

FINANCIAL BUDGET MANUAL

1998



Farm Management Group
Applied management
and Computing Division

LINCOLN
UNIVERSITY
Te Whare Wānaka O Aoraki



FINANCIAL BUDGET MANUAL 1998

EDITOR: E.S.Burt M.Agr.Sc.(Hons)

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Farm Management Group
Applied Management and Computing Division
P.O.Box 84
Lincoln University
Canterbury
New Zealand

Phone: (03) 325-3859

Fax: (03) 325-3839

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PREFACE

The "Financial Budget Manual 1998" is an invaluable reference book for farmers and growers, consultants and students. It contains a wealth of up to date information on farm and orchard costs and prices, the profitability of different enterprises, and income taxation. A special supplement to the Manual is also provided, containing information on the market and price outlook for each of New Zealand's major farm exports.

Unless stated otherwise, the data contained in the Manual is that ruling in January 1998. All prices are quoted exclusive of GST. Prices do not remain stationary so the Manual should be used as a guide only. Market movements and exchange rate changes are just two of the factors which can rapidly alter costs and prices. The availability of discounts for bulk purchases, and deferred payment arrangements, may also affect final costs for budgeting purposes.

Information quoted has been gathered from sources throughout New Zealand, but some variation may occur between regions. Trade names have been used for clarity and convenience; no preferential endorsement by the University is intended, nor is any criticism implied of any product which does not appear in the Manual.

To use the Manual effectively, readers are well advised to first consult the index (Section F) to identify the location of the information required.

Please note that each of the five sections is paged individually, for example, page A-40 refers to the 40th page of the first section; B-120 refers to the 120th page of the second section.

I would like to thank all individuals, organisations and commercial firms who have provided information for our use. Without their co-operation, the production of the Financial Manual is not feasible. I wish to express my appreciation to Samantha Gurteen, Charlotte Belcher, Jackie Diack and Jayne Murdoch for their efforts in gathering and collating information.

While every effort has been made to ensure that the information in this publication is accurate, Lincoln University cannot accept responsibility for any errors or omissions or for any loss or damage resulting from the reliance on or the use of the information, forecasts or opinions therein.

The inclusion of advertisements in the text does not necessarily imply the University's endorsement of those advertised products/services.

Any suggestions for the improvement of the Manual would be welcomed.

For readers' information the Applied Management and Computing Division at Lincoln University also produces a companion volume - the "Farm Technical Manual". It is a versatile reference book which brings into one place all manner of essential technical information required by farmers and others involved in the farming industry.

Elizabeth S. Burt
EDITOR
February 1998

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SECTION 6 - INDEX

SECTION 1

PRODUCT PRICES

1.1 MARKET PRICES

1.1.1 Impact of Exchange Rate on Product Prices

For pastoral farming, exchange rates can have a dominant effect on prices at the farm gate. The exchange rate is influenced by four main factors. These are the Government's fiscal policy (its spending behaviour), its monetary policy (how much money the Reserve Bank permits to circulate within the economy at any given time), the interest rate level (the cost of borrowing money on the domestic money market) and the inflation rate.

The following table shows the estimated movement in farmgate prices for a 10% movement in trade weighted exchange rates for a range of commodities. This movement in exchange rates effectively gives the same result as a price change at f.o.b.*.

In general the greater the processing and handling charges between the farm gate and f.o.b. as a proportion of the f.o.b. price the greater the impact of exchange rate movements in farm gate prices. Wool and venison, where the proportion of the value added between farm and ship is low relative to other pastoral products, shows the least leveraged effect of exchange rate movements. Mutton at the other extreme shows the highest leveraged effect.

In times of currency volatility, low added value products minimise exposure to appreciation of the currency, but minimise potential gains to producers from a currency depreciation.

**f.o.b. - Free on Board (ship or aeroplane)*

Farmgate Prices - Effect of a 10% Movement in Trade Weighted Exchange Rates.

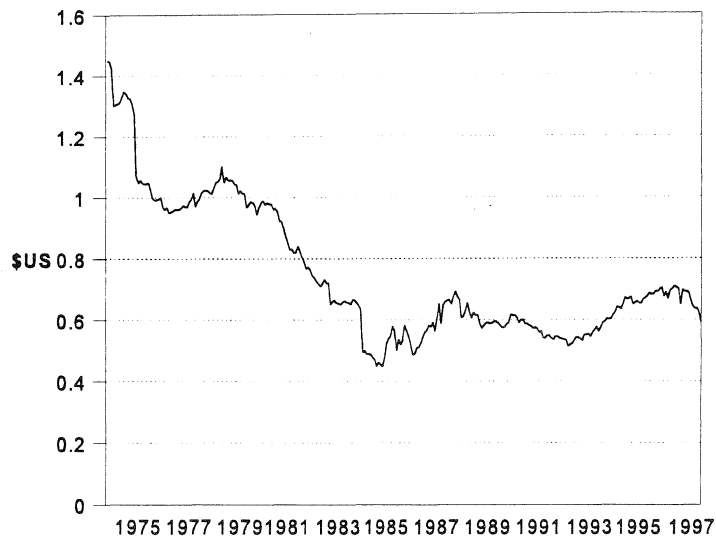
	Depreciation	Appreciation
Wool	+13%	-12%
Lamb	+17%	-14%
Mutton	+26%	-22%
Beef	+16%	-13%
Venison	+13%	-12%
Dairy	+15%	-13%
Kiwifruit	+24%	-19%
Apples	+20%	-16%

Note: The figures assume the appreciation or depreciation is effective for the whole season. Fluctuations of lesser duration will have lesser effects.

Source: N.Z. Meat and Wool Boards' Economic Service.

1.1.2 Exchange Rate 1974 to 1997

Exchange Rates: \$US to \$NZ (1974 to 1997)



Exchange Rates: Major Currencies and TWI to \$NZ (Annual Averages)

	Year Ended March					
	1993	1994	1995	1996	1997	1998F
1 NZ\$ =						
US\$.53	.55	.62	.67	.69	.71
£ stg	.31	.37	.39	.43	.44	.43
Yen	66	59	61	64.3	78	85
A\$.74	.81	.83	.89	.88	.91
DM	.82	.93	.95	.95	1.08	1.16
TWI *	53.5	55.6	58	62.2	66.5	69

*Reserve Bank Trade Weighted Index (a measure of the value of the NZ\$ against a weighing of the five most important currencies involved with New Zealand's exports and imports).

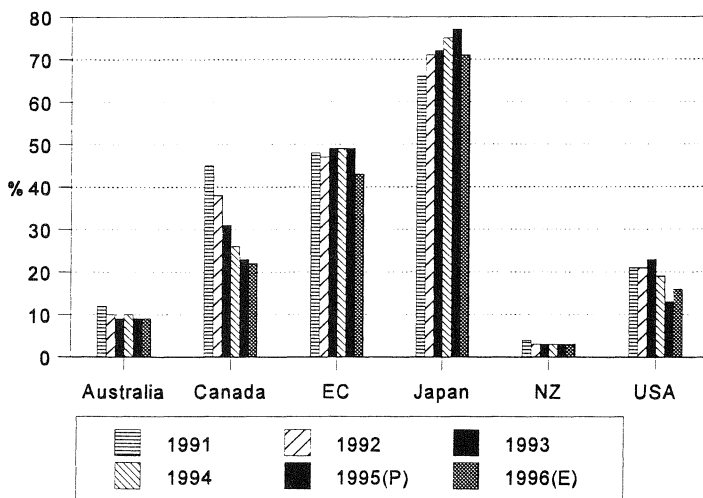
F = forecast

Source: Situation and Outlook for NZ Agriculture, MAF Policy, June 1997

1.1.3 Government Support to Farmers

Producer Subsidy Equivalents (PSEs) are the OECD's measure of government support to farmers. Calculation of PSEs involves estimating the effects on farm incomes of such diverse policy instruments as import barriers and price supports, and aggregating all these effects into a single measure, expressed as a proportion of farmers' incomes.

Producer Subsidy Equivalents (PSEs) All Products



Source: *Situation and Outlook for NZ Agriculture, MAF Policy, June 1997*

1.2 SHEEP

1.2.1 Lamb Schedule (Export)

Meat which is destined for export is graded by the New Zealand Meat Producers Board. The various grades are paid for according to Works' schedules which are set every week during the killing season. Below is an example of net prices offered for export lambs for the week beginning January 8th, 1998. This information is usually available each week in a range of newspapers and farming journals.

Weight	Grade	Waitotara (Wanganui)	North Is Av.	Southland Av.	South Is Av.
\$ per head					
9.0	A	18.75	16.06	21.73	22.27
11.0	PL	24.84	23.72	26.28	22.27
13.0	YL	29.49	31.17	32.94	27.17
13.0	PL	29.49	31.01	32.88	33.72
13.5	YM	34.79	34.79	38.18	33.66
13.5	PM	34.79	34.79	36.70	38.88
14.0	YM	36.78	36.01	39.32	37.42
14.0	PM	36.78	36.01	37.78	40.05
15.0	YM	39.75	39.89	43.04	38.54
15.0	PM	39.75	39.89	41.31	43.72
15.0	TM	35.70	34.90	36.66	42.04
15.0	FM	29.70	28.41	27.89	36.07
15.0	CM	26.70	26.04	29.01	28.24
16.0	YM	42.02	42.39	45.32	30.19
16.0	PM	42.02	42.39	43.48	46.08
17.0	YM	44.29	44.89	47.67	44.29
17.0	PM	44.29	44.89	45.72	48.50
18.0	YX	46.20	48.87	50.56	46.59
18.0	PX	46.20	48.87	48.49	51.15
19.0	YX	47.50	50.60	52.85	53.51
19.0	PX	47.50	50.60	50.66	51.38
19.0	TH	44.65	46.71	44.77	44.01
19.0	FH	37.05	37.96	34.51	32.80
21.0	YX	51.90	55.67	51.13	51.41
21.0	PX	51.90	55.67	48.71	48.98
22.0	YX	55.20	58.49	50.92	51.69
22.0	PH	53.00	56.29	48.39	48.61
23.0	YX	57.45	61.04	52.81	53.64
23.0	PH	55.15	58.74	50.16	50.42
Pelt 1kg Woolly		7.15	7.22	7.61	8.15

Note: The net lamb values shown above are calculated after deducting all killing charges and levies. Premiums and processing rebates have been added where applicable. Farm to works transport is not included (*Waitotara* pays all freight). Spot premiums above the announced prices are sometimes paid.

Source: "NZ Farmer" January 8 1998

1.2.2 Lamb Price Trends

(i) Average prices paid for *14.5 kg PM lamb*; and lamb "*all grades average*":

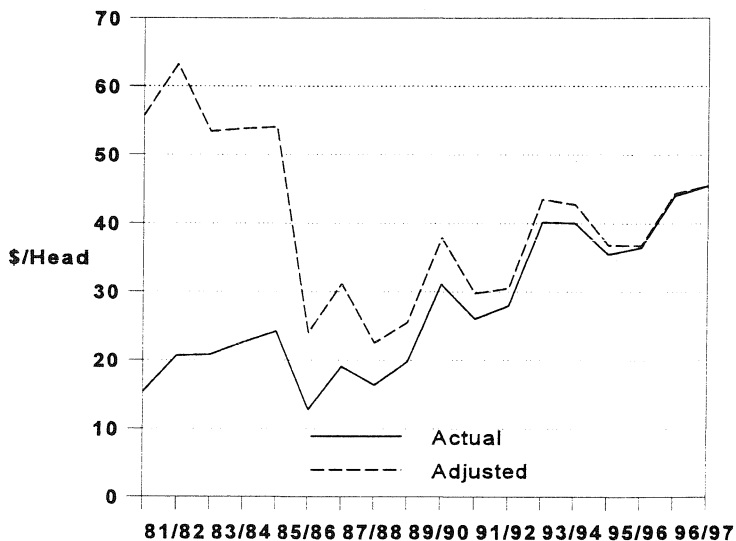
	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97
14.5 kg lamb (\$/hd)	\$29.19	\$41.08	\$41.32	\$34.59	\$38.01	\$43.73
This price comprises:						
- Baremeat schedule (c/kg)	160.42	229.70	225.00	176.30	200.60	236.50
- Pelt and wool (\$/hd)	\$5.68	\$7.01	\$6.79	\$7.65	\$7.10	\$7.07
Lamb "all grades average"	\$27.97	\$40.16	\$39.97	\$32.16	\$36.54	\$44.00

Figures may not add due to rounding.

Prices are at works, for year ended 30 September.

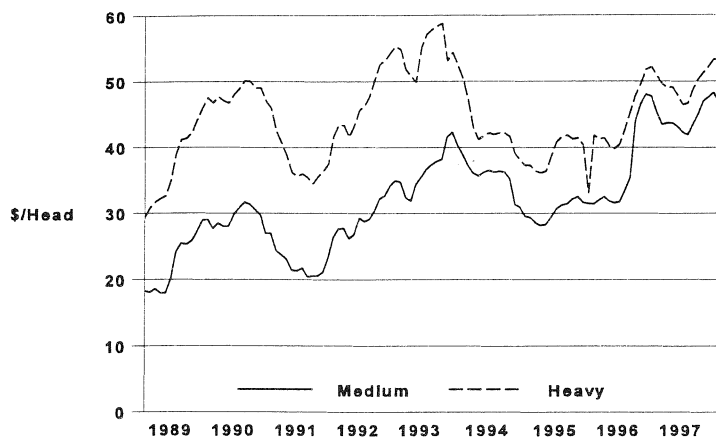
Source: N.Z. Meat and Wool Boards' Economic Service.

(ii) **Actual and Inflation Adjusted Lamb Prices, 1980 to 1997.**
(PM Lamb Price - September year)



Source: N.Z. Meat and Wool Boards' Economic Service

(iii) Average net export price paid for heavy and medium lambs with a 1kg Woolly Pelt (monthly averages, January 1988 to December 1997)



Note: Until October 1993 categories were 13.5kg and 21kg. From November 1993 to June 1996 weights were 14kg and 18kg and from July 1996 onwards weights were 15kg and 18kg.

Source: "N.Z Farmer" Issues January 1988 to January 1998

(iv) **Prime Lamb/Hogget Prices - Local Trade**

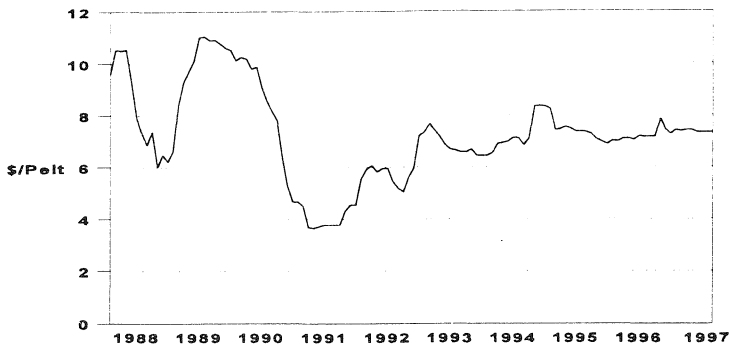
(See Section 1.2.9)

(v) **Store Lamb Prices**

(See Section 1.2.10 (i))

1.2.3 Lamb Skin Price Trends 1988 to 1997

The graph shows the "at works" price for lamb skins (including 1 kg wool pull).



Source: N.Z. Meat and Wool Boards' Economic Service

1.2.4 Contract Lamb Prices

(i) Annual Contracts

The *AFFCO* 'LambPlan Supply Plan' is an all year-round supply programme which offers monthly market-related returns. It is specifically designed to reward farmers for making a commitment to produce lambs which meet Northern Hemisphere market specifications. Features of Lamb Plan Supply Plan are:

- Optional advance payment, to approved suppliers, of up to \$25.00 per lamb.
- Competitive interest rate on advances.
- Reward for quality presentation.
- Interim payment at slaughter, paid within 14 days of kill, equivalent to 100% of the slaughter value, less all previous payments and interest.
- Final payment, reflecting a market related return, paid four weeks after the end of the *AFFCO* business month of kill.
- Renewal incentive payment of \$1.00 per head, paid at slaughter, for each qualifying lamb supplied under the previous season's Lamb Plan Supply Agreement
- Freight paid by *AFFCO* to the nearest *AFFCO* processing facility.

(ii) European/North American Chilled Lamb Contract - Spring 1997 (*Richmond*)

A minimum of 100 lambs were to be supplied during the nominated supply week(s) between 7 October and 5 November 1997. Carcase weight had to be between 13.3 and 21.2 kilograms, and grade either YM, YX, PM, PX or TM. GR had to be up to and including 15mm on M grading carcases up to and including 12 mm on X grading carcases. The following bonus premium reflected and compensated for new season spring lamb supply.

Supply Period	Bonus Premium cents per kg/carcase weight
6 October to 10 October	50
13 October to 17 October	50
20 October to 24 October	45
27 October to 31 October	20
3 November to 7 November	10

A supply bonus of \$1.50 per head contracted was paid if the full volume was supplied in full.

(iii) YL Lamb Supply Contract (*Richmond*)

A minimum of 100 lambs had to be supplied during the nominated supply week. Carcase weight had to be between 9.1 and 13.2 kilograms and grade either YL1 or YL2. Lambs were to be unshorn.

Supply Period	Gross YL Contract Price cents per kg/carcase weight
29 September to 10 October	240
13 October to 17 October	235
20 October to 15 November	230
17 November to 28 November	225

(iv) European Chilled Lamb Contract - Easter 1997 (*Richmond*)

No Easter Lamb contract was offered in 1997.

(v) Lamb Supply Contract - Winter 1997/98 (*Richmond*)

A minimum of 100 lambs had to be supplied and the week(s) of supply nominated. Carcase weight of the lambs had to be 14.9 to 21.2 kilograms, and grade either Y, P or T.

The following bonus premiums were paid.

Supply Period	Bonus Period cents per kg/carcase weight
13 July to 22 July	10
27 July to 5 August	15
10 August to 19 August	20
24 August to 2 September	25
7 September to 16 September	30
21 September to 23 September	35

Addition Payments, payable on the 10 October 1997 included

- (1) \$1.50 per head if **all lambs** presented for slaughter had been shorn more than 2 weeks and less than 8 weeks at time of delivery to the processing plant.
- (2) 75 cents per head provided the total number of lambs contracted were delivered.

- (3) 75 cents per head provided lambs were delivered within the contracted/allocated supply period.
- (4) Tolerance - additional paymentss under clauses 1, 2, and 3 were paid provided a minimum of 80% of the lambs contracted were delivered up to a maximum of 120% of the contracted lambs.

(vi) Large Lean Lamb Supply Contract - 1997/98 (*Richmond*)

The purpose of this contract is to test market acceptance of large lamb cuts beyond the normal carcase weight range. A minimum number of 100 lambs must be accepted during the supply period, with a carcase weight between 23.0 and 30.0 kilograms, and grade Y, P or T. Lambs must be Texel or Texel cross with a minimum of 25% Texel and be wethers or ewes.

The supply period will be late April, May June 1998.

1.2.5 Live Lamb and Sheep Shipments

There have been a limited number of live sheep shipments in 1997/98. Details of contracts and prices are strictly confidential. It is likely that these will continue but in limited numbers, and with very closely defined stock specifications. Contracts are likely to be negotiated on an individual basis and will remain confidential between the supplier and exporter.

In the longer term, it is expected that greater numbers of Awassi (an Arabic breed) cross bred sheep will be available for export. The first shipment, consisting of 2,500 of these animals, occurred in April 1996. It is anticipated that Saudi Arabian demand for these sheep will be greater than for traditional New Zealand breeds.

In recent years the live lamb and sheep trade encountered difficulties in areas of animal welfare and co-ordination between exporters and importers. In October 1995, dissatisfaction from industry participants resulted in the Ministry of Agriculture establishing a set of principles to govern the trade from New Zealand to the Kingdom of Saudi Arabia.

1.2.6 Slink Skins

The price received for lamb slink skins in 1997 was the same as the 1996 price. The range was from \$1.50 to \$2.00 per skin, compared with the 1995 range of \$1.50 to \$1.70 per skin, which was similar to 1994 prices. In 1993 slink skins averaged \$0.80 each.

1.2.7 Mutton Schedule (Export)

The following is an example of net prices offered to farmers for the various mutton grades. This information is for the week beginning the 2nd of February 1998 and is usually available weekly in various newspapers and farming journals.

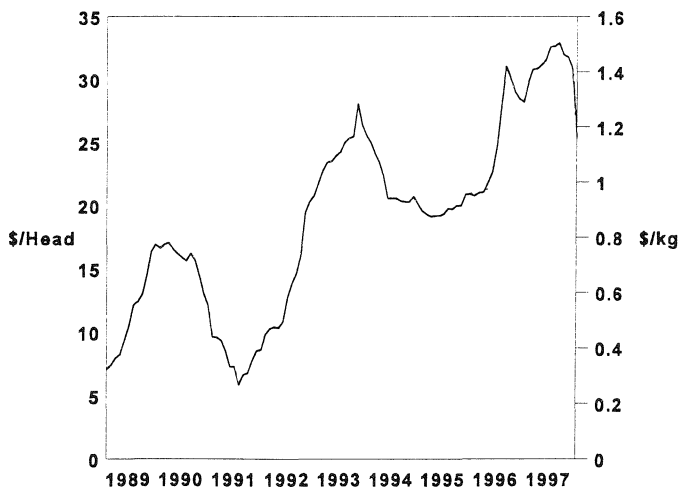
Weight	Grade	Waitotara (Wanganui) \$ per head	One South Island Company \$ per head
15.0	MM	8.70	7.80
17.0	MM	9.86	8.84
17.0	MX1	14.62	14.45
19.0	MM	11.02	9.88
19.0	MX1	16.34	16.15
19.0	ML1	16.72	16.15
19.0	MP	13.87	7.60
21.0	MX1	18.06	17.85
21.0	ML1	18.48	17.85
23.0	MX1	19.78	19.55
23.0	ML1	20.24	19.55
23.5	MX2	21.86	19.74
23.5	ML2	20.45	19.74
23.5	MH	15.51	14.57
23.5	MP	17.16	9.40
25.0	ML2	21.75	21.00
27.0	ML2	23.49	22.68
27.0	MH	17.82	16.74
27.0	MF	12.15	16.2
27.0	MP	19.71	10.8
30.0	ML2	26.1	25.2
Pelt	0.5 kg shorn	3.33	5.87

Note: The net mutton values are calculated on the same basis as for lamb (refer *Section 1.2.1*). The value of a 0.5kg pelt is included.

A line of cull ewes often contains a significant proportion of cutters (MPs) and this must be allowed for when analysing selling options.

1.2.8 Mutton Price Trends (Export)

(i) Net Value of a 21kg Ewe with a 0.3kg Pelt (January 1989 to December 1997)



Source: N.Z. Farmer Issues January 1989 to January 1998

(ii) Average Prices Paid for 18kg Mutton; and "All Grades Average":

	1992/93	1993/94	1994/95	1995/96	1996/97
MXI Mutton (18 kg)-	\$26.34	\$26.88	\$22.58	\$24.79	\$30.59
<i>This price comprises:</i>					
- Baremeat schedule (c/kg)	113.20	114.00	77.00	92.20	122.50
- Pelt and wool (\$/hd)	\$5.20	\$5.02	\$7.81	\$6.89	\$6.69
Mutton "all grades average"-	\$25.76	\$26.73	\$21.70	\$24.22	\$31.20

Figures may not add due to rounding

Prices are at works, for year ended 30 September.

Source : N.Z. Meat and Wool Boards' Economic Service.

1.2.9 Sheep Prices - Prime Stock (Local Sales)

A large amount of meat is sold directly from farms to wholesale buyers, but the prime stock auction sales in main centres still set the market. The current situation can be determined from the weekly stock sale reports in the newspapers. The following information should be used as a guide only.

Sales Information (three main sale centres) 1997:

Prices represent ranges from the prime sales at each centre over a two month period.

	Tuakau	Stortford	Addington
	\$/head		
Jan/Feb			
Lambs	35 - 49	38	35 - 52
Hoggets	36 - 44	38 - 47	44 - 48
Ewes	14 - 39	12 - 38	27 - 42
Mar/Apr			
Lambs	37 - 55	33 -55	26 - 50
Hoggets	38 - 48	50	25 - 49
Ewes	17 - 47	34 - 48	5 - 38
May/June			
Lambs	46 - 62	41 - 58	29 - 51
Hoggets	44 - 47	45 - 47	27 - 46
Ewes	18 - 50	33 - 52	19 - 47
July/Aug			
Lambs	46 - 65	36 - 54	30 - 58
Hoggets	42 - 52	37 - 66	27 - 49
Ewes	18 - 47	20 - 54	24 - 55
Sept/Oct			
Lambs	37 - 59	39 - 60	34 - 60
Hoggets	34 - 57	42 - 62	23 - 51
Ewes	20 - 47	25 - 54	20 - 45
Nov/Dec			
Lambs	33 - 54	33 - 51	19 - 59
Hoggets	35 - 59	25 - 56	30 - 52
Ewes	18 - 43	24 - 48	18 - 43

Note: The price range is the lowest priced stock (of each type, over a number of sales) and the highest priced stock, respectively.

Source: "N.Z.Farmer" 1997 Issues; Lincoln University.

1.2.10 Sheep Prices - Store and Breeding Stock

Note: This information should be used as a guide only, as store and breeding sheep prices may vary markedly between districts, seasons and breeds.

(i) Average Prices for Store Stock (N.Z. Regions) 1988 to 1997

Lambs

	North/South Auckland \$	East Coast \$	Taranaki Manawatu \$	Marlborough Canterbury \$	Otago Southland \$
1989-90	19.87	23.23	23.14	23.98	26.22
1990-91	15.28	14.85	15.18	24.56	24.56
1991-92	17.69	18.42	19.97	21.81	25.39
1992-93	25.87	28.34	30.17	32.92	32.79
1993-94	26.62	27.46	29.72	34.92	41.59
1994/95	16.98	20.49	20.42	23.23	22.27
1995/96	20.18	25.64	25.89	32.30	28.58
1996/97p	27.24	31.50	33.94	32.30	32.73

Two-Tooth Ewes

	North/South Auckland \$	East Coast \$	Taranaki Manawatu \$	Marlborough Canterbury \$	Otago Southland \$
1989-90	28.23	31.76	29.96	25.51	32.13
1990-91	25.82	30.15	25.18	31.75	35.55
1991-92	25.13	29.27	25.94	27.81	34.38
1992-93	40.37	48.79	37.48	45.64	60.38
1993-94	48.55	51.34	42.43	53.65	58.09
1994-95	30.60	34.93	29.32	39.43	40.19
1995/96	36.07	46.08	36.28	36.70	46.83
1996/97p	45.89	60.03	46.03	50.44	49.37

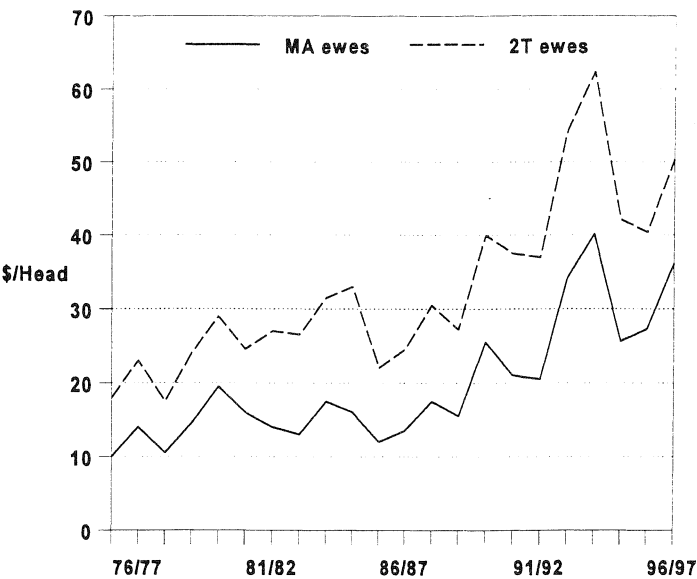
Mixed Age Ewes

	North/South Auckland \$	East Coast \$	Taranaki Manawatu \$	Marlborough Canterbury \$	Otago Southland \$
1989-90	19.14	22.98	20.87	23.57	23.56
1990-91	14.89	16.78	16.14	20.71	21.25
1991-92	15.13	17.45	17.83	19.92	21.63
1992-93	28.75	33.96	30.79	29.80	30.06
1993-94	35.50	34.54	34.95	35.44	38.34
1994/95	24.46	22.55	25.2	19.69	24.21
1995/96	27.64	29.81	29.77	22.36	26.93
1996/97p	38.64	39.81	41.36	34.57	26.32

p = provisional

Source: "N.Z. Farmer" 1997 Issues; Lincoln University.

(ii) N.Z. Average Purchase Price for MA Ewes and two-tooths (1975 to 1997)
(\$/Head - All Regions Average)



Source : N.Z. Meat and Wool Boards' Economic Service

Note: 1996/97 figures are provisional.

1.3 WOOL

1.3.1 Highest and Lowest Market Prices of Clean Wool (1996/97 and 1997/98)

(Clean Market Price - cents per kg)

			1996/97 (to June 1997) (cents per kg)		1997/98 (to January 1998) (cents per kg)	
Description and Micron /Category	Colour	Length (Y-Z)mm	High	Low	High	Low
Merino						
18 Fleece	1	80	1740	1140	1930	1560
19 Fleece	1	75	-	-	1315	1245
21 Fleece	1	80	-	-	100	925
23 Fleece	1	90	625	545	735	690
21 Pieces	2.5	75	640	580	890	765
21 Bellies	2.5	75	610	555	855	755
Halfbred and Corriedale						
25 Fleece	2	90	590	515	676	600
25 Fleece	2.5	90	-	-	676	600
27 Fleece	2	95	630	500	682	608
27 Fleece	2.5	95	-	-	680	604
29 Fleece	2	100	532	495	626	584
29 Fleece	2.5	100	618	495	620	580
31 Fleece	2	105	525	495	578	550
31 Fleece	2.5	105	565	495	574	548
28 Pieces	4.5	85	555	435	615	545
28 Bellies	4.5	85	520	410	580	505
28 Lox	4.0	50	355	265	475	380
26 Lambs	1.5	50	600	463	625	625
28 Crutchings	3.5	50	330	265	460	370
Crossbred Full Fleece						
33 Fleece	3.5	115	515	473	538	456
33 Fleece	5.5	115	-	-	540	393
35 Fleece	3.5	125	-	-	465	350
35 Fleece	5.5	125	508	420	434	335
36 Fleece	3.5	125	-	-	434	335
36 Fleece	5.5	125	-	-	-	-
37 Fleece	3.5	125	500	367	382	317
37 Fleece	5.5	125	463	333	384	313
37 Cott	6.5	125	-	-	348	300

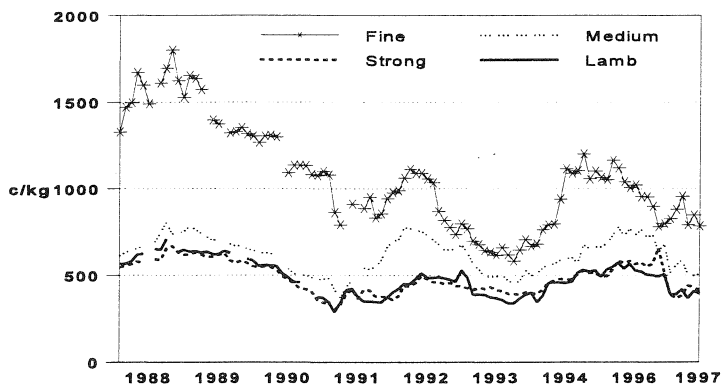
			1996/97 (to June 1997) (cents per kg)		1997/98 (to January 1998) (cents per kg)	
Description and Micron /Category	Colour	Length (Y-Z)mm	High	Low	High	Low
35 Pieces	8.5	100	395	350	370	298
35 Bellies	9.5	100	385	343	345	300
35 Lox	9.5	50	280	251	310	277
<i>Crossbred Second Shear</i>						
33 Shear	3.5	65	392	350	420	416
33 Shear	3.5	50	-	-	399	399
35 Shear	3.5	75	438	353	425	323
37 Shear	3.5	65	-	-	341	316
37 Shear	2.5	100	463	350	420	323
37 Shear	5.5	100	450	325	361	308
37 Shear	2.5	85	458	342	400	320
37 Shear	5.5	85	435	380	360	305
37 Shear	2.5	75	476	324	365	314
37 Shear	5.5	75	424	368	365	321
37 Shear	2.5	65	413	320	321	321
37 Shear	3.5	100	-	-	370	311
35 Bellies	3.5		312	280	335	288
<i>Lambswool</i>						
28 Lambs	2.0	65	480	397	537	537
29 Lambs	2.0	65	475	389	540	525
29 Lambs	2.5	65	444	380	512	477
30 Lambs	2.5	65	458	371	500	490
31 Lambs	2.5	65	448	365	461	461

Source: "N.Z. Farmer" 1997 and 1998 Issues

1.3.2 Wool Price Trends

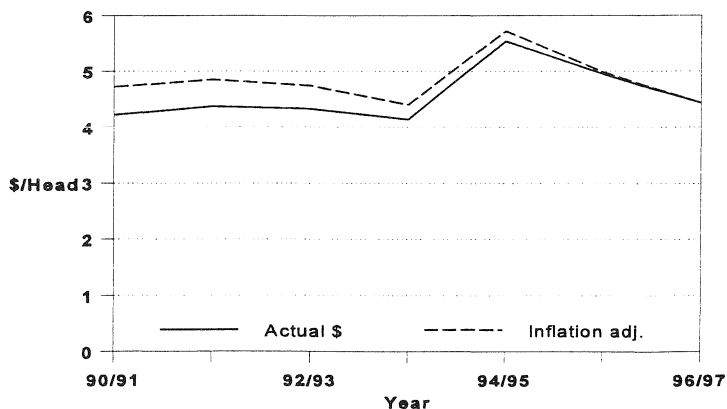
(i) Price Indicators 1988-97

Price trends for the four main segments of the New Zealand clip are shown on the graph:
Fine = 18 to 24 micron; Medium = 25 to 31 micron; Coarse = 32 to 41 micron



Source: "N.Z. Farmer", Lincoln University

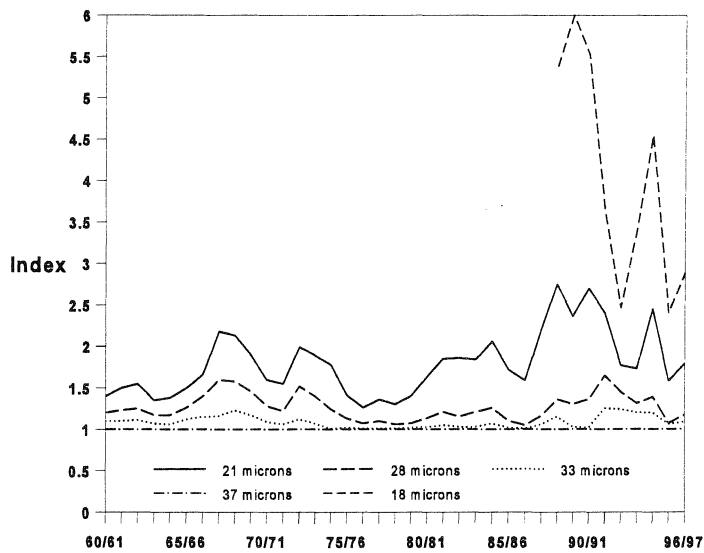
(ii) Actual and Inflation Adjusted Clean Wool Price



(Average Auction Price 1981 to 1997 - year ended June).

Sources : Lincoln University; Wools of New Zealand.

1.3.3 Wool Price Ratios 1960 to 1997



Comparison of the prices received for 18, 21, 28, and 33 micron fleece with the price received for 37 micron wool. The index used is 37 micron = 1.0

Source: Lincoln University; Wools of New Zealand.

1.4 CATTLE

1.4.1 Beef Schedule (Export)

The beef schedule works in the same way as for sheep (refer to *Section 1.2.1*).

Below are examples of net prices (cents per kg), as at 5 January 1998. This information is usually available weekly in various newspapers and farming journals.

Net Price per kilogram:

Grade	Weight Range (kg)	Beeflands c/kg	North Island average c/kg	CMP c/kg	South Island average c/kg	Phoenix (Southland) c/kg
L2 Steer	196-220		160	136	134	154
	221-245		175	142	141	160
	246-270	180	184	175	166	166
	271-295	186	191	176	172	157
P2 Steer	196-220		170	156	164	159
	221-245		182	162	178	170
	246-270	185	192	195	195	186
	271-295	191	199	196	198	192
	296-320	192	206	200	202	198
	321-345	198	210	198	200	198
	346+	203	213	187	199	189
T2 Steer	246-270	180	184	180	182	176
	271-295	186	191	181	188	182
	296-320	187	197	185	191	188
	321-345	193	201	183	189	188
	346+	198	205	172	177	179
F2 Steer	271-295	176	169	146	142	142
	296-320	177	176	136	145	148
	321-345	183	179	137	145	148
	346+	188	182	137	146	149
P2 Heifer	171-195		162	150	158	198
	196-220		171	151	168	154
	221-245		184	157	182	165
	245-270	185	192	190	199	181
	271-270	191	198	191	200	187

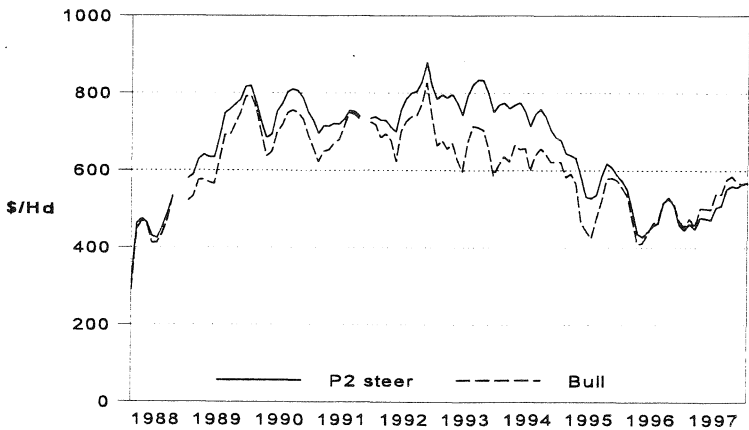
Grade	Weight Range (kg)	Beeflands c/kg	North Island average c/kg	CMP c/kg	South Island average c/kg	Phoenix (Southland) c/kg
P2 Cow	196-220	143	168	115	118	119
	220-245	149	173	124	125	125
	245-270	155	180	138	138	136
	271-295	161	186	154	154	152
M Cow	146 - 170	129	162	94	117	106
	171 - 195	137	170	136	135	128
	196 - 220	143	178	141	142	139
	221 - 245	149	183	147	150	155
M2 Bull	196-220	163	199	142	153	159
	221-245	179	209	158	168	170
	245-270	185	216	173	183	181
	270-295	186	221	184	193	187
	296-320	192	226	187	196	193
	321-345	198	231	190	196	193
	346+	203	236	191	196	189

Source: "N.Z. Farmer" 8th January 1998

1.4.2 Beef Price Trends (Export)

(i) Net Price Paid for 280 kg P2 Steer and 260 kg Bull

January 1988 to December 1997)



Source: "N.Z. Farmer" Issues January 1988 to December 1997

(ii) Cow Beef Schedule

	91/92	92/93	93/94	94/95	95/96	96/97
<i>Cow M Grade (145-170 kg)</i>	211c	222c	200c	157c	200c	132c
<i>Cow M Grade (average per hd)</i>	\$334	\$351	\$316	\$249	\$190	\$208

Prices are at works, for year ended 30 September.

Source: N.Z. Meat and Wool Boards' Economic Service.

(iii) Bull Beef Schedule

	91/92	92/93	93/94	94/95	95/96	96/97
<i>Bull Grade (220-245 kg)</i>	278c	287c	256c	203c	165c	170c
<i>Bull Grade (average per hd)</i>	\$651	\$670	\$600	\$474	\$385	\$400

Prices are at works, for year ended 30 September.

Source: N.Z. Meat and Wool Boards' Economic Service.

1.4.3 Beef Contracts and Pools

See also Sections 1.5.6 and 1.5.7

One South Island company was offering the following forward contract prices for early 1998 (January to March).

Weight Range (kg)	\$ /kg		
	Bulls	Steers	Heifers
220.5 - 245			183
245.5 - 270	192	198	
270.5 - 320	197	203	
320.5 - 345		198	

Riverlands (owned by Canterbury Meat Packers) (1997/98)

Riverlands offer a bull grazing contract scheme whereby farmers may buy bulls of their choice and immediately "on sell" them to *Riverlands* at current market value. *Riverlands* now owns the bulls but leaves them with the farmer to feed and manage them to slaughter as if they were their own.

The "Grazing Fee" the farmer receives is the difference between their "on-hook" value and the price *Riverlands* bought them from the farmer, less a "holding costs margin" (currently 8.75% per annum flat of the purchase price) and a management fee. The farmer pays all "on farm" costs including animal health and deaths.

There is no minimum number required. Bulls of any age from 5 days to 20 months may be contracted for specified kill periods and minimum carcase weights. Farmers with some

bull farming experience are preferred and must be financially sound with a good credit rating.

The scheme allows farmers to operate a bull beef enterprise without tying up capital in stock. Their capital can be used for other investments with a higher opportunity cost.

Riverlands is also offering a summer schedule price of plus 15 cents over the weekly Bull schedule price.

AFFCO

The #1 Bull Pool

Offers bull farmers throughout the North Island an innovative system which provides security of cash flow and competitive market returns. To qualify the farmer must commit 10 bulls, each three months of age or more and a minimum of 100kg liveweight.

The #1 Bull Pool offers you the benefits of:

- Optional advance payment available to approved suppliers
- Optional progress payments are available
- Competitive interest rate on advances
- Interim payment, paid within 14 days of kill, equivalent to 100% of the slaughter value, less all previous payments and interest.
- Final payment, reflecting a market related return, paid four weeks after the end of the AFFCO business month of kill
- Freight paid by AFFCO
- Renewal incentive payment of \$10 per head, subject to the conditions as outlined in the contract

Primeplan

Primeplan is operated as a Pool, targeted specifically at the developing Asian market and other premium table beef markets, and is reliant on quality and consistency of supply. To qualify the farmer must commit a minimum of 10 cattle, each at least 3 months old and weighing not less than 100kg. Steers and heifers both qualify. Optional advance and/or progress payments can be received in addition to payment after slaughter (plus a later final payment). Free farm to plant freight.

Cow Pool

This innovative monthly pool pays sustainable market returns and additional rewards to suppliers who meet specific criteria. An optional advance payment is available to approved suppliers who commit a minimum of 10 head. Cattle receiving the advance payment must be slaughtered before the 1st of April, or after the 1st of June. Priority of slaughter space is given to Co-operative cow pool suppliers. An end of season loyalty bonus is available if farmers send their total supply of cows to Cow Pool.

The ANZA Beef Plan

The *New Zealand Angus Association* has established it's own Angus Beef brand. In conjunction with *AFFCO*, the *New Zealand Angus Association* plans to establish ANZA as a New Zealand beef brand that represents outstanding quality.

AFFCO has introduced new meat grading standards which recognise specific characteristics of consumer preference in target markets. All carcasses entered in the

ANZA Beef Plan undergo chiller assessment the day following slaughter. To qualify for ANZA, selected cuts must meet the following criteria:

- Animals must grade P or T
- Meat colour grades 1 to 5 are acceptable
- Fat colour grades 1 to 5 are acceptable
- pH level of the meat of 5.8 or less is acceptable
- Carcase weight of 295.1 to 365kg is required

Cattle must be Angus, or Angus crossed with a recognised beef breed. A minimum of 10 cattle (steers only qualify) must be committed, each at least 3 months old and weighing not less than 100kgs.

Richmond

Asian beef programme

This contract, which will operate from October 1997 to March 1998, offers farmers the opportunity to contract all heifer/steer grades of 300kg to 370kg carcase weight.

The *Richmond* Pasture Prime market specification for the contract period is as follows:

- meat colour range 1 to 4
- fat colour range 1 to 4
- steer/heifer carcase of 300 to 370kg (inclusive)
- maximum pH of 5.8
- minimum fat level of 5mm
- muscling class 1 and 2

In addition to the “Operating Price”, a quality bonus will be paid for cattle meeting the *Richmond* “Pasture Prime” specification. The quality bonus for the period of this contract will be 30 cents per kilogram of carcase weight for each carcase meeting the specifications. Cattle achieving fat and meat colour of 5, which is the *Richmond* “Asian Beef” specification, shall attract a secondary market premium of 5 cents per kilogram of carcase weight.

Phoenix Meat

The 1997/98 *Phoenix* Calf Scheme involves the bailment of \$150 per head (maximum) depending on calf condition, at 7% interest, which is repayable at stock sale time. The company retains \$220, which covers initial bailment, interest, administration fee (\$5.00) and an allowance for deaths.

1.4.4 Calf Slink Skins

The price received for calf slink skins in 1997 was the same for both the North and the South Islands, with large skins fetching \$5.00 and small skins \$1.00. The 1996 price for calf slink skins ranged between \$1.00 and \$5.00 per head. The price received for calf slink skins in 1994 ranged from \$6 to \$8 per skin and averaged \$5 in 1993.

1.4.5 Cattle Prices - Prime Stock (Local Sales)

Sales Information (three main sale centres) 1997:

Prices represent ranges from the sales at each centre over a two month period.

	Tuakau c/kg	Stortford \$/head	Addington c/kg
Jan/Feb:			
Steers	82 - 99	500 - 560	70 - 96
Heifers	70 - 94	328 - 470	60 - 80
Cows	41 - 69	400 - 525	63 - 64
Mar/Apr:			
Steers	78 - 102	335 - 678	69 - 91
Heifers	72 - 90	285 - 545	57 - 76
Cows	52 - 80	290 - 482	41 - 57
May/June:			
Steers	86 - 110	382 - 655	83 - 99
Heifers	85 - 95	290 - 495	62 - 86
Cows	57 - 89	270 - 450	50 - 67
July/Aug:			
Steers	107 - 120	410 - 595	79 - 102
Heifers	102 - 117	410 - 678	59 - 88
Cows	76 - 112	317	54 - 68
Sept/Oct:			
Steers	109 - 124	485 - 757	98 - 110
Heifers	102 - 117	300 - 595	75 - 101
Cows	72 - 106	335 - 500	44 - 71
Nov/Dec:			
Steers	105 - 128	435 - 742	103 - 107
Heifers	94 - 113	380 - 584	75 - 101
Cows	75 - 104	320 - 540	69 - 73

Note: The price range is the lowest priced stock (of each type, over a number of sales) and the highest priced stock, respectively.

Source: "N.Z. Farmer" 1997 issues; Lincoln University.

1.4.6 Store and Breeding Cattle Prices

The following tables are a guide to the average prices paid for store and breeding cattle throughout the country.

(i) Average Prices for Store Stock (N.Z. Regions) 1988 to 1997:

2 Year plus Steers (\$ per head)

	North/South Auckland	East Coast	Taranaki Manawatu	Marlborough Canterbury	Otago Southland
1989-90	642	511	765	550	505
1990-91	612	444	716	-	575
1991-92	659	620	621	603	572
1992-93	692	745	730	602	-
1993-94	729	671	664	787	627
1994-95	623	437	608	-	400
1995-96	520	406	404	452	-
1996-97p	523	-	400	-	-

1 to 1.5 Year Steers (\$ per head)

	North/South Auckland	East Coast	Taranaki Manawatu	Marlborough Canterbury	Otago Southland
1989-90	499	479	540	336	483
1990-91	506	484	570	551	519
1991-92	521	606	561	256	629
1992-93	520	549	521	583	531
1993-94	539	577	549	603	600
1994-95	418	447	444	497	473
1995-96	295	286	208	290	364
1996-97p	- 273	269	230	216	349

Weaner Steers (\$ per head)

	North/South Auckland	East Coast	Taranaki Manawatu	Marlborough Canterbury	Otago Southland
1989-90	290	377	382	235	282
1990-91	291*	383	343	334	399
1991-92	307*	357	405	363	319
1992-93	296*	421	409	423	461
1993-94	289*	419	341	383	472
1994-95	223*	259	237	291	378
1995-96	164*	204	155	230	221
1996-97p	263	257	226	177	221

* Prices influenced significantly by the sale of bobby calves.

Weaner Heifers (\$ per head)

	North/South Auckland	East Coast	Taranaki Manawatu	Marlborough Canterbury	Otago Southland
1990-91	278	254	266	273	261
1991-92	280	249	284	305	218
1992-93	242	295	272	369	309
1993-94	224	293	290	352	353
1994-95	188	185	209	217	237
1995-96	88	235	114	170	225
1996-97p	169	216	181	185	250

1 to 1.5 year heifers (\$ per head)

	North/South Auckland	East Coast	Taranaki Manawatu	Marlborough Canterbury	Otago Southland
1990-91	376	451	512	342	312
1991-92	417	444	493	465	328
1992-93	409	507	384	366	428
1993-94	441	481	458	559	520
1994-95	333	354	293	363	311
1995-96	259	283	208	290	364
1996-97p	273	269	230	216	349

Cows (\$ per head)

	North/South Auckland	East Coast	Taranaki Manawatu	Marlborough Canterbury	Otago Southland
1990-91	399	549	526	527	-
1991-92	392	518	574	550	364
1992-93	560	563	564	647	418
1993-94	503	640	516	569	638
1994-95	438	348	351	611	687
1995-96	307	323	347	357	368
1996-97p	306	324	447	-	273

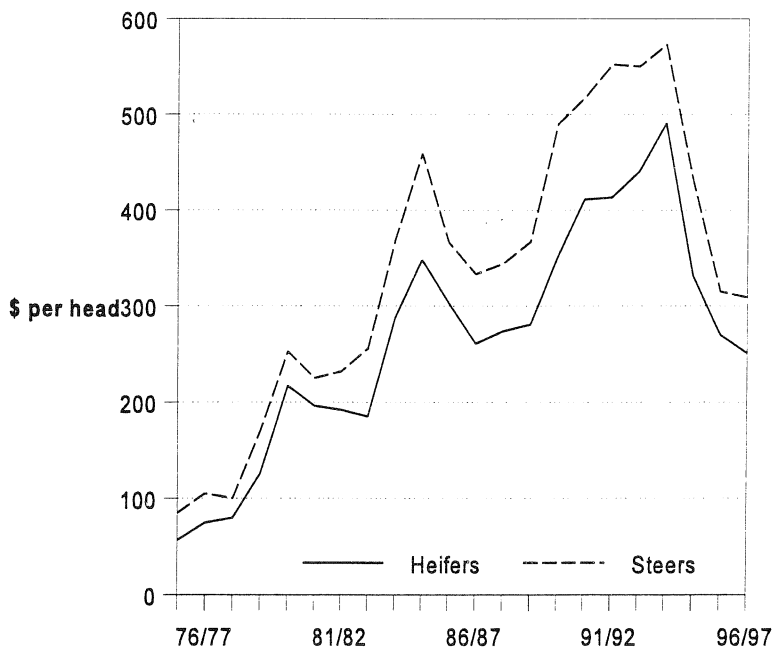
Weaner Steers (\$ per head)

	North/South Auckland	East Coast	Taranaki Manawatu	Marlborough Canterbury	Otago Southland
1990-91	290 *	391	332	333	365
1991-92	305*	371	413	356	337
1992-93	298 *	425	411	419	444
1993-94	291*	418	331	393	385
1994-95	225*	258	231	299	362
1995-96	164*	204	155	230	221
1996-97p	263	257	226	177	221

p = provisional

Source: New Zealand Meat and Wool Boards' Economic Service.

(ii) N.Z. Average Purchase Price for 18 Month Steers/Heifers (1975 to 1997)



Note: 1996/97 figures are provisional

Source: New Zealand Meat and Wool Boards' Economic Service

1.4.7 T.B Compensation

Subject to certain criteria, compensation is payable to the owners of cattle classified as TB reactors. For all TB cattle reactors, compensation will be payable at a rate of 65% of the fair market value of each reactor animal, up to the maximum allowable.

Fair Market Value:

			\$/head
Beef	Breeding cattle	more than one year of age	575
		6 weeks one year	235
	Steers and non-breeding bulls	more than 18 months	790
	Steers and bulls	6 weeks and 18 months	330
	Breeding bulls		2279
Dairy Cattle	Seasonal supply	more than two years	900
		one to two years	500
		6 weeks to one year	325
	Town supply	more than two years	1250
		one to two years	625
		6 weeks to one year	406

No TB reactor compensation will be paid when:

- A farmer wishes to slaughter cattle which have been positive to an approved TB test and the animals are awaiting a retest, as directed by an Inspector or authorised person;
- An owner wishes to retain the meat from a TB reactor for home consumption;
- The owner has not complied with a legal directive to slaughter a TB reactor;
- Pathological evidence of TB is detected in non-reactor cattle at slaughter.

Source : MAF Qual.

1.5 DAIRY PRODUCE

1.5.1 Milksolids Price Trends

Each season, the *New Zealand Dairy Board* announces an advance price to be paid, per kg milksolids, to the Dairy Companies. This may be altered during the season. A final distribution is made at the end of the season, usually increasing the overall total payout price.

The companies are paid by the *N.Z. Dairy Board* on the 20th of each month. After the companies have deducted their manufacturing and administrative costs, and have possibly withheld amounts for capital development, they pay the residual amount to their suppliers on the 20th of the month following delivery, plus a final payout after the season's end.

(i) Dairy Company Payouts

The following Dairy Company payouts are given as examples:

Company	Payout c/kg						
	90/91	91/92	92/93	93/94	94/95	95/96	96/97
<i>Northland</i>	223	313	349	318	323	390	358
<i>N.Z. Dairy Group</i>	253	343	372	339	350	410	369
<i>Kiwi</i>	260	251	376	339	340	408	367
<i>Marlborough</i>	225	317	340	300	310	370	342
<i>Alpine</i>	213	302	335	311	325	362	343
<i>Otago Co-op</i>	266	343	339	313	331	400	370

* up to 4c/kg on capital notes

(ii) N.Z. Weighted Average Payouts (Season Average Prices)

The "average" price quoted below is the average payout made by the Dairy Companies to their farm suppliers (the farm gate price for milkfat supplied that season). The "advance" payment is the average payment received by farmers for milk in the season in which it is supplied; in general the "final" payment being received the following season.

Milksolids in wholemilk for manufacture (cents per kg):

	85/86	86/87	87/88	88/89	89/90	90/91
<i>NZDB-Final</i>	230.32	190.45	205.52	302.68	331.13	212.22
<i>Company margin</i>	1.05	11.81	26.52	22.68	28.57	29.76
<i>NZ weighted average</i>	229.27	202.26	232.04	325.36	359.70	241.98

(See next page for 1992 to 1997 payouts)

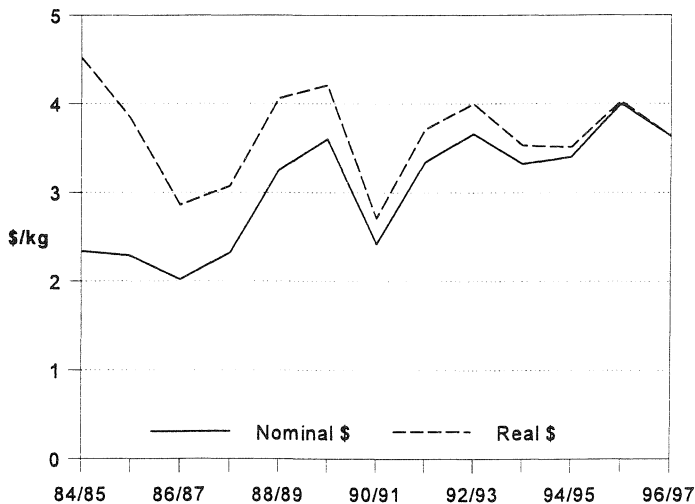
	91/92	92/93	93/94	94/95	95/96	96/97
NZDB-Final	298.03	325.29	290	300	360	318
Company margin	36.42	40.54	41.72	39.85	39.43	44.88
NZ weighted average	334.45	365.83	331.72	339.85	399.43	362.88

Note: The above figures are all cents / kg milksolids. Those prior to 1993/94 have been converted from milkfat.

Source: New Zealand Dairy Board.

(iii) Average Payouts Since 1984 in Actual Dollars and in "Real" Dollars (Based on the value of the Dollar in December 1997 and adjusted for inflation).

Figures are in \$/kg Milksolids.



Source: New Zealand Dairy Board.

1.5.2 Penalties for Poor Quality Milk

Two examples of the penalties imposed by Dairy Companies for poor quality milk in the 1997/98 season are quoted, one for the North Island and one for the South Island.

(i) *Alpine Dairy Products*

Alpine Dairy Products impose the following penalties for the 1997/98 Season

	Grade Level	Actual Deduction of Milk Protein c/kg c/kg		Ready Reckoner - approx. loss of income
up to 10 grading days	First	20	43	10%
	Second	82	170	40%
	Reject	163	340	80%
between 11 and 20 grading days	First	41	85	20%
	Second	163	340	80%
	Reject	327	680	160%
21 grading days and above	First	82	170	40%
	Second	327	680	160%
	Reject	653	1361	320%

Alpine Dairy Products carries out the following Raw Milk Quality Tests

Test	Minimum frequency	Result	Comment on Docket	Test Time
Aerobi Plate Count Bactoscan to be introduced	3 per month	10,000/ml or less 11,000 - 30,000/ml 31,000 - 60,000/ml 61, 000- 190,000/ml 200, 000/ml or more	finest of concern grade warning first grade second grade	72 hours Bactoscan technology same day testing
Thermoduric Plate Count	3 per month	90/ml or less 100 - 290/ml 300 - 599/ml 600 - 2000/ml 2010 - 10, 000/ml 10, 010/ml or more	finest of concern grade warning first grade second grade reject grade	72 hours
Coliform Plate Count	3 per month	less than 100/ml 100 - 400/ml 500 - 1500/ml 1600 - 2000/ml 2010 - 10,000/ml 10, 100/ml or more	finest fair check hygiene grade warning second grade reject grade	24 hours
Inhibitory Substances (see note 1)	Each pickup	less than 0.003 IU >0.003 - 0.006IU >0.006IU	finest second grade reject grade	same day

Sediment	1 per month	7.5mg/300ml or less 15.0mg/300ml 22.5mg/300ml 32.5mg/300ml insects or animal parts	finest grade warning first grade second grade reject grade	same day
Organoleptic Assessment (Senses) (See note 1)	Each pickup	poor unacceptable major defect	finest first grade second grade reject grade	same day
Colostrum	First two pickups and at random after this	less than 0.20% BBG 0.21 - 0.30% BBG 0.31 - 0.35% BBG 0.36 - 0.45% BBG 0.46% BBG or more	finest grade warning first grade second grade reject grade	24 hours
Freezing Point	as required	-0.516 C and lower -0.510 to -0.515 C -0.501 to 0.509 C -0.500 C and higher	finest grade warning first grade second grade	same day
Somatic Cell Count	3 per month	less than 200,000/ml 201,000 - 400,000/ml 401,000 -500,000/ml 501, 000 - 750,000/ml greater than 750,000/ml	finest grade warning first grade second grade reject grade	Samples sent to Livestock Improvement Cooperation
Temperature	Each pick up	17 C and less 18 or 19 C 20 C and above	finest first grade not collected	Measured by tanker driver

(ii) *Kiwi Co-operative Diaries Limited* Quality Testing of suppliers' milk

The cooperative tests are for the following:

Bactoscan, APC, thermodurics, senses, somatic cells, sediment, cress, inhibitory substances, colostrum and added water.

Test	Frequency (min)	Standards (min)	Penalty Rates
Bactoscan	1/10 days random	Finest-Low	0-24,999/ml
		Bacto - High	25,000-49,999/ml
		Bacto alert	50,000-74,999/ml
		First Grade	75,000-149,999/ml (3%)
		Second Grade	>150,000/ml (20%)

APC	1/10 days random	Finest	0 - 74,999
		First Grade	75,000 - 149,999 (3%)
		Second Grade	> 150,000 (20%)
Thermodurics	1/10 days	Finest	0 - 499
		Therm High	500 - 999
		Therm Alert	1,000 - 1,999
		First Grade	2,000 - 4,999 (3%)
		Second Grade	> 5,000 (20%)
Senses	Random	Finest	
		First Grade	First = 3%
		Second Grade	Second = 20%
Somatic Cells	3 per month	Finest	0 - 149,000
		Somatic High	150,000 - 299,999
		Somatic alert	300,000 - 399,999
		First Grade	400,000 - 599,999 (3%)
		Second Grade	> 600,000 (20%)
Sediment	1/10 days	Finest = A	
		First Grade = B	First = 3%
		Second Grade = C	Second = 20%
Cress	As Required	First Grade	First = 3%
		Second Grade	Second = 20%
Inhibitory Substance	1/10 days	> 0.003 iu/ml - if Co notified	1st offence 50% penalty 2nd 100% penalty
		Co not notified	1st offence 100% penalty 2nd 150% penalty
Colostrum	1/5 days (random)		50% of ave price
Excess Water	1/10 days	0.523 H	25% of ave price
		0.523 H (winter milk contracts)	two warnings per season then further penalty

Note: Sharemilkers may carry full financial implication of penalty eg. If the farm has a second grade they lose 40% of income to the farm - the sharemilker will probably carry all this, which if 50:50 sharemilker means 80% loss of income.

1.5.3 Winter and Quota Milk Contracts: (see also *Section 1.5.2* for milk penalties.)

Meadow Fresh Foods operates a two tier system:

- town supply contracts - a set daily number of litres which a farmer is required to supply throughout the whole year (including winter).
Payment for the 1997/98 year (Commencing 1/8/97) is
 - September to April (8 months) \$4.24/kg MS
 - May to August (4 months) \$6.78/kg MS
- winter supply contract - a set daily number of litres in addition to town supply contract (where a supplier also has a town supply contract) which a farmer is required to supply during the three month period 15 May to 15 August. Payment for winter 1998 is \$7.06 kg MS (paid as \$4.78 kg milkfat plus \$9.96 kg protein). To qualify for a winter milk contract a supplier must produce milk throughout the three month contract period.

A supplier must meet winter contract commitments during the contract period, otherwise it will be reduced for the following year (to the daily average of the lowest production month). The company's winter contract volume is reviewed and adjusted annually.

In the Auckland, Waikato and Bay of Plenty regions, a premium of 27.9 cents per litre above the manufacturing payout will be paid for contract milk in May, June and July 1998. This is unchanged from 1997. Some existing *New Zealand Dairy Group* suppliers also hold secondary contracts at 20 cents/litre and period contracts (those who supply for part of the winter months) who formerly supplied *Bay Milk Products Ltd* (now part of *NZ Dairy Group*) hold contracts which pay a premium of 12.5 cents for May and July and 25 cents for June. There are also a small number of contracts at lower rates.

Northland Dairy Company offers a system by which the supplier contracts a nominated volume which has to be supplied within a 20% range to the company for at least 7 out of the 9 winter 10 day periods. All milk supplied over the 20% range receives manufacturers price. The supplier receives a premium above normal payout for supply in May, June and July equivalent to \$1.65 per kg milksolids (Winter 1998).

All milk supplied outside the 20% range receives manufacturers price, plus 50 cents per kilogram milksolids. Participating farmers must supply a nominated volume of at least 500 litres per day. The contract volume is reviewed annually at the farmer's discretion.

1.5.4 Sire Proving Payments

The Livestock Improvement Corporation's sire proving payment for qualifying heifers which are milked this season are:

\$52 for heifers herd tested under self sample system

\$62 for heifers herd tested under self sample assist or sampling officer options.

Provisional payments are set at \$47.

1.5.5. Dairy Cattle Sales (1997/98)

Actual prices for spring 1997 and predictions for 1998 for dairy cattle are presented below for six regions:

Waikato					
Class		<i>Spring 97</i>		<i>Autumn 98</i>	
		<i>High BI</i>	<i>Low BI</i>	<i>High BI</i>	<i>Low BI</i>
Mixed age cows	Friesian	\$800-\$900	\$700 - \$750	\$1000	\$800
	Jersey	\$800-\$900	\$700 - \$700	\$1000	\$700
Rsg 2yr heifers	Friesian	\$450	\$350	\$700	\$600
	Jersey	\$450	\$350	\$700	\$600
Rsg 1yr heifers	Friesian	\$330-\$350	\$250	\$425	
	Jersey	\$330-\$350	\$250	\$380	
4-day heifer calves		\$50 plus \$1/BW unit			

Bay of Plenty			
Class		<i>Winter/Spring 1997</i>	<i>Winter/Spring 1998(E)</i>
MA Cows	Friesian	\$700 to \$1000	\$700 to \$1000
	Jersey	\$600 to \$900	\$600 to \$900
Rsg 2yr heifers	Friesian	\$600 to \$800	\$600 to \$800
	Jersey	\$600 to \$700	\$500 to \$700
Rsg 1yr heifers	Friesian	\$400	\$400
	Jersey	\$350	\$300 to \$400

Taranaki			
Class		<i>Winter/Spring 1997</i>	<i>Winter/Spring 1998 (E)</i>
MA Cows	Friesian	\$700 to \$900	\$700 to \$800
	Jersey	\$850 to \$950	\$800 to \$900
Rsg 2yr heifers		\$600 to \$750	\$600 to \$700
Rsg 1yr heifers		\$240 to \$300	\$240 to \$300
Heifer calves	Friesian	\$80 to \$100	\$80 to \$100
	Jersey	\$50 to \$80	\$50 to \$80
Weaned Calves		\$200 to \$220	\$200 to \$220

- Note:**
1. Rising 2 year old heifers did not sell well in the winter 1997. Vendors withdrew from the market in response to poor prices offered by "bargain hunters". The market still appears to be softening.
 2. Rising 1 year old heifer prices were low with few sales. The market is still weak.
 3. "Budget" cows usually sell in autumn for 'cull cow' price plus \$100 to \$200.

Manawatu/Wairarapa			
Class		<i>Winter/Spring 1997</i>	<i>Winter/Spring 1998 (E)</i>
MA Cows	Friesian	\$1000 to \$1150	\$750 to \$900
	Jersey	\$800 to \$1000	\$600 to \$800
Rsg 2yr heifers	Friesian	\$900	\$600 to \$700
	Jersey	\$800	\$500 to \$600
Rsg 1yr heifers	Friesian	\$450	\$350
	Jersey	\$350	\$300
Heifer calves		\$70	\$50

Canterbury			
Class		<i>Winter/Spring 1997</i>	<i>Winter/Spring 1998 (E)</i>
MA Cows	Friesian	\$700 to \$1000	\$700 to \$1000
	Jersey	\$700 to \$900	\$700 to \$900
Rsg 2yr heifers	Friesian	\$500 to \$700	\$550 to \$750
	Jersey	\$500 to \$650	\$550 to \$700
Rsg 1yr heifers	Friesian	\$250 to \$450	\$250 to \$450
	Jersey	\$200 to \$350	\$200 to \$350
Heifer calves		\$1.00 per BW	

Southland			
Class		<i>Winter/Spring 1997</i>	<i>Winter/Spring 1998 (E)</i>
MA Cows	Friesian	\$1000 to \$1200	\$700 to \$900
	Jersey	-	-
Rsg 2yr heifers	Friesian	\$850 to \$1050	\$650 to \$800
	Jersey	-	-
Rsg 1yr heifers	Friesian	\$300 to \$450	\$300 to \$450
	Jersey	-	-
100kg weaners		\$250 to \$425	\$180 to \$250

Cost of transport from the Waikato to Southland is approximately \$185 per head.

1.5.6 Dairy and Dairy-Cross Calves (Refer also to Sections 1.4.3 and 1.5.7)

(i) Calves sold for rearing (spring 1997):

The price depended on district and sex, breed and weight of calves.

In the Waikato top quality four day old friesian bull calves and beef calves sold for \$50 per head. In Canterbury top quality four day old Friesian bull calves and beef calves sold for \$35 to \$45 per head compared to \$25 to \$30 in 1996. Prices averaged \$70 to \$120 in 1995, \$80 to \$120 in 1994, and \$120 to \$140 in 1993.

(ii) Bobby Calf Price at Farm Gate:

Dairy Meats New Zealand Limited-Boned in hot carcase weight

	11.0-13.5kg (c/kg)	13.6-18.5kg (c/kg)	18.6+kg (c/kg)
1991/92	225.59	288.71	377.52
1992/93	198.17	226.45	287.80
1993/94	133.67	186.31	281.54
1994/95	187.61	215.77	299.59
1995/96	90.0	112.0	140.00
1996/97	62.0	108.0	145.00

Use of these figures as farm gate price for Bobby Calves must be cautioned. They are not a reflection of the average return for Bobby Calves in New Zealand. Each year the value becomes more distorted as companies provide shares, dividends and various rebates.

1.5.7 Dairy Beef Weaners - (Refer also to *Section 1.4.3*)

In the Waikato, weaned 100 kg Friesian bull calves sold for \$190 to \$250 compared to \$280 to \$300 in 1996. In Canterbury during December 1997 Friesian bull calves and beef cross calves sold for \$130 to \$150 compared to \$150 to \$200 in December 1996, \$200 to \$220 in 1995, and \$280 in 1994 and \$350 per head in 1993.

1.5.8 Cow Beef - See *Section 1.4.2 (ii)*

1.5.9 TB Compensation - See *Section 1.4.7*

1.6 DEER PRODUCTION

1.6.1 Venison Schedule (Export)

Schedule information is available weekly from a number of sources.

Grade	Weight	North Island			South Island			NZ
	(kg)	Summit	Duncan & Co.	Game Meats	Duncan Otago	PPCS	Pacifica	Mair
\$/kg carcase weight								
Hind								
AP	30	68	66	67	65	82	74	63
AP	37	105	103	101	103	136	121	100
AP	40	114	112	110	112	148	131	109
AP	45	165	167	168	167	195	155	155
AP	50	200	199	197	199	217	181	193
AP	55	226	225	228	225	266	219	227
AP	60	248	247	250	246	291	240	249
AP	65	269	268	271	267	307	237	270
AP	70	276	268	268	267	331	256	267
AP	75	252	250	258	249	295	268	249
AP	80	241	231	243	231	310	258	222
AP	85	197	199	216	199	329	275	207
AP	90	209	207	220	206	297	237	201
AP	95	221	219	233	218	314	251	213
AF/AT	50	185	177	179	176	155	143	161
AF/AT	60	224	220	223	219	187	195	207
AF/AT	80	197	219	211	219	251	198	182
AF2	70	238	177	240	208	184	169	176
Stag								
AP	30	71	69	70	68	85	77	66
AP	37	109	107	105	106	140	124	104
AP	40	118	116	114	116	152	135	113
AP	45	170	172	172	171	200	160	160
AP	50	205	204	202	204	222	186	198
AP	55	232	231	234	230	272	224	233
AP	60	254	253	256	252	297	246	255
AP	65	275	274	278	274	313	244	276
AP	70	283	275	275	274	338	263	274
AP	75	259	257	265	257	298	275	256
AP	80	249	239	251	239	318	266	230
AP	85	206	208	225	207	338	283	215
AP	90	218	216	229	215	306	246	210
AP	95	231	228	243	228	323	260	222
AF/AT	50	190	182	179	181	160	148	166
AF/AT	60	230	226	223	225	193	201	213
AF/AT	80	205	227	211	227	259	206	190
AF2	70	245	184	240	215	191	176	183

Note: GIB levy and MAF Qual. inspection fees have been deducted from the above figures except PPCS.

Source: "N.Z. Farmer" January 8th 1998

Fallow Schedule:

Example of a fallow schedule as at January 1998

(gross dollars per kg carcase weight) **Grade - AP**

Weight	16 kg	18 kg	21 kg	24 kg	27 kg	30 kg
\$/head	18	39	67	90	102	114

Prices are net of GIB Levy, MAF fees and Animal Health levies.

Source: "N.Z. Farmer" January 8th. 1998

1.6.2. Venison Contracts

One South Island company was offering the following forward contract prices for early 1997 and 1998 (January to March).

Weight range (kg)	Stags c/kg		Hinds c/kg	
	1998	1997	1998	1997
30.1 to 40	400	-	390	-
40.1 to 50	450	643	440	633
50.1 to 70	495	693	475	683
70.1 to 100	475	673	465	663
> 100	445	643	435	634

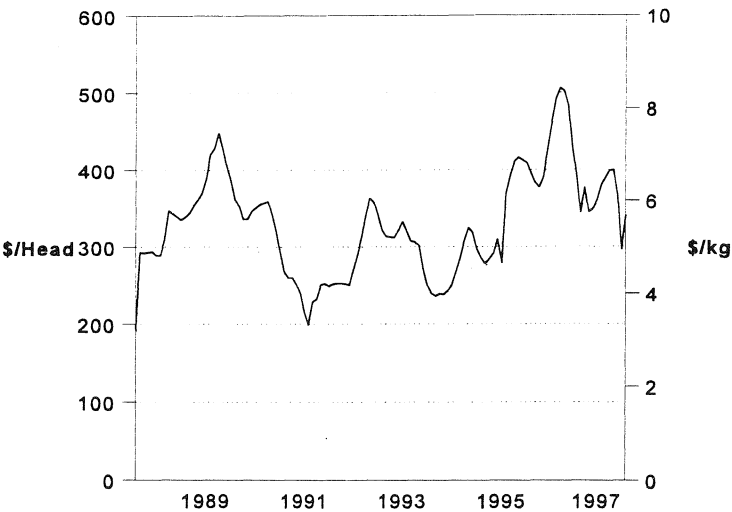
1.6.3 Venison Price Trends**(i) Venison Schedule prices 1989 - 1998**

Grade A 60kg stage schedule (gross)								
1989 - 1990	1990 - 1991	1991 - 1992	1992 - 1993	1993 - 1994	1994 - 1995	1995 - 1996	1996 - 1997	1997 - 1998
\$6.35	\$4.59	\$4.85	\$5.79	\$4.74	\$5.78	\$7.53	\$6.77	\$5.30 - 5.50

- Note: 1. The figures are based on the average weekly schedule for the year ending September.
2. 1997 -1998 figures have been forwarded by *Nimmo Bell and Company*, in consultation with several exporters.

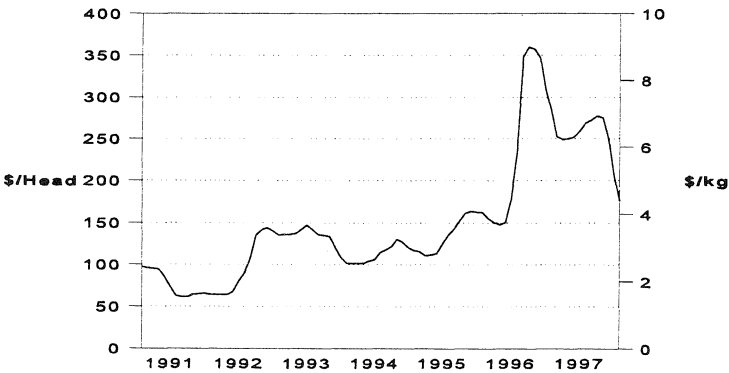
Source: NZ Game Industry Board, *Nimmo Bell & Co.*

(ii) Average Schedule Price for AP Grade Venison (60 kg animal) 1988 to 1997



Sources: Lincoln University; "N.Z. Farmer" 1991-1997

(iii) Average Schedule Price for AP Grade Venison (37 kg hind) 1991 to 1997



Sources: Lincoln University; "N.Z. Farmer" 1991-1997

1.6.4 Deer - Live Sales

Livestock prices vary markedly throughout the year and between districts. Apart from breeding stags, prices will be very dependent on feed availability, freezing works capacity and schedules.

Livestock Prices as at January 1998

The following are estimated price ranges (as quoted by one stock firm):

Red Deer

	\$ per head			
	1994/95	1995/96	1996/97	1997/98(E)
Weaner hinds	100-170	150-200	180-250	120-160
Rising 18mth hinds	250-350	300-350	400-450	250-300
Mixed age hinds	300-350	350-450	450-550	300-400
Cull for age hinds	250-300	250-300	300-400	200-250
Weaner stags	130-180	160-230	220-270	140-200
Rising 18mth stags	250-350	350-400	350-450	250-350
Mixed age velvetting stags	600-1000	600-1000	600-1000	500
Breeding stags	3000-25000	3000-25000	3000-25000	1000-12000

Weaner red deer can also be purchased on a per kilogram live weight basis.

	\$ per kg			
	1994/95	1995/96	1996/97	1997/98(E)
Weaner hinds	2.50-2.80/kg	2.80-3.20/kg	4.00-4.50/kg	1.50-3.00/kg
Weaner stags	2.80-3.20/kg	3.80-4.20/kg	4.50-5.00/kg	2.50-3.20/kg

Wapiti and Wapiti cross

	\$ per head			
	1994/95	1995/96	1996/97	1997/98(E)
Weaner Hinds	180-250	250-300	250-300	200-250
Rising 18mth hinds	350-500	400-600	400-600	350-450
Mixed age hinds	500-1000	500-1000	500-1000	300-700
Weaner stags	250-500	350-600	350-600	200-500
Rising 18mth stags	300-800	400-800	400-800	300- 550
M.A. velvetting stags	600-1400	600-1400	600-1400	350-600
Breeding stags	2500-30000	2500-30000	2500-30000	1000-16000

Source: MAF

1.6.5 Velvet

(i) Velvet Pool Prices by Grade (\$ per kg):

	1997/98	1996/97
Super A	31.00-121.11	56-121
A 1 & 2	30.70-105.77	43-106
B 1 & 2	31.99-107.77	40-108
C 1 & 2	28.20-80.99	32-81
D 1 & 2	25.00-86.77	25-87
E	13.35-75.89	14-76
Manufact.	11.10-58.04	13-58
Taiwan 1	88.20-126.01	100-126
2	30.99-86.60	53-87
3	60.00-95.13	71-95
4	27.99-66.03	37-66
Spiker 1	29.02-104.39	41-104
2	26.30-81.39	30-81
3	9.02-55.10	13-55
Regrowth	11.05-74.55	21-74
Overgrown	8.52-17.11	-
Damaged	10.00-25.20	-

These figures represent a range of prices paid over the November to January period in each season. Prices are net of GIB Levy of \$4.50 per kg, handling/grading charges (\$4 per kg) and commission of 3.5%.

Source: Velpool Holdings Ltd.

(ii) Seasonal Average Prices

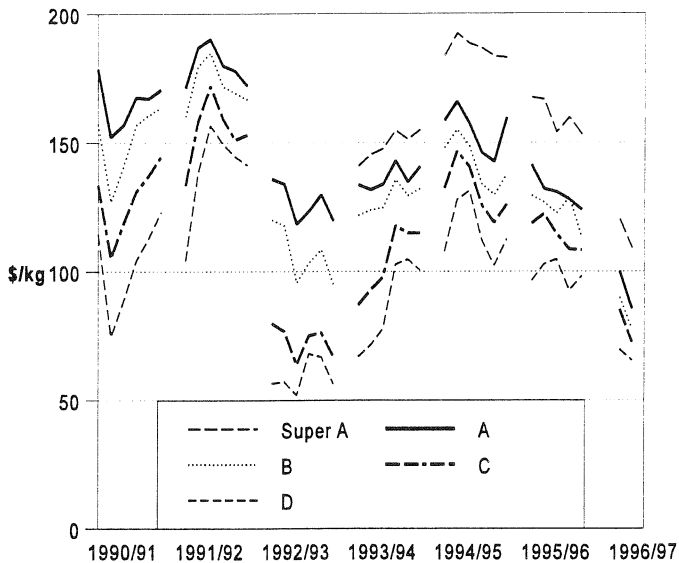
The Game Industry Board Provides the following figures for Red Grade Velvet.

		1994/95	1995/96	1996/97	1997/98*
Average Weighted Pool Prices		\$124.13	\$107.77	\$77.71	\$53.66
Average Grade Pool Prices	A/B	\$152.65	\$128.75	\$92.49	\$61.02
	C/D	\$134.68	\$111.41	\$96.27	\$42.47
SA		\$118.01	\$164.59	\$118.18	\$78.36
A		\$160.05	\$134.87	\$98.10	\$65.47
B		\$149.87	\$125.99	\$88.23	\$57.29
C		\$141.34	\$118.89	\$78.68	\$45.94
D		\$128.01	\$102.89	\$70.38	\$30.15
E		\$104.91	\$81.25	\$55.089	\$22.37
Taiwan		\$137.15	\$120.95	\$106.06	\$69.82
Spiker		\$103.94	\$97.04	\$76.83	\$35.29
Damaged		\$111.33	\$100.50	\$52.29	\$34.33
Manufacturing		\$67.41	\$59.92	\$45.10	\$23.33
Regrowth		\$81.88	\$79.36	\$57.17	\$20.51

* 1998 prices are estimated

Source: Game Industry Board

(iii) National Average Monthly Prices for Velvet, 1990 to 1997 (to January)



Source: Game Industry Board.

(iv) Wapiti Velvet -

The following prices are from the South Island sales

		1994/95	1995/96	1996/97	1997/98
Supreme		\$251.00	\$211 to \$216	\$146.56	85.70
EW1	- long	\$235.00	\$171 to \$191	\$75	-
	- medium	-	-	\$90	-
	- short	\$235.00	\$181 to \$193	\$118.60	68.30
EW2	- long	\$221.00	\$160 to \$171	\$63.99	-
	- medium	-	-	\$75.99	-
	- short	\$221.35	\$177 to \$192	\$120.56	-
EW3	- long	\$185.11	\$121 to \$151	\$65.99	-
	- medium	-	-	\$75.99	-
	- short	\$185.11	\$126 to \$151	\$100.50	-
EW4	- long	\$185.11	\$110 to \$125	\$60.99	-
	- medium	-	-	\$70.99	-
	- short	\$185.11	\$116 to \$130	\$86.99	35.01
EW overgrown		-	\$60 to \$110	\$55.99	-

Source: Wrightsons

(v) Fallow Velvet

Fallow deer velvet sales make an insignificant contribution to the market and rarely grade above B1 to A2. Separate prices for fallow velvet are unavailable for the current season or for 1996/97 or 1995/96.

	\$ per kg		
	1994/95	1993/94	1992/93
A2	-	\$50	\$28 to \$32
B1	\$50	\$45	\$61
B2	\$57	-	\$22
C1	\$36	\$30 to \$45	\$25 to \$32
C2	\$30 to \$55	\$30 to \$41	\$8 to \$15
Damaged 1	-	-	\$10
Manufacturing	\$5	\$5 to \$13	\$2 to \$5
Spiker	\$15	-	\$3
Hard Antler 1	-	-	\$8.50
Hard Antler 2	-	\$5.50	\$5 to \$6

Source: Velpool Holdings Ltd

1.6.6 TB Compensation

No compensation is paid to farmers for deer classified as TB reactors.

1.7 GOAT PRODUCTION

1.7.1 Introduction

Production from goats can be divided into three categories: Meat (chevon), milk and fibre. In conjunction with these, goats can be employed as a viable alternative in weed control.

1.7.2 Goat Meat Prices (Chevon)

(i) Schedule Prices:

These are normally available on a weekly basis, (prices are \$ per head).

Carcase Weight	Grace \$	PPCS \$
4	-1.62	6.70
6	8.88	10.30
8	12.38	13.90
10	19.86	17.50
12	24.18	21.10
14	32.68	24.70
16	36.78	28.30
18	41.58	31.90
20	31.38	14.70

Source: "N.Z. Farmer", 29th January 1998

(ii) Prices in Past Seasons:

Average prices for 17 kg goats were as follows:

	North Island	South Island
1996/97	38.12	32.49
1995/96	25.60	31.18

Average prices for 12 kg goats were as follows:

	North Island	South Island
1995/96	\$15.18	\$18.69
1994/95	\$14.59	\$19.59
1993/94	\$13.49	\$20.41
1992/93	\$9.01	\$15.72
1991/92	\$6.80	\$12.44
1990/91	\$7.40	\$10.80
1989/90	\$8.00	\$13.20

Source: Meat Board News, N.Z. Farmer.

1.7.3 Goat Milk

Milk for processing in 1997/98 will be paid on a milk solids basis at \$9.50 per kg total solids per litre, dependant on the product manufactured. Most milk is converted to milk powder (mainly for export), UHT milk and specialised goat milk infant formula (powder). The industry is concentrated in the Waikato and Taranaki and is restricted to a limited number of suppliers. In other regions, production is limited and returns to individual producers vary widely, depending on local supply and demand. For the 1996/97 season price paid was estimated to be between 85 cents and \$1.00 per litre (North Island).

1.7.4 Goat Fibre

A world wide shortage of all goat fibres has upheld prices which should be sustainable in the foreseeable future.

(i) Mohair Sales

The following are the average prices (\$NZ per kg fleece) for mohair as at December in each year;

Grade	1997 Average Pool Price \$NZ/kg	1996 Average Pool Price \$NZ/kg	1995 Average Pool Price \$NZ/kg	1994 Average Bin Price \$NZ/kg
A O Super Fine Kid (ASFK0)	15.00	13.00	15.00	17.00
A Super Fine Kid (ASFK1)	13.00	11.50	12.00	13.00
B Super Fine Kid (BSFK1)	7.00	7.00	7.00	7.50
A O Kid (AK0)	10.0	9.00	9.00	14.00
A Kid (AK1)	9.00	8.00	8.00	8.00
A 2nd Kid (AK2)	7.50	6.00	7.00	7.50
A O Young Goat (AYG0)	8.00	7.00	6.50	10.00
A Young Goat (AYG1)	7.00	6.80	5.50	9.00
A 2nd Young Goat (AYG2)	6.00	6.00	5.00	4.80
B O Kid (BK0)	7.00	7.00	7.00	9.00
B Kid (BK1)	7.00	7.00	7.00	7.50
B O Young Goat (BYG0)	7.00	7.00	7.00	6.50
B Young Goat (BYG1)	7.00	7.00	7.00	6.50
B 2nd Young Goat (BYG2)	3.00	3.50	4.00	4.30
A Xbred Young Goat (AXBYG)	2.50	3.00	3.00	4.00
A O Adult (AH0)	6.00	6.00	5.50	8.00
A Adult (AH1)	5.00	5.50	5.00	8.00
BO Adult (BH0)	5.00	5.50	5.50	6.50
B Adult (BH1)	5.00	5.00	5.00	6.00
A 2nd Adult (AH2)	4.50	4.50	4.50	7.00
Inferior (XXB3)	1.00	1.00	1.00	2.50
Stained Mohair (STN)	3.50	3.50	3.00	3.50

Heavily Stained Mohair (HSTN)	1.00	1.00	1.00	2.50
Cotted (COTT)	3.50	3.50	3.00	3.50
Coloured Mohair (COLMO)	0.00	1.00	1.00	2.00

Source: Mohair Fibres Ltd.

(ii) Cashgora Sales

All prices are \$ per kg raw fibre.

Grade:	1997 \$/kg	1996 \$/kg	1995 \$/kg
Cashgora A	12.00	13.00	15.00
Cashgora B	8.00	9.00	13.00
Cashgora D	6.00	7.00	10.00
GY/BR (coloured) Cashgora	3.00	5.00	8.00

Note: Cashgora yields from G4 goats range from 0.7 to 1.5 kg per goat.

(iii) Cashmere Sales

Feral goats are typically shearing a fleece of about 300 grams per head per year of which approximately 100 grams is saleable 'Down' cashmere

	1997 \$/kg	1996 \$/kg	1995 \$/kg
WW1/WC1	80.00	95.00	100.00
WW2/WC2	60.00	72.00	80.00
GY1/GY2/BR1/BR2	50.00	65.00	70.00

1994 prices were based on \$100.00 per kg of white down, with a world wide shortage.

1993 prices were based on \$60.00 per kg of down yield, but very little was sold.

Source: Mohair Fibres Ltd.

1.7.5 Goat Fibre Export Price Trends

Table of Fibre Export Prices 1992 to 1996 (year ended June):

	\$/kg				
	1992	1993	1994	1995	1996
Mohair (Fleece)	5.68	4.20	4.21	7.32	6.43
Cashgora (Fleece)	6.91	3.35	7.71	10.57	20.74
Cashmore (Down)	35.31	10.22	28.70	8.36	38.41

1997 figures are unavailable.

1.7.6 Goat Livestock Sales

Typical prices in December 1997 were as follows:

		\$/head
Does -Texan and Zim Angora Purebred and crossbreds		
	Adults	50 to 750
	Kids	50 to 300
Commercial Angoras		25 to 75
Farmed Ferals		15 to 30
Cashmere and Cashgora		10 to 50
South African Boer Purebreds		
	Adults	100 to 1000
	Kids	100 to 500
Boer Crossbreds		
	Adults	40 to 200
	Kids	30 to 200
Wethers (Angora)		20 to 50
Bucks	Texan/ZimAngora purebreds and cross	100 to 1000
	Boer purebreds (meat)	300 to 1000
	Boer crossbreds	100 to 500
	Cashmere and Cashgora	100 to 300

Source: Garrick Batten, Registered Farm Management Consultant

1.8 PIG PRODUCTION

1.8.1 Pork Prices

The *Pork Marketing Board* has set a minimum price to maintain the viability of pig production. Below is an example of a schedule, as at November 21st 1997.

Weight ranges and payments based on "on hooks", "hot" carcase weight, cents per kg (net). These prices are subject to change at short notice.

CODES					
Fat Measure (mm)	A under 35 kg cents	B 35.0-40.0 kg cents	C 40.5-45.0 kg cents	D 45.5-50.0 kg cents	E 50.5-55.0 kg cents
<6mm	245	245	245	245	245
6 - 9	200	245	300	305	305
10 - 12	200	240	295	295	295
13	140	140	170	180	190
14	140	140	140	155	175
15	130	130	140	155	165
16-18	100	100	100	100	100
19+	100	100	100	100	100

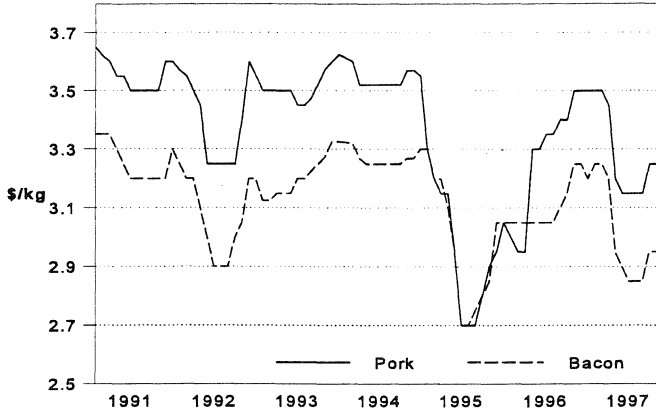
Fat Measure	F 55.5-60 kg cents	G 60.5-65.0 kg cents	H 65.5-70 kg cents	I 70.5-75.0 kg cents	J > 75.0 kg cents
<6mm	245	245	245	245	245
6 - 9	300	290	290	285	285
10 - 12	300	290	290	285	285
13	245	250	250	300	250
14	280	280	290	250	280
15	250	280	280	280	270
16-18	100	100	100	100	100
19+	100	100	100	100	100

Meat Inspection Levy (\$3.00), to make a total of \$7.40 per pig.

1.8.2 Average Pigmeat Returns 1991-1997

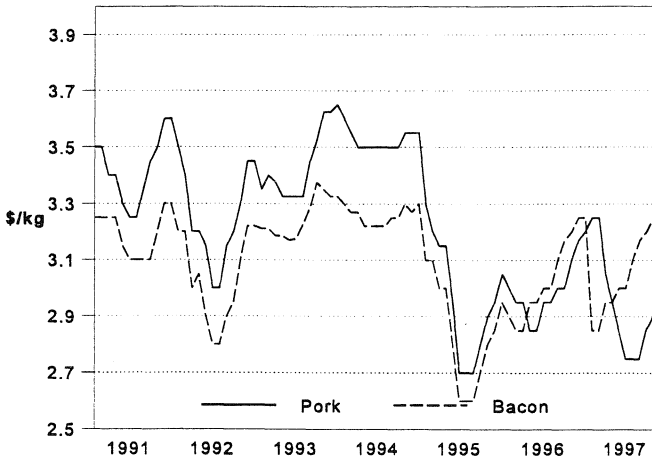
The following are average monthly return for pigs, on a per kg basis, sold in three regions from 1991 to 1997 (C2 Pork and G2 Bacon).

(i) Waikato

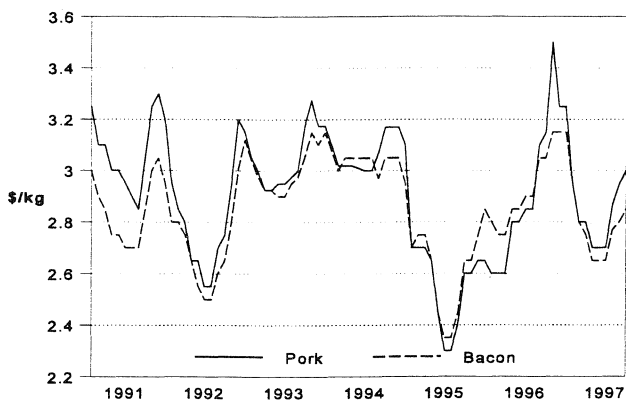


Source: Pork Industry Board

(ii) Manawatu



(iii) Canterbury



Source: Pork Industry Board

1.8.3 Live Pig Sales

	Canterbury (average)	North Island
	\$ per head	\$ per head
Weaners - small	\$20 to \$35	\$35 to \$60
- large	\$60 to \$70	\$75 to \$100
Slips	\$70 to \$85	\$110 to \$138
Stores	\$90 to \$100	\$95 to \$120
Porkers	\$110 to \$150	\$100 to \$175
Bacon	\$150 to \$180	\$150 to \$220
Sows	\$250 to \$350	\$160 to \$310
Choppers	\$150 to \$200	\$120 to \$180

Source: Wrightsons

1.9 EMUS AND OSTRICHES

1.9.1 Introduction

Although well established in other countries ratite farming is a relatively new industry in New Zealand. During the last year Emu and Ostrich farming began shifting from the “Breeding” to the “Commercial” phase.

1.9.2 Meat Prices

Ostrich Schedule as at 15 December 1997

Payment is made at two times:

1. A meat payment will be made on the 20th of the month following processing
2. A pelt payment will be made when COP receives final grading and payment for pelts.
This is about 4 months after processing.

Meat Payment - trimmed carcass weight

	Birds under 14 months	Birds over 14 months
Weight (kg)	\$ /kg	
Under 20	2.00	2.00
30 to 40	2.75	2.00
40.1 to 60	6.00	2.00
60.1 and over	8.00	2.00

Note: 1. Trimmed carcass weight is the weight of the carcass after skinning, removal of the head, removal of the legs below the ‘elbow joint’, and evisceration, removal of fat, and removal of any part of the carcass that has been condemned.

2. For birds where the whole carcass is condemned there will be no payment, but a cost of \$50 per bird

Pelt

Pelts are graded after tanning. Grade is determined by area and damage.

Grade	\$ per sq foot
1	16
2	10
3	4
4	1

Note: 1 sq foot = 0.09 sq metres

As a guide only, commercially processed emus are presently returning Australian farmers approximately A\$350 to \$400 at the farm gate at 12 to 14 months of age at about 40kg. Killing costs are about A\$95 per animal. Ostriches are being processed in smaller numbers returning approximately A\$500 to \$650 at farm gate at a live weight of 100 to 120kg.

A limited quantity of New Zealand Emu and Ostrich meat produced locally is selling for \$45 to \$55 per kg for prime cuts.

1.9.3 Livestock Prices

In New Zealand there are some important variables to consider when assessing the value of individual animals. These include hatch dates and bloodline history, which will strongly influence when birds will begin laying for the first time and how many eggs they will produce. Demand for stock is also a very important factor.

The following prices are those ruling in January of each year.

	1998	1997	1996
	\$/head		
Ostrich			
Chicks (3+ months)*	150 to 500	3,000 to 8,000	8,000 to 15,000
Yearlings	500 to 5,000	10,000 to 20,000	20,000 to 35,000
Adults/Breeders	1,500 to 10,000	20,000 to 40,000	40,000 to 65,000
Emu			
Chicks (2+ months)*	150 to 750	3,000 to 4,000	3,000 to 4,500
Yearlings	500 to 2,000	6,000 to 15,000	8,000 to 15,000
Adults/Breeders	1,500 to 5,000	15,000 to 25,000	20,000 to 30,000

*prices for chicks suitable for growing out to processing age

1.10 CROPS

1.10.1 Wheat

(i) Contract prices 1997/98

Premium and Bread Wheat

Contracts delivered to *Allied Foods Co*:

Premium wheats: Endeavour, Monad, Otane, Domino

Bread wheats: Belfield, Kotuku, Batten, Rata

Protein %	Premium wheats	Belfield, Kotuku	Batten, Rata
	\$ per tonne		
12.6 and above	302.10	296.80	286.20
12.1 to 12.5	296.40	291.20	280.80
11.6 to 12.0	290.70	285.60	275.40
11.1 to 11.5	285.00	280.00	270.00
10.6 to 11.0	279.30	274.40	264.60
10.0 to 10.5	273.60	268.80	259.20

Below 10.0% protein = buyers option to purchase

Wrightsons Nutrition offer milling contracts for *Champion Flour Mills* delivered to either Christchurch or Timaru

Otane	\$345	100 index points
Domino (South Island Only)	\$315	100 index points
Norseman	\$315	100 index points
Monad	\$285	100 index points
Belfield	\$285	100 index points

Note: A storage increment of 10 cents per tonne per day will be paid starting at 1st April.

Biscuit wheat

Contracts delivered to *Goodman Fielder*:

Spread Payment Biscuit wheat contracts for Canterbury have a base price of \$285.00 per tonne delivered wheat x cultivar points x protein index. The preliminary price for the wheat will be calculated by the company from the quality results of the harvest sample. A final price for the wheat will be calculated from the aggregate delivered. Brock, Devoy and Sapphire have 100% cultivar points. Era has 98%.

Fixed Biscuit wheat contracts for Canterbury have a base price of \$270.00 per tonne delivered wheat x cultivar points x protein index. Cultivar points are same as above. Storage payments start April 1 at 1% of the indexed price and increase by 1% per month thereafter up to, and including, January 1999.

Speciality biscuit wheat contracts offered in Southland for the 1997/98 season were: \$237 per tonne for wheat with a protein content of up to 9.5% and \$232.90 for a protein content of 9.6% or above. Brock, Devoy and Sapphire receive 100% with Era getting 98%.

Note: A storage Increment of 1% per month will be paid from 1 April 1998.

Feed Wheat

Contracts offered by *Tegel Foods*

The Spring wheat price for the 1997/98 season is \$198 per tonne (free on rail). A storage increment for any cultivar of 8 cents per tonne per day is paid as from 1st April 1998.

The Winter wheat price is \$223 per tonne (free on truck).

Index 100% for Apollo, Caprimus, Impact, Hunter, Riband and Hussar.

A storage increment of 10 cents per tonne per day is paid from 1st of April 1998.

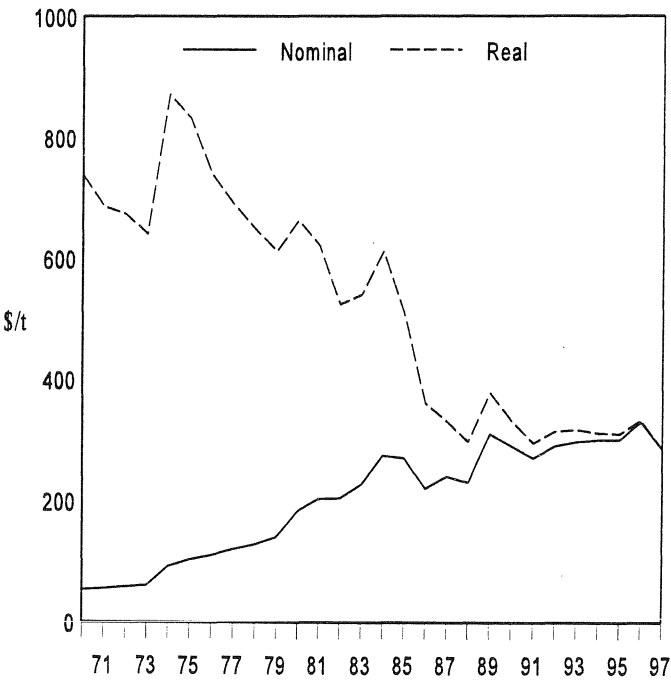
Seed Wheat

Seed crops will usually be based on milling or biscuit wheat contract prices with a premium of 7% over the milling price for 1st generation and 10% over the milling price for basic seed, if up to specification (*Wrightson's Nutrition*).

(ii) Wheat Price Trends:

New Zealand Milling Wheat Prices 1971 to 1997 (Harvest Years)

"Nominal" dollars is the contract price that was paid to South Island growers at harvest each year; "Real" dollars are based on the value of the \$NZ in December 1997 and are adjusted for inflation using C.P.I. figures, for each calendar year, as published by the *Department of Statistics*.



Source: Lincoln University

1.10.2 Barley

(i) 1996/97 Contract Prices:

Malting

The *Canterbury N.Z. Malting Company Ltd* contract price for No. 1 Grade Malting barley for the 1997/98 harvest is \$220 per tonne in the South Island (delivered Rakaia or Ashburton), and \$260 per tonne in the North Island (delivered Marton).

Penalties apply for barley with a screening percentage greater than 5%. (South Island 6 to 10% = \$1 per 1% per tonne. North Island 6 to 15% = \$1 per 1% per tonne). A storage increment is paid at the rate of \$7.00 (South Island) or \$8.15 (North Island) per tonne for delivery up to the 1st of May and a further \$0.09 per day per tonne (South Island) or \$0.10 per day per tonne (North Island) thereafter to December the 31st. In the South Island autumn sown barley prior to the 15th June attracts a \$15 per tonne premium.

Feed

Otago/Southland contracts (*Tegel Foods*) for the 1997/98 harvest were \$185 per tonne (free on rail) or \$175 per tonne ex farm. A storage increment of 6 cents per day will be paid from the 1st of April 1998.

Other contracts of up to \$215 per tonne (delivered) were also available.

North Island contracts were around \$195 per tonne (1997/98 harvest).

Last years prices were higher than this with the South Island receiving between \$210 and \$250 per tonne. North Island growers recieved around \$260 per tonne in 1996/97.

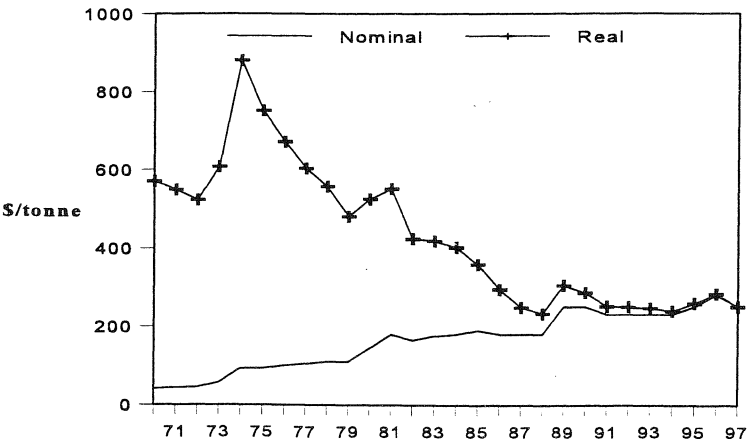
Seed

Contract price for seed barley for the 1997/98 season were the same as feed barley contracts plus a bonus of 7% on the feed barley price. Barley received before the 1st of April does not receive any bonus. Growers may also receive up to \$0.08 per tonne per day from the 1st of April onwards.

(ii) Barley Price Trends 1970 to 1997

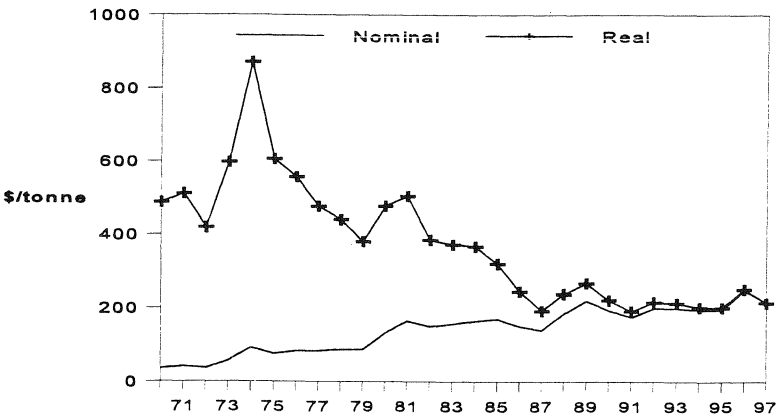
In the following two graphs "Nominal" dollars is the contract price that was paid to South Island growers at harvest each year; "Real" dollars are based on the value of the \$NZ in December 1997 and are adjusted for inflation using C.P.I. figures, for each calendar year, as published by the Department of Statistics.

N.Z. Malting Barley Prices 1971-1997 (Harvest Years):



Source: Lincoln University

N.Z. Feed Barley Prices 1971-97 (Harvest Years):



Source: Lincoln University

1.10.3 Oats / Oaten Hay

South Island contracts for 1997/98 were \$215 to \$225 per tonne if delivered to Dunedin (*Harraways*) and \$215 per tonne if delivered to Gore (*Fleming and Co.*). There is also a storage increment of 7 cents per tonne per day from 1st April 1998. The 1996/97 price ranged from \$240 to \$250 per tonne compared with the 1995/96 average of \$280 per tonne. The 1994/95 average price was \$220 per tonne (Canterbury) and \$200 per tonne Southland.

Wrightson's Nutrition offered \$280 per tonne for field dressed oats and \$310 per tonne for machine dressed oats during the 1996/97 harvest.

Few contracts are available in the North Island, but where they are prices are likely to be \$20 to \$30 per tonne above the South Island prices.

Oat hay in the South Island is currently worth \$35 to \$50 for a conventional round bale (January 1997).

1.10.4 Peas

The prices offered for peas in bulk grown under contract for the 1997/98 harvest were:

Field peas:

Maple	\$400 per tonne field dressed (F.D.) but subject to No.1 grade and maximum dressing loss of 7.5% (Canterbury)
Prussian peas	\$350 per tonne (F.D.) subject to same conditions as above.
Marrowfat peas	\$600 to \$650 for premium grade (<5% bleach)
	\$460 for No.1 grade (5 to 10% bleach)
	\$300 to \$360 for Fair Average Quality (F.A.Q.) grade.(max. 20% bleach)
White Peas (subject to the same conditions as Maples)	
	\$300 to \$320 per tonne (F.D.) Canterbury
	\$275 per tonne (F.D.) Southland

Prices are for prompt payment, higher prices can be received for deferred payment

Garden peas:

Canterbury

Freezer Varieties	\$550 per tonne machine dressed (M.D.)
Onwards	\$550 per tonne machine dressed (M.D.)
Masseys	\$620 per tonne machine dressed (M.D.)
Alderman	\$650 per tonne machine dressed (M.D.)

Freezer peas:**(i) South Canterbury - McCain Foods (NZ) Ltd.:**

Grade	Tenderometer Reading	\$ per tonne packed weight	
		1996/97	1997/98
1	Not over 95	403.00	403.00
2	96 to 100	377.00	377.00
3	101 to 105	333.00	333.00
4	106 to 110	303.00	303.00
5	111 to 115	291.00	291.00
6	116 to 120	266.00	266.00
7	121 and over	248.00	248.00

Note: In addition to these basic prices there was an early and late sowing bonus paid per tonne. For early sowing from 1st August an extra payment of \$30 per day, on a reducing scale of \$1.00 per day from 6 August down to \$5 extra on 30 August. From late sowing from 1 November an extra payment will be paid depending on the type of seed and the sowing date.

(ii) Other Regions

Average prices paid by *Talley's Frozen Foods* for the 1997/98 harvest were \$300 per tonne.

In Marlborough, grade 5 prices were \$330 per tonne, packed weight.

1.10.5 Maize/Maize Silage**Maize**

1996/97 prices received by farmers for growing maize for seed are expected to be in the price range of \$240 to \$265 per tonne, compared with \$265 to \$280 per tonne in 1995/96.

Maize Silage**1997/98**

15 to 18 cents per kilogram can be expected by farmers from the Waikato, Taranaki, Bay of Plenty and Northland areas.

10 to 16 cents per kilogram of dry matter is expected in the Manawatu, Wairarapa, and in the South Island.

1996/97:

14 to 16 cents per kilogram dry matter was paid to farmers from the Waikato, Taranaki, Bay of Plenty, and Northland areas for the 1996/97 harvest and 10 to 14 cents per kilogram dry matter was paid in the Manawatu, Wairarapa, and in the South Island.

1995/96: Fixed Price Contracts for 1995/96 varied by region:

Gisborne \$250 to \$300 per tonne was paid in 1995/96, however very little silage was made in that season.

Bay of Plenty 12c to 15c per kilogram of dry matter was paid during 1995/96.

Waikato Farmers received \$2500 to \$2600 per hectare in 1995/96 compared with \$2500 to \$3750 per hectare during 1994/95.

1.10.6 Ryecorn

South Island:

The 1997/98 price for ryecorn is \$300 to \$320 per tonne, unchanged from 1996/97. The 1995/96 price was \$310 per tonne base price, compared to the price paid for ryecorn in the 1994/95 season which was \$320 per tonne field dressed and 100 index points.

1.10.7 Lentils

Farmers could expect to receive a minimum of \$500 per tonne for the 1997/98 harvest, which is less than the \$600 per tonne farmers received in 1996/97. 1995/96 prices were in the vicinity of \$500 per tonne.

1.10.8 Triticale

Canterbury growers can expect to receive \$220 per tonne for the 1997/98 harvest. The harvest price for triticale for 1996/97 was \$250 per tonne and the price for 1995/96 is \$230 per tonne (Canterbury). The 1994/1995 price for triticale was \$210 per tonne (Canterbury) and \$275 per tonne (Manawatu) (*Hodder and Tolley*).

1.10.9 Lupins

The harvest price for blue lupins for the 1997/98 was \$375 per tonne machine dressed compared to the 1996/97 price which was \$400 per tonne and 1995/96, \$380 per tonne.

1.10.10 Oilseed Rape

Southland growers can expect a minimum of \$475 per tonne for the 1997/98 harvest compared with \$525 per tonne for the 1996/97 harvest (\$500 per tonne 1995/96 and \$490 per tonne 1994/95).

1.10.11 Linseed

Canterbury growers can expect to receive \$480 per tonne during the 1997/98 harvest. In the 1996/97 season the price received for linseed was \$450 which was the same price received for the 1995/96 harvest.

1.10.12 Evening Primrose

\$3.00 to \$3.50 per kilogram is the price expected to be paid to farmers for the 1997/98 harvest, compared with \$3.00 per kilogram received for 1996/97 (*New Zealand Agriseeds Limited*).

Farmers received \$2.50 during 1995/96. The 1994/95 market was weak due to oversupply and the average price in 1993/94 was \$3.00 per kg (subject to quality).

1.11 SMALL SEEDS

The price paid for small seeds is based on machine dressed weight which depends on the purity of the seed line. Prices are very variable and depend on the region and season. The following prices are for first generation certified seed paid to the grower, as at December 1997/January 1998 (information from Canterbury and Manawatu sources).

1.11.1 Pasture Grasses

Ryegrasses:

Proprietary ryegrasses (restricted breeders' rights):

Most have a guaranteed minimum of \$1.25 per kg but higher prices are likely to be paid for some lines, depending on cultivar and season.

