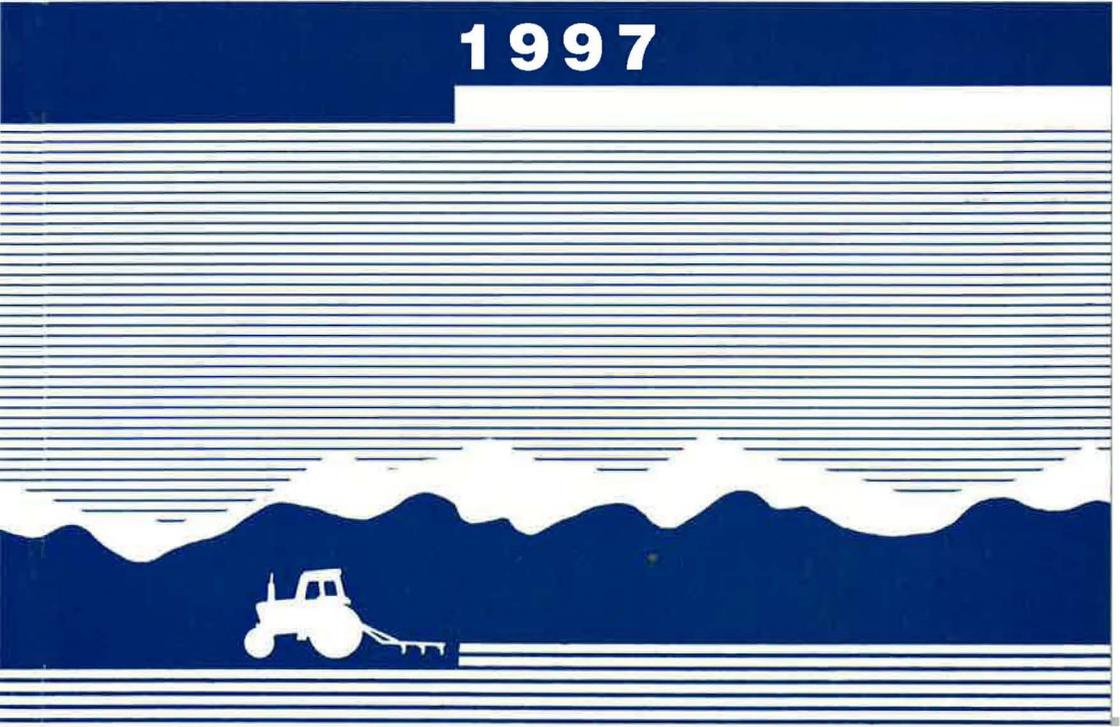


# FINANCIAL BUDGET MANUAL

1997



Department of Farm  
and Horticultural  
Management

LINCOLN  
UNIVERSITY  
*Te Whare Wānaka O Aoraki*



# FINANCIAL BUDGET MANUAL 1997

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## PREFACE

The "Financial Budget Manual 1997" 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 1997. 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 Charlotte Belcher, Susan Falconer, Callum Taylor and Sheryl Frew 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, Lincoln's Department of Farm and Horticultural Management 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. The 1996 edition of this handy book is available now.

Elizabeth S. Burt  
EDITOR

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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 lamb, mutton, beef and wool. 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, 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.

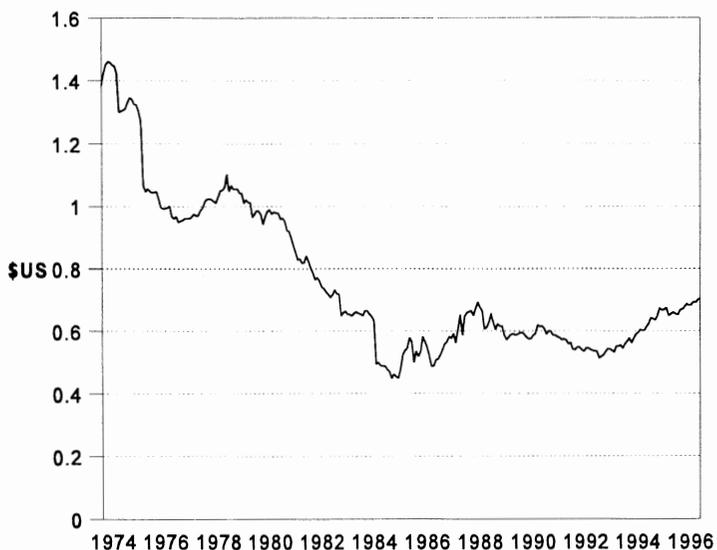
	Depreciation	Appreciation
Wool	+12%	-10%
Lamb	+17%	-14%
Mutton	+20%	-16%
Beef	+17%	-14%
Venison	+17%	-13%
Dairy	+16%	-13%
Kiwifruit	+19%	-15%
Apples	+17%	-14%

**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 1996

#### Exchange Rates: \$US to SNZ (1974 to 1996)



#### Exchange Rates: Major Currencies and TWI to SNZ (Annual Averages)

	<i>Year Ended March</i>					
	<i>1992</i>	<i>1993</i>	<i>1994</i>	<i>1995</i>	<i>1996</i>	<i>1997F</i>
1 NZ\$ =						
US\$		.53	.55	.62	.66	.67
£ stg	.33	.31	.37	.39	.42	.43
Yen	75	66	59	61	64	69
A\$	.73	.74	.81	.83	.91	.93
DM	.95	.82	.93	.95	.94	.96
TWI *	56.5	53.5	55.6	58	62	64

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

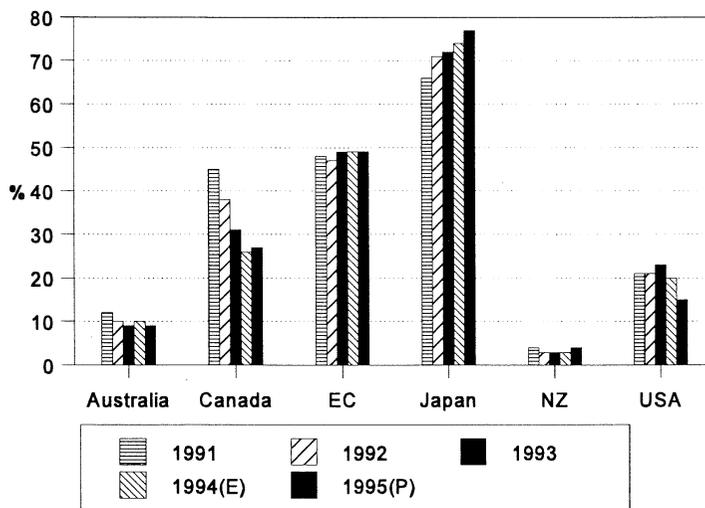
F = forecast

Source: *Situation and Outlook for NZ Agriculture, MAF Policy, June 1996*

### 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 1996*

## 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 6th, 1997. 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.
\$					
9.0	A	18.70	15.69	22.07	21.95
11.0	PL	25.34	20.07	27.47	26.24
13.0	YL	30.09	31.01	34.31	32.99
13.0	PL	30.09	31.01	34.26	32.93
13.5	YM	38.05	38.67	39.16	37.92
13.5	PM	38.05	38.67	37.67	36.37
14.0	YM	39.25	40.05	40.36	39.06
14.0	PM	39.25	40.05	38.82	37.45
15.0	YM	44.35	44.16	43.97	42.54
15.0	PM	44.35	44.16	42.32	40.81
15.0	TM	40.15	39.36	31.12	39.86
15.0	FM	26.65	26.83	23.52	23.49
15.0	CM	26.65	26.83	25.92	25.36
16.0	YM	46.93	47.01	46.30	44.66
16.0	PM	46.93	47.01	44.54	42.82
17.0	YM	49.51	49.86	48.77	47.00
17.0	PM	49.51	49.86	46.90	45.05
18.0	YX	52.45	52.99	51.23	49.86
18.0	PX	52.45	52.99	49.19	47.79
19.0	YX	55.05	55.47	53.65	52.15
19.0	PX	55.05	55.47	51.50	49.96
19.0	TH	51.25	51.19	37.94	36.19
19.0	FH	34.15	34.66	29.01	29.35
21.0	YX	60.25	61.15	51.77	50.43
21.0	PX	60.25	61.15	49.32	48.01
22.0	YX	62.85	63.77	52.77	50.77
22.0	PH	61.75	63.22	48.37	46.59
23.0	YX	65.45	66.60	54.82	52.68
23.0	PH	64.30	66.02	50.22	48.31
<b>Pelt 1kg Woolly</b>		7.10	7.95	8.24	7.61

**Note:** 1. 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).

2. The value of the wool pull/pelt is included and is shown for each company.

Source: "N Z Farmer" January 9 1997

### 1.2.2 Lamb Price Trends

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

	1990/91	1991/92	1992/93	1993/94	1994/95 (P)	1995/96 (E)
<b>14.5 kg lamb (\$/hd)</b>	\$28.06	\$29.19	\$41.08	\$41.32	\$34.59	\$38.01
This price comprises:						
- Baremeat schedule (c/kg)	164.33	160.42	229.70	225.00	176.30	200.60
- Pelt and wool (\$/hd)	\$4.11	\$5.68	\$7.01	\$6.79	\$7.65	\$7.10
<b>Lamb "all grades average"</b>	\$26.04	\$27.97	\$40.16	\$39.97	\$32.16	\$36.54

Figures may not add due to rounding.

P = Provisional

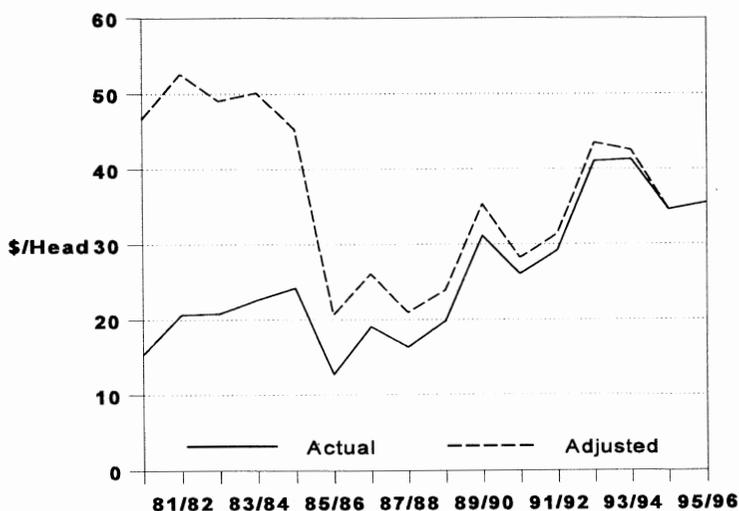
E = Estimate (as at June 1996)

Prices are at works, for year ended 30 September.

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

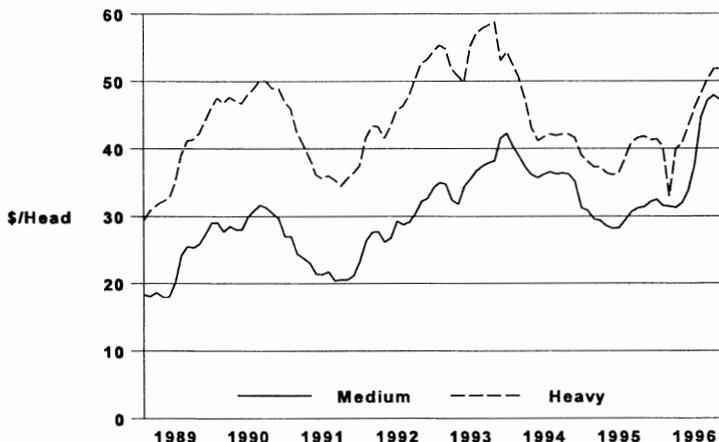
(ii) Actual and Inflation Adjusted Lamb Prices, 1980 to 1996.

(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 October 1996)



**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 1997*

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

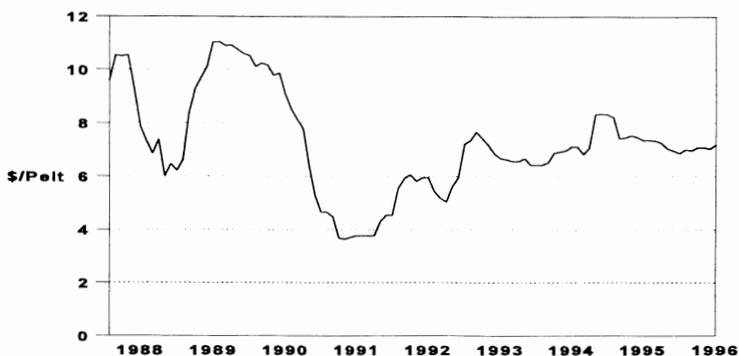
(See Section 1.2.10)

(v) **Store Lamb Prices**

(See Section 1.2.4 viii)

### 1.2.3 Lamb Skin Price Trends 1988 to 1996

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. Farmers who commit lambs to LambPlan Supply Plan for all or part of the season receive the following rewards:

- Optional advance payment, to approved suppliers.
- Low interest rate on advances.
- Renewal incentive payment, for repeat commitments.
- 100% of *AFFCO* operating price, plus any premiums that may apply, at slaughter.
- Monthly market-related payment, paid eight weeks from the end of the month of slaughter, on qualifying grades.
- Freight paid by *AFFCO* to the nearest *AFFCO* processing facility.

#### (ii) Middle East Chilled Lamb Contract - Spring 1996 (*Richmond*)

*Richmond* offered a contract for lambs supplied during September and October 1996. Carcase weight had to be between 9.1 and 13.2 kilograms and had to grade either YL1 or YL2. The supplier could elect to receive an interest free cash advance of \$20 per head of lambs supplied up to the total number contracted. This advance was payable from 19th August 1996, upon the acceptance and execution of this contract by *Richmond*. The total cash advanced was deducted in full from the slaughter proceeds before any proceeds were paid to the supplier.

The following bonus premium reflected and compensated for new season spring lamb supply.

<b>Supply Period</b>	<b>Bonus Premium cents per kg/carcase weight</b>
23 September to 28 September	30
30 September to 5 October	30
7 October to 12 October	20
14 October to 19 October	20
21 October to 25 October	20

A supply bonus of \$1.00 per head contracted was paid if the contract volume was supplied in full.

**(iii) European Chilled Lamb Contract - Spring 1996** (*Richmond*)

A minimum of 100 lambs were to be supplied during the nominated supply week(s) between 7 October and 5 November 1996. Carcase weight had to be between 13.3 and 17 kilograms, and grade either Y, P or T. GR had to be up to and including 15. The following bonus premium reflected and compensated for new season spring lamb supply.

<b>Supply Period</b>	<b>Bonus Premium cents per kg/carcase weight</b>
7 October to 12 October	50
14 October to 19 October	50
21 October to 26 October	35
29 October to 2 November	25
4 November to 5 November	20

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

**(iv) 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.

<b>Supply Period</b>	<b>Gross YL Contract Price cents per kg/carcase weight</b>
4 November to 9 November	240
11 November to 16 November	235
18 November to 23 November	230
25 November to 30 November	225

**(v) European Chilled Lamb Contract - Easter 1996** (*Richmond*)

A minimum of 100 lambs had to be supplied in the nominated week between 22 January to 3 March 1996. Lambs had to weigh between 14.9 to 17 kilograms and had to grade either Y, P or T. GR had to be up to and including 15.

Lambs which met the specification criteria and were supplied during the allocated supply weeks or other weeks as directed by *Richmond* received the total operating price applicable at the date of the kill. An additional payment of 15 cents per kilogram for each particular weight and grade within the specification criteria was paid.

**(vi) Lamb Supply Contract - Winter 1996** (*Richmond*)

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

The following bonus premiums were paid.

<b>Supply Period</b>	<b>Bonus Period cents per kg/carcase weight</b>
22 July to 2 August	10
5 August to 16 August	15
19 August to 30 August	20
2 September to 13 September	25
16 September to 27 September	30
30 September to 4 October	35

**(vii) Large Lean Lamb Supply Contract - 1997** (*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 25.0 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 July / August 1997.

**(viii) Store Lamb Contracts**

**Canterbury**

Finishing/mixed cropping farmers were offering store lamb producers \$31 to \$33 for lambs delivered in December/January 1996/97, compared to \$23 to \$28 during 1995/96.

**1.2.5 Beta Lamb Price**

*Alliance*: No Beta lambs were killed in 1996 and a minimal number were accepted in 1995.

Payment, on carcasses of between 4 and 7.1 kg, was set at \$3.36 per kg (less freight).

(1994 payment was \$3.20 per kg, markedly less than the 1993 payment of \$4.36 per kg.)

### **1.2.6 Live Lamb and Sheep Shipments**

In the year ended September 1995, about 720,000 live sheep were exported to Saudi Arabia from New Zealand for slaughter. The average FOB price in 1994/95 was \$52 per head, down from an average FOB price of \$70 per head in the previous two years. The number of sheep exported has declined significantly since the peak of 1.4 million in 1992/93. The main factors causing this decline have been :

- weaker demand in Saudi Arabia, owing to a downturn in the economy;
- tighter supply conditions in New Zealand; and
- a ban on the export of lambs under ten months old from New Zealand which was imposed in October 1994 because of unacceptable voyage mortality rates.

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.

### **1.2.7 Slink Skins**

The price received for lamb slink skins in 1996 ranged 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.

### 1.2.8 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 20th of January 1997 and is usually available weekly in various newspapers and farming journals.

Weight	Grade	Waitotara (Wanganui) \$	One South Island Company \$
15.0	MM	8.70	10.35
17.0	MM	9.86	11.73
17.0	MX1	18.87	17.17
19.0	MM	11.02	13.11
19.0	MX1	21.09	19.19
19.0	ML1	21.47	19.19
19.0	MP	13.87	10.64
21.0	MX1	23.31	21.21
21.0	ML1	23.73	21.21
23.0	MX1	25.53	23.23
23.0	ML1	25.99	23.23
23.5	MX2	27.73	23.50
23.5	ML2	26.32	23.50
23.5	MH	21.39	-
23.5	MP	17.16	14.10
25.0	ML2	28.00	25.00
27.0	ML2	30.24	27.00
27.0	MH	24.57	-
27.0	MF	12.15	20.52
27.0	MP	19.71	15.12
30.0	ML2	33.60	30.00
<b>Pelt</b>	0.5 kg shorn	5.48	7.07

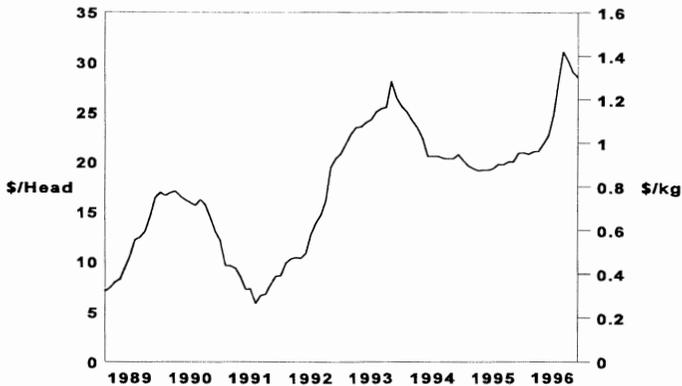
**Note:** The net mutton values are calculated on the same basis as for lamb (refer *Section 1.2.1*). The value of a 0.5 kg pelt is included.

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

Although Meat Companies have widely varying schedule setting methods the announced schedules are all in cents per kilogram. The net per head values are derived from these. All charges and levies are deducted and premiums added.

### 1.2.9 Mutton Price Trends (Export)

#### (i) Net Value of a 21kg Ewe with a 0.3kg Pelt (January 1989 to December 1996)



Source: N.Z. Farmer Issues January 1989 to January 1997

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

	1991/92	1992/93	1993/94	1994/95 (P)	1995/96 (E)
<b>MXI Mutton (18 kg)-</b>	\$13.16	\$26.34	\$26.88	\$22.58	\$24.79
<i>This price comprises:</i>					
- Baremeat schedule (c/kg)	48.30	113.20	114.00	77.00	92.20
- Pelt and wool (\$/hd)	\$4.28	\$5.20	\$5.02	\$7.81	\$6.89
<b>Mutton "all grades average"-</b>	\$12.42	\$25.76	\$26.73	\$21.70	\$24.22

Figures may not add due to rounding

P = Provisional

E = Estimate (as at June 1996)

Prices are at works, for year ended 30 September.

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

### 1.2.10 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) 1996:

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

	<b>Tuakau</b>	<b>Stortford</b>	<b>Addington</b>
	\$/head		
<b>Jan/Feb</b>			
Lambs	24-40	14-47	12-43
Hoggets	22-35	28-35	23-39
Ewes	3-27	9-25	9-25
<b>Mar/Apr</b>			
Lambs	20-44	20-63	26-42
Hoggets	21-35	28-40	25-43
Ewes	9-30	10-32	5-30
<b>May/June</b>			
Lambs	30-57	38-57	29-48
Hoggets	27-39	25-39	27-40
Ewes	10-39	20-43	15-33
<b>July/Aug</b>			
Lambs	40-83	39-70	34-58
Hoggets	30-41	30-49	37-49
Ewes	16-46	20-52	20-55
<b>Sept/Oct</b>			
Lambs	42-71	42-77	34-59
Hoggets	33-49	38-77	36-49
Ewes	16-48	18-50	21-37
<b>Nov/Dec</b>			
Lambs	30-56	23-50	19-53
Hoggets	24-49	31-47	32-52
Ewes	10-42	26-44	18-33

**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" 1996 Issues; Lincoln University.

### 1.2.11 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 1996

##### *Lambs*

	North/South Auckland \$	East Coast \$	Taranaki Manawatu \$	Marlborough Canterbury \$	Otago Southland \$
1988-89	8.89	10.34	12.66	11.36	21.80
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
1995/96p	19.38	23.33	25.86	25.83	30.03

##### *Two-Tooth Ewes*

	North/South Auckland \$	East Coast \$	Taranaki Manawatu \$	Marlborough Canterbury \$	Otago Southland \$
1988-89	18.68	20.10	17.12	19.64	20.44
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
1995/96p	37.59	45.81	36.38	41.00	44.12

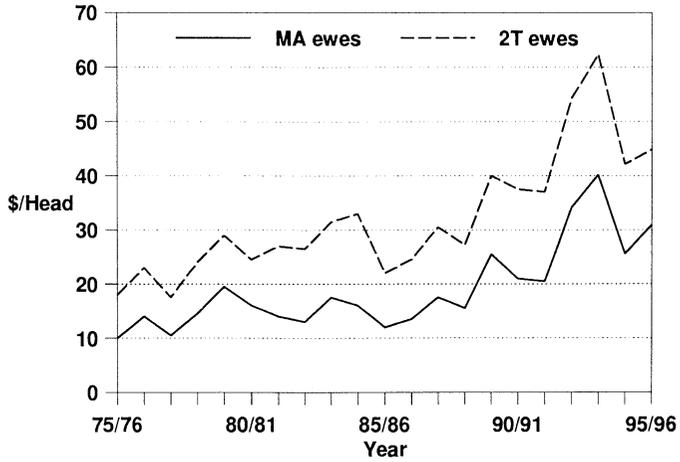
##### *Mixed Age Ewes*

	North/South Auckland \$	East Coast \$	Taranaki Manawatu \$	Marlborough Canterbury \$	Otago Southland \$
1988-89	9.98	10.69	11.41	13.58	19.60
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
1995/96p	28.56	30.55	28.22	21.06	28.65

p = provisional

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

(ii) N.Z. Average Purchase Price for MA Ewes and two-tooths (1975 to 1996)  
(\$/Head - All Regions Average)



**Note:** 1995/96 figures are provisional.

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

### 1.3 WOOL

#### 1.3.1 Highest and Lowest Market Prices of Clean Wool (1995/96 and 1996/97) (Clean Market Price - cents per kg)

			1995/96 (cents per kg)		1996/97 (to Dec 1996) (cents per kg)	
Description and Micron /Category	Colour	Length (Y-Z)mm	High	Low	High	Low
<b><i>Merino</i></b>						
18 Fleece	1	75	1595	1100	-	-
18 Fleece	1	80	-	-	1740	1140
19 Fleece	1	75	1185	860	-	-
19 Fleece	1	80	-	-	1090	875
21 Fleece	1	80	960	690	-	-
21 Fleece	1	85	-	-	810	705
23 Fleece	1	85	810	635	-	-
23 Fleece	1	90	-	-	625	545
21 Pieces	2.5	60	670	600	-	-
21 Pieces	2.5	75	-	-	640	580
21 Bellies	2.5	60	-	-	-	-
21 Bellies	2.5	75	-	-	610	555
<b><i>Halfbred and Corriedale</i></b>						
25 Fleece	2	90	757	605	575	515
27 Fleece	2	95	693	595	545	500
29 Fleece	2	100	670	580	532	495
31 Fleece	2	105	610	545	525	495
28 Pieces	4.5	75	610	570	-	-
28 Pieces	4.5	85	-	-	475	435
28 Bellies	4.5	75	580	560	-	-
28 Bellies	4.5	85	-	-	460	410
28 Lox	4	40	410	353	-	-
28 Lox	4.0	50	-	-	350	265
26 Lambs	1.5	50	-	-	-	-
28 Crutchings	3.5	50	428	350	330	265
<b><i>Crossbred</i></b>						
32 Fleece	3.5	110	601	526	-	-
32 Fleece	3.5	115	-	-	518	496
33 Fleece	3.5	115	586	511	515	473
35 Fleece	2.5	125	556	503	506	451

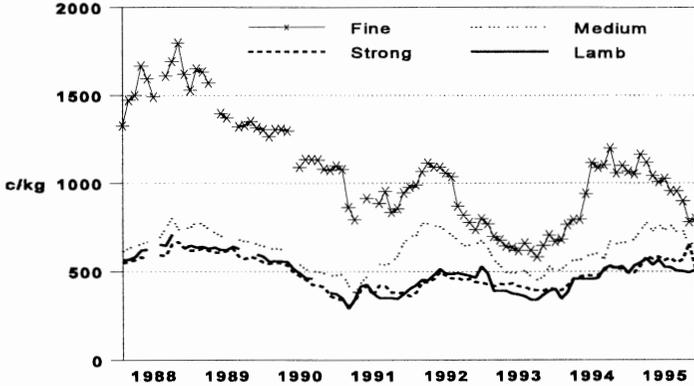
			1995/96 (cents per kg)		1996/97 (to Dec 1996) (cents per kg)	
Description and Micron /Category	Colour	Length (Y-Z)mm	High	Low	High	Low
35 Fleece	5.5	125	-	-	495	437
37 Fleece	3.5	125	547	471	500	436
37 Fleece	5	125	504	455	-	-
37 Fleece	5.5	125	-	-	463	418
35 Pieces	8.5	100	495	362	395	350
35 Bellies	9.5	100	482	352	385	343
35 Lox	9.5	50	367	275	280	251
37 Crutchings	5	65	433	360	359	275
<b><i>Crossbred Second Shear</i></b>						
37 Shear	3.5	85	496	449	446	410
37 Shear	3.5	100	-	-	476	418
37 Shear	5	85	485	392	-	-
37 Shear	5	100	-	-	450	406
37 Shear	3.5	75	478	434	436	403
37 Shear	5	75	470	438	-	-
37 Shear	3.5	65	466	425	425	380
37 Shear	5	65	465	426	-	-
35 Bellies	8	65	393	344	312	280

Source: "N.Z. Farmer" 1996 and 1997 Issues

### 1.3.2 Wool Price Trends

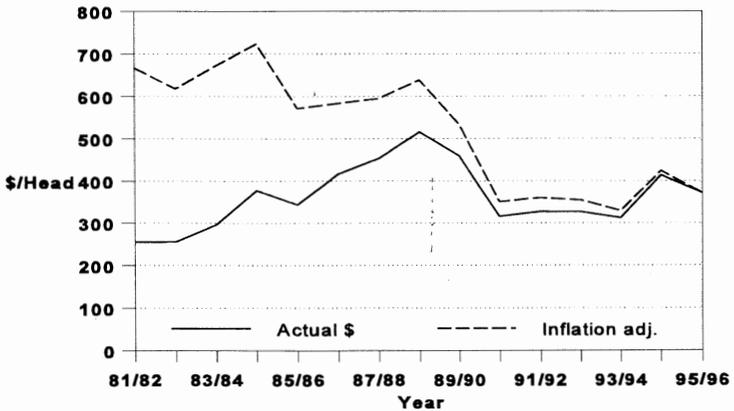
#### (i) Price Indicators 1988-96

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

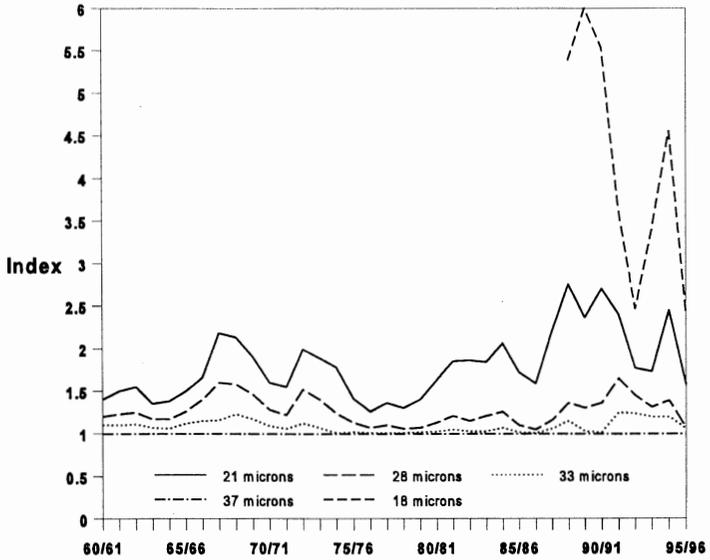
#### (ii) Actual and Inflation Adjusted Greasy Wool Price (Average Auction Price 1981 to 1996 - year ended June).



Sources : Lincoln University; Wools of New Zealand.

### 1.3.3 Wool Price Ratios 1960 to 1996

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 January 6 1997. This information is usually available weekly in various newspapers and farming journals.

#### Net Price per kilogram:

Grade	Weight Range (kg)	Benmore (Auckland) c/kg	Waikato Meats c/kg	South Island average c/kg	Phoenix (Southland) c/kg
L2 Steer	196-220	112	105	76	88
	221-245	128	122	85	89
	246-270	139	133	117	121
	271-295	145	139	128	125
P2 Steer	196-220	125	118	104	109
	221-245	141	135	113	117
	246-270	147	141	140	141
	271-295	153	147	151	150
	296-320	159	152	155	155
	321-345	165	158	152	150
	346+	168	161	145	144
T2 Steer	246-270	139	133	126	131
	271-295	145	139	139	140
	296-320	151	144	143	145
	321-345	157	150	139	140
	346+	160	153	130	134
F2 Steer	271-295	123	117	80	85
	296-320	129	122	82	88
	321-345	135	128	83	88
	346+	138	131	83	89
P2 Heifer	171-195	113	107	82	98
	196-220	125	118	97	104
	221-245	141	135	108	112
	245-270	152	141	135	136
	271-295	148	147	146	145

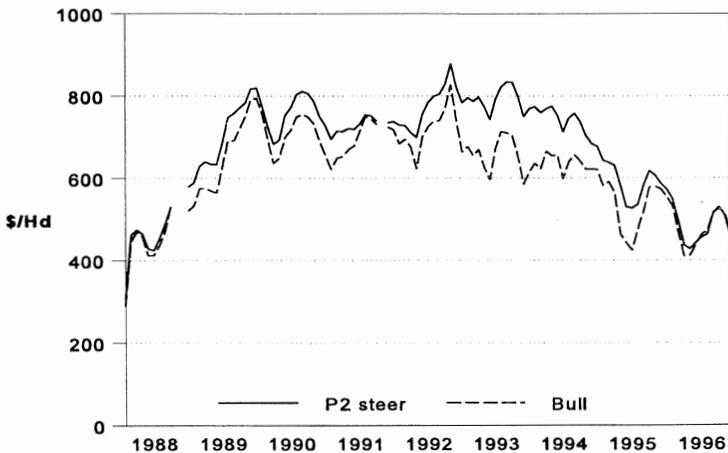
Grade	Weight Range (kg)	Benmore (Auckland) c/kg	Waikato Meats c/kg	South Island average c/kg	Phoenix (Southland) c/kg
P2 Cow	196-220	120	118	69	69
	220-245	126	125	76	75
	245-270	132	131	93	91
	271-295	133	132	103	102
M2 Bull	196-220	125	128	102	104
	221-245	131	145	117	120
	245-270	142	151	129	126
	270-295	148	157	137	137
	296-320	154	162	139	138
	321-345	158	163	143	143
	346+	158	163	145	139

**Note:** Above values are on a "net of all levies" basis. Transport needs to be deducted.

Source: "N.Z. Farmer" 9th January 1997

#### 1.4.2 Beef Price Trends (Export)

- (i) Net Price Paid for 280 kg P2 Steer and 260 kg Bull (January 1988 to December 1996)



Source: "N.Z. Farmer" Issues January 1988 to December 1996

**(ii) Cow Beef Schedule**

	90/91	91/92	92/93	93/94	94/95	95/96 (P)
<b><i>Cow M Grade (145-170 kg)</i></b>	217c	211c	222c	200c	157c	200c
<b><i>Cow M Grade (average per hd)</i></b>	\$342	\$334	\$351	\$316	\$249	\$190

P = Provisional

Prices are at works, for year ended 30 September.

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

**(iii) Bull Beef Schedule**

	90/91	91/92	92/93	93/94	94/95	95/96 (P)
<b><i>Bull Grade (220-245 kg)</i></b>	268c	278c	287c	256c	203c	165c
<b><i>Bull Grade (average per hd)</i></b>	\$627	\$651	\$670	\$600	\$474	\$385

P = Provisional

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 1997 (January to March).

<b>Weight Range (kg)</b>	<b>\$/kg</b>			
	<b>Steers</b>		<b>Bulls</b>	
	<b>Jan</b>	<b>Feb/Mar</b>	<b>Jan</b>	<b>Feb/Mar</b>
245.5 to 270	158	155	144	142
270.5 to 320	163	160	148	145
320.5 to 345	158	155	148	145

***Riverlands (a subsidiary of Pacific Beef) (1996/97)***

*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.

A minimum of 50 of any one age group is 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.

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.

## ***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. Farmers can receive advance payments and progress payments (at six month intervals).

### 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). Farmers can receive a grazing payment if they supply stock from July to October.

### The Co-operative Cow Pool

This innovative monthly pool pays sustainable market returns and additional rewards to suppliers who meet specific criteria. An optional advance payment up to \$150 per cow 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.

### The ANZA Beef Plan

The *New Zealand Angus Association* has introduced its 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

## ***Richmond***

### Asian beef programme

This contract, which will operate from October 1996 to March 1997, offers farmers the opportunity to contract all heifer/steer grades of 300kg to 370kg carcass 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 carcass 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 carcass weight for each carcass 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 carcass weight.

### XY Entire Supply Contract

Entire males must be New Zealand born, grass fed and must not have been treated with any hormone, natural or synthetic. The stock must be handled with the minimum amount of stress. Entire males must have no more than two permanent incisors (first pair) erupted. Carcasses must be over 270kg and less than 6mm fat cover.

The minimum supply volume to be contracted will be 30 head. The supply period is the 1996/97 export year (1 October to 30 September).

### Prime Steer, Bull Supply Contract - Winter 1996

Prime steer of a minimum carcass weight of 270.5kg or bull of a minimum carcass weight of 245.5kg as per the *Richmond Limited* scales. *StockCo Limited* provided a cash advance upon request to the contracted supplier on either of the following terms:

- Interest Bearing Advance
- Interest Free Advance

## ***Phoenix Meat***

The 1996/97 *Phoenix* Calf Scheme involves the bailment of \$175 per head (maximum) depending on calf condition, at 7% interest, which is repayable at stock sale time. The company retains \$260, which covers initial bailment, interest, administration fee (\$5.00) and an allowance for deaths.

### **1.4.4 Calf Slink Skins**

The 1996 price for calf slink skins ranged between \$1.00 and \$5.00 per head. The price received for calf slink skins in 1995 varied between the North and South Islands. In the South Island large skins fetched \$5.00 and small skins \$2.00, compared to the North Island where large skins fetched \$5.00, medium skins, \$3.00 and small skins \$2.00.

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) 1996:

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

	Tuakau c/kg	Stortford \$/head	Addington c/kg
<b>Jan/Feb:</b>			
Steers	70-113	410-682	69-106
Heifers	60-101	320-570	69-93
Cows	47-89	280-500	30-69
<b>Mar/Apr:</b>			
Steers	64-95	300-670	66-91
Heifers	46-92	265-470	53-78
Cows	30-79	320-390	27-58
<b>May/June:</b>			
Steers	67-98	290-585	56-80
Heifers	55-82	220-427	48-73
Cows	32-73	250-400	23-50
<b>July/Aug:</b>			
Steers	86-114	330-640	88-102
Heifers	87-108	300-545	78-97
Cows	50-90	240-450	47-49
<b>Sept/Oct:</b>			
Steers	91-113	405-858	90-95
Heifers	85-106	342-680	50-89
Cows	65-88	235-455	49-61
<b>Nov/Dec:</b>			
Steers	80-109	325-675	76-91
Heifers	68-95	212-472	62-81
Cows	55-85	208-415	48-58

**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" 1996 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 1996:

##### *2 Year plus Steers*

	North/South Auckland \$	East Coast \$	Taranaki Manawatu \$	Marlborough Canterbury \$	Otago Southland \$
1988-89	450	465	520	-	375
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
1995-96p	448	438	389	-	400

##### *1 to 1.5 Year Steers*

	North/South Auckland \$	East Coast \$	Taranaki Manawatu \$	Marlborough Canterbury \$	Otago Southland \$
1988-89	385	380	410	205	335
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
1995-96p	295	355	297	328	231

##### *Weaner Steers*

	North/South Auckland \$	East Coast \$	Taranaki Manawatu \$	Marlborough Canterbury \$	Otago Southland \$
1988-89	175	250	245	210	205
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
1995-96p	130*	213	153	191	200

\* Prices influenced significantly by the sale of bobby calves.

**Weaner Heifers**

	North/South Auckland \$	East Coast \$	Taranaki Manawatu \$	Marlborough Canterbury \$	Otago Southland \$
1988-89	170	215	190	195	170
1989-90	267	277	283	266	252
1990-91	275	243	267	260	266
1991-92	283	229	287	315	212
1992-93	246	288	281	376	290
1993-94	218	304	295	362	334
1994-95	184	196	210	218	224
1995-96p	108	129	116	160	250

**1 to 1.5 year heifers**

	North/South Auckland \$	East Coast \$	Taranaki Manawatu \$	Marlborough Canterbury \$	Otago Southland \$
1988-89	260	365	310	265	245
1989-90	349	436	441	243	310
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
1995-96p	231	295	204	358	312

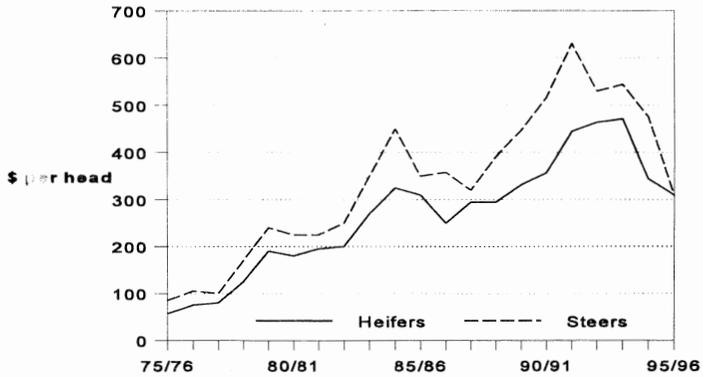
**Cows**

	North/South Auckland \$	East Coast \$	Taranaki Manawatu \$	Marlborough Canterbury \$	Otago Southland \$
1988-89	375	350	470	-	280
1989-90	430	531	505	546	420
1990-91	400	593	508	531	-
1991-92	385	442	542	674	-
1992-93	592	559	516	680	592
1993-94	516	636	529	571	599
1994-95	410	333	358	476	708
1995-96p	292	328	348	415	600

p = provisional

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

(ii) N.Z. Average Purchase Price for 18 Month Steers/Heifers (1975 to 1996)



Note: 1995/96 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
<b>Beef</b>	Breeding Cattle : more than one year of age	490
	Breeding Cattle : 6 weeks to one year	185
	Steers and Non-Breeding bulls : more than 18 months	695
	Steers and Bulls : 6 weeks and 18 months	315
	Breeding Bulls	2905
<b>Dairy Cattle</b>	Seasonal Supply : more than two years	1000
	one to two years	600
	6 weeks to one year	325
	Town Supply : more than two years	1250
	one to two years	750
	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						
	89/90	90/91	91/92	92/93	93/94	94/95	95/96
<i>Northland</i>	337	223	313	349	318	323	390
<i>N.Z. Dairy Group</i>	363	253	343	372	339	350	410
<i>Kiwi</i>	371	260	351	376	339	340	408
<i>Tui (Manawatu)</i>	350	246	338	367	330	334	384
<i>Marlborough</i>	346	225	317	340	300	310	370
<i>Alpine</i>	334	213	302	335	311	325	362
<i>Otago Co-op</i>	376	266	343	359	313	331	400

\* upto 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):*

	84/85	85/86	86/87	87/88	88/89	89/90
<b><i>NZDB-Final</i></b>	228.29	230.32	190.45	205.52	302.68	331.13
<b><i>Company margin</i></b>	5.65	1.05	11.81	26.52	22.68	28.57
<b><i>NZ weighted average</i></b>	233.94	229.27	202.26	232.04	325.36	359.70

(See next page for 1990 to 1996 payouts)

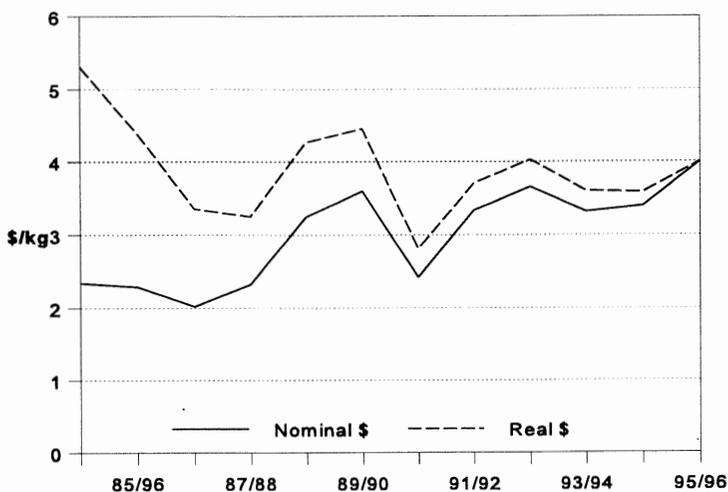
	1990/91	91/92	92/93	93/94	94/95	95/96
<b>NZDB-Final</b>	212.22	298.03	325.29	290	300	360
<b>Company margin</b>	29.76	36.42	40.54	41.72	39.85	39.43
<b>NZ weighted average</b>	241.98	334.45	365.83	331.72	339.85	399.43

**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 1996 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 1996/97 season are quoted, one for the North Island and one for the South Island.

(i) *Tui Milk Products Ltd* :

Milk is graded into 3 categories: Finest, First Grade and Second Grade. Over 15 downgrades will incur a double penalty. Over 25 downgrades will result in a triple penalty rate.

Milk 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
<b>Bactoscan</b>	1/10 days random	A Finest-Low	0-25000/ml
		A Finest-Medium	25000-50000/ml
		B Finest-High	50000-75000/ml
		C First Grade	75000-150000/ml
		D and E Second Grade	>150000/ml
<b>APC</b>	1/10 days random	Finest 75000	
		First >75000-150000	First = 3%
		Second >150000	Second = 20%
<b>Thermodurics</b>	1/10 days	Finest 2000	
		First >2000-5000	First = 3%
		Second >5000	Second = 20%
<b>Senses</b>	Random	Finest	
		First	First = 3%
		Second	Second = 20%
<b>Somatic Cells</b>	3 per month	Finest <400000	
		First 400000-600000	First = 3%
		Second >600000	Second = 20%
<b>Sediment</b>	1/10 days	Finest = A	
		First = B	First = 3%
		Second = C	Second = 20%
<b>Cress</b>	As Required	First	First = 3%
		Second Grade	Second = 20%
<b>Inhibitory Substance</b>	1/10 days	Up to 2 penalties in one season	18c/l milk
		> than 2 penalties in one season	36c/l milk
<b>Colostrum</b>	1/5 days		18c/l milk
<b>Added Water</b>	1/10 days		9c/l milk

(ii) The following information was supplied by a South Island dairy company.

#### Milk Quality Standards

- First grade - 10% penalty
- Second grade - 40% penalty
- Reject grade - 80% penalty
- Non-notified inhibitory substances - 150% loss of income
- Organoleptic (senses) grades - 100% loss of income

**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 an 80% loss of income.

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

*Meadow Fresh Foods* operates a two tier system for winter milk contracts. The contract period is the four months May to August inclusive.

- town supply contracts- a set daily number of litres which a farmer is required to supply throughout the whole year (including winter).
- winter supply contract- is in addition to town supply contract (where a supplier also has a town milk contract).

The 1997 price for both winter contract and winter town supply milk is \$7.06/kg milksolids paid as \$4.72/kg milkfat and \$10.04/kg protein plus 1.50 cents per litre storage allowance. To qualify for a winter milk contract, a supplier must produce milk throughout the four 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 and Waikato regions, a premium of 27.9 cents per litre above the manufacturing payout was paid for contract milk in May, June and July 1996. The premium for winter 1997 will be 27.9 cents per litre. (*N.Z.Dairy Group of Companies*)

*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 \$1.75 per kg milksolids (Winter 1997).