Agri-seeds lines Vedette, Ellett, Yatsyn 1 and Dobson have a final price (as at December 1997) for the 1997/98 harvest of \$1.70 per kilogram for perennial and annual ryegrasses for 99% minimum purity, 90% germination and 0.05% maximum weed content. Impact has a final price at December 1997 of \$1.95. A minimum price of \$1.95 per kilogram is guaranteed for hybrid ryegrasses. A final price of \$1.65 is guaranteed for annual ryegrasses. The 1998/99 minimum prices have also been set and these are \$1.40 per kilogram for perennial ryegrasses and annual ryegrasses; Impact will have a guaranteed minimum price of \$1.55. Hybrid ryegrasses have a guaranteed minimum price of \$1.40. A minimum price of \$1.40 has been guaranteed from annual ryegrasses from 1998

Public Ryegrasses:	\$ per kg	
	<i>Midland Seeds</i>	<i>Agricom</i>
Nui, Ruanui (limited quantities)	1.20	1.60 to 1.80
Manawa	1.50 to 1.60	1.50 to 1.60
Moata	1.20 to 1.30	1.30 to 1.75
Tama	1.30 to 1.50	1.50 to 1.75
Samson Ryegrass	-	1.70
Greenstone (both "endosafe" and "endofree")	-	1.50

Other Grasses:	\$ per kg
Advance Tall Fescue (<i>Agricom</i>)	3.50
Kahu Timothy (<i>Midland Seeds</i>)	3.50 to 4.20
Maru Phalaris (<i>Agricom</i>)	5.30
Gala Brome (<i>Pyne Gould Guinness Ltd</i>)	1.30
Matua Prairie Grass (<i>Pyne Gould Guinness Ltd</i>)	1.90 to 2.15
Kara Cocksfoot (<i>Pyne Gould Guinness Ltd</i>)	3.00 to 3.50
Wana Cocksfoot (<i>Crop Marketing New Zealand Society Ltd</i>)	2.00 to 2.50

1.11.2 Turf Species: (Canterbury)

	\$ per kg
Yarrow (<i>Midland Seeds</i>)	15.00
Turf Ryegrasses (<i>Midland Seeds</i>)	1.50
Turf Fescues (<i>Crop Marketing New Zealand Society Limited</i>)	1.50 to 1.70
Browntop (all cultivars) (<i>Pyne Gould Guinness Ltd</i>)	6.00

1.11.3 Legumes:

Maku Lotus: (<i>Agricom</i>)	14.00
White Clover:	
Proprietary lines (multiplication contracts) (<i>Midland Seeds</i>)	4.50 to 5.00
Huia (<i>Agricom</i>)	3.50 to 4.00
Aran (<i>Agricom</i>)	7.00
Grasslands Sustain (<i>New Zealand Agriseeds Limited</i>)	5.25
Prestige (<i>Pyne Gould Guinness Ltd</i>)	4.00
Red Clover:	
Pawera (<i>Midland Seeds</i>)	6.00 to 8.00
(<i>Agricom</i>)	9.00 to 10.30
Other cultivars (<i>Midland Seeds</i>)	3.50 to 5.50
Lucerne:	
Wairau (<i>Midland Seeds</i>)	4.00 to 6.00
Otaio (<i>Midland Seeds, Agricom</i>)	7.50

1.11.4 Chicory

Puna (<i>Agricom</i>)	6.50
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1.11.5 Brassicas: (Canterbury)

Rape (Rangi)	0.80 to 1.30
Kale	1.75 to 2.50
Turnips/Swedes	1.75 to 2.00

1.12 FRUIT PRODUCTION

Prices paid to growers for fruit vary markedly (sometimes by several hundred percent) both within and between years and between districts. They vary daily and are very much dependent on climate and the subsequent effect on both availability and quality of fruit offered for sale. Both the location of property in relation to population centres, and the amount of produce that an individual producer provides over the course of a season influence prices received. Whether the produce is for local consumption or for export is another major influence.

1.12.1 Fruit Prices - Domestic Market

1996	July	Aug	Sept	Oct	Nov
Apples	19.18.	20.92	23.37	23.80	22.13
Avocado	51.59	64.47	58.51	49.32	35.73
Nectarines	-	-	3.68	-	39.98
Strawberries	56.05	40.36	28.47	19.59	24.93

1997	Jan	Feb	Mar	May
Apples	26.24	19.91	26.24	12.23
Avocado	34.93	34.93	39.22	40.00
Nectarines	23.01	-	-	-
Strawberries	19.05	23.83	19.05	61.00

Note: The above figures should be taken as a guide only. They encompass more than one of container in some products, so will be misleading if used as finite references for values. Prices after May 1997 are unavailable as these now remain confidential to the auctioneers and their clients.

Source: *Horticultural News*, January, March, April and May 1997 issues

Fruit Price Trends

The following average monthly prices for the 1995 and 1994 seasons are taken from the Auckland City Markets (*Turners and Growers*). These figures should be read as trends and not finite quotations.

All prices are in dollars and are quoted per pack size as follows:

Kiwifruit, lemons, mandarins, oranges, tamarillos - 15 kg crates

Avocados - bushel crates, 80 to 150 count

Hot house grapes - 5 kg cartons

Nectarines and Peaches - 10 kg lugs

Strawberries - 12 punnet trays

1995 Fruit Prices - Auckland City Markets

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Avocados	38.31	32.79	42.4	41.53	48.05	84.26	93.92	61.36	57.56	38.66	41.76	24.21
H/H Grapes	54.96	35.86	25.7	26.89	29.39	25.26	31.57	49	-	-	37.77	42.95
Kiwifruit	4.5	13.96	58.51	28.23	11.19	5.8	5.7	7.2	27.2	8.21	9.12	8.66
Lemons	35.49	30.59	16.89	20.05	23.79	14.43	9.68	9.66	9.75	10.41	15.18	15.74
Manderines	13.64	24.19	3.64	26.57	23.57	27.28	22.27	23.7	16.74	26.12	19.64	22.09
Nectarines	22.18	21.35	21.08	27	-	-	-	-	-	-	-	29.62
Oranges	16.19	17.06	15.19	17.81	13.21	10.83	16.26	22.78	20.41	20.12	21.44	20.61
Peaches	20.17	15.31	23.03	26.58	-	-	-	-	-	-	-	19.37
Strawberries	18.22	22.75	23.64	27.07	31.87	40.36	41.84	35.58	34.33	19.96	20.27	23.20
Tamarillos	-	-	-	29.57	22.44	15.89	14.46	17.27	15.82	22.44	31.60	23.24

1994 Fruit Prices - Auckland City Markets

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Avocados	37.91	29.36	33.15	33.18	36.94	37.96	38.42	45.88	39.85	39.85	41.76	39.76
H/H Grapes	51.59	37.14	24.44	30.27	33.39	35.79	49.86	-	-	-	-	-
Kiwifruit	11.56	11.71	20.84	16.57	11.77	11.25	11.37	12.34	10.38	10.39	10.18	13.62
Lemons	18.99	20.84	17.40	14.36	12.43	12.46	11.47	11.10	13.11	20.86	19.11	21.72
Manderines	14.12	16.00	20.25	19.68	31.85	27.24	25.42	28.52	25.80	33.38	32.33	26.06
Nectarines	22.55	15.10	14.14	13.29	-	-	-	-	-	-	-	-
Oranges	26.08	19.44	10.45	13.40	12.62	12.75	11.27	18.23	20.81	16.56	17.62	18.93
Peaches	15.60	-	19.8	36.23	-	-	-	-	-	-	-	-
Strawberries	15.37	14.79	28.06	28.10	37.28	35.27	50.08	48.64	38.09	25.50	18.10	18.73
Tamarillos	4.00	-	13.05	23.27	20.95	19.59	19.37	20.75	23.01	35.22	28.32	22.80

1.12.2 Apples

Apples sold to *N.Z. Apple and Pear Marketing Board*

(i) Total Payment to Growers: (Fancy Average Payment)

Variety	1997 Total \$/TCE	1996 Total \$/TCE	1995 Total \$/TCE	1994 Total \$/TCE	1993 Final \$/TCE
Aurora	-	17.07	10.84	-	-
Braeburn	9.72	11.83	11.67	18.92	13.76
Coromandel Red	-	10.30	6.66	15.27	8.98
Cox's Orange Pippin	8.32	15.45	13.66	21.96	17.93
Cripps Pink	-	21.16	6.94	-	-
Fiesta	1.28	11.67	5.32	18.86	17.24
Fuji	11.19	13.03	15.21	18.75	13.93
Gala	12.12	12.03	13.39	18.91	12.55
Golden Delicious	8.72	6.16	6.61	9.02	6.63

Granny Smith	11.92	10.08	5.49	11.08	4.64
Pacific Rose	15.91	20.05	16.23	-	-
Pink Lady	15.18	21.16	-	-	-
Red Delicious	0.46	4.23	6.01	8.62	5.15
Red Dougherty	-	2.11	7.38	4.36	5.18
Regal	3.99	9.54	11.94	17.08	9.58
Regala	-	11.08	12.82	17.94	8.93
Royal Gala	13.07	15.14	17.18	21.53	17.07
Southern Rose	14.21	16.84	-	-	-
Southern Snap	8.65	11.95	11.69	-	-
Splendour	-	11.48	10.01	11.55	16.71
Sturmer Pippin	8.84	11.87	9.99	10.08	5.45

Note 1: Figures are Class 1 export variety pools.

Note 2: A current TCE weighs approximately 18.kg - TCEs pre 1996 weighed approx. 18.5kg

(ii) Advance Payment to Growers

The following table shows how payments to growers are structured.

Types of Payment	Timing
Advance Payment	Within two to three weeks of submitting fruit. This payment is around 50% of the estimated market return for that variety at the time of price setting.
Interim Payment	Within three months of the closing date for a variety, this may be made depending on market returns and whether varietal costs have been met. Interim and progress payments are adjustments to the purchase price and therefore include GST.
Pool Payments	Made once indicative market returns are received and are dependent on the cash flow received. There are usually three payments made, the first two between August and November and a profit payment in early December. No GST is payable on the disposition of seasonal profit.

The Board has the ability to levy growers with a capital charge which is deducted from grower payments. Any requirement for a capital charge is determined by the Board in February of each year.

The capital charge of 20 cents per carton (1996/97) is from the payment distributed to growers. This contributes to the Board's capital expenditure and is determined by

- estimating the Board's Capital Expenditure requirements for the next five years
- deducting its likely level of net borrowing and depreciation for that period
- dividing the net result by the estimated crop that the Board will receive in the five year period.

The effect of using a five year period is to smooth out any unevenness in annual capital expenditure.

(iii) Processing/Standard/Reject fruit submitted ex Packhouses for 1997 were

Initial Payment	\$75.00 per tonne
Supplementary Payment	\$20.25 per tonne
Total Payment	\$95.25 per tonne

Payment varies according to varitey and range from Braeburn \$60 per tonne initial payment + \$20.25 per tonne supplementary payment to Granny Smith \$105 per tonne initial payment + \$20.25 per tonne supplementary payment.

These figures compare with 1996 payments of:

Processing/Standard/Reject	
Fruit submitted ex Packhouses	
Initial payment	\$80 per tonne
Supplementary Payment	\$20 per tonne
Total Payment	\$100 per tonne

Payment varies according to variety and range from

Red Delicious - \$55 per tonne initial payment + \$20 per tonne supplementary payment
to Granny Smith - \$110 per tonne initial payment + \$20 per tonne supplementary
payment

1.12.3 Pears

Pears sold to *N.Z. Apple and Pear Marketing Board*

Total Payment to Growers: (Fancy Average Payment by variety).

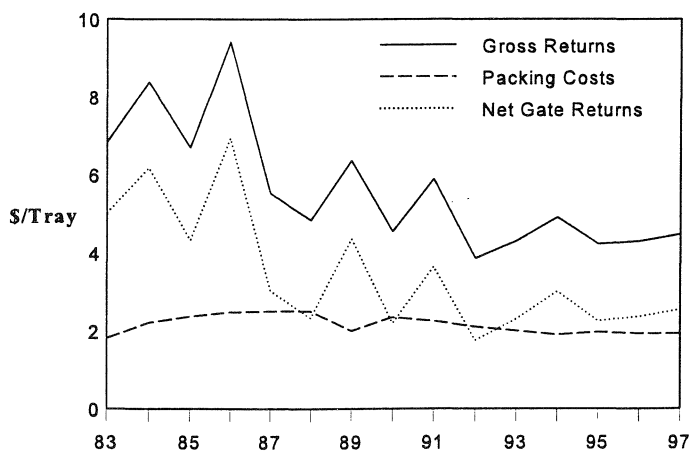
Note 1: 1993 figures are export/premium pool payments.

Note 2: A current TCE weighs approximately 18. kg - TCEs pre 1996 weighed approx 18.5kg

Variety	1997 Total \$/TCE	1996 Total \$/TCE	1995 Total \$/TCE	1994 Final \$/TCE	1993 Final \$/TCE
Beurre Bosc	8.70	12.86	11.59	13.64	12.55
Doyenne Du Comice	18.65	24.37	17.66	26.68	29.79
Packham's Triumph	-	9.56	7.00	9.97	6.35
Taylor's Gold	23.80	23.75	22.47	-	-
Winter Cole	-	-	0.44	9.12	16.22
Winter Nelis	-	-	2.53	10.10	17.63

1.12.4 Kiwifruit

(i) Export Returns to Grower 1983 to 1997



1997 figures are forecasts as at December 1997.

Note: * tray = 3.5 kg

Net Gate Return is to Grower per Tray

(Net Gate Return is Gross Return less Packing Cost and Levy)

	1992	1993	1994	1995	1996	1997 (E)
Gross Returns	\$3.85	\$4.30	\$4.90	\$4.22	\$4.29	\$4.47
Packing and Packaging	\$2.10	\$2.00	\$1.90	\$1.97	\$1.93	\$1.93
Orchard Gate Returns	\$1.75	\$2.30	\$3.00	\$2.25	\$2.36	\$2.54

E = Estimate

Source: Kiwifruit New Zealand

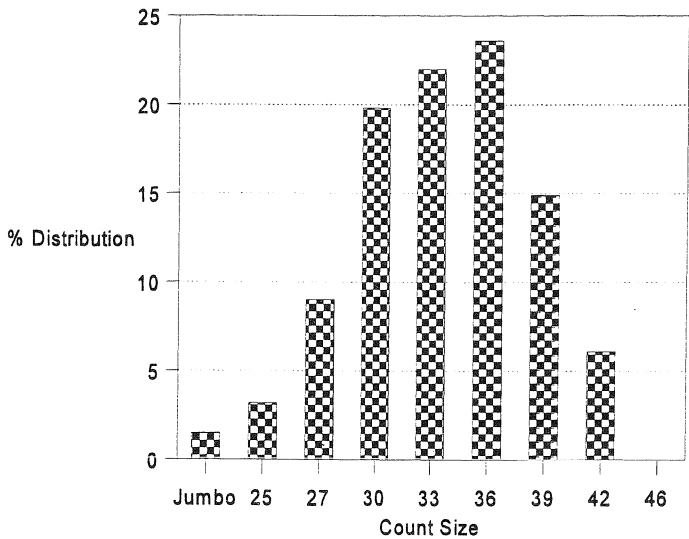
(ii) Net Orchard Return Per Planted Hectare:

1986	1987	1988	1989	1990	1991
\$12,985	\$8,952	\$7,532	\$13,191	\$10,034	\$14,532
1992	1993	1994	1995	1996	1997(e)
\$8,047	\$15,312	\$18,210	\$14,860	\$16,134	\$14,755

Source: Kiwifruit New Zealand

(iii) ‘Ideal’ Production for 1998:

A balanced approach to production with no over-emphasis on either large or small fruit is required for the new season to obtain the ideal crop characteristics.



Note: Essential points of the 1998 payments policy are:-

- Kiwifruit New Zealand will establish the weighted average per tray equivalent return to grower from market realisations.
- Payment for count 33 will be 1.05 x weighted average.
- Payment for count 36 will be 1.00 x weighted average.
- Payment for other fruit sizes will be determined by the profile of the 1998 crop and market realisations.

Source: Kiwifruit New Zealand

(iv) Progress Payments for 1997:

The pattern of 1997 progress payments for the average grower of class 1 fruit was as follows:

	Month	\$/tray
Harvest	July	\$0.75
	August	\$0.20
	September	\$0.20
	October	\$0.08
	November	\$0.26
	December	\$0.37
	Net Storage Incentive paid	\$0.22
Total		\$2.23
	Payhouse payment	\$0.24
	Packaging payment	\$1.23
	Kiwistart incentive	\$0.06
Total		\$1.52
Total to date		\$3.75
Proposed Payments		
	Payable Jan 30	\$0.10
	Net storage incentive Jan 30	\$0.02
	Indicative Feb	\$0.06
	Progress payments to 31 March 1998	\$0.06
	Progress payments from April 1998	\$0.19
	Net storage incentive remaining	\$0.01
	Promissory note	\$0.07
Total		\$0.51
Total available for distribution to growers (June)		\$4.26

Note: Amounts are forecast only for Class 1 fruit.

Source: Kiwifruit Marketing Board

1.12.5 Feijoa

Domestic market

The estimated volume of Feijoa in the 1997/98 season is 600 tonnes with some 20% as Premium Grade. Premium Grade conforms with the *NZ Feijoa Growers Association* "Recommended Local Market Standard".

Wholesale prices (exclusive of GST) for Premium Grade were:

Large (90 kg plus), ranging from \$5 per kg at the start of the season to \$3 per kg mid-season.

Medium (65 to 90 kg), ranging from \$5 per kg at the start of the season to \$2.20 per kg mid-season.

Small, ranging from over \$4 per kg to less than \$1 per kg.

Other grades are paid for at a lower prices sometimes as low as 20c per kg.

In April 1996 the mid season gross returns (2% levy to be deducted) for Feijoas ranged from 20 cents per kg for small fruit (55 grams to 70 grams) to \$2.50 per kg for larger good quality fruit* (90 grams or over).

* Good quality is defined by NZFGA as touch picked, cool stored and with very minor defects.

Export market

40 tonnes is exported annually, mainly to North America. The North American market normally requires tray counts of 39 (55 grams to 65 grams), 33, 36, 30 (90 grams to 100 grams).

Tray weights average about 2.7 kg.

Returns to the grower (after deductions of commission, industry levy, MAF charges, freight etc) range from \$29 per tray at the start of the season to \$12 per tray mid season for the major exporters, with some of the other exporters prices falling to around \$9 per tray.

In 1996 the total exports of Feijoa were approximately 12,000 trays. The average return for exports in 1996 was between \$5.00 and \$6.00 per tray. A typical tray weight is 2.8kg. Mid season prices, f.o.b., are commonly \$13 per tray (USA and Australian markets).

Tray weights are approximately

Large	(90 grams plus) 2.9 to 3.5 kg per tray
Medium	(70 to 90 grams) 2.4 to 2.8 kg per tray
Small	(55 to 70 grams) 2.3 kg per tray

1.12.6 Grapes
Bulk Grapes for Wine Production
1997 Vintage: Average grape price per tonne

	Northland	Auckland	Waikato	Gisborne	Hawkes Bay	Wellington	Marlborough	Nelson	Canterbury	Otago	Varietal Average
Variety	\$ per tonne										
Muller Thurgau	-	-	-	418.17	388.91	-	401.98	-	600.00	-	406.75
Chardonnay: table	1200.00	1253.71	1300.00	1223.59	1340.11	2038.68	1422.03	1347.54	1384.56	1487.34	1325.09
Chardonnay: sparkling	-	935.00	-	-	-	-	1491.82	1331.29	-	1650.00	1483.56
Sauvignon Blanc	-	1116.91	1151.06	808.56	1052.45	1318.24	1233.22	1146.76	850.00	1300.00	1123.35
Chenin Blanc	-	-	803.23	513.99	661.92	-	464.82	-	-	-	595.30
Gewurztraminer	-	1170.14	-	868.22	1118.93	-	1083.28	-	1050.00	-	1001.86
Palomino	-	431.65	-	419.79	418.23	-	-	-	-	-	421.07
Riesling	-	-	-	518.06	878.27	2010.72	876.35	863.91	800.00	425.83	851.13
Muscat Varieties	-	-	-	432.69	434.20	-	-	-	-	-	433.00
Semillon	-	1153.95	-	814.17	985.24	-	1081.32	-	-	-	927.69
Chasselas	-	-	-	378.87	328.77	-	-	-	-	-	361.15
Sylvaner	-	-	250.00	439.18	437.89	-	-	-	-	-	417.95
Reichensteiner	-	-	-	383.81	-	-	-	-	-	-	383.81
Other White Wines	-	600.00	450.00	468.04	481.88	1300.00	1094.35	-	1100.00	-	514.12
Cabernet Sauvignon	-	1385.61	1077.09	912.29	1337.39	1679.46	1222.98	-	1250.00	-	1293.83
Pinot Noir: table	-	1200.00	1091.72	699.62	1256.96	2026.62	1568.34	700.00	1398.30	1717.34	1553.23
Pinot Noir: sparkling	-	-	-	771.50	841.62	2100.00	1057.32	-	-	1650.00	929.34
Pinotage	-	1214.53	-	718.47	-	-	879.20	-	-	-	770.26
Merlot	-	1266.67	-	1154.47	1368.02	1787.82	1426.88	1400.00	1500.00	-	1359.59
Cabernet Franc	-	1400.00	-	1061.96	1558.14	1346.80	1215.89	-	-	-	1313.15
Other Black Varieties	-	700.00	876.72	493.64	1523.63	2000.00	1392.51	-	-	-	885.41
All White Hybrids	-	-	-	-	350.00	-	-	-	-	-	350.00
All Black Hybrids	-	500.00	753.53	-	543.40	-	612.60	-	-	-	581.78
Regional Average	1200.00	943.35	952.17	618.05	842.32	1925.94	1077.93	1146.47	989.86	1418.65	829.42

Note: The figures are from the *Wine Institute of New Zealand's* annual vintage survey and therefore do not include all grapes purchased.

Source: Wine Institute of New Zealand

	Auckland	Gisborne	Hawkes Bay	Wellington	Marlborough	Nelson	Canterbury	Otago	Varietal Average
Variety	\$ per tonne								
Müller Thurgau		405.39	415.90		433.05				414.15
Chardonnay:table	1,186.93	1,024.63	1,301.00	2,035.23	1,371.13	1,329.08	1,554.96	1,741.18	1,218.55
Chardonnay:sparkling	587.38	715.70	892.72		1,377.34			1,200.00	965.16
Sauvignon Blanc	892.82	760.20	977.14	1,408.00	1,195.57	1,281.43		2,816.67	1,104.55
Chenin Blanc		441.11	640.85		587.50				560.84
Gewurztraminer		810.03	1,293.76		1,131.57			1,100.00	985.66
Palomino	385.00	371.81	430.01						403.12
Riesling		439.46	943.40	1,008.04	776.79	935.15	883.02	1,290.32	784.40
Muscat Varieties		415.96	443.96	2,500.00					424.68
Semillon	1,450.00	756.80	852.24		1,020.47				859.60
Chasselas		386.90	388.83						387.55
Reichensteiner		436.13							436.13
Pinot Gris	1,100.00	683.12	1,000.00	1,300.00	1,189.19			1,600.00	861.06
Other White Vinifera	1,000.00	408.37	434.19		971.09				435.41
Cabernet Sauvignon	115.01	883.15	1,469.45	1,706.76	1,236.16				1,376.92
Pinot Noir: table			1,354.53	2,132.32	1,787.75		1,362.50	2,042.11	1,820.20
Pinot Noir: sparkling		739.12	796.71		1,086.89	887.67	650.00	1,200.00	915.03
Pinotage	1,287.50	849.99			819.60				852.64
Merlot		1,160.77	1,474.37	2,144.44	1,566.04	1,500.00			1,428.29
Cabernet Franc	1,240.00	986.22	1,636.96	1,400.00	1,233.14				1,314.77
Syrah			1,503.63	2,000.00	2,072.47				1,824.24
Malbec			1,328.41						1,328.41
Other Red Vinifera	700.00	424.16	975.78		856.06				600.14
All Hybrids		350.00	500.00		550.44				470.39
Regional Average	811.24	591.89	899.55	1,851.45	1,074.10	1,134.49	1,010.68	1,574.13	842.11

Note: The figures are from the *Wine Institute of New Zealand's* annual vintage survey and therefore do not include all grapes purchased.

Source: Wine Institute of New Zealand

1.12.7 Process Fruit

Details of contracts for process fruit are generally confidential and in many cases negotiated with growers on an individual basis. Prices vary markedly with district and season.

Apples:

Canterbury growers were expecting to average 7 cents per kg in 1997/98 for apples to be processed to juice. Hawkes Bay growers were offered \$160 per tonne in 1996/97 (*Grower Foods Ltd*).

Apricots:

Roxdale Food Ltd. (Otago) maximum price paid was \$0.80 cents per kg for processing grade apricots for the 1997/98 season, with the price declining as the quality decreased.

Kiwifruit:

Prices offered to growers in the Hawkes Bay (*Grower Foods Ltd*) were \$80 per tonne in 1997.

1.13 VEGETABLE PRODUCTION

1.13.1 Fresh Vegetable Prices (Auction)

As with fruit, the prices paid to growers for vegetables vary markedly (sometimes by several hundred percent) both within and between years and between districts. They vary daily and are very much dependent on climate and its subsequent effects on both availability and quality of vegetables offered. Again, as with fruit, the location of the property in relation to population centres, and the amount of produce that an individual producer provides over the course of a season also influences prices received. Whether the produce is for local consumption or for export is another major influence for a small range of vegetables.

Wholesale prices paid for a large range of vegetables in the four main centres of Auckland, Palmerston North, Wellington, Christchurch were, until recently, published monthly. However this information now remains confidential to the auctioneers and their clients.

(i) 1997 Vegetable prices

1997	Jan	Feb	Mar	May
Broccoli	11.16	12.83	20.95	11.50
Cabbage	6.20	6.35	5.98	6.50
Capsicum	23.21	11.11	9.46	12.50
Carrots	8.07	10.16	9.83	6.50
Cauliflower	8.70	7.68	11.62	7.00
Celery	14.77	13.74	14.13	10.50
Chinese Cabbage	8.00	7.21	7.59	8.50
Courgettes	18.76	11.71	19.06	25.00
Cucumber (Short)	-	-	-	-
Cucumber (tele)	26.69	21.50	19.95	23.30
Kumara	52.48	34.82	22.07	11.50
Lettuce	6.85	6.23	7.52	9.00
Lettuce Fancy	10.94	11.10	11.45	13.50
Mushrooms	16.79	15.12	16.70	15.00
Onions (table)	8.55	5.70	4.20	8.00
Potatoes	6.37	5.96	5.82	5.20
Tomatoes	16.51	21.57	28.38	22.00

Note: The above figures should be taken as a guide only. They encompass more than one size of container in some products, so will be misleading if used as a finite references for values.

Source: *Horticulture News*

January, March, April, May 1997 Issues

(ii) 1996 Vegetable Prices - Auckland Wholesale Market

Note: prices are \$ per case (buttercup, celery, kumara, pumpkin)
 \$ per bag (carrots, onion, potatoes)
 \$ per crate (cabbage, cauliflower, lettuce)
 \$ per carton (tomatoes)

	Jan	Feb	Mar	Apr	May	June
Broccoli	14.59	15.25	15.94	13.56	14.79	17.13
Cabbage	4.23	6.27	7.36	6.42	4.48	4.99
Capsicum	15.90	9.20	10.76	13.26	20.90	33.52
Carrots	11.56	11.50	6.46	6.42	6.60	6.58
Cauliflower	8.38	7.00	17.12	9.46	9.00	12.18
Celery	16.49	10.93	10.54	9.07	8.40	10.62
Chinese Cabbage	6.03	7.64	6.01	6.47	8.74	10.47
Courgettes	15.90	14.08	14.85	15.14	31.48	32.71
Cucumber short	15.03	19.74	16.07	14.94	25.76	29.06
Cucumber tele	15.47	20.69	21.92	21.82	36.46	38.46
Kumaras	40.40	44.50	26.81	31.44	30.55	31.30
Lettuce	9.51	10.30	6.28	5.52	17.07	12.51
Lettuce Fancy	10.27	12.95	9.17	7.35	13.07	17.73
Mushrooms	13.53	16.92	16.18	16.37	16.78	17.57
Onions (table)	10.22	6.29	3.99	4.26	3.24	3.29
Potatoes	4.76	5.54	5.41	5.34	4.81	4.48
Tomatoes	14.26	9.58	20.03	15.72	40.34	32.37

	July	Aug	Sept	Oct	Nov
Broccoli	15.34	13.09	21.56	17.18	16.87
Cabbage	4.56	4.41	6.00	30.80	7.78
Capsicum	58.40	26.12	28.11	28.22	35.28
Carrots	6.49	6.45	7.75	9.60	9.04
Cauliflower	8.57	6.49	8.99	11.32	8.24
Celery	11.56	13.75	11.82	12.11	17.69
Chinese Cabbage	10.50	9.10	8.54	8.07	4.84
Courgettes	41.22	35.39	60.30	32.12	15.00
Cucumber (Short)	44.46	40.27	29.50	23.90	18.30
Cucumber (tele)	41.07	52.99	33.80	40.81	18.90
Kumara	34.09	33.42	33.48	36.85	39.77
Lettuce	7.21	16.30	17.98	7.40	4.92
Lettuce Fancy	17.91	17.32	15.00	10.04	9.12
Mushrooms	17.04	18.61	17.77	17.59	17.51
Onions (table)	3.33	3.68	3.05	4.27	4.44
Potatoes	4.56	4.21	3.67	4.46	6.18
Tomatoes	32.74	39.54	40.24	37.73	22.89

Source: "Horticultural News" 1996 Issues

(iii) 1995 Vegetable Prices - Auckland Wholesale Market

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Broccoli	13.56	13.58	18.90	18.97	30.93	21.43	20.06	18.40	21.47	20.39	11.74	9.70
Cabbage	4.43	4.38	5.77	7.83	10.89	9.32	9.68	10.87	10.54	6.38	7.12	3.00
Capsicum	16.66	8.93	13.90	13.58	15.52	31.39	21.27	25.79	29.01	40.91	35.65	21.10
Carrots	16.69	15.76	9.76	8.90	8.66	8.21	8.16	7.51	5.62	11.58	10.67	12.50
Cauliflower	12.05	11.71	15.39	14.56	18.23	15.46	12.77	7.14	7.75	12.60	9.14	5.90
Celery	14.57	12.67	9.62	9.78	13.98	12.83	13.87	18.14	23.16	10.13	20.37	20.43
Chinese Cabbage	6.87	8.23	8.06	8.23	8.65	8.04	11.81	10.33	8.31	8.60	7.78	4.48
Courgettes	13.33	11.18	11.02	7.96	19.25	23.91	30.77	20.50	21.90	40.51	18.51	12.33
Cucumber short	14.01	12.07	9.76	12.72	20.11	27.56	28.68	28.75	26.74	22.66	15.40	12.20
Cucumber tele	22.96	19.32	17.40	27.07	31.11	29.44	38.92	32.14	27.00	24.33	17.37	14.60
Kumaras	26.18	23.58	17.03	21.06	26.48	30.18	30.15	30.11	30.26	27.99	33.30	37.24
Lettuce	5.33	7.93	9.49	17.48	20.85	15.04	18.06	22.88	16.06	7.46	4.48	4.46
Lettuce Fancy	9.24	10.75	11.60	14.69	16.74	15.68	18.98	25.34	15.21	8.13	8.18	10.50
Mushrooms	13.23	13.80	13.43	14.31	15.16	14.79	14.63	16.05	15.80	15.80	16.94	17.50
Onions (table)	13.70	14.62	12.40	12.28	12.76	11.98	9.93	12.14	15.95	13.84	12.05	13.20
Potatoes	10.60	12.34	10.71	10.00	9.00	9.00	8.61	8.03	7.60	7.62	7.45	7.75
Tomatoes	16.43	13.28	17.26	15.71	25.51	27.62	22.58	26.64	37.05	31.63	23.83	13.92

Source: "Horticulture News" 1995 Issues

1.13.2 Process Vegetable Prices

Note: Details of contracts for process vegetables are often confidential, especially those for organically grown crops.

(i) Asparagus

1997/98 harvest prices for Hawkes Bay (*McCain Foods (NZ) Limited*)

1st Grade	\$1.82 per kg	(\$1.82 - 1996/97, \$2.02 - 1995/96, \$2.40 - 1994/95, \$2.42 - 1993/94)
2nd Grade	\$1.20 per kg	(\$1.20 - 1996/97, \$1.35 - 1995/96, \$1.65 - 1994/95, \$1.65 - 1993/94)

(Average 95% 1st Grade; 5% 2nd Grade)

(ii) Beans

Green and Yellow Beans

1997/98 harvest prices for Hawkes Bay green beans

Average Seed Length	\$ per tonne
under 10mm	\$287
10 - 11mm	\$269
11 - 12 mm	\$252
over 12 mm	\$240

Source: *McCain Foods (NZ) Limited*

Whilst details of contracts are confidential one Canterbury grower was expecting to net an average \$290 per tonne for green beans and \$310 per tonne for yellow beans.

1996/97

Prices for Hawkes Bay were:

Green Beans Grade A to C range from \$245 to \$293

Grower paid for seed.

Baby Beans	under 8 mm	\$332/tonne
	8-10 mm	\$293/tonne
	10.1-11 mm	\$275/tonne
	over 11 mm	\$257/tonne

Source: Growers Foods Ltd

Whole Beans**1997/98 prices**

Average Seed Length	\$ per tonne
under 8 mm	325
10 to 8 mm	287
over 10 mm	269

Source: McCain Foods (NZ) Limited

Broad Beans

Talley's Frozen Foods paid farmers \$476 per tonne for broad beans in the 1997/98 season.

(iii) Beetroot

Prices paid to growers over the 1996/97 and the previous three seasons average was \$125 per tonne. (*Grower Foods Ltd*).

McCain Foods (NZ) Limited is no longer processing beetroot.

(iv) Carrots

1997/98 prices (*McCain Foods (NZ) Limited*)

Washed top - grade one \$240 per tonne

1996/97 prices (\$ per tonne)

Manawatu	\$89.00 per tonne (same as 1994/95)
South Canterbury (<i>McCain Foods Ltd.</i>)	\$112 per tonne

Hawkes Bay (*Grower Foods Ltd*)

Carrots for dicing	grade 1	\$105 per tonne
	grade 2	\$60 per tonne

(v) Garlic

The price varies tremendously throughout the season, depending on the demand and market. There are three markets for garlic; Fiji, Australia and New Zealand and therefore three different prices received by farmers depending on what market they sell their garlic to \$2.50 to \$3.00 is the Fijian price for 1997/98. \$3.00 to \$4.00 is the Australian price and Garlic sold on the local market can fetch anywhere between \$2.40 to \$3.00 depending on the year and supply. The 1996/97 prices were \$3.00 to \$3.50 (Fiji) \$3.50 to \$4.50 (Australian), and local market fetched between \$3.00 to \$7.00.

(vi) Onions

The price for onions varies a lot during the year depending on supply and demand. PLK onions were sold for \$4 per 20 kg bag in Canterbury for the 1997/98 season. One Canterbury grower expected to receive \$12 to \$10 per 20kg bag at the beginning of the season, for table onions with this price dropping to \$4 to \$5 per 20kg bag by the middle of the season. The price for Jumbo onions was expected to average out at \$5 to \$7 per 20kg bag although early season prices could be as high as \$17 per 20 kg bag. Choppers were expected to receive \$3 to \$4 per bag in the 1998 season. Last year table onions fetched \$900 per tonne, Jumbos, \$990 to \$1125 per tonne and Choppers, \$360 to \$540 per tonne during the 1995/96 season. Onions were worth between \$300 and \$350 per tonne in the Manawatu for the 1996/97 season.

(vii) Peas

Details of contracts are confidential. However one Canterbury grower was expecting to net \$260 per tonne for vining peas grown in 1997/98.

(viii) Potatoes

Talley's Frozen Foods contract prices for the 1997/98 harvest was \$180 per tonne. *McCain Foods (NZ) Ltd* contract prices for the 1997/98 harvest were \$175 per tonne for processing (french fries). Contract prices for the 1996/97 and 1995/96 harvest were \$180 per tonne.

(ix) Sweet Corn

Note: Price includes harvesting and delivery to the factory.

1997/98 Prices for Canterbury

A grade	\$126.00
B grade	\$119.00
C grade	\$108.00
Supersweet	\$129.00

Source: McCain Foods (NZ) Limited

Hawkes Bay (price excludes harvesting and delivery to the factory)

1996/97	A grade	\$120 per tonne
	B grade	\$113.40 per tonne
	C grade	\$102.50 per tonne
	Supersweet	\$123 per tonne
1995/96		\$128.80
1994/95		\$140

Source: Grower Foods Ltd

McCain Foods (NZ) Ltd paid \$148 per tonne to growers in 1996/97 (price included harvesting and delivery to the factory).

(x) Zucchini:

Canterbury farmers were offered 50 cents per kg for zucchini in the 1997/98 season by Talley's Frozen Foods.

1.13.3 Main Crop Potatoes

Manawatu:

1998 \$225 to \$300 per tonne.

1997 \$250 to 350 per tonne.

1996 \$300 per tonne.

1995 \$250 to \$300 per tonne.

1994 \$100 to \$220 per tonne due to high yields and surplus supply.

Canterbury:

Due to the dry season the returns expected for potatoes in Canterbury this season are reduced substantially from last year. December 1997 the price expected to be received by one Canterbury farmer was \$80 to \$90 per tonne for export market potatoes and \$100 per tonne for local market.

Prices received for potatoes in 1996/97 were \$400 to \$500 per tonne or higher as the total area was limited.

Southland:

Main crop potatoes for the 1997/98 season in Southland are expected to sell for \$300 to \$500 per tonne, unchanged from last year..

1.13.4 Kabocha (Buttercup Squash)

North Island:

For the 1997/98 season Kabocha contracts were expected to range from \$0.15 to \$0.45 per kilogram (same as 1995/96 and 1996/97) and it is predicted that the 1997/98 harvest will be between 70,000kg and 80,000kg.

Uncontracted kabocha is sold on the spot market and is very dependent on season and availability of the product. In a poor growing season, with lower yields, prices are higher.

Source: Growex Limited

Squash for processing:

Canterbury farmers were offered 50 cents per kg for squash grown for processing in 1997/98. (Talley's Frozen Foods).

1997 Auction Prices - Auckland

Figures are \$ per 5,10 or bunch

	Jan	Feb	Mar	April	May	June	July	August	Sept	Oct	Nov	Dec
Carnation - spray (per 10)	1.91-3.30	1.06-2.11	2.36	2.34-3.28	4.43-5.77	4.84-5.77	4.15-5.30	2.72-3.44	2.44-3.19	3.00-4.20	1.12	1.10-3.48
- standard (per 10)	1.70-3.80	1.48-2.88	2.89	2.86-4.85	-	4.74-6.72	4.70-6.30	2.86-4.85	2.61-4.36	3.19-3.80	1.10	1.03-5.38
Chrysanthemums (per 5)	3.00-6.16	2.64-5.37	4.52	6.33	3.13-6.54	3.00-6.83	3.00-6.79	1.00-5.90	2.10-4.28	2.60-5.34	1.90-3.70	1.53-4.80
Rose (per 10)	1.90-13.71	1.99-15.80	1.99-12.52	1.95-10.14	3.67-11.78	4.10-15.90	4.36-16.00	4.60-18.42	2.90-15.65	1.87-13.97	2.90-10.86	1.79-11.04
Agapanthus (per 5)	1.02	-	-	-	1.56	2.15	2.67	-	-	1.34	-	-
Ageratum (per 5)	1.87	1.52	1.68	1.89	2.24	2.48	3.50	2.15	-	1.73	1.46	1.34
Alstroemeria (per 5)	1.74	1.60	-	-	4.34	3.61	3.15-3.78	2.59-3.14	1.50-2.34	1.87	1.56	1.42-2.31
Anemone (per 10)	-	-	-	2.31-2.60	1.46-2.88	2.10-2.48	2.00-2.56	1.41-2.36	-	2.28	-	-
Daffodil (per 10)	-	-	-	-	0.93-2.50	2.68-3.25	1.41-1.97	0.85-1.95	-	-	-	-
Delphinium (per bunch)	1.69-3.61	1.46-2.61	1.86	2.35-3.31	3.12-4.31	4.09-5.05	4.31-4.66	-	2.53-3.00	3.24-3.76	2.40-2.79	1.02-2.95
Freesia (per 10)	2.00-3.00	-	-	3.07	1.59-1.67	2.90	-	2.33-2.90	2.15-3.03	-	2.37-2.85	-
Gerbera (per 5)	2.47-5.25	1.83-5.48	2.14-5.26	2.37-5.36	4.21	4.51	5.16	-	-	-	3.15-4.11	2.20-3.95
Gypsophylia(per bunch)	2.66-3.20	2.09-3.15	4.25	4.85	6.63	8.89	9.16	8.78	2.97	-	1.75-2.60	1.87
Iris (per bunch)	1.74	1.53-2.10	1.39-2.05	1.21-2.15	1.70-2.79	3.29-4.45	1.85-3.60	1.29-3.10	1.00-3.44	1.79-2.97	-	1.86
Lily (per 5)	2.41-5.35	2.13-4.06	2.35-5.03	2.55-5.11	2.87-6.05	3.00-8.17	2.96-10.40	2.64-7.03	2.49-6.13	3.27-5.22	2.69-4.70	1.65-6.37
Ranuncula (per bunch)	-	-	-	1.31-1.90	2.73-3.16	2.45-3.24	1.88-2.70	1.56-2.09	2.15-2.60	1.42-1.72	-	-
Snap Dragon (per 5)	1.45-2.00	-	1.38-1.86	1.29-1.86	1.76-2.21	2.76-4.09	2.79-3.84	1.62-3.24	1.29-1.81	1.50-2.20	-	0.97-1.63
Statice (per bunch)	1.18-3.05	1.77-2.35	1.78-2.86	1.59-3.13	3.75-5.66	-	-	-	7.80-8.53	1.33-5.50	1.76	1.04-2.03
Stock Double (per 5)	3.00	3.40-4.24	3.56-4.35	3.16-4.57	3.32-4.70	5.14-6.17	2.79-3.99	2.57-3.48	1.59-2.80	1.84-2.92	1.72-2.23	-
Tulip (per 5)	2.09-4.06	1.69-2.62	1.78-3.24	2.00-3.38	1.96-4.02	2.40-5.40	4.39-5.33	2.33-4.16	1.41-3.81	1.13-2.45	-	-

Source "Horticultural News" 1997 Issues

1996 Auction Prices

	Jan/Feb	Feb/Mar	Mar/Apr	Apr/May	May/June	June/July	July/Aug	Aug/Sept	Sept/Oct	Oct/Nov
Carnation										
-Spray (per 10)	145-2.01	1.80-2.96	3.78-5.53	3.43-5.09	3.00-5.27	4.95-6.02	3.99-5.59	3.31-4.84	1.97-3.80	1.85-2.84
-Standard (per 10)	1.37-2.03	2.64-4.10	3.27-5.26	4.28-6.60	4.20-5.32	4.57-6.82	5.61-6.75	7.26-8.26	2.00-4.11	1.87-4.36
Chrysanthemums (per 5)	2.42-4.48	2.98-4.40	3.38-6.86	3.82-7.89	3.25-7.19	3.68-7.28	3.28-9.42	3.44-10.05	1.68-4.89	2.10-7.47
Rose (per 10)	2.13-9.30	2.92-8.29	3.14-8.33	4.44-11.53	4.55-11.47	6.26-17.13	7.25-21.16	3.45-19.43	2.99-20.25	2.46-14.21
Agapanthus (per 5)	-	-	-	2.90	-	2.95	2.98	2.95	1.98	-
Ageratum (per 5)	1.75	1.70	2.39	2.80	2.93	3.20	2.99	2.86	1.87	2.03
Alstromeria (per 5/10)	-	1.95	-	2.91-3.72	2.99-3.32	3.54	2.67	2.88-3.34	1.30-1.85	1.82
Anemone (per 10)	-	-	2.18-2.90	2.20-2.43	2.02-3.03	1.82-.55	1.54-1.87	1.75-2.40	-	1.38-1.85
Daffodil (per 10)	-	-	-	-	0.66-3.25	1.65-2.70	0.89-1.13	1.16-2.16	1.30-1.40	-
Delphinium (per bunch)	1.53-1.80	2.74-3.35	3.32-3.51	3.78-3.89	3.20-4.20	3.76-5.01	3.93-4.46	4.02-5.10	1.18-3.89	1.41-3.57
Freesia (per 10)	-	-	-	3.15-4.40	3.94	3.70-3.79	2.98-3.45	2.13-2.87	1.97-2.36	1.73-2.70
Gerbera (per 5)	2.54-5.00	3.28-4.60	3.60-6.17	3.65-7.27	4.80-7.02	2.97-8.35	3.54-7.30	3.64-7.12	2.46-5.70	2.14-5.11
Gypsophila (per bunch)	2.31	2.87	5.54	6.78	7.85	7.90	6.80	10.38	1.76-2.12	3.87
Iris (per bunch)	-	2.88-3.01	2.47-2.90	2.98-4.69	3.40-3.77	4.12-4.60	3.67-4.15	2.09-2.98	1.05-3.23	1.56-1.91
Lily (per 5)	2.16-2.93	2.34-4.78	4.88-7.42	4.19-7.03	3.38-6.26	4.64-6.73	3.70-5.85	1.26-5.68	1.20-3.99	2.80-9.20
Ranacula (per bunch)	-	-	-	3.33-4.14	3.59-4.04	3.09-3.60	2.19-3.10	1.93-2.33	1.17-1.51	-
Snap Dragon (per 5)	1.13-1.89	1.80-2.60	2.44-4.03	2.70-4.93	3.15-4.26	3.00-4.80	2.90-3.86	3.21-5.10	1.53-2.09	1.43-2.32
Statice (per bunch)	2.68-2.69	1.51-2.21	3.21-4.68	5.66-5.86	8.03-8.78	2.92-9.68	4.85-8.16	-	4.27-6.26	3.89-4.68
Stock Double (per 5)	-	-	3.81-6.18	3.84-4.76	3.00-5.80	5.14-6.17	2.79-4.99	2.57-3.48	1.27-2.50	2.10-2.75
Tulip (per 5)	-	4.91-4.92	3.41-4.95	3.73-4.79	2.97-5.10	2.40-5.40	4.39-5.33	2.33-4.16	1.50-1.90	1.24-1.65

Source: "Horticulture News" 1996 issues

1995 Prices:

Figures are \$ per 5, 10 or bunch (as stated)

	Jan/Feb	Feb/Mar	Mar/Apr	Apr/May	May/June	June/July	July/Aug	Aug/Sept	Sept/Oct	Oct/Nov
Carnations:										
-Spray (per 10)	1.86-2.81	1.56-2.60	2.48-3.89	3.34-3.99	4.53-5.99	5.27-6.25	6.08-7.18	4.88-6.40	2.34-4.70	1.95-3.62
-Standard (per 10)	1.43-2.25	2.34-3.42	3.44-4.20	3.59-5.03	4.95-6.13	-	-	-	2.35-3.89	2.68-4.20
Chrysanthemums (per 5)	3.14-4.32	3.20-4.47	3.61-5.22	2.39-4.20	3.69-8.09	3.71-7.75	5.93-10.60	4.21-9.59	4.56	3.22-4.84
Rose (per 10)	3.32-6.82	3.01-6.02	2.23-6.57	3.63-6.80	4.53-10.29	5.70-11.20	7.89-13.52	6.41-12.61	5.89-11.44	3.12-7.04
Agapanthus (per 5)	-	-	-	2.23	3.02	2.99	3.05	2.68	2.02	1.94
Ageratum (per 5)	1.83	-	2.64	2.86	3.13	3.20	4.13	2.78	2.01	1.87
Alstromeria (per 5/10)	2.11-2.36	2.31-2.69	2.67-2.94	2.52-3.29	3.65-4.39	4.09-4.53	5.02-5.42	-	1.85-2.51	1.68
Anemone (per 10)	-	-	1.97-3.08	2.41-2.55	2.43-2.80	2.18-2.61	2.35-2.61	1.57-1.84	1.45-1.74	1.52
Daflodil (per 10)	-	-	-	-	1.02-2.12	0.90-2.78	1.54-2.95	1.05-1.34	-	-
Delphinium (per bunch)	2.87-3.23	3.14-3.84	2.45-3.15	4.34-5.10	4.70-5.97	5.20-5.67	5.54-6.27	4.45-6.13	2.98-7.17	1.69-3.83
Freesia (per 10)	1.96	-	-	3.99-4.48	4.19-4.80	4.18-5.30	3.57-4.62	1.09-2.34	1.45-1.71	1.58-2.60
Gerbera (per 5)	3.03-5.51	3.71-5.72	4.22-6.16	4.13-6.68	4.70-6.53	5.39-7.16	5.80-7.38	5.06-6.79	3.78-5.99	2.59-4.55
Gypsophila (per bunch)	-	3.12-3.39	5.13	2.76-2.90	4.30-4.38	12.85-13.42	10.49-12.98	7.89-8.86	6.03-6.29	5.25
Iris (per 5)	3.99	1.61-3.40	2.28-2.88	3.02-4.39	4.26-4.77	4.36-4.85	4.96-6.30	2.16-4.64	1.94-2.54	2.69
Lily (per 5)	2.72-5.66	3.89-6.30	3.43-10.94	3.07-4.51	4.21-12.02	5.09-7.11	4.51-7.33	2.77-8.05	3.22-4.69	3.81-6.20
Ranunula (per bunch)	-	-	3.31	2.12-4.90	4.28-5.09	-	-	2.63-3.91	2.18	1.58-2.80
Snap Dragon (per 5)	1.46-1.66	1.52-2.08	2.23-2.91	2.78-4.11	3.73-5.10	4.08-5.12	5.56-6.36	3.02-3.69	1.71-2.44	2.23-3.09
Statice (bunch)	3.13-3.36	3.45	3.34-3.96	2.80-5.10	3.50-3.82	8.68-8.97	4.93-7.01	5.02-5.38	3.17-4.47	1.75-4.33
Stock Double (per 5)	1.90-2.32	-	4.07-5.11	4.07-4.47	3.89-6.35	4.33-6.85	6.09-7.90	2.56-4.05	2.11-3.06	2.89-3.89
Tulip (per 5)	1.75	2.82-4.01	2.89-4.10	3.75-4.13	3.97-4.87	3.64-3.89	3.25-4.42	2.53-4.53	2.34-2.55	1.41-2.54

Source: "Horticulture News" 1995 issues

1994 Prices:

Figures are \$ per 5, 10 or bunch (as stated)

	Jan/Feb	Feb/Mar	Mar/Apr	Apr/May	May/June	June/July	July/Aug	Aug/Sept	Sept/Oct	Oct/Nov
Carnations:										
- Spray (per 10)	1.33-1.98	2.52-3.23	4.19-5.34	3.61-4.77	4.51-5.13	5.55-6.20	4.55-5.46	3.70-4.90	3.32-4.31	1.21-1.67
- Standard (per 10)	1.56-1.81	2.66-3.65	3.45-4.95	2.82-4.46	4.20-6.30	5.13-5.93	5.97-7.30	4.53-5.52	3.56-4.14	1.26-1.80
Chrysanthemums (per 5)	3.67-4.98	3.15-4.87	4.47-5.92	4.80-5.30	4.58-6.26	5.74-6.81	6.21-8.59	6.15-9.34	4.69-8.52	3.29-5.68
Rose (per 10)	2.99-6.92	3.23-8.93	2.96-7.67	3.90-8.60	3.88-10.24	6.74-12.82	7.64-13.49	9.04-15.18	6.04-13.91	3.13-8.20
Agapanthus (per 5)	-	-	-	-	-	-	2.94	2.89	2.93	-
Ageratum (per 5)	-	-	2.64	-	4.07	4.27	4.83	4.27	4.21	2.30
Alstromeria (per 5/10)	-	2.39-2.96	-	-	3.76-4.26	-	-	-	-	-
Anenome (per 10)	-	-	-	-	2.53-2.59	2.71-3.27	3.13-3.85	2.21-2.52	-	-
Daffodil (per 10)	-	-	-	-	-	2.43-4.11	1.62-2.25	1.03-1.49	1.64-1.96	-
Delphinium (per bunch)	-	3.63-4.53	-	5.40-6.90	4.18-5.09	-	-	-	-	-
Freesia (per 10)	-	-	-	4.26-4.80	4.07-4.52	4.53-4.85	3.13-3.49	2.03-2.57	1.64-2.37	-
Gerbera (per 5)	1.51-2.94	1.99-3.16	3.47-4.39	3.96-4.57	4.20-4.97	3.40-5.70	3.43-5.00	2.10-5.10	3.79-4.68	3.90-6.04
Gypsophila (per bunch)	1.69-1.73	3.82-4.42	5.86-6.31	3.78	7.06	9.38	8.18	7.84	9.74	1.71-2.04
Iris (per 5)	2.23	4.40	3.51-3.96	3.90-5.43	3.84-5.38	5.89-6.58	5.20-5.22	2.45-2.98	2.36-3.06	2.82-3.84
Lily (per 5)	2.20-3.35	1.86-3.98	4.36-5.85	4.22-6.41	3.42-4.82	5.16-7.54	6.24-9.13	5.82-6.83	4.20-6.10	1.96-4.75
Ranuncula (per bunch)	-	-	-	-	-	4.19-5.35	4.60-5.14	3.27-3.85	-	-
Snap Dragon (per 5)	1.43-2.23	1.62-2.57	2.85-2.95	3.16-4.66	3.92-4.79	4.77-5.49	5.59-6.47	4.17-5.20	3.50-4.20	-
Statice (bunch)	1.84-2.16	1.84-2.16	1.96-4.98	2.33-8.00	2.58-7.36	-	-	3.69	7.13	1.30-2.51
Stock Double (per 5)	-	-	-	-	-	7.24-7.97	4.31-5.41	3.12-4.08	3.18-3.88	2.29-2.48
Tulip (per 5)	-	-	-	-	4.40-5.08	5.67-7.14	4.62-4.99	4.14-4.80	-	-

Source: "Horticulture News" 1994 issues

1.15 LOGS

The following information has been kindly provided by *Ministry of Forestry* Advisors. The prices and rates shown are those current at January 1998, and are only guidelines, being subject to a wide range of factors including location and size of woodlot, access and internal roading, log quality and changing market conditions. Farmers are advised to ring their local *Ministry of Forestry* office for detailed information.

Log prices are for Radiata Pine unless shown otherwise.

1.15.1 Market Outlook

Forestry export return declined markedly in the year to June 1997. This was largely a result of four factors:

- (i) a strong New Zealand dollar reducing export returns
- (ii) a pulp and paper price spike which saw upside prices recorded in 1995 and downside prices recorded in 1996
- (iii) global overproduction of wood products depressing prices.

Despite this, roundwood equivalent export volumes increased by around 700 000 cubic metres in the year to June 1997 while the total roundwood harvest increased by around 400 000 cubic metres. Most of the acceleration occurred in the June quarter. The marked weakening in the New Zealand dollar in the first half of 1997 suggested prospects for some recovery in export earnings have improved during the last 6 months although there have been few significant real improvements in market conditions. The pulp and paper sector is only very slowly edging away from the bottom of its trough and is showing few signs that any rapid escalation is likely to occur.

The main log markets, Japan and Korea are showing weakness and competition in the Australian market continues to increase. Nonetheless, Australian sawn timber markets show possibly the brightest picture with the prospect of the Sydney Olympic Games beginning to generate significant building business.

New Planting

The most recent Ministry of Forestry nursery survey shows an estimated 81 5000 hectares of new planting during the 1996 winter planting season. An additional 30 300 hectares is estimated to have been restocked. Nursery managers reported a higher level of sales during the 1996 winter than was expected before the season's start. This meant the new planting was at the upper end of the Ministry's calculated forecast range of between 56 000 and 83 000 hectares, based on a similar survey in March 1996.

The December survey also indicated that nursery managers are maintaining their view that tree planting levels will remain buoyant. Based on anticipated restocking of 32 000

hectares, the calculated forecast for 1997 is between 68 000 and 97 000 hectares with a best estimate of 85 000 hectares.

In 1996 the Ministry of Forestry commissioned an independent report forecasting planting levels to 2010. The report provides a medium term forecast describing the five years out to the year 2000. The report estimates new planting to be between 44 000 hectares and 95 000 hectares per year during this period with a best estimate of 68 000.

Forestry and Logging

New Zealand's roundwood removals have increased markedly over the past 45 years, averaging a 4.1 percent increase annually. Total roundwood removals from New Zealand forests for the year ended December 1996 are estimated at 16 964 000 cubic metres. The industrial wood harvest from natural forest in 1996 totalled 118 000 cubic metres.

Log Exports

Logs are New Zealand's largest forest products export, in terms of both value and volume. In 1996 New Zealand's log trade totalled 5.6 million cubic metres, with an f.o.b. value of NZ\$671 million. The export market for New Zealand logs is presently dominated by Japan and Korea. In 1996 these two countries purchased 92 percent of New Zealand export logs.

Woodchips

Exports of woodchips comprise a very minor segment of the New Zealand forestry industry. Woodchip exports in the year to March 1997 totalled 229 000 bone dry units with an export value of NZ\$38 million. Woodchips are presently exported mainly from four ports in New Zealand - Tauranga, Nelson, Dunedin and Bluff. Woodchip exports from Whangarei commenced in the June 1996 quarter and small quantities are also exported from Auckland. Presently, Nelson and Dunedin export pine chips, and Tauranga and Bluff export pine and eucalypt chips. Japan has previously been the sole destination for New Zealand woodchip exports. A small trade with Taiwan commenced in 1996.

Sawn Timber

Production of sawn timber in New Zealand has grown strongly since the late-1980's. In 1988 sawn timber production totalled 1 821 000 cubic metres. In 1996 this increased to 3 030 000 cubic metres, an average annual increase of 8 percent. However, there are signs that New Zealand's production of sawn timber is reaching a plateau in response to several potentially limited factors in current export markets.

Woodpulp

Wood pulp production in New Zealand is presently carried out at 6 mills in New Zealand. Total production of wood pulp in the year to December 1996 totalled 1 353 000 tonnes, 4.0 percent below production in the December 1995 year.

International wood pulp prices increased rapidly in 1995 with the list price in the US peaking in November at US\$985 per metric tonne. The benchmark Northern Bleached Softwood Kraft (NBSK) price series increased 134 percent from its December 1993 low

point of US\$420 per tonne. However, during the following three months pulp prices plummeted. The March 1996 NBSK list price was set at US\$600 a decline of the 64 percent on the peak. Since March 1996 NBSK prices have hovered in a band between US\$515 and US\$580. While there was some evidence of a minor recovery in pulp prices in the latter months of 1996, price have again turned downwards in early 1997, seemingly testing the bottom of the trough.

Newsprint

New Zealand production of newsprint is carried out exclusively at Fletcher Challenge Ltd's Kawerau mill. Production in the year to December 1996 totalled 375 000 tonnes, 5 percent below production in the December 1995 year. Exports of newsprint for the year ended March 1997 totalled 253 000 tonnes an increase of 5.1 percent. Value of newsprint exports, however, decreased by 8.1 percent to NZ\$237 million as a result of a major slumping newsprint prices. Domestic consumption of newsprint appears to have declined by about 30 percent in 1996, though much of this decline is thought to be related to stock liquidation.

Other Paper and Paperboard

In the year to December 1996 New Zealand's production of other paper and paperboard totalled 490 000 tonnes, a 3.7 percent decline on the previous year. The majority of this production is kraft liner board, though smaller quantities of tissue and fine papers are also produced. Exports of other paper and paperboard in the year to March 1998 totalled 121 000 tonnes, an increase of 10.1 percent on the previous year. The value of exports, however, declined from NZ\$140 million to NZ\$126 million, a 10.3 percent decline.

Fibreboard

Fibreboard capacity in New Zealand has grown rapidly over the past decade. Production of fibreboard in the year to December 1996 was 593 000 cubic metres compared with 248 000 cubic metres in 1987. Surprisingly, however, exports of fibreboard have been relatively static over the past 5 years. In the year to March 1993 fibreboard exports totalled 371 000 cubic metres while in the March 1997 year fibreboard exports were actually lower, at 357 000 cubic metres. Over the same period apparent domestic consumption has increased from 173 000 cubic metres to 236 000 cubic metres.

Other Panel Production

The other panel products group consist of veneer, plywood and particle board production, with laminated veneer lumber (LVL) an important subgroup of plywood production. Plywood production is an important growth area in New Zealand's forest industry. Exports of plywood have increased from NZ\$22 million in 1991 to NZ\$112 million in the March 1997 year.

Other Forest Products

Exports of other forest products, which include manufactures of paper and paperboard, furniture and mouldings, and miscellaneous forest products earned NZ\$241 million in the year to March 1997. This was 4.6 percent less than the previous year.

Conclusion

Taken as a whole, export conditions for forest products are probably at their worst for 5 years. In the year to March 1997 forest products exports totalled NZ\$2.38 billion, 10.6 percent below the value of NZ\$2.66 billion exported in the March 1996 year. A part decline can be explained by a strengthening in the New Zealand dollar, with the annual average of the TWI in the March 1997 year being 66.5 compared with 62.2 in the previous year, an increase of almost 7 percent. However, the coincidence of weak market conditions for most forest products, most notably for pulp and paper products, but also for sawn timber and fibreboard, allied with relatively soft log prices have contributed to this poor result.

Source : December Issue, Forestry Report, Ministry of Forestry, 1997

For further information, please contact M.O.F., Dr John Coppola, PO Box 1610, Wellington, Tel: (04) 495 8366

1.15.2 Indicative Log Prices

(i) Export Log Prices (per quarter)

Grade	Dec 1996	Mar 1997	Jun 1997	Sep 1997	Dec 1997
Pruned -Japan, Korea	186-207	179-200	203 - 213	230 - 235	217 - 238
Unpruned A - Japan	93 - 109	97 - 114	108 - 115	108 - 128	108 - 133
Unpruned K - Korea	91 - 96	78 - 100	91 - 105	98 - 112	97 - 110
Unpruned J - Japan	69 - 87	75 - 83	91 - 99	80 - 99	95 - 101
Pulp - Japan	44 - 49	46 - 51	38 - 48	52 - 62	55 - 60

Source: December issues, Forestry Report, Ministry of Forestry, 1997

Despite economic woes and currency crises across Asia, median prices for export logs through the fourth quarter hardly moved against the third. While there has been some price softening the pruned and A grades, prices firmed in the other grades, particularly in K and pulp.

Given the Korean situation, firming of K-grade prices, with the median price actually rising by nearly 10 percent, is a surprise. One factor that may have contributed to this is competition from India, where imports are similar to Korean grades. Sellers on the Indian Market report that prices were similar to those for Korea.

Source: Ministry of Forestry

(ii) Domestic Log Prices (*per quarter*)

Grade	Dec 1996	Mar 1997	Jun 1997	Sep 1997	Dec 1997
P1	143-190	146-180	148-195	150-195	145-195
P2	114-148	113-148	115-128	117-165	118-165
S1	90-108	90-110	99-110	100-111	100-115
S2	87-97	91-100	85-98	76-96	97-100
L1 and L2	54-81	65-75	50-75	54-64	55-64
S3 and L3	62-76	91-85	60-70	60-85	63-87
Pulp	41-58	40-48	38-45	38-45	35-45

Note: Readers must appreciate that these log prices (both domestic and export) are indicative only and may not correspond to actual prices paid in market transactions. They have been obtained from a variety of sources and elements of subjective judgement have been incorporated into them. The prices are subject to changes when further data become available.

Fourth quarter prices on the domestic market have firmed and not moved much against the third quarter. An expectation is S2, where the median price has gone up by 15 percent. Log sellers report that volumes are generally steady and there is good competition for the pruned grades. The volatile export market is likely to bring price pressure into the domestic scene through next year.

Source: December Issue, Forestry Report, Ministry of Forestry 1997.

1.15.3 Log Grade Specifications

Domestic Log Grades

Log Grade	Pruned/ unpruned	Small end diameter (mm)	Lengths (m)	Max knot (mm)	Sweep class
P1	Pruned	400+	4.0 to 6.1	NA	1
P2	Pruned	300 to 399	4.0 to 6.1	NA	1
S1	Unpruned	400+	4.0 to 6.1	60	1
S2	Unpruned	300 to 399	4.0 to 6.1	60	1
S3	Unpruned	200 to 299	4.0 to 6.1	60	1
L1	Unpruned	400+	4.0 to 6.1	140	1
L2	Unpruned	300 to 399	4.0 to 6.1	140	1
L3	Unpruned	200 to 299	4.0 to 6.1	140	1
Pulp	Unpruned	100+	4.0 to 6.1	NA	2

Note: Sweep class is defined by maximum permissible sweep

Export Log Specifications:

Log Grade	Minimum Small end	Average Small end diameter (mm)	Maximum Long end diameter (mm)	Maximum Knot diameter (mm)	Length (m) (mm)	Percentage allowed	Sweep
Pruned							
Pruned peelers	300	unrestricted	unrestricted	NA	4.0,6.0	Shipper's option	1/4 s.e.d
Unpruned							
C&I construction peelers	300	unrestricted	unrestricted	80	4.0,6.0,8.0	Shipper's option	1/4 s.e.d
Korean H peelers	160 to 200	260	unrestricted	70 to 80	4.0	5%max	1/4 s.e.d
					6.0,8.0	Shipper's option	1/4 s.e.d
Japan H peelers	200	unrestricted	500	80	4.0,6.0,8.0	Shipper's option	1/4 s.e.d
Japan A	200	340	800	*	4.0	10% max	1/4 s.e.d
					8.0	balance	1/2 s.e.d
					12.0	50% min	s.e.d
Japan J	200	260	unrestricted	*	4.0	10% max	1/4 s.e.d
					8.0	balance	1/2 s.e.d
					12.0	50% min	s.e.d
Korea K	200	260	unrestricted	*	3.6	balance	1/4 s.e.d
					5.4	10% max	1/4 s.e.d
					7.3	balance	1/2 s.e.d
					11.0	40% min	s.e.d
China C	200	260	unrestricted	*	4.0	15% max	1/4 s.e.d
					6.0,8.0,10.0	Shipper's option	1/2 s.e.d
Japan pulp	100	unrestricted	unrestricted	unrestricted	4.0,6.0,8.0	Shipper's option	unrestricted

Note: s.e.d = Small end diameter

* = 1/3 s.e.d up to 150mm max. Excessive number of large knots not permitted.

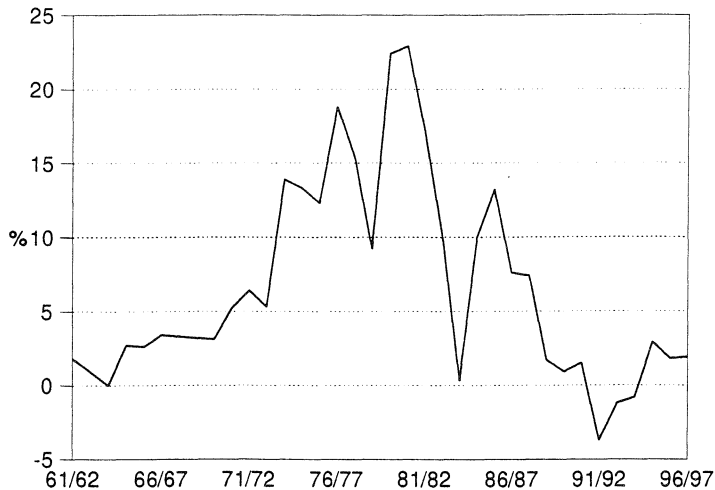
SECTION 2

FARM AND ORCHARD EXPENSES

2.1 INPUT PRICES - GENERAL INFORMATION

2.1.1 Input Price Movements

Sheep and Beef Farm Input Price Movements 1961/62 to 1996/97



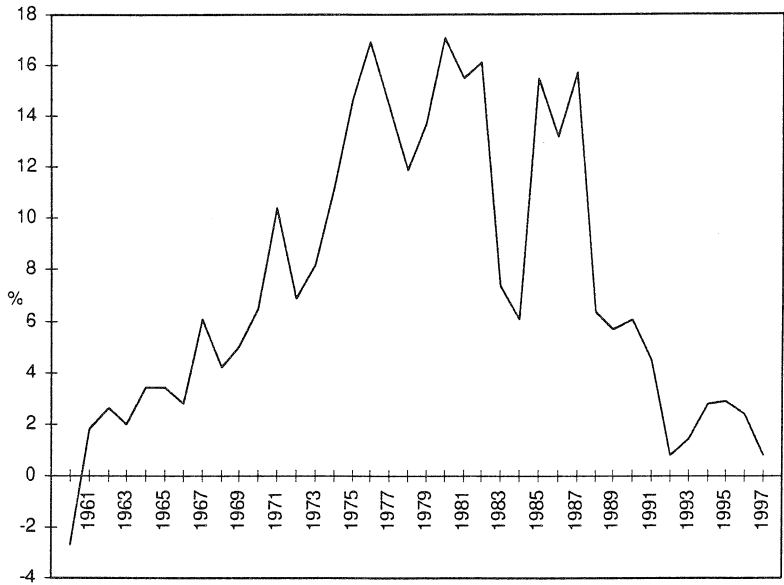
Source: N.Z. Meat and Wool Boards' Economic Service

2.1.2 Price Discounts

As farmers and growers will be aware, it is sometimes possible to negotiate price discounts from retailers, particularly if goods are purchased in bulk. Similarly, trading societies can also offer goods at cheaper than normal retail rates to members. Discounts are commonly in the order of 15% to 25% for many farm goods excluding some items such as common agricultural chemicals. To become a member of one South Island society, five hundred \$1 shares must be purchased and members receive rebates and dividends.

2.1.3 Rate of Inflation in New Zealand 1960 to 1997

The Consumer Price Index (C.P.I.) measures the rate of inflation for each year.



Source: Reserve Bank

Note: Also see Appendix, *Section 2.24*, for rate of inflation since 1891, and method used to calculate the fall in the value of the dollar.

2.2 WAGES/SALARIES/DRAWINGS

2.2.1 Wages and Salaries - Farm Employees

As a guide to wages/salaries commonly paid to farm employees, Mr L.Orr of *Central Employment*, Pukekohe, and Karen Hickey of *Central Employment, South Island Ltd*, have kindly provided the following figures.

Note: The average working week equates to approximately 50 hours.

Dairy:

Remuneration includes; production/quality bonus, accomodation, meat, milk, power, phone rental, protective clothing, overalls, training/education fees, motorbike allowance, fuel and oil.

North Island

(Wages/Salaries include rent free accommodation)

Single worker- depending on experience, age and contract milking	\$14,000 to \$24,000
Herd Manager (up to 180 cows)	\$26,000 to \$35,000
Herd/Farm Manager (staff supervision responsibility)	\$28,000 to \$50,000
Other farm worker (limited experience)	\$23,000 to \$28,000
Couples - both working on the farm	\$40,000 to \$45,000
Management Position	
Couple with one partner milking until Christmas (220 to 250 cows)	\$40,000 to \$50,000
or with partner working full-time on farm	\$45,000 to \$65,000

South Island

Employee Category		Base Salary	Total Remuneration
Under 17		\$13000 - \$19500	\$17612 - \$26962
17 - 20 years		\$16000 - \$20000	\$19152 - \$24940
Over 20 years		\$18616 - \$23250	\$22597 - \$28227
Minimum 2 seasons experience		\$20000 - \$26000	\$23900 - \$31200
Relief milker - skilled, unsupervised		\$10 per hour	\$14 per hour
Dairy Herd Manager		\$24500 - \$31000	\$31500 - \$38672
Dairy Farm Manager	Canterbury	\$27750 - \$37109	\$34195 - \$44981
	Otago/Southland	\$31000 - \$52500	\$36200 - \$56500
Management/Contract milking - per kg MS basis		\$34000 - \$55000	

Contracts:

A common contract includes \$0.58 to \$0.75 per kg milksolids (\$1.10 to \$1.35 per kg milkfat) and paying some shed expenses. Conditions of these contracts vary greatly.

Variable Sharemilking positions:

- up to 20% milk cheque with no costs except labour
- 20 to 25% milk cheque but paying farm bike expenses, some shed costs and labour
- 25 to 30 % milk cheque but paying all machinery, shed and labour costs
- 35 to 40% milk cheque with more negotiable conditions including fertiliser and supplementary feed

The statutory minimum wage for youths aged 16 and over, as at 1 March 1997 is \$4.20 per hour i.e. \$210 for a 50 hour week. If hours exceed 50 overtime is generally paid. Aged 20+ the gross minimum salary is \$16,575. The gross minimum wage is \$6.375 per hour. If hours exceed 50 per week generally workers are compensated i.e. overtime is paid.

Sheep and Beef:

Remuneration total includes additional payments/benefits, overtime, meat, meals, power, phone, rental, vehicle, protective clothing/boots, petrol, training/education fees, dog/animal expenses (in the case of shepherds/stock managers food for dogs, registration, insurance and veterinary bills).

North Island

Single worker - "fully found" *	\$13,000 to \$21,000
Shepherd	\$22,000 to \$29,000
Stock Manager	\$28,000 to \$35,000
Manager	\$28,000 to \$50,000
General hand, tractor driver	\$23,000 to \$29,000
Head Shepherd	\$24,000 to \$30,000

* "fully found" means the employer provides full board, in addition to the wage rates shown.

South Island

Employees Category	Base Salary	Remuneration
Under 20 years	\$13260 to \$17900	\$15088 to \$21800
Over 20 years	\$18000 to \$23400	\$23120 to \$27640
General Employee/Shepherd	\$19000 to \$26000	\$23816 to \$31895
Senior Employee/Head Shepherd	\$22250 to \$30000	\$27946 to \$36480
Stock Manager	\$27500 to \$36000	\$35000 to \$44400
Farm Manager	\$30000 to \$48750	\$36830 to \$52350

As from 1 March 1997 the new statutory minimum wage rate for employees aged 16 and over is \$4.20 per hour, \$33.60 for an 8 hour day. \$168 for a 40 hour week, overtime is usually paid over 40 hours. Minimum wage for adults aged 20 or more is \$7.00 per hour, \$56 for an 8 hour day, \$260 for a 40 hour week.

2.2.2 Wage and Salaries - Horticultural Employees

Some typical wage rates are as follows:

Orchard Workers (Canterbury)

Permanent Staff:

	\$ per hr
Assistant Foreman	\$30,000 per annum
Permanent Leading Hand	\$10.38 to \$10.71
Permanent Leading Hand II	\$9.64 to \$10.01
Adult Unsupervised	\$8.91 to \$9.28
Permanent Adult Learning	\$8.41
Permanent Junior under 19	\$7.60
Adult unsupervised, acting as supervisor	\$10.38

Casual Staff:

Casual	\$7.54 to \$8.52
Casual - Quality Assurance	\$10.00 to \$12.00
Casual Supervisor	\$10.00
Casual Cropliner Operator	\$8.36 to \$9.00
Tractor Driver	\$7.54 to \$9.00
Forklift Operator	\$8.36 to \$10.00
Penalty Rate	\$5.00 to \$6.38

Note: These hourly rates are exclusive of holiday pay. The pay rates are negotiated annually as part of the collective employment agreements for casual, qualified casual and permanent employees. Any variation to these rates can only be upward and must be approved by the Operations General Manager. The exception is the casual penalty rate which is a temporary reduction in wage to penalize performance below minimum standards.

Orchard/Packhouse Workers (Auckland)

General staff

(packhouse staff paid towards lower end of scale, \$8.50 to \$9.50 per hour
graders paid towards the higher end of scale)

Casual (some experience) \$8.30 per hour

Casual - Foreman \$9.30 to \$9.80 per hour

Tractor Drivers \$10.50 per hour

Tomato Glasshouse Workers (Canterbury)

Casual Youth (depending on age/experience) \$7.50 per hour

Casual Adult \$9.00 to \$9.50 per hour

Permanent adult \$9.50 to \$13.00 per hour

Market Garden (Hastings)

Adult casual inexperienced \$8.00 per hour

Adult casual experienced \$8.50 to \$9.00 per hour

Permanent experienced \$10.80 per hour

Casual Supervisor \$10.00 per hour

Contract Field Workers: (Bay of Plenty)

Contract workers (orchard work - spray/ prune/ thin/ pick, etc.) earn approximately \$18 per hour if they provide their own machinery or \$10 to \$14 per hour without machinery. Contractors employees earn \$9.50 to \$10.

Berryfruit Workers

Fruit picking rates are as follows but depend on the calibre of the employee:

Strawberries

Average rate 59¢ per kg

Range 45¢ to 80¢

(Auckland lowest
Horowhenua highest)

Boysenberries

Average rate 50¢ per kg

Range 45¢ to 50¢

(Nelson lowest
Waikato highest)

Raspberries

Range	\$0.90 to \$1.20
Indiv. Quick Frozen ave	\$1.80
Bulk Frozen ave	\$1.15

Blueberries

Range	\$1.00 to \$4.00
Process Picking	80¢ to \$1.00 per kg
Fresh Picking	\$1.50 tp \$6 per kg

2.2.3 Drawings

Drawings or Personal expenditure for farmers and growers :

North Region:

- Dairy \$141 to \$200 per cow
- Sheep and Beef \$4.97 to \$2.10 per su
- Deer \$14.96 per su
- Kiwifruit \$4340 per ha

North Central:

- Dairy \$154 to \$189 per cow
- Sheep and Beef \$3.58 to \$13.96 per su
- Pipfruit \$3221 per ha

South Central:

- Sheep and Beef \$5.02 to \$10.59 per su
- Mixed Cropping and Livestock \$5.19 per su
- Dairy \$90.24 to \$118.73 per cow
- Apple Orchards \$526 to \$2783 per ha

South Region:

- Sheep and Beef \$5.19 to \$10.93 per su
- Dairy \$103 per cow

Source: MAF Farm Monitoring Report, July 1997.

2.3 ANIMAL EXPENSES

2.3.1 Animal Health - Average Costs

(See also *Section 2.3.14* for mineral supplements, licks etc.)

Dairy Cows

Total animal health costs can range from \$34 to \$51 per cow depending on the farm locality, herd size etc. Below are the ranges for each region:

North Region	\$34 to \$46 per cow
North Central	\$36 to \$37 per cow
South Central	\$31.25 to \$50.71 per cow
South Region	\$45 per cow

See individual items for accurate budgeting.

Sheep and Cattle

Total animal health costs typically range from \$1.00 to \$3.00 per stock unit per year depending on the farm, season etc.

North Region	\$1.99 to \$2.56 per stock unit
North Central	\$1.75 to \$2.64 per stock unit
South Central	\$0.98 to \$2.73 per stock unit
South Region	\$1.93 to \$2.83 per stock unit

See individual items in this section for accurate budgeting.

Deer

Total animal health costs typically average around \$4 to \$5 per stock unit.

Source: MAF Farm Monitoring Report, July 1997

2.3.2 Drenches/Vaccines/Bloat Control

Sheep Drenching Costs - Examples:

Tradename:	<i>Nilverm</i>	<i>Rycoben</i>	<i>Levicare</i>	<i>Ivomec</i>
Dose rate:	1ml/5kg	1ml/5kg	3ml/16kg	1ml/4 kg
Cost per ml:	0.58 cents	0.95 cents	0.48 cents	2.8 cents
Cost per 50 kg ewe:	5.8 cents	9.5 cents	4.5 cents	35 cents

Cattle Drenching Costs - Examples:

Tradename:	<i>Rycoben</i>	<i>Systamex</i>	<i>Fenben HI-MIN</i>	<i>Ivomec Injection</i>
Dose rate:	1 ml/20 kg	1 ml/20 kg	15 ml/50 kg	1 ml/50 kg
Cost per ml:	5.6 cents	6.6 cents	0.66 cents	71.0 cents
Cost per 500 kg cow:	\$1.48	\$1.65	99 cents	\$7.10

Drenches/Anthelmintics

Ancare:

Product		Dose Rate	Unit Size	Retail Price
Levicare	Sheep	3 ml per 16 kg	20 litre	\$96
	Cattle	9 ml per 45 kg		
Levicare HI-MIN	Sheep	3 ml per 16 kg	20 litre	\$108
	Cattle	9 ml per 45 kg		
Levitape	Lambs	1 ml per 5 kg	10 litre	\$324
Levitape HI-MIN	Lambs	1 ml per 5 kg	10 litre	\$324
Fenben	Sheep	1 ml per 5 kg	20 litre	\$120
Fenben HI-MIN	Cattle	15 ml per 50 kg	20 litre	\$132
Albendazole		1 ml per 5 kg	20 litre	\$120
Albendazole Hi-Mineral		1 ml per 5 kg	20 litre	\$132
Albendazole C		1 ml per 15 kg	5 litre	\$150
			20 litre	\$504
First Drench		1 ml per 5 kg	5 litre	\$194
			10 litre	\$363
First Drench Hi-Mineral		1 ml per 5 kg	5 litre	\$194
			10 litre	\$363
Oxfen		1 ml per 5 kg	5 litre	\$54
			20 litre	\$144
Oxfen Hi-Mineral		1 ml per 5kg	5 litre	\$60
			20 litre	\$156
Oxfen C		1 ml per 20 kg	5 litre	\$144
			20 litre	\$480
Oxfen C Hi-Mineral		1 ml per 20 kg	5 litre	\$156
			20 litre	\$510
Double Strength Oxfen Hi Mineral		1 ml per 10 kg	5 litre	\$92
			20 litre	\$264
Arrest		1 ml per 5 kg	20 litre	\$240
Arrest Hi-Mineral		1 ml per 5 kg	5 litre	\$77
			20 litre	\$240
Arrest C		1 ml per 10 kg	5 litre	\$156
			20 litre	\$564
Genesis Hi-Mineral		1 ml per 5 kg	5 litre	\$194
			10 litre	\$325
Genesis Tape Hi-Mineral		1 ml per 5 kg	5 litre	\$236
			10 litre	\$436
Genesis Horse Wormer		1 ml per 20 kg	30 ml	\$22

MSD Agvet:

Ivomec Liquid	Sheep	1 ml per 4 kg	5 litre	\$150
		1 ml per 4 kg	20 litre	\$520
Ivomec Liquid (selenised)	Sheep	1 ml per 50 kg	20 litre	\$520
Ivomec Injection	Cattle	1 ml per 50 kg	200 ml	\$137
		1 ml per 33 kg	500 ml	\$299
Ivomec Plus Injection	Cattle	1 ml per 10 kg	200 ml	\$145

		1 ml per 20 kg	500 ml	\$325
Ivomec Pour-on		1 ml per 10 kg	250ml pack	\$45
			1 litre	\$146
			2.5 litre	\$325
			5 litre	\$645
Ivomec Cattle Oral			1 litre	\$249
Ivomectin Maximise Capsule	Sheep	100 days control	Ewe	\$2.80/cap
			Lamb	\$2.30/cap
Eqvalan Paste	Horses			\$19.50

Coopers:

Sheep and cattle:

Nilverm, selenised		1 ml per 5 kg	20 litre	\$115
Systemex, selenised		1 ml per 5 kg	20 litre	\$183
Systemex, low dose cattle		1 ml per 20 kg	2.5 litre	\$165

Nufarm:

Sheep and cattle:

Levamisole All Min		1 ml per 5 kg	20 litre	\$106
Mineralised Levamisole		1 ml per 5 kg	20 litre	\$106

Bayer:

Sheep and lambs:

Nemacur			5 litre	\$290
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Young's Animal Health (NZ) Ltd:

Leviben	Sheep	1 ml per 5 kg	20 litre	\$270
Rycoben	Sheep Cattle	1 ml per 5 kg	20 litre	\$190
Eradox		-	20 litre	\$180
Rycozole		1 ml per 5 kg	20 litre	\$115
Rycoben	Cattle Deer	1 ml per 20 kg	5 litre	\$280
Rycotape		-	10 litre	\$322
Eradox low dose		-	5 litre	\$205
Rycomectin		1 ml per 4kg	20 litre	\$430

Cydectin Pour-on	Cattle	-	500 ml	\$78
		-	2 litre	\$239
		-	5 litre	\$533
Cydectin Injection	Cattle	1 ml per 50 kg	500 ml	\$270
Cydectin Oral	Sheep	1 ml per 5 kg	15 litre	\$430

Cattle Endectocides

Ancare:

Genesis Injection		1 ml per 50 kg	250 ml	\$204
			500 ml	\$368
Genesis Pour-On		1 ml per 20 kg	1 litre	\$294
			2.5 litre	\$735

Boluses*MSD Agvet:*

Ivomec SR Bolus for cattle - price per bolus	\$17.80
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Nu Farm:

Extender 100 - price per 20	\$44.00
Stockman - price per bolus	\$2.60
Stockman Junior - price per bolus	\$2.20

Vaccines*Ancare:*

	Dose Rate	Unit Size	Retail Price
Viracare	3 ml per animal	90 ml	\$97.50
Phenax		150 dose	\$17.80
		300 dose	\$35.63

Cooper:

Nilvax (sheep)	20 - 25 kg 3.5 ml	500 ml	\$44.10
	26 - 65 kg 4.0 ml		
	>65 kg 4.5 ml		
Multine 5 in 1 + selenium	Sheep 2ml dose	500 ml	\$28.95
	Cattle 4ml dose		
Lamb vaccines	2ml per 10kg	500 ml	\$52

Schering-Plough Animal Health:

Footvax	1ml (2 doses 6 wks apart)	250 ml	\$140
Permaco (sheep)	1 pellet per 18 months	per pellet	\$1.30

Young's Animal Health (NZ) Ltd:

Ryvax 5 in 1	Sheep 2ml per dose	500 ml	\$29.00
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Cydetect Eweguard	Sheep	500 ml	\$205
7 in 1 Ultrafiltered	Cattle 2.5 ml	250 ml	\$99.60
Lepto	Cattle 2 ml	250 ml	\$75.00
Murobovin	Cattle 2 ml	100 ml	\$253.20
Ultravac 5 in 1	Cattle 2 ml	250 ml	\$35.60

Bloat Control*Ancare:*

	Unit Size	Price
Blocare 4511	200 litre	\$868
Blocare Hi-Mineral	200 litre	\$1023

Dominion Chemicals Ltd.:

Paraffin Oil	2 litre	\$10.31
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Elanco Animal Health:

Rumensin anti bloat capsules	per capsule	\$13.95
Rumensin Liquid (4.000 cow dose)	20 litre	\$320.00

Nu Farm:

Bloataid Dual	20 litre	\$132
Bloataid Super	20 litre	\$148
Bloataid Tracer	20 litre	\$159
Bloataid Tracer HiSe	20 litre	\$163

Growth Promotants

Elanco Animal Health:

Compudose 200 (steers and non-breeding heifers)	\$5.70 per implant
Compudose 400 (steers and non-breeding heifers)	\$8.90 per implant
Implus S (Steers)	\$4.00 per implant
Implus H (Prime heifers)	\$4.00 per implant

2.3.3 Dips/Sprays/Ointments/Dressings

(see also contract dipping costs, *Section 2.4.7.*)

Ancare:

Product		Dose Rate	Unit Size	Price
Flypel	Lambs/ Hoggets	5 to 12 ml		
	Ewes/Rams	10 ml	5 litres	\$188
Fleececare			1 litre	\$113
			5 litre	\$525
Xterminated 10			5 litre	\$83
			20 litre	\$338
Cypercare		1 ml per 5 kg	1 litre	\$25
			4 litre	\$71
			20 litre	\$298
Tempor - lice	Cattle	6 ml per 100kg	1 litre	\$71
			5 litre	\$365

Coopers:

Dips:				
Grenade Dilute 1:2500 dilution	2 litre wash per sheep	5 litre	\$260	
Supreme DFF 1:1000 dilution	see note below	5 litre	\$425	
Sconder	1ml/10kg	10 litre	\$331	

Note: For Supreme DFF, various dilutions are used, depending on treatment method and what the treatment is for, e.g. lice, ked and blowfly.

Warbex	5ml per 50 kg BW	5 litre	\$295
Wipe-out	up to 4 months wool growth - 2ml per 10kg BW	10 litre	\$237
	4 - 6 months wool growth - 4ml per 10kg BW		
Stampede Easy Dose	5ml per 100kg BW	2.5 litre	\$288

Merial NZ Ltd:

Eprinex Pour on			
Cattle	1ml per 10kg	250 ml	\$49
		1 litre	\$155

Deer	1ml per 10kg	2.5 litre	\$349
		5 litre	\$695

Nufarm:

Farmguard Zinc Sulphate Heptahydrate	10 kg/100 litres water	25 kg	\$32
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FERNZ Chemicals:

Nu Zinc	20 kg	\$69
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Young's Animal Health NZ Ltd:

Sheep Dips -	5 litre	10 litre	20 litre
Zenith	\$475	-	-
Seraphos 500	\$195	-	\$675
Lice and Fly Pour-ons -			
Avalanche	\$162	\$290	-
Cyphor	-	-	\$310
Cypafly	\$121	-	\$427
Flystrike Treatments -			
Seraphos 500 (fly and lice dip)	\$195	-	\$675
Seraphos 1250 (fly and lice)	\$385	\$720	-
Cypor Sheep and Goat (lice pouron)	\$105	-	\$310
Destruct (cattle sprays)	\$195	-	-
Maggo	\$42.50 per litre		

Bomatak pour on	Cattle	1 litre	\$63.11
		5 litre	\$179.56

Disinfectants:

Savlon	5 litre	\$35.00
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Technik Products:

Omnicide - disinfectant for control following a disease outbreak	5 litre	\$138.00
Technicide - for use in housing and with animal equipment	20 litre	\$360.00
Septex - everyday use around farm	20 litre	\$89.65

2.3.4 Metabolics/Antibiotics

(See also *Section 2.3.14* for mineral supplements, licks etc.)

Vitamin

B12 - injection	Sheep/cattle	500 ml	\$53.33
Vitamin B12 Seleniumised		500 ml	\$57.33

Coastal Veterinarian Group, Opunake:

Product	Unit Size	Price
Calcium Borogluconate 37% (Milk Fever)	500 ml	\$9.36
Glucalmag - milk fever complicated by grass staggers	500 ml	\$7.80
Glucalmax - milk fever complicated by acetoanaemia or grass staggers	500 ml	\$8.32

Glucalpos - milk fever complicated by acetonemia or grass staggers and sleepy sickness in sheep	500 ml	\$9.87
Ketol - ketosis in cattle and sleepy sickness in sheep and goats	5 litre	\$48.56
Magnesium Sulphate 20%	500 ml	\$5.34
Scour Powder (calves and cows)	500 g	\$4.36

Magnesium Treatment			
Cost per 10g dose of actual magnesium in typical magnesium supplements:			
<i>Product</i>	<i>Mg</i>	<i>Weight</i> (g/10g of Mg)	<i>Costs</i> (¢/10g Mg)
Calmag (Mg oxide)	55%	18	7.5
Australian Mg oxide	55%	18	3.8
Magnesium Chloride	12%	85	8.5
Magnesium Sulphate	10%	100	11

Note: The figures take no account of any differences in magnesium availability in the products or of benefits of added ingredients such as molasses or trace elements.

Selenium Treatment	
Costs per cow (to give equivalent periods of cover for approximately 7 to 12 months):	
Selenium prills at 1 kg per ha	\$0.70
Selenium bolus (Permasel) \$4.26 each (2 required per cow)	\$8.52
Selenium injection (Deposel) (0.67c per ml x 5ml minimum dose)	\$3.35
Selenium injection (Se-Hypo) (40c per injection, 1 per month required)	\$2.80
Selenium drenched daily 1.2c per day x 210 days	\$2.52

Copper Treatment	
Costs per cow (for season):	
Copperplan injection, 98c per dose x 2	\$1.96
Copacap, 20gm bolus	\$4.50
Costs per calf:	
Cobalt injection (Prolaject) 3ml @ 24c	\$0.72
Copper capsule (Copacap 10 gm)	\$2.27

Antibiotics (for cattle)

Intra-mammary tubes

(i) Cows in milk: (generally require a course of three tubes; sold 20 per box)

	Price per tube
Lactating Orbenin LA	\$4.67
Mastalone	\$5.28
Streptopen Milking Cow	\$2.88
Streptopen High Potency	\$4.12
Zeromast (only 1 tube required)	\$10.80

(ii) Dry Cows:

Cepravin (generally sold in boxes of 80 tubes)	\$3.38
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Elanco Animal Health:

Tylan Injection (1ml per 20 kg bodyweight)	\$33.00 per 100 ml
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Other (for feet/ wounds/ post-parturient disorders etc.)

	Price per 100 ml
Propen S (about 30 to 50 ml per dose)	\$44.46
Injectable Ceporex (no milk withholding period)	\$82.14
(1 ml per 25 kg live weight per day required, over 3 to 5 days)	

2.3.5 Veterinary Expenses

Veterinary club charges vary depending on the club. A typical membership fee would be \$20 to \$80 per annum, which allows members up to 10% discount on most services.

Farmed Animal Practices - Average Fees:

General:		Deer:	
Farm Visit + 1st exam	\$37.98	Pregnancy test	\$3.27
re-visit	\$27.04	TB test per animal	\$2.30
Farm Visit A/H	\$45.19	TB test per hour	\$94.66
Travel per km	\$0.74	Develveting per animal	\$22.83
Lab test	\$18.33		
Hourly Rate eg Surgery	\$117.83		
		Pig	
Cattle:		Injection fee	\$9.80
Pregnancy test	\$2.11	Caesarean	\$162.68
Non cycling exam	\$3.12	Castrate Boar	\$46.85
Vaccination charge	\$0.86	Vaccination	\$1.43
Blood test per animal	\$4.16		
Hot Iron debudding	\$3.21		
Adult dehorning	\$13.40	Sheep	
Calf castration	\$10.60	Caesarean	\$83.75
Vasectomy	\$72.16	Pregnancy diagnosis	
Caesarean	\$184.96	- Ultrasound	\$0.52
Semen test	\$53.49	- Wet/dry	\$0.39
TB test	\$1.90	Semen	\$30.49
		Brucellosis test	\$4.66
Goat:		Vaccination	\$0.77
Castration	\$28.82	Vasectomy - Ram	\$40.78
Vasectomy	\$40.46		
Pregnancy diagnosis	\$1.14		

Source: Survey by R.H.Duckworth (Executive Director of the New Zealand Veterinary Association Inc.), updated January 1998

TB Testing:

MAF Qual offers a “user pays” TB testing for deer (South Island)

- \$50/hour plus
- 1ml tuberculin per head at 25c
 - 25c clipper hire per head
 - 50c/km charged for travel

Calf debudding (gas):

\$75 per hour if two persons are operating or \$55 per hour for one person. 10% discount if paid on the day. Approximately 30 calves per hour can be debudded if two people are working.

Calf dehorning:

Minimum of 20 calves

\$3.00 per head

Calf dehorning is an all up cost that includes two or more technicians, twin crates, gas burners, anaesthetic, antiseptic.

Facial Eczema Tolerance Testing Fees (for Rams):

AgResearch: Ramguard

No. Animals	Base Charge (Liveweight)			Surcharge
	30 kg	50 kg	70 kg	(\$ per kg)
0 to 12	\$80	\$105	\$130	\$1.25
13 to 15	\$70	\$95	\$120	\$1.25
16 to 20	\$63	\$87	\$111	\$1.20
21 to 30	\$58	\$81	\$104	\$1.15
31 to 40	\$53	\$75	\$97	\$1.10
41 to 50	\$50	\$71	\$92	\$1.05
51 to 60	\$46	\$66	\$80	\$1.00
61 to 70	\$43	\$62	\$81	\$0.95
over 70	\$40	\$58	\$76	\$0.90

The surcharge is calculated on the weight above base weight i.e. for testing 30 animals with an average weight of 55kg, the Ramguard charge would be \$81 plus 5 x \$1.15 i.e. \$86.75 per animal.

2.3.6 Animal Health Equipment

Electrotek Engineering Ltd:

Calving Chain Handles	\$24.90
Calving Ropes (double/single loops)	\$8.40/\$6.55

Instrument Supplies:

Drench Guns - 50ml Dairy Super Shot Drench Gun	\$113.49
20 ml Defender Drench Gun	\$65.84
25 ml Protector Drench Gun	\$63.30
V10 ml Drencher Complete	\$21.18
Vaccinator - 1 ml, 2 ml, 5 ml Vaximate	\$12.72
V10 ml Injector	\$16.50
4.5 litre to 5 litre Flexi-back pack	\$24.34 to \$26.40

Peta Enterprises:

Bloat Dispenser	pack 1 (24 hour), 1 dispenser	\$77.15
Bloat Dispenser	pack 2 (12 hour), 2 dispensers	\$164.70
Multi-purpose Solid Dispenser	for Mg, salt, trace elements, etc	\$138.12
Jerrycan	10 litre	\$15.73
Zinc Dispenser	for zinc sulphate	\$147.57

Shoof International: (Includes freight)

Automatic drench gun	(20 to 70 ml)	\$111
Manual drench gun	(20 to 150 ml)	\$70 to \$89
Drench back packs	3 litre	\$32.84
	5 litre	\$44.41
Bolus Guns	V-Grip	\$48.90
	Plastic	\$6.00
Auto Injector		\$111
Automatic syringes		\$61.34 to \$132
Re-useable Syringes		\$11 to \$15
Disposable syringes	- packs of 100 (1 to 10 ml)	\$16 to 27
	- packs of 50 - 20 ml	\$20
	- 30 ml	\$35
	- 25 pack (50 ml)	\$21
Needles	- re-useable (12 pack)	\$8.45 to \$9.73
	- disposable (100 pack)	\$12.89
Bloat Knife		\$16.87
Trocar Plastic Screw		\$23.96
Trocar Stainless (includes 4 canulas)		\$61.34
Mastitis Tests	- electronic	\$617.86
RMT (5 litre container)		\$33.34
Paper (25 pack)		\$5.28

Drench Gun Services

Gas Gun	Phillips 50 ml	\$568.74
	120 ml Gun	\$171.58
	60 ml Gun	\$175.74
	30 ml Gun	\$158.14
	20 ml Gun	\$138.38
Vaccinator	- 1 ml	\$89.94
	- 2 ml	\$132.41

Nu Medic

Unmetered drench system		\$1,655
Deluxe metered drench system		\$3,497
Hand gun		\$7,750
Teat spray 6/50litre		\$250/\$340

2.3.7 Dog Expenses

Dog Registration and Hydatid Control Fee

These vary depending on the Local Body involved. Fees for pups depends on age. Examples of some Local Body fees are:

Horowhenua District Council:

Farm Dogs \$40 per dog
\$17 per desexed dog

Palmerston North City Council:

- Rural pet \$35
- Rural working dog (second and subsequent) \$20 (\$15)

Manawatu District Council:

The following applies to all dogs in the district over the age of 3 months.

- working dog (second and subsequent) \$12 (\$7)
- selected owner policy dog (second and subsequent) \$12 (\$7)
- neutered dog (second and subsequent) \$20 (\$10)
- other dogs including pets (second and subsequent) \$40 (\$20)

Selwyn District Council:

Working dogs - First dog \$25.00, second and subsequent dogs \$7.00

Clutha District Council:

All dogs three months of age and older \$12.50

Dog feed - see *Section 2.3.14*

2.3.8 Breeding Expenses

Dairy farmers are currently spending about \$29 a cow per year on breeding and testing (combined). The ranges for each region are as follows (per cow per year):

North Region	\$27
North Central	\$24 to \$26
South Centre	\$32 to \$33.13
South Region	\$33

Source: M.A.F. Farm Monitoring Report, July 1997

Artificial Breeding:

Livestock Improvement Corporation:

Nominated Semen Options (all regions):

A wide range of dairy bulls with New Zealand proofs, as well as many overseas dairy bulls, and a selection of beef breeds, are listed in the Cheqmate and Globull Catalogues along with complete pricing details.

Insemination component will be charged as for other yearling inseminations, using the nominated or PREMIER SIREs services. These fees do not include veterinarian farm visit fees which, if they apply, are charged by the veterinarian to the client direct.

Genermate costs:

Treatment Fee \$19.50 per animal
Insemination and semen - normal per animal fees for either premier sires as nominated service

- DIY training \$275 for a five day course.
- Leasing of deep freeze banks, \$90 fixed fee plus \$10 per week or part thereof subject to availability of banks. Nitrogen to be supplied at the ruling rates.
- Semen storage, no charge for the first 20 straws. Additional straws will be charged at a rate of \$3 per client per month plus 2.5 cents per straw per month.
- Semen despatch fees - fees for despatching nominated semen sold by *Livestock Improvement* (charged to the client).
 - (i) DIY clients will be charged a despatch fee of \$20 per order.
 - (ii) Late despatch fee of \$20 per order when orders for *Livestock Improvement* nominated brands semen are received within 30 days of the required date or after the bank has gone into the field.
- Handling fee, \$28 per order for semen in storage that is transferred from one client to another.

Premier Sires

	Per Cow Cost		
	Auckland	Taranaki	South Island
(Technician Service)			
1st 100	\$18.00	\$17.20	\$20.00
2nd 100	\$17.20	\$17.20	\$19.10
3rd 100	\$16.50	\$17.20	\$18.30
4th 100	\$15.70	\$17.20	\$17.50
Thereafter	\$14.90	\$17.20	\$16.70
Per Insemination Cost			
1st 100	\$14.00	\$13.00	\$14.80
2nd 100	\$13.40	\$13.00	\$14.20
3rd 100	\$12.80	\$13.00	\$13.60
4th 100	\$12.20	\$13.00	\$13.00
Thereafter	\$11.60	\$13.00	\$12.40
(D.I.Y. Operators)			
1st 100	\$13.00	\$12.00	\$13.80
2nd 100	\$12.40	\$12.00	\$13.20
3rd 100	\$11.80	\$12.00	\$12.60
4th 100	\$11.20	\$12.00	\$12.00
Thereafter	\$10.60	\$12.00	\$11.40

Cattle Embryo Transfer Fees

Premier Genetics N.Z. Ltd.:

One Donor - programme and flush (including drugs)	\$500
Two Donors - programme and flush (including drugs)	\$450/donor
Three Donors - programme and flush (including drugs)	\$400/donor
Four or more Donors - programme and flush (including drugs)	\$350/donor
Non surgical transfers - per embryo	\$80
Surgical Transfers	\$100

Special Rate: (Out of season only)		
Five plus donors (includes flushes, transfers into recipients, freezing and drugs)		\$600/donor
Freezing - charge per embryo		\$40
Thaw and Implant (charge per embryo)	1 to 9 embryos	\$100
	10 to 20 embryos	\$80
	more than 20 embryos	\$60
Surgical Transfers		add \$25 per recipient
Embryo Splitting		price on request.

Note: Travel and accommodation expenses are additional. The above fees do not include synchronisation of recipients, which will normally be carried out by the farmer's own veterinary practitioner.

Bull Semen Collection:

Premier Genetics:

On Farm Collection	Attendance Fee	\$70
	Under 200 Straws	\$3.50 per straw
	200 straws and over	\$3 per straw
	Travel	0.65c per km
On Centre Collection	Entry Fee	\$550
	Collection Fee	\$2 per straw (domestic use)
	Grazing after 42 days	\$42 per week
Storage	0.4c/straw/month	minimum charge \$15 per year
Despatch	For despatch	\$17
	Liquid Nitrogen	\$4
	Freight	At cost

Deer Reproduction:

Deer Reproduction Services:

Donors	Cost per donor	Cost per embryo transferred	Cost per recipient
1 to 2	\$1,050	\$100	-
3 to 5	\$950	\$100	-
6 to 19	\$850	\$75	-
20 to 24	\$800	-	\$50
25 to 26	\$800	-	\$25
30 plus	\$800	-	\$25

Freezing embryos

\$30 per embryo (\$200 minimum)

Thaw and implant

< 10 embryos

\$250 per embryo

11 to 15 embryos

\$200 per embryo

16+

\$150 per embryo

Artificial insemination

On farm laparoscopic intra uterine insemination

< 20 bunch

\$70 each

20 to 50

\$65 each

50 to 100

\$55 each

100 +

\$45 each

Inducing Dairy Cows:

<i>Coastal Veterinary Service, Opunake, charges the following for inducing:</i>	
First induction	\$7.55
Drug per animal (1st shot 5ml dexavet AP)	\$6.00
Second induction	\$8.84
Drug per animal (2nd shot 5ml dex-5)	\$5.50

Obviously variations occur i.e. some cows require a third injection or often additional injections are needed to prevent metabolic problems.

Bull Appraisal:

Appraisal of two bulls, including semen sampling, should cost about \$100 per bull.

Sire Replacement:

See Stock Purchases, on following page.

Pregnancy Detection:

Refer to *Section 2.4.8*

2.3.9 Ostrich and Emu Incubation

Smaller sized incubator (suitable for the eggs produced across one season from 1 to 2 pairs of either species)	\$2500 to \$3500
Mid-sized incubator (3 to 6 pairs)	\$6000 to \$12000
Large incubator (5 to 15 pairs)	\$15000 to \$25000

Contract Incubation Fees:

Per egg in incubator	\$10
Per chick out of incubator	\$80 to \$90
To raise chicks up to 2 to 4 months	\$15 per week

2.3.10 Stock Purchases

Sheep - See also *Section 1.2.10* for ewes, two tooth and lambs

Rams - the following figures are some approximate values for flock rams:

Dorset Down	\$200 to \$450
Corriedale	\$200 to \$500
South Dorset Down	\$250 to \$450
Perendale	\$200 to \$400
South Suffolk	\$200 to \$400
Border Leicester	\$200 to \$350
Suffolk	\$250 to \$500
Borderdale	\$250 to \$450
Romney	\$250 to \$500
Coopworth	\$200 to \$600
Merino	\$250 to \$700

Note: These values are only useful as a guide for budgeting purposes. Up to date figures should be obtained wherever possible.

With Coopworths You Can Budget with Confidence



**Secretary: Chris Logan
P.O. Box 169
Lincoln University
Canterbury**

Exotic Breeds:

The following figures are some approximate values for flock rams:

<i>Texel:</i>	Average Pick	Range
Purebred	\$375	\$250 to \$450
7/8	\$350	\$300 to \$375
3/4	\$300	\$250 to \$375
½ (Dorset Cross)	\$350	\$250 to \$500
Poll Dorset	\$300	\$200 to \$500
<i>Oxford Down:</i>		
Purebred		\$200 to \$300
7/8		\$200 to \$300
3/4		\$200 to \$250
½		\$200 to \$250
<i>East Friesian:</i>		
Purebred		\$2000 - \$20000
1/2		\$300 - \$600
	Southland	up to \$800
<i>Finnish Landrace: ½ bred</i>		
		\$250 to \$300

Beef Cattle

Bulls - Beef bulls vary much in price depending on breed, qualities desired, etc.

For example:

Run Bulls at Name Auctions -	
Angus	\$3000 to \$20,000
Hereford	\$2500 to \$10,000
Charolais	\$2000 to \$10,000
Run Bulls from second tier studs are usually in the range of	
	\$2,000 to \$5,000

Beef Breeding Cows, Heifers, Steers - see *Section 1.4.5 and 1.4.6*

Dairy Cattle -See *Sections 1.5.5 and 1.5.7*

Deer

● Stags

The average price for breeding stags (red deer) is in the region of \$2,400 to \$4,000. Some very high producing stags have been sold for up to \$20,000. The average price for Wapiti breeding stags is between \$2,400 and \$4,000 with some top stags reaching \$24,000.

● Hinds, Weaners, Yearlings, Velvetting Stags - see *Section 1.6.4*

Goats - See *Section 1.7.6*

Pigs - See *Section 1.8.3*

Ostrich and Emu - See *Section 1.9.3*

2.3.11 Herd Testing Charges

Livestock Improvement Corporation

Livestock Improvement's basic fee enables clients to indicate the preferred date for the first test, and how many tests they require. If clients specify the dates they would prefer to have for each test then a 12.5% premium is applicable. Herd test clients are automatically enrolled in MINDA although the fees for MINDA are not shown in the Herd Test fees. The fees will be shown separately on invoice statements broken into

1. Fixed fees for dairy herds.
2. MINDA for non-dairy herds
3. Optional MINDA Herd Report Fees
4. MINDA Disk Downloads

MINDA

Dairy Herds		\$275 fee plus \$1.50 per head 24 months of age and over
Non Dairy Herds		\$50 fee plus \$1.50 per head
Optional MINDA Herd Report Fees	Single Herd Reports	\$6.00 per report, plus \$0.05 per animal
	Sale Catalogue	\$1.25 per animal - minimum charge \$50
Individual Animal History Report		\$6.00 each
MINDA Annual Herd Fee		\$100
Fee for each download		\$10, plus \$0.05 per animal

Auckland/Waikato Region :

Sample Officer / Self-Sample assist	herd fee	\$275
	visit fee	\$140
	per cow per test fee	\$1.30
Self-Sample (without labour)	herd fee	\$27,500
	visit fee	\$45
	per cow per test fee	\$1.20

U.L.T.I. fees - 6 month contract, charged in six separate monthly instalments.

Technician Option;	Sample officer	\$400 herd fee per month plus
		\$3.40 per cow per month
	Self-sample	\$345 herd fee per month plus
		\$3.35 per cow per month
	Self-sample assist	\$400 herd fee per month plus
		\$3.35 per cow per month
D.I.Y. Option;	Sample officer	\$400 herd fee per month plus
		\$3.05 per cow per month
	Self-sample	\$345 herd fee per month plus
		\$3.00 per cow per month
	Self-sample assist	\$400 herd fee per month plus
		\$3.00 per cow per month

Taranaki Region :

Sample Officer / Self-Sample assist;	herd fee	\$275
	visit fee	\$160
	per cow test fee	\$1.30

Self-Sample (without labour)	herd fee	\$275
	visit fee	\$65
	per cow test fee	\$1.20

U.L.T.I. 6 month contract, charged in six monthly instalments.		
Technician Option	Sample Officer	\$415 herd fee per month plus
		\$3.40 per cow per month
	Self-sample	\$355 herd fee per month plus
		\$3.35 per cow per month
	Self-sample assist	\$410 herd fee per month plus
		\$3.30 per cow per month
D.I.Y Option-	Sample officer	\$415 herd fee per month plus
		\$3.00 per cow per month
	Self-sample	\$355 herd fee per month plus
		\$2.95 per cow per month
	Self-sample assist	\$410 herd fee per month plus
		\$2.95 per cow per month

South Island :

Sample Officer / Self-Sample Assist	herd fee	\$275
	visit fee	\$190
	per cow test fee	\$1.50
Self-Sample (without labour)	herd fee	\$275
	visit fee	\$95
	per cow test fee	\$1.40

ULTI, six month contract, charged in six monthly instalments.

Technician Option -	Sample Officer	\$430 herd fee per month plus
		\$3.80 per cow per month
	Self-sample	\$375 herd fee per month plus
		\$3.75 per cow per month
	Self-sample assist	\$430 herd fee per month plus
		\$3.70 per cow per month
DIY Option-	Sample Officer	\$430 herd fee per month plus
		\$3.30 per cow per month
	Self-sample assist	\$375 herd fee per month plus
		\$3.25 per cow per month
	Self-sample	\$430 herd fee per month plus
		\$3.25 per cow per month

The INVESTA-MATE discount applies to herds which use Premier Sires on at least 70% of the cows in the herd, and which herd test at least four times a year.

Discount levels

1st year	2.5%
2nd year	5.0%
3rd plus years	7.5%

2.3.12 Dairy Shed Expenses

Shed Expenses per Cow

Dairy shed budget figures should ideally be based on farmer estimates and past records of farm expenditure. Where such information is not available, the following figures may serve as a guide for budgeting purposes:

Depending on the farm, size of herd etc, total shed expenses typically range from \$15 to \$27 per cow per year. This does not include animal health. Below are the ranges from each region (per cow per year):

North Region	\$17 to \$18
North Central	\$15
South Region	\$15.63 to \$27
South Centre	\$15

Source: M.A.F. Farm Monitoring Report, July 1997.

See also Section 2.3.1 and electricity Section 2.5.1.

Detergents and Sanitizers

Diversey:

Mycorinse detergent	180 litre	\$740
Low Foam Mucosan dairy sanitizer	20 litre	\$97
Mycosan S dairy sanitizer	20 litre	\$96
Deosan Acid Bright Low Foam	20 litre	\$78
Deosan Starbrite	20 litre	\$95
Deosan Alternate	20 litre	\$86
Deosan D90	15 kg	\$125
Deosan D Kleen	20 litre	\$47

Klenzade:

Klenz Iodophor - sanitizer	20 litre	\$100.40
Q Klenz - sanitizer and cleanser	20 litre	\$110.00
Low Foam Q Klenz	20 litre	\$114.75
Klenz Alltemp	20 litre	\$103.85
Klenzphos H.C.milk stone remover	20 litre	\$151.30
Stainless Steel Detergent	20 kg	\$157.90
Kleer Klenz - alkaline cleaner	20 kg	\$99.00
Principal	20 litre	\$112.35
Klenzaid	20 litre	\$89.65
	200 litre	\$710.90
Chloride of Lime	9 kg	\$48.20
Caustic Soda	20 kg	\$68.70
Klenzaid XY12	20 litre	\$52.20
Klenzaid Hi-Line Dispenser Model 330 Short		\$1054.70
Klenzaid Dispenser Replacement Kit SU2		\$68.81

Milka-Ware:

Dairy Acid	100 litre	\$392
Dairy Alkali	100 litre	\$363
Dairy Idophor	20 litre	\$110
Liquid Scour	5 litre	\$21

Acidsan	100 litre	\$400
Alfa Alkali	100 litre	\$371

Dairy Ointments, Soaps and Teat Sprays

Teatspray Plus (Chlorhexidine)	100 litre	\$539
Sorbitol Emollient	20 litre	\$98

Ancare:

Teatcare Plus	200 litre	\$977
Teatcare	20 litre	\$131

Diversey:

Deosan Teatspray	20 litre	\$146
Deosan Teat Ex	20 litre	\$163

Klenzade:

Blu Gard	20 litre	\$196.25
Teat Guard plus	20 litre	\$167.15

Milka-Ware:

Teat Spray	100 litre	\$752
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Nu Farm:

Teat Dip and Spray	20 litre	\$87.11
Teatspray Plus	20 litre	\$119.11
Udder Cream	3.5 kg	\$32.26

Dairy Shed Equipment*Actoagriculture:*

Mastest Mastitis test kit	\$78.67
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Herd Test Bucket, 25 litre	\$213.33
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Alfa-Laval Agri:

Cup Removers only -		
Electronic	\$1500 (per unit installed)	
Liners	\$5.20	
Shells (Teatcups)	\$20.50	
Vacuum Pumps	Masport Master	\$1891.00
	Masport Super	\$2200.00

Vacuum Pump Oil	20 litre	\$73.80
	4 litre	\$16.00
Claws	HCC 150	\$149
	Topflo (TF 350)	\$295
EP100B Electronic Pulsator		\$260
Vacuum Pumps:		
Milka-Ware (Utile) full range		\$1609 to \$5562
Masport full range		\$1068 to \$4242
Milka-Ware water ring (Allflex)		\$3012 to \$4310
Milka-Ware Pump Diaphragm back plate		\$45.89
Milka-Ware Pump Diaphragm	Milfos fits DCM/FLYNN	\$25.00
Liners: No's 1 to 16		\$4.75
Milka-Ware European		\$5.25
Reid/Monokura/Smith		\$6.00
Sealed Milk Unit		\$7.95
Claws: Star Claw		\$143.20
Milka-Ware Starflo		\$149.20
Milka-Ware Starlite		\$152.20
Maxi Claw - auto shut off		\$240
Sight Claw (Visi)		\$160.20
Yellow Line Rubberware:		
Air Tubes		\$6.60 to \$89
Twin Tubes		\$7.12 to \$102.22
Claw Tubes		\$1.48 to \$55.01
Milk Tubes		\$8.55 to \$148
Suction Tube		\$72.10 to \$143
Milka-Ware multi blade centrifugal pump		\$1550
Flomax Centrifugal pumps	(0.75HP and 1.5HP)	\$1587 and \$1691.25
Milk Pump controllers	- variable speed	\$2616.70 to \$3335.15
Filters		\$376 to \$570
Filter Socks (packs of 100)		\$25.94 to \$107.20
Milk Coolers:		
Single Bank Plate Coolers	(18 plate - 104 plate)	\$944 to \$2900
Superflo Coolers	(2000L/H - 9000 L/H)	\$4224 to \$10695
Receiving Cans:		
Milka-Ware Systemax 2000 C/P		\$1950
Systemax 2000 Tee Type C/P		\$2050
Sustem Loop Can		\$1925
Receiving Can OBE 4 Ports		\$548 to \$630
Test Buckets		\$198 to \$240
Mastitis Detectors		\$27.20
Automatic Cup removers		\$1700
Jetter Wash		\$58.20 to \$145
Washline Injector Milka-Ware		\$812
Air Injector Valve		\$220.50
Injector Electronic Control		\$425

Nu Pulse New Zealand Limited:

Vacuum Pump System	\$280 - \$390
Milk Transport System	
Fully controlled Flexible Impellor Releaser	\$280 - \$350
Fully controlled Diaphragm Releaser	\$300 - \$390
Partially controlled Diaphragm Releaser	\$290 - \$340
Partially controlled Centrifugal Releaser	\$180 - \$200
Milk Line System	
Single Milkline	\$300
Double Milkline	\$470 - \$520
Wash System	\$160
Cluster Assembly	\$270
Pulsation	\$220
Water Heater	\$100 - \$130
Installation	\$100 - \$200

Onga (NZ) Ltd:

Dairy Wash Down

Hi Flow Self Priming Cast Iron Centrifugal Pumps

Model	182	1500W	50psi	240/415v	\$970/\$995
	183	2400W	59psi	240/415v	\$1580/\$1100
	184	3800W	71psi	415v	\$1450
	185	6000W	77psi	415v	\$2070

Dairy Shed In-Place Cleaning

Cast Iron Centrifugal Pumps

Model	Davies K1/3250W	240/415v	\$590
	Davies K3/4680W	240/415v	\$668
	Davies K1/4930W	240/415v	\$776
	Onga V 415/V112	240v	\$420/\$690

McNeill Pumping & Irrigation:

Dairy Wash Down Pumps Close Coupled Motors

	kW	Metres	Litres per minute	
Dairy blaster 3.0	2.2	30 (40psi)	151	\$1110
Dairy blaster 5.5	4.0	30 (40psi)	326	\$1565
Dairy blaster 7.5	5.5	45 (64psi)	280	\$1950

Dairy Shed in place cleaning (vat wash)

CHI 2.40	0.43	35 (50psi)	24	\$785
CHI 4.40	0.73	35 (50psi)	60	\$900
CHI 8.20	0.96	30 (40psi)	120	\$1080
CHI 12.20	1.72	40 (60psi)	150	\$1375

Note: For complete dairy shed units see *Section 2.21.2*

Dairy Shed Inspection Fees

Annual basic inspection fees for dairy sheds cost about \$100 to \$170 per shed, depending on the area.

2.3.13 Calf Rearing

Cost of Calf Rearing (*Source: I.M.Brookes, Massey University, January 1998*)

Feed costs for Friesian calves over first 10 weeks of life:

(i) Restricted Milk and Pasture

Daily gain over 10 weeks - 0.8 kg per day			
Live weight at 10 weeks - 90 kg			
Whole milk:	5 litres per day for 70 days	350 l @ 30¢	\$105
Pasture:	0.5 kg DM per day for 56 days	28 kg @ 10¢	\$3
			\$108

(ii) Early Weaning

Daily gain over 10 weeks - 0.8 kg per day			
Live weight at 10 weeks - 90 kg			
Whole milk:	5 litres per day for 42 days	210 l @ 30¢	\$63
Calf nuts:	1.0 kg per day for 56 days	56 kg @ 60¢	\$34
Pasture:	0.5 kg DM per day for 56 days	28 kg @ 10¢	\$3
			\$100

(iii) Ad Lib Milk

Daily gain over 10 weeks - 1.1 kg per day			
Live weight at 10 weeks - 110 kg			
Whole milk:	8 litres per day for 42 days	336 l @ 30¢	\$101
Calf nuts:	1.0 kg per day for 20 days	20 kg @ 60¢	\$12
Pasture:	2.0 kg DM per day for 28 days	56 kg @ 10¢	\$6
			\$119

(iv) High protein meal/straw

Daily gain over 10 weeks - 1.0 kg per day			
Live weight gain over 10 weeks - 100 kg			
Whole milk	2 litres per day for 28 days	56 l @ 30c	\$17
Milk powder	250 g per day for 28 days	7 kg @ \$2.70	\$19
High protein meal	ad lib.	130 kg @ 75c	\$98
Straw	ad lib.	1 bale @ \$3.00	\$137

Milk Replacers: see *Section 2.3.14*

Feeding Equipment

Agri-feeds Ltd:

Tubing - 30m	\$14.22
Replacement teats - small	\$1.95 each
- large	\$4.00 each
Calf bottle feeders	\$10.67

McInnes Manufacturing Ltd:

Milk Feeders:		
Milk Bar Teat		\$1.73
Milk Bar Bottle		\$18.62
Milk Bar Bottle with frame		\$35.51
Milk Bar 5 teat		\$67.50
Milk Bar 10 teat		\$118.19
Milk Bar Quad		\$417.38
Milk Bar mobile	20 and 24 teat	\$884.55
	30 and 36 teat	\$1,022.00

Shoof International:

Replacement teats - calfateria	\$2.62 each
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Other Calf Rearing Equipment

McInnes Manufacturing Ltd:

Bird Proof Meal Bar	\$176.91
Munch Trough	\$66.63
Snack Bar	\$36.89
Portable Water Trough	\$93.25

Shoof International:

Debudders	Electric	\$111 to \$195
	LPG	\$218
	Gas cordless debudder	\$289

2.3.14 Feed and Nutrition

Milk Replacers

Shoof International:

'Littermilk' Milk Replacer for piglets, kids, fawns and lambs, 10 kg	\$79.97
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Technik Products:

Calf Max - calf milk replacer	- 2 kg	\$23.65
	- 4 kg	\$44.40
	- 10 kg	\$84.53

Elanco Animal Health:

Rumensin Premix (Coccidiosis control and productivity enhancer for dairy and beef cattle)	\$260 per 20 kg bag
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Mineral/Nutritional Supplements (See also *Section 2.3.4* for metabolics)

Agrifeeds Limited: (ex Tauranga)

	250 kg Drum
Promag/Himag - cattle	\$228.00
Calcium Enriched Molasses (Vet prescription only)	\$190.00
Molasses -feed grade	\$130.00

-Blackstrap		\$140.00
Equestri-Feed (horses)		\$285.00
	Quantity	Bag Price
Copper Sulphate	1 tonne	\$62.00
Magnesium Sulphate	1 tonne	\$712.00
Magnesium Chloride	1 tonne	\$870.00
Zinc Sulphate - Heptahydrate	1 tonne	\$1,120.00
- Monohydrate	1 tonne	\$1,650.00
Ferrous Sulphate	1 tonne	\$880.00
Sodium Bicarbonate	1 tonne	\$750.00
Kalori Powdered Molasses	1 tonne	\$1,120.00
Calcium Chloride	1 tonne	\$800.00
Zinc Oxide - Supazinc	1 tonne	\$4,269.00
Hyfat (99% palm oil, beaded)	1 tonne	\$1,700.00
Monopropylene glycol	250 kg	\$577.00
Magnesium oxide	1 tonne	\$560.00
Agri feeders	200 litres	\$160.00
Bichlor	1 tonne	\$1,450.00
Kynofos (mono dicalcium phosphate)	1 tonne	\$1,050.00

Dominion Chemicals Ltd:

	Size	Price
Energo-Mag	250ml	\$21.28
More-Mag	5 litre	\$114.25
Garlic	1kg	\$19.06
Livamol	10kg	\$41.23
Molasses Blackstrap	25kg	\$37.24
Molasses Palabind	25kg	\$33.92
Seaweed	25kg	\$166.25

Livestock Supplies (N.Z.) Ltd: (ex-store)

Trace Elements - Manganese Sulphate, feed grade	\$35.00 per 25 kg
Magnesium Supplements	
Cal Mag, superfine drenching	\$14.20 per 25 kg
Nutrimag Australian, superfine drenching/dusting	\$23.75 per 25 kg

PCL Feeds:

	Bag size	Price/bag	\$/tonne
Megacalf	25 kg	\$17.28	\$691.00
Megacalf	40 kg	\$27.12	\$678.00
Hi-Pro Calf Pellets	25 kg	\$16.08	\$643.00
Hi-Pro Calf Pellets	40 kg	\$25.24	\$631.00
Dairy Rations :			
Premium Dairy Meal	40 kg	\$19.00	\$475.00
Premium Dairy Pellets	40 kg	\$19.64	\$491.00
All Seasons Dairy Pellet	40 kg	\$15.80	\$395.00
Milking Goat Pellet	40 kg	\$21.62	\$540.62

Salt

Agrifeeds Ltd:

	Quantity	Price
Coarse G11	1 tonne	\$370
Medium G23	1 tonne	\$390
Rock	1 tonne	\$900

Dominion Chemicals Ltd:

Red Rockie salt lick	20 kg	\$22.48
Rockies - Phos Rich	20 kg	\$35.25

Livestock Supplies (N.Z. Ltd: (ex-store)

Ocean Thrift Cattle Lick	40 kg	\$30.00
Ocean Thrift Sheep Lick	40 kg	\$23.00
Ocean Thrift Cattle Blocks	20 kg	\$13.85
Ocean Thrift Sheep Blocks	20 kg	\$13.00
Rock Salt,	50 kg	\$24.80
Agricultural Salt	50 kg	\$20.00
Hi Mineral Sheep block	20 kg	\$16.20

Concentrates - Meal/Crumble/Pellet/Nut

Dairy and Calf Feeds

Harvey Farms:

Dairy	Quantity	Price per tonne
Maxum High Energy	40 kg	\$557
Sustain High By Pass Protein	40 kg	\$597
Thrifty	40 kg	\$527
Calves		
Armalcalf 22% Protein DM	25 kg	\$663
Topcalf Pellets 20% Protein DM	25 kg	\$614
Topcalf Nuts 20% Protein DM		\$615
Cereal Mix Plus Textured 20% Protein DM	25 kg	\$668

NRM Feeds Ltd (South Island):

Product	Price per Unit	Price per Tonne
Dairy		
Prima Dairy Nuts 40 kg	\$20.20	\$505.00
NRG Pellets	\$387.00	\$387.00
NRG Nuts 40 kg	\$19.08	\$477.00
NRG Pro Pellets 40 kg	\$21.08	\$534.00
Maize Silage Balancer Lact 40 kg	\$25.08	\$627.00
Calves		
Moozlee Plus 40 kg	\$28.00	\$700.00
Grow Up Plus Pellets - Bulk	\$451.00	\$451.00
- 25 kg	\$13.13	\$525.00

Poultry Farmers Co-op (Invercargill)

Rapeseed Meal (Discount rates for bulk, 1 tonne or over)	\$23.50 per 50 kg
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Deer/Sheep/Beef and Goat Feeds

Product		Price per unit	Price per tonne
Multifeed Nuts	bulk	\$330.00	\$330.00
	40 kg	\$16.80	\$420.00

Horse Feeds

NRM Feeds Ltd (South Island):

Product	Price per unit	Price per tonne
Sweetfeed Sport 25 kg	\$16.45	\$658.00
Coolade	\$14.78	\$591.00
Horse and Pony Pellets 40 kg	\$21.08	\$527.00
Affinity 25 kg	\$14.00	\$560.00
Favourite 40 kg	\$30.08	\$752.00
Racehorse Pellets 40 kg	\$20.00	\$500.00
Lite Brew 40 kg	\$21.00	\$525.00
Pro Plus 40 kg	\$22.60	\$565.00
Progress	\$19.00	\$760.00

Emu and Ostrich Feeds

McMillan Stockfoods Ltd:

Ostrich Starter	40 kg	\$25
Ostrich Grower	40 kg	\$24
Ostrich Breeder	40 kg	\$25
Ostrich Maintenance	40 kg	\$19
Ostrich Budget	40 kg	\$17
Emu Starter	40 kg	\$23
Emu Grower	40 kg	\$20
Emu Breeder	40 kg	\$21
Emu Maintenance	40 kg	\$19
Emu Budget	40 kg	\$17

Poultry Feeds and Premixes

NRM Feeds Ltd (South Island):

(Prices are in bulk and delivered onto farm between the Rakaia and Waiau rivers.)

Product	Price per unit	Price per tonne
Chick starter crumble 10 kg	\$6.59	\$659.00
Chick starter crumble 40 kg	\$22.76	\$569.00
Hi Lay Super Mash 10 kg	\$6.27	\$627.00
Hi Lay Super Mash 40 kg	\$21.48	\$537.00
Hi Lay Super Pellets 10 kg	\$21.88	\$547.00
Peck n Lay Gold Pellets 10 kg	\$5.95	\$595.00
Peck n Lay Gold Pellets 25 kg	\$12.88	\$515.00
Meatbird Crumble	\$28.48	\$712.00

Technik Products:

Roxolin		
Feed additive for laying poultry and growth promotion in pigs		\$74 per 10 kg

Pig Rations*NRM Feeds Ltd: (Delivery within Canterbury included at \$15 per tonne bulk)*

Product	Price per Unit	Price per Tonne
Pig Tucker Plus Pellets 25 kg	\$13.80	\$552.00
Pig Tucker Plus Nuts 40 kg	\$21.08	\$527.00

Technik Products:

Porcstart - colostrum gel for use as a high energy base to support suckling of new born piglets - 80cc	\$46.90
Raspberry flavour - supplement for inclusion in pig feeds - 25 kg	\$425

Feed Grains*NRM Feeds Ltd (South Island):*

Product	Price per Unit	Price per Tonne
Feedwheat 40 kg	\$21.48	\$537.00
Whole Barley 10 kg	\$5.63	\$563.00
Steam Flaked Maize 40 kg	\$24.00	\$600.00
Mixed Grain 10 kg	\$9.99	\$999.00
Bran 50 kg	\$16.50	\$330.00
Barley Meal 40 kg	\$21.32	\$533.00

Dog Feeds*Tux:*

Dog biscuits	40 kg	\$68
Meaty bites	20 kg	\$34.84

Hay and Straw(For contract hay baling see *Section 2.4.1.*)

Depends on area, season and quality.

Summer 1997/98 prices for average/good quality bales were approximately as follows:

Canterbury		Conventional	Big Round Bale (10 to 15 bale equivalent)
Hay:	Meadow	\$2.50 to \$4.50	\$25 to \$40
	Lucerne	\$4.00 to \$7.00	\$40 to \$70
Straw:	Ryegrass	\$1.00 to \$1.50	\$12 to \$22
Hawkes Bay			
Hay:	Meadow	\$3.25 to \$3.50	\$30 to \$45
	Lucerne	\$5.50 to \$7.50	-
	Standing	\$1.50	-
Taranaki			
Hay:	Behind Baler	\$3.50 to \$4.50	\$45 to \$65
	Standing	\$2.00 to \$3.00	-
Silage:	Baled	\$17 to \$20 (wrapped)	\$50 to \$60

Waikato			
Hay:	Behind baler	\$4.50	\$40 to \$60
	Standing	\$2.00	-
Southland			
Hay:	Behind baler	\$2.00 to \$2.50	-
	Standing	\$1.00	-
Silage:	Baled		\$30 to \$40
	Standing	8c to 10c per kg DM	-

Grazing Fees

Payment for grazing varies according to the class and age of livestock, the time of year, seasonal conditions and the district. Rates for 1997/98 are approximately:

Dairy Cattle

Calves (weaning to May)

Bay of Plenty	\$3.00 to \$3.50 per head per week
Taranaki	\$3.50 per head per week
Canterbury	\$3.00 per head per week
Waikato (Friesian calves)	\$0.80 per kg
Hawkes Bay	\$1.50 to \$2.00 per head per week
Southland	January to March \$2.50 per week
	March to May \$3.00 per week

Yearling heifers (May to May)

Bay of Plenty	\$4.50 to \$5.00 per head per week or \$5.60 to \$6.50 if on a liveweight gain basis (e.g. 250 kg for the 12 month period)
Waikato	\$0.95 to \$1.25 cents per kg
Hawkes Bay	\$4.00 to \$5.00 per head per week
Taranaki	\$5.25 per head per week (May/May)
	\$6.00 per head per week (June/July) or \$1.00 to \$1.10 per kg liveweight gain
Canterbury	\$0.90 to \$1.10 per kg of liveweight gain
Southland	\$4.50 to \$5.00 per head per week

Cows (winter)

Bay of Plenty	\$9 to \$12 per head per week
Waikato	\$8 to \$10 per head per week
Taranaki	\$12 per head per week (\$2 freight)
Southland	\$10 per head per week
Canterbury	\$6 to \$12 per head per week
Hawkes Bay	\$7 to \$10 per head per week

Sheep and Beef

Cost per head per week:		
	<i>Canterbury</i>	<i>Southland</i>
Sheep		
-summer - ewes	20 to 50¢	25 to 40¢
-winter - hoggets	50 to 60¢	65 to 75¢
- ewes	50 to 70 ¢	65¢ to \$1.00
Breeding Cows	\$3 to \$6	\$6 (\$3 summer)
Dry Cattle - weaners	\$2 to \$5	\$3 (\$1 summer)
- steers	\$3 to \$5	-

Deer (Southland)

Hinds	- Red/Wapiti	\$2.00 to \$3.00 per head per week
Stags	- Red/Wapiti	\$3.00 to \$4.00 per head per week
Weaners	- Red/Wapiti	\$1.50 to \$2.50 per head per week

Note: When comparing grazing arrangements any additional costs of bulls, freight, animal health, weighings and management need to be identified.

Maize Silage-Buying In

Waikato farmers are paying about 15 ¢ per kg of dry matter.

Animal Feeders

Agri-feeds Ltd:

Agri-feeders	200kg	\$160.00
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McInnes Manufacturing Ltd:

Milk Feeders - Natural Suckling	
Milk Bar Teat	\$1.95
Milk Bar Bottle with frame	\$39.95
Milk Bar 1 - 10	\$29.90 to \$132.95
Milk Bar Quad 22	\$469.50
Milk Bar Mobile 20 - 36	\$995.00 to \$1,150.00
Milk Feeders with Tubes	
Milk Bar 6 to 12 Tube	\$84.67 to \$159.95
Milk Bar Lamb - Goat 1 to 3	\$31.50 to \$34.70
Milk Bar Lamb - Goat 8 to 18	\$93.00 to \$176.75
Meal - Pellet Feeders	
Braden Start Bottle	\$29.90
Snack Bar	\$41.50
Meal Bar	\$169.00
Combo Bar Meal and Hay	\$599.00
Waterers	
Snack Water Trough	\$69.95
Portable Water Trough	\$104.90
Dispenser	
McInnes Dispenser	\$495.00

Shoof International:

Pigs:		
Meal Feeders	3 space	\$177
	4 space	\$212
	5 space	\$248
	6 space	\$284
Milk Feeders	3 space	\$67
	8 space	\$124
Waterers	- self cleaning, cast iron	\$67
	- for weaners	\$97

2.3.15 Wool and Shearing Expenses

Sheep Farmers are currently spending about \$3.38 per stock unit (South Island) and \$3.65 per stock unit (North Island) on shearing and shed expenses in total per year. These figures are based on total stock units wintered. The regional ranges are as follows:

North Region	\$2.57 to \$4.65
North Central	\$3.43 to \$3.93
South Central	\$1.95 to \$4.27
South Region	\$3.04 to \$4.27

Source: MAF Farm Monitoring Report, July 1997.

Shearing Rates

Note: Approximate range only. Travel has not been incorporated into these rates.

North Island: (per 100 sheep)

<i>Contract Rates:</i>			
	Manawatu	Wairarapa	Wanganui
Full Wool	\$189	\$190-\$210	\$195
Lambs	\$185	\$180-\$200	\$180
Second shear ewes	\$185	\$190-\$210	\$180
Full belly crutch	\$97	\$90	\$90
Half belly crutch	\$78	\$75	\$75 - \$80
Tail crutch	\$55	\$54	\$49
<i>Open Shearing Rates:</i>			
Full Wool	-	\$100	\$97
Crutching	-	-	\$50 - \$52
Second shear ewes	-	-	\$40
Half belly crutch	-	-	\$45

South Island: (per 100 sheep)

<i>Contract Rates:</i>			
	Canterbury	Central Otago	Southland
Full Wool ewes - summer	\$215	\$228	\$206
- cover comb	\$223	\$240	\$220
Lambs	\$185	\$200	\$190

Merino ewes	\$265	\$299	\$270
Merino wethers	\$310	\$324	\$300
Full belly crutch	\$90	\$95	\$90
Half belly crutch	\$85	\$89	\$85
Buttonhole crutch	\$61	\$64	\$54
<i>Open Shearing Rates:</i>			
Full wool	\$120	\$115	\$125
Lambs	\$115	\$105	\$118
Full belly crutch	\$60	\$60	\$60

Blade Shearing (Canterbury):(per 100 sheep)

Open:	Belly Crutched	\$125
Semi-Contract:	Belly Crutched	\$145
Full-Contract:	Belly Crutched	\$255

Other Shearing Costs are as follows: (Open)

Shed hand rate - senior/intermediate wool cert.	\$11.50 + \$1.50 untaxable to \$14 per hour
- learner	\$8.50 to \$11.50
Presser rate	\$11.50 to \$15.00 per hour
Classing rate	\$28.50 to \$37.25 per 100

Plant

Lister 2 speed shearing plant	\$1264
Oster shearing machine	\$640
Dagging plant	\$975
Sunbeam Handpieces	- Supergrip \$535
	- Regal Eclipse \$558
Heiniger Handpiece	- Omega \$568
Golden Shear Handpiece	\$518
Clipnmaster	\$350
Laser sheep shear	\$768

Williams & Kettle Ltd:

Sunbeam Supergrip	\$670.45
Heiniger Omega Handpiece	\$630.00

Combs and Cutters

Combs:	Price per unit
Standard wide (convex, straight sided comb)	
Magnum Plus	\$35.74
Lightning	\$35.74
Sunbeam Super cover comb	\$41.34
Super Flight	\$30.23
Heiniger comb stealth	\$36.54
12 Tornado	\$36.89
Hurricane	\$36.89
Sonic Ultra Flash	\$36.54

Quaser	\$36.54
Cutters:	
XLII	\$6.85
Super AAA	\$5.91
Heiniger Jet Cutter	\$5.78

Williams & Kettle:

Sunbeam Combs	\$34.36
Sunbeam Super Cover Comb	\$51.40
Heiniger Comb	\$38.35
Lister Lightning Comb	\$39.95
Sunbeam Super AAA Cutter	\$7.15
Heiniger Jet Cutter	\$6.80
Sunbeam Super Flight	\$39.90
Sunbeam Force 12 Tornado and Hurricane	\$42.42

Electric Grinders

Lister Double Ended electric grinder	\$1,403
Heiniger - Double ended electric grinder	\$1,257

Emery Papers

Ramshead Emery papers - fine / coarse	\$4.98
Sunbeam emery papers - fine / coarse	\$6.76

Williams & Kettle:

Heiniger Emeries	\$5.80
Ramshead Emeries	\$5.80

Woolpresses

Lyco NZ Ltd:

Diamond MKII 220V-2.25HP (low power draw)	\$7,980
Power Tech 'S' DOMINATOR 220V 3 phase	\$12,400
Power Tech 'S' DOMINATOR 5HP 3 phase	\$12,600

Wool Tables

Lyco NZ Ltd:

Fleecemaster round standard	\$785
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Weighing System

Allflex (electronic)	\$1120
Scales for Diamond woolpress (also for stock general use)	\$1480

Other Woolshed Expenses

Stencils: Numerals/Alphabet	\$21.34/\$43.51
Tally counters	\$13.88
Hand Shears	\$40.95 to \$49.95
Footrot shears (serrated)	\$48.90

Sprayline		\$8.13
Simple description stencil	- 2/S, HGT, LBS, BIN, B/P, EWE	\$18.30
Extenda wool sweep	- aluminium	\$22.67
	- wooden handle	\$18.22
Bale clips	- 500	\$14.89
Bag and bale hooks, all sizes		\$17.25
Hand Shears	- dagging, plain/with stops	\$33.75 / \$40.15
	- sheep shears, plain/with stops	\$41.70 / \$48.15
Woolpacks		\$4.85

Shoof International:

Hand Shears	- Economy	\$17.74
	- Quality (dagging / straight)	\$35.52 / \$44.41

Williams & Kettle Ltd:

Woolshed broom		\$19.95
Bale clips, pack of 500, Maspro		\$18.95
Tally counter		\$15.64
Sunbeam Latex, 250ml		\$4.95
Moccasins		\$31.00
Pendulum - Ellery		\$96.00

Fibre Testing Charges

Wool Measurement Service - Lincoln University:

Cost per sample			
	Number of Samples		
	1-99	100- 49	250 +
Yield and Micron	\$5.50	\$4.50	\$4.00
Micron ONLY	\$3.75	\$3.50	\$3.25
Yield ONLY	\$4.25	\$4.00	\$3.75
Predictive Colour	\$3.00	\$3.00	\$2.50
Loose Wool Bulk (with any scoured test \$3.60)	\$6.50	-	-
Scoured Colour (with any scoured test \$5.50)	\$8.25	-	-
Medullation Score (with any scoured test \$1.10)	\$3.80	-	-
Staple Length	\$2.50	-	-
Staple Strength	\$7.00	-	-
Additional Tests using ODFA (Optical Fibre Diameter Analyser)			
Medullation %			\$1.25*
Curvature			\$0.60*
Spinning Fineness			\$0.60*
Histograms (distribution graphs)			\$0.50
Additional Data Analysis		\$25 per hour	
Speciality Fibre Measurement and other tests - Please Enquire			
Minimum charge per invoice is \$25			
Data on disks \$10.00 (\$5.00 if own disk supplied)			
Appraisal and comment of greasy samples		\$0.50 per sample	

*These prices are in addition to micron

Number of samples	Yield & Micron	Micron only
0000 to 100	\$4.25 per sample	\$3.75 per sample
0101 to 500	\$3.50 per sample	\$3.00 per sample
0501 to 800	\$3.00 per sample	\$2.75 per sample
0801 to 1500	\$2.75 per sample	\$2.50 per sample
1501 up	\$2.60 per sample	\$2.50 per sample
(with histogram - 50 cents extra per sample)		

S.G.S. Wool Testing Services: (Timaru and Wellington)
Fees for Mid Slide Samples

SGS Wool Testing Services



ISO Guide 25 accredited laboratory services for:

- Fleece testing
- IWTO certification
 - yield & micron
 - length & strength
- Additional measurements
 - colour
 - CV diameter
 - bulk
- Length after carding
 - scoured certification
 - greasy LAC
- condition testing
- medullation
- scoured residuals
- pesticide residues
- card waste

FLEECE TESTING SERVICES

Marine Parade, PO Box 349, Timaru, Tel: (03) 688-8813, Fax: (03) 684-8643

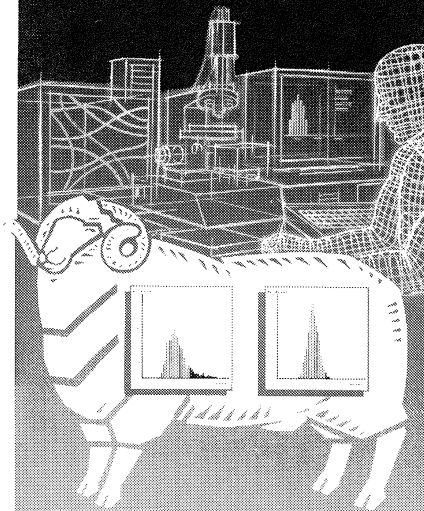
CENTRAL LABORATORY

48 Kemp Street, Kilbirnie, PO Box 15062, Wellington, Tel: (04)387-8565, Fax: (04) 387-8651, eMail: sgswtswl@xtra.co.nz



The SGS Group has been established for over 100 years. It is the world's largest independent quality and inspection assurance company, operating in over 140 countries, with more than 270 laboratories, and employing over 35,000 staff.

TODAY'S TECHNOLOGY TEAM FOR THE WOOL CLIPS OF TOMORROW



S.G.S Wool Testing Services: (Wellington)

Core Testing for Certification:	
Yield Test	\$42.00 per sample
Yield and Fineness	\$46.00 per sample
Lot Build	\$5.00 per sample
Condition test for scoured wool or yarn	\$30.00
Loose wool bulk	\$27.00
Staple Length	\$40.00

AgResearch Fibre Measurement (Invermay)

Wool

	Cost per sample	
	Up to 100	>100
OFDA Fibre Diameter Only	\$3.00	\$2.50
OFDA Fibre Diameter, Full Statistics and histograms	\$3.50	\$3.00
OFDA Fibre Diameter and Washing Yield	\$4.50	\$4.00
OFDA Fibre Diameter and Fibre Curvature	\$4.50	\$4.50
OFDA Fibre Diameter, Fibre Curvature and Opacity	\$5.50	\$5.50
OFDA Fibre Diameter, Washing Yield and Colour	\$11.00	\$11.00
OFDA Fibre Diameter, Washing Yield, Colour and FC and FO	\$12.00	\$12.00
OFDA Fibre Diameter, Washing Yield and Corebulk	\$17.50	\$17.50
Washing Yield and Colour	\$7.00	\$7.00
Full test including all of the above	\$24.00	\$24.00

Mohair

	Up to 100
OFDA Fibre Diameter Only	\$5.35
OFDA Fibre Diameter, Medullation and Kemp	\$16.00
Medullation and Kemp	\$10.70
Scoured Yield	\$3.60
OFDA Fibre Diameter and Scoured Yield	\$9.00
OFDA Fibre Diameter, Medullation, Kemp and Scoured Yield	\$25.00
OFDA FD, Medullation, Kemp, Staple length, Scoured Yield.	\$27.00

Cashmere

OFDA Fibre Diameter Only	\$5.35
OFDA Fibre Diameter and Down Yield	\$24.00
Down Yield Only	\$18.00
OFDA Fibre Diameter, Down Yield and Scoured Yield	\$26.50

Alpaca

OFDA Fibre Diameter Only	\$6.00
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Fibre Handling and Classing Charges - see *Section 2.10.3 and 2.10.4*

2.3.16 Stock Management

Lambing Equipment

Lamb/goat teat	\$3.23
Chestnut shepherds crook	\$33.94
Aluminium shepherds crook,	\$24.27
Tethering peg - spiral	\$7.87

Shoof International:

Teat - Lamb/Kid	\$2.22 to \$4.40
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Lyco N.Z. Ltd:

Lamb Marking Cradle :	
- Holdmaster cradle single	\$220
- Rollamaster/Rollamaster contractor model	\$720/\$840

Mating Management Aids

Stafix Ram/Goat Harnesses	\$24.45
Crayons - Soft	\$3.51 each

Tailing and Marking Requisites

Electro-Tek Engineering:

Earmarker	- sheep	\$81 to \$135
	- cattle	\$104 to \$146

Shoof International: (freight included)

Earmarkers	Medium to large	\$47 to \$87
	Small	\$26.63
Baby pig ear notcher		\$38.18
Shepherds Crook		\$33.00 to \$40.00
Rubber rings	100 / 500 pack	\$3.11 / \$11.11
Castration Ring Applicator		\$17.74

Ear Tags

Allflex N.Z. Ltd:

	Blank	Stamped sequentially	One row*	Two rows - one per side*	Two rows - on both sides*
Button male	\$0.40	\$0.48	\$0.61	-	-
Button female	\$0.34	\$0.42	\$0.51	-	-
Small male	\$0.48	\$0.56	\$0.85	\$1.21	\$1.95
Small female	\$0.45	\$0.61	\$0.82	\$1.19	\$1.93
Medium male	\$0.49	\$0.67	\$0.86	\$1.23	\$1.99
Medium female	\$0.46	\$0.62	\$0.83	\$1.20	\$1.94
Large male	\$0.67	\$0.89	\$1.04	\$1.41	\$2.16
Large female	\$0.62	\$0.83	\$0.99	\$1.36	\$2.10
Maxi female	\$0.83	\$1.04	\$1.20	\$1.57	\$2.31
Super maxi female	\$1.25	\$1.40	\$1.88	\$1.88	\$2.68
Brass	\$0.34	\$0.34	-	-	-
Flexitag	\$0.17	\$0.25	-	-	-

* denotes \$5.00 set up fee per tag

Leader Products (N.Z.):

Two Piece Flexible - prices vary with size of tag:		
	Price per Piece	
	Plain	Stamped
Male - sizes M1 to M5	31¢ to 51¢	42¢ to 68¢
Female - sizes F1 to F5	25¢ to 65¢	47¢ to 80¢
Bell tag	51¢	67¢

	Price per 100 tags				
	Plain	Lettered 1 side	Lettered 2 sides	Numbered and name	Numbered only
Leader tags	\$16	\$24	\$25	\$25	\$24
Multitags	\$16	\$24	-	\$26	\$24
Swiveltags	\$17	\$30	\$35	\$35	\$30

P

LEADER

EARTAGS

LEADERMATIC SHEEP TAG APPLICATOR
and the original LEADER SHEEP TAGS . . .
THE PERFECT COMBINATION IN TAGGING
TWO PIECE

FLEXIBLE

*Ideal for Beef and Dairy
Cattle, Goats, Pigs, Deer
and Stud Sheep.*

LEADER PRODUCTS (N.Z.)

P.O. Box 100-617, N.S.M.C., Auckland 10
Unit 1/42 Ellice Road, Glenfield, Auckland 10
Telephone: (09) 444 6180 Facsimile: (09) 444 1220

Leader's in the field!

Ear Tag applicators and accessories*Allflex N.Z. Ltd:*

Laza Tagger	\$30.39
Lazamatic	\$59.56
Blunt Pin	\$2.37
Lazamatic Pins	\$6.83
One Shot applicator	\$57.30
Fleximatic	\$81.90
Flexitagger	\$16.38

Leader Products (N.Z.):

Standard Applicators (for type 1 and 2 systems)	\$20
New Flexomatic (for type 1 system only)	\$68
Leader tags applicator	\$50
Standard Leader applicator pliers	\$38
Multitag applicator	\$20
Swivel tag applicators	\$25

Docking Pens*Cyclone:*

Complete Pen with Single Side Race 2.4m x 2.4m	\$453.75
Complete Pen with Double Side Race	\$532.25
- extra panel, 2.4m	\$66.10
- extra panel with drafting gate, 3 m	\$96.00

Raddles and Markers

Sprayline Aerosol Marker - 400 ml can	\$8.13
Stick Raddle (per stick)	\$1.24
Tailpaint, 500 ml	\$7.38

Shoof International

Cull Cow paint; aerosol	\$13.29
Sprayola	\$20.00
Paint Stik	\$2.62
Ultracolour Fluorescent Marker	\$8.85

Brands and Tattoos*Shoof International Ltd:*

Tattoo Outfit Standart	10 mm	\$96.90
Letter set		\$79
Number set		\$28.40
Tattoo Ink (85gm / 3oz)		\$10.62
Freeze Branding (0-8 set)	51 mm	\$319
	76 mm	\$355
	102 mm	\$435
Cleaning Alcohol (5 litre)		\$34.95
Brandspray (aerosol - freezes skin) kit, includes stencils, cleaning alcohol, aerosol etc		\$177
Pigs - Tattoo hammer, standard		\$70.00

De-Horning*Electro-tek Engineering Ltd:*

Yearling de-horners (blades \$39, handle \$14.65)	\$216
Manual calf de-horner	\$32.30
Scully Junior (blades \$82.30, handle \$27.00)	\$220
Keystone Dehorner (blades \$114.75 pair, handle \$30.20)	\$248.70
240 Volt (Boviet Germany)	\$132
LPG Matador, gas	\$184
LPG Matador, head	\$36.20

Hoofcutting*Electo-tek Engineering Ltd:*

Hoofcutter double action	\$105.75
Foot-rot shears-Angesa Italy	\$20.70

Shoof International Ltd:

Hoof trimmer	
Double action-economy	\$88.85
Single action 'Nordic'	\$70.23

Footrot Bath*Ribtec:*

3.9 m x 300 mm x 150 mm	\$249
3.9 m x 900 mm x 125 mm	\$409

Cattle Castrators*Shoof International Ltd:*

Triple Crush "Aescupal"	\$310
Triple Crush "Shoof"	\$124

Bull Rings and Leads*Instrument Supplies Ltd:*

Bull Rings	
Copper 3"	\$28.18
Copper 2 3/4"	\$25.68
Spiked	\$37.19
Bull Leads	
Stainless	\$28.98
Spring Loaded	\$22.70

Electric Prodders*Instrument Supplies Ltd:*

Kawe Prodder	\$235.53
Hot Shot Handle	\$146.95
Hot Shot Shaft 48" to 24"	\$77.88 to \$63.47
Flexible Shaft 24"	\$88.53

Scales and Platforms (See also fleece and bale weighers, *Section 2.3.15*)*Agrisales:*

Indicator with battery AG700-01/02/03	\$667/\$1339/\$1800
Standard 2000 kg and 3000 kg loadbars (pairs)	\$868 and \$1540
Cattle Platform	\$609
Printer 230V	\$642

Prattley Engineering:

(South Island prices. Prices are slightly higher in the North Island)

Sheep weigh crate with 3 way draft	\$1,149
3 way autodrafting sheep crate	\$10,041
Less true test indicator	\$7,507

Animal Crushes and Crates

Head Bale		\$666
Crates	Two-way drafting crate, auto closing and opening rear door, fits loadbars	\$1055
	Three-way drafting crate, fits loadbars	\$1112

Easybail Enterprises:

Galvanised bail		\$1,430
Painted bail		\$1,295
Non return race gate	- galvanised	\$465
	- painted	\$445

C & F Industries:

Deer Crush	\$5260
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Heenan Engineering: Canterbury

Two options available both involving the Heenan Workshop Gold Series Model

- Purchase standard model for \$6,700 - PTO driven but will require extension hose kits for between work room and hydraulic source. Short model \$5,900

5m hose length	\$170
10m hose length	\$260
15m hose length	\$350

- Purchase standard model and a power pack, either
 Petrol motor power pack \$1,650
 Electric motor power pack 3 horse power \$1,462 and 2 horse power \$1,287.
 But will possibly also require extension hose kits as listed above.
 A semen collection facility can be added into the deer handler for \$500.

Pregnancy Diagnosis/Back fat/Rib Eye Sonography(See *Sections 2.4.8* and *2.4.9* for charges if a contractor is used)*Canbay Pig Development Co.*

Renco Leanmeater back fat tester	\$1250
Renco PT 1 pregnancy tester	\$915
Renco PT 2 pregnancy tester	\$595

Medtel

Aloka Micrus, high grade, vet ultrasound equipment	\$15000
Aloka UST-944B-3.5, probe for sheep pregnancy diagnosis	\$8500
Aloka UST-588U-5, large animal pregnancy diagnosis and back- fat/ribeve muscle scanning	\$8500

Dog Trainers

Agtronics:

Electronic dog trainer	- single unit EDT Mark 10	\$620
	- single unit Smartaid	\$996
Hire rate	- EDT Mark 10	\$40 per week
	- Smartaid	\$60 per week
Voice recognition bark collar		\$200
Vibration bark collar		\$166

Cowsling

Shoof International:

Daisy Lifter	\$177
Hip Clamp - Economy	\$177

PETA Enterprises:

Cow Jack - lifting device	\$1085
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Calving Aids

Shoof International:

Calving chains	\$26.67 to \$130.68
Ropes	\$13.29 to \$29.29
Calving chain handle	\$17.74
Calf Pullers -HK E11	\$289
-HK E20	\$355
-HK E21	\$497
Calving Jack	\$489

Calf Covers

Palmer Canvas and Synthetics Ltd:

	Number		
	10	50	100
Polyethylene Fabric	\$109.50	\$392.50	\$720
Canvacon Fabric	\$133	\$562.50	\$1015

Shoof International

Thermal Covers - 'Foil Canvas'	\$61 to \$97
Thermal Cover - 'Super'	\$106 to \$177

Straitline Canvas Ltd:

	Length Wither to	Number		
	Tail	10	50	100
Animac Polyethylene Calf Covers	400/650 mm	\$74	\$305	\$570
Deluxe Calf Covers	800 mm	\$91	\$382	\$713
	1100 mm	\$132	\$569	\$1,063
Jute Calf Covers	650 mm	-	\$591	\$1,118
	1100 mm	-	\$888	\$1,679

Horse Shoeing

Standard Hack	- Includes Shoes	\$40 to \$60
Draught Horse	- Includes Shoes	\$100

Saddles and Covers

New Zealand Covers:

Stock saddles	\$450 to \$500
General Purpose saddles	\$265 to \$480
Indian stock and snaffle bridles	\$39.95
Horse covers - summer	\$79.95 to \$120
- winter	\$130 to \$190

2.4 CONTRACTING CHARGES

2.4.1 Hay Making

Some examples of contractors' charges are as follows:

Taranaki:

Mower/conditioner		\$98 per hour
Tedding/raking (28 foot rake)		\$95 per hour
Baling: Conventional		\$0.98 per bale
Large round	- 15 bale equivalents	\$12.90 per bale
Large round	- 12 bale equivalents	\$10.90 per bale
	- 10 bale equivalents	\$8.90 per bale

Waikato:

Baling	Small square		\$0.85 per bale
	Large round bales	- 10 small bale equivalents	\$8.00 per bale
		- 12 small bale equivalents	\$9.00 per bale
		- 14 small bale equivalents	\$10.00 per bale
Mowing	3 metre wide mower		\$75 to \$85 per hour
Raking	Swather rake		\$75 per hour

Hawkes Bay:

Baling	Conventional bale		\$0.85 per bale
	Large square bale	8 to 10 equivalent	\$9 per bale
		12 to 14 equivalent	\$9.19 per bale

Canterbury:

Medium baler	7 ft	\$10.25
	6 ft	\$9.25
Hi density round baler	5ft x 4ft	\$10.40
	6ft x 4ft	\$11.40
Conventional bales		\$0.73
Medium square bales	6 ft to 8 ft	\$10.20 to \$12.88
	4 ft to 5 ft	\$6.80 to \$9.35
Big square bales	4ft x 4ft x 7ft	\$19.60
Mowing		\$42 per ha
Mower conditioner		\$54.34 per ha

2.4.2 Silage

Charged in several different ways depending on contractor.

Mower conditioner	from \$120 per hour
Silage chopper	from \$330 per hour
Trucks per unit	from \$70 per hour
Stack tractor	from \$140 per hour
To chop, cart and stack silage	\$610 per hour
Direct cut rotary header front with forage harvester	from \$375 per hour
Medium squares (5 ft)	\$20 per bale
Rounds (4ft x 4ft)	\$20 per bale
Rounds wrapped in tubeline	\$18 per bale
Medium squares wrapped in tubeline	\$17 to \$18 per bale

Waikato

Wrapped baled silage	Rowed, wrapped, baled	\$17 per bale
Medium square	10 bale equivalent	\$18 per bale
Stack tractor		\$75 per hour
Loader wagon	30 plus m ³	\$120 per hour

Taranaki:

Wrapped silage:	
- 1.2 diameter bale - baled and wrapped	\$18.90 per bale
- loading and gathering	\$65 per hour

2.4.3 Cultivation

Typical contractor's rates are as follows:

Canterbury

	Rate per hectare
Ploughing (with tractor) 70, 100, 130, 150, 200 HP	from \$62
Reversible ploughing	\$75
Subsoiler - 3 legs, 2.5m	\$80 to \$130
Tunnel plough	\$38
Chisel plough (topwork)	\$60
Grub and discing straight in	\$75
Grub and discing top work	\$62
Grub and harrow	\$40
Grub and power harrows	\$28
Direct drill	\$65
- with disc-coulters over borders	\$70
- with hoe-coulters (over borders)	\$80 (\$90)
- hire	\$40
Conventional drill (and Cambridge roller)	\$40 (\$52)
- over borders	\$45 (\$60)
- hire	\$30
Cambridge rolling	\$40
Heavy roll over border	\$40
Heavy roll over worked ground	\$60
Discing - straight in	\$40
Discing - top work	\$50
Discing - first pass and stubble	\$38
Levelling	\$40
Maxitill	\$30
- with levelling bars - top work	\$40
- straight in	\$50

One **Waikato** Contractor charges the following for cultivation work,

Hoeing 170HP, 120" hoe	\$120 per hour
Rotor tilling	\$120 per hour
3 in 1 (hoe, seed, roll)	\$100 per hour
Planting maize	\$72 per hectare
Ripping	\$120 per hour

Another contractor charges the following:	
Cultivation (includes hoeing, ripping and power harrowing)	\$254 per hectare
Side dressing maize	\$54 per hectare
Undersowing	\$55 to \$60 per hectare
Cross drilling	\$100 to \$110 per hectare

Typical **Hawkes Bay** contracting rates:

Ploughing	\$86 per hectare
Discing and rolling	\$39 per hectare
Rotary hoeing	\$1 per inch per hour
Inter-row cultivation of squash	\$45 per hectare
Side dressing squash or maize	\$50 per hectare
Planting - squash	\$86 per hectare
- sweetcorn	\$86 per hectare

Typical **Taranaki** contract rates are as follows:

Ploughing	\$83 to \$105 per hectare
Drilling	\$75 per hectare
Rolling	\$74 per hectare
Roller drill	\$74 per hectare
Rotary hoeing	\$100 per hectare

2.4.4 Windrowing

In the **Waikato** contractor charges are about \$75 per hour

In **Taranaki**, rates for windrowing are \$80 per hour.

2.4.5 Heading

The following are contract prices for one **Canterbury** contractor.

Header only	\$125 per hectare
Heading, trucks, put in silo	\$150 per hectare
Clover and ryegrass	\$165 per hectare
Clover and ryegrass (wet and tough)	\$172 per hectare

Rates vary with the type and quality of crop and the tonnage expected from it (i.e. a lower price is paid for crops on light soils with low yields). Smaller size paddocks and heavier crops are charged at a higher rate per hectare. Allowance should be made for travelling time for trucks, labour and for bagging. A surcharge for work on hill country is taken into account in the higher price range.

In the **Hawkes Bay** an average rate for harvesting is \$184 per ha for small grain and \$192.50 per ha for maize.

2.4.6 Oversowing

Waikato: For aerial seeding with a fixed wing plane, \$60 per tonne to \$200 per tonne is charged depending on application rates, seed weight and area sown.

2.4.7 Dipping

Sheep Dipping (*Canterbury*), 30 to 39c per head for application only, depending on numbers. With chemical included - depending whether full or part fly protection, or lice only, 52c to \$1.30 per head. Another contractor charges 21c/head for shower dipping.

2.4.8 Pregnancy Diagnosis

Stockscan:

Cattle - less than 100 stock	\$1.70 per head
- greater than 100 stock	\$1.60 per head

60¢ per km is charged to the nearest main centre and a setting up fee is charged if there is less than 50 stock.

Sheep - wet, dry, ageing (500 to 700 per hour)	30¢ per ewe
- multiple births (300 to 400 per hour)	50¢ per ewe dries/singles/twins
	60¢ per ewe/triplets

Deer - Realtime Ultrasound, pregnancy testing for deer \$1.50 per head

Ultra-scan Ltd:

Number Cattle	Cost per head
0 to 30	\$3.10
31 to 50	\$2.70
51 to 100	\$2.60
101 to 150	\$2.50
151 to 200	\$2.40
201 to 250	\$2.30
251 to 300	\$2.20
301 to 350	\$2.10
351+	\$2.00

Sheep	(minimum of 300)	per head
Wet/dry		\$0.35
Twin		\$0.45

2.4.9 Muscle and Fat Detection

Stockscan:

Eye muscle depth only	\$2.00 per head
Eye muscle area (width x depth)	\$2.50 per head
Eye muscle area and fat measure	\$3.00 per head
Fat measure only	\$1.00 per head
Small mobs (20 to 50 per hour)	\$115 per hour

2.4.10 Miscellaneous Contracting

Canterbury:

Shelter Belt Trimming and gorse cutting	\$54 per hour
Digging of offtal pits trenches drains etc. (minimum of 1 hours work required)	
- 12 tonne machines	\$75 per hour

Post driving	\$35 per hour
Tailing	\$65 per hour
Bulldozing	\$100 to \$120 hour

Hawkes Bay:

Effluent Spreading \$75 per hour

Gisborne:

Excavator (12 t, 15t, 20t, 30t machines)		\$70 to \$120 per hour
Bulldozing	D3 Caterpillar	\$65 per hour
	D65	\$110 per hour
	Komatsu D65	\$120 per hour
Trenching, includes excavator and bulldozer for backfilling		\$70 to \$88 per hour

2.4.11 Agricultural Machinery Hire Rates

Rural and Associated Contractors Federation of New Zealand Inc.:

Wheel Tractors		
(kW)	Hire Rate 2WD per hour	Hire Rate 4WD per hour
10 to 21	-	\$41.00 to \$44.00
22 to 37	\$48.00 to \$50.00	\$48.50 to \$51.00
38 to 51	\$52.50 to \$55.50	\$54.00 to \$57.50
52 to 64	\$59.00 to \$61.50	\$60.50 to \$63.50
65 to 88	\$70.50 to \$75.00	\$74.00 to \$78.00
89 to 142	\$84.50 to \$88.00	\$84.50 to \$101.50
Grain Drills		
Coulters		Hire Rate Disc Coulter
Up to 16		\$24.50
17 to 20		\$52.00
Over 20		\$76.00
Haybalers - conventional (depend on group)		
- one tonne square		\$337.00
Haymower conditioners		\$31.00 to \$58.50
Forage Harvesters		\$21.00 to \$132.50
Hedge and grass mulcher mowers		\$11.00 to \$38.00

Note: **Fencing** Contractor rates see *Section 2.19.1*

Shearing rates see *Section 2.3.15*

Fertiliser spreading charges see *Section 2.6.3*

Spraying costs see *Section 2.9.16*

2.5 ELECTRICITY

2.5.1 Total Farm Electricity Costs

Depending on the type of farm size and locality, typical electricity costs (including domestic) are as follows:

	Dairy Farms (Per cow costs)	Sheep & Beef Farms (Per stock unit cost)
North Region	\$24 to \$29	\$0.41 to \$1.09
North Central	\$21 to \$34	\$0.42 to \$1.10
South Central	\$20.63 to \$24.40	\$0.11 to \$0.93
South Region	\$24	\$0.18 to \$0.85

Source: M.A.F. Farm Monitoring Report, July 1997.

2.5.2 Regional Charges

Manawatu - Central Power:

	Smartplan			Economy 8		
	A	B	C	A	B	C
Network Service Charge (c/day)	55	80	105	55	80	105
Anytime electricity - first 10 units (c/unit)	16			17		
- subsequent units (c/unit)	12.5			13.5		
Controlled electricity (c/unit)	8.7			8.7		
Day electricity (c/unit)	-			-		
Night electricity (11pm to 7am) (c/unit)	6.0			6.0		

The A,B,C category reflects the area in which the clients live or run their business. Category C includes customers in rural areas.

EasyPlan is an option suitable for holiday homes or other properties with intermittent or low usage.

	A	B	C
Electricity Charges (c/unit)	20	25	30
Minimum Monthly Charges (\$/month)	20	27.5	35

Canterbury - Southpower:

	Daily fixed charge (c)	Electricity (c/unit)	Night charge (c/unit)
Enterprise unlimited	29,244	15.3844	
		Day charge	
Enterprise Open 24 hour	60,000	16.478	6.655
Enterprise Weekender	29,244	16.478	9.776
Enterprise Nightsaver	29,244	15.583	5.446
		Uninterruptible	Interruptible
Enterprise Daysaver	29,244	15.384	11.384
Enterprise Daysaver Plus	29,244	15.384	9.886

Irrigation Rates:

Option 1A: higher motor capacity fixed charge and lower energy costs - better for large users.

Option 1B: lower motor capacity fixed charge and higher energy costs - better for small users.

Option	1A	1B	Extra Irrig
Capacity Charge	15.230	8.148	8.148
Power Factor Connection Rebate	7.140	7.140	7.140
Initial 500 hours	7.154	18.109	7.154
Subsequent hours	5.247	5.247	5.247

2.5.3 Cost of Power Installation

The average cost of installation for 1 kilometre of power line in rural areas is \$25,000 (this is for 11,000 volt overhead lines). Price varies depending on the distance to be installed i.e. the shorter the distance the more it costs per metre, up to 350 m, then prices start to level out.

2.6 FERTILISER AND LIME

2.6.1 Fertiliser

BOP Fertiliser Limited:

Phosphate Fertilisers:							Price per tonne bulk
N	P	K	S	Mg	Ca		Mt Maunganui
0	9	0	12	0	22	Superphosphate	\$158.10
0	15	0	7	0	18	Super Plus	\$267.80
0	21	0	2	0	14	Triple Super	\$411.90
0	13	0	0	0	14	Reactive Rock	\$174.50
0	12	0	7	0	31	Reactive Rock + S	\$177.50
Potash Fertilisers							
0	8	8	10	0	19	15 % Potash Super	\$186.40
0	7	10	10	0	18	20% Potash Super	\$194.50
0	6	15	8	0	15	30% Potash Super	\$210.55
0	5	25	8	0	11	50% Potash Super	\$242.80
0	12	10	5	0	14	20% Potash Super Plus	\$282.25
0	9	8	7	0	29	15% Potash RPR	\$200.35
0	9	15	0	0	24	30% Potash RPR	\$222.05
0	0	50	0	0	0	Muriate of Potash	\$333.65
0	0	40	17	0	0	Sulphate of Potash (bagged)	\$608.30
Sulphur Fertilisers							
0	8	0	20	0	20	Sulphur Super 20	\$165.10
0	7	8	17	0	17	15% Potash Sulphur Super	\$192.40
0	6	15	14	0	14	30% Potash Sulphur Super	\$215.50
0	4	25	10	0	10	50% Potash Sulphur Super	\$246.30
0	7	0	30	0	20	Sulphur Super 30	\$166.95
Magnesium Fertilisers							
N	P	K	S	Mg	Ca		
0	7	0	9	5	17	Serpentine Super	\$153.35
0	6	8	8	4	14	15% Potash Serpentine Super	\$182.40
0	5	15	6	4	12	30% Potash Serpentine Super	\$207.25
0	3	25	4	3	9	50% Potash Serpentine Super	\$240.40
0	8	0	11	5	19	Magphos	\$203.05
0	7	8	9	5	13	15% Potash Magphos	\$231.35
0	6	15	7	5	0	30% Potash Magphos	\$255.55
0	0	0	6	30	0	Granmag	\$437.30
NPKS Pasture and Crop Fertilisers							
5	4	5	12	3	10	Crop Fertiliser	\$209.60
7	7	0	15	0	17	Ammoniated Super	\$199.60
4	5	12	12	0	12	Pasture 4	\$232.50
6	6	6	13	0	15	Pasture 6	\$218.15
18	20	0	2	0	0	DAP	\$470.45
11	15	0	13	0	7	DAP Sulphur Super	\$349.05

Nitrogen Fertilisers							
21	0	0	24	0	0	Sulphate of Ammonia	\$278.65
46	0	0	0	0	0	N-Rich Urea (bulk)	\$379.25
46	0	0	0	0	0	N-Rich Urea (bagged)	\$427.95

Special Mixtures:

To obtain an approximate price for a mixture when incorporated at the rates below, add the mixture price of the additive shown to the base fertiliser price.

	Quantity per tonne	Add per tonne
Boron	25kg	\$45.55
Copper Sulphate	12.5kg	\$29.50
Selenium (Selcote Ultra)	1.5kg	\$5.95
Granular Sulphate	1.0kg	\$14.60
Molybdenum	150kg	\$8.70

Special mixtures despatched in less than 4 tonne quantities will incur a surcharge.

Dominion Chemicals Ltd.:

Solid Fertilisers:	Unit	Cost
Ammonium Nitrate	25kg	\$31.92
Ammonium Sulphate	25kg	\$33.25
Blood and Bone	50kg	\$57.19
Calcium Nitrate	tonne	\$1,010.80
Diammonium Phosphate	50kg	\$110.39
Dolomite	50kg	\$31.92
General Purpose	50kg	\$34.58
Gypsum Fine	25kg	\$11.64
Gypsum Coarse	25kg	\$11.64
Lime	25kg	\$4.99
Magphos	50kg	\$27.93
Monoammonium Phosphate	50kg	\$99.75
Monopotassium Phosphate	50kg	\$70.15
Potassium Nitrate	25kg	\$32.92
Potassium Sulphate	40kg	\$48.95
Super Phosphate	50kg	\$24.61
Urea	40kg	\$38.84
Trace Elements:		
Ammonium Molybdate	1kg	\$49.48
Borax Pentahydrate	25kg	\$38.90
Borax Solubor	25kg	\$136.33
Boric Acid	25kg	\$46.55
Calcium Chloride 74%	25kg	\$24.94
Cobalt Sulphate	25kg	\$881.13
Copper Hydroxide	25kg	\$1,981.70
Copper Sulphate	25kg	\$53.20
Iron Sulphate	25kg	\$21.28
Magnesium Sulphate	25kg	\$21.28

Manganese Oxide	25kg	\$39.90
Manganese Sulphate	25kg	\$35.25
Salt - Coarse	25kg	\$9.64
Salt - Medium	25kg	\$9.64
Selcote Ultra	25kg	\$124.02
Shandong 60 mesh (Magnesium Oxide)	tonne	\$598.50
Sodium Molybdate	50kg	\$1,246.88
Sulphur Prills	50kg	\$44.56
Zinc Sulphate	25kg	\$31.92
Chelates:		
Powders:		
Calcium 10%	20kg	\$505.13
Cobalt 14%	1kg	\$108.45
Copper 14.5%	20kg	\$477.74
Iron Chelate 13.2%	20kg	\$323.46
Magnesium 6%	20kg	\$396.34
Manganese 12%	20kg	\$436.50
Zinc 14%	20kg	\$362.56
Liquids:		
Calcium 3%	20 litre	\$148.00
Copper 6.5%	20 litre	\$192.00
Magnesium 2.5%	20 litre	\$116.00
Manganese 5%	20 litre	\$130.00
Zinc 6%	20 litre	\$142.00
Specialty Items:		
Gibberellic Acid	12g	\$73.15
Nitric Acid	35kg	\$87.83
Phosphoric Acid 85%	35kg	\$58.18
Potassium Hydroxide	25kg	\$60.52
Potassium Permanganate	1kg	\$329.84

New slow release, 24% Cu

(suitable for trace elements in fertiliser or animal feeds)

\$1980 (bulk) per tonne

Fluid Fertilisers NZ Ltd:

N	P	K	S	Type	Price 20 / 200 litre
9	5	6	0	Reaction	\$95/\$730
5	4	11	0	Reaction	\$95/\$730
14	4	4	0	Reaction	\$95/\$730
6	9	5	0	Reaction	\$115/\$900
8	4	6	0	Blood and Bone Formula	\$105/\$780
8	3	6	0	Fish formula	\$85/\$630
10	3	6	0	Solfert	\$65/\$380
8	4	9	0	Solfert	\$65/\$425
5	4	11	0	Legume Special	\$95/\$730
				Super Seaweed	\$155/\$980
0	0	0	14	Super Sulphur	\$95/\$730
				Qualigrass	\$80/\$580

				Tracemol	\$144/\$950
Horticultural Range					
				Hortrange Quickstart Inground Fertiliser	\$85/\$630
14	4	4	0	Hortrange Earlyboost	\$95/\$730
9	5	6	0	Hortrange Preflower	\$95/\$730
5	4	11	0	Hortrange Hiyield	\$95/\$730
				Hortrange Organic Seaweed	\$125/\$980
				Hortrange Calcium	\$90/\$850

Hatuma Lime Co:

N	P	K	S		Price per tonne
<i>Phosphate:</i>					
0	4	0	6	No 7 Dicalcic Phosphate	\$120.10
<i>Sulphur:</i>					
				Calsul	\$73.50
				Dicalcic Phosphate 10% Sulphur	\$130.10
<i>Potash:</i>					
				15% Potassic Dicalcic Phosphate	\$165.70
				30% Potassic Dicalcic Phosphate	\$196.00
0	2	12	5	Haymix/Dairy Blend	\$207.35
<i>Beef/Dairy and Sheep</i>					
0	3	0	4	No 4 10% Salt	\$138.90

Hortlink Marketing Ltd:

Blood and Bone	50 kg	\$32.00
Dolomite Lime	25 kg	\$7.88
Sulphate of Iron	25 kg	\$16.01

Liquid and soluble fertilisers:

N	P	K	S			
10	2	6	1	Nitrophoska foliar	5 litres	\$36.55
40	4	4		Schultz Turf and Lawn Super	11.3kg	\$112.00
20	30	20	0	Schultz Instant All Purpose	11.3kg	\$112.00
10	60	10	0	Schultz Instant Bloom	11.3kg	\$128.00

Liquid Cut Flower Food/Preservative:

Schultz Instant	3.78 litre concentrate	\$42.00
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Controlled Release Fertilisers: Nutricote

16	4.4	8.3		3-4 month release Standard	25kg	\$113
13	5.7	10.8 + TE		3-4 month release + Trace Elements	25kg	\$126.63
18	4.4	8.3		8-9 month release Standard	25kg	\$113
13	5.7	10.8 + TE		8-9 month release + Trace Elements	25kg	\$123.63

Livestock Supplies (N.Z.) Ltd:

Trace Elements:		
Boron	25kg	\$29.50
Copper Sulphate 98% Free flowing / Standard	25kg	\$49.50/\$43.75

Maganese Sulphate, fert grade	25kg	\$32.50
Hepto Zinc / Mono Zinc	25kg	\$25/\$35
Zinc Oxide	25kg	\$118.75
Magnesium Supplements:		
Calcined Magnesite, dusting	25kg	\$14.25
Cal Mag, superfine plus,	20kg	\$20.50
Magnesium Sulphate Epsom Salt	25kg	\$16.00
Magnesium Chloride	25kg	\$18.75
Clacined Magnesite	25kg	\$12.50
Swede Mix	40kg	\$14.20
Double Boron Swede Mix	37kg	\$20.20
Kale Mix	40kg	\$11.75
All Swede and Kale mixes contain Boron, Cal Mag, Zinc, Copper and Selenium.		
Cobalt/Selenium:		
Livestock Supplies 1-year Selenium	25kg	\$38.75
Selcote Ultra	25kg	\$80.00
Cobalt Sulphate	25kg	\$575.00

Ravensdown Fertiliser Co-Operative Ltd:

Notes: Approximate retail prices (for bulk) are given.

For bagged product in 50 kg bags add \$41.60 per tonne

Phosphorus and sulphur availability information and trace element quantities are provided at the end of this price list.

					\$ per tonne bulk		
					<i>Awatoto (Napier)</i>	<i>Hornby (Chch)</i>	<i>R'borne (Dunedin)</i>
N	P	K	S				
0	9	0	12	Superphosphate	\$154	\$156	\$152
0	10	0	8	Longlife Super	-	\$156	\$152
0	21	0	1	Triple Super	\$402	\$420	\$400
0	13	0	1	NC Reactive Phosphate Rock	-	\$176	\$198
0	15	0	15	TSP (15% Sulphur)	\$259	-	-
13	16	0	13	DAP (13% Sulphur)	\$402	-	\$371
0	7	0	9	Drilling Super	-	-	\$139
0	7	0	9	Serpentine Super	-	-	\$139
0	13	0	0	Sechura Rock Phosphate	-	\$172	-
0	9	0	12	Boron Super	\$180	\$183	\$178
0	9	0	12	Cobalt Super (1.0kg)	\$181	-	-
0	9	0	12	Cobalt Super (1.5kg)	-	\$200	\$190
0	9	0	12	Copper Super	\$197	-	\$195
0	9	0	12	Molybdate Super (500g)	-	\$167	\$163
0	9	0	12	Molybdate Super (250g)	\$161	\$163	\$160
0	9	0	12	Moly Sulphur Super Extra	-	\$166	\$166
0	9	0	12	Selenium Super (2kg)	\$164	\$166	\$162
0	8	0	20	Sulphur Super	\$160	\$162	\$158
0	8	0	20	Sulphur Super plus Selenium	-	-	\$164
0	7	0	28	Sulphur Super Extra	\$162	\$165	\$161
0	5	0	50	Maxi Sulphur Super	\$163	\$166	\$162
0	8	0	20	Moly Sulphur Super	-	\$170	\$164
0	7	0	28	Moly Sulphur Super Extra	-	\$170	\$163
0	9	0	16	Longlife Sulphur Super	-	\$162	-
0	8	8	10	15% Potash Super	\$173	\$183	\$179
0	7	10	10	20% Potash Super	\$181	-	-
0	6	15	8	30% Potash Super	\$188	\$206	\$202
0	5	25	6	50% Potash Super	\$204	\$237	\$232
0	6	15	8	30% Potash Moly Super	-	\$213	\$207
0	7	10	17	20% Potash Sulphur Super	-	\$192	\$188
0	6	15	14	30% Potash Sulphur Super	-	\$208	\$203
7	5	7	14	Hi-Gro	-	-	-
0	0	50	0	Potassium Chloride	\$332	\$336	\$330
0	6	15	8	30% Potash Boron Super	-	\$228	\$223
0	8	0	16	Westland Pakihi Starter + TE	-	\$195	-

					<i>Awatoto (Napier)</i>	<i>Hornby (Chch)</i>	<i>R'borne (Dunedin)</i>
18	20	0	2	Cropmaster DAP	\$458	\$461	\$454
20	10	0	13	Cropmaster 20 W	\$380	\$384	\$378
15	10	10	8	Cropmaster 15 W	\$382	\$386	\$380
13	14	15	1	Cropmaster 13	\$416	-	\$413
11	22	0	1	Ammo-Phos MAP	\$590	\$503	\$488
9	19	7	1	Ammo-Phos/Hycrop	\$467	\$478	-
8	15	15	1	Ammo-Phos/Hycrop P&S Mix	\$440	\$443	\$446
8	15	15	1	Ammo-Phos/Hycrop Pea Fert.	\$412	\$447	-
					Bulk	Bagged	Bagged
12	10	10	1	Nitrophoska	\$555	\$599	\$595
12	5	14	3	Nitrophoska Blue	\$531	\$587	\$571
12	5	14	8	Nitrophoska Blue Extra	-	\$963	\$963
					Bulk	Bulk	Bagged
16	10	10	5	Potash Gold	\$454	-	\$462
15	10	10	12	Potash Gold	\$453	\$433	\$468
14	7	14	6	Potash Gold	\$456	-	-
8	14	13	6	Potash Gold	\$500	\$504	-
0	7	8	13	20% Potash Gold Super	\$229	\$234	-
0	6	15	14	35% Potash Gold Super	\$282	-	-
0	4	23	15	55% Potash Gold Super	\$353	-	-
0	0	42	18	Potassium Sulphate (Granular)	\$509	\$554	-
0	0	42	18	Potassium Sulphate (Standard)	-	\$886	-
21	0	0	24	Ammonium Sulphate	-	\$254	\$248
21	0	0	24	Granular Ammonium Sulphate	\$294	\$298	\$292
26	0	0	14	Ammonium Sulphate Nitrate	-	\$378	\$371
27	0	0	0	Calcium Ammonium Nitrate	\$381	\$425	\$420
46	0	0	0	N-Rich Urea	\$384	\$384	\$448

Horticultural Fertilisers:

						<i>Napier</i>	<i>Nelson</i>
N	P	K	S	Mg		Price per tonne, bulk	
0	0	0	23	0	Zinc Sulphate (Monohydrate)	-	\$1,089
0	0	0	13	10	Magnesium Sulphate	\$593	\$588
0	0	0	22	16	Kierosite	\$691	\$691
0	0	0	0	11	Dolomite	\$200	\$153
13	0	38	0	0	Potassium Nitrate (crystalline)	-	\$987
0	0	0	23	0	Ferous Sulphate 19% Fe	\$544	\$575
0	0	0	13	0	Manganese Sulphate 32% Mn	-	\$914
0	0	0	0	55	Calcined Magnesite	-	\$466
16	4	16	4	0	Asparagus Fertiliser	-	\$412
11	3	11	10	0	Berryfruit Fertiliser	-	\$351
7	3	17	8	0	Hop Fertiliser	-	\$284
12	2	14	0	0	Kiwifruit Fertiliser	-	\$389
15	0	18	80	0	Kiwifruit Fertiliser No P	-	\$445
7	4	7	16	12	Market Garden Fertiliser	-	\$292

10	2	10	6	2	Orchard Fertiliser	-	\$269
10	2	5	7	2	Orchard Low K	-	\$262
6	3	12	7	1	Orchard Low N	-	\$254
0	0	0	0	0	Lime	-	\$57
0	0	0	18	0	Calcium Sulphate (Gypsum)	-	\$260

Liquid Fertilisers

N	P	K	S			Price per tonne, bulk	
20	0	0	0		Liquid Nitrogen	\$352	\$340
7	2	4	1		Liquigro Foliar	\$658	\$662
6	1	6	1		Liquigro Trickle	\$392	\$470
3	0	6	0		Liquigro Tomato No.1	\$389	\$393
6	0	6	0		Liquigro Tomato No 2	\$490	\$493

Phosphorus Availability:

To give an indication of the quickly available (to plants) phosphorus content of fertilisers, a citric solubility test is required for all phosphate fertilisers in New Zealand. With some fertilisers, particularly those containing reactive phosphate rock (RPR), the amount of plant available phosphorus is greater than indicated by the citric acid test. For such fertilisers Ravensdown Fertiliser Co-op Ltd has provided an estimate of the potentially available phosphorus (PAP). They state that the PAP estimates take into account slowly available phosphorus which is a better guide to the value of the fertiliser for use on pasture.

Product:	<i>Total P</i>	<i>Cit.sol.P</i>	<i>PAP</i>
Superphosphate 0-9-0	9	8.5	8.8
15% Potash Super 0-8-8	8	7.2	7.6
Cropmaster DAP 18-20-0	20	20	20
Longlife Super 0-10-0	10	6.8	10
North Carolina RPR 0-13-0	13	4	13

Sulphur Availability:

The sulphur contained in fertilisers may be either quickly or slowly available (or intermediate) depending on the blend of sulphate sulphur (quick) and elemental sulphur (slow).

Fertilisers with only quickly available (sulphate) sulphur include: super phosphate, long-life super, potash super mixes and 'crop' or 'nitrogen' type fertilisers based on ammonium sulphate or potassium sulphate.

Fertilisers with mainly slowly available sulphur are those containing elemental sulphur such as RPR plus sulphur mixes, PAPR plus sulphur mixes and sulphur bentonite prills.

Fertilisers which have a mix of both quickly available and slowly available sulphur include sulphur supers and longlife sulphur supers.

Trace Elements:

As a guide the table below indicates the amount of additive (containing the trace element) which would normally be added to one tonne of fertiliser mixture, and the amount of the element which would be supplied (to one hectare) if the application rate was 250kg per hectare.

Trace Element	Form of Additive	Additive per tonne	Element per ha
Boron	Sodium borate	25kg per tonne	0.94 kg B per ha
Cobalt	Cobalt sulphate	1.5kg per tonne	0.053kg Co per ha

Copper	Copper sulphate	25kg per tonne	1.56 kg Cu per ha
Selenium	Sodium selenate prills	4kg per tonne	0.01 kg Se per ha
Molybdenum	Sodium molybdate	0.25kg per tonne	0.025kg Mo per ha
Other additives available are Ferrous Sulphate, Zinc Sulphate, Manganese Sulphate, Magnesium Oxide, and Sodium Chloride.			

Rural Research Limited:

Liquid Fertilisers - Nitrosol Liquid Blood and Bone fertiliser.						
N	P	K	S	Name	Quantity	Price
8	3	6	2	Nitrosol	5 litre	\$41
8	3	6	2	Nitrosol	20 litre	\$120
8	3	6	2	Nitrosol	60 litre	\$315
8	3	6	2	Nitrosol	200 litre	(N.I.) \$800
8	3	6	2	Nitrosol	200 litre	(S.I.) \$850
8	3	6	5	Nitrosol + S	200 litre	(N.I.) \$820
8	3	6	5	Nitrosol + S	200 litre	(S.I.) \$870

The prices detailed above include the cost of freight from the factory to local merchants throughout New Zealand.

Southfert Co-op Ltd:

Southern Crop Ltd.						
Phosphate Fertilisers:						
N	P	K	S			Bulk Price per tonne
0	9	0	11		Superphosphate	\$151.32
0	20	0	1		Triple Super	\$405.60
0	15	0	6		HIP	\$284.70
0	14	0	1		Reactive Phosphate Rock	\$175.76
Potash Fertilisers:						
0	7	7	9		15% Potash Super	\$182.86
0	6	15	8		30% Potash Super	\$208.16
0	0	50	0		Muriate of Potash	\$341.95
0	0	40	17		Sulphate of Potash (bagged)	\$675.00
Sulphur Fertilisers:						
0	8	0	22		22% Sulphur Super	\$160.52
0	7	0	33		33% Sulphur Super	\$157.23
0	4	0	50		50% Sulphur Super	\$156.95
0	10	0	17		Tussock	\$172.74
0	11	0	11		Double Eleven	\$174.38
Magnesium:						
0	7	0	9	5	Serpentine Super/Drilling	\$141.44
0	6	7	8	4	15% Potash Serpentine Super	\$174.46
0	5	15	6	4	30% Potash Serpentine Super	\$201.25
0	6	0	20	4	Serpentine Gold	\$155.57
Special Mixtures:						
0	9	0	11		Moly Super 300gms Mo per tonne Super	\$163.81
0	9	0	11		Cobalt Super 1.5kg per tonne	\$193.21
0	9	0	11		Copper Super 25kg per tonne	\$204.86
0	9	0	11		Selenium Super 2kg per tonne	\$164.47
0	9	0	11		Boron Super 50kg per tonne	\$219.09

<i>High Analysis:</i>						
18	20	0	1		Southcrop DAP	\$458.64
20	10	0	13		Southcrop Green	\$378.04
16	8	10	10		Southcrop Blue	\$370.80
14	15	13	1		Southcrop Pink	\$430.22
9	10	25	1		Southcrop Yellow	\$395.56
21	0	0	24		Ammonium Sulphate	\$284.96
11	10	0	13		Triple Boost	\$350.48
46	0	0	0		N Rich Urea, bulk	\$380.64

<i>Trace Elements:</i>		
	Pack Size	Price
Cobalt Sulphate	20kg	\$478.40
Copper Sulphate	25kg	\$51.08
Zinc Sulphate	25kg	\$19.91
Selcote Ultra Selenium	25kg	\$90.18
Calcined Magnesite	25kg	\$13.40
Granular Borate	25kg	\$34.55
Sulphate of Iron	50kg	\$36.56
Ulexite	25kg	\$20.37
Brassica Mineralised	25kg	\$62.40

Watkins N.Z. Ltd:

N	P	K	S	Mg		Price per 50kg
27	0	0	0	0	Calcium Ammonium Nitrate	\$32.17
18	20	0	2	0	Diammonium Phosphate	\$35.59
11	3	7	16	2	TE Grange	\$24.71
0	0	50	0	0	Muriate of Potash	\$28.46
12	5	14	3	1	TE Nitrophoska Blue TE	\$40.60
12	10	10	1	0	Nitrophoska 12.10.10	\$40.09
0	7	8	6	5	Potash Magphos 15%	\$23.80
0	6	15	7	5	Potash Magphos 30%	\$21.53
0	0	0	20	15	Kieserite	\$41.00
0	0	25	18	6	Patent Kail	\$52.23
21	0	0	24	0	Sulphate of Ammonia	\$22.85
0	0	40	17	0	Sulphate of Potash	\$44.21
0	9	0	12	0	Superphosphate	\$19.16
16	0	10	19	0	TE Turf Extra	\$25.50
7	7	0	0	0	Blood and Bone (40kg)	\$34.00

<i>Slow release fertilisers:</i>	
Magamp (25kg bag)	\$115.35
15gram fertiliser tablets (10kg bag)	\$73.50
<i>Water soluble fertilisers:</i>	
Plant Starter (25kg bag)	\$99.00
Potash Special (25kg bag)	\$99.00

Yates New Zealand Limited:

<i>Slow Release Fertilisers:</i>					
N	P	K	Name	Pack Size	Price
17	7.3	14	IBDU 31N Granular	25kg	\$90.00
24	3.4	13	Magamp	22.68kg	\$110.00
20	4	4	Yates Plant Tabs	10kg	\$70.00
<i>Soluble Fertilisers:</i>					
31	4	8	Microfeed 311	20kg	\$87.00
16	3	27	Microfeed 214	20kg	\$87.00
			Solubor DF 17.4% Boron	5kg	\$22.40
			Solubor DF 17.4% Boron	12kg	\$60.00
7	17	5	Magamp + 12% Magnesium	22kg	\$110.00

Mark Bell Booth Limited:

<i>Supacrop Soluble Fertilisers - 10 kg bags</i>		Price per kg
Crop Spray		\$6.25
Foliar G P		\$6.35
Pasture Plus		\$6.00
Plant Starter		\$7.10
Soluble Phosphate		\$7.40
Soluble Potassium		\$7.35
Brassica Booster		\$6.45
<i>Supacrop Liquid Fertiliser and Foliar Sprays</i>		
Humusol SC		20 litres \$159.00
Humusol GPS		20 litres \$177.00
Spray Oil (vegetable extract)		20 litres \$108.00
Soluble Sulphur		20 litres \$99.00
<i>Supacrop Trace Elements:</i>		
Boron		5 litres \$60.00
Soluble Magnesium		20 litres \$118.00
Calcium		20 litres \$86.00
Molybdenum		1 litre \$40.00
Soluble Zinc		5 litre \$26.50
Manganese		5 litre \$27.50
Maxicrop Triple		25 litres \$210.00
		200 litres \$1,200.00
Maxi crop Flake 'Seasure'		2.5 kg pail \$99.50

2.6.2 Lime*Austin Chalk Co Ltd: (Canterbury)*

	\$ per tonne
Agricultural Lime	\$15
Ag Gypsum	\$140 to \$200
Quick Lime - Hydrated	\$280

Hatuma Lime Co Ltd:

	\$ per tonne
Agricultural Lime	\$16.50
Cropfine Lime	\$20.00
80% Dicalcic Phosphate 20% Cropfine	\$102.85
60% Dicalcic Phosphate 40% Cropfine	\$82.85
40% Dicalcic Phosphate 60% Cropfine	\$62.85
20% Dicalcic Phosphate 80% Lime	\$40.00

McDonald's Lime Ltd:(Otorohanga)

		\$ per tonne
Agricultural Lime	- bulk per tonne	\$16.50
	- 1 tonne bulk bags	\$60.00
	- 25kg bags	\$70.00
Supplimate Lime flour	- bulk, per tonne	\$20.00
	- 1 tonne bulk bags	\$70.00
Hydrated Lime	- 25kg bags	\$241.00

Parkside Quarries Ltd: (Oamaru)

Agricultural Lime	- bulk price, ex works Weston	\$15 per tonne
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2.6.3 Fertiliser Spreading/Application Costs**Ground Spreading***N.T. Wealleans Ltd: (Waikato)*

Rate - kg per ha	(cwt per acre)	
200	(1.5)	\$7.40/ha
250	(2.0)	\$35.00/ t
370	(3.0)	\$22.50/t
500	(4.0)	\$19.50/t
625	(5.0)	\$18.50/t
750	(6.0)	\$18.00/t
1250	(10.0)	\$12.00/t
2500	(20.0)	\$8.50/t
High Analysis Fertiliser (MAP, DAP, Urea, Sulphate of Ammonia) per hectare		\$7.41

Canterbury:

Typical rates range from \$12.00 to \$17.00 per hectare with a precision spreader costing approximately \$30.89 to \$39.54 per hectare depending on the number of hectares. An additional \$1.49 may be charged for steeper land.

Aerial Spreading:

The cost of aerial spreading of fertiliser varies greatly and depends very much on the location and condition of the airstrip and the rate of application. Most firms prefer to quote for individual situations rather than publish fixed rates. For the aerial (fixed wing) spreading of superphosphate, the following are approximate costs.

North Island Contractor:

400HP Fletcher	\$550 per hour
Super	\$27.30 to \$39.90 per tonne
Lime (discount if over 500 tonne)	\$19.95 to \$26.25 per tonne

Helicopter work

Helicopter Spreading	Depending on application rate and area - \$120 to \$300 per tonne
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2.6.4 Testing of Soil, Water, Plant and Feeds

Agriculture N.Z.:

Consultancy Soil Fertility and Fertiliser Recommendation.

Charging for this service may vary from district to district. However, the following may be used as an approximate guide:

Prices range from \$98.00 (one sample per property) to \$590.00 (10 samples per property) with additional samples costing \$45.00 each. Service includes soil test and fertiliser advice according to crop or pasture type etc. These prices apply where the farmer collects the soil samples and delivers them to an Agriculture NZ office.

AgResearch Laboratory Analyses

Service	Description	Price
<i>Soil Test Profiles</i>		
Basic Test	- pH, P, K, Mg, Na, Ca, S An indication of the basic fertility of a soil by measuring the level of major available nutrients and soil acidity	\$44.45
Basic Test Plus Organic Sulphur	- pH, P, K, Mg, Na, Ca, S, OS An indication of basic soil fertility plus soil's organic sulphur reserve	\$59.47
Basic Test Plus Anion Storage Capacity (A.S.C) and Organic S	- pH, P, K, Mg, Na, Ca, S, OS, ASC An indication of basic soil fertility plus soil's ability to retain phosphate and sulphur together with organic sulphur reserve	\$66.45
Glasshouse Soil Test	- pH, P, Ca, K, Mg, Na, S, SS A measure of major available nutrients, acidity (pH) and soluble salts in a glasshouse soil	\$51.47
Commonly Requested Extra Tests -		
Tetra Phenyl Boron Potassium	A measure of the soil's reserve potassium	\$24.50
Aluminium (Al)	Plant available aluminium	\$13.01
Soluble Salts (SS)	Soluble salts	\$7.01
Boron (B)	Boron	\$17.50
Organic Carbon	Organic carbon (OC)	\$17.50
<i>Agriculture Herbage Analysis</i>		
Super Animal Health Profile	N, P, S, Mg, Ca, Na, K, Mn, Zn, Cu, Fe, Mo, Co, Se To provide major and all trace element analyses relating to animal nutritional requirements	\$85.82
Animal Health Profile	N, P, S, Mg, Ca, Na, K, Mn, Zn, Cu, Fe, Mo To provide major and trace element analyses relating to animal nutritional requirements	\$70.21
Suspected Copper Deficiency	Cu, S, Fe, Mo To provide the analytical data required to diagnose the potential copper deficiency of livestock	\$39.01

Mixed Pasture Nutrition	N, P, S, Mg, Ca, K To determine the major elements in mixed pasture relating to pasture nutrition	\$39.01
Cover or Lucerne	N, P, s, Mg, Ca, K, Mn, Zn, Cu, Fe, B, Mo To provide the major and trace elements analysis of legumes, their nutritional requirements and requirements of the nitrogen fixing rhizobial bacteria	\$70.21
Cereal Nutrition Profile	N, P, S, Mg, Ca, K, Mn, Zn, Cu, Fe To determine the major and trace elements in a cereal which are required for its nutrition and the production of high quality grain	\$54.61
<i>Horticulture Plant Analysis</i>		
General Profile	N, P, S, Mg, Ca, Na, K, Mn, Zn, Cu, Fe, B A complete major and trace element analysis suite relating to the nutrition of horticultural crops	\$62.41
Vegetable Profile	N, P, S, Mg, ca, Na, K, Mn, Zn, Cu, fe, B, Mo A complete analytical suite covering all the major and trace elements relating to the nutrition for vegetable crops	\$70.21
Kiwifruit Profile	N, P, S, Mg, Ca, Na, K, Mn, Zn, Cu, Fe, B, Cl A complete analytical suite covering all major and trace elements relating to the nutrition of kiwifruit	\$74.11
Commonly requested Extra Tests -		
Aluminium (Al)	Analytical test to determine aluminium levels	\$11.70
Chloride (Cl)	Analytical test to determine chloride levels	\$5.79
Molybdenum (Mo)	Analytical test to determine molybdenum levels	\$13.01
Selenium (Se)	To provide selenium levels for animal health	\$13.01
Cobalt and Iron	To provide cobalt and iron levels for animal health	\$13.01
Iodine (I)	To provide iodine levels for animal health	\$40.01
<i>Feed Quality Analysis:</i>		
Assess pasture, silage, hay, brassicas, meals, compound feeds indicating true dry matter, fibre content, crude levels, pH levels, free ammonia, metabolisable energy, digestibility.		
NIR (Near Infra-Red)		\$65.01
NIR + Major elements - N, P, S, Mg, Ca, Na, K		\$104.01
NIR + Major + Trace elements - N, P, S, Mg, Ca, Na, K, Mn, Zn, Cu, Fe, Mo, Co, Se		\$150.82
<i>Water Analysis Profiles:</i>		
Domestic Water Chemistry Profiles	Analysis of pH conductivity, alkalinity, chloride hardness, dissolved solids, CO ₂ , Ca, Mg, Fe, Mn, Cu, Zn and nitrate nitrogen	\$68.00
Horticultural Water Profile	Analysis as in domestic water chemistry profile to ascertain the suitability for use as irrigation supply	\$73.77
Microbial		\$40.00

Individual or additional tests may be requested. Contact laboratory to discuss requirements and obtain price prior to submission.

Analytical Services Laboratory (a division of R.J.Hill Laboratories Ltd.)

Soils		Price
Basic Soil Test	Volume weight, pH, P, K, Ca, Mg, Na, CEC, % Base Saturation	\$36.00
Special Soil Analyses	Soluble salts, phosphate retention, organic matter, available nitrogen, sulphate-sulphur, reserve magnesium, aluminium, boron	\$11.00 each
	Resin phosphorous, total nitrogen, total phosphorus, total selenium	\$15.00 each
	Organic sulphur (this test requires the sulphate to be determined)	\$15.00 each
	Reserve potassium	\$18.00
	C/N ratio (this test requires the organic matter and total nitrogen to be determined)	\$26.00
	Trace elements (EDTA manganese, zinc, copper, cobalt)	\$20.00
Plants		
Basic Plant Profile	N, P, K, S, Ca, Mg, Na, Fe, Mn, Zn, Cu, B	\$57.00
Special Plant Analyses	Molybdenum, cobalt, selenium, sulphate-sulphur, chloride, aluminium, nitrate-nitrogen	\$11.00 each
	Iodine	\$17.00
Additional Feedstuff Profile	Fibre, ash, digestibility (estimated), metabolisable energy (estimated)	\$35.00
Nutrient Solution		
Basic Nutrient Profile	Nitrate-nitrogen, phosphorus, potassium, sulphur, calcium, magnesium, sodium, chloride, iron, manganese, zinc, copper, boron, pH, conductivity	\$40.00
Special Nutrient Analysis	Molybdenum, silica, ammonium-nitrogen	\$11.00 each
Growing Media		
Basic Media Profile	pH, conductivity, nitrate-nitrogen, ammonium-nitrogen, phosphorus, potassium, calcium, magnesium, sodium	\$40.00
Special Media Analyses	trace elements (DPTA - extractable iron, manganese, zinc, copper, boron)	\$30.00
	Cation exchange capacity	\$40.00
	Physical analysis (air filled porosity and water holding capacity)	\$35.00
	Nitrogen Drawdown index	\$70.00
Feedstuff		
Basic Feedstuff Profile	Dry matter, protein, fibre, ash, digestibility (estimated), metabolisable energy (estimated)	\$67.00

Special Feedstuff Analyses	pH, ammonium-nitrogen/total nitrogen ratio	\$11.00 each
General Mineral Profile	Phosphorus, potassium, sulphur, calcium, magnesium, sodium, iron, manganese, zinc, copper, boron, molybdenum, cobalt, selenium	\$58.00
Water testing for drinking, stock and irrigation		
Basic Test	pH, conductivity, total dissolved salts, alkalinity, carbon dioxide, calcium, magnesium, hardness, sodium, potassium, chloride, sulphur, nitrate N, boron, iron, manganese, zinc, copper	\$65.00
Assessment of results, with written report (including test charge)		\$85.00
Bacteriological Tests (Total and Faecal Coliforms)		\$25.00

- Freepost available for sample transport on request
- discount of 10% applies when 5 or more samples are submitted together for routine soil and plant tissue tests.

- Other services offered include:

- | | |
|-----------------------------------------------------------------------|-------|
| Pesticide residue testing in soil, plant tissue and water per sample: | |
| - DDT, Dieldrin and metabolites | \$90 |
| - multi-residue screen including organochlorines | \$190 |
| - acid herbicide (phenoxy) residues | \$210 |

Environmental analyses per sample:

- | | |
|-------------------------------|----------------------------------------------------------------|
| - heavy metals (total levels) | \$20 sample preparation plus \$10 per element (except mercury) |
| - Mercury | \$35 |

FREIGHT AND CARTAGE

2.7.1 Road Transport Rates

Road Freight rates are normally dependent on both type of goods and distance to be carted. The following figures are estimates for the South Island, areas north of the Waitaki River - in other areas the rates may differ slightly.

The publication of this list is intended as a guide only, each operator determines their own rates on parameters according to their individual costs.

(i) General Freight:

Estimated January 1998 rates (\$ per tonne unless otherwise stated):

	km						
	10	30	40	50	60	70	80
General Goods	\$19.69	\$32.57	\$38.00	\$42.82	\$47.40	\$51.34	\$54.43
Bagged Lime and Fertiliser	\$16.36	\$25.06	\$28.70	\$32.16	\$35.59	\$38.86	\$49.86
Bulk Lime	\$6.87	\$11.10	\$13.01	\$14.78	\$16.59	\$18.00	\$19.43
Bulk Fertiliser	\$10.77	\$19.10	\$23.07	\$26.66	\$30.22	\$33.36	\$36.28
Wool (per bale)	\$3.94	\$6.01	\$6.98	\$8.01	\$8.92	\$9.75	\$10.29
Bulk Grain	\$11.35	\$18.68	\$21.85	\$24.55	\$27.07	\$29.40	\$31.61
Metal	\$12.13	\$24.50	\$29.67	\$35.23	\$40.72	\$46.36	\$51.90

(ii) Small Goods Rates:

Weight	up to 16km	17 to 32km	33 to 48km	49 to 64km	over 64km
up to 32 kg	\$6.73	\$6.73	\$6.73	\$6.73	\$6.73
102 kg	\$6.73	\$7.33	\$7.99	\$10.03	\$12.44
508 kg	\$14.94	\$20.02	\$24.96	\$29.89	\$34.05
965 kg	\$24.00	\$32.32	\$39.96	\$47.41	\$54.77

(iii) Stock (dollars per head):

	km						
	10	30	50	70	100	130	160
Store lambs	-	-	-	-	\$1.00	\$1.15	\$1.30
Prime lambs	\$0.60	\$0.90	\$1.20	\$1.50	\$1.80	\$2.00	\$2.30
Hoggets	\$0.65	\$0.62	\$1.25	\$1.55	\$1.85	\$2.05	\$2.35
Store sheep	-	\$0.70	\$0.90	\$1.20	\$1.50	\$1.80	\$2.10
Fat sheep	\$0.70	\$0.90	\$1.40	\$2.00	\$2.50	\$0	\$3.00
Weaner cattle	-	-	\$5-\$6	-	-	-	\$10-\$12
Yearlings	-	-	\$6-\$7	-	-	-	\$12-\$14
18 mth cattle	-	\$6.50	\$8.50	\$10.50	\$12.50	\$14.50	\$16.50
2 Year cattle	\$7.00	\$9.00	\$11.00	\$13.00	\$15.00	\$17.00	\$19.00
Prime cattle	\$8.00	\$10.00	\$12.00	\$14.00	\$16.00	\$18.00	\$20.00
Deer	-	-	\$5.00	\$7.00	\$9.00	\$10.00	\$11.00

(iv) Timber:

See Section 2.22.3 for costs of transportation of timber.

2.7.2 Railway Transport Rates

Railfreight rates are confidential and are normally dependent on the type of goods, the size of the consignment and the distance involved.

2.7.3 Inter-Island Ferry Freight Rates

These freight rates can vary greatly and are confidential to *Tranz Rail Ltd.* For budgeting figures either contact a transport company to ask for costings or *Trans Rail Ltd.*, who may quote direct or recommend a transport company. The rates can vary according on the goods being freighted, the amount and often the customer's ongoing business relationship is considered.

2.7.4 Air Freight Rates

Air New Zealand: Overnight Domestic Rates quoted

Minimum of 20 kg: ex Christchurch	
To Timaru, Oamaru, Westport, Hokitika, Greymouth	\$1.00/kg
To Rest of South Island	\$1.65/kg
To Wellington and Palmerston North	\$1.80/kg
To Rest of North Island	\$2.30/kg
Minimum of 20 kg: ex Auckland	
To Rotorua, Whangarei, Hamilton, Tauranga, Taupo	\$1.00/kg
To Rest of North Island	\$1.65/kg
To Christchurch	\$2.50/kg
To Nelson, Blenheim	\$2.80/kg
To rest of South Island	\$3.00/kg
Delivery Options -	
For each piece or for every 20kg (whichever is greater) the price is:	
- 9.30am delivery	\$2.50
- 12.00am and 2.00pm deliveries (Auck, Wgtn and ChCh only)	No Charge

International Rates quoted ex Christchurch and Auckland

Destination	Foodstuffs (per kg)					Flowers/Bulbs/Seeds (per kg)	
	Normal Rate/kg	100kg min	250kg min	500kg min	1000kg	45kg min	100kg min
Sydney	\$4.22	\$2.24	-	\$1.43	-	\$2.09	-
Melbourne	\$4.22	\$2.24	-	\$1.43	-	\$2.09	-
Brisbane	\$4.22	\$2.24	-	\$1.43	-	\$2.09	-
Perth	\$7.48	-	\$2.49	\$2.19	-	\$3.50	-
Singapore	\$12.87	\$3.32	-	\$2.90	\$5	-	\$3.53
Hong Kong	\$14.18	\$3.15	\$3.01	-	\$8	\$3.97	-
London	\$18.60	\$5.00	-	-	-	\$5.55	\$5.16
Los Angeles ¹	\$18.31	\$4.56	-	-	\$4.03	\$4.17	(250kg)
Los Angeles ²	\$17.46	\$4.06	-	-	\$3.53	\$3.67	(250kg)
Tokyo	\$10.98	\$4.43	-	-	-	\$4.40	-

¹ Ex Christchurch, ² Ex Auckland

Note: For Courier Services see *Section 2.15.4*

2.8 SEEDS, PLANTS AND PROPAGATION

2.8.1 Seeds - Pasture

		Price per kg			
<i>Ryegrass</i>		Bare	Prillcote	Superstrike	Gaicho
Aries Hi Endophyte		\$5.60		\$7.96	\$9.33
Banks		\$4.85		\$7.20	\$8.58
Bronsyn		\$5.47		\$7.82	\$9.20
Concord		\$3.69		\$6.31	\$7.47
Conker		\$3.56		\$6.09	\$7.33
Cordura		\$3.96		\$6.00	\$7.69
Corvette		\$3.96		\$6.31	\$7.69
Dobson		\$5.42		\$7.78	\$9.16
Ellett		\$5.16		\$7.51	\$8.89
Embassy		\$4.98		\$7.33	\$8.71
Exalta		\$3.64		\$6.53	\$7.38
Flanker		\$4.45		\$5.96	\$6.67
Grasslands Pacific		\$4.53		\$6.89	\$8.27
Greenstone	- endofree	\$3.56		\$6.53	\$7.33
	- endosafe	\$4.13		\$6.09	\$7.33
Impact		\$5.69		\$8.09	\$9.47
Italian	- Uncertified	\$1.60			
Moata	- 1st Generation	\$2.00			
	- Uncertified	\$1.78			
Nui	- 1st Generation	\$2.13	\$2.22		
	- Zero Nui	\$2.89		\$5.29	\$6.67
	- low endophyte	\$2.27			
Ruanui	-1st Generation	\$2.27			
Samson		\$4.89		\$7.29	\$8.62
Tama	- Uncertified	\$1.96			
	- 1st Generation	\$2.18			
Vedette		\$5.42		\$7.78	\$9.16
Yatsyn		\$5.42		\$7.78	\$9.16
<i>White Clovers</i>					
Aran				\$11.82	
Challenge				\$10.22	
Demand				\$9.73	
Huia	- basic	\$6.40			
	- 1st Generation	\$4.80			
	- Uncertified	\$4.71			
Kopu				\$11.11	
Le Bons				\$11.11	
Pitau - 1st Generation		\$5.56		\$6.58	
Prestige		\$9.82		\$9.17	
Prop				\$9.07	
Sustain				\$10.89	
Tahora				\$9.33	

		Bare	Prillcote	Superstrike	Gaicho
Red Clovers					
Colenso				\$10.31	
Pawera	- 1st Generation	\$11.47		\$10.05	
Hamua Broad	- 1st Generation	\$6.76			
	- Uncertified	\$5.87			
Subterranean Clovers					
Karridale		\$7.25			
Leura			\$6.31	\$8.18	
Dalkeith		\$7.25			
Sub clover			\$5.78	\$7.56	
Woogenellup		POA			
Caucasian Clovers					
Endura/Kura		\$17.56			
Cocksfoot					
Kara		\$6.49	\$4.53	\$8.80	\$10.13
Saborto		\$6.13	\$4.36	\$8.45	\$10.00
Tekapo		\$5.56	\$4.00	\$7.91	\$9.42
Wana		\$5.56	\$4.00	\$7.91	\$9.42
Tall Fescues					
Advance				\$10.31	
Au Triumph				\$8.89	
Vulcan				\$10.31	
Other					
Alsike clover		\$3.11			
Matua Prairie Grass (Easy drill)		\$3.33			
Gala Brome		\$5.11		\$7.56	
Grasslands Maku Lotus			\$16.09		
Maru Phalaris		\$9.73		\$12.13	
Massey Baysn		\$11.96		\$8.18	
Timothy		\$4.18	\$3.24		
Herbal Ley		\$15.74			
Garden peas for hay (per tonne)		\$650.00			
Chicory					
Forager		\$14.45	\$12.45		
Puna		\$15.11	\$13.34		
Power Pak Mixes					
Dryland		\$145.80		\$193.27	\$220.65
Finishing		\$156.46		\$199.40	\$224.21
Rotational		\$293.28		\$200.11	\$218.69
Summer Plus		\$143.48		\$190.87	\$218.34
Winter Plus		\$133.17		\$180.56	\$208.03

	Bare	Prillcote	Superstrike	Gaicho
<i>Lucerne</i>				
Kaituna	\$13.78		\$14.45	
Otaio			\$13.50	
Wairau	\$9.07		\$10.58	
WL322HQ	\$14.49		\$15.02	
WL323	\$14.49		\$15.02	
<i>Kales</i>				
Gruner	\$9.33		\$16.54	\$24.36
Kestrel	\$10.40		\$17.42	\$25.34
Proteor	\$10.40		\$17.42	\$25.34
<i>Rapes</i>				
Bonar			\$12.45	\$19.91
Emerald Giant	\$4.18		\$11.82	\$19.11
Giant	\$2.13	\$9.78		
Maxima Plus			\$13.51	\$20.98
Rangi	\$3.20		\$10.89	
Wairangi	\$4.18		\$11.82	\$19.11
<i>Forage</i>				
Pasja	\$7.56		13..69	\$22.45
Wairoa	\$5.87		\$12.27	\$20.80
<i>Summer Forages</i>				
Jumbo Sorghum	\$6.13			
Nutrifed Hybrid Forage	\$11.47			
<i>Swedes</i>				
Calder	\$7.33		\$16.89	\$22.23
Crimson King	\$7.33		\$16.89	\$22.23
Doon Major	\$7.33		\$16.89	\$22.23
Highlander	\$7.91		\$17.42	\$22.85
Kiri	\$7.33		\$16.89	\$22.23
Major Plus			\$18.58	
Tina	\$7.33		\$16.89	\$22.23
<i>Turnips</i>				
Appin	\$7.33		\$17.42	\$22.23
Barkant			\$21.34	
Gr top Yellow	\$7.33		\$17.42	\$22.23
Green Resistant	\$7.33		\$17.42	\$22.23
Green Globe			\$17.42	\$22.23
Manga	\$7.33		\$17.42	\$22.23
Vollenda			\$21.34	
York Globe			\$17.42	\$22.23

<i>Turf Grasses</i>	Bare	Superstrike
<i>Ryegrass:</i>		
Galahad	\$7.16	\$9.16
All Star	\$7.16	\$9.16
Excalibur	\$5.76	\$7.76
Jester	\$5.56	\$7.76
Tambour	\$5.36	\$7.36
Joust	\$4.56	\$6.56
<i>Fescue Turf:</i>		
Fine - Bellmay	\$10.66	\$12.66
Fine - Enjoy	\$10.66	\$12.66
Hard - SR3100		\$25.00
Blue - SR3200		\$30.00
<i>Browntop:</i>		
Egmont	\$14.50	\$17.50
SR1020		\$65.00

2.8.2 Seeds - Arable

		Price per tonne
Cereals:	Precleaned White Oats	\$550
	Amuri Oats	\$750
	Black Oats	POA
	Caravelle Oats	\$650
	Monad Wheat (milling)	\$820
	Sapphire Wheat (milling)	\$815
	Magnum Barley	\$705
	Regatta Barley	\$680
	Fleet Barley	\$695
	"Titore" Red Lentils	POA
	Charisma Oats - certified	\$495
	Ryecorn uncertified	\$750

Peas: (vining)

Seed is normally supplied by the company and the cost deducted from final payout.

2.8.3 Coated Seed:

See also *Section 2.8.1* for coated seed prices

Seed Coating - Drill

Seed coating can include insecticide/fungicide/N-fixing bacteria/Molybdenum/
Growth enhancement factors and bird repellency.

Coated Seed Ltd (Superstrike):

	Seed/Coat ratio	\$ per kg
Brassica	1:0.25	\$8.80 to \$19.30
Lucerne	1:0.25	\$9.10 to \$16.00
Ryegrass	no increase	\$3.90 to \$12.00
Clovers	1:0.75	\$5.50 to \$12.50

Seed Coating - Oversowing

Seed coating can include lime coat/fungicide/N-fixing bacteria.

Coated Seed Ltd:

	Seed/Coat ratio	\$ per kg
Prillcote		
Ryegrass	1:1	\$2.10 to \$3.75
Cocksfoot	1:1	\$3.90 to \$4.65
Clovers	1:0.75	\$3.45 to \$10.30
Lotus	1:0.75	\$8.95 to \$13.10

Seed Treatment - Drilling*Coated Seed Ltd:*

Grubbuster (specific grassgrub control) \$5.20 to \$17.30
(depending on type of seed)

The grass grub component equals \$70 per hectare at a 20kg per hectare sowing rate.

2.8.4 Vegetable Seeds

Vegetable seeds vary quite markedly in price depending on cultivar and quantity ordered. In the majority of cases, the huge range in price for a particular vegetable is due to the high cost of hybrid species. The following are estimates only. (*Yates N.Z. Ltd., Webling & Stewart*).

	Standard	Hybrid
Asparagus	\$60 / 500 g	-
Beans: Broad	\$113 / 25 kg	-
Dwarf French Beans	\$160 to \$560 / 25 kg	-
Butter Beans	\$201 / 25 kg	-
Runner Beans	\$228 to \$373 / 25 kg	-
Beetroot	\$27.50 to \$65/500 g	\$76.00 / 50,000 seeds
Broccoli	-	\$660 to \$685 / 500 g
Brussel sprouts	\$135 / 500 g	\$335 / 10,000 seeds
Cabbage	\$98 to \$685 / 500 g	\$98 to \$685 / 500g
Carrot	\$32 to \$85 / 500 g	\$28.75 to \$58 / 50,000 seeds
Cauliflower	\$125 to \$140 / 500 g	\$43 to \$59 / 2500 seeds
Celery	\$220 / 500 g	-
Cress	\$60 / 500 g	-
Cucumber	\$125 to \$400 / 500 g	\$765 / 1000 seeds
Egg Plant	-	\$185 to \$196 / 100 g
Gherkin	-	\$80 to \$345 / 500 g
Leek	\$160 to \$360 / 500 g	-
Lettuce	\$90 to \$250 / 500 g	-
Melon - Rock	\$12 / 100 g	\$202 to \$284 / 100 g
- Water	\$8.25 to \$40 / 100 g	\$115 to \$265 / 100 g

Onion	\$12 to \$62.50 / 100 g	\$87.50 to \$237.50 / 100 g
Parsley	\$45.50 to \$150 / 500 g	-
Parsnip	\$58 to \$110 / 500 g	-
Pea	\$66 / 25 kg	-
Peppers	-	\$25 to \$835 / 100 g
Pumpkin	\$45 to \$80 / 500 g	\$152 to \$240 / 500 g
Radish	\$6.25 to \$85 / 100 g	-
Rhubarb	\$25 / 100g	-
Spinach	-	\$20 to \$44.50 / 500g
Squash	\$45 to \$70 / 500 kg	\$145 to \$250 / 500 kg
Sweet Corn	\$23 to \$24 / 500 g	-
Tomato	-	\$80 to \$225 / 500 seeds
Turnip	\$15 / 500 g	\$350 / 500 g
Zucchini	-	\$96 to \$285 / 500 g

2.8.5 Flower Seeds/Bulbs

Seeds:

There can be a wide range in cost of flower seeds, depending on the variety of seed.

The following are indicative prices only.

Amaranthus	\$15.50 per 25g
Anemone	\$150 per 1000 seeds
Aster	\$37 to \$102 per 100g
Carnation	\$68 to \$79 per 100g
Chrysanthemum	\$35 per 10g
Dwarf Chrysanthemum	\$27.50 to \$46 per g
Cyclamen	\$135 to \$460 per 1000 seeds
Dahlia	\$40 to \$140 per 100g
Delphinium	\$70 to \$135 per 25g
Freesia	\$49.75 per 10g
Geranium	\$159 to \$398 per 1000 seeds
Gerbera	\$180 to \$500 per 10g
Gypsophila	\$7 to \$48 per 25g
Hollyhock	\$35 to \$210 per 100g
Lobelia	\$41.50 to \$95.50 per 25g
Lupin	\$5 to \$31 per 25g
Marigold - African	\$5.50 per 25g
- French	\$33 per 25g
Nasturtium	\$55 to \$100 per 500g
Pansy	\$140 to \$250 per 5g
Petunia	\$70 to \$159 per g
Polyanthus	\$24 to \$180 per g
Primulas	\$5 to \$156 per g
Sweet Pea	\$12.50 to \$40 per 500g
Sweet William	\$48 to \$73 per 100g
Wallflower	\$14.50 to \$24 per 25g
Zinnia	\$5.60 to \$195 per 10g

Bulbs:*Blue Mountain Gardens:*

	Price per 100
Iris (Juno)	\$55
Iris (English)	\$540.50
Tulips	\$27 to \$65
Narcissus	\$30 to \$75
Crocus species	\$28
Crocus hybrids	\$24

2.8.6 Fruit Trees and Plants(see also *Section 2.22.1* for shelter plants)**Fruit Trees:**

Prices are per tree but based on an order of 50 plus trees. It should be emphasised that a grower buying in bulk would be able to negotiate a substantially discounted price if buying hundreds (10%) or thousands of the same variety. (Range of Cultivars)

Harrisons Trees:

Apples	\$13.60 to \$15.35
Apricots	\$16.25
Cherries	\$14.60
Peaches	\$13.25
Plums	\$13.25
Quinces	\$13.80

Copperfield Nurseries:

Grapefruit	\$8.50
Lemons	\$5.25 to \$8.50
Limes	\$8.50
Mandarins	\$8.50
Oranges	\$8.50 to \$9.50
Tangelos	\$8.50
Tangors	\$8.50 to \$9.50

Kauri Creek (Wholesale) Ltd:

Citrus trees	\$8.50 to \$9.50 ex nursery
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Cheddar Valley Walnuts:

Persimmon (Fuju, Hirotonashi, Yoko) 75 to 100 cm	\$130.00 per 10
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Nut Trees:*Cheddar Valley Walnuts:*

Discounts are normally available for purchases of more than 10 trees (10% discount) and more than 100 trees (20% discount).

	Size	Price each
Pecan	75 to 100cm	\$8.90
Chestnuts (Japanese and Spanish)	75 to 100cm	\$17.80
	100 to 150cm	\$6 to \$19.55

Hazelnuts	50 to 75cm	\$8 to \$13
Walnuts	40 to 75cm	\$8 to \$30
Macadamias	25 to 50cm	\$4.45 to \$16

Halketts Nursery Ltd:

Hazelnuts	\$13.25
Sweet Chestnuts	\$13.25
Walnuts - English	\$13.25
- Black	\$13.25

Allenton Nurseries: (orchard and trade suppliers only)

Almonds - Burbank/Monovale	\$8.40
Sweet Chestnut (Castanea)	\$9.80
Hazelnut (Corylus)	\$9.80
Common Walnuts	\$5.90 to \$7.40

Harrisons Trees:

Almonds	\$12.45
Chestnuts	\$16.55
Hazelnuts	\$12.40
Walnuts	\$15.60 to \$28.30

Vines:

Te Puke Nurseries:

Kiwifruit	Price per hundred
Hayward Female grafted	\$1500
Chieftain Male grafted	\$1500
Bruno Rootstock	\$700
Budwood	\$150

Berryfruit:

The Tree Centre (Hokitika):

Blackberry (thornless)	small planterbag	\$10.95 each
Blackcurrant	large planterbag	\$12.95 each
Blueberries	large planterbag	\$14.95 each
Boysenberry	small planterbag	\$10.95 each
Cranberry	large planterbag	\$15.95 each
Elderberry	large planterbag	\$14.95 each
Gooseberries	large planterbag	\$14.95 each
Loganberry (thornless)	small planterbag	\$10.95 each
Raspberry	small planterbag	\$3.95 each
Redcurrant	large planterbag	\$12.95 each
Strawberry	punnets of six	\$5.95 each
Tayberry	small planterbag	\$10.95 each
Worcesterberry	small planterbag	\$12.95 each

2.8.7 Planting/Propagating Materials

Agpac Plastics:

Hydroponic Film (Black/White)		
600mm x 500m x 30m	150 microns	\$40.54
Agpac Black Mulch Film		
750mm x 500m x 30m		\$45.78
900mm x 500m x 30m		\$53.34
1200mm x 500m x 30m		\$71.12

Athco Industries: (Auckland)

Planterbags:	- PB 3/4 to PB 95 - pack size-6000 to 100	\$24.54 to \$993.65 per 1000
Plastic labels	125 mm	\$30.00 per 1000
Seedling Punnets	- Taglock	\$110 per 100
	- Standard	\$95 per 1000
Propagation Trays	small	\$1.03 each
Propagation Tubes	5.5cm	\$65 per 1000
	7 cm	\$95 per 1000
Cell Trays	25ml, round, 128 cells per tray	\$3.00 per 50
	40ml, round, 72 cells per tray	\$3.00 per 50
Standard Planters	- 0.5 to 5cm - pack size 700 to 138	\$115.50 to \$477 per 1000
Square 'spacesaver' pots	- 10 to 15cm - pack size 1050 to 300	\$135 to \$310 per 1000
Commercial round pots	- 10 to 30cm - pack size 760 to 50	\$132 to \$560 per 1000
Large planters	- 5 to 15 litre - pack size 130 to 50	\$450 to \$2170 per 1000

Transplant System Ltd:

Plantek Seedling Trays	- 25 to 256 cells per tray	\$7.35 to \$10.00 per tray
Landmark Trays	- 50 to 512 plug tray and 84 Hexagonal	\$320 per carton
Water Absorbent Polymers	- 25 kg bag	\$375
	- 10 kg pail	\$190
	- 5 kg pail	\$112.50
	- 1 kg pack	\$25
Pottputki Planting Tubes	- 49 to 68mm	\$168 to \$216
	- Kidney-shaped plant holder	\$84
Ecopots	- 433 to 1525 cell per square metre	\$5.20 to \$6.38/carton
Plastic Growing Trays for Paperpots/Ecopots		\$6.30 to \$7.20 per tray
Paperpots	- vary in size	\$2.12 to \$7.34/carton

Quickheat:

Thermogro plant raising panels (230 volt)		
400 x 500mm		\$55.00
450 x 750mm		\$65.00
450 x 1200mm		\$79.40
600 x 750mm		\$69.99
600 x 1200mm		\$88.00
600 x 1520mm		\$109.00

Watkins N.Z. Ltd:

Labels:		Price per carton
Plastic labels	1000 per carton	\$30.00
Trainers (for climbing plants)	100 per carton	\$23.00 to \$33.00
Display stakes	25 per carton	\$50.00 to \$65.00
Display cards	25 per carton	\$7.50 to \$8.75

Hardware:		
Watkins Pyco pots		\$36 to \$194 per carton
Watkins Squat pots		\$18 to \$218 per carton
Teku light weight pots		\$128 to \$209 per carton

Note: Price discounts apply on large orders.