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 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 (1996/97)

Actual prices for spring 1996 and predictions for 1997 for dairy cattle are presented below for six regions:

<b>Waikato</b>					
Class		<i>Spring 96</i>		<i>Autumn 97</i>	
		<i>High BI</i>	<i>Low BI</i>	<i>High BI</i>	<i>Low BI</i>
Mixed age cows	Friesian	\$1000	\$825	\$1000	\$800
	Jersey	\$1000	\$750	\$1000	\$700
Rsg 2yr heifers	Friesian	\$650	\$500	\$800	\$600
	Jersey	\$625	\$450	\$800	\$600
Rsg 1yr heifers	Friesian	\$310		\$425	
	Jersey	\$280		\$380	
4-day heifer calves		\$80 plus \$1/BW unit			
100kg weaners	Friesian	\$300			
	Jersey	\$280			

<b>Bay of Plenty</b>			
Class		<i>Winter/Spring 1996</i>	<i>Winter/Spring 1997(E)</i>
MA Cows	Friesian	\$900-\$1150	\$700-\$1000
	Jersey	\$800-\$1100	\$600-\$900
Rsg 2yr heifers	Friesian	\$900	\$600-\$800
	Jersey	\$800	\$600-\$700
Rsg 1yr heifers	Friesian	\$450	\$400
	Jersey	\$350	\$350

<b>Taranaki</b>			
Class		<i>Winter/Spring 1996</i>	<i>Winter/Spring 1997 (E)</i>
		MA Cows	Friesian
Jersey	\$700-\$900		\$700-\$900
Rsg 2yr heifers		\$600-\$750	\$600-\$750
Rsg 1yr heifers		\$240-\$300	\$240-\$300
Heifer calves	Friesian	\$80-\$100	\$80-\$100
	Jersey	\$50-\$80	\$50-\$80
Weaned Calves		\$200-\$220	-

<b>Manawatu/Wairarapa</b>			
Class		<i>Winter/Spring 1996</i>	<i>Winter/Spring 1997 (E)</i>
MA Cows	Friesian	\$1000-\$1150	\$750-\$900
	Jersey	\$800-\$1000	\$600-\$800
Rsg 2yr heifers	Friesian	\$900	\$700-\$800
	Jersey	\$800	\$500-\$600
Rsg 1yr heifers	Friesian	\$450	\$400
	Jersey	\$350	\$300
Heifer calves		\$70	

<b>Canterbury</b>			
Class		<i>Winter/Spring 1996</i>	<i>Winter/Spring 1997 (E)</i>
MA Cows	Friesian	\$800-\$1050	\$850-\$1200
	Jersey	\$700-\$950	\$750-\$1100
Rsg 2yr heifers	Friesian	\$650-\$950	\$650-\$950
	Jersey	\$550-\$850	\$550-\$850
Rsg 1yr heifers	Friesian	\$350-\$550	\$300-\$400
	Jersey	\$250-\$450	\$200-\$300
Heifer calves		\$2.50-\$3.00/BW	

<b>Southland</b>			
Class		<i>Winter/Spring 1996</i>	<i>Winter/Spring 1997 (E)</i>
MA Cows	Friesian	\$1000-\$1200	\$1000-\$1200
	Jersey	-	-
Rsg 2yr heifers	Friesian	\$850-\$1050	\$850-\$1050
	Jersey	-	-
Rsg 1yr heifers	Friesian	\$300-\$500	\$300-\$500
	Jersey	-	-
100kg weaners		\$250-\$425	

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 1996):**

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

In Canterbury top quality four day old friesian bull calves and beef calves sold for \$25 to \$30 per head.

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

	<b>11.0-13.5kg (c/kg)</b>	<b>13.6-18.5kg (c/kg)</b>	<b>18.6+kg (c/kg)</b>
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

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

In the Waikato, weaned 100 kg friesian bull calves sold for \$280 to \$300 in 1996. In Canterbury during December 1996 and January 1997 100 kg friesian bull calves and beef cross calves sold for \$150 to \$200, compared to \$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. An example only is given here. (\$ per kilogram carcase weight)

		North Island			South Island			NZ
Grade	Weight	<i>Summit</i>	<i>Duncan &amp; Co.</i>	<i>Game Meats</i>	<i>Duncan Otago</i>	<i>PPCS</i>	<i>Pacifica</i>	<i>Mair</i>
	(kg)	\$						
<b>Hind</b>								
AP	30	94	90	96	95	138	101	92
AP	37	166	146	150	141	197	154	141
AP	40	180	158	162	154	213	167	153
AP	45	235	237	242	241	270	229	227
AP	50	277	269	284	264	300	286	268
AP	55	311	302	316	302	250	323	301
AP	60	341	331	346	330	382	354	330
AP	65	370	359	375	358	408	377	358
AP	70	395	369	404	383	440	407	368
AP	75	383	362	385	369	435	395	369
AP	80	365	323	363	335	459	370	354
AP	90	380	364	391	377	503	390	363
AF/AT	50	260	254	279	241	239	223	238
AF/AT	60	314	313	343	303	288	279	294
AF/AT	80	325	287	355	299	385	270	314
<b>Stag</b>								
AP	30	97	93	99	98	141	104	95
AP	37	170	149	153	145	201	158	145
AP	40	184	162	166	158	217	171	157
AP	45	240	242	246	246	274	234	232
AP	50	282	274	289	269	305	291	273
AP	55	317	308	322	307	356	329	307
AP	60	347	337	352	336	388	360	336
AP	65	376	365	382	365	415	384	364
AP	70	402	376	411	390	447	414	375
AP	75	390	370	393	377	437	403	376
AP	80	373	331	371	343	467	378	362
AP	90	389	373	400	386	512	399	372
AF/AT	50	265	259	279	246	244	228	243
AF/AT	60	320	319	343	309	294	285	300
AF/AT	80	333	295	355	307	393	278	322

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

Source: "N.Z. Farmer" January 9th 1997

**Fallow Schedule :**

Example of a fallow schedule as at January 1997:

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

<b>Weight</b>	16 kg	18 kg	21 kg	24 kg	27 kg	30 kg
<b>\$/head</b>	30	52	83	108	122	133

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

Source: "N.Z. Farmer" January 9th 1997

**1.6.2. Venison Contracts**

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

<b>Weight range (kg)</b>	<b>Stags c/kg</b>			<b>Hinds c/kg</b>		
	Jan	Feb	Mar	Jan	Feb	Mar
40.1 to 50	682	643	604	672	633	594
50.1 to 60	733	693	654	723	683	644
60.1 to 70	733	693	654	723	683	644
70.1 to 85	716	673	634	706	663	624
85.1 to 100	716	673	634	706	663	624
> 100	685	643	604	675	633	594

**1.6.3 Venison Price Trends**

(i) Venison Schedule prices 1989 - 1996 (year ended 30 June)

	1991	1992	1993	1994	1995	1996 (e)	1997 (f)
Grade AP2 (50-65 kg) (\$/kg)	\$4.84	\$4.24	\$5.50	\$4.63	\$5.05	\$6.55	\$6.90
Av 40-50 kg Hinds (\$/kg)	\$3.24	\$2.70	\$4.50	\$4.10	\$4.45	\$6.10	\$6.50

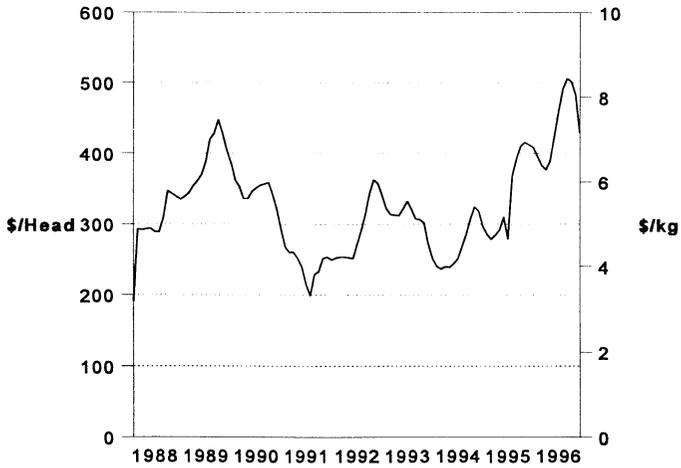
Prices are net of GIB levy.

e = estimate

f = forecast

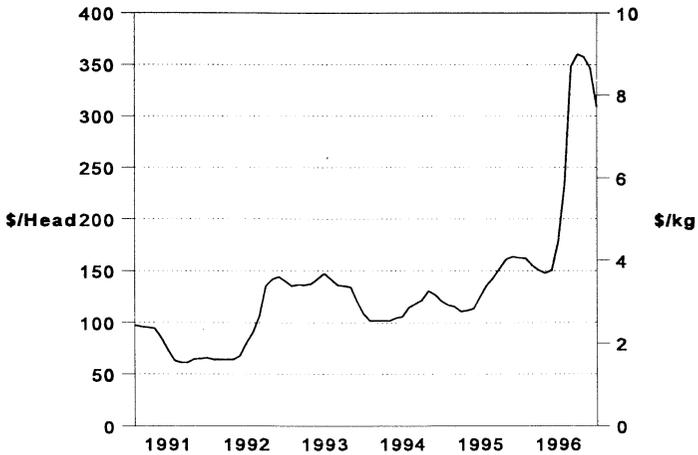
Source: Department of Statistics

(ii) Average Schedule Price for AP Grade Venison (60 kg animal) 1988 to 1996



Sources: Lincoln University; "N.Z. Farmer" 1988-1996

(iii) Average Schedule Price for AP Grade Venison (37 kg hind) 1991 to 1996



Sources: Lincoln University; "N.Z. Farmer" 1991-1996

### 1.6.4 Deer - Live Sales

Livestock prices vary markedly through the year and between districts.

#### Livestock Prices as at January 1997

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

##### Red Deer

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

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

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

##### Wapiti and Wapiti cross

	\$ per head		
	1994/95	1995/96	1996/97(E)
Weaner Hinds	180-250	250-300	250-300
Rising 18mth hinds	350-500	400-600	400-600
Mixed age hinds	500-1000	500-1000	500-1000
Weaner stags	250-500	350-600	350-600
Rising 18mth stags	300-800	400-800	400-800
Mixed age velvetting stags	600-1400	600-1400	600-1400
Breeding stags	2500-30000	2500-30000	2500-30000

Apart from breeding stags, the above prices will be very dependent on feed availability, freezing works capacity and schedules.

##### 1993/94 Season Average Prices (Red deer)

	\$ per head
Weaner Stags	140
Weaner Hinds	90
Mixed Age Hinds	225 to 300
Velvetting Stags	450 to 500

Source: MAF

## 1.6.5 Velvet

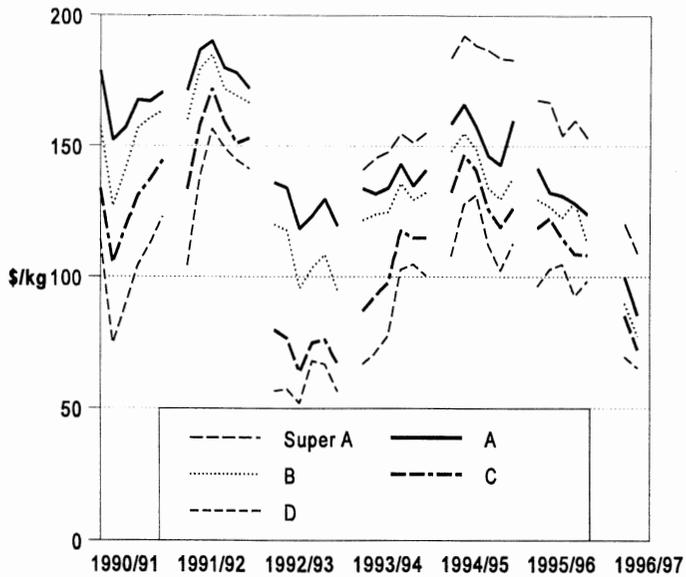
### (i) Velvet Pool Prices by Grade (\$ per kg):

	1996/97	1995/96	1994/95	1993/94	1992/93
<b>Super A</b>	92-131	151-172	170-199	134-148	121-148
<b>A 1 &amp; 2</b>	73-125	115-157	142-181	119-144	108-145
<b>B 1 &amp; 2</b>	63-113	101-136	126-162	104-137	82-134
<b>C 1 &amp; 2</b>	56-102	94-130	111-155	71-107	52-98
<b>D 1 &amp; 2</b>	43-93	82-117	95-136	56-87	41-75
<b>E</b>	30-70	61-92	82-114	35-60	32-56
<b>Manufact.</b>	23-53	41-89	18-70	18-29	17-39
<b>Taiwan 1</b>	120-135	118-156	119-177	60-127	90-126
<b>2</b>	70-102	102-125	100-138	60-127	85-124
<b>3</b>	106-121	104-132	107-147	60-127	81-114
<b>4</b>	66-100	62-113	70-110	60-127	69-113
<b>Spiker 1</b>	59-91	96-121	90-130	40-86	34-65
<b>2</b>	51-64	79-93	71-112	40-86	34-65
<b>Regrowth</b>	31-73	36-111	45-111	22-52	11-36
<b>Overgrown</b>	23-66	51-98	60-121	-	26-86
<b>Damaged</b>	31-96	75-129	55-156	43-98	32-100

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) National Average Monthly Prices for Velvet, 1990 to 1996 (to January)



Source: Game Industry Board.

(iii) Wapiti Velvet -

The following prices are from the South Island sales

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

Source: Wrightsons

**(iv) Fallow Velvet**

At time of printing (February 1997) there had been no sales of Fallow velvet for the 1996/97 season. There were sales of only very small quantities in 1995/96, 1994/95 and 1993/94.

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

#### (i) Schedule Prices:

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

Carcase Weight	Grace \$	PPCS \$
4	-1.68	7.90
6	6.42	12.10
8	9.12	16.30
10	15.32	20.50
12	18.72	18.10
14	22.12	21.10
16	25.52	24.30
18	28.92	27.40
20	24.32	14.70

Source: "N.Z. Farmer", January 1997

#### (ii) Prices in Past Seasons:

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 1996/97 is estimated to fetch between 85 cents and \$1.00 per litre in the North Island, depending on the type of product that is to be 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.

### 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	1996 Average Pool Price \$NZ/kg	1995 Average Pool Price \$NZ/kg	1994 Average Bin Price \$NZ/kg	1993 Average Bin Price \$NZ/kg
A O Super Fine Kid (ASFK0)	13.00	15.00	17.00	11.00
A Super Fine Kid (ASFK1)	11.50	12.00	13.00	8.50
B Super Fine Kid (BSFK1)	7.00	7.00	7.50	-
A O Kid (AK0)	9.00	9.00	14.00	10.00
A Kid (AK1)	8.00	8.00	8.00	7.00
A 2nd Kid (AK2)	6.00	7.00	7.50	5.00
A O Young Goat (AYG0)	7.00	6.50	10.00	7.00
A Young Goat (AYG1)	6.80	5.50	9.00	5.30
A 2nd Young Goat (AYG2)	6.00	5.00	4.80	4.80
B O Kid (BK0)	7.00	7.00	9.00	7.00
B Kid (BK1)	7.00	7.00	7.50	4.50
B O Young Goat (BYG0)	7.00	7.00	6.50	5.00
B Young Goat (BYG1)	7.00	7.00	6.50	4.50
B 2nd Young Goat (BYG2)	3.50	4.00	4.30	2.50
A Xbred Young Goat (AXBYG)	3.00	3.00	4.00	1.50
A O Adult (AH0)	6.00	5.50	8.00	5.50
A Adult (AH1)	5.50	5.00	8.00	4.50
BO Adult (BH0)	5.50	5.50	6.50	4.00
B Adult (BH1)	5.00	5.00	6.00	4.00
A 2nd Adult (AH2)	4.50	4.50	7.00	3.80
Inferior (XXB3)	1.00	1.00	2.50	0.50
Stained Mohair (STN)	3.50	3.00	3.50	1.00
Heavily Stained Mohair (HSTN)	1.00	1.00	2.50	0.75
Cotted (COTT)	3.50	3.00	3.50	1.00
Coloured Mohair (COLMO)	1.00	1.00	2.00	-

Source: Mohair Fibres Ltd.

### (ii) Cashgora Sales (1996)

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

**Note:** All prices are per kg raw fibre.

<b>Grade:</b>	<b>1996 \$/kg</b>	<b>1995 \$/kg</b>
Cashgora A	13.00	15.00
Cashgora B	9.00	13.00
Cashgora D	7.00	10.00
GY/BR (coloured) Cashgora	5.00	8.00

### (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

	<b>1996 \$/kg</b>	<b>1995 \$/kg</b>
WW1/WC1	95.00	\$100.00
WW2/WC2	72.00	\$80.00
GY1/GY2/BR1/BR2	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 1989 to 1996: (year ended June)

	<b>\$/kg</b>					
	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996 (E)</b>
<i><b>Mohair (Fleece)</b></i>	5.02	5.68	4.20	4.21	7.32	6.43
<i><b>Cashgora (Fleece)</b></i>	6.95	6.91	3.35	7.71	10.57	20.74
<i><b>Cashmere (Down)</b></i>	27.25	35.31	10.22	28.70	8.36	38.41

**Note:** Prices are average New Zealand FOB.

E = Estimate (as at December 1996)

*Source: Department of Statistics*

### 1.7.6 Goat Livestock Sales

Goat prices continue to be volatile. Apart from meat schedules that have remained stable for two years, recent price improvements for all goat fibre is reflected in higher stock prices especially for quality animals. The U.S.A. exotic animal demand for Boer goats has deflated dramatically although prices are still very variable.

Typical prices in December 1996 were as follows:

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

*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 January 13th 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	250	310	310	310	310
10 - 12	250	300	310	310	310
13	140	150	150	175	195
14	140	140	140	155	175
15	130	130	140	155	165
16-18	110	110	110	135	155
19+	110	110	110	110	110

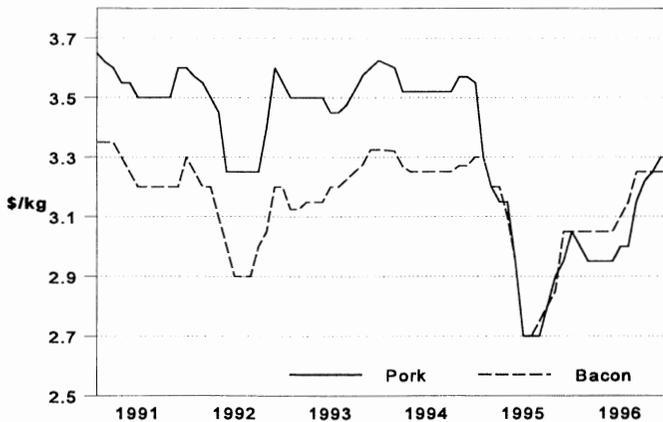
Fat Measure	F 55.5-60 kg cents	G 60.5-65.0 kg cents	H 65.5-70 kg cents	I 70.5-75.0 kg cents	J > 75.0 kg cents
<6mm	245	245	245	245	245
6 - 9	315	315	315	310	300
10 - 12	315	315	315	310	300
13	280	280	300	300	290
14	280	280	290	290	280
15	250	280	280	280	270
16-18	170	170	170	170	160
19+	110	110	110	110	110

Deductions (per pig) include the *Pork Industry Board Levy* \$4.40, *Meat Inspection Levy* (\$3.00), to make a total of \$7.40 per pig.

### 1.8.2 Average Pigmeat Returns 1991-1996

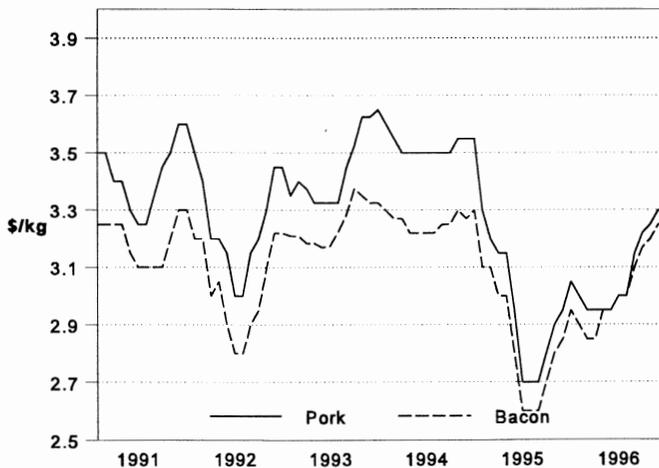
The following are average monthly return for pigs, on a per kg basis, sold in three regions from 1991 to 1996 (C2 Pork and G2 Bacon).

#### (i) Waikato



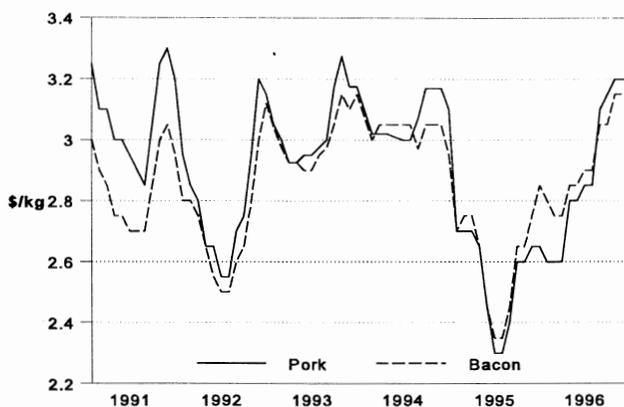
Source: Pork Industry Board

#### (ii) Manawatu



Source: Pork Industry Board

(iii) Canterbury



Source: Pork Industry Board

1.8.3 Live Pig Sales

	Canterbury (average)	North Island
	\$/head	\$/head
Weaners - small	20-35	40-55
- large	55-65	65-85
Slips	70-85	-
Stores	90-110	100-110
Porkers	110-150	110-180
Bacon	150-210	220-230
Sows	250-350	-
Choppers	150-200	140-200

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. There are no established local markets at present for any of the products which include meat, leather, feathers, eggs and in the case of emu, oil. During the expansion phase of the industry, sales of livestock to establishing farmers or investors (through share-farming and other agreements) is the only major source of income to already established farmers.

**As a guide only**, commercially processed emus are presently returning Australian farmers approximately A\$400 to \$420 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\$600 to \$700 at farm gate at a liveweight of 100 to 120kg.

### 1.9.1 Livestock Prices

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. If investor interest wanes before the establishment of a stable industry, demand for livestock may slow and lower values substantially in the foreseeable future. Caution is needed in budgeting using current prices.

The following prices are those ruling in January 1997.

	(\$/head)
<b>Ostrich</b>	
Chicks(3+ months)	\$3,000 to \$8,000
Yearlings	\$10,000 to \$20,000
Adults/Breeders	\$20,000 to \$40,000
<b>Emu</b>	
Chicks(2+ months)	\$3,000 to \$4,000
Yearlings	\$6,000 to \$15,000
Adults/Breeders	\$15,000 to \$25,000

Corresponding January 1996 prices were:

	(\$/head)
<b>Ostrich</b>	
Chicks(3+ months)	\$8,000 to \$15,000
Yearlings	\$20,000 to \$35,000
Adults/Breeders	\$40,000 to \$65,000
<b>Emu</b>	
Chicks(2+ months)	\$3,000 to \$4,500
Yearlings	\$8,000 to \$15,000
Adults/Breeders	\$20,000 to \$30,000

## 1.10 CROPS

### 1.10.1 Wheat

#### Contract prices 1996/97

(i) **Bread wheat** contracts delivered to *Defiance* mill.

Protein % (at 14% moisture)	Cultivar Indexes (\$ / tonne)		
	Monad	Otane, Torfrida, Domino	Kotuku, Belfield, Rata, Morahi
>12	350 range (300-350)	335 range (285-335)	325 range (275-325)
11.5-11.9	340	325	315
11.0-11.4	330	315	305
10.5-10.9	320	305	295
10.0-10.4	310	295	285
<9.9	300	285	275

**Note:**

Dunedin Contracts will be at the above prices less \$10 per tonne.

Timaru Contracts will be at the above prices less \$5 per tonne.

A storage increment of 1% per month will be paid starting in August.

*Wrightson's Nutrition* offer milling contracts for Champion Flour Mills.

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

### (ii) Biscuit wheat

*Speciality biscuit* wheat contracts *Defiance* mill

Protein percentage	Farm Gate Price \$/tonne
9.7 to 10.1%	\$230
10.2 to 10.6%	\$240
10.7 to 11.6%	\$250
11.7 to 12.1%	\$240
12.2%+	\$230

**Note:** Storage Increment is plus 1% per month from 1 April 1997

*Wrightson's Nutrition*

**Biscuit Wheat**

Karamu	\$315	No indexing (Base Price)
--------	-------	--------------------------

*Spread Payment* biscuit wheat contract delivered to *Defiance* mill.

Protein %	Sapphire, Larnoch, Bounty \$/tonne	Brock, Jasper \$/tonne
up to 8.5%	\$257.18	\$267.90
8.6 to 9.5%	\$273.60	\$285.00
9.6 and above	\$257.18	\$267.90

*Fixed Price* biscuit wheat contracts delivered to *Defiance* mill.

Purple wheat contracts were for \$300 per tonne for mid range protein quality.

**(iii) Feed Wheat**

Feed wheat prices range from \$285 to \$305 per tonne in the North Island, and \$230 to \$250 per tonne in the South Island (January 1997).

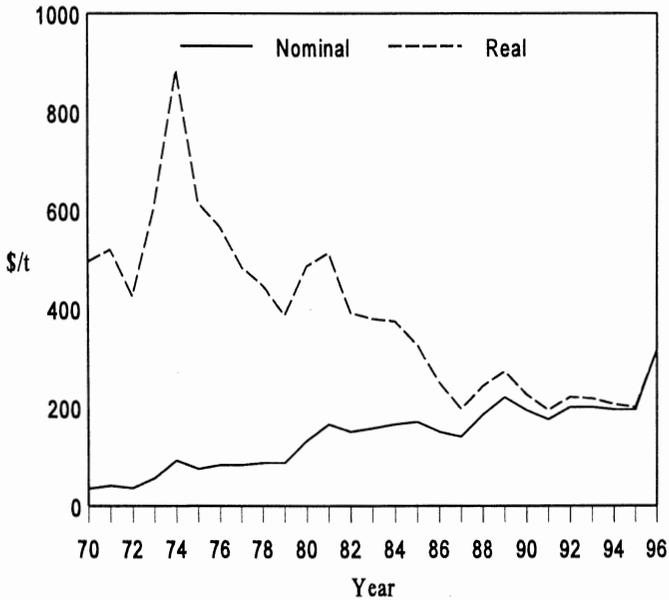
**(iv) Seed Wheat**

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*).

## Wheat Price Trends:

### New Zealand Milling Wheat Prices 1971 to 1996 (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 1996 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**

### **1996/97 Contract Prices:**

#### ***Malting***

The *Canterbury N.Z. Malting Company Ltd* contract price for No. 1 Grade Malting barley for the 1996/97 harvest is \$280 per tonne in the South Island (delivered Rakaia or Ashburton), and \$320 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***

South Island contracts for the 1996/97 harvest were \$210 to \$250 per tonne.

North Island contracts were around \$260 per tonne (1996/97 harvest).

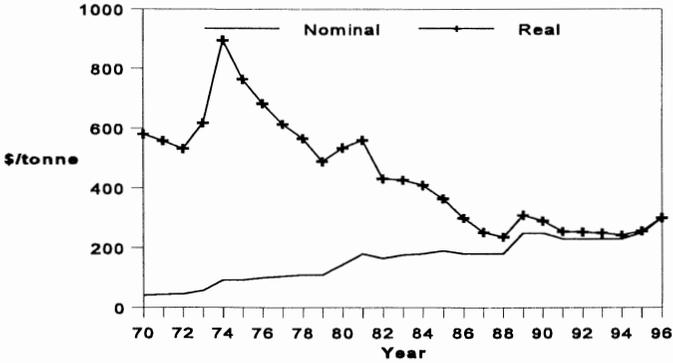
#### ***Seed***

Contract price for seed barley in 1996/97 were the same as feed barley contracts plus a bonus of 7% on the feed barley price. Growers also receive \$0.08 per tonne per day from the 1st of April onwards. Barley received before the 1st of April does not receive any bonus.

### Barley Price Trends 1970 to 1996

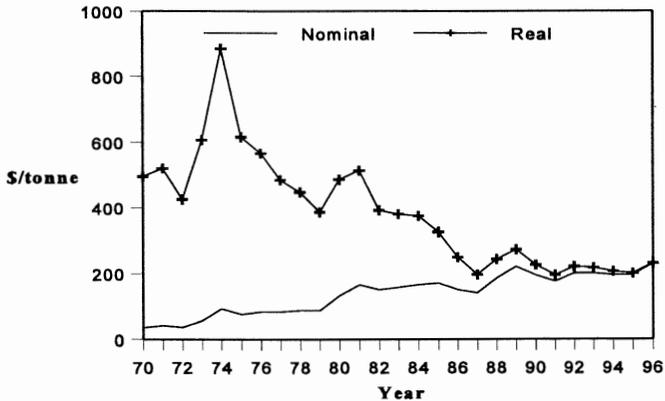
In the following two graphs "Nominal" dollars is the contract price that was paid to South Island growers at harvest each year; "Real" dollars are based on the value of the \$NZ in December 1996 and are adjusted for inflation using C.P.I. figures, for each calendar year, as published by the Department of Statistics.

#### (i) N.Z. Malting Barley Prices 1971-1996 (Harvest Years):



Source: Lincoln University

#### (ii) N.Z. Feed Barley Prices 1971-1996 (Harvest Years):



Source: Lincoln University

### 1.10.3 Oats / Oaten Hay

South Island contracts for 1996/97 ranged from \$240 to \$250 per tonne compared with the 1995/96 average of \$280 per tonne and with the 1994/95 average of \$220 per tonne (Canterbury) and \$200 per tonne Southland. (1993/94 - \$230/tonne, 1992/93 - \$215 to \$240 per tonne Canterbury).

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

There were few contracts available in the North Island for the 1995/96 season. 1994/95 prices were approximately \$245 to \$250 per tonne ( \$10 to \$15 less than the 1993/94 contracts).

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 1995/96 harvest were:

#### **Field peas:**

Maple	\$365 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	\$530 for premium grade (<5% bleach),
	\$460 for No.1 grade (5 to 10% bleach),
	\$360 for Fair Average Quality (F.A.Q.) grade.(max. 20% bleach)
White Peas (subject to the same conditions as Maples)	
	\$320 per tonne (F.D.) Canterbury
	\$280 per tonne (F.D.) Southland

#### **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) Canterbury - Wattie Frozen Foods Ltd.**

Grade	Tenderometer Reading	Cleaned intake weight		
		\$/tonne		
		1994/95	1995/96	1996/97
1	Not over 95	372.90	374.80	374.80
2	95 to 100	339.40	341.10	341.10
3	100 to 105	306.80	308.30	308.30
4	105 to 110	275.30	276.70	276.70
5	110 to 115	263.80	265.10	265.10
6	115 to 120	247.40	248.60	248.60
7	120 to 130	229.10	230.20	230.20

**Note:** Freezer pea crops that are passed over are paid for at a previously agreed rate. Usually 65% of the fortnightly district average but, subject to the conditions of the contract, the farmer has the right to harvest and market the crop. Selected varieties planted early in the season, may also receive a premium payment. Rejected crops, for whatever reason do not receive any payment from the Company.

**(ii) South Canterbury - McCain Foods (NZ) Ltd.:**

Grade	Tenderometer Reading	\$ per tonne packed weight	
		1995/96	1996/97
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.

**(iii) Other Regions**

Grade 5 prices for the 1996/97 harvest were announced by a number of Companies in various regions:

*Grower Foods* - Hawkes Bay, \$220 to \$300 per tonne (cleaned weighbridge weight). A company in Marlborough will be offering \$330 per tonne packed weight.

*Hodder and Tolley* (Manawatu) paid \$245 to \$255 per tonne.

### **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 to \$265 to \$280 per tonne in 1995/96.

#### **Maize Silage**

##### **1996/97:**

14 to 16 cents per kilogram dry matter can be expected by farmers from the Waikato, Taranaki, Bay of Plenty, and Northland areas for the 1996/97 harvest.

10 to 14 cents per kilogram dry matter is expected in the Manawatu, Wairarapa, and in the South Island by farmers growing Maize for silage.

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

Gisborne           \$250 to \$300 per tonne in 1995/96, however very little silage was made in the 1995/96 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 and \$2500 to \$3750 per hectare during 1994/95.

### **1.10.6 Ryecorn**

#### *South Island:*

The 1996/97 price paid for ryecorn was \$300 to \$320. 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 quality. (1993/94 price was \$220 to \$315 per tonne M.D.)

### **1.10.7 Lentils**

Farmers could expect to receive a minimum of \$600 per tonne for the 1996/97 harvest. 1995/96 prices were in the vicinity of \$500 per tonne. No contracts were set for the 1994/95 harvest. 1993/94 contract prices ranged from \$550 to \$600 per tonne.

### **1.10.8 Triticale**

Canterbury growers can expect to receive \$250 per tonne for the 1996/97 harvest. The harvest price for triticale 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*). 1992/93 prices ranged from \$200 to \$250 per tonne.

### **1.10.9 Lupins**

The harvest price for blue lupins for the 1996/97 was \$400 per tonne machine dressed. Canterbury growers received \$380 per tonne for lupins in the 1995/96 harvest compared to \$350 to \$400 per tonne (free price), in the 1994/95 harvest (similar to 1993/94 prices).

### **1.10.10 Oilseed Rape**

Southland growers can expect a minimum of \$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 \$450 per tonne during the 1996/97 harvest, which is the same price received for the 1995/96 harvest.

*Bio Oils Ashburton Ltd.* contract for linseed harvested in the 1993/94 season was \$385 per tonne (\$370 per tonne in 1992/93).

### **1.10.12 Evening Primrose**

\$3.00 per kilogram is the expected price that farmers will receive during the 1996/97 harvest.

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). The 1992/93 price was \$3.50 per kg.

## 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 1996/January 1997 (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.

*Agriseeds* lines (Vedette, Ellett, Yatsyn 1, Dobson and Impact) have a guaranteed minimum (as at December 1996) for the 1996/97 harvest of \$1.50 per kilogram for perennial and annual ryegrasses for 99% minimum purity, 90% germination and 0.05% maximum weed content. A minimum price of \$1.60 per kilogram is guaranteed for hybrid ryegrasses. A minimum of \$1.55 is guaranteed for annual ryegrasses. The 1997/98 minimum prices have also been set and these are \$1.55 per kilogram for perennial ryegrasses and annual ryegrasses. Hybrid ryegrasses have a guaranteed minimum price of \$1.60.

*Agricom New Zealand Ltd.* contract price for Greenstone (both "endosafe" and "endofree" varieties) is \$1.50 per kg in 1996/97 (same as 1995/96, 1994/95 and 1993/94).

	<b>\$/kg</b>
<b>Public Ryegrasses:</b>	
Nui, Ruanui (limited quantities)	1.60-1.80
Manawa	1.50-1.60
Moata	1.30-1.75
Tama	1.50-1.75
Samson Ryegrass	1.70
<b>Others:</b>	
Matua Prairie Grass	1.90-2.10
Advance Tall Fescue	3.50
Kahu Timothy	3.50-4.20
Wana Cocksfoot	3.00
Maru Phalaris	4.80
Gala Brome	1.30
Kara Cocksfoot	3.50

### 1.11.2 Turf Species:(Canterbury)

Turf Ryegrasses	1.60
Turf Fescues	2.20
Browntop (all cultivars)	5.50-6.00
Yarrow	12.00

### 1.11.3 Legumes:

<b>Maku Lotus:</b>	14.00
<b>White Clover:</b>	
Proprietary lines (multiplication contracts)	4.50-5.50
Huia	3.50-4.00
Aran	5.50-5.75
Prop	4.75
Grasslands Sustain	5.15
Prestige	4.50
<b>Red Clover:</b>	
Pawera	10.50-11.00
Other cultivars	3.50-5.50
<b>Lucerne:</b>	
Wairau	4.00-6.00
Otaio	7.50

### 1.11.4 Chicory

Puna	6.50
------	------

### 1.11.5 Brassicas: (Canterbury)

Rape (Rangi)	1.30-1.60
Kale	2.60-3.50
Turnips/Swedens	1.60-2.00

## 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

At date of printing, figures for 1996 were unavailable. 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
Mandarines	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
Mandarines	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	1996 Total \$/TCE	1995 Total \$/TCE	1994 Total \$/TCE	1993 Final \$/TCE	1992 Final \$/TCE
Aurora	17.07	10.84	-	-	-
Braeburn	11.83	11.67	18.92	13.76	27.23
Coromandel Red	10.30	6.66	15.27	8.98	9.67
Cox's Orange Pippin	15.45	13.66	21.96	17.93	28.81
Cripps Pink	21.16	6.94	-	-	-
Fiesta	11.67	5.32	18.86	17.24	18.07
Fuji	13.03	15.21	18.75	13.93	20.98
Gala	12.03	13.39	18.91	12.55	23.70
Golden Delicious	6.16	6.61	9.02	6.63	13.70
Granny Smith	10.08	5.49	11.08	4.64	9.76
Pacific Rose	20.05	16.23	-	-	-
Red Delicious	4.23	6.01	8.62	5.15	10.83
Red Dougherty	2.11	7.38	4.36	5.18	7.71
Regal	9.54	11.94	17.08	9.58	20.63
Regala	11.08	12.82	17.94	8.93	20.67
Royal Gala	15.14	17.18	21.53	17.07	26.24
Southern Snap	11.95	11.69	-	-	-
Splendour	11.48	10.01	11.55	16.71	12.12
Sturmer Pippin	11.87	9.99	10.08	5.45	13.21

**Note 1:** Figures are Class 1 export variety pools.

**Note 2:** A TCE weighs approximately 18.5kg except for 1996 which weighs 18kg.

## (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, and 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. 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.

A capital charge of 20 cents per carton is taken off the money 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** grade fruit price will be confirmed in February 1997 but 1996 payments were:

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

## Apples for Processing

*J. Wattie Foods* (Hastings) 1996/97 prices are : All Grades - \$140 per tonne. 1995/96 prices are: All grades - \$140 per tonne (1st grade). Average of \$160 per tonne 1994/95, same as 1993/94.

*Grower Foods*, (Hastings) paid \$160 per tonne for apples in 1996/97.

### 1.12.3 Pears

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

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

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

**Note 2:** A TCE weighs approximately 18.5 kg.

Variety	1996 Total \$/TCE	1995 Total \$/TCE	1994 Final \$/TCE	1993 Final \$/TCE	1992 Final \$/TCE
Beurre Bosc	12.86	11.59	13.64	12.55	19.59
Doyenne Du Comice	24.37	17.66	26.68	29.79	19.90
Packham's Triumph	9.56	7.00	9.97	6.35	14.65
Taylor's Gold	23.75	22.47	-	-	-
Winter Cole	-	0.44	9.12	16.22	14.37
Winter Nelis	-	2.53	10.10	17.63	8.94

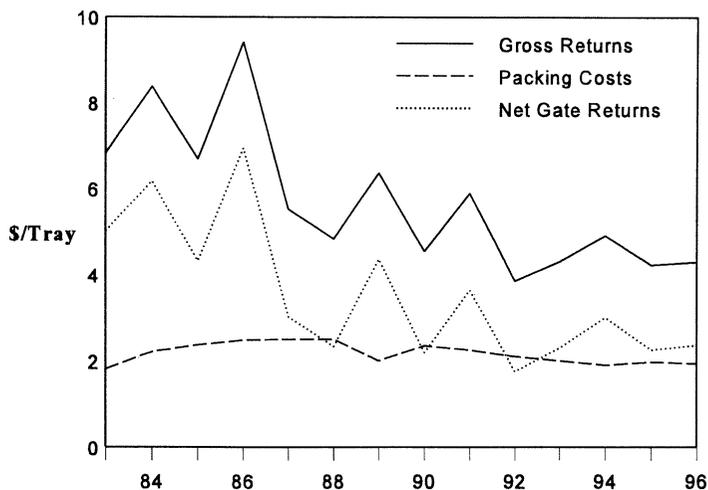
#### Process Pears

*J. Wattie Foods* (Hastings) did not purchase process pears in 1996/97.

1995/96	\$355 per tonne
1994/95 1st Grade	\$375 per tonne
2nd Grade	\$375 per tonne
1992/93 1st Grade	\$30 per tonne
2nd Grade	\$158 per tonne

### 1.12.4 Kiwifruit

#### Export Returns to Grower 1983 to 1996



1996 figures are forecasts as at December 1996.

**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 (E)
Gross Returns	\$3.85	\$4.30	\$4.90	\$4.22	\$4.29
Packing and Packaging	\$2.10	\$2.00	\$1.90	\$1.97	\$1.93
Orchard Gate Returns	\$1.75	\$2.30	\$3.00	\$2.25	\$2.36

E = Estimate

Source: Kiwifruit Marketing Board

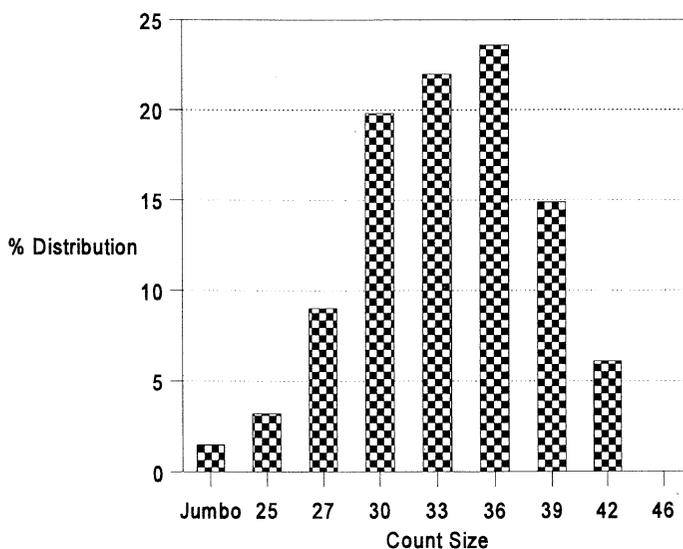
### Net Orchard Return Per Planted Hectare:

1986	1987	1988	1989	1990	1991
\$12,985	\$8,952	\$7,532	\$13,191	\$10,034	\$14,532
1992	1993	1994	1995	1996 (E)	
\$8,047	\$15,312	\$18,210	\$14,860	\$15,547	

Source: Kiwifruit Marketing Board

### 'Ideal' Production for 1997:

A balanced approach to production and not an 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 1997 payments policy are:-

- The NZKMB 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 1997 crop and market realisations.

Source: Kiwifruit Marketing Board

### Progress Payments for 1996:

The pattern of 1996 progress payments was as follows:

	Month	cents / tray
Harvest	April to June	73c
	July	17c
	August	20c
	September	20c
	October	17c
	November	31c
	December	48c
	January to June	Balance

### Initial Payment for 1997

As at December 1997, the initial payment to growers for fruit submitted to coolstores had yet to be decided. It was expected to be in the region of \$2.25. However, \$1.50 of this (yet to be confirmed) will be paid directly to packhouses on behalf of growers. It is anticipated that monthly progress payments will begin in July 1997.

Source: Kiwifruit Marketing Board

### Process Kiwifruit

*Grower Foods Ltd.* 1997 prices are predicted to be \$80 per tonne. 1996 prices were 8c per kilogram delivered to the packhouse, the same as 1994 and 1995 prices.

#### 1.12.5 Stone Fruit - (See also Section 1.12.1 for auction prices)

### Process Stone Fruit:

*Grower Foods Ltd* had no contracts for the 1996/97 season for nectarines or peaches.

**Apricots:** *J. Watties Foods Ltd.* Paid \$0.80 to \$1.00 per kilogram for apricots in 1996/97. Price paid to growers for processing was \$0.90 per kg in 1993/4 but no contracts were available in 1994/95. (*Grower Foods Ltd.* - Hastings)

### Plums:

Desert (Black Doris and Omega)	\$700 per tonne (Average)
	(\$1000 1995/96; \$700 1993/94)
Jam (Billington and Sultan)	\$700 per tonne
	(\$700 1995/96; \$700 1994/95)

(*J. Wattie Foods Ltd.* - Hastings)

Billington	\$1.00 per kg
	(\$0.85 per kg 1995/96, 1994/95)
Black Doris	\$1.00 per kg
	(\$0.85 per kg 1995/96, 1994/95)
Omega	\$1.00 per kg
	(0.85 per kg 1995/96)

(*Grower foods Ltd.* - Hastings)

**Peaches:**

1996/97 No contracts available  
 1995/96 \$560 per tonne.  
 1994/95 1st grade \$560 per tonne (\$560 1993/94, \$555 1992)  
 2nd grade \$350 per tonne (\$350 1993/94 and 1992/93)

*(J.Wattie Foods Ltd.)***Nectarines:**

1996/97 No contracts available  
 1995/96 \$640 per tonne (average)  
 1994/95 \$650 per tonne (average)  
 1993/94 \$650 per tonne

*(J.Wattie Foods Ltd.)***1.12.6 Berryfruit****Processing 1996/97***J.Wattie Foods Ltd - Hastings:*

Strawberries	\$2300 per tonne, 1996/97	(\$2300 1995/96;1994/95)
Boysenberries	\$2300 per tonne, 1996/97	(\$2300 1995/96;1994/95)
Raspberries	\$3300 per tonne, 1996/97	(\$3300 1995/96;1994/95)

*Grower Foods Ltd - Hastings:*

Strawberries	\$2.55 per kg (fresh)	(\$2.80 1995/96,\$2.50 1994/95)
Boysenberries	\$2.30 per kg (fresh)	(\$2.30 1995/96,\$2.30 1994/95)
Blackberries	\$2.65 per kg (frozen)	(\$2.60 1995/96,\$2.85 1994/95)
Blueberries	\$2.75 per kg (frozen)	(\$2.70 1995/96,\$2.90 1994/95)

**Note:** Fresh prices delivered to factory.  
 Frozen prices delivered to cold store.

**1.12.7 Feijoa****Domestic market**

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

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

**Export market** (total exports approximately 12,000 trays)

The average return for exports in 1996 was between \$5.00 and \$6.00. A typical tray weight is 2.8kg. Mid season prices, f.o.b., are commonly \$13/tray (USA and Australian markets).

Tray weights are approximately

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

1.12.8 Grapes - (See Section 1.12.1 for Auction prices)  
Bulk Grapes for Wine Production

	Northland	Auckland	Waikato	Gisborne	Hawkes Bay	Wellington	Marlborough	Nelson	Canterbury	Otago	Varietal Average
<b>Variety</b>	<b>\$ per tonne</b>										
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

## 1.13 VEGETABLE PRODUCTION

### 1.13.1 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 are usually available in the local newspapers. Auckland wholesale prices are published monthly in "Horticulture News".