Punnets:	\$62 to \$160 per thousand
Petepots	\$150 per 8000 to \$79 per 450
Planter bags	\$9 per 100 to \$113 per 100

Secateurs	\$11 to \$15
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2.8.8 Growing Medium

Laings Gardenmakers:

	Price per scoop (1 to 4 scoops)
Laings superfine screened soil	\$14
Laings standard screened soil	\$11
Laings lawn topdressing soil mix	\$18
Fine bark nuggets	\$19
Bark nuggets	\$19
Chunky bark	\$11
Rotted sawdust	\$12
Mushroom compost	\$9
Bio-mix soil conditioner	\$18
Premix	\$13
Plastering sand	\$20
Bedding sand	\$16
Cyclone sand	\$15
Chip	\$15
Kaiapoi scree	\$25
Oamaru white scree	\$47

2.9 WEED, PEST AND DISEASE CONTROL

2.9.1 Weed, and Pest Control - Budget Figures

Depending on the type of farm, location and other factors, typical weed and pest control costs are:

	Dairy (per cow)	Sheep & Beef (per su)	Deer (per su)	Orchard (per ha)
North Region	\$6 - \$10	\$0.23 - \$1.01	\$1.50	\$1000
North Central	\$5 - \$6	\$0.10 - \$0.55	-	\$2161
South Central	\$3.81 - \$7.50	\$0.51 - \$2.15	-	\$1158 - \$2357
South Region	\$6	\$0.69 - \$2.15	-	-

Source: M.A.F. Farm Monitoring Report, July 1997

Arable Farms - see examples in *Section 3*, Gross Margins for crops.

Orchards - see examples in *Section 3*, Gross Margins for fruit.

See individual items in this section for accurate budgeting.

2.9.2 Weed, Pest and Disease Control - General

Some herbicides, fungicides, and insecticides are produced by more than one chemical company and come in a range of strengths. Hence the trade names shown are to serve only as examples of the chemical concerned.

No preferential endorsement by Lincoln University is implied, nor is any criticism implied of any chemical which does not appear in this Manual.

The following coding has been employed to distinguish between the various Agrochemical companies:

A	Annand	M	Monsanto
B	BASF	N	Nu Farm
BY	Bayer	P	Pfizer
C	Ciba Geigy	PM	Pest Management Services
CC	CropCare	R	Rohm and Haas
CF	Crawford	RP	Rhone Poulenc
CY	Cyanamid	S	Shell Agriculture
D	Du Pont	SD	Sandoz
DE	Dow Elanco (formerly IWD)	ST	Southern
F	Fil	W	Watkins
H	Hoechst Schering	WN	Wrightson Nutrition
I	ICI	U	Uniroyal
ISK	ISK Biotech	Y	Yates
K	Key Chemicals	Z	Zeneca
MA	Makhteshim Agan		

2.9.3 Herbicides

For detailed information on products, active ingredients, application and dilution rates and for suitability of various chemicals for individual situations, farmers should consult their local Chemical company representative or refer to publications such as the "N.Z.Agrichemical Manual" (obtainable from rural retailers or direct from the publishers, Wham Chemsafe Limited, P.O.Box 11-092, Wellington).

Trade Name	Active Ingredient (%)	Company	Unit Size	Retail Price
2,4-D Amine	2,4-D amine (40)	DE	20 litre	\$204.00
2,4-D Ester 80	2,4-D butyl ester (72)	N	20 litre	\$216.00
2,4-DB	2,4-DB (40)	DE	20 litre	\$267.50
Acheive	tralkoxydim (40)	Z	4.5 kg	\$395.50
Afalon F1 - Linuron	linuron (45)	SD	5 litre	\$161.25
Asulow			20 litre	\$586.08
Asulox	asulam (40)	RP	5 litre	\$151.20
Atradex	atrazine (90)	I	10 kg	\$138.60
Avadex BW	triallate (40)	M	20 litre	\$332.35
Avenge 640	difenzoquat (64)	Y	6 kg	\$92.63
Axall	bromoxynil (7.5), ioxynil (7.5), mecoprop (34)	RP	20 litre	\$384.19
Axall	bromoxynil (7.5), ioxynil (7.5), mecoprop (34)	RP	5 litre	\$128.08
Banvel 200	dicamba (20)	N	5 litre	\$120.44
		N	20 litre	\$448.50
Banvine	2,4-D (20)	DE	1 litre	\$33.60
Basagran	bentazone (48)	B	5 litre	\$186.88
Basagran	bentazone (48)	B	10 litre	\$362.83
Betanal AM 11	phenmedipham (8.3) desmedipham (8.3)	DE	5 litre	\$258
Bladex 2x10 l	cyanazine (50)	S	10 litre	\$188.96
Bromoxynil	hydrocarbon liquids (44) bromoxynil (40)	D	5 litre	\$150.00
Buctril M	bromoxynil (20), MCPA (20)	RP	20 litre	\$389.28
Buster	ammonium phopshate (20)	B	5 litre	\$148.64
Buster	glufosinate ammonium (20)	W	20 litre	\$538.88
Caragard 500 FW	terbuthylazine (25) terbumeton (25)	C	5 litre	\$138.00
Centurion, 24 EC	clethodim (24)	N	500 ml	\$79.98
Centurion 24 EC	clethodim (24)	N	5 litre	\$657.28
Chloro-IPC	chlpropham (40)	Y	20 litre	\$703.80
Combine	bromoxynil (20), ioxynil (20)	RP	5 litre	\$205.85
Commando	L-flamprop, isopropyl(20)	S	20 litre	\$553.50
Cougar 20G	diflufencarn (10), isoproturon (50)	RP	5 litre	\$208.15
Duplosan Super	dichlorprop (60)	B	10 litre	\$170.44
Duplosan KV	mecoprop-P (60)	B	10 litre	\$256.50
Escort	metasulfuron (60)	D	500 g	\$458.58
Frontier	dimethanamid (90)	Y	10 litre	\$504.28
Fusilade WG	fluazifop-butyl (25)	I	1 kg	\$91.38

Gallant	haloxyfop (10)	DE	20 litre	\$1,547.70
Gardoprim FW	terbuthylazine (50)	C	20 litre	\$236.25
Gesagard	prometryn (50)	C	5 litre	\$199.75
Gesaprim	atrazine (50)	C	5 litre	\$41.02
Gesatop 500FW	simazine (50)	C	5 litre	\$48.19
Glean 75DF	chlorsulfuron (75)	D	200 g	\$192.50
Glyphosate	glyphosate (36)	N	25 litre	\$264.38
Gramoxone	paraquat (20)	I	5 litre	\$96.75
Granstar	methylbenzoate complex (75)	D	200 g	\$213.75
Grazon	trichlopyr (60)	DE	20 litre	\$979.33
Hi - Ester 2,4-D	2,4-D butyl ester (72)	DE	5 litre	\$51.75
Harmony (WSB)	thifensulfuron methyl	D	100 g	\$126.50
Jaguar	diflufenican (0.25), bromoxynil (25)	RP	10 litre	\$339.58
Kerb Flo	propyramide (40)	R	5 litre	\$293.91
Lasso M/Tech	alachlor (48)	M	10 litre	\$163.33
Lexone 75 DF	metribuzin (75)	D	2.5 kg	\$267.31
Linuron DF	linuron (50)	D	2.5 kg	\$80.64
MCPA	MCPA (37.5)	N	20 litre	\$103.40
MCPB	MCPB (40)	N	20 litre	\$180.00
Mossoff	benzalkonium chloride (50) copper sulphate (19.7)		5 litre	\$186.60
Mostox RP	dichlorphen (43)	R	5 litre	\$136.30
Nortron	ethofumesate (20)	Y	1 litre	\$115.31
Pasture - Kleen	2,4-D ethylhexylester (52)	DE	20 litre	\$192.00
Permazol SDA	dalapon (37), amitrole (25)	RP	20 kg	\$327.83
Preeglone	diquat (6), paraquat (12)	I	20 litre	\$273.90
Pulsar	bentazone (20) MCPA (20)	B		
Puma Super		H	20 litre	\$1693.13
Puma S	fenoxaprop-p-ethyl (7.5)	B	5 litre	\$450.00
Pyramin DF	chloridazon (43)	B	1 kg	\$58.88
Radiate	picloram (15) clopyralid (22)	C	5 litre	\$774.00
Regione	diquat (20)	I	20 litre	\$382.20
Roundup Drum			115 L	\$75.00
Roundup Extra	glyphosate (36)	M	115 L	\$1840.41
Salvo	dicamba (1.7), dichlorprop (23.3) MCPA (10.7), mecoprop (21)	S	20 litre	\$289.99
Sencor 70 DF	metribuzin (70)	BY	2 kg	\$218.95
Stomp 330E	pendimethalin (33)	Y	20 litre	\$517.88
Surrender	benalkonium chloride (50)	Y	5 litre	\$103.74
Targa	quizalofop-p-ethyl (50)	S	5 litre	\$236.88
Terbogran	terbuthylazine (50)	MA	10 kg	\$219.45
Topik	clodinafop-propagul (24)	C	1 litre	\$776.25
Topogard FW	terbutryn (35) terbuthylazine (15)	C	5 litre	\$224.10
Tordon Brush- killer NF	picloram (10) triclopyr (30)	DE	20 litre	\$1214.75
Tordon 2G	picloram (2)	DE	5 kg	\$64.80
Totril	ioxynil (22.5)	RP	20 litre	\$675.00
Touchdown	glyphosate-trimesium (48)	I	20 litre	\$253.05
Tridan	trifluralin (40)	RP	20 litre	\$243.75
Tribunil WP	methabenzthiazuron (70)	BY	2kg	\$103.00

Triden DF	trifluralin (40)	RP	20 litre	\$230.63
Trimec	mecoprop (60) MCPA (15) dicamba (1.8)	I	20 litre	\$271.95
Trophy	acetochlor (84)	M	20 litre	\$284.88
Triflur 40	trifluralin (40)	N	5 litre	\$85.88
Trimec	dicamba (1.87) plus MCPA (15), plus mecoprop (60)	I	20 litre	\$271.95
Tropotox Plus	MCPA (2.5), MCPB (37.5)	RP	20 litre	\$207.00
Versatil	clopyralid (30)	DE	20 litre	\$1330.35
Velpar 20G	hexazinone (20)	D	20 kg	\$1342.00
Velpar 90	hexazinone (90)	D	2 kg	\$148.29

2.9.4 Insecticides

Refer to *Section 2.9.2* for key to Company codes.

For detailed information on products, active ingredients, application and dilution rates and for suitability of various chemicals for individual situations, farmers should consult their local Chemical company representative or refer to publications such as the "N.Z. Agrichemical Manual" (obtainable from rural retailers or direct from the publisher Wham Chemsafe Limited, P.O.Box 11-092, Wellington).

Trade Name	Active Ingredient (%)	Company	Unit Size	Retail Price
Actellic Dust	pirimiphos-methyl (50)	I	15 kg	\$148.35
Actellic EC	pirimiphos-methyl (50)	I	1 litre	\$52.90
Actellic Smoke Gen	pirimiphos-methyl (50)		90 g	\$15.59
Basudin 600EW	diazinon (80)	C	5 litre	\$117.38
Chlorpyrifos 48EC	chlorpyrifos (48)	N	20 litre	\$854.44
Counter 20 G	terbufos (20)	S	15 kg	\$207.00
Dimilin 25W	diflubenzuron (25)	U	500 g	\$64.04
Disan 10G			20 kg	\$288.00
Dismissal	thiodicarb	WN	20 kg	\$118.80
Disyston	disulfoton (10)	BY	15 kg	\$151.88
Folidol	parathion-methyl (60)	BY	1 litre	\$43.90
Gaucho 600 FS	imidacloprid (60)	BY	5 litre	\$2700.00
Gesapon 20G	diazinon (20)	C	22 kg	\$276.89
Icon 10WP	lambda-cyhalothrin (10)	Z	50 g	\$14.70
Karate	cyhalothrin (5)	I	5 litre	\$428.93
Lorsban 40EC	chlorpyrifos (40)	DE	5 litre	\$189.00
Mavrik	fluralinate (24)	Y	1 litre	\$167.90
Mesuroil bait	methiocarb	BY	10 kg	\$148.81
Mesuroil 75	methiocarb (2)	BY	400 g	\$61.58
Metasystox	demeton-s-methyl (25)	BY	5 litre	\$139.02
Miral 10G	isazophos (10)	C	20 kg	\$264.50
Monitor	methamidophos (60)	B	5 litre	\$212.68
Nuvan 1000 EC	dichlorvos (100)	C	1 litre	\$51.15
Perfekthion	dimethoate (50)	B	5 litre	\$119.85
Pheromone traps		PM	2 kits	\$100.41
Phorate 20G	phorate (20)	I	15 kg	\$115.50
Pirimor 500	pirimicarb (50)	I	500 g	\$38.25
Ripcord 20 EC	cypermethrin (20)	S	275 mls	\$50.05
Rogor E	dimethoate (40)	Y	5 litre	\$101.52
Saprene	triforine (18.3) plus acephate (11.4)	N	1 litre	\$36.40
Slugout	metaldehyde (18)	CC	20 kg	\$126.00
Suscon Green	chlorpyrifos (10)	W	15 kg	\$225.75
Tamaron	methamidophos (60)	BY	10 litre	\$315.00
Verthion 1000	fenitrothion (60)	S	5 litre	\$226.40
Vvdate L	oxamyl (24)	D	3.8 litre	\$171.62

2.9.5 Fungicides

Refer to *Section 2.9.2* for key to Company Codes.

Trade Name	Active Ingredient (%)	Company	Unit Size	Retail Price
Acrobat MZ	dimethomorph (7.5) mancozeb (66.7)	CY	25 kg	\$1002.94
Aliette Super	fosetyl-aluminium (52.8) thiabendazole (12.9) thiram (17.21)	RP	2.9 kg	\$289.90
Alto	cyproconazole	N	5 litre	\$644.00
Bavistan FL	carbendazim (50)	B	5 kg	\$220.50
Baytan IM	triadimenol (15)	BY	10 kg	\$985.00
Benlate	benomyl (50)	W	1 kg	\$74.12
Bravo 500F	chlorothalonil (50)	Y	2 litre	\$81.95
Beret Dust 10x1 kg	fenpicloril (25)	C	1 kg	\$30.22
Cereous	triadimenol (25)	BY	5 litre	\$505.66
Carbendazin	protek (50)		20 litre	\$754.00
Daconil (Bravo)	chlorothalonil (50)	ISK	20 litre	\$412.39
Daconil 90DF	chlorothalonil (50)	ISK	10 kg	\$402.85
Euparen DF	dichlofluanid (50)	BY	2 kg	\$140.33
Folicur	terbuconazole (25)	BY	5 litre	\$688.05
Galben	benalaxyl (8), mancozeb (65)	I	10 kg	\$381.38
Kocide DF	cupric hydroxide (50)	S	10 kg	\$113.40
Manzate	mancozeb (48)	D	25 kg	\$177.19
Merit	propiconazole (12.5) fenpropimorph (37.5)		5 litre	\$285.03
Monceren DS	pencycuron (12.5)	BY	20 kg	\$586.35
Monceren IM	Pencycuron (25) imazalil (6)	BY	20 kg	\$598.05
Monceren IM FS	pencycuron (25) imazalil (2)	BY	5 litre	\$464.44
Opus	epoxiconazole (12.5)	B	10 litre	\$573.65
Ridomil MZ WSP	metalaxyl (8) mancozeb (64)	C	2.5 kg	\$112.70
Rubigan FLO	fenarimol (12)	RP	1 litre	\$110.00
Score 250 EC	difenoconazole (10)	C	5 litre	\$811.13
Shirlan	fluazinam (50)	Z	5 litre	\$635.86
Sportek	prochloraz (45)	B	5 litre	\$242.10
Sumiscler granules	procymidone (10)	CC	16 kg	\$320.25
Sumiscler FLO	procymidane (25)	I	20 litre	\$913.75
Syllit Plus	dodine (40)	RP	10 litre	\$171
Tilt 625 Gel	prop-isoconazole	C	1 kg	\$262.69
Tiptor NF	prochloraz (33.7) cyproconazole (3)	SD	5 litre	\$290.68
Topsin M-4A	thiophanate-methyl (40)	DE	5 litre	\$186.75
Vincit	flutriafol (5) imazalil sulphate (5)	I	5 litre	\$426.80
Vitaflo 200	carboxin (20), thiram (20)	N	20 litre	\$574.54

2.9.6 Rabbit/Rodent Control

Refer to *Section 2.9.2* for key to Company Codes.

Trade Name	Active Ingredient (%)	Company	Unit Size	Retail Price
Non toxic Feed Pellets		PM	10 kg	\$20
Pindone Rabbit Pellets		PM	10 kg	\$36
Magtoxin fumigant		PM	1 kg	\$164
Storm Wax Baits		PM	3 kg	\$50
Talon 20P	brodifacoum (5)	I	10 kg	\$45

2.9.7 Bird Repellants

4 The Birds (per tube)		PM	0.3 kg	\$17.00
Scarecrow Bird Repellent (per tube)		PM	0.25 kg	\$18.00
Alpha chloralose wheat		PM	1.5 kg	\$18.00

2.9.8 Bactericides

Streptomycin	streptomycin (17)	K	1.2kg	\$72
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2.9.9 Wetting, Spreading and Marking Agents

Citowett sticker/spread	alkylaryl polyglycol ether	B	5 litre	\$61.10
Contact	non ionic surfactant	I	20 litre	\$231.90
Sprayfast Its Rainfast			1 litre	\$63.45
Landmark	spray marker dye	N	1 litre	\$4.853
Nu Film			4 litre	\$176.60
Spraystay			5 litre	\$103.85
Millermark	foam"blob"marker conc.	K	3.78 litre	\$105.89

2.9.10 Penetrants

Pulse (for Roundup herbicide)		M	5 litre	\$160.43
Triton X45		I	20 litre	\$287.83
Boost			20 litre	\$600.60
Guardall Liquid			2.5 litre	\$55.30

2.9.11 Growth Regulants

Cultar	paclobutrazol (25)	I	1 litre	\$341.90
Cycocel 750	chlomequat (75)	B	10 litre	\$129.95
Ethrel 48	chlorthethepon (48)	RP	1 litre	\$78.00
Regulex	gibberellin (1)	Z	1 litre	\$221.45
Terpal	mepiquat chloride (30.5) chlorthethepon (15.5)	B	5 litre	\$241.20

2.9.12 Sprout Inhibitors

Trade Name	Active Ingredient (%)	Company	Unit Size	Retail Price
No Sprout	chlorpropham (50)	A	20 litre	\$731.40
Propham Dust	propham (40)	A	20 kg	\$130

2.9.13 Oil Sprays

D-C Trate	Int. spraying oil	B	20 litre	\$97.20
Sunspray	oils-mineral-	S	5litre	\$31.13
	insecticidal (97)	S	20litre	\$96

2.9.14 Soil Fumigants

Basamid Granules	dazomet (99)	B	20kg	\$328
Methol Bromide			681 grams	\$47.15

2.9.15 Root Forming Hormones

Clonex	beta-indolyl butyric acid	Y	500 grams	\$9.95
Seradix 1,2	beta-indolyl butyric acid		500 grams	\$25.00
Seradix 3	beta-indolyl butyric acid		500 grams	\$50.00
Liba 10,000	gamma-indolylbutyric		200 mls	\$22.20

2.9.16 Spraying Costs - Aerial and Ground

Aerial Spraying

Canterbury:

For helicopter work in Canterbury costs include:

Crop Spraying	\$26 to \$38 per hectare
Brushweed Spraying	\$130 to \$150 per hectare
Charter Rate	\$1000 per productive hour

Waikato:

Cost varies according to application rate, area, farm location and distance to ferry. Some examples are:

Pasture weeds	\$9 to \$15 per hectare
Gorse	\$200 to \$250 per hectare

South Island

Aerial spraying for spot work and large blocks may be negotiated on the basis of a rate per flying hour as follows:

Loma	\$1,125 per hour
Squirrel	\$995 per hour

Ground Spraying (crops):

Canterbury

Rates vary depending on chemical used, application rate and crop being sprayed.

Boom spraying costs on average

\$12.44 per ha

Gun spraying

\$35.56 per ha

Roto Wipe Hire

\$44.45 per half day

\$88.89 per half day

Contract Weed Control:

Gunning work, 2 people and machinery:

Depending on job size

\$95 to \$135 per hour

2.10 SELLING, HANDLING, PROCESSING CHARGES, AND LEVIES

2.10.1 Yard Fees

Usually on a per head basis and varies between stock and station agents.

Canterbury

	Vendor	Purchaser
Sheep and lambs	\$0.55	\$0.25
Prime cattle	\$6.00	\$2.00
Store cattle	\$3.20	\$0.80
Prime pigs	\$3.00	\$1.50
Store pigs	\$2.50	\$1.00
Bobby calves	\$2.20	\$0.70
Dairy cattle	\$6.00	\$2.00
Goats	\$3.00	\$2.00

North Island sales yards levy approximately 12c per head for sheep and \$1.10 per head for cattle, payable in equal amounts by vendor and purchaser.

2.10.2 Commissions on Stock and Plant sold through a Stock and Station Agent

Canterbury

Sale Yards		Clearing Sales	
Sheep	5.50%	Sheep	5.50%
Prime/Store Cattle	5.50%	Store Cattle	5.50%
Vealers	5.50%	Dairy Cows	7.50%
Bulls Stud	8.50%	Horses	8.50%
Dairy Cattle	7.50%	Stud Sheep/Cattle	8.50%
Pigs	6.25%	Pigs	6.25%
Deer	5.50%	Dogs	8.50%
Goats	5.50%	Plant	10% to 15%
		Deer	6.00%

Central North Island

Sales Yards		Clearing Sales	
Sheep	5.50%	Sheep	5.50%
Cattle	5.50%	Store Cattle	5.50%
Vealers	5.50%	Pigs	5.50%
Bulls Stud	9.00%	Dairy Cows	5.50%
Dairy Cattle	5.50%	Horses	5.50%
Pigs	7.50%	Stud Cattle	9.00%
Deer - weaners	6.00%	Stud Sheep	9.00%
Deer - breeding	6.00%	Dogs	5.50%
Deer - stud	6.00%	Plant	10% to 15%
Goats - G2 - feral	5.50%		

2.10.3 Wool Selling Charges

Brokers Charges	14.0c/kg
Pre-sale test certificate	\$56 per test per lot
NZWB levy	5% of gross proceeds less brokers charges

Broker's charges cover receiving, warehousing, weighing, lotting, cataloguing and advertising. Reclassing, binning and inter-lotting are not included. The fee quoted here is an average for the whole country and is likely to vary between companies depending on the services provided and the quality of those services.

2.10.4 Goat Fibre Charges

The *South Island Mohair Warehouse Co Ltd* classing and handling charges are as follows. Levies are included.

All fibres attract the following instore charges:

Classing	55 cents per minute
Warehouse Fee	22 cents per kg
Marketing	5% on net sold

Mohair: *Mohair NZ Levy:* 16c/kg (2 to 2.5%) includes the replacement of the *Mohair NZ* subscription.
IMA Levy: 7 cents per kg on 0 and 1st lines (optional)

Cashgora and Cashmere:

Classing warehousing and marketing as for Mohair. There are no levies on these fibres.

2.10.5 Velvet Charges

The *Velpool Group* charges for consolidation and grading costs are as follows:

- Seller charged 3.5% for commission.
- Seller charged \$4.00 per kg for handling and grading costs.
- Buyer packing fee \$1.00 per kg

See also *Section 2.10.7*

2.10.6 Killing and Inspection Charges

Options for Suppliers of Livestock:

Livestock procurement policies vary widely between meat processing/exporting companies. Significant differences between North and South Island policies can also be observed.

Generally a farmer has a choice of the following selling options.

- on farm selling, on schedule, company pool, direct contract

In most cases the price paid is net of processing costs. Consequently the concept of "killing charges" for individual companies or plants is no longer relevant. Processing costs are not shown on weight notes or killing sheets.

Deductions are usually made only for livestock transport to the killing plant and for compulsory levies recovered by companies for other parties. GST is also shown as a separate item.

Meat inspection fees are usually treated as an internal cost by companies in the South Island and are not shown as a deduction on the killing sheet. In the North Island the fees are often treated as an external cost and are shown separately.

Meat Inspection Fees :

These fees are payable by meat companies under a compulsory cost recovery contract negotiated with *MAF Quality Management* each year. The contract includes the recovery of the direct costs of front line meat inspection as well as off-plant programme costs and overheads.

The current levels of meat inspection costs are approximately:

Lamb	\$0.96 per head
Sheep	\$1.08 per head
Cattle	\$6.72 per head
Pigs	\$3.25 per head

Goats	\$1.00 per head
Bobby Calves	\$0.96 per head
Horses	\$6.72 per head

- Note:**
- These indicative rates are based on the recovery of the total budgeted inspection costs divided by the estimated national kill for the 1997/98 killing season.
 - Variation in rates may occur between plants because of the different nature and pattern of kill between plants.
 - 80% of Meat Companies have now entered into agreed service contracts for the first time.

2.10.7 Livestock Levies (GST inclusive)

By law, levies are collected by meat companies from the owners of stock at the time of slaughter. The chart below lists the levy rates MAF collects for the listed organisations (effective from 1 Oct 1997).

Figures are rounded to the nearest cent.

Levies per head:	Adult cattle	Calves (up to 27kg)	Vealers (27 to 60kg)
Disease eradication*	\$9.80	-	\$9.80
Meat Producers Board	\$4.73	\$0.27	\$4.73
Total levies	\$12.91	\$0.24	\$12.91
Levies per head:	Lambs	Sheep and Goats	Pigs
Meat Producer Board	\$0.53	\$0.53	-
Pork Industry Board ¹	-	-	\$4.95
Total Levies	\$0.47	\$0.47	\$4.40

Note: Other Cattle Includes Heifers, Steers and Bulls.

Sheep Includes Hoggets and Rams, and other Adult Sheep.

All levy rates shown are GST exclusive.

¹ See also *Section 1.8.1*

* A nil rate of levy applies to any animal slaughtered which is wholly condemned, by MAF inspectors only, for any reason following slaughter.

Pork Industry Council Administration and Pork Marketing Stabilisation Levies

See previous page and also *Section 1.8.1*

Wool Board Levy - see *Section 2.10.3*

Deer/Game Industry Board Levies

Current *Game Industry Board* Levies effective until 31 September 1998 are as follows:

Venison -

22¢ per kg carcase weight, 15¢ per kg carcase weight for fallow deer, plus 4¢ per kg for the Animal Health Board, on all farmed deer going through Deer Slaughter Premises. A nil levy is charged on all condemned animals and the levy is waived for animals that are TB reactor positive.

Velvet -

\$1.00 per kg green weight for Fallow velvet and \$3.00 per kg green weight on all velvet other than Fallow deer. An additional 40¢ per kg is paid to the Animal Health Board.

In addition to these levies effective from July 1st 1997 is the NZDFA commodity levy which includes 2.0¢ per kg on venison and 13¢ per kg of velvet. The same rate applies for Fallow deer.

2.10.8 Contract Fees - Beef Cattle

See *Section 1.4.3.* for holding cost margins and management fees associated with beef contracts

2.10.9 Herbage Seed Levy

The *Herbage Seedgrowers Subsection* and *Foundation for Arable Research (FAR)* have set the levies for herbage seed crops for 1998.

The recently approved Commodity Levy (Non Proprietary and Uncertified Herbage Seeds) Order 1997 gives provision for a variable levy rate. This provision will be implemented in 1998 to allow a better distribution of income and cost. The levies are either 0.8% or 1.5% depending on the cultivar.

Refer also to *Section 1.10.1.*

2.10.10 Arable Crop Growers Levies

Wheat:

United Wheatgrowers levy - \$2.50 per tonne, Insurance premium.

Foundation for Arable Research levy - 0.4% of value of first point of sale.

Other crops:

Levies for Barley, Maize, field peas and Oats are also 0.4%, Sunflower 0.1%

The 1998 FAR levy will be 0.5% of the estimated value of the crops levied for research. For crops that fall into the FAR's "other" (borage, oilseed, rape, linseed) category the rate is 0.1%.

2.10.11 Horticultural Levies

Berryfruit:

A levy is paid on the area of fruit grown.

Less than 250 sq metres		Nil		
Over 250 sq m but not over 8000 sq m or 2000 strawberry plants (which ever is less)		\$205.43		
8000 sq m and over		\$359.93		
		Local Market	Export Market	
		Grower	Grower	Exporter
Blueberries	Fresh	10¢ per kg	28¢ per kg	5¢ per kg
	Frozen	3¢ per kg	5¢ per kg	1¢ per kg
Boysenberries		2¢ per kg	-	-

Blackcurrants:

A levy of 2.5 cents per kilogram shall be paid in respect of all blackcurrants sold for processing or export (over and above the general berryfruit levy). An export levy of 0.6c per kilogram is also paid by the grower.

Raspberries:

North Island raspberries growers are under the Annual Berryfruit Levy, there is also a \$50 levy on top of the Annual Berryfruit Levy.

South Island raspberries divided are into three regions (Nelson, Canterbury and Otago), each with its own levy system. The levies are collected by the *Raspberry Marketing Council*.

Nelson:	A levy of 8 cents per kg on export and locally sold produce
Canterbury:	Levy of \$10.00 per hectare if a producer (To be a producer, must have a tenth of a hectare.)
Otago:	Levy of \$100 per grower per year.

Citrus Fruits:

The *New Zealand Citrus Growers Institute* imposes a voluntary 1c/kg levy on all citrus fruit growers.

Summerfruits:

Levy on:	Local Market	Export Market	
	Grower	Grower	Exporter
Nectarines	1.5% voluntary	1.5% per kg	1.5¢ per kg
Apricots	1.5% voluntary	1.5% per kg	1.5¢ per kg
Peaches	1.5% voluntary	1.5% per kg	1.5¢ per kg
Plums	1.5% voluntary	1.5% per kg	1.5¢ per kg
Cherries	0.75% voluntary	0.75% per kg	2¢ per kg

Other Fruit:

Table Grapes	-	10¢ per kg	6¢ per kg
Avocados	3.0%	50¢ per tray	10¢ per tray
Feijoas	2.0%	30¢ per tray	20¢ per tray
Persimmons	-	30¢ per tray	-

Orchard Levies:

Orchard Levies apply to all fruit grown in orchard type conditions except berryfruits, e.g. kiwifruit, pip and stonefruit:

The new compulsory Commodity Levy that became effective from January 1, 1996 is as follows:

Fruitgrowers with a total planted area of over 40ha, a flat rate:	\$640
Fruitgrowers with a total planted area of 4 to 40ha:	\$16 per ha
Fruitgrowers with a total planted area of 2 to 4ha:	\$60 per ha
Fruitgrowers with a total planted area of 0.5 to 2 ha, a flat rate:	\$45
Fruitgrowers with a total planted area of under 0.5 ha:	Exempt

Vegetables:

Below are the proposed rates under the new commodity levy:

Fresh vegetables	\$0.45 per \$100 of sales		
Export vegetables	\$0.325 per \$100 of sales		
Process vegetables	\$0.5625 per \$100 of sales		
Potatoes	\$0.75 per \$100 of sales		
Process Tomatoes	\$1.00 per \$100 of sales		
Tomato	\$1 per \$100 of sales		
Asparagus	\$0.15 per \$100 of sales		
	Local Market	Export Market	
	Grower	Grower	Exporter
Buttercup Squash	\$3.50 per tonne	\$5.00/tonne	\$1.50 per tonne
Garlic	0.45%	0.375% + 10¢ per kg	-

2.11 SUNDRY CROPPING and HORTICULTURAL EXPENSES

2.11.1 Seed Certification Charges 1997/98

These comprise the following fees:

- a) Grower Fee - per paddock
- b) Plot Testing Fee - per line
- c) Per Kilogram Fee - per kg MD seed

Details are as follows:

Grower Fees:

Crop eligible 1st or 2nd Generation	\$62 per paddock
Crop eligible Breeders or Basic	\$124 per paddock
plus travel	\$5.50 to 43.00 per paddock
Late fee	\$50
Crops withdrawn before inspection date	\$25

Plot Testing Fee:

\$10 per line

Per Kilogram Fee:

	Cents/kg MD Seed: (sack weight in brackets)	
Cereals	0.70 (50kg)	0.60 (70kg)
Grasses/Brassicas	1.29 (25kg)	1.03 (40kg)
Herbage Legumes	2.32 (25kg)	1.96 (50kg)
Redressing and Downgrading	18¢ per sack	

Uncertified Seed:

Per Line Fee	\$35 per line	
Per Kilogram Fee	Cents/kg MD Seed: (sack weight in brackets)	
Cereals	0.36 (50kg)	0.26 (70kg)
Grasses/Brassicas	0.84 (25kg)	0.57 (40kg)
Herbage Legumes	1.40 (25kg)	1.05 (50kg)

Example Calculation:

1st Generation crop of Perennial Ryegrass

Line size 6500kg MD seed

Grower fee	
- Crop eligible 1st Generation	\$62.00
- Travel	\$8.00
Plot Testing	\$10.00
Per kg Fee - 6500 kg MD ryegrass x 1.29 ¢ per kg MD seed	\$83.85

2.11.2 Grain Drying Charges

Carr Storage Company:(Ashburton)

All grain drying	- up to 16% moisture	\$17.00 per tonne
	- greater than 16% moisture	\$20.00 per tonne
Wheat Screening		\$20.00 per tonne
Seed sampling for certification (plus mileage)		\$20.00 per sample
Pea grading		\$2.45 per tonne

SGS (Timaru) Grain Terminal Charges (1998 harvest)

Wheat and Barley:

% Moisture	Price per metric tonne
0 to 15%	\$15.00
15.1% to 17%	\$16.50
17.1% to 18%	\$18.50
18.1% to 20%	\$20.50
above 20%	\$25.00
above 24%	POA

Peas:

0% to 18%	\$30.00
18.1% to 20%	\$35.00
above 20%	\$40.00
above 24%	POA

Maize:

Waikato

%	Drying cost (\$ per tonne)
20%	\$18.50 to \$19.00

Manawatu and Rangitikei

%	Price (\$ per tonne)
up to 20.9	18.00
21 to 21.9	19.50
22 to 22.9	21.00
23 to 23.9	22.50
24 to 24.9	24.00
25 to 25.9	25.50
26 to 26.9	27.00
27 to 27.9	28.50
28 to 28.9	30.50
29 to 29.9	31.50
30 to 30.9	33.00
31 to 31.9	34.50
32 to 32.9	36.00
33 to 33.9	37.50
34 to 34.9	39.00
35 to 35.9	40.50

Moisture deductions - up to 27.9% - 1.4%
 - 28% and over - 1.5%

2.11.3 Consolidated Dressing and Store Handling Charges

McFarlanes Seed and Grain:

These rates include receiving, delivering, sampling, weighing, dressing, brushing of sacks and disposal of offal.

Ryegrasses		16.00 cents per kg
Cocksfoot		35.20 cents per kg
Clovers	White, Red and Alsike	30 to 35.00 cents per kg
Lucerne		33.00 cents per kg
Grass seed	(Fine - Browntop, Fescue, Dogstail and Timothy)	42.90 cents per kg

Field dressed ryegrasses, clovers and timothy usually dress out approximately 25% offal and field dressed cocksfoot from 25% to 33% offal.

Turnips, Chou Moellier, Kale and Mustard	20.00 cents per kg
Rape	20.00 cents per kg
Prairie Grass	64.90 cents per kg
Yarrow	84.70 cents per kg
Separating White Clover and Ryegrass	\$2.10 per sack
Separating mixed Oats and Ryegrass	\$2.10 per sack
Chemical treating	\$32.00 per tonne plus materials
Blending clovers and blending grass seeds	\$6.00 per 100 kg

Machine Dressing

Wheat and Ryecorn	\$55.00 per tonne
Barley	\$50.00 per tonne
Field Peas and Lupins	\$61.00 per tonne
Garden Peas, Beans and Lentils	\$65.00 per tonne
Oats (dressing and clipping)	\$66.50 per tonne
	(or by negotiation)

Storage Charges

MacFarlane's Seed and Grain charge \$0.08 to \$0.10 per day per tonne. There is a minimum storage cost of \$5.00 and consolidation fee of \$5.50.

2.11.4 Seed Testing Fees

MAFQual:

Purity and Germination Tests:

	Purity and Germination	Purity only	Germination only
All species of seed except imported	\$126.50	\$96.80	\$99.00
Field dressed seed	-	-	\$63.80
Imported grain	\$154.00	\$137.50	\$99.00
Imported milled grain	-	\$176.00	-
Imported seed except grain	\$154.00	\$121.00	\$99.00

Note: Prices for imported seed are based on each 1kg sample.

Rates for mixtures are Purity and Germination rates as above, plus one germination charge.

Additional Tests or Services:

Endorsed Certificate for Export	\$77.00
Seed Weight	\$16.50
Fluorescence	\$44.00
Moisture	\$88.00
Tetrazolium	\$110.00
Vigour	\$110.00
Buried clover seed content in soil sample	\$110.00
Downgrading	\$49.50
Seeds for identification	\$33.00
Heterogeneity tests	\$825.00

Seed-borne Disease tests:

Phytosanitary, Quarantine and Consultancy	
Tests for - Fungi	\$121.00
- Bacteria	\$121.00
- Viruses	\$121.00
- Nematodes	\$121.00
Combined Tests - Pea Bacterial Blight (PBB) and Pea Seedborne Mosaic Virus (PSBMV)	\$198.00
- PBB, PSBMV and Ascochyta	\$253.00

Endophyte Tests Ryegrass and Fescue:

Seed-borne test	\$121.00
Grow out test	\$121.00

In recognition of the need expressed by some clients for a 'fast track' service the Station will offer a 'Priority Service' where purity testing will start on the same day that the sample is received. In addition Purity results will be faxed on completion of the purity test and the certificate will be sent by fastpost as soon as it is printed.

Priority Service: Urgent test

\$44.00

Carr Storage Co Ltd:

Separate Lab Tests on Milling Wheat	
Protein/Moisture (NIR)	\$9.00
Falling Number	\$13.00
Black Point	\$6.60
Kernel Weight	\$6.00
Screenings (Rotoscreen)	\$3.50
Test Weight	\$2.10
Full Range of Lab Tests on Milling Wheat	\$30.00

2.11.5 Crates, Packaging and Weighing Equipment

Crate Hire

Fruit Case Company:

F80	-610mm long x 420mm wide x 445mm deep	\$11 deposit plus \$1.00 user fee
	-560mm long x 380mm wide x 420mm deep	

F40	-610mm long x 420mm wide x 237mm deep	\$11 deposit plus \$1.00 user fee
	-560mm long x 380mm wide x 224mm deep	
F25	-610mm long x 420mm wide x 150mm deep	\$11 deposit plus \$1.00 user fee
	-556mm long x 380mm wide x 140mm deep	
Binpack	-1065mm long x 1220mm wide x 665mm deep	\$70 deposit plus \$7.00 user fee
	-1015mm long x 1175mm wide x 500mm deep	

Trays

Carter Holt Harvey Plastic Products Ltd:

	Price Per 1000
Kiwifruit Fluted Trays	\$155
Summerfruit Trays	\$200
Avocado Trays	\$185
Nashi Trays	\$260
Punnets	\$65
Squash/Melon Trays (for field use)	\$45
Seedling Punnets	\$60
Plixtrainers	\$350
Exotic Trays (for feijoas/tamarillos)	\$200
Kwik Pak Trays	\$1521

Flower Packing

Pacific Growers Supplies Ltd:

Silver Freesia Sleeve		\$68.25 per 100
Spray Carnation Sleeve	Plain - 450 x 210 x 100	\$39.63 per 1000
	Perforated - 450 x 210 x 100	\$42.00 per 1000
Chrysanthemum Large Sleeve	Plain - 450 x 350 x 185	\$61.83 per 1000
	Perforated - 450 x 350 x 185	\$63.25 per 1000
Orchid Polythene Sleeve	160 x 600mm Packs	\$26.14 per 1000
	205 x 600mm Packs	\$30.44 per 1000
Orchid Tubing	225mm wide x 1000m	\$49.95 per roll

Kiwifruit Tray Component Prices

Standard single layer tray	\$1.04
Euro Double tray	\$1.28
Euro Bulk tray	\$1.70
Pallet P10	\$21.95
Cap P10	\$3.75
Standard pallet	\$10.50
Standard cap	\$4.75
Container pallet	\$12.00
Container cap	\$7.00
Plateau single pallet	\$1.68
Plateau cap	\$5.50
Labour	\$0.03 to \$0.035 per box
Glue	\$0.02 per box
VertV Boards	\$0.95

Flight Group Ltd:

Seedling tray T1686, 485 x 350 x 70mm	\$3.30 to \$3.50 per carton
Punnets 65 x 65 x 53mm to 100 x 100 x 83mm	\$60.50 to \$96.50 per carton
152 x 108 x 63mm to 160 x 115 x 65mm	\$83.65 to \$99.15 per carton
240 x 170 x 69mm to 320 x 235 x 70mm	\$220.50 to \$388.20 per carton
Seedling tray, 485 x 326 x 50mm T1685	\$3.15 to \$3.25
Punnets designed to fit tray 100 x 75 x 53mm to 150 x 100 x 55mm	\$47.50 to \$87.00 per carton
Punnets designed to fit tray T1805 150 x 130 x 50mm	\$100.75 per carton

Southcorp Packaging

Packaging Film

Natural			
Width	Length	Gauge	\$/roll
1 to 2m	100 m	50 µm	\$14.26 to \$28.54
4 to 5m	50 m	80 µm	\$41.61 to \$52.44
2 to 5m	50 m	125 µm	\$32.50 to \$80.64
Black			
2 m	100 m	80 µm	\$29.29
2 to 5m	50 m	125 µm	\$23.00 to \$57.60
2 to 4m	50 m	250 µm	\$46.00 to \$92.20

Conform Hand Stretchways

500 mm x 500m x 16 µm - green tint	\$11.10
500 mm x 500m x 20 µm - blue tint	\$13.58
500 mm x 400m x 23 µm - natural	\$12.55

2.11.6 Grading and Packing Charges - Horticultural Produce

Note: See also *Section 3, Export Fruit Gross Margins*.

Contract Grading/Packing

Apples

A *South Island* contractor charges \$55 to \$65 per 25 bushell bin, fruit delivered, for packing.

An additional charge of \$5 is charged if the apples are drenched prior to packing.

A *North Island* contractor charges \$50 to \$60 per 25 bushell bin.

Avocado

Packing charges for export Avocado are \$1.75 to \$2.78 per tray and \$1.75 to \$2.60 for bulk packing.

Kiwifruit

A *North Island* packing house charges the following: \$1.45 to \$1.65 per tray.

Rates differ according to amount of kiwifruit being processed.

The cost per tray can be divided approximately as follows:

Labour	20%
Cartage	5%
Packaging	60%
Overheads (management, shed charge, including margin for profit)	15%

See also *Section 1.12.4* for further kiwifruit packing costs.

2.11.7 Cool Storage

Coolpak Coolstores Ltd (Timaru):

Fresh Fruit	5.0¢ per kg to freeze
Vegetables	3.3¢ per kg to freeze
Cost of Storing Frozen Goods:	
Meat	approximately \$28.30 per tonne equivalent
Vegetables	\$16 per tonne
Fish	\$14 to \$20 per tonne

Minimum charge \$35 per tonne for small parcels. All prices are for one month of storage or part thereof.

Eskimo Group:

1. Prices are tendered based on volume, product density, racking/storage requirements, time in storage, time of year service is required and a number of other factors.
2. Storage is charged on a volume basis, generally converted to a rate per tonne. Prices range between \$20.00 and \$50.00 (plus) per metric tonne, per calendar month or part thereof.
3. Other activity based costs may also be charged such as container loading/unloading and order picking. The price ranges from \$0.10 to \$0.50 per carton.
4. Blast Freezing ranges from 6 to 12 cents per kilogram

2.11.8 Pollination

Hive Hire

Auckland:

In general \$40 per hive for the pollination period of a crop ie. squash, pip and stonefruit. This varies for the three to four week pollination period for kiwifruit, where the hives are for pollination only and no honey is produced. In this situation hive hire is \$70 to \$75 per hive.

Canterbury:

Apple pollination costs \$60 to \$70 per hive for up to four weeks rental. Hive hire for other crops varies from \$60 for brassica crops to \$100 for carrot crops. (*Airborne Honey Ltd*).

Bumble Bees (Purchase)

<i>Zonda Resources:</i>	Per Hive
Serves up to 1,500 square metres	\$73 to \$120

Hive Purchase

\$160 per hive

2.11.9 Weighing Charges

The current weighing charge at a *Pyne Gould Guinness Ltd* weigh bridge in Canterbury is \$9.00 for a double unit weigh and \$4.50 for a single unit.

2.12 REPAIRS AND MAINTENANCE

Expenditure on repairs and maintenance varies widely between farm types, districts and seasons. Farm profitability or otherwise is very often a major factor. Where records are not available the following should be used as a guide only.

2.12.1 Total Repairs and Maintenance per Farm/Orchard

Under the current economic climate and depending on the type of property, location, season etc, typical total expenses per year (excluding vehicle expenses) range from:

Dairying (per cow)	
North Region	\$49 to \$59
North Central	\$49 to \$51
South Central	\$28.13 to \$42.86
South Region	\$26
Sheep and Beef (per su)	
North Region	\$1.36 to \$3.02
North Central	\$1.30 to \$4.24
South Central	\$0.65 to \$3.65
South Region	\$1.06 to \$2.75
Orchards (per ha)	
North Region	\$1,050
North Central	\$520

Source: M.A.F. Farm Monitoring Report, July 1997.

2.12.2 Repairs and Maintenance - Farm Improvements and Plant

Where precise information is unavailable, expenditure on repairs and maintenance of farm improvements and plant may be estimated by using the following rates:

% capital value per annum		
Dwellings	1 to 3%	depending upon the age of the building
Farm buildings	1 to 3%	
Piggeries	2 to 5%	
Water supply	Up to 5%	depending on water type
Implements and plant	5 to 15%	depending upon use
Roads, tracks and culverts	1 to 5%	depending on locality
Yards and dip	2.5 to 5%	
Fences	1%	

2.12.3 Repairs and Maintenance - Vehicles and Mobile Plant

(See also *Section 2.13*)

Where precise information is unavailable, expenditure on repairs and maintenance of vehicles and mobile plant may be estimated by using the following rates:

Cars and light trucks	allow 9.2 cents per km
Tractors	allow 100% of purchase price spread over the economic life of tractor - see examples in <i>Section 2.13.2</i>
Mobile plant	allow 5% of initial value per annum
up to 1300 cc	8 cents per km
1301 to 1600 cc	8.1 cents per km
1601 to 2000 cc	9.2 cents per km
over 2001 cc	9.7 cents per km

2.13 VEHICLE EXPENSES

2.13.1 Total Vehicle Running Expenses

The following figures can be used as estimates for budgeting purposes where details are not available for the farm or orchard. Depending on the locality and type of property, typical total vehicle running expenses (including fuel, oil, repairs and maintenance, registration etc) on all farm vehicles including private car use, are as follows:

	Dairy	Sheep & Beef	Deer	Orchard
North Region	\$44 - \$61	\$1.97 - \$3.31	\$4.24	-
North Central	\$40 - \$51	\$0.97 - \$4.79	-	-
South Central	\$35.75 - \$37.50	\$1.79 - \$4.79	-	\$605 - \$913
South Region	\$35	\$1.79 - \$4.41	-	-

Source: MAF Farm Monitoring Report, July 1997

For details see individual items in this section.

See also *Section 2.12.3* for estimates of the repairs and maintenance component of expenditure on vehicles.

2.13.2 Tractor Running Costs

A useful calculation to determine the fuel requirements of a tractor is:

0.21 litres per kilowatt hour.

Guide to Tractor Fuel Requirements for Individual Field Operations.

Operation	Fuel Consumption litre/ha
Subsoiling	15
Ploughing	21
Heavy cultivation	13
Light cultivation	8
Rotary cultivation	13
Fertiliser distribution	3
Grain drilling	4
Rolling	4
Mowing, tedding, baling	3
Forage harvesting	15
Spraying	1

Source: "Choosing and Using Farm Machines", B. Whitney, 1988.

Guide for Fuel Consumption under Minimum Cultivation and Normal Cultivation Conditions.

(This guide is based on 0.24 and 0.32 litres per kW hour.)

Tractor Power			
HP	kW	Minimum Cultivation	Normal Cultivation
		<i>(0.24 l per kW hr)</i>	<i>(0.32 l per kW hr)</i>
16	11.5	2.76 litres per hour	3.68 litres per hour
30	22.0	5.28 litres per hour	7.04 litres per hour
40	30.0	7.20 litres per hour	9.60 litres per hour
50	37.0	8.88 litres per hour	11.84 litres per hour
64	48.0	11.52 litres per hour	15.36 litres per hour
75	55.7	13.37 litres per hour	17.82 litres per hour
80	60.0	14.40 litres per hour	19.20 litres per hour
103	77.2	18.53 litres per hour	24.70 litres per hour
160	119.0	28.56 litres per hour	38.08 litres per hour

Total Tractor Running Costs - Examples

(i) 75 kW (100 HP) 2WD Tractor

Replaced after 3500 hours (6 years)

Initial Cost \$75,073; Resale Price \$39,896

Running: Average 580 hours per year

<i>Fixed costs per annum:</i>		
Opportunity cost \$75,073 at 7% (Real)	\$5255.00	
Replacement cost \$75,073 to \$39,896		
\$35,177 x sinking fund factor (7% for 6 years) 0.139796	\$4918.00	
Annual licensing fee	\$35.10	
Insurance	\$500.57	
		\$10,708.67
Total fixed cost per hour (580 hours/year)		\$18.46

<i>Variable costs per hour:</i>		
Fuel usage - 18 litres at 46¢/litre	\$8.28	
- based on minimum cultivation conditions		
Oil and filters 15% of fuel cost	\$1.24	
Repairs and maintenance 100% of purchase price over 'economic life' of tractor (10000 hrs)	\$7.51	
Total variable costs per hour excluding labour		\$17.03
Total cost (fixed plus variable) per hour		\$35.49

(ii) 75 kW (100 HP) 4WD Tractor

Replaced after 3500 hrs (6 years)

Initial Cost \$91,630; Resale Price \$53,691

Running: Average 580 hours per year

<i>Fixed costs per annum:</i>		
Opportunity cost \$91,630 at 7% (Real)	\$6414.10	
Replacement cost (\$91,630 to \$52,691)		
\$38,939 x Sinking fund factor (7% for 6 years) 0.139796	\$5443.50	
Annual licensing fee	\$35.10	
Insurance	\$591.70	
		\$12,484.50
Total fixed cost/hour assuming 580 hours per year		\$21.53

<i>Variable costs per hour:</i>		
Fuel usage - 18 litres at 46¢/litre	\$8.28	
- based on minimum cultivation conditions		
Oil and filters 15% of fuel cost	\$1.24	
Repairs and maintenance 100% of purchase price over 'economic life' of tractor (10000 hrs)	\$9.16	
Total variable cost per hour excluding labour		\$18.68

Total cost (fixed plus variable) per hour		\$40.21
-------------------------------------------	--	---------

(iii) 95 kW (124 HP) 4WD Tractor

Replaced after 4000 hours (6 years)

Initial Cost \$106,494; Resale Price \$61,767

Running: Average 670 hours per year

<i>Fixed costs per annum:</i>		
Opportunity cost \$106,494 at 7% (Real)	\$7,455.00	
Replacement Cost (\$106,494 to \$61,767)		
\$44,727 x Sinking fund factor (7% for 6 years) 0.139796	\$6,253.00	
Annual licensing fee	\$35.10	
Insurance	\$652.44	
		\$14,386.09
Total fixed cost/hour assuming 670 hours per year		\$21.47

<i>Variable costs per hour:</i>		
Fuel usage - 24.9 litres at 46¢/litre	\$11.45	
- based on minimum cultivation conditions		
Oils and filters 15% of fuel cost	\$1.72	
Repairs and maintenance 100% of purchase price over 'economic life' of tractor (10000 hrs)	\$10.65	
Total variable cost per hour excluding labour		\$23.82

Total cost (fixed plus variable) per hour		\$45.29
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2.13.3 Car Operating Costs

Based on *Sydenham Technical Centre* estimates (as at November 1997), total annual car operating costs are:

	< 1,300	1,301 to 1,600	1,601 to 2,000	above 2,001
Fixed costs	4,602	5,662	7,022	8,276
Running costs				
Petrol	752.54	842.40	932.26	1190.59
Oil	38.40	38.40	38.40	38.40
Tyres	202.80	232.80	256.80	296.40
Repairs and Maintenance				
Servicing	957	977	1,094	1,166
Total	6,553	7,753	9,343	10,967
Total/km	54.6cents	64.4cents	77.9cents	91.4cents

Running cost includes petrol, oil, tyres, repairs and maintenance.

Fixed cost is made up of the cost of depreciation, interest on outlay, insurance, licensing and warrants of fitness.

Car operating costs - petrol driven - 12,000 km per year

2.13.4 Fuel, Oil and Grease

Petrol	- Unleaded	(91 octane)	77 cents per litre
	- Unleaded	(96 octane)	82 cents per litre
Diesel			46 cents per litre
LPG			58 cents per litre

Note: The current refund rates for fuels are:

Petrol - 10.58 cents per litre

LPG - 9.45 cents per litre

CNG - \$3.57 per gigajoule

Oil - One major N.Z. Company's oil prices:

	Container Size	Wholesale Delivered
Universal Tractor Oil20	209 litre	\$3.34 per litre
Gear Oil 80 EP	60 litre	\$3.79 per litre
(Two Stroke Oil)	60 litre	\$3.46 per litre
Multi-purpose grease L2M	18 kg	\$6.39 per kg
Hydraulic Fluid HLP46	60 litre	\$2.75 per litre
Antifreeze	20 litre	\$4.75 per litre

Grease:		
Gun cartridge		\$4.70
Bucket	500 grams	\$6.03
Oil Filters:		
Engine (Ford)		\$18.74
Hydraulic (Ford)		\$29.48

2.13.5 Tyres and Tubes

Firestone:

Tubes:	Price each
Tractor/Earthmover/Forestry and Loader tubes, 9-24 to 30.5-32	\$40.50 to \$290
Tyres:	
Radial 45 degree rear tractor tyres, 11.2R24F7000 to 18.4R38F7000	\$720 to \$1,895
Cross-ply rear tractor tyres, 9-20ATC6 to 11-42RT10	\$435 to \$1,277
Farm/implement/utility tyres,	
All trac utility, 12/12.5-18ATU12 to 16.9-28ATU10	\$748 to \$1,186
Rancher, 400-12RANCH4	\$98
Open centre, 600-16/6T133 to 750-16/8T133	\$180 to \$305
Farm, 10-15.3FARM10 to 11.5-15.3FARM16	\$263 to \$390
Forestry tyres, 28L26FS14 to 30.5-32FS16	\$4,300 to \$5,250

New Zealand Motor Distributors Wellington Ltd:

B.J.Goodrich Range				
	14 inch	15 inch	16 inch	16.5 inch
Trail	\$236	\$234 to \$309	\$312 to \$412	\$359
Mud Terrain	-	\$319 to \$550	\$383 to \$466	\$411 to \$527
All Terrain	\$248	\$248 to \$508	\$341 to \$416	\$377 to \$518

2.13.6 Licensing/Road Charges

Re- Licensing Fees (12 months)

Private Car		\$157.75
Agricultural Machinery	Exempt Class B	\$35.10
Farmers Cars	Exempt Class B	\$56.50
Farmers Motorcycles	Under 60cc	\$23.85
	61cc and over	\$35.10
Trucks (not subject to TLF)	Up to 3500kg	\$157.75
	3500kg and over	\$159.25
Farmers Trucks	Exempt Class B up to 3500kg	\$56.50
	Exempt Class B over 3500kg	\$56.50
Tractors	Exempt Class B	\$35.10
Trailers	Exempt Class B up to 3500kg	\$35.10
	Exempt Class B over 3500kg	\$56.50
Domestic Trailer	up to 3500kg	\$35.10

Note: 6 month licences are available and are usually approximately 50% of the 12 month fees.

Road User Charges

The cost of using New Zealand's roads is recovered from road users via levies in the price of some fuels or via Road User Charges. Those vehicles which must pay Road User Charges are required to display current road user licences while operating on public roads.

Vehicles required to pay road user charges are:

All diesel-powered vehicles, regardless of weight, must pay Road User Charges: so do all vehicles with a manufacturer's gross laden weight of more than 3.5 tonnes

and vehicles with a manufacturer's gross laden weight of 3.5 tonnes or less, powered by a fuel not taxed at source. Fuels taxed at source are petrol, compressed natural gas (CNG), and liquified petroleum gas (LPG).

Exemptions Include:

Vehicles licensed as E Class A:

- mobile machinery never used on roads except for servicing at a garage or driver testing.

Vehicles licensed as E Class B:

- farm machinery with restricted road usage.

Vehicles not required to be registered under the Transport Act 1962.

Vehicles exempt from registration and annual licence fees.

Two-wheeled vehicles whose gross laden weight is less than 1 tonne.

Time Licences (for off-road vehicles) - Consult New Zealand Post for these charges.

Distance Licences

Distance licences are classified according to whether the vehicle is powered or unpowered, the number of axles on the vehicle, the number of tyres per axle, and the axle spacing.

As there are so many variables in the computation of rates we have given two examples:

Charges are given in dollars per 1000km of distance to which the licence relates:

Type 1, i.e. 2 axles, both single tyred		
● 2 tonnes gross laden weight		\$14.27
● 5 tonnes gross laden weight		\$27.84
● 10 tonnes gross laden weight		\$111.17
Type 2, i.e. 2 axles, 1 single tyred and 1 twin tyred		
● 2 tonnes gross laden weight		\$14.22
● 5 tonnes gross laden weight		\$26.28
● 10 tonnes gross laden weight		\$86.06

When the distance licence is exhausted, a new licence must be obtained. The nominated maximum weight may be increased by either obtaining a new licence or obtaining a supplementary licence.

Purchasing Options and Transaction Fees

There are different purchase options available to RUC users. A varying transaction fee applies. The transaction fee for these options are as follows:

- Counter Sales at LTSA Agencies	\$8.50 per licence
- By phone/fax (available through BP)	\$6.20 per licence
- RUC Card at BP shops and truckstops	\$4.50 per licence
- Direct Connects	\$3.00 per licence
(Mostly commercial transport operators)	

Refunds of Road User Charges may be payable in a variety of circumstances e.g.:

- Incorrect licence details
- Unused time licence
- Unused distance due to hubodometer change or number plate change
- Off road running
- When a vehicle is permanently destroyed, exported or deregistered

All vehicles requiring distance licences must be fitted with an approved distance recorder in working order. Hubodometers are required where the gross laden weight exceeds 3.5 tonnes.

Note: Gross laden weight is calculated using the expected vehicle load being added to the unladen vehicle weight. This weight is then rounded up to the nearest tonne for the licence weight to be purchased.

2.13.7 Combine Harvester Running Costs

148 kW (200 HP) Header Harvester - Total Running Costs:

Replaced after 3000 hours (15 years) 200 hours per year

Initial Cost \$220,000; Trade in Value \$90,000

<i>Fixed costs per annum:</i>		
Opportunity cost \$220,000 at 7% (Real)	\$15,400.00	
Replacement cost (\$220,000 - \$90,000)		
\$130,000 x sinking fund factor		
(7% for 15 years) 0.039795	\$5173.35	
Annual licence (6 months)	\$35.10	
Insurance	\$1320.00	
		\$22,385.60
Total fixed costs per hour assuming 200 hrs per year		\$111.93

<i>Variable costs per hour:</i>		
Fuel (.24 litres/kW hr) 30.48 litres at 46c/litre	\$14.02	
Oil and filters 15% of fuel cost	\$2.10	
Repairs and maintenance 100% of purchase price		
over economic life (5000 hours)	\$44.00	
Total variable costs per hour excluding labour		\$60.12
Total costs (fixed plus variable) per hour		
		\$172.05

2.14 PROFESSIONAL FEES

2.14.1 Accountancy Fees

Accountants base their fees on input of time taken in compiling financial statements, tax returns and other services.

Some of the reasons why fees vary considerably (time being one of the most important factors) are:

- The adequacy of the presentation of farm records to the accountant by the farmer.
- The form of ownership - individual, company or partnership, and if there is a trust account involved.
- The amount of information the farmer wants: advice on management, financial advice, trial balances, etc.
- The degree of intensification of the farming operations.
- The amount of administration undertaken by the accountant. G.S.T. returns, budgetary control, receiver/payee of all income/expenditure for the farmer.

An approximate range of fees typically charged for Pastoral and Cropping farms would be from \$1800 to \$4000 per annum, depending on service provided, with a typical fee being around \$2700.

2.14.2 Farm Consultancy Charges

Consultancy charges are usually based on an hourly rate. Travelling and administration expenses and computer time charges are all extra.

	Area Averages
Waikato/North Area	\$75 to \$100/hour
Central/Wellington Area	\$50 to \$110/hour
Canterbury/Nelson/West Coast area	\$60 to \$80/hour
Otago/Southland	\$50 to \$75/hour

Agriculture New Zealand:

Agriculture New Zealand provides a full range of agricultural, horticultural and agribusiness consultancy as well as providing assistance with resource consents.

Consultancy fees range from \$250 to \$350 per half day.

Travelling is charged at \$0.60 per kilometre, administration at \$30 per hour and other disbursements are also charged at cost.

Lincoln University Property Management Service:

The *Property Management Service* is an independent body that promotes farming agreements and provides, for a fee, standard leasehold, partnership and sharefarming agreements for farmers and horticulturalists.

Standard Fee \$250 to \$500

This fee is subject to variation for additional work involved above the cost of a standard contract.

2.14.3 Land Transfer Fees

This fee is charged by the *Land Titles Office* on all land transactions, such as transfers, mortgages and related documents.

The cost of an ordinary transfer of title is \$115.00. If the land is in more than one title the cost of transferring each additional title is \$5.00.

In subdivision situations the fee for each new title is \$90.00.

2.14.4 Legal Fees

The former system of a N.Z. wide scale of minimum and maximum charges has been abolished. Fees are now worked out on a more appropriate basis, taking into account the nature of the job and expenses incurred by the solicitor or law firm. In general they are based on an hourly rate (in the region of \$150.) Lawyers are encouraged to give written estimates for the cost of a job. Anyone seeking a solicitor's help or advice should ask for an estimate (in writing) and both parties should have a clear understanding of what work that estimate is to cover.

Property Purchase

Fees charged vary widely depending on circumstances and how much work is involved. Generally around \$600 to \$1000 for the average situation, depending on whether there is finance consent is required.

A curtilage calculation must be submitted to IRD for stamp duty and GST purposes. (Generally the value of the house and the land around it is excluded from the calculation). The calculation may be included in a valuer's report or by way of a certificate from Valuation New Zealand, at a cost of around \$75.

Stamp Duty (This is paid by the Purchaser)

Up to \$50,000 - 1%

\$50,000 to \$100,000 - \$500 plus 1.5% of excess over \$50,000.

Over \$100,000 - \$1,250 plus 2% of excess over \$100,000.

No duty is payable on the value of land or buildings to be used primarily as a residence.

Stamp duty payable on farm properties is reduced where one or more of the purchasers does not hold or has not held an interest in farm land exceeding \$150,000. In these cases, the "new" purchaser must actively farm the property, which means to personally supervise, manage or carry on the business of farming as their principal occupation.

In cases where a number of people are jointly purchasing the property and none of them has held an interest in farm land (as detailed above) no duty is payable.

Family Trusts

A trust is a legal arrangement between two parties where one party (the trustee) holds assets for the benefit of others (the beneficiaries). The trustee is the legal owner of the trust assets but is not normally a beneficiary of the trust.

Before estate duty was abolished in 1992, trusts were regarded as a way for wealthy people to avoid costly estate duties. Contrary to popular belief, trusts have been used more often as a way to manage the transfer of assets from one generation to another.

Guardian Trust:

Charges are based on the complexity of the trust and time spent thereon, however, for the preparation of a standard trust the cost is \$250.

2.14.5 Real Estate Charges

There is now no scale nor recommended fee relating to any real estate transaction. However most agents still work on a commission basis. The most common fee structures are in the following approximate ranges:

Farm Sales:

\$375 basic fee, plus 3.75% commission on the first \$200,000 of consideration, this may vary from 3 to 4% depending on circumstances. Plus 1.5% commission on balance of

consideration. The general criteria by which agents fix fees now relate to the level of professional services which the individual company offers. When vendors select intensive marketing programmes, higher fees may be levied. If vendors participate in advertising costs then lower basic fees may be rendered. Sole agencies may attract lesser fees than general agencies.

Auction Sales (Sales other than mortgagee sales):

In general these are levied at the same rate as residential sales. The auctioneer may, in addition, with the vendor's authority, charge to the vendor all auction advertising, flagging, other promotional costs and disbursements. In addition, an auctioneer may levy an offering fee if the property is not sold at auction or, alternatively, seek a term of sole agency after the auction sale to enable a sale to be concluded.

2.14.6 Valuation Charges

Valuation charges are no longer subject to the minimum scale of charges as set by *The New Zealand Institute of Valuers*. Valuers may now set their own charges which are usually based on an hourly rate and vary depending on the degree of skill or responsibility required, expenses incurred and other factors. Travelling allowance (mileage) is normally charged at the average State Service rate.

Examples:

- For a valuation of a 366 ha property in North Canterbury (value \$950,000), the valuation would take approximately 14 hours and cost \$1,200 to \$1,400 (plus travel and GST).
- For a valuation of a small (100 ha) pastoral property - about \$500 (plus travel and GST).
- For a valuation of a 10 ha pipfruit property (value \$500,000), the cost would be about \$800 to \$1,000 plus GST (at least one day's work).
- For a glasshouse property (about ½ day) - \$500 to \$800.
- For residential property \$200 (plus travel and G.S.T.)

2.14.7 Survey Fees

Connell Wagner Limited:

Subdivision of rural property requires an application to Council in terms of the District Plan and the completion of a legal survey so that new Certificates of Title can be issued. Survey fees are charged on a time basis plus expenses incurred and will vary depending on the location and size of the property being subdivided. Average fees would be expected to be:

For smaller subdivisions - typically 2 to 3 lots	\$4,000 to \$6,000
For medium size subdivisions - typically 3 to 10 lots	\$6,000 to \$25,000
For large subdivisions	from \$25,000
Council's processing fees	\$1,000 to \$2,000
Land Information New Zealand fees plus Solicitor's fees	\$1,000 to \$2,000

2.15 ADMINISTRATION EXPENSES

Refer also to *Section 2.14 Professional Fees*.

2.15.1 Average Administration Costs

Total annual administration expenses vary widely between farms and orchards.

The following are indicative costs:

	Dairy	Sheep & Beef	Deer	Orchard
North Region	\$62 - \$76	\$3.17 - \$4.60	\$4.74	\$880
North Central	\$27 - \$28	\$1.30 - \$2.89	-	\$911
South Central	\$17.38 - \$26.25	\$1.15 - \$3.66	-	\$421 - \$739
South Region	\$38	\$1.15 - \$5.45	-	-

Source: M.A.F. Farm Monitoring Report, July 1997.

2.15.2 Telephone Costs

Telecom - Canterbury:

Standard Residential Network Connection Charge	\$55.00
Change of customer name	\$26.67
Line Rental (per month):	
Standard Residential	\$31.70
Standard Business - with Local Call Charging - Individual	\$58.42
Non-standard Business - B1 - Individual	\$58.42
Non-standard Business - B2 - Individual	\$58.42
Telephone Rental (per month):	
Standard Business Rental Phone	\$3.56
Standard Residential Rental Telephone	\$3.56
Second and subsequent	\$3.56
Calls to Cellular phones (per minute)	\$0.63
Wiring Maintenance Charge (per month) - optional	\$1.73
Minimum call out charge:	
Business	\$30.00
Residential (Applies if telephone is not owned by Telecom)	\$30.00
Hourly charge out rate outside normal hours:	
Residential	\$44.00
Business (depends on work done)	\$44 to \$89
Special Listing (per month)	\$2.25

Toll Charges - Refer to Telephone Directory

MetPhone - The New Zealand Meteorological Service provides a telephone weather forecast service for the whole of the country. Forecasts can be accessed from any part of New Zealand through Telecom for a charge of 99 cents a minute. Forecasts for each region can be obtained by phoning **0900 999** then the STD number for the region. e.g. 03 for Canterbury.

Also:

N.Z. Brief Forecast	0900 999 64
N.Z. Mountain Forecast	0900 999 66

Premium MetPhone - this additional service is available for those who would like to have

access to a Weather Office for discussion on a weather situation. The cost is \$9.00 per consultation. Further information about the service can be obtained by telephoning a New Zealand Met. Service Weather Office (not the above numbers).

2.15.3 Postage

(These prices are *GST inclusive*)

Surface Mail - Inland:

Standard letters	\$0.40
Fast post	\$0.80
Large letters	\$0.80
Fast post	\$1.20

Non-standard articles:

Envelope size	Standard Post	Fast Post
Medium (up to 120mm x 235mm)	\$0.40	\$0.80
Large	\$0.80	\$1.20

Parcels

New Zealand is divided into six zones and postage rates vary accordingly between zones.

kg	Across Town (next day)	Short Haul (1-2days)	Within Island (1-2days)	Between Islands (2-3days)
0-500g	\$2.00	\$2.50	\$2.80	\$4.00
500g-1	\$2.00	\$2.70	\$3.00	\$4.40
1-2	\$2.50	\$3.00	\$3.50	\$5.50
2-3	\$2.50	\$3.50	\$4.00	\$6.70
3-4	\$2.50	\$4.00	\$4.50	\$7.80
4-5	\$2.50	\$4.50	\$5.00	\$9.00
5-10	\$2.50	\$5.70	\$6.30	\$12.45
10-15	\$2.50	\$7.45	\$8.50	\$18.20
15-20	\$2.50	\$9.50	\$10.30	\$24.00

2.15.4 Courier Charges

New Zealand Couriers:

Courier Tickets (5/15/25 kg)

Example ex Christchurch		
1 ticket/25kg	Local -Lyttelton, Sumner, Airport, Islington, Belfast	\$3.00
1 ticket/25kg	Outer -Amberley, Darfield, Rakaia (70km)	\$3.62
1 ticket/15kg	Short-haul -West Coast, Methven, Waimate, Kaikoura	\$5.25
1 ticket/5kg	Long-haul -Rest of South Island	\$7.88
1 ticket/5kg	Inter-Island -Stewart or North Island	\$15.23

Example ex Hamilton		
1 ticket/25kg	Local -Te Rapa, Chedworth, Hillcrest, Dinsdale, Glenview and Airport	\$3.00
1 ticket/25kg	Outer -Waikato, King Country, Thames Valley	\$3.62
1 ticket/15kg	Short-haul -Auckland, Bay of Plenty, Coromandel Peninsula	\$5.25
1 ticket/5kg	Long-haul -Rest of North Island	\$7.88
1 ticket/5kg	Inter-Island -To all South Island destinations	\$15.23

NZ Couriers International Direct

Code	Area	Days to delivery
A	Main centre Australia	1
B	Other Australian place, Fiji	1-2
C	Hong Kong, Singapore, Malaysia, Pacifica	1-4
D	Japan	2-4
E	USA	1-2
F	UK, Canada	1-3
G	West Europe	2-4
H	World	3-5

Express Document

Weight (kg)	A	B	C	D	E	F	G	H
0.5	14.00	19.00	27.00	29.00	35.00	37.00	39.00	59.00
1.0	23.00	30.00	46.00	52.00	61.00	64.00	66.00	92.00
5.0	87.00	110.00	154.00	196.00	205.00	224.00	230.00	296.00
10.00	137.00	180.00	224.00	286.00	295.00	342.00	330.00	426.00
Per 0.5	137.00	180.00	224.00	286.00	295.00	342.00	330.00	426.00
Express Parcels								
0.5	7.00	39.00	48.00	51.00	55.00	57.00	61.00	80.00
1.0	38.00	50.00	69.00	74.00	81.00	84.00	88.00	113.00
5.0	106.00	130.00	181.00	210.00	229.00	240.00	248.00	305.00
10.00	156.00	200.00	251.00	310.00	329.00	350.00	358.00	425.00
Per kg	\$5.00	\$6.00	\$6.00	\$10.00	\$10.00	\$12.00	\$15.00	\$20.00

2.15.5 Subscriptions (Magazines/Farming Organisations)

Some examples are:

Magazines

"New Zealand Farmer"	\$98 per year or \$2.30 per copy
"Dairy Exporter"	\$22.23 per year
"Straight Furrow"	Free
"Horticultural News"	\$53.34 per year
"The Orchardist"	\$72.00 per year
"The Main Report Agricultural Letter"	\$53.30 per year
"The Deer Farmer"	\$76 per year (10 issues)

Organisations

Young Farmers

Full member:	\$40.00
Associate member: e.g. advisory member	\$10.00
Junior (under 18)	\$10.00
Full time tertiary student (require documentation)	\$30.00

Federated Farmers (Canterbury)

Corporate member	\$350
Full	\$265
Sharemilker	\$220

Countrysider	\$150
Associate or retired member	\$110

2.15.6 Aerial Photographs and Farm Maps

Aerial Photographs

New Zealand Aerial Mapping

Charges for black and white enlargements

Size	Unmounted	Extra Copies
23 x 34	\$44	\$36
34 x 46	\$60	\$48
70 x 70	\$124	\$100
70 x 120	\$140	\$112
95 x 120	\$164	\$130
120 x 140	\$224	\$180

Add \$12 handling fee, charged once for every order.

Scanning Charges

Scanning package: 1 A4 aerial photograph and 1 scanned image on a disk	\$64
Contact Print - black and white, colour	\$16

Farm Maps

N.Z Land Information Services

NZLIS offers a mapping service to farmers, whereby farm maps can be prepared from aerial photographs. Maps can be prepared to suit individual requirements and may include:

- Paddock area calculations only.
- Paddock area calculations, fencelines, etc. redrawn in ink, paddock numbers/names/areas noted and 50 reduced copies of the map are included.
- Same as above but the map would show the information typeset and produced using hi-tech gear. Additional information is also provided, e.g. graphic scale, extra data such as sheds, gates etc. A clear overlay foil is provided.

There is no standard pricing structure for this service. Prices on application only.

2.15.7 Travelling

Cost of travel is fully tax deductible when the purpose is farm business. This can represent a large expenditure item with some systems of management or some types of farms, e.g. stud farms.

2.15.8 Bank Fees and Stock Company Charges

(see *Section 2.17 Financial Charges*)

2.16 STANDING CHARGES

2.16.1 Insurances

A typical farm package insurance cost in the Canterbury region is approximately \$1800 to \$2000. This includes insurance for vehicle, buildings, house and contents and public liability. The range of costs can vary greatly from as little as about \$800 to \$1000 for a sharemilker, to \$10,000 or more for a crop farmer with plentiful plant and machinery and crop insurance costs of say \$4000.

Typical Charges are as follows:

All premiums vary with the nature of the risk and value of items but some examples are:

Buildings:

Dwelling	200 square metres (\$100 excess)	\$297.85
Woolshed	\$100,000 value (\$500 excess)	\$301.92

Plant and Machinery:

		Annual Premium
Tractor - Value:	\$10,000	\$78.590
	\$50,000	\$309.31
	\$75,000	\$500.57
	\$90,000	\$591.70
	\$100,000	\$652.44
	Premium includes tyre cover (\$100 excess)	
Utility - Value:	\$20,000 including windscreen cover	\$239.58
Header	\$220,000	\$1320

Specialised Farm Equipment

Chainsaws, tools, scanaprobe, nitrogen containers, radio telephones etc.

\$5,000 farming plant, machinery, tools and equipment (\$100 excess) \$39.38

Wool:

\$5,000 worth of clipped wool, (\$100 excess) \$39.38

General Farm Produce and Manures: whilst on the farm 0.313 %

Income Protection

Premiums vary because of such factors as age, health, smoking etc. As an example for a male aged 40, non-smoker, total disablement from illness/sickness would cost \$163 per \$100 cover. (Cover for an income of \$500 per week would cost $163 \times 5 = \$815$ per year)

Public Liability - to cover legal liability arising from negligence of employees and principals. Cover can be sought from fines and defence costs under the Health and Safety in the Workplace Act and employers liability resulting from the compression of cover offered under the Accident Compensation and Rehabilitation Act.

Cover inclusive of the above options: \$500,000 Premium is \$67.50

Stock Insurance

Wrightson:

Livestock on farm (fire and electrocution only)	\$0.08 per \$100
Mortality and loss of use by accident, illness and disease	
Pedigree bulls:	9.5% of value for 12 months
Run bulls:	9.5% of value for 12 months
Stud rams: (including loss of use)	11.25% of value for 12 months
Deer - Stag: (including loss of use)	9.5% of value for 12 months
Deer - Hinds:	7.5% of value for 12 months

Note: All the prices/quotes include all earthquake.

Crops

P.G.G. Insurance (1997 contracts for 1997 crops)

- Option A: Combined perils cover over cereals for fire, lightning, explosion, windstorm, hail, flood, snow, frost, wandering stock, impact, theft, transit and malicious damage.
Premium rate of \$25.00 per \$1,000 insured.
- Option B: Restricted cover available for peas and small seed crops. The cover is for the same elements as in option A, excluding wind damage.
Peas - Premium rate of \$20.00 per \$1,000 insured.
Small seeds - Premium rate of \$30.00 per \$1000 insured.
- Option C: Fire cover only for all crops.
Premium rate \$5.00 per \$1,000 insured.

For wheat growers the cover provides a 'Top Up' over the \$200 per tonne payable under the wheat scheme at a rate of \$20.00 per \$1,000 insured including windstorm damage.

Note: Wind, hail and frost damage will not be paid unless the damage exceeds 30% of the expected yield.

Earthquake cover is available. Additional Premium rate of \$0.50 per \$1,000 insured.

The insured shall bear the following amount of all losses,

- Fire, lightning or explosion - Excess Nil.
- Hail, frost (excluding ryegrass) or windstorm - Excess 15%.
Except where there have been one or more losses in the previous three growing seasons for crop loss or damage at the property caused by the same peril the excess shall be - 30%
- Frost to ryegrass - Excess 30%
Except where there have been one or more losses in the previous three growing seasons for loss or damage to Ryegrass at the property caused by frost, the excess shall be 40%
- All other losses - Excess 15%.

Forestry

See *Section 2.22.2*

2.16.2 Accident Compensation Commission Levy

There are two forms of this levy

1. Levy on the farmer as an employer (% of wages paid)
2. Levy on the farmer as a self employed person (% of taxable income)

Both are tax deductible and are detailed in *Section 4.15.7*.

2.16.3 Rates

See *Section 2.18.8* for stock water supply charges.

The main classes of rates are as follows:

- General rates for the costs involved in administering the District.
- Special rates for Regional Councils.
- Special rates for repayment of loans, raised by any local body.
- Water supply charges where stock water is supplied by and local body, e.g. water races, district water schemes.
- Pest Destruction Board rates where the farm is in a Board district.
- All districts rate on either the Capital or Land values. Water and pest destruction rates may be assessed on either per hectare, Capital value or Land value basis.

Some examples are:

Horowhenua District Council:

Rates are levied on the rural sector as follows:

Uniform annual general charge	\$90
Rural rate	0.4676 cents in \$1 land value

Selwyn District Council (Canterbury):

1997/98 General Rate collected on by the District Council on behalf of the Canterbury Regional Council: (Rates are cents in the dollar, based on the rateable capital value, and are GST inclusive.)

All districts have a general purpose fee: 0.001854 of C.V

Charges	Ellesmere	Malvern	Paparua	Rolleston
Annual General:	\$75	\$75	\$75	-
Community Centre:	These charges are different for each township.			
Recreation Reserve:	\$22.50	-	-	-
Library:	\$47.85	\$68.00	\$34.40	\$43.30
Medical Centre:	\$11.00	\$63.40	\$36.80	-

In addition, the Selwyn District Council collects other rates such as water supply levies which are based on a percentage of capital value or land value. Drainage rates etc. come on top of this.

As an example a farm property with a capital value of \$550,000 in the Malvern area would pay \$1,162.70 in rates. This excludes water race charges which are calculated as follows:

Ellesmere	Malvern	Selwyn
\$4.45 per hectare	\$5.30 per hectare	\$4.65 per hectare
Paparua - dependant upon area of land		

Manawatu District council:

- Works and Services Separate Rate:
Revenue sought \$3,498,453 to be applied to roading, footpaths, refuse tips.
Amount varies depending on the category of the property.
- General Rate:
Revenue sought \$3,081,591 to be applied to democracy, community services, library, Makino Aquatic Centre, reserves, civil defence and other costs not

otherwise specified in rates specified, again the amount depends on the category of the property.

- **Uniform Annual General Charge:**

A Uniform annual general charge pursuant to Section 19 of the Rating Powers Act 1988 amounting to \$300 on every separately rateable property within the district

- **Uniform Annual Charges:**

Uniform annual charges pursuant to the provisions of the Rating Powers Act 1988 on separately rateable properties as depending on the location. The costs are related to water supply charges and sewerage charges etc.

- **Special Rates applying to certain areas due to the repayment of annual loan charges in respect of sewerage and water supply loans.**

- **Drainage Separate Rating Areas: applying to different drainage areas due to maintenance and development of the drainage systems.**

- **Manawatu - Wanganui Regional Council Rates:**

1. A general rate

2. A separate transport rate

3. A separate Lower Manawatu Scheme special and maintenance rate.

4. A separate Rangitikei scheme maintenance rate.

2.16.4 Rent on Leased Land

Pastoral/Arable Land

Canterbury:

The rate for leasing land for stock grazing is dependant upon the production capabilities of the leased area. High producing land costs \$11 per stock unit compared to dry east coast land which is approximately \$6.50 per su. The lessee pays the rates, fertiliser and carries out routine maintenance work.

Paddock lease-

Potato Ground - in the vicinity of \$1150 per hectare per year (lessor is responsible for irrigation).

Larger areas of cultivable land in the vicinity of \$400 per hectare per year.

Southland:

Dairy run-off blocks	\$290 to \$370 per hectare
Dairy run-off, partly milked	\$440 to \$500 per hectare
Sheep and Beef	\$150 to \$250 per hectare
Sheep/Beef/Cropping	\$250 per hectare

Waikato:

Dairy Properties - Farms are typically leased for \$750 per ha. Sheep and cattle farms vary as to the type of farming enterprise able to be undertaken, and range up to \$140 per ha or \$11 to \$12 per s.u. For harder hill areas a reasonable rate would be in the vicinity of \$5 to \$6 per s.u.

Hawkes Bay:

Medium hill country grazing- excluding buildings	\$125 to \$200 per hectare
Process crop land	\$950 to \$1250 per hectare

Bay of Plenty:

Dairy Properties	\$620 to \$860 per hectare
Drystock	\$180 to \$350 per hectare, avg \$240
Dairy run off	\$200 to \$500 per ha, avg \$350
Forestry lease	\$225

Taranaki

Dairy Farms	\$700/ha
Dry stock - flat - hard hill	\$130/ha

Crown Land

Renewed Rents on Crown Renewable Leases are 4.5% of Rental Value, as from 1971 (reduced to 4% for prompt payment). Short term lease rents usually assessed within the range of 4% to 6% of Capital Value.

Note: Rental Value is the Land Exclusive of Improvements plus Crown Improvements.

Pastoral Leases - 2.25% of Rental Value, as from 1979, (reducible to 2% for prompt payment).

Renewable Leases: 33 year terms, 11 year rent rests at 4.5% of Rental Value (reducible to 4% for prompt payment).

2.17 FINANCIAL CHARGES

2.17.1 Interest and Bank Charges

Important Note:

Interest rates, where quoted, are as at early 1998 unless otherwise stated. Readers are advised not to rely on these figures for budgeting purposes as market interest rates can change rapidly.

Trading Banks

ASB Bank:

The ASB bank through its nation-wide branch network offers a comprehensive farm management banking package. This package is delivered and managed by a team of tertiary qualified Rural Managers.

Term Loans:

- Term:
 - Up to 25 years with interest only options available
 - Up to 5 years for sharemilkers
 - May be table or reducing
- Pricing:
 - Variable rates
 - Fixed rates up to 10 years
 - Commercial Bill related
 - An establishment fee may be charged
- Security
 - Registered first mortgage over land. Livestock security may also be required. Usual maximum loan to 60% of Bank's valuation

Seasonal Finance:

Farmline Overdraft:

- Incorporates seasonal and revolving credit facilities (i.e. capital requirements)
 - An agreed limit may be set high enough to have funds in reserve
 - Pays daily interest on credit balances
 - Has ability to direct credit income
 - Withdrawals by cheque, EFTPOS, ATM s, Fastnet, Fastphone, and Gateway (computer banking facility)
- Security:
 - As per the term loan
- Term:
 - The facilities requirements are reviewed annually
- Fees:
 - Transaction fees and service commitment fees may be charged

Application Information:

- Budget and cashflow (including capital budget)
- Current statement of position
- Accounts and balance sheets for last 3 years (if available)

Other Services:

- Investment and savings accounts
- Retirement saving schemes
- Farm Insurance
- ASB Bank Visa

Bank of New Zealand:

The following are the specialised farm finance packages offered by the Bank of New Zealand which are packaged under the Farm First Brand:

Farm First Mortgage:

Uses	● Purchase of land, stock, or plant, refinancing of existing debt and other capital expenditure.
Amount	● Up to two thirds of the property valuation with no minimum.
Security	● Mortgage over farm property (prefer 1st mortgage) up to 66.6% of the market value of the farm property.
Term	● Mortgage secured - max. 15 years while repayments can be scheduled up to 20 years. Stock loans - max. 5 year term while repayments can be scheduled up to 10 years.
Repayments	● Flat loan - interest only over a maximum of 3 years. Table - monthly or quarterly. Non-Table - monthly or quarterly.
Interest Rate	● Depends on security offered and individual circumstances.
Fee	An establishment fee of up to 1% may apply.
Early Repayment	● No penalty for variable rate loans. Penalty may apply for fixed term loans.

Seasonal Finance:

Rates depend on type of security offered with best rates when forming part of a Farm First package.

Amount	● By arrangement
Term	● As per seasonal requirements, normally reviewed annually.
Interest Rate	● Depends on security and individual circumstances.
Security	● Farm property and/or stock.
Credit interest	● Where the total business with the Bank is greater than \$50,000 this account earns credit interest.
Access	● Cheque, telephone, card.

Farm First Revolving Credit:

Uses	● Any farm business related expenditure.
Amount	● Minimum \$20,000, maximum by arrangement (up to 50% of property valuation).
Security	● First mortgage over farm property.
Term	● As per requirements, normally reviewed annually.
Repayments	● Not fixed, at borrowers option. Account to operate within approved credit limit.
Interest Rate	● Refer to the Bank of New Zealand.
Credit Interest	● Calculated on the daily balance of the account
Fees	● Usual cheque account fees, no service commitment fees.
Access	● Cheque, Card, Phone

Bank Charges and Fees:

Cheque Accounts:

Option 1:

- Base Fee ● Cheque Account \$2.25 per month (\$27.00/year).
- Activity Fee ● 25 cents per transaction (debit or credit) charged monthly.

Note: These two fees combine to give a bank fee.

- Option 2: ● \$10.00 per month with the first forty transactions free each month,
 \$0.35 per transaction thereafter.

Overdrafts/Seasonal Finance:

- Application Fee ● 1% of the overdraft limit with a minimum of \$50.00.
- Service ● 1.44% p.a. charge at a rate of 0.12% per month, with a minimum
- Committment charge of \$3.00 per month. Where total business with the Bank is
 greater than \$50,000, this charge is rebated in full.

Farm First Call Accounts:

Money market linked interest rates with funds on call with cheque access.

Financial Data Required:

Minimum requirements generally are:

- Past three years balance sheet and accounts.
- Cash flow forecast and status quo budget.
- Personal statement of assets and liabilities.

Other considerations:

- Knowledge/experience in farming; character and capacity; age.
- Past borrowing record.
- Repayment capacity (debt servicing normally not exceeding 25% of gross farm income).

The latest rural product information is available on the internet: <http://www.bnz.co.nz>

The National Bank (NZ) Ltd:

The National Bank offers a full range of rural financial services through one main point of contact - 170 specialised Rural Managers, who are assigned to each rural client.

Term Loans

- Uses ● To purchase land, stock, plant, machinery and other capital expenditure, or to refinance existing debt.
- Security ● A registered First Charge Mortgage. Livestock security may also be required.
- Terms ● Floating rate loans - up to 25 years (up to 5 years for interest only loans)
- Fixed rate loans - up to 5 years
- Repayment ● Table - repayments of interest and principal in equal monthly instalments (floating rate loans only)
- Interest only - payments of interest only in equal monthly instalments.
- Interest Rate Floating rate
- Fixed interest rate - 1,2,3,4 and 5 year terms
- Forward fixed interest rates for future drawdown available

Seasonal Finance - FreePlan

- | | | |
|------------------|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Uses | ● | FreePlan is a working account designed to bring together all farm finance requirements - term, seasonal, and savings (or any combination of these requirements) into one account. |
| Access | ● | Cashpoint card - for use in money machines and EFTPOS facilities |
| | ● | Cheque Books - various options |
| | ● | Freephone - for daily banking requirements with automated touchtone option |
| | ● | Freepost - for depositing cheques and sending other correspondence |
| | ● | DirectLink - PC based banking from the farm. |
| Payment | ● | Electronic payment services such as automatic payments, services direct debits, and direct credits are also available with FreePlan. |
| Credit/ Interest | ● | Credit balances earn competitive interest, paid monthly. |

General Information

- | | | |
|-------------|---|-----------------------------------------------------------------------------------------------------------------------|
| Fees | ● | Establishment and investigation fees up to 1% of the value of the loan may be charged. |
| | ● | With FreePlan, a fixed monthly fee of \$10 is charged to cover all standard transactions. |
| | ● | For FreePlan accounts that are seasonal only, an overdraft management fee of 0.083% per month (1% pa) may be charged. |
| Interest | ● | Rates are available from any Rural Manager. |
| Information | ● | Budget and cashflow forecast showing ability to service required the debt |
| | ● | Copies of financial accounts for last three years |
| | ● | Statement of financial position |

Rabobank.:

- | | | |
|----------------------|---|-------------------------------------------------------------------------------------------------------------------|
| General Information | ● | A specialist rural and agribusiness bank |
| | ● | Interest only loans, available for property purchase, refinance, on or off farm investment |
| | | Preferred minimum loan = \$250,000 interest only for 15 years and can be renewed. |
| Security | ● | Via land mortgage, up to 55% of valuation. |
| | | A negotiable establishment fee is payable on acceptance. |
| Interest payment | | |
| Options | ● | Monthly |
| | ● | Quarterly in arrears |
| | ● | Working capital can be incorporated within the loan facility at the same interest rates as for long term finance. |
| Principal reductions | ● | These can be temporary or permanent and are possible with no penalties. |

Interest rates to borrowers

- Variable rate
- fixed interest options available 90 day, 180 day, 1, 2, 3, 4 and 5 years.

A.N.Z. Bank:

Farm Finance Loans:

Description	To purchase land, stock or plant, capital expenditure and to refinance existing debt
Terms	Up to 25 years are available, consisting of fixed, variable interest only options
Forward Start	Allows the client to pre-book a fixed interest rate up to 12 months in advance
Interest Saver	Allows the client to invest seasonal surplus funds in a Farm Finance Loan to reduce the interest bill. Funds can be redrawn later as required.
Repayments	Can be varied to suit individual requirements, e.g. fortnightly, monthly, quarterly or yearly
Pricing	Each client is priced individually to reflect their unique situation
Security	Registered first mortgage over land. Livestock security may also be required

Seasonal Finance:

Description	A working account that has no fixed repayment arrangements. Drawings are allowed up to an approved limit in line with the farm's cash flow position.
Control	Night and Day Card for cash and EFT POS facilities Cheque books ANZ Phone-Direct access to the client's account to transfer funds, pay bills and make other account inquiries, 24 hours a day ANZ Direct. A computer based banking package for managing daily financial requirements on a personal computer
Security	Registered first mortgage over land. Livestock security may also be required

General Information:

- Electronic payment facilities such as Direct Debit, Automatic Payments and Direct Credits are available
- Establishment fees of up to 1% of the value of the loan to a maximum of \$1,000 may be charged
- A Monthly Management fee may also be payable
- A range of personal accounts, Credit Cards and Term Deposits are available if required

WestpacTrust

Westpac Banking Corporation and Trust Bank New Zealand deliver a full range of financial services to the rural sector through a network of specialist Agribusiness Managers and rural service branches.

Note: All loans are subject to meeting WestpacTrust's credit criteria.

WestpacTrust can provide:

Overdrafts for farm seasonal requirements.

- Amount by negotiation;
- Term subject to annual review, on presentation of annual cashflow budget and financial accounts;
- Interest charged monthly and based on WestpacTrust's Farm Lending Rate plus a margin based on the individual credit assessment of the borrower.
- Line of Credit Charge is payable at 0.1% per month, calculated on the overdraft facility limit. An establishment charge of up to 1.0% may apply.
- Facility accessed by cheque book (or other options as arranged).

Term Loans for farm purchase, stock or other capital expenditure.

- Amount by negotiation.
- Terms: Up to 15 years against farm mortgage security, with up to 2 years interest only; or 5 years against livestock security, with up to 6 months interest only.
- Repayments of principal normally arranged on a monthly basis. Depending on the farm's cashflow patterns, flexibility can be applied, with combined monthly Principal and Interest (P and I) repayments, or principal repayments based on quarterly, half yearly or annual cycles in lieu of monthly, or "ballooned" repayments during the term of the loan.
- Interest is charged monthly to the farm working account (unless P and I repayments are arranged) and based on WestpacTrust's Farm Lending Rate plus a margin based on the individual credit assessment of the borrower. Fixed interest rate terms available up to 5 years and rates may be fixed forward by up to 12 months ahead of drawdown.
- An establishment charge of up to 1.0% may apply.

Security

WestpacTrust will normally require a registered first mortgage over the farm property and will lend up to 60% of the farm's valuation (registered or as assessed by WestpacTrust).

Where the loan to security ratio is over 50%, WestpacTrust will also seek a registered charge over livestock or crop lien to support the loan.

Where lending is against livestock security, WestpacTrust will lend up to 60% of the market value (as assessed by WestpacTrust) of dairy livestock and 50% of market value of other classes of livestock.

Stock and Station Agencies

The finance departments of most Stock and Station Agencies have both seasonal and term lending facilities available. Loan facilities are offered to all new and existing farmers.

P.G.G.Trust Ltd.:

Term: Generally three years although shorter and longer terms can be negotiated.

Renewals: For further terms subject to review of security and debt servicing.

Interest rates: Fixed and Floating available, payable monthly by direct debit. Interest only or "reducing" or optional Principal repayments available.

Security: First Mortgage over land and buildings. Up to 66% of Value.

Application fee: payable - by negotiation.

Advances can be secured against Rural, Commercial or Residential property.

Pyne Gould Guinness Ltd:

Seasonal Finance:

Provided on a seasonal basis with annual review and secured against livestock, plant, crops or land. Part of the initial costs of purchase of livestock and plant may be approved in individual cases.

Livestock loans:

Funds are available for the purchase and finishing of livestock in approved cases where normal seasonal facilities have been fully used. These loans are subject to security over the finishing stock plus additional livestock in some cases or a waiver from any security holder.

Interest and Fees:

Calculated on the daily balance with credit interest paid. No application or annual fees. Cheque fees apply.

Wrightson Farmers Finance Ltd.:

Term Loans:

Uses - land purchase, debt restructuring, purchasing of livestock, plant and machinery and vehicles and agricultural diversification.

Term - 5 years reviewable to maximum 15 years.

Security - Land, livestock or plant.

Interest Rates - competitive with flexible repayment terms to suit particular needs.

Seasonal/Current Overdraft:

Uses - To fund farmers' ongoing farm expenditure throughout the year, as an advance on income.

Term - Up to 12 months, thereafter reviewed and renewed.

Security - Instrument over livestock, crops or plant, or a mortgage over land.

No current account bank transaction or overdraft fees etc - the interest rate is the only cost of funds.

Credit interest is paid on current account daily, when in credit.

Funding determined by personal, management and viability factors.

Fixed Loan Facility:

Uses - Land purchases, purchasing of livestock, plant and machinery, debt restructuring and diversification.

Interest Rate - Fixed for term of loan

Terms - 1,2 or 3 years.

Security - Mortgage over land and/or instrument over livestock or plant.

Flexi-Credit Farm Facility:

Uses - A farm credit facility in which all farm financial requirements (term and seasonal) are included in one single account.

Amount - Minimum facility of \$150,000

Interest rate - the prime rate for term loans, plus a premium of 0.5%

Security - First mortgage on land and/or security over livestock.

Direct access to flexi-credit account from cheque book.

Client Cash Flow Management System:

A monthly cash flow update and summary report, generated from client payments and receipts.

Wrightson American Express Cards:

A unique farmers charge card facility with associated bonus point system on purchases.

Financial Data Required:

Current balance sheet and accounts.

Cash flow forecast and budget.

Personal statement of assets and liabilities.

Investment Facilities:

A comprehensive investment facility exists, tailored for the Rural Sector. Provision for Call, Term and Debenture Stock exists, with flexibility and interest is calculated daily and credited on a monthly or quarterly compound.

Trust Companies

As an example, *Guardian Trust* offers both floating and fixed rate mortgage finance (interest only or including principal repayments) on amounts from \$50,000 (minimum) to \$7 million (maximum). As at 26 February 1998, the floating rate was 9.9% and fixed rate was 9.5%. The term of the loan varies according to the type of loan sought but ranges from a 1 year minimum to a 20 year maximum.

Solicitors

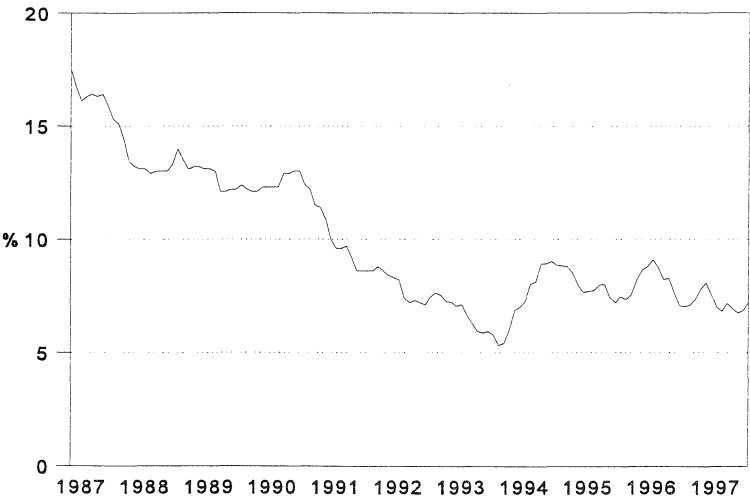
Solicitors generally provide short term finance (2-3 years) but shorter or longer terms are sometimes available. Flat mortgages are the most common, but provisions for lump sum principal reductions may be included. Interest rates vary, but are currently between 10% and 12% on first mortgage (including the solicitors collection costs of around 1%). Rates are normally not reviewable with loans of 2 years or less. The maximum amount which can be borrowed is usually limited to 66% of valuation.

Other Institutions

Under certain circumstances several other institutions will lend money for land, stock and plant purchase, development or other agricultural and related projects. These include Building Societies, Dairy Companies (usually clients only) and Life Insurance Companies. Interest rates and terms are usually negotiated for individual situations.

2.17.2 Interest Rates - 5 Year Government Stock

Editor's Note: As an approximate guide, interest rates on first mortgage (for farm purchase) in recent years have generally been about 2 to 3 percent higher than the 5 year Government Stock Rate (see graph):



Source: Reserve Bank Financial Statistics

2.17.3 Cost of Table Mortgages - Monthly/Quarterly/Annual Payments

(i) Monthly Payments

(Monthly Payments on Amortised Loans).

The monthly payment (interest and principal combined) per \$1000 borrowed on a table mortgage, is set out below:

Repayments of Principal and Interest Per \$1000 Borrowed

Terms of Loan:

Years (Mortgage Term)

	5	10	15	20	25
Interest Rate	\$ p.m.	\$ p.m.	\$ p.m.	\$ p.m.	\$ p.m.
6%	19.33	11.10	8.44	7.16	6.44
6.5%	19.57	11.35	8.71	7.46	6.75
7%	19.80	11.61	8.99	7.75	7.07
7.5%	20.04	11.87	9.27	8.06	7.39
8%	20.28	12.13	9.56	8.36	7.72
8.5%	20.52	12.40	9.85	8.68	8.05
9%	20.76	12.67	10.14	9.00	8.39
9.5%	21.00	12.94	10.44	9.32	8.74
10%	21.25	13.22	10.75	9.65	9.09
10.5%	21.49	13.49	11.05	9.98	9.44
11%	21.75	13.77	11.37	10.32	9.80
11.5%	22.00	14.06	11.68	10.66	10.16
12%	22.24	14.35	12.00	11.01	10.53
12.5%	22.50	14.64	12.33	11.36	10.90
13%	22.75	14.93	12.65	11.72	11.28
13.5%	23.01	15.23	12.98	12.07	11.66
14%	23.27	15.53	13.32	12.44	12.04
14.5%	23.53	15.83	13.66	12.80	12.42
15%	23.79	16.13	14.00	13.17	12.81
15.5%	24.05	16.44	14.34	13.54	13.20
16%	24.32	16.75	14.69	13.91	13.59
16.5%	24.58	17.06	15.04	14.28	13.98
17%	24.85	17.38	15.39	14.67	14.38
17.5%	25.12	17.70	15.75	15.05	14.78
18%	25.39	18.02	16.10	15.43	15.17
18.5%	25.67	18.34	16.47	15.82	15.57
19%	25.94	18.67	16.83	16.21	15.98

(ii) Quarterly Payments

(Quarterly Payments on Amortised Loans).

The quarterly payment (interest and principal combined) per \$1000 borrowed on a table mortgage, is set out below:

Repayments of Principal and Interest Per \$1000 Borrowed

Terms of Loan:

Years (mortgage Term)

	5	10	15	20	25
Interest Rate	\$ p.q.	\$ p.q.	\$ p.q.	\$ p.q.	\$ p.q.
6%	58.25	33.43	25.40	21.55	19.38
6.5%	58.97	34.20	26.22	22.43	20.30
7%	59.70	34.98	27.06	23.33	21.25
7.5%	60.43	35.76	27.91	24.24	22.22
8%	61.16	36.56	28.77	25.17	23.21
8.5%	61.90	37.37	29.65	26.11	24.21
9%	62.65	38.18	30.54	27.07	25.23
9.5%	63.40	39.01	31.44	28.04	26.27
10%	64.15	39.84	32.36	29.03	27.32
10.5%	64.91	40.68	33.28	30.03	28.38
11%	65.68	41.54	34.23	31.05	29.46
11.5%	66.45	42.40	35.18	32.08	30.55
12%	67.22	43.27	36.14	33.12	31.65
12.5%	68.00	44.15	37.11	34.17	32.76
13%	68.78	45.03	38.09	35.23	33.89
13.5%	69.57	45.93	39.09	36.31	35.02
14%	70.37	46.83	40.09	37.39	36.16
14.5%	71.16	47.74	41.11	38.48	37.32
15%	71.97	48.66	42.13	39.59	38.47
15.5%	72.77	49.59	43.16	40.70	39.64
16%	73.59	50.53	44.21	41.82	40.81
16.5%	74.40	51.47	45.26	42.95	41.99
17%	75.22	52.42	46.32	44.08	43.18
17.5%	76.05	53.38	47.38	45.23	44.37
18%	76.88	54.35	48.46	46.38	45.56
18.5	77.72	55.32	49.54	47.53	46.76
19%	78.56	56.30	50.63	48.69	47.97

(iii) Annual Payments

(Annual Payments on Amortised Loans).

The annual payment (interest and principal combined) per \$1000 borrowed on a table mortgage, is set out below:

Repayments of Principal and Interest Per \$1000 Borrowed

Terms of Loan:

Years (Mortgage Term)

	5	10	15	20	25
Interest Rate	\$ p.a.	\$ p.a.	\$ p.a.	\$ p.a.	\$ p.a.
6%	237.40	135.87	102.96	87.18	78.23
6.5%	240.64	139.11	106.36	90.76	81.99
7%	243.89	142.38	109.79	94.39	85.81
7.5%	247.17	145.69	113.29	98.10	89.72
8%	250.46	149.03	116.83	101.85	93.68
8.5%	253.77	152.41	120.43	105.68	97.72
9%	257.09	155.82	124.06	109.55	101.81
9.5%	260.44	159.27	127.75	113.48	105.96
10%	263.80	162.75	131.47	117.46	110.17
10.5%	267.18	166.26	135.25	121.49	114.43
11%	270.57	169.80	139.07	125.58	118.74
11.5%	273.98	173.38	142.92	129.70	123.10
12%	277.41	176.98	146.82	133.88	127.50
12.5%	280.85	180.62	150.76	138.10	131.94
13%	284.31	184.29	154.74	142.35	136.43
13.5%	287.79	187.99	157.76	146.65	140.95
14%	291.28	191.71	162.81	150.99	145.50
14.5%	294.79	195.47	166.90	155.36	150.08
15%	298.32	199.25	171.02	159.76	154.70
15.5%	301.85	203.06	175.17	164.20	159.34
16%	305.41	206.90	179.36	168.67	164.01
16.5%	308.98	210.77	183.57	173.16	168.71
17%	312.56	214.66	187.82	177.69	173.42
17.5%	316.16	218.57	192.10	182.24	178.16
18%	319.78	222.51	196.40	186.82	182.92
18.5%	323.41	226.48	200.73	191.42	187.69
19%	327.05	230.47	205.09	196.05	192.49

2.18 WATER SUPPLY, IRRIGATION AND DRAINAGE.

Note: Many manufacturers continue to express capacity in gallons and pump pressure in gallons per hour (gph). The conversion figure to obtain the metric rate is:
1 gallon = 4.546 litres.

2.18.1 Water Supply System Costs

The complete cost of a new stock water supply system for a farm depends on an extremely large number of variables. For example, recent figures suggest a cost of around \$20,000 for the development of a new water supply on an 120 hectare farm being converted from sheep to dairy farming. Refer to *Section 2.18.8* for supply charges.

2.18.2 Water Troughs

Concrete

McKendrys:

Oblong Troughs - Sheep, Cattle, Horses.		
40 type (170 litres) 1.83mm long x 480mm wide x 355mm deep		\$103 to \$130
60 type (250 litres) 1.83mm long x 685mm wide x 310mm deep		\$110 to \$160
70 type (290 litres) 2.13mm long x 535mm wide x 420mm deep		\$130 to \$160
120 type (545 litres) 2.743mm long x 635mm wide x 457mm deep		\$190 to \$220
Round Troughs - Cattle, Sheep		
40 type (160 litres) 965 diam x 330mm deep		\$101
100 type (450 litres) 1.37mm diam x 380mm deep		\$136
130 type (585 litres) 1.480mm diam x 434mm deep		\$154.50
200 type (900 litres) 1.93mm diam x 380mm deep		\$185 to \$220.50
Round Troughs - Dairy Cattle Types		
225 type (1020 litres) 1.63mm diam x 650mm deep		\$238
300 type (1360 litres) 1.910mm diam x 650mm deep		\$285
Deer Troughs		
20 type (90 litres) 815mm diam x 370mm high		\$75.50 to \$103
40 type (180 litres) 1.120mm diam x 380mm high		\$105 to \$139
Pig Troughs		
915mm long x 405mm wide x 230mm deep		\$53
1.37mm long x 405mm wide x 230mm deep		\$60
1.83mm long x 405mm wide x 230mm deep		\$69
915mm long - heavy duty		\$60

Humes:

	Weight	Price
Rectangular troughs:		
RB200/300/400	280kg/366kg/525kg	\$140.25/\$159.76/\$199.27
Round troughs:		
CB100/150/500	235kg/370kg/465kg	\$110.22/\$135.36/\$186.59
CB750/1000/1500	680kg/854kg/1034kg	\$263.42/\$292.68/\$350.01

Cement Products

Oblong Troughs				
Litres	Length (m)	Width (mm)	Height (mm)	Price
36.00	1.05	370.00	170.00	\$41.78
200.00	2.04	660.00	370.00	\$87.12
270.00	2.00	660.00	380.00	\$111.13
Circular Troughs				
Litres	Diameter (mm)		Height (mm)	Price
225.00	1150.00		310.00	\$87.12
450.00	1470.00		460.00	\$133.35
780.00	1600.00		460.00	\$151.13
1125.00	1970.00		510.00	\$204.47

Fibreglass

Ribtec: (price includes delivery) (Round troughs)

340 litres	35" x 20"	0.89m x 0.51m	\$164
600 litres	63" x 13"	1.60m x 0.33m	\$249
900 litres	54" x 24"	1.37m x 0.61m	\$280
1400 litres	5'9" x 24"	2.44m x 0.61m	\$356
2200 litres	7' x 24"	2.13m x 0.61m	\$445
4500 litres	10' x 24"	3.05m x 0.61m	\$756
Long Troughs (Galvanised Frame)			
700 litre - no frame/low frame/high frame			\$280/\$551/\$604
1400 litre - no frame/low frame/high frame			\$426/\$747/\$773
Liquid feed troughs/lid/frame			\$445/\$89/\$267

2.18.3 Tanks

Fibreglass

<i>Ribtec:</i> (price includes delivery)			
Litres	Price	Litres	Price
110	\$213	4600 upright	\$1,049.00
330	\$267	5455	\$1,227.00
700	\$338	7700	\$1,511.00
1250	\$445	9600	\$1,575.00
1400	\$533	9900 upright	\$1,575.00
2080	\$711	10600	\$1,689.00
2300	\$773	15800	\$1,867.00
3100 squat	\$844	23780	\$2,089.00
3636 upright	\$960	3636 upright	\$1,662.00
Underground:			
18000	\$3556	27000	\$4890

Concrete

Humes:

11250 litres, 2500mm diameter, 2800mm height	\$1470
11375 litre Spun Tank	\$1617
2000 litre Water Tank (500 gallon)	\$768
4550 litre Water Tank (1000 gallon)	\$1225

Cement Products Ltd (Palmerston North):

Litres	(gal.)	Diameter(m)	Height(m)	Price
900	(200)	1.20	1.15	\$608.97
1800	(400)	1.45	1.22	\$868.55
2700	(600)	1.75	1.22	\$988.57
3600	(800)	1.90	1.22	\$1084.58
4500	(1000)	1.90	1.83	\$1155.70
9100	(2000)	2.74	1.83	\$1548.64
13600	(3000)	2.74	2.44	\$1671.32
18200	(4000)	3.42	2.28	\$1866.90
22800	(5000)	3.42	2.74	\$1938.02

Freight costs are additional to the tank prices and are charged at \$4.00 per kilometre for all tank sizes.

McKendrys: (Christchurch)

Volume (litres)	Height	Price
1829	1.37m	\$625
4546	1.9m	\$952.60
11365	2.4m	\$1415.70
15911	1.80m	\$1700
23660	2.72m	\$2183

Note: Prices quoted are ex yard. Prices include 2 x 25mm brass outlet and 1 x 25 mm brass inlet sockets.

Timber Tanks and Reservoirs

Timbertank Enterprises:

Capacity (litres)	Diameter	Height	Price
19,447	3.80	2.00	\$2,775
34,550	4.80	2.00	\$3,960
47,280	4.80	2.70	\$5,425
69,670	6.00	2.70	\$6,755
96,130	6.90	2.70	\$8,945

Note: All prices include 0.2 PVC liner and construction. Individual quotes are given to take into account location, non standard pipework, 0.5 PVC liner and site preparation if required.

Timbertank Enterprises:

Capacity (litres)	Diameter	Height	Price
19,447	3.80	2.00	\$2,590
11,200	2.80	2.00	\$2,070
8,640	2.40	2.00	\$1,905
4,830	1.80	2.00	\$1,420
2,800	1.80	1.20	\$1,155

Note: Kitset prices are ex, factory, and include standard pipework and 0.5 PVC liners.

Reservoir

95 cubic metre to 3000 cubic metre reservoirs are quoted individually.