#### a) 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	July	Aug	Sept	Oct
Broccoli	14.59	15.25	15.94	13.56	14.79	17.13	15.34	13.09	21.56	17.18
Cabbage	4.23	6.27	7.36	6.42	4.48	4.99	4.56	4.41	26.01	30.18
Capsicum	15.90	9.20	10.76	13.26	20.90	33.52	38.40	26.12	12.98	28.22
Carrots	11.56	11.50	6.46	6.42	6.60	6.58	6.49	6.45	7.74	9.60
Cauliflower	8.38	7.00	17.12	9.46	9.00	12.18	8.57	6.49	8.99	11.32
Celery	16.49	10.93	10.54	9.07	8.40	10.62	11.56	13.75	11.82	12.11
Chinese Cabbage	6.03	7.64	6.01	6.47	8.74	10.47	10.50	9.10	11.17	8.07
Courgettes	15.90	14.08	14.85	15.14	31.48	32.71	41.22	35.39	60.30	32.12
Cucumber short	15.03	19.74	16.07	14.94	25.76	29.06	44.46	40.27	29.55	23.90
Cucumber tele	15.47	20.69	21.92	21.82	36.46	38.46	41.07	52.99	35.01	40.81
Kumaras	40.40	44.50	26.81	31.44	30.55	31.30	34.09	33.42	33.48	36.85
Lettuce	9.51	10.30	6.28	5.52	17.07	12.51	7.21	16.30	12.98	7.40
Lettuce Fancy	10.27	12.95	9.17	7.35	13.07	17.73	17.91	17.32	15.20	10.04
Mushrooms	13.53	16.92	16.18	16.37	16.78	17.57	17.04	18.61	17.77	17.59
Onions (table)	10.22	6.29	3.99	4.26	3.24	3.29	3.33	3.68	3.05	4.27
Potatoes	4.76	5.54	5.41	5.34	4.81	4.48	4.53	4.21	3.67	4.46
Tomatoes	14.26	9.58	20.03	15.72	40.34	32.37	32.74	39.54	40.24	37.73

Source: "Horticultural News" 1996 Issues

**b) 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

**b) 1994 Vegetable Prices - Auckland Wholesale Market**

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Broccoli				19.77	13.87	16.06	23.31	13.30	19.35	26.35	15.98	16.95
Cabbage				15.62	8.68	10.28	14.38	10.21	10.33	13.51	7.17	5.51
Capsicum				7.86	13.53	33.11	58.03	74.27	74.04	61.67	29.89	21.13
Carrots				5.88	6.85	7.41	8.12	8.12	8.49	12.32	15.12	16.45
Cauliflower				12.08	9.11	10.61	9.50	7.46	10.94	17.42	7.42	25.81
Celery				12.19	9.85	11.58	12.73	14.73	12.76	12.52	25.07	20.41
Chinese Cabbage				4.90	4.48	5.64	8.83	7.50	8.41	9.96	8.09	6.25
Courgettes				13.48	35.09	24.39	30.11	30.72	28.51	25.27	15.23	10.35
Cucumber short				15.51	18.83	25.61	26.16	26.88	25.08	19.37	13.86	10.62
Cucumber tele				17.85	24.16	34.38	39.87	28.96	32.24	26.18	18.56	23.35
Kumaras				11.29	11.23	13.72	14.75	15.87	17.80	18.43	26.32	27.98
Lettuce				15.27	12.70	14.46	22.56	21.06	11.93	17.29	16.94	10.99
Lettuce Fancy				9.04	12.28	11.96	14.51	14.53	13.12	12.62	13.33	12.15
Mushrooms				16.16	14.85	15.05	14.95	16.84	16.78	16.22	15.15	13.85
Onions (table)				9.02	8.79	8.76	9.26	9.70	9.88	10.53	9.80	10.87
Potatoes				4.89	4.80	5.53	6.02	6.73	6.40	6.18	6.03	7.17
Tomatoes				10.52	18.96	22.19	23.69	26.25	26.93	24.97	14.67	15.49

Source: "Horticultural News", 1994 Issues

### 1.13.2 Vegetable Prices (Process)

#### Asparagus

(i) 1996/97 harvest price for Hawkes Bay (*J.Wattie Foods*):

1st grade	\$2300 per tonne	(\$2300 1995/96,\$2400 1994/95,\$2400 1993/94)
2nd grade	\$1000 per tonne	(\$1000 1995/96,\$1600 1994/95,\$1600 1993/94)

(ii) 1996/97 harvest prices for Hawkes Bay (*Grower Foods Ltd.*)

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

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

#### Beans

(i) Beans (green and yellow) grown for process freezing in Canterbury are paid for as follows (*Watties Frozen Foods Ltd*):

Grade	Average Seed Length	\$ per tonne			
		1996/97	1995/96	1994/95	1993/94
1	Less than 9mm	360	360	360	360
2	over 9mm, not over 9.5mm	347	347	347	347
3	over 9.5mm, not over 10mm	336	336	336	336
4	over 10mm, not over 10.5mm	326	326	326	326
5	over 10.5mm, not over 11mm	318	318	318	318
6	over 11mm, not over 11.5mm	310	310	310	310
7	over 11.5mm, not over 12mm	303	303	303	303
8	over 12mm, not over 12.5mm	298	298	298	298
9	over 12.5mm, not over 13mm	295	295	295	295
10	over 13mm	293	293	293	293

**Note:** Payment is based on weight after processing and freezing or in fresh green state before the dehydration process. Seed cost of \$6.36/kg is deducted.

Hawkes Bay (*Growers Foods Ltd*):

#### 1996/97

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

Grower pays 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

**1995/96**

Green Beans Grade 1 to 4 ranged from \$258 to \$308 (average - \$281)

Grower pays for seed.

Baby Beans	under 8 mm	\$349/tonne
	8-10 mm	\$308/tonne
	10.1-11 mm	\$289/tonne
	over 11 mm	\$270/tonne

**1994/95**

Green Beans Grade 1 to 4 ranged from \$266 to \$318 (average - \$300)

Grower pays for seed.

Baby Beans	under 8 mm	\$360/tonne
	8 - 10 mm	\$318/tonne
	10.1 -11 mm	\$298/tonne
	over 11 mm	\$279/tonne

(ii) Whole Beans in Canterbury (*Watties Frozen Foods Ltd*):

Grade	Average Seed Length	\$ per tonne			
		1996/97	1995/96	1994/95	1993/94
1	less than 7.5mm	458	526	526	526
2	over 7.5mm not over 8mm	443	509	509	509
3	over 8mm, not over 8.5mm	427	491	491	491
4	over 8.5mm, not over 9mm	412	473	473	473
5	over 9mm, not over 9.5mm	397	456	456	456
6	over 9.5mm, not over 10mm	381	438	438	438
7	over 10mm	367	422	422	422

**Note:** Payment is based on weight after processing and freezing or in fresh green state before the dehydration process.

(iii) Broad Beans - Canterbury 1996/97 (*Watties Frozen Foods Ltd*)

\$476 per tonne for grey or green seeded varieties based on cleaned intake weight.  
(Unchanged from previous season)

(iv) Italian Beans \$362 per tonne packed weight for 1996/97 in Canterbury (*Watties Frozen Foods Ltd*). \$307 per tonne for 1995/96.

**Beetroot**

1996/97 delivered to the factory price: \$140 per tonne in Hastings (*J. Wattie Foods Ltd*).  
(Unchanged since 1993/94).

*Grower Foods Ltd* have paid \$125 per tonne for the last three seasons and this will remain unchanged for the 1996/97.

**Broccoli**

1996/97 price for broccoli in the Manawatu is \$500 per tonne, compared with \$800 per tonne in 1995/96, 1994/95 and 1993/94 seasons.

## Carrots

### 1996/97 prices (\$ per tonne)

Manawatu			\$89.00 per tonne (same as 1994/95)
South Canterbury ( <i>McCains Foods Ltd.</i> )			\$112 per tonne
Canterbury ( <i>Watties Frozen Foods Ltd.</i> )			\$84.50 per tonne bulk.
- Baby carrots			\$400 per tonne based on factory packed weights to \$120 per tonne field weight.
Hawkes Bay ( <i>Grower Foods Ltd.</i> )			
- carrots for dicing	1994/95	grade 1	\$97 per tonne
		grade 2	\$90 per tonne
	1995/96	grade 1	\$97 per tonne
		grade 2	\$90 per tonne
	1996/97	grade 1	\$105 per tonne
		grade 2	\$60 per tonne
Hastings ( <i>J.Wattie Foods Ltd.</i> ) - carrots for dicing			\$95 per tonne

(For auction prices see *Section 1.13.1*)

## Cauliflower

The 1996/97 price for cauliflower is \$500 to \$550 per tonne. Cauliflower grown for process freezing in 1995/96 is \$490 per tonne field weight (Manawatu). (\$490 1994/95, \$450 1993/94).

(For auction prices see *Section 1.13.1*)

## Celery

\$450 per tonne Hastings - 1996/97, 1995/96, and 1994/95 (*J.Wattie Foods Ltd.*)

( For auction prices see *Section 1.13.1*)

## 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. \$3.00 to \$3.50 is the Fijian price for 1996/97. \$3.50 to \$4.50 is the Australian price, and Garlic sold on the local market can fetch anywhere between \$3.00 to \$7.00 depending the the time of the year and the supply. The average prices for 1993/94 range from \$3 to \$5 per kg for export, and \$3 to \$6 per kg for local market sales. Average price paid in the 1992 season was \$2.60 per kg (\$2.80 in 1991).

## Onions

The price for onions varies a lot during the year depending on supply and demand. Onions are worth between \$300 and \$350 per tonne in the Manawatu for the 1996/97 season. Table onions fetched \$900 per tonne, Jumbos , \$990 to \$1125 per tonne and Choppers, \$360 to \$540 per tonne during the 1995/96 season.

## Peas

(See *Section 1.10.4*)

## Peppers

\$900 per tonne Hastings - 1996/97 (*J. Wattie Foods Ltd.*), (\$700 1995/96, 1994/95, \$650 1993/94, and \$860 1992/93)

## Potatoes

(For market prices see *Sections 1.13.1 and 1.13.3*)

*Watties Frozen Foods* offered \$189.55 per tonne for potatoes for the 1996/97 season (unchanged from 1995/96) compared to \$188.55 paid in 1994/95.

*McCains Foods (NZ) Ltd*

Contract prices for the 1996/97 harvest were \$180 per tonne for processing (french fries) unchanged from 1995/96.

*J. Watties Foods Ltd.* (Manawatu)

1996/97 prices are unchanged from 1995/96 at \$220 per tonne field weight (\$212/tonne 1993/94)

## Pumpkin

\$100 per tonne in Hastings for 1996/97 (*J. Wattie Foods Ltd.*) (Unchanged from previous two seasons. \$150 per tonne was paid in 1993/94)

(For auction prices see *Section 1.13.1*)

## Sweet Corn (1996/97)

\$148.00 per tonne Canterbury (*McCains Foods (NZ) Ltd*)

\$118.00 per tonne Manawatu (\$125 1994/95)

\$122.50 per tonne Hawkes Bay (*J. Wattie Foods Ltd.*)

**Note:** Price includes harvesting and delivery to the factory.

### *Grower Foods Ltd*

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

These prices exclude harvesting and delivery to the factory.

## Tomatoes (1996/97)

(*J. Wattie Foods Ltd*) No tomatoes were purchased during the 1996/97 season. Prices were \$140 per tonne 1995/96, \$147 per tonne 1993/94, \$137 per tonne 1992/93.

*Grower Foods Ltd* are not processing tomatoes in 1996/97. None were processed in 1995/96.

(For auction prices see *Section 1.13.1*)

**Zucchini:**

Manawatu price for 1996/97 was \$1000 per tonne compared with \$525 per tonne paid in the previous three seasons.

**1.13.3 Main Crop Potatoes**

In the 1995/96 growing season all potato growing areas were affected by adverse weather conditions. The result was a nationwide shortage of table potatoes and rising prices to satisfy demand.

**Manawatu:**

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:**

With an increase in overall costs especially of seed, the total area planted was limited. Potato prices are expected to be \$400 to \$500 per tonne or higher.

**Southland:**

Southland prices are similar to Canterbury, with any major differences being due to freight charges. Main crop potatoes for the 1996/97 season are expected to sell for \$300 to \$500 per tonne.

**1.13.4 Kabocha (Buttercup Squash)****North Island:**

For the 1996/97 season Kabocha contracts were expected to range from \$0.15 to \$0.45 per kilogram (same as 1995/96) and it is predicted that the 1996/97 harvest will be close to 70,000kg. There were no North Island contract prices for kabocha for the 1994/95 year. Prices were volatile in relation to supply and demand. In 1994, 95,000 tonnes were grown with a price range of 15 to 40 cents per kg.

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 (*Watties Frozen Foods*). No contracts were available for either the 1996/97, 1995/96 or 1994/95 season.

## 1996 Auction Prices - Auckland

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
Carnation										
-Spray (per 10)	1.45-2.01	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	3.35-7.19	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 (per5/10)	-	1.95	-	2.91-3.72	2.99-3.32	3.54	2.67-2.76	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	1.82-2.55	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	3.64-7.30	3.64-7.12	2.46-5.70	2.14-5.11
Gypsophilia (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	2.90-3.76	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	3.54-6.45	3.28-4.49	2.27-3.82	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	3.87-4.47	3.40-5.10	2.44-3.07	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
Daffodil (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
Gypsophilia (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	-	-	-	-	-
Anemone (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 1997, 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

The New Zealand economy continued to perform well in 1996. The New Zealand dollar has fluctuated significantly against the key forestry currencies - Australia, Japan and the United States - during the past twelve months. This has created some difficulties for New Zealand exporters by reducing price competitiveness and lowering export returns. The New Zealand dollar is expected to continue to strengthen throughout the forecast horizon.

#### New Planting

During 1996 MOF conducted a survey amongst forest nurseries which indicated that there were sufficient seedlings to establish 75,200 hectares of new planted forestry in 1996. This estimate assumes that an additional 28,500 hectares of harvested area will be restocked in the 1995 planting season. A likely new planting scenario is for planting levels to moderate over the next three to four years, coincident with New Zealand's economic cycle. The MOF's long run expectation is for an average new planting rate in excess of 50,000 hectares through to the year 2020.

#### Forestry and Logging

New Zealand's roundwood removals have increased markedly over the past 5 years, averaging an 8 percent increase annually. Announced processing capacity increases, allied with export market outlooks and increasing harvest availability, suggest this rate of increase has the potential to be slow through 1996-1997.

#### Log Exports

The export market for New Zealand logs is dominated by Japan and Korea. These two markets purchase 95 percent of New Zealand logs. Prices in the Japanese market continue to show weakness with the average New Zealand log price slipping from NZ\$140 per tonne in June 1995 to NZ\$120 per tonne in June 1996. Prices are likely to remain soft through to 1997, given the overall weakness in the Japanese economy. For log markets as a whole, the MOF forecasts slower growth in log exporting over the coming five years. The increase in wood available for harvest will outstrip present processing capacity coming on-stream and the further utilisation of currently idle capacity in the sawmilling industry.

**Over 80% of new  
forestry plantings  
are being made  
by farmers and  
small investors.**

The Ministry of Forestry offers a range of specialist publications covering all aspects of forestry and forest industries. From planting and processing to investment information. Just call our office near you.



**Northland** 0-9-430 3010  
**Auckland** 0-9-303 3269  
**Rotorua** 0-7-348 0089  
**Wellington** 0-4-472 1569

**Nelson** 0-3-544 8350  
**Christchurch** 0-3-379 1040  
**Dunedin** 0-3-477 8454

### Woodchips

The MOF anticipates similar woodchip export volumes in the year to March 1997, in line with industry expectations. However, as new fibreboard capacity comes on stream, chips are expected to be diverted into the mills reducing export volumes in the latter years of the forecast horizon.

### Sawn Timber

Sawn timber markets tend to be correlated with log markets in terms of price movements, though generally with a short lag. New Zealand exports of sawn timber to the Australian market are largely influenced by interest rates and the level of home building. Conversely, in Asian markets, where radiata pine is used predominately as a packaging material, exports tend to parallel economic growth. New Zealand's sawn timber industry is badly exposed to weakness in the Australian. However, the proportion of structural sawn timber exported to Australia is far higher. Japan, the second largest market, imports primarily packaging grade timber and generally in flitch form. The United States, the third largest market, imports mainly mouldings and shop grade timbers.

### Woodpulp

International wood pulp prices peaked in 1995. There remains considerable doubt as to how long the peak will be sustained and rapidity with which downward price movements may occur. These forecasts anticipate a gradual easing over the next three years as the additional capacity cuts in and the global economy softens. The decrease in price now occurring will continue into 1997 and possibly 1998.

### Newsprint

In New Zealand, significant changes in newsprint production are likely to occur over the next three years, with the announcement that the *Tasman Pulp and Paper*'s Kawerau mill are looking at converting one of the newsprint machines to produce fine coated paper. The newsprint reduction would eliminate the need to export into Asian spot markets and reduce the volume of exports into Australia.

### Conclusion

The fibre-based and solidwood markets for New Zealand forestry products markets can be characterised, in very broad terms, as being at opposite ends of the price spectrum. Globally, pulp and paper markets are approaching or have in some cases exceeded, their historical maximums, while key log and sawn timber markets, Japan and Australia, are in recession. Harvesting levels will continue to increase as the forestry resource matures, with log exporting likely to remain close to current volumes and the sawmilling and panel industries expected to increase output to absorb the bulk of the harvest increases.

For further information, please contact M.O.F. Chris Brown, Senior Analyst International Policy, PO Box 1610, Wellington, Tel:(04) 472-2314

### 1.15.2 Export Log Prices

December Quarter 1996

Grade	SNZ per JAS (f.o.b)
Pruned - Japan, Korea	160-185
Unpruned A - Japan	110-135
Unpruned K - Korea	70-83
Unpruned J - Japan	73-85
Pulp - Japan	40-55

Source: Ministry of Forestry, 1996

### 1.15.3 Domestic Log Prices

December Quarter 1996

Grade	SNZ per tonne delivered
P1	130-200
P2	100-150
S1	85-110
S2	68-88
L1 and L2	55-80
S3 and L3	58-66
Run of bush	55-70
Pulp	35-55

Source: Ministry of Forestry, 1996

### 1.15.4 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
<b>Pruned</b>							
Pruned peelers	300	unrestricted	unrestricted	NA	4.0,6.0	Shipper's option	1/4 s.e.d
<b>Unpruned</b>							
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**

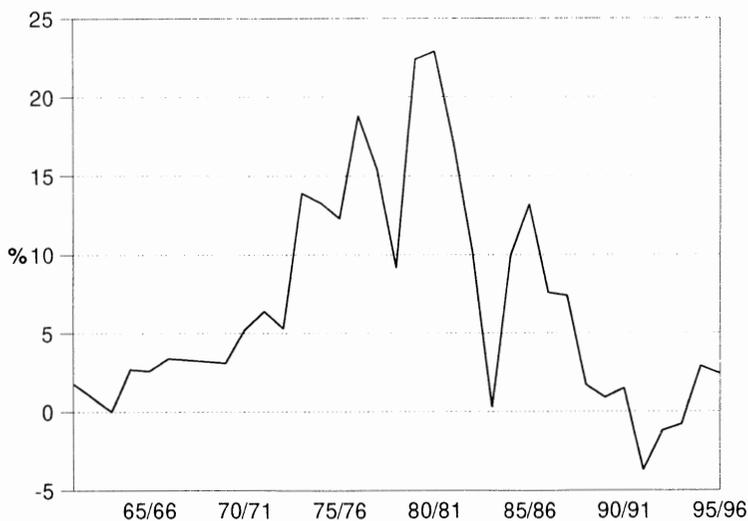
### **FARM AND ORCHARD EXPENSES**



## 2.1 INPUT PRICES - GENERAL INFORMATION

### 2.1.1 Input Price Movements

Sheep and Beef Farm Input Price Movements 1960/61 to 1995/96



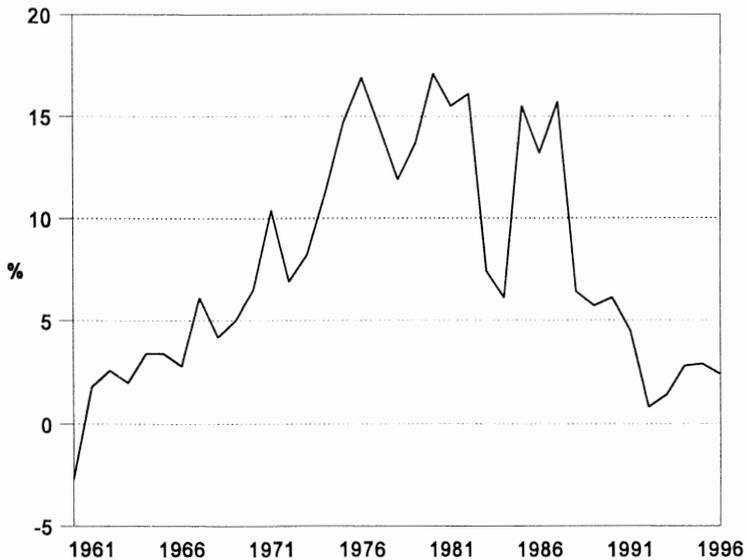
Source: N.Z. Meat and Wool Boards' Economic Service

### 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 1996

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:** (Wages/Salaries include rent free accommodation)

Single worker- depending on experience, age and whether 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

\*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.

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:

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

**Sheep and Beef:** (Wages/Salaries include rent free accommodation)

Single worker - "fully found" *	\$13,000 to \$21,000
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Minimum wage rules apply as for dairying

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.

**Note:** These figures come from the average to the upper end of the salary scale.

## 2.2.2 Wage and Salaries - Horticultural Employees

Some typical wage rates are as follows:

### Orchard Workers (Canterbury)

Permanent Staff:	\$ per hr
Foreman	\$11.69 to \$12.02
Assistant Foreman	\$11.04 to \$11.37
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
Casual - Experience Level 1	\$8.00
Casual - Quality Assurance	\$8.36
Casual Supervisor	\$10.00
Casual Supervisor - Experience Level 1	\$10.13
Casual Cropliner Operator	\$8.36
Tractor Driver	\$7.54
Forklift Operator	\$8.36
Forklift Operator - Experience Level 1	\$9.50
Penalty Rate	\$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, graders paid towards the higher end of scale)	\$8.50 to \$9.50 per hour
Casual (some experience)	\$8.00 per hour
Casual - Foreman	\$9.00 to \$9.50 per hour
Tractor Drivers	\$10 per hour

### Tomato Glasshouse Workers (Canterbury)

Casual Youth (depending on age/experience)	\$7.50 per hour
Casual Adult	\$8.50 per hour
Permanent adult	\$8.50 to \$11.00 per hour

**Market Garden (Hastings)**

Adult casual inexperienced	\$7.50 per hour
Adult casual experienced	\$8.00 to \$8.50 per hour
Permanent experienced	\$10.80 per hour
Casual Supervisor	\$10.00 per hour

**Note:** A \$0.50 per hour incentive bonus is paid at the end of the season.

**Contract Field Workers:** (Bay of Plenty)

Contract workers (orchard work - spray/ prune/ thin/ pick, etc.) earn in the vicinity of \$15 to \$17 per hour if machinery is provided by the contractor or \$10 to \$14 per hour without machinery.

**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

**Kiwifruit**

The picking rate for kiwifruit is in the region of 20 cents per tray.

**2.2.3. Recommendations for Contract of Employment for F.E.T.A. Cadets**

The Agriculture Industry Training Organisation is the Industry Training Organisation (I.T.O.) for the farming industry. One of its primary roles is training of young people through the facilitation and co-ordination of the Farm Cadet Scheme, providing both on farm and off farm training leading towards National Certificates in Agriculture and Farm Business Management.

**1. Remuneration**

(also refer to *Section 2.2.1* for current wage rates).

- The minimum adult wage as set by Government legislation increased from \$6.25 per hour to \$6.375 per hour in June 1996. The minimum wage for those aged 16 to 20 years increased on the same date from \$3.75 to \$3.825 per hour.
- Increases for training and/or experience:
 

1 years NCA	+ 5 percent
2 years NCA	+ 10 percent
3 years NCA	+ 15 percent
FBM A	+ 20 percent
FBM B	+ 25 percent

## **2. Accommodation, food, clothing and perquisites**

Where board and lodging is not provided a market related allowance is generally paid over and above wages and salaries. A non-taxable wet weather gear allowance of \$6.00 per week is also paid in addition to wages and salaries as outlined above.

## **3. Hours of Work**

The wages and salaries outlined earlier are based upon the maximum ordinary hours for dairy farm employees, being 98 hours per fortnight, and for sheep, beef, pig and arable farms 80 hours per fortnight. If employees are working a greater number of hours it is important they are compensated either in terms of hourly rates and/or salary.

Breaches of the minimum wages legislation exposes employers to penalties and lessens the image of the industry.

## **4. Employment Contracts**

For the protection of both employer and employee a formal and recognised Employment Contract should be entered into. (Contact your local Agriculture I.T.O. Field Officer for further information). Such Employment contracts specify the responsibilities of both parties in relation to:

- Wages and Salaries
- Job Description
- Hours of Work
- Leave Entitlements
- Equal Pay
- Parental Leave and Employment Protection

### **2.2.4 Drawings**

Drawings or Personal expenditure for farmers and growers :

Northern North Island:

- Dairy \$25,600 to \$33,000
- Sheep and Beef \$22,000 to \$28,000
- Deer \$30,000
- Kiwifruit \$23,000

Lower North Island:

- Sheep and Beef \$22,000 to \$45,000
- Dairy \$30,000
- Pipfruit \$22,500

Canterbury and Northern South Island:

- Sheep and Beef \$15,500 to \$22,200
- Mixed Cropping and Livestock \$21,700 to \$27,000
- Dairy \$19,000 to \$35,000
- Apple Orchards \$10,000 to \$32,000

Otago and Southland:

- Sheep and Beef \$20,000 to \$42,000
- Dairy \$40,000

*Source: MAF Farm Monitoring Report, January 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 \$29 to \$52 per cow depending on the farm locality, herd size etc. Below are the ranges for each region:

Northern North Island	\$29.00 to \$49.00 per cow
Lower North Island	\$38.00 to \$40.00 per cow
Canterbury and Northern South Island	\$29.68 to \$45.29 per cow
Otago and Southland	\$52.00 per cow

See individual items for accurate budgeting.

#### *Sheep and Cattle*

Total animal health costs typically range from \$1.20 to \$3.30 per stock unit per year depending on the farm, season etc.

Northern North Island	\$2.01 to \$3.26 per stock unit
Lower North Island	\$1.32 to \$2.26 per stock unit
Canterbury and Northern South Island	\$1.25 to \$2.58 per stock unit
Otago and Southland	\$1.19 to \$2.41 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, January 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:	0.53 cents	0.78 cents	0.48 cents	2.3 cents
Cost per 50 kg ewe:	5.3 cents	7.8 cents	4.5 cents	28.8 cents

#### *Cattle Drenching Costs - Examples:*

Tradename:	<i>Rycoben</i>	<i>Systemex</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:	4.8 cents	5.2 cents	0.66 cents	61.4 cents
Cost per 500 kg cow:	\$1.20	\$1.31	99 cents	\$6.14

## Drenches/Anthelmintics

Ancare:

Product		Dose Rate	Unit Size	Retail Price
Levicare	Sheep	3ml per 16kg	20 litre	\$96
	Cattle	9ml per 45 kg		
Levicare HI-MI	Sheep	3ml per 16kg	20 litre	\$108
	Cattle	9ml per 45 kg		
Levitape	Lambs	1 ml per 5 kg	10 litre	\$324
Levitape HI-MI	Lambs	1 ml per 5 kg	10 litre	\$324
Lypor	Cattle	6 ml per 100 kg	1 litre	\$71
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 5kg	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	\$50
			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		1ml 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	\$185
Genesis Tape Hi Mineral		1 ml per 5 kg	5 litre	\$236
			10 litre	\$436
Genesis Horse Wormer		1ml per 20 kg	30 ml	\$22

MSD Agvet:

Ivomec Liquid	Sheep	1ml per 4kg	5 litre	\$143
		1 ml per 4 kg	20 litre	\$467
Ivomec Liquid (selenised)	Sheep	1ml per 50 kg	20 litre	\$467
Ivomec Injection	Cattle	1ml per 50 kg	200 ml	\$142
		1ml per 33 kg	500 ml	\$307

Ivomec Plus Injection	Cattle	1 ml per 10 kg	200 ml	\$142
		1 ml per 20 kg	500 ml	\$344
Ivomec Injection	Pigs	1 syringe per 600 kg	200 ml	\$142
Ivomec Pour-on		1 ml per 10kg	250ml pack	\$40
			1 litre	\$142
			2.5 litre	\$307
			5 litre	\$614
Ivomec Cattle Oral			1 litre	\$212
Ivomectin Maximise Capsule	Sheep	100 days control	Ewe	\$2.55/cap
			Lamb	\$2.09/cap
Eqvalan Paste	Horses			\$16

*Mallinckrodt Veterinary:*

Sheep and cattle:

Nilverm, selenised		1 ml per 5kg	20 litre	\$105
Systemex, selenised		1 ml per 5kg	20 litre	\$160
Systemex, low dose cattle		1ml per 20kg	2.5 litre	\$131

*Nufarm:*

Sheep and cattle:

Levamisole All Min		1 ml per 5 kg	20 litre	\$119
Mineralised Levamisole		1 ml per 5 kg	20 litre	\$118

Sheep and lambs:

Nemadet		1 ml per 5 kg	20 litre	\$150
Nemadet Extra		1 ml per 5 kg	20 litre	\$160

*Young's Animal Health (NZ) Ltd:*

Leviben	Sheep	1 ml per 5 kg	20 litre	\$318
Rycoben	Sheep Cattle	1 ml per 5kg	20 litre	\$235
Eradox		-	20 litre	\$195
Rycozole		1 ml per 5kg	20 litre	\$121
Rycoben	Cattle Deer	1ml per 20kg	5 litre	\$318
Rycotape		-	10 litre	\$412
Eradox low dose		-	5 litre	\$259

Cysectin Pour-on	Cattle	-	500 ml	\$78
		-	2 litre	\$257
		-	5 litre	\$651
Cysectin Injection	Cattle	1 ml per 50 kg	500 ml	\$320
Cysectin Oral	Sheep	1 ml per 5 kg	15 litre	\$464

**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 bolus	\$2.40
Stockman - price per bolus	\$2.62
Stockman Junior - price per bolus	\$2.15

**Vaccines***Ancare:*

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

*Mallinckrodt Veterinary:*

Nilvax (sheep)	20 - 25 kg	3.5 ml	500 ml	\$38
	26 - 65 kg	4.0 ml		
	>65 kg	4.5 ml		
Multine 5 in 1 + selenium	Sheep	2ml dose	500 ml	\$25.81
	Cattle	4ml dose		
Lamb vaccines		2ml per 10kg	500 ml	\$46.50
Footvax	1ml (2 doses 6 wks apart)		250 ml	\$133
Permaco (sheep)	1 pellet per 18 months		per pellet	\$1.20

*Young's Animal Health (NZ) Ltd:*

Ryvan 4 in 1	Sheep	2ml per dose	500 ml	\$24.90
Ryvax 5 in 1	Sheep	2ml per dose	500 ml	\$30.00

Cydectin Eweguard

500 ml

\$205

**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 (4000 cow dose)	20 litre	\$320

*Nu Farm:*

Bloataid Dual	20 litre	\$149
Bloataid Super	100 litre	\$583
Bloataid Tracer	100 litre	\$609
Bloataid Tracer HiSe	100 litre	\$635

**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
Rumensin Premix (Coccidiosis control and productivity enhancer for dairy and beef cattle)	\$260 per 20kg bag
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 - (depending on age)	5 litres	\$188
	Ewes/Rams	10 ml		\$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
Outlaw	over 4 months wool, 20 ml per animal		2.5 litre	\$70
			10 litre	\$253

*Mallinckrodt Veterinary:*

Dips:			
Grenade Dilute 1:2500 dilution	2 litre wash per sheep	5 litre	\$218
Supreme DFF 1:1000 dilution	see note below	5 litre	\$360
Sconder	1ml/10kg	10 litre	\$305

**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	\$261
Wipe-out	up to 4 months wool growth -2ml per 10kg BW	10 litre	\$211
	4 - 6 months wool growth - 4ml per 10kg BW		
Stampede Easy Dose	5ml per 100kg BW	2.5 litre	\$246

*Nufarm:*

Farmguard NuZinc			
(Sheep, cattle, deer and goats)	3 g/100kg daily	20 kg	\$102
Farmguard Mono Zinc	6 kg/100 litres water	20 kg	\$40
Farmguard Zinc Sulphate Heptahydrate	10 kg/100 litres water	20 kg	\$28

*Young's Animal Health NZ Ltd*

<b>Sheep Dips -</b>	5 litre	10 litre	20 litre
Zenith	\$635	-	-
Seraphos 500	\$213	-	\$745
<b>Lice and Fly Pour-ons -</b>			
Avalanche	\$162	\$290	-
Cyphor	-	-	\$271
Cypafly	\$121	-	\$427
<b>Flystrike Treatments -</b>			
Seraphos 500 (fly and lice dip)	\$183	-	\$613
Seraphos 1250 (fly and lice)	\$213	\$745	-
Cypor Sheep and Goat (lice pouron)	\$105	-	\$351
Destruct (cattle sprays)	\$289	-	-
Maggo		\$45.10 per litre	

**Disinfectants:**

Savlon	5 litre	\$31.00
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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.)

*Coastal Veterinarian Group, Opunake:*

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

<b>Magnesium Treatment</b>			
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.

<b>Selenium Treatment</b>	
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

<b>Copper Treatment</b>	
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 @ 34c	\$0.81
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	\$4.49
Mastalone	\$5.28
Streptopen Milking Cow	\$2.88
Streptopen High Potency	\$4.12
Vetimast (only 1 tube required)	\$6.68

(ii) Dry Cows:

Cepravin (generally sold in boxes of 80 tubes)	\$3.38
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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)	\$83.00
(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:*

Farm visit (including first examination)	\$26.82
Re-visit	\$21.03
Farm visit (after hours)	\$31.05
Travel per km	\$0.61 to \$0.80
Lab Test	\$8.16
Hourly rate	\$89.15

*Cattle:*

Pregnancy test	\$1.58
Non cycling	\$3.49
Blood test per animal	\$4.96
Hot iron debudding	\$2.76
Adult dehorning	\$8.13
Calf castration	\$9.02
Vasectomy	\$54.69
Caesarean	\$121.99
Semen Test	\$48.41

*Deer:*

Pregnancy test	\$2.37
TB test per hour	\$75.45
Develveting per hour	\$11.95

*Goat:*

Castration	\$20.65
Pregnancy Diagnosis	\$13.12

*Pig:*

Castrate Boar	\$41.81
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*Horses:*

Equine visit + 1st exam	\$35.75
Insurance exam	\$40.58
Pregnancy Diagnosis, (manual)	\$28.81
Pregnancy exam, (ultrasound)	\$43.90
A/H visit	\$39.81
Hourly rate	\$37.09
Anaesthetic - induction	\$77.66
Surgical hourly rate	\$161.44
Castration	\$153.75

*Sheep:*

Caesarean	\$64.46
Pregnancy Diagnosis (ultrasound)	\$0.37
Pregnancy Diagnosis (wet/dry)	\$0.37
Semen test	\$24.33
Brucellosis test	\$6.34

*Source: Survey by R.H.Duckworth (Executive Director of the New Zealand Veterinary Association Inc.), updated December 1996*

#### **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):**

\$3 per head. 50c/km charged for travel.

### Facial Eczema Tolerance Testing Fees (for Rams):

*AgResearch: Ramguard*

No. Animals	Base Charge (Liveweight)			Surcharge (\$ per kg)
	30 kg	50 kg	70 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

*Allflex NZ Ltd:*

Phillips automatic 150ml drench gun, cattle	\$145.00
Phillips 20ml adjustable dose automatic drench gun	\$124.55
Phillips 60ml automatic drench gun	\$158.15
Phillips 10ml automatic injector	\$122.22
Phillips 5ml lever action automatic injector	\$126.66
Phillips 5ml automatic vaccinator - metal	\$87.45
'Vaxomatic' 5ml disposable automatic vaccinator	\$15.95

*Electrotek Engineering Ltd:*

Calving Chain Handles	\$19.55
Calving Ropes (double and single loops)	\$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	\$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
Zinc Dispenser	for zinc sulphate	\$147.57

*Shoof International: (Includes freight)*

Automatic drench gun	(20 to 70 ml)	\$125
Manual drench gun	(20 to 150 ml)	\$79 to \$89
Drench back packs	3 litre	\$17.50
	5 litre	\$49.95
Drench Container	5 litre	\$36.95
Bolus Guns		\$39
Auto Injector		\$97.50 to \$169
Automatic syringes		\$225 to \$245
Re-useable Syringes		\$11.95 to \$105
Disposable syringes	- packs of 100 (1 to 10ml)	\$17.95 to 29.95
	- packs of 50 - 20 ml	\$22.50
	- 30 ml	\$39.50
	- 25 pack (50ml)	\$23.50
Needles	- re-useable (12pack)	\$5.50 to \$10.95
	- disposable (100 pack)	\$14.50
Bloat Knife		\$16.50
Trocar Plastic Screw		\$26.95
Trocar Stainless (includes 4 canulas)		\$69.00
Mastitis Tests	- electronic	\$695.00
RMT (5 litre container)		\$29.95
Paper (25 pack)		\$5.95

*Drench Gun Services*

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

**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 \$30.00 per dog

*Palmerston North City Council:*

- Rural pet \$45
- Rural working dog (second and subsequent) \$30 (\$25)

*Manawatu District Council:*

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

- working dog (second and subsequent) \$22.00 (\$12)
- selected owner policy dog (second and subsequent) \$22.00 (\$12)
- neutered dog (second and subsequent) \$22.00 (\$12)
- other dogs including pets (second and subsequent) \$40.00 (\$20)

Selwyn District Council:

Working dogs - First dog \$29.00, Second and subsequent dogs \$9.00

**Dog feed** - see Section 2.3.14

### 2.3.8 Breeding Expenses

Dairy farmers are currently spending about \$26 a cow per year on breeding and testing (combined). The ranges for each region are as follows (per cow per year):

Northern North Island	\$22.00 to \$30.00
Lower North Island	\$22.00 to \$28.00
Canterbury and Northern South Island	\$29.03 to \$32.94
Otago and Southland	\$29.00

Source: M.A.F. Farm Monitoring Report, January 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 Semen Catalogue along with complete pricing details.

Total cost \$18.50 per animal

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.

- DIY training \$275 for a five day course.
- A.B. technician nominated insemination charges, \$4.90 per insemination. Some locations, timing of services, or non-dairy, may incur additional charges.
- 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
<b>(Technician Service)</b>			
1st 100	\$18.00	\$16.70	\$20.00
2nd 100	\$17.20	\$16.70	\$19.10
3rd 100	\$16.50	\$16.70	\$18.30
4th 100	\$15.70	\$16.70	\$17.50
Thereafter	\$14.90	\$16.70	\$16.70

	Per Insemination Cost		
1st 100	\$14.00	\$11.90	\$14.80
2nd 100	\$13.40	\$11.90	\$14.20
3rd 100	\$12.80	\$11.90	\$13.60
4th 100	\$12.20	\$11.90	\$13.00
Thereafter	\$11.60	\$11.90	\$12.40
<b>(D.I.Y. Operators)</b>			
1st 100	\$13.00	\$10.90	\$13.80
2nd 100	\$12.40	\$10.90	\$13.20
3rd 100	\$11.80	\$10.90	\$12.60
4th 100	\$11.20	\$10.90	\$12.00
Thereafter	\$10.60	\$10.90	\$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

**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	\$50
Per chick out of incubator	\$150 - \$300
To raise chicks up to 2 - 4 months	\$20 - \$40 per week

**2.3.10 Stock Purchases****Beef Cattle**

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

For example:

Run Bulls at Name Auctions -	
Angus	\$3,500 to \$20,000
Hereford	\$3,000 to \$10,000
Charolais	\$2,500 to \$10,000
Run Bulls from second tier studs are usually in the range of	\$2,500 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*

**Sheep** - See also *Section 1.2.11* for ewes, two toothed and lambs

Rams. The following figures are some approximate values for flock rams:

Dorset Down	\$200 to \$450
Corriedale	\$200 to \$400
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 \$450
Merino	\$250 to \$500

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

Exotic Breeds: (Oxford Down, Texel, Finnish Landrace)

The following figures are some approximate values for flock rams:

<i>Texel:</i>	Average Pick	Range
Purebred	\$375	\$250 to \$500
7/8	\$350	\$300 to \$400
3/4	\$300	\$250 to \$400
½ (Dorset Cross)	\$350	\$250 to \$400
<i>Oxford Down:</i>		
Purebred		\$200 to \$300
7/8		\$200 to \$300
3/4		\$200 to \$250
½		\$200 to \$250
<i>Finnish Landrace: ½ bred</i>		
		\$250 to \$300

### **Deer**

- Stags

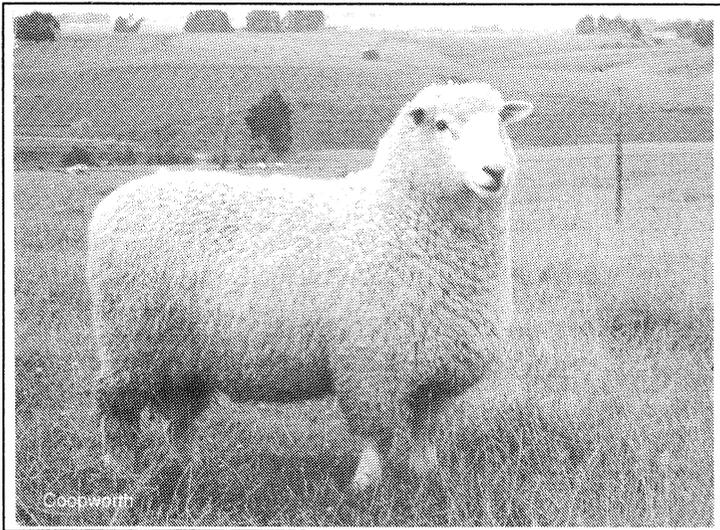
The average price for breeding stags (red deer) is in the region of \$3,000 to \$5,000. Some very high producing stags have been sold for up to \$25,000. The average price for Wapiti breeding stags is between \$3,000 and \$5,000 with some top stags reaching \$30,000.

- Hinds, Weaners, Yearlings, Velvet Stags - see *Section 1.6.4*

**Goats** - See *Section 1.7.6*

**Ostrich and Emu** - See *Section 1.9.2*

*With Coopworths  
You Can  
Budget  
with Confidence*



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

### 2.3.11 Herd Testing Charges

#### General

Dairy farmers are currently spending about \$26 a cow per year on herd testing and breeding (combined). The ranges for each region are as follows:

Northern North Island	\$22.00 to \$30.00 per cow
Lower North Island	\$22.00 to \$28.00 per cow
Canterbury and Northern South Island	\$29.03 to \$32.94 per cow
Otago and Southland	\$29 per cow

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

#### 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 cents per animal
	Sale Catalogue	\$1.25 per animal - minimum charge \$50
Individual Animal History Report		\$4.00 each
MINDA Annual Herd Fee		\$100
Fee for each download		\$10, plus \$0.05 per animal

#### Auckland/Waikato Region :

A.) Sample Officer / Self-Sample assist	herd fee	\$275
	visit fee	\$130
	per cow per test fee	\$1.25/\$1.20
B.) Self-Sample (without labour )	herd fee	\$27500
	visit fee	\$40
	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	\$395 herd fee per month plus
		\$3.40 per cow per month
	Self-sample	\$340 herd fee per month plus
		\$3.35 per cow per month
	Self-sample assist	\$395 herd fee per month plus
		\$3.35 per cow per month

D.I.Y. Option:	Sample officer	\$395 herd fee per month plus \$3.05 per cow per month
	Self-sample	\$340 herd fee per month plus \$3.00 per cow per month
	Self-sample assist	\$395 herd fee per month plus \$3.00 per cow per month

**Taranaki Region :**

A.) Sample Officer / Self-Sample assist;	herd fee	\$275
	visit fee	\$150
	per cow test fee	\$1.25/\$1.20
B.) Self-Sample (without labour)	herd fee	\$275
	visit fee	\$60
	per cow test fee	\$1.20

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

Technician Option	Sample Officer	\$405 herd fee per month plus \$3.30 per cow per month	
		Self-sample	\$355 herd fee per month plus \$3.25 per cow per month
	Self-sample assist	\$405 herd fee per month plus \$3.25 per cow per month	
		D.I.Y Option-	Sample officer
	Self-sample	\$355 herd fee per month plus \$2.90 per cow per month	
		Self-sample assist	\$405 herd fee per month plus \$2.90 per cow per month

**South Island :**

A.) Sample Officer / Self-Sample Assist	herd fee	\$275
	visit fee	\$180
	per cow test fee	\$1.45/\$1.40
B.) Self-Sample (without labour)	herd fee	\$275
	visit fee	\$90
	per cow test fee	\$1.40

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

Technician Option -	Sample Officer	\$425 herd fee per month plus \$3.75 per cow per month
		Self-sample
	Self-sample assist	\$425 herd fee per month plus \$3.75 per cow per month

DIY Option-	Sample Officer	\$425 herd fee per month plus
		\$3.30 per cow per month
	Self-sample assist	\$370 herd fee per month plus
		\$3.25 per cow per month
	Self-sample	\$425 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 \$13 to \$28 per cow per year. This does not include animal health. Below are the ranges from each region (per cow per year):

Northern North Island	\$13.00 to \$18.00
Lower North Island	\$14.00 to \$15.00
Canterbury and Northern South Island	\$14.19 to \$27.85
Otago and Southland	\$15.00

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

See also Section 2.3.1 and electricity Section 2.5.1.