J.S.Job:

Reservoir Valves

80 mm	20/25/32 mm	\$77/\$77/\$85
300 mm	20/25/32 mm	\$83/\$83/\$91
600 mm	20/25/32 mm	\$89/\$93/\$99

Galvanised Iron Tanks

C & F Industries:

1700 litres	\$548
2700 litres	\$700
3600 litres	\$834
1200 high tank stands	\$533
Each additional metre height	\$47

2.18.4 Pumps and Windmills

Bertolini (Diaphragm Pumps)

Medium to High Pressure			
Model	Max. Continuous Working Pressure	Litres per Minute	Price
25 S	18 Bar (270 psi)	25	\$650 to \$950
PA 330	40 Bar (600 psi)	30	\$650 to \$950
PA 430	40 Bar (600 psi)	40	\$745 to \$1022
PA 530	40 Bar (600 psi)	55	\$870 to \$1228
PA 730	50 Bar (750 psi)	70	\$1085 to \$1499
PA 908	50 Bar (750 psi)	90	\$1510
PA 144	50 Bar (750 psi)	145	\$1950
Low Pressure	15 Bar (220 psi)	65 to 250	\$750 to \$2600
Motorised			
(electric/petrol)	15 Bar (220 psi)	15	\$830 / \$920
(electrical)	20 Bar (300 psi)	20	\$995

4 Stroke	20 Bar (300 psi)	25	\$1462 to \$1655
	40 Bar (600 psi)	40	\$2136
Ceramic Plunger	50 Bar (700 psi)	30	\$950
	70 Bar (1000 psi)	70	\$2039
	70 Bar (1000 psi)	90	\$2117
	70 Bar (1000 psi)	145	\$3139
	50 Bar (700 psi)	245	\$3683

***Onga (NZ) Ltd* - Davies and Onga Pumps:**

Prices for various pressure systems vary according to tank size.

Farm Pressure Systems

Shallow Well Jet Pumps

JJ400	750W	20 to 40 psi	AP 50 tank	\$850
JJ600	1100W	20 to 50 psi	AP 50 tank	\$1170
OJ700	1500W	20 to 70 psi	AP 80 tank	\$1770
OJ800	2400W	30 to 110 psi	AP 80 x 2 tanks	\$2520
Deep Well - add the following to the above pumps:				
	4/5/6" deep well injectors			\$180/\$210/\$280

General Purpose Water Transfer

Hi Flow Self Priming Moulded Centrifugal Pumps

Models	415	750W	31psi	240v	\$395
	112	1100W	37psi	240/415v	\$600/\$630
	143	2400W	60psi	240/415v	\$1260/\$890

Farm Water Supply

Model	Davies B1 Piston Pump	300 gallons per hour	\$995
	Davies C1 Piston Pump	500 gallons per hour	\$1,990

Hydroponics

Moulded Centrifugal Pumps

Model	413	400W	21 psi	240v	\$285
	660	550W	21 psi	240v	\$550
	661	750W	25 psi	240v	\$605

Irrigation

Cast Iron Centrifugal Pumps (Bare Shaft)

Model	DB 50/2 (15000gph @ 130 psi-2900rpm)	\$1,230
	DB 65/26 (24000gph @ 130 psi-2900rpm)	\$1,505
	DB 100/26 (60000gph @ 130 psi-2900rpm)	\$1,775

Cast Iron Centrifugal Pumps (Motorized Electric)

Model	DBC 40/20 11 kW (6000gph @ 80 psi)	\$3,270
	DBC 50/20 15 kW (13000gph @ 80 psi)	\$3,660
	DBC 65/20 22 kW (24000gph @ 70 psi)	\$5,030

Cast Iron Centrifugal Pump (Motorized Diesel Engine)-non electric start

Model	380	68 psi	max. flow	5900gph	4.5 hp	\$4,360
	384	78 psi	max. flow	10100gph	6 hp	\$5,410

McNeill Pumping & Irrigation:

Grundfos Pumps:

High Pressure Multi Stage

	kW	Pressure	Flow, litres per minute	Price
CR4-60	1.1	60 metre (85psi)	120	\$1262
CR8-60	2.2	60 metre (85psi)	180	\$2245
CR16-50	5.5	75 metre (110psi)	330	\$3345

Farm Pressure Systems

JP 6 PT 75LT	0.92	55 metre (80psi)	50	\$1299
CR4-40 PT75	0.75	40 metre (60psi)	120	\$1820
CR8-60 PT75	2.2	60 metre (85psi)	180	\$2925

General Purpose Transfer Pump

JQ2	0.32	40 metre	40	\$699
JQ4	0.46	45 metre (65psi)	40	\$828
CH2-40	0.39	36 metre (50psi)	18	\$499
CH4-40	1.05	30 metre (40psi)	36	\$655
CH8-60	1.41	45 metre (65psi)	65	\$1258

Farm Water Supply Close Coupled Pumps

NM 65-40	1.1	14 metre (20psi)	120	\$1359
NP 80-65	4.0	35 metre (50psi)	360	\$2004
LM 50-200	1.1	15 metre (22psi)	60	\$1589
LP 80-160	7.5	35 metre (50psi)	100	\$2926

Bore Hole Submersible Stainless Steel

SP 5A-17	1.5	100 metre (140psi)	30	\$2100
SP 8A-15	2.2	80 metre (110psi)	45	\$2720
SP 27-7	5.5	60 metre (85psi)	300	\$5509
SP 45-9	11.0	100 metre (140psi)	480	\$7585

Effluent Submersible Sump Pumps (stainless steel)

KP 150 A1 (with float switch)	7 metre (10psi)	150	\$365
KP 250 A1 (with float switch)	5 metre (7psi)	180	\$395
AP 35-40.06 A1	9 metre (14psi)	180	\$580
AP 12-40.06 A	13 metre (20psi)	200	\$750

Irrigation Pumps, Close Coupled 1450 RPM

150 Bloc:	kW			
65 - 40	5	40m (60 psi)	300	\$2592
80 - 50	55	25m (36 psi)	600	\$2236
100 - 80	44	10m (14 psi)	1020	\$2108
125 - 80	30	65m (90 psi)	1500	\$6224
150 - 125	185	25m (36 psi)	4200	\$4459

Hydra-Cell Pumps Ltd: suggested guidelines.

Hydra-cell F20 Brass head	up to 4 litre per min up to 1500 psi	\$800
Hydra-cell D03 Brass head	up to 9 litre per min up to 1200 psi	\$1,200

Hydra-cell D10 C1 head	up to 30 litre per min up to 1000 psi	\$1,800
Hydra-cell D11 C1 head	up to 15 litre per min up to 1500 psi	\$2,000
Hydra-cell H25 C1 head	up to 80 litre per min up to 1000 psi	\$4,800
Hydra-cell D35 C1 head	up to 80 litre per min up to 1000 psi	\$8,500
Hydra-cell D40 C1 head	up to 140 litre per min up to 1200 psi	\$9,000

Effluent Pumps

Tulloch:

Reime SP10 manure separator	\$24,590
Reime L-04-100 submersible manure pump	\$11,510

Windmills

Jolly Windmill Company:

Windwheel and pole		Pump, footvalve, and filter	
Diameter (m)	Price	Bore (mm)	Price
1.8	\$2,100	40 Household	\$490
2.0	\$2,850	40 High Pressure	\$650
2.4	\$4,200	50 High Pressure	\$750
2.6	\$5,200	65 High Pressure	\$950
3.0	\$6,200		

Automatic Reservoir Shut-off Valve	
25mm/32mm	\$95/\$220
Installation Costs:	
Minimum installation charge if customer assists	\$250
Minimum installation charge if done solely by company	\$350

2.18.5 Well Drilling

McMillan Water Wells Lts (Canterbury):

Price for Drilling Wells	Price/metre
4 inch (100mm)/5 inch (125mm)	\$150/\$170
6 inch (150mm)/8 inch (200mm)	\$190/\$252
10 inch (250mm)/12 inch (300mm)	\$320/\$375

Developing and test pumping is charged at \$100 per hour.

Note: All prices include drilling and steel pipe. Stainless steel wedge wire screens are normally fitted and range in price from \$300 per metre for 100 mm to \$720 per metre for 300 mm

2.18.6 Well Liners

Humes:

Well liners are priced at:

Diameter	Price per metre
525 mm x 1.00 metre	\$110
600 mm x 1.22 metre	\$131
900 mm x .900 metre	\$183
900 mm x 1.5 metre	\$313

2.18.7 Pipes and Fittings

MICO Pipelines:

PVC Pressure pipe, metric pipe series (available in 6m lengths).

Red print (87 psi) = class B			
Size (mm)	Socketed one end	Size (mm)	Rubber ring joint
15 to 32	\$11 to \$33	80 to 150	\$109 to \$295
40 to 80	\$34 to \$104	175 to 300	\$427 to \$1201
100 to 125	\$157 to \$221	375 to 450	\$2112 to \$3013
150 to 200	\$285 to \$516		
Blue print (130 psi) = class C			
50 to 80	\$57 to \$124	50 to 100	\$61 to \$206
100 to 150	\$201 to \$405	125 to 200	\$326 to \$729
175 to 200	\$601 to \$748	25 to 450	\$1135 to \$4382

Other classes of pipes area available which include:

Class D = 173 psi

Class E = 217 psi

Class F = 260 psi

Hansen Products (N.Z) Ltd:

Polythene Pipe Fittings:

Straight Couplings (HS)	15 to 50mm	\$2.58 to \$13.96
Male Straight Couplings (HMS)	15 to 50mm	\$2.27 to \$10.31
Female Straight Couplings (HFS)	15 to 50mm	\$2.89 to \$10.40
Reducing Straight Couplings (HRS)	20 x 15 to 50 x 40mm	\$3.33 to \$13.96
Reducing Male Couplings (HRMS)	20 x 15 to 25 x 20mm	\$3.07 to \$3.38
Tees (HT)	15 to 50mm	\$4.93 to \$26.67
Bends	15 to 50mm	\$5.47 to \$21.87
Reducing Tees (HRT)	20 x 15 to 50 x 40mm	\$5.82 to \$26.67
Reducing Male Bends (HRMB)	15 x 20 to 25 x 20mm	\$6.76 to \$8.00
Reducing Female Bends (HRFB)	15 x 20 to 50 x 40mm	\$7.38 to \$25.66

Steel & Tube N.Z. Ltd:

Galvanised Wrought Steel Pipe Fittings:

Tee	10mm, 20mm, 40mm	\$5.56/\$9.28/\$30.71
Bend	10mm, 20mm, 40mm	\$4.24/\$6.56/\$19
Elbow	10mm, 20mm, 40mm	\$5.01/\$8.30/\$24.64
Barrel and Piece	10mm, 20mm, 40mm	\$3.10/\$3.70/\$6.38
Galvanised black malleable fitting		
Elbows - banded equal	10/20/40mm	\$1.42/\$1.90/\$5.69
- banded reducing	10/20/40mm	\$1.86/\$2.09/\$6.64
Tees - banded equal	10/20/40mm	\$1.96/\$2.59/\$7.58
- banded reducing	10/20/40mm	\$2.97/\$2.97/\$8.85
Plugs	10/20/40mm	\$0.95/\$1.07/\$2.72
Ball Valves - full flow brass ball valve	10/20/40mm	\$6.14/\$9.94/\$32.14
- brass ball valve, T bar handle	20mm (male/female)	\$10.40

2.18.8 Stock Water Supply Charges

Selwyn District - Canterbury:

Stock Water and Irrigation Supplies:

Ellesmere	Per hectare or part thereof	\$4.45
	Minimum charge	Nil
Malvern	Per hectare or part thereof	\$5.15
	Minimum charge	\$53.55
Selwyn	Per hectare or part thereof	\$4.65
	Minimum charge	\$31.00

The Council maintains all head works and main races, while on farm cleaning of races is left to the individual farmers.

Taranaki:

Metered supply charge		\$0.50
Restricted flow	\$75/unit (1 cubic metre per day)	
Connection fee - standard 15 - 20mm		\$540
- no main		\$1020
- upgrade from 15 mm to 20mm		\$360

2.18.9 Water and Discharge Permits

Canterbury Regional Council:

Scale of Charges for Processing and Monitoring Resource Consents

- (i) Applications for water or discharge permits have a minimum charge of \$262.50.
Final costs depend on the amount of time required to process an application especially if submissions are received which require a hearing
- (ii) Applications to construct or alter a bore has a minimum charge of \$87.50 per bore.

Compliance monitoring:

Monitoring of water permits - abstraction of groundwater.

- (i) Compliance monitoring is charged on actual and reasonable costs and include preparation time, the site visit and reporting. Typically costs range from \$25 to \$300 depending on work undertaken. If water samples are required, costs can be higher.
- (ii) Transfer of a consent costs \$43.75.

2.18.10 Irrigation Equipment - Pastoral and Arable

Rainer Irrigation Ltd:

Travelling Irrigators

Briggs Model 200 Roto Rainer and Hose Trailer	\$32650
Briggs Model 250 Roto Rainer and Hose Trailer	\$38800
Briggs Model 250 Linear Rain Turbine Drive and Hose Trailer	\$45995
Briggs Model 125 Roto Rainer and Hose Trailer	\$29400
Briggs Model 100 Roto Rainer and Hose Trailer	\$20950
Briggs Model 25 Roto Rainer and Hose Trailer	\$15700
Briggs Model 25 Trailer	\$4400
Briggs Model 10 Roto Rainer Standard (Effluent Irrigator)	\$3300

Briggs Model 10 Hose Trailer	\$4400
Briggs Model 125, 200 or 250 Hose Trailer	\$6500
Briggs Model 100 Hose Trailer	\$4400

Hoses

Angus or Snaftile

65mm to 75mm	\$18.20 to \$27.00 per metre
89mm to 100mm	\$32.00 to \$41.00 per metre
114mm to 125mm	\$49.50 to \$52.00 per metre

Underground Mainline (PVC pipes)

	Class B (per metre)
80mm	\$6.25
100mm	\$8.50
125mm	\$10.71
150mm	\$13.08

Note: Hydrant outlets cost \$200 to \$300 each
 Entrenching and laying costs \$2.00 to \$3.50 per metre

Irrigation and Pumping Services Ltd.

Southern Cross Irrigators

Irrigator complete with sprinklers, black hose (Angus)

SX 5	20 mm x 56 m hose and sprinkler	\$770
SX 20	38 mm x 67 m hose and sprinkler	\$2,655
SX 30	50 mm x 100 m hose and sprinkler	\$6,373
SX 250	75 mm x 200 m hose and gun	\$16,308
SX 350C	88 mm x 200 m hose and gun	\$19,272
SX 450B	100 mm x 200 m hose and gun	\$30,585
SX 550A	115 mm x 200 m hose and gun	\$35,981

Hoses

Angus Hose	44 mm to 75 mm (Black)	\$14.01 to \$27.79 per metre
	100 mm to 150 mm (Black)	\$42.89 to \$66.14 per metre

Sprinklers (each)

Naan	233/96	11 to 62 litres per minute	\$29.00
	5035/91	11 to 42 litres per minute	\$14.20
	254/96	18 to 124 litres per minute	\$55.50

Pump Units Complete with Motor

Starline ISO Motorpumps

50 x 32	200	11kW	2P	7 litres per sec	92gpm	65m	\$3636
65 x 40	250	15kW	2P	9 litres per sec	120gpm	78m	\$4024
80 x 50	250	22kW	2P	20 litres per sec	264gpm	68m	\$4706
100 x 65	250	30kW	2P	28 litres per sec	370gpm	68m	\$5918
100 x 65	250	45kW	2P	35 litres per sec	460gpm	86m	\$7295
125 x 100	315	90kW	2P	60 litres per sec	790gpm	100m	\$13615

Duncan Industries:

Rainbeau Irrigators

Travelling Effluent Irrigator	150m of cable	\$2550
Travelling Water Irrigator	150m of cable	\$2980

2.18.11 Irrigation Equipment - Horticultural

Alister Bevin Products Ltd.

Driplines

Hardie Tape

15 ml x 8"/12" spacing 1219m	\$320
10 ml x 8" spacing x 1829m	\$385
8 ml x 8"/4" spacing x 2133m	\$390/\$420
6 ml x 8" spacing x 2500m	\$325
8 ml x 8"/4" spacing x 300m	\$100

Hydrodrip

35 ml x 90 cm x 1.8 x 600m	\$320
35 ml x 60 cm x 1.8 x 600m	\$336
25 ml x 60 cm x 1.8 x 600m	\$363
25 ml x 40 cm x 1.8 x 800m	\$406

Irrigation Controllers

<i>Hunter SRC - 6 station</i>	\$150
<i>Orbit control star - 4 to 12 station</i>	\$180 to \$465
<i>Irritrol Dial Series - 4 to 12 stations</i>	\$685 to \$1125
<i>Rain-O-Matic electronic rain gauge</i>	\$150
<i>Mini-Click Rain Sensor</i>	\$75

Filters - *Amiad*

Plastic Filters

Filter	- 20mm black with flushing valve	\$49.00
Filter	- 25mm with nylon screen and flushing valve	\$105.00
Filter	- 40mm with grooved disc element	\$255.00
Super-2	- 50mm with moulded stainless steel screen	\$475.00
Jumbo	- 50mm with grooved disc element	\$640.00
Plastic	- 80mm threaded with grooved disc element	\$840.00
Steel Filters		
Filter	- 50mm with moulded stainless steel screen	\$725
Filter	- 80mm with grooved disc element	\$1050
Filter	- 100mm with perforated screen	\$2250
Filter	- 150mm Super with fine stainless steel screen	\$3295

2.18.12 Irrigation Water Supply Charges

Farm Charges

Charges for irrigation vary depending on the length of time the scheme has been in operation, the size of the scheme, the source of water and the number of farmers participating in the scheme.

Some examples of water charges for the 1997/98 season for community irrigation schemes in the South Island are as follows:

<u>Scheme</u>	<u>Charges</u>
<i>Amuri Irrigation Co:</i>	
- Borderdyke	\$30/ha/year
- Spray	\$21/hectare/year
- Up front cost to buy irrigation rights:	
\$25.00 per "A" share (one "A" share is one hectare of developed land)	
\$12.50 per "B" share (one "B" share is one hectare of yet to be developed land).	
<i>Ashburton-Lyndhurst Scheme</i>	\$14/ha/year
<i>Mayfield-Hinds Scheme</i>	\$12/ha/year
<i>Morven, Glenavy and Ikawai Districts:</i>	
- Borderdyke	\$20/ha for 1st 810 mm plus 1.20/1000 m ³ over 610 mm
- Spray	\$12/ha
<i>Lower Waitaki</i>	\$11.00 per ha spray irrigation
	\$27.50 per ha for borderdyke irrigation (16 day rotation)

2.18.13 Irrigation Scheduling Service

Agriculture New Zealand:

Provides agricultural and horticultural properties with irrigation scheduling advice based on weekly soil moisture readings by using a Neutron Probe and Soil Moisture Tensiometers.

Canterbury: \$50 per site (depending on location) i.e dairy farm - 25 readings per season (\$625 per season) cropping farm - 10 readings per season (\$250 per season)

Nelson Region: \$1400 (cropping) and \$1200 (dairying) total cost (average per property). The number of sites monitored depends on the owner's requirements. This is influenced by the number of crops grown and the number of soil types.

2.18.14 Border Dyke Irrigation

Doug Hood Ltd:

Earthworks:

Earthworks only - \$1,200 per hectare or \$3,000 per hectare which includes the borders, headraces etc. This cost includes: All levelling, construction of levees, construction of supply and head races.

Structures:

Concrete Dams

Depends on flow rate of water and will vary depending on water flow but average \$255.00.

Sills

Standard sills cost on average \$85.00 each.

There are various other designs which would generally be more expensive.

Cutting out grass sills costs \$85 per group of borders

Weirs

2.5m - \$485 each

Access Crossings

For a 6 metre crossing, cost including installation and pipes:

300mm diameter pipe	\$75.00/metre
750mm diameter pipe	\$250/metre
Head walls for a 6m crossing, pipe diameter 750mm:	\$220/each
Concrete bridge crossing	\$1800

Batt-Latch

Roger Martyn:

Battery operated timer for spring gate border dyke irrigation flap release	\$200
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2.18.15 Drainage and Subsoiling Costs

The cost of intensive pipe/tile and mole drainage depends on a very large number of variables. *Blackley Contractors* of Manawatu quoted typical flatland costs for intensive (20 to 25mm drainage coefficient) systems:

Clay soils, metal backfill with mole drainage	\$2375 /ha
Clay soils, mole drainage, no metal backfill	\$1930 /ha
Silts (no moling), metal backfill	\$2225 /ha
Silts (no moling or metal backfill)	\$1780 /ha
Mole drainage	\$150 /ha
Difficult sites with poor outlet conditions or flat country may range up to	\$2700 /ha

Southland Brick & Pipe Ltd:

Southtile Field Tiles

Diameter	Length	Per unit for 100	Per unit for 500
75 mm	300 mm	\$0.84	\$0.70
125 mm	300 mm	\$1.30	\$1.08
190 mm	300 mm	\$2.65	\$2.21
100 mm	600 mm	\$2.02	\$1.68
150 mm	600 mm	\$4.08	\$3.40
225 mm	600 mm	\$8.61	\$7.18

Southtile Junctions

75 x 75mm to 225 x 125mm T junctions	\$12 to \$19
75 x 75mm to 225 x 125mm Y junctions	\$12 to \$19

MICO Wakefield Ltd:

Farmtuff - UPVC culvet pipe

200mm x 3m	\$55.56
250mm x 3m	\$84.01
315mm x 3m	\$129.79
400mm x 5m	\$200.91
500mm x 5m	\$316.48

Concrete Culvert Pipes

Cement Products:

Diameter (inch)	Diameter (mm)	Price per metre
6	150	\$24.90
9	230	\$24.90
12	300	\$31.15
15	380	\$42.67
18	450	\$50.67
24	600	\$64.00

McKendrys:

	150 to 375 mm x 900 mm	\$23.10 to \$40
	450 to 900 mm x 900 mm	\$46.20 to \$99.50

Humes:

Wingwalls

0 to 300mm	\$171
300 mm to 600 mm Medium	\$298
600 mm to 900 mm Large	\$748

Rubber Ring Joint Pipes (per pipe)

Diameter	Class X		Class Y		Class Z		Ring	Length
mm	kg	Price	kg	Price	kg	Price	Price	metre
300	225	\$105	-	-	225	\$120	\$7	2.42
600	735	\$251	735	\$283	793	\$311	\$15	2.42
900	1363	\$597	1363	\$658	1520	\$729	\$34	2.42
1200	2125	\$972	2125	\$1,044	2495	\$1,133	\$44	2.42
1800	4375	\$1,739	4375	\$1,982	5025	\$2,197	\$84	2.42

Flush Joint Pipes (per pipe)

Diameter	Class X		Class Y		Class Z		EB/ Band	Length
mm	kg	Price	kg	Price	kg	Price	Price	metre
375	253	\$253	-	-	275	\$143	\$15	2.42
600	553	\$234	610	\$263	690	\$283	\$20	2.42
900	1063	\$494	1183	\$543	1338	\$603	\$29	2.42
1200	1730	\$803	1868	\$861	2188	\$935	\$59	2.42
1800	3275	\$1,493	3625	\$1,705	4250	\$1,888	\$75	2.42

Backfill Gravel

Canterbury supplier:

Crushed stabalized metal courses	\$8.10 to \$11.20
Crushed unstabalized metal courses	\$8.50 to \$9.60
Crushed to dust	\$20.15 to \$21.70
Sealing chips	\$18.20
Drainage Board aggregates	\$7.98
Blended Mix (premix)	\$14.40 to \$16.20
Washed aggregates	\$4.00 to \$8.80
Pit run shingle and filling	\$3.00 to \$21.70

2.18.16 Dairy Shed Effluent Disposal

Examples of capital and running costs for 200 cow effluent disposal systems:

(i) Two Ponds

Major Capital Cost items:

Contractor to dig ponds	\$4,000
Land retired, 0.2ha	\$2,000
Fencing, pipework	\$1,000
Sealing Liner	\$6,000
Plus :	
Pump and wiring if required from milking shed	\$2,500
Pump pit - concrete	\$1,500
Total Capital Costs	\$1,700
Running Costs:	
Weed spray on aerobic pond	\$50
Minor labour requirements:	
Unblocking and repairing pipes	\$150
Desludging required every 4 years	Annual cost \$450
Total Running Costs	\$650

(ii) Single Pond or Long Drain

Major Capital Cost Items:	
Contractor for pond or drain	\$2000
Share of honey wagon or contractor	\$1000
Plus:	
Pump and wiring if required from milking shed	\$2500
Pump pit - concrete	\$1500
Running Costs:	Total Capital Cost \$4500
Minor repairs and maintenance	\$100
Annual cleaning	\$750
Total Running Costs	\$850

(iii) Spray Irrigation

Major Capital Cost Items:	
Pump (often needs larger pump than shed to pond model)	
7.5kW with coupled electric motor	\$3900
Wiring	\$1000

Pump pit should gravity drain to a pond storage facility. This holding pond allows effluent to be stored during winter months as its too wet to apply it to land.

Essential.

Holding pond	\$2800
Spray irrigator, self-propelled	\$3200
PVC Mainline	\$2000
Alkathene Sprayline	\$600
Fittings and hydrants	\$1600
Capital Costs Total	\$12900

Running Costs:		
Machines involved (impellers on pumps, switch gear) - annual cost		\$200
Piping: (allow 10 year life). Annual cost		\$200
Power costs		\$700
Total Running Costs		\$1100

Source: Phil Heatley, from *Dairying and the Environment: Managing Dairy Effluent*, updated January 1998.

2.18.17 Septic Tanks

Fibreglass

Ribtec:

Super RD multi-chamber and rock filter		
4500 litre		\$2267
4500 litre with pump out chamber		\$2534
3300 litre single		\$1422

Concrete

Cement Products Ltd:

2700/3300 litre		\$644.53/\$822.33
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McKendrys:

Envirotank Z5000 3300 litre		\$2030
Septic Tank		\$745
Pumping chamber		\$420
Distribution box		\$112.50
Septic closet		\$470
Grease trap		\$450
Sludge tank		\$470

Humes:

2700 litre Septic tank (600 Gal)	2310 kg	\$763
3300 litre Septic Tank (700 Gal)	2750 kg	\$1,103
RD 5000 Eco Tank (Pump Chamber)		\$2,036

2.18.18 Underground Tanks

Ribtec:

18000/27000 litre		\$3556/\$4890
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2.19 FENCING COSTS

2.19.1 Guide to Fencing Costs

Labour:

Fencing contractors charge out at around \$18 to \$24 per hour (not including travel). The price for fencing on hill country is determined by such things as contour, ease of digging, ease of access, remoteness of site, size of job and number of strainers and angles required. Labour costs per metre (Canterbury) are currently working out to about \$1.30 on easy land and \$1.50 to \$2.00 per metre on hill country where some hand digging is necessary.

Contract:

Approximate charges for labour and materials for Canterbury conditions:

Flat land: (Costings based on at least 300m of construction. Posts 125mm diam.)

		Price per metre
Standard 8 wire	post per 4m, 5 battens	\$5.60
Netting	8/36/12 S.S.H.T., A8-900-300	\$6.60
Electric	post per 10m, 5 wire	\$3.00 to 3.15
Deer*	13/75/12, A13-1900-300	\$7.01
	11/61/12, A11-1550-300	\$6.50

*see also other detailed examples below

Medium Hill Country: 8 wire, post per 7 m, wire droppers \$7.50 to \$8.00

North Island

Morice & Associates Ltd: Napier

Cost per metre for a typical North Island sheep and cattle fence - posts 5 metres apart, 7 wires (No.8 bottom, 1 barb, six 12.5G steel), 5 battens per bay:

Total materials \$5.85 per metre
Erection cost \$2.75 (average) to \$4.00 per metre

Cost of Materials for Electric Fences:

Gallagher Electronics Ltd:

(see also Sections 2.19.2, and 2.19.8 onward)

(i) 5 wire fibreglass fence on undulating to hill country, using one 13mm rod and three 10mm rods per 16 metre	Cost per km = \$1941
(ii) 5 electric wire, batten and insulator fence on undulating to hill country at 5 metre spacing	Cost per km = \$1536
(iii) 5 wire (electric) insul timber fence on undulating to hill country. 1 post and 3 droppers per 16 metres.	Cost per km = \$1582

Note: This cost does not include the Energizer unit and accessories.

North Island

Morice & Associates Ltd: Napier

Cost per metre for a typical North Island electric fence - No.3 posts 50 metres apart, 4 wires (3 electrified), four 1.5 metre ground treated battens at 10 metre intervals between posts:

Total materials \$1.64 per metre
Erection costs \$1.20 to \$1.50 per metre

Cost of Materials for Deer Fences: Updated by, "Cyclone"(See also *Section 2.19.2* onward)**(i) Boundary fence for flat to rolling country:**

Spacings: Posts, every 5 metres
 Strainers, every 200 metres

Materials required for 400 metres:

Posts 2.7m x 125mm	80 @	\$18.18	\$1454.00
Strainers 3.7m x 175mm	3 @	\$44.00	\$132.60
Stays 2.7m x 115mm	3 @	\$12.70	\$38.10
Stay blocks 200mm x 50mm x 0.5m	3 @	\$5.98	\$17.94
2.5mm H.T. wire	1200m @	\$0.08/m	\$96.00
150mm x 1900m netting 13 line	400m @	\$350/100m	\$1400.00
Gate 3.66 x 1900mm	1 @	\$287	\$287.00
Staples 4mm	12 kg @	\$3.48	\$41.76
Gudgeons lock through post	1 @	\$19.80	\$19.80
Gudgeon through post	1 @	\$11.00	\$11.00
Gate fastener and staple	1 @	\$7.00	\$7.00
per 400 metres			\$3,505.20
Materials Cost per metre (excluding labour)			\$8.76

(ii) Internal Deer Fencing:**Fence Design A:**

Six wire electric, no netting

Spacings: Flat country, posts up to 30 metres
 Droppers up to 8 metres

Tie downs: Where necessary, tie downs should be constructed using droppers rather than posts. This will reduce costs and maintain a degree of flexibility in the fence.

Materials required for 1000 metres

Posts 2.7m x 125mm	30 @	\$18.18	\$545.40
Droppers 1000mm x 40mm x 50mm	100 @	\$1.17	\$117.00
Strainers 3.0m x 175mm	9 @	\$35.00	\$315.00
Stays 2.7m x 115mm	9 @	\$12.70	\$114.30
Stay blocks 200mm x 50mm x 0.5m	9 @	\$5.98	\$53.82
2.5mm H.T. wire (1 coil = 648m)	9.4 coils @	\$53.00	\$498.20
Plastic strain insulators	48 @	\$0.70	\$33.60
Joint Clamps	24 @	\$0.60	\$14.40
Cut-out switch	1 @	\$5.63	\$5.63
Gate breaks (flexible connectors)	4 @	\$3.82	\$15.28
Gates	4 @	\$184.45	\$737.80
Staples 4mm	2 kg @	\$3.48	\$6.96
Gudgeons lock through post	4 @	\$19.80	\$79.20

Gudgeons through post	4 @	\$11.00	\$44.00
Gate fasteners and staple	4 @	\$4.54	\$28.00
	cost per 1000 m		\$2608.59
Cost per metre (excluding labour)			\$2.61

Fence Design B:

Consists of 3 live wires above 800mm 7 line netting.

The netting provides an excellent physical barrier for young stock and yet the fence is still inexpensive and quick to erect.

Spacings: Same as for the Fence Design A.

Materials required for 1000 metres

Posts 2.7m x 125mm	30 @	\$18.18	\$545.40
Droppers 1.52m insul timber	100 @	\$8.50	\$850.00
Strainer posts 2.7m x 200mm	9 @	\$33.38	\$300.42
Stays 2.7m x 115mm	9 @	\$12.70	\$114.30
Stay blocks 200mm x 50mm x 0.5m	9 @	\$5.98	\$53.82
2.5mm H.T. wire (648m/coil)	4.7 @	\$53.00/coil	\$249.10
Wire netting			
(800mm x 300mm, 7 line)	1000m @	\$34.25/100m	\$1342.50
Plastic strain insulators	24 @	\$0.70	\$18.90
Joint clamps	12 @	\$0.57	\$6.84
Cut-out switch	1 @	\$5.63	\$5.63
Gate breaks (flexible connectors)	4 @	\$3.82	\$15.28
Gates 3.66m x 1900m	4 @	\$184.45	\$737.80
Staples 4mm	3 kg @	\$3.48	\$10.44
	cost per 1000 m		\$4250.43
Cost per metre (excluding labour)			\$4.25

2.19.2 Wire

(see also *Section 2.19.5, Wire Netting*)

Cyclone:

	Gauge of Wire	Length of Coil	\$ per 25kg coil
Flexspan: (Mild Steel)			
	3.55 mm (No.9) 25 kg	321 metres	\$67.00
	4.00 mm (No. 8) 25 kg	253 metres	\$59.00
Hispan: (High Tensile Steel)			
	2.00 mm, 25 kg	1013 metres	\$77.00
	2.50 mm, 25 kg	648 metres	\$55.00
	3.15 mm, 25 kg	408 metres	\$65.00
Span 7 (High Tensile Cable)			
	6.0 mm		\$0.58 per metre
Barbed			
Iowa Pattern	75 mm spacings	225 metres	\$85.60
	150 mm spacings	255 metres	\$82.90
Reverse Twist HT	RT 150 mm spacings	500 metres	\$93.70
	RT 100 mm spacings	500 metres	\$99.35

Hurricane:

Barbed Wire Standard 2.5mm.	75 and 150 mm	25 kg reel	\$84 per reel
Reverse Twist 1.6mm HTHTR	100 mm	500 m reel	\$95.11 per reel
Lacing Wire	2.0 mm	10 kg coil	\$36.95
	1.6 mm	10 kg coil	\$39.75

2.19.3 Posts/Strainers/Droppers/Battens/Stays (see also *Section 2.19.11*)

Note: Price discounts of 10 to 15% may be possible for bulk orders.

McVicar Timber Group Ltd:

Fencing Posts/Stays -		
Half-Round	1.8m	\$7.38
Posts (1.8 m pointed)	75 to 100 mm	\$6.44
	100 to 125 mm	\$7.87
	125 to 150 mm	\$9.78
Deer Posts	125 mm x 2.7 m pointed	\$18.18
Stays	75 to 100 mm x 2.4 m	\$11.42
	75 to 100 mm x 2.7 m	\$12.05

Strainers -	
175 mm to 200 mm x 2.1 m pointed	\$19.60 to \$22.14
175 mm to 225 mm x 2.4 m pointed	\$24.70 to \$29.60
200 mm x 2.7 m pointed	\$33.38

Droppers/Battens -	
50 mm x 40 mm x 1 m	\$1.07
50 mm x 40 mm x 1.05 m	\$1.15
50 mm x 40 mm x 1.2 m	\$1.25

Gallagher:

Insultimber		
Post, No 1.	1520 x 38 x 38 mm	\$6.69
Post, No 2.	1380 x 38 x 38 mm	\$5.99
Droppers	940 x 38 x 26 mm	\$3.11
Tie down	700 x 38 x 26 mm	\$1.32

Hurricane:

Fencing Standards (Waratah)	
1650mm	\$6.50
1800mm	\$8.50

Placemakers:

100 x100mm	1.8/2.4/2.7/3 m	\$19.72/\$22.22/\$24.89/\$17.91 each
100 x 75mm	1.8/2.4/2.7/3 m	\$7.60/\$16.44/\$18.67/\$20.44 each
125 x 75mm	2.7 m	\$16.17 each

McAlpines:

Length	Size	Price per post
Posts		
1.8 m	Small	\$7.25
1.8 m	Small	\$8.30
1.8 m	Medium	\$9.50
1.8 m	Large	\$10.95
Stays		
2.4 m	Medium	\$11.75
2.7 m	Medium	\$12.90
Deer Posts		
2.7 m	Large	\$17.75
Strainers		
2.1 m	150	\$18.00
2.1 m	175	\$20.75
2.4 m	150	\$20.00
2.4 m	175	\$23.60
2.7 m	150	\$22.70
2.7 m	175	\$26.75
Poles		
3.0 m/3.6 m	Medium	\$35.05/ \$39.90
4.2 m/4.8 m	Medium	\$56.50 /\$66.70
5.4 m/6.0 m	Medium	\$76.90 /\$88.10

2.19.4 Gates

Wooden

McVicar

Hurdles:	1.8/2.1 m	\$29.82/\$31.82
Gates:	3.6/4.2 m	\$81.60/\$85.56

Beattie Insulators

Spring gate kit	\$8.89
Tape gate kit	\$9.20
Heavy duty gate break	\$4.00

Steel

Cyclone:

Farm Gates:		
Economy	3.05m to 4.27m	\$108 to \$116
Deer Gates: 1.9m high	3.05m/3.66m/4.27m long	\$205/\$191/\$208

Hurricane:

Farm Gates	Length (m)	Price
Sheep Gates	3.05 to 4.25	\$86 to \$93
Cattle Gates	3.05 to 4.25	\$119 to \$147
Stockmaster Gates	3.05 to 4.25	\$178 to \$187
Deer Gates - 1900mm	3.05 to 4.25	\$207 to \$224
- 1550mm	3.05 to 4.25	\$190 to \$207

2.19.5 Wire Netting

Placemakers:

Galvanised hexagonal wire netting	
-aviary (900 x 13mm)/chicken (900 x 50 mm)	\$103.64/\$47.73 per 50m roll
Galvanised chain link netting	\$178.53 to \$355.82 per roll
Plastic coated chain link netting	\$259.89 per roll

Cyclone:

Twinlock Field	per 100m Roll
2.5 mm wire:	
8 line 900 mm high, 150/300 mm spacings	\$213/\$163
8 line 800 mm high, 150/300 mm spacings	\$217/\$160
7 line 900 mm high, 150/300 mm spacings	\$196/\$153
7 line 800 mm high, 150/300 mm spacings	\$200/\$138
6 line 700 mm high, 300 mm spacings	\$129
5 line 525 mm high, 150/300 mm spacings	\$134/\$106
2.0 mm wire:	
7 line 800mm high 300mm spacings	\$95
Tightlock Deer (100m rolls) 2.5mm:	
17 line 1900 mm high, 150/300 mm spacings	\$529/\$346
15 line 1550 mm high, 150 mm spacings	\$459
13 line 1900 mm high, 150/300 mm spacings	\$395/\$265
11 line 1550 mm high, 150/300 mm spacings	\$333/\$247
Top-up Fence - 2.5mm wire:	
4 line 600 mm high, 600 mm spacings 200 metre roll	\$135
Tightlock Field Fence (100m rolls) - 2.5mm wire:	
9 line 900 mm high, 150/300 mm spacings	\$275/\$202
8 line 900 mm high, 150/300 mm spacings	\$233/\$171
7 line 900 mm high, 150/300 mm spacings	\$223/\$160

Note: All netting is High Tensile (HT) unless otherwise stated.

Farm Mesh 75mm x 150mm x 4mm diameter galvanised wire 1000 mm wide roll, per 30 metre roll	\$240
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Hurricane:

		per 100 metres
High Tensile Boundary Fence	13/190/15	\$290
Staytight	17/190/30 to 11/155/30	\$220 to \$177
Hinge Joint	13/190/30 to 11/155/30	\$180 to \$175

High Tensile Boundary Fence		
Staytight	8/90/30 to 7/90/30	\$185 to \$180
Hinge Joint - South Island	8/90/30 to 7/75/30	\$180 to \$175
Economy	6/70/30, 200m	\$209

2.19.6 Fencing Tools and Equipment

Straining Equipment

Cyclone:

Hayes wire Strainers:	Price per Item
Hayes Permanent 302 (Pack of 25)	\$2.20
Tightening Handle - Permanent	\$5.85
Chain Wire Strainer	\$68

Franklin:

Gate clamp	\$4.13
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Post and Standard Drivers

Cyclone:

Post Rammer Pipe Handles	\$25.60
Standard Driver 352 Tubular	\$56.85

Post Hole Diggers

Aitchison Industries: - Mate Post Hole Diggers

100cc motorised powerhead	\$1249
Single blade 1500 series, Double blade 1700 series.	
Size	Price
76.2 / 101.8 / 127.0 mm	\$178 to \$216
152.4 / 203.2 / 254 mm	\$234 to \$309

2.19.7 Cattle Stops

C & F Industries:

Type 50, 3.6m x 2.1m Heavy Duty	\$1606
3.6m Concrete Surround	\$545

2.19.8 Electric Fence Energisers

Gallagher:

Mains energisers	M2500 to MX5000	\$1,228 to \$1,496
Mains powered	M120 - up to 15 km multi wire fencing	\$167
	M4000 - up to 100 km multi wire fencing	\$997
Battery powered	B15 - up to 1.5 km multi wire fencing	\$180
	B1200 - up to 60 km multi wire fencing	\$821
Solar powered	B150 solar kit, 10 watt	\$627
	B1200 solar kit, 60 watt	\$2,483

2.19.9 Insulators

Beattie Insulators:

Wooden Post Insulators	\$0.19 to \$0.55
Waratah or Y Insulators and Flat Standard Insulators	\$0.34 to \$0.43
Strainer / Corner Insulators	\$0.69 to \$2.30
Gate Break	\$3.01
Outriggers	\$1.26 to \$1.32 each
Pigtail Outriggers	\$1.44 to \$1.24
Concrete post outrigger	\$1.15
Rod Insulator	\$0.19

Gallagher:

Plastic	
Super Strain - white	\$0.91
Turbo end strain - red	\$0.11
Long Life wooden post	\$0.39
Pinlock wooden post	\$0.26
Pinlock Y steel post	\$0.35
Polytape insulator for polytape, up to 40mm	\$2.77

2.19.10 Electric Fence Reels and Wire

Beattie Insulators:

Insulation Tube:	30 m coil	\$11.90
Self insulated fence reel with spring loaded ratchet latch		\$25.30
Electric Net, 50 metres		\$120.59

Cyclone: - Electric Fence Wire

2.00 mm/1.60 mm (Soft)	\$33.65/\$39.70 per 10 kg
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Gallagher:

Strip grazing reels - small	\$21.28
- medium complete with handle and insulgrip	\$28.75
- medium geared complete with handle	\$31.51
- large geared complete with handle and insulgrip	\$44.44
Triple reel system (3 reels prewound polywire mounted on stand)	\$135.74
Reel stand for deer fencing (1 to 4 reels)	\$21.01
Reel stand (1 to 3 reels)	\$12.12
Lead, connector for single reel	\$3.36
Lead, connector for multi reels	\$9.13
Wire and Tape	
XL wire, aluminium coated high conductive 1000m	\$289.26
Polywire - Ultra white, 6 strand, 200/500m	\$10.06/\$24.74
Turbo Wire - White XL, 9 strand, 200/400m	\$22.18/\$41.90
Polytape - Orange/white, 5 strand, 200m	\$17.78
Turbo tape - White, 200/400m	\$23.36/\$45.41

2.19.11 Electric Fence Standards/Outriggers

Gallagher:

Tread-in, polymer, multiwire	\$2.19
Heavy duty multiwire tread-in	\$4.09
Extenda-post (heavy duty tread-in with extension)	\$5.05
Pigtail standard (white plastic coated)	\$1.55
Fibreglass:	
Post 1200 x 10 mm/1370 x 13 mm (white)	\$2.36/\$4.61
Post 1500 x 10 mm/2000 x 10 mm (orange)	\$2.96/\$3.95
Post 2000 x 13 mm (white)	\$6.92
Quick Clips 10 mm/13 mm	\$0.16 to \$0.22

Pressure Plate (for 10 and 13 mm)	\$0.52
Cap, Driver	\$7.39
Outrigger 10 mm diameter x 20 mm	\$0.70
Outrigger pointed 10 mm diameter x 300 mm	\$0.99

2.19.12 Electric Fence Cable

Gallagher:

1.6 mm double insulated cable, 50 m	\$19.80
2.5 mm underground double insulated cable (2 x 50 m)	\$73.06
Leadout cable, XL high conductive, 200 m	\$208.05

Beattie Insulators:

Underground Cable	- 1.6mm x 50m	\$20.74
	- 1.6mm x 100m	\$41.04
	- 2.5mm x 50m	\$26.64
	- 2.5mm x 100m	\$51.46
	- 2.5mm x 250m	\$136.39

2.19.13 Electric Fencing Accessories

Gallagher:

Testers -	Neon	\$23.64
	Digital volt meter	\$59.94
	Live lite tester	\$29.21
	Digital volt meter, old type	\$94.40
Batteries -	Dry Cell	\$54.32
	Low loss	\$278.13
Earthing Equipment:	Galvanised joint clamp	\$0.60
	Screw in tie down (galvanised)	\$3.82
	Screw in tie down handle	\$19.55
	Earthing stake, galvanised 2m	\$14.42
	Earth clamp, galvanised	\$4.42
	Gallagher super earth kit	\$72.06

2.19.14 Staples

Hurricane:

Plain	up to 40 mm	\$28.34 per 5 kg pack
Barbed	up to 40 mm	\$29.46 per 5 kg pack
Concrete Post Staples		\$124.00 per 20 kg bag

2.20 MACHINERY, IMPLEMENTS AND PLANT

At present, many manufacturers and importers of farm and horticultural machinery do not have fixed price lists. In many instances, especially for larger models, machinery will be imported only when specifically ordered by a client, and the price will be negotiated on an individual basis. Trade-in provisions and financing arrangements, also negotiated on an individual basis, may alter final prices considerably, as will fluctuations in exchange rates.

2.20.1 Vehicles - Average Prices

Note: Please refer to later sections for details of specific models.

Tractors (see Section 2.20.3)

The tractor prices below show price ranges for different sizes (power ratings) but they also indicate the price range for different models/brands.

	Average Price	Range
22 to 37 kW (30 to 50 HP)	\$35,000	\$26,900 to \$42,495
38 to 52 kW (51 to 70 HP)	\$41,000	\$34,900 to \$65,900
53 to 75 kW (71 to 100 HP)	\$61,000	\$47,000 to \$95,515
Over 75 kW (over 100 HP)	\$107,000	\$75,684 to \$183,404

Farm Bikes (see Section 2.20.4)

2 wheel	\$4,800	\$3,462 to \$6,132
4 wheel	\$8,800	\$6,216 to \$14,213

Trucks and Utilities (see Section 2.20.14)

There are a range of models with differing cab/deck arrangements, mostly with a choice of fuel type and 4WD option.

2WD vehicles	\$27,500	\$24,450 to \$41,750
4WD vehicles	\$33,115	\$17,495 to \$74,900

2.20.2 Implements and Plant - Average Prices

Note: Please refer to later sections for details of specific models.

Mowers (see Section 2.20.5)

Drum or Disc	\$15,000	\$7,580 to \$22,960
(these may have a conditioner attached or as an optional extra)		
Mower Conditioners	\$25,000	\$14,216 to \$87,045
Toppers/Slashers	\$4,500	\$1,995 to \$9,995

Hay Rakes

(see Section 2.20.6) \$17,000 \$1,845 to \$33,910

Hay Balers (see Section 2.20.6)

Conventional	\$30,000	\$27,576 to \$34,962
Big balers - Round	\$45,000	\$35,490 to \$54,000
- Square	\$115,000	\$82,600 to \$141,000

Ploughs (see Section 2.20.15)

Depending on the number of furrows and tractor mounting
\$26,000 \$844 to \$53,375

Discs (see Section 2.20.15) \$8,500 \$6,500 to \$13,290

Harrows (see Section 2.20.15) \$2,000 \$135 to \$4085

Power Harrows \$20,000 \$11,668 to \$149,000

Rollers (see Section 2.20.15)

Heavy rollers \$12,000 \$8,000 to \$16,000

Cambridge rollers \$10,000 \$4,500 to \$15,500

Drills (see Section 2.20.17) \$25,000 \$4,600 to \$70,065

2.20.3 Tractors

Note: As most manufacturers express tractor power in horsepower (hp) rather than kW that description has been used in the manual. 1 hp = .7475 kW, ie a 100 hp tractor = 74.6 kW tractor. Readers also need to be aware that tractor power may be expressed as maximum PTO power or as engine power usually to DIN 70020 standard. For further explanation see Section 7.7 in the companion volume, Farm Technical Manual.

Belarus:

	2WD	4WD
51 to 70hp/71 to 100hp	\$32,900	\$34,900/\$39,500

Fiatagri:

85 Series Crawler	70 DIN hp	\$51,982
86 Series Orchard/Vineyard	55 to 85 DIN hp	\$37,039 to \$60,111
66S Utility ROPS	45 to 80 DIN hp	\$38,448 to \$57,793
L Series	60 to 95 DIN hp	\$49,880 to \$77,475
100 - 900, 110 - 90	100 DIN hp	\$75,684 to \$79,500
M Series Range Command	100 to 160 DIN hp	\$95,515 to \$135,206
G Series	170 to 240 DIN hp	\$152,918 to \$183,404

Kubota:

B & ST-30 Series		17 to 30.5 hp	\$17,190 to \$26,867
GRAND L Series	2/4WD	38 to 45 hp	\$28,500 to \$42,495
M30 Series Models	4WD	66 to 77 hp	\$39,966 to \$44,966
M1 Series Models	4WD	83 to 108 hp	\$59,875 to \$81,980

Ford: C.B Norwood

Series 35	65 to 95 DIN hp	\$49,800 to \$72,964
Series 40 Dual Power	75 to 100 DIN hp	\$55,784 to \$79,782
Series 40 SLE	85 to 125 DIN hp	\$77,986 to \$105,187
Series 60 Range Command	100 to 160 DIN hp	\$95,515 to \$135,206
Series 70 Genesis	170 to 240 DIN hp	\$152,918 to \$183,404

Iseki:

	2WD	4WD
5 to 30 hp	-	\$17,900 to \$23,900
31 to 50 hp	-	\$26,900 to \$37,300
51 to 70 hp	-	\$36,900 to \$44,900
42 to 58 hp (no cab)	\$31,800 to \$34,800	\$29,800 to \$39,600
42 to 58 hp (cabs)	\$42,500	\$46,800
TA Orchard -		
TA 545 to TA 560	\$34,600 to \$41,100	\$41,100 to \$46,150
SX Series Models -		
65 to 75 hp (no cab)	-	\$47,500 to \$56,500
65 to 75 hp (XG cab)	\$48,700	\$54,300 to \$66,700
85 to 95 hp (no cab)	-	\$56,900 to \$59,900
85 to 95 hp (super cab)	-	\$74,500 to \$82,800

Case Corp Ltd:

	HP	
2140 2WD	64	\$41,623
2140 4WD	64	\$46,713
CX50	50	\$35,342 to \$41,578
CX60	60	\$45,431 to \$54,736
CX70 - CX80	70/80	\$49,315 to \$66,578
CX90	90	\$61,526 to \$72,210
CX100	100	\$78,421
MX120	120	\$107,368
MX150	150	\$120,000
MX170	170	\$126,315
8930	206	\$158,220
8950	255	\$179,569

John Deere:

Compact 20 to 39 hp	\$20,500 to \$30,500
5000 Series 46 to 84 hp	\$32,990 to \$48,990
6000 Series 78 to 116 hp	\$72,430 to \$105,042
7000 Series row crop tractors 95 to 150 hp	\$99,574 to \$127,161
8000 Series row crop tractors 160 to 225 hp	\$146,249 to \$176,632



SPI AIR DRILLS

- Precision Air Assisted Drill with precise individual peg wheel seed metering and seed separation.
- For uniform and even crop establishment.
- Higher Yields = Higher Profits
- Use as solo or Power Harrow Drill combination.

DPX SPREADERS

- Precision Fertilizer spreaders with one step easy spread width adjustment from 12 m up to 28 m.
- Fully assembled with stainless steel bolts and nuts.
- Stainless steel Hopper bottom.
- Rubber primer coated frame



The Best Quality For Your Money

**See Your local
New Holland Farm Machinery
Centre Today!**



NEW HOLLAND

Farm Machinery Centre

Massey Fergusson:

	2WD	4WD
31/50 hp	\$31,900	\$39,900
51/70 hp	-	\$39,900 to \$61,900
71/100 hp	-	\$53,500 to \$88,824
100+ hp	-	\$85,900 to \$135,000

Same:

	2WD	4WD
51 to 70 hp	\$38,900	\$42,900 to \$65,900
71 to 100 hp	\$44,200	\$47,000 to \$89,900
100+ hp		\$107,900 to \$135,000

2.20.4 Farm Bikes, Bike Trailers and Accessories.

Honda:

TRX400FW	4 x 4	400cc	5 speed & reverse	\$11,106
TRX300FW	4 x 4	300cc	5 speed & reverse	\$8,996
TRX300	4 x 2	282cc	5 speed & reverse	\$7,794
XR200/100R	2 wheeler		6 / 5 speed	\$4,884/\$3,733
CT110	2 wheeler	105cc	4 speed	\$3,462

Kawasaki:

KLF 220	2 x 4		\$6,223
KLF 300B	2 x 4		\$7,102
KLF 300C	4 x 4		\$8,587
KLF 400B	4 x 4		\$9,769
MULE 500	2 x 4		\$8,524
MULE 2510	4 x 4		\$14,213
Sherpa 250	2 wheeler		\$6,132

Suzuki: Eric Wood Suzuki/Suzuki New Zealand.

2 Wheeler DF200E Trojan		\$4,800
2 Wheeler TF 125X Mudbug		\$3,107
DR 250kw Dual purpose		\$7,017
4 Wheeler LTF 160 Quadrunner		\$4,440
4 Wheeler LTF 250 Quadrunner		\$6,662
4 Wheeler LTF 4WD King Quad 300		\$8,884

Yamaha:

2 Wheeler	- AG100FJ/200EJ	\$3,552/\$4,800
	- TW200H	\$4,888
4 Wheeler	- Timberwolf 4 x 4	\$6,216
	- Big Bear 4 x 2/4 x 4	\$7,992/\$9,120
	- Kodiak 4 x 4	\$10,040
	- Wolverine 4 x 4	\$9,776

Farm Bike Trailers

Giltrap Engineering:

1.8 x 1.2, single axle - no crate/with crate	\$1,290 to \$1,580
1.8 x 1.2, tandem axle - no crate/with crate	\$1,710 to \$2,000

Smiths Attachments: (freight paid)

1200 x 900 trailer	- ply/mesh deck	\$785/\$890
	- stock crate	\$315
1500 x 1100 trailer	- ply/mesh deck	\$856/\$977
	- stock crate	\$343
1500 x 1100 hay trailer	- ply/mesh deck	\$1,015 to \$1,145
	- hay stock crate	\$250
1800 x 1200 trailer	- ply/mesh deck	\$1,013 to \$1,189
	- stock crate	\$371
2400 x 1200 calf trailer	- ply/mesh deck	\$1,897 to \$2,117
	- stock crate, with division	\$863

All trailers complete with ball coupling, fixed axle, tyres, roller bearing wheels and hot dip galvanised

Farm Bike accessories

Smith Attachments Ltd:

ATV Accessories	
Galvanised bullbar kit	\$255 to \$337
Galvanised rollbar	\$190 to \$219
Mudflap kits	\$53 to \$66
Motorcycle Accessories	
Farm carriers	\$94 to \$115
Farm handlebar protection	\$68
Farm towbars	\$114 to \$116

2.20.5 Mowers and Toppers

Howard:

Smart Finishing Mowers - for 12 to 45 hp tractors	\$2,977 to \$3,789
Drum Mowers 1.7 m	\$7,980
1.9 m	\$9,396
Disc Mowers DCM 165 1.6 m	\$7,669
DCM 210 2.1 m	\$8,367
DCM 245 2.6 m	\$9,049
DCM 280 2.8 m	\$9,979

Kuhn:D Cosgrove Ltd

GMD 500	\$9,750
GMD 600	\$11,150
GMD 66	\$9,500
GMD 700	\$12,220
GMD 801	\$16,570

Lely: Modular Disc Mowers

	Discs	Cutting Width	
165	4	1.6 m	\$7,895
205	5	2.05 m	\$9,595
240	6	2.4 m	\$11,975
280	7	2.8 m	\$13,275
320	8	3.2 m	\$14,775

Trimax:

	Cutting Width	Standard
Ezeemow	1.17 to 1.83 m	\$3,630 to \$4,970
Swing Arm		\$5,100
Mulch Masta	1.55 to 2.16 m	\$6,900 to \$7,600
Warlord	Parks and Reserves	
	1.44 to 2.34 m	\$6,900 to \$8,300
	Roadside Contractors	
	1.44 to 2.34 m	\$7,160 to \$8,550
	Flail Topper/Stubble Mulcher	
	1.44 to 2.94 m	\$7,160 to \$8,550
	Orchard Mower/Mulcher	
	1.44 to 2.94 m	\$6,900 to \$8,300
Veemow	3.2 to 3.4m	\$9,170 to \$9,550
Stealth	3.2 to 3.4m	\$9,670 to \$13,650
Procut	1.38 to 3m	\$4,650 to \$8,700
Topper	1.38 to 4.4m	\$4,270 to \$9,440

Tulloch:

Krone AM 323S 3.2 m	\$14,880
Krone AM 283CV 2.8 m	\$12,750

Vicon:

CM 167 M, 1.65 m disc mower 3 blades/disc	\$8,995
CM 217 H, 2.15 m disc mower, 3 blades/disc	\$10,990
CM 247 H, 2.4 m disc mower, 3 blades/disc	\$11,990

PZ:

Drum Mowers			
CM1650	1.65m	2 drum	\$7,580
CM1900	1.90m	2 drum	\$9,880
CM2250	2.25m	2 drum	\$11,980
CMT2800 Trailed	2.80m	3 drum	\$22,960
Disc Mowers			
SB2000	2.0m	5 disc	\$10,950
SB2400	2.4m	6 disc	\$11,950
SB2800	2.8m	7 disc	\$13,450

Mower Conditioners

Howard:

Drum mower conditioner DM 195RC 6'4"	\$14,216
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Kuhn: Dan Cosgrove Ltd.

FC 202/FC 280 P	\$15,470 to \$22,250
FC 300 G /FC 350 G	\$36,550 to \$38,750
FC 301 GD	\$41,780
FC 500-Alterna	\$87,045

Lely:

5 disc mower conditioner, 2.05m	\$15,950
6 disc mower conditioner, 2.4m	\$17,950
7 disc mower conditioner, 2.8m	\$20,950
7 disc front mower conditioner, 2.8m	\$21,900

Tulloch:

Gehl DC 2360, 3.1 m trailed mower conditioner	\$34,600
Krone AMT323CV trailed mower conditioner	\$34,250

Mowtown:

Conditioners for PZ Mowers	1.85m to 3.0m cut	\$4,690 to \$7,270
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Case Corp NZ:

8309 Mower Conditioner	\$32,143
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JF:

CMT2800	2.80m	3 drum	\$28,850
GX2400	2.40m	6 disc	\$21,540
GX2800	2.80m	7 disc	\$23,750
GX3200	3.15m	8 disc	\$25,950
GMS2800	2.80m	7 disc	\$37,450
GMS3200	3.15m	8 disc	\$41,750

Toppers/Slashers

Giltrap Engineering: (add \$300 to \$400 for South Island prices to include freight)

1.2m to 1.5m cutting width, 3 or 4 blade	\$1,900 to \$2,800
1.5m width, 2 blade HI SPEED topper	\$2,600
2.3m to 3.0m cutting width, 2 rotor, rigid frame	\$5,600 to \$7,800

Howard:

Clipper - for tractors up to 45hp	\$1,995
Nugget - for tractors 27 to 45hp	\$2,395 to \$3,341
HD - for tractors up to 100hp	\$4,293 to \$4,655
EHD - unlimited hp @ 540 r.p.m. PTO	\$5,876 to \$8,448

Power Farming:

TR 12 to 15	Trojan slasher	\$1995 to \$2850
CR 18 to 39	Topper	\$5250 to \$9995

PZ:

Retro fit conditioners	
CM190 to CM260H	\$4,690 to \$6,990

Vicon:

2.8 m cut	\$23,990
3.0 m cut	\$39,990

2.20.6 Hay Making Equipment

Hay Rakes and Tedders

JF:

RV550 Rotary Tedder	5.5 m	4 rotor	\$10,950
RV660 Rotary Tedder	6.6 m	6 rotor	\$15,980
RS340 Rake	3.4 m	1 rotor	\$8,850
RS420 Rake	4.2 m	1 rotor	\$11,990
RS650 Mounted Rake	6.2 to 6.6 m	2 rotor	\$19,850
RS650 Trailed Rake	6.2 to 6.6 m	2 rotor	\$23,980
RS780 Trailed Rake	6.8 to 7.4 m	2 rotor	\$31,950
CRS400 Tedder/Rake	4.0 m	2 rotor	\$10,550

Howard:

Tedder Rake - Haytrix 300 - 10', PTO driven	\$4,795
Mounted Finger wheel rakes FW 4 (9'6") to FW 6 (13'6")	\$1,845 to \$2,584
Trailed Wheel Rakes TR 6 Columbia (13') to TR 9 (19')	\$4,695 to \$8,338

Kuhn:

Tedder/Rake GRS 25N	\$8,500
GA 300/GA 4101	\$6,630/\$9,160
GA 4101 GT	\$10,775
GA 7301/GA 7302	\$26,630 to \$43,095
GF 5000	\$8,570
GF 7000 T	\$13,410

Lely:

Lotus Combi, 3m working width	\$5,250
Superzip Combi, 3.8m working width	\$7,250
Lotus Stabilo Combi, 6m working width	\$14,250

PZ:

Haybob 300 Rake/Tedder - centre raking, combo rake and tedder.	\$5,990
Haybob 380 - centre rake	\$7,590
PZ HS360 - 3m side rake	\$9,490
PZ Andex 3.8m/4.6m	\$10,490/\$13,990
Fanex Rotary tedders 5.0m to 6.4m	\$9,900 to \$15,990

Tulloch:

Fransgard TI-4000 - 6000 hay rake	\$14,550 to \$19,850
Krone Duo hay rake	\$33,910

Big Balers - Round

John Deere:

590 SL1 Round Baler	\$35,406
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Tulloch:

Gehl RB1670 round baler (variable chamber)	\$37,500
Krone10-16 round baler (variable chamber)	\$48,000
KR 10-16S round baler (variable chamber)	\$54,600

Case Corp Ltd:

626 STD P/U	\$43,860
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Welger: roller type open chamber

RP 200 twine tie	POA
RP 200 net wrap	POA

New Holland:

Roll - Belt balers	From \$44,684
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Greenland Deutz-Fahr

RF120	Standard twine only	\$35,490
RF120	Net wrap and twine	\$38,990
RF120	Wide pick-up, twine only	\$41,990
RF120	Wide pick-up, twine and net wrap	\$46,990

Big Balers - Square

New Holland:

D710/D1010/D1210	From \$82,600
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Case Corp Ltd:

31" x 34" Rectangular (8575)	\$118,575
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Tulloch:

Krone Big Pack	\$141,000
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Conventional Balers

New Holland:

NH 570 Rectangular baler	from \$34,962
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John Deere:

348 IE1 Rectangular baler	\$27,576
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Welger:

AP 630 with hydraulic drawbar shifting device	POA
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J.I Case:

31" x 18" (8545)	\$32,508
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Bale Wrappers*Duncan Industries Ltd:*

DML model BW2 balage wrapper - ground roll wrapper (towable type)	\$4,950
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Howard:

Reco Autowrapper, complete	\$34,950
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Michale:

Round	-991B/BE trailed	\$25,350 to \$30,220
	-991L/LBER mounted	\$14,080 to \$22,940

Tanco:

Series 550 trailed round baler	from \$24,674
Series 1050 trailed square and round bale wrapper	from \$31,059

Tulloch:

Pronovost P-6300 round silage bale tubing machine	\$30,710
Pronovost P-6400 round or square bale tubing	\$58,100

Baling Twine*Donaghys:*

For conventional bales:	
Freerun (clipped heavy sisal) - 1200 m - 2 or 4 ball packs	\$68.45/\$128.91
Extra (synthetic) - 1200 m x 4 balls	\$133.35
Bulky (synthetic) - 1350 m x 4 balls	\$140.46
For big round squares:	
Synthetic - 2100m x 4 balls	\$175
Natural (sisal) - 2250m x 2 balls	\$82.23
For big square bales:	
Big tough - 1200 m x 2 balls	\$105.79
Don 350m	\$111.13

Balewrapping*Balewrap Systems:*

Polypropylene Conventional	2 x 1800m	\$55
Polypropylene Big Square	2 x 1200m	\$68
Polypropylene Big Round	2 x 4800m	\$68
Untreated silage twine	2 x 2200m	\$55

Hay Handling Equipment*Duncan Industries Ltd:*

Big Bale Side feeders	\$5,170 to \$6,150
CF160 Silabale Dual Purpose Feeder	\$2,390
Multi-bale feeders 2 to 3 bales	\$8,490 to \$9,750

Three point linkage bale fork	-standard type 1200kg capacity	\$750
	-heavy duty 1600kg capacity	\$995

Giltrap Engineering:

Round Bale Feeder - two directional	\$4,650
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Maillieux:

Manubal Bale Spike	\$1,095
Round Bale Soft Arms	\$2,350
Round or Square Bale Spike Grab	\$2,055

Michale: Dan Cosgrove Ltd.

Bale Handler - Round Bales	\$2,520
Bale Handler - Square Bales	\$2,440

Quin Baleboy's Ltd:

Big Bale Clamp	\$1,690
Soft Arms	\$250
Big Bale Spikes - includes removable tines	\$740
Big Bale Spikes - soft nosed (wrapped bales)	\$650
Big Bale Tines	\$140
Silage Forks 5 x Tine Forks Complete	\$600
Silage Forks 7 x Tine Forks Complete	\$660

Taege Manufacturing:

3 Point Linkage Bale Feeders	- comb and cutter one side	\$6,250
	- side load arm extra	\$1,200
2 Bale Trailing Bale Feeder		\$9,350
Multi Bale Feeders - 5 bale		\$14,600

Clough Group:

3 PTL	\$6,670
2 Bale trailing sidewinder - standard wheels/wide wheels	\$10,254/\$10,754

2.20.7 Spray Equipment

Power Farming

GTM P55 D20M	Turbo Miser 2000 litre trailed sprayer	\$26,995
GTM P424	Turbo Miser 400 litre, linkage sprayer	\$7,150
GTM P506	Turbo Miser 600 litre, linkage sprayer	\$8,995
M209 - 1415	Maxi Blast 2000 litre trailed airblast	\$16,995
GTM P5510G	Turbogrape 1000 litre trailed sprayer	\$25,995
GTM P5020G-3R	Turbogrape 2000 litre	\$32,550
SDO3	Strip Spraying System 800mm Sheilded Spray Dome	\$875
UP50	50 litre 12 Volt Sprayer	\$475
Amazone T.P.L	800 to 1200 litre with Booms	P.O.A
	12 to 24 metre - Hydraulic Fold	P.O.A
Silvan T.P.L	300 to 900 litre with Booms	P.O.A
	4 to 12 metre - Manual Fold & Hydraulic Fold	P.O.A
Amazone Trailed	2000 to 3000 litre with Booms 12 to 30 metres	P.O.A

Croplands Equipment Ltd:

Agripak series - Linkage Sprayers		
Agpak 500	Complete package, 500 litre linkage sprayer, AR60 pump, 6 metre boom, hose reel c/w 30 metres 10 mm hose and turbo 400 pistol	\$3,520
Agpak 700	Complete as above with 700 litre linkage sprayer and 10 metre boom.	\$4,390
ATM Series	500 litre linkage sprayer with 6 to 10 metre boom	\$2,186 to \$3,476
Cropmate Series, for smaller tractors		
ATM 3P Series	200 litre linkage sprayer AR19 pump, 3 to 4 metre boom	\$2,015 to \$2,880
ATM 2P Series	300 litre linkage sprayer AR19 pump, 3 to 6 metre boom	\$1,890 to \$2,360
Ute Pak Series - non motorised		
UP 30 - UP 200	35 litre / 200 litre, 12 volt ute pak	\$399/\$885
Ute Pak Series - motorised		
UP 200-450 19 PE	200 to 450 litre, 4.0 hp petrol	\$2,730 to \$3,694
UP 300-30 PE - UP 600-30 PE	300 to 600 litre, 5.5 hp petrol	\$3,290 to \$4,650
UP 450 - UP 600-503 PE	450 to 600 litre, 9.0 hp petrol	\$4,545 to \$5,245
Utility Trailed sprayers		
UT 220-12v-2/4	120 litre 12 volt pump, 1 to 4 metre boom	\$1,565 to \$2,035
UT 200-12v/UT 200 19 PE	200 litre 12 volt pump, 2 to 4 metre boom/ 200 litre AR 19 pump/ motor 4/6 metre boom	\$1,760 to \$2,230/ \$3,150 to \$3,825
ATV Bike sprayer		
CP 70 series	70 litre tank, 12 volt pump c/w reg kit, 6 metre hose, adjustable lance, 3/4 metre boom	\$1,210 to \$1,265
Foam marking systems		
AC 94/97	Pressure marking system single/double side 12 metre hose and droppers	\$7909 to \$990
Polyethylene tanks		
30 litre foam tank		\$140
70 litre bike tank		\$330
120 to 450 litre tanks		\$245 to \$495
500 to 900 litre three point linkage tanks		\$570 to \$1,100
1000 to 2000 litre tanks		\$1,150 to \$1,980
Linkage booms		
CFB Series	3 metre to 12 metre boom 6 to 20 nozzles	\$415 to \$2,700
	12 metre Hydralink boom, 24 nozzles, self levelling	\$6,100

Ag Equipment Specialists: (AES)

Sprayers - Motorised		
AES Petrol powered 17 to 33 litres per minute		\$1,825 to \$2,185
Spraying Accessories		
Spray Booms 4.5 and 6 m complete with nozzles		\$495 to \$695
Hose Reels 100 mm and 150 mm		\$235 to \$255
Spray Hose 10 mm ID		\$2.95 per m
Spray Guns		\$95 to \$105

Macagri: Hardi Spraying Equipment

Sprayer for 4 Wheeled Motor Bikes, 100 litre capacity		\$810
Three point linkage sprayer		
400 litre tank, 6 metre boom, pump to suit		\$2,820
plus hose reel and spraygun		\$3,245
800 litre tank 10 metre boom, pump to suit		\$4,629
plus hose reel and spraygun		\$5,054
Precision sprayer 600 litre tank, 10 metre boom		\$4,568
Very Accurate and Safe Sprayer (three point linkage) -		
800 to 1200 litre tank, 12 to 24 metre boom, remote controlled		
from tractor cabin (electric and hydraulic controls)		\$17,000 to \$42,000
Trailer Sprayers		
1500 litre, 2400 litre, 3500 litre, 12 to 24 metre boom		\$30,024 to \$98,800
Orchard Sprayers - Pip Fruit		
2000 litre trailer with an 800 to 900 mm fan		\$16,000 to \$25,000

Handgun Sprayers/Wet Booms

Ag-Equipment Specialists:

Hurricane spray pack, including 250/500 litre spray tank, tractor driven, 17 to 75 litre per minute		\$2,185
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C-DAX:

Noble-Adams Machinery Ltd.:

Pressure nozzle booms for ATV's:		
Wet Booms	- 2 m/3 m	\$225 to \$280
	- budget fire-break boom	\$298 to \$454
Vertical fold booms	- 3 m/6 m, complete with breakaway	\$379 to \$669
	- Quick-Smart vertical fold boom	\$535 to \$825
C.D.A. Booms for ATV's:		
Low volume C.D.A. boom kits		\$685 to \$2,295
- single C.D.A./four C.D.A atomiser boom kit		
ATV mounted Z-wiper - 2.2 m effective width		\$699 to \$899
Trailed Z-wiper - 3.0 m effective width		\$2,092 to \$2,218
U200 Series Sprayers (for ATV's, trailed, flatdecks and utes):		
U200 spot sprayers - 200 litre		\$895 to \$1,122
Trailer kit		\$1,671 to \$1,982

Knapsack Sprayers

Croplands Equipment Ltd.:

Plastic Knapsack	15 litre	\$165
Pump up sprayers	5 litre/7 litre	\$59/\$65

Knapsack sprayer - 5 litre	\$62.67
Solo Garden Sprayer - 7 litre	\$77.79

White Star Products:

"Fynspray" 18l High Pressure, Manual, WS75	\$222
WS22, Brass Knapsac	\$392

Waterblasters

Ag-Equipment Specialists:

Hurricane Complete, tractor driven,		
250/500 litre - tanks 21.5 to 27.5 litres/minute, 2000 psi		\$2,750 to \$3,400
Tornado - Motorised 1750 to 3000 psi, 11 to 30 litres/minute		\$2,195 to \$6,450
Electro-blast electric - 1400 to 3000 psi, 9 to 30 litres/minute (single and three phase)		\$1,575 to \$6,350
Steam Cleaners (Hot/Cold Water Blasters)		
Kilimat 1740 psi, 8 litres per minute		\$2,750
Pulicar 1500 to 3000 psi 11 to 21 litres/minute (single, three phase and petrol powered)		\$4,150 to \$7,400

Croplands Equipment Co.:

Electric	Bravo pressure cleaner, 240 volt, 8 litres per minute capacity	\$690
	240 volt, Blitz, 11 litres per minute	\$1,100
Petrol	11 hp Honda, 15 litres per minute	\$3,550
	220cc acme motorised, 11 to 15 litres per minute	\$2,150 to \$2,750

Kanters Engineering & Machinery Ltd.:

Electric Waterblasters, Ryobi range		\$395 to \$695
Electric Singlephase 2.5 hp/3.0 hp		\$990 to \$1,750
Electric Threephase 5.5/7.5/10 hp		\$2,150 to \$3,300
Petrol Waterblasters		
Briggs & Stratton 3.5 hp 1500 psi		\$1,350
Honda Annovi Reveibi Pump 4.0 hp 1750 psi		\$1,790
5.5 hp 2000 psi		\$2,150
Honda Hawk Pump 9.0 hp 3000 psi		\$2,850
Honda Interpump 11 hp 3000 psi		\$3,490
13 hp 3000 psi		\$3,950
Hose reels		
Large - big model		\$350
Small		\$300
Retractable		\$950

Greenhouse Sprayers

Kanters Engineering & Machinery Ltd.:

Low volume mist	- fully automatic	\$3,750
	- deluxe model, pneumatic adjustable height	\$4,250

2.20.8 Tractor Transport Trays

Giltrap Engineering:

	Tray Only	Complete
1.980 m x 1.220 m	\$940	\$1,240
2.130 m x 1.370 m	\$960	\$1,280

2.20.9 Front End Loaders

Duncan Industries Ltd.:

Front end loader forks	1200 kg capacity	\$850
	1600 kg capacity	\$1,066
	Silabale (dual purpose)	\$2,390

Fairbrothers Industries Limited:

Heavy duty, single crowd front end loader, 40 to 90 hp		\$7,078
Heavy duty, twin crowd front end loader, 60 to 100 hp		\$7,825
Buckets	Single Crowd Heavy Duty	Twin Crowd Heavy Duty
- 1200/4' to 0"/0.270 m ³	\$870	\$1,050
- 1500/5' to 0"/0.340 m ³	\$970	\$1,150
- 1800/6' to 0"/0.410 m ³	\$1,090	\$1,270
Pallet Fork	\$775	\$955
Round Bale Handler	\$910	\$1,090
Silage Fork - 5 tines	\$945	\$1,125
- 7 tines	\$1,085	\$1,265
Silage Grab	\$2,240	\$2,420
Grade Blade	\$940	\$1,120
Quick Hitch	\$780	\$960

Mailleux:

Frontend loaders all complete, with Twin Crown Rams, Bucket	
MX 40.55	\$10,950
MX 40.70	\$11,490
MX 40.85	\$12,190
MX 6000	\$14,090

Pearson Engineering Ltd.:

Loaders	hp	
Regular	45 to 90	\$8380 to \$9361
3218	45 to 90	\$8105 to \$9350
3518	60 to 100	\$8105 to \$9350
3818	90 to 120	\$9086 to \$9955
3920	100 to 140	\$10,015 to \$10,865

Buckets	
1.0m wide x 1.0m shell to 2.0m wide x 1.5m shell	\$550 to \$1350
4 in 1 buckets, 1.2 to 1.8m wide	\$3495 to \$4325
Auger feed bucket, loader or TPL mounted, suitable maize, carrots, kiwifruit etc	\$6,700
Line chop silage teeth for buckets	\$370 to \$595
Forks	\$990 to \$1440
Silage, 1.0m wide x 6 tine to 1.5m wide 9 tine	\$1360 to \$1480
Big bale silage combo fork, 1.2m wide, 6 or 7 tine	\$930
Pallet fork, fixed/adjustable	\$870 to \$1530
Log fork, standard	\$1,065
Silage Grabs	
Silage grab, 1.2 to 1.5m wide	\$2565 to \$2995
Silage shear grab 1.2m wide x 0.62m ³ to 1.26m wide x 0.90m ³	\$4500 to \$5695
Big bale and silage grab, standard	\$2,155
Bale Clamps	
Wrapped bale clamp, standard, heavy duty and wide opening	\$2080 to \$2395
Square bale grapple	\$2,450
Grader Blades	
Mini, 1.2 to 1.5m wide	on request
Regular, 1.8 to 2.4m wide	\$2270 to \$2740
Heavy Duty, 2.1 to 2.4m wide. Manual, 1, 2, or 3 ram hydraulic	\$2980 to \$3360
Mighty, 2.1 to 2.4m wide. Manual, 1, 2, 3 ram hydraulic	\$3995 to \$5710

Note: Prices include freight and pins

Power Farming:

Skid Steer Loaders	14 to 47 hp	\$29,900 to 45,000
Backhoe Loaders	80 to 90 hp	\$110,000 to \$135,000
Tractor Loaders	80 hp	\$48,900 to \$75,900
	96 to 106 hp	\$103,900 to \$149,900

Land Power NZ (ex Farmrite Industries)

J.C.B Loadalls (Telescopic Handlers)			
520-55/535-67	4WD	4WS	\$79,950/\$98,800
J.C.B Fastracts			
1115	115 hp	50 KPH	\$113,300
1135	135 hp	50 KPH	\$121,900
135 - 65	135 hp	65 KPH	\$134,750

Case Corp Pty Ltd:

Uni Loaders	4 in 1 bucket	54 to 60 hp	\$43,144 to \$49,950
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2.20.10 Trailers

Giltrap Engineering:

2 tonne tip trailer 2.75 x 1.83 deck	\$4,450
3 tonne tip trailer 2.75 x 2.3 deck	\$4,950
4.5 tonne tip trailer 3.2 x 2.3 deck	\$5,500
5 tonne tip trailer 3.65 x 2.3 deck	\$6,400

5 or 6 tonne tip trailer - on tandems	\$7,950/\$8,500
6 tonne tip trailer 3.65 x 2.4 deck	\$7,300
6 tonne tip trailer - on tandems	\$8,500
8 tonne tip trailer 4.4 x 2.3 - on tandems	\$12,000

Smith Attachments Ltd:

	Ply Deck	Steel Mesh Deck	Stock Crate	Tail door	Centre door for stock crate
Trailer 1200 x 900	\$785	\$890	\$315		
Trailer 1500 x 1100	\$856	\$977	\$343		\$107
Trailer 1800 x 1200	\$1013	\$1189	\$135		
Hay Trailer 1500 x 100	\$1013	\$1144	\$250	\$107	
Calf Trailer (dual axle)	\$1897	\$2117	\$863		

2.20.11 Silage Wagons/Forage Harvesters/Maize Choppers

Silage Wagons

Giltrap Engineering: Silage Wagons/Forage Harvesters.

(freight included) add \$600 to \$800 for South Island purchases:

Front-centre Feed Wagons - Fast floor for harvesting for 7.09 cu.m to 9.18 cu.m standard.	
PTO/Hydraulic - 7.09 cu.m	\$12,200 to \$12,460
Super Hydraulic - 8.36 cu.m	\$12,850
Super Hydraulic/PTO - 9.18 cu.m	\$13,050 to \$13,300
Super Hydraulic/PTO (on tandems) 10.82 cu.m	\$17,150 to \$17,400
Super Hydraulic/PTO (on tandems) 13.28 cu.m	\$21,400 to \$22,200
- Optional rear floor drive kit for harvesting 10.82 cu.m to 13.28 cu.m, non motorised/motorised	\$850 to \$1,890
Cross Conveyor models	
PTO or hydraulic -7.09/8.36 cu.m	\$14,800 to \$15,740
PTO or hydraulic (on tandems) - 10.82/13.28 cu.m	\$20,550 to \$24,600

Taege Manufacturing:

8.5 cubic metre	single axle, centre feed/side delivery	\$14,000 to \$16,800
	tandem axle, centre feed/side delivery	\$16,200 to \$19,000
10.5 cubic metre	single axle, centre feed/side delivery	\$15,500 to \$18,300
	tandem axle, centre feed/side delivery	\$17,700 to \$20,400
7/13.5/16 cubic metre silage wagons		POA
Front-centre Feed Wagons, 8/10.5 cu.m		\$12,100 to \$13,100
Tandem Axle extra/Side Delivery extra		\$2,300 to \$2,900

Forage Harvesters (precision chop)

Tulloch:

Gehl CB865 trailed forage harvester	\$66,500
Gehl TR3038 Twin Row Maize Front	\$16,900
Mengele MB300 maize harvester	\$16,530
Mengele SH40N 1.8 metre pickup. 90 to 150 hp	\$72,510

JF:

FCT850 Precision Chop	1.6m pickup	\$39,980
FCT900 Precision Chop	1.8m pickup	\$46,950
FCT1100 Precision Chop	2.1m pickup	\$57,800

Maize Choppers

Claas:

Single Row Maize Choppers	Jaguar 35, 8mm lengths	\$22,100
	Jaguar 25, 5mm lengths	\$14,690

PZ:

Maize chopper MH 90S single row		\$14,990
Maize chopper MH 90S twin double row		\$21,990

JF:

MH30 Single Row		\$13,950
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Silage/Hay Covers and Wraps

(see also Section 2.20.23)

Agpac Plastics Ltd:

Agtuf - extra wide, super tough polythene film (Black/White)		
6 m x 40 m - 203 micron		\$402.70

Permathene Plastics Ltd:

Covers - Custom Made

125 micron - black	\$0.68 per square metre
250 micron - black	\$1.10 per square metre

Rondotex:

Round bale netting MX1000, red thread	\$275 per roll
5 rolls or more	\$258 per roll

Van Leer New Zealand Ltd.:

Film - Black

125 μ x 5000mm x 50m	\$54 per roll
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Balewrap Systems Ltd.:

Balewrap plastic, 750 x 1500 x 25 micron, white - norbic plastic	\$108
Netwrap - high UV treated	\$235
Silage covers - 12 m x 25 m x 200 micron, black/white	\$215
Silaflex 750 x 1500 x 25 micron	\$85

Cosgrove:

Silage wrap

750 x 1500 x 25 - Green/White/Black	\$103
750 x 1500 x 25 - Rondotex M1000	\$275

Tulloch:

100 micron thickness, 45.7m long (store 34 bales)	
1.2 to 1.4 round bale	\$157.00
1.4 to 1.5 round bale	\$160.00
2.92 to 3.54 1/2 square perimeter	\$225.00

Silage/Hay Preserves

PDQ Products:

PDQ Silage Treet	Soluble (treats 50 tonnes)	100 g	\$66.67
	Ready to use powder (treats 20 tonnes)	10 kg	\$30.22
PDQ Hay Treet - treats 260, 30 kg bales (20 to 30 cents per bale)		16 kg	\$56
Gandy Applicator - suitable for ready to use powder and Hay Treet			\$693
Moisture Tester			\$325

Hv-Si:

Hay - silage improver - liquid 20 litre	
- silage (treats 80 tonnes), hay (treats 90 tonnes)	\$155

2.20.12 Grain Crushers and Mixers

Streamline Feeding Systems:

John Turner (freight included)

Junior all grain roller crusher, 100 mm roller, chain driven rollers	\$550
Senior all grain roller crusher, 1 hp	\$1,370
Hayway Chaff cutter - electric	\$2,500
- PTO	\$2,201

2.20.13 Fertiliser and Manure Spreaders and Topdressers

Power Farming New Zealand:

Spun Steel Hopper - Eurospand Models

SH 300	250 litre capacity (350kg), 6 to 12m spreading width	\$875
SH 400	350 litre capacity (426kg), 6 to 12m spreading width	\$925
SH 500	450 litre capacity (540kg), 6 to 12m spreading width	\$975

Polyethylene Hoppers -

B/S Broadpectrum Models - Spinner Spreaders

XL Series

XL400	300 litre	\$1,095
XL500	350 litre	\$1,150

Oscillating tube spreaders - P Series

P406	390 litre capacity (470kg) 6 to 20m spreading width	\$3,395
P556	540 litre capacity (650kg) 6 to 20m spreading width	\$3,695
P706	690 litre capacity (830kg) 6 to 20m spreading width	\$3,895
P906	890 litre capacity (1070kg) 6 to 20m spreading width	\$4,095

Aitchison Industries:

Linkage mounted spinner spreaders - 400 to 600 litres capacity	\$1,475 to \$1,699
Linkage mounted spinner spreaders - 900 to 1100 litres capacity	\$3,365 to \$3,950
A.T.V. Trailed spreaders - 200 to 400 litres capacity	\$1,965 to \$2,245

Duncan Industries Ltd.:

T.H.S. Model 2000 (2 tonnes Super or 2.75 tonnes lime)	\$8,400
T.H.S. Model 3000 (3 tonnes Super or 4 tonnes lime)	\$9,125

Giltrap Engineering Ltd.:

Slurry Spreaders (3000 to 10000 litre tank)	\$14,200 to \$23,800
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*C.B.Norwood:**Sulky:*

Rotor 402, single spinner, 330 litres	\$995
Rotor 500, single spinner, 580 litres	\$2,795
DR Series, 450 to 1150 litres	\$5,490 to \$6,590
DPX/GLX Series, 1150 to 3000 litres	\$8,750 to \$16,475

*Howard:**Fertiliser spreaders*

HS/300 (400kg) to HS/500 (600kg)	\$777 to \$999
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Kuhn:

MDS701/921	\$6,500 to \$8,020
ZSB 900B/1100E	\$7,250 to \$7,560

Lely:

2400SL Centreliner, 1200kg hopper capacity	\$7,950
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Vicon:

PS 203	200 litre per 0.5t per ha capacity	\$2,895
PS 403	400 litre per 1.0t per ha capacity	\$3,995
PS 604	600 litre per 1.5t per ha capacity	\$4,790
BS 952H	950 litre per 2.4t per ha capacity	\$9,990

2.20.14 Trucks and Utilities (Light Commercials)*Daihatsu:**Diesel Delta Trucks*

1.5 to 3.5 tonne 2WD with single or double cabs	\$27,500 to \$36,200
Feroza 4WD 5 speed	\$26,990 to \$30,990
Rocky 4WD 5 speed	\$51,990

Ford:

Courier 2WD	\$25,195 to \$33,995
Courier 4WD	\$26,995 to \$41,995
Falcon Utilities Models (4 litres)	\$33,495 to \$38,595
Transit 2.5 D	\$36,795 to \$50,095

Holden (Blackwell Motors):

Holden VS Utility	3.8, V6, 5 speed and automatic	\$34,345 to \$37,545
	5 litre V8, 5 speed and automatic	\$40,745 to \$41,545
Holden Rodeo	4 x 2 Petrol	\$29,400 to \$31,900
	4 x 2 Diesel	\$27,500 to \$33,000
	4 x 4 2.8 L Diesel	\$37,500 to \$44,500
Holden Jackaroo	3.2 L1 V6 Petrol, 5 speed/automatic	\$70,100 to \$82,800
	3.1 L1 Turbo Diesel S/SE 5 Speed	\$72,600 to \$81,100

Lada:

Sportage 2.0 4WD		\$34,995 to \$43,750
Mentor		\$23,250 to \$26,250
Ceres 2.4		\$22,995 to \$25,995
Ceres Tip Deck 4WD		\$29,995

Landrover (BMW Rover)

Defender (Manual)		\$49,990 to \$59,990
Discovery (Manual and Auto)		\$67,990 to \$81,990
Range Rover (Manual and Auto)		\$113,990 to \$129,990

Mazda:

Bounty 2WD Cab plus Ute W/S	2.6 litre Petrol	\$29,490
Bounty 4WD Cab plus Ute W/S	2.6 litre Petrol	\$38,990
Bounty 4WD Double Cab D/X W/S	2.5 litre Diesel	\$40,990
T3500 -3.5 tonne	3.5 litre	\$40,000

Mitsubishi

L200 Petrol standard cab ute		\$24,450
L200 Petrol double cab ute		\$30,450
L200 Diesel standard cab ute		\$27,550
L200 Diesel double cab ute		\$33,450
L300 Petrol SWB 4 door		\$28,300 to \$48,700
L300 Petrol LWB 5 door		\$35,600 to \$37,900
L300 Diesel SWB 4 door		\$31,300 to \$32,500
L300 Diesel LWB 5 door		\$37,900 to \$40,300
Pajero SWB		\$28,900 to \$65,300
LWB		\$45,200 to \$74,900

Nissan:

Navara Models	2WD standard cab diesel 2.7	\$29,500 to \$31,500
	4WD standard cab diesel 1.7	\$38,450 to \$40,350
	2WD double cab petrol	\$31,500 to \$41,750
	2WD double cab diesel	\$34,900 to \$37,700
	4WD double cab diesel	\$41,990
Pathfinder Models	4WD 5 dr 3.3 L petrol	\$59,995
	4WD 5 dr 3.7 L turbo diesel	\$55,495 to \$64,495
Patrol Models	4WD Station Wagon Diesel	\$59,995
	4WD Station Wagon Petrol	\$58,995 to \$60,995

Suzuki:

Vitara JX/JLX	\$25,995 to \$48,995
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Toyota:

2WD Hi-Lux 2.4 Petrol	\$26,300 to \$34,150
2WD Hi-Lux 2.4 Diesel	\$29,700 to \$37,450
4WD Hi-Lux 2.8 Diesel	\$33,115 to \$39,830
Landcruiser LWB petrol or diesel	\$49,784 to \$59,120

2.20.15 Cultivation Implements

Ploughs

Clough:

2000 TRI-LINE Series - auto reset

4 to 6 furrow (In-furrow)	\$23,580 to \$28,608
7 to 9 furrow (On-land)	\$33,408 to \$37,482

1000 TRI-LINE Series - auto reset

3 to 5 furrow	\$10,682 to \$14,488
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460 Disc Plough -

2 to 3 furrow	\$5,484 to \$6,888
4 to 5 furrow	\$8,219 to \$9,566

Dowdeswell Reversible Ploughs

	Steel boards	Plastic boards
100 Series Delta Furra - Manual Adjustment		
Shearbolt leg (3 to 5 furrow)	\$22,370 to \$28,975	\$22,660 to \$29,460
Auto Reset legs (3 to 5 furrow)	\$25,825 to \$35,000	\$26,120 to \$35,680
100 Series Delta Furra - Hydraulic Adjustment		
Shearbolt leg (3 to 5 furrow)	\$27,950 to \$37,080	\$28,240 to \$27,565
Auto Reset legs (3 to 4 furrow)	\$31,280 to \$37,535	\$31,570 to \$37,925
120 Series Delta Furra (Manual Adjustment)		
Shearbolt leg (5 to 6 furrow)	\$34,250 to \$38,690	\$34,735 to \$39,290
Auto reset (5 furrow)	\$38,775	\$39,260
220 Series Delta Furra (Manual Adjustment)		
Shearbolt leg (5 to 6 furrow)	\$46,880 to \$52,775	\$47,365 to \$53,375
Auto reset (5 to 6 furrow)	\$54,650 to \$61,750	

Klough:

Multi Plough, Mounted Auto Reset, 3 to 5 furrow	\$7,353 to \$11,079
Multi Plough, Semi Mounted Auto Reset, 4 to 6 furrow	\$15,398 to \$20,349
Model 850 Mounted Plough, Shear Pin, 2 to 5 furrow	\$4,244 to \$7,722
Model 680 Quartz Plough, semi-mounted, 4 to 8 furrow	\$12,480 to \$25,568
Quartz Vari Width - semi-mounted 4 to 8 furrow	\$14,187 to \$28,291
- mounted 2 to 5 furrow	\$5,408 to \$10,443
Model 830 Disc Plough 2 to 5 furrow	\$4,201 to \$7,560
Model 820 Golden Plough 1 to 3 furrow	\$976 to \$2,040
Massey Ferguson Plough 2 to 3 furrow	\$844 to \$1,263

494 H.D. Hydraulic Vari Width Auto Reset	
- fully trailing, 4 to 6 furrow	\$27,000 to \$31,000
- semi mounted, 4 to 7 furrow	\$19,500 to \$23,500
680 Quartz Shear Pin-Fully Trailing, 4 to 7 furrow	\$15,800 to \$27,300
660 Quartz Vari Width Shear Pin - Semi mounted, 4 to 8 furrow	\$13,512 to \$26,944

Speciality Machinery Ltd:

Agric Ploughs

Model TH3, 3 furrow Hydraulic Reversible Disc Plough	\$10,500
Model TH4, 4 furrow Hydraulic Reversible Disc Plough	\$14,600
Model TH6, 6 furrow Hydraulic Reversible Disc Plough	\$19,900

Case Corp Pty Ltd:

165 Plows

5 furrow	\$29,900 to \$30,500
6 furrow	\$32,500 to \$33,260

Chisel Ploughs and Subsoilers

Aitchison:

Soil Aerator

Double Beam Model Number of tines	Frame width (metres)	Without coulter	With coulter
3	1.83	\$2,769	\$3,699
4	1.83	\$3,292	\$4,532
5	1.83	\$3,815	\$5,365
5	2.40	\$4,115	\$5,665
7	2.40	\$5,161	\$7,331
9	2.40	\$6,207	\$8,997
Optional extra	Plain roller, Crumbler roller (1.83/2.4 m)		\$1,436/ \$1,751
	Vibrator		\$977
Mole Plough - manual tine adjustor/hydraulic adjustor			\$2,160/\$2,575

Combo Units - Chisel Plow coupled with Cultivator:

6'/8' (1.83m/2.44m) Unit	\$7,200 to \$8,296
8'/10' (2.44m/3.05m) Unit	\$8,968 to \$11,160
10'/12' (3.05/3.66m) Unit	\$11,146 to \$13,338

Clough:

950 Goliath Chisel plough/cultivator -	
7 tine (2.7 m) to 15 tine (4.3 m)	\$4,560 to \$7,386
960 3 Row Ridger	\$4,807
300 Panaerator sub tillage plough 3 to 7 legs	
(with coulters and roller crumbler)	\$5,535 to \$9,990

Howard:

CP 165, 5 tine	\$3,186
CP 300, 9 tine	\$6,168
Swing Plough 3 to 6 leg	\$19,531 to \$27,050

Clough:

460 Mole Plough - Standard	\$1,643
Mole Plough - Hydraulic	\$2,350
980 Chisel Plough/Panbuster, 3 to 11 tine	\$3,872 to \$9,955
980 Panbuster Auto Reset, 3 to 11 tine	\$5,719 to \$17,400
Excel Soil Aerator - 3/4/5 leg	
Standard, with coulters or with coulters and roller	\$3,802 to \$8,494

Discs*D. Cosgrove:*

Cosgrove Trailing Disc	32 and 36 blade	\$11,870 to \$13,290
Reid and Grey Tandem Discs	2.7 m and 3.04 m	\$6,500 to \$6,910

Duncan:

800 Mounted Disc 7'	\$7,085 to \$7,060
800 Mounted Disc 8' to 9'	\$7,245 to \$7,645

Cultivators*Aitchison:*

Easyflow Cultivators			
1.8m/3.66m	17/35 tine	without crumbler, roller	\$2,147/\$3,278
		with crumbler, roller	\$2,568/\$4,393
Wideline Foldup LT Cultivators, with Crumbler Roller and end wheels			
4.3m/5.0m	43/49 tine		\$8,517/\$9,202
5.6m/6.2m	55/61 tine		\$9,834/\$10,687
Easyflow Wideline Trailed LT Cultivators, with Crumbler Roller and end wheels			
5.6m/9.25m	56/90		\$19,835/\$26,828
Easyflow Wideline Trailed DP Cultivators, with Crumbler Roller, Grubber Tines and end wheels			
5.6m/9.25m	45/72 tine		\$23,160/\$37,460

Superflow Heavy Cultivators

2 Bar Frame			
Subsoiler	1.12m/1.98m	1 to 3 tines	\$2,225/\$5,259
Lo-Draft	1.90m/2.44m	3 to 7 tines	\$3,255/\$6,335
Cushion	1.90m/2.44m	3 to 7 tines	\$3,351/\$6,559
3 Bar Frame			
Lo-Draft	1.90m/3.66m	5 to 13 tines	\$5,050/\$11,660
Cushion	1.90m/3.66m	5 to 13 tines	\$5,210/\$12,076
Depth wheel, per pair			\$1,058

*Clough:***Standard Frame 925 Mini-Till Models -**

	With Crumbler	Without Crumbler
1.6m to 2.6m, 13 to 19 tine	\$2,101 to \$2,445	\$1,470 to \$1,665
Helper Tines - extra \$14.96		
923 Wide Line Trailing Maxi-Till		
5.5m to 8.8m, 54 and 82 tine	\$16,900 to \$19,456	\$13,811 to \$15,990

920 Mounted Maxi-Till Standard Models		
2.53m to 4.13m , 22 and 38 tine	\$2,695 to \$3,643	-
929 Contura - Foldup mounted Maxi-till		
4.25m to 5.6m, 42 to 56 tine	\$6,775 to \$7,695	-

Klough:

"S" Tine Cultivators

		With Crumbler	Without Crumbler
925 Mini Till	1.6 m (13 tine)	\$2,107	\$1,464
	2.1 m (17 tine)	\$2,316	\$1,596
920 Maxi-Till	2.4 m to 4.1 m (23/38 tine)	\$3,039 to \$3,969	\$2,262 to \$3,005
203 Centre Fold Maxi-Till,	4.26 to 6.1m (41 to 59 tine)		\$6,850 to \$8,170
295 Maxi-Till,	2.4m to 3m (24 to 30 tine)		\$2,650 to \$2,850
923 Fully Trailed Maxi-Till,	5.5m to 8.8m		\$17,249 to \$19,935
906 Fully Trailing Coil Tine Grubber,	4.9 to 6.1 m (27 to 35 tine)		\$14,231 to \$16,199

Tine Cultivators

Clough:

940 Agri-tiller Coil Tine Cultivator

		With Crumbler	Without Crumbler
2.06 m	9 tine	\$3,477	\$2,703
2.50 m	11 tine	\$4,105	\$3,017
2.96 m	13 tine	\$4,585	\$3,440
3.40 m	15 tine	\$5,020	\$3,840
3.86 m	17 tine	\$5,450	\$4,282

Howard:

STCL/5	L/D 5 tine 1.10m	\$1,409
STCM/7	M/D 7 tine 1.75m	\$2,021
STCM/9	M/D 9 tine 2.25m	\$2,476
STCM/9R	M/D 9 tine 2.25m	\$2,724
STCM/11R	M/D 11 tine 2.59m	\$3,349
STCM/13R	M/D 13 tine 3.10m	\$3,690

Rotary Hoes

Howard:

FALC rotary hoes	for tractors up to 65 hp	\$7,768
	for tractors up to 80 hp	\$8,878 to \$9,360
	for tractors up to 100 hp	\$12,738 to \$13,751

C.B Norwood.

Breviglieri Rotary Hoes	for tractors up to 35 hp	from \$3,095
	for tractors up to 70 hp	from \$7,960
	for tractors up to 90 hp	from \$10,980
	for tractors up to 140 hp	from \$14,950
	for tractors up to 200 hp	from \$22,840

Power Harrows

Belrecolt:

Crumbler roller, leveller	- HRB 252 D	\$13,015
	- HRB 302 D	\$14,900

Howard:

HK20 - for tractors up to 100hp	\$11,668 to \$17,796
HK30 - for tractors up to 140hp	\$22,798
Superfox - for tractors up to 200hp	\$21,072 to \$22,593
Magnum - for tractors up to 240hp	\$22,340 to \$64,879

Kuhn:

HR Series models -

HRB252D	\$13,015
- crumbler roller	\$1,060
- packer roller	\$1,850
- levelling bar	\$525
- cam clutch	\$510
HRB302D	\$149,000
- crumbler roller	\$1,295
- packer roller	\$2,195
- levelling bar	\$565
- cam clutch	\$510

C.B Norwood

Breviglieri Series

Brevi Leader Series	for tractors up to 140 hp	\$16,890 to \$21,850
Brevi Magnum Series	for tractors up to 220 hp	\$22,450 to \$30,480
Brevi Premier Series	for tractors up to 270 hp	\$52,500 to \$56,980

Lely:

Rotary Power Harrows:

2.5m, 100hp to 3.5m, 140hp	\$15,400 to \$21,500
3m, 210hp to 6m, 275hp	\$21,750 to \$63,500

Harrows

Lyndon Harrows:

"Lyndon" chain harrow

1.5 to 4.2 m width - 10/12 mm sq	\$410 to \$1,095
2.4 to 4.2 m width - 16 mm sq	\$1,395 to \$2,095

Spiked chain harrows

12 mm round, 6' x 6' to 12' x 8'	\$570 to 1,450
16 mm round, 8' x 8' to 14' x 8'	\$1,330 to \$2,150
20 mm round, 8' x 8' to 14' x 8'	\$2,150 to \$4,420

Tripod and 'Lyndon' chain harrows

10/12 mm sq chain, 2.4 to 4.2 m	\$1,740 to \$3,085
16 mm sq chain, 3.0 to 4.2 m	\$3,005 to \$4,085

Standard Models

	2.4 m	3.0 m	3.7 m
12 mm round and 10 mm square	\$900	\$1,120	\$1,345
12 mm round and 12 mm square	\$1,090	\$1,265	\$1,515
16 mm round and 12 mm square	\$1,365	\$1,605	\$1,885
16 mm round and 16 mm square	\$2,060	\$2,415	\$2,775

Round ring chain harrow

12 mm round, 8' x 3' to 12' x 3'	\$435 to \$575
16 mm round, 8' x 6' to 12' x 6'	\$825 to \$1,070
20 mm round, 8' x 8' to 14' x 8'	\$1,945 to \$3,175

Round ring contractor's harrow

24 mm round material, 8' x 8' to 14' x 8'	\$2,330 to \$4,030
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Utility harrows

10 to 16 mm diameter, round, 2.1 to 4.2 m	\$345 to \$850
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Pea Harrows

4 row/5 row	\$170 (bar \$185) to \$180 per leaf
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Potato harrow	\$170 per leaf, bar \$185
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Drill harrows.

Light weight 10 kg leaf 30 x 5 flat	
4/3 row per leaf	\$135 to \$155
Bars	\$135 to \$155
3.5 m wide (suit 20 run drill)/3.2 wide (suit 18 run drill)	\$675 to \$645
Medium weight 18 kg leaf 32 x 8 flat and Heavy weight 22 kg 30 x 10 flat	
4 row \$152 per leaf, suit 20 run drill	\$760
3 row \$115 per leaf, suit 18 run drill	\$725
Bars	\$140 to \$165
Medium or heavy weight	
4 row/3 row per leaf	\$162/\$130
Standard bar	\$162

Stump jump rakers

4 row wide, 3/4 deep, 30/40 kg per leaf, 40 x 10 flat	\$195/\$240
40 x 10 flat, 53 kg heavy rakers/50 x 10 flat, 63 kg super heavy rakers	\$285/\$320 per leaf
Draw bar, 3/4/5 leaf	\$285/\$315/\$350

Diamond harrows

16 mm tine/20 mm tine	\$245 to \$280
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Zig zag harrows, high tensile tines

35 kg 16 mm tine/45 kg 20 mm tine	\$230 to \$265
Bars - 3/4/5 leaf	\$260/\$300/\$340

3.1 m, 3 leaf and bar 16 mm/20 mm	\$950/\$1,055
4.05 m, 4 leaf and bar 16 mm/20 mm	\$1,220/\$1,360
5.05 m, 5 leaf and bar 16 mm/20 mm	\$1,490/\$1,665

Mechanical Weeders

Howard:

Gaspardo inter-row weeder/side dresser

HL 780 5M/P 6 - Row rigid toolbar, plate protection	\$11,116
HL 780 5M/D 6 - Row rigid toolbar, disc protection	\$12,720

Lely:

Weeders 4.5 m to 7 m	\$5,650 to \$9,800
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Breviglieri:

Brevi MG-3 Interow	for tractors up to 100 hp	\$7,765
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Rollers - Cambridge Rollers

Austins Foundry Limited:

Standard Farm Roller	\$4,500
Hydraulic Folding Roller	
- 9 to 10 foot	\$3,120 to \$4,050
- 11 to 13 foot	\$3,465 to \$4,720
- 25 foot	\$15,500
Seeder Roller	\$10,300

Aitchinson Industries:

Cambridge Rollers - 2.4 to 3.6 metres	\$3,916 to \$4,885
Hydraulic transporting cambridge rollers	\$8,359 to \$9,525

Duncan:

310 Field Roller

2.48m to 3.0m (8' to 10') Standard Rings, no wheels	\$5,595 to \$6,195
2.48m to 3.0m (8' to 10') with hydraulic lift whels	\$8,160 to \$8,760

Heavy Rollers

Water Ballast Heavy Rollers	from \$8,000 to \$16,000
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2.20.16 Cultivation Accessories

Klough Group:

Plough Parts -

Share 30 cm (steel)	\$35.00
Share 36 cm (steel)	\$37.00
Share 41 cm (steel)	\$38.00
Share 30 cm (SG)	\$33.00
Share 36 cm (SG)	\$37.00
Mouldboard 36 cm bolted GP/AP, bolt on share	\$194

Mouldboard 850 multi-purpose		\$204
Maxi Till Tine (bare)		\$19.00
Maxi Till Points		\$2.90
Mole Plough	-Main Blade	\$374.86
	-Plug 6.4 to 10.2 cm	\$67.75 to \$99.40
	-Point	\$88.25

2.20.17 Planting Implements

Drills and Seed Boxes

Aitchison Industries: (freight included)

Seedmatic 3000 Seed Only Drills		
Linkage 12 to 20 row	1.8 to 3.0 m	\$10,484/\$12,492
Trailed 12 to 20 row	1.8 to 3.0 m	\$14,374/\$16,482
Coulter/Linkage 12 to 20 row	1.8 to 3.0 m	\$13,509/\$17,153
Coulter/Trailed 12 to 20 row	1.8 to 3.0 m	\$17,399/\$21,143
Seedmatic 3100 Seed and Fertiliser Drills		
Linkage 12 to 20 row	1.8 to 3.0 m	\$12,598/\$15,188
Trailed 12 to 20 row	1.8 to 3.0 m	\$16,488/\$19,178
Coulter/Linkage 12 to 20 row	1.8 to 3.0 m	\$15,623/\$19,849
Coulter/Trailed 12 to 20 row	1.8 to 3.0 m	\$19,513/\$23,839
Seedking 1400 Arable drill		
18 to 24 run Hoe Coulter/Double disc	3.27 to 4.5 m	\$22,081/\$29,298
Seed and Fertiliser Boxes for rollers, powers harrows etc		
Seed only	1.8 to 3.8 m	\$5,017/\$6,671
Seed and fertiliser	1.8 to 3.8 m	\$7,512/\$10,771
Roller drills hydraulic transport	9 ft to 12 ft sowing	\$14,692/\$17,590
Moore no till drill	3 m 18 run (166 mm)	\$37,152
	3 m 22 run (133 mm)	\$42,485
	4 m 24 run (166 mm)	\$47,852

Austins Foundry Ltd:

Roller Seed Drills	\$10,300
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Duncan:

720 Quantrum Arable	
17 to 23 Run Hoe Coulter	\$30,015 to \$35,860
17 to 23 Run Double Disc Coulter	\$32,025 to \$38,586
760 Till Seed -	
11 Run with seed and fert box and disc openers	\$11,705
15 Run with seed and fert box and disc openers	\$13,785
320 Roller Drill - 2.48 to 3.0m std/deep 'v' rings and wheels	\$13,250 to \$16,650
15 to 23 run triple disc	\$38,915 to \$51,000
734 Multi-Seeder -	
15 to 23 Run Triple Disc Standard	\$25,278 to \$33,939
Eclipse Sowing Box 15 to 23 Run Front/Rear	\$2,640 to \$3,350

C.B.Norwood:

Sulky Master	3 m	from \$15,750
GC Tramline	3 to 4 m	from \$18,950

Howard:

Maize Drills 4 to 6 row		\$17,319 to \$36,864
Vegetable Seed drill	- V 12, 4 row complete drill	\$15,610
	- V 20 twin 4 row complete drill	\$32,370

Lely:

Polymat pneumatic drill		
300-24N	3 m width	\$25,850
400-32N	4 m width	\$33,850

Precision Drills

Howard:

Punched Belt Models - 2 row to 6 row drill	\$4,600 to \$17,889
Singulaire Pneumatic Models - 4 to 12 row	\$30,111 to \$70,065

C.B.Norwood:

Sulky SP1 Air Drill, 3.0 to 4.5 metre	\$33,500
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Transplanters

Aitchison Industries:

152 mm to 254 mm diameter, adjustable from 0.43 m to 0.61 m long, replaceable cutter and tungsten carbide breaker tip	\$147 to \$191
38 cm extensions to fit all above	\$66.04

Transplant Systems Ltd:

(prices ex. Christchurch/Auckland)

RT-2 Transplanters	Two Row	\$11,700
	Three Row	\$16,600
Optional extras	- Second Toolbar	\$420
	- Land compression rollers	\$550
Three row automatic transplanters		\$50,000
Bare root Transplanters		
3 point linkage mounted	1 row	\$2,580 to \$2,750
	2 row	\$4,910 to \$5,250
Cell root transplanters		
3 point linkage	1 row	\$6,200
	2 row	\$12,100
Planting pots or cell transplants	1 row	\$8,200
Tree Seedling Transplant		\$3,950 to \$11,700
Tunnel layer, 3 point linkage	1 row	\$9,985

Potato Planters

Land Power New Zealand Ltd: ex Farmrite Industries Ltd.:

Grimme Potato Planter	VL20E 2 row cup planter	\$13,500
	VL20B 2 row cup planter	\$19,900
	VL20KLZ 4 row trailed planter	\$35,500
Structural Belt Potato planters	- 2 row tipping hopper model (850kg hopper)	\$29,800
	- 2 row trailing model (1500kg hopper)	\$35,760
	- 4 row tipping hopper model	\$58,500

C.B.Norwood:

Big Boy, 2 row planter, 1.25 tonne hopper capacity from \$22,950

2.20.18 Harvesting Equipment Lifters, Diggers and Harvesters

Land Power New Zealand Ltd: ex Farmrite Industries Ltd:

Grimme Potato Harvesters -

Dominator	SE7520 single row harvester, 2.2 tonne bunker	\$93,450
	SE7530 high capacity single row harvester, 3.5 tonne bunker	\$109,750
	SE7540 high capacity single row harvester, 4.5 tonne bunker	\$116,750
Variant DL 1700 two row harvester		\$127,750
All rounder GB1700		\$164,000
Jumbo DR1500 4.8 tonne bunker		\$173,750

Specialty Machinery Ltd:

ASA-LIFT:

Hydraulic Combi Harvesters -

Carrot harvesters	POA from approximately \$21,650
Leek harvesters	from approximately \$19,500
Potato harvesters	POA from approximately \$43,950
Onion harvesters	from approximately \$54,700
Green Bean harvesters	POA from approximately \$56,000

Midland Machinery:

Schumacher Crop Lifters -

Button type lifters (blue)	\$30.09
Spring lock lifters (orange)	\$35.47
Mounting reel with bolt and nut	\$4.80

Windrowers

Land Power New Zealand Ltd: ex Farmrite Industries Ltd.:

Grimme RL1500	\$45,750
RL3600	POA
Grimme Combi star CS1500/CS1700	\$83,000/\$90,000

Specialty Machinery Ltd:

ASA-Lifter for windrowing of root crops, onions, celery, potatoes etc.	\$3,300 to \$4,100
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Lely:

Lotus Tedder/Windrowers:

300 Combi, 2 Rake Wheels, 3m working width	\$5,250
380 Superzip Combi, 3.8 m working width	\$7,250
600 Stabilo Combi, 6m working width	\$14,250

Combine Harvesters

Land Power New Zealand Ltd: ex Farmrite Industries Ltd:

Claas 202 Mega, 160 hp Claas Dominator	\$170,000
Claas 204 Mega, 200 hp	\$220,000

C.B.Norwood:

TC56, 170hp hydrostatic	POA
TX64, plus 234hp hydrostatic	POA
TX66, 260hp hydrostatic	POA

Grain Augers

Standard 40 ft (12.2 metres)

\$3500 to \$5500

2.20.19 Farm Bulldozers

Gough Gough and Hamer:

Caterpillar range

Track Type Tractor - D3CIII/D4C11/D5CIII	\$150,020/\$185,000
Series Track Type Tractor - D5M/D6M/D6R	\$207,000/\$260,000/\$340,000

2.20.20 Lift Trucks/ Forklifts/ Pallet Truck

For orchard, cool store and general lifting work.

Gough, Gough & Hamer Ltd.:

Hyster Lift Trucks (Lift Heights from 3.8m to 7.0m)

Side shift and Fork options, Prices include all standard equipment.