### Detergents and Sanitizers

Diversey:

Mycorinse detergent	180 litre	\$658
Low Foam Mucosan dairy sanitizer	20 litre	\$97
Mycosan S dairy sanitizer	20 litre	\$96
Deosan Acid Bright Low Foam	20 litre	\$69
Deosan Starbrite	20 litre	\$95
Deosan Alternate	20 litre	\$80
Deosan D90	15 kg	\$120
Deosan Whirl	18 kg	\$86
Deosan Rapid Clean	20 litre	\$88
Deosan Red Label Hypo	20 litre	\$55.20
Deosan D Kleen	20 litre	\$48.00
Deosan Shift	20 litre	\$157.20

*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 Iodophor	20 litre	\$110
Liquid Scour	5 litre	\$21

*Agmax Industries Ltd:*

Multisan Acid	100 litre	\$320
Multisan Alkali	100 litre	\$260

**Dairy Ointments, Soaps and Teat Sprays**

*Agmax Industries Ltd:*

Teatspray Plus (Chlorhexidine)	100 litre	\$545
Iodine Teatspray	20 litre	\$130
Sorbitol Emollient	20 litre	\$75

*Ancare:*

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

*Diversey:*

Deosan Teatspray	20 litre	\$132
Deosan Teat Ex Plus	20 litre	\$52

*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	100 litre	\$380
Teatspray Plus	20 litre	\$119
Udder Cream	3.5 kg	\$32

**Dairy Shed Equipment***Actoagriculture:*

Mastest Mastitis test kit		\$78.67
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*Agrifeeds:*

Herd Test Bucket (North Island only)		\$158.22
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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 (Alflex)		\$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

Dairy blaster 3.0	2.2	30 metre (40psi)	151	\$1110
Dairy blaster 5.5	4.0	30 metre (40psi)	326	\$1565
Dairy blaster 7.5	5.5	45 metre (64psi)	280	\$1950

#### Dairy Shed in place cleaning (vat wash)

CHI 2.40	0.43	35 metre (50psi)	24	\$785
CHI 4.40	0.73	35 metre (50psi)	60	\$900
CHI 8.20	0.96	30 metre (40psi)	120	\$1080
CHI 12.20	1.72	40 metre (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 1997*)

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

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	\$1.69
Milk Bar Bottle	\$17.99
Milk Bar Bottle with frame	\$35.00
Milk Bar 5 teat	\$67.50
Milk Bar 10 teat	\$117.39
Milk Bar Quad	\$416.25
Milk Bar mobile - 20 and 24 teat	\$860.75
- 30 and 36 teat	\$994.40

### *Shoof International:*

Replacement teats- calfatelia	\$2.50 each
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## Other Calf Rearing Equipment

### *McInnes Manufacturing Ltd:*

Bird Proof Meal Bar	\$173.51
Munch Trough	\$66.80
Snack Bar	\$36.56
Portable Water Trough	\$93.24

### *Shoof International:*

Debudders	Electric	\$125 to \$219
	LPG	\$245
	Gas cordless debudder	\$299

## 2.3.14 Feed and Nutrition

### Milk Replacers

#### *Shoof International:*

'Littermilk' Milk Replacer for piglets, kids, fawns and lambs, 10 kg	\$89.95
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#### *Technik Products:*

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

**Mineral/Nutritional Supplements** (See also *Section 2.3.4* for metabolics)

*Agrifeeds Limited: (ex Tauranga)*

		250 kg Drum
Promag/Himag - cattle		\$202.69
Calcium Enriched Molasses (Vet prescription only)		\$190.00
Molasses -feedgrade		\$130.00
-Blackstrap		\$140.00
Equestri-Feed (horses)		\$285.00
	Bag Size	Bag Price
Causmag XLM/AL4	20 kg	\$22.00
Copper Sulphate	25 kg	\$62.00
Magnesium Sulphate	25 kg / 1 tonne	\$17.80 / \$632.97
Magnesium Chloride	25 kg 1 tonne	\$21.75 / \$773.43
Supa Zinc	25 kg	\$90.00
Zinc Sulphate - Heptahydrate	25 kg / 1 tonne	\$28.75 / \$1022.35
- Monohydrate	25 kg / 1 tonne	\$41.25 / \$1466.85
Agrimag 94	25 kg	\$13.00
Ferrous Sulphate	50 kg	\$44.00
Sodium Bicarbonate	25 kg / 1 tonne	\$18.75 / \$666.75
Kalori Powdered Molasses	25 kg / 1 tonne	\$28.00 / \$995.68
Calcium Chloride	25 kg / 1 tonne	\$20.00 / \$711.20
Coarse Salt	25 kg / 1 tonne	\$9.25 / \$328.93
Zinc Oxide	25 kg / 1 tonne	\$90.00 / \$3200.40
Hyfat (99% palm oil, beaded)	25 kg / 1 tonne	\$42.50 / \$1511.30
Kynofos (mono dicalcium phosphate)	25 kg / 1 tonne	\$26.25 / \$933.45

*Dominion Chemicals Ltd:*

	Size	Price
Ergo-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	\$22.50 per 25 kg

*PCL Feeds:*

	Bag size	Price/bag	\$/tonne
Megacalf	25 kg	\$19.00	\$760.00
Megacalf plus Bovatec	40 kg	\$29.90	\$747.56
Hi-Pro Calf Pellets	25 kg	\$17.56	\$702.22
Hi-Pro Calf Pellets plus Rumensin	40 kg	\$27.63	\$690.67

By-Pass Pellets/Meal	40 kg	\$26.31	\$657.78
Dairy Rations :			
Premium Dairy Meal	40 kg	\$20.73	\$518.22
Premium Dairy Pellets/Nuts	40 kg	\$21.40	\$535.11
By-Pass Pellets/Meal	40 kg	\$26.31	\$657.78

### Salt

#### *Agrifeeds Ltd:*

	Quantity	Price
Coarse G11	25 kg	\$9.25
Medium G23	25 kg	\$8.00
Rock	50 kg	\$45.00

#### *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	40kg bag	\$30
Ocean Thrift Cattle Blocks	20 kg	\$13.85
Rock Salt,	50 kg	\$24.80
Agricultural Salt	per bag	\$21.00

### Concentrates - Meal/Crumble/Pellet/Nut

#### *Harvey Farms Pty Limited:*

	Price per tonne (North of Taupo)	Price per tonne (Taupo and South)
Topcalf Cereal Mix (textured calf food)	\$718.68	\$695.50
Topcalf Armacalf (20% protein calf pellets)	\$694.30	\$642.00
Topcalf Plus (pellets/nuts)	\$689.00	\$642.00
Topcow Thrifty (pre calving feed)	\$558.62	\$524.30
Topcow Maxum (high energy)	\$589.57	\$604.55

#### *Southfert Co-op:*

Rapeseed Meal (Discount rates for bulk, 1 tonne or over)	\$23 per 50 kg
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### Emu and Ostrich Feeds

Commercial feed range \$0.60 to \$0.70 per kg delivered  
(Consumption - 600 to 1200g per day)

### Poultry Feeds and Premixes

#### *NRM Feeds Ltd:*

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

	\$ per tonne
Chick Mash	\$456
Chick Crum	\$467
Pullet Grower Mash	\$369
Pullet Grower Crum	\$375

Pullet Grower Low Energy Mash	\$367
Pre-Lay Mash	\$388
Late Lay Mash	\$394
Hi-Lay Super Mash	\$409
Hi-Lay Super Pellet	\$415
Hi-Lay Super Crums	\$415
Hi-Lay Super Crums P.G.	\$397
Hi Lay Supreme Mash	\$416
Hi-Lay Supreme Pellet	\$422
Hi-Lay Supreme Crum	\$422
Broiler Starter Crum	\$611
Broiler Finisher 1 Pellet	\$566
Broiler Finisher 2 Pellet	\$551
Broiler Finisher 3 Pellet	\$533
Broiler Breeder Starter Crums	\$499
Broiler Breeder Grower Crums	\$389
Broiler Breeder Layer Crums	\$435

*Technik Products:*

Roxolin	
Feed additive for laying poultry and growth promotion in pigs	\$88 per 10 kg

**Pig Rations**

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

	Bulk per tonne
Pig creep crumbs	\$35 per bag
Pig Starter pellets	\$590
Pig Flexiwean meal/pellets	\$534/\$545
Pig rapid grow meal/pellets	\$434/\$445
Pig early finisher meal	\$390
Pig breeder meal/pellets	\$364/\$395
Dry Sow pellets/nuts	\$380
Lactating Sow pellets/nuts	\$423

*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

**Dog Feeds**

Tux: Dog biscuits	40 kg	\$64
Meaty bites	20 kg	\$33

**Hay and Straw**

(For contract hay baling see *Section 2.4.1.*)

Depends on area, season and quality.

Summer 1996/97 prices for average/good quality bales were approximately as follows:

Canterbury		<i>Conventional</i>	<i>Big Round Bale</i> <i>(10 to 15 bale equivalent)</i>
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	\$3.00 to \$3.30	\$30 to \$45
	Lucerne	\$5.50 to \$7.50	-
Standing		\$1.50	-
Taranaki			
Hay:	Behind Baler	\$5.00 to \$5.50	\$60 to \$75
	Standing	\$2.50 to \$3.50	-
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	\$2.50 to \$3.00	-
	Standing	\$1.00 to \$1.50	-
Silage	Baled		\$30 to \$50
	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 1996/97 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)	\$3.00 to \$4.50 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	\$5.00 to \$7.00 per head per week
Hawkes Bay	\$4.50 per head per week
Taranaki	\$5.50 per head per week (May/May)
	\$6.00 per head per week (June/July)
Canterbury	\$0.90 to \$1.10 per kg of liveweight gain
Southland	\$5.00 per head per week

**Cows (winter)**

Bay of Plenty	\$9 to \$12 per head per week
Waikato	\$8 to \$12 per head per week
Taranaki	\$12 per head per week (\$2 freight)
Southland	\$12 per head per week
Canterbury	\$6 to \$12 per head per week
Hawkes Bay	approximately \$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	\$3.00/\$4.50 per head per week
Stags	- Red/Wapiti	\$5.00 per head per week
Weaners	- Red/Wapiti	\$1.50/\$2.50 per head per week

**Maize Silage-Buying In**

Waikato farmers are paying about \$2,600 to \$3,000 per ha standing. Or 16 to 18¢ per kg of dry matter.

**Animal Feeders***Agri-feeds Ltd:*

Agri-feeders	125kg	\$113.75
	250kg	\$131.25

*Shoof International:*

Pigs:		
Meal Feeders	3 space	\$175
	4 space	\$215
	5 space	\$249
	6 space	\$285
Milk Feeders	3 space	\$75
	8 space	\$139
Waterers	- self cleaning, cast iron	\$53
	- for weaners	\$69

### 2.3.15 Wool and Shearing Expenses

Sheep Farmers are currently spending about \$2.96 per stock unit (South Island) and \$3.26 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:

Otago and Southland	\$2.50 to \$4.04
Canterbury and Northern South Island	\$1.25 to \$3.41
Northern North Island	\$2.93 to \$4.69
Lower North Island	\$2.35 to \$3.37

Source: MAF Farm Monitoring Report, January 1997.

*Canterbury:* When budgeting for shearing (full wool) costs, a figure of approx. \$1.81 per head may be used for the average contract situation. This figure takes account of an organisation fee, wages paid to shed hands etc, travel costs and levies. Actual costs will vary from farm to farm. See below for contract and "open" rates.

#### 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	\$175	\$175-\$195	\$170-\$185
Lambs	\$171	\$165-\$180	\$170
Second shear ewes	\$171	\$170-\$190	\$170
Full belly crutch	\$90	\$85	\$50 - \$52
Half belly crutch	\$72	\$50	\$40 - \$45
Tail crutch	\$51	-	\$30 - \$35
<i>Open Shearing Rates:</i>			
Full Wool	-	\$100	\$95
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	\$180	\$208	\$195
- winter	-	\$220	\$215
Lambs	\$165	\$180	\$185
Merino ewes	\$234	\$259	\$250
Merino wethers	\$248	\$284	\$260
Full belly crutch	\$85	\$90	\$90
Half belly crutch	\$80	\$84	\$85
Buttonhole crutch	\$52	\$61	\$54
<i>Open Shearing Rates:</i>			
Full wool	\$120	-	\$125
Lambs	\$115	-	\$115
Full belly crutch	\$60	-	\$60

**Blade Shearing (Canterbury):(per 100 sheep)**

Open:	Belly Crutched	\$125
Semi-Contract:	Belly Crutched	\$143.50
Full-Contract:	Belly Crutched	\$251.50

**Other Shearing Costs are as follows: (Open)**

Shed hand rate	\$10.38 to \$16.00 per hour
Presser rate	\$10.58 to \$17.00 per hour
Classing rate	\$24.50 to \$33.25 per 100

**Plant***Actoagriculture:*

Shear Leader electric shearing plant - single phase	\$1,370
Shear Leader electric shearing plant - three phase	\$1,447
Lister electric dagging plant with flexible tube	\$809
Lister 2 speed shearing plant with flexible tube	\$660.00
Nova dagging plant	\$879.55
12 Volt Nova dagging plant	\$790.30
Shogun handpiece	\$585.25
Laser deer clipper	\$715.30
Laser sheep shear	\$684.70

*New Zealand Shearing Supplies:*

Sunbeam Handpieces	- Supergrip	\$623.50
	- Regal Eclipse	\$636.25
Heiniger Handpiece	- Omega	\$636.25

*Willams & Kettle Ltd:*

Sunbeam Supergrip	\$595.96
Heiniger Omega Handpiece	\$560.00

**Combs and Cutters***Actoagriculture:*

Combs:	
Standard Wide (Convex, straight sided comb)	\$31.90
Magnum plus	\$36.70
Lightning	\$36.70
Lister	\$36.70
Cutters:	
XL II	\$6.15
Colt narrow cutters	\$5.85

*N.Z. Shearing Supplies:*

Sunbeam Combs	\$36.10 to \$42.00
Cutters -Super AAA/ Big Gem Cutter	\$6.75
Lister Combs	\$36.70
Cutters -XL II cutters	\$6.15
Heiniger Combs	\$35.15 to \$45.40

*Williams & Kettle:*

Sunbeam Combs	\$34.36
Sunbeam Super Cover Comb	\$43.24
Heiniger Comb	\$31.95 to \$37.07
Lister Lightning Comb	\$34.36
Sunbeam Super AAA Cutter	\$6.04
Heiniger Jet Cutter	\$6.04

Sunbeam Super Flight	\$37.50
Sunbeam Force 12 Tornado and Hurricane	\$41.50
Sonic 2 Ultra Flash	\$40.10
Pro 2 Stealth	\$42.10
Quaser	\$42.10

**Electric Grinders**

*Actoagriculture:*

Double Ended electric grinder - single phase	\$1,395.80
Double Ended electric grinder - three phase	\$1,210.95

*New Zealand Shearing Supplies Ltd:*

Heiniger - Double ended electric grinder		\$1,273.40
Sunbeam - Double ended electric grinder	-1 phase	\$1,600.15
Lister - Double ended electric grinder, complete	-1 phase	\$1,395.80
	-3 phase	\$1,210.95

**Emery Papers**

*Actoagriculture:*

Ramshead Emery papers - fine / coarse	\$6.40
Ekamant emery papers - fine / coarse	\$6.40

*Williams & Kettle Ltd:*

Heiniger Emeries	\$5.15
Ramshead Emeries	\$5.00

**Woolpresses**

*Lycy NZ Ltd:*

Diamond MKII 220V-2.25HP (low power draw)	\$7,980
Scales for Diamond (also for stock general use)	\$1,480
Power Tech 'S' DOMINATOR 220V 3 phase	\$12,400
Power Tech 'S' DOMINATOR 5HP 3 phase	\$12,600

**Wool Tables**

*Lycy NZ Ltd:*

Fleecemaster round standard	\$785
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**Electronic Weighing Systems**

*Allflex N.Z. Ltd:*

FX1 - suitable for weighing fleeces to cattle beasts	\$1170 to \$1326
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### Other Woolshed Expenses

Stencils: Numerals/Alphabet		\$17.95/\$31.95
Tally counters		\$14.00 to \$32.95
Hand Shears		\$40.95 to \$49.95
Footrot shears (serrated)		\$58.95
Trollies: Workmaster bag and bale		\$325

### Actoagriculture:

Spraymark - black stencil spray		\$8.20
0-9 Plastic number stencil		\$36.30
A-Z plastic letter stencil		\$64.00
Simple description stencil	2/S, HGT, LBS, BIN, B/P, EWE	\$17.25
Extenda wool sweep - twist lock		\$34.50
Bale clips -	- 100 pack / 300 pack	\$5.70 / \$12.90
Bag and bale hooks, all sizes		\$13.20

### New Zealand Shearing Supplies:

Bale Hooks		\$13.20
Bale Clips	- container of 100 / 300	\$5.70 / \$12.90
Hand Shears	- dagging, plain/with stops	\$33.75 / \$40.15
	- sheep shears, plain/with stops	\$41.70 / \$48.15
Spraymark		\$8.20
Wool Sweeps		\$15.00 to \$34.50

### Shoof International:

Hand Shears	- Economy	\$19.95
	- Quality (dagging / straight)	\$39.95 / \$49.95

### Williams & Kettle Ltd:

Woolshed broom		\$19.07
Bale clips, pack of 500, Maspro		\$16.84
Tally counter		\$15.64
Sunbeam Latex, 250ml		\$4.40
Moccasins		\$27.55
Pendulum - Ellery		\$85.33

### Fibre Testing Charges

*S.G.S. Wool Testing Services: (Timaru)*

Testing of Side Samples:		
Yield and Micron (water scoured for yield; fibre diameter by O.F.D.A.) -		
1 to 100 samples -		\$4.25 each
101 to 500 samples -		\$3.50 each
More than 500 samples -		\$3.00 each
(with histogram - 50 cents extra per sample)		
Micron only (fibre diameter measured by O.F.D.A.) -		
1 to 100 samples -		\$3.25 each
101 to 500 samples -		\$3.00 each
More than 500 samples -		\$2.75 each
(with histogram - 50 cents extra per sample)		

*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

*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	-	-
<b>Additional Tests using ODF A (Optical Fibre Diameter Analyser)</b>			
Medullation %			\$1.25*
Curvature			\$0.60*
Spinning Fineness			\$0.60*
Histograms (distribution graphs)			\$0.50
Additional Data Analysis			\$25 per hour
Specialty 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

*AgResearch Fibre Measurement (Invermay)*

**Wool**

	Cost per sample	
	Up to 100	>100
OFDA Fibre Diameter Only	\$4.00	\$3.50
OFDA Fibre Diameter and Fibre Curvature	\$4.50	\$4.00
OFDA Fibre Diameter and Fibre Diameter Std Dev	\$4.50	\$4.00
OFDA Fibre Diameter and FC & FdSd	\$5.00	\$4.50
OFDA Fibre Diameter, Full statistics and histograms	\$5.50	\$5.00
OFDA Fibre Diameter and Washing Yield	\$7.50	\$7.00
OFDA Fibre Diameter, Washing Yield and Colour	\$11.00	\$10.00
OFDA Fibre Diameter, Washing Yield, FC and FdSd	\$8.00	\$7.50
OFDA Fibre Diameter, Washing Yield, Colour and FC and FdSd	\$12.00	\$11.50
Washing Yield and Colour	\$7.00	\$6.00

**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	\$18.00
Down Yield Only	\$14.00
OFDA Fibre Diameter, Down Yield and Scoured Yield	\$20.50

**Alpaca**

OFDA Fibre Diameter Only	\$6.00
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**Fibre Handling and Classing Charges - see Sections 2.10.3 and 2.10.4****2.3.16 Stock Management****Lambing Equipment***Actoagriculture:*

Pritchard lamb teat	- fluttervalve/standard	\$2.25/\$2.10
Chestnut shepherds crook		\$39.75
Aluminium shepherds crook,		\$25.50
Tethering peg - screw in		\$8.25

*Shoof International:*

Teat - Lamb/Kid	\$2.50 to \$4.95
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*Lycor N.Z. Ltd:*

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

**Mating Management Aids**

Stafix Ram/Goat Harnesses	\$23.82
Crayons - Soft	\$3.38 each

**Tailing and Marking Requisites***Allflex N.Z. Ltd*

The Elastrator Instrument	\$35.00
Castration and Docking System	\$61.50

*Electro-Tek Engineering:*

Earmarker	- sheep	\$81 to \$155
	- cattle	\$104 to \$167
Docking Rings (500 per packet)		\$8.40

*Shoof International: (freight included)*

Earmarkers;	Medium to large	\$60 - \$98
	Triangle	\$119
	Small	\$29.95
Baby pig ear notcher		\$42.95
Shepherds Crook		\$37.50 to \$45.00
Rubber rings	-100 / 500 pack	\$3.50 / \$10.50
Castration Ring Applicator		\$19.95

**Ear Tags**

*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

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**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 12-464, Penrose, Auckland  
277 Church Street, Onehunga, Auckland.  
Telephone: (09) 634 2026 Facsimile: (09) 634 4570  
*Leader's in the field!*

*Allflex N.Z. Ltd:*

All prices are for stamped tags:	Price per tag	Pack size	Pack price
Farmacy Brass Tag	32¢	25	\$8.00
Farmacy Kurl Lock	32¢	25	\$8.00
Farmacy Nickel	50¢	25	\$12.50
Goat/Hog female	55¢	25	\$13.75
Large female	73¢	25	\$18.25
Large male	79¢	25	\$19.75
Maxi female	92¢	25	\$23.00
Medium female	55¢	25	\$13.75
Medium male	59¢	25	\$14.75
Racemaster	34¢	100	\$34.00
Sheep female	37¢	25	\$9.25
Sheep male	42¢	25	\$10.50
Ultra large female	80¢	50	\$40.00
Ultra large male	85¢	50	\$42.50
Ultra medium female	59¢	50	\$29.50
Ultra medium male	63¢	50	\$31.50

**Ear Tag applicators and accessories**

*Allflex N.Z. Ltd:*

Ultra tagger applicator	\$28.94
Ultra-matic applicator	\$56.72
Retract-o-matic applicator	\$56.72
Total tagger applicator	\$28.94
One Shot applicator	\$54.57
Roto tagger applicator	\$15.60
“Rapid Fire” Fleximatic applicator	\$78.00

*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 - 200 ml can	\$5.38
Stick Raddle (per stick)	\$1.56
Tailpaint, 1 litre	\$9.02

*Shoof International*

Cull Cow paint; aerosol	\$14.25
Sprayola	\$19.95
Paint Stik	\$2.50
Ultracolour Fluorescent Marker	\$9.95

**Brands and Tattoos***Shoof International Ltd:*

Tattoo Outfit Standart	10 mm	\$109.95
Letter set		\$89
Number set		\$31.95
Tattoo Ink (85gm / 3oz)		\$11.95
Freeze Branding (0-8 set)	51 mm	\$359
	76 mm	\$399
	102 mm	\$489
Cleaning Alcohol (5 litre)		\$34.95
Brandspray (aerosol - freezes skin) kit, includes stencils, cleaning alcohol, aerosol etc		\$199
Pigs - Tattoo hammer, standard		\$72.50

**De-Horning***Electro-tek Engineering Ltd:*

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

**Hoofcutting***Electro-tek Engineering Ltd:*

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

*Shoof International Ltd:*

Hoof trimmer	
Double action-economy	\$99.95
Single action 'Nordic'	\$79

**Footrot Bath***Ribtec:*

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

**Cattle Castrators***Shoof International Ltd:*

Triple Crush "Aescupal"	\$455
Triple Crush "Shoof"	\$139

## Bull Leaders

*Electro-tek Engineering Ltd*

Without rope	\$23.00
With rope	\$28.45

## Scales and Platforms (See also fleece and bale weighers, Section 2.3.15)

*Allflex NZ Ltd:*

Electronic Weighing Systems:	
FX1 - suitable for weighing fleeces to cattle beasts	\$1170 to \$1326
FX11 - provides additional statistical information e.g. averages, max/min	\$1323 to \$1508
FX31 - screen display, memory can store up to 255 mob files	\$2403.55 to \$2617
Steel cattle platform 600 x 2100mm	\$504.78
Alloy cattle platform 600 x 2000mm	\$572

*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

*Allflex N.Z. Ltd: (Donalds)*

Crush - Head Bail Automatic	\$1510.13
Crates - Non-draft sheep crate, front and rear doors, fits loadbars	\$780
- Two-way drafting crate, auto closing and opening rear door, fits loadbars	\$986.70
- Three-way drafting crate, fits loadbars	\$1040
- Calf crate, automatic trip action, suits loadbars	\$1050

*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 \$5,600 to \$6,700 - PTO driven but will require extension hose kits for between work room and hydraulic source.

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 \$1,220
 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 Section 2.4.8 for charges if a contractor is used)

#### *Canbay Pig Development Co.*

Renco Leanmeater back fat tester	\$1238
Renco PT 1 pregnancy tester	\$955
Renco PT 2 pregnancy tester	\$560

#### *Medtel*

Aloka SSD-500, veterinarian ultrasound machine including the Aloka SSD-210 DXII, portable linear ultrasound system	\$23,000
Aloka UST-5813, electronic linear transrectal probe 5MHz	\$9,900
Aloka UST-588U-5, high density linear probe 5MHz	\$9,000

### **Dog Trainers**

#### *Agronics:*

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	\$199
Hip Clamp - Economy	\$199
Anilift - heavy duty PVC	\$995

### **Calving Aids**

#### *Shoof International:*

Calving chains	\$30 to \$147
Ropes	\$15 to \$33
Obstetric Eye Hook (6cm and 8cm)	\$30 and \$33
Calving chain handle	\$20
Calf Pullers -HK E11	\$355
-HK E20	\$449
-HK E21	\$595
Calving Jack	\$550

**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'	\$69 to \$109
Thermal Cover - 'Super'	\$119 to \$199

*Straitline Canvas Ltd:*

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

**Horse Shoeing**

Standard Hack	- Includes Shoes	\$40 to \$60
Draught Horse	- Includes Shoes	\$130

**Saddles and 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		\$0.70 per bale
	Large Round bales	- 10 small bale equivalents	\$7.00 per bale
		- 12 small bale equivalents	\$9.45 per bale
		- 14 small bale equivalents	\$9.80 per bale
Mowing			\$105 per hour
Raking			\$57 per hour

#### Hawkes Bay:

Baling	Conventional bale		\$0.70 to \$0.74 per bale
8 - 10 equivalent	Large Square bale		\$8 per bale
12 - 14 equivalent			\$9.19 per bale

#### Canterbury:

The following are the charges of one Canterbury contractor.

Baling:		
Conventional Bales		\$0.82 to \$0.85 per bale
Medium Squares (10 to 12 bale equivalent)		\$7.50 per bale
Round Bales - net wrap (2 metre)		\$10 per bale
Mower Conditioner - front and rear (5.8m cut)		\$230 per hour
- 3 m with autoswather		\$120 per hour

### 2.4.2 Silage

Charged in several different ways depending on contractor.

Approximately 4 - 7 tonnes per load (depends on wilt)	\$75 per load
Includes choppers, trucks and loaders.	
To stack (excludes covering costs)	\$8.75 to \$10.50 per tonne
Baled Silage:	
- round individual wrapped	\$14.44
- tube wrapping	\$11.38 plus wrap at \$5.25 per bale
- round bale tube wrapper	\$12.25 to \$13.13 per bale
Silage trucks	\$70 per hour
4WD Stack Tractor	\$140 per hour
Silage Harvester	\$330 per hour
Silage Chopper	\$375 per hour

In the **Waikato**, one contractor charges \$0.80 per small bale equivalent for silage baling. The bales are in three different sizes of

10 small bale equivalents	\$8 per bale
12 small bale equivalents	\$9.45 per bale
14 small bale equivalents	\$11.03 per bale
To compact silage in a pit with a tractor	\$109 per hour

Another contractor charges \$200 to \$220 per hectare where the contractor is responsible for mowing, raking, precision chopping and stacking the silage.

#### **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	\$70.00 to \$150.00
Reversible ploughing	\$68.00
Subsoiler - 3 legs, 2.5m	\$100.00 to \$130.00
Tunnel plough	\$38.00
Chisel plough ( topwork)	\$38.00
Grub & discing straight in	\$75.00
Grub & discing top work	\$62.00
Grub and harrow	\$22.31
Grub and power harrows	\$28.00
Direct drill	\$65.00
- with disc-coulters over borders	\$70.00
- with hoe-coulters (over borders)	\$80.00 (\$90.00)
- hire	\$40.00
Conventional drill (and Cambridge roller)	\$40.00 (\$52.00)
- over borders	\$45.00 (\$60.00)
- hire	\$30.00
Cambridge rolling	\$38.00
Heavy roll over border	\$38.00
Heavy roll over worked ground	\$38.00
Discing- straight in	\$50.00
- top work	\$30.00
- first pass and stubble	\$38.00
Levelling	\$40.00
Maxitill	\$30.00
- with levelling bars	- top work
	- straight in
	\$50.00

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

Typical **Hawkes Bay** contracting rates:

Ploughing	\$86 per hectare
Discing and rolling	\$39 per hectare
Rotary hoeing	\$1 per inch
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 \$70 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	\$165 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*), 29 to 37c per head for application only, depending on numbers. With chemical included - depending whether full or part fly protection, or lice only, 52c to \$1.20 per head.

## 2.4.8 Pregnancy Diagnosis / per Muscle and Fat Detection

*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 \$1.31 per head

### Muscle and Fat Detection

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)	\$15 per hour

## 2.4.9 Miscellaneous Contracting

### Canterbury:

Shelter Belt Trimming and gorse cutting	\$105 per hour
Digging of offal pits trenches drains etc. (minimum of 1 hours work required)	
- 12 tonne machines	\$75 per hour
Bulldozing	\$57.50 per hour

### Hawkes Bay:

Effluent Spreading \$75 per hour

### Gisborne:

Excavator	\$70 to \$120 per hour
Bulldozing	\$110 per hour
Trenching, includes excavator and bulldozer for backfilling	\$70 to \$88 per hour

**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 (Total Farm costs)
Northern North Island	\$24.00 to \$25.00	\$1,700 to \$3,300
Lower North Island	\$21.00 to \$24.00	\$1,200 to \$4,800
Canterbury and Northern South Island	\$20.59 to \$21.29	\$1,500 to \$5,500
Otago and Southland	\$21.00	\$1,800 to \$4,300

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

### 2.5.2 Regional Charges

#### Manawatu - Central Power:

Domestic

Domestic Customers:					
	Network Connection (c/day)	Anytime Energy (c/unit)	Controlled Energy (c/unit)	Night Energy (c/unit)	Daytime Energy (c/unit)
Standard contract	53	11	9	4	-
Variable contract	-	18	-	-	-
Economy 8 contract	53	-	9	4	12

Variable contract - all units 19.8c/unit, minimum charge of \$19.50 per month applies.

Non-Domestic:

	Network Connection (c/day)	Anytime Variable (c/unit)	Controlled Variable (c/unit)	Night Variable (c/unit)	Day Variable (c/unit)
Standard contract	67	12	9	4	-
Economy 8 contract	67	-	9	4	13
Irrigation contract	67	9	-	4	13

#### Canterbury - Southpower Farm Tariffs.

General Business:					
	Supply	Day	Interruptible	Un- interruptible	Night
	Charge (c/day)	Units (c/unit)	Units (c/unit)	Units (c/unit)	Units (c/unit)
Business unlimited	29.244	13.950	-	-	-
Business Nightsaver	29.244	14.170	-	-	4.970
Daysaver 2 hr max.	29.244	13.149	10.430	13.950	-
Daysaver plus	29.244	13.149	9.090	13.950	-

Open 24 hr	60.000	14.980	-		6.050
Weekender 9pm to 7am	60.000	14.980	-		8.910

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.

<b>Option</b>	<b>1A</b>	<b>1B</b>
Motor Capacity Charge \$/kW/year	\$47.21	\$23.60
First Step Unit Charge c/kWh (first 500 hrs)	7.304c	14.466c
Second Step Unit Charge c/kWh	4.962c	4.962c
Capacitor Rebate \$/kVAr/year	\$23.56	\$23.56

**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	\$155.50
0	15	0	7	0	18	Super Plus	\$287.00
0	21	0	2	0	14	Triple Super	\$427.00
0	13	0	0	0	14	Reactive Rock	\$167.50
0	12	0	7	0	31	Reactive Rock + S	\$171.50
Potash Fertilisers							
0	8	8	10	0	19	15 % Potash Super	\$184.50
0	7	10	10	0	18	20% Potash Super	\$193.00
0	6	15	8	0	15	30% Potash Super	\$209.50
0	5	25	8	0	11	50% Potash Super	\$243.00
0	12	10	5	0	14	20% Potash Super Plus	\$298.50
0	9	8	7	0	29	15% Potash RPR	\$195.00
0	9	15	0	0	24	30% Potash RPR	\$218.00
0	0	50	0	0	0	Muriate of Potash	\$340.00
0	0	40	17	0	0	Sulphate of Potash (bagged)	\$608.50
Sulphur Fertilisers							
0	8	0	20	0	20	Sulphur Super 20	\$165.50
0	7	8	17	0	17	15% Potash Sulphur Super	\$193.50
0	6	15	14	0	14	30% Potash Sulphur Super	\$218.00
0	4	25	10	0	10	50% Potash Sulphur Super	\$250.00
0	0	0	100	0	0	Durasul	\$399.00
0	7	0	30	0	20	Sulphur Super 30	\$167.00
Magnesium Fertilisers							
N	P	K	S	Mg	Ca		
0	7	0	9	5	17	Serpentine Super	\$151.50
0	6	8	8	4	14	15% Potash Serpentine Super	\$181.50
0	5	15	6	4	12	30% Potash Serpentine Super	\$207.00
0	3	25	4	3	9	50% Potash Serpentine Super	\$241.00
0	8	0	11	5	19	Maghos	\$200.50
0	7	8	9	5	13	15% Potash Magphos	\$230.00
0	6	15	7	5	0	30% Potash Magphos	\$255.00
0	0	0	6	30	0	Granmag	\$437.50
NPKS Pasture and Crop Fertilisers							
5	4	5	12	3	10	Crop Fertiliser	\$209.00
7	7	0	15	0	17	Ammoniated Super	\$197.50
4	5	12	12	0	12	Pasture 4	\$232.00
6	6	6	13	0	15	Pasture 6	\$217.00
18	20	0	2	0	0	DAP	\$485.00
11	15	0	13	0	7	DAP Sulphur Super	\$357.50

Nitrogen Fertilisers							
21	0	0	24	0	0	Sulphate of Ammonia	\$279.00
46	0	0	0	0	0	N-Rich Urea (bulk)	\$442.50
46	0	0	0	0	0	N-Rich Urea (Bagged)	\$484.00
27	0	0	0	0	8	Calcium Amm Nitrate (Bagged)	\$430.00
High Analysis Fertilisers							
12	5	14	4	1	6	Nitrophoska®Blue (bagged)	\$601.00
12	10	10	1	0	6	Nitrophoska®12:10:12 (bagged)	\$605.50
9	18	7	2	0	0	Ammophos®Hycrop (bagged)	\$496.50
8	14	15	1	0	0	Ammohpos®Hycrop (bagged)	\$475.50

*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	\$45.76
Copper Sulphate	12.5kg	\$29.64
Selenium (Selcote Ultra)	1.5kg	\$5.98
Cobalt Sulphate	0.5kg	\$17.26
Molybdenum	50g	\$8.84

Special mixtures despatched in less than 4 tonne quantities will incur a surcharge.

**Dominion Chemicals Ltd.:**

<b>Solid Fertilisers:</b>	Unit	Cost
Ammonium Nitrate	25kg	\$31.92
Ammonium Sulphate	25kg	\$33.25
Blood and Bone	50kg	\$57.19
Calcium Nitrate	tonne	\$1,090.60
Diammonium Phosphate	50kg	\$110.39
Dolomite	50kg	\$30.59
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	\$78.14
Potassium Nitrate	25kg	\$37.91
Potassium Sulphate	40kg	\$48.95
Super Phosphate	50kg	\$24.61
Urea	40kg	\$38.84

<b>Trace Elements:</b>		
Ammonium Molybdate	1kg	\$49.48
Borax Pentahydrate	25kg	\$38.90
Borax Solubor	25kg	\$136.33
Boric Acid	25kg	\$53.20
Calcium Chloride 74%	25kg	\$24.94
Cobalt Sulphate	25kg	\$881.13
Copper Hydroxide	25kg	\$1,901.90
Copper Sulphate	25kg	\$57.19
Iron Sulphate	25kg	\$21.28
Kieserite	25kg	\$63.18
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	\$122.63
Selenium Prills	25kg	\$154.00
Shandong 60 mesh (Magnesium Oxide)	tonne	\$598.50
Sodium Molybdate	50kg	\$1,246.88
Sulphur Prills	50kg	\$44.56
Zinc Sulphate	25kg	\$31.92
<b>Chelates:</b>		
<b>Powders:</b>		
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
<b>Liquids:</b>		
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
<b>Specialty Items:</b>		
Gibberellic Acid	12g	\$73.15
Nitric Acid	35kg	\$79.93
Phosphoric Acid 85%	35kg	\$92.15
Potassium Hydroxide	25kg	\$60.52
Potassium Permanganate	1kg	\$329.84
Silver nitrate	100g	\$66.50
Zeolite Coarse	25kg	\$10.00
Zeolite Fine	25kg	\$18.78

New slow release, 24% Cu  
(suitable for trace elements in fertiliser or animal feeds)

\$1200 (bulk) per tonne

**Farmers Fertiliser Ltd:**

<i>Supergro Fertilisers</i>				Price per tonne bulk*		
N	P	K	S		<i>Whangarei</i>	<i>New Plmth</i>
0	9	0	11	Superphosphate <sup>†</sup>	\$167	\$160
0	7	0	8	Reverted Superphosphate	\$139	\$139
0	5	0	5	Super Lime 1/1	\$110	\$116
0	13	0	0	RPR	\$173	\$173
0	7	8	9	15 Potash Super	\$195	\$188
0	7	10	8	20 Potash Super	\$203	\$197
0	6	15	7	30 Potash Super	\$219	\$213
0	5	25	5	50 Potash Super	\$250	\$246
0	0	50	0	Muriate of Potash <sup>†</sup>	\$345	\$345
21	0	0	24	Ammonium Sulphate <sup>†</sup>	\$293	\$288
46	0	0	0	N-Rich 25 urea (bagged) <sup>†</sup>	\$484	\$484
6	7	0	12	Nitroboost 25	\$200	-
6	6	6	12	Crop	\$222	\$218
4	5	12	10	Dairy Pasture Mix	\$241	\$234
18	20	0	2	Di-Ammonium Phosphate <sup>†</sup>	\$484	\$484
12	5	14	3	Nitrophoska Blue (bagged) <sup>†</sup>	\$643	\$623
12	10	10	1	Nitrophoska 12-10-10 (bagged)	\$654	\$613
0	0	40	18	Sulphate of Potash (bagged)	\$613	\$608
0	0	0	99	Durasul Sulphur Prills <sup>†</sup>	\$393	\$425

\* For bagged product add \$45 per tonne

† **Fertmark Registered products**

**Note:** Any combination of products to meet all nutrient requirements can be supplied.

**Fluid Fertilisers NZ Ltd:**

N	P	K	S	Type	Size	Price
9	5	6	0	Reaction	20 litre/200 litre	\$95/\$730
5	4	11	0	Reaction	20 litre/200 litre	\$95/\$730
0	14	4	4	Reaction	20 litre/200 litre	\$95/\$730
0	6	9	5	Reaction	20 litre/200 litre	\$115/\$900
0	8	4	6	Blood and Bone Formula	20 litre/200 litre	\$105/\$780
0	8	3	6	Fish formula	20 litre/200 litre	\$85/\$630
10	3	6	0	Solfert	20 litre/200 litre	\$65/\$380
0	8	4	9	Solfert	20 litre/200 litre	\$65/\$425
				Super Seaweed	20 litre/200 litre	\$155/\$980
0	0	0	14	Super Sulphur	20 litre/200 litre	\$95/\$730
				Qualigrass	20 litre/200 litre	\$80/\$580
				Tracemol	25 litre/200 litre	\$144/\$950

**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>					
				Calcul	\$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	\$31.50
Dolomite Lime	25 kg	\$7.88
Sulphate of Iron	25 kg	\$17.08

#### *Liquid and soluble fertilisers:*

N	P	K	S			
10	2	6	1	Nitrophoska foliar	5 litres	\$36.65
10	10	27	0	Phostrogen	3.9kg	\$39.49
20	30	20	0	Schultz Instant All Purpose	11.3kg	\$90.03
10	60	10	0	Schultz-Instant Bloom	11.3kg	\$102.21

#### *Liquid Cut Flower Food/Preservative:*

Schultz Instant	3.78 litre concentrate	\$39.50
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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:**

<i>Trace Elements:</i>		
Boron	25kg	\$32
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
<i>Magnesium Supplements;</i>		
Calcined Magnesite, dusting	25kg	\$14.25
Cal Mag, superfine plus,	20kg	\$20.50
Magnesium Sulphate Epsom Salt	25kg	\$17.50
Magnesium Chloride	25kg	\$18.75
Clacined Magnesite	25kg	\$13.50
Swede Mix	40kg	\$14.70
Double Boron Swede Mix	37kg	\$21.20
Kale Mix	40kg	\$11.75
All Swede and Kale mixes contain Boron, Cal Mag, Zinc, Copper and Selenium.		
<i>Cobalt/Selenium:</i>		
Livestock Supplies 1-year Selenium	25kg	\$37.00
Selcote Ultra	25kg	\$78.00
Cobalt Sulphate	25kg	\$625.00

# YOU DON'T HAVE TO LOOK FAR TO FIND NEW ZEALAND'S TOP QUALITY FERTILISERS

- |                |                |                  |
|----------------|----------------|------------------|
| 1. Winton      | 29. Dunsandel  | 50. Mangatainoka |
| 2. Edendale    | 30. Leeston    | 51. Feilding     |
| 3. McNab       | 31. Whataroa   | 52. Tapuata      |
| 4. Kaitangata  | 32. Darfield   | 53. Ormondville  |
| 5. Clinton     | 33. Amberley   | 54. Waipukurau   |
| 6. Invertiel   | 34. Cheviot    | 55. Marton       |
| 7. Clydevale   | 35. Waiau      | 56. Aramoho      |
| 8. Milton      | 36. Kowhai     | 57. Raetihi      |
| 9. Lawrence    | 37. Hokitika   | 58. Ohakune      |
| 10. Heriot     | 38. Stillwater | 59. Taihape      |
| 11. Lumsden    | 39. Ikamatua   | 60. Utiku        |
| 12. Mossburn   | 40. Westport   | 61. Wairoa       |
| 13. Outram     | 41. Takaka     | 62. Matawhero    |
| 14. Alexandra  | 42. Blenheim   |                  |
| 15. Oturehua   | 43. Taratahi   |                  |
| 16. Ranfurly   | 44. Manakau    |                  |
| 17. Palmerston | 45. Koputaroa  |                  |
| 18. Alma       | 46. Shannon    |                  |
| 19. Oamaru     | 47. Himatangi  |                  |
| 20. Kurow      | 48. Pongaroa   |                  |
| 21. Waimate    | 49. Pahiatua   |                  |
| 22. Fairlie    |                |                  |
| 23. Hinds      |                |                  |
| 24. Mayfield   |                |                  |
| 25. Ashburton  |                |                  |
| 26. Tinwald    |                |                  |
| 27. Methven    |                |                  |
| 28. Rakaia     |                |                  |



**Ravensdown Fertiliser**  
Co-operative Limited

**RAVENSBOURNE WORKS:** PO Box 499, Dunedin. Tel 0-3-471 0511, Fax 0-3-471 0640

**SEADOWN STORE:** PO Box 409, Timaru. Tel. 0-3-688 2097, Fax 0-3-688 2095

**HORNBY WORKS:** PO Box 16 081, Hornby, Christchurch. Tel. 0-3-349 6189, Fax 0-3-349 9174

**NELSON WORKS:** PO Box 3028, Richmond, Nelson. Tel. 0-3-544 6109, Fax 0-3-544 4879

**AWATOTO WORKS:** Private Bag, Napier. Tel. 0-6-835 5469, Fax 0-6-835 3268

CREATIVE 8465

### 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		
N	P	K	S		<i>Awatoto (Napier)</i>	<i>Hornby (Chch)</i>	<i>R'borne (Dunedin)</i>
0	9	0	12	Superphosphate	154	156	152
0	21	0	1	Triple Super	418	420	414
0	13	0	1	NC Reactive Phosphate Rock	174	176	170
0	15	0	15	TSP (15% Sulphur)	348	-	-
13	16	0	13	DAP (13% Sulphur)	402	-	383
0	7	0	9	Drilling Super	-	-	137
0	7	0	9	Serpentine Super	-	-	137
0	9	0	12	Boron Super	181	183	179
0	9	0	12	Cobalt Super (1.0kg)	185	-	-
0	9	0	12	Cobalt Super (1.5kg)	198	200	196
0	9	0	12	Copper Super	202	-	200
0	9	0	12	Molybdate Super (500g)	-	167	163
0	9	0	12	Molybdate Super (250g)	162	164	160
0	9	0	12	Moly Sulphur Super Extra	-	166	-
0	9	0	12	Selenium Super (2kg)	164	-	-
0	8	0	20	Sulphur Super	161	163	159
0	8	0	20	Sulphur Super plus Selenium	-	-	165
0	7	0	28	Sulphur Super Extra	165	167	163
0	5	0	50	Maxi Sulphur Super	170	172	167
0	8	0	20	Moly Sulphur Super	-	170	-
0	7	0	28	Moly Sulphur Super Extra	-	170	170
0	8	8	10	15% Potash Super	181	183	179
0	7	10	10	20% Potash Super	189	-	-
0	6	15	8	30% Potash Super	204	206	202
0	5	25	6	50% Potash Super	235	237	232
0	6	15	8	30% Potash Moly Super	-	213	-
0	7	10	16	20% Potash Sulphur Super	-	193	189
0	6	15	14	30% Potash Sulphur Super	-	209	204
7	5	7	14	Hi-Gro	221	-	-
0	0	50	0	Potassium Chloride	334	336	330
0	8	0	16	Westland Pakihi Starter + TE	-	195	-
18	20	0	2	Cropmaster DAP	474	476	470
20	10	0	13	Cropmaster 20	385	387	381
15	10	10	8	Cropmaster 15	389	391	385
13	14	15	1	Cropmaster 13	428	-	424

11	22	0	1	Ammo-Phos MAP	501	503	497
9	19	7	1	Ammo-Phos/Hycrop	476	478	-
8	15	15	1	Ammo-Phos/Hycrop	447	449	443
8	12	22	1	Ammo-Phos/Hycrop Pea Fert.	412	455	-
					Bulk	Bagged	Bagged
12	10	10	1	Nitrophoska	555	599	593
12	5	14	3	Nitrophoska Blue	542	586	579
12	5	14	8	Nitrophoska Blue Extra	-	977	977
						Bulk	
16	10	10	5	Potash Gold	466	-	473
15	10	10	12	Potash Gold	439	442	-
14	7	14	6	Potash Gold	468	-	-
8	15	13	6	Potash Gold	512	514	-
0	7	8	13	20% Potash Gold Super	232	234	-
0	6	15	14	35% Potash Gold Super	288	-	-
0	4	23	15	55% Potash Gold Super	362	-	-
0	0	42	18	Potassium Sulphate (Granular)	524	526	-
0	0	42	18	Potassium Sulphate (Standard)		-	-
21	0	0	24	Ammonium Sulphate		254	248
21	0	0	24	Granular Ammonium Sulphate	287	290	283
26	0	0	14	Ammonium Sulphate Nitrate	375	378	371
27	0	0	0	Calcium Ammonium Nitrate	381	-	-
46	0	0	0	N-Rich Urea	448	448	448

*Horticultural Fertilisers:*

N	P	K	S	Mg		<i>Napier</i>	<i>Nelson</i>
						Price per tonne, bulk	
0	0	0	23	0	Zinc Sulphate (Monohydrate)	-	\$1,106
0	0	0	13	10	Magnesium Sulphate	\$593	\$592
0	0	0	22	16	Kieresite	\$699	\$688
0	0	0	0	11	Dolomite	\$300	\$153
13	0	38	0	0	Potassium Nitrate (crystalline)	\$1,002	\$1,001
0	0	0	23	0	Ferous Sulphate 19% Fe	\$544	\$543
0	0	0	13	0	Manganese Sulphate 32% Mn	-	\$915
0	0	0	0	55	Calcined Magnesite	-	\$469
16	4	16	4	0	Asparagus Fertiliser	-	\$414
11	3	11	10	0	Berryfruit Fertiliser	-	\$383
7	3	17	8	0	Hop Fertiliser	-	\$282
12	2	14	0	0	Kiwifruit Fertiliser	-	\$393
15	0	18	80	0	Kiwifruit Fertiliser No P	-	\$450
7	4	7	16	12	Market Garden Fertiliser	-	\$292
10	2	10	6	2	Orchard Fertiliser	-	\$267
10	2	5	7	2	Orchard Low K	-	\$260
6	3	12	7	1	Orchard Low N	-	\$253
0	0	0	0	0	Lime	-	\$58
0	0	0	18	0	Calcium Sulphate (Gypsum)	-	\$234

### Liquid Fertilisers

N	P	K	S		Price per tonne, bulk	
20	0	0	0	Liquid Nitrogen	\$352	\$358
7	2	4	1	Liquigro Foliar	\$658	\$673
6	1	6	1	Liquigro Trickle	\$392	\$401
3	0	6	0	Liquigro Tomato No.1	\$389	\$395
6	0	6	0	Liquigro Tomato No 2	\$490	\$497

### 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:	Total P	Cit.sol.P	PAP
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:**

<i>Phosphate Fertilisers:</i>						
N	P	K	S			Bulk Price per tonne
0	9	0	11		Superphosphate	\$162.36
0	20	0	1		Triple Super	\$405.60
0	15	0	6		HIP	\$284.23
0	14	0	1		Reactive Phosphate Rock	\$166.40
<i>Potash Fertilisers:</i>						
0	7	7	9		15% Potash Super	\$179.40
0	6	15	8		30% Potash Super	\$202.28
0	0	50	0		Muriate of Potash	\$331.55
0	0	40	17		Sulphate of Potash(bagged)	\$796.33
<i>Sulphur Fertiliser:</i>						
0	8	0	22		22% Sulphur Super	\$161.20
0	7	0	33		33% Sulphur Super	\$167.96
0	4	0	50		50% Sulphur Super	\$170.56
0	10	0	17		Tussock	\$171.29
0	11	0	11		Double Eleven	\$173.16
<i>Magnesium:</i>						
0	7	0	9	5	Serp. Super/Drilling	\$141.44
0	6	7	8	4	15% Potash Serp. Super	\$166.40
0	5	15	6	4	30% Potash Serp. Super	\$189.80
0	6	0	20	4	Serpentine Gold	\$156.00
<i>Special Mixtures:</i>						
0	9	0	11		Moly Super 300gms Mo per tonne Super	\$163.38
0	9	0	11		Cobalt Super 1.5kg per tonne	\$199.45
0	9	0	11		Copper Super 25kg per tonne	\$202.40
0	9	0	11		Selenium Super 2kg per tonne	\$208.73
0	9	0	11		Boron Super 50kg per tonne	\$236.60
<i>High Analysis:</i>						
18	20	0	1		Southcrop DAP	\$472.16
20	10	0	13		Southcrop Green	\$382.72
16	8	10	10		Southcrop Blue	\$383.55
14	15	13	1		Southcrop Pink	\$444.60
9	10	25	1		Southcrop Yellow	\$410.80

0	13	16	0		Southcrop Red	\$390.73
0	10	25	0		Southcrop Black	\$378.04
21	0	0	24		Ammonium Sulphate	\$284.96
11	10	0	13		Triple Boost	\$350.48
46	0	0	0		N Rich Urea, bulk	\$448.24

<i>Trace Elements:</i>		
	Pack Size	Price
Cobalt Sulphate	25kg	\$702.00
Copper Sulphate	25kg	\$48.65
Zinc Sulphate	25kg	\$21.64
Selcote Ultra Selenium	25kg	\$84.59
Calcined Magnesite	25kg	\$12.60
Fertiliser Borate FB48	25kg	\$31.92
Granular Borate	25kg	\$32.49
Sulphate of Iron	50kg	\$35.07
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	Superphoshate	\$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 (22.75kg 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	Multicote (111)	25kg	\$88
24	3.4	13	Multicote (312)	25kg	\$88
20	4	4	Yates Plant Tabs	10kg	\$81
<i>Soluble Fertilisers:</i>					
31	4	8	Microfeed 311	20kg	\$99
16	3	27	Microfeed 214	20kg	\$99
			Solubor DF 17.4% Boron	6kg	\$22.80
			Solubor DF 17.4% Boron	12kg	\$52
7	17	5	Magamp + 12% Magnesium	22kg	\$110

**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: (Feilding)*

	\$ per tonne
Agricultural Lime	\$16.50
Cropfine Lime	\$20.00
80% Dicalcic Phosphate 20% Cropfine	\$100.10
60% Dicalcic Phosphate 40% Cropfine	\$80.10
40% Dicalcic Phosphate 60% Cropfine	\$60.00
20% Dicalcic Phosphate 80% Lime	\$37.20

*McDonald's Lime Ltd: (Otorohanga)*

		Price
Agricultural Lime	- bulk per tonne	\$15
	- 1 tonne bulk bags	\$60
	- 25kg bags	\$70
Supplimate Lime flour	- bulk, per tonne	\$20
	- 1 tonne bulk bags	\$70
Hydrated Lime	- 25kg bags	\$241.00
	- 25kg bags	\$80

*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)	\$ per hectare
200	(1.5)	\$7.40
250	(2.0)	\$35.00
370	(3.0)	\$22.50
500	(4.0)	\$19.50
625	(5.0)	\$18.50
750	(6.0)	\$18.00
1250	(10.0)	\$12.00
2500	(20.0)	\$8.50
High Analysis Fertiliser (MAP, DAP, Urea, Sulphate of Ammonia) per hectare		\$7.41

Typical Spreading Rates - Canterbury and Waikato

#### Canterbury:

Typical rates range from \$3.33 to \$3.50 per hectare with a precision spreader costing approximately \$12.50 to \$16.00 per hectare depending on the number of hectares. An additional \$1.09 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 - \$100 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

##### Soil Test Profiles

**Basic Soil Test** : - pH, Ca, P, K, Mg, Na,S, an indication of the basic fertility of a soil through the measurements of major available nutrients, acidity and estimates of cation and anion storage capacity, and bulk density

\$45.00

**Soiless Media Test** - NH<sub>4</sub>, NO<sub>3</sub>, pH, Ca, K, Mg, Na, Soluble Salts. A measure of available nutrients, acidity (pH) and soluble salts in soiless media and potting mixes. \$56.70

**Glasshouse Soil Test** - pH, P, Ca, K, Mg, Na, Soluble Salts. A measure of major available nutrients, acidity and soluble salts in a glasshouse soil. \$52.11

**Note:** Prices include free *lablink* overnight post back to laboratory. Volume discount available on 10 or more samples = 10%

Mixed Pasture Nutrition	
<i>Individual or Additional Soil Analyses:</i>	
Soil Acidity (pH)	\$7.00
Phosphate	\$7.00
Total Phosphorus	\$15.00
Sulphur	\$10.00
Cation Storage Capacity	\$24.00
Anion Storage Capacity	\$7.00
Cations	\$11.00
Organic Sulphur	\$15.00
Mineral Nitrogen - NH <sub>4</sub> , NO <sub>3</sub>	\$15.00
Nitrate - NO <sub>3</sub>	\$10.00
Reserve K	\$24.00
Soil Texture Analysis	\$58.00
Total Nitrogen	\$10.00
Available Aluminium	\$13.00
Boron	\$17.50
Chloride	\$17.50
Organic carbon	\$17.50
Iron	\$25.00
Total Exchangeable	\$24.00
Bulk density	\$8.00
Particle density	\$100.00
Preparation fee of \$10 charged on samples submitted for individual or a combination of individual test without a profile.	