Petrol/Diesel

1.5 tonne to 3.0 tonne	\$27,000 to \$41,000
4.0 tonne/5.0 tonne	\$49,000/\$68,000
Hyster Electric (Cold Store Electric Application)	
1.5 tonne	\$42,000 to \$46,000
2.5 tonne/3.0 tonne	\$49,000/\$63,000

Quin-Baleboys Ltd:

	Lift Height	Lift Capacity	
1 Stage	1.8m	1000 kg	\$2,650
2 Stage	1.5m	750 to 1250 kg	\$2,800 to \$3,200
	1.9m	1500 to 2000 kg	\$4,000 to \$5,300
	2.0/2.4m	450/750 kg	\$1,990/\$2,950
	3.0m	1250, 1500, 2000 kg	\$3,800/\$4,300/\$5,750
3 Stage	2.59m	1000 to 1250 kg	\$4,350 to \$4,800
4 Stage	2.59m	1000 kg	\$5,750

Options available:

Sideshift (fitted to forklift, includes hydraulic hoses and couplers)	\$1,260
Front Mounting	\$2,350
Bin Tipper - tips 150 degrees	\$2,650
Bucket Attachment	\$1,875
Bin/Pallet Forks (1500 kg)	\$570
Shortened top and bottom link arms - Cat I/Cat II	\$280/\$310
Double Acting Top Link - Cat I/Cat II	\$310/\$320
D/A Top link hoses	\$80

2.20.21 Other Farm/Orchard Equipment

See also *Section 2.19.6*, fencing equipment.

Spray Tanks

Ribtec:

340 litre	\$338
690 litre	\$476
1138 litre	\$702
1200 litre	\$765
2200 litre	\$1,334

Mulchers

Howard:

FALC Alce mulchers for tractors up to 90 hp	\$8,852 to \$14,349
FALC Super Alce for tractors up to 140 hp	\$16,115 to \$24,217

Breviglieri:

Turbo orchard and park mulcher	1.6 to 2.2m	\$7,690
Hurricane straw-scrub and grass mulcher	1.6 to 2.8m	\$6,990

Power Farming:

Nobili Mulchers

VKD 155	1.5 m Orchard Mulcher	from \$7,595
VKD 190	1.9 m Orchard Mulcher	from \$7,895
VKD 210	2.1 m Orchard Mulcher	from \$8,295
WMO 230	2.3 m Orchard Mulcher	from \$9,495

Chainsaws

Foster Chainsaws:

<i>Stihl:</i>	Bar Size (inch)	Bar Size (cm)	Price
009-36cc	16	41	\$459
E14-electric	14	36	\$631
025 - 44.3cc	16 to 18	41 to 46	\$796
039 - 64.1cc	20	51	\$1,133
064 - 84.9cc	20	51	\$1,601
090 - 136cc	30	76	\$2,674
023c - 40cc	16	41	\$695

Russell Thomas Engineers: (McCulloch)

Russell Thomas Engineers: (McCulloch)

32cc/35cc	14/16	36/41	\$340 to \$445
38cc/55cc	18/20	46/51	\$518 to \$710
46cc/49cc	16/18	41/46	\$605 to \$760

Dolmar:

39cc/43cc	14/15	36/38	\$418 to \$698
52cc/51cc/60cc	18	46	\$773 to \$956
68cc/90cc	21/24	53/64	\$1138 to \$1,414

Brushcutters/Trimmers*Russell Thomas Engineers:*

McCulloch MAC	Brushcutter 28cc bent/straight shaft	\$238 to \$404
McCulloch MAC	Brushcutter 32cc bent/straight shaft	\$476 to \$533
Dolmar MS Series	22.2 to 30.5cc	\$248 to \$643
Dolmar MS Series	33 to 45cc	\$738 to \$1013

Solo Brushcutters:

Models range from 25 cc to 40 cc with loop or bull horn handles \$550 to \$998

Portable Generators and Welders*Lincoln Electric:*

Tractapac (basic)	\$2,050
Trailer for Tractapac	\$1,236
Weldanpower 175/230 petrol	\$3,990/\$5,995
Weldanpower 350 diesel (silenced)	\$14,965

Suzuki:

SX750 (0.55 KVA)	\$995
SV2200P (1.7 KVA) / 4000P (3.2 KVA)	\$1,915/\$2,995

Ladders*Alco:*

AC4 to AC10 Combination ladder - 1.2-2m to 3-5.5m	\$246 to \$491
ASL aluminium single or pole ladders 2.4 to 6.6m	\$200 to \$521
AEL Trademaster commercial heavy duty aluminium double extension ladders -	
3.1-5.2m to 6.7-11.8m	\$454 to \$1,100
AEH Homemaster aluminium double extension ladders -	
2.5-4m to 3.73-6.23m	\$312 to \$492
Ahp heavy duty aluminium platform step ladders 2.4 to 5.4m	\$703 to \$1,498
AFP aluminium forest pruning ladders 1.8 to 4.8m	\$208 to \$430
AMP aluminium mobile platform ladder - platform height 1.16 to 2.84m	
	\$1,322 to \$2,291
AHS heavy duty aluminium step ladders 3.6 to 5.4m	\$841 to \$1,346

Pruning Equipment

Pruning saw	\$26.23
Lopping Shears	\$113.79
Brushcutter	\$152

Pasture Probes

Mosaic Systems Ltd:

Pasture Probe	from \$985
Chlorophyll meter	\$1,600

Tru-Test:

Speedrite GrassMaster (pasture wand) \$850

Chains

Ancra N.Z. Ltd: 7.1mm to 10mm Uni-drag Chain kit 5 metres \$83.45 to \$96.00

Effluent Pond Stirrer

Williams Engineering: (including wheels) \$3,240

Stump Chippers and Log Splitters

Mowtown MTD Products NZ Ltd

LS635	25t hydraulic log splitter, 6hp IC motor	\$3,902
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Fairbrother Industries Ltd:

Heavy Duty Log Chipper	6 inch, 18/25hp	\$9,549/\$10,649
Heavy Duty Log Chipper	PTO driven commercial, 6 inch	\$7,490

2.20.22 Safety Equipment

Croplands Equipment Ltd:

Kasco Helmet and portable filter, c/w 12/24 v tractor mounted filter, 2m hose	\$1,950
Kasco spray helmet	\$450
Breathalon spray suit	\$175
Arbin tractor filters	\$1,065

N.Z. Safety Limited:

Overalls	\$49.68 to \$63.36
Overtrousers PVC	\$89.95
Coveralls Breathalon	\$170.25
White Horticultural Coverall	\$129.90
Yellow Coverall	\$112.00
Earmuffs - grade 4	\$25
Antifog Goggles	\$14
Glove Nitrile Fabric	\$10
Glove PVC	\$5
Mask Dust Moldex 1100	\$0.56
Modex Mask 2000 Series	\$2.40 to \$7.05
Overalls Bib	\$49.68
Parka PVC	\$25 to \$135
Boots	\$70 to \$170
Gumboots	\$45
Browguard	\$30

Fire Extinguishers:*N.Z. Safety Limited:*

Alsafe- stored pressure dry chemical

1.0 kg/2.0 kg	\$69/\$91
3.0 kg/4.5 kg	\$113/\$147
6.0 kg/9.0 kg	\$157/\$179

2.20.23 Protection (Crop)*Electro-Tek Engineering Ltd:*

Birdscarer Gun Zon Export	- complete unit	\$855
	- gun only	\$428
	- timer only	\$277
	- tripod	\$150

Donaghv's:

Birdnetting:	
Birdtex 5 m x 100 m to 10 m x 100 m	\$360 to \$675
Birdtex GP20 5 m x 300 m to GP16 5 m x 300 m	\$550 to \$595
Hailnet:	
Super Hailtex 6.5 m x 100 m	\$580

Permathene Plastics Ltd.:

Birdnetting	- 4.27 m x 50 m	\$84
Growsheild plant protection fabric	- 1.9 m x 100 m	\$102
	- 3.76 m x 91.5 m	\$208

Tarpaulins*Straitline Canvas:*

Hay Covers	- cambicon (50 sq. metres)	\$11 per square metre
Trucks	- cambicon	\$11 per square metre
	- PVC Tarpaulin	\$17 per square metre

Load Binders*Ancra N.Z. Ltd:*

2000 kg RAS Webbing Load restraint	\$30.00
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2.21 BUILDINGS AND STRUCTURES

2.21.1 Building Permit Charges

The Building Industry Authority Levy:

The rate of the levy is \$0.65 for every \$1000 (or part thereof, including G.S.T) of the estimated value of building work for which the consent is issued. Buildings with a total estimated value of less than \$20,000 are exempt from the levy. For example there is no levy payable on building work with an estimated value of \$19,000 but for work valued at \$21,000 a levy of \$13.65 will be charged.

The Building Research Levy which is also chargeable on building consents for building work with an estimated value of greater than \$20,000. The rate is currently \$1 for every \$1000. It can only be increased by an amendment to the Building Act 1991.

2.21.2 Dairy Sheds

The cost of building dairy sheds varies considerably depending on type of shed, availability of materials and labour, building site (completely new or conversion of existing shed), access to electricity and water, to name but a few factors.

Cost of Shed (excluding milking equipment)

Herringbone Shed Costs for building under full contract, range from approximately \$5,000 to \$6,000 per bail. This price includes the building and yard, power and plumbing, effluent disposal, tanker track and site works, but not milking plant.

For example: 30 bail Herringbone

Building contract	\$5568 per bail
Site preparation and power	\$539 per bail
Effluent disposal	\$411 per bail
Total cost	\$6518 per bail

Rotary Turnstyle Costs for complete dairies which involve all buildings, platform and yards are generally in the range of \$5,000 to \$7,000 per bail.

Building cost estimates: (depends on type of material used)

Building (roof, walls and facility rooms)	\$870 to \$1480 per bail
Building floor and foundations	\$742 per bail
Milkroom/outside silo	\$260 to \$470 per bail
Electrician/Plumber	\$550 per bail
Yard concrete (based on ten cows per bail)	\$546 per bail
Yard pipework (based on ten cows per bail)	\$370 per bail

Complete Sheds: (including equipment)*Alfa Laval Agri New Zealand Ltd. (Turn-Styles):*

Average Project Costs:	Platform Size (bales)					
	28	32	36	40	50	60
Building:	70,000/	80,000/	84,000/	88,000/	95,000/	105,000/
	100,000	105,000	110,000	115,000	135,000	145,000
Yard	15,500/	16,500/	19,000/	20,500/	26,000/	31,000/
Concrete:	17,000	18,000	20,000	22,500	28,000	34,000
Yard Pipe	11,000/	11,000/	13,000/	14,500/	18,000/	22,000/
Work:	12,000	13,000	15,000	16,500	20,000	24,000
Electrical:	9,000/	10,000/	11,000/	12,000/	12,000/	13,000/
	14,000	15,000	16,000	17,000	17,000	20,000
Plumbing:	5,000/	6,000/	6,000/	7,000/	7,000/	8,000/
	9,000	10,000	10,000	11,000	11,000	12,000
Platform:	40,500/	44,100/	47,250/	51,480/	61,470/	70,920/
	51,300	57,600	64,800	71,100	87,750	106,200
Milking	59,000/	67,100/	70,100/	77,300/	96,000/	106,000/
Equipment:	68,000	77,000	84,500	89,000	105,500	120,000
TOTAL	210,000/	234,700/	250,350/	270,780/	315,470/	355,920/
	271,300	295,600	320,300	342,100	404,750	461,200
PER BAIL	7,500/	7,334/	6,954/	6,770/	6,309/	5,932/
	9,689	9,238	8,897	8,553	8,095	7,687

Note: Not included:

- Site preparation
- All weather access to site
- Water supply to site
- Power supply to site
- Effluent disposal from site

Milking Equipment*(See also Section 2.3.12, Dairy Shed Expenses)*

Costs for milking equipment range from approximately \$1,500 to \$3,000 per bail (some fully automated equipment costs more).

Alfa-Laval:

Complete milking plant, from cluster to delivery line including jetter wash system but excluding water heaters, plumbing and electrical.

	\$ per cluster
Standard	\$1,600
Hiflo specification	\$1,800
Harmony Milking Unit	\$2,200

2.21.3 Woolsheds/Covered Yards/Dips

C. & F. Industries:

Crossflo Woolshed -	
Standard 3 Stand	\$44,527
Each Additional Shearing Stand	\$3,793
Each Additional Woolroom Bay	\$3,873
Each Additional Yard Bay	\$3,567
Raised Board	\$1,053

Calder Stewart Industries Ltd:

Woolsheds typically cost \$250 to \$280 per square metre to erect. Covered yards (building component only - not including cost of yards) cost \$55 to \$75 per square metre.

Sheep Dips

Ribtec:

6 metres long (1.7m deep) 3000 litres	(S.I.) \$2,223
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2.21.4 Yards and Ramps

Sheep: Price varies markedly depending mainly on capacity. Yards with 1000 ewe capacity about \$9,905; 5000 ewe capacity about \$22,870.

Cattle: Price varies markedly with capacity and design (number of gates etc). Yards with a 50 head capacity at least \$6,250 (through to \$43,260 for 500 head).

Mothering Pens

Calder Stewart:

4 Bay	\$740
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Portable Yards

Prattley Engineering:

Prices are freight paid to nearest rail terminal unless otherwise stated.

Sheep Yards:	
3 point link yard basic	\$4,136
3 m mobil yard basic	\$5,227
3 m super yard - 60m gate length and 7.5m handling race	\$12,388
4.2 m super yard - 115m gate length and 10.8m double handling race	\$21,629
4.9 m super yard - 132m gate length and 10.8m double handling race	\$24,262
Single lane handling race	\$1,272 to \$1,827
Double lane handling race	\$2,575 to \$3,419

Drafting race			\$1,119
Sheep grating panels			\$72.55 per sq m
Cattle Yards:		Alloy	Steel
Cattle gate	- standard	\$452	\$272
	- swinging race gate	\$459	\$336
	- automatic gate opener/closer	\$663	\$1,385
	- sliding race gate		\$458
Cattle Headbail			\$709 to \$1,624
Cattle Crush			\$3,539 to \$9,021
Permanent cattle yard, 140 head - kitset (excluding freight)			\$14,500 to \$19,500

Loading Ramps

Prattley Engineering:(excluding freight)

Sheep - portable loading ramp	\$693 to \$2,893
Cattle loading ramp	\$1,973 to \$5,815

C & F Industries:

Sheep - portable with drawbar	\$1,665
Cattle	\$1,608

2.21.5 Deer complex building costs:

Deer shed cost varies with size and design.

Elk/Wapiti Complex:	
- Under existing covered yards	\$20,000 to \$28,000
- Need an outside corral, can handle approximately 400 weaners/yearlings	
- New yards/shed, one third covered, two thirds corral	\$45,000
- Farmer building own shed, capable of use for 125 to 250 hectare block	\$16,000

Kean Deer Yards:

Red Deer Complex:	
Sheds, price includes stamped concrete floor, nova-lite panels in roof, spouting and downpipes, walls clad 150 x 40 RS H3 7.5 x 7.5m to 9 x 9m	\$11,000 to \$15,800
Shed internals , 6 various plans available, example of two plans,	
Plan B - 2.4m ¼ circle, 3m workrace, 6 internal subdivision panels, 1.8m door, 4 x 1.2m doors.	\$7,600
Plan D - 4.5m ½ circle, 3m workrace, 7 internal subdivision panels, 1.8m door, 4 x 1.2m doors, 0.8m door, 0.8m triangle	\$9,740
Outer Yards, various plans available	
Plans D,E & F - 40 metres yard walls, 3.6m gate, 3 x 3m gates 1.8m gate, loading ramp	\$9,135

Yards with 50 head capacity (9m x 7.15m) would cost in the region of \$13,000 to \$20,000; this would include some holding pens outside the shed.

Converting an existing shed would cost approximately 50% of the cost of a new shed.

2.21.6 Greenhouses, Growing Tunnels and Tunnelhouses

Edwards & Williams Greenhouses Ltd.:

Redpath Greenhouses:

Commercial: 'Crop King' curved rafter truss house included, Double Ridge ventilation 30% roof area, twinskin covers, up to 3.5m stud height, crop support, doors, delivered.

Approximately 929 square metres kitset from \$42.80 per square metre
constructed \$53.00 per square metre

Flower: Roof ventilated crop cover. Single skin, roll up side vents, doors etc.

Approximately 929 square metres, ultra heavy duty kitset from \$32.00 per square metre
203 micron, 4 year warranty greenhouse covers. constructed from \$39.80 per square metre

Crop Cover: Side ventilated arch roof design, single skin, up to 3metre stud height.

Approximately 929 square metres, ultra heavy duty 203 micron, 4 yr warranty greenhouse covers. kitset from \$21.80 per square metre constructed from \$28.80 per square metre

Propagation: (Semi-commercial) Truss design, twinskin, ridge vent for full length, 1 x door 4.1 metre span.

Sizes	4.1 x 6m	\$2,731
	4.1 x 8m	\$3,126
	4.1 x 10m	\$3,521
	4.1 x 12m	\$3,917
	4.1 x 14m	\$4,312
	4.1 x 16m	\$4,708

Colonial Series: (home gardener)

Single skin truss design all steel, aluminium framing, 1 x sliding door, and louvre glass window kits include ridge vent on two largest sizes.

Sizes	2.5m x 2.4m	\$843
	2.5m x 3.6m	\$967
	2.5m x 4.8m	\$1,250
	2.5m x 6.0m	\$1,376

Harford Greenhouses:

Maxispan Professional Series:	
24 metres	\$11,165
30 metres	\$13,186
36 metres	\$15,260
48 metres	\$18,980
60 metres	\$23,740
Maxispan Single Vent Series:	
24 metres	\$9845
30 metres	\$11,386
36 metres	\$13,100
48 metres	\$16,100
Sawtooth	from \$25 per m ²
Budget Span	from \$21.50 per m ²
Crop topper	from \$15 per m ²

Sliding doors	\$350 per set
Wind and Temperature Controllers	\$750 to \$1610

Kerilea Manufacturing Ltd.:

Lo-Tunnel Cloche Systems (All frames priced and sold in packs of 25 units). Price includes delivery to nearest freight depot South Island on all orders over \$300, a freight surcharge of \$15 applies to all orders under \$300.

Frames:			Film:		
Frame Width	Frame Height	Price per 25 Frame Pack	Roll Width	Roll Length	Price per roll
0.6m	0.3 m	\$78.55	1.12 m	250 m	\$86.97
0.8m	0.5 m	\$98.33	1.62 m	250 m	\$125.80
1.0m	0.45 m	\$107.51	1.76 m	250 m	\$137.36
1.0m	0.55 m	\$116.94	1.96 m	250 m	\$152.40
1.5m	0.6 m	\$139.51	2.46 m	150 m	\$114.75
1.5m	0.75 m	\$153.66	2.76 m	150 m	\$128.52
2.0m	0.9 m	\$180.29	3.4 m	100 m	\$105.53
0.6m	0.55 m	\$98.33	1.62 m	250 m	\$125.80
0.8m	0.65 m	\$116.94	1.96 m	250 m	\$137.36
1.0m	1.0 m	\$153.66	2.76 m	150 m	\$128.52
1.3m	0.8 m	\$142.08	2.76 m	150 m	\$128.52
1.8m	0.9 m	\$171.68	3.4 m	100 m	\$105.53

Discounts:	6 to 9 rolls per order	5% discount
	10 to 19 rolls per order	10% discount
	20 rolls and over per order, price on application.	

Tunnel World Ltd.:

New town-house model	1 cover	2 covers
2.3m x 2 to 2.3 x 4m	\$743 to \$995	\$875 to \$1062
Mini-tunnelhouses	Complete kitset	Less timber
3m x 2m to 3m x 10m	\$698 to \$1578	\$635 to \$1314
3m x 12m to 3m x 30m	\$1706 to \$3380	\$1467 to \$2840
4m x 2m to 4m x 10m	\$1002 to \$1769	\$676 to \$1493
4m x 20m to 4m to 30m	\$3031 to \$4289	\$2577 to \$3660
Tunnelhouses		
Jumbo Hort Houses	- 20m x 18m	\$4,481
Kitset ex-factory	- 20m x 24m	\$5,547
	- 20m x 30m	\$6,401

Budget Span Crop Cover: Side Height 1.8m; over 100m²

Width	No sides	Sides	Solid Ends (each)
5m	\$27	\$30	-
6m	\$27	\$30	\$550

Greenhouse Film

Tunnelworld Ltd:

Films	
Agphane 2 and 4 metre widths (200 micron)	\$2.25 per square metre
Infrasol 4 to 14 m	\$2.25 per square metre
Tunnel world locking system	\$2.25 per metre
EVA (200 micron) 6 to 10 m	\$2.25 per square metre
Copper (40% shade) 8 m	\$4.50 per square metre

Glasshouse Heating

Exal Industries Ltd:

ESWA Warming cables:

Cable Size	Without thermostat	With thermostat
18 metres, 230 watt	\$149.00	\$214.00
28 metres, 350 watt	\$197.50	\$262.50
56 metres, 700 watt	\$277.81	\$382.50
94 metres, 1150 watt	\$481.50	\$546.50
Water proof glasshouse thermostats:		
ET O-40 thermostat, standard		\$75.00
Fitted with phase interruption plug		\$90.00

Mosaic Systems Ltd:

PlantPlan greenhouse climate control systems (temperature, humidity and wind override protection)	from \$1,695
PlantPlan computer connectable climate control systems	from \$2,645
PlantPlan hydroponic control systems	from \$3,230
PlantPlan multiple process controllers	from \$6,500

Richard Anderson Greenhouses Ltd:

Propagation Heating	
- soil heating cables	\$75 to \$469
- heat wave panels e.g. 1m x 5m	\$465

Aquaheat Industries Ltd:

Greenhouse heaters. Thermobloc series have a size range of 44 kW to 1172 kW with the option of diesel oil, natural gas, electricity or LPG as fuel. As a guide:

Thermobloc MTP400 D vertical upflow, c/w fan/motor giving 100 Pa, diesel oil burner.	\$7,996
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Glasshouse Ventilation

Exal Industries Ltd:

Exal ventilation fansets:	
500 series, fan plate model/wall fan model, 2.34 m ³ per second	\$341/\$460
600 series, fan plate model/wall fan model, 900 rpm, 3.06 m ³ per second	\$600
1200 series, 380 rpm, 9.81 m ³ per second	\$1100
Turbofan	
500 series turbofan, white enamel, 45 metre throw	\$385
500 series turbofan stainless steel cabinet, 45 metre throw	\$455
400 series turbofan, plastic cabinet, stainless steel blade, 35 metre throw	\$333

Kanters Engineering & Machinery Ltd:

Greenhouse Fans - air movement 4000 cubic metres per hour	\$330
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Glasshouse Watering*Exal Industries Ltd:*

Mist propagation controller:	
Balance arm mist controller	\$90.00
24 volt transformer	\$42.00
24 volt x 20 mm solenoid valve	\$38.00
Misting nozzles, spaced at not greater than 900 mm	
on 300 mm PVC risers. 0.8 mm x 15 mm	\$12.00 each

Mosaic Systems Ltd:

PlantPlan Irrigation - feeding - propagation control systems, 10 station controllers, options for both time and solar based delivery	from \$815
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Richard Anderson Greenhouses Ltd:

Misting Equipment	
- minimalist system	\$375
- mist timer	\$400

2.21.7 Houses/Cottages*Fraemohs Industries: (ex Christchurch)*

Interlocking solid timber homes.

Model	Bedroom	Area (square metres)	Kitset 1	Kitset 2	Erected
221	2	62	\$39,192	\$44,790	\$65,513
223	2	74.5	\$50,239	\$57,811	\$80,943
224	2	88	\$57,202	\$63,417	\$88,465
325	3	103.3	\$67,313	\$75,099	\$103,021
328	3	116	\$73,876	\$81,949	\$111,674
332	3	148.1	\$78,842	\$87,928	\$141,236
420	4	145.1	\$90,256	\$101,916	\$141,236
424	4	200	\$100,485	\$109,815	\$153,004

Note:

Kitset 1 Walls. Windows. Exterior and interior doors. Ground floor joists, flooring, Floor joists and flooring (where shown). Roof beams. Rafters. Sarking and fascia boards. Batts, building paper, purlins and roofing. Spouting and down pipes. Stain and satin polyurethane. Stairs (where shown). Hardware. Working drawings and erection instructions.

Kitset 2 As Homepack, plus: Kitchen joinery. Plumbing fittings.

Erected All Homepack 1, erected and painted plus:
Electrical installations. Plumbing installation and painting. An allowance for drainage, foundations and building permit.

2.21.8 Garages

Durobuilt:

All Steel:	
6m x 4m	from \$3,457
6m x 6m	from \$4,444
6m x 9m	from \$5,466
7.5m x 6m	from \$5,244
7.5m x 9m	from \$6,399
7.5m x 12m	from \$7,555

2.21.9 Haybarns/Implement Sheds/Packing Sheds/Stables

Durobuilt:

Calf Rearing Shelters

6m x 4m	from \$2,666
9m x 4m	from \$3,033
6m x 6m	from \$2,877
9m x 9m	from \$3,963

Implement Sheds

Small Block implement sheds 3m wide bays 6m x 6m to 12m x 12m

(2 to 4 bays)	\$3,732 to \$10,310
Farm implement sheds, 4m wide bays 8m x 6m/8m x 12m, all 2 bays	\$5,369 to \$8,729

Lean-to Implement Sheds

Open across front

6m deep 4.9m bays, 2 bays	\$5,480
7.5m deep 4.9m bays, 2 bays	\$6,356

Commercial Buildings

All steel, 4m bays

17m x 15m, 4 bays	\$22,471
17m x 18m, 4 bays	\$28,534
17m x 21m, 4 bays	\$31,916

C & F Industries:

Haysheds (Kitset)

Bays	Bales	Circular	Lean - to
1	500 to 550	-	\$4,287
2	1000 to 1100	\$4,049	\$6,165
3	1500 to 1650	\$5,711	\$8,044
4	2000 to 2250	\$7,380	\$9,928
5	2500 to 2750	\$9,025	\$11,805
6	3000 to 3250	\$10,708	\$13,683
End wall			\$1,242
Door end wall			\$2,484

Circular Arch Hayshed 3.5 m lean-tos, to fit

First two bays both sides	\$3,455
Each additional bay	\$1,334

Lean - To Implement Sheds

	Shed	Canopy
1 Bay	\$3,741	\$519
2 Bays	\$5,469	\$913
3 Bays	\$7,198	\$1,307
4 Bays	\$8,939	\$1,701
5 Bays	\$10,664	\$2,095
6 Bays	\$12,388	\$2,489

Packing Sheds (9m span)	Lean-to	Gable
2 Bays	\$11,481	\$11,856
3 Bays	\$14,920	\$15,445
4 Bays	\$18,359	\$19,034
5 Bays	\$21,798	\$22,623
6 Bays	\$25,237	\$26,212
Stables		Colour walls
1st bay	\$4395	\$4777
Each additional bay	\$3034	\$3202

McAlpines:

Haybarns (Kitset only), bays 4.5m wide, 4.2 - 3.0 high, 6m deep.

Includes Roof, Back Wall and 2 Ends

	2 Bay	3 Bay	4 Bay	5 Bay	6 Bay
Medium Wind	\$3,610	\$4,735	\$5,880	\$7,055	\$8,180
High Wind	\$3,800	\$4,960	\$6,140	\$7,360	\$8,525
V. High Wind	\$4,475	\$5,880	\$7,335	\$8,740	\$10,150
Snow/Medium Wind	\$3,765	\$4,970	\$6,190	\$7,445	\$8,650
Snow/High Wind	\$3,950	\$5,195	\$6,450	\$7,750	\$8,990
Snow/V. High Wind	\$4,620	\$6,115	\$7,650	\$9,125	\$10,615
Standard	\$4,690	\$6,315	\$7,945	\$9,560	\$11,185

Cover Fast Building Systems (Formsteel):

Implement Shed, three sides enclosed, gable		
12 x 6 to 12 x 12 metres	- height 3.0m	\$5,939 to \$12,733
	- height 4.0m	\$6,523 to \$13,917
18 x 6 to 18 x 12 metres	- height 3.0m	\$8,019 to \$17,623
	- height 4.0m	\$8,832 to \$19,031

Packing Shed, enclosed with roller door		
12 x 6 to 12 x 12 metres	- height 3.0m	\$7,163 to \$14,323
	- height 4.0m	\$9,066 to \$16,823
18 x 6 to 18 x 12 metres	- height 3.0m	\$9,708 to \$19,720
	- height 4.0m	\$11,863 to \$22,611

Calder Stewart Industries Ltd:

	\$ per sq m
Implement Sheds	\$90 to \$130
Haybarns	\$80 to \$120
Farm workshops	\$150 to \$200
Packing sheds	\$130 to \$170
Growing sheds	\$130 to \$160
Storage buildings	\$80 to \$150

Note: Prices vary depending upon size, number of walls, floors, doors, windows, layout etc.

Steel Plus Industries Ltd:

Half Round Buildings:	
Used for haybarns, workshops, storage, calf rearing sheds etc.	
8.7m x 6m to 8.7m x 30m (1100-5500 bales, 2-10 bays), 4.8m high	\$3,890 to \$16,375
Used for workshops, large machinery etc.	
3.6m bays, 8.7m x 7.2m to 8.7m x 36m (2-10 bays), 4.8m high	\$4,495 to \$18,690
12m arch, 12m x 8m to 12m x 40m (2-10 bays) 6m high	\$8,614 to \$42,500
Gable Buildings:	
Used for implement sheds, packing sheds etc.	
7.2m x 6m to 21.6m x 9m	\$5,000 to \$21,346
10.8m x 10m to 21.6m x 12m	\$13,205 to \$28,329

2.21.10 Silage Pits*McKendrys:*

Modular 2m x 2m slabs including brackets	\$252.00
Columns	\$155.50

2.21.11 Fertiliser Bins*C & F Industries:*

Sliding Arch Fertiliser Bins:		
2 Bays	50 tonnes capacity	\$12,068
3 Bays	80 tonnes capacity	\$14,729
4 Bays	110 tonnes capacity	\$17,397

2.21.12 Bridges*C & F Industries (Ex Depot Carterton):*

3.6 m x 3.3 m wide	\$1,388
15 m x 3.8 m wide	\$16,554
6 m x 3.8 m wide	\$5,644
18 m x 3.8 m wide	\$21,200
9 m x 3.8 m wide	\$8,143
21 m x 3.8 m wide	\$25,858
12 m x 3.8 m wide	\$11,654
24 m x 3.8 m wide	\$33,097
Hand Rail Posts	\$62

2.21.13 Grain Silos

Refer also to Section 2.19.5, Silo Mesh.

Dan Cosgrove Ltd: (Silos to be bolted to concrete base)

Model	Diam (m)	Overall Height (m)	Bushel Capacity	Metric Tonnes		Capacity m ³	Wholesale Price
				Wheat	Barley		
15/3	4.58	3.78	1422	38	32	47.73	\$2,609
15/4	4.58	4.59	1820	49	41	61.06	\$2,966
15/5	4.58	5.41	2222	60	50	74.56	\$3,247
15/6	4.58	6.22	2620	71	59	87.89	\$3,707
18/3	5.49	4.04	2107	57	48	70.68	\$3,235
18/4	5.49	4.85	2678	73	60	89.86	\$3,644
18/5	5.49	5.67	3257	88	74	109.27	\$4,113
18/6	5.49	6.48	3829	104	87	128.44	\$4,617
18/7	5.49	7.29	4400	119	100	147.61	\$5,150
18/8	5.49	8.1	4972	135	113	166.78	\$5,810
18/9	5.49	8.92	5550	151	127	186.19	\$6,560
21/5	6.41	5.93	4535	123	103	152.13	\$5,139
21/6	6.41	6.74	5302	144	121	177.85	\$5,865
21/7	6.41	7.55	6081	165	139	203.98	\$6,379
21/8	6.41	8.36	6860	186	157	230.11	\$7,213
21/9	6.41	9.18	7648	207	175	256.56	\$7,996
24/5	7.32	6.2	6012	163	137	201.69	\$6,215
21/6	7.32	7.01	7029	191	160	235.78	\$7,023
24/7	7.32	7.82	8046	218	184	269.86	\$7,880
24/8	7.32	8.63	9061	246	207	303.95	\$8,595
24/9	7.32	9.45	10090	274	232	338.45	\$9,492

Transportable silos -

Model	Diam. (m)	Overall Height (m)	Bushell Capacity	Wheat (t)	Barley (t)	Oats (t)	Maize (t)	Price
121	3.66	3.31	452	13	12	9	12	\$3,822
122	3.66	4.21	695	20	17	13	18	\$4,017
123	3.66	4.93	938	27	23	19	24	\$4,357
124	3.66	5.74	1191	33	29	24	30	\$4,852
125	3.66	6.55	1424	40	35	29	37	\$5,117
126	3.66	7.36	1667	46	41	34	43	\$5,499

Note: Price includes free delivery 80 km from Timaru to Rakaia. \$2.20 per kilometre thereafter. When a pilot vehicle is required it is to be supplied by client.
Silos come complete with external wall ladder and bagging-off chute.

Cone Base Silo

Wheat Tonnage	Eave Height	Overall Height	Kitset Price
53	4.90	6.22	\$7,235
64	5.71	7.03	\$7,695
75	6.52	7.84	\$8,155
72	4.90	6.48	\$8,995

88	5.71	7.29	\$9,547
104	6.52	8.10	\$10,100
120	7.34	8.92	\$10,729
97	4.90	6.74	\$11,337
118	5.71	7.55	\$11,985
139	6.52	8.36	\$12,726
160	7.34	9.18	\$13,450

Cosgrove Feed Silos

Tonnes Wheat	Tonnes Barley	Cubic metres	Overall Height	Price
1.83 diameter with 60 degree centre draw hopper to 450mm opening				
3.13	2.67	4.09	3.28	\$2,500
4.77	4.07	6.23	4.09	\$2,600
6.41	5.46	8.37	4.91	\$2,700
2.74 diameter with 45 degree centre draw hopper to 150mm opening				
6.92	5.90	9.03	4.30	\$3,230
10.59	9.03	13.82	5.11	\$3,400
14.26	12.16	18.62	5.93	\$3,620
2.74 diameter with 60 degree centre draw hopper to 450mm opening				
8.41	7.17	10.98	4.19	\$3,260
12.08	10.30	15.77	5.00	\$3,430
15.75	13.43	20.57	5.82	\$3,650

2.21.14 Diesel Tanks

Ross Irving Ltd:

500 litre to 2000 litre tanks

from \$985 each

2.21.15 Killing Sheds

Concrete

Cement Products:

2.13 m x 2.8 m high with aluminium screen door	\$2,649
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McKendrys

Round type - 2.4m diam x 2.7m high	\$1785 to \$2220
Large square type - 2.44m square x 2.44m high	\$2785 to \$3235
All include door, vents, rail and fittings.	

Fibreglass

Ribtec: (price includes delivery)

Diameter	Height	
2.44m	2.13m	\$1,600
3.05m	2.15m	\$1,867
3.43m	2.44m	\$2,089

2.21.16 Piggeries (Circular Arch)

C & F Industries:

Bays	Length	
2/3	6/9 m	\$12,830 to \$15,638
4/5	12/15 m	\$18,434 to \$21,211
6	18 m	\$23,983
Vents - each		\$933

2.21.17 Shelters (Stock)

Ribtec:

Calf/Goat fibreglass hutch (4m long x 2.4m diameter)	\$1067
Calf Shelter	\$2478
Goat Shelter	\$1225

2.21.18 Dog Motels

Ribtec:

Single Fibreglass Kennel	- small	\$222
	- large	\$284

Prattley Engineering:

Dog motels	\$296 to \$598
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2.21.19 Building Materials

Roofline Products Ltd:

	Price per metre
Iron: - Galvanised 0.40 corrugated and roofdeck	\$9.05
- Colourcote 0.40 corrugated and roofdeck	\$11.85
- Galvanised 0.40 weatherboard	\$11.85
- Mini Iron	\$11.15
- Z/Lume 0.40 corrugated and roofdeck	\$9.50
Skylite - corrugated profile	\$14.50
Spouting: - 115 x 55 Box Galvanised and D Galvanised	\$5.65
- 125 x 55 D Galvanised	\$5.75
- External and internal corner galvanised	\$22.65
- Spouting stopends	\$10.00
Downpipe: - 65mm x 3m round plastic	\$13.18
- 65mm x 0.40 round Galvanised	\$7.95

Placemakers:

Roofing iron	\$20.58 to \$41.15 per sheet
Roofing fibreglass	\$37.91 to \$75.82 per sheet
PVC Rainwater system	\$28.89 per 5 metres
Spouting joiners	\$1.51 each
Downpipes	\$20.80 per 3 metres

Cement Products

Higgins Redimix Concrete: (Ex Palmerston North and Feilding)

	19 mm (\$ per cu.m)	12 mm (\$ per cu.m)
10/15/17.5/20 MPa	\$124 to \$145	\$129 to \$150
25/30/35/40 MPa	\$158 to \$203	\$163 to \$208
Blockfill	\$179	-
Kerb Mix	\$153	-
Small load surcharge	up to 2 m ³	\$30.00 per load

Conveyor Hire - \$12.50 per cubic metre

Accelerator (calcium) \$3 per 1% per cubic metre

Allied Concrete Ltd: (1997 prices)

	\$/cu.m
17.5 MPa	\$112.50 to \$141.50
20 MPa	\$114.50 to \$143.00
25 MPa	\$119.50 to \$148.00
30 MPa	\$124.50 to \$153.00

Firth Industries Ltd:

Hollow Masonry Blocks

Half	150 mm	\$1.50	200 mm	\$1.80
One Plain End	150 mm	\$2.00	200 mm	\$2.50
Open End	150 mm	\$2.00	200 mm	\$2.50
Bond Beam Closed end	150 mm	\$2.00	200 mm	\$2.50

Polythene

Edwards and Williams Ltd:

Horticultural polythenes:	Price per sq/m
Durafilm '3' - widths 1 to 14 metres	
0 to 75 m ²	\$2.00
76 to 199 m ²	\$1.60
200 m ² plus	\$1.40
Duratough 203 micron	
0 to 75 m ²	\$2.60
76 to 199 m ²	\$2.20
200 m ² plus	\$1.90

Placemakers:

125μ	4m x 25m / 4m x 50m	\$61.67/\$125.00
250μ	4m x 25m / 4m x 50m	\$87.67/\$173.15

2.22 SHELTER AND FARM FORESTRY COSTS

2.22.1 Seedling Trees

Appletons Tree Nursery:

	Price per 100	Price per 1000
Cupressus lusitanica	\$58	\$485
Cupressus macrocarpa	\$58	\$485
Eucalyptus nitens	\$72	\$640
Pinus radiata GF16	\$24	\$180
GF23CP - control pollinated	\$58	\$433
Douglas Fir (25/50 cms)	\$60	\$540
Douglas Fir transplants	\$65	\$585

Note: Freight is extra

Ministry of Forestry: (price is per 1000)

	Northland	Wairarapa and Wellington	Canterbury
P.radiata GF 17 to 9	\$175 to \$250	\$150 to \$200	\$230
GF 22	\$500 to \$600	\$400 to \$550	\$450 to \$600
GF 25 to 28	\$500 to \$800	\$450 to \$600	\$500 to \$850
A.melanoxylon	\$420 to \$600	\$420 to \$600	\$550 to \$800
C.macrocarpa	\$350 to \$450	\$330 to \$450	\$400 to \$600
C.lusitanica	\$350 to \$450	\$330 to \$450	\$500 to \$600
Eucalyptus	\$420 to \$600	\$420 to \$600	\$420 to \$600
J.nigra 1000 spots (nuts)	\$550	\$550	-
Poplars	\$600 to \$800	\$800 to \$1500*	\$600 to \$880
Willows	\$600 to \$800	\$800 to \$1500*	\$600 to \$800
Douglas Fir	-	\$350 to \$450	\$400
Root trainers (each)	\$1 to \$1.10	\$1.00 to \$1.20	\$1 to \$1.20

* = stakes and poles

Gibbs Nurseries Ltd: Dannevirke (price is per 100)

Abelia (Chinese Floribunda)	\$176
Acacia spp (Wattle)	\$120
Alnus	\$195 & \$244
Cedrus Deodara (Indian Cedar) 2 year	\$222
Chamaecyparis Lawsoniana 2 year	\$142
Cupressus all varieties 2 year trees	\$133
Eucalyptus spp. 2 year	\$116
Larix spp (Larch)	\$156
Liquid amber	\$58 per 10
Pinus Radiata: 1 year (selected)/1.5 year (sturdy)/2 year transplanted	\$27/\$62/\$93
Podocarpus (Totara)	\$311
Populus spp. (Poplars)	\$173
Pseudotsuga menziesii (Douglas Fir) 2 year old	\$120
Salix Matsudana (Willow)	\$173
Sequoia (Californian Redwood) 2 year	\$176
Tree Lucerne (Tagasaste)	\$133

Ngongotaha Nursery: (Rotorua)

	Price per 100	Price per 1000
Acacia dealbata (Silver Wattle)	\$65	\$550
Alnus rubra (Red Alder) 50 to 70cm	\$85	-
Cedrus deodara (Himalayan cedar)	\$40 per 10	-
Cupressus (Macrocarpa and Lusitanica spp)	\$53	\$450
Chamaecytisus palmensis (Tree lucerne / Tagasaste)	\$60	\$480
Eucalyptus spp.	\$57	\$480
Larix decidua	\$55	-
Leyland cypress (0.50 to 0.75 m)	\$250	\$2125
Pseudotsuga menziesii (Douglas fir) 2 year - 35cm +	\$85	\$650
Pinus radiata - GF18 seedlings	\$25	\$180
- GF26 nursery cuttings	\$53	\$450
- GF28 nursery cuttings	\$53	\$450
Sequoia sempervirens (Californian Redwood)	\$150	-

Halketts Nursery: (Christchurch)

	Price per 10	Price per 100	Price per 1000
Pinus radiata 1/0 GF 16	\$3.56	\$35.56	\$196
1/0 GF 17	\$4.45	\$35.56	\$213
1/0 GF 19	\$4.45	\$35.56	\$249
2/0 GF 17	\$5.33	\$53.34	\$276
Pinus nigra 2/0	\$5.78	\$57.79	\$489
Pinus patula	\$17.33	\$147	-
Eucalyptus spp	\$13.33	\$111	-
Poplar- all cultivars	\$10.67	\$89	\$756
Pseudotsuga menziesii (Douglas Fir)	\$3.56	\$35.56	\$249
Cedrus deodara \$4.45 each	\$42.23	\$418	-
Salix spp (willows)	\$10.67	\$88.89	\$756
Wattles - all cultivars	\$17.33	\$147	-
Alnus glutinosa (Black Alder)	\$17.33	\$147	-
Betula pendula (Silver Birch) - dependant on grade and range			\$11.51 each
Phormium tenax (N.Z. Native Flax) PB2	\$37.78	\$333	-
Sequoia giganteum (Wellingtonia) PB2	\$42.23	\$378	-
Leyland cypress PB2	\$37.78	\$333	-
Cupressus -macrocarpa	\$17.33	\$84.45	-

John Farrell Nurseries:(Pukekohe)

	Price per tree (pb3/4)
Acacia Dealbata (Silver Wattle)	\$1.50
Acacia Melanoxylon (Tasman Blackwood)	\$1.50
Eucalyptus Botryoides	\$1.50
Eucalyptus Nitens	\$1.50
Eucalyptus Ovata	\$1.50
Eucalyptus Saligna	\$1.50
Alnus Cordata (Italian Alder)	\$1.50
Alnus Glutinosa (common Alder)	\$1.50
Cupressus Lusitanica	\$1.50

Macrocarpa	\$1.50
Leyland Cypress	\$2.75
Pinus radiata	\$1.00
Populus	\$3.00
Cedrus Deodara	\$3.00

2.2.2.2 Forestry Establishment and Tending Costs

Note: The following figures have been kindly provided by the *Ministry of Forestry*. Readers should note that costs vary markedly according to region and locality, size of woodlot, slope, access and vegetation etc.
M.O.F. advisers recommend that farmers seek advice from qualified persons before incurring any expenditure on a forestry project.

Likely costs for forest operations are:

Establishment

Spot spraying before or after planting	flat (easy)	14 to 18 cents per spot
	hill	15 to 22 cents per spot
(The above costs include chemical at 3 to 6 cents per spot)		
Ripper hire		\$15 to \$25 per hour in use
Contract ripping		\$50 per km, or \$150 to \$200 per ha
Hand planting - radiata (bare rooted)	flat	15 to 20 cents per tree
	hill	20 to 30 cents per tree
- other (bare rooted)		20 to 35 cents per tree
- containerised stock		40 to 80 cents per tree
(depending on size of container)		

Seedlings see Section 2.2.2.1.

Nutrition

Hand fertilising (phosphate)	15 to 25 cents per tree
Aerial fertilising (phosphate) by helicopter	\$300 to \$340 per hectare
Aerial fertilising (nitrogen) by helicopter	\$350 to \$370 per hectare
Oversowing (grass/legumes) plus fertiliser by helicopter	\$320 to \$380 per hectare
Boron fertilising/Ulexite @ 50kgs/ha	for 10 to 20 ha, \$80 to \$110 per ha applied

Tending

Pruning	- first lift	\$0.70 to \$1.20 per tree
	- second lift	\$0.90 to \$1.45 per tree
	- third/fourth lift	\$1.00 to \$1.70 per tree
Thin to waste	- first thin to 400 to 600 trees	\$120 to \$250 per ha
	- second thin to 200 to 300 trees	\$100 to \$150 per ha

Note: Hourly rate of \$16 to \$20 per hour, add \$3.50 per hour for chainsaw.

Fencing See Section 2.19, *Fencing Costs*

Fire Insurance

Available through major insurance companies and brokers (brochures available through the *Ministry of Forestry*). Usual cost range is \$10 to \$25 per ha per year depending on level of cover. Minimum charge of \$40 plus administration costs.

2.22.3 Logging and Transportation Costs

Logging	- Ground based logging	\$14 to \$20 per tonne
	- Cable logging	\$18 to \$26 per tonne
	- Helicopter logging, depends on flight time or distance	\$75 to \$100 per tonne
Roading	- Clayland: range from	\$0.67 to \$2.70 per tonne
Truck and trailer per kilometre (25 tonnes)		\$4.20 per km

2.22.4 Tree Planting Equipment

Aitchison Industries:

Tree planting augers: 152mm to 254mm diameter, adjustable from 0.43m to 0.61m long.	
Replaceable cutter plus tungsten carbide breaker tip	\$147 to \$191
38cm extensions to fit the above	\$66.04

2.22.5 Shelter/Windbreak/Shade and Weed Cloth

Donaghys:

Windbreak:	Width	Price per 50 m roll
Woven (green):	0.91 m to 2.74 m	\$56 to \$184
Knitted:	0.91 m to 1.83 m	\$72 to \$134
Shadecloth:		
Supashade (knitted):		
Very light	1.83 m to 3.66 m	\$5.08 per metre
Light	1.83 m to 3.66 m	\$5.60 per metre
Medium	1.83 m to 3.66 m	\$7.14 per metre
Heavy	1.83 m to 3.66 m	\$8.33 per metre

Edwards and Williams Greenhouses Ltd:

Weed Control:		
Weedtex	0.91 m to 3.66 m	\$54.10 to \$216.40

Tunnelworld Ltd:

Shade Material: (knit)	\$ per m ²	\$ per roll	\$ per roll
Very Light	\$3.69	\$230	\$459
Light	\$3.87	\$248	\$495
Medium	\$4.14	\$320	\$639
Heavy	\$4.41	\$360	\$720
Wind-break Super	\$63	\$126	-
Butterfly clips for securing windbreak			\$70 per bag

Newfield Marketing:

KBC Tree Shelters (wrap around):	.Quantity 100 to 499
500mm x150mm square	\$2.35
600mm x 100mm square	\$2.05
750mm x 100mm square	\$2.35
1.2m x 125mm square	\$3.55
1.5m x 125mm square	\$4.20
Tubex Tree shelters	
Sold in nests of four, 1.2m height x 84mm to 115mm wide	
Between 120 and 475 shelters	\$3.75
Plantskydd animal repellent	\$40/kg

2.23 COMPUTERS

2.23.1 Farmers Requirements

Market surveys have revealed the following uses of the on-farm computer.

- Farm financial record-keeping/analysis.
- Farm physical record-keeping/analysis.
- Accounting and payroll.
- Farm decision analysis, e.g. investment analysis, linear programming, etc.
- Breeding records.
- Communication with other computers to gather information; or
- Communication with other computers to execute market transactions, e.g. order machinery parts, sell produce, etc.
- Education and entertainment.

2.23.2 Guides for Purchasing a Farm Computer

Three questions should be answered before making a final decision to purchase a computer.

These are:

- What are the current requirements and problems on the property?
- Can these be best fulfilled or overcome using a computer or are there other least cost alternatives available, e.g. secretarial services or mail-in services?
- The final question is - the choice of system to be purchased. This final question will be discussed under the following three headings:
 - Software
 - Hardware
 - General Criteria

Note: Farmers are advised to seek advice from qualified persons before incurring any expenditure on farm computers.

Software

- Do the programs meet the requirements of the farm or farmer?
- Are they endorsed by relevant professional and educational institutions/bodies?
- Are the programs technically correct?
- Are the programs user orientated?
- Are the programs flexible and adaptable i.e. if the farmer changes farming type, policy or legislation changes, e.g. tax changes?
- Is there adequate back-up support if problems occur?
- Are the data required to run the programs readily available?

Hardware

- Is there sufficient capacity, in terms of memory and permanent storage, to handle the data to be processed? This is particularly important as the operating system and programs reduce the available memory.
- Has the particular make and model of computer got a good name for reliability?
- In the event of a breakdown how quickly can the machine be repaired, i.e. does the dealer stock spare parts?
- Is replacement equipment provided while yours is being repaired?
- Is the printer's speed and quality suitable for your requirements?

General Criteria

- What is the total price of the complete system installed on the property, in working order?
- What are the repayment terms and conditions of contract?
- What assurances are given regarding delivery, and installation dates, guarantees and maintenance ?
- What is the cost of the service contract after the warranty expires?
- Is the dealer likely to stay in business?
- If programs are especially written for you, who owns them? Can copies be sold to third parties?
- Is the firm's hardware and software likely to change? What is the fully maintained life expectancy of their products?

2.23.3 General Guidelines

When purchasing a new computer the minimum specification considering available technology and relative market value should be:-

Computer:

At least 16MB RAM for an IBM (or compatible) computer (preferably 32MB if Windows 95 is used). At least 1GB hard disc, and one floppy disk drive. SVGA colour screen is recommended. A minimum speed of 133Mhz or pentium processor. A computer with this sort of capability could be expected to cost within the range of \$2000 to \$3000.

Many software programs are available today in both DOS and Windows format. If a windows interface/operating system (recommended but is not essential) is not required, a very much lower cost, lower specification computer, perhaps acquired second hand, would suffice as a beginners set-up. A 286 processor, 640 KB RAM (.64 MB) and monochrome screen should be the minimum specification considered. Costs are likely to be in the \$400 to \$1000 range.

Printer:

The choice of printer will depend on the end use of the computer output. The general rule is that the cost of the printer is related to its speed and the quality produced. (The higher the quality and speed the more expensive the printer will be.) The printer should be capable of handling 132 characters across a page.

A reliable ink jet printer for general farming use would cost between \$280 and \$1000. Laser printers offer the the highest print quality for modest running costs. Typical prices for laser printers are \$850 to \$3500.

Software:

A farmer would normally require the following software:

- Financial recording and budgeting system. Suitable products are available from between \$500 to \$1500.
- Word processing
- Spreadsheet
- Database

Software will be cheaper if purchased with hardware.

2.23.4 Hardware Prices

	Cyrix P200+	Pentium 166MHz	Pentium 200MHz	Pentium 233MHz
No HDD	\$1,199	\$1,399	\$1,599	\$1,799
Quantum 2.1GB Bigfoot Fast ATA-2	\$1,499	\$1,699	\$1,899	\$2,099
Quantum 3.2GB Fireball Ultra ATA	\$1,599	\$1,799	\$1,999	\$2,199
Quantum 4.3GB Bigfoot Fast ATA-2	\$1,599	\$1,799	\$1,999	\$2,199
Quantum 6.4GB Fireball Ultra ATA	\$1,899	\$2,099	\$2,299	\$2,499

Key Features - PC Direct 510 vs

- Processor: Cyrix P200+ or Intel Pentium with MMX technology
 - Memory: 16MB EDO RAM
 - Cache: 512KB Pipelined Burst cache
 - Video: S3 Trio64V2 2MB RAM
 - Monitor: PC Direct 14 inch low radiation
 - Audio: 16 bit sound card with amplified speakers
 - CD-ROM 24x Max speed IDE
 - Operating System: Microsoft Windows 95
-
- Included Extras: Two button mouse, Microsoft Works 4.5, Nortons Antivirus and OCL Invoice
 - Warranty: Three years return to base parts and labour warranty, 90 days software support.

Additional Upgrades

Additional Ram	\$149 per 16MB
56k Internal Dynalink Modem	\$199
33.6k Internal Dynalink Modem	\$139
Zip drive internal	\$169
Zip drive external	\$269
Additional zip cartridge	\$25
HP Deskjet 670 Colour Printer	\$299
HP Deskjet 692C printer with photo upgrade kit	\$519
Printer cable	\$15
Mustek scanner	\$199

Information obtained from the internet URL address: <http://www.asset-computers.co.nz>

2.23.5 Software Prices

AgResearch, Whatawhata Research Centre:

Stockpol is a simulation model, designed to evaluate changes in farm policy. With Stockpol, the farmer can experiment with changes to stock classes, stock numbers, buying and selling patterns, lambing and calving dates, target liveweights, shearing, conservation and cropping. By entering the details for the existing and new policies, and using the simulation to predict what will happen. If there is a problem, Stockpol will suggest ways of making the new policy work. An integrated database of prices lets the farmer compare the economics of each policy. Stockpol can also operate as a short-term model for feed-budgeting and monitoring applications.

Stockpol Farmer	\$995
This price does not include software support or training.	

Computer Concepts:

Concept Cash Manager - Farm Financial Recording Budgeting	\$960
Cash Concept for Windows	\$496
Cash Concept for Budgeting	\$246
Feed Manager for Windows	\$296
Concept Debtors	\$342
Endeavour	\$590
Financial Analysis	\$180

Flock-Linc:

Annual Flock Fee	\$65 per flock
Annual Ewe Fee	\$2.50 per ewe mated
Enrolment Fee	\$100 per flock (paid once)
Discounts Available	- \$0.18 per ewe mated when data is via floppy disc
	- \$0.18 per ewe mated, if flock greater than 300 ewes

Landmark:

Software for the land - Windows based ; farm specific and easy to use.

A comprehensive farm planner and financial package.

\$795

- farm mapping
- feed budgeting
- paddock diary
- stock recording (individual or group basis)
- budget (cash flow or gross margin)
- cashbook - end of year reports, GST
- internet support

A simplified version is available for those who have a 486 computer.

Bureau Services: (*Animalplan/Geneplan/Breedpac*)

Animalplan (owned by *The New Zealand Animal Breeding Trust*) is an animal recording and data processing system for genetic evaluation of sheep, beef, deer and goats. Three bureaux are licensed to offer a sheep recording service based on *Animalplan* and they market their services as *Geneplan* and *Breedpac* (see below).

The New Zealand Animal Breeding Trust:

Animalplan Software/Specialised Processing -

The *New Zealand Animal Breeding Trust*, also makes *Animalplan* available by offering a Personal Computer (PC) based system for breeders and breed groups to operate themselves. In addition the Trust provides specialised data processing services including sire referencing.

Animalplan PC Software Package for Breeders -	
Annual lease fee per flock/herd for first flock/herd	\$300
Multiple flock/herd lease fees available on application	
Annual NZABT royalty per new animal recorded	\$0.16
Sire Referencing (across-flock/herd) -	
Data analysis (multi-trait BLUP) per flock/herd fee	\$480*

Genetic Trends -	
Data analysis (multi-trait BLUP) per flock/herd fee	\$120*
Within-flock/herd Multi-trait BLUP Analysis -(including Genetic Trends) Flock/herd fee	\$480*

- * Where flock/herd is recording using the Trust/Animalplan Genetic Engine either through the Trust or a Bureau licenced to use the Trust software. Other recording systems may incur a data preparation cost.

Specialised and customised processing services - available on application, e.g. ultra-sound scan records analysed.

Animalplan Field Notebooks -	
These notebooks are only available directly from the Trust, c/- Massey University, Palmerston North. (Price includes postage and handling).	
250 breeding females	\$23.40
500 breeding females	\$32.40
1000 breeding females	\$44.40
"Breeding Matters" Newsletter - published by the <i>NZ Animal Breeding Trust</i>	
"Breeding Matters" Ringbinder	\$15.10
Four copies per year - annual subscription	\$10.20

Alan F. Warren & Associates, (Timaru):

Geneplan:	
Annual flock fee	\$150
Annual flock fee second and small flocks	\$75.00
Annual processing fee per ewe recorded	\$1.75
Processing discounts for flocks over 500 ewes	P.O.A.
Annual NZABT royalty per new animal recorded	\$0.20
Joining flock fee, (depending on amount of back data to be loaded)	\$100
Joining flock fee small flocks	\$50.00
Entry of historical data	P.O.A.

Computer Concepts: (Masterton):

Geneplan	\$375 Flock fee plus \$1.75 per head
Geneplan batch	\$456

Breedpac (Invercargill):

Annual Flock fee	\$65.00
Annual processing fee per ewe recorded (includes NZABT royalty)	\$1.95
No joining fee or charge for entry of historical data	

Ken Moore Computing Ltd:

Livestock Recording

Studfax for Windows program (with one animal database) - a comprehensive performance recording program with fully featured pedigree reporting, import/export facilities and the ability to analyse on-farm trial work \$1400

Additional databases - Sheep: dual purpose, meatbreed, Merino

- Cattle: with Breedplan interface

- Red Deer, Elk, Goats, Horses \$200 each

Studfax for Windows Breeding Values module \$795

Payroll

Ace Payroll Plus (incorporates current taxation schedules)

DOS version \$330

Windows version \$795

Farm Works:

Farm Tracker:	
Dairy, Intensive Sheep and Cattle (including feed budgeting and mapping)	\$800
Hill and High Country, Cropping and Horticulture (includes mapping)	\$650
Feed Budget as an additional module for Farm Tracker base modules	
Paddock and Stock	\$250
Stock Watch	\$350

Tru Test:

WinWeigh 2 - linker software to the TruTest 700 series electronic indicators \$195

2.24 APPENDIX: RATE OF INFLATION IN NEW ZEALAND 1891 TO 1997

The Consumer Price Index (C.P.I.) measures the rate of inflation for each year, for example, 0.5% in 1892 (see second column) and 0.8% in 1997 (see page B-230).

To calculate the fall in the value of the dollar from any of the base years (where value shown is 1.0000) simply divide 1.0 by the value of the dollar in the year of interest.

For example:

- (i) 1891 (below) compared with 1997 (page B-230)
= 1.0 divided by 0.0088 = 113.64
this means a dollar (ten shillings) in 1891 would buy 113.64 times as much as a dollar in 1997.
- (ii) 1950 (page B-229) compared with 1984 (page B-230)
= 1.0 divided by 0.0681 = 14.68 times more purchasing power.

Base Year:

Year	C.P.I.	1891	1920	1930	1940	1950	1960	1970	1980	1990
	%									
1891	-	1.0000								
1892	0.5	0.9947								
1893	2.7	0.9682								
1894	0.5	0.9632								
1895	-0.5	0.9681								
1896	0.5	0.9631								
1897	1.0	0.9532								
1898	4.1	0.9143								
1899	-3.4	0.9457								
1900	2.0	0.9265								
1901	3.0	0.8988								
1902	2.4	0.8771								
1903	-0.5	0.8812								
1903	0.0	0.8812								
1905	0.0	0.8812								
1906	6.6	0.8228								
1907	-0.9	0.8301								
1908	0.0	0.8301								
1909	-1.3	0.8412								
1910	1.4	0.8298								
1911	-0.9	0.8372								
1912	3.2	0.8107								
1913	2.2	0.7929								
1914	4.3	0.7589								
1915	7.8	0.6996								
1916	8.0	0.6435								
1917	9.9	0.5798								

Base Year:										
Year	C.P.I. %	1891	1920	1930	1940	1950	1960	1970	1980	1990
1918	12.2	0.5090								
1919	7.7	0.4696								
1920	13.6	0.4059	1.0000							
1921	3.3	0.3926	0.9672							
1922	-10.9	0.4353	1.0725							
1923	-2.5	0.4464	1.0998							
1924	2.1	0.4371	1.0768							
1925	0.5	0.4348	1.0713							
1926	0.5	0.4326	1.0658							
1927	-0.8	0.4359	1.0739							
1928	0.0	0.4359	1.0739							
1929	-0.3	0.4370	1.0739							
1930	2.01	0.4460	1.0987	1.0000						
1931	7.6	0.4797	1.1819	1.0757						
1932	7.9	0.5177	1.2754	1.1608						
1933	4.6	0.5415	1.3341	1.2142						
1934	1.3	0.5345	1.3169	1.1986						
1935	3.8	0.5142	1.2667	1.1529						
1936	2.8	0.5000	1.2319	1.1212						
1937	7.1	0.4643	1.1439	1.0411						
1938	3.1	0.4501	1.1089	1.0093						
1939	4.6	0.4295	1.0581	0.9631						
1940	4.1	0.4118	1.0145	0.9233	1.0000					
1941	3.7	0.3965	0.9768	0.8891	0.9629					
1942	3.1	0.3842	0.9465	0.8615	0.9330					
1943	2.5	0.3744	0.9224	0.8395	0.9092					
1944	1.8	0.3676	0.9058	0.8244	0.8928					
1945	1.3	0.3628	0.8937	0.8314	0.8809					
1946	0.7	0.3604	0.8878	0.8081	0.8752					
1947	3.3	0.3486	0.8589	0.7817	0.8466					
1948	8.0	0.3207	0.7902	0.7192	0.7789					
1949	1.6	0.3157	0.7779	0.7080	0.7667					
1950	5.8	0.2976	0.7331	0.6672	0.7226	1.0000				
1951	10.9	0.2651	0.6532	0.5946	0.6439	0.8911				
1952	7.9	0.2443	0.6019	0.5478	0.5933	0.8211				
1953	4.6	0.2332	0.5745	0.5229	0.5663	0.7837				
1954	4.5	0.2227	0.5487	0.4994	0.5408	0.7485				
1955	2.6	0.2168	0.05342	0.4862	0.5266	0.7287				
1956	3.4	0.2095	0.5161	0.4698	0.5087	0.7041				
1957	2.2	0.2048	0.5046	0.4593	0.4974	0.6884				
1958	4.5	0.1957	0.4820	0.4387	0.4751	0.6575				
1959	7.5	0.1810	0.4460	0.4095	0.4396	0.6084				

Base Year:										
Year	C.P.I. %	1891	1920	1930	1940	1950	1960	1970	1980	1990
1960	-2.7	0.1860	0.4582	0.4170	0.4516	0.6250	1.0000			
1961	1.8	0.1827	0.4501	0.4097	0.4437	0.6140	0.9824			
1962	2.6	0.1779	0.4382	0.3988	0.4319	0.5978	0.9564			
1963	2.0	0.1743	0.4294	0.3908	0.4232	0.5857	0.9371			
1964	3.4	0.1683	0.4147	0.3775	0.4088	0.5657	0.9051			
1965	3.4	0.1626	0.4006	0.3646	0.3949	0.5465	0.8743			
1966	2.8	0.1581	0.3895	0.3545	0.3839	0.5313	0.8500			
1967	6.1	0.1484	0.3657	0.3328	0.3605	0.4988	0.7981			
1968	4.2	0.1421	0.3502	0.3187	0.3452	0.4777	0.7642			
1969	5.0	0.1351	0.3327	0.3028	0.3280	0.4539	0.7262			
1970	6.5	0.1263	0.3112	0.2833	0.3068	0.4245	0.6792	1.0000		
1971	10.4	0.1131	0.2787	0.2537	0.2747	0.3802	0.6083	0.8955		
1972	6.9	0.1053	0.2595	0.2363	0.2558	0.3540	0.5664	0.8338		
1973	8.2	0.0967	0.2383	0.2168	0.2349	0.3251	0.5201	0.7658		
1974	11.2	0.0859	0.2117	0.1927	0.2087	0.2888	0.4621	0.6803		
1975	14.7	0.7333	0.1807	0.1645	0.1781	0.2465	0.3943	0.5806		
1976	16.9	0.0609	0.1501	0.1366	0.1480	0.2048	0.3276	0.4824		
1977	14.4	0.0522	0.1285	0.1170	0.1267	0.1753	0.2805	0.4130		
1978	11.9	0.0459	0.1132	0.1030	0.1116	0.1544	0.2470	0.3637		
1979	13.7	0.0396	0.0976	0.0889	0.0963	0.1332	0.2131	0.3138		
1980	17.1	0.0328	0.0809	0.0737	0.0798	0.1104	0.1766	0.2600	1.0000	
1981	15.5	0.0278	0.0684	0.0623	0.0674	0.0933	0.1493	0.2198	0.8453	
1982	16.1	0.0233	0.0574	0.0523	0.0566	0.0798	0.1253	0.1845	0.7094	
1983	7.4	0.0216	0.0532	0.0484	0.0524	0.0725	0.1160	0.1708	0.6570	
1984	6.1	0.0203	0.0499	0.0455	0.0492	0.0681	0.1090	0.1605	0.6171	
1985	15.5	0.0171	0.0422	0.0384	0.0416	0.0576	0.0921	0.1356	0.5216	
1986	13.2	0.0149	0.0366	0.0333	0.0361	0.0500	0.0799	0.1177	0.4526	
1987	15.7	0.0125	0.0309	0.0281	0.0304	0.0421	0.0674	0.0992	0.3815	
1988	6.4	0.0117	0.0289	0.0263	0.0285	0.0394	0.0631	0.0929	0.3572	
1989	5.7	0.0111	0.0273	0.0248	0.0269	0.0372	0.0595	0.0876	0.3368	
1990	6.1	0.0104	0.0256	0.0233	0.0253	0.0349	0.0559	0.0823	0.3163	1.0000
1991	4.5	0.0099	0.0244	0.0223	0.0242	0.0333	0.0534	0.0786	0.3021	0.9550
1992	0.8	0.0098	0.0242	0.0221	0.0240	0.0330	0.0530	0.0778	0.2997	0.9474
1993	1.4	0.0097	0.0239	0.0218	0.0237	0.0325	0.0523	0.0767	0.2955	0.9341
1994	2.8	0.0094	0.0232	0.0211	0.0230	0.0316	0.0508	0.0745	0.2872	0.9079
1995	2.9	0.0091	0.0225	0.0205	0.0223	0.0307	0.04933	0.0723	0.2788	0.8816
1996	2.4	0.0089	0.0220	0.0200	0.0218	0.0300	0.0481	0.0706	0.2721	0.8604
1997	0.8	0.0088	0.0218	0.0198	0.0216	0.0298	0.0477	0.07	0.2699	0.8535

Source: Lincoln University

SECTION 3

LIVESTOCK, CROPPING and HORTICULTURAL GROSS MARGINS

ENTERPRISE ANALYSIS

3. LIVESTOCK, CROPPING and HORTICULTURAL GROSS MARGINS (ENTERPRISE ANALYSIS)

3.1 INTRODUCTION

General:

The gross margins included in this manual relate, where possible, to the "real farm" (or orchard) situation. Cost, price and yield estimates for the stock and crop enterprises are based largely on Canterbury figures. The horticultural gross margins have been derived from a variety of information sources.

Use of Gross Margins:

Gross Margins can be used as the first step in comparing the profitability of different enterprises. The mathematics involved is simple - the direct or variable costs associated with a particular enterprise are subtracted from the total income from that enterprise. The gross margin result is then normally expressed in terms of dollars per stock unit or per hectare.

Direct or variable costs include items such as animal health costs, and harvesting costs. They do not include costs common to all enterprises, such as rates and interest payments (fixed costs).

Warning:

Gross margins are a simple means of comparing enterprises, but care must be taken when interpreting the results. It is important to note that gross margins make the assumption that each enterprise is independent of all other farm or orchard activities, both technically and financially. They also assume that each additional unit of production is worth as much as, and costs as much as, each preceding unit. Note also that different properties are likely to show differing gross margin returns for identical enterprises, because yields and costs will differ according to each individual property.

A critical evaluation of the gross margin technique will reveal further limitations with this form of analysis. In many instances, the farmer or grower will find it necessary to go the next step, and that is to prepare partial budgets or full budgets in order to further compare alternative enterprises.

Explanation of Tables:

Some Gross Margins are accompanied by a 'sensitivity' table, which shows how the profitability of the enterprise will differ if different yields, prices etc. are used in the analysis. The central, boxed, figure in the table is the gross margin result from the example used.

Interest and Supplementary Feed Costs:

Interest and supplementary feed costs are normally excluded from gross margins when comparing enterprises (in particular livestock enterprises) for the same property.

However a partial budgeting approach may be adopted with livestock enterprises, including estimates of interest and feed costs in order to provide a more accurate indication of actual returns. The interest cost takes account of the high capital requirements of some enterprises, and the fact that in many instances borrowed capital is involved. The interest used here is that of a typical stock and station agent livestock loan as at February 1998. Feed costs can be ignored where there is no change in the supplementary feed required to change from one stock enterprise to another. Where there is a change however, all additional supplementary feed costs, should be included.

NOTE: ALL FIGURES USED IN THE CALCULATIONS ARE GST EXCLUSIVE.

3.2 LIVESTOCK GROSS MARGINS

Prices and costs used are those ruling in early 1998.

The gross margins should therefore be adjusted as costs, prices, policies and production parameters change.

The assumption is made that the farm has suitable layout, buildings, equipment and sufficient labour to carry out the routine work associated with each enterprise. Shearing and dipping are done by contract.

Assistance in the preparation of these gross margins was given by staff of the Lincoln University Farm Advisory Service and Alastair Nicol from the Animal and Food Sciences Division.

3.2.1 Sheep - Breeding ewe flock

SHEEP GROSS MARGIN

Crossbred Ewe Flock. Breeding Own Replacements.
(Hill country)

Capital Stock Wintered:

	<u>No.</u>		<u>Total</u>	<u>S.U.</u>	<u>Total S.U.</u>
Breeding Ewes	735 @	\$45	\$33,075	1	735
2 th Ewes	265 @	\$60	\$15,900	1	265
Ewe Hoggets	390 @	\$40	\$15,600	0.7	273
Rams	20 @	\$100	\$2,000	0.8	16
	1,410		\$66,575		1,289

Dollar Investment in sheep per stock unit \$ 51.65

Production Parameters:

Lambing - survival to sale.	105%
Death rate.	5%
Cull hoggets sold as hoggets/2ths	
Wether lambs sold prime	60%
Sell genuine 5 year old ewes.	
Ewes wool clip (kg)	4.5
Hogget wool clip (kg)	3.0
Ewe lamb wool clip (kg)	1.5

Income:

Prime wether lambs	315 @	\$44.00	\$13,860
Store m.s. lambs	345 @	\$25.00	\$8,625
Cull hogget/2ths	82 @	\$45.00	\$3,690
5 year old ewes	140 @	\$30.00	\$4,200
Cull ewes to works	44 @	\$25.00	\$1,100
(Average price)	926	\$ 33.99	
Wool (kg)	5960 @	\$2.40 (net)	\$14,304

TOTAL INCOME \$45,779

Expenditure:

Shearing -				
Sheep	990 @	\$215 per 100	\$2,128.50	
Hoggets	370 @	\$215 per 100	\$795.50	
Lambs	390 @	\$185 per 100	\$721.50	
Tup crutch - ewes	1010 @	\$61 per 100	\$616.10	
Main crutch - ewes	990 @	\$85 per 100	\$841.50	
Crutch - hoggets	370 @	\$61 per 100	\$225.70	\$5,328.80
Woolshed expenses - plant, packs etc.				\$350.00
Animal Health -				
Drench ewes pre-lamb	990 @	\$0.06	\$59.40	
Drench lambs (doses)	2985 @	\$0.05	\$149.25	
(replacements drenched 5 times, stores 3 times)				
Vaccinate ewes	990 @	\$0.42	\$415.80	
Vaccinate hoggets	370 @	\$0.34	\$125.80	
Eartags, footrot and docking etc			\$550.00	
Dipping - sheep	1000 @	\$0.90	\$900.00	
- lambs	690 @	\$0.70	\$483.00	\$2,683.25
Cartage - (based on 100km travel)				
Prime lambs	315 @	\$1.80	\$567.00	
Store lambs	345 @	\$1.00	\$345.00	
Cull hgts/2th/5yr ewes	222 @	\$1.85	\$410.70	
Works ewes	44 @	\$1.50	\$66.00	
Wool - bales	33 @	\$12.00	\$396.00	\$1,784.70
Selling Charges -				
Yard fees - sheep	567 @	\$0.55	\$311.85	
Commission -				
- saleyards	\$16,515 @	5.5%	\$908.33	
- other stock	\$14,960 @	5.5%	\$822.80	\$2,042.98
Ram Purchase	5 @	\$375		\$1,875.00

TOTAL DIRECT COSTS \$14,064.73

TOTAL GROSS MARGIN (before interest)	\$31,714.28
GROSS MARGIN per dollar invested in sheep	\$ 0.48
<u>GROSS MARGIN per Stock Unit</u>	<u>\$ 24.60</u>

**Gross Margin per Stock Unit at Various
Stock Sale and Wool Prices.**

		Wool Price \$/kg (net)		
		\$1.92	\$2.40	\$2.88
AVERAGE STOCK	\$27.19	\$17.64	\$19.86	\$22.08
SALE PRICE	\$33.99	\$22.38	\$24.60	\$26.82
\$/HEAD	\$40.79	\$27.13	\$29.35	\$31.57

Interest Costs:

Interest on Capital Stock Value:			
\$66,575	@	13%	\$ 8.655
RETURN per Stock Unit (after interest)			\$ 17.89

Eartags, footrot and docking etc			\$300.00	
Dipping - purchased ewes already dipped				
ewes	418 @	\$0.90	\$376.20	
lambs	850 @	\$0.70	\$595.00	\$1,926.40
Cartage - (based on 50km travel except for replacement ewes, at 70km)				
Prime lambs	1200 @	\$1.20	\$1,440.00	
Works ewes	527 @	\$0.90	\$474.30	
Replacement ewes	595 @	\$2.00	\$1,190.00	
Wool - bales	21 @	\$8.01	\$168.21	\$3,272.51
Ram Purchase	4 @	\$375		\$1,500.00
TOTAL DIRECT COSTS				\$27,938.14
TOTAL GROSS MARGIN (before interest)				\$45,482.86
GROSS MARGIN per dollar invested in sheep				\$1.44
<u>GROSS MARGIN per Stock Unit</u>				<u>\$44.91</u>

**Gross Margin per Stock Unit at Various
Lamb and Wool Prices.**

		Wool Price \$/kg (net)		
		\$1.96	\$2.45	\$2.94
LAMB	\$36.00	\$32.39	\$34.24	\$36.10
PRICE	\$45.00	\$43.05	\$44.91	\$46.77
S/HEAD	\$54.00	\$53.71	\$55.57	\$57.43

Interest Costs:

Interest on Capital Stock Value:			
\$31,600	@	13%	\$4,108.00
RETURN per Stock Unit (after interest)			\$40.85

3.2.3 Sheep - Merino Ewe

SHEEP GROSS MARGIN

Merino Ewe Flock, Breeding Own Replacements
(Low country)

Capital Stock Wintered:

	<u>No.</u>		<u>Total</u>	<u>S.U.</u>	<u>Total S.U.</u>
Breeding Ewes	850 @	\$38	\$32,300	0.85	722.5
2 th Ewes	150 @	\$55	\$8,250	0.8	120
Hoggets (m.s.)	850 @	\$35	\$29,750	0.6	510
Rams	13 @	\$150	\$1,950	0.7	9
	1,863		\$72,250		1,362
Dollar Investment in sheep per stock unit			\$53.06		

Production Parameters:

Lambing - survival to winter	85%
Death rate (ewes)	5%
All lambs/hoggets wintered, surplus sold after shearing.	
Percentage of 2th entering the flock	15%
Ewes wool clip (kg)	4
Hogget wool clip (kg)	3.1
(average 21 and 19 micron diameter, respectively).	

Income:

Hoggets (m.s.)	680 @	\$30.00 (net)	\$20,400	
Works ewes	100 @	\$18.00	\$1,800	
Wool (kg)	4000 @	\$5.70 (net)	\$22,800	
Wool (kg)	2635 @	\$7.20 (net)	\$18,972	
Average wool price	6635 kg	\$6.30		
TOTAL INCOME				\$63,972.00

Expenditure:

Shearing -				
Sheep	1000 @	\$265 per 100	\$2,650.00	
Hoggets	845 @	\$265 per 100	\$2,239.25	
Crutch ewes	1015 @	\$85 per 100	\$862.75	
Crutch hoggets	850 @	\$61 per 100	\$518.50	
Crutch hoggets	850 @	\$61 per 100	\$518.50	
Crutch lambs	900 @	\$40 per 100	\$360.00	\$6,630.50

Woolshed expenses - plant, packs etc.					
Plant, packs etc				\$400.00	
Classing etc. approx.	@	\$0.27	per head	\$500.00	\$900.00
Animal Health -					
Drench ewes (2x)	2000	@	\$0.12	\$240.00	
Drench lambs/hoggets	4850	@	\$0.08	\$388.00	
Vaccinate ewes	990	@	\$0.42	\$415.80	
Vaccinate hoggets	160	@	\$0.35	\$56.00	
Footvax	2000	@	\$0.50	\$1,000.00	
Fly spray, zinc sulphate, tags etc				\$800.00	
Dipping - all sheep	1900	@	\$0.90	\$1,710.00	\$4,609.80
Cartage - (based on 70km travel)					
Hoggets	736	@	\$1.55	\$1,140.80	
Works ewes	100	@	\$1.20	\$120.00	
Wool - bales	40	@	\$9.75	\$390.00	\$1,650.80
Ram Purchase	3	@	\$375		\$1,125.00

TOTAL DIRECT COSTS \$14,916.10

TOTAL GROSS MARGIN (before interest) \$49,055.90

GROSS MARGIN per dollar invested in sheep \$0.68

GROSS MARGIN per Stock Unit \$36.03

Gross Margin per Stock Unit at Various hogget and wool prices

		Average Wool Price \$/kg (net)		
		\$5.04	\$6.30	\$7.55
AVE HOGGET	\$24.00	\$26.90	\$33.03	\$39.17
PRICE	\$30.00	\$29.89	\$36.03	\$42.16
\$/HEAD (net)	\$36.00	\$32.89	\$39.02	\$45.16

Interest on Capital Stock Value:

\$72,250 @ 13% \$ 9,393

RETURN per Stock Unit (after interest) \$ 29.13

3.2.4 Beef - Breeding cow

BEEF GROSS MARGIN

Breeding Cow Herd, Selling Steers
and Surplus Heifers at approximately 18 months

Capital Stock Wintered:

	<u>No.</u>		<u>Total</u>	<u>S.U.</u>	<u>Total S.U.</u>
Breeding Cows	82 @	\$300	\$24,600	5.5	451
I.C. R2yr heifers	18 @	\$400	\$7,200	5.5	99
R1yr Heifers	43 @	\$200	\$8,600	3.5	151
R1yr Steers	43 @	\$275	\$11,825	4	172
Breeding Bulls	3 @	\$1,400	\$4,200	5.5	17
	189		\$56,425		889
Dollar Investment in cattle per stock unit			\$63.47		

Production Parameters:

Calves weaned	86%
Death rate	3%
Heifers entered in herd each year	18%
Angus/Hereford cows mated to Angus or Hereford bulls.	
Steers and surplus heifers sold as forward store, on farm.	

Income:

18 month steers	42 @	\$400 (net)	\$16,800	
18 month heifers	24 @	\$350 (net)	\$8,400	
Average price of 18 month cattle		\$382		
Cull Cows	15 @	\$200 (net)	\$3,000	
Bull	1 @	\$600 (net)	\$600	
TOTAL INCOME				\$28,800

Expenditure:

Animal Health -				
Drench calves (3x)	258 @	\$0.78	\$201.24	
Pregnancy test cows	100 @	\$1.58	\$158.00	\$359.24
Bull purchase - landed				\$2,250
Freight and commission (stock net on farm)				\$0.00
TOTAL DIRECT COSTS				\$2,609.24

TOTAL GROSS MARGIN (before interest)	\$26,190.76
GROSS MARGIN per dollar invested in cattle	\$0.46
<u>GROSS MARGIN per Stock Unit</u>	<u>\$29.25</u>

Gross Margin per Stock Unit at various weaning percentages and selling prices (18 month cattle):

		AVERAGE SALE PRICE \$/HEAD of 18 month cattle		
		\$324.70	\$382.00	\$439.30
% WEANED	77%	\$21.99	\$25.67	\$29.36
	86%	\$25.04	\$29.26	\$33.48
	95%	\$28.09	\$32.85	\$37.61

Interest and Feed Costs:

Interest on Capital Stock Value:		
\$56,425 @ 13%	\$7,335.25	
Feed - Buy in additional hay (bales)		
700 @ \$ 4.00	\$2,800.00	\$10,135.25
RETURN per stock unit (after interest and feed)		\$18.06

3.2.5 Bull Beef

BULL GROSS MARGIN

Friesian Bulls purchased as weaners
sold at 19 to 24 months of age
(70% killed at 20 months)

Stock Wintered:

	<u>No.</u>		<u>Total</u>	<u>S.U.</u>	<u>Total S.U.</u>
Rsg 1 yr Friesian Bulls	70 @	\$200	\$14,000	3.5	245
Rsg 2 yr Friesian Bulls	20 @	\$420	\$8,400	6	120
	90		\$22,400		365

Dollar Investment in beef per stock unit \$61

Production Parameters:

Death rate. 3%

Sell majority 70% at 19 to 21 months of age between March and May, retain balance until Oct/Nov (sell at 24 months of age). The assumption is made that prices normally rise during May to August, with an average price for the period being \$1.80/kg.

Income:

Bulls (270 kg C.W.) 68 @ \$1.80 per kg \$31,824.00

TOTAL INCOME \$31,824.00

Expenditure:

Weaner Bulls (100 kg) 72 @ \$1.45 / kg \$10,440.00

Animal Health

Anthelminitics (6x) 420 @ \$0.60 / dose \$252.00

Pour on (2x) 70 @ \$1.48 / dose \$103.60

70 @ \$2.90 / dose \$203.00

Cobalt injection 70 @ \$0.72 / dose \$50.40 \$609.00

Copper Bullet 70 @ \$2.27 \$158.90 \$250.00

Five in One (2x) 140 @ \$0.23 \$32.20

Transport based on 50km

Weaners to Farm 72 @ \$5.50 \$396.00

Finished Bulls to Work: 68 @ \$12.00 \$816.00 \$1,212.00

Levies - AHB, Federated Farmers, NZMB

68 @ \$12.91 per head \$877.88

TOTAL DIRECT COSTS	\$13,388.88
TOTAL GROSS MARGIN (before interest)	\$18,435.12
GROSS MARGIN per dollar invested in cattle	\$0.82
<u>GROSS MARGIN per Stock Unit</u>	<u>\$50.51</u>

**Gross Margin per Stock Unit at Various
weaner and bull prices**

		BULL SCHEDULE \$/kg		
		\$1.40	\$1.80	\$2.20
WEANER	\$1.25	\$35.33	\$54.51	\$73.69
PRICE	\$1.45	\$31.33	\$50.51	\$69.69
\$/kg	\$1.65	\$27.32	\$46.50	\$65.68

Interest and Feed Costs:

Interest on Capital Stock Value:	
\$22,400 @ 13%	\$2,912.00
RETURN per stock unit (after interest)	\$42.53

3.2.6 Dairy

DAIRY GROSS MARGIN

Factory Supply herd

Capital Stock Wintered:

	<u>No.</u>		<u>Total</u>	<u>S.U.</u>	<u>Total S.U.</u>
Milking Cows	156 @	\$850	\$132,600	7	1092
In Calf Milking Heifers	44 @	\$650	\$28,600	6.5	286
R 1 Yr Heifers	46 @	\$400	\$18,400	3.5	161
	246		\$179,600		1,539

Dollar Investment in cattle per stock unit	\$116.70
--------------------------------------------	----------

Production Parameters:

Milk solids production per cow	300 kg
Calving - live calves	90% Surplus sold within two weeks
Death Rate	5%
Culling Rate	17%

Income:

Milk Solids (kg)	60000 @	\$3.25 per kg	\$195,000
Cull cows	34 @	\$250.00 (net)	\$8,500
M.S. calves	132 @	\$42.00 (net)	\$5,544

TOTAL INCOME	\$209,044
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Expenditure:

Animal Health	200 @	\$39.00 per cow	\$7,800
(i.e. bloat, magnesium, mastitis, vet etc)			

Artificial Breeding

Premier Sires Insemination

Cows	100 @	\$20.00 per cow	\$2,000	
Cows	100 @	\$19.10 per cow	\$1,910	\$3,910

Herd Testing (self sample, 4 tests per year)

Herd Fee			\$275	
Visits	4 @	\$90.00	\$360	
4 tests	200 @	\$1.40	\$1,120	\$1,755

Electricity - shed	200 @	\$22.00 per cow	\$4,400
Shed expenses	200 @	\$25.00 per cow	\$5,000

(i.e. detergent, rubberware, filters etc)

TOTAL DIRECT COSTS	\$22,865
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TOTAL GROSS MARGIN (before feed costs and interest)	\$186,179
GROSS MARGIN per dollar invested in cattle	\$1.04
<u>GROSS MARGIN per Stock Unit</u>	<u>\$120.97</u>

Gross Margin per Stock Unit at various milksolids production levels and milksolids prices:

		MILKSOLIDS PRICE \$/kg		
		\$2.93	\$3.25	\$3.58
kg	270	\$96.90	\$108.30	\$119.71
Milksolids	300	\$108.30	\$120.97	\$133.64
per cow	330	\$119.71	\$133.64	\$147.58

Interest and Feed Costs:

Interest on Capital Stock Value:			
\$179,600	@	13%	\$23,348
Feed - Buy in 20% of total requirement per cow (over whole herd) (i.e. grazing off, hay etc)			
@	\$ 50.00	\$10,000	\$33,348
RETURN per stock unit (after interest and feed)			\$99.31

3.2.7 Deer - Finishing

RED DEER GROSS MARGIN

All Stag Policy - Buy in
weaners and kill at 14 months

Capital Stock Wintered:

	<u>No.</u>		<u>Total</u>	<u>S.U.</u>	<u>Total S.U.</u>
Weaner Stags (50kg lwt)	100 @	\$150	\$15,000	1.4	140
Dollar Investment in deer per stock unit			\$ 107.14		

Production Parameters:

Death rate.	3%
Carcase weight at Slaughter (14 months)	55 kg
Spiker velvet harvested; proceeds pay for cost of harvesting velvet from all stock	

Income:

Stags, 55 kg carcass weight	97 @	\$5.50 /kg	\$29,342.50
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Expenditure:

Weaner stags (50 kg lwt)	100 @	\$3.00 /kg	\$15,000
Animal Health (per head)	100 @	\$7.25	\$725.00
Freight	100 @	\$9.00	\$900.00
	97 @	\$11.00	\$1,067.00
Levies -			
GIB & AHB venison levy	5335 @	\$0.26 /kg	\$1,387.10
Meat inspection fee	97 @	\$12.91 /hd	\$1,252.27
			\$2,639.37

TOTAL DIRECT COSTS \$20,331.37

TOTAL GROSS MARGIN (before feed costs and interest) \$9,011.13

GROSS MARGIN per dollar invested in deer \$0.60

GROSS MARGIN per Stock Unit \$64.37

Note: Refer to table on the next page for the sensitivity analysis.

**Gross Margin per Stock Unit at Various
weaner purchase prices and venison schedule prices.**

		VENISON SCHEDULE \$/KG		
		\$4.51	\$5.50	\$6.49
WEANER	\$3.45	\$26.32	\$64.04	\$101.77
PURCHASE PRICE	\$3.00	\$26.64	\$64.37	\$102.09
\$/kg Lwt	\$2.55	\$26.96	\$64.69	\$102.41

Interest and Feed Costs:

Interest on Capital Stock Value:

\$15,000 @ 13% \$1,950.00

Winter Feed - Buy in additional hay and concentrates

@ \$12 per head \$1,200.00 \$3,150.00

RETURN per Stock Unit (after interest and feed) \$41.87

3.2.8 Deer - Breeding Herd

DEER GROSS MARGIN

Red Deer Herd, Selling 12 Month Stags
and Surplus Weaner Hinds.

Capital Stock Wintered:

	<u>No.</u>		<u>Total</u>	<u>S.U.</u>	<u>Total S.U.</u>
M.A. Hinds	130 @	\$350	\$45,500	2	260
18 Month Hinds	20 @	\$250	\$5,000	2	40
6 Month Hinds	21 @	\$120	\$2,520	1.2	25
6 Month Stags	64 @	\$120	\$7,680	1.6	102
Breeding Stags	5 @	\$2,000	\$10,000	2.8	14
	240		\$70,700		442

Dollar Investment in deer per stock unit	\$ 160.10
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Production Parameters:

Calving - survival to sale	85%
Death rate.	3%
Rising 2 year hinds entering herd each year	15%
12 month stags slaughtered at 55 kg C.W.	
(Spiker velvet harvested; proceeds pay for cost of harvesting velvet from all young stags.)	
Surplus weaner hinds sold net on farm.	
All breeding stock over 3 months T.B. tested every year (herd previously accredited).	

Income:

Stags (55 kg C.W.)	61 @	\$5.50 per kg	\$18,453	
Weaner hinds @ 50 kg Lwt	43 @	\$2.50 per kg	\$5,375	
C.f.a. hinds	14 @	\$225	\$3,150	
C.f.a. stag	1 @	\$400	\$400	\$27,378
Velvet (5 breeding stags)	15 @	\$50		\$750
TOTAL INCOME				\$28,127.50

Expenditure:

Sire stag	1 @	\$2,000		\$2,000
Animal Health	240 @	\$9.25		\$2,220
Velveting Stags	5 @	\$23.00		\$115
Freight	61 @	\$9.00	\$549.00	
	15 @	\$11.00	\$165.00	\$714.00

Levies -

GIB & AHB Venison levy	3455 @	\$0.26 /kg	\$898.30	
Meat inspection fee	62 @	\$12.91 /kg	\$800.42	
GIB & AHB Velvet levy	15 @	\$3.53	\$52.95	\$1,751.67

TOTAL DIRECT COSTS \$6,800.67

TOTAL GROSS MARGIN (before interest) \$21,326.83

GROSS MARGIN per dollar invested in deer \$0.30

GROSS MARGIN per Stock Unit \$48.29

**Gross Margin per Stock Unit at Various
weaner hind prices and venison schedule prices.**

		VENISON SCHEDULE \$/kg		
		\$4.60	\$5.50	\$6.40
WEANER	\$2.00	\$39.01	\$45.86	\$52.71
HIND PRICE	\$2.50	\$41.44	\$48.29	\$55.15
\$/kgLwt	\$3.00	\$43.88	\$50.73	\$57.58

Interest and Feed Costs:

Interest on Capital Stock Value:

\$70,700 @ 13% \$9,191.00

Winter Feed - Buy in additional hay and concentrates

@ \$12 per head \$2,880.00 \$12,071.00

RETURN per Stock Unit (after interest and feed) \$20.96

3.2.9 Deer - Velveting

DEER GROSS MARGIN

Velvet Production - Red deer

Capital Stock Wintered:

	<u>No.</u>		<u>Total</u>	<u>S.U.</u>	<u>Total S.U.</u>
Spikers	30 @	\$200	\$6,000	1.8	54
Rsg 2 yr Stags	15 @	\$300	\$4,500	2.25	34
Rsg 3 yr Stags	13 @	\$400	\$5,200	2.5	33
M.A. Stags	58 @	\$400	\$23,200	2.5	145
	116		\$38,900		265

Dollar Investment in deer per stock unit \$146.65

Production Parameters:

Death rate. 3%
Velvet yields, ranges and prices are extremely variable. The following assumptions have been made for this gross margin.

Spiker	0.25 kg	Spiker grade
2 yr	1.5 kg	C grade
3 yr	2 kg	B grade
M.A. Stags	3 kg	A grade

No regrowth income is budgeted.

Income:

Velvet				
Spiker	30 @	0.25 kg @	\$30 /kg Spiker	\$225.00
2yr Stags	15 @	1.5 kg @	\$35 /kg C grade	\$787.50
3yr Stags	13 @	2 kg @	\$45 /kg B grade	\$1,170.00
M.A. Stags	58 @	3 kg @	\$60 /kg A grade	\$10,440.00
Average price		230 kg @	\$55	
Cull stags	20 @	70 kg @	\$5.50 per kg	\$7,700.00
TOTAL INCOME				\$20,322.50

Expenditure:

Weaner stags	30 @	\$140		\$4,200.00
Velveting using veterinarian -				
1st cut	116 @	\$28	\$3,248.00	
2nd cut	35 @	\$25	\$875.00	\$4,123.00
Animal health				
Pour-on	232 @	\$2.46	\$570.72	
Copper bullet(10g)	116 @	\$2.27	\$263.32	\$834.04
Levies -				
Venison				
MAF inspection	10 @	\$12.91	\$129.10	
G.I.B.	1400 @	\$0.26	\$364.00	
Velvet G.I.B & AHB	230 @	\$3.53	\$811.90	\$1,305.00
TOTAL DIRECT COSTS				\$10,462.04
TOTAL GROSS MARGIN (before interest)				\$9,860.46
GROSS MARGIN per dollar invested in deer				\$0.25
<u>GROSS MARGIN per Stock Unit</u>				<u>\$37.17</u>

**Gross Margin per Stock Unit at Various
velvet prices and velvet yields.**

		AVERAGE VELVET YIELD (kg/head)		
		207.00	230.00	253.00
AVERAGE	\$45.00	\$24.40	\$28.61	\$32.82
VELVET	\$54.88	\$32.11	\$37.17	\$42.24
PRICE	\$64.76	\$39.82	\$45.74	\$51.66
\$/KG				

Interest on Capital Stock Value:			
\$38,900 @	13%	\$5,057.00	
Winter Feed - Buy in additional feed			
@	\$12 per head	\$1,392.00	\$6,449.00
RETURN per Stock Unit (after interest and feed)			
\$12.86			

3.2.10 Pig - Breeding

PIG GROSS MARGIN Housed Sows Selling Weaners

Capital Stock:

Sows	50 @	\$350	\$17,500	
Boars	2 @	\$1,100	\$2,200	\$19,700

Production Parameters:

Weaners sold per sow per year	20
Sow replacement rate	40%
Boar replacement rate	50%
Ratio of feed used to pigmeat sold (kg)	6.68
Meal cost as a percentage of total income	64%
Litters per sow per year	2.2

Income:

Weaners at 20kg	1000 @	\$65.00	\$65,000.00	
Chopper Sows	14 @	\$140.00	\$1,960.00	
Chopper Boar	1 @	\$140.00	\$140.00	
TOTAL INCOME				\$67,100.00

Expenditure:

Replacement Stock Purchase -				
Boar	1 @	\$850.00	\$850.00	
Gilts	20 @	\$350.00	\$7,000.00	\$7,850.00
Home milled feed-				
Breeder (t)	64.7 @	\$305.00	\$19,733.50	
Creep (t)	3.1 @	\$350.00	\$1,085.00	
Weaner (t)	22.3 @	\$465.00	\$10,369.50	\$31,188.00
Animal Health	@	\$30.00	per Sow	\$1,500.00
Repairs to pens, feeders and water supply (in pen)				\$2,000.00
Electricity				\$1,500.00
TOTAL DIRECT COSTS				\$44,038.00
TOTAL GROSS MARGIN (before interest)				\$23,062.00
GROSS MARGIN per sow				\$461.24
GROSS MARGIN per \$ invested in pigs				\$1.17

**Gross Margin per Sow
at varying weaner prices and feed costs.**

		WEANER PRICE \$/HEAD		
		\$58.50	\$65.00	\$71.50
Average Feed Cost	\$380.76	\$268.86	\$398.86	\$528.86
Used \$/t	\$346.15	\$331.24	\$461.24	\$591.24
(Breeder Creep & Weaner)	\$311.53	\$393.62	\$523.62	\$653.62

Interest Cost:

Interest on Capital Stock Value		
\$19,700 @	13% per annum	\$2,561.00
Return per pig after interest		\$394.25

3.2.11 Pig - Finishing

PIG GROSS MARGIN
Purchase Weaners and Finish
to 95% Bacon 5% Pork

Capital Stock:

Weaners	1000 @	\$65.00	\$65,000.00
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Production Parameters:

Death Rate - Pork	2%
- Bacon	2.5%
Carcase Weight - Pork	42 kg
- Bacon	65 kg
Ratio of feed used to pigmeat sold (kg)	3.52
Meal cost as a percentage of total income	46%
Purchase to finishing 13 weeks	
Buying 20 kg weaners	

Income:

Porkers	49 @	\$116.12	\$5,689.88
Baconers	926 @	\$183.70	\$170,106.20

TOTAL INCOME	\$175,796.08
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Expenditure:

Replacement stock purchase			
weaners	1000 @	\$65.00	\$65,000.00
Home milled feed -			
Grower mix (t)	177 @	\$460.00	\$81,420.00
Animal Health per weaner	@	\$4.00	\$4,000.00
Repairs - water supply (in-pen), pens and feeders			\$2,000.00
Electricity			\$2,000.00
Freight @ \$1 per weaner and \$3 per Porker/Baconer			\$4,000.00

TOTAL DIRECT COSTS	\$158,420.00
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TOTAL GROSS MARGIN (before interest)	\$17,376.08
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GROSS MARGIN per weaner	\$17.38
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<u>GROSS MARGIN per \$ Invested</u>	\$0.27
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**Gross Margin per Weaner
at various Baconer prices and feed costs**

		BACONER PRICE \$/head		
		\$165.33	\$183.70	\$202.07
Grower	\$506.00	(\$7.78)	\$9.23	\$26.24
Feed	\$460.00	\$0.37	\$17.38	\$34.39
\$/tonne	\$414.00	\$8.51	\$25.52	\$42.53

Interest Cost:

Interest on Capital Stock Value

\$65,000 @ 13% per annum (13 weeks) \$2,112.50

Return per weaner after interest \$15.26

3.2.12 Poultry - Eggs

POULTRY GROSS MARGIN

Egg Production

Capital Stock: (average value)

Laying Hens	1000 @	\$4.25	\$4,250.00
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Production Parameters:

24 dozen eggs per laying hen (laying life 12 months)

4 % Deaths (50% of deaths replaced during the year)

Income:

Eggs	24000 @	\$1.47	\$35,280.00
Salvage Value	980 @	\$0.05 per hen	\$49.00
TOTAL INCOME			\$35,329.00

Expenditure:

Replacement Pullets	1020 @	\$8.50 per head	\$8,670.00
Feed	24000 @	\$0.74 per dozen eggs	\$17,760.00
Power	24000 @	\$0.02 per dozen eggs	\$480.00
Repairs to caging	24000 @	\$0.02 per dozen eggs	\$480.00
Packaging, Freight to supermarket	1020 @	\$0.25 per dozen eggs	\$6,000.00
TOTAL DIRECT COSTS			\$33,390.00
TOTAL GROSS MARGIN per 1000 hens (before interest)			\$1,939.00
<u>GROSS MARGIN per dollar invested in hens</u>			\$0.46

**Gross Margin per 1000 hens at various
feed and egg prices.**

		EGG PRICE \$ per dozen		
		\$1.32	\$1.47	\$1.62
FEED COST	\$0.81	(\$3,365.00)	\$163.00	\$3,691.00
per dozen eggs	\$0.74	(\$1,589.00)	\$1,939.00	\$5,467.00
produced	\$0.67	\$187.00	\$3,715.00	\$7,243.00

Interest Cost:

Interest on Capital Stock Value:

\$ 3,750 @ 13%

\$487.50

RETURN per 1000 hens (after interest)

\$1,451.50

3.2.13 Poultry - Broiler

POULTRY GROSS MARGIN

Broiler production

Production Parameters:

Farm Size (birds placed) 45000

Runs (per year) 6

Deaths 4.0%

Birds and feed are supplied by the company.

Income:

Birds 259200 @ \$0.470 \$121,824.00

Manure \$4,216.00

TOTAL INCOME \$126,040.00

Expenditure:

Power 6 @ \$1,950.00 \$11,700.00

Shavings 6 @ \$600.00 \$3,600.00

Cleaning 6 @ \$700.00 \$4,200.00

Insurance (Birds) 6 @ \$200.00 \$1,200.00

Repairs & Maintenance 6 @ \$2,000.00 \$12,000.00

TOTAL DIRECT COSTS \$32,700.00

TOTAL GROSS MARGIN \$93,340.00

GROSS MARGIN per bird \$0.35

3.3 CROP GROSS MARGINS

The following gross margins relate to an intensive cropping farm in Canterbury, on a medium soil type.

Care should therefore be taken when interpreting these results, as yield and cost estimates will differ according to each individual farm.

Assumptions made are: - All cultivation work carried out by the farmer.
- All spraying and harvesting done by contract.

Assistance in the preparation of these Gross Margins has been given by staff from the Farm Advisory Service, Lincoln University.

3.3.1 Wheat

WHEAT GROSS MARGIN

Income:

Per tonne delivered	6 t/ha	@	\$285.00 /tonne	\$1,710.00
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Expenditure (per hectare):

Cultivation -				
75 kW tractor -	3.4 hrs	@	\$18.68 /hour	\$62.76
(Fuel \$9.52/hr; R&M \$9.16/hr)				
Seed -	220 kg/ha	@	\$820.00 /tonne	\$180.40
Fertilizer -				
Cropmaster 20	100 kg/ha	@	\$384.00 /tonne	\$38.40
Urea	150 kg/ha	@	\$384.00 /tonne	\$57.60
Ammonium Sulphate	100 kg/ha	@	\$254.00 /tonne	\$25.40
				\$121.40
Weed, Pest and Disease -				
Commando	4 l/ha	@	\$27.68 /litre	\$110.72
Cougar	0.8 l/ha	@	\$41.63 /litre	\$31.22
Glean	15 g/ha	@	\$0.96 /gram	\$14.40
Cereous	0.5 l/ha	@	\$101.13 /litre	\$51.58
Cycocel	1.5 l/ha	@	\$19.96 /litre	\$29.94
Applications	4	@	\$27.50	\$110.00
				\$347.86
Irrigation - 75 mm	2 x	@	\$29.00	\$58.00
(Electricity \$19.50; R&M \$9.50)				

Harvest - (in silo; contract)	6 t	@	\$29.30 /tonne	\$175.80
Freight - (silo to port 40 km)	6 t	@	\$21.85 /tonne	\$131.10

TOTAL DIRECT COSTS	\$1,077.32
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<u>GROSS MARGIN per Hectare</u>	<u>\$632.68</u>
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**Gross Margin per Hectare at various
selling prices and yields.**

		YIELD Tonnes/ha		
		5.4	6	6.6
PRICE	\$256.50	\$338.47	\$461.68	\$584.89
PER	\$285.00	\$492.37	\$632.68	\$803.68
TONNE	\$313.50	\$646.27	\$803.68	\$961.09

3.3.2 Barley

BARLEY GROSS MARGIN

Spring Barley (Fleet; Feed)

Income:

Per tonne 6.5 t/ha @ \$220.00 /tonne \$1,430.00

Expenditure (per hectare):

Cultivation -

75 kW tractor - 2.9 hrs @ \$18.68 /hour \$54.92
(Fuel \$9.52/hr; R&M \$9.16/hr)

Seed - 120 kg/ha @ \$690.00 /tonne \$82.80

Fertilizer -

Cropmaster 20 150 kg/ha @ \$384.00 /tonne \$57.60

Urea 200 kg/ha @ \$384.00 /tonne \$76.80 \$134.40

Weed, Pest and Disease -

Avadex 3.5 l/ha @ \$13.86 /litre \$48.51

Cougar 0.5 l/ha @ \$41.63 /litre \$20.82

Glean 12 g/ha @ \$0.96 /gram \$11.52

Applications 3 @ \$27.50 \$82.50 \$163.35

Irrigation - 75 mm 2 x @ \$29.00 \$58.00
(Electricity \$19.50; R&M \$9.50)

Harvest - 6.5 t @ \$29.30 /tonne \$190.45
(in silo; contract)

Freight - 6.5 t @ \$21.65 /tonne \$140.73
(silo to port 40 kms)

TOTAL DIRECT COSTS **\$824.64**

GROSS MARGIN per Hectare **\$605.36**

**Gross Margin per hectare at
various selling prices and yields.**

		YIELD Tonnes/ha		
		5.2	6.5	7.8
PRICE	\$187.00	\$214.00	\$390.86	\$567.73
PER	\$220.00	\$385.60	\$605.36	\$825.13
TONNE	\$253.00	\$557.20	\$819.86	\$1,082.53

3.3.3 White Clover

WHITE CLOVER GROSS MARGIN
(Kopu, specialist wide rows)

Income:

Clover (M.D.) 400 kg @ \$5.00 /kg \$2,000.00

Expenditure(per hectare):

Cultivation (direct drill into crop stubble) -
75 kW tractor - 0.84 hr @ \$18.68 /hour \$15.69
(Fuel \$9.52/hr; R&M \$9.16/hr)
Seed 3 kg/ha @ \$11.11 /kg \$33.33
Fertiliser
Cropmaster 20 50 kg/ha @ \$384.00 /tonne \$19.20
Urea 50 kg/ha @ \$384.00 /tonne \$19.20 \$38.40
Weed, Pest and Disease -
Roundup 1 l/ha @ \$16.00 /litre \$16.00
Phorate 5 kg/ha @ \$7.70 /kg \$38.50
Gallant 2.5 l/ha @ \$77.39 /litre \$193.48
Applications 2 @ \$27.50 \$55.00
Buster 5 l/ha @ \$29.73 /litre \$148.65
Inter row spray 1 @ \$35.00 /ha \$35.00
Reglone 3 l/ha @ \$19.11 /litre \$57.33
Application 1 @ \$27.50 \$27.50 \$571.46
Irrigation 75 mm 3 x @ \$29.00 \$87.00
(Electricity \$19.50; R&M \$9.50)
Mowing 1 ha/hr @ \$16.00 \$16.00
Harvest (contract) 1 ha/hr @ \$165.00 \$165.00
Freight 570 kg @ \$25.00 /tonne \$14.25
Seed Dressing 570 kg @ \$0.33 /kg \$188.10

TOTAL DIRECT COSTS \$1,129.23

GROSS MARGIN per Hectare \$870.77

Gross margin per Hectare at
various selling prices and yields.

		YIELD kg (MD)/Hectare		
		250	400	550
PRICE	\$4.50	\$70.32	\$670.77	\$1,271.22
\$/kg	\$5.00	\$195.32	\$870.77	\$1,546.22
	\$5.50	\$320.32	\$1,070.77	\$1,821.22

3.3.4 Ryegrass

RYEGRASS GROSS MARGIN

(Embassy)

Income:

Seed (Machine Dressed)	1250 kg	@	\$1.70 /kg	\$2,125.00
Straw	7 bales	@	\$15.00 each	\$105.00
TOTAL INCOME				\$2,230.00

Expenditure(per hectare):

Cultivation -				
75 kW tractor -	2.94 hr	@	\$18.68 /hour	\$54.92
(Fuel \$9.52/hr; R&M \$9.16/hr)				
Seed -	10 kg/ha	@	\$4.98 /kg	\$49.80
Fertiliser -				
Cropmaster 20	100 kg/ha	@	\$384.00 /tonne	\$38.40
Urea (split appln.)	260 kg/ha	@	\$384.00 /tonne	\$99.84
Weed, Pest and Disease -				
Roundup	2.5 l/ha	@	\$16.00 /litre	\$40.00
Trimec	3.5 l/ha	@	\$13.60 /litre	\$47.60
Commando	5 l/ha	@	\$27.68 /litre	\$138.40
Folicur	0.75 l/ha	@	\$137.61 /litre	\$103.21
Application costs	4	@	\$27.50	\$110.00
Irrigation (75 mm)	2 x	@	\$28.00	\$56.00
(Elec. \$19.00; R&M \$9.00)				
Harvest - Windrow (contract)		@	\$74.00 /ha	\$74.00
Header (contract)	1 ha/hr	@	\$160.00	\$160.00
Freight - (F.D.)	1.5 t	@	\$25.00 /tonne	\$37.50
Seed Dressing -	1500 kg	@	\$0.16 /kg	\$240.00

TOTAL DIRECT COSTS \$1,249.67

GROSS MARGIN per Hectare \$980.33

**Gross margin per Hectare at
various selling prices and yields.**

		YIELD kg (MD)/ Hectare		
		1000	1250	1500
PRICE	\$1.53	\$440.83	\$767.83	\$1,094.83
\$/kg	\$1.70	\$610.83	\$980.33	\$1,349.83
	\$1.87	\$780.83	\$1,192.83	\$1,604.83

3.3.5 Field Peas

FIELD PEAS GROSS MARGIN (Marrowfat)

Income:

Peas	4 t	@ \$625.00 /tonne	\$2,500.00
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Expenditure (per hectare):

Cultivation -						
75 kW tractor -	2.94 hr	@	\$18.68	/hour		\$54.92
(Fuel \$9.52/hr; R&M \$9.16/hr)						
Seed	290 kg/ha	@	\$600.00	/tonne		\$174.00
Fertilizer -						
Superphosphate	125 kg/ha	@	\$156.00	/tonne		\$19.50
Weed, Pest and Disease -						
Tropotox Plus	2 l/ha	@	\$10.35	/litre	\$20.70	
Bladex	2.5 l/ha	@	\$18.90	/litre	\$47.25	
Topas	300 ml/ha	@	\$102.30	/litre	\$30.69	
Applications	2	@	\$27.50		\$55.00	\$153.64
Irrigation (75 mm)	2 x	@	\$29.00			\$58.00
(Electricity \$19.50; R&M \$9.50)						
Windrow		@	\$74.00	/ha		\$74.00
Harvest -	4 t/ha	@	\$45.00	/tonne		\$180.00
(in silo; contract)						
Freight - (40 km)	4 t/ha	@	\$21.85	/tonne		\$87.40

TOTAL DIRECT COSTS	\$801.46
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GROSS MARGIN per Hectare \$1,698.54

Gross Margin per Hectare at various selling prices and yields.

		YIELD Tonnes/ha		
		3.2	4	4.6
PRICE	\$531.25	\$952.02	\$1,323.54	\$1,602.18
PER	\$625.00	\$1,252.02	\$1,698.54	\$2,033.43
TONNE	\$718.75	\$1,552.02	\$2,073.54	\$2,464.68

3.3.6 Maize

(Source : *N.Z. Vegetable and Potato Growers Federation (Inc.)*)

Note: See Production Cost Module notes in *Section 3.4* for explanation of procedure and disclaimer.

Production Cost Model 1997/98

Rangitikei

<u>Growing Costs Operation</u>	<u>Hours/Qty Hectare</u>	<u>Unit Rate</u>	<u>Total Cost \$ per ha</u>
Liming - 2.5 t/ha every 2 yea	1.25 t/yr	\$65.00 /t	\$81.25
Preparation of Seedbed			
plough 1 time	1.1 hrs	\$65.52 /hr	\$72.07
disc and harrow 1 time	1 hrs	\$56.49 /hr	\$56.49
power and harrow 2 time	1.5 hrs	\$89.15 /hr	\$133.73
level 1 time	0.4 hrs	\$56.49 /hr	\$22.60
Sowing Contract		\$70.00 /hr	\$70.00
seed	90,000 seeds	\$3.56 /1000	\$320.40
nitro 12:10:10	0.25 t	\$691.00 /t	\$172.75
Pre Emergence Spray			
contract boom spray		\$31.00 /ha	\$31.00
roustabout	3 l	\$37.80 /l	\$113.40
Inter-row Cultivation contract		\$30.00	\$30.00
Harvest contract			\$200.00
Maintenance of land			
flail stubble 1 time	1 hrs	\$56.49 /hr	\$56.49
TOTAL GROWING COSTS			\$1,360.17
REVENUE			
Price received per tonne	\$245	\$245	\$245
Crop yield paid weight (tonnes per ha)	7.5	11	15
TOTAL REVENUE	\$1,838	\$2,695	\$3,675
Less costs:			
Cartage \$9.00 per tonne	\$67.50	\$99.00	\$135.00
Drying \$28.50 per tonne	\$213.75	\$313.50	\$427.50
Total	\$281	\$413	\$563
Less growing Costs (from above)	\$1,360	\$1,360	\$1,360
SURPLUS	\$196	\$922	\$1,752

* Editors' Note: See also *Section 1.13.2* for further contract price information.

3.4 PROCESS CROPS - PRODUCTION COST MODELS

Editors' note:

The following production cost models (compiled May 1997) have been kindly provided by the *New Zealand Vegetable and Potato Growers Federation (Inc.)*. The cost models are accompanied by notes on methodology (published here in part) and the Federation's disclaimer:

Methodology:

The cost models are based upon the activities of a "typical" grower using sound growing and other business practices.