Plant Analysis Profiles:

*Agriculture*

**Super Animal Health Profile** - N,P,Mg,Na,Mn,Zn,Cu,Fe,Mo,Co,Se \$66.00  
(To provide major and all trace element analyses relating to animal nutrition requirements)

**Animal Health Profile** - N,P,S,Mg,Ca,Na,K,Mn,Zn,Cu,Fe,Mo \$54.00  
(To provide major and trace element analyses relating to animal nutritional requirements)

**Suspected Copper Deficiency (livestock)** - Cu,S,Fe,Mo \$30.00  
(To provide the analytical data required to diagnose potential copper deficiency)

**Mixed Pasture Nutrition** - N,P,S,Mg,Ca,K \$30.00  
(To determine the major elements in mixed pasture relating to fertiliser nutrition)

<b>Clover or Lucerne</b> - 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 the requirements of the nitrogen fixing rhizobial bacteria)	\$54.00
<b>Cereal Nutrition Profile</b> - N,P,S,Mg,Ca,K,Mn,Zn,Cu,Fe (To determine the major and trace elements in cereals which are required for their nutrition and the production of high quality grain)	\$42.00

#### *Horticulture*

<b>General Profile</b> - 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)	\$48.00
<b>Vegetables</b> - N,P,S,Mg,Ca,K,Mn,Zn,Cu,Fe,B,Mo (A complete analytical suite covering all major and trace elements relating to the nutrition of vegetable crops)	\$54.00
<b>Kiwifruit</b> - 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)	\$57.00

#### Feed Quality Analysis Profiles:

##### **Hay and Pasture**

NIR Analysis: Dry matter, crude protein, estimation of metabolisable energy and digestibility from NIRS calibration.	\$50.00
Classical: Dry matter, crude protein, acid detergent fibre, organic matter, ash and estimations of metabolisable energy and digestibility.	\$62.00
<b>Compound feeds and meals</b> Intermediate Assessment: Analysis for fibre, crude protein, estimation of metabolisable energy and digestibility	\$62.00
<b>Pasture or Maize Silage</b> Assessment: A visual assessment of quality plus acidity and dry matter values.	\$35.00
Intermediate Assessment: Measures of pH, dry matter, crude protein, acid detergent fibre, organic matter, ash and estimations of metabolisable energy and digestibility.	\$62.00
Full Quality Assessment: As for the intermediate profile plus a measure of free ammonia.	\$99.00

#### Water Analysis Profiles:

<b>Domestic Water Chemistry Profiles:</b> Analysis of pH conductivity, alkalinity, chloride hardness, dissolved solids, CO <sub>2</sub> , Ca, Mg, Fe, Mn, Cu, Zn, and nitrate nitrogen	\$68.00
<b>Horticultural water profile:</b> Analysis as in domestic water chemistry profile to ascertain the suitability for use as irrigation supply .	\$73.79
<b>Microbial:</b>	\$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 (Includes pH, P, K, Ca, Mg, Na, C'EC, % Base Saturation)		\$35.00 each
<i>Additional Tests:</i>		
Sulphate, Nitrate, Soluble Salts		\$10.00 each
Phosphate Retention		\$10.00 each
Total Nitrogen, Organic Matter, Organic Sulphur		\$15.00 each
Available Nitrogen (Min. N)		\$10.00 each
Lime Requirement		\$10.00 each
Hot Water Soluble Boron		\$15.00 each
pH only	1 sample	\$20.00 each
Chloride		\$10.00 each
D.T.P.A & E.D.T.A. (elements only)		\$35.00 each
- Single element only		\$20.00 each
TBK Potassium		\$35.00 each
Foreign Soil Handling Charge (per sample)		\$10.00 each
Phosphate Resin P Test		\$15.00 each
NO <sub>3</sub> /NH <sub>4</sub> on soils		\$12.50 / element
Exchangeable Aluminium		1st sample \$25.00 each
		Subsequent \$15.00 each
Percolation Test		\$55.00 each
Sand/Silt/Clay		\$75.00 /sample

<b>Organochlorines on soil</b>		
Organochlorines (DDT, DDE, DDD, Lindane)	1st sample	\$135.00
	Subsequent	\$90.00

<b>Plant Tissue</b>		
Basic Test ( Includes N, P, K, Ca, Mg, Na, S, Fe, Mn, Cu, Zn, B)		\$55.00 each
Cobalt, Molybdenum and Selenium		\$10.00 each
Stock Health (Na, Cu, Zn, Fe, Mo, Se, Co, K, Mg)		\$55.00 each
Iodine (ASL) and Aluminium		\$12.00 each
Chloride		\$10.00 each
Dry Matter		\$25.00 each
Silage (pH \$10, Digest/MD/Crude Protein \$50)		\$70.00 each
Crude Protein/M.E.		\$35.00 each
Nitrate	1st sample	\$35.00
	Subsequent	\$25.00

<b>Pesticide Analysis</b>		
Owing to the complex nature of pesticide analysis, specific information is required. Price available on application.		
Atrazine/Simazine	1st sample	\$185.00
	Subsequent	\$75.00

<b>Mineral Analysis on Apples (ENZA Calcium Test)</b>		
Includes Ca, Mg, K, Ca/Mg ratio, Ca x 10/K ratio, average fruit weight		\$45.00 / sample

<b>Water</b>		
Domestic analysis (and recommendations)		\$85.00 each
Irrigation analysis (and recommendations)		\$75.00 each
Bacteria analysis		\$39.50 each

*Plants:*

Basic Plant Analysis - N, P, K, S, Ca, Mg, Na, Fe, Mn, Zn, Cu, B. \$57

Special Plant Analysis

- Mo, Co, Se, sulphate-sulphur, Cl, Al, nitrate-nitrogen. \$10 each

- I \$14

*Feedstuff:*

Basic Feedstuff Analysis - DM, protein, fibre, ash, ME \$75

Special Feedstuff Analysis - DM only, ash only, pH (of silage) \$15 each

- ammonium-nitrogen (of silage) \$20

- fibre only \$25

- protein only \$35

- soluble carbohydrate, or soluble carbohydrate and starch \$50

- mineral analysis P.O.A.

In order to derive metabolisable energy, a full analysis is required, therefore this result is only available as part of the basic analysis profile.

These prices apply to silages, hay and forage samples where the routine analysis methods used yield Relative Standard Deviations (RSDs) of typically 5%. For compound feeds or instances where a high precision analysis is required then alternative procedures should be used.

## 2.7 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 1997 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	\$2.70	\$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	\$0.90/kg
To Rest of South Island	\$1.50/kg
To Wellington and Palmerston North	\$1.65/kg
To Rest of North Island	\$1.90/kg
Minimum of 20 kg: ex Auckland	
To Rotorua, Whangarei, Hamilton, Tauranga, Taupo	\$0.90/kg
To Rest of North Island	\$1.50/kg
To Christchurch	\$2.30/kg
To Nelson, Blenheim	\$2.50/kg
To rest of South Island	\$2.80/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	100kg	250kg	500kg	1000kg	45kg	100kg
	Rate/kg	min	min	min		min	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	\$2.75	-	\$3.53
Hong Kong	\$14.18	\$3.15	\$3.01	-	\$2.78	\$3.97	-
London	\$18.60	\$5.00	-	-	-	\$5.55	\$5.16
Los Angeles <sup>1</sup>	\$18.31	\$4.56	-	-	\$4.03	\$4.17	(250kg)
Los Angeles <sup>2</sup>	\$17.46	\$4.06	-	-	\$3.53	\$3.67	(250kg)
Tokyo	\$10.98	\$4.43	-	-	-	\$4.40	-

<sup>1</sup> Ex Christchurch, <sup>2</sup>Ex Auckland

**Note:** For Courier Services see *Section 2.15.4*

## 2.8 SEEDS, PLANTS AND PROPAGATION

### 2.8.1 Seeds - Pasture

		<b>Price/kg</b>
Ryegrass	Aries HD	\$5.20
	Banks	\$4.62
	Dobson	\$4.15
	Embassy	\$4.62
	Yatsyn	\$4.15 to \$4.89
	Ellett	\$3.95 to \$4.80
	Nui -Basic	POA
	- Certified 1st Generation	\$2.04
	- High and low endophyte	\$2.40
	- Grasslands Zero Nui	\$2.65
	Flanker	N/A
	Impact	N/A
	Ruanui - Basic	POA
	- Cert 1st Generation	\$2.04
	- Uncertified	\$1.78
	Concord	\$3.42
	Conker	\$3.42
	Exalta	\$3.42
	Cordura	\$3.87
	Grasslands Greenstone - endofree	\$3.15 to \$3.38
	- endosafe	\$3.80 to \$4.13
	Grasslands Pacific (high and low endophyte)	\$4.31
	Manawa - Basic	POA
- 1st Generation	\$2.22	
Italian - Uncertified	\$1.64	
Tama - Basic	POA	
- 1st Generation	\$2.40	
- Uncertified	\$1.42	
Vedette	\$4.15	
Moata - Basic	POA	
- 1st Generation	\$2.04	
- Uncertified	\$1.87	
Clover	Aran	\$11.50
	Sustain	\$9.50
	Prop	\$7.50
	Grasslands Kopu (Superstrike)	\$10.80
	Grasslands Tahora (Superstrike)	\$8.90
	Huia - Basic	\$6.62
	- 1st Generation	\$5.51
	- Uncertified	\$5.02
	Pitau - 1st Generation	\$6.62
	Endura Kura ( Prillcote)	\$17.47
	Alsylke	\$3.02



	Hamua Broad Red - 1st Generation	\$6.89
	- Uncertified	\$5.69
	Turoa Mont Red - Basic	POA
	- 1st Generation	\$8.09
	- Uncertified	\$6.00
	Pawera - Basic	POA
	- 1st Generation	\$14.40
	- Uncertified	POA
	Colenso Red Clover (Superstrike)	\$9.33
	Woogenellup Subclover	\$6.00
	Karridale Subclover	\$6.00
	Dalkeith Subclover	\$6.22
	Mount Baker Sub Clover	\$6.00
	Sunrise Lotus	\$18.00
	Grasslands Maku Lotus (Prillcote)	\$14.58 to \$18.00
	Grasslands Samson Perennial Ryegrass	\$4.45
Legume	Necton Sulla	\$7.00
	Spectra Hybrid Serradella	\$8.00
		<b>Price/kg for 1,2 &amp;10 kg packs</b>
Turnips	York Globe Turnip	\$6.97
	Green Globe Turnip	\$6.97
	Appin Turnip	\$7.69
	Barkant Turnip	\$14.93
	Swedes	\$15.42
	Major Plus (Superstrike)	\$8.00
	Highlander	\$7.96
	Other Varieties	\$7.07
Forage Brassicas	Pasja	\$5.69
	Wairoa Brassica	\$5.11
	Winfred (25kg)	
		<b>Price per kg</b>
Rape	Bonar Rape	\$3.96
	Emerald Giant Rape	\$3.69
	Wairangi Rape	\$3.56
	Rangi Rape	\$2.18
	Cert Giant Rape	\$1.78
Kale	Gruner Kale	\$9.33
	Kestrel Kale	\$10.18
	Rawera	\$5.56
	Proteor	\$10.18
Miscellaneous	Tares	POA
	Sheeps Burnett	\$6.00
	Mustard	\$2.62
Other Grass	Grasslands Maru Phalaris	\$8.85 to \$9.38
	Timothy (Kahu)	\$4.80
	Matua Prarie Grass	\$3.24
	Crested Dogtail	\$3.91
	Massey Basyn Fog (Prillcote)	\$8.13

	Gala Grazing Brome	\$4.71
	Grasslands Puna Chicory - superstrike	\$17.00
	- Bare seed	\$14.65 to \$15.56
	- Prillcote	\$12.85
	Herbal Ley (10kg packs)	\$15.02
	Au Triumph Tall Fescue (Superstrike)	\$9.11
	Advance Tall Fescue - fungicide treated	\$7.50
	- superstrike NI	\$9.35
	- superstrike SI	\$9.50
	Dovey Tall Fescue	\$6.50
	Saborto Cocksfoot	\$6.18
	Grasslands Kara	\$6.31
	Grasslands Wana	\$5.47
	Grasslands Tekapo	\$5.47
	Kaituna Lucerne	\$13.69
	WL322HQ	\$14.44
	WL323	\$14.04
	Grasslands Otaio Lucerne - superstrike	\$14.00
	- bareseed	\$14.00 to \$15.02
	Lucerne Uncertified	\$7.82
	Wairau Certified	POA
Turf Grasses	Chewing Fescue	\$6.89
	Perennial (Fine Leaf) All Star Saturn Ryegrass	\$5.42 to \$7.07
	New Zealand Browntop	\$6.22
	Egmont Browntop	\$20.00
	Maku - Yorkshire Fog	\$8.00
	Lawn Mix Chewings/Browntop	\$6.67
Duraturf Blends	All Purpose - 5kg bare / superstrike	\$61.02 / \$70.49
	- 1kg bare / superstrike	\$12.62 / \$14.62
	Classic - 5kg bare / superstrike	\$86.22 / \$95.73
	- 1kg bare / superstrike	\$17.64 / \$19.64

### 2.8.2 Seeds - Arable

		Price per tonne
<b>Cereals:</b>	Precleaned White Oats	\$490.00
	Amuri Oats	\$600.00
	Ryecorn Rahu	\$560.00
	Black Oats	POA
	Caravelle Oats	\$650.00
	Monad Wheat (milling)	\$710.00
	Sapphire Wheat (milling)	\$720.00
	Magnum Barley	\$650.00
	Regatta Barley	\$650.00
	Fleet Barley	\$680.00
	"Titore" Red Lentils	POA
	Garden Peas for hay	\$600.00
	Charisma Oats - certified	\$495.00

**Watties Process Crop Seed Prices:** (see also vegetable seeds later)

Peas (dependant on mix)	\$1.18 to \$1.67 per kg
Whole Beans	\$8.93 per kg
Broad Beans	\$1.75 per kg
Italian Beans	\$6.36 per kg
Green Beans	\$6.36 per kg
Carrots	\$64.00 per kg
Baby Carrots	\$80.00 per kg

Seed is normally supplied by the Company and the cost deducted from final payout.

**2.8.3 Coated Seed:**

Prices shown are for coated seed (includes seed and the coating). Price ranges reflect the price differences between cultivars.

*See also advertisement at front of Manual*

**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 to \$130 / 25 kg	-
Dwarf French Beans	\$160 to \$560 / 25 kg	-
Butter Beans	\$151 to \$200 / 25 kg	-
Runner Beans	\$175 to \$595 / 25 kg	-
Beetroot	\$265 to \$440 / 6 kg	\$580 / 6 kg
Broccoli	-	\$660 to \$685 / 500 g
Brussel sprouts	\$135 / 500 g	\$310 to \$335 / 10,000 seeds
Cabbage	\$22 to \$570 / 500 g	\$360 to \$790 / 500g
Carrot	\$32 to \$75 / 500 g	\$50 to \$58 / 500 g
Cauliflower	\$120 to \$940 / 500 g	\$42 to \$145 / 2500 seeds
Celery	\$180 / 500 g	-
Cress	\$285 / 10 kg	-
Cucumber	\$45 to \$130 / 500 g	\$180 to \$480 / 500 g
Egg Plant	\$14 to \$185 / 100 g	\$150 to \$196 / 100 g
Gherkin	\$55 to \$260 / 500 g	\$75 to \$345 / 500 g
Leek	\$68 to \$360 / 500 g	-
Lettuce	\$98 to \$145 / 500 g	-
Melon - Rock	\$12 to \$14 / 100 g	\$165 to \$330 / 100 g
- Water	\$8.25 to \$19 / 100 g	\$68 to \$205 / 100 g
Onion	\$48 to \$237 / 100 g	\$76 / 500 kg
Parsley	\$45.50 to \$210 / 500 g	-
Parsnip	\$55 to \$110 / 500 g	-
Pea	\$66 to \$310 / 25 kg	-
Peppers	\$22 to \$835 / 100 g	\$295 to \$595 / 100 g
Pumpkin	\$45 to \$98 / 500 g	\$152 to \$315 / 500 g
Radish	\$6.25 to \$85 / 100 g	\$80 / 100 g
Spinach	-	\$20 to \$44.50 / 500g
Squash	\$36 to \$70 / 500 kg	\$125 to \$320 / 500 kg
Swedes	\$20 / 500 g	-
Sweet Corn	\$23 to \$24 / 500 g	\$26 to \$28 / 500 g
Tomato	\$42 to \$85 / 100 g	\$25 to \$47.50 / 100 g
Turnip	\$17 / 500 g	\$355 / 500 g
Zucchini	\$23 / 500 g	\$97 to \$125 / 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
Chysanthemum	\$35 per 10g
Dwarf Chysanthemum	\$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)	\$135
Iris (English)	\$50
Tulips	\$45 to \$54
Narcissus	\$36 to \$66
Crocus species	\$63
Crocus hybrids	\$44

### **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)

Almonds	\$7.80 to \$13.25	Apples	\$7.25 to \$15.35
Apricots	\$7.55 to \$16.25	Cherries	\$8.35 to \$14.60
Citrus	\$8.50 to \$9.50	Plums	\$7.55 to \$13.25
Quinces	\$13.80	Nectarines	\$7.55 to \$13.25
Peaches	\$7.55 to \$13.25	Pears	\$7.25 to \$13.25
Figs	\$13.25	Nashis	\$14.50 to \$16.00
Persimmons	\$25.00	Tamarillos	\$6.00
Feijoas	\$13.25		

*Kauri Creek (Wholesale) Ltd:*

Citrus trees	\$8.50 to \$9.50 ex nursery
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*Cheddar Valley Walnuts:*

Persimmon (Fuju, Jiro, Hirotonashi, Yoko) 75 to 100 cm	\$132.46 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	\$15.10 to \$20
	100 to 150cm	\$18 to \$25
Hazelnuts	50 to 75cm	\$8 to \$13
Walnuts	40 to 75cm	\$8 to \$30
Hickory	10 to 25cm	\$5.33
Macadamias	25 to 50cm	\$4.45 to \$16
Avocados	25 to 50cm	\$27.00

*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	\$7.80
Sweet Chestnut	\$5.45 to \$7.60 each per 25
Hazelnut	\$5.25 to \$7.60 each per 25

*Harrisons Trees:*

Chestnuts	\$16.35 to \$18.35
Hazelnuts	\$6.70 to \$12.40
Walnuts	\$15.60 to \$29.65

**Vines:**

*Te Puke Nurseries:*

	Price per hundred
Kiwifruit	
Hayward Female grafted	\$1350
Chieftain Male grafted	\$1350
Bruno Rootstock	\$620 to \$790
Budwood	\$40 to \$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 four	\$4.95 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 200m	150 microns	\$112.00
600mm x 300m	150 microns	\$168
600mm x 500m	150 microns	\$279.90
Agpac Black Mulch Film		
750mm x 500m	30 / 50 microns	\$48.70/\$81.30
900mm x 500m	30 / 50 microns	\$58.50/\$97.50
1200mm x 500m	30 / 50 microns	\$78.00/\$130.00
Black Polythene Planter Bags		
- sizes 0.75 to 95		\$3.75 to \$156.10 per 100

### *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

*Transplant System Ltd:*

Plantek Seedling Trays	- 25 to 256 cells per tray	\$7.35 to \$11.50 per tray
Landmark Trays	- 50 to 512 plug tray and 84 Hexagonal	\$3.20 per tray
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 \$7.17/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 Pyc 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
Paper pulp pots		\$155 per 500 to \$191 per 8
Planter bags		\$2.79 per 100 to \$113 per 100

Secateurs		\$11 to \$15
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### 2.8.8 Growing Medium

*Laings Gardenmakers:*

	<b>Price per scoop (1 - 4 scoops)</b>
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:

Sheep/Beef/Dairy Farms

Northern North Island	\$900 to \$2,480
Lower North Island	\$750 to \$3,500
Canterbury and Northern South Island	\$750 to \$3,675
Otago and Southland	\$1,395 to \$22,000

*Source: M.A.F. Farm Monitoring Report, January 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:

<b>A</b>	Annand	<b>M</b>	Monsanto
<b>B</b>	BASF	<b>N</b>	Nu Farm
<b>BY</b>	Bayer	<b>P</b>	Pfizer
<b>C</b>	Ciba Geigy	<b>PM</b>	Pest Management Services
<b>CF</b>	Crawford	<b>R</b>	Rohm and Haas
<b>D</b>	Du Pont	<b>RP</b>	Rhone Poulenc
<b>DE</b>	Dow Elanco (formerly IWD)	<b>S</b>	Shell Agriculture
<b>F</b>	Fil	<b>ST</b>	Southern
<b>I</b>	ICI	<b>W</b>	Watkins
<b>K</b>	Key Chemicals	<b>Y</b>	Yates

### 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. Agrochemical 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	\$198.90
2,4-D Ester 80	2,4-D butyl ester (72)	N	20 litre	\$207.36
2,4-DB	2,4-DB (40)	DE	20 litre	\$250.00
Alachlor 480 EC	alachlor (48)	S	20 litre	\$265.00
Activated Amitrol	amitrol (40) ammonium - thiocyanate (10)	N	20 litre	\$228
Amitrole	amitrole (40)	W	20 litre	\$313
Asulox	asulam (40)	RP	20 litre	\$546.38
Atradox BW	atrazine (90)	I	10 kg	\$143.00
Atrazine (Flowable)	atrazine (90)	N	20 litre	\$191
Avadex BW	triallate (40)	M	20 litre	\$325.13
Avenge 640	difenzoquat (64)	Y	6 kg	\$361.61
Axall	bromoxynil (7.5), ioxynil (7.5), mecoprop (34)	RP	20 litre	\$371.77
Banvel 200	dicamba (20)	N	5 litre	\$127
Banvine	2,4-D (20)	DE	1 litre	\$36.00
Basagran	bentazone (48)	B	20 litre	\$714.15
Betanal AM 11	Phenmedipham (8.3) Desmedipham (8.3)	DE	5 litre	\$258
Bladex	cyanazine (50)	S	10 litre	\$192.35
Boundary	norflurazon (40) doiron (40)	Y	5 kg	\$293
Bromoxynil	hydrocarbon liquids (44) bromoxynil (40)		5 litre	\$170.36
Buctril M	bromoxynil (20), MCPA (20)	RP	20 litre	\$382.95
Buster	ammonium phopshate (20)	B	5 litre	\$154.33
Buster	glufosinate ammonium (20)	W	20 litre	\$550.85
Caragard FW	terbuthylazine (25) terbutometon (25)	C	5 litre	\$133.98
Carbetamex	carbetamide (70)	RP	5 kg	\$153
Centurion, 240EC	clethodim (24)	N	5 litre	\$669.75
Chloro-IPC	chlopropham (40)	Y	20 litre	\$703
Combine	bromoxynil (20), ioxynil (20)	RP	5 litre	\$196.56
Commando	L-flamprop, isopropyl(20)	S	20 litre	\$564.65
Couger 20G	diflufencarn (10), isoproturon (50)	RP	5 litre	\$196.65
Decthal W75	chlorthal dimethyl (75)	Y	10 kg	\$486
Dicamba 20	dicamba (20)	I	20 litre	\$442.90
Dual 960 EC	metolachlar (96)	C	5 litre	\$139
Duplosan Super	dichlorprop (60)	B	10 litre	\$161.00
Duplosan KV	mecoprop-P (60)	B	10 litre	\$260.33
Escort	metasulfuron (60)	D	500 g	\$485.44
Frontier	dimethanamid (90)	Y	2 litre	\$140.54
Foresite	oxadiazon (38)	RP	4 litre	\$332
Foresite	oxadiazon (38)	W	4 litre	\$305
Fusilade WG	fluazifop-butyl (25)	I	5 kg	\$411.60
Gallant	haloxyfop (10)	DE	20 litre	\$1,561.77
Galtak	benazolin - ethyl	N	5 litre	\$558
Gardoprim FW	terbuthylazine (50)	C	20 litre	\$241.50
Gesagard	prometryn (50)	C	5 litre	\$195.50

Gesamil 50 WP	propazine (50)	C	2 kg	\$81
Gesaprim	atrazine (50)	C	5 litre	\$40.82
Gesatop 500FW	simazine (50)	C	5 litre	\$54.53
Glean 75DF	chlorsulfuron (75)	D	200 g	\$225.00
Glyphosate	glyphosate (36)	N	20 litre	\$266.68
Gramoxone	paraquat (20)	I	20 litre	\$367.65
Granstar	methylbenzoate complex (75)	D	200 g	\$213.75
Grazon	trichlopyr (60)	DE	20 litre	\$1,002.10
Greenscape - organic	C8-C10 fatty acids (70)	Y	20 litre	\$193
Hi - Ester 2,4-D	2,4-D butyl ester (72)	DE	20 litre	\$219
Hyvar X	bromacil (80)	D	2.5 kg	\$198
Jaguar	Diffufenican (0.25), bromoxynil (25)	RP	10 litre	\$318.75
Karmex	Diuron (80)	D	2.5 kg	\$66
Kerb Flo	propyzamide (40)	R	5 litre	\$300.44
Krovar	bromacil (40) 7 diuron (40)	D	2.5 kg	\$104
Lasso M/Tech	alachlor (48)	M	10 litre	\$152.40
Lexone 75 DF	metribuzin (75)	D	2.5 kg	\$267.07
Linuron DF	linuron (50)	D	2.5 kg	\$78.92
MCPA	MCPA (37.5)	N	20 litre	\$102.13
MCPB	MCPB (40)	N	20 litre	\$190.38
Marksman 480	dicamba (8), atrazine (40)	N	10 litre	\$200
Mostox	dichlorphen (43)	R	5 litre	\$131.10
Nortron	ethofumesate (20)	Y	1 litre	\$110.70
No Sprout	chlorthoproham (50)	Y	20 litre	\$953
Paraquat - see Gramoxone				
Permazol SDA	dalapon (37), amitrole (25)			
	sodium thiocyanate (4.5)	RP	20 kg	\$309.15
Preeglone E	diquat (6), paraquat (12)	I	20 litre	\$273.90
Prefix D	chlorthiamid (7.5), dichlobenil (6.75)	S	5 kg	\$92
Proturf	dichlorprop (27.4), ioxynil (5.4), bromoxynil (36), MCPA (11.9)	RP	5 litre	\$88
Puma S	fenoxaprop-p-ethyl (7.5)	B	5 litre	\$450.00
Pyramin DF	chlolidazon(43)	B	1 kg	\$56.61
Ramrod FLO	propachlor (48)	M	9.47 litre	\$212
Reglone	diquat (20)	I	20 litre	\$391.20
Ronstar SG	oxadiazon (2.0)/simazine (0.5)	RP	20 kg	\$171
Roundup	glyphosate (36)	M	20litre	\$263.43
Salvo	dicamba (1.7), dichlorprop (23.3) MCPA (10.7), mecoprop (21)			
		S	20 litre	\$276.13
SDA	simazine, dalapon, amitrol	DE	500 g	\$17
Selecta 4CPA	4-CPA (40)	DE	5 litre	\$91
Semeron	desmetryn (25)	C	2 kg	\$145
Sencor 70 DF	metribuzin (70)	BY	2 kg	\$220.04
Simatox 900 WG	simazine (50)	I	10 kg	\$225
Simazine Flowable	simazine (51)	N	20 litre	\$105
Sinbar	terbacil (80)	D	1 kg	\$316
Spraygrow	diquat (2.5), paraquat (15)	I	20 litre	\$540
Stomp 330E	pendimethalin (33)	Y	20 litre	\$553.19

Surflan (FLO)	oryzalin (75)	DE	5 litre	\$223
Surrender	benalkonium chloride (50)	Y	20 litre	\$420
Targa	quizalofop-p-ethyl (50)	S	5 litre	\$225.98
Topogard FW	terbutryn (35) terbutylazine (15)	C	5 litre	\$215.04
Tordon Brush- killer NF	picloram (10) triclopyr (30)	DE	20 litre	\$1,214.75
Tordon 2G	picloram (2)	DE	5 kg	\$62.10
Tordon 50D	picloram (2), 2,4-D (20)	DE	20 litre	\$500
Torpedo	diquat (10)	I	20 litre	\$382
Totril	ioxynil (22.5)	RP	20 litre	\$690.00
Touchdown	glyphosate-trimesium (48)	I	20 litre	\$264.18
Treflan	trifluralin (40)	DE	20 litre	\$257
Tribunil WP	methabenzthiazuron (70)	BY	1kg	\$75.00
Triden	trifluralin (40)	RP	20 litre	\$230.63
Triflur 40	trifluralin (40)	N	20 litre	\$230.63
Trimec	dicamba (1.87) plus MCPA (15), plus mecoprop (60)	I	20 litre	\$278.43
Tropotox Plus	MCPA (2.5), MCPB (37.5)	RP	20 litre	\$196.43
Turfweed	ethofumesate	Y	2 litre	\$260
Tyllanex	ethidimuron (70)	N	20 litre	\$293
Velpar 20G	hexazinone (20)	D	20 kg	\$65
Velpar 90	hexazinone (90)	D	2 kg	\$144.70
Velpar L	hexazinone (25)	D	20 litre	\$690
Versatill	clopyralid (30)	DE	20 litre	\$1,387.37
Vorox TDA	terbutylazine (40) amitrole(12.5), dalapon (26)	RP	20 litre	\$474
Weedazol	amitrole (40) ammonium thiocyanate (10)	RP	20 litre	\$217

### 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	\$145.64
Actellic EC	pirimiphos-methyl (50)	I	1 litre	\$52.07
Actellic SG	pirimiphos-methyl (20)	I	90 g	\$15.23
Apollo 50 SC	clofentezine (50)	Y	2 litre	\$760
Applaud 25W	buprofezin (25)	DE	250 g	\$42
Attack	pirimiphos (47.5)	I	5 litre	\$164
Attack	permethrin (2.5) pirimiphos-methyl (47.5)	W	1 litre	\$43
Averte 525 EC	diazinon (50) permethrin (25)	C	10 litre	\$318
Azinphos -methyl 50W	azinphos-methyl (50)	N	12 kg	\$557
Basudin 50WP	diazinon (50)	C	2 kg	\$49
Basudin 800EC	diazinon (80)	C	5 litre	\$176
Baythroid 5 EC	cyfluthin (5)	BY	5 litre	\$261
Carbaryl 50F	carbaryl (50)	N	10 litre	\$191
Carbaryl 80W	carbaryl (80)	N	15 kg	\$425
Chlorpyrifos 48EC	chlorpyrifos (48)	N	20 litre	\$902.75
Chlorpyrifos 48EC	chlorpyrifos (48)	N	5 litre	\$245.30
Chlorpyrifos 50W	chlorpyrifos (50)	N	12 kg	\$669
Counter	terbufos (20)	S	15 kg	\$193.60
Decis EC	deltamethrin (2.5)	N	5 litre	\$295
Decis	deltamethrin (2.5)	W	1 litre	\$70
Defender - organic	potassium salts of fatty acids (25)	Y	20 litre	\$101
Delfin WG - organic	bacillus thuringiensis	Y	1 kg	\$136
Diazinon 20G	diazinon (20)	N	15 kg	\$185.15
Diazinon 50W	diazinon (50)	W	2 kg	\$55
Diazinon 80 EC	diazinon (80)	W	20 litre	\$601.14
Dimilin 25W	diflubenzuron (25)	W	500 g	\$65.40
Dipel 2 X	bacillus thuringiensis	N	500 g	\$59
Drisan	isazophos (10)	BY	20 kg	\$276.00
Ekatin	thiomton (25)	N	20 litre	\$200
Folidol	parathion-methyl (60)	BY	1 litre	\$41.20
Folimat	omethoate (58)	BY	5 litre	\$345
Gesapon 20G	diazinon (20)	C	22 kg	\$270.87
Gesapon 80EC	diazinon (80)	C	5 litre	\$155.77
Halmark 5EC	esfenvalerate (5)	S	1 litre	\$79
Imidan	phosmet (75)	I	3 litre	\$68
Karate	cyhalothin (5)	I	5 litre	\$438.90
Kelthane 35	dicofol (35)	R	1 kg	\$37
Lannate L	methomyl (20)	D	5 litre	\$154
Lar bait	thiodicarb (0.4)	RP	10 kg	\$132

Lorsban 40EC	chlorpyrifos (40)	DE	5 litre	\$271.38
Lorsban 50WP	chlorpyrifos (50)	DE	4 kg	\$234
Malathion 50	maldison (50)	N	20 litre	\$208
Maldison 50 EC	maldison (50)	Y	5 litre	\$76
Malix 35 EC	endosulfan (35.5)	B	5 litre	\$99
Mavrik aquaflo	fluvalinate (24)	Y	1 litre	\$169.01
Mesuroi bait	methiocarb	BY	10 kg	\$149.46
Mesuroi Snail	methiocarb (2)	BY	5 kg	\$88
Metasystox	demcto-s-methyl (25)	BY	5 litre	\$133.23
Miral 10G	iazophos (10)	C	2 kg	\$272.93
Monitor	methamidophos (60)	B	20 litre	\$835.43
Nemacur 400 EC	fenamiphos (40)	BY	5 litre	\$299
Nissorun WP	hexythiozox (10)	RP	1 kg	\$200
Nursery Mavrik	tau-fluvinat (0.96)	Y	1 litre	\$27
Nuvan 1000 EC	dichlorvos (100)	C	1 litre	\$45.00
Omite 30W	propargite (30)	N	2 kg	\$84
Orthene 75	acephate (75)	N	10 kg	\$511
Orthene Liquid	acephate (19.5)	Y	1 litre	\$44
Otinem - organic	<i>Heterorhabditis bacteriophra</i>			
	0.63 million per g	Y	95 g	\$100
Pentac Aquaflow	dienochlor (48)	Y	1 litre	\$264
Perfekthion S	dimethoate (50)	B	5 litre	\$125.66
Pheromone traps		PM	2 kits	\$94.23
Phorate 20G	phorate (20)	I	15 kg	\$117.15
Pirimor 500	pirimicarb (50)	I	500 g	\$39.10
Ripcord 20 EC	cypermethrin (20)	S	275 mls	\$51.84
Rogor E	dimethoate (40)	Y	20 litre	\$336.17
Safers Insecticide	potassium salts (47.7)	W	4 litre	\$31
Saprene	triforine (18.3) plus acephate (11.4)	N	1 litre	\$39.00
Sevin FLO	carbaryl (50)	RP	10 litre	\$181
Sevin WP	carbaryl (80)	RP	2 kg	\$57
Suscon Green	chlorpyrifos (10)	W	15 kg	\$288
Tamaron	methamidophos (60)	BY	20 litre	\$671.52
Thimet 20G	phorate (20)	N	15 kg	\$125.19
Thiodan 35EC	endosulfan (35.5)	W	20 litre	\$458
Verthion 1000	fenitrothion (60)	S	5 litre	\$227.36
Vydate L	oxamyl (24)	D	3.8 litre	\$165
Yates Pyrethrum	pyrethrum (1.4) (Organic)	Y	5 litre	\$144

## 2.9.5 Fungicides

Refer to Section 2.9.2 for key to Company Codes.

Trade Name	Active Ingredient (%)	Company	Unit Size	Retail Price
Afugan	pyrazophos (30) xylene (56)	<b>B</b>	1 litre	\$62
Aliette W G	fosetyl-aluminium (80)	<b>RP</b>	1 kg	\$77
Aliette Super	fosetyl-aluminium (52.8) thiabendazole (12.9) thiram (17.21)	<b>RP</b>	2.9 kg	\$243.98
Alto	cyproconazole	<b>N</b>	5 litre	\$646.80
Antrocol 70 WP	propineb (70)	<b>BY</b>	25 kg	\$307.13
Bavistan FL	carbendazim (50)	<b>B</b>	5 litre	\$377.47
Baycor 50 WP	triazole (50)	<b>BY</b>	2 kg	\$226
Bayleton 5 DF	triazole (5)	<b>BY</b>	2 kg	\$119
Baytan IM	triadimenol (15)	<b>BY</b>	10 kg	\$980.54
Benlate	benomyl(50)	<b>W</b>	1 kg	\$74.12
Beret Z 24 WS	fenpiconil (20) imazalil (0.4)	<b>C</b>	1 kg	\$31
Botran 25W	dicloran (75)	<b>Y</b>	2 kg	\$144
Bravo 500F	chlorothalonil (50)	<b>Y</b>	2 litre	\$79.98
Calixin	tridemorph (75)	<b>B</b>	5 litre	\$235
<b>Captan - see Orthocide</b>				
Cereous	triadimenol (25)	<b>BY</b>	5 litre	\$505.66
Champ - organic	cupric hydroxide (23)	<b>Y</b>	9.46 litre	\$132
Champion-organic	copper (50)	<b>Y</b>	10 kg	\$144
Copper	copper oxichloride (50)	<b>W</b>	25 kg	\$234
Dacamil (Bravo)	chlorothalonil (50)		20 litre	\$430.32
Dithane M45	mancozeb (80)	<b>R</b>	25 kg	\$375
Dodine 400	dodine (40)	<b>N</b>	10 litre	\$205
Euparen DF	dichlofluanid (50)	<b>BY</b>	2 kg	\$140.33
Folicur	terbuconazole (25)	<b>BY</b>	5 litre	\$697.43
Fongarid 25 WP	furalaxyl (25)	<b>Y</b>	500 g	\$171
Galben	benalaxyl (8), mancozeb (65)	<b>I</b>	10 kg	\$372.83
Greenguard	chlorothalonil (12.5)	<b>Y</b>	20 litre	\$485
Karathane	dinocap (18.5)	<b>R</b>	2.5 kg	\$83
Kocide 606	cupric hydroxide (50)	<b>S</b>	10 litre	\$120
Kocide DF	cupric hydroxide (50)	<b>S</b>	10 kg	\$108.68
Kumulus	sulphur (80)	<b>W</b>	10 kg	\$64
Lime Sulphur	sulphur (15)	<b>F</b>	20 litre	\$64
Mancozeb 80W	mancozeb (80)	<b>N</b>	2 kg	\$31
Mancozeb	mancozeb (80)	<b>W</b>	25 kg	\$249
Merit 500EC	propiconazole (12.5) fenpropimorph (37.5)	<b>C</b>	5 litre	\$285.03
Monceren	pencycuron (12.5)	<b>BY</b>	20 kg	\$578.53
Nimrod	bupirimate (25)	<b>I</b>	10 kg	\$377
Nustar	flusilazol (20)	<b>D</b>	400 g	\$123
Orthocide, 10 Dust	captan (10)	<b>N</b>	25 kg	\$182

Trade Name	Active Ingredient (%)	Company	Unit Size	Retail Price
Orthocide 65	captan (65)	N	25 kg	\$330
Orthocide 80 W	captan (80)	N	12 kg	\$208
Pencozeb	mancozeb (80)	N	25 kg	\$330
Phaltan 50W	folpet (50)	N	2 kg	\$30
Polyram DF	metiram (80)	B	10 kg	\$132
Previcur N	propamocarb (60)	W	1 litre	\$44
Ridomil MZ WSP	metalaxyl (8) mancozeb (64)	C	20 kg	\$811.21
Ridomil 10G	metalaxyl (10)	C	2.5 kg	\$107
Rizolex	tolclofos methyl (10)	S	2 kg	\$54.88
		S	25 kg	\$519
Ronilan DF	vinclozolin (50)	B	5 kg	\$450.23
Rovral WP	iprodione (50)	RP	1 kg	\$111
Rovral Flo	iprodione (25)	RP	5 litre	\$225.44
Rubigan 12EC	fenarimol (12)	RP	5 litre	\$481
Rubigan FLO	fenarimol (12)	RP	1 litre	\$107.36
Saprene	triforine (3.9), acephate (4.5)	N	1 litre	\$30
Saprol	triforine (19)	S	2 litre	\$105
		S	5 litre	\$235
Shirlan	fluzazinam (50)	I	5 litre	\$635.86
Sportak 45 EC	prochloraz (45)	N	5 litre	\$237.06
Sumisclax FLO	procymidane (25)	I	20 litre	\$892.50
Syllit Plus	dodine (40)	RP	10 litre	\$171
Taratek	chlorothalonil (25) thiophanate methyl (25)	W	10 litre	\$425
Terraclor 75WP	quintozene (75)	W	25 kg	\$1350
Terrazole 35WP	etridiazole (35)	W	25 kg	\$2438
Terrazole 25EC	etridiazole (25)	W	1 litre	\$71
Thiram 40 F	thiram (40)	N	10 litre	\$84
Thiram DF	thiram (80)	N	20 kg	\$339
Thiram WDG	thiram (80)	Y	2 kg	\$40
Thiram 80	thiram (80)	N	20 kg	\$230
Thiram 80W	thiram (80)	W	20 kg	\$375
Thiram 40F	thiram (40)	W	10 litre	\$100
Tilt 625 Gel	prop-isoconazole	C	100 g	\$262.69
Topas MZ62WP	penconazole (1.7), mancozeb (60)	C	3 kg	\$88
Topas 10 WP	penconazole (10)	C	0.5 kg	\$68
Topas 100 EC	penconazole (10)	C	1 litre	\$107
Topsin M-4A	thiophanate-methyl (40)	DE	5 litre	\$190.90
Vincit	flutriafol (5) imazalil sulphate (5)	I	5 litre	\$408.50
Vitaflo 200	carboxin (20), thiram (20)	N	20 litre	\$487.19

## 2.9.6 Rabbit/Rodent Control

Trade Name	Active Ingredient (%)	Company	Unit Size	Retail Price
Non toxic Feed Pellets		PM	25 kg	\$37
Pindone Rabbit Pellets		PM	25 kg	\$65 - \$73
Magtoxin fumigant	(pellets)	PM	1 kg	\$164
Storm Wax Baits		PM	3 kg	\$50
Talon 50 WB	brodifacoum (5)	I	12.5 kg	\$108

## 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

Refer to *Section 2.9.2* for key to Company Codes.

Citowett sticker/spread	alkylaryl polyglycol ether	B	5 litre	\$52
Contact	non ionic surfactant	I	20 litre	\$198
Delfoam	anti-drift agent	Y	5 litre	\$71
Keymark	foam"blob"marker conc.	K	5 litre	\$62
Landmark	spray marker dye	N	1 litre	\$49
Millermark	foam"blob"marker conc.	K	4 litre	\$100

## 2.9.10 Penetrants

Pulse (for Roundup herbicide)		M	5 litre	\$156
Triton X45		I	20 litre	\$296

## 2.9.11 Growth Regulants

Cultar	paclobutrazol (25)	I	1 litre	\$293
Cycocel 750	chlomequat (75)	B	10 litre	\$137
Ethrel	chlorthalopron (48)	RP	20 litre	\$730
Promalin	gibberellic acid (1.9)	N	500 ml	\$207
Terpal	mepiquat chloride (30.5) chlorthalopron (15.5)	B	5 litre	\$210

## 2.9.12 Sprout Inhibitors

Trade Name	Active Ingredient (%)	Company	Unit Size	Retail Price
No Sprout	chlorpropham (50)	A	20 litre	POA
			200 litre	POA
Propham Dust	propham (40)	A	20 kg	\$130

### 2.9.13 Oil Sprays

D-C Trate	Int. spraying oil	B	20litre	\$99
Sunspray	oils-mineral-	S	5litre	\$32
	insecticidal (97)	S	20litre	\$96

### 2.9.14 Soil Fumigants

Basamid G	dazomet (99)	B	20kg	\$281
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### 2.9.15 Root Forming Hormones

Clonex	beta-indolyl butyric acid	Y	500ml	\$36
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### 2.9.16 Spraying Costs - Aerial and Ground

#### Aerial Spraying

##### Canterbury:

For helicopter work in Canterbury costs include:

Crop Spraying	\$25 to \$35 per hectare
Brushweed Spraying	\$120 to \$140 per hectare
Charter Rate	\$980 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

Another contractor charges \$32 per hectare for most types of spraying.

##### 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 \$37.50 per ha

##### Contract Weed Control:

Gunning work, 2 people and machinery:

Depending on job size \$90 to \$110 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	\$0.40	\$0.15
Prime cattle	\$5.00	\$1.00
Store cattle	\$3.20	\$0.80
Prime pigs	\$2.15	\$0.60
Store pigs	\$1.65	\$0.35
Bobby calves	\$2.15	\$0.60
Dairy cattle	\$3.70	\$0.80
Goats	\$0.40	\$0.15
Ponies	\$4.50	\$1.00

*North Island* sales yards levy approximately 16c per head for sheep and \$1.60 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	5.50%
Bulls Stud	8.50%	Horses	5.50%
Dairy Cattle	5.50%	Stud Sheep/Cattle	8.50%
Pigs	6.25%	Pigs	5.50%
Deer	5.50%	Dogs	5.50%
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	6.25%	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 1<sup>st</sup> 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	\$0.93 per head	Goats	\$0.97 per head
Sheep	\$1.05 per head	Bobby Calves	\$0.93 per head
Cattle	\$6.50 per head	Horses	\$6.50 per head
Pigs	\$3.25 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 1995/96 killing season.
  - Significant variation in rates may occur between plants because of the different nature and pattern of kill between plants.
  - 85% of Meat Companies have now entered into agreed service contracts for the first time.

### 2.10.7 Livestock Levies

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 November 1994).

Figures are rounded to the nearest cent.

Levies Per Head:	Cows	Other	Calves	Vealers
		Cattle	(up to 27 kg)	(27 to 60 kg)
Disease Eradication *	\$8.71	\$8.71	-	\$8.71
Meat Producers Bd.	\$4.20	\$4.20	\$0.24	\$4.20
<b>Total Levies</b>	<b>\$12.91</b>	<b>\$12.91</b>	<b>\$0.24</b>	<b>\$12.91</b>
Levies per head:	Lambs	Sheep and Goats	Pigs	
Meat Producer Board	\$0.47	\$0.47	-	
Pork Industry Board <sup>1</sup>	-	-	\$4.40	
<b>Total Levies</b>	<b>\$0.47</b>	<b>\$0.47</b>	<b>\$4.40</b>	

- Note:** **Other Cattle** Includes Heifers, Steers and Bulls.  
**Sheep** Includes Hoggets and Rams, and other Adult Sheep.  
All levy rates shown are GST exclusive.

<sup>1</sup> 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 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 December 1st 1995 is the NZDFA commodity levy which includes 1.5¢ per kg on venison and 10¢ per kg of velvet. The same rate applies for Fallow deer.

### **2.10.8 Contract Fees - Beef Cattle**

For holding cost margins and management fees associated with beef contracts - see *Section 1.4.3*.

### **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 1997.

The 1997 FAR levy will be 0.6% of the estimated value of the crops levied for research. For crops that fall into the FAR's "other" category the rate is 0.1%.

Refer to *Section 1.10.1*.

The fee for 'Maintenance of Non Proprietary Cultivars' (NPC's) will continue to be 0.8% on the estimated value of the 13 NPC varieties. This will appear on the Seed Testing Station invoice as 'AgResearch Maintenance Fee'

### **2.10.10 Wheat Growers Levies**

*United Wheatgrowers levy* - \$2.10 per tonne, Insurance premium.

*Foundation for Arable Research* levy - 0.4% of value of first point of sale.

Levies for Barley, Maize, field peas and Oats are also 0.4%, Sunflower 0.1%

### **2.10.11 Horticultural Levies**

#### **Annual Berryfruit Levy:**

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)	\$200
8000 sq m and over	\$350

#### **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).

#### **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 9 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.

#### Summerfruits:

Levy on:	Local Market		Export Market	
	Grower	Grower	Grower	Exporter
<b>Nectarines</b>	1.5% voluntary	1.5% per kg	1.5% per kg	1.5¢ per kg
<b>Apricots</b>	1.5% voluntary	1.5% per kg	1.5% per kg	1.5¢ per kg
<b>Peaches</b>	1.5% voluntary	1.5% per kg	1.5% per kg	1.5¢ per kg
<b>Plums</b>	1.5% voluntary	1.5% per kg	1.5% per kg	1.5¢ per kg
<b>Cherries</b>	0.75% voluntary	0.75% per kg	0.75% per kg	2¢ per kg
<b>Blueberries - (Fresh)</b>	10¢ per kg	28¢ per kg	28¢ per kg	5¢ per kg
<b>- (Frozen)</b>	3¢ per kg	3¢ per kg	5¢ per kg	1¢ per kg
<b>Table Grapes</b>	-	-	10¢ per kg	6¢ per kg
<b>Avocados</b>	3.0%	50¢ per tray	50¢ per tray	10¢ per tray
<b>Feijoas</b>	2.0%	30¢ per tray	30¢ per tray	20¢ per tray
<b>Persimmons</b>	-	30¢ per tray	30¢ per tray	-
<b>Buttercup Squash</b>	\$3.50 per tonne	\$5.00/tonne	\$5.00/tonne	\$1.50 per t
<b>Garlic</b>	0.45%	0.375% + 10¢ per kg	0.375% + 10¢ per kg	-
<b>Black Currants</b>	-	6.0¢ per kg	6.0¢ per kg	-
<b>Boysenberries</b>	2¢ per kg	-	-	-

#### Citrus Fruits:

The Citrus Planning Council imposes a 1% levy on all citrus fruit growers.

#### 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 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	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
Export Buttercup Squash	0.15¢ per \$100 of sales

## 2.11 SUNDRY CROPPING and HORTICULTURAL EXPENSES

### 2.11.1 Seed Certification Charges 1996/97

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	17¢ 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

SGS (Timaru) Grain Terminal Charges (1997 harvest)

Wheat and Barley:

% Moisture	Price per metric tonne
0 - 15%	\$15.00
15.1% - 17%	\$16.50
17.1% - 18%	\$18.50
18.1% - 20%	\$20.50
above 20%	\$25.00
above 24%	POA

Peas:

0% - 18%	\$30.00
18.1% - 20%	\$35.00
above 20%	\$40.00
above 24%	POA

**Waikato:**

Barley:

%	Drying cost (\$ per tonne)	Dry conversion
up to 20	\$18.50	0.919
21	\$20.10	0.9055
22	\$21.70	0.892
23	\$23.30	0.8785
24	\$24.90	0.865
25	\$26.50	0.8515
26	\$28.10	0.838
27	\$29.70	0.8245
28	\$31.30	0.811
29	\$32.90	0.7975
30	\$34.50	0.784
32	\$36.10	0.757
34	\$37.70	0.730
36	\$39.30	0.703

Maize:

%	Drying cost (\$ per tonne)
20%	\$18.50 to \$19.00

**Manawatu and Rangitikei:**

Maize:

%	Price (\$ per tonne)
up to 20.9	17.25
21 to 21.9	18.75
22 to 22.9	20.25
23 to 23.9	21.75
24 to 24.9	23.25
25 to 25.9	24.75
26 to 26.9	26.25

27 to 27.9	27.75
28 to 28.9	29.25
29 to 29.9	30.75
30 to 30.9	32.25
31 to 31.9	33.75
32 to 32.9	35.25
33 to 33.9	36.75
34 to 34.9	38.25
35 to 35.9	39.0

Moisture deductions - up to 27.9% - 1.4%  
- 28% and over - 1.5%

*Buchanans Storage Company:*

All grain drying	- up to 16% moisture	\$17.00 per tonne
	- greater than 16% moisture	\$20.00 per tonne
Screening charge		\$15.00 per tonne

**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		16.00cents per kg
Cocksfoot		35.20cents per kg
Clovers	White, Red and Alsike	33.00cents per kg
Lucerne		33.00cents per kg
Grass seed	(Fine - Browntop, Fescue, Dogstail and Timothy)	42.90cents 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	20.00cents per kg
Rape	20.00cents per kg
Prairie Grass	64.90cents per kg
Yarrow	84.70cents per kg
Separating White Clover and Ryegrass	\$2.10per sack
Separating mixed Oats and Ryegrass	\$2.10per sack
Slurry treating	\$29.30 per tonne plus materials
Blending clovers and blending grass seeds	\$6.00 per 100 kg

**Machine Dressing**

Wheat and Ryccorn	\$55.00 per tonne
Barley	\$55.00 per tonne
Field Peas and Lupins	\$61.00 per tonne
Garden Peas, Beans and Lentils	\$71.00 per tonne
Oats (dressing and clipping)	\$66.50 per tonne
	(or by negotiation)

## Storage Charges

*MacFarlane's Seed and Grain* charge \$2.75 per tonne per month. Storage commences 1 April 1997, minimum storage cost of \$5.50, consolidation fee \$5.50.

### 2.11.4 Seed Testing Fees

*MAFQual:*

Purity and Germination Tests:

	<b>Purity and Germination</b>	<b>Purity only</b>	<b>Germination only</b>
All species of seed except imported	\$121.00	\$96.80	\$93.50
Field dressed seed	-	-	\$60.50
Imported grain	\$171.60	\$137.50	\$93.50
Imported milled grain	-	\$176.00	-
Imported seed except grain	\$148.50	\$121.00	\$93.50

**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

*Buchanans 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**

**Crates**

*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 \$0.40 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	

*Plix Packaging Ltd:*

	Price Per 1000
Kiwifruit Fluted Trays	\$164
Summerfruit Trays	\$203
Avocado Trays	\$175
Nashi Trays	\$270
Punnets	\$65
Squash/Melon Trays (for field use)	\$42
Seedling Punnets	\$60
Plixtrainers	\$350
Exotic Trays (for feijoas/tamarillos)	\$203
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	\$38.04 per 1000
	Perforated -450 x 210 x 100	\$40.03 per 1000
Chrysanthemum Large Sleeve	Plain - 450 x 350 x 185	\$59.34 per 1000
	Perforated - 450 x 350 x 185	\$60.37 per 1000
Orchid Polythene Sleeve	160 x 600mm Packs	\$26.63 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	\$1.09
Euro Double tray	\$1.28
Euro Bulk tray	\$1.74
Pallet P10	\$21.95
Cap P10	\$3.25
Standard pallet	\$11.00
Standard cap	\$4.50
Container pallet	\$13.00
Container cap	\$6.00
Plateau single pallet	\$1.68
Plateau cap	\$4.70
Labour	\$0.03 to \$0.035 per box
Glue	\$0.02 per box
VertV Boards	\$0.83

*Flight Group Ltd:*

Seedling tray T1686, 485 x 350 x 70mm	\$3.30 to \$3.65 per carton
Punnets 65 x 65 x 53mm to 100 x 100 x 83mm	\$50.65 to \$116.70 per carton
152 x 108 x 63mm to 160 x 115 x 65mm	\$83.65 to \$141.50 per carton
240 x 170 x 69mm to 320 x 235 x 70mm	\$275.60 to \$529.85 per carton
Seedling tray, 485 x 326 x 50mm	\$3.50
Punnets designed to fit tray 100 x 75 x 53mm to 150 x 100 x 55mm	\$45.30 to \$111.60 per carton
Seedling tray, 433 x 375 x 65mm	\$3.45
Punnets designed to fit tray T1805 150 x 130 x 50mm	\$111.65 per carton
Seedling tray T2146, 345 x 295 x 45mm	\$2.05

*Southcorp Packaging:***Packaging Film**

<b>Kiwifruit Polythene Products</b>		
Euro Bags	400 x 360 x 470mm x 30 $\mu$	\$75 per 1000
Euro Bags	400 x 360 x 530mm x 30 $\mu$	\$80 per 1000
<b>Apple Carton Polybag</b>		
Standard Polybag (natural,punched)	500 x 380 x 800mm x 30 $\mu$	\$140 per 1000
Ultrathane Polybag (natural,punched)	500 x 380 x 800mm x 18 $\mu$	\$115 per 1000
<b>Bin Liners</b>		
Kiwifruit Liner (natural)	1035 x 770 x 1325mm x 70 $\mu$	\$1100 per 1000
<b>Pallet Wrapping Film -</b>		
<b>Pallet Shrink Wrap</b>		
Shrink Tubing Natural	1270 x 1070mm (25kg rolls)	\$3.80 per kg
Shrink Tubing Natural	1340 x 1140mm (25kg rolls)	\$3.80 per kg

Pallet Stretch Wrap		
Handwrap	500mm x 500m x 20 $\mu$	\$22 per 1000m roll
Handwrap	500mm x 450m x 23 $\mu$	\$22 per 1000m roll
Machine Wrap	500mm x 1850m x 20 $\mu$	\$80 per 1000m roll
Machine Wrap	500mm x 1625m x 23 $\mu$	\$80 per 1000m roll

*Agpack Plastics Limited:*

Layflat Polythene Tubing, for Heat Ducting and Packaging applications:

Layflat width x Roll Length	Tube Diameter	Gauge	Price per Roll
250 mm x 200 m	160 mm	100 $\mu$ m	\$69.40
500 mm x 100 m	300 mm	100 $\mu$ m	\$66.50
800 mm x 50 m	500 mm	125 $\mu$ m	\$70.15
1000 mm x 50 m	600 mm	125 $\mu$ m	\$87.20

### 2.11.6 Grading and Packing Charges - Horticultural Produce

**Note:** See also *Section 3.5, Export Fruit Gross Margins.*

#### *Contract Grading/Packing*

##### Apples

A *South Island* contractor charges \$55 to \$68 per 25 bushell bin, fruit delivered, for packing. An additional charge of \$5 is charged if the apples are drenched.

A *North Island* contractor charges

\$1.10 per 18kg carton or \$24.44 per 400kg bin

##### Avocado

Packing charges for export Avocado export were around \$1.40 to \$1.80 per tray.

##### 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	21%
Cartage	5%
Shed Charge	8%
Packaging	60%
Overhead	3%
Lease	3%

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
Veges	\$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 tonne basis but differ per product type. Prices range between \$20.00 and \$50.00 (plus) per metre tonne, per calender month or part thereof.
3. Order picking is sometimes included in a container loading rate or on its own. The price ranging between \$0.30 - \$0.50 per carton.
4. Blast Freezing ranges between 6 - 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	\$80 to \$180

#### Hive Purchase

\$160 per hive

### 2.11.9 Weighing Charges

The current weighing charge at a weigh bridge in Christchurch (*Pyne Gould Guinness Ltd*) is \$6.75 per weigh.

## 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:

<b>Dairying</b>	
Northern North Island	\$9,500 to \$11,200
Lower North Island	\$9,000 to \$11,500
Canterbury and Northern South Island	\$4,800 to \$17,000
Otago and Southland	\$12,000
<b>Sheep and Beef</b>	
Northern North Island	\$3,570 to \$7,291
Lower North Island	\$3,785 to \$15,000
Canterbury and Northern South Island	\$2,300 to \$7,000
Otago and Southland	\$5,060 to \$9,000
<b>Orchards</b>	
Northern North Island	\$4,100
Lower North Island	\$3,630
Canterbury and Northern South Island	\$7,000 to \$8,000

Source: M.A.F. Farm Monitoring Report, January 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.

## 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:

	Sheep/Beef/Dairy and Deer farms
Northern North Island	\$7,300 to \$10,000
Lower North Island	\$5,500 to \$9,900
Canterbury and Northern South Island	\$6,000 to \$16,574
Otago and Southland	\$9,200 to \$24,500

	Orchards
Northern North Island - Kiwifruit	\$4,300
Lower North Island - Apples	\$6,223
Canterbury and Northern South Island - Apples	\$10,000 to \$11,500

*Source: MAF Farm Monitoring Report, January 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

#### Guide to Tractor Fuel Requirements for Individual Field Operations.

<i>Operation</i>	<i>Fuel Consumption litre/ha</i>
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 <i>(0.24 l per kW hr)</i>	Normal Cultivation <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	\$585.05	
		\$10,793.15
Total fixed cost per hour (580 hours/year)		\$18.60

<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		\$35.63
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**(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	\$696.20	
		\$12,589.00
Total fixed cost/hour assuming 580 hours per year		\$21.71

<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		\$40.39
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**(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	\$770.35	
		\$14,504.00
Total fixed cost/hour assuming 670 hours per year		\$21.65

<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		\$45.47
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### 2.13.3 Car Operating Costs

Based on *Sydenham Technical Centre* estimates (as at November 1996), total annual car operating costs are:

	Running cost	Fixed cost	Total cost
up to 1300cc	\$1,922	\$4,731	\$6,653
1301 to 1600cc	\$2,088	\$5,991	\$8,079
1601 to 2000cc	\$2,340	\$7,252	\$9,592
over 2000cc	\$2,772	\$8,241	\$11,013

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.

### 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

### 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 \$400
Forestry tyres, 28L26FS14 to 30.5-32FS16	\$4,300 to \$5,250
New Zealand made tyres	
- front tractor, 600-16/6FT to 750-16/8FT	\$170 to \$239
- rear tractor, 535540A to 535560A	\$615 to \$931

*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 (Mostly commercial transport operators)	\$3.00 per licence

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	\$2094.40	
		\$23,160.00
Total fixed costs per hour assuming 200 hrs per year		\$115.01

<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		\$175.92

## 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-\$110/hour
Canterbury/Nelson/West Coast area	\$73/hour
Otago/Southland	\$50-\$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 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 and land valuation consent required.

Where an application is required to gain Land Valuation Consent, the purchaser must pay an application fee of \$200 to the Land Valuation Tribunal.

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.

### 2.14.4 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.

### **2.14.5 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.)

## 2.15 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:

	Sheep and Beef
Northern North Island	\$10,300 to \$13,150
Lower North Island	\$10,200 to \$12,650
Canterbury and Northern South Island	\$7,000 to \$17,600
South Region	\$9,000 to \$15,730
	Dairying
Northern North Island	\$10,600- \$12,000
Lower North Island	\$8,350- \$44,355
Canterbury and Northern South Island	\$4,200- \$13,300
Otago and Southland	\$15,000
	Orchard
Northern North Island - Kiwifruit	\$6,650
Lower North Island - Pipfruit	\$3,487
Canterbury and Northern South Island - Apples	\$7,400- \$8,000
Otago and Southland	-

Source: *M.A.F. Farm Monitoring Report, January 1997*.

### 2.15.2 Telephone Costs

#### *Telecom - Canterbury:*

Standard Residential Network Connection Charge	\$55.00
Change of customer name	\$26.67
<b><i>Line Rental (per month):</i></b>	
Standard Residential	\$31.88
Standard Business - with Local Call Charging - Individual	\$60.42
Non-standard Business - B1 - Individual	\$60.42
Non-standard Business - B2 - Individual	\$60.42
<b><i>Telephone Rental (per month):</i></b>	
Standard Business Rental Phone	\$3.56
Standard Residential Rental Telephone	\$3.56
Second and subsequent	\$3.56
<b><i>Calls to Cellular phones (per minute)</i></b>	\$0.63
<b><i>Wiring Maintenance Charge (per month) - optional</i></b>	\$0.87
Minimum call out charge:	
Business	\$30.00
Residential (Applies if telephone is not owned by Telecom)	\$30.00
<b><i>Hourly charge out rate outside normal hours:</i></b>	
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 - 40¢.

Fast Post - 80¢.

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.

A 2 kg parcel ranges from \$2.50 to \$5.50 (Standard Post), and \$4.00 to \$8.80 (Fast Post).

A 20 kg parcel ranges from \$2.50 to \$24.00 (Standard Post), and \$11.00 to \$34.00 (Fast Post).

Across town delivery (by the working day):

up to 1kg -	\$2.00
1 to 20kg-	\$2.50

### 2.15.4 Courier Charges

*New Zealand Couriers:*

Courier Tickets (5/15/25 kg)

Example ex Christchurch		
1 ticket/25kg	<b>Local</b> -Lyttelton, Sumner, Airport, Islington, Belfast	\$3.00
1 ticket/25kg	<b>Outer</b> -Amberley, Darfield, Rakaia (70km)	\$3.62
1 ticket/15kg	<b>Short-haul</b> -West Coast, Methven, Waimate, Kaikoura	\$5.25
1 ticket/5kg	<b>Long-haul</b> -Rest of South Island	\$7.88
1 ticket/5kg	<b>Inter-Island</b> -Stewart or North Island	\$15.23

Example ex Hamilton		
1 ticket/25kg	<b>Local</b> -Te Rapa, Chedworth, Hillcrest, Dinsdale, Glenview and Airport	\$3.00
1 ticket/25kg	<b>Outer</b> -Waikato, King Country, Thames Valley	\$3.62

1 ticket/15kg	<b>Short-haul-</b> Auckland, Bay of Plenty, Coromandel Peninsula	\$5.25
1 ticket/5kg	<b>Long-haul-</b> Rest of North Island	\$7.88
1 ticket/5kg	<b>Inter-Island-</b> To all South Island destinations	\$15.23

International Rates:				
Zone	0.5 kg	1 kg	5.0 kg	10 kg
Australia/Fiji	\$12.62	\$22.70	\$99.40	\$151.40
Southeast Asia/Pacific	\$28.90	\$42.80	\$154.00	\$258.50
USA, Canada	\$40.45	\$61.25	\$227.65	\$323.65
All Others	\$52.00	\$75.10	\$249.80	\$363.80

*T.N.T. Express Worldwide (NZ) Ltd:*

Citywide ticket up to 25kg		\$4.30
Regional ticket (150km radius)		\$6.00 per 5kg or part thereof
Within an Island		\$9.00 per 5kg or part thereof
Between the Islands		\$16.50 per 5kg or part thereof
Supamail 1 (Standard letter)	up to 500 gm	\$2.50
Supamail 2 (440mm x 160mm)	up to 500 gm	\$3.60
Supamail 3 (380mm x 260mm)	up to 1 kg	\$4.50
Supamail 4 (460mm x 320mm)	up to 2 kg	\$6.00
Supamail 5 (400mm x 510mm)	up to 3 kg	\$10.50

**2.15.5 Subscriptions** (Magazines/Farming Organisations)

Some examples are:

**Magazines**

"New Zealand Farmer"	\$92.44 per year or \$2.10 per copy
"Dairy Exporter"	\$24.44 per year
"Straight Furrow"	Free
"Horticultural News"	\$53.34 per year
"The Orchardist"	\$72.00 per year
"The Main Report Agricultural Letter"	\$89.00 per year
"The Deer Farmer"	\$56 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)	\$10.00

*Federated Farmers (Canterbury)*

Corporate member:	\$350
Owner:	\$220
Sharemilker:	\$140
Small farmer:	\$140
Associate member:	\$70
Retired member:	\$70

## 2.15.6 Aerial Photographs and Farm Maps

### Aerial Photographs

*New Zealand Aerial Mapping*

Charges for black and white enlargements

Size	Unmounted	Extra Copies
34 x 46	\$54	\$32
70 x 70	\$72	\$44
70 x 120	\$92	\$58
95 x 120	\$122	\$80
120 x 140	\$176	\$116

Add \$12 handling fee, charged once for every order.

### Scanning Charges

Scanning package: 1 A4 aerial photograph and 1 scanned image on a disk	\$116
Contact Scanning package: 1 contact aerial photo and 1 scanned image on a disk	\$88
C.D Rom Scan Package: 1 A4 aerial photo and a CD with 1 scanned image.	\$152
One Scanned Image	\$64
Contact Mosaic	\$28
Contact Print	\$12

### 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)	\$235.55
Woolshed	\$100,000 value (\$500 excess)	\$345.35

#### **Plant and Machinery:**

		Annual Premium
Tractor - Value:	\$10,000	\$103.30
	\$50,000	\$399.75
	\$75,000	\$585.05
	\$90,000	\$696.20
	\$100,000	\$770.35
	Premium includes tyre cover (\$100 excess)	
Utility - Value:	\$20,000 including windscreen cover	\$263.20

#### **Specialised Farm Equipment**

Chainsaws, tools, scanaprobe, nitrogen containers, radio telephones etc.

\$5,000 farming plant, machinery, tools and equipment (\$100 excess) \$31.60

#### **Wool:**

\$5,000 worth of clipped wool, (\$100 excess) \$31.60

**General Farm Produce and Manures:** whilst on the farm \$0.362 per \$100

#### **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 \$120 per \$100 cover. (Cover for an income of \$500 per week would cost  $120 \times 5 = \$600$  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 \$55.00

## 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 and fire service charges.

## Crops

*P.G.G. Insurance* (1996 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 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%

- All other losses - Excess 15%.

### 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):

1995/96 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
Annual General:	\$75	\$75	\$75
Community Centre:	These charges are different for each township.		
Recreation Reserve:	\$11.25	-	-
Library:	\$38.50	-	-
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 \$1,180.60 in rates. This excludes water race charges which are calculated as follows:

Ellesmere	Malvern	Selwyn
\$4.45 per hectare	\$5.15 per hectare	\$4.65 per hectare
<b>Paparua</b> - dependant upon area of land		

#### ***Manawatu District council:***

- Works and Services Separate Rate:  
Revenue sought \$3,163,271 to be applied to roading, footpaths, refuse tips.  
Amount varies depending on the category of the property.
- General Rate:  
Revenue sought \$2,991,228 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 (proposed) 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 area. 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/su. The lessee pays the rates, fertiliser and carries out routine maintenance work.

###### Paddock lease-

Potato Ground (with facility for irrigation) - in the vicinity of \$1000 per hectare per year.

Larger areas of cultivable land in the vicinity of \$400 per hectare per year.

###### Southland:

Dairy run-off blocks	\$370 to \$450 per hectare
Dairy run-off, partly milked	\$500 per hectare
Sheep and Beef	\$150 to \$250 per hectare
Sheep/Beef/Cropping	\$250 to \$320 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.

###### Manawatu:

Hill country	\$100 per hectare
Dairy Run-off	\$350 to \$550 per hectare
Easy Hill	\$250 per hectare
Cropping	\$250 to \$370 per hectare
Dairying	\$500 to \$750 per hectare
Potato land	\$1000 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

***Crown Land***

Renewed Rents on Crown Renewable Leases are 4.5% of Rental Value, as from 1971 (reducible 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 Cost of Finance (see also Sections 2.17.2, 2.17.3 and 2.17.4)

Source: *New Zealand Farmer*, February 1997.

Lending Organisations gave quotes (as at 27 February 1997) for a hypothetical farmer who required \$200,000 first mortgage and seasonal finance of up to \$50,000. The average overdraft was \$20,000 and was needed for seven months; with five months in credit (average \$15,000). The hypothetical farm was a 3250 stock unit sheep and beef farm, with above average performance and credit risk. Land value was \$600,000 and the seasonal loan was secured over \$175,000 worth of stock and plant.

**Note:** These survey notes were prepared by *Agri-Fax* - they state:

It is important to realise the banks have quoted on a specific package and care must be taken when relating this to your own situation. This survey is essentially a snapshot of the rural lending scene where interest rates and charges are constantly under review. The rates quoted may be available to existing borrowers or just to new clients. Factors other than costs are important e.g. level of service, personal relationships, and understanding of the business. The approach taken has been to ask each of the lending organisations to quote on the same specific farm situation.

Seasonal Loan (\$50,000) 7 Months in Debit						
Name	Investigation Establishment Fees (\$)	Interest Rate		Other Fees Per 3 Months (%)	Cheque (25) \$/Month (\$)	Yearly Net Cost (\$)
		Base (%)	Margin (%)			
ANZ	0	10.6	0.0	0.36	8.25	\$1,257
BNZ	0	11.2	0.0	0.0	8.50	\$709
Nat. Bank Free Plan	250	10.8	1.2	0.0	10.00	\$820
Rabobank	50	9.9	0.0	0.0	8.50*	\$1,471
Westpac	260	10.14	0.0	0.3	9.75	\$1,318
ASB Bank	0	9.75	2.00	0.0	20.00	\$876
Trust Bank	200	11.25	0.0	0.1875	10.00	\$1,144
Southland Building & Investment Society	0	10.45	0.0	0.0	8.50*	\$965

\* Denotes no cheque facility, BNZ rates used in the calculations.

#### Notes - Seasonal Loan (from table above)

1. The set up costs are spread over 5 years.
2. The "Other Fees" include Line, Service and Facility fees and are shown as a quarterly charge. Their cost is based on the maximum seasonal advance and the impact on the cost of borrowing can be very high if the current account is rarely in overdraft. With a few banks this cost can be reduced significantly if the overdraft limit is adjusted regularly. Some lenders do not have this type of fee.
3. The cost of operating a cheque account using 25 cheques per month is shown. In the Yearly Net Cost calculation, the BNZ cheque costs are used for organisations not providing a cheque facility.

4. The "Yearly Net Cost" includes the yearly cost of any setup fees, the total interest cost of the \$20,000 borrowed for the 7 months, the "Other Fees", the yearly cheque costs, and a credit for interest accrued during the 5 months of current account surplus. (The first \$7,500 only earns interest if interest is credited automatically. The next \$7,500 is invested to best advantage. Those banks offering a revolving credit package without a cheque facility are not credited with interest on the first \$6,000 of current account surplus because of the need to maintain a separate cheque account.)
5. Unlike the term loan this total cost is expressed as a dollar value, because cheque fees do not relate to the amount borrowed. The effective seasonal net interest percentage can be calculated by deducting the yearly cheque costs and dividing by the average yearly overdraft (\$11,667).

#### **Term Loan (\$200,000) 15 Years**

Name	Investigation Establishment Fees (\$)	Interest Rate (%)	Risk Margin	Effective Cost %	Total Term Cost
ANZ	1,000	9.95	yes	10.3%	\$21,550
BNZ	750	9.63	yes	10.2%	\$21,068
Nat. Bank Freeplan	500	9.69	yes	9.9%	\$20,669
Rabobank	200	9.58	no	9.5%	\$20,501
Westpac	740	9.55	yes	9.9%	\$21,185
ASB Bank	200	9.2	yes	9.9%	\$20,545
AMP	1,000	9.5	no	9.7%	na
NZI Guardian Trust	1,000	9.5	no	10.7%	na
Southland Building & Investment Soc.	200	9.5	no	10.4%	\$21,799
Trust Banks	800	9.63	yes		

#### **Notes - Term Loan**

1. The financier's establishment charges, along with additional legal and valuation charges of \$1350 (unless advised differently) are spread over the 15 year term.
2. The effect of the different repayment periods is built into the final cost. For example, for a loan with a nominal interest rate of 10.00% where interest is paid monthly, the effective rate is 10.5%.
3. Likewise if the principal is reduced ("rested") less often than payments, then the effective rate is increased slightly.
4. The "Effective Cost %" is made up of the yearly cost of the front end fees, along with the effective interest costs and is expressed as a percentage of the \$200,000 loan.
5. The "Total Combined Cost" on the extreme right combines both Seasonal and Term to give an overall picture.

*Source: NZ Farmer, February 1997.*

## 2.17.2 Interest and Bank Charges (See also *Section 2.17.1*)

### **Important Note:**

Interest rates, where quoted, are as at February 1st 1997 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:    | <ul style="list-style-type: none"><li>● Up to 25 years with up to 5 years interest only</li><li>● Up to 7 years for sharemilkers</li><li>● May be table or reducing</li></ul>        |
| Pricing: | <ul style="list-style-type: none"><li>● Variable rates</li><li>● Fixed rates up to 5 years</li><li>● Commercial Bill related</li><li>● An establishment fee may be charged</li></ul> |
| Security | <ul style="list-style-type: none"><li>● Registered first mortgage over land. Livestock security may also be required. Usual minimum loan to 60% of Bank's valuation</li></ul>        |

#### *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, fastphone, and Gateway (computer banking facility)
- |           |   |
|-----------|---|
| Security: | <ul style="list-style-type: none"><li>● As per the term loan</li></ul>  |
| Term:     | <ul style="list-style-type: none"><li>● The facilities requirements are reviewed annually</li></ul>           |
| Fees:     | <ul style="list-style-type: none"><li>● Transaction fees and service commitment fees may be charged</li></ul> |

#### *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	<ul style="list-style-type: none"><li>● Purchase of land, stock, or plant, refinancing of existing debt and other capital expenditure.</li></ul>
Amount	<ul style="list-style-type: none"><li>● Up to two thirds of the property valuation with no minimum.</li></ul>
Security	<ul style="list-style-type: none"><li>● Mortgage over farm property (prefer 1st mortgage) up to 66.6% of the market value of the farm property.</li></ul>
Term	<ul style="list-style-type: none"><li>● 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.</li></ul>
Repayments	<ul style="list-style-type: none"><li>● Flat loan - interest only over a maximum of 3 years. Table - monthly or quarterly. Non-Table - monthly or quarterly.</li></ul>
Interest Rate	<ul style="list-style-type: none"><li>● Depends on security offered and individual circumstances.</li></ul>
Fees	<ul style="list-style-type: none"><li>● An establishment fee of up to 1% may apply.</li></ul>
Early Repayment	<ul style="list-style-type: none"><li>● No penalty for variable rate loans. Penalty may apply for fixed Capped term loans.</li></ul>

#### *Seasonal Finance:*

Rates depend on type of security offered with best rates when forming part of a Farm First package.

Amount	<ul style="list-style-type: none"><li>● By arrangement</li></ul>
Term	<ul style="list-style-type: none"><li>● As per seasonal requirements, normally reviewed annually.</li></ul>
Interest Rate	<ul style="list-style-type: none"><li>● Depends on security and individual circumstances.</li></ul>
Security	<ul style="list-style-type: none"><li>● Farm property and/or stock.</li></ul>
Credit interest	<ul style="list-style-type: none"><li>● Where the total business with the Bank is greater than \$50,000 this account earns credit interest.</li></ul>
Access	<ul style="list-style-type: none"><li>● Cheque, telephone, card.</li></ul>

#### *Interest Rate Reviews:*

Phone 0800 240000 for latest rural interest rates.

Fixed Rate	<ul style="list-style-type: none"><li>● Fixed interest rates for periods of six months to five years. Fixed rate loans are repaid on a table (amortising) basis</li></ul>
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#### *Farm First Revolving Credit:*

Uses	<ul style="list-style-type: none"><li>● Any farm business related expenditure.</li></ul>
Amount	<ul style="list-style-type: none"><li>● Minimum \$20,000, maximum by arrangement (up to 50% of property valuation).</li></ul>
Security	<ul style="list-style-type: none"><li>● First mortgage over farm property.</li></ul>
Term	<ul style="list-style-type: none"><li>● As per requirements, normally reviewed annually.</li></ul>
Repayments	<ul style="list-style-type: none"><li>● Not fixed, at borrowers option. Account to operate within approved credit limit.</li></ul>
Interest Rate	<ul style="list-style-type: none"><li>● Refer to the Bank of New Zealand.</li></ul>
Credit Interest	<ul style="list-style-type: none"><li>● Calculated on the daily balance of the account</li></ul>
Fees	<ul style="list-style-type: none"><li>● Usual cheque account fees, no service commitment fees.</li></ul>
Access	<ul style="list-style-type: none"><li>● Cheque, Card, Phone</li></ul>

*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 charge of \$3.00 per month. Where total business with the Bank is greater than \$50,000, this charge is rebated in full.
- Commitment

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 National Bank (NZ) Ltd:***

The National Bank offers a full range of rural financial services through one main point of contact - over 200 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 options monthly instalments.
- Interest only - repayments of interest only in equal monthly instalments.

### *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 = \$150,000 interest only for 15 years and can be renewed.
- SecurityVia 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 Loan:*

A term lending facility, of up to 25 years, secured by first mortgage over land and buildings, up to two years interest only.

- Amount ● Up to 60% of FMV of Land and Buildings.
- Interest Rate ● 11.4%, charged monthly (can be capped for 2 years)
- Approval Fees ● 1% - min \$200 to a max of \$1000

*Farm Equity Credit Line:*

A revolving credit facility with full transactional facilities, secured by first mortgage over land and buildings.

- Interest Rate ● 11.4% based on a daily balance, charged monthly.
- Approval Fees ● 1% - min \$200 to a max of \$1000
- Bank Charges ● Line of credit fee 0.35% per quarter
- Account administration fee \$2/month
- Transaction fee - \$0.25/ trans (1st five free)

*Seasonal Finance:*

An overdraft facility for when mortgage security is not held.

- Interest Rate ● Indicator lending rate, plus a margin
- Approval Fees ● Minimum \$50 to a maximum \$500
  
- Bank Charges ● Line of credit fee 0.12% per month
- Account administration fee \$2/month
- Transaction Fee \$0.25/trans (1st five free)

*Interest Saver Facility:*

Facility to transfer credit funds from Equity Credit Line, or Seasonal Overdraft, into the Farm Finance Loan, and then redraw them as required at a later date.

*Fixed Rate Loans:*

Fixed rates available for 1 to 5 years

*Sharemilker/Sharefarmer Loan:*

Term lending facility, secured over livestock and plant, for terms up to 7 years.

- Amount ● up to 50% of FMV of Stock
- Interest Rate ● 11.9%, charged monthly
- Approval Fees ● 1%, minimum \$200 to a maximum \$1000

Other Services Available:

- ANZ Direct - Computer banking from home
- Phone Direct - Telephone banking, including bill payment facilities.
- ANZ Cover Farm Policy - Full farm and domestic insurance
- ANZ Investment Advisers

**Note:** The rates and fees shown above are indicative only, and each proposal is looked at on an individual basis and terms and conditions may vary.

### ***Westpac Banking Corporation & Trust Bank N.Z Ltd.***

**Note:** Westpac has recently purchased Trust Bank New Zealand and is going through a process of intergration of the two banks products and services. As at February 1997 however, services were still delivered under both Westpac and Trust Bank.

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 Westpac's/Trust Bank's credit criteria.

Westpac and Trustbank 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 Westpac's/Trust Bank'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 12 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 Westpac's/Trust Banks Farm Lending Rate plus a margin based on the individual credit assessment of the borrower. Fixed interest rate terms available up to 5 years.
- An establishment charge of up to 1.0% may apply.

### *Security*

Westpac/Trust Bank 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 Westpac/Trust Bank).

Where the loan to security ratio is over 50%, Westpac/Trust Bank will also seek a registered charge over livestock or crop lien to support the loan.

Where lending is against livestock security, Westpac/Trust Bank will lend up to 60% of the market value (as assessed by Westpac/Trust Bank) 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 costs of purchase or refinance 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 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.

#### *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 12 February 1997, the floating rate was 10.10% and fixed rate was 9.56%. 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**

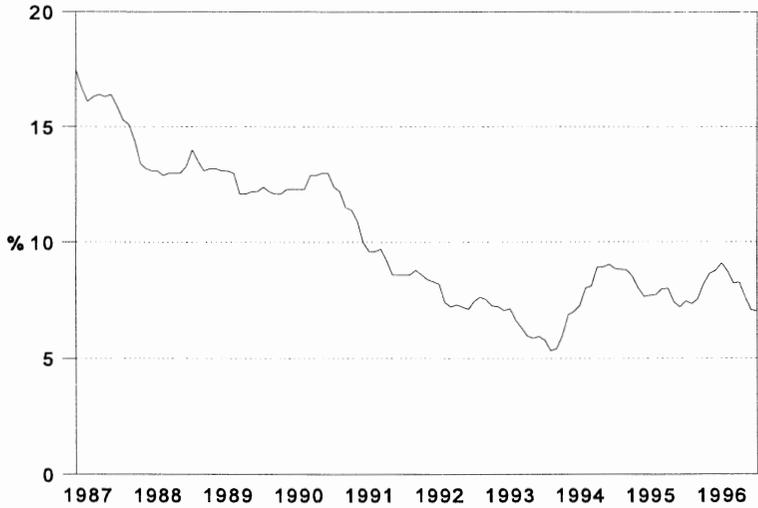
Solicitors generally provide short term finance (2-3 years) but shorter or longer terms are sometimes available. Flat mortgages are the most common, but provisions for lump sum principal reductions may be included. Interest rates vary, but are currently between 10% and 12% on first mortgage (including the solicitor's 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.

### 2.17.3 Interest Rates - 5 Year Government Stock

As an approximate guide, interest rates on first mortgage (for farm purchase) in recent years have generally been about 2½ percent higher than the 5 year Government Stock Rate (see graph):



*Source: Reserve Bank Financial Statistics*

## 2.17.4 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.				
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)

	<b>5</b>	<b>10</b>	<b>15</b>	<b>20</b>	<b>25</b>
<b>Interest Rate</b>	\$ p.q.	\$ p.q.	\$ p.q.	\$ p.q.	\$ p.q.
<b>6%</b>	58.25	33.43	25.40	21.55	19.38
<b>6.5%</b>	58.97	34.20	26.22	22.43	20.30
<b>7%</b>	59.70	34.98	27.06	23.33	21.25
<b>7.5%</b>	60.43	35.76	27.91	24.24	22.22
<b>8%</b>	61.16	36.56	28.77	25.17	23.21
<b>8.5%</b>	61.90	37.37	29.65	26.11	24.21
<b>9%</b>	62.65	38.18	30.54	27.07	25.23
<b>9.5%</b>	63.40	39.01	31.44	28.04	26.27
<b>10%</b>	64.15	39.84	32.36	29.03	27.32
<b>10.5%</b>	64.91	40.68	33.28	30.03	28.38
<b>11%</b>	65.68	41.54	34.23	31.05	29.46
<b>11.5%</b>	66.45	42.40	35.18	32.08	30.55
<b>12%</b>	67.22	43.27	36.14	33.12	31.65
<b>12.5%</b>	68.00	44.15	37.11	34.17	32.76
<b>13%</b>	68.78	45.03	38.09	35.23	33.89
<b>13.5%</b>	69.57	45.93	39.09	36.31	35.02
<b>14%</b>	70.37	46.83	40.09	37.39	36.16
<b>14.5%</b>	71.16	47.74	41.11	38.48	37.32
<b>15%</b>	71.97	48.66	42.13	39.59	38.47
<b>15.5%</b>	72.77	49.59	43.16	40.70	39.64
<b>16%</b>	73.59	50.53	44.21	41.82	40.81
<b>16.5%</b>	74.40	51.47	45.26	42.95	41.99
<b>17%</b>	75.22	52.42	46.32	44.08	43.18
<b>17.5%</b>	76.05	53.38	47.38	45.23	44.37
<b>18%</b>	76.88	54.35	48.46	46.38	45.56
<b>18.5</b>	77.72	55.32	49.54	47.53	46.76
<b>19%</b>	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
<b>Interest Rate</b>	\$ p.a.				
<b>6%</b>	237.40	135.87	102.96	87.18	78.23
<b>6.5%</b>	240.64	139.11	106.36	90.76	81.99
<b>7%</b>	243.89	142.38	109.79	94.39	85.81
<b>7.5%</b>	247.17	145.69	113.29	98.10	89.72
<b>8%</b>	250.46	149.03	116.83	101.85	93.68
<b>8.5%</b>	253.77	152.41	120.43	105.68	97.72
<b>9%</b>	257.09	155.82	124.06	109.55	101.81
<b>9.5%</b>	260.44	159.27	127.75	113.48	105.96
<b>10%</b>	263.80	162.75	131.47	117.46	110.17
<b>10.5%</b>	267.18	166.26	135.25	121.49	114.43
<b>11%</b>	270.57	169.80	139.07	125.58	118.74
<b>11.5%</b>	273.98	173.38	142.92	129.70	123.10
<b>12%</b>	277.41	176.98	146.82	133.88	127.50
<b>12.5%</b>	280.85	180.62	150.76	138.10	131.94
<b>13%</b>	284.31	184.29	154.74	142.35	136.43
<b>13.5%</b>	287.79	187.99	157.76	146.65	140.95
<b>14%</b>	291.28	191.71	162.81	150.99	145.50
<b>14.5%</b>	294.79	195.47	166.90	155.36	150.08
<b>15%</b>	298.32	199.25	171.02	159.76	154.70
<b>15.5%</b>	301.85	203.06	175.17	164.20	159.34
<b>16%</b>	305.41	206.90	179.36	168.67	164.01
<b>16.5%</b>	308.98	210.77	183.57	173.16	168.71
<b>17%</b>	312.56	214.66	187.82	177.69	173.42
<b>17.5%</b>	316.16	218.57	192.10	182.24	178.16
<b>18%</b>	319.78	222.51	196.40	186.82	182.92
<b>18.5%</b>	323.41	226.48	200.73	191.42	187.69
<b>19%</b>	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

*McKendrrys:*

- Oblong Troughs - Sheep, Cattle, Horses.	
40 type (170 litres) 1.83mm long x 480mm wide x 355mm deep	\$98 to \$127
60 type (250 litres) 1.83mm long x 685mm wide x 310mm deep	\$105 to \$135
70 type (290 litres) 2.13mm long x 535mm wide x 420mm deep	\$125 to \$155
120 type (545 litres) 2.743mm long x 635mm wide x 457mm deep	\$177 to \$207
- Round Troughs - Cattle, Sheep	
40 type (160 litres) 965 diam x 330mm deep	\$96
100 type (450 litres) 1.37mm diam x 380mm deep	\$130
130 type (585 litres) 1.480mm diam x 434mm deep	\$147
200 type (900 litres) 1.93mm diam x 380mm deep	\$210
- Round Troughs - Dairy Cattle Types	
225 type (1020 litres) 1.63mm diam x 650mm deep	\$227
300 type (1360 litres) 1.910mm diam x 650mm deep	\$272
- Deer Troughs	
20 type (90 litres) 815mm diam x 370mm high	\$72 to \$98
40 type (180 litres) 1.120mm diam x 380mm high	\$100 to \$133
- Pig Troughs	
915mm long x 405mm wide x 230mm deep	\$51
1.37mm long x 405mm wide x 230mm deep	\$58
1.83mm long x 405mm wide x 230mm deep	\$66
915mm long - heavy duty	\$58

*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

**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
With frame, bearing wheels and coupling for motorbike			\$1360

RIBTEC

**FREE DELIVERY ANYWHERE IN THE SOUTH ISLAND**

PLUS MANY MORE ITEMS

RIBTEC



**ABOVE GROUND WATER TANKS**



**SPRAY TANKS**



**SEPTIC TANKS**



**TROUGHS**



**KILLING SHEDS**



**SILOS**

**SOUTH ISLAND FIBREGLASS TANKS LTD**

● 20 YEAR GUARANTEE ON TANKS  
 ● RIBBED FIBREGLASS CONSTRUCTION  
 ● LIGHTWEIGHT EASILY LOCATED

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 PHONE (03) 308-1814  
 FAX (03) 308-6649

**FREE PHONE 0800 RIBTEC (742 832)**

**2.18.3 Tanks**

**Fibreglass**

*Ribtec:* (price includes delivery)

Litres	Price	Litres	Price
110	\$213	4600 upright	\$1,138.00
330	\$267	5455	\$1,227.00
700	\$338	7700	\$1,529.00
1250	\$445	9600	\$1,662.00
1400	\$533	9900 upright	\$1,662.00
2080	\$711	10600	\$1,778.00
2300	\$773	15800	\$1,911.00

3100 squat	\$845	23780	\$2,223.00
4600 squat	\$1,138	3636 upright	\$1,662.00
Underground:			
18000	\$3556	27000	\$4890

### Concrete

#### Humes:

11250 litres, 2500mm diameter, 2800mm height	\$1470
11375 litre Spun Tank	\$1,617
2000 litre Water Tank (500 gallon)	\$768
4550 litre Water Tank (1000 gallon)	\$1,225

#### 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 km for all tank sizes.

#### McKendrys: (Christchurch)

Volume (litres)	Height	Price
1829	1.37m	\$625
2955	1.3m	\$885.60
4546	1.9m	\$952.60
11365	2.4m	\$1415.70
13638	2.47m	\$1627
22730	2.77m	\$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

#### McAlpine: (Price includes installation) ex Christchurch

Capacity (litres)	Diameter	Height	Price
150,000	7.75	3.4	\$30,515
360,000	9.45	5.4	\$58,078
750,000	12.89	6.0	\$86,625
1,500,000	19.77	5.3	\$163,406
2,500,000	23.20	6.3	\$236,250

## Reservoirs

*McAlpines:* (Price includes installation) ex Christchurch

Capacity (litres)	Diameter	Height	Price
20,000	3.80	2.0	\$5,852
45,000	4.80	2.7	\$8,564
95,000	6.89	2.7	\$12,796

**Note:** All prices are for 0.55mm PVC lined tanks and include construction, freight, travel, and accommodation (where necessary). Pipe, and crane hire for lifting the tops onto reservoirs is included.