The costings are designed to give growers a realistic breakdown of the costs of production for selected process crops within major growing areas. (Editors' note: The Federation's costings of indirect or overhead expenses, apart from overheads for tractors and equipment, have been omitted from this section. Costings for labour have also been omitted apart from contract labour requirements).

The costs of running tractors and equipment have been established by allocating the capital cost less resale value over the economic life and adding the cost of financial charges, maintenance, insurance and fuel. The cost of irrigation equipment has been calculated on the economic life of the irrigation equipment. Also included in the cost of irrigation equipment are the interest charges, insurance, maintenance and operating costs (electricity or fuel).

Where crops are harvested by processors and the costs charged in effect by deduction against growers' returns, the cost factors for harvesting are disregarded, and the growers' revenues are shown net of harvesting and delivery costs.

Where harvesting is the responsibility of the grower, it is common practice to employ a specialist contract harvester and accordingly contract rates are included.

Federation's Disclaimer:

The costings have been prepared by the New Zealand Vegetable and Potato Growers Federation (Inc.). Every effort has been made to ensure the accuracy of the costings. However, growers use these costings at their own risk, and the Federation disclaims any responsibility and accepts no liability for any reliance on or use of the costings for any purpose whatsoever.

3.4.1 Green Beans (Source: N.Z.Vegetable and Potato Growers Federation (Inc.))

GREEN BEANS (PROCESS)

Production Cost Model 1997/98

Canterbury District

<u>Growing Costs Operation</u>	<u>Hours/Qty</u> <u>Hectare</u>	<u>Unit</u> <u>Rate</u>	<u>Total Cost</u> <u>\$ per ha</u>
Liming - 2.5 t/ha every 5 years	0.5 t/yr	\$32.00 /t	\$16.00
Pre-work - grubbing 3 times	1.5 hrs	\$56.49 /hr	\$84.74
Preparation seedbed			
roll once	0.4 hrs	\$47.43 /hr	\$18.97
plough once	1.1 hrs	\$65.52 /hr	\$72.07
maxitill 3 times	1.2 hrs	\$56.49 /hr	\$67.79
roll once	0.4 hrs	\$47.43 /hr	\$18.97
Pre-emergence spray contract		\$21.00 /ha	\$21.00
Treflan	2.1 l	\$12.31 /l	\$25.85
Sowing contract		\$110.00 /ha	\$110.00
seed	110 kg	\$6.36 /kg	\$699.60
fertiliser - Cropmaster 15	0.375 t	\$440.00 /t	\$165.00
Post emergence spray contract		\$21.00 /ha	\$21.00
Basagran	2 l	\$37.51 /l	\$75.02
Cittowet	0.1 l	\$11.38 /l	\$1.14
ground spray contract		\$21.00 /ha	\$21.00
Topsin	2.5 l	\$38.40 /l	\$96.00
ground spray contract		\$21.00 /ha	\$21.00
Sumisclex	2 l	\$47.55 /l	\$95.10
Irrigation 5 times	25 hrs	\$19.71 /hr	\$492.75
Labour	5 hrs	\$15.00 /hr	\$75.00
TOTAL GROWING COSTS			\$2,198.00
REVENUE			
Price received* (11.5-12mm) per tonne	\$300	\$300	\$300
Crop yield paid weight (tonnes per ha)	8	10	11
TOTAL REVENUE	\$2,400	\$3,000	\$3,300
Less growing Costs (from above)	\$2,198	\$2,198	\$2,198
SURPLUS	\$202	\$802	\$1,102

* Editors' Note: See also *Section 1.13.2* for further contract price information

GREEN BEANS (PROCESS)

Production Cost Model 1997/98

Hawkes Bay/Heretaunga Plains

<u>Growing Costs Operation</u>	<u>Hours/Qty</u> <u>Hectare</u>	<u>Unit</u> <u>Rate</u>	<u>Total Cost</u> <u>\$ per ha</u>
Preparation seedbed			
chip hoe 1 time	1.6 hrs	\$62.89 /hr	\$100.62
plough once	1.6 hrs	\$45.31 /hr	\$72.50
roll once	0.6 hrs	\$37.75 /hr	\$22.65
disc harrow & roll 2 times	0.8 hrs	\$45.31 /hr	\$72.50
rollatill 4 times	2.6 hrs	\$45.31 /hr	\$117.81
roll 1 time	0.4 hrs	\$37.75 /hr	\$15.10
Pre-emergence spray contract		\$31.50 /ha	\$31.50
Triflur	2 l	\$13.83 /l	\$27.66
alachlor	5 l	\$12.50 /l	\$62.50
Sowing contract		\$85.00 /ha	\$85.00
seed	111 kg	\$4.80 /kg	\$532.80
fertiliser - AMMO 12:10:10	0.25 t	\$597.00 /t	\$149.25
Cultivation			
harrow 1 time	0.6 hrs	\$37.75	\$22.65
inter row 2 times	3.5 hrs	\$37.75	\$132.13
Post emergence spray contract	0.7 hrs	\$45.30 /ha	\$31.71
Kocide	1.5 l	\$146.79 /l	\$220.19
Metasystox	0.57 l	\$33.10 /l	\$18.87
contract 2 times		\$105.60 /ha	\$105.60
Sumisclex	4 l	\$52.06 /l	\$208.24
Karate	0.2 l	\$97.75 /l	\$19.55
Irrigation 3 times	20 hrs	\$38.16 /hr	\$763.20
Labour	7 hrs	\$13.20 /hr	\$92.40
TOTAL GROWING COSTS			\$2,904.41
REVENUE			
Price received* (11.5-12mm) per tonne	\$290	\$290	\$290
Crop yield paid weight (tonnes per ha)	10	13	16
TOTAL REVENUE	\$2,900	\$3,770	\$4,640
Less growing Costs (from above)	\$2,904	\$2,904	\$2,904
SURPLUS	(\$4)	\$866	\$1,736

* Editors' Note: See also *Section 1.13.2* for further contract price information

3.4.2 Sweetcorn (Source: N.Z.Vegetable and Potato Growers Federation (Inc.))

SWEETCORN (PROCESS) Production Cost Model 1997/98 *Rangitikei District*

<u>Growing Costs Operation</u>	<u>Hours/Qty Hectare</u>	<u>Unit Rate</u>	<u>Total Cost \$ per ha</u>
Liming - 2.5 t/ha every 2 years	1.25 t/yr	\$65.00 /t	\$81.25
Preparation seedbed			
plough once	1.1 hr	\$65.52 /hr	\$72.07
disc and harrow once	1 hrs	\$56.49 /hr	\$56.49
power harrow twice	1.5 hrs	\$89.15 /hr	\$133.73
level once	0.4 hrs	\$56.49 /hr	\$22.60
Sowing contract		\$70.00 /ha	\$70.00
seed	12 kg	\$19.80 /kg	\$237.60
nitro 12:10:10	0.25 t	\$691.00 /t	\$172.75
Pre emergence spray			
contract boom spray		\$31.00 /ha	\$31.00
Roustabout	3 l	\$37.80 /l	\$113.40
Post emergence spray			
aerial spray contract		\$28.00 /ha	\$28.00
Hallmark 1 time	0.5 l	\$87.40 /ha	\$43.70
Inter-row cultivation contract		\$30.00 /ha	\$30.00
Maintenance of Land			
flail stubble once	1 hr	\$56.49 /hr	\$56.49
TOTAL GROWING COSTS			\$1,149.07
REVENUE			
Price received* per tonne	\$120	\$120	\$120
Crop yield paid weight (tonnes per ha)	15	17	19
TOTAL REVENUE	\$1,800	\$2,040	\$2,280
Less growing Costs (from above)	\$1,149	\$1,149	\$1,149
SURPLUS	\$651	\$891	\$1,131

* Editors' Note: See also *Section 1.13.2* for further contract price information

SWEETCORN (PROCESS)

Production Cost Model 1997/98

Marlborough District

<u>Growing Costs Operation</u>	<u>Hours/Qty</u> <u>Hectare</u>	<u>Unit</u> <u>Rate</u>	<u>Total Cost</u> <u>\$ per ha</u>
Liming - 2.5 t/ha every 5 years	0.5 t/yr	\$55.00 /t	\$27.50
Preparation seedbed			
chip hoe 1 time	1.6 hr	\$72.58 /hr	\$116.13
plough 1 time	1.6 hrs	\$64.02 /hr	\$102.43
disc and harrow once	0.6 hrs	\$45.93 /hr	\$27.56
power harrow once	1.2 hrs	\$54.99 /ha	\$65.99
level once	1 hrs	\$54.99 /hr	\$54.99
harrow and roll 2 times	1 hrs	\$45.93 /hr	\$46.32
Sowing contract			
seed		\$321.23 /ha	\$321.23
contract sowing		\$61.75 /ha	\$61.75
fertiliser-cropmaster 20	0.37 t	\$572.67 /t	\$211.89
Post emergence spray		\$24.00 /ha	\$24.00
atrazine	3 l	\$9.25 /l	\$27.75
lorsban	0.6 l	\$46.28 /l	\$27.77
Scarify and side dress	1.25 hrs	\$45.93 /hr	\$57.41
urea	0.124 t	\$565.30 /t	\$70.10
Irrigation 3 times	18 hrs	\$20.17 /hr	\$363.06
labour	4 hrs	\$13.50 /hr	\$54.00
Catepillar spray			
aerial spray and chemical		\$58.00 /ha	\$58.00
TOTAL GROWING COSTS			\$1,659.87
REVENUE			
Price received* per tonne	\$135	\$135	\$135
Crop yield paid weight (tonnes per ha)	18	20	22
TOTAL REVENUE	\$2,430	\$2,700	\$2,970
Less growing Costs (from above)	\$1,660	\$1,660	\$1,660
SURPLUS	\$770	\$1,040	\$1,310

* Editors' Note: See also *Section 1.13.2* for further contract price information

SWEETCORN (PROCESS)

Production Cost Model 1997/98

Gisborne District

Growing Costs Operation	Hours/Qty Hectare	Unit Rate	Total Cost \$ per ha
Preparation seedbed			
plough once	2.5 hr	\$57.73 /hr	\$144.33
disc and roll 2 times	1.8 hrs	\$48.71 /hr	\$87.68
disc, harrow and roll 2 times	2.4 hrs	\$48.71 /hr	\$116.90
power harrow and roll 1 time	1.6 hrs	\$81.36 /hr	\$130.18
Sowing contract		\$79.00 /ha	\$79.00
seed	12 kg	\$15.40 /kg	\$184.80
fertiliser-AMMO 15:10:10	0.225 t	\$443.00 /t	\$99.68
scarify and side dress	1 hr	\$49.03 /hr	\$49.03
urea	0.2 t	\$486.00 /t	\$97.20
Pre emergence spray	0.6 hrs	\$56.58 /hr	\$33.95
soil incorporation	1.2 hrs	\$81.36 /ha	\$97.63
lasso	7 l	\$12.70 /l	\$88.90
Post emergence spray		\$44.50 /ha	\$44.50
cutworm-hallmark	0.5 l	\$86.60 /ha	\$43.30
weeds-atrazine	2.5 l	\$8.00 /ha	\$20.00
-citowett	0.1 l	\$12.82 /ha	\$1.28
Maintenance of Land			
cultivation	1.7 hr	\$48.71 /hr	\$82.81
TOTAL GROWING COSTS			\$1,401.16
REVENUE			
Price received* per tonne	\$119	\$119	\$119
Crop yield paid weight (tonnes per ha)	15	17	19
TOTAL REVENUE	\$1,785	\$2,023	\$2,261
Less growing Costs (from above)	\$1,401	\$1,401	\$1,401
SURPLUS	\$384	\$622	\$860

* Editors' Note: See also *Section 1.13.2* for further contract price information

3.4.3 Peas (Source: N.Z.Vegetable and Potato Growers Federation (Inc.))

PEAS (PROCESS)

Production Cost Model 1997/98

Canterbury District

<u>Growing Costs Operation</u>	<u>Hours/Qty</u> <u>Hectare</u>	<u>Unit</u> <u>Rate</u>	<u>Total Cost</u> <u>\$ per ha</u>
Liming - 2.5 t/ha every 5 years	0.5 t/yr	\$32.00 /t	\$16.00
Pre-work - grubbing 3 times	1.5 hrs	\$56.49 /hr	\$84.74
Preparation seedbed			
roll once	0.4 hrs	\$47.43 /hr	\$18.97
plough once	1.1 hrs	\$65.52 /hr	\$72.07
maxitill twice	0.8 hrs	\$56.49 /hr	\$45.19
Pre-emergence spray contract		\$18.00 /ha	\$18.00
Treflan	2.1 l	\$12.31 /l	\$25.85
Sowing	0.8 hr	\$84.70 /hr	\$67.76
seed	300 kg	\$1.38 /kg	\$414.00
fertiliser - PM super	0.15 t	\$502.22 /t	\$75.33
Cultivation			
roll 1 time	0.4 hrs	\$47.43 /hr	\$18.97
Post emergence spray contract		\$18.00 /ha	\$18.00
MCPB	2 l	\$9.33 /l	\$18.66
Bladex	2.5 l	\$18.75 /l	\$46.88
Irrigation 3 times	15 hrs	\$19.71 /hr	\$295.65
Labour	3 hrs	\$15.00 /hr	\$45.00
TOTAL GROWING COSTS			\$1,281.07
REVENUE			
Price received* (11.5-12mm) per tonne	\$280	\$280	\$280
Crop yield paid weight (tonnes per ha)	6	6	7
TOTAL REVENUE	\$1,624	\$1,792	\$1,960
Less growing Costs (from above)	\$1,281	\$1,281	\$1,281
SURPLUS	\$343	\$511	\$679

* Editors' Note: See also *Section 1.10.4* for further contract price information

PEAS (PROCESS)

Production Cost Model 1997/98

Rangitikei

<u>Growing Costs of Operation</u>	<u>Hours/Qty</u> <u>Hectare</u>	<u>Unit</u> <u>Rate</u>	<u>Total Cost</u> <u>\$ per ha</u>
Liming - 2.5 t/ha every 2 years	1.25 t/yr	\$52.00 /t	\$65.00
Preparation seedbed			
plough 1 time	1.1 hrs	\$65.52 /hr	\$72.07
disc & harrow 1 time	1 hrs	\$65.52 /hr	\$65.52
power harrow 2 times	1.5 hrs	\$89.15 /hr	\$133.73
level 1 times	0.4 hrs	\$56.49 /hr	\$22.60
Sowing contract			
contract sowing		\$50.00 /ha	\$50.00
seed & cartage	250 kg	\$1.26 /kg	\$315.00
roll	0.4 hrs	\$39.55 /hr	\$15.82
contract fert spread & cartage		\$38.30 /ha	\$38.30
30% P Super	0.25 t	\$210.00 /t	\$52.50
Post emergence spray contract		\$31.00 /ha	\$31.00
bladex	3 l	\$18.48	\$55.44
mcpb	1.4 l	\$9.62 /l	\$13.47
mcpa	0.15 l	\$6.90 /l	\$1.04
Mildew spray contract aerial		\$28.00 /ha	\$28.00
folicur	0.25 l	\$147.78 /l	\$36.95
TOTAL GROWING COSTS			\$996.42
REVENUE			
Price received TR 5 per tonne	\$265	\$265	\$265.00
Crop yield paid weight tonnes per ha	5.5	6	6.50
TOTAL REVENUE	\$1,457.50	\$1,590.00	\$1,722.50
Less growing Costs (from above)	\$1,013.00	\$1,013.00	\$1,013.00
SURPLUS	\$1,423.50	\$1,556.00	\$1,688.50

*Editors' Note: See also *Section 1.10.4* for further contact price information

PEAS (PROCESS)

Production Cost Model 1997/98

Marlborough

<u>Growing Costs Operation</u>	<u>Hours/Qty</u> <u>Hectare</u>	<u>Unit</u> <u>Rate</u>	<u>Total Cost</u> <u>\$ per ha</u>
Liming - 2.5 t/ha every 5 years	0.5 t/yr	\$55.00 /t	\$27.50
Preparation seedbed			
chip hoe 1 time	1.6 hrs	\$72.58 /hr	\$116.13
harrow and roll 1 time	0.5 hrs	\$45.93 /hr	\$22.97
plough 1 time	1.6 hrs	\$54.99 /hr	\$87.98
rotatill 3 times	1.5 hrs	\$54.99 /hr	\$82.49
harrow and roll 2 times	1 hrs	\$45.93	\$45.93
Sowing contract		\$45.93 /ha	\$45.93
seed	300 kg	\$1.10 /kg	\$330.00
fertiliser - Super	0.25 t	\$291.60 /t	\$72.90
Post emergence spray contract		\$24.00 /t	\$24.00
topoguard	0.9 l	\$42.03 /l	\$37.83
TOTAL GROWING COSTS			\$893.65
REVENUE			
Price received* (11.5-12mm) per tonne	\$306	\$306	\$306
Crop yield paid weight (tonnes per ha)	4.5	5.5	6.5
TOTAL REVENUE	\$1,377	\$1,683	\$1,989
Less growing Costs (from above)	\$894	\$894	\$894
SURPLUS	\$483	\$789	\$1,095

* Editors' Note: See also *Section 1.10.4* for further contract price information

PEAS (PROCESS)

Production Cost Model 1997/98

Central Hawkes Bay

<u>Growing Costs Operation</u>	<u>Hours/Qty</u> <u>Hectare</u>	<u>Unit</u> <u>Rate</u>	<u>Total Cost</u> <u>\$ per ha</u>
Preparation seedbed			
plough 1 time	1.6 hrs	\$53.93 /hr	\$86.29
disc and roll 1 time	0.9 hrs	\$53.93 /hr	\$48.54
disc and harrow 2 times	1.6 hrs	\$53.93 /hr	\$86.29
Sowing contract-drill		\$65.00 /ha	\$65.00
labour	1 hr	\$12.00 /hr	\$12.00
roll 1 time	1 hr	\$37.35 /hr	\$36.39
seed	270 kg	\$1.08 /kg	\$291.60
fertiliser -P super	0.25 t	\$245.00 /t	\$61.25
Post emergence spray contract		\$31.50 /ha	\$31.50
MCPB	1.4 l	\$10.43 /l	\$14.60
Bladex	3 l	\$22.12 /l	\$66.36
Restoration of land			
cultivation			
disc and harrow 2 times	1.6 hrs	\$44.91 /hr	\$71.86
TOTAL GROWING COSTS			\$871.67
REVENUE			
Price received* (11.5-12mm) per tonne	\$265	\$265	\$265
Crop yield paid weight (tonnes per ha)	4.5	5	5.5
TOTAL REVENUE	\$1,193	\$1,219	\$1,458
Less growing Costs (from above)	\$872	\$872	\$872
SURPLUS	\$321	\$347	\$586

* Editors' Note: See also *Section 1.10.4* for further contract price information

3.4.1 Carrots (Dicing) (Source: N.Z. Vegetables and Potato Growers Federation (Inc.))

CARROTS (DICING)

Production Cost Model 1997/98

Canterbury

<u>Growing Costs Operation</u>	<u>Hours/Qty</u> <u>Hectare</u>	<u>Unit</u> <u>Rate</u>	<u>Total Cost</u> <u>\$ Hectare</u>
Out of grass contract spray		\$18.00 /ha	\$18.00
roundup	3 l	\$13.00 /l	\$39.00
Preparation Seedbed			
plough 1 time	1 hr	\$71.32 /hr	\$71.32
rotary hoe 2 times	3 hrs	\$79.88 /hr	\$239.64
Fertiliser crop 15	0.5 t	\$440.00 /ha	\$220.00
application (contract)		\$13.00 /ha	\$13.00
level	1 hr	\$62.30 /hr	\$62.30
Sowing (contract)		\$180.00 /kg	\$180.00
seed	1.5 kg	\$150.00 /ha	\$225.00
Insecticide application (contract)		\$18.00 /t	\$18.00
phorate	11 kg	\$7.67 /kg	\$84.37
Pre-emergence spray contract		\$18.00 /ha	\$18.00
stomp	3 l	\$27.73 /l	\$83.19
Post emergence spray contract		\$18.00 /ha	\$18.00
linuron	0.5 kg	\$37.40 /kg	\$18.70
gesagard	0.5 l	\$49.60 /l	\$24.80
Scarify 2 times	2 hrs	\$47.43 /hr	\$94.86
urea	0.2 t	\$494.00 /t	\$98.80
Irrigation 4 times	20 hrs	\$19.71 /hr	\$394.20
labour	4 hrs	\$15.00 /hr	\$60.00
Topping (contract)		\$100.00 /ha	\$100.00
TOTAL DIRECT GROWING COSTS (excl harvesting)			\$2,081.18
Harvesting yield (t)	50	70	90
contract \$30/tonne	\$1,500	\$1,950	\$2,700
labour \$2.50/t/person x 2	\$250	\$325	\$450
bulk transport \$8/t	\$400	\$520	\$720
TOTAL GROWING COSTS	\$4,231	\$4,876	\$5,951
REVENUE			
Price received per tonne	\$87	\$87	\$87
Yield (t) per hectare	50	65	90
TOTAL REVENUE	\$4,350	\$5,655	\$7,830

*Editor's Note: See also *Section 1.13.2* for further contract price information.

3.5 EXPORT FRUIT GROSS MARGINS

The following Gross Margins are included to give an indication of current profitability. Figures have been derived mainly from MAF Monitoring forecasts. Care should be taken when interpreting these results, as yield and cost estimates will differ according to each individual property.

3.5.1 Export Apples

EXPORT APPLE GROSS MARGIN

(Based on effective planted area at full production of 8 ha (full production area of 7.29 ha with a conservative yield and an export price averaged over a range of varieties.)

Hawkes Bay - June 1997

Income:

Fruit Value		
Advanced	\$15,109	
Deferred	\$14,914	
Other orchard income	\$751	
		\$30,774

Expenditure (per hectare):

Fertiliser	\$229	
Chemicals	\$2,248	
Casual wages - pruning	\$983	
- thinning	\$1,370	
- picking	\$5,006	
- other	\$1,044	
- ACC	\$173	\$8,576
Spray and chemicals	\$2,161	
Pollination	\$87	
Packing cost	\$6,384	
Fertiliser	\$229	
Freight	\$726	
Sundry Production	\$103	
Vehicles	\$911	
Administration and property	\$2,004	
Repairs and maintenance	\$520	
Electricity	\$195	
TOTAL DIRECT COSTS		\$21,896
GROSS MARGIN PER HECTARE		\$8,878
<u>GROSS MARGIN per Tray Carton Equivalent</u>		<u>\$6.47</u>

Source: *AgFirst Consultants*

3.5.2 Export Kiwifruit

EXPORT KIWIFRUIT GROSS MARGIN

Income: (Based on effective planted area at full production)

Trays per hectare (net of cool storage and levies)	6300 /ha @	\$4.30	\$27,090.00
-------------------------------------------------------	------------	--------	-------------

Expenditure (per hectare):

Administration		\$1,800.00	
Fertiliser		\$530.00	
Pollination		\$765.00	
Spraying and Chemicals		\$800.00	
Casual Wages - Pruning	\$4,600.00		
- Picking	\$1,200.00	\$5,800.00	
Grade and Pack		\$9,450.00	
Shelter		\$200.00	
Other		\$430.00	
TOTAL DIRECT COSTS			\$19,775.00
GROSS MARGIN PER HECTARE			\$7,315.00

3.6 EXPORT FLOWERS

3.6.1 Export Calla Lilies (Zantedeschia)

CALLA LILY GROSS MARGIN

10,000 Mixed size tuber, selling flowers and exporting tubers

Tuber Stock: (average value)		
Mixed Sized tubers	10000 @ \$ 1.70	\$17,000

Production Parameters:

	Tuber Diameter	
Planting Specification	2 to 3 cm	60 to 80 per m2
	4 to 5 cm	30 per m2
	8 cm	15 per m2

Rows 1m wide and 0.6m apart.
Tubers multiply and increase in size. The assumption is that the tuber numbers increase by 50% allowing for losses.

Note: Tuber stock numbers are kept static at approximately 10,000, but stock quality may decline unless some replacements are grown from tissue culture.

Flowering:

	Tuber Diameter	
2000	1 to 3cm	0 flowers
2000	3 to 4cm	0.75 flowers per tuber
2000	4 to 5cm	1.00 flowers per tuber
2000	5 to 6cm	1.75 flowers per tuber
2000	8 to 10cm	3.00 flowers per tuber

Assumption is therefore a mean flower production of 1.3 flowers per tuber (of which 75% are saleable).

Flower grading and packing and tuber washing, curing and storing is on contract.
Cultivation, planting and lifting machinery is hired. Casual labour is hired for lifting and grading.

Prices for numerous grades of flowers and tubers have been averaged in this gross margin.
Tuber price is net of commissions and levies.

Income: (average prices)

Flower Stems	9750 @ \$1.00	\$9,750.00
Tuber export	5000 @ \$1.20	\$6,000.00 \$15,750.00

Expenditure:

Flowers -

Picking, Grading and Packing	@	\$ 0.30 / stem	\$2,925.00	
Commission	@	12.50%	\$1,218.75	
Levy	@	2%	\$195.00	\$4,338.75

Tubers -

Cultivation and planting				
- casual labour	20 hrs	@	\$10.00	\$200.00
- machinery hire	6 hrs	@	\$40.00	\$240.00
Replacement tuber stock				\$1,000.00
Lifting and Grading				
- labour	250 hrs	@	\$10.00	\$2,500.00
Lifting				
- machinery hire	5 hrs	@	\$50.00	\$250.00
Washing, Curing and Storing 70 trays (1250mm x 900mm)				
(contract)	70	@	\$15.00	\$1,050.00
Fertilizer				\$150.00
Weed Control				\$250.00
Pest and Disease				\$550.00

TOTAL DIRECT COSTS \$10,528.75

TOTAL GROSS MARGIN per 10,000 Tubers (before interest) \$5,221.25

Gross Margin per 10,000 mixed sized tubers at varying flower/tuber production and prices

		NUMBER OF FLOWERS/TUBERS SOLD			
		8775 4500	9750 5000	10725 5500	Flowers Tubers
PRICE OF FLOWERS/ TUBERS	\$0.90 /	\$2,789.86	\$3,787.63	\$4,785.39	
	\$1.08				
	\$1.00 /	\$4,080.13	\$5,221.25	\$6,362.38	
	\$1.20				
	\$1.10 /	\$5,370.39	\$6,654.88	\$7,939.36	
	\$1.32				

Interest Costs

Interest on Capital invested in Tubers
\$17,000 @ 13% \$2,210.00

RETURN per 10,000 tubers after interest \$3,011.25

TAXATION

Contributed by:

Murray B. CLARK, M.Com. CA
Senior Lecturer in Accounting

LINCOLN UNIVERSITY

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NOTE:

This manual details both the current (January 1998) legislation and the proposed changes where applicable.

While every attempt is made to ensure these writings are accurate, we must caution readers not to rely solely on the Budget Manual without further reference, including professional advice where appropriate.

4.1 INTRODUCTION

4.1.1 Tax Legislation

This section of the manual sets out some of the more important requirements for Income Tax, Fringe Benefit Tax and Goods and Services Tax. Information regarding Gift Duty is set out in Section 5.

The law relating to tax in New Zealand includes the Income Tax Act 1994, the Tax Administration Act 1994 and the Goods and Services Tax Act 1985. The Income Tax Act also sets out the requirements for some other taxes, including Fringe Benefit Tax. Only selected aspects of the taxation law have been included in this section, and caution must be exercised when applying those guidelines to a particular circumstance. If in doubt, your accountant, or financial adviser should be consulted.

4.1.2 Recent changes to the legislation

In recent years there have been rapid and dramatic changes to the legislation in order to: broaden the income and consumption tax bases; reduce the scope for avoidance and evasion; lower the rates of tax; make the system fairer; and simplify the tax system and make it more certain.

As part of this process, both the Income Tax Act 1976 and the Inland Revenue Department Act 1974 have been repealed and replaced with the Income Tax Act 1994, the Tax Administration Act 1994, and the Taxation Review Authorities Act 1994.

In essence, provisions relating to the calculation of tax liabilities are contained in the Income Tax Act 1994, administrative provisions have been consolidated into the Tax Administration Act 1994, while legislation relating to the Taxation Review Authority have been transferred to a separate Act.

The new legislation is essentially a reorganisation and consolidation of existing law into a more logical order (including a change in the method of numbering sections of the Act), which also allowed some wording to be modernised. There was no intention to change existing income tax law or current interpretation of that law.

One aspect that has changed is the introduction of a binding rulings regime. Under this regime, the Commission of Inland Revenue will be able to issue rulings regarding the interpretation of tax law which will bind the Inland Revenue Department (IRD) in future decisions. For example, the IRD could issue a ruling regarding the tax implication of a proposed business transaction. Rulings can be classified as public rulings, product rulings, and private rulings. Product and private rulings will be charged for on a full cost recovery basis. Rulings are valid for the period specified in the ruling but may be subsequently withdrawn. Rulings may also be terminated if there is a change in relevant law.

In addition, the tax legislation is being rewritten in plain English in order to make it more readable. The first phase of this rewrite has been enacted and deals with the core provisions which form the basis of the tax legislation.

During 1996, the Government introduced a “tax reduction and social policy package” which lowered rates of taxes for individuals, modified existing family assistance measures, and introduced an income-tested Independent Family Tax Credit. The thresholds for the Superannuitant Surcharge were also increased. These provisions will be implemented in two stages - 1 July 1996 and 1 July 1997. In addition, the requirements for an IR5 taxpayer to be exempt from filing a tax return have been simplified for the 1996 and subsequent years.

1997 saw a continuation of the tax simplification process as well as the implementation of key taxation components resulting from the Coalition Agreement of 11 December 1996. In particular the second round of tax reductions introduced in 1996 has been deferred for one year although the legislated increases in the Independent Family Tax Credit and Family Support will proceed.

Other changes made during 1997 include amendments to the depreciation regime, the repeal of the Superannuitant Surcharge, new provisional tax rules, and amendments to the taxpayer compliance, penalty and interest requires. Changes to the ACC levies were also announced.

With respect to farming, the scope of changes to the tax legislation during 1997 was minimal. Many of these related to the application of the legislation to the current year e.g. livestock tax values, as opposed to structural changes. Details of the tax treatment for ostriches and emus as non-specified livestock were announced.

There is an air of inevitability concerning changes to tax legislation, and where appropriate, details of these changes have been incorporated into the relevant section.

4.2 THE INCOME TAX SYSTEM

4.2.1 Overview

The New Zealand income tax legislation stipulates that the primary obligations of a taxpayer are to:

- correctly determine their amount of tax payable;
- deduct or withhold the correct amount of tax from payments or receipts
- pay tax on time;
- keep all necessary information and maintain all necessary accounts or balances;
- disclose all information that the Commissioner requires in a timely and useful way;
- co-operate with the Commissioner, and

to comply with other specific tax obligations.

Income tax is collected throughout the year by either the PAYE, withholding tax, or provisional tax systems. After the income year has finished, each taxpayer should complete the appropriate annual Return of Income and file it with the Inland Revenue Department, if required to do so. (See Section 4.2.5 Returns of Income.) An assessment is then issued to the taxpayer.

A taxpayer can dispute his or her income tax assessment. Under the disputes procedures, the taxpayer and the IRD must, in writing, state their various positions with respect to the items under dispute. There are several stages in this process which may involve a conference between the parties and adjudication. Recourse to the Taxation Review Authority and/or the Court is available in the final stages of the dispute.

Because of the complexity and rigid time restrictions of the dispute procedures, it is important that disputes are promptly dealt with and suitable professional advice is obtained by the taxpayer.

4.2.2 PAYE (Pay As You Earn) Tax on Personal Income

Under the PAYE system, source deductions of tax are made by employers. Employees (and contractors in some cases) are required to complete an IR12 or IR13 tax code declaration. The information in the IR12 or IR13, is used by the employer to help establish how much tax should be deducted. The tax deducted is paid over to the Inland Revenue Department.

The PAYE system applies to salaries, wages, and withholding payments.

Salary or wages - the amount of tax depends on the amount of payment and the tax code shown on the IR12. Tax tables to calculate the amounts to be deducted are published by the Inland Revenue Department (IR 184X).

For secondary employment and extra emoluments, such as back pay or bonuses, PAYE tax is deducted at a flat rate of 24% but will be reduced to 21% from 1 July 1998. Extra emoluments includes redundancy payments made after 29 November 1992.

Withholding payments are payments for personal services where there is not an employer-employee relationship. Common types of payment and the appropriate tax rates are specified on the back of the IR 13 form and include:

	%
Company directors' fees	33
Droving work	15
Honoraria	33
Shearing work	15

Failure to provide an IR 13 increases the rate of withholding tax to be deducted by 15 cents for every \$1. The amount on which withholding tax is calculated should not include any GST charged by the contractor.

This tax mainly applies to payments by businesses to self-employed contractors. Withholding tax does not apply for payments to Companies.

Payment of PAYE and Withholding Tax

Employers must pay the total PAYE and withholding tax to the Inland Revenue Department. Due dates depend upon the type of employer.

‘Small’ employers - those whose deductions did not exceed \$100,000 in the preceding year - make one payment by the 20th of the month following the month when the deductions were made.

‘Large’ employers - deductions exceed \$100,000 in the preceding year - make two payments each month. Payments are due on the 20th of the month (for tax deducted from payments made from the first to the 15th of the month); or the 5th of the following month (for tax deducted from payments made on or after the 16th of the month).

Each year the employer is required to complete the pay details on the tax deduction certificates and give the yellow (bottom) copy to the employee by 20 April. The top copies, together with a completed Annual Reconciliation Form (IR68), must be sent to the Inland Revenue Department by 31 May each year.

Employers must keep proper records for each employee showing gross wages, tax deductions, and tax credits (if any). Tax credits relate to the family support tax credit scheme and the guaranteed minimum family income tax credit scheme. All records relating to employee wages must be kept for seven years.

4.2.3 Resident Withholding Tax

Resident withholding tax (RWT, sometimes called ‘interest PAYE’ or ‘dividend PAYE’) was introduced in 1989. It is deducted by businesses which pay interest or dividends to clients/shareholders. The rates are 24% for interest and 33% for dividends. The RWT tax deduction rate applying to interest has been reduced from 24% to 21.5% for interest paid on or after 1 July 1996, and will be further reduced to 19.5% from 1 July 1998. RWT on dividends is also reduced to the extent that imputation credits are attached. Where the recipient does not provide their IRD number to the payer of the interest, the rate of deduction is 33%.

No tax is required to be deducted from payments to organisations holding a Certificate of Exemption. These certificates are issued by the Inland Revenue Department to financial institutions, companies with sales greater than \$2 million p.a. and organisations whose income is exempt from tax.

It is not necessary to deduct RWT from interest on private borrowings. However, businesses which pay more than \$5,000 p.a. of interest to people or organisations which do not hold Certificates of Exemption, are required to deduct resident withholding tax. This situation will apply to some farmers and other businesses who have borrowed money privately.

Institutions which deduct resident withholding tax from interest are required to provide taxpayers with RWT certificates by 20th May each year. The certificates, together with dividend notices showing RWT credits, allow a credit for the tax withheld to be claimed in the annual tax returns.

4.2.4 Provisional Tax System

Provisional tax is levied on all income which does not have source deduction tax (such as PAYE or RWT) taken from it. It is meant to ensure that all income will be taxed in the year in which it is earned. Provisional taxpayers include:

- Individuals who derive business or professional income, e.g. farmers.
- Companies.
- Trusts.

Taxpayers who have residual income tax (total tax less source deductions) of more than \$2,500 are required to pay provisional tax.

Provisional tax is based on either an estimate of the current year's income or a figure calculated from a previous year's tax liability. The rules are intended to ensure that approximately the correct amount of tax is paid in the year in which income is earned. The difference between provisional tax paid and the actual tax, or the income earned, is adjusted in the next year.

Provisional tax payers pay provisional tax in one of three ways:

- in three instalments if their residual income tax (RIT) was greater than \$2,500 in the previous income year. Instalments are due on the seventh day of the 4th, 8th and 12th month of the taxpayer's income year. (July, November and March where balance date is 31 March; October, February and June where balance date is 30 June.)
- in one instalment (3rd instalment date) if their RIT was less than \$2,500 last year but more than \$300,000 this year (and the taxpayer is not a new provisional taxpayer).
- in either one, two, or three instalments if they are new provisional taxpayers.

End of year tax to pay, called terminal tax, is calculated in the annual tax return. For provisional taxpayers whose balance dates are March to September inclusive, terminal tax is due on 7 February following balance date. (Due dates are specified in *Section 4.15.1*). Where provisional or terminal tax is not paid by the date it is due, 'additional tax' of 10% is added to the amount payable. Additional tax is increased by a further 10% (compounding) for each six month period that the tax remains unpaid.

Penalties may be due on provisional tax which is underestimated, and some taxpayers are also required to pay interest on the difference between provisional tax paid and the actual tax for the year.

Provisional Tax is Calculated as Follows:

- Based on previous year's tax

The general rule is that a provisional taxpayer is liable to pay provisional tax of 105% of the residual income tax of the previous income year. Where no return has been (legitimately) filed by the instalment date, the first two instalments of provisional tax may be based on 110% of residual income tax for the previous income year.

Note: Taxpayers who expect their current year's residual income tax to exceed \$300,000 are not permitted to base provisional tax on the amount paid last year.

- Estimated or re-estimated by the taxpayer

Taxpayers have the right to estimate their liability at any time on or before the third instalment date during an income year. All estimates must be 'fair and reasonable'. For example, it is not 'fair and reasonable' to make 'nil' returns for the first two provisional payments, and pay the full amount as the third payment in order to bring the total provisional tax up to the required level for the year.

If the taxpayer is obliged to pay provisional tax, and the amount paid is less than 80% of the actual residual income tax required for the year, an under-estimation penalty is payable. The amount payable is 10% of the difference between the actual tax and greater of the provisional tax paid or the amount estimated.

Interest on Underpaid or Overpaid Tax

Interest calculated on a daily basis, is charged (paid) on the difference between total provisional tax and the actual tax liability subsequently calculated in the tax return i.e. on the terminal tax (refund due) in the following circumstances:

- (a) Underpaid tax

All provisional taxpayers except individuals whose residual income tax is less than \$30,000 and who did not estimate their provisional tax. The interest rate is 13.9% p.a. from 8 Feb 1997.

- (b) Overpaid tax

All provisional taxpayers except individuals whose residual income tax exceeds \$30,000 and who did not estimate their provisional tax. ('Residual income tax' has a slightly wider definition for the purposes of calculating interest on overpaid tax). The interest rate is 7.1% p.a. from 8 Feb 1997.

Interest charges commence on the first instalment date if their RIT is over \$30,000. If the taxpayer's RIT is \$30,000 or less, interest charges are calculated from the date of

the third instalment. A \$100 tax threshold before use of money interest is imposed or paid is now in place.

Provisional Tax Example

Mr J. Smith is a farmer, with a personal income from his farm and from casual work for a local contractor. His total income is \$53,875. Total tax due in his 31 March 1998 tax return (in whole dollars) is:

Tax on total income	\$14,134
Less rebates (say)	<u>50</u>
Tax payable	\$14,084
Less PAYE deductions	<u>1,000</u>
RESIDUAL INCOME TAX	\$13,084
Less provisional tax already paid	<u>10,000</u>
TERMINAL TAX	<u>\$3,084</u>

His terminal tax payment will be due on 7 February 1999. Because his residual income tax is less than \$30,000 and he did not estimate his provisional tax, he is not subject to interest on the terminal tax due.

The above details assume Mr Smith pays his provisional tax on the basis of the previous year's tax. If, however, the provisional tax paid (\$10,000 in the example) was based on an estimate, he would be required to pay various additional amounts. These would include a penalty, since the provisional tax (\$10,000) is less than 80% of actual residual income tax (ie: 80% of \$13,084, which amounts to \$10,467). The penalty would be 10% of the difference, or \$308. Using the estimate basis would also mean that interest at 13.9% p.a. (on a daily basis) from 7 March 1998 to 7 February 1999 (337 days) would be due on his terminal tax payment (interest of \$396 in this example).

For the 1999 year, his provisional tax will be 105% of the residual income tax, (i.e. \$13,738). The provisional tax payments for 1998 are due as follows:

7 July 1997 (one third)	\$4,579
7 November 1997 (one third)	\$4,579
7 March 1998 (one third)	\$4,580

Tax Simplification - Provisional Tax

The provisional tax rules will be simplified and streamlined with effect from the 1998/99 income year.

Key features include:

- The definition of provisional taxpayer has been expanded to include those who had a reasonable expectation of being a provisional taxpayer and who paid provisional tax exceeding \$2,500 during the year.

- The underestimation penalty and associated provisions have been repealed.
- Use of money interest regime, if applicable, will begin from the date of the first instalment of provisional tax.
- Due date in January will shift from 7 January to 15 January.
- New rules for those who change balance dates.

These amendments are summarised in the following chart:

	Safe harbour Current rules	Safe harbour New rules	Non-safe harbour taxpayers
Classification	All natural person provisional taxpayers except: <ul style="list-style-type: none"> • those with RIT greater than \$30,000 • those who opt out • trustees • those with certificates of exemption 	Same as current rules	All provisional taxpayers other than those safe harboured.
Interest Starting date:	Terminal tax date for those safe-harboured	Terminal tax date for those safe-harboured	The interest applies from first instalment date in all cases
Estimation:	Not required	Not required. A taxpayer who estimates leaves the safe harbour	Estimates not required. Currently required if RIT greater than \$300,000
Instalment amount:	Formula (based on 105% of last year's RIT)	Formula (based on 105% of last year's RIT)	Formula or estimate. A requirement that taxpayers take reasonable care if they estimate. Currently an under-estimation penalty enforces estimates.
Late payment penalty:	Yes	Yes	Yes, if taxpayer pays less than estimated or required by formula.
Interest on overpayments:	No (but taxpayers may opt out of the safe harbour, in which case interest starts at third instalment date)	No (but taxpayers may opt out of the safe harbour by estimating, in which case interest starts at first instalment date.	Yes (if more than \$100)
Interest on underpayments:	No	No, unless taxpayer opts out of safe harbour	Yes (if more than \$100)

4.2.5 Returns of Income

In general, every taxpayer must furnish a return of income each year setting out details of the assessable income derived during the year, plus supporting information, including accounts, etc. Annual returns relate to an income year ending 31 March

unless an alternative balance date has been approved by the Inland Revenue Department.

In accordance with the desire to simplify the tax system and to reduce compliance costs, some IR 5 taxpayers (see definitions below) do not have to file a tax return. The following criteria must apply to the taxpayer:

- Income is only from employment and/or interest and dividends, and PAYE tax has been appropriately deducted.
- Total income does not exceed \$34,200 from all sources. (\$38,000 from the 1998/99 income year.)
- The taxpayer is not a shearer, a shearing shed hand, or an absentee; does not receive Family support; does not pay Child Support; does not have a student loan.

The following return forms should be used:

IR3 For individuals who pay provisional tax. Includes self-employed taxpayers, salary and wage earners and superannuitants who derive investment income with a residual income tax liability in excess of \$2,500, and taxpayers whose income was derived from estates, trusts or partnerships.

IR3B Supplementary return of business income.

IR3F Supplementary return of farming income.

IR4 Company and club returns.

IR5 For natural persons whose only income is New Zealand sourced income from salary or wages, extra emoluments or resident withholding income and does not include withholding payments or beneficiary income. An IR5 should also be used by persons who derive investment income but whose residual income tax liability does not exceed \$2,500.

IR6 Estate or Trust return.

IR7 Partnership return.

Due Dates for Annual Returns

Annual returns for IR5 taxpayers are due 7 June each year. Annual returns for all other taxpayers are due as follows:

- Balance dates between 1 October and the following 7 May (inclusive) - return is due 7 July.
- Balance dates between 8 May and the following 30 September (inclusive) - return is due two months after balance date.

There are penalties for filing returns after the due date. Refer to *Section 4.2.7*.

Special rules apply to returns completed by accountants and other specialists. These allow a proportion of returns to be completed by later dates.

4.2.6 Assessment of Tax

The return of income requires the taxpayer to calculate his or her actual tax liability and then deduct the PAYE, withholding, or provisional tax, which was paid during the income year. The Inland Revenue Department then issues an assessment notice to the taxpayer. Possible results are:

- A refund of tax overpaid (or a credit that can be offset against other tax due).
- More tax to pay (terminal tax). For individuals who are not provisional taxpayers, the due date for terminal tax is the 7th day of the following February. For provisional taxpayers, due dates are specified in *Section 4.15.1*.
- No adjustment required.
- Confirmation of a tax loss which can be carried forward to be offset against future income.

The Inland Revenue Department has the right to issue an amended assessment if it believes a previous assessment was not correct. The IRD has the right to do this until four years after the end of the income year (31 March) in which an assessment was made. Where a tax return was fraudulent or wilfully misleading or where it omitted income, then the Inland Revenue Department can issue an amended assessment without any time limit.

The taxpayer has the right to dispute their tax assessment. Commentary on the new disputes procedures appears in *Section 4.2.1, Overview of the Tax System*. It is advisable to seek professional advice if a tax assessment is under dispute as the new procedures are complex and subject to rigid time restrictions.

The obligation to pay non-deferrable tax in dispute before requesting a case stated or commencing a challenge is unchanged. If the taxpayer is successful in the dispute, the IRD will pay interest on the tax which the taxpayer paid before litigation. Alternatively, if the IRD is successful the taxpayer will be liable for interest on the unpaid portion of tax which is outstanding from the original due date.

4.2.7 Penalties

Interest

“Use of money” interest is not a penalty as such, although it is appropriate to outline the provisions here.

The principle behind the two-way interest regime is that tax payments are due on prescribed dates, and taxpayers have an obligation to pay on the applicable date.

Interest will provide an incentive to pay the right amount of tax at the right time by removing any benefit which can be achieved by deferring tax payments.

The two-way interest regime applies to both the taxpayer and the IRD, although the interest rates differ. Interest on underpayment of tax will be charged to the taxpayer at 13.9% p.a., while interest on overpayment will be paid to the taxpayer by the IRD at 7.1% p.a. (These rates of interest will be determined by Government and will be based on market rates.) Generally, interest will be charged from the day after the original due date until the tax is paid. Interest received (by the taxpayer) will be assessable and subject to withholding tax; interest paid will be deductible provided it is “business related”.

Penalties

A new penalties regime will apply in most instances from the commencement of the 1998 income year (ie: from 1 April 1977). It places greater emphasis on taxpayers meeting their obligations at the standard expected of a reasonable person. The new penalty regime supports self-assessment concepts by encouraging voluntary compliance with the law.

Some, but not all, penalties may be remitted by the Commissioner. Where remitted, the debt (penalty) is legally forgiven.

There are two classes of penalty under the new regime. The key features of each class are outlined below.

Civil Penalties

Civil penalties apply in the following circumstances:

- Underestimation of provisional tax. (Refer to *Section 4.2.4.*)
- Late filing of returns. (Penalties range from \$50 to \$500, depending on the amount of net income.)
- Late payment of tax (5% plus 2% per month until paid).
- Shortfall penalties where tax is underpaid because of a lack of reasonable care (20% of deficient tax), an unacceptable interpretation or application of tax law (20%), gross carelessness (40%), an abusive tax position (100%), or tax evasion (150%). The penalties may be abated for voluntary disclosure, or increased if the taxpayer obstructs the IRD. Threshold amounts apply to ensure that trivial amounts do not attract such penalties.

Civil penalties are not tax-deductible.

Criminal Penalties

The new regime consolidates the criminal offences and standardises the resulting penalties across all revenues. Sanctions for some offences have been increased to better act as a deterrent. Penalties obviously relate to the offence and can vary from fines of up to \$4,000 for first offences (eg: for failing to provide information when

required to do so), to fines of up to \$50,00 and/or imprisonment for up to five years for tax evasion.

Details of the new penalties regime are contained in Tax Information Bulletin, Vol 8, No. 7, October 1996.

4.3 CALCULATING TAXABLE INCOME - OVERVIEW

Core Provisions

Legislation concerning the core provisions represents the second phase of the rewrite process and sets out the basis of income tax laws in New Zealand. Core provisions, broadly, are those sections of the legislation which define the tax base by bringing certain income to tax, exempting various types of income, prescribing the rules for deductions, and defining when a person is resident in New Zealand. These provisions adopt a “global” approach to the calculation of an income tax liability, and have been written in plain language.

In general terms, the annual gross income is reduced by the allowable tax deductions in order to determine the net income or net loss of the taxpayer. Taxable income is calculated by deducting net losses carried forward (if any) from net income. Tax is calculated on the amount of taxable income, but is then adjusted for rebates and the NZ superannuation supercharge (if applicable).

Available tax credits (eg: PAYE and/or provisional tax paid by the taxpayer) are then deducted from this net tax liability in order to establish if the taxpayer has underpaid or overpaid their tax for the year. Underpaid tax results in more tax to pay (terminal tax) while overpaid tax generally results in a refund to the taxpayer.

There are a number of consequential changes resulting from the new core provisions. A number of new terms and definitions have been introduced with the intention of adding consistency to the legislation. References to “profit” in the old legislation for example, from land transactions, personal property, forestry and minerals - have been split into income, deductions, and timing components, and new provisions relating to “revenue account property” and matching have been introduced.

4.4 CALCULATION OF TAXABLE INCOME - INDIVIDUALS

4.4.1 Overview

Individuals are required to file IR3 or IR5 returns (depending on their sources of income - see *Section 4.2.5, Returns of Income*), and to pay tax at the rates specified by the Income Tax Act. These rates vary according to the level of income on the basis that the higher the income, the higher the marginal rate of tax. The rates of tax are set out in *Section 4.15.2 Rates of Income Tax*.

Taxable income is the net amount after deducting exempt income and allowable deductions from income received by the taxpayer.

The actual tax liability for the year is the amount of tax (calculated on taxable income) less the applicable rebates and adjustments (if any). These are calculated in the taxpayer's tax return.

It is usual to find that the taxpayer must make a final adjustment to settle their tax liability. The amount of adjustment is calculated by deducting the tax paid during the year (e.g. PAYE or provisional tax) and any other tax credits from their actual tax liability. A negative amount represents an overpayment of tax, which will be refunded to the taxpayer. A positive amount represents an underpayment of tax which must be subsequently paid to the Tax Department (as terminal tax).

4.4.2 Assessable Income includes, among other sources:

1. Profits or gains derived from any business.
2. Monetary remuneration from employment, such as salary and wages, allowances (other than reimbursing allowances), bonuses, gratuities, emoluments (including redundancy payments made on or after 30 November 1992), or other monetary benefits.

Salary and wages includes:

- Value of board, lodging and house allowances received.
 - Payments on account of an employee.
 - Pensions and superannuation from past employment.
 - National superannuation.
 - Earnings related Accident Compensation receipts.
 - 'Basic Grant' paid to students.
3. Profits or gains derived from the sale or disposition of property if it is the business of the taxpayer to deal in such property, or if the property was acquired for the purpose or intention of selling or otherwise disposing of it.
 4. Revenues from land e.g. net rents received; profits from extraction, removal or sale of minerals, timber, etc.

5. Gains from the sale of land in some circumstances.

There are complex rules regarding the taxation of gains from the sale of land (including improvements e.g. buildings). The following list provides a simplified summary:

Gains are taxable where:

- A. The land was bought with an intention of selling it (unless it was used for 'substantial business' by the taxpayer, or for his or her residence).
- B. Where the taxpayer or an associated person is in the business of dealing in land, is a property developer, or is a builder. These sections do not apply if the land has been held for more than ten years, nor if was used for 'substantial business' by the taxpayer, or as his or her residence.
- C. Where gains are partly due to a change in zoning (including expected zone changes). However, there are exemptions if the land was used by the taxpayer for a farming or agricultural business and sold to be used as a farming or agricultural business; or if it was used as the taxpayer's residence and sold to be used as a residence. Gains are also not taxable if the land was held for more than ten years, and this allowance applies proportionately if the land was held for less than ten years (e.g. held for three years, 30% of gain is not taxable).
- D. Where an undertaking for the land to be developed or subdivided was commenced within ten years of the land being acquired. However, this section does not apply where the development was for purposes of a business conducted from the land, or for the residence of the taxpayer, or for income from rents. It also does not apply if the land was less than 4,500m² and was occupied as the taxpayer's residence; and it does not apply where the taxpayer used the land primarily for farming or agriculture, and the subdivided land is capable of being worked as an economic unit, as a farming, or agricultural business.
- E. The development profit is taxable where there was significant expenditure in developing land for industrial, commercial or residential purposes. This section does not apply if the land was less than 4500m² and was occupied as the taxpayers residence; or where the taxpayer used the land primarily for farming or agriculture and it is capable of being worked as economic units for farming or agricultural business.

6. Royalties and 'know how' payments.

7. Interests, dividends, annuities and pensions.

8. All income-tested benefits paid by the Department of Social Welfare .
9. Travelling allowances received by an employee will be taxable except those amounts which represent a reimbursement of additional transport costs incurred by the employee in travelling between home and his or her place of work.

4.4.3 Exempt Income

The following items, amongst others, are exempt from income tax:

- Prize money from horse or dog racing, or trotting.
- Prizes from Lotto, Instant Kiwi and Bonus Bonds.
- Monies received by way of Gifts, Legacies, and Capital Gains.
- Any educational scholarship or bursary (but not 'basic grant' which is paid by the N.Z. Government).

4.4.4 Deductions for Employees

Recipients of salary, wages and/or national superannuation, and casual agricultural employees, are no longer permitted to deduct employment related expenses.

However, there is one remaining category of deduction which still applies to most people. Expenses incurred in the determination of a person's liability for tax may be claimed as a deduction. This includes fees paid for preparation of accounts and tax returns, and purchase of reference materials to assist the taxpayer in calculating his or her tax.

4.4.5 Personal Tax Rebates

Rebates are offset against tax assessed. However, the total rebates claimed cannot exceed the assessed amount of tax payable, so the rebates cannot be claimed as a refund if they are more than the tax which was due.

The principal rebates available to individuals for the current income year are:

Personal Tax Rebate for Child Taxpayer

Maximum \$156 per year.

This rebate applies to a child taxpayer who during the income year was under 15 years old or was under the age of 19 years and attended a primary, secondary, or special school, in that tax year.

Transitional Tax Allowance

<u>Assessable Income</u>	<u>Rebate</u>
Up to \$ 6,240	\$728
\$6,241 - \$9,880	\$728 less 20% of excess over \$6,240
Over \$9,880	Nil

This rebate is not allowed if the taxpayer or spouse is entitled to the Family Support tax credit or the Guaranteed Minimum Family Income tax credit.

The rebate is reduced if the taxpayer was not a full-time earner for the whole year. (The definition of full-time earner includes people engaged in remunerative work for not less than 20 hours each week.)

Low Income Rebate

The low income rebate applies to natural persons so that the effective tax rate on income up to \$9,500 pa is 15%. Beyond this amount, the rebate reduces so that it reaches zero at the point where the top marginal tax rate starts.

The rebate is only allowed on income that does not comprise interest, dividends, royalties, rents, or income derived by a beneficiary under a trust. That is, it is allowed on wages, salaries and income as a self-employed person or partner in a business.

However, the rebate reduction applies to total income, including the categories that the rebate is not allowed on. For National Superannuitants with incomes less than \$9,500, the rebate applies to all income items.

The commencement point for the top marginal rate of tax is being progressively raised over the next three years, with consequential amendment to the low income rebates.

The following table depicts the low income rebate after the deferral introduced by the Coalition Agreement.

1998 income year		
<u>Income</u>	<u>Low Income Rebate</u>	<u>Effective tax rate</u>
\$0 - \$9,500	- 6.5 cents	15 cents
\$9,501 - \$34,200	2.5 cents	24 cents
Over \$34,200	Nil	33 cents
1999 income year		
\$0 - \$9,500	- 5.0 cents	15 cents
\$9,501 - \$34,200	1.75 cents	21.75 cents
\$34,201 - \$38,000	1.125 cents	24 cents
Over \$38,000	Nil	33 cents
2000 income year		
\$0 - \$9,500	- 4.5 cents	15 cents
\$9,501 - \$38,000	1.5 cents	21 cents
Over \$38,000	Nil	33 cents

Housekeeper/Child Care Rebate

The lesser of \$310 or 33% of payments made.

This rebate is allowable for a housekeeper, or for childcare (at home, at a childcare centre, or any other institution). It is available, provided the child care services are necessary, because the taxpayer is a sole parent, or is disabled, or the care is necessary for business or employment, or when a housekeeper is required because of the taxpayer's disability.

Donations

The lesser of \$500 or 33 $\frac{1}{3}$ % of payments made.

Donations must be for a minimum of \$5 and made to approved charities. School fees are no longer eligible for this rebate.

Receipts must be furnished in support of the rebate claimed.

Visitors from Overseas who work for part of the income year in New Zealand are allowed a proportion (based on time worked here) of the following rebates:

- Child taxpayers
- Housekeeper
- Transitional Tax Allowance
- Low Income

Other Rebates

There are also a few other rebates which apply in special circumstances. These include rebates for First World War pensioners and for savings in special home, farm and fishing vessel ownership savings accounts (although no new accounts may be opened).

4.4.6 Tax Credits

Tax credits are paid to the taxpayer as a benefit paid by the Social Welfare Department, but the final end-of-year adjustments are made through the taxpayer's annual return. For example if the tax credits are more than enough to offset the tax due, then the remainder is paid out to the taxpayer.

Income for tax credit calculations is calculated using special rules. Family income is combined for the purpose of the calculation. Some tax exemptions and business losses are ignored, and profits made by a family company must be included.

There are two tax credits available to taxpayers: The Family Credit of Tax, (made up of the Family Support tax credit and the Independent Family tax credit) and the Guaranteed Minimum Family Income tax credit.

Family Credit of Tax

The amount of the tax credit is the Family Support tax credit plus the Independent Family tax credit less the amount of family credit abatement.

Family Support Tax Credit

From 1 January 1998, the amount of Family Support payable for qualifying children aged 16 and over, has been increased to \$60 per week. Because of this change, Family Support will be a composite rate for the 1997/98 income year. The rates for the 1998 and 1999 income years are as follows:

	1998	1999
For the eldest child:		
Aged 0 - 15 years	\$2,411.50	\$2,444.00
Aged 16 years and over	\$2,580.50	\$3,120.00
For each additional child:		
Aged 0 - 12 years	\$1,631.50	\$1,664.00
Aged 13 - 15 years	\$2,047.50	\$2,080.00
Aged 16 years and over	\$2,307.50	\$3,120.00

The credit is proportionately reduced if the taxpayer is not eligible to receive a full year's credit.

Independent Family Tax Credit

\$682.50 per eligible child, pro-rated over the period of eligibility.

A taxpayer becomes ineligible to receive this credit if either spouse receives certain types of income (eg: an income-tested benefit, NZ Superannuation, veteran's pension, plus others) or suspends their entitlement to an income-tested benefit.

The maximum amount of the credit will increase to \$780 for the 1999 income year.

Family Credit Abatement

The family tax credits abate if the family income exceeds \$20,000, is as follows:

- (i) For income not exceeding \$27,000; 18% of the income above \$20,000.
- (ii) For incomes exceeding \$27,000; \$1,260 plus 30% of the income above \$27,000.

The amount of abatement is also proportionately reduced if the taxpayer is not eligible for the tax credits at any stage during the year.

The abatement amount is calculated and first applied to the Family Support tax credit with the remainder, if any, being applied to the Independent Family tax credit.

Guaranteed Minimum Family Income Tax Credit

This tax credit is paid in addition to the Family Credit of Tax for full-time employees with dependent children and a low income. The tax credit is based on both the period of eligibility and the number of weeks that the claimant is a full-time earner within that period.

The tax credit is \$14,768 less the amount of net specified income, and is proportionately reduced if the taxpayer is not eligible to receive a full year's credit. The base amount increases to \$15,002 for the 1998/99 income year, and to \$15,080 for the 1999/2000 income year.

Tax Credit Example

A married man with one child aged four, derived the following income during the year ended 31 March 1998:

Salary (gross)	\$20,000
Interest- Savings Bank (\$1,000 gross less \$240 resident withholding tax)	760
Dividends received (with \$100 imputation credit attached)	300
PAYE tax deductions from his salary as per his IR12 were:	3,600

His wife earned \$600 in the same year.

Throughout the year he paid the following amounts:

Donations to Red Cross	\$30
Activity fees to school	70

His taxable income totals to \$21,400, being:

Salary	\$20,000
Interest - Savings Bank (\$760 + \$240)	1,000
Dividends - (\$300 + \$100)	400

Income tax on \$21,400 amounts to \$4,601

less Rebates:

Donations

Lesser of \$500 or 33 1/3% of \$30 (school fees not eligible)	\$10
------------------------------------------------------------------	------

Low Income Rebate

Lesser of \$617.50 or 6.5% of \$20,000	617.50
Less Abatement (20,000 - 9,500) x 0.025	262.50

356

Total rebates	<u>366</u>
Total Tax payable	<u>\$4,235</u>

His terminal tax would be calculated as:

Tax payable		\$4,235
<i>less</i> tax already paid:		
PAYE already paid	\$3,600	
Resident withholding tax paid	240	
Imputation credit	<u>100</u>	
		<u>\$3,940</u>
Terminal Tax		<u>\$295</u>

Note:

1. Family Credit of Tax

The principal caregiver receives the family credit of tax - assumed to be the wife in this example (although the Commissioner may determine otherwise).

The family credit of tax would be calculated as:

Family Support tax credit	2,411.50
Independent Family tax credit	<u>682.50</u>
	3,094.00
Less Abatement (18% of \$2,000)	<u>360.00</u>
	<u>\$2,734.00</u>

The family credit of tax would be included in the wife's tax return, and would result in a refund to her. However, both returns (husband and wife) should be filed together.

2. Guarantee Minimum Family Income tax credit

This credit would be shared between husband and wife (50% each). However, the GMFI tax credit amounts to zero in the example as the net family income exceeds the threshold of \$14,690.

4.4.7 Tax Surcharge (on National Superannuation)

National superannuitants are subject to an additional tax surcharge at the rate of 25% of income other than national superannuation and/or foreign social security pensions, in excess of a stated threshold. The amount of this threshold is \$15,444 per married couple or \$10,296 for a single superannuitant.

The tax surcharge is limited to a maximum of the net amount of national superannuation received by the taxpayer in that year.

The superannuitant surcharge has been abolished as from 1 April 1998 (i.e. the 1999 income year).

4.5 CALCULATING TAXABLE INCOME - COMPANIES

A company pays tax in its own right (i.e. it is separate and distinct from its shareholders). The basic rate of tax on income derived by New Zealand resident companies is 33%. (The rate for non-resident companies is 38%.) Taxable income generally means business profits (in the normal accounting sense). Adjustments are made for income and deductions that have special tax requirements, for example, depreciation. Under the imputation system, tax payable by a company can be available as a tax credit to the shareholders. Companies pay tax through the Provisional Tax System (see *Section 4.2.4*).

4.5.1 Imputation System

Dividends paid can be subject to imputation tax credits. This means that tax paid by the Company can be passed on as a tax credit to the shareholders.

In a simplified example:

Family Company Limited earns a taxable income of	\$100.00
Company tax payable (33%)	<u>33.00</u>
Profit after tax	<u>\$67.00</u>

The directors decide to declare a dividend of \$33.50. They have the option of deciding how much imputation tax credit can be attached to the dividend. There are limits to how much imputation credit can be attached to the dividend. The maximum imputation credit cannot be (a) more than the ratio of tax to income for the current tax rate, and it also cannot be more than (b) the amount of tax paid.

$$\begin{aligned}\text{Maximum ratio} &= \frac{\text{tax rate}}{1 - \text{tax rate}} \\ &= \frac{0.33}{1 - 0.33} \\ &= 49.25\% \text{ of the dividend}\end{aligned}$$

In the example:

Maximum possible imputation credit is the total tax paid by the company:
\$33.00 - see (b) above.

The maximum possible imputation credit also cannot exceed the ratio multiplied by the dividend - see (a) above.

$$\$33.50 \text{ (dividend)} \times 49.25\% = \$16.50$$

The maximum imputation credit that can be distributed with this dividend is \$16.50.

The remainder of the tax paid can be carried forward, subject to shareholder continuity rules being met, in an 'imputation credit account'. The balance carried forward can be

used for tax credits in later years. Assuming the directors decide to distribute the maximum tax credit shown above, this will affect the shareholders (in total) as follows:

Dividend received	\$33.50
plus imputation credit advised on the dividend notice:	<u>16.50</u>
Total to be declared on the tax return along with other income	<u>\$50.00</u>
Tax on \$50.00 at 33% (maximum personal tax rate)	\$16.50
Deduct imputation tax credit advised by the company (as above)	<u>16.50</u>
	<u>\$0.00</u>

Additional tax to pay as a result of receiving a \$33.50 dividend is \$0.00.

The company must maintain an Imputation Credit Account (ICA)
This account will include:

CREDITS:

- All Company tax payments for the 1988-89 and subsequent income years;
- Balances brought forward from previous years (but only from 1988-89 and later)
- Dividends received with imputation credits attached

less DEBITS

- Imputation credits transferred to shareholders;
- Tax refunds received

The Imputation Credit Account can go into debit, by allocating the shareholders' credits before the company pays its tax, but it must be zero or in credit by 31 March each year, or the amount overpaid plus a penalty (of 10%) is payable. An imputation return must be filed by 31 May each year. These dates apply regardless of the company's actual balance date.

To Summarise:

Imputation means that company dividends are not subject to double taxation. Company tax can be passed on as a credit to shareholders. As a result, if a company has enough imputation credits, and decides to distribute them, then dividends received should not result in extra tax to pay.

Resident Withholding Tax

Resident withholding tax (refer *Section 4.2.3*) must also be deducted from dividends at a rate of 33%, but any imputation credits are offset against the amount to be deducted.

4.5.2 Bonus Issues

A company can now elect to treat a bonus issue as either taxable or non-taxable. Non-taxable bonus issues made by companies remaining registered under the Companies Act 1955 will have no tax effect, but they may increase paid-up capital. Under the

Companies Act 1993, a non-taxable bonus issue also has no tax effect, but does not result in the capitalisation of company reserves i.e. is equivalent to a share split.

4.5.3 Losses

Losses can be carried forward and deducted from the first available assessable income, subject to the following rules:

- At least 49% of the voting interests or market value interests in the company must remain constant from the beginning of the year of loss to the end of year of carry forward.
- Losses must be offset in the same order as incurred.
- Losses incurred prior to the 1992-93 income year may be carried forward provided the previous 40% continuity test is satisfied in respect of the period from the beginning of the year of loss to the end of the year when offset against profits, and the new continuity test (49%) has been satisfied from the beginning of the 1992-93 income year.

4.5.4 Payments to Associated Persons

Special considerations apply where associated persons (for example, relatives) of the shareholders or directors receive remuneration from the company. These may affect arrangements to split income between family members, and it would be advisable to seek professional advice under these circumstances.

4.5.5 Dividends Received by Companies Now Taxable

As from the commencement of the 1993 income year, dividends received by a company will become taxable. Dividends received from a foreign company do not add to assessable income but are subject to a foreign dividend withholding payment. (33% of gross dividend less any foreign withholding tax paid.)

4.5.6 'Closely-held' Companies

With effect from the 1992-93 income year, closely held companies may elect to be taxed as though they are a partnership.

Criteria to become a Qualifying Company include:

- not a unit trust
- not a foreign company
- at all times during the year the company has a maximum of five shareholders, or is a flat-owning company
- each shareholder must be a natural person, another qualifying company, or a trustee of a trust where all cash dividends and taxable bonus issues are distributed to beneficiaries
- foreign non-dividend income under \$10,000
- all directors and shareholders 20 years of age and over must elect that the company become a Qualifying Company
- shareholders must elect to be personally liable for their share of income tax payable by the company.

An entry tax, called Qualifying Company Entry Tax, is payable on entry to the scheme. This is 33% of taxable revenue reserves that would arise had the company been wound up at the time of entry.

The major advantages and disadvantages of electing to become a Qualifying Company are as follows:

Advantages

- Capital gains are distributed tax free.
- Tax losses are allocated to shareholders. (Certain additional criteria must be met.)
- Concessional rates on distribution of old reserves.

Disadvantages

- Shareholders are personally liable for company tax of Qualifying Company.
- Cost of entry into the regime.
- Tax losses incurred before becoming a Qualifying Company cannot be carried forward i.e. are forfeit.
- Complex rules of the regime.

Any taxpayer contemplating election as a Qualifying Company is advised to seek professional advice.

4.5.7 Repurchase of Shares by a Company

Under the Companies Act 1993, a company may repurchase shares which it has issued. This amounts to a distribution, but may not be subject to tax. The rules regarding the cancellation, repurchase or redemption of shares are complex, and professional advice should be sought concerning the impact such activities have upon company tax.

4.6 CALCULATING TAXABLE INCOME - PARTNERSHIPS

4.6.1 Overview

Tax is paid on a partnership's income by the individual partners. A partnership is not a taxpaying entity and is not itself liable to pay tax, although tax must still be paid on its income. The partnership must file a separate partnership return of income (IR7) covering its joint income (or loss), a copy of the accounts, and detailing its distribution among the partners. Each partner must file an annual return declaring their portion of the partnership income. Accounts should also be furnished.

The partnership's assessable income is calculated under the same provisions that apply to other businesses conducted by individual sole traders or by companies.

Each partner is liable for tax as an individual and must add his or her share of the net partnership income to income from other sources. Partnership losses are also allocated to the individual partners, as a partnership may not carry a loss forward.

Payments of salary or wages and bonus payments made to a working partner under a written contract of service will be tax-deductible to the partnership. Normal PAYE procedures will apply to these payments.

4.6.2 Family Partnerships

The use of family partnerships, often including trusts for infants, has been a common device for splitting income among family members, thereby reducing the income affected by high tax brackets.

To counteract loss of revenue through this type of income splitting, the Income Tax Act lays down a number of requirements before a family partnership is deemed to be acceptable for taxation purposes:

- There must be a contract of partnership in writing or by deed signed by all parties;
- No partner can be under 20 years of age when the agreement is signed;
- The agreement must bind the partners for at least three years;
- Each partner must have real and effective control of their share of remuneration and real and effective liability for their share of losses; and
- The remuneration payable to any relative must not constitute a gift.

Where the above requirements are not satisfied and the Commissioner of Inland Revenue believes that the remuneration or share of profits paid to the relative is excessive, he has the power to reallocate the partnership income for taxation purposes between the partners in such shares as he considers reasonable, having regard to the capital and services contributed by the partners and other relevant matters.

4.7 CALCULATING TAXABLE INCOME - TRUSTS

A trust is an equitable obligation binding on a person (who is called a trustee) to deal with property over which he has control (which is called the trust property), for the benefit of persons (who are called the beneficiaries) of whom he may himself be one, and any one of whom may enforce the obligation.

It is not necessary that a trust be in writing, as a valid trust can be created by an oral agreement, or by the conduct of the parties concerned. However, it is desirable to evidence a trust in writing by a Deed of Trust, or inclusion in a will, or by some other trust instrument.

Trusts are commonly used as a means to hold family assets until children reach an appropriate age. They can have advantages in estate planning, and have some income tax effect.

4.7.1 Classification of Trusts

The Income Tax Act distinguishes between three types of trust:

Qualifying Trust

This category covers most New Zealand based trusts. (Note that the distinction between 'specified trusts' and 'other trusts' has now been abolished.)

Foreign Trusts

Generally trusts settled by a non resident.

Non-Qualifying Trusts

All other trusts - generally those with an off-shore trustee.

Special rules apply to foreign trusts and non-qualifying trusts. These are not dealt with in this Manual.

4.7.2 Liability for Income Tax (Qualifying Trusts)

A trust is a separate legal entity, and as such all the income of a trust is liable for income tax in the hands of the trustee, either as *Trustees' Income* or as *Beneficiaries' Income* where the trustee acts as the agent of the beneficiary (although the primary liability remains with the beneficiary).

In the case of *Beneficiaries' Income*, the taxation liability is determined by calculating the tax liability of the beneficiary as an individual. If the beneficiary derives additional income, a personal return of income should be filed incorporating his/her trust income and the tax already paid by the trustee on his/her behalf.

Trustees' Income is any income which is not distributed as *Beneficiaries' Income* and the trustee is assessed for tax at 33 cents per dollar.

Provisional tax will normally be paid on the income of a trust. The return of income for the trust (IR6) will be filed by the trustee(s). Trust income is taxed once only so that a distribution to a beneficiary is not taxed if the trustee has paid tax on the income previously.

4.7.3 Classification of Income

Income derived by a trust during an income year is classified either as *Beneficiaries' Income* or as *Trustees' Income*.

Beneficiaries' Income is:

- Where a beneficiary of any trust becomes entitled to income under a specific provision of the trust deed or by the discretionary act of the trustee; or
- Where the trustee pays or credits income to, or on behalf of the beneficiary of a trust, during or within six months after the income year by a genuine transaction which places the income beyond the possession and control of the trustee in his/her capacity as trustee of that trust.

Any other income not coming within the above is *Trustees' Income*.

It should be noted that the test for Beneficiaries' Income stresses the 'vesting absolutely in interest' of the income, that is the funds being paid or credited to the beneficiary.

4.8 CALCULATING TAXABLE INCOME - FARMERS

4.8.1 Farm Income

The assessable income of a farmer will include the following:

- Business profits from trading operations, calculated as sales *less* purchases and other business expenses *plus or minus* changes in value of stock on hand at the end of the year (increases are added, decreases are subtracted). (For valuation of stock, see *Section 4.8.3*).
- The value of meat and produce consumed domestically. (Usually nominal value if grown/raised on the farm.)
- Income received from any contracting work.
- Rents received from leasing farm property, including grazing fees.
- Receipts from the hire of livestock and plant, including stud fees.
- Insurance proceeds in respect of the loss of crops or stock.
- Prize money from A & P shows, less entrance fees and other related expenses.
- Compensation for stock condemned.
- Refunds from the Income Equalisation scheme, including interest.
- Income from the sale of timber, including standing timber and trees planted for agricultural purposes. Income may be spread over the year of sale and up to three preceding years.
- Income from dealings on the futures market, e.g. wool futures.
- Other items including any other categories of income generated by the farm business and income from any off-farm activities or investments.

Note: For a business registered for GST purposes, GST collected on sales is not regarded as assessable income.

4.8.2 Farm Expenses

Private expenses in the nature of household stores, domestic wages, repairs to household equipment, etc. are to be treated as private drawings, and must not be charged against farm income. Similarly, the private portion of expenses on the dwelling and car, should also be regarded as drawings.

In addition to the appropriate business expenses, farm expenses will include the following:

- Legal expenses incurred in arranging finance for the purchase, or lease of income producing assets.
- Legal expenses incurred in borrowing or renewing loan moneys employed as capital in the production of assessable income.
- Telephone (excluding personal toll calls).
- Proportion of car expenses (including depreciation) applicable to business use, on the basis of the ratio of business usage to total usage. This ratio is derived from details kept in a logbook over a representative 90 day period, and applies for a maximum period of 3 years. A new ratio must be established if business usage declines by 20% or more so that the established ratio no longer fairly represents business usage. Where insufficient records are kept, the maximum deduction allowable for business is limited to 25% of the car expenses.
- Stores and rations provided to employees:
 - ◊ Supplied to an outside employee (including a partner with less than 20% interest): the farmer can claim the actual cost of additional stores and rations purchased if accurate records are kept. Otherwise the deduction is limited to \$10 per employee per week. This applies where these costs have not already been claimed as a tax deductible farm expense.
 - ◊ Supplied to related married employees or part proprietor employees: the actual cost of stores and rations supplied is tax deductible.
- Accommodation supplied to employees:
 - ◊ Supplied to all employees except a partner-manager: depreciation at appropriate rate(s) and all expenses (e.g. mortgage interest, repairs, maintenance, etc.) are deductible in full. (The value of board and lodging to the employee is treated as part of his or her assessable income and subject to PAYE tax deductions).
 - ◊ Supplied to a partner/manager: the partnership can claim 25% of the costs of the dwelling.
- One quarter of total expenditure on the farm dwelling if situated on the farm - e.g. repairs and maintenance, depreciation, domestic power etc.
- Depreciation - see *Section 4.8.4*.
- Development Expenditure - see *Section 4.8.5*.

- Repairs and Maintenance costs on stock yards, sheep dips, fencing and any other income producing assets.
- Cost of papers and magazines containing farming information.
- Wages paid to spouse.

Payments for cooking duties in respect of permanent employees (including adult members of the farmer's family employed full-time) will be allowed as a deduction on the basis of:

One permanent employee - \$18 per week.
 Two permanent employees - \$27 per week.
 Three permanent employees - \$33 per week
 and thereafter an additional \$4.50 per employee per week.

It is necessary that the requirements for the payment of wages between husband and wife are met, that is, declaration that the wages are genuine services, IR12 completed, regular cash payments, tax and Accident Compensation levy deducted and accounted for. The following should be noted:

- ◊ Payments for work performed on, or on behalf of, the farm may be deductible if the Commissioner of Inland Revenue has given prior consent to such payments. Before consent is granted, the Commissioner must be satisfied that the payment is for genuine services rendered in producing assessable income for the year.
- ◊ An application for approval must contain certain details (the Inland Revenue Department provides appropriate declaration forms), but subsequent to approval, only written confirmation that wages are still being paid on the agreed basis is required. The declaration should be filed before the employment commences.

This payment is in addition to any special arrangements made in respect of seasonal or part-time employees, e.g. shearers.

- Cost of transporting employees' children to school. The cost of transporting the farmer's own children is regarded as private and therefore not deductible.
- Accident Compensation Premiums (refer to *Section 4.15.7*).
- 'Income spreading' schemes. Taxable income may be altered by shifting the year when certain expenditures (such as fertiliser application) can be claimed as a

deduction. Farm income may also be shifted to subsequent years under the Income Equalisation Scheme - see *Section 4.8.8*.

Prepaid expenditure is required to be accounted for on a progressive basis over the financial year. However, for practical reasons, smaller items of expenditure can still be treated as a lump sum expense. For example, rent paid in advance which is less than \$23,000 and which relates to a period less than six months after balance date, can be deducted. Rent for a higher amount, or paid for in advance over more than six months, must be carried forward and deducted in the following year. Details are set out in *Section 4.15.6, Accrual Rules for Expenditure*.

- Protective clothing, e.g. wet weather gear, spray masks etc.

For a business registered for GST purposes, GST paid on items purchased is not a tax-deductible expense, since it can be recovered as a GST input. However, if the taxpayer is not registered for GST purposes, then GST forms part of cost and is tax deductible if the item to which it relates is deductible.

4.8.3 Valuation of Trading Stock

General Principles

The value of the trading stock of any business at the beginning and at the end of every income year must be detailed in a taxpayer's accounts (or tax return). The value on hand at the end of the year is included in assessable income; the value on hand at the beginning of the year is deducted from assessable income.

In general, the taxpayer has the option of valuing the trading stock at cost price, market selling value; or replacement price. In practice, the lowest of the three possible values is generally the most advantageous for taxation. Livestock is valued according to special rules (see below).

Consumable Aids

Items consumed in the production of trading stock, but which do not form part of the final product, are regarded as consumable aids and not as trading stock. Therefore, expenditure on items such as fuel, farm chemicals, fertiliser held for spreading and hay held for winter use would be fully deductible in the year the expenditure is incurred, even although some unconsumed stocks may be held at the end of the year.

However, if the value of all unused consumables on hand at balance date exceeds \$58,000, then the original expenditure cannot be treated as a lump sum expense, but must be spread over the period(s) when they are actually used. Refer to *Section 4.15.6, Accrual Rules for Expenditure*.

Growing Crops, Fruit and Vegetables

Crops, fruit and vegetables and other products which grow from the land and are attached to the land are regarded as part of the land itself, i.e. a capital asset. Growing crops are not regarded as trading stock unless and until they are harvested or severed from the land.

Valuation of Livestock (Refer also to Sections 4.15.4 and 4.15.5.)

Farmers who farm sheep, cattle, deer, pigs or goats ('specified livestock'), are required to value their livestock for taxation purposes using the methods prescribed by the Income Tax Act. Between 1987 and 1992 the available methods were the trading stock scheme, the herd scheme, or the cost price scheme (the first two schemes were based on average market values while the third represents the lower of actual accumulated costs or market value). For 1993 and subsequent years, the trading stock scheme has been replaced by the national standard cost scheme. The existing herd scheme, cost-price scheme, and high-priced purchased livestock scheme have all been retained with some modification.

For livestock other than bloodstock and specified livestock (sheep, cattle, deer, pigs and goats), the valuation options are (i) cost price, market value or replacement price, and (ii) standard value as agreed by the Tax Department (a fixed value which stays the same for each category of stock from year to year; and differing from the standard values for specified livestock - see below).

Valuation of Sheep, Cattle, Deer, Goats and Pigs

The valuation options available are:

- I. Herd Scheme
- II. Cost - National Standard Cost or Self Assessed Cost
- III. Market Value or Replacement Price.

In addition, the High Priced Livestock Scheme must be used where relevant livestock qualify.

I. Herd Scheme

The philosophy underlying the herd scheme is that the herd is a capital asset, and movements in herd values should be treated as a non-assessable gain or loss to the farmer. Changes in herd numbers or the composition of the herd will affect taxable income.

All classes of livestock are eligible for the herd scheme. The farmer can select (i) the classes of livestock, and (ii) the number of animals within each class, which are to be valued under the herd scheme. The remaining animals in each class must be valued under one of the alternative options.

Once the herd scheme has been adopted, any increase in a class of livestock over a 'base number' may be valued using an alternative valuation option. The base number is the closing herd number for that class in the preceding year. This is a voluntary option entirely at the discretion of the farmer.

While the alternative valuation option does increase the flexibility of the herd scheme, it also requires an increase in record keeping as some form of inventory system must be kept.

Subject to a supporting valuation, herd values for any farmer may be set at 90%, 100%, 110%, 120%, or 130% of the National Average Market Value. Prior modification of an intention to change is required. Any income or loss arising from a change of herd value percentage will be assessable or deductible in the year of change.

National Average Market Values (NAMV's) are published annually by the Tax Department. Refer to *Section 4.15.4*, for the 1994, 1995, 1996 and 1997 values.

Movement to/from the Herd Scheme

Any number of livestock in any age class may be moved to the herd scheme in any year without notice. This includes first adoption of the herd scheme and/or the progressive movement of stock classes or numbers to the herd scheme from another option.

Movement out of the herd scheme or a change to the percentage level of herd values requires notification 2 years prior to the change.

Deferrable income from the 1991 and 1992 income years must be spread under the original provisions, details of which appear in previous editions of the Financial Budget Manual.

II. Cost

National Standard Cost

The National Standard Cost (NSC) option is a simplified way of calculating the cost of livestock produced on a farm.

Cost per head was accumulated until the animal reaches maturity (1 year for pigs, 3 years for male cattle, 2 years for all other livestock). The aggregated cost will be held at that level within an inventory system (such as average cost) until the livestock is disposed of.

National standard costs will be announced annually by the Tax Department as:

- breeding, rearing and growing (BRG) costs of rising 1 year livestock of each type;
- rearing and growing (RG) costs for rising 2 year livestock of each type except pigs;
- rearing and growing costs for 3 year male cattle.

The average cost of livestock purchased must also be included in order to determine the final cost per head. Thus, average cost will be specific to each farmer.

Only one cost option may be operated at any one time.

Example calculations (indicative costs only).

Example 1 Homebred sheep

Year 1:	BRG costs from IRD	\$13.00 per head
	Value per head = \$13	
Year 2:	R1 year value	\$13.00 per head
	RG ₂ costs from IRD	\$8.00 per head
	Value per head = \$21	

Example 2 Rising 1 year stock

No of lambs bred	1000
No of lambs purchased	400
Average purchase price	\$25 per head
BRG costs from IRD	\$13 per head

Calculation:

Homebred lambs	1000 @ \$13	\$13,000
Purchased lambs	<u>400 @ \$25</u>	<u>10,000</u>
	<u>1400</u>	<u>\$23,000</u>
Average cost of lambs	=	\$23,000 ÷ 1400
	=	\$16.43 per head

Note: BRG costs relate to homebred stock only.

No rearing and growing costs are assigned to purchased stock in the year of purchase.

Cost per head is an average over all stock of that class.

Example 3 Rising 2 year stock

NB: The year following example 2.

No of hoggets at start of year	400
Cost of hoggets at start of year	\$16.43
Sheep purchased (not R1 class)	200 @ \$30 each
RG ₂ costs from IRD	\$8 per head

Calculation:

Hoggets at start of year	400 x \$16.43	\$ 6 572
Rearing & growing costs	400 x \$8	3 200
Purchases	<u>200 x \$30</u>	<u>6 000</u>
	<u>600</u>	<u>\$15 772</u>

$$\begin{aligned}\text{Average cost of mature sheep} &= \$15\,772 \div 600 \\ &= \$26.29 \text{ per head}\end{aligned}$$

Note: No rearing and growing costs are assigned to purchased stock in the year of purchase.

The year-end cost of opening stock can also be calculated as

$$\begin{aligned}&\text{Opening stock numbers} \times (\text{Year 1 cost} + \text{RG}_2) \\ &\text{i.e. } 400 \times (\$16.43 + \$8)\end{aligned}$$

The closing cost (\$26.29 in this example) is held constant until the livestock concerned are either sold or die, or until the valuation method is changed. Depreciation is NOT charged on this stock.

An inventory system is necessary in order to account for **mature** animals. It is suggested that an average cost inventory system would be appropriate for a livestock farmer. This method recalculates average cost annually. FIFO (first in, first out) could also be used.

Example 4 Average cost of mature sheep

Number on hand-start	2000
Intake of mature sheep	700
Sales and deaths of mature sheep	600
Number on hand - end	2100

Last year's average cost (say)	\$25.00 per head
This year's average cost	\$26.29 per head

Calculation:

Cost of sheep surviving from last year:

(Start nos - sales and deaths) x last year's cost

$$(2000 - 600) \times \$25 \qquad \$35,000$$

Cost of this year's intake:

$$\begin{array}{r} 700 \times \$26.29 \\ \hline 18,403 \\ \hline \underline{\underline{\$53,403}} \end{array}$$

$$\begin{aligned}\text{Average cost per head} &= \$53,403 \div 2100 \\ &= \$25.43 \text{ per head}\end{aligned}$$

Note: The actual formulae are more complex than these examples show. Farmers should seek professional advice.

Section 4.15.4 details the National Standard Costs over recent years.

Section 4.15.5 provides example calculations for the herd scheme and the National Standard Cost scheme.

Self Assessed Cost

The Self Assessed Cost (SAC) option uses basically the same methodology as that used for NSC, but will have higher compliance costs because of the record keeping requirements and the need for complex calculations.

Virtually the same rules that apply to NSC also apply to SAC:

- it is an optional scheme.
- can be used with other schemes except NSC.
- an inventory control system is required for mature stock groups.

Self assessed cost cannot be used for stock currently in the herd scheme.

Farmers considering the Self Assessed Cost scheme should seek professional advice.

III. Market Value or Replacement Price

Market value is the estimated selling price of the livestock, as determined by a stock agent. Replacement price is the cost of buying an animal of the same size, age, and breed.

Market value/replacement price can be used as an alternative when using either of the cost options.

Changing between Schemes

- Movement into the herd scheme may be undertaken at any time. This includes first adoption of the herd scheme and/or the progressive movement of stock classes or numbers to the herd scheme from another option.
- Movement out of the herd scheme will require two years prior notice.
- Changes to the percentage level of herd values will also require two years prior notice.
- Increases in stock numbers in any herd class valued under the herd scheme can be valued under an alternative valuation option.
- Movement between one of the cost schemes and the market value/replacement price options is unrestricted and may be undertaken on a year to year basis for each inventory group.
- Movement between the National Standard Cost and the Self Assessed Cost schemes will require two years prior notice.
- The National Standard Cost scheme and the Self Assessed Cost scheme are mutually exclusive - i.e. either the NSC or the SAC scheme may be used, but not both.

Transitional Measures

Any income arising as a result of the scheme changes and adjustments in the 1992-93 income year may be spread over a maximum of 5 years. Income may arise from movements into the herd scheme, adoption of herd values other than 100% of the declared market value, or a change from any current valuation method to cost (NSC or SAC), market value or replacement price. The lesser of the 1992-93 assessable income and the spreadable revaluation income (net of any losses carried forward), may be spread over a 5 year period commencing 1992-93 income year. A minimum of 20% must be returned as income in any one year.

Further information on the livestock valuation options, including comments on the factors which farmers should consider, is contained in MAF Policy Technical Paper 92/18, *The 1992 Livestock Valuation Review*.

High-Priced Livestock

High priced livestock are in a separate class for valuation purposes. 'High priced' means that the purchase price is at least \$500 and exceeds by 5 times the higher of the previous year's or the current year's declared National Average Market Value for that class of livestock.

High priced livestock are valued at cost less a write down for 'depreciation'.

Depreciation may be calculated using the straight line method or the diminishing value method. The rate depends on the type of animal, as follows:

Livestock Category	Straight Line Rate (%)	Diminishing Value Rate (%)
Sheep	25	33
Cattle	20	26
Stags	20	26
Other deer	15	22
Goats	20	26
Pigs	33	40

An election to adopt the diminishing value method of depreciation is irrevocable.

There are restrictions on the closing value for the first income year. Where the livestock is owned for less than six months and is not used for breeding purposes, or is less than one year old at balance date, the closing value must be cost price (i.e. is not depreciated).

Once high-priced animals have been depreciated to the NAMV for that class, they will be included in the other valuation schemes operated by the farmer i.e. transferred out of the High Priced Livestock scheme.

Livestock taxation examples are illustrated in Section 4.15.5.

Bloodstock

All bloodstock is to be valued at cost price. Stud stallions may be written down to \$1 over a period of five years, while broodmares may be written down to \$1 over a period of between three and 14 years depending upon the age when first used for breeding purposes. However, if the true market value of bloodstock is less than 50% of normal market value because of infertility, birth deformity or accident, then the true market value may be used. Costs of breeding and rearing are to be capitalised until the animal is used for breeding. The write-down provisions outlined above commence in the income year in which the horse was first used for breeding purposes. There are transitional provisions for horses raced before the 1987-88 accounting year.

Changes to the depreciation regime announced on 16 December 1991 increased the depreciation rate applicable to bloodstock used for horse-breeding by 25%. In addition, stallions may be depreciated on a straight line basis (at 20%) or a diminishing value basis (at 37.5%). These revised provisions apply to bloodstock purchased and first used after 15 December 1991.

Adjustments to cost price used for depreciation occur where breeding bloodstock is raced rather than used for breeding purposes. Expenditures add to this cost, income received reduces the cost. Expenditures and losses incurred in racing bloodstock, or preparing bloodstock for racing are not tax deductible unless incurred to train a horse for a 'ready to race' sale, or where a horse is trained for another taxpayer.

Horses raced by a bloodstock breeder can be regarded as a hobby or can be treated as part of the business. Transfers from business to private use must be at market value. Once racing is regarded as a hobby, prize money received is exempt income.

Gains on sale or other disposal of breeding stock may be used to reduce the cost price of replacement bloodstock, if application is made within a specified period.

4.8.4 Depreciation (See also *Section 4.8.5 for Depreciation on Land Improvements*).

Depreciation is an allowance for loss in value of a fixed asset due to fair wear and tear, obsolescence, etc. Not all assets are depreciable - for example, assets which are not used to produce assessable income, or assets which are not subject to wear and tear (such as land). In addition, a taxpayer may choose to exclude an asset from depreciable property. Where an asset has a part business and part private use, depreciation is calculated at the schedule rate and then apportioned between business and private (e.g. car depreciation).

Depreciation is calculated on the net price of the asset which generally would exclude GST if the taxpayer is registered for GST purposes. For a non-registered taxpayer, depreciation is calculated on the GST inclusive cost.

Depreciation is based on the effective working life of the assets concerned, giving rise to the concept of economic rates.

The taxpayer has a choice of 3 methods of depreciation: diminishing value method, straight line method, and the pool method.

Diminishing value (DV) method is a constant percentage of adjusted tax value. The rates applicable to each asset are set by the IRD although a taxpayer may apply for a special rate. Selected examples of the economic rates are set out in *Section 4.15.9*.

Straight line (SL) method is a constant percentage of cost price. The rates are set by the IRD although special rates may be approved. Selected examples are set out in *Section 4.15.9*.

Pool method allows the grouping of low valued assets, with depreciation being charged on the total of the pool. Buildings cannot be pooled. To pool property, the following criteria must be satisfied:

- (i) The maximum cost or depreciated book-value of any one asset is \$2,000.
- (ii) Assets depreciated in the 1993 income year using the 'globo accounting method' may be pooled. All assets must be in the same pool. The globo accounting method is no longer available.
- (iii) The assets must be used 100% for business purposes or be subject to FBT if their business use is less than 100%

There is no restriction on the number of assets in a pool. Depreciation is calculated using the diminishing value method on the average value of the pool. The rate of depreciation is the lowest rate applying to any asset in the pool.

Example:

Value of pool at year start		\$18,000
Asset purchased during year		<u>6,000</u>
Value at end of year		<u>\$24,000</u>
Average value of pool	=	$(\$18,000 + \$24,000) \div 2$
	=	\$21,000
Depreciation at (say) 22% DV	=	$\$21,000 \times 22\%$
	=	\$4,620
Pool value at end of year	=	$\$24,000 - \$4,620$
	=	<u>\$19,380</u>

Changing Between Methods

Taxpayers can change the method(s) used for depreciation on a year to year basis, except when the asset is included in a pool. The carrying value for subsequent depreciation calculations is the current adjusted tax value. Charts exist to convert diminishing value rates to/from straight line rates. The Schedule of economic rates (Section 4.15.9) shows rates for both methods of depreciation.

Adjustments

Assets other than pool assets acquired during the year may be depreciated (DV or SL) for the number of months owned.

Additions to an existing pool are taken into account when the average value of the pool is calculated.

Disposal of assets other than pool assets - Assets other than buildings may not be depreciated in the year of disposal. Buildings may be depreciated for the number of months used in the year of disposal. A loss on sale is tax deductible (except for buildings). A gain on sale is assessable except that any excess over original cost price is a capital gain and is not taxable.

Disposal of pool assets - The sale price must be deducted from the adjusted tax value of the pool before depreciation is calculated. No adjustment should be made if the pool asset is dumped or lost. If the resultant pool value is negative, that amount must be treated as depreciation recovered i.e. assessable income. The pool value becomes zero and no depreciation is charged until new assets are added to that pool.

Private use of non-pool assets - Depreciation must be apportioned between personal (non-deductible) expenditure and business (deductible) expenditure using an appropriate measurement base. For vehicles the same apportionment as for running costs must be used i.e. factual apportionment when complete records are kept, or based upon a test period of 3 months (subject to review every 3 years).

Private use of pool assets - Depreciation on pool assets cannot be apportioned - by definition, pool assets must have 100% business use. If the usage of a pool asset is not totally business related, it must be removed from the pool (deemed sale at market value) and then depreciated separately. Depreciation can then be apportioned between business and personal.

Special Rules

Computer Software - Expenditures on or after 1 July 1993 must be capitalised and depreciated at 40% DV or 30% SL. Software costing less than \$200 may be immediately expensed. Costs of upgrades follow the same rules.

Loose tools are consumable items of the type that are left on the shelf or in a chest when not in use. Loose tools should be treated as any other asset ie: separately depreciated, pooled, or treated as a low value asset.

Low value assets costing \$200 or less may be claimed as a deduction (subject to some rules). If such property is subsequently sold, the entire sales proceeds are assessable.

Assets which are scrapped may, with IRD approval, be totally written off. The disposal costs must exceed the expected sale proceeds for such assets. If a scrapped asset is later sold, the proceeds are assessable up to original cost.

Transfers of depreciable property between associates. New rules apply to property acquired after 23 September 1998. In general terms, the base value of an asset purchased from an associate is the lower of the original price paid by the seller or the price paid by the buyer. In addition the purchaser cannot claim a higher rate of depreciation than that used by the seller.

New assets and imported second-hand assets excluding imported used cars, buildings, intangible assets and software, may be depreciated at the economic rate plus a 20% loading. Secondhand property, imported used cars and buildings are depreciated at the appropriate economic rate.

Depreciation Regime Prior to 1993-94 Income Year

Depreciation was required to be calculated as a percentage of either the cost price of the asset (CP or straight line method) or the diminishing book value (DV method). The Inland Revenue Department specified both the maximum allowable rate (although a lesser rate could be claimed) and the method of depreciation. The Department also has discretion to allow special rates of depreciation in some circumstances.

Schedule rates are listed in *Section 4.15.8*.

Assets Acquired During the Income Year

Buildings - Depreciation is allowable on the cost of the building only (excluding land). If no separate values of land and buildings purchased are available, the total cost is apportioned, often using the amounts shown in the latest government valuation as an indication. Depreciation is allowed in proportion to the number of months the building has been owned.

Other assets - A full year's depreciation is allowable if the asset was used for more than six months of the year or more than half a season if used for seasonal work; otherwise half of a year's depreciation is allowable.

Assets Sold During the Income Year

When a depreciable asset is sold, the total depreciation already allowed is adjusted so that the amount equals the actual decline in value from original cost to the disposal

value. The amount of the adjustment is calculated by comparing the net sales proceeds (after deducting the costs of sale) with the book value of the asset.

If net sales proceeds are less than book value i.e. a loss on sale occurs, the loss is deductible in the year of sale. However, losses on sale of buildings are not tax deductible.

If net sales proceeds exceed book value i.e. a gain on sale occurs, the gain is assessable in the year of sale, except that any excess above the original cost price represents a capital gain which is not taxable.

Summary of Depreciation Methods

Date Used	Type	Rate
Before 16/12/91	All assets	Schedule
16/12/91 - 31/03/93	NZ new assets	Interim
	Used assets	Schedule
1/4/93 - 31/3/95	NZ new assets	Interim or Economic
	Used assets	Schedule or Economic
1/4/95 onwards	NZ new assets	Economic + Loading
	Used assets	Economic

Rates are:

Schedule: Depreciation regime prior to 1994 income year. (Historic rates)

Interim: Schedule rate multiplied by 1.25. (ie: Historic rates x 1.25)

Economic: Rate set under the new regime.

Economic + Loading: Economic rate multiplied by 1.20.

4.8.5 Expenditure on Land Improvements (Development Expenditure)

Expenditure on the following items may be deducted in full when incurred:

- The destruction of weeds or plants which are detrimental to the land.
- The destruction of animal pests detrimental to the land.
- The clearing, destruction and removal of scrub, stumps and undergrowth.
- The repair of flood or erosion damage.
- The planting and maintaining of trees for the purpose of preventing or combating erosion or providing shelter. (See also Tree Planting, below).
- The construction on the land of fences for agricultural purposes, including the costs of rabbit-proofing existing fences.

Other expenditures on land improvements must be capitalised as an asset and depreciated at the rates set out in *Section 4.15.3, Expenditure on Land and Aquaculture Improvements*. Such expenditures qualify for the 25% loading in the 1993, 1994 and 1995 income years, and the 20% loading for 1996 and subsequent years.

Prior to the 1992 income year, development expenditures were apportioned between a tax-deductible amount and a depreciable asset. Details are contained in previous editions of the Financial Budget Manual.

Tree Planting

- Expenditure on trees planted for shelter and/or erosion control is fully deductible as 'development'.

Prior to the 1992 income year, such expenditure was deductible on a reducing scale with the proviso that the allowable deduction shall not be less than the lesser of \$7500 or the actual expenditure. Expenditure which was not eligible for immediate deduction was to be capitalised as Land Improvements and depreciated at 10% DV.

- Other tree planting excluding Forestry Encouragement activities and fruit trees.

Deduction calculated on a reducing scale, as in 1 above. Expenditure for 1992 and subsequent years is the lesser of \$7500 or actual expenditure. The non-deductible proportion was to be capitalised as Land Improvement and depreciated.

- Fruit trees - see *Section 4.9*.
- Forestry activities - see *Section 4.8.7*.

Purchase of Land

Where land is purchased, any development expenditure incurred by the previous owner can continue to be depreciated.

Development Expenditure Example

In the year ended 30 June 1998, a farmer incurs the following expenditure:

New Fencing	\$3,000
Shelter Structures	\$5,000
Repairs to Access Road	\$1,000

The amounts deductible are:

New Fencing - Total amount deductible in full	\$3,000
-----------------------------------------------	---------

Shelter Structures -

'Depreciation' deduction 12.5% of \$5000	\$625
<i>Diminished value for next year's calculation = \$4375 (\$5000 - \$625)</i>	

Repairs to Access Road -

Deductible in full as repairs and maintenance	\$1,000
-----------------------------------------------	---------

4.8.6 Limitation of Tax Losses from Farming or Landowning

There is no limitation regarding the offsetting of such losses against other income.

For historical purposes only, it should be noted that a \$10,000 limitation did apply prior to the 1991 income year. Losses above this limit had to be carried forward and deducted from other income in subsequent year(s), subject to the \$10,000 limit in each year.

4.8.7 Timber Sales and Farm Forestry

Income from the sale of timber, including standing timber and trees planted for agricultural purposes, but excluding ornamental or incidental trees, is assessable but may be spread over the year of sale and up to three preceding years.

Forest Development Expenditure

Any forestry business which held or owned land as at 12 December 1985 which was planted prior to 31 December 1986 may continue to deduct development expenditure until the end of the 1997 income year.

A 'new' forestry business will not receive this concession, but will be subject to the same rules as for farming (see *Section 4.8.5*). This requires that development expenditures be capitalised and depreciated at the rates set out in *Section 4.15.3*.

Forestry Planting and Maintenance

Any forestry business which held or owned land as at 12 December 1985 which was planted prior to 31 December 1986 may continue to deduct maintenance costs in full up to the end of the 1997 income year.

The ability of 'other' forestry businesses to deduct expenditures on planting and maintenance expenditure has been reducing on the same basis as for development (see above). The non-deductible proportion of such expenditures were to be capitalised to a 'cost of timber' account which can only be deducted when those trees are sold.

For the 1992 and subsequent years, expenditure on planting and maintaining trees is fully deductible. However, there has been no change to the requirement to depreciate costs capitalised to the cost of bush account over the 1988 to 1991 income years.

In addition, expenditure on the construction of access tracks which have a life of less than 12 months is fully deductible for the 1992 and subsequent years.

The following items will continue to be tax-deductible in the year the expenditure is incurred:

- Rent, rates, land tax, insurance premiums, administrative overheads, or other like expenses.
- Weed, pest or disease control after trees have been planted. (Excludes releasing.)
- Interest on money borrowed.

- Repairs and maintenance on plant and machinery used to develop land, or to plant or maintain trees.
- Repairs and maintenance on land improvements (not trees).
- Depreciation on plant and machinery used to develop land or to plant or maintain trees.
- Fertiliser.

Individuals who derive assessable income from forestry qualify for the Income Equalisation Scheme. (Refer *Section 4.8.8* below).

Gross receipts from thinning operations carried out by a forestry company also qualify for the Income Equalisation Scheme.

4.8.8 Income Equalisation Schemes

Main Income Equalisation Scheme

This scheme allows a farmer to smooth income from year to year by permitting a reduction in assessable income by the amounts deposited with the Inland Revenue Department. These deposits are retained in the Income Equalisation Reserve Account in the farmer's name at the Reserve Bank. When amounts are withdrawn at a later date, they become assessable income. A forestry company may use the income equalisation scheme with respect to income from thinning operations only.

Deposits

Assessable income is reduced by the amount deposited during a year. Deposits may, however, be used to reduce the income of the immediately preceding year upon the taxpayer's written election, provided the deposit is made within the shorter of:

- six months after balance date; or
- one month after the due date for filing the return of income.

The maximum amount of deposits in any one year is the assessable farm income for that year, and each deposit must be a minimum of \$200 (except the last deposit to make up the maximum).

The minimum period of deposit is one year (able to be relaxed under certain circumstances) and the maximum period for any one deposit is five years.

Generally no deposit can be made in a year when the farmer voluntarily withdraws funds from the Income Equalisation Reserve Account.

3% interest is paid on deposits held (except those withdrawn within one year), and credited to the appropriate deposit.

Withdrawals

Compulsory refunds are made if a deposit reaches the maximum term of five years. Voluntary refunds (withdrawals) can be made at any time but must be made from

funds deposited for a minimum period of 12 months, subject to the following exceptions:

- (a) If deposited for six months or more, funds may be withdrawn:
 - ◇ For immediate expenditure on planned development or maintenance work;
 - ◇ To purchase livestock;
 - ◇ To avoid hardship.
- (b) If deposited for less than six months, funds may be withdrawn:
 - ◇ For immediate expenditure on unplanned development or repair work resulting from an adverse event;
 - ◇ To purchase replacement livestock due to an adverse event;
 - ◇ To avoid hardship.

All refunds become assessable income in the income year when the application is made, or the immediately preceding year on the same conditions as for deposits.

A refund will not attract more tax than the deposit saved.

Refunds are made from the oldest deposits first.

The minimum refund is \$200 unless the account balance is smaller; the maximum is the account balance.

Special rules apply where the refund is due to the retirement, death, or bankruptcy of the farmer.

Adverse Event Income Equalisation Scheme

This new scheme, introduced for the 1993-94 income year, allows taxpayers engaged in any farming or agricultural business, to deposit income that arises from the sale of livestock, or failure to replace livestock, due to a self-assessed adverse event.

Deposits may be made during the year or backdated if made within one month after the end of the financial year. Interest at 6.5% p.a. (4.7% before 20 April, 1995) is payable on deposits.

Refunds add to assessable income in the year application is made. Deposits remaining in the Adverse Events Income Equalisation Scheme one year after the event are transferred to the Main Income Equalisation Scheme.

4.9 CALCULATING TAXABLE INCOME - HORTICULTURE

The following provisions relate specifically to horticulture, but readers should also familiarise themselves with the farming provisions (*Section 4.8*).

Purchase of land, including conveyancing fees, is capital expenditure and is not deductible. However, legal fees incurred in arranging finance to purchase the land, or in arranging to lease the land, will be tax deductible.

Buildings are capital expenditure and are subject to depreciation allowances as for a farm (refer *Section 4.8.4*).

Expenditure on land improvements and development is subject to the same rules as for farming (refer *Sections 4.8.4* and *4.8.5*).

Purchase and planting of fruit trees - The cost of fruit trees is capital expenditure. The cost of planting fruit trees is regarded as a land improvement to be capitalised and depreciated (refer *Section 4.8.5*). The cost of fruit trees and vines which are scrapped may be written-off.

Expenditure on plants and planting for *asparagus* and *berryfruits* (e.g. blackcurrants, raspberries, strawberries, etc.) should be treated as follows:

- Plant life span of 1 to 5 years: costs either written off in year incurred or over the life span of the plants.
- Plant life span of 6 to 20 years: initial costs are not tax deductible, but subsequent replantings are fully deductible in the year of replacement.
- Crop rotation programme: cost of replacement crop and its planting is deductible in the year incurred so long as overall area under cultivation does not increase.

Recurring annual costs until production - where there is a period between establishment and the production of the first crop, the annual recurring expenses would be tax deductible when incurred notwithstanding that they are incurred to earn profits in future years. For example, an orchardist would be entitled to deduct expenditure on cultivation, pruning, spraying, rates, insurance, depreciation, etc. in the year the expenditure is incurred.

Hail Damage - Compensation payments received by orchardists for hail damage made to fill a gap in the profits are assessable income in the year received.

Growing crops of fruit, vegetables etc. are a capital asset and are only regarded as trading stock when they are harvested or severed from the ground. Unharvested potatoes may be valued as inventory provided the taxpayer consistently follows this practice.

Valuation of Nursery Stock

- Mature plants - suitable for sale and severed from the land. Valued at cost price, market value or replacement price.
‘Cost’ can be estimated as :
 - ◊ 50% of selling price for plants propagated and grown in pots, trays, or bags.
 - ◊ actual cost for plants bought in from other growers.
 - ◊ nil value for plants which are still growing in the ground.

- Immature plants that are in pots or polyurethane bags may be valued at 10% of selling price. Otherwise they should be valued at nil.
- Pots and containers should be valued at cost price, market value or replacement price. (The lowest of these is normally used.)
- Plants purchased from other growers should be valued at actual cost.

Horticulturists qualify for the Income Equalisation Scheme (refer *Section 4.8.8*).

4.10 CALCULATING TAXABLE INCOME - FISHING INDUSTRY

The following provisions relate specifically to the fishing industry but readers should also familiarise themselves with *Section 4.8* which includes information about farming generally.

In general ‘fish’ includes shellfish and crustaceans.

4.10.1 Spreading of Repair Costs on Fishing Boats

Expenditure incurred in making repairs or alterations necessary to obtain a certificate of survey under the ‘Shipping and Seamen Act 1952’ may be deferred in whole or in part and claimed at the written election of the taxpayer in the year of expenditure and up to four succeeding years. The expenditure covers repairs and alterations to the hull, equipment or machinery, and must be ordinarily deductible as ‘repairs and maintenance’ (i.e. would not be regarded as capital expenditure).

4.10.2 Development Expenditure - Fish Farming

Development expenditure for rock oyster farming, mussel farming, scallop farming, sea-cage salmon farming, and freshwater fish farming, must be capitalised as an asset and depreciated at the rates set out in *Section 4.15.3, Land Improvements: Qualifying Expenditure and Depreciation Rates*, Parts III to VII. Refer also to *Section 4.8.4, Depreciation*.

Prior to the 1992 income year, development expenditures were apportioned between a tax-deductible amount and a depreciable asset (under the same regime as for farmers). Details are contained in previous editions of the Financial Budget Manual.

4.10.3 Income Equalisation Scheme

Taxpayers engaged in the business of fishing are able to make deposits under the income equalisation scheme, and for this purpose ‘fishing’ includes rock oyster farming, mussel farming, and freshwater fish farming. (Also see *Section 4.8.8*.)

4.11 EXPORT INCENTIVES

No export incentives are available.

4.12 DISPOSITIONS OF MATRIMONIAL PROPERTY

Since 28 July 1983, one spouse may transfer matrimonial property to the other spouse under Section 21 of the Matrimonial Property Act 1976 without giving rise to a subsequent liability for income tax. Transfers of matrimonial assets made by Court order under Section 25 of the Matrimonial Property Act 1976 are totally exempt. (For Estate and Gift Duty provisions refer to Section 5.) The legislation basically allows assets to be transferred at book values rather than market values. In essence, the recipient of the matrimonial property is placed in the same position as the person who made the transfer.

Legislation of relevance to the agricultural sector regarding matrimonial transfers include the following:

- Transfers of land are deemed to be at the original purchase price which the taxpayer paid for the land. No profit on sale, needs to be included as part of income.
- Transfers of land with growing timber on it are regarded as a sale of timber, but may be transferred at cost price.
- Livestock is to be transferred at the same value as it appears in the books of the transferor.
- The rights of ownership of an asset will accompany the asset if it is transferred under a matrimonial agreement e.g. depreciation, recovery of depreciation upon disposal, etc.

4.13 FRINGE BENEFIT TAX

Fringe benefit tax (FBT) is a tax paid by employers on non-cash benefits that have been given to their employees. For example, an employer who provides a company car, cheap loan or other gifts may be required to pay FBT. Before this tax was introduced, these fringe benefits were used as a way of reducing tax.

4.13.1 General Provisions

Fringe benefit tax is calculated as 49% of the taxable value of fringe benefits provided to employees and is payable by the employer, usually at quarterly intervals.

For each quarter the employer must complete a return form setting out details of benefits granted and the tax payable, and send the return with payment to the Inland Revenue Department by the 20th of the month following the end of each quarter. Fringe benefit tax is levied on all employers, irrespective of whether they are taxable entities or are in a tax-loss situation. It is deductible for income tax purposes.

For the 1993 and subsequent income years, employers who do not exceed \$100,000 PAYE and superannuation tax deductions in the previous year may elect to pay fringe benefit tax on an annual rather than a quarterly basis. Similarly, employers of shareholder - employees may also pay on an annual basis. Interest is payable when FBT is paid annually.

The tax is payable by every employer who directly or indirectly grants a fringe benefit to an employee (which includes a former employee or a prospective employee).

Expenditures incurred in providing fringe benefits must be business-related or incurred in gaining assessable income in order to be tax-deductible i.e. expenditures must follow the normal rules in order to determine if they are tax-deductible.

4.13.2 Definition of 'Fringe Benefit'

A fringe benefit is any benefit received by an employee which consists of:

1. The private use, or the availability for private use, of an employer provided motor vehicle with a gross laden weight of 3500 kg or less.
2. Low interest loans. Current account balances owed to a company by a shareholder-employee can also represent low interest loans and become subject to fringe benefit tax. The reason for the low interest rate is because the recipient is an employee. Loans granted because of a family relationship e.g. father to son, would not be deemed to be a fringe benefit to the employee.
Loans made to employees under an employee share purchase scheme are excluded.
3. Subsidised transport where the employer is a public carrier.
4. Superannuation, retiring allowances or redundancy payments.
Retirement benefits are not subject to FBT but are assessable in the hands of the recipient. (Prior to 1 April 1993, retirement benefits were subject to FBT, but were completely tax-free to the recipient.) Superannuation contributions to 'Category 3' schemes, or non-monetary superannuation contributions are subject to fringe benefit tax. Redundancy payments are not subject to FBT but are taxable in the hands of the recipient as an "extra emolument".
5. Other benefits, such as free, subsidised or discounted goods and services, e.g. free milk, meat, firewood etc. provided to a farm worker. Other fringe benefits, for instance, life insurance or accident insurance premiums paid on behalf of an employee or family, school fees for an employee's children.