## 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	4.5HP	\$4,360
384	78 psi	max. flow	10100gph	6HP	\$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/min up to 1500 psi	\$800
Hydra-cell D03 Brass head	up to 9 litre/min up to 1200 psi	\$1,400
Hydra-cell D10 C1 head	up to 30 litre/min up to 1000 psi	\$1,800
Hydra-cell D11 C1 head	up to 15 litre/min up to 1500 psi	\$2,000
Hydra-cell H25 C1 head	up to 80 litre/min up to 100 psi	\$5,100
Hydra-cell D35 C1 head	up to 80 litre/min up to 1000 psi	\$8,500
Hydra-cell D40 C1 head	up to 140 litre/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	Price	Pump, footvalve, and filter	Price
Diameter (m)		Bore (mm)	
1.8	\$2,100	40 Household	\$490
2	\$2,850	40 High Pressure	\$650
2.4	\$4,200	50 High Pressure	\$750
2.6	\$5,200	65 High Pressure	\$950
3.0	\$6200		

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 per metre
4 inch (100mm)	\$150
5 inch (125mm)	\$170
6 inch (150mm)	\$190
8 inch (200mm)	\$252
10 inch (250mm)	\$320
12 inch (300mm)	\$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 100mm - \$720 per metre for 300mm

## 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 Wakefield S.I Ltd:*

Low Density Polythene Pipe (For low pressure water systems)

Working Pressure	Size (mm)	Price Per 100 metre coil
900 kpa (130 psi)	15	\$76.18
800 kpa (116 psi)	20	\$143.87
650 kpa (90 psi)	25	\$179.83
500 kpa (75 psi)	32	\$224.27
450 kpa (65 psi)	40	\$270.82
300 kpa (50 psi)	50	\$357.56

Medium Density Polythene Pipe (Price per 100 metre coil)

Class C

Size(mm)	900 kpa (130 psi)
20	\$130
25	\$166
32	\$245
40	\$403
50	\$588
63	\$854

*Hansen Products (N.Z) Ltd:*

Polythene Pipe Fittings:

Straight Couplings (HS)	15 to 50mm	\$4.38 to \$17.94
Male Straight Couplings (HMS)	15 to 50mm	\$3.90 to \$17.65
Female Straight Couplings (HFS)	15 to 50mm	\$4.19 to \$17.79
Reducing Straight Couplings (HRS)	20 x 15 to 50 x 40mm	\$5.69 to \$23.96
Reducing Male Couplings (HRMS)	20 x 15 to 25 x 20mm	\$5.28 to \$5.79
Tees (HT)	15 to 50mm	\$8.42 to \$45.65
Bends	15 to 50mm	\$9.37 to \$37.47
Reducing Tees (HRT)	20 x 15 to 50 x 40mm	\$10.00 to \$45.65
Reducing Male Bends (HRMB)	15 x 20 to 25 x 20mm	\$11.55 to \$13.73
Reducing Female Bends (HRFB)	15 x 20 to 50 x 40mm	\$12.64 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	\$4.35
	Minimum charge	Nil
Malvern	Per hectare or part thereof	\$5.00
	Minimum charge	\$52.00
Selwyn	Per hectare or part thereof	\$4.00
	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:*

Connection fee to Council reticulated water scheme \$1,000 to \$2,000 (includes cost of access pipe and water meter). Water supply levy is \$0.40 per cubic metre (includes servicing of water meter and pressure reducing valves).

### 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 have 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 125 Linear Rain Turbine Drive and Hose Trailer	\$36985
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 Snaptide

65mm to 75mm	\$15.25 to \$23.75 per metre
89mm to 100mm	\$26.75 to \$35.25 per metre
114mm to 125mm	\$42.50 to \$45.90 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 \$200 to \$300 each  
 Entrenching and laying costs \$2.00 to \$3.50 per metre

*B.R. Homersham Ltd:*

Rainguns

K1	\$111.00
Hydra	\$172.00
Synkro	\$780.00
Mercury	\$905.00
Big River	\$1355.00
Mariner	\$950.00
Skipper	\$357.00

Sprinklers

402 - 00	1/8"	\$23.30
403 - 02	3/16 x 3/32"	\$32.95
404 - 00	7/32 x 3/16"	\$67.00
434 - 00 Part Circle	3/16 x 1/8"	\$96.80
442 - 01 Part Circle	5/32"	\$38.75
443 - 01 Part Circle	5/32 x 3/32"	\$68.70

*Irrigation and Pumping Services Ltd:*

Southern Cross Irrigators

Irrigator complete with sprinklers, black hose (Angus)

SX 5	20 mm x 50 m hose and sprinkler	\$770
SX 20	38 mm x 67 m hose and sprinkler	\$2,300
SX 30	50 mm x 100m hose and sprinkler	\$6,020
SX 150	63 mm x 200 m hose and sprinkler	\$10,077
SX 250	75 mm x 200 m hose and gun	\$15,700
SX 350C	88 mm x 200 m hose and gun	\$17,796
SX 450B	100 mm x 200 m hose and gun	\$27,444
SX 550A	115 mm x 200 m hose and gun	\$35,000

Hoses

Angus Hose	44 mm to 75 mm (Black)	\$12.25 to \$24.32 per metre
	100 mm to 150 mm (Black)	\$37.57 to \$57.89 per metre

Sprinklers (each)

Naan	233/96	11 to 62 litres per min	\$32.95
	5035/91	11 to 42 litres per min	\$18.80
	254/96	18 to 124 litres per min	\$57.60

Pump Units Complete with Motor

Starline ISO Motorpumps

50 x 32	200	11kW	2P	7 litres per sec	92gpm	65m	\$3067
65 x 40	250	15kW	2P	9 litres per sec	120gpm	78m	\$3599
80 x 50	250	22kW	2P	20 litres per sec	264gpm	68m	\$4346
100 x 65	250	30kW	2P	28 litres per sec	370gpm	68m	\$5357
100 x 65	250	45kW	2P	35 litres per sec	460gpm	86m	\$6815
125 x 100	315	90kW	2P	60 litres per sec	790gpm	100m	\$13257

*B.R. Homersham Ltd*

Irrigation Accessories

Aluminium pipe -	50mm x 7.5m	\$140	
	80mm x 7.5m	\$185	
	100mm x 7.5m	\$186	
	125mm x 7.5m	\$288	
Aluminium Couplings	- Female Plain	50mm	\$65
		100mm	\$85
		125mm	\$96
	- Male Plain	50mm	\$15
		100mm	\$20
		125mm	\$37

*Duncan Industries:*

Rainbeau Irrigators

MK I Travelling Effluent Irrigator	150m of cable	\$2550
MK II Travelling Water Irrigator	150m of cable	\$2980

**2.18.11 Irrigation Equipment - Horticultural**

*B.R Homersham Ltd:*

Plastic Sprinklers

CR15 Cropwell Sprinkler	\$15.00
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*Alister Bevin Products Ltd.*

Driplines

Hardie Tape

15 mil x 8"/12" spacing 1219m	\$320
10 mil x 8" spacing x 1829m	\$385
8 mil x 8"/4" spacing x 2133m	\$390/\$420
6 mil x 8"/4" spacing x 2500m	\$325/\$340
8 mil x 8"/4" spacing x 300m	\$100/\$105

## Hydrodrip

35 mil x 90 cm x 1.8 x 600m	\$320
35 mil x 60 cm x 1.8 x 600m	\$336
25 mil x 60 cm x 1.8 x 600m	\$363
25 mil x 40 cm x 1.8 x 800m	\$406

## Irrigation Controllers

<i>Hunter SRC</i> - 6 station	\$150
<i>Orbit control star</i> - 4 to 12 stations	\$180 to \$465
<i>Irritrol Dial Series</i> - 5 to 36 stations	\$640 to \$2390
<i>Rain-O-Matic</i> electronic rain gauge	\$150
<i>Mini-Click</i> Rain Sensor	\$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	\$3250

## 2.18.12 Irrigation Water Supply Charges

### Farm Charges

Charges for irrigation vary depending on the length of time the scheme has been operating, 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 1996/97 season for community irrigation schemes in the South Island are as follows:

#### Scheme

#### Charges

#### *Amuri Irrigation Co:*

- Borderdyke \$28/ha/year
- Spray \$42/litres/second/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).

#### *Ashburton-Lyndhurst Scheme*

\$12/ha/year

#### *Mayfield-Hinds Scheme*

\$10.50/ha/year

#### *Morven, Glenavy and Ikawai Districts:*

- Borderdyke \$20/ha for 1st 610 mm plus 1.20/1000 m<sup>3</sup> over 610 mm
- Spray \$12/ha

#### *Lower Waitaki*

\$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/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, 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.

#### **Weirs**

2.5m - \$485

#### **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
Bridge crossing	\$1630

#### **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, including metal backfill range from \$1,800 to \$2,200 per hectare. Costs can range above these figures in situations which require pumped outfalls and/or large diameter (200mm and upward) mains. Typical rolling country costs for 12 to 18mm drainage coefficient systems \$1,200 to \$1,500 per hectare. Mole drainage is typically \$125 to \$150 per hectare and subsoiling is typically \$50 to \$60 per hectare.

*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
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

*Clarks Potteries:*

Field tiles

Diameter	Length	Price
75mm	300mm	\$0.95
100mm	300mm	\$0.95
100mm	600mm	\$1.90
150mm	600mm	\$4.60
225mm	600mm	\$8.15

*MICO Wakefield Ltd:*

Farmtuff - UPVC culvert pipe

200mm x 5m	\$200
250mm x 5m	\$303
315mm x 5m	\$467
400mm x 5m	\$724
500mm x 5m	\$1143

**Concrete Culvert Pipes**

*McKendrys:*

	150 to 375 mm x 900 mm	\$22 to \$38
	450 to 900 mm x 900 mm	\$44 to \$94.50

*Humes:*

Wingwalls

0 - 300mm	\$171
300 mm - 600 mm Medium	\$298
600 mm - 900 mm Large	\$748

Rubber Ring Joint Pipes (per pipe)

Diameter mm	Class X		Class Y		Class Z		Ring Price	Length Metre
	kg	Price	kg	Price	kg	Price		
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 mm	Class X		Class Y		Class Z		EB/Band Price	Length Metre
	kg	Price	kg	Price	kg	Price		
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

One Canterbury supplier charges the following (price includes 15 km travel from gravel source to farm):

Fill-pea metal, 20ml stones and screen gravel	\$20 per cubic metre
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### 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	\$4000
Land retired, 0.2ha	\$2000
Fencing, pipework	\$1000
Sealing Liner	\$6000
Plus :	
Pump and wiring if required from milking shed	\$2500
Pump pit - concrete	\$1500
	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
	Total Capital Cost \$4500
Running Costs:	
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 if it is 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 February 1997.

### 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
Effluent Holding Tanks	
Sloping Base - 3100/5600/8300 litre	\$1180/\$1700/\$1830
Flat Base - 3800/5800/7900/11300 litre	\$850/\$1226/\$1670/\$1870

#### Concrete

*Cement Products Ltd:*

2700/3300 litre	\$644.53/\$822.33
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*McKendrrys:*

Envirotank Z5000 3300 litre	\$1990
Septic Tank	\$710
Pumping chamber	\$405
Distribution box	\$108
Septic closet	\$425
Grease trap	\$415
Sludge tank	\$425

*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/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 7 wire	(post per 7m, 4 battens)	\$4.50 to 4.70
Netting	(8/36/12 S.S.H.T.)	\$5.75 to 6.00
Electric	(post per 10m, 5 wire)	\$3.00 to 3.15
Deer*	(13/75/12)	\$9.40
	(11/61/12)	\$8.20

\*see also other detailed examples below

**Medium Hill Country:** 8 wire, post per 7 m, wire droppers \$7.50 to \$8.00

#### Cost of Materials for Electric Fences:

(Gallagher Electronics Ltd - 1996/97 costings)

(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 = \$1981
(ii) 5 electric wire, batten and insulator fence on undulating to hill country at 5 metre spacing	Cost per km = \$1567
(iii) 5 wire (electric) insultimber fence on undulating to hill country. 1 post and 3 droppers per 16 metres.	Cost per km = \$1614

**Note:** This cost does not include the Energizer unit and accessories.

#### 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 @	\$0.12/m	\$144.00

150mm x 1900m netting 13 line	400m @	\$320/100m	\$1280.00
Gate 3.66 x 1900mm	1 @	\$287	\$287.00
Staples 4mm	12 kg @	\$3.17	\$38.04
Gudgeons lock through post	1 @	\$19.80	\$19.80
Gudgeon through post	1 @	\$8.97	\$8.97
Gate fastener and staple	1 @	\$4.54	\$4.54
	per 400 metres		\$3,425.00
<b>Materials Cost per metre (excluding labour)</b>			<b>\$8.56</b>

**(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 @	\$3.00	\$6.00
Gudgeons lock through post	4 @	\$19.80	\$79.20
Gudgeons through post	4 @	\$8.97	\$35.88
Gate fasteners and staple	4 @	\$4.54	\$18.16
	cost per 1000 m		\$2589.67
<b>Cost per metre (excluding labour)</b>			<b>\$2.59</b>

*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
<b>Wire netting</b>			
(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 @	\$3.00	\$9.00
	cost per 1000 m		\$4248.99
<b>Cost per metre (excluding labour)</b>			<b>\$4.25</b>

## 2.19.2 Wire

(see also *Section 2.19.5*, Wire Netting)

### *Cyclone:*

	Gauge of Wire	Length of Coil	\$ per 25kg coil
<b>Flexspan: (Mild Steel)</b>			
	3.55mm (No. 9) 25 kg	321 metres	\$67.00
	4.00mm (No. 8) 25 kg	253 metres	\$59.00
<b>Hispan: (High Tensile Steel)</b>			
	2.00mm, 25 kg	1013 metres	\$77.00
	2.50mm, 25 kg	648 metres	\$55.00
	3.15mm, 25 kg	408 metres	\$65.00
<b>Span 7 (High Tensile Cable)</b>			
	6.0mm		\$0.58 per metre
<b>Barbed</b>			
Iowa Pattern	75 mm spacings	225 metres	\$85.60
	150 mm spacings	255 metres	\$82.90
Reverse Twist HT	RT 150mm spacings		\$93.70 /500 m
	RT 100mm spacings		\$99.35 / 500 m

### *Hurricane:*

Barbed Wire Standard 2.5mm,	75 and 150mm	25kg reel	\$78.22 per reel
Reverse Twist 1.6mm HTHTR	100mm/150mm	500m reel	\$95.11 per reel
<b>Lacing Wire</b>			
	2.0mm	10kg coil	\$50.48
	1.6mm	10kg coil	\$59.63

### 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 100mm	\$6.44
	100 to 125mm	\$7.87
	125 to 150mm	\$9.78
Deer Posts	125mm x 2.7m pointed	\$18.18
Stays	75 to 100mm x 2.4m	\$11.42
	75 to 100mm x 2.7m	\$12.05
Strainers -		
175mm to 200mm x 2.1m pointed		\$19.60 to \$22.14
175mm to 225mm x 2.4m pointed		\$24.70 to \$29.60
200mm x 2.7m pointed		\$33.38
Droppers/Battens -		
50mm x 40mm x 1m		\$1.07
50mm x 40mm x 1.05m		\$1.15
50mm x 40mm x 1.2m		\$1.25

#### *Gallagher:*

Insultimber		
Post, No 1.	11520 x 38 x 38mm	\$6.83
Post, No 2.	21380 x 38 x 38mm	\$6.11
Droppers	940 x 38 x 26mm	\$3.17
Tie down	700 x 38 x 26mm	\$1.41

#### *Hurricane:*

Fencing Standards (Waratah)	
1650mm	\$8.25
1800mm	\$8.80

#### *Placemakers:*

100 x 100mm	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	2.7m	\$16.17 each

#### *R.A Shearing Contractors Ltd:*

Concrete Fence Posts;	1.8/2.4/2.7 m	\$22.33/\$29.54/\$30.43
Concrete Gate Posts;	2.4/2.7 m	\$41.37/\$43.26
Stays:	2.4/2.7 m	\$17.62/\$18.05
Stay Blocks:		\$5.82 to \$8.23

### 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

## Steel

### Cyclone:

Farm Gates:		
Economy	3.05m to 4.27m	\$90 to \$97
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	\$84 to \$93
Cattle Gates	3.05 to 4.25	\$119 to \$147
Stockmaster Gates	3.05 to 4.25	\$178 to \$187
Barred Gates	3.05 to 4.27	\$147 to \$187
Deer Gates -1550mm to 1900mm	3.05 to 4.25	\$187 to \$209

## 2.19.5 Wire Netting

### Placemakers:

Galvanised hexagonal wire netting	-aviary	\$103.64 per 50m roll
	-chicken	\$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
2.5mm 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
2.0mm 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
Farm Mesh 75mm x 150mm x 4mm diameter galvanised wire		\$240
1000 mm wide roll, per 30 metre roll		

**Note:** All netting is High Tensile (HT) unless otherwise stated.

*Hurricane:*

		per 100 metres
High Tensile Boundary Fence	13/190/15	\$368
Staytight	17/190/30 to 11/155/30	\$200 to \$175
Hinge Joint	13/190/30 to 11/155/30	\$169 to \$160

High Tensile Boundary Fence		
Staytight	8/90/30 to 7/90/30	\$172 to \$164
Hinge Joint - South Island	8/90/30 to 7/75/30	\$163 to \$142
- North Island	8/90/15 to 7/90/30	\$234 to \$155
	8/80/15 to 7/90/30	\$212 to \$153
Economy	6/70/30, 200m	\$204

## 2.19.6 Fencing Tools and Equipment

### Straining Equipment

*Beattie Insulators:*

Wire strainer - Insulated		\$2.62
- Uninsulated		\$2.06
Porcelain strainer		\$1.00

*Cyclone:*

Hayes wire Strainers:		Price per Item
Hayes Permanent 302 (Pack of 25)		\$2.20
Tightening Handle - Permanent		\$5.85
Chain Wire Strainer		\$66.10

*Hurricane:*

Boundary Fence Clamp		\$106
Deer Fence Clamp		\$160
Pull Down Tool with Chain		\$74.67
Pull Down Tool without Chain		\$16

### 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
Rock Auger - Tungsten carbide cutters (right hand)		
91.44cm x 42.88mm (Auger only)		\$301
Rock auger tip		\$75

### 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	\$1,527 to \$1,253
Mains powered	M120 - up to 15 km multi wire fencing	\$170
	M4000 - up to 100 km multi wire fencing	\$1,017
Battery powered	B15 - up to 1.5 km multi wire fencing	\$184
	B1200 - up to 60 km multi wire fencing	\$838
Solar powered	B150 solar kit, 10 watt	\$640
	B1200 solar kit, 60 watt	\$2,534

### 2.19.9 Insulators

*Beattie Insulators:*

Wooden Post Insulators	\$0.17 to \$0.48
Waratah or Y Insulators and Flat Standard Insulators	\$0.28 to \$0.35
Strainer / Corner Insulators	\$0.40 to \$1.00
Gate Break	\$2.62
Outriggers	\$1.00 to \$1.05 each
Pigtail Outriggers	\$1.20 to \$1.95
Concrete post outrigger	\$0.90
Rod Insulator	\$0.17

*Gallagher:*

Plastic	
Super Strain - white	\$0.93
Turbo end strain - red	\$0.11
Long Life wooden post	\$0.40
Pinlock wooden post	\$0.27
Pinlock Y steel post	\$0.36
Polytape insulator for polytape, up to 40mm	\$2.83

### 2.19.10 Electric Fence Reels and Wire

*Beattie Insulators:*

Underground Cable	- 1.6mm x 50m	\$17.14
	- 1.6mm x 100m	\$33.90
	- 2.5mm x 50m	\$22.00
	- 2.5mm x 100m	\$42.50
	- 2.5mm x 250m	\$112.65
Insulation Tube:	30m coil	\$10.35
Self insulated fence reel with spring loaded ratchet latch		\$19.50
Electric Net, 50 metres		\$104.86

*Cyclone:* - Electric Fence Wire

2.00 mm/1.60mm (Soft)	\$33.65/\$39.70 per 10 kg
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*Gallagher:*

Strip grazing reels - small	\$26.60
- medium complete with handle and insulgrip	\$35.94
- medium geared complete with handle	\$39.39
- large geared complete with handle and insulgrip	\$55.55
Triple reel system (3 reels prewound polywire mounted on stand)	\$169.68
Reel stand for deer fencing (1 to 4 reels)	\$26.26
Reel stand (1 to 3 reels)	\$15.15
Lead, connector for single reel	\$4.20
Lead, connector for multi reels	\$11.41
Wire and Tape	
XL wire, aluminium coated high conductive 1000m	\$361.58
Polywire - Ultra white, 6 strand, 200/500m	\$12.57/\$30.93
Turbo Wire - White XL, 9 strand, 200/400m	\$27.73/\$52.38
Polytape - Orange/white, 5 strand, 200m	\$22.22
Turbo tape - White, 200/400m	\$29.20/\$56.76

**2.19.11 Electric Fence Standards/Outriggers**

*Stafix:*

	Each
Tread - white or red	\$2.60
Fibreglass pigstail standard	\$3.12
Fibreglass rod and clips 9 and 12mm x .85 to 2mm	\$1.78 to \$7.38

*Gallagher:*

Tread-in, polymer, multiwire	\$2.24
Heavy duty multiwire tread-in	\$4.17
Extenda-post (heavy duty tread-in with extension)	\$5.15
Pigtail standard (white plastic coated)	\$1.58
Fibreglass:	
Post 1200 x 10 mm/1370 x 13 mm (white)	\$2.41/\$4.70
Post 1500 x 10mm/2000 x 10 mm (orange)	\$3.02/\$4.03
Post 2000 x 13 mm (white)	\$7.06
Quick Clips 10 mm/13 mm	\$0.16 to \$0.22
Pressure Plate (for 10 and 13 mm)	\$0.53
Cap, Driver	\$7.55
Outrigger 10 mm diameter x 20 mm	\$0.71
Outrigger pointed 10 mm diameter x 300 mm	\$1.01

**2.19.12 Electric Fence Cable**

*Gallagher:*

1.6 mm double insulated cable, 50 m	\$20.20
2.5 mm undergate double insulated cable (2 x 50 m )	\$74.55
Leadout cable, XL high conductive, 200 m	\$212.30

*Stafix:*

Underground Cable 50m x 1.6mm; and 50m x 2.5mm	\$22.56 and \$41.99
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**2.19.13 Electric Fencing Accessories**

*Gallagher:*

Testers -	Neon	\$24.12
	Digital volt meter	\$61.16
	Live lite tester	\$29.81
	Digital volt meter, old type	\$96.33
Batteries -	Dry Cell	\$55.43
	Low loss	\$283.81
Earthing Equipment:	Galvanised joint clamp	\$0.61
	Screw in tie down (galvanised)	\$3.90
	Screw in tie down handle	\$19.95
	Earthing stake, galvanised 2m	\$14.71
	Earth clamp, galvanised	\$4.51
	Gallagher super earth kit	\$73.53

*Stafix:*

Cut out switches	\$7.54
- heavy duty	\$8.19

Gate Breaks	- standard	\$3.90
	- spring gates	\$10.40

Tester	\$71.50
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**2.19.14 Staples**

*Hurricane:*

Plain	4.00 to 2.00mm diameter	\$26.40 to \$28.34 per 5kg pack
Barbed	4.00 to 2.80mm diameter	\$29.20 to \$29.46 per 5kg pack
Concrete Post Staples		\$124.00 per 20kg 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)	\$36,498	\$24,500 to \$48,496
38 to 52 kW (51 to 70 hp)	\$49,850	\$29,800 to \$69,900
53 to 75 kW (71 to 100 hp)	\$66,000	\$39,500 to \$92,500
Over 75 kW ( over 100 hp)	\$120,750	\$64,200 to \$177,299

#### Farm Bikes (see Section 2.20.4)

2 wheel	\$5,629	\$3,462 to \$7,795
4 wheel	\$7,773	\$4,440 to \$11,106

#### 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	\$32,753	\$23,195 to \$42,311
4WD vehicles	\$49,173	\$17,495 to \$80,850

### 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	\$11,222	\$7,669 to \$25,990
(these may have a conditioner attached or as an optional extra)		
Mower Conditioners	\$28,791	\$4,490 to \$87,045
Toppers/Slashers	\$5,174	\$1,900 to \$8,448

#### Hay Rakes

(see Section 2.20.6) \$17,893 \$1,845 to \$43,090

**Hay Balers** (see Section 2.20.6)

	Average Price	Range
Conventional	\$33,606	\$28,626 to \$38,950
Big balers - Round	\$43,420	\$35,490 to \$51,1350
- Square	\$115,480	\$109,000 to \$121,960

**Ploughs** (see Section 2.20.15)

Depending on the number of furrows and tractor mounting

\$26,950 \$844 to \$61,750

**Discs** (see Section 2.20.15)

\$9,853 \$6,416 to \$13,290

**Harrows** (see Section 2.20.15)

\$2,095 \$135 to \$4085

**Power Harrows**

\$21,074 \$11,668 to \$64,879

**Rollers** (see Section 2.20.15)

Heavy rollers

\$12,000 \$8,000 to \$16,000

Cambridge rollers

\$10,000 \$4,500 to \$30,640

**Drills** (see Section 2.20.17)

\$23,717 \$4,600 to \$98,500

**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
51-70hp/71-100hp	\$29,900/\$39,950	\$34,500/\$39,500

*John Deere:*

Compact 20 to 39 hp	\$19,890 to \$29,890
2000 Series 49 to 100 hp	\$32,670 to \$57,468
5000 Series 46 to 84 hp	\$37,316 to \$48,734
6000 Series 78 to 133 hp	\$74,080 to \$111,766
7000 Series row crop tractors 130 to 170 hp	\$121,912 to \$130,271
8000 Series row crop tractors 160 to 225 hp	\$146,254 to \$176,640

*Fiatagri:*

85 Series Crawler	70 DIN hp	\$49,971
86 Series Orchard/Vineyard	55 to 85 DIN hp	\$36,608 to \$60,821
66S Utility ROPS	45 to 80 DIN hp	\$48,496 to \$50,999
L Series	60 to 95 DIN hp	\$48,440 to \$79,167
100 - 90	100 DIN hp	\$69,976 to \$77,447
M Series Range Command	100 to 160 DIN hp	\$97,484 to \$134,510
G Series	170 to 240 DIN hp	\$147,536 to \$177,299

*Iseki:*

	2WD	4WD
5-30 hp	-	\$17,900 to \$23,900
31-50hp	-	\$24,500 to \$37,300
51-70hp	-	\$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/super cab)	\$56,900 to \$59,900/\$74,500 to \$82,800	

*J.I. Case:*

Agricultural -		
2 wheel drive	53 to 84 hp (incl. cab models)	\$35,650 to \$57,000
	100 hp A/C Cab	\$83,500
4 wheel drive	46 to 72 hp (incl. cab models)	\$36,600 to \$69,900
	84 to 100 hp A/C Cab	\$51,250 to \$91,000
	110 to 265 hp	\$99,000 to \$161,280
5100 Series	90 to 123 hp	\$83,890 to \$106,000
7200 Series	160 to 255 hp	\$123,711 to \$166,268
Horticultural -		
2WD/4WD	64 hp	\$40,375 to \$45,312

*Ford:C.B.Norwood*

Series 35 Utility	65 to 95 DIN hp	\$49,366 to \$79,167
Series 40 Dual Power	75 to 100 DIN hp	\$54,825 to \$83,005
Series 40 SLE	85 to 125 DIN hp	\$67,297 to \$104,277
Series 60 Range Command	100 to 160 DIN hp	\$92,484 to \$134,510
Series 70 Genesis	170 to 240 DIN hp	\$147,536 to \$177,299

*Kubota:*

B & ST-30 Series		17 to 30.5 hp	\$19,900 to \$29,390
GRAND L Series	2/4WD	38 to 45 hp	\$28,500 to \$41,895
M30 Series Models	4WD	66 to 77 hp	\$44,708 to \$48,132
M1 Series Models	4WD	83 to 108 hp	\$59,875 to \$81,980

*Massey Ferguson:*

	2WD	4WD
31/50hp	\$31,300	\$41,400
51/70hp	\$49,400 to \$50,400	\$36,900 to \$56,900
71/100hp	\$49,400 to \$74,500	\$49,900 to \$92,500
100+hp	\$69,900	\$64,200 to \$145,000

# STEP UP TO THE POWER!



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## BE MORE PRODUCTIVE EVERY DAY

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New Holland Series 60 Ford tractors deliver uncompromised power and versatile performance.

**POWER.** Reliable 7.5 litre engines feature exceptional lugging ability with up to 42% PTO torque rise.

**PERFORMANCE.** The exclusive 18 x 6 Range Command™ transmission features six powershift gears in three ranges. Push button range change and power shuttle are standard too.

**COMFORT.** Exceptional visibility front to rear, plenty of legroom, easy-to-reach controls, two doors, comfortable seat and quiet interior.

**SERVICE.** Exclusive flip-up hood allows total access to battery and filters.



**NEW HOLLAND**

TRACTORS DESIGNED FOR  
THE WAY YOU WANT TO FARM

Same:

	2WD	4WD
51-70hp	\$38,900	\$42,900 to \$45,250
71-100hp	\$44,200	\$49,400 to \$89,900
100+hp		\$107,900 to \$139,900

#### 2.20.4 Farm Bikes, Bike Trailers and Accessories.

*Honda:*

TRV300V	300cc	2WD	5 Speed & Reverse	\$7,795
TRX300FWV	300cc	4WD	5 Speed & Reverse	\$8,995
TRX400FWV	400cc	4WD	5 Speed & Reverse	\$11,106

*Kawasaki:*

KLF 220A9/KLF 300B9				\$6,221 to \$9,332
KLF 300C8				\$9,399
KLF 400B4				\$10,498
KAF 300B2 Mule				\$8,382
KEF 300A1 Sport				\$7,612

*Suzuki: Eric Wood Suzuki/Suzuki New Zealand.*

2 Wheeler DF200E Trojan				\$5,329
2 Wheeler TF 125X Mudbug				\$3,462
2 Wheeler DR 350V Thundercross				\$7,107
4 Wheeler LTF 160 Quadrunner				\$4,440
4 Wheeler LTF 250 Quadrunner				\$7,107
4 Wheeler LTF 4WD King Quad 300				\$9,507

*Yamaha:*

2 Wheeler	- AG100FH/AG200FH		\$3,728/\$4,800
	- TW200H/XT250EH		\$4,888/\$5,328
4 Wheeler	- Timberwolf 4 x 4		\$7,728
	- Big Bear 4 x 2/4 x 4		\$8,264/\$9,421
	- Kodiak 4 x 4		\$10,664
	- Wolverine 4 x 4		\$10,664

#### Farm Bike Trailers

*Giltrap Engineering:*

1.8 x 1.2, single axle - no crate/with crate		\$1,260 to \$1,550
1.8 x 1.2, tandem axle - no crate/with crate		\$1,680 to \$1,970

*Smiths Attachments: (freight paid)*

1200 x 900 trailer	- ply/mesh deck	\$776/\$879
	-stock crate	\$279
1500 x 1100 trailer	-ply/mesh deck	\$846/\$967
	-stock crate	\$332

1500 x 1100 hay trailer	-ply/mesh deck	\$1,015 to \$1,145
	-hay stock crate	\$241
1800 x 1200 trailer	-ply/mesh deck	\$998 to \$1,173
	-stock crate	\$359
2400 x 1200 calf trailer	-ply/mesh deck	\$1,869 to \$1,998
	-stock crate, with division	\$832

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		\$224 to \$292
Galvanised rollbar		\$154 to \$172
Mudflap kits		\$47 to \$59
Motorcycle Accessories		
Farm carriers		\$84 to \$105
Farm handlebar protection		\$58
Farm towbars		\$104 to \$106

### 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 2.8m		\$9,979

*Kuhn:D Cosgrove Ltd*

GMD 44 Multi-Disc Mower - Hydraulic		\$8,860
GMD 500		\$10,320
GMD 600		\$11,800
GMD 66		\$10,435
GMD 700		\$12,920
GMD 801		\$20,280

*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

*PZ Mowers: Mowtown.*

Drum Mower (2 drums)	1.65 to 2.3 m cut	\$7,990 to \$13,990
PZ CM 260H/300H drum mower	1.85 to 3.0 m cut	\$21,990/\$25,990

*Power Farming*

TR 1.2 - 1.5	1.2 metre Topper	From \$1,995
RP 1.8 - 3900	1.8 metre Park Mower	From \$6,595

*Trimax:*

	Cutting Width		Standard
Ezeemow	1.17 to 1.83 m	North Island	\$3,630 to \$4,680
		South Island	\$4,780
Swing Arm			\$5,000
Mulch Master	1.55 to 2.16 m	North Island	\$6,710 to \$7,270
		South Island	\$6,810 to \$7,370
Warlord	Parks and Reserves		
	1.44 to 2.34 m	North Island	\$6,800 to \$8,170
		South Island	\$6,900 to \$8,270
	Roadside Contractors		
	1.44 to 2.34 m	North Island	\$7,050 to \$8,420
		South Island	\$6,810 to \$8,130
	Flail Topper/Stubble Mulcher		
	1.44 to 2.94 m	North Island	\$7,050 to \$11,490
		South Island	\$7,150 to \$11,590
	Orchard Mower/Mulcher		
1.44 to 2.94 m	North Island	\$6,710 to \$8,030	
	South Island	\$6,810 to \$8,130	
Sidewinder		North Island	\$3,390 to \$3,860
		South Island	\$3,390 to \$3,960
Warrior		North Island	\$8,430 to \$9,430
		South Island	\$8,530 to \$9,530
Veemow	3.2 to 3.4m	North Island	\$8,660 to \$9,040
		South Island	\$9,170 to \$9,550
Stealth	3.2 to 3.4m	North Island	\$10,760 to \$13,140
		South Island	\$11,270 to \$13,650
Procut	1.38 to 3m	North Island	\$3,780 to \$7,960
		South Island	\$3,880 to \$8,060
Topper	1.74 to 3m	North Island	\$5,090 to \$6,940
		South Island	\$5,190 to \$7,440

*Tulloch:*

Krone AM 202 - 2.0 m		\$10,525
Krone AM 242 - 2.4 m		\$11,850
Krone AM 283S - 2.8 m		\$13,800

*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

**Mower Conditioners**

*Howard:*

Drum mower conditioner DM 195RC 6'4"	\$14,216
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*Kuhn: Dan Cosgrove Ltd.*

FC 202/FC 280 F	\$16,930 to \$24,670
FC 300 GD/FC 350 GD	\$37,175 to \$39,615
FC 301 GD	\$43,365
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 2340/2360, 2.7/3.1 m mower conditioner	\$31,500 to \$34,600
Krone AM 242Z 2.4 m	\$19,400
Krone AFL 283CV 2.8 m	\$31,561
Krone AMT323CV 3.2 m	\$39,340

*Vicon: Mowtown.*

AMS 2400 Three point 2.4m cut	- 3 blade disk flail	\$21,990
AMS 2400 Trailing 2.4m cut	- Crimper	\$37,990
GMR 2800 Trailing 2.8m cut	- Crimper	\$39,990
GMR 3200 Trailing 3.2m cut	- Crimper	\$42,990

*Mowtown:*

Conditioners for PZ Mowers	1.85m to 3.0m cut	\$4,690 to \$7,270
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*J I Case:*

9'-2" Cut 6 Disc C/W Titor Rollers	\$29,900
12' Cut 8 Disc C/W Titor Rollers	\$35,368

**Toppers/Slashers**

*Giltrap Engineering:* (add \$300-400 to 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	\$1,950
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

## 2.20.6 Hay Making Equipment

### Hay Rakes and Tedders

*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	\$10,800
Gyorake GA 300/GA 4101	\$5,770/\$10,100
Gyorake GA 4101 GT	\$10,775
Gyorake GA 7301/GA 7302	\$29,135 to \$43,095
Gyrotedder GF 5000	\$8,830 to \$11,900
Gyrotedder 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.	\$6,590
Fanex 500A 5.0 m Tedder fixed or lift link drawbar (trailing), Rotary vertical tyne tedder.	\$9,975
Fanex 642 DH 5.4 m Tedder Cat 1 & 2 HYD TPL, Rotary vertical tyne tedder.	\$15,990
PZ Andex 432 to 722 Rake, Rotary vertical tynes.	\$11,990 to 30,990
PZ Andex 302 to 382 Rake, Rotary vertical tynes.	\$6,990 to \$10,590

*Tulloch:*

Fransgard TI-4000 - 6000 hay rake	\$13,220 to \$19,850
Fransgard RV390 hay rake	\$11,030
Krone Duo hay rake	\$32,765
Krone KW hay tedders	\$17,200 to \$22,290

*Vicon: Mowtown*

Vicon HKX 620/1 4 wheel fingerwheel rakes	\$1,890
Vicon H120 6 wheel fingerwheel rake	\$4,990

**Big Balers - Round***John Deere:*

590 SL1 Round Baler	\$38,074
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*Tulloch:*

Gehl RB1310 round baler (fixed chamber)	\$27,500
Gehl RB1475/RB1870 (variable chamber)	\$36,250/\$45,200
Krone KR130/KR160 round baler (fixed chamber)	\$35,250/\$48,750
Krone KR130W fixed chamber with cutter	\$50,600

*J.I Case:*

6' x 4'	\$38,400
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*Welger:* roller type open chamber

RP 200 twine tie	\$36,100
RP 200 net wrap	\$40,640

*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:*

D1010/D1210	From \$121,960
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*J.I Case:*

31" x 34" Rectangular	\$109,000
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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	\$28,626
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*Welger:*

AP 630 with hydraulic drawbar shifting device	\$38,950
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*J.I Case:*

31" x 18"	\$30,400
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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 square bale tubing	\$42,320
Elho 1410 trailed round bale wrapper	\$28,500
Elho 1410F trailed bale wrapper for round and big square bales	\$31,000

*Clough Group:*

Superpac Round 8500	\$24,950
Superpac 8500E (Electronic)	\$27,500
Superpac Square/Round 8500S	\$28,950
Superpac Square/Round 8500 SE (Electronic)	\$31,800

## Baling Twine

*Donaghys:*

For conventional bales:	
Freerun (clipped heavy sisal) - 1200 m - 2 ball packs	\$68.45
Extra (synthetic) - 1200 m	\$131.56
Bulky (synthetic) - 1350 m	\$144.90
For big round squares:	
Synthetic - 4 x 4000m	\$187.56
Natural (sisal) - 1200 m	\$175.11
For big square bales:	
Big tough - 1200 m	\$102.22
Don 350 - 1200 m	\$107.56

**Baling Wrap:** see Section 2.20.11.

## 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	\$8,430 to \$9,750

*Giltrap Engineering:*

Round Bale Feeder - two directional	\$4,650
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*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 Trailing Sidewinder	\$6,670 to \$9,770
Roller Kits	\$590

## 2.20.7 Spray Equipment

*Power Farming ex Agmark:*

GTM P55 D20M	Eclips Turbomast sprayer 2000 litre Trailed	\$26,500
GTM P424	Turbo Miser 400 litre 3 PTL	\$6,995 + Heads
GTM P506	Turbo Miser 600 litre 3 PTL	\$8,995 + Heads
M209 - 1415	Maxi Blast 2000 litre Trailed	\$15,950
GTM P5520G	Two Row Grape	\$25,995
GTM P55D20G3	Three Row Grape	\$29,500
SDO3	Strip Spraying System 800mm Sheilded Spray Dome	\$875
UP50	50 litre 12 Volt Sprayer	\$525
Broad Ace		
Amazone T.P.L	800 - 1200 litre with Booms	P.O.A
	12 - 24 metre - Hydraulic Fold	P.O.A
Silvan T.P.L	300 -900 litre with Booms	P.O.A
	4 - 12 metre - Manual Fold & Hydraulic Fold	P.O.A
Amazone Trailed	2000 - 3000 litre with Booms 12 - 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 & turbo 400 pistol	\$3,520
Agpak 700	Complete as above with 700 litre linkage sprayer & 10 mtr boom.	\$4,390
ATM Series	500 litre linkage sprayer with 6 - 10 metre boom	\$2,861 to \$3,476
Cropmate Series, for smaller tractors		
ATM 3P Series	200 litre linkage sprayer AR19 pump, 3-4 metre boom	\$2,305 to \$2,360
ATM 2P Series	300 litre linkage sprayer AR19 pump, 3-6 metre boom	\$2,430 to \$2,880
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 - 450 litre, 4.0 hp petrol	\$2,730 to \$3,694
UP 300-30 PE - UP 600-30 PE	300 - 600 litre, 5.5 hp petrol	\$3,290 to \$4,650
UP 450 - UP 600-503 PE	450 - 600 litre, 9.0 hp petrol	\$4,545 to \$5,245
Utility Trailed sprayers		
UT 220-12v-2/4	120 litre 12 volt pump, 1-4 metre boom	\$1,565 to \$2,035
UT 200-12v/UT 200 19 PE	200 litre 12 volt pump, 2-4 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 & droppers	\$790 to \$990
Polyethylene tanks		
30 litre foam tank		\$140
70 litre bike tank		\$380
120 - 450 litre tanks		\$245 to \$495
500 - 900 litre three point linkage tanks		\$770 to \$1,100
1000 - 2000 litre tanks		\$1,350 to \$1,980
Linkage booms		
CFB Series	3 metre - 12 metre boom 6 -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 - 33 litres/min	\$1,825 to \$2,185
Spraying Accessories	
Spray Booms 4.5 & 6 m c/w nozzles	\$495 to \$775
Hose Reels 100 mm & 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 17-75 litres / 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 - C.D.A. atomiser boom kit		\$685 to \$2,295
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

### *Acto Agriculture New Zealand Ltd.:*

Knapsack sprayer - 16 litre/20 litre	\$106/\$110
Compression sprayer - 7.5 litre	\$46.55
Trombone sprayer 5 to 20 litre	\$43.20 to \$98.10

### *White Star Products:*

"Fynspray" 18 litre High Pressure, Manual	\$222
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## Waterblasters

### *Ag-Equipment Specialists:*

Hurricane Complete, tractor driven,		
250/500 litre - tanks 25.5 to 27.5 litres/minute, 2000 psi		\$2,950 to \$3,550
Tornado - Motorised 1750 - 3000 psi, 11 to 30 litres/minute		\$2,195 to \$6,975
Electro-blast electric - 1400 - 3000 psi, 9 to 30 litres/minute (single and three phase)		\$1,750 to \$5,750
Steam Cleaners (Hot/Cold Water Blasters)		
Kilimat 1740 psi, 8 litres per minute		\$2,795
Pulicar 1500 - 3000 psi 11 - 21 litres/minute (single, three phase & petrol powered)		\$4,495 to \$7,450

### *Croplands Equipment Co.:*

Electric	- Bravo pressure cleaner, 240 volt, 8 litres per minute capacity	\$780
	- 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		
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		\$350
Small		\$300
Retractable		\$900

## 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

	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/ 1600 kg capacity	\$850 / \$1,600
	Silabale (dual purpose)	\$2,390

*Fairbrothers Industries Limited:*

Heavy duty, single crowd front end loader, 40 - 90 hp		\$7,078
Heavy duty, twin crowd front end loader, 60 - 100 hp		\$7,825
Buckets	Single Crowd Heavy Duty	Twin Crowd Heavy Duty
- 1200/4' - 0"/0.270 m <sup>3</sup>	\$870	\$1,050
- 1500/5' - 0"/0.340 m <sup>3</sup>	\$970	\$1,150
- 1800/6' - 0"/0.410 m <sup>3</sup>	\$1,090	\$1,090
Pallet Fork	\$775	\$955
Round Bale Handler	\$910	\$1,090
Silage Fork - 5 tines / 7 tines	\$945 / \$1,085	\$1,125 / \$1,265
Silage Grab	\$2,240	\$2,420
Grade Blade	\$940	\$960
Quick Hitch	\$780	\$960

*Pearson Engineering Ltd.:*

Buckets	-1.0 wide x 1.0 shell to 2.0 wide x 1.5 shell	\$550 to \$1,350
	-4 in 1 bucket 1.2 to 1.8 wide	\$3,395 to \$4,195
Forks	-fine chop silage teeth for buckets, 1.2 wide to 2.0 wide	\$355 to \$570
	-silage forks 1.0 wide x 6 tine to 1.5 wide x 9 tine	\$920 to \$1,390
	-big bale/silage combo fork, 1.2 wide x 6 tine	\$1,310 to \$1,430
	-silage grab, 1.2 wide x 7 tine to 1.5 wide x 9 tine	\$2,485 to \$2,885
	-silage shear grab, 1.2 wide x 0.62 cubic metres to 1.76 wide x 0.9 cubic metres	\$4,400 to \$5,500
	-big bale silage grab, standard	\$2,075
	-big bale fork, 1.2 wide x 2 tine	\$880
	-wrapped bale clamp	\$1,985
	-square bale grapple	\$2,400
	-pallet fork, fixed/adjustable	\$795/\$1,465
	-log fork, standard	\$975

*Power Farming:*

Skid Steer Loaders	14 to 47 hp	\$29,900 to \$45,000
Backhoe Loaders	80 to 90 hp	\$92,500 to \$115,000
Tractor Loaders	80 hp	\$56,990 to \$85,390
	96 to 106 hp	\$78,500 to \$92,500

*Land Power NZ (ex Farmrite Industries)*

J.C.B Loadalls (Telescopic Handlers)			
520-55	4WD	2WS	\$66,300
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

*J.I Case:*

Uni Loaders	4 in 1 bucket	54 to 60 hp	\$39,900 to \$46,000
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**2.20.10 Trailers**

*Giltrap Engineering:*

2 tonne tip trailer 2.75 x 1.83 deck	\$5,000
3 tonne tip trailer 2.75 x 2.3 deck	\$5,550
4.5 tonne tip trailer 3.2 x 2.3 deck	\$6,150
5 tonne tip trailer 3.65 x 2.3 deck	\$7,100
5 or 6 tonne tip trailer - on tandems	\$8,650/\$9,200
6 tonne tip trailer 3.65 x 2.4 deck	\$8,000
6 tonne tip trailer - on tandems	\$9,200
8 tonne tip trailer 4.4 x 2.3 - on tandems	\$12,700

*Smith Attachments Ltd:*

	Ply Deck	Steel Mesh Deck	Stock Crate	Tail door	Centre door for stk crate
Trailer 1200 x 900	\$776	\$879	\$279		
Trailer 1500 x 1100	\$846	\$967	\$332		\$128
Trailer 1800 x 1200	\$998	\$1,173	\$359		
Hay Trailer 1500 x 100	\$1,015	\$1,145	\$241	\$107	
Calf Trailer (dual axle)	\$1,869	\$1,998	\$832		

## 2.2.0.11 Silage Wagons/Forage Harvesters/Maize Choppers

### Silage Wagons

*Giltrap Engineering:* Silage Wagons/Forage Harvesters.