Benefits which are specifically excluded from the FBT regime include:

- Benefits provided and enjoyed on the business premises e.g. sports and recreational facilities, dining facilities, etc.
- Amounts already assessable as income.

- Amounts exempt from income tax.
- Benefits provided in the place of allowances which would be regarded as exempt income.
- Transportation in a vehicle not designed for the carriage of passengers.
- Benefits arising from the discounted price of shares acquired by employees under a share purchase scheme.
- Any benefit that is entertainment except where the employee may choose when to receive the benefit and other than in the course of employment duties.
- Club subscriptions paid by employer, provided it would be ordinarily tax-deductible to the employer.
- Board, lodging and free/subsidised accommodation (as these are already assessable as income).

There are two general exemptions for benefits in this category:

1. \$75 per employee per quarter; and
2. There is no fringe benefit where an employee purchases an item from the employer at below cost price where the normal retail price does not exceed \$200 and:
 - (a) For sale goods
 - ◇ The difference in price is made up of the discount to the public plus the usual staff discount, and
 - ◇ The price charged to the employee is no less than the smaller of 95% of cost or 95% of the price to the public, and
 - ◇ A reasonable quantity of these sale goods are available to the public.
 - (b) For non-sale goods, the price is not less than 95% of the retail price.

4.13.3 Calculation of Fringe Benefit Tax

The amount of fringe benefit tax payable is the taxable value of fringe benefit multiplied by the rate of FBT (49%).

The taxable value of the fringe benefit is the “gross” value of the fringe benefit less the amount contributed by the employee, if any.

4.13.4 Value of Fringe Benefits

The rules for calculating the value of fringe benefits are set out in the Income Tax Act.

Motor Vehicles

For vehicles, the value of the fringe benefit per quarter is generally set at 6% of the GST inclusive price (or 6.75% of the GPT exclusive price) of the vehicle. This value is reduced to take into account times when the vehicle is not available to be used privately, and contributions by the employee.

$$\text{Value of benefit} = \frac{\text{No days available for private use (max 90)}}{90} \times Z$$

'Z' is 6% of the cost price of vehicle including GST; or
6% of the market value of vehicle at commencement of lease, including GST; or
6.75% of the cost price of the vehicle excluding GST.

A vehicle is subject to fringe benefit tax if it is available for private use; it does not have to be actually used privately. If a car is allocated to an employee, the following can be regarded as days when the vehicle was not available for private use:

- Any day when the employee used the vehicle to leave home to attend an 'emergency call' (defined to be between 6 pm and 6 am on a working weekday, or on any Saturday, Sunday or public holiday, and involves the protection of plant and machinery or health and safety of the employer or a customer of the employer).
- Any day when an employee uses the vehicle for regular business-related trips of at least 24 hours duration.
- Any day on which the vehicle is regarded as a 'work related vehicle' (defined to be a vehicle, other than a car, with gross laden weight less than 3500 kg and which has the employer's name or logo permanently affixed to its exterior).
- The number of days used for private purposes may be determined using a three month test period. The results will form the basis for calculating fringe benefit tax for a three-year period.

Note: Vehicles with a fold-down rear seat may be regarded as a work-related vehicle only if the rear seat is removed or permanently folded down, e.g. welded in the folded down position, and the employer's name is prominently and permanently affixed to the vehicle.

Taxable value = Value of Benefit - Employee Contributions

Employee contributions towards the cost of private use of the vehicle may take the form of:

- Payment of all or part of the running costs.
- Reimbursing employer for the use of the vehicle.
- Where the vehicle is partly owned by the employee, 2.5% of the cost price of the employee's share may be deducted from the value of the benefit calculated as above.

Low Interest Loans

The value of a fringe benefit provided by way of a low interest loan is calculated by deducting the interest actually payable by the employee from the interest calculated at the prescribed rate of interest on the daily balance of the outstanding loan.

Recent interest rates, as prescribed by Regulation, are:

Period	Rate %
1 January 1998 onwards	9.94

1 April 1977 - 31 December 1997	9.65
1 January 1997 - 31 March 1997	10.0
1 October 1996 - 31 December 1996	11.1
1 July 1996 - 30 September 1996	10.6
1 January 1996 - 30 June 1996	10.4

Subsidised Transport

This category applies to employers who carry on a business that includes transportation of the general public for hire or reward. The taxable value is the greater of: 25% of highest cost to public for that class of travel, or the amount paid by the employee.

Other Benefits

Taxable value is the value of benefit minus amount paid by employee.

Free or Discounted Goods

- Where the goods are manufactured by the employer, the value of the benefit is the lowest price at which identical goods are sold on an arm's length basis.
- Where the goods are purchased by the employer, the value of the benefit is the cost to the employer.

Note: The value of the benefit is the lower of the cost as determined above or the market value on the day of supply to the employee. If the value cannot be determined by the methods above, then the value is set at normal market price or such amount as the Commissioner may decide.

Free or Discounted Services

The value of the benefit is, in general, the normal price charged for the services to members of the public.

4.14 GOODS AND SERVICES TAX (GST)

4.14.1 Overview

GST is a broad based tax on consumption, levied on virtually all goods and services (except financial services, domestic accommodation and a few other categories) supplied in New Zealand. Exported goods and services are taxable at a rate of zero per cent. GST is imposed on all goods and services imported into New Zealand. The rate of GST is 12.5%. (It was 10% from 1 October 1985 to 30 June 1989.)

Only persons who conduct a 'taxable activity' are required to register for GST purposes, and are liable to charge and account for GST. To arrive at the net amount of GST payable to the IRD, businesses ('registered persons') must deduct the GST which they paid on their inputs from the GST charged on their outputs. Thus, although GST is charged at each stage of production and distribution, it is only the final consumer who actually bears the full cost of the GST charged.

Registration

Any person/organisation whose gross turnover from taxable activities is over \$30,000 p.a. must register, and charge and account for GST. Registration is optional for traders having an expected taxable turnover of less than \$30,000 per year.

A taxable activity is any activity which involves the regular supply of goods or services to any other person for a consideration (payment). This is a wide definition which includes businesses, clubs, public and local authorities; but specifically excludes private recreational pursuits or hobbies, employment income, the directorship of a company (treated as employment), and the making of exempt supplies.

The following are exempt from GST:

- The supply of financial services;
- The supply of fine metal;
- The supply of donated goods/services by a non-profit body;
- The supply of residential accommodation in a dwelling; and
- The sale of rental dwellings (which have been used for rental accommodation for a period of five or more years).
- The supply of residential accommodation in a commercial dwelling (e.g. a hotel or hall of residence) is partially exempt. GST is payable on 60% of the amounts charged.

Certain supplies of goods and services are zero-rated. This means that the activities are taxable, but the rate of GST is zero.

Zero-rating occurs if:

- The goods are exported or are supplied outside New Zealand;
- A taxable activity is sold as a going concern to a registered person, i.e. a business or property is sold to another registered person who can continue operating without interruption;
- The services were performed outside New Zealand;
- The services were related to the transportation of passengers or goods to or from New Zealand; or
- The goods supplied consist of newly-refined precious metal.

4.14.2 Returns and Payment of GST

Registered persons must furnish GST returns to the IRD. The standard period for each return is two months. Alternatively taxpayers may choose to make monthly returns, or six monthly returns (but only if the value of taxable supplies does not exceed \$250,000 in the previous 12 months). Businesses with annual turnover greater than \$24 million must complete monthly returns.

The GST return, which details the net amount of GST payable to the IRD (or to be refunded, as the case may be) is due by the last working day of the following month e.g.

if the period covers the months of December 1992 and January 1993, and ends on 31 January 1993, then the return is due by the last working day in February 1993.

There is a penalty for late payment of additional tax to pay. GST unpaid after the due date attracts additional tax at the rate of 10% for the first month, and a further 2% for each extra month the tax remains unpaid.

GST is normally calculated on an invoice (accrual) basis. This means that GST on Sales (outputs) must be included in the GST return covering the month in which the sale is made. GST can be claimed on purchases (inputs) in the same month as they take place. There is an alternative method, the payments (cash) basis. Under the payments basis, GST on outputs is only due if cash has been received. GST inputs can only be included if they have been paid for. This basis may be adopted by:

- Public or local authorities
- Non-profit bodies
- Registered persons whose total taxable supplies are less than \$1 million.

A further alternative, the hybrid basis, has been available since the commencement of the 1992 income year. Under this basis, output tax is calculated on an invoice basis and input tax on a payments basis. This method allows businesses to use their cash payments book to calculate input tax.

4.14.3 Calculating Output and Input Tax

Output tax is the GST charged in respect of the supply of goods and services made by the registered person.

Output tax can be calculated using the ‘tax fraction’ method. The tax fraction is the amount of GST included in the total sale price. It is calculated by dividing sales by one-ninth (for a GST rate at 12.5%).

The tax fraction of one-ninth is illustrated in this example:

Value of goods excluding GST:	\$100.00
Plus GST at 12.5%	<u>12.50</u>
Consideration (price) including GST	<u>\$112.50</u>

$$\begin{aligned} \text{Amount of GST included} &= \frac{\text{GST rate}}{\text{Consideration including GST}} \\ &= \frac{12.5}{112.50} \\ &= \frac{1}{9} \end{aligned}$$

The amount of GST included in the total consideration (\$112.50) is calculated by dividing by nine (result: \$12.50).

Alternatively, the accounting system may separately accumulate the total GST.

Input tax is the GST charged in respect of goods and services supplied to the registered person, provided that tax invoices have been obtained from the supplier. Input tax also includes GST paid on imports. Expenditure on fixed assets and other long term items is included, and GST inputs on these items should also be claimed in the GST return.

Other adjustments for specific circumstances are also required (e.g. bad debts, business use of private assets, private use of business assets, fringe benefits).

Example Calculation

The GST payable by (or refundable to) a registered person for a return period is calculated as in the following example:

Output Tax:

Sales -	
(Total taxable supplies for the period, including GST.)	\$11,000
less	
Zero rated supplies (e.g. direct export sales)	<u>2,000</u>
	<u>\$9,000</u>
GST Content: one ninth	1,000
Plus Adjustments (e.g. GST on goods used privately)	<u>200</u>
<u>Total Output tax</u>	<u>\$1,200</u>

Input Tax:

Purchases/expenses (business related) -	
Total for which tax invoices are held, including GST	<u>\$5,400</u>
GST Content one ninth	600
Plus adjustments(e.g. business use of private vehicle)	<u>50</u>
<u>Total Input tax</u>	<u>\$650</u>
GST PAYABLE (Output Tax less Input Tax)	<u>\$550</u>

(The above example follows the format used in a Goods and Services Tax Return.)

Note: If output tax exceeds the input tax, the difference is paid to the IRD: if output tax is less than the input tax, the difference is refunded to the taxpayer, or it may be used to offset other amounts due to the IRD.

4.14.4 Recording GST

Recording of GST is normally part of the accounting system for a business. Where a cashbook is used, a GST column is normally included. The one ninth tax fraction on items that include GST is analysed into this column. At the end of the GST period, the column total can be transferred direct to the GST return (for businesses registered under 'payments' basis for recording GST).

Other businesses will need to include amounts that have not yet been paid or received, in their GST returns. (This applies to businesses using the 'invoice' basis.)

This situation can be dealt with in a cash book-based system by using a separate 'GST Accrual' book. At the end of the GST period, all invoices on hand which have not been paid should be written into the book. The amount of GST included should be added to the amount shown in the cash book and included in the GST return. At the same time, the total from the GST accruals book at the previous return date should be deducted (since the invoices included will now be recorded, either as payments or in the GST accruals book again).

For example:

	GST inputs from cash book for Jan. and Feb.	\$1,234.56
<i>plus</i>	GST inputs included in GST accruals book for Feb. (invoices on hand but not yet paid at 28 Feb.)	<u>\$ 502.00</u>
		<u>\$1,736.56</u>
<i>less</i>	GST inputs included in GST accruals book for Dec. (invoices which were on hand but were not yet paid as at 31 Dec.) accounted for in the previous GST return.	<u>\$ 321.05</u>
	GST inputs on an invoice basis	<u>\$1,415.51</u>

Businesses using more sophisticated accounting systems will generally record GST inputs and outputs in separate ledger clearing accounts.

4.14.5 Tax Invoices

A 'tax invoice' must be held before GST paid on inputs can be claimed as a deduction.

The tax invoice is a document which contains details of the items supplied - namely:

- The words 'tax invoice' in a prominent place;
- The name, and registration number of the supplier;
- The name, and address of recipient;
- The date of issue of the tax invoice;
- A description of the goods and services supplied;
- The quantity/volume of the goods and services supplied;
- Either: the value excluding GST, the GST charged, and the GST-inclusive price; or the GST inclusive price and a statement that GST is included in the price.

A slightly simplified invoice may be used where the amount supplied is less than \$200.

Details required are:

- The word 'tax invoice';
- Name and registration number of supplier;
- Date of issue of the tax invoice;
- A description of goods and services supplied;
- The GST inclusive price and a statement that GST is included in the price.

No invoice is necessary if the amount supplied is less than \$50.

It is the responsibility of the supplier of the goods/services to issue a tax invoice. However, there is provision to allow the recipient (buyer) of such services to produce the tax invoice, provided the IRD agrees, both parties agree that the supplier will not issue the tax invoice, and that both parties receive a copy of the tax invoice. This provision has significance for the rural sector where it is common for the buyer to create a document which evidences a sale e.g. a freezing works.

Where a registered person obtains second hand goods from a non-registered person, the purchase price is deemed to include a notional amount of GST (calculated by applying the tax fraction to the price paid).

The purchaser/recipient of second hand goods must maintain records detailing:

- Name and address of supplier;
- Date of acquisition of the goods;
- Description of the goods;
- Quantity or volume of goods;
- Price paid.

4.14.6 Auction Sales

Sales through auctioneers are also subject to special rules, because often it is not known if the sale is taxable or not (i.e. whether the principal is registered). With the principal's agreement, the auctioneer can treat all sales as taxable; the tax collected is either remitted to the IRD by the auctioneer on behalf of an unregistered principal, or passed to a registered principal for him to account for. If there is no agreement to adopt this approach, the sale by auction will only be taxable if the principal concerned is a registered person selling goods in the course of his taxable activity.

It should be noted that the principal is the supplier/seller of the goods.

Auctions may themselves be carried on either a tax-inclusive or tax-exclusive bidding basis - the latter requiring GST to be added to the successful bid. Each auctioneer will decide his individual approach.

The commission charged by the auctioneers is subject to GST if the auctioneer is registered.

4.15 TAXATION APPENDICES

4.15.1 Tax Payment Dates

Months for Payment
of Provisional and Terminal Tax

Month of balance date	Provisional Tax			Terminal tax
	First Instalment	Second Instalment	Third Instalment	
Oct 97	Feb 97	June 97	Oct 97	Sept 98
Nov 97	March 97	July 97	Nov 97	Oct 98
Dec 97	April 97	Aug 97	Dec 97	Nov 98
Jan 98	May 97	Sept 97	Jan 98	Dec 98
Feb 98	June 97	Oct 97	Feb 98	Jan 99
March 98	July 97	Nov 97	March 98	Feb 99
April 98	Aug 97	Dec 97	April 98	Feb 99
May 98	Sept 97	Jan 98	May 98	Feb 99
June 98	Oct 97	Feb 98	June 98	Feb 99
July 98	Nov 97	March 98	July 98	Feb 99
August 98	Dec 97	April 98	Aug 98	Feb 99
Sept 98	Jan 98	May 98	Sept 98	Feb 99

Note: Payment is due on the 7th day of the appropriate month, payments due in January are due on the 15th day.

4.15.2 Rates of Income Tax

Individuals

1998 Income year

\$1 - \$34,200	21.5%
Over \$34,200	33.0%

1999 Income year

\$1 - \$34,200	20.0%
\$34,201 - \$38,000	22.875%
Over \$38,000	33.0%

2000 Income year

\$1 - \$38,000	19.5%
Over \$38,000	33.0%

Companies

Domestic companies: 33% of taxable income

Overseas companies: 38% of taxable income

4.15.3 Expenditure on Land and Aquaculture Improvements

Note: For 1993, 1994 and 1995 income years: rate = rate x 1.25.

For 1996 and subsequent years: rate = rate x 1.20.

Description and Rate of Depreciation Diminishing Value (%).

PART A: FARMING AND AGRICULTURE (including HORTICULTURE)

	%
(a) The eradication or extermination of animal or vegetable pests on the land:	5
(b) The felling, clearing, destruction, and removal of timber, stumps, scrub or undergrowth on the land:	5
(c) The destruction of weeds or plants detrimental to the land:	5
(d) The preparation of the land for farming or agriculture, including the cultivation and grassing thereof, but excluding expenditure incurred in respect of any of the items specified in paragraph (b):	5
(e) The draining of swamp or low-lying lands:	5
(f) The construction of access roads or tracks to or on the land:	5
(g) The construction of dams, stopbanks, irrigation or stream diversion channels, or other improvements for the purpose of conserving or conveying water for use on the land or for preventing or combating soil erosion:	5
(h) The construction of earthworks, ponds, settling tanks, or other similar improvements primarily for the purpose of the treatment of waste products in order to prevent or combat pollution of the environment:	5
(i) The repair of flood or erosion damage:	5
(j) The sinking of bores or wells for the purpose of supplying water for the use on the land:	5
(k) The construction of aeroplane landing strips to facilitate aerial topdressing of the land:	5
(l) The planting of vines or trees on the land other than trees planted primarily and principally for the purpose of timber production:	10
(m) The construction on the land of fences, including the purchase of wire or wire netting for the purpose of making new or existing fences rabbit proof:	10
(n) The erection on the land of electric-power lines or telephone lines:	10
(o) The construction on the land of feeding platforms, feeding yards, plunge sheep dips, or self-feeding ensilage pits:	10
(p) The construction on the land of supporting frames for growing crops:	10
(q) The construction on the land of structures for shelter purposes.	10

PART B: FORESTRY

	%
(a) The felling, clearing, destruction, or removal of timber, stumps, scrub, or undergrowth on the land in the preparation of the land for the planting of trees on the land:	5
(b) The eradication or extermination, to enable the planting of trees on the land, of animal or vegetable pests on the land:	5
(c) The destruction, to enable the planting of trees on the land, of weeds or plants detrimental to the land:	5
(d) The draining of swamp or low-lying lands in the preparation of the land for the planting of trees on the land:	5
(e) The construction of roads to or on the land, being roads which are formed and wholly or substantially metalled or sealed, and any culverts or bridges that are necessary for the purposes of that construction:	5
(ea) The construction of roads to or on the land (including any culverts or bridges that are necessary for the purposes of that construction), being -	
(i) Roads which are formed and partially metalled or sealed; or	
(ii) Roads which are not metalled or sealed, -	
and not being access tracks in respect of which a deduction may be claimed under section DL 1(4) (Temporary access track).	20
(f) The construction of dams, stopbanks, irrigation or stream diversion channels, or other improvements for the purpose of conserving or conveying water for use on the land or for preventing or combating soil erosion:	5
(g) The repair of flood or erosion damage:	5
(h) The sinking of bores or wells for the purpose of supplying water for use on the land:	5
(i) The construction of aeroplane landing strips to facilitate aerial topdressing or disease control work or firefighting on the land:	5
(j) The construction on the land of fences, including the purchase of wire or wire netting for the purpose of making new or existing fences rabbit proof:	10
(k) The erection on the land of electric power lines or telephone lines:	10

PART C: ROCK OYSTER FARMING

(a) The acquisition and preparation of spatting sticks;	20
(b) The construction and erection of posts, rails, or other structures for the holding of spatting sticks during spat catching and maturing;	20
(c) The construction of fences (including breakwater fences).	20

PART D: MUSSEL FARMING

	%
(a) The acquisition, preparation, and mooring of pontoons, rafts, or other floating structures for collecting spat:	20
(b) The acquisition, mooring, and outfitting of moored floating platforms or longlines from which the collected spat is suspended for subsequent growth:	20
(c) The collecting and depositing of shell or other suitable material on the sea bed to create spatting surfaces.	20

PART E: SCALLOP FARMING

(a) The acquisition, preparation, and mooring of floating structures for collecting spat:	20
(b) The acquisition, mooring, and outfitting of longlines from which the collected spat is suspended for subsequent growth.	20

PART F: SEA-CAGE SALMON FARMING

(a) The acquisition, preparation, and mooring of pontoons, rafts, or other floating structures for securing or protecting cages or other containment vessels:	20
(b) The acquisition, preparation, and placing of equipment of structures, including tanks, cages, nets, or other vessels, for the containment of live salmon:	20
(c) The acquisition and placing of ropes and buoys used in the breeding or maturing of salmon.	20

PART G: FRESHWATER FISH FARMING

(a) The drilling of water bores:	5
(b) The draining of land or the excavating of sites for ponds, tanks, or races:	5
(c) The construction or races, sluices, ponds, settling ponds, or tanks of impervious materials to conduct or contain waters:	5
(d) The supply and installation of pipes for water reticulation:	5
(e) The construction of walls, embankments, walkways, service paths, or access paths:	5
(f) The construction of effluent ponds:	5
(g) The supply and installation of baffles or screens for the containing or excluding of fish:	10
(h) The construction of fencing on the fish farm.	10

4.15.4 Values for Specified Livestock

- Note:** (1) Section contents include livestock values for 1997, 1996, 1995 and 1994 income years.
(2) Standard Value does not apply to 1993 or subsequent years.
(3) All animals are eligible for inclusion in the herd classes for 1993 and subsequent years.

1997 Income Year:

National Standard Costs (1997)

Kind of Livestock	Category of Livestock	National Standard Cost
		\$
Sheep	Rising 1-year	15.00
	Rising 2-year	8.80
Dairy Cattle	Purchased bobby calves	128.00
	Rising 1 year	413.00
	Rising 2 years	72.40
Beef Cattle	Rising 1 year	125.00
	Rising 2 year	73.70
	Rising 3 year male non-breeding cattle (all breeds)	73.70
Deer	Rising 1 year	48.90
	Rising 2 year	23.90
Goats (Meat & Fibre)	Rising 1 year	11.50
	Rising 2 year	7.20
Goats (Dairy)	Rising 1 year	80.70
	Rising 2 year	13.20
Pigs	Weaners to 10 weeks of age	72.00
	Growing pigs 10 to 17 years of age	56.70

4.15.4 continued

National Average Market Values (1997)

Type of Livestock	Classes of Livestock	Average Market Value
		\$
Sheep	Ewe hoggets	41
	Ram and wether hoggets	41
	Two-tooth ewes	57
	Mixed-age ewes (rising three-year and four-year old ewes	51
	Rising five-year and older ewes	43
	Mixed-age wethers	35
	Breeding rams	143
Beef cattle	<i>Beef breeds and beef crosses:</i>	
	Rising one-year heifers	188
	Rising two-year heifers	293
	Mixed-age cows	381
	Rising one-year steers and bulls	279
	Rising two-year steers and bulls	396
	Rising three-year and older steers and bulls	496
	Breeding bulls	1,177
Dairy cattle	<i>Friesian and related breeds:</i>	
	Rising one-year heifers	294
	Rising two-year heifers	573
	Mixed-age cows	688
	Rising one-year steers and bulls	218
	Rising two-year steers and bulls	348
	Rising three-year and older steers and bulls	459
	Breeding bulls	728
	<i>Jersey and other dairy cattle:</i>	
	Rising one-year heifers	221
	Rising two-year heifers	462
	Mixed-age cows	591
	Rising one-year steers and bulls	144
	Rising two-year and older steers and bulls	242
	Breeding bulls	540
Deer	<i>Red deer:</i>	
	Rising one-year hinds	218

4.15.4 continued

	Rising two-year hinds	364
	Mixed-age hinds	410
	Rising one-year stags	243
	Rising two-year and older stags (non-breeding)	390
	Breeding stags	1,642
	<i>Wapiti, elk, and related crossbreeds:</i>	
	Rising one-year hinds	252
	Rising two-year hinds	402
	Mixed-age hinds	458
	Rising one-year stags	274
	Rising two-year and older stags (non-breeding)	453
	Breeding stags	1,576
	<i>Other breeds:</i>	
	Rising one-year hinds	86
	Rising two-year hinds	145
	Mixed-age hinds	170
	Rising one-year stags	110
	Rising two-year and older stags (non-breeding)	174
	Breeding stags	358
Goats	<i>Angora and angora crosses (mohair producing):</i>	
	Rising one-year does	19
	Mixed-age does	25
	Rising one-year bucks (non-breeding)/ wethers	17
	Bucks (non-breeding)/wethers over one year	22
	Breeding bucks	148
	<i>Other fibre and meat producing goats (Cashmere or Cashgora producing):</i>	
	Rising one-year does	13
	Mixed-age does	18
	Rising one-year bucks (non-breeding)/ wethers	17
	Bucks (non-breeding)/wethers over one year	23
	Breeding bucks	167

4.15.4 continued

<i>Milking (dairy) goats:</i>		
	Rising one-year does	117
	Does over one year	185
	Breeding bucks	275
	Other dairy goats	180
Pigs	Breeding sows less than one year	188
	Breeding sows over one year	252
	Breeding boars	310
	Weaners less than 10 weeks of age (excluding sucklings)	39 ^a
	Growing pigs 10 to 17 weeks of age (porkers and baconers)	82
	Growing pigs over 17 weeks of age (baconers)	121

4.15.4 continued

1996 Income Year:

National Standard Costs (1996)

Type of Livestock	Classes of Livestock	National Standard Cost
		\$
Sheep	Rising 1-year	16.10
	Rising 2-year	9.20
Dairy Cattle	Purchased bobby calves	123.00
	Rising 1-year	453.00
	Rising 2-year	70.80
Beef Cattle	Rising 1-year	132.00
	Rising 2-year	76.80
	Rising 3-year male non-breeding cattle (all breeds)	76.80
Deer	Rising 1-year	42.90
	Rising 2-year	21.90
Goats (Meat and fibre)	Rising 1-year	12.40
	Rising 2-year	7.60
Goats (Dairy)	Rising 1-year	80.90
	Rising 2-year	13.20
Pigs	Weaners to 10 weeks of age	71.50
	Growing pigs 10 to 17 weeks of age	56.00

National Average Market Values (1996)

Type of Livestock	Classes of Livestock	Average Market Value per head
		\$
Sheep	Ewe hoggets	35
	Ram and wether hoggets	33
	Two-tooth ewes	44
	Mixed-age ewes	
	(rising three-year and four-year old ewes)	37
	Rising five-year and older ewes	30
	Mixed-age wethers	28
	Breeding rams	144
Beef Cattle	<i>Beef breeds and breed crosses:</i>	
	Rising one-year heifers	142
	Rising two-year heifers	241
	Mixed-age cows	304
	Rising one-year steers and bulls	207
	Rising two-year steers and bulls	317
	Rising three-year and older steers and bulls	427
	Breeding bulls	1,049
Dairy Cattle	<i>Friesian and related breeds:</i>	
	Rising one-year heifers	364
	Rising two-year heifers	704
	Mixed-age cows	868
	Rising one-year steers and bulls	149
	Rising two-year steers and bulls	259
	Rising three-year and older steers and bulls	351
	Breeding bulls	573
	<i>Jersey and other dairy cattle:</i>	
	Rising one-year heifers	327
	Rising two-year heifers	651
	Mixed-age cows	828
	Rising one-year steers and bulls	138
	Rising two-year and older steers and bulls	262
	Breeding bulls	520

4.15.4 continued

Type of Livestock	Classes of Livestock	Average Market Value per head
		\$
Deer	<i>Red deer:</i>	
	Rising one-year hinds	225
	Rising two-year hinds	357
	Mixed-age hinds	413
	Rising one-year stags	273
	Rising two-year and older stags (non breeding)	431
	Breeding stags	2,321
	<i>Wapiti, elk, and related crossbreeds:</i>	
	Rising one-year hinds	279
	Rising two-year hinds	433
	Mixed-age hinds	513
	Rising one-year stags	335
	Rising two-year and older stags (non breeding)	537
	Breeding stags	2,432
	<i>Other breeds:</i>	
	Rising one-year hinds	101
	Rising two-year hinds	163
	Mixed-age hinds	182
	Rising one-year stags	119
	Rising two-year and older stags (non-breeding)	185
	Breeding stags	472
Goats	<i>Angora and angora crosses (mohair producing):</i>	
	Rising one-year does	22
	Mixed-age does	39
	Rising one-year bucks (non-breeding)/wethers	17
	Bucks (non-breeding)/wethers over one year	38
	Breeding bucks	121
	<i>Other fibre and meat producing goats (Cashmere or Cashgora producing):</i>	
	Rising one-year does	22
	Mixed-age does	39
	Rising one-year bucks (non-breeding)/wethers	17
	Bucks (non-breeding)/wethers over one year	38
	Breeding bucks	121

4.15.4 continued

Type of Livestock	Classes of Livestock	Average Market Value per head
		\$
	<i>Milking (dairy) goats:</i>	
	Rising one-year does	126
	Does over one year	135
	Breeding bucks	192
	Other dairy goats	77
Pigs	Breeding sows less than one year of age	168
	Breeding sows over one-year of age	200
	Breeding boars	292
	Weaners less than 10 weeks of age (excluding sucklings)	38
	Growing pigs 10 to 17 weeks of age (porkers and baconers)	80
	Growing pigs over 17 weeks of age (baconers)	121

4.15.4 continued

1995 Income Year:

National Standard Costs (1995)

Type of Livestock	Classes of Livestock	National Standard Cost
		\$
Sheep	Rising 1 year	16.10
	Rising 2 year	9.10
Dairy Cattle	Purchased bobby calves	142.00
	Rising 1 year	397.00
	Rising 2 year	68.70
Beef Cattle	Rising 1 year	131.00
	Rising 2 year	76.40
	Rising 3 year male non-breeding cattle (all breeds)	76.40
Deer	Rising 1 year	38.50
	Rising 2 year	19.70
Goats (Meat and Fibre)	Rising 1 year	12.10
	Rising 2 year	7.30
Goats (Dairy)	Rising 1 year	79.20
	Rising 2 year	12.40
Pigs	Weaners to 10 weeks of age	75.00
	Growing pigs 10 to 17 weeks of age	55.20

Section 4.15.4 continued

National Average Market Values (1995)

Type of Livestock	Classes of Livestock	National Average Market Value
		\$
Sheep	Ewe hoggets	29.00
	Ram and wether hoggets	28.00
	Two-tooth ewes	38.00
	Mixed-age ewes (rising 3-year and 4 year old ewes)	33.00
	Rising 5-year and older ewes	25.00
	Mixed-age wethers	25.00
	Breeding rams	117.00
Beef Cattle	<i>Beef breeds and beef crosses:</i>	
	Rising 1-year heifers	215.00
	Rising 2-year heifers	333.00
	Mixed-age cows	412.00
	Rising 1-year steers and bulls	276.00
	Rising 2-year steers and bulls	410.00
	Rising 3-year and older steers and bulls	544.00
	Breeding bulls	1,109.00
Dairy Cattle	<i>Friesian and related breeds:</i>	
	Rising 1-year heifers	408.00
	Rising 2-year heifers	723.00
	Mixed-age cows	830.00
	Rising 1-year steers and bulls	192.00
	Rising 2-year steers and bulls	350.00
	Rising 3-year and older steers and bulls	489.00
	Breeding bulls	763.00
	<i>Jersey and other dairy breeds:</i>	
	Rising 1-year heifers	328.00
	Rising 2-year heifers	610.00
	Mixed-age cows	723.00
	Rising 1-year steers and bulls	115.00
	Rising 2-year and older steers and bulls	230.00
	Breeding bulls	605.00

Section 4.15.4 continued

Type of Livestock	Classes of Livestock	National Average Market Value
		\$
Deer	<i>Red deer:</i>	
	Rising 1-year hinds	123.00
	Rising 2-year hinds	212.00
	Mixed-age hinds	255.00
	Rising 1-year stags	164.00
	Rising 2-year and older stags (non-breeding)	319.00
	Breeding stags	1,580.00
	<i>Wapiti, elk, and related crossbreeds:</i>	
	Rising 1-year hinds	166.00
	Rising 2-year hinds	269.00
	Mixed-age hinds	321.00
	Rising 1-year stags	208.00
	Rising 2-year and older stags (non-breeding)	377.00
	Breeding stags	1,851.00
	<i>Other breeds:</i>	
	Rising 1-year hinds	43.00
	Rising 2-year hinds	76.00
	Mixed-age hinds	89.00
	Rising 1-year stags	59.00
	Rising 2-year and older stags (non-breeding)	107.00
	Breeding stags	298.00
Goats	<i>Angora and angora crosses (mohair producing):</i>	
	Rising 1-year does	34.00
	Mixed-age does	42.00
	Rising 1-year bucks (non-breeding)/wethers	15.00
	Bucks (non-breeding)/wethers over 1 year	21.00
	Breeding bucks	174.00
	<i>Other fibre and meat producing goats (Cashmere or Cashgora):</i>	
	Rising 1-year does	12.00
	Mixed-age does	16.00
	Rising 1-year bucks (non-breeding)/wethers	10.00
	Bucks (non-breeding)/wethers over 1 year	13.00
	Breeding bucks	87.00

Section 4.15.4 continued

Type of Livestock	Classes of Livestock	National Average Market Value
		\$
	<i>Milking (dairy) goats:</i>	
	Rising one-year does	61.00
	Does over one year	104.00
	Breeding bucks	261.00
	Other dairy goats	114.00
Pigs	Breeding sows less than 1 year of age	195.00
	Breeding sows over 1 year of age	263.00
	Breeding boars	341.00
	Weaners less than 10 weeks of age (excluding sucklings)	40.00
	Growing pigs 10 to 17 weeks of age (porkers and baconers)	89.00
	Growing pigs over 17 weeks of age (baconers)	125.00

Section 4.15.4 continued

1994 Income Year:

National Standard Costs (1994)

Type of Livestock	Classes of Livestock	National Standard Cost \$
Sheep	Rising 1 year	13.30
	Rising 2 year	7.80
Dairy Cattle	Purchased bobby calves	135.00
	Rising 1 year	268.00
	Rising 2 year	68.20
Beef Cattle	Rising 1 year	116.00
	Rising 2 year	65.50
	Rising 3 year male non-breeding cattle (all breeds)	65.50
Deer	Rising 1 year	35.90
	Rising 2 year	18.60
Goats (Meat and Fibre)	Rising 1 year	10.10
	Rising 2 year	6.30
Goats (Dairy)	Rising 1 year	74.00
	Rising 2 year	10.80
Pigs	Weaners to 10 weeks of age	75.70
	Growing pigs 10 to 17 weeks of age	56.70

National Average Market Values (1994)

Type of Livestock	Classes of Livestock	National Average Market Value
		\$
Sheep	Ewe Hoggets	39.00
	Ram and wether hoggets	35.00
	Two-tooth ewes	53.00
	Mixed-age ewes (rising 3-year and 4-year old ewes)	45.00
	Rising 5-year and older ewes	37.00
	Mixed-age wethers	33.00
	Breeding rams	138.00
Beef Cattle	<i>Beef breeds and beef crosses:</i>	
	Rising 1-year heifers	333.00
	Rising 2-year heifers	490.00
	Mixed-age cows	637.00
	Rising 1-year steers and bulls	426.00
	Rising 2-year steers and bulls	605.00
	Rising 3-year and older steers and bulls	749.00
	Breeding bulls	1 551.00
Dairy Cattle	<i>Friesian and related breeds:</i>	
	Rising 1-year heifers	481.00
	Rising 2-year heifers	840.00
	Mixed-age cows	1 008.00
	Rising 1-year steers and bulls	364.00
	Rising 2-year steers and bulls	552.00
	Rising 3-year and older steers and bulls	723.00
	Breeding bulls	1 384.00
	<i>Jersey and other dairy cattle:</i>	
	Rising 1-year heifers	413.00
	Rising 2-year heifers	747.00
	Mixed-age cows	926.00
	Rising 1-year steers and bulls	254.00
	Rising 2-year and older steers and bulls	436.00
	Breeding bulls	1 219.00

Section 4.15.4 continued

Type of Livestock	Classes of Livestock	National Average Market Value
		\$
Deer	<i>Red deer:</i>	
	Rising 1-year hinds	111.00
	Rising 2-year hinds	204.00
	Mixed-age hinds	254.00
	Rising 1-year stags	144.00
	Rising 2-year and older stags (non-breeding)	254.00
	Breeding stags	1 729.00
	<i>Wapiti, elk, and related crossbreeds:</i>	
	Rising 1-year hinds	147.00
	Rising 2-year hinds	266.00
	Mixed-age hinds	317.00
	Rising 1-year stags	191.00
	Rising 2-year and older stags (non-breeding)	333.00
	Breeding stags	1 898.00
	<i>Other breeds:</i>	
	Rising 1-year hinds	65.00
	Rising 2-year hinds	88.00
	Mixed-age hinds	101.00
	Rising 1-year stags	65.00
	Rising 2-year and older stags (non-breeding)	98.00
	Breeding stags	324.00
Goats	<i>Angora and Angora crosses (Mohair producing):</i>	
	Rising 1-year does	19.00
	Mixed-age does	20.00
	Rising 1-year bucks (non breeding)/wethers	12.00
	Bucks (non-breeding)/wethers over 1 year	14.00
	Breeding bucks	104.00

Section 4.15.4 continued

Type of Livestock	Classes of Livestock	National Average Market Value
		\$
	<i>Other fibre and meat producing goats</i> <i>(Cashmere or Cashgora producing):</i>	
	Rising 1-year does	16.00
	Mixed-age does	20.00
	Rising 1-year bucks (non-breeding/wethers)	13.00
	Bucks (non-breeding)/wethers over 1 year	16.00
	Breeding bucks	65.00
	<i>Milking (dairy) goats:</i>	
	Rising 1-year does	83.00
	Does over 1 year	96.00
	Breeding bucks	148.00
	Other dairy goats	45.00
Pigs	Breeding sows less than 1 year of age	188.00
	Breeding sows over one year of age	282.00
	Breeding boars	325.00
	Weaners less than 10 weeks of age (excluding sucklings)	44.00
	Growing pigs 10 to 17 weeks of age (porkers/baconers)	92.00
	Growing pigs over 17 weeks of age (baconers)	149.00

4.15.5 Livestock Taxation Examples

Note: Farmers should consult their accountant concerning the valuation options available.

1996-97 Income Year

	30 June 1997		30 June 1996	
	Nos.	NAMV	Nos.	NAMV
Ewe hoggets	925	\$ 41	930	\$ 35
2th ewes	760	\$ 57	753	\$ 44
3 & 4 year ewes	1502	\$ 51	1530	\$ 37
5 yr and older ewes	580	\$ 43	540	\$ 30
Rams	70	\$143	70	\$144

National Standard Cost	1997	1996
Rising 1 year sheep	\$15.00	\$16.10
Rising 2 year sheep	\$ 8.80	\$ 9.20

Cost of mature sheep (calculated in 1996) \$21.59

Livestock sales \$49,000 (2300 lambs, 1200 mixed-age ewes)

Livestock purchases \$10,200 (450 mixed-age ewes)

Natural increase 3,250 (survival to sale)

Deaths and missing 186 (including killed for rations)

Herd Scheme

Note: All sheep are in the herd scheme.

1997 Opening Tax Values

(Beginning numbers x ending NAMV)

Ewe hogget	930 x \$ 41	\$ 38,130
2th ewes	753 x \$ 57	42,921
3 & 4 yr ewes	1530 x \$ 51	78,030
5 yr older ewes	540 x \$ 43	23,220
Rams	70 x \$143	<u>10,010</u>
		<u>\$192,311</u>

1997 Closing Tax Values

(Ending numbers x ending NAMV)

Ewe hoggets	925 x \$ 41	\$ 37,925
2th ewes	760 x \$ 57	43,320
3 & 4 yr ewes	1502 x \$ 51	76,602
5 yr and older ewes	580 x \$ 43	24,940
Rams	70 x \$143	<u>10,010</u>
		<u>\$192,797</u>

Increase in taxable income due to changes in herd numbers

=	\$192,797	-	\$192,311
=	\$486		

Check

Herd value 30/6/97	\$192,797
Herd value 30/6/96	<u>\$148,572</u> (see 1996 example)
Increase	<u>\$ 44,225</u>

Made up of:

Increase in capital value of herd (\$148,572 to \$192,311)	\$ 43,739
Increase due to change in numbers	<u>486</u>
Total increase in value	<u>\$ 44,225</u>

Note: The base number for the alternative valuation option for 1998 will be the 1997 closing herd numbers.

Income from Livestock Operations

Sales	\$ 49,000
Less Purchases	<u>10,200</u>
Cash Surplus	38,800
plus Taxable increase in herd	<u>486</u>
Taxable income from sheep	<u>\$ 39,286</u>

Note: Income may be adjusted if deferrable income has been carried forward.

National Standard Cost

Detailed formulae for calculating livestock values under the National Standard Cost scheme are contained in the Income Tax (National Standard Costs for Livestock) Determination 1994, reprinted as the Appendix to the Tax Information Bulletin Volume 5, No 11, April 1994. The formulae are complex and will not be detailed in this Budget Manual.

Using these formulae, and an average cost inventory system, the 1996 livestock values for tax purposes have been calculated as:

Ewe hoggets	\$15.00 per head
Mature sheep	\$22.83 per head

1997 opening tax value

Ewe hoggets	930 x \$16.10	\$14,973
Mature sheep	2893 x \$21.59	<u>\$62,460</u>
		<u>\$77,433</u>

1997 closing tax value

Ewe hoggets	925 x \$15.00	\$13,875
Mature sheep	2912 x \$22.83	<u>\$66,481</u>
		<u>\$80,356</u>

Increase in taxable income = \$ 2,923

Income from Livestock Operations

Sales	\$49,000
less Purchases	<u>10,200</u>
Cash Surplus	38,800
plus Increase in livestock	<u>2,923</u>
	41,723
plus Revaluation income deferred from 1993	<u>1,278</u>
Taxable income from sheep	<u>\$43,001</u>

1995-96 Income Year

	30 June 1996		30 June 1995	
	Nos.	NAMV	Nos.	NAMV
Ewe hoggets	930	\$ 35	920	\$ 29
2th ewes	753	\$ 44	750	\$ 38
3 & 4 year ewes	1530	\$ 37	1420	\$ 33
5 yr and older ewes	540	\$ 30	630	\$ 25
Rams	70	\$144	70	\$117

National Standard Cost	1996	1995
Rising 1 year sheep	\$16.10	\$16.10
Rising 2 year sheep	\$ 9.20	\$ 9.10

Cost of mature sheep (calculated in 1995) \$19.95

Livestock sales \$47,000 (2250 lambs, 1137 mixed-age ewes)

Livestock purchases \$ 9,000 (460 mixed-age ewes)

Natural increase 3,200 (survival to sale)

Deaths and missing 220 (including killed for rations)

Herd Scheme

Note: All sheep are in the herd scheme.

1996 Opening Tax Values

(Beginning numbers x ending NAMV)

Ewe hogget	920 x \$ 35	\$ 32,200
2th ewes	750 x \$ 44	33,000
3 & 4 yr ewes	1420 x \$ 37	52,540
5 yr older ewes	630 x \$ 30	18,900
Rams	70 x \$144	10,080
		<u>\$146,720</u>

1996 Closing Tax Values

(Ending numbers x ending NAMV)

Ewe hoggets	930 x \$ 35	\$ 32,550
2th ewes	753 x \$ 44	33,132
3 & 4 yr ewes	1530 x \$ 37	56,610
5 yr and older ewes	540 x \$ 30	16,200
Rams	70 x \$144	<u>10,080</u>
		<u>\$148,572</u>

Increase in taxable income due to changes in herd numbers

= \$148,572 - \$146,720
= \$ 1,852

Check

Herd value 30/6/96	\$148,572
Herd value 30/6/95	<u>\$125,980</u> (see 1995 example)
Increase	<u>\$ 22,592</u>

Made up of:

Increase in capital value of herd (\$125,980 to \$146,720)	\$ 20,740
Increase due to change in numbers	<u>1,852</u>
Total increase in value	<u>\$ 22,592</u>

Note: The base number for the alternative valuation option for 1997 will be the 1996 closing herd numbers.

Income from Livestock Operations

Sales	\$ 47,000
Less Purchases	<u>9,000</u>
Cash Surplus	38,000
plus Taxable increase in herd	<u>1,852</u>
Taxable income from sheep	<u>\$ 39,852</u>

Note: Income may be adjusted if deferrable income has been carried forward.

National Standard Cost

Detailed formulae for calculating livestock values under the National Standard Cost scheme are contained in the Income Tax (National Standard Costs for Livestock) Determination 1994, reprinted as the Appendix to the Tax Information Bulletin Volume 5, No 11, April 1994. The formulae are complex and will not be detailed in this Budget Manual.

Using these formulae, and an average cost inventory system, the 1996 livestock values for tax purposes have been calculated as:

Ewe hoggets	\$16.10 per head
Mature sheep	\$21.59 per head

1996 opening tax value		
Ewe hoggets	920 x \$16.10	\$14,812
Mature sheep	2870 x \$19.95	<u>\$57,256</u>
		<u>\$72,068</u>

1996 closing tax value		
Ewe hoggets	930 x \$16.10	\$14,973
Mature sheep	2893 x \$21.59	<u>\$62,460</u>
		<u>\$77,433</u>

Increase in taxable income = \$ 5,365

Income from Livestock Operations

Sales	\$47,000
less Purchases	<u>9,000</u>
Cash Surplus	38,000
plus Increase in livestock	<u>5,365</u>
	43,365
plus Revaluation income deferred from 1993	<u>1,278</u>
Taxable income from sheep	<u>\$44,643</u>

1994-95 Income Year

	30 June 1995		30 June 1994	
	#	NAMV	#	NAMV
Ewe hoggets	920	\$ 29	910	\$ 39
2th ewes	750	\$ 38	730	\$ 53
3 & 4 year ewes	1420	\$ 33	1450	\$ 45
5 yr & older ewes	630	\$ 25	600	\$ 37
Rams	70	\$117	65	\$138

National Standard Cost	1995	1994
Rising 1 year sheep	\$16.10	\$13.30
Rising 2 year sheep	\$ 9.10	\$ 7.80

Cost of mature sheep (calculated in 1994) \$19.09

Livestock sales: \$44,000 (2000 lambs, 1200 mixed-age ewes)

Livestock purchases: \$ 7,000 (395 mixed-age ewes plus 5 rams)

Natural increase 2,980 (survival to sale)

Deaths and missing 145

Herd Scheme

Note: All sheep are in the herd scheme.

1995 Opening Tax Values

Ewe hoggets	910	x	\$ 29*	\$26,390
2th ewes	730	x	\$ 38	27,740
3 & 4 yr ewes	1450	x	\$ 33	47,850
5 year & older ewes	600	x	\$ 25	15,000
Rams	65	x	\$117	<u>7,605</u>
				<u>\$124,585</u>

* Herd livestock are at end-of-year values.

1995 Closing Tax Values

Ewe hoggets	920	x	\$ 29	\$ 26,600
2th ewes	750	x	\$ 38	28,500
3 & 4 yr ewes	1420	x	\$ 33	46,860
5 year & older ewes	630	x	\$ 25	15,750
Rams	70	x	\$117	<u>8,190</u>
				<u>\$125,980</u>

Increase in taxable income due to changes in herd numbers

= \$125,980 - \$124,585

= \$1,395

Check

Herd value 30/6/95 \$125,980

Herd value 30/6/94 \$170,600 (see 1993-94 example)

Decrease in value \$(44,620)

made up of:

Decrease in capital value of herd (\$170,600 - \$124,585) \$(46,015)

Taxable income from increased numbers \$ 1,395

Total decrease in value \$ 44,620

Note: The base number for the alternative valuation options for 1996 will be the 1995 closing herd numbers.

Income from Livestock Operations

Sales	\$44,000
less Purchases	<u>7,000</u>
Cash Surplus	37,000

plus taxable increase in herd 1,395

Taxable income from sheep \$38,395

Note: This income may be adjusted if the taxpayer has deferrable income from the 1992 income year.

National Standard Cost

Detailed formulae for calculating livestock values under the National Standard Cost scheme are contained in the Income Tax (National Standard Costs for Livestock) Determination 1994, reprinted as the Appendix to the Tax Information Bulletin Volume 5, No 11, April 1994. The formulae are complex and will not be detailed in this Budget Manual.

Using these formulae and an average cost inventory system, the 1995 livestock values for tax purposes have been calculated as:

Ewe hoggets	\$16.10
Mature sheep	\$19.95

1995 Opening tax values

Ewe hoggets	910	x	\$13.30	\$12,103.00
Mature sheep	2845	x	\$19.09	<u>54,311.05</u>
				<u>\$66,414.05</u>

1995 Closing tax values

Ewe hoggets	920	x	\$16.10	\$14,812.00
Mature sheep	2870	x	\$19.95	<u>57,256.50</u>
				<u>\$72,068.50</u>

Increase in taxable income = \$72,068.50 - \$66,414.05 = \$5,654.45

Income from Livestock Operations

Sales	\$44,000.00
less Purchases	<u>7,000.00</u>
Cash Surplus	37,000.00
plus Taxable increase in stock	<u>5,654.45</u>
Income for 1995	42,654.45
plus Revaluation income deferred from 1993	<u>1,277.66</u>
Taxable income from sheep	<u>\$43,932.11</u>

1993-94 Income Year

	Nos.	N.A.M.V. (Herd Scheme)	Std. Value (Trading Scheme)
30 June 1993			
Ewe hoggets	900	\$40.10	\$13.00
2th ewes	700	\$47.00	\$18.39
3 & 4 yr ewes	1400	\$41.60	\$18.39
5 yr & older ewes	600	\$35.20	\$18.39
Rams	70	\$151.70	\$18.39

Note: NSC values for mature sheep were calculated for the 1992-93 income year.

30 June 1994		
Ewe hoggets	910	\$39
2th ewes	730	\$53
3 & 4 yr ewes	1450	\$45
5 yr & older ewes	600	\$37
Rams	65	\$138

National Standard Cost (1994)

Rising 1 year sheep	\$13.30
Rising 2 year sheep	\$ 7.80

Livestock sales: \$45,000 (2000 lambs, 1100 mixed age ewes)

Livestock purchases: \$ 6,100 (350 mixed age ewes)

Natural Increase 3000 (survival to sale)

Deaths and missing 165

Herd Scheme

Note: All sheep are in the herd scheme.

1994 Opening Tax Values

Ewe hoggets	900	x	\$ 39*	\$35,100
2th ewes	700	x	\$ 53	37,100
3 & 4 yr ewes	1400	x	\$ 45	63,000
5 year & older ewes	600	x	\$ 37	22,200
Rams	70	x	\$138	<u>9,660</u>
				<u>\$167,060</u>

* Herd livestock are at the end-of-year values.

1994 Closing Tax Values

Ewe hoggets	910	x	\$ 39	\$35,490
2th ewes	730	x	\$ 53	38,690
3 & 4 yr ewes	1450	x	\$ 45	65,250
5 year & older ewes	600	x	\$ 37	22,200
Rams	65	x	\$138	<u>8,970</u>
				<u>\$170,600</u>

Increase in taxable income due to changes in herd numbers

= \$170,600 - \$167,060

= \$3540

Check

Herd value 30/6/94	\$170,600	
Herd value 30/6/93	<u>\$158,969</u>	(see 1992-93 example)
Increase in value	<u>\$11,631</u>	

made up of:

Tax-free increase in herd (\$167,060 - \$158,969)	\$8,091
Taxable income from increase in livestock	<u>3,540</u>
Total increase in value	<u>\$11,631</u>

Note: The base number for the alternative valuation options for 1995 will be the 1994 closing herd numbers.

Income from Livestock Operations

Sales	\$45,000
less Purchases	<u>6,100</u>
Cash Surplus	\$38,900

plus Taxable increase in herd	<u>4,920</u>
Taxable income from sheep	<u>\$43,820</u>

Note: This income may be adjusted if the taxpayer has deferrable income from the 1991 and 1992 income years.

National Standard Cost

Detailed formulae for calculating livestock values under the National Standard Cost scheme are contained in the Income Tax (National Standard Costs for Livestock) Determination 1994, reprinted as the Appendix to the Tax Information Bulletin Volume 5, No 11, April 1994. The formulae are complex and will not be detailed in this Budget Manual.

Using these formulae, the 1994 livestock values for tax purposes have been calculated as:

Ewe hoggets	\$13.30
Mature sheep	\$19.09

1994 Opening Tax Values

Ewe hoggets	900	x	\$13.00	\$11,700.00
Mature sheep	2770	x	\$18.39	<u>50,940.30</u>
				<u>\$62,640.30</u>

1994 Closing Tax Values

Ewe hoggets	910	x	\$13.30	\$12,103.00
Mature sheep	2845	x	\$19.09	<u>54,311.05</u>
				<u>\$66,414.05</u>

Increase in taxable income
= \$66,414.05 - 62,640.30
= \$3,673.65

Income from Livestock Operations

Sales	\$45,000.00
less Purchases	<u>6,100.00</u>
Cash surplus	38,900.00

plus Increase in livestock 3,673.65
Income for 1994 42,573.65

plus Revaluation income deferred from 1993 1,277.66
Taxable income from sheep \$43,851.31

1992-93 Income Year

Livestock on hand:

	Nos.	N.A.M.V. (Herd Scheme)	Std. Value (Trading Scheme)
30 June 1992			
Ewe hoggets	860	\$ 24.60	\$ 14.28
2th ewes	760	\$ 34.30	\$ 19.51
3 & 4 yr ewes	1340	\$ 21.20	\$ 11.88
5 yr & older ewes	590	\$ 13.00	\$ 9.73
Rams	75	\$175.30	\$103.90

30 June 1993		
Ewe hoggets	900	\$ 40.10
2th ewes	700	\$ 47.10
3 & 4 yr ewes	1400	\$ 41.60
5 yr & older	600	\$ 35.20
Rams	70	\$151.70

National Standard Cost (1993)

Rising 1 year sheep	\$13.00
Rising 2 year sheep	\$ 7.50

Livestock sales \$40,000 (1900 lambs, 1050 mixed age ewes)

Livestock purchases \$6,000 (300 mixed age ewes)

Natural Increase 2800 (survival to sale)

Deaths and missing 185

Herd Scheme

Note: All sheep are in the herd scheme.

1993 Opening Tax Values

Ewe hoggets	860	x	\$40.10*	\$34,486.00
2th ewes	760	x	\$47.00	35,720.00
3 & 4 yr ewes	1340	x	\$41.60	55,744.00
5 & 6 yr ewes	590	x	\$35.20	20,768.00
Rams	75	x	\$151.70	<u>11,377.50</u>
				<u>\$158,095.50</u>

* Herd livestock values are the end-of-year values.

1993 Closing Tax Values

Ewe hoggets	900	x	\$ 40.10	\$36,090.00
2th ewes	700	x	\$ 47.00	32,900.00
3 & 4 yr ewes	1400	x	\$ 41.60	58,240.00
5 & 6 yr ewes	600	x	\$ 35.20	21,120.00
Rams	70	x	\$151.70	<u>10,619.00</u>
				<u>\$158,969.00</u>

Increase in taxable income due to changes to herd numbers

= \$158,969.00 - \$158,095.50

= \$873.50

Check

1992 Closing Values

Ewe hoggets	860	x	\$ 24.60	\$21,156.00
2th ewes	760	x	\$ 34.30	26,068.00
3 & 4 yr ewes	1340	x	\$ 21.20	28,408.00
5 & 6 yr ewes	590	x	\$ 13.00	7,670.00
Rams	75	x	\$175.30	<u>13,147.50</u>
				<u>\$96,449.50</u>

Total increase in livestock

= 1993 Value - 1992 Value

= \$158,969.00 - \$96,449.50

= \$62,519.50

made up of:

Tax-free increase in value of herd \$158,095.50 - \$96,449.50 \$61,646.00

Taxable income from change in numbers 873.50

\$62,519.50

Note: Base numbers for the alternative valuation options for 1994 will be the 1993 closing herd numbers.

Income from Livestock Operations

Sales	\$40,000.00
less Purchases	<u>6,000.00</u>
Cash Surplus	\$34,000.00

plus Taxable increase in herd 873.50

Taxable income from sheep \$34,873.50

Note: This income may be adjusted if the taxpayer has deferrable income from homebred herdstock and/or new herdstock from the 1991 and 1992 income years.

National Standard Cost

The farmer adopts National Standard Cost (NSC) scheme to replace the Trading Scheme (no longer available).

Detailed formulae for calculating NSC's are set out in the Appendix to Tax Information Bulletin Volume 5, No 2, August 1993. These formulae are complex and will not be repeated here.

Using these formulae, the 1993 Costs of livestock for tax purposes have been calculated as:

Ewe hoggets	\$13.00 per head
Mature sheep	\$18.39 per head

1993 Opening Tax Values (Trading Scheme)

Ewe hoggets	860	x	\$ 14.28	\$12,280.80
2th ewes	760	x	\$ 19.51	14,827.60
3 & 4 yr ewes	1340	x	\$ 11.88	15,919.20
5 & 6 yr ewes	590	x	\$ 9.73	5,740.70
Rams	75	x	\$ 103.90	<u>7,792.50</u>
				<u>\$56,560.80</u>

1993 Closing Tax Value (NSC)

Ewe hoggets	900	x	\$13.00	\$11,700.00
2th ewes	700	x	\$18.39	12,873.00
3 & 4 yr ewes	1400	x	\$18.39	25,746.00
5 yr & older ewes	600	x	\$18.39	11,034.00
Rams	70	x	\$18.39	<u>1,287.30</u>
				<u>\$62,640.00</u>

Increase in taxable income

$$\begin{aligned} &= 1993 \text{ Value} - 1992 \text{ Value} \\ &= \$62,640.30 - \$56,560.80 \\ &= \underline{\underline{\$6,079.50}} \end{aligned}$$

Revaluation Income:

Ewe hoggets	900	x	(\$13.00 - \$14.28)	(1,152.00)
2th ewes	700	x	(\$18.39 - \$19.51)	(784.00)
3 & 4 yr ewes	1400	x	(\$18.39 - \$11.88)	9,114.00
5 yr & older ewes	600	x	(\$18.39 - \$9.73)	5,196.00
Rams	70	x	(\$18.39 - \$103.90)	<u>(5,985.70)</u>
				<u>\$6,388.30</u>

Note: This may be spread over 5 years, say, \$1,277.66 p.a.

Income from Livestock Operations

Sales	\$40,000.00
less purchases	<u>6,000.00</u>
Cash surplus	34,000.00

plus Increase in value of sheep	<u>6,079.50</u>
	40,079.50

less Revaluation Income deferred

(\$6,388.30 - \$1,277.66)	<u>5,110.64</u>
Taxable income from sheep	<u>\$34,968.86</u>

4.15.6 Accrual Rules for Expenditure

Expenditures which can be treated as a tax deductible expense when paid, (i.e. the portion that relates to a period after balance date) and the upper limit after which the unexpired portion must be adjusted for are as follows:

Expenditure	Limit on Expenditure
Postage and Stationery	No limit
Subscriptions	* Journals and periodicals No limit * Trade and professional No limit in total, but the associations maximum for any one association is \$6,000.
Telephone	Expenditure must not extend further than 2 months past balance date.
Vehicle Registration	No limit
Rents payable for lease of land and or buildings	Must not relate to a period beyond 6 months past balance date and the amount unexpired must not exceed \$23,000 (or may exceed this amount if it relates to a period not more than one month after balance date).
Rents payable for lease or bailment of livestock or bloodstock	Must not relate to a period beyond 6 months past balance date and the amount unexpired must not exceed \$23,000.
Insurance premiums	Must not relate to a period beyond 12 months past balance date and the amount unexpired must not exceed \$12,000.
Maintenance contracts	The contract/warranty must have been purchased as an integral part of the asset(s).
Service contracts	Performance completed within 3 months of balance date and the unexpired portion must not exceed \$23,000.
Consumable aids	Must be in the possession of the taxpayer at balance date and the unexpired portion must not exceed \$58,000.

Periodic charges	Must not relate to a period beyond 12 months past balance date and the unexpired portion must not exceed \$12,000.
Rates	No limit
Advance bookings for travel and accommodation	Maximum \$12,000, must not exceed 6 months after balance date.
Advertising	Maximum \$12,000, 6 months.
Road user charges	No limit
Audit fees	No limit
Accounting costs	No limit

If the above conditions are not met then the expenditures must be treated as an asset (prepayment) and progressively written off as an expense as the goods or services are used or provided.

4.15.7 Accident Compensation Levy

All persons who suffer injury by accident in New Zealand (and in certain cases, outside New Zealand) and who are employees or self-employed at the time of the accident, have cover under the Earners' Scheme of the Accident Compensation Act. The scheme is funded by a levy (premium) paid by employers and self-employed persons. These levies are a tax-deductible expense.

Levies on Employers

Every employer, whether an individual, a partnership, trust, company or club, must pay an annual levy by 31 May each year, based on the amount of leviable earnings paid to employees during the year ended 31 March.

Premium groups were extensively revised in 1996 and activities are now grouped according to the risk of injury occurring, although these groups are still based on broad economic sectors. Activities will be reclassified into different premium groups when their risk profile changes, resulting in increased premiums when risks increase, and decreased premiums when risks decrease.

The Premium Rate Booklet is available from the Accident Rehabilitation and Compensation Insurance Corporation but a selection of ACC Employer Premiums for 1997 and 1998 are listed below. These premiums include the 6 cents Occupational Safety and Health buy, and do NOT include GST.

Class	Description	1997 Premium (per \$100)	1998 Premium (per \$100)
Horticulture and Fruit Growing			
01110	Plant nurseries	\$3.20	\$2.66
01120	Cut flower and flower seed growing	3.20	2.66
01130	Vegetable growing	3.20	2.66
01140	Grape growing	3.20	2.66
01150	Apple and pear growing	3.20	2.66
01160	Stone fruit growing	3.20	2.66
01170	Kiwi fruit growing	3.20	2.66
01190	Fruit growing (not elsewhere classified)	3.20	2.66
Grain, Sheep and Beef Cattle Farming			
01210	Grain growing	3.20	2.66
01220	Grain-sheep and grain-beef cattle farming	2.93	2.61
01230	Sheep-beef cattle farming	2.93	2.61
01240	Sheep farming	2.93	2.61
01250	Beef cattle farming	2.93	2.61
Dairy Cattle Farming			
01300	Dairy cattle farming	2.93	2.61

Class	Description	1997 Premium (per \$100)	1998 Premium (per \$100)
Poultry Farming			
01410	Poultry farming (meat)	2.93	2.61
01420	Poultry farming (eggs)	2.93	2.61
Other Livestock Farming			
01510	Pig farming	2.93	2.61
01520	Horse farming	4.89	5.20
01530	Deer farming	2.93	2.61
01590	Livestock farming (not elsewhere classified)	2.93	2.61
Other Crop Growing			
01690	Crop and plant growing (not elsewhere classified)	3.20	2.66
Services to Agriculture			
02120	Shearing services	4.89	6.04
02130	Aerial agricultural services	4.89	6.04
02190	Services to agriculture (not elsewhere classified)	2.95	2.80
02191	Animal or pet boarding	2.93	2.61
02192	Sphagnum moss processing	2.95	2.80
Forestry and Logging			
03010	Forestry	\$9.18	8.22
03020	Logging	9.18	8.22
03021	Forest products gathering	2.95	2.80
03030	Services to forestry (excluding tree cutting and felling)	9.01	6.81
03031	Forest nursery, operation or service	3.20	2.66
Marine Fishing			
04110	Rock lobster fishing	6.00	5.15
04120	Prawn fishing	6.00	5.15
04130	Fishing, finfish trawling (including processing on board)	6.00	5.15
04140	Squid jigging (including processing on board)	6.00	5.15
04191	Shellfish and paua fishing (not from cultivated beds)	6.00	5.15
04192	Seaweed, shellfish and other seafood, handgathering (not from boat)	2.95	2.80
Aquaculture			
04200	Aquaculture	2.95	2.80

Levies on the Self-Employed

Owner-operators, partnerships and sharemilkers are generally regarded as self-employed for accident compensation purposes. The levy payable is calculated by applying the values shown above to total assessable income. Self-employed ACC levies must be paid to the Inland Revenue Department by the terminal tax due date.

Levies on Salary and Wage earners

Salary and wage earners pay a premium of 70 cents per \$100 earnings to meet the costs of non work-related accidents. This amount is deducted by the employer (like PAYE tax).

Changes for the 1998/99 income year

The Government has changed the levy rates based on a strategy of making ACC a fully funded scheme. Details were not available at the time of compiling the Budget Manual, but general guidelines had been announced.

These are as follows:

Employer Premium

The average levy on employers will be reduced to 2.35% i.e. \$2.35 per \$100 of leviable earnings, effective from 1 April 1998. (This rate does not include GST.) Selected levy rates are listed above. Separate frameworks will be developed for large employers and the self-employed for the 1999/2000 premium year.

Earners Premium

The levy on salary and wage earners will be increased to 1.2% i.e. \$1.20 per \$100 of leviable earnings, effective from 1 April 1998. This rate includes GST.

4.15.8 Schedule of Historic Rates of Depreciation

Note: DV is the Diminishing Value rate.

DV+ is the loaded interim rate of 1.25 times the Diminishing Value rate, where applicable.

SL is the Straight Line rate (or Cost Price method).

SL+ is the loaded interim rate of 1.25 times the Straight Line rate, where applicable.

SV denotes Standard Value as agreed by IRD.

* denotes the option of replacement value, annual revaluation or standard value.

Bold indicates the method to be used for income years 1992-93 and earlier.

	DV	DV+	SL	SL+
Agricultural plant and equipment:				
Tractor drawn implements	10	12.5	7	8.5
Self propelled equipment	20	25	13.5	17.5
Aircraft:				
Fixed wing agricultural aerial work aircraft, including wing attachments for spraying, dusting and distributing seed:	33	41.3	24	31
Helicopters from and including year ended 31 March 1969				
- Airframe, engine, rotor system	25	31.3	17.5	22
- Spraying tanks and attached spraying mechanism	33.3	41.7	24	32
Barns:				
Simple loafing barns	15		10	
Wintering barns all types of construction	15		10	
Beehives	*			
Boats - see Vessels				
Boilers	10	12.5	7	8.5
Bores and wells	*			
Bridges:				
Wooden	3	4	2.5	3.1
Others	2.5	3	2	2.5
Buildings:				
Reinforced concrete, steel or reinforced concrete framed with brick walls or permanent materials.	1		1	
Brick, stone or concrete walled without steel or reinforced concrete frame, stucco, steeltex or other similar construction with wooden frame.	2.5		2	
Wooden framed - not specified elsewhere.	3		2.5	

Section 4.15.8 continued

	DV	DV+	SL	SL+
Affected by acid fumes - vinegar manufacturers, fertiliser works, bulk fertiliser stores, chemical works, tanneries.	6		4	
Portable huts	10		7	
'Temporary Buildings'	10		7	
Bulk lime spreaders	10	12.5	7	8.5
Bulldozers:				
General	20	25	13.5	17.5
Earthmoving contractors	25	31.3	17.5	22
Cars and Trucks:				
Rental	25	31.2	17.5	22
Other	20	25	13.5	17.5
Chainsaws	50	62.5	40	51
Cloches	*			
Compressors:				
Portable	15	18.8	10	13
Fixed	10	12.5	7	8.5
Computers	20	25	13.5	17.5
Concrete mixers	15	18.8	10	13
Electric test equipment	20	25	13.5	17.5
Electronic scales	20	25	13.5	17.5
Ensilage pits - concrete walls with sliding roof	10	12.5	7	8.5
Feeding out units for cattle - all types of construction	6	7	45	
Fences:				
Electric	10	12.5	7	8.5
Others		<i>Maintenance</i>		
Fire fighting plant and equipment:				
Reservoir	1	2	1	1.3
Ring main and hydrants	1	2	1	1.3
Breathing apparatus, hoses, pipelines, pumps and diesel engines	10	12.5	7	8.5
Axes, ladders, blankets and fire extinguishers costing less than \$100 each	*			
Fish processing buildings	6		4	
Fish processing plant	15	18.8	10	13
Fishing boats and gear - see Vessels				
Fork lifts	20	25	13.5	17.5

Section 4.15.8 continued

	DV	DV+	SL	SL+
Freezers and cookers for preparation and storage of dog meat	10	12.5	7	8.5
Fowl houses - see poultry				
Frost protection plant - pumping unit, sprinklers, standards and pipelines	10	12.5	7	8.5
		<i>or partly claim as Development exp.</i>		
Fuel tanks:				
Underground		<i>rate as for buildings</i>		
Gas cylinder containers	S.V.			
Gas water heaters	10	12.5	7	8.5
Glasshouses:				
Wooden framed	7		5	
Metal framed	4		3	
Grain drying and storage bins	5	6.3	3.5	4
Grain drying plant	10	12.5	7	8.5
Grain - portable silos - see silos				
Hay balers	20	25	13.5	17.5
Header harvesters	20	25	13.5	17.5
Heating systems	10	12.5	7	8.5
Helicopters - see aircraft				
Hop frames	*			
Hop kilns	15	18.8	10	13
Incinerators	15	18.8	10	13
Land Improvements - see Section 4.15.3.				
Lawnmowers:				
Motor driven	20	25	13.5	17.5
Others	10	12.5	7	8.5
Lime spreaders bulk	10	12.5	7	8.5
Livestock saleyards - see saleyards				
Loose tools - no single item to exceed \$250 in cost	<i>See Section 4.8.4</i>			
Milking sheds - all types:				
Built before 1 April 1966	6		4	
Built after 1 April 1966	15		10	
Cost of converting to herringbone design after 1 April 1966 -	15		10	
Rotary Herringbone	10	12.5	7	8.5
Motor vehicles, trucks and scooters	20	25	13.5	17.5
Office equipment and machines	20	25	13.5	17.5
Pallets	*			
Pig houses - all types	15		10	
Pipelines	<i>maintenance</i>			

Section 4.15.8 continued

	DV	DV+	SL	SL+
Plant and machinery - except as elsewhere specified:				
General including agricultural plant and implements but not motor vehicles	10	12.5	7	8.5
Plastic pots for tomato growing	S.V.			
Poultry:				
Battery type cages	10	12.5	7	8.5
Colony houses with wooden frames, iron roofs and netting sides and bases	10	12.5	7	8.5
Fowl houses-steel framed	3		2.5	
-wooden framed	7		5	
Saddlery and harnesses	*			
Saleyards:				
Constructed after 1 April 1971	2.5	3	2	2.5
Constructed prior to April 1971				
- less than 40 years old.	Spread over remaining years (assumed life of 50 years)			
- 40 years or more		15		10
Additions:				
- if part of an existing yard	Spread over remaining life			
- if virtually a new yard	2.5	3	2	2.5
Saws - chain	50	62.5	40	51
Sawmillers- diesel or petrol tractors, locomotives and power units used for log hauling	20	25	13.5	17.5
Scales and weighing machines				
- mechanical	10	12.5	7	8.5
- electronic	20	25	13.5	17.5
Septic tanks and sewerage systems	<i>As for buildings</i>			
Sheep and cattle yards:				
Uncovered yards	<i>See saleyards</i>			
Roofed yards	<i>Appropriate building rate</i>			
Gratings- fixed	<i>Appropriate building rate</i>			
- Loose	*			
Sheep crates	15	18.8	10	13
Sheep and cattle dips:				
Shower type				
- tanks and pipes	10	12.5	7	8.5
- dip or shower (including pumps)	10	12.5	7	8.5
- electric motor and fitting	10	12.5	7	8.5

Section 4.15.8 continued

	DV	DV+	SL	SL+
Spray type				
- Shed			<i>Appropriate Building rate</i>	
- Base (race, floor of dip, two draining pens and sump)			<i>Dev.expenditure</i>	
- tanks and pipes, dip including pumps, electric motor and fittings	10	12.5	7	8.5
Silage storage bunkers			<i>Development expenditure and maintenance</i>	
Silos - Grain:				
- with built in drying and loading/unloading machinery	10	12.5	7	8.5
- With separate drying, loading/unloading machinery	5	6.3	3.5	4
- if erected on farms	10	12.5	7	8.5
- portable			<i>Cost of replacement or scrapping if abandoned</i>	
Slaughterhouse on farms:				
Concrete	7		5	
Timber and concrete	8		6	
Timber	15		10	
Spray plant - orchardists:				
Self propelled and air blast units	20	25	13.5	17.5
Others	10	12.5	7	8.5
Stock food manufacturing plant	15	18.8	10	13
Storage tanks - underground			<i>Appropriate building rate</i>	
Tarpaulins		*		
Threshing plant	20	25	13.5	17.5
Tomatoes:				
Plastic pots for growing	S.V.			
Structure for shading	2.5	3	2	2.5
Tools			<i>See Section 4.8.4</i>	
Traction engines	10	12.5	7	8.5
Tractors	20	25	13.5	17.5
Trailers			<i>Rate applicable to vehicle by which drawn</i>	
Trickle irrigation equipment in glasshouses	25	31.3	17.5	22
Trucks - see motor trucks				
Tunnel houses P.V.C.	11		7.5	

Section 4.15.8 continued

	DV	DV+	SL	SL+
Underground silage pits - concrete walled with sliding roof	10	12.5	7	8.5
Vessels (Registered for fishing):				
- Hulls including fixed gear and refrigeration rooms	10	12.5	7	8.5
- Deck machinery, winches, and motors	15	18.8	10	13
- Main engines	20	25	13.5	7.5
Waggons, carts and drays	10	12.5	7	8.5
Water towers		<i>Appropriate building rate</i>		
Weighing machines and scales	10	12.5	7	8.5
Wells and water bores *				
Windmills	10	12.5	7	8.5
Wine making industry:				
Tanks and vats				
- stainless steel	10	12.5	7	8.5
- Wooden	10	12.5	7	8.5
- Concrete:				
for fermentation.	10	12.5	7	8.5
for storage	6	7	4	5
Casks and barrels				
- both circulating or storage	S.V.			
Wintering barns - all types of construction	15	18	10	12.5
Wire ropes	*			

4.15.9 General (Economic) Rates of Depreciation

The following are selected examples of industry and asset categories.

Note: The depreciation rates for NZ new assets may be increased by 20%.

Refer Section 4.8.4.

Industry Categories	Estimated Useful Life (Years)	DV Depn Rate (%)	SL Equiv Depn Rate (%)
<i>Agriculture, Horticulture and Aquaculture</i>			
Agricultural and horticultural machinery (not specified)	15.5	12	8
Aeroplanes (top dressing and spraying) and specialised attachments	10	18	12.5
Beekeeping equipment	12.5	15	10
Bush cutters	5	33	24
Chainsaws	3	50	40
Cherry pickers	12.5	15	10
Cleaning machinery	15.5	12	8
Crates (cattle)	10	18	12.5
Crates (pig)	10	18	12.5
Crates (sheep)	10	18	12.5
Cultivators (rotary)	5	33	24
Egg crates	3	50	40
Feeders (forage)	12.5	15	10
Graders (tomatoes)	8	22	15.5
Grading machinery	15.5	12	8
Harness	5	33	24
Harvesters	15.5	12	8
Haybalers	12.5	15	10
Hop kilns	15.5	12	8
Irrigation piping (above ground)	15.5	12	8
Irrigation pumps (above ground)	15.5	12	8
Irrigators (travelling)	10	18	12.5
Isolating transformers	8	22	15.5
Kennel (dogs)	5	33	24
Milking machinery	8	22	15.5
Mowers (gang and PTO type)	12.5	15	10
Pig feeding plant	8	22	15.5
Pig watering systems	20	9.5	6.5
Post hole borers	5	33	24
Post hole borers (PTO type)	12.5	15	10
Poultry equipment	12.5	15	10
Rollers	12.5	15	10

Section 4.15.9 continued

Industry Categories	Estimated Useful Life (Years)	DV Depn Rate (%)	SL Equiv Depn Rate (%)
Saddlery	5	33	24
Shearing equipment	8	22	15.5
Shellfish nets	4	40	30
Shellfish ropes	4	40	30
Shellfish stakes	4	40	30
Sorting machinery	15.5	12	8
Sprayers (backpack)	5	33	24
Sprayers (mobile crop)	12.5	15	10
Sprayers (mobile weed)	12.5	15	10
Spreads (fertiliser)	12.5	15	10
Tools (hand)	3	50	40
Tools (power)	3	50	40
Tractor drawn implements	15.5	12	8
Tractors (wheeled)	15.5	12	8
<i>Dairy Plant</i>			
Dairy plant and equipment (not specified)	15.5	12	8
Blending bins (casein)	15.5	12	8
Butter making machines (except as specified)	15.5	12	8
Butter patting machines	12.5	15	10
Cartoning machines	15.5	12	8
Centrifuges	12.5	15	10
Cheddaring system	15.5	12	8
Cheese maturing boards	6.66	26	18
Cheese plant	15.5	12	8
Churns	15.5	12	8
Clarifiers (whey)	15.5	12	8
Control equipment	8	22	15.5
Conveyors	15.5	12	8
Conveyors (crates)	15.5	12	8
Cooling equipment	15.5	12	8
Crating machines	15.5	12	8
Decanters	12.5	15	10
Decrating machines ¹	5.5	12	8
Dryers	15.5	12	8
Effluent plant (excluding SS tanks and screens)	12.5	15	10

Section 4.15.9 continued

Industry Categories	Estimated Useful Life (Years)	DV Depn Rate (%)	SL Equiv Depn Rate (%)
Electrodialysis plant (whey)	12.5	15	10
Evaporators (MVR type)	15.5	12	8
Evaporators (TVR type)	20	9.5	6.5
Filling machines (bottle)	15.5	12	8
Flow meters	8	22	15.5
Grinding plant (casein)	15.5	12	8
Heat exchanges	15.5	12	8
Homogenisers	12.5	15	10
Ion exchangers (whey)	12.5	15	10
Metal detectors	8	22	15.5
Mixers	15.5	12	8
Packing machinery (vacuum)	10	18	12.5
Packing machines (butter)	15.5	12	8
Pasteurisers	15.5	12	8
Pipework	15.5	12	8
Powder dryer buildings	15.5	12	8
Presses (butter)	15.5	12	8
Presses (cheese)	15.5	12	8
Refrigeration equipment	15.5	12	8
Retorts	25	7.5	5.5
Scrape surface heat exchangers	12.5	15	10
Separators	12.5	15	10
Sifting plant (casein)	15.5	12	8
Silos	25	7.5	5.5
Tempering bins (casein)	15.5	12	8
Ultrafiltration plant	10	18	12.5
Valves	15.5	12	8
Vats	25	7.5	5.5
Washers (bottle)	15.5	12	8
Washers (boxes)	12.5	15	10
Washers (crate)	12.5	15	10
<i>Fishing</i>			
Fishing equipment (not specified)	20	9.5	6.5
Alternators (auxiliary)	10	18	12.5
Bins (plastic)	5	33	24
Bridles		expense	expense
Compressors (for refrigeration systems)	10	18	12.5
Craypots	2	63.5	63.5
Electronic systems	5	33	24

Section 4.15.9 continued

Industry Categories	Estimated Useful Life (Years)	DV Depn Rate (%)	SL Equiv Depn Rate (%)
Engines	12.5	15	10
Floodlight systems	3	50	40
Freezers (Blast)	10	18	12.5
Generators (auxiliary)	10	18	12.5
Hydraulic systems	5	33	24
Icemaking machines	10	18	12.5
Instrumentation (electronic)	5	33	24
Insulation to refrigerated holds	15.5	12	8
Lifejackets	4	40	30
Life rafts	8	22	15.5
Lines (fishing)		expense	expense
Nets (fishing)		expense	expense
Piping	10	18	12.5
Refrigeration systems	10	18	12.5
Safety equipment (other)	4	40	30
Sweeps		expense	expense
Trawl boards	3	50	40
Vessels (Fishing)(non-steel hulled)	20	9.5	6.5
Vessels (Fishing)(steel hulled-over 20m)	15.5	12	8
Vessels (Fishing)(steel hulled-under 20m)	20	9.5	6.5
Winches	10	18	12.5
Wire (trawl)		expense	expense

Asset Categories

Buildings and Structures

Buildings and structures (not specified)	50	4	3
Aprons (Airports)	50	4	3
Barns	20	9.5	6.5
Borewells	20	9.5	6.5
Bridges (of block construction)	100	2	1.5
Bridges (of brick construction)	100	2	1.5
Bridges (of concrete construction)	100	2	1.5
Bridges (of stone construction)	100	2	1.5
Bridges (other than of block, brick, concrete and stone)	50	4	3
Buildings (portable)	12.5	15	10

Section 4.15.9 continued

Asset Categories	Estimated Useful Life (Years)	DV Depn Rate (%)	SL Equiv Depn Rate (%)
Buildings with pre-fabricated stressed skin insulation panels	33.3	6	4
Buildings with reinforced concrete framing	50	4	3
Buildings with steel or steel and timber framing	50	4	3
Buildings with timber framing	50	4	3
Bunkers (concrete)	20	9.5	6.5
Dams (earth with rock core)	100	2	1.5
Dams (of block construction)	100	2	1.5
Dams (of brick construction)	100	2	1.5
Dams (of concrete construction)	100	2	1.5
Dams (of earth construction without rock core)	50	4	3
Dams (of stone construction)		100	21.5
Driveways	50	4	3
Dykes (of earth construction)		50	4 3
Fences	20	9.5	6.5
Fertiliser works	33.3	6	4
Floating piers	33.3	6	4
Fowl houses	20	9.5	6.5
Hot houses (of glass or other construction excluding PVC)	20	9.5	6.5
Hot houses (of PVC or similar construction)	12.5	15	10
Lamp posts (excluding wooden)	25	7.5	5.5
Lamp posts (wooden)	20	9.5	6.5
Manholes	50	4	3
Pig houses	20	9.5	6.5
Reservoirs (above ground, concrete)	50	4	3
Reservoirs (for water, other than concrete or lined earth)	33.3	6	4
Reservoirs (in-ground, concrete)	100	2	1.5
Reservoirs (lined earth)	50	4	3
Retaining walls (concrete)	100	2	1.5
Retaining walls (wooden)	25	7.5	5.5
Roadways	50	4	3
Saleyards	33.3	6	4
Shade houses (of glass or other construction excluding PVC)	20	9.5	6.5

Section 4.15.9 continued

Asset Categories	Estimated Useful Life (Years)	DV Depn Rate (%)	SL Equiv Depn Rate (%)
Shade houses (of PVC or similar construction)	12.5	15	10
Stopbanks (of earth construction)	50	4	3
Swimming pools (in-ground)	33.3	6	4
Tanneries	33.3	6	4
Towers (for floodlights)	25	7.5	5.5
Tunnels (of block construction)	100	2	1.5
Tunnels (of brick construction)	100	2	1.5
Tunnels (of concrete construction)	100	2	1.5
Tunnels (of stone construction)	100	2	1.5
Wharf tarmac	50	4	3
Wharves (of block construction)	100	2	1.5
Wharves (of brick construction)	100	2	1.5
Wharves (of concrete construction)	100	2	1.5
Wharves (of stone construction)	100	2	1.5
Wharves (other than of block, brick, concrete & stone)	50	4	3
<i>Transportation</i>			
Transportation (not specified)	20	9.5	6.5
Aeroplanes (top dressing and spraying) and specialised attachments	10	18	12.5
Helicopters	20	9.5	6.5
Horse floats	20	9.5	6.5
Jetboats	10	18	12.5
Lifejackets and the like	4	40	30
Motor vehicles, class NA (for transporting goods, not exceeding 3.5 tonnes unladen weight)	10	18	12.5
Motor vehicles, class NB (for transporting goods, exceeding 3.5 tonnes but not exceeding 12 tonnes unladen weight)	12.5	15	10
Motor vehicles, class NC (for transporting goods, exceeding 12 tonnes unladen weight)	10	18	12.5
Motorcycles		6.66	26 18

Section 4.15.9 continued

Asset Categories	Estimated Useful Life (Years)	DV Depn Rate (%)	SL Equiv Depn Rate (%)
Traction engines	25	7.5	5.5
Tractors (farm type)	15.5	12	8
Trailer, class TC (for transporting goods, exceeding 3.5 tonnes but not exceeding 10 tonnes unladen weight)	20	9.5	6.5
Trailer, class TD (for transporting goods, exceeding 10 tonnes unladen weight)	15.5	12	8
Trailer, classes TA and TB (for transporting goods, not exceeding 3.5 tonnes unladen weight and excluding domestic type trailers)	15.5	12	8
Trailer, domestic type (not exceeding 1,000 kg rated carrying capacity)	8	22	15.5
Vehicles (road going) (not elsewhere specified)	15.5	12	8

SECTION 5

GIFT DUTY

Contributed by
M.B. CLARK, M.Com. CA.
Senior Lecturer in Accounting

LINCOLN UNIVERSITY

5.1 INTRODUCTION

Gift duty is levied under the Estate and Gift Duties Act 1968 as amended. Estate duty has been abolished as from 17 December 1992.

5.2 GIFT DUTY

5.2.1 Definitions

A gift is any disposition of property made otherwise than by will, without fully adequate consideration in money or money's worth passing to the donor (the person making the gift).

'Disposition of property' is used in its widest sense to cover any alienation of property, such as any conveyance, transfer, settlement or assignment, including transactions which diminish the value of one estate to the betterment of another. It includes all gifts of property in New Zealand and all gifts of foreign property if the owner is domiciled in New Zealand.

'Consideration' is what one party in a transaction gives to the other party. The most common form is money, but it could be a promise to do or not to do something, or another form of property. Whatever form is involved, its value is calculated in monetary terms.

5.2.2 Valuation of Gift

The value of a gift is the monetary value of the property gifted less any consideration paid. The value of land and buildings is determined by agreement between the donor and the Commissioner of Inland Revenue, or by the Valuer-General. All other property is at market value as assessed by a competent valuer.

The valuation of an annuity or some other form of future interest is calculated using the present value tables in *Section 5.3.2*.

Example:

A friend aged 45 is gifted an annuity of \$4000 for the remainder of her life.

The present value of \$1 p.a. for the remaining life of a female aged 45 is \$15.60540 (from Table B, page E-14).

The value of this gift is \$62,421.60, calculated as \$4,000 x \$15.60540.

It is important that the correct Table is used, for example, Table A to value a life interest for males, or Table D to value an interest for a specified time.

Date of Valuation

A gift (and any consideration) is valued as at the date the gift is made, which is taken to mean the date at which the donor has put himself in the position where the gift cannot be revoked (i.e. the gift is complete).

The completion dates of some of the more common forms of gift are illustrated in the following chart:

Description of Gift	When Complete
Cash	On delivery to the beneficiary.
Cheques	When the cheque has been cashed. (Until then it can be revoked.)
Land	Except where a valid trust is created, the earlier of the dates on which - (a) the instrument of transfer is registered in the Land Transfer Office; or (b) the beneficiary has possession of all the necessary documents to enable the registration to be effected.
Shares	As for land, except that the instrument of transfer is registered by the company.
Chattel	Where there has been effective delivery of the chattels or there has been a deed of assignment.
Forgiveness of debt	Normally the execution of a legally effective deed of release or forgiveness of debt will be required.

Forgiveness of Debt

The forgiving of a debt has been a traditional feature of estate planning, but under the Financial Arrangement rules, the amount forgiven can in some circumstances be assessed for income tax in the hands of the person who owes the debt. A common example would include a provision under a will to forgive an outstanding family debt upon the death of the testator. However proper drafting of a will or gift deed can avoid the situation where gifts become taxable as income. Professional advice is recommended.

No income tax liability arises where the debt is forgiven in a will executed before 1 October 1987. All debts forgiven after that date are subject to income tax except where the debt is forgiven by a natural person in consideration of 'natural love and affection' towards the person who owes the debt.

5.2.3 Exemptions from Gift Duty

A dutiable gift is any gift which is or may be liable to gift duty. However, certain gifts are specifically excluded from gift duty, and include:

1. Small gifts, not exceeding an aggregate of \$2,000 to the same beneficiary in the same calendar year, are not taken into account if they are made in good faith as part of the normal expenditure of the donor.
2. Gifts made towards the maintenance or education of a relative provided the gift is not excessive having regard to the obligation of the donor.
3. Gifts made to charitable bodies.
4. Special exemptions including:
 - certain superannuation elections.
 - contributions by an employer to superannuation fund.
 - certain gratuitous payments from employer to employee.
 - settlement of a joint family home.

5.2.4 Dispositions of Matrimonial Property

Since 28 July 1983 one spouse may transfer up to 50% of the matrimonial property to the other spouse under Section 21 of the Matrimonial Property Act 1976, without giving rise to a liability for gift duty or estate duty at the time of transfer. Duty will be payable on the value of property which exceeds a 50% share. Transfers of matrimonial assets between spouses or settlements solely for the benefit of minor or dependent children are exempt if made pursuant to a Court Order under Section 25 of the Matrimonial Property Act 1976.

A copy of the agreement which involves the disposition of matrimonial property must be delivered to the Commissioner within 3 months of the date of disposition.

Matrimonial property includes property which both spouses have directly or indirectly contributed to or made use of. Any other property is called 'separate property' and is not subject to these rules. However spouses can convert separate property to matrimonial property by including it in a Matrimonial Property Agreement.

Example:

Before entering into an agreement to dispose of matrimonial property under Section 21 of the Matrimonial Property Act 1976, property was held as follows:

Husband	-	Farm	\$300,000
	-	Share	20,000
	-	Bank Account	10,000
Wife	-	Bank Account	\$ 15,000

On 30 November 1993 the couple decided to share ownership of the matrimonial property on a 50:50 basis, and executed an agreement to that effect.

The farm and shares would be regarded as matrimonial property, whereas the two bank accounts could be regarded as separately owned assets (depending on the circumstances).

The end result of the transfers would be:

Husband	-	Bank Account	\$ 10,000
	-	Farm (half share)	150,000
	-	Shares (half share)	10,000
Wife	-	Bank Account	\$ 15,000
	-	Farm (half share)	150,000
	-	Shares (half share)	10,000

The wife, as transferee, does not hold more than 50% of the matrimonial property after the transfer. Accordingly, there is no liability for gift duty.

5.2.5 Calculation of Gift Duty

Gift duty does not become payable until the value of any dutiable gifts over any twelve month period exceeds \$27,000 in total value. Rates of Gift Duty are detailed in *Section 5.3.1*

If more than one dutiable gift is made within a twelve month period, the duty is apportioned to each dutiable gift involved in accordance with the following formula:

$$\frac{a}{b} \times c$$

where:

- (a) is the value of the dutiable gift.
- (b) is the total value of this gift and all other dutiable gifts made within twelve months.
- (c) is the amount of gift duty payable on item (b).

It should be noted that the 12 month period is chosen so as to maximise the amount of gift duty payable.

5.2.6 Aggregation of Gifts

It is important to note that although gift duty is charged on each individual dutiable gift, the rate of gift duty charged on any such individual gift depends upon the aggregation of the value of all dutiable gifts made at the same time or within twelve months subsequently or previously by the same donor (not being a gift exempted from

duty, e.g. to a charity). The day the gift is made is included in the twelve month period, so that gifts completed on the same day each year cannot be aggregated. Furthermore, all dutiable gifts are aggregated, irrespective of the identity of the recipient (donee).

Example 1:

Gift to A of \$20,000 made on 1 August 1995.

Gift to B of \$15,000 made on 31 July 1996.

These gifts would be aggregated and be liable to gift duty of \$400, even though each gift is below the exemption level of \$27,000. Note that if the gift to B was made on 1 August 1996, no aggregation would occur as the gifts are not within a twelve month period.

Example 2:

Gift to C of \$30,000 made on 1 August 1995 - duty of \$150 paid.

Gift to D of \$15,000 made on 1 January 1996.

These gifts would be aggregated and duty of \$1,350 on the sum of \$45,000 would be payable, less the \$150 already paid.

5.2.7 Assessment and Collection

If the value of a gift exceeds \$12,000 or if the aggregated value of this gift and all other gifts made over the previous twelve months exceeds \$12,000, a Gift Statement (form IR 635) must be delivered to the Commissioner by the donor within three months of making the gift.

A gift statement must always be filed where property is settled under a matrimonial property agreement - refer *Section 5.2.4*.

If the donor fails to deliver the Gift Statement within the specified time, the donee has an extra month to do so.

If gift duty remains unpaid within six months of making a dutiable gift, a penalty of 5% will be added to the unpaid duty.

Interest at 5% p.a. on the duty payable, and subsequently on any penalty levied, will be added to any duty unpaid within three months of making a dutiable gift.

The donor is primarily liable to pay gift duty, but the Inland Revenue can obtain payment from the donee. Unless the terms of the gift provide otherwise, the donee is entitled to recover such duty paid from the donor.

5.2.8 Example of Gift Duty Assessment:

Gift made to D on 14 August 1995 of \$22,000

Gift made to E on 18 November 1995 of \$22,000

Gift made to F on 31 October 1996 of \$35,000

Duty assessment is as follows:

14 August 1995

Gift duty payable on gift of \$22,000 to D is zero.

18 November 1995

Gift duty payable on total gifts for previous 12 months (\$44,000) is \$1,250.00

The duty of \$1250 would be apportioned in the following manner:

$$\text{Gift to D } \frac{22,000}{44,000} \times 1250 = \$625.00$$

$$\text{Gift to E } \frac{22,000}{44,000} \times 1250 = \$625.00$$

31 October 1996

Gift duty payable on total gifts for previous 12 months (\$57,000) is \$2,850.

The duty of \$2,850 would be apportioned as follows:

$$\text{Gift to E } \frac{22,000}{57,000} \times 2850 = \$1,100.00$$

less duty already paid	<u>625.00</u>
DUTY PAYABLE	475.00

$$\text{Gift to F } \frac{35,000}{57,000} \times 2850 = \$1,750.00$$

Total gift duty payable is:-

Gift to D	\$ 625
Gift to E (625 + 475)	\$1,100
Gift to F	<u>\$1,750</u>
	<u>\$3,475</u>

5.3 APPENDICES

5.3.1 Rates of Gift Duty

Gifts Made On or After 1 April 1984

Value of Dutiable Gifts Made Within 12 months	Amount and Rate of Duty	
\$1 - \$27,000		Nil
\$27,001 - \$36,000	\$0 plus	5% of excess over \$27,000
\$36,001 - \$54,000	\$450 plus	10% of excess over \$36,000
\$54,001 - \$72,000	\$2,250 plus	20% of excess over \$54,000
Over \$72,000	\$5,850 plus	25% of excess over \$72,000

5.3.2 Tables for Valuation of Pensions etc.

Table A
Present Value of Annuity or Other Interest for Life
of MALE or Expectant on Death of MALE

Years of Age	Expectation of Life of Male	Present Value of \$1 p.a. on Death	Present Value of \$1 Payable for Life	Present Value of Income on Capital of \$1
	Years	\$	\$	\$
0	68.29	19.28531	0.03573	0.96427
1	69.03	19.31080	0.03446	0.96554
2	68.17	19.28117	0.03594	0.96406
3	67.27	19.24885	0.03756	0.96244
4	66.33	19.21357	0.03932	0.96068
5	65.39	19.17665	0.04117	0.95883
6	64.44	19.13758	0.04312	0.95688
7	63.48	19.09622	0.04519	0.95481
8	62.53	19.05334	0.04733	0.95267
9	61.56	19.00747	0.04963	0.95037
10	60.60	18.95988	0.05201	0.94799
11	59.63	18.90948	0.05453	0.94547
12	58.66	18.85664	0.05717	0.94283
13	57.69	18.80124	0.05994	0.94006
14	56.74	18.74441	0.06278	0.93722
15	55.79	18.68488	0.06576	0.93424
16	54.86	18.62391	0.06880	0.93120
17	53.92	18.55941	0.07203	0.92797
18	53.00	18.49340	0.07533	0.92467
19	52.07	18.42335	0.07883	0.92117
20	51.15	18.35084	0.08246	0.91754
21	50.23	18.27503	0.08625	0.91375
22	49.32	18.19663	0.09017	0.90983
23	48.40	18.11378	0.09431	0.90569
24	47.48	18.02716	0.09864	0.90136
25	46.56	17.93660	0.10317	0.89683
26	45.63	17.84085	0.10796	0.89204
27	44.70	17.74068	0.11297	0.88703
28	43.76	17.63473	0.11826	0.88174
29	42.83	17.52505	0.12375	0.87625
30	41.89	17.40904	0.12955	0.87045

Table A continued

	Years	\$	\$	\$
31	40.96	17.28896	0.13555	0.86445
32	40.03	17.16314	0.14184	0.85816
33	39.10	17.03125	0.14844	0.85156
34	38.17	16.89325	0.15534	0.84466
35	37.24	16.74887	0.16256	0.83744
36	36.32	16.59947	0.17003	0.82997
37	35.40	16.44326	0.17784	0.82216
38	34.48	16.27992	0.18600	0.81400
39	33.57	16.11105	0.19445	0.80555
40	32.65	15.93259	0.20337	0.79663
41	31.74	15.74811	0.21259	0.78741
42	30.83	15.55535	0.22223	0.77777
43	29.92	15.35394	0.23230	0.76770
44	29.02	15.14570	0.24271	0.75729
45	28.13	14.92971	0.25351	0.74649
46	27.25	14.70681	0.26466	0.73534
47	26.38	14.47697	0.27615	0.72385
48	25.52	14.24019	0.28799	0.71201
49	24.67	13.99650	0.30018	0.69982
50	23.83	13.74593	0.31270	0.68730
51	23.00	13.48857	0.32557	0.67443
52	22.18	13.22161	0.33892	0.66108
53	21.38	12.95106	0.35245	0.64755
54	20.59	12.67399	0.36630	0.63370
55	19.82	12.39437	0.38028	0.61972
56	19.06	12.10793	0.39460	0.60540
57	18.32	11.81622	0.40919	0.59081
58	17.60	11.52338	0.42383	0.57617
59	16.89	11.22607	0.43870	0.56130
60	16.19	10.92067	0.45397	0.54603
61	15.50	10.60871	0.46959	0.53044
62	14.82	10.29307	0.48535	0.51465
63	14.16	9.97560	0.50122	0.49878
64	13.52	9.65621	0.51719	0.48281
65	12.90	9.34054	0.53297	0.46703
66	12.29	9.01705	0.54915	0.45085
67	11.71	8.70177	0.56491	0.43509
68	11.14	8.38437	0.58078	0.41922
69	10.59	8.06670	0.59666	0.40334
70	10.05	7.75097	0.61245	0.38755

Table A continued

	Years	\$	\$	\$
71	9.53	7.43320	0.62834	0.37166
72	9.01	7.11396	0.64430	0.35570
73	8.51	6.79196	0.66040	0.33960
74	8.03	6.48255	0.67587	0.32413
75	7.57	6.17217	0.69139	0.30861
76	7.13	5.87436	0.70628	0.29372
77	6.71	5.58028	0.72099	0.27901
78	6.31	5.29600	0.73520	0.26480
79	5.92	5.01599	0.74920	0.25080
80	5.55	4.73990	0.76300	0.23700
81	5.19	4.47126	0.77644	0.22356
82	4.84	4.20411	0.78979	0.21021
83	4.51	3.94555	0.80272	0.19728
84	4.19	3.69482	0.81526	0.18474
85	3.89	3.45545	0.82723	0.17277
86	3.60	3.21687	0.83916	0.16084
87	3.33	2.99474	0.85026	0.14974
88	3.07	2.78084	0.86096	0.13904
89	2.83	2.57640	0.87118	0.12882
90	2.60	2.37771	0.88111	0.11889
91	2.39	2.19631	0.89018	0.10982
92	2.19	2.02354	0.89882	0.10118
93	2.01	1.86805	0.90660	0.09340
94	1.84	1.71429	0.91429	0.08571
95	1.68	1.56916	0.92154	0.07846
96	1.53	1.43311	0.92834	0.07166
97	1.39	1.30612	0.93469	0.06531
98	1.27	1.19728	0.94014	0.05986
99	1.15	1.08844	0.94558	0.05442
100	1.05	0.99773	0.95011	0.04989

Table B
Present Value of Annuity or Other Interest for Life
of FEMALE or Expectant on Death of FEMALE

Years of Age	Expectation of Life of Female	Present Value of \$1 p.a on Death	Present Value of \$1 Payable for Life	Present Value of Income on Capital of \$1
	Years	\$	\$	\$
0	72.43	19.41600	0.02920	0.97080
1	72.90	19.42934	0.02853	0.97147
2	72.05	19.40521	0.02974	0.97026
3	71.12	19.37756	0.03112	0.96888
4	70.18	19.34831	0.03258	0.96742
5	69.23	19.31737	0.03413	0.96587
6	68.26	19.28427	0.03579	0.96421
7	67.30	19.24994	0.03750	0.96250
8	66.33	19.21357	0.03932	0.96068
9	65.35	19.17505	0.04125	0.95875
10	64.37	19.13464	0.04327	0.95673
11	63.39	19.09226	0.04539	0.95461
12	62.41	19.04779	0.04761	0.95289
13	61.42	19.00067	0.04997	0.95003
14	60.44	18.95172	0.05241	0.94759
15	59.47	18.90092	0.05495	0.94505
16	58.50	18.84765	0.05762	0.94238
17	57.53	18.79180	0.06041	0.93959
18	56.56	18.73325	0.06334	0.93666
19	55.60	18.67252	0.06637	0.93363
20	54.64	18.60887	0.06956	0.93044
21	53.67	18.54147	0.07293	0.92707
22	52.71	18.47156	0.07642	0.92358
23	51.75	18.39830	0.08008	0.91992
24	50.79	18.32154	0.08392	0.91608
25	49.83	18.24110	0.08795	0.91205
26	48.87	18.15682	0.09216	0.90784
27	47.92	18.06947	0.09653	0.90347
28	46.96	17.97698	0.10115	0.89885
29	46.01	17.88108	0.10595	0.89405
30	45.06	17.78043	0.11098	0.88902

Table B continued

	Years	\$	\$	\$
31	44.11	17.67502	0.11625	0.88375
32	43.16	17.56461	0.12177	0.87823
33	42.21	17.44898	0.12755	0.87245
34	41.26	17.32787	0.13361	0.86639
35	40.32	17.20238	0.13988	0.86012
36	39.38	17.07102	0.14645	0.85355
37	38.44	16.93352	0.15332	0.84668
38	37.50	16.78959	0.16052	0.83948
39	36.57	16.64058	0.16797	0.83203
40	35.64	16.48470	0.17576	0.82424
41	34.71	16.32162	0.18392	0.81608
42	33.79	16.15293	0.19235	0.80765
43	32.88	15.97856	0.20107	0.79893
44	31.97	15.79638	0.21018	0.78982
45	31.06	15.60540	0.21973	0.78072
46	30.17	15.40991	0.22950	0.77050
47	29.29	15.20817	0.23959	0.76041
48	28.41	14.99774	0.25011	0.74989
49	27.54	14.78078	0.26096	0.73904
50	26.68	14.55732	0.27213	0.72787
51	25.82	14.32456	0.28377	0.71623
52	24.98	14.08804	0.29560	0.70440
53	24.14	13.83998	0.30800	0.69200
54	23.31	13.58470	0.32077	0.67923
55	22.49	13.32253	0.33387	0.66613
56	21.67	13.05019	0.34749	0.65251
57	20.87	12.77449	0.36128	0.63872
58	20.08	12.49093	0.37545	0.62455
59	19.30	12.19839	0.39008	0.60992
60	18.53	11.89933	0.40503	0.59497
61	17.77	11.59402	0.42030	0.57970
62	17.02	11.28238	0.43588	0.56412
63	16.28	10.95993	0.45200	0.54800
64	15.56	10.63620	0.46819	0.53181
65	14.84	10.30270	0.48487	0.51513
66	14.14	9.96598	0.50170	0.49830
67	13.45	9.62085	0.51896	0.48104
68	12.77	9.27160	0.53642	0.46358
69	12.11	8.92159	0.55392	0.44608
70	11.46	8.56256	0.57187	0.42813

Table B continued

	Years	\$	\$	\$
71	10.83	8.20702	0.58965	0.41035
72	10.22	7.85036	0.60748	0.39252
73	9.63	7.49459	0.62527	0.37473
74	9.07	7.15080	0.64246	0.35754
75	8.53	6.80486	0.65976	0.34024
76	8.01	6.46966	0.67652	0.32348
77	7.52	6.13833	0.69308	0.30692
78	7.05	5.82022	0.70899	0.29101
79	6.59	5.49499	0.72525	0.27475
80	6.16	5.18940	0.74053	0.25947
81	5.74	4.88168	0.75592	0.24408
82	5.34	4.58319	0.77084	0.22916
83	4.96	4.29814	0.78509	0.21491
84	4.59	4.00823	0.79959	0.20041
85	4.24	3.73400	0.81330	0.18670
86	3.91	3.47191	0.82640	0.17360
87	3.60	3.21687	0.83916	0.16084
88	3.31	2.97829	0.85109	0.14891
89	3.04	2.75616	0.86219	0.13781
90	2.78	2.53320	0.87334	0.12666
91	2.54	2.32588	0.88371	0.11629
92	2.32	2.13584	0.89321	0.10679
93	2.12	1.96307	0.90185	0.09815
94	1.93	1.79592	0.91020	0.08980
95	1.75	1.63265	0.91837	0.08163
96	1.59	1.48753	0.92562	0.07438
97	1.45	1.36054	0.93197	0.06803
98	1.31	1.23356	0.93832	0.06168
99	1.19	1.12472	0.94376	0.05624
100	1.07	1.01587	0.94921	0.05079

Table C
Present Value of Annuity or Other Interest for Widowhood
or Expectant on Termination of Widowhood

Years of Age	Expectation of Widowhood	Present Value of \$1 per Annum For Widowhood	Present Value of \$1 Payable on Termin- ation of Widowhood	Present Value of Income on Capital of \$1 for Widowhood
Years	Years	\$	\$	\$
Up to 20	7.5	6.12479	0.69376	0.30624
21	8.2	6.59213	0.67039	0.32961
22	8.9	7.04336	0.64783	0.35217
23	9.8	7.59895	0.62005	0.37995
24	10.7	8.13101	0.59344	0.40656
25	11.5	8.58483	0.57076	0.42924
26	12.2	8.96931	0.55153	0.44847
27	12.8	9.28751	0.53562	0.46438
28	13.3	9.54509	0.52275	0.47725
29	13.7	9.74712	0.51264	0.48736
30	14.1	9.94674	0.50266	0.49734
31	14.4	10.09104	0.49545	0.50455
32	14.9	10.33156	0.48342	0.51658
33	15.3	10.51709	0.47415	0.52585
34	15.8	10.74614	0.46269	0.53731
35	16.3	10.96866	0.45157	0.54843
36	16.9	11.23044	0.43848	0.56152
37	17.6	11.52338	0.42383	0.57617
38	18.2	11.76874	0.41156	0.58844
39	18.8	12.00617	0.39969	0.60031
40	19.5	12.27376	0.38631	0.61369
41	20.3	12.56989	0.37151	0.62849
42	20.9	12.78526	0.36074	0.63926
43	21.4	12.95789	0.35211	0.64789
44	21.8	13.09463	0.34527	0.65473
45	22.0	13.16300	0.34185	0.65815
46	22.1	13.19556	0.34022	0.65978
47	22.2	13.22811	0.33859	0.66141
48	22.2	13.22811	0.33859	0.66141
49	22.1	13.19556	0.34022	0.65978
50	22.0	13.16300	0.34185	0.65815

Table C continued

Years	Years	\$	\$	\$
51	21.8	13.09463	0.34527	0.65473
52	21.6	13.02626	0.34869	0.65131
53	21.3	12.92370	0.35381	0.64619
54	20.9	12.78526	0.36074	0.63926
55	20.5	12.64168	0.36792	0.63208
56	20.0	12.46221	0.37689	0.62311
57	19.6	12.31145	0.38443	0.61557
58	19.1	12.12301	0.39385	0.60615
59	18.5	11.88745	0.40563	0.59437
60	18.0	11.68959	0.41552	0.58448
61	17.4	11.44028	0.42799	0.57201
62	16.8	11.18681	0.44066	0.55934
63	16.1	10.88140	0.45593	0.54407
64	15.4	10.56290	0.47186	0.52814
65	14.6	10.18725	0.49064	0.50936

For widows 66 years of age or over, the expectations of life and widowhood are deemed to be identical, and Table B applies for both purposes.

Table D
Present Value of Annuity or Other Interest for Period
Other Than Life or Expectant on Event Other Than Death

Years	Present Value of \$1 per Annum for Period	Present Value of \$1 Payable After Period	Present Value of Income on Capital of \$1 for Period
	\$	\$	\$
1	0.95238	0.95238	0.04762
2	1.85941	0.90703	0.09297
3	2.72325	0.86384	0.13616
4	3.54595	0.82270	0.17730
5	4.32948	0.78353	0.21647
6	5.07569	0.74622	0.25378
7	5.78637	0.71068	0.28932
8	6.46321	0.67684	0.32316
9	7.10782	0.64461	0.35539
10	7.72173	0.61391	0.38609
11	8.30641	0.58468	0.41532
12	8.86325	0.55684	0.44316
13	9.39357	0.53032	0.46968
14	9.89964	0.50507	0.49493
15	10.37966	0.48102	0.51898
16	10.83777	0.45811	0.54189
17	11.27407	0.43630	0.56370
18	11.68959	0.41552	0.58448
19	12.08532	0.39573	0.60427
20	12.46221	0.37689	0.62311
21	12.82115	0.35894	0.64106
22	13.16300	0.34185	0.65815
23	13.48857	0.32557	0.67443
24	13.79864	0.31007	0.68993
25	14.09394	0.29530	0.70470
26	14.37518	0.28124	0.71876
27	14.64303	0.26785	0.73215
28	14.89813	0.25509	0.74491
29	15.14107	0.24295	0.75705
30	15.37245	0.23138	0.76862

Table D continued

	\$	\$	\$
31	15.59281	0.22036	0.77964
32	15.80268	0.20987	0.79013
33	16.00255	0.19987	0.80013
34	16.19290	0.19035	0.80965
35	16.37419	0.18129	0.81871
36	16.54685	0.17266	0.82734
37	16.71129	0.16444	0.83556
38	16.86789	0.15661	0.84339
39	17.01704	0.14915	0.85085
40	17.15909	0.14205	0.85795
41	17.29437	0.13528	0.86472
42	17.42321	0.12884	0.87116
43	17.54591	0.12270	0.87730
44	17.66277	0.11686	0.88314
45	17.77407	0.11130	0.88870
46	17.88007	0.10600	0.89400
47	17.98101	0.10095	0.89905
48	18.07716	0.09614	0.90386
49	18.16872	0.09156	0.90844
50	18.25592	0.08720	0.91280
51	18.33898	0.08305	0.91695
52	18.41807	0.07910	0.92090
53	18.49340	0.07533	0.92467
54	18.56514	0.07174	0.92826
55	18.63347	0.06833	0.93167
56	18.69854	0.06507	0.93493
57	18.76052	0.06197	0.93803
58	18.81954	0.05902	0.94098
59	18.87575	0.05621	0.94379
60	18.92929	0.05354	0.94646
61	18.98027	0.05099	0.94901
62	19.02883	0.04856	0.95144
63	19.07508	0.04625	0.95375
64	19.11912	0.04404	0.95596
65	19.16107	0.04195	0.95805
66	19.20102	0.03995	0.96005
67	19.23907	0.03805	0.96195
68	19.27530	0.03623	0.96377
69	19.30981	0.03451	0.96549
70	19.34268	0.03287	0.96713

Table D continued

	\$	\$	\$
71	19.37398	0.03130	0.96870
72	19.40379	0.02981	0.97019
73	19.43218	0.02839	0.97161
74	19.45922	0.02704	0.97296
75	19.48497	0.02575	0.97425
76	19.50949	0.02453	0.97547
77	19.53285	0.02336	0.97664
78	19.55510	0.02225	0.97775
79	19.57628	0.02119	0.97881
80	19.59646	0.02018	0.97982
81	19.61568	0.01922	0.98078
82	19.63398	0.01830	0.98170
83	19.65141	0.01743	0.98257
84	19.66801	0.01660	0.98340
85	19.68382	0.01581	0.98419
86	19.69887	0.01506	0.98494
87	19.71321	0.01434	0.98566
88	19.72687	0.01366	0.98634
89	19.73987	0.01301	0.98699
90	19.75226	0.01239	0.98761
91	19.76406	0.01180	0.98820
92	19.77529	0.01124	0.98876
93	19.78599	0.01070	0.98930
94	19.79618	0.01019	0.98981
95	19.80589	0.00971	0.99029
96	19.81513	0.00924	0.99076
97	19.82394	0.00880	0.99120
98	19.83232	0.00838	0.99162
99	19.84030	0.00798	0.99202
100	19.84791	0.00760	0.99249

SECTION 6

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FURTHER INFORMATION :

Liaison Officer, Freepost 36,
P.O.Box 94, Lincoln University,
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0800 2LINCOLN or