(freight included) add \$600 to \$800 to South Island purchases:

Front-centre Feed Wagons- Fast floor for harvesting for 7.09 cu.m to 9.18 cu.m standard.	
PTO or hydraulic - 4.0/5.95 cu.m	\$9,650 to \$10,250
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 \$21,700
- 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 \$15,500
PTO or hydraulic (on tandems) - 10.82/13.28 cu.m	\$19,800 to \$24,600

*Taega 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

*Tulloch:*

Krone Titan loader wagon	\$65,750
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### Forage Harvesters (precision chop)

*Tulloch:*

Mengele MB220 maize harvester	\$16,530
Mengele MB300 maize harvester	\$19,730
Mengele SH40N 1.8 metre pickup, 90 to 150 hp	\$82,820

### 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
Maize chopper MH 180S twin, four row drive backwards	\$48,990

## 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 - 150mm	\$209
12 m x 25 m - 150mm	\$261
12 m x 50 m - 150mm	\$523
15 m x 30 m - 150mm	\$513

### 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	\$345 per roll
5 rolls or more	\$313 per roll

### Silotite:

Stretch film wrap	- 500mm x 1800m x 25 $\mu$ - black/white	\$85/\$90 per roll
	- 750mm x 1500m x 25 $\mu$ - black/white	\$142/\$149 per roll

(discount if buy in bulk i.e. per pallet, up to \$8 discount per roll)

### Van Leer New Zealand Ltd.:

#### Film - Black

125 $\mu$ 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	\$113
Netwrap - high UV treated	\$278
Silage covers - 12 m x 25 m x 200 micron, black/white	\$215

### Cosgrove Silage wrap:

750 x 1500 x 25 - Green/White	\$112
750 x 1500 x 25 - Black	\$106

## Silage/Hay Preserves

### PDQ Products:

PDQ Silage Treet	Soluble (treats 50t)	100g	\$66.67
	Ready to use powder (treats 20t)	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			\$667
Moisture Tester			\$325

## 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,

18 litre hopper, ¼ hp	\$550
Senior all grain roller crusher, 1 hp	\$1,370
Hayway Chaff cutter - electric	\$2,500
- PTO	\$2,201

### *Tulloch:*

Gehl MX125 mobile mixer mill	\$31,680
Gehl MX170 mobile mixer mill	\$36,210
Gehl RM125/170 roller mills	\$36,420/\$38,760

## 2.20.13 Fertiliser and Manure Spreaders and Topdressers

### *Power Farming New Zealand:*

Spun Steel Hopper - Eurospand Models

SH 300	255 litre capacity (350kg), 6 to 12m spreading width	\$850
SH 400	350 litre capacity (426kg), 6 to 12m spreading width	\$900
SH 500	450 litre capacity (540kg), 6 to 12m spreading width	\$950

Polyethylene Hoppers -

B/S Broadspectrum Models - Spinner Spreaders

XL Series

XL400	385 litre capacity (460kg)	\$1,095
XL500	450 litre capacity (540kg)	\$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
Hopper Cover		\$90 to \$140

### *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 \$22,850
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*Norwood Distributors:*

R500L	\$2,795
DR Series 450 - 1150 L	\$5,490 to \$6,590
DPX/GLX Series 1150 to 3000 L	\$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	\$5,860 to \$8,395
ZSB 900B/1100E	\$7,250 to \$7,560

*Lely:*

2400SL Centreliner, 1200kg hopper capacity	\$7,950
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*Tulloch:*

Gehl MS 250 tonne trailed box spreader	\$24,590
Gehl MS 315 tonne scavenger II manure spreader	\$38,250

*Vicon:*

PS 203	(200 litre/0.5t/ha capacity)	\$2,895
PS 403	(400 litre/1.0t/ha capacity)	\$3,995
PS 604	(600 litre/1.5t/ha capacity)	\$4,790
BS 952H	(950 litre/2.4t/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	\$27,111 to \$42,311
Feroza 4WD 5 speed - RV/EFi/EFi widetrack	\$29,324/\$31,102/\$32,444
Rocky 4WD - SWB 5 speed diesel/LWB turbo diesel	\$35,547/\$44,436
4WD SWB Feroza/Rocky 5 speed	\$29,324 to \$44,446

*Ford:*

Courier 2WD	\$23,195 to \$32,995
Courier 4WD	\$33,995 to \$41,995
Falcon Utilities Models (4 litres)	\$33,495 to 45,595
Transit 2.5 D	\$38,295 to \$45,595

*Holden (Blackwell Motors):*

Holden VS Utility	3.8, V6, 5 speeds and automatics	\$33,945 to \$37,145
	5 litre V8, automatic and 5 speed	\$40,345 to \$41,145
Holden Rodeo	4 x 2 Petrol	\$28,495 to \$34,995
	4 x 2 Diesel	\$29,875 to \$35,525
	4x 4 2.5 L Diesel	\$41,195 to \$45,875
	4 x 4 2.8 L Diesel	\$40,175 to \$49,675
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:*

Niva 4WD		\$17,495
Turist 4WD		\$18,995
Cossack 4WD		\$20,695
Taiga flat deck 4WD		\$22,995

*Landrover (Archibalds):*

Defender		\$45,990 to \$64,990
Discovery		\$75,990 to \$89,990
Range Rover		\$119,990 to \$139,990

*Mazda:*

Bounty 2WD Cab plus Ute W/S	2.2 litre Petrol	\$29,550
Bounty 4WD Cab plus Ute W/S	2.6 litre Petrol	\$39,990
Bounty 4 WD Double Cab D/X W/S	2.5 litre Diesel	\$42,500
T3500 -3.5 tonne		\$40,000

*Mitsubishi*

L200 Petrol standard cab ute		\$20,606
L200 Petrol double cab ute		\$23,660 to \$41,860
L200 Diesel standard cab ute		\$26,206
L200 Diesel double cab ute		\$32,331 to \$38,272
L300 Petrol SWB 4 door		\$29,417 to \$42,341
L300 Petrol LWB 5 door		\$30,931 to \$32,978
L300 Diesel SWB 4 door		\$27,116 to \$31,666
L300 Diesel LWB 5 door		\$32,978 to \$34,991
Pajero SWB		\$53,550 to \$56,875
LWB		\$39,287 to \$66,125

*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	\$41,000
Pathfinder Models	4WD 5 dr 3.3 L petrol	\$69,500
	4WD 5 dr 3.7 L turbo diesel	\$72,000 to \$74,000

*Suzuki:*

Vitara JX/JLX	\$25,995 to \$48,995
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*Toyota:*

2WD Hi-Lux Petrol	\$26,300 to \$34,150
2WD Hi-Lux Diesel	\$29,700 to \$37,450
4WD Hi-Lux Petrol	\$38,667 to \$69,333
4WD Hi-Lux Diesel	\$40,100 to \$48,650
Landcruiser petrol or diesel	\$59,000 to \$80,000
Landcruiser LWB petrol or diesel	\$75,000 to \$130,000

## 2.20.15 Cultivation Implements

### Ploughs

*Clough:*

2000 TRI-LINE Series - auto reset

4 to 6 Furrow (In-furrow)	\$15,758 to \$19,997
7 to 9 Furrow (On-land)	\$25,850 to \$30,596

1000 TRI-LINE Series - auto reset

3 to 5 Furrow	\$7,020 to \$10,312
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460 Disc Plough -

2 to 3 Furrow	\$3,935 to \$4,850
4 to 5 Furrow	\$5,930 to \$7,090

	Steel boards	Plastic boards
100 Series Delta Furra - Manual Adjustment		
Shearbolt leg (3-5 furrows)	\$22,370 to \$28,975	\$22,660 to \$29,460
Auto Reset legs (3 -5 furrows)	\$25,825 to \$35,000	\$26,120 to \$35,680
100 Series Delta Furra - Hydraulic Adjustment		
Shearbolt leg (3-5 furrows)	\$27,950 to \$37,080	\$28,240 to \$27,565
Auto Reset legs (3-4 furrows)	\$31,280 to \$37,535	\$31,570 to \$37,925
120 Series Delta Furra (Manual Adjustment)		
Shearbolt leg (5-6 furrows)	\$34,250 to \$38,690	\$34,735 to \$39,290
Auto reset (5 furrows)	\$38,775	\$39,260
220 Series Delta Furra (Manual Adjustment)		
Shearbolt leg (5-6 furrows)	\$46,880 to \$52,775	\$47,365 to \$53,375
Auto reset (5-6 furrows)	\$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 TH4, 6 furrow Hydraulic Reversible Disc Plough	\$19,900

*J.I Case:*

**165 Plows**

5 furrow	\$28,320
6 furrow	\$30,240
7500 5 furrow semi mounted vari width 14" to 24"	\$27,840

**Chisel Ploughs and Subsoilers**

*Aitchison:*

**Soil Aerator**

Double Beam Model Number of tines	Frame width (metres)	Without coulters	With coulters
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	\$7,122 to \$8,218
8'/10' (2.44m/3.05m) Unit	\$8,886 to \$11,078
10'/12' (3.05/3.66m) Unit	\$11,056 to \$13,248

*Clough:*

950 Goliath Chisel plough/cultivator -	
7 tine (2.7 m) to 15 tine (4.3 m)	\$6,575 to \$9,610
960 3 Row Ridger	\$3,020
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 - 6 leg		\$19,531 to \$27,050

*Klough:*

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'		\$6,416 to \$6,460
800 Mounted Disc 8' to 9'		\$6,546 to \$7,205

**Cultivators**

*Aitchison:*

Easyflow Cultivators		Without Crumbler roller	With Crumbler roller and end wheels
1.8m/3.66m	17/35 tine	\$2,147/\$3,278	\$2,568/\$4,393
Wideline Foldup LT Cultivators			
4.3m/5.0m	43/49 tine		\$8,517/\$9,207
5.6m/6.2m	55/61 tine		\$9,834/\$10,687
Easyflow Wideline Trailed LT Cultivators			
5.6m/9.25m	56/90		\$19,835/\$26,828
Easyflow Wideline Trailed DP Cultivators			
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/\$12,176
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	\$1,995 to \$2,320	\$1,395 to \$1,580
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, with crumbler	\$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	\$3,039 to \$3,969	\$2,262 to \$3,005
2.4 m to 4.1 m (23/38 tine)		
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
904 Double Bar Coil Tine Cultivator, (13 to 19 tine)		\$3,663 to \$4,833

*Speciality Machinery: (Marton)*

Rolling Cultivator		
4 x 3,4,5 spider gangs for 0.50 to 1.12 m rows		\$5,033 to \$5,673
8 x 3,4,5 spider gangs for 0.50 to 1.12 m rows		\$9,349 to \$10,629

*Tulloch:*

Vaderstad NZG-600 LB trailed folding cultivator		\$36,140
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**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 65hp	\$7,768
	- For tractors up to 80hp	\$8,878 to \$9,360
	- For tractors up to 100hp	\$12,738 to \$13,751

C.B Norwood:

Breviglieri Rotary Hoes	For Tractors up to 35 hp	From \$3,295
	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

### Power Harrows

Belrecolt:

Crumbler roller, leveller	- HRB 252 D	\$16,620
	- HRB 302 D	\$19,010

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	\$22,820 to \$64,879

Kuhn:

HR Series models -

Crumbler, Roller, Levellers	\$22,820 to \$30,755
Packer, Roller, Leveller	\$24,235 to \$30,755

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 7.5 m	\$15,500
Seeder Roller	\$10,000

*Tulloch:*

Vaderstad RX-620 SJLB folding cambridge roller	\$35,900
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#### Field Rollers

*Duncan:*

300 Field Roller

2.48m to 3.0m (8' to 10') Standard Rings (630 mm/26")	\$4,480 to \$5,530
2.48m to 3.0m (8' to 10') Deep 'V' Rings	\$5,020 to \$6,100

## 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		\$194
Mouldboard 850 multi-purpose		\$204
Mouldboard plastic		\$398
Maxi Till Points (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	\$13,374/\$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
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	3.27 to 4.11 m	\$22,081/\$25,977
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	\$10,500
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*Duncan:*

720 Quantum Arable	
15 to 23 Run Hoe Coulter	\$25,500 to \$35,190
15 to 23 Run Double Disc Coulter	\$27,122 to \$37,428
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
Enviro multi seeder	\$36,950
15 to 21 run triple disc	\$36,950 to \$46,800
734 Multi-Seeder -	
15 to 23 Run Triple Disc Standard	\$25,205 to \$34,200
Eclipse Sowing Box 15 to 13 Run Front/Rear	\$2,630 to \$3,310

*Howard:*

Maize Drills 4 to 6 row	\$17,319 to \$36,864
Vegetable Seed drill - SV 290 4 row complete drill	\$15,610
- SV 260 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

*Tulloch:*

Vaderstad NZC-600 concord pneumatic seed drill	\$98,500
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**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

**Transplanters***Aitchison Industries:*

152 mm to 304 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

*Land Power New Zealand Ltd: ex Farmrite Industries Ltd:*

## Grimme Potato Planters

VL20E, 2 row cup planter, 3 point linkage, 450 kg seed hopper	\$13,500
VL20B, 2 row cup planter, 3 point linkage, 1200 kg seed hopper	\$19,900
VL20 KLZ, 4 row trailed planter, 2500 kg tipping seed hopper	\$35,500

*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

**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	from approximately \$30,000
Potato harvesters	from approximately \$46,900
Onion harvesters	from approximately \$57,200
Green Bean harvesters	from approximately \$56,000

**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.	\$3,900 to \$4,700
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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	\$180,000
Claas 204 Mega, 200 hp	\$220,000

### Potato Planters

Land Power New Zealand Ltd: ex Farmrite Industries Ltd.:

Grimme Potato Planter 1995	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

### 2.20.19 Farm Bulldozers

Gough Gough and Hamer:

Caterpillar range

Track Type Tractor - D3CIII/D4C11	\$150,020/\$184,850
Series Track Type Tractor - D5M/D6M/D6R	\$200,000/\$270,000/\$381,000

### 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 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/CatII	\$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

*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
WMU 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	16-18	41-46	\$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/Masport:*

32cc/35cc	14/16	36/41	\$320 to \$489
38cc/60cc	18/20	46/51	\$520 to \$707
70cc/82cc	20/24	51/61	\$822 to \$1,267

*Sachs-Dolmar*

33cc/43cc	14/15	36/38	\$620 to \$835
52cc/60cc/68cc	18/21	46/53	\$999 to \$1,330
90cc	24	61	\$1,690

**Brushcutters/Trimmers***Russell Thomas Engineers:*

McCulloch	Brushcutter 32cc bent/straight shaft	\$234 to \$398
McCulloch	Brushcutter 32cc bent/straight shaft	\$468 to \$525
Dolmar MS Series	33 - 45 cc	\$1,071 to \$1,343

*Solo Brushcutters:*

124	25cc	4-tooth mowing blade	\$595
126	25cc	4-tooth grass blade	\$660
128	25cc	Anti-vibration system	\$750
134	34cc	supplied with all accessories	\$889
140	40cc	supplied with all accessories	\$998

**Portable Generators and Welders***Lincoln Electric:*

Tractapac (basic)	\$2,050
Trailer for Tractapac	\$1,236
Weldanpower 175/225 petrol	\$3,990/\$5,995
Weldanpower 300 diesel (silenced)	\$12,722

*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	\$230 to \$459
ASL aluminium single or pole ladders 2.4 to 6.6m	\$187 to \$487
AEL Trademaster commercial heavy duty aluminium double extension ladders	
- 3.1-5.2m to 6.7-11.8m	\$424 to \$1,028
AEH Homemaster aluminium double extension ladders	
- 2.5-4m to 3.73-6.23m	\$292 to \$460
Ahp heavy duty aluminium platform step ladders 2.4 to 5.4m	\$657 to \$1,400
AFP Aluminium forest pruning ladders 1.8 to 4.8m	\$194 to \$402
AMP aluminium mobile platform ladder - platform height 1.16 to 2.84m	
	\$1,236 to \$2,141
AHS heavy duty aluminium step ladders 3.6 to 5.4m	\$786 to \$1,258

## Pruning Equipment

Brushmate pruning saw	\$52
Lopping Shears	\$132
Husqvarna medium brushcutter	\$650

## Pasture Probes

*Mosaic Systems Ltd:*

PastureProbe	From \$985
Chlorophyll meter	\$1,600

## Chains

*Ancra N.Z. Ltd:* 7.1mm to 10mm Uni-drag Chain kit 5 metres \$96.80 to \$138.65

## Effluent Pond Stirrer

*Williams Engineering:* (including wheels) \$3,240

## Stump Chippers and Log Splitters

*Mowtown*

LM 2500	TPL 25 tonne Hydraulic Log splitter	\$2,695
CM 18	18 hp Commercial 15cm Chipper	\$9,549
CM 25	25 hp Commercial 15cm Chipper	\$10,649
CM PTO	PTO Driven Commercial 15cm Chipper	\$7,490

## 2.20.22 Safety Equipment

*Croplands Equipment Ltd:*

Kasco Helmet and portable filter, c/w 12/24 v tractor mounted filter, 2 m hose	\$1,950
Kasco spray helmet	\$450
Breathalon spray suit	\$175
Arbin tractor filters	\$1,065

*N.Z. Safety Limited:*

Overalls	\$36
Overtrousers PVC	\$37.95
Coveralls Breathalon	\$169.95
Coveralls PVC	\$109
Coveralls Tyvek	\$18.79
Earmuffs - grade 4	\$12.10
Antifog Goggles	\$12.24
Glove Nitrile Fabric	\$10.40
Glove PVC	\$3.04
Mask Dust Moldex 1100	\$0.56
Mask 1100 Consumer	\$3.06
Overalls Bib	\$54.95
Parka PVC	\$63.00
Mask	\$48.30
Boots	\$66.84
Gumboots	\$41.49
Browguard	\$26.60

**Fire Extinguishers:**

*N.Z. Safety Limited:*

Alsafe- stored pressure dry chemical	1.0 kg/2.0 kg	\$68/\$89
	3.0kg/4.5kg	\$110/\$143
	6.0kg/9.0kg	\$153/\$174

**2.20.23 Protection (Crop)**

*Electro-Tek Engineering Ltd:*

Birdscarer Gun Zon Export	- complete unit	\$898
	- gun only	\$450
	- timer only	\$277
	- tripod	\$171

*Permathene Plastics Ltd.:*

Birdnetting	- 4.27 m x 50 m	\$84
Marix frost protection	- 1.9 m x 100 m	\$102
	- 3.76 m x 91.4 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	\$35.00
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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) 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 \$21.00 (not \$1.00) will be charged.

The Building Industry Authority Levy is a different levy from the Building Research Levy which is also chargeable on building consents for building work with an estimated value of greater than \$20,000.

The levy rate is reviewed annually and can be decreased by regulation. 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 \$4,000 to \$6,500 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	\$5400 per bail
Site preparation and power	\$530 per bail
Effluent disposal	\$400 per bail
Total cost	\$6330 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)	\$850 to \$1450 per bail
Building floor and foundations	\$720 per bail
Milkroom/outside silo	\$250 to \$450 per bail
Electrician/Plumber	\$545 per bail
Yard concrete (based on ten cows per bail)	\$530 per bail
Yard pipework (based on ten cows per bail)	\$360 per bail

**Complete Sheds:** (including equipment)  
*Alfa Laval Agri New Zealand Ltd. (Turn-Styles):*

Average Project Costs:	Platform Size (bails)					
	28	32	36	40	50	60
Building:	70,000/ 100,000	80,000/ 105,000	84,000/ 110,000	88,000/ 115,000	95,000/ 135,000	105,000/ 145,000
Yard	15,500/ 17,000	16,500/ 18,000	19,000/ 20,000	20,500/ 22,500	26,000/ 28,000	31,000/ 34,000
Yard Pipe	11,000/ 12,000	11,000/ 13,000	13,000/ 15,000	14,500/ 16,500	18,000/ 20,000	22,000/ 24,000
Electrical:	9,000/ 14,000	10,000/ 15,000	11,000/ 16,000	12,000/ 17,000	12,000/ 17,000	13,000/ 20,000
Plumbing:	5,000/ 9,000	6,000/ 10,000	6,000/ 10,000	7,000/ 11,000	7,000/ 11,000	8,000/ 12,000
Platform:	45,000/ 57,000	49,000/ 64,000	52,500/ 72,000	57,200/ 79,000	68,300/ 97,500	78,800/ 118,000
Milking	59,000/ 68,000	67,100/ 77,000	70,100/ 84,500	77,300/ 89,000	96,000/ 105,500	106,000/ 120,000
Equipment:						
TOTAL (\$)	214,500/ 277,000	239,600/ 302,000	255,600/ 327,500	276,500/ 350,000	322,300/ 414,500	363,800/ 473,000
PER BAIL	7,660/ (\$)	7,487/ 9,437	7,100/ 9,097	6,912/ 8,750	6,446/ 8,280	6,063/ 7,883

- Note:** Not included:
- Site preparation
  - All weather access to site
  - Water supply to site
  - Power supply to site
  - Effluent disposal from site

A specific example of the cost of construction of a 50 bail Rotary shed in 1996 (Canterbury) is as follows:

Complete building (includes pumps etc.) \$7,600 to \$8,200 per bail  
 This includes everything except the power to the site (all other electrical work included), earthworks and a deep well, if required.

### 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 \$230 to \$280 per square metre to erect. Covered yards (building component only - not including cost of yards) cost \$50 to \$60 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 \$9,500; 5000 ewe capacity about \$22,000.

**Cattle:** Price varies markedly with capacity and design (number of gates etc). Yards with a 50 head capacity at least \$5,500 (through to \$40,000 for 500 head).

## Mothing 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
Perm cattle yard kitset	140 head		\$14500 to \$19500 (excluding freight)

## 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



Sizes	2.5m x 2.4m	\$843
	2.5 x 3.6m	\$967
	2.5m x 4.8m	\$1,250
	2.5m x 6.0m	\$1,376

*Harford Greenhouses:*

<b>Maxispan Professional Series:</b>	
24 metres	\$11,165
30 metres	\$13,186
36 metres	\$15,260
48 metres	\$18,980
60 metres	\$23,740
<b>Maxispan Single Vent Series:</b>	
24 metre	\$9845
30 metre	\$11,386
36 metre	\$13,100
48 metre	\$16,100
Sawtooth	from \$25 per m <sup>2</sup>
Budget Span	from \$21.50 per m <sup>2</sup>
Crop topper	from \$15 per m <sup>2</sup>
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:*

<b>New town-house model</b>	<b>1 cover</b>	<b>2 covers</b>	
2.3m x 2 to 2.3 x 6m	\$743 to \$995	\$806 to \$1166	
<b>Mini-tunnelhouses</b>	<b>Complete kitset</b>	<b>Less timber</b>	
3m x 2m to 3m x 10m	\$698 to \$1508	\$635 to \$1314	
3m x 12m to 3m x 30m	\$1706 to \$3380	\$1467 to \$2840	
4m x 2m to 4m x 10m	\$747 to \$1710	\$676 to \$1493	
4m x 20m to 4m to 30m	\$2979 to \$4251	\$2577 to \$3660	
<b>Tunnelhouses</b>			
Kitset ex-factory	- 20m x 18m	\$4,536	
	- 20m x 24m	\$5,616	
	- 20m x 30m	\$6,480	
Large Commercial Alloy		Single cover	Twin skinned
	- 5m wide	\$41.40	\$47.70
	- 6m wide	\$54.00	\$60.30
	- 7m wide	\$54.90	\$61.20
	- 8m wide	\$56.70	\$63.00

Budget Span Crop Cover: Side Height 1.8m; over 100m<sup>2</sup>

Width	No sides	Sides	Solid Ends (each)
5m	\$26.10	\$29.70	\$378
6m	\$30.60	\$30.60	\$495

**Greenhouse Film**

*Agpack Plastics Ltd:*

<b>Agphane:</b>			
2m x 50m	125 / 200 microns	\$120/\$198	
3m x 50m	200 microns	\$286	
4m x 50m	125 microns	\$242	
4m x 50m	200 microns	\$359	
<b>Infrasol -length 50m, 150 microns:</b>			
4m		\$300	
7m		\$525	
10m		\$750	
14m		\$1050	
<b>Sunselector Red - length, 150 microns:</b>			
7m / 8m / 12m		\$927/ \$1060 / \$1590	
<b>Infrane Greenhouse Lining film:</b>			
2m x 100m	50 microns	\$89	
5m x 100m	80 microns	\$297	

*Tunnelworld Ltd:*

<b>Films</b>	
Agphane 2 and 4 metre widths (200 micron)	\$3.87 per square metre
Infrasol 4 to 14 m	\$3.15 per square metre
Tunnel world locking system	\$2.25 per metre
EVA (200 micron) 6 to 10 m	\$4.05 per square metre
Copper (40% shade) 8 m	\$4.05 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 <sup>3</sup> per second	\$341/\$460
600 series, fan plate model/wall fan model, 900 rpm, 3.06 m <sup>3</sup> per second	\$600
1200 series, 380 rpm, 9.81 m <sup>3</sup> 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 4000/5000 cubic metres per hour		\$295/\$345
Extendable Rotary greenhouse cleaning brushes	1.8 to 3.6m	\$277
	2.4 to 4.8m	\$301

## 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 (m <sup>2</sup> )	Kitset 1	Kitset 2	Erected
221	2	62	\$44,085	\$50,383	\$73,693
223	2	74.5	\$56,512	\$65,029	\$91,049
224	2	88	\$64,344	\$71,335	\$99,511
325	3	103.3	\$75,718	\$84,476	\$115,884
328	3	116	\$83,100	\$92,181	\$125,618
332	3	148.1	\$88,686	\$98,907	\$139,705
420	4	145.1	\$101,525	\$114,641	\$158,871
424	4	200	\$113,032	\$123,526	\$172,108

### **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 and 2 ends.

	2 Bay	3 Bay	4 Bay	5 Bay	6 Bay
Medium Wind	\$3,132	\$4,086	\$5,058	\$6,064	\$6,991
High Wind	\$3,377	\$4,445	\$5,521	\$6,633	\$7,691
V. High Wind	\$3,894	\$5,101	\$6,344	\$7,551	\$8,741
Snow/Medium Wind	\$3,255	\$4,288	\$5,338	\$6,405	\$7,438
Snow/High Wind	\$3,386	\$4,463	\$4,421	\$5,898	\$7,700
Snow/V. High Wind	\$4,016	\$5,338	\$6,624	\$7,866	\$9,179
Standard	\$4,078	\$5,495	\$6,913	\$8,339	49,756

*New World Products Ltd.:*

Round Barns:				
3.6 metre Bays		Erected	Complete Kitset	Steel Only
3.6 metre Extension		\$1,698	\$1,444	\$1,269
2.2 m	2 Bays	\$3,688	\$3,063	\$2,888
3.3 m	3 Bays	\$5,460	\$4,913	\$4,550
4.4 m	4 Bays	\$6,913	\$6,221	\$5,674
5.5 m	5 Bays	\$8,313	\$7,486	\$6,576
6.6 m	6 Bays	\$9,881	\$8,890	\$7,798
8.1 m	7 Bays	\$11,633	\$10,476	\$9,204
8.7 m	8 Bays	\$12,973	\$11,650	\$10,194
9.9 m	9 Bays	\$14,700	\$13,213	\$11,575
11 m	10 Bays	\$16,433	\$14,779	\$12,959
Hinged Door End		\$1,488	\$1,378	-
Sliding Door End		\$1,706	\$1,597	-
Blank End		\$1,006	\$919	-
Coralite (per sheet)		\$21.88	-	-
Flashing (per end)		\$109	-	-

The customer is responsible for: 0.3 cubic metres of builders mix per truss, water for the foundations and a level site. Mileage is charged at \$1.75 per km for distances over 60km.

Lean-tos on one side	Erected Iron off	Erected Iron on	Kitset Iron on	Kitset Iron off
1st bay, roof only	\$770	\$866	\$753	\$621
2nd bay, roof only	\$1365	\$1540	\$1330	\$1199
3rd bay, roof only	\$1969	\$2223	\$1908	\$1785
4th bay, roof only	\$2091	\$2888	\$2485	\$2275
5th bay, roof only	\$3168	\$3570	\$3063	\$2940
6th bay, roof only	\$3763	\$4244	\$3640	\$3518
Lean-to side wall				\$140 per bay
Lean-to end wall				\$289 per end
Coralite				\$30.60 per sheet

**Gable Buildings (Multi-purpose):**

Erected Prices (OIS=Open One Side, CID=Closed One Door):

Height	2.5 OIS	2.5 CID	3.0 OIS	3.0 CID
6 x 6	\$4,262	\$5,101	\$4,472	\$5,448
up to				
21 x 6	\$10,091	\$11,608	\$10,436	\$12,159
7.2 x 7	\$5,129	\$6,134	\$5,541	\$6,682
up to				
21.6 x 7	\$11,059	\$12,705	\$11,908	\$13,851
up to				
Height	3.0	3.0	3.5	3.5
7.2 x 8	\$7,014	\$8,202	\$7,456	\$8,925
up to				
21.6 x 8	\$14,496	\$16,486	\$15,079	\$17,416
7.2 x 9	\$7,200	\$8,434	\$7,873	\$9,342
up to				
21.6 x 9	\$14,958	\$16,994	\$12,378	\$18,471
7.2 x 10	\$8,803	\$10,130	\$9,374	\$10,982
up to				
21.6 x 10	\$17,887	\$20,061	\$18,673	\$21,196

**Note:** Netting, sizalation, coralite, man doors can be fitted. Mileage and/or accommodation charges after 60km. Customer supplies builders mix and water on a level site.

**Cover Fast Building Systems (Formsteel):**

Implement Shed, three sides enclosed		
12 x 6 to 12 x 12 metres	- height 3.0m	\$5,939 to \$12,465
	- height 4.0m	\$6,523 to \$13,619
18 x 6 to 18 x 12 metres	- height 3.0m	\$8,019 to \$17,260
	- height 4.0m	\$8,832 to \$18,634

Packing Shed, enclosed with roller door		
12 x 6 to 12 x 12 metres	- height 3.0m	\$7,163 to \$14,017
	- height 4.0m	\$9,066 to \$16,484
18 x 6 to 18 x 12 metres	- height 3.0m	\$9,708 to \$19,305
	- height 4.0m	\$11,863 to \$22,153

*Calder Stewart Industries Ltd:*

	\$ per sq m
Implement Sheds	\$90 to \$110
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	\$3,594 to \$14,744
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	\$4,194 to \$17,393
12m arch, 12m x 8m to 12m x 40m (2-10 bays) 6m high	\$7,756 to \$38,329
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	\$225
Columns	\$140

**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):*

3.6m x 3.3m wide	\$1,388
15 m x 3.8m wide	\$16,554
6.0m x 3.8m wide	\$5,644
18 m x 3.8m wide	\$21,200
9.0m x 3.8m wide	\$8,143
21 m x 3.8m wide	\$25,858
12 m x 3.8m wide	\$11,654
24 m x 3.8m wide	\$33,097
Hand Rail Posts	\$62

## 2.21.13 Grain Silos

*Dan Cosgrove Ltd:*

Silos to be bolted to concrete base -

Model	Diam (m)	Overall Height (m)	Bushell Capacity	Metric Tonnes		Capacity m <sup>3</sup>	Wholesale Price
				Wheat	Barley		
15/3	4.58	3.78	1355	36	31	47.73	2924
15/4	4.58	4.59	1733	46	39	61.06	3256
15/5	4.58	5.41	2116	57	48	74.56	3638
15/6	4.58	6.22	2495	67	57	87.89	4097
18/3	5.49	4.04	2006	54	46	70.68	3680
18/4	5.49	4.85	2551	68	58	89.86	4106
18/5	5.49	5.67	3102	83	71	109.27	4709
18/6	5.49	6.48	3646	98	83	128.44	5245
18/7	5.49	7.29	4191	113	96	147.61	5916
18/8	5.49	8.1	4735	127	108	166.78	6630
18/9	5.49	8.92	5286	142	121	186.19	7395
21/5	6.41	5.93	4319	116	99	152.13	5916
21/6	6.41	6.74	5049	136	116	177.85	6766
21/7	6.41	7.55	5791	156	133	203.98	7472
21/8	6.41	8.36	6533	176	150	230.11	8347
21/9	6.41	9.18	7284	196	167	256.56	9265
24/5	7.32	6.2	5726	154	131	201.69	7285
21/6	7.32	7.01	6694	180	153	235.78	8245
24/7	7.32	7.82	7662	206	176	269.86	9265
24/8	7.32	8.63	8630	233	198	303.95	10115
24/9	7.32	9.45	9609	260	221	338.45	11220

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.

### 2.21.14 Killing Sheds

#### Concrete

##### *Cement Products:*

2.13 m x 2.8 m high with aluminium screen door	\$2,649.22
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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	\$2,578
3.05m	2.15m	\$3,112
3.43m	2.44m	\$3,556

### 2.21.15 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

### 2.21.16 Shelters (Stock)

##### *Ribtec:*

Calf/Goat fibreglass hutch (4m long x 2.4m diameter)	\$1067
Calf Shelter	\$2478
Goat Shelter	\$1225

### 2.21.17 Dog Motels

##### *Ribtec:*

Single Fibreglass Kennel	- small	\$222
	- large	\$284

##### *Prattley Engineering:*

Dog motels	\$296 to \$598
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### 2.21.18 Building Materials

##### *Roofline Products Ltd:*

	Price per metre
Iron: - Galvanised 0.40 corrugated and roofdeck	\$8.80
- Colourcote 0.40 corrugated and roofdeck	\$11.50
- Galvanised 0.40 weatherboard	\$8.50
- Mini Iron	\$9.40
- Z/Lume 0.40 corrugated and roofdeck	\$8.80
Skylite - corrugated profile	\$14.50
Spouting: - 115 x 55 Box Galvanised and D Galvanised	\$5.50

- 125 x 55 D Galv.	\$5.60
- External and internal corner galvanised	\$22.00
- Spouting stopends	\$10.00
Downpipe:- 65mm x 3m round plastic	\$13.18
- 65mm x 0.40 round Galvanised	\$7.70

### Cement Products

*Higgins Redimix Concrete:* (Ex Palmerston North and Feilding)

	19 mm (\$/cu.m)	12 mm (\$/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 <sup>3</sup>	\$30.00 per load

Conveyor Hire - \$12.50 per cubic metre

Accelerator (calcium ) \$3 per 1% per cubic metre

*Allied Concrete Ltd:*

	\$/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

	150 mm	\$1.27	200 mm	\$1.79
Half				
One Plain End	150 mm	\$2.39	200 mm	\$2.84
Open End	150 mm	\$2.39	200 mm	\$2.84
Bond Beam Closed end	150 mm	\$2.39	200 mm	\$2.84

### Polythene

*Edwards and Williams Ltd:*

Horticultural polythenes:	Price per sq/m
Durafilm '3' - widths 1 to 14 metres	
0 - 75 sq/m	\$2.00
76 - 199 sq/m	\$1.60
200 sq/m plus	\$1.40
Duratough 203 micron	
0 - 75 sq/m	\$2.60
76 - 199 sq/m	\$2.20
200 sq/m plus	\$1.90

*Placemakers:*

	4m x 25m / 4m x 50m	\$61.67/\$125.00
125μ		
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	\$470
Cupressus macrocarpa	\$58	\$470
Eucalyptus nitens	\$70	\$570
Pinus radiata GF16	\$23	\$175
GF23CP	\$56	\$420
Douglas Fir (25/50 cms)	\$78	\$570

**Note:** Freight is extra

*Ministry of Forestry:* (price is per 1000)

	Northland	Wairarapa and Wellington	Canterbury
P.radiata GF 17 to 9	\$200 to \$250	\$150 to \$200	\$200 to \$230
GF 22	\$600	\$400 to \$550	\$550 to \$650
GF 25 to 28	\$600 to \$800	\$450 to \$600	\$600 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	\$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 per 100
Abelia (Chinese Floribunda)	\$173
Acacia spp (Wattle)	\$111 to \$222
Alnus	\$195 & \$244
Cedrus Deodara (Indian Cedar) 2 year	\$156 to \$222
Chamaecyparis Lawsoniana 2 year	\$133
Cortaderia spp. 2 year (Pampas and N.Z. Toe Toe)	\$84 to \$267
Cupressus all varieties 2 year trees	\$133
Eucalyptus spp. 2 year	\$111
Larix spp (Larch)	\$111
Liquid amber	\$49 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	\$111
Salix Matsudana (Willow)	\$173
Sequoia (Californian Redwood) 2 year	\$173
Tree Lucerne (Tagasaste)	\$120

*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)	\$280	-
Cupressus (Macrocarpa and Lusitanica spp)	\$53	\$450
Chamaecytisus palmensis (Tree lucerne / Tagasaste)	\$55	\$480
Eucalyptus spp.	\$57	\$480
Larix kaempferi (Japanese Larch) (0.75 to 1.2 m)	\$120	-
Leyland cypress (0.50 to 0.75 m)	\$250	\$2125
Pseudotsuga menziesii (Douglas fir) 2 year - 35cm +	\$100	\$850
Pinus radiata - GF18 seedlings	\$30	\$180
- GF26 nursery cuttings	\$63	\$530
- GF28 nursery cuttings	\$63	\$530
Sequoia sempervirens (Californian Redwood)	\$150	\$1270

*Halketts Nursery: (Christchurch)*

	Price per 10	Price per 100	Price per 1000
Pinus radiata 1/0 GF 16	-	-	\$187
1/0 GF 17	-	-	\$204
1/0 GF 19	-	-	\$231
2/0 GF 17	-	-	\$578
Pinus nigra	-	\$58	\$440
Pinus patula	\$36	\$333	-
Eucalyptus spp	\$13	\$84	\$667
Poplar- all cultivars	\$11	\$89	\$756
Pseudotsuga menziesii (Douglas Fir)	-	\$58	\$440
Cedrus deodara \$4 each	\$36	\$333	-
Salix spp (willows)	\$11	\$89	\$756
Wattles - all cultivars	\$13	\$84	\$667
Alnus glutinosa (Black Alder)	\$17.34	\$147	\$1067
Betula pendula (Silver Birch) - dependant on grade and range			\$13 to \$22
Cortadenia seloana (Pampas Grass)	\$36	\$333	-
Phormium tenax (N.Z. Native Flax)	\$36	\$333	-
Sequoia giganteum (Wellingtonia)	\$36	\$333	-
Leyland cypress	\$36	\$333	-
Cupressus -arizonica	\$17	\$147	\$1067
-macrocarpa	\$17	\$147	\$1067

### 2.22.2 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 2.22.1.

#### Nutrition

Hand fertilising (phosphate)		15 to 25 cents per tree
Aerial fertilising (phosphate) by helicopter		\$320 to \$340 per hectare
Aerial fertilising (nitrogen) by helicopter		\$350 to \$370 per hectare
Oversowing (grass/legumes) plus fertiliser by helicopter		\$320 to \$340 per hectare
Boron fertilising/Ulexite	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 \$35 plus administration costs.

### 2.2.2.3 Logging and Transportation Costs

Logging	- Ground based logging	\$14 to \$20 per tonne
	- Cable logging	\$18 to \$23 per tonne
	- Helicopter logging, depends on flight time or distance	\$65 to \$100 per time
Roading	- Clayland: range from	\$0.67 to \$2.70 per tonne
Transportation per kilometre		\$2.00 per tonne

### 2.2.2.4 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

### 2.2.2.5 Shelter/Windbreak/Shade and Weed Cloth

*Agpack Plastics Ltd:*

Windbreak Cloth	- 0.91m x 50m	\$46
	- 1.83m x 50m	\$92
	- 2.74m x 50m	\$135
Shadecloth	- 1.83m x 50m (32% shadecloth)	\$147
	- 1.83m x 50m (50% shadecloth)	\$157
Weedtex	- 0.91m x 50m	\$57
	- 0.91m x 100m and 1.8m x 50m	\$112

*Donaghys:*

Windbreak:	Width	Price per 50 m roll
Woven (green):	0.91 m to 2.74 m	\$51.10 to \$202.20
Knitted:	0.91 m to 1.83 m	\$63.00 to \$126.00
Knitted (ultrawind):	1 m to 4.10 m	\$114.50 to \$468.30
Shadecloth:		
Supashade (knitted):		
Very light	1.83 m to 3.66 m	\$186.40 to \$372.80
Light	1.83 m to 3.66 m	\$205.15 to \$410.30
Medium	1.83 m to 3.66 m	\$261.45 to \$522.90
Heavy	1.83 m to 3.66 m	\$304.80 to \$609.60

*Edwards and Williams Greenhouses Ltd:*

Weed Control:		
Weedtex	0.91 m to 3.66 m	\$54.10 to \$216.40

*Evergreen Horticulture and Hydroponics:*

Woven Shadecloth - (1.83m x 50m Rolls)		
Very Light	(30% to 35%)	\$150
Light	(45% to 50%)	\$160
Medium	(65% to 70%)	\$190
Heavy	(75% to 80%)	\$219

Donaghy's supa shadecloth - knitted (1.83m x 50m)		
Very Light	(30% to 35%)	\$203.79
Light	(45% to 50%)	\$224.29
Medium	(65% to 70%)	\$285.82
Heavy	(75% to 80%)	\$294.04

Woven Windbreak -	0.915m x 50m	\$43.00
	1.83m x 50m	\$86.00
	2.74m x 50m	\$175.00
	3.66m x 50m	\$182.00

Knitted Ultrawind 65% Porosity Windbreak		
2.74m x 50m		\$339.65
3.66m x 50m		\$428.07
Woven Weedmat		
0.915m x 50m		\$54
1.83m x 50m		\$108
3.66m x 50m		\$216

*Tunnelworld Ltd:*

Shade Material: (knit)	\$/m <sup>2</sup>	\$/roll	\$/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 / bag

*Newfield Marketing:*

KBC Tree Shelters (wrap around):	Quantity 100 - 499
500mm x150mm square	\$2.50
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 - 114mm wide	
Between 120 and 476 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 8MB RAM for an IBM ( or compatible ) computer. (8MB, preferably 16MB if windows is used). Need a minimum of 500MB hard disc, and one floppy disk drive. (1GB if windows is used). SVGA colour screen is recommended. Require at least a 486 or pentium processor. A computer with this sort of capability could be expected to cost within the range of \$1800 to \$2500.

#### **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 dot matrix printer for general farming use would cost between \$280 and \$1000. Ink jets provide superior print quality but running costs are higher. They cost between \$350 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
- Cost would be in the vicinity of \$2,000 to \$3,000 if purchased individually but between \$800 and \$1000 if purchased as a collective 'suite'. Often software will be cheaper if purchased with hardware.

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.

## 2.23.4 Hardware Prices

### Asset Computers

Specifications (see below)	Basic	Home	Explorer
Cyrix(IBM) 6x86 P150 +	\$1,217	\$1,704	\$2,101
Cyrix(IBM) 6x86 P166 +	\$1,274	\$1,762	\$2,159
AMD K5 P133	\$1,238	\$1,725	\$2,122
Pentium 120 (Intel)	\$1,251	\$1,739	\$2,136
Pentium 133 (Intel)	\$1,366	\$1,854	\$2,251
Pentium 150 (Intel)	\$1,424	\$1,911	\$2,308
Pentium 166 (Intel)	\$1,688	\$2,176	\$2,573
Pentium Pro 200 (Intel)	\$2,789	\$3,290	\$3,690

“Basic” system specifications

- Intel or Cyrix (IBM) cpu as per chart
- 1.3 Gb Maxtor hard drive
- 16 Mb EDO RAM (gold edged 72 pin)
- 1 Mb PCI Video card
- 256k pipeline burst cache RAM
- 14" NI monitor (KTX)
- 1.44 Mb floppy disk drive
- 104 Keyboard

“Home and Education” system specifications includes “basic system” plus:

- 8 x CD drive, Yamaha 26 bit sound card, stereo speakers.
- Windows 95 CD ROM (OSR2)
- Windows “Starts Here” tutorial CD ROM
- MS Internet Explorer V3.0
- MS Works, Money, Encarta 96, Golf, Dangerous Creatures, MS Scenes
- Mouse & mouse pad

“Internet Explorer” system specifications includes “home and education” plus:

- 1.6 Gb Maxtor or Seagat hard drive
- 2 Mb Virge 3d PCI video card
- 15" digital control SVGA monitor (KTX)
- 33,600 fax/voice/modem (Rockwell chipset)

All systems can be built to your specifications with upgrades of all components.

### Accessories:

Zip Drives	\$355
Printers :	
Hewlett packard HP 400 colour deskjet printer. Free colour kit	\$355
Epson Stylus colour IIs 720x360 dpi colour ink jet printer	\$342
Epson EPL 5500 Laser Printer	\$870
Epson EPL5500W Windows Laser Printer	\$660

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.

There are two versions of Stockpol available:	
Stockpol Farmer	\$1400
Stockpol Consultant	\$3450
These prices include software, support and 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.	\$350

*Animalplan/Genepplan/Breedpac Bureau Services*

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 Genepplan and Breedpac (see below).

*Alan F. Warren & Associates, (Timaru):*

<b>Geneplan:</b>	
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	

*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)	\$480*
Flock/herd fee	

\* 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

## 2.24 APPENDIX: RATE OF INFLATION IN NEW ZEALAND 1891 TO 1996

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 2.4% in 1996 (see page B-233).

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 1996 (page B-233)

= 1.0 divided by 0.0089 = 112.36

this means a dollar (ten shillings) in 1891 would buy 112.36 times as much as a dollar in 1996.

(ii) 1950 (page B-232) compared with 1984 (page B-233)

= 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	-	<b>1.0000</b>								
1892	<b>0.5</b>	0.9947								
1893	<b>2.7</b>	0.9682								
1894	<b>0.5</b>	0.9632								
1895	<b>-0.5</b>	0.9681								
1896	<b>0.5</b>	0.9631								
1897	<b>1.0</b>	0.9532								
1898	<b>4.1</b>	0.9143								
1899	<b>-3.4</b>	0.9457								
1900	<b>2.0</b>	0.9265								
1901	<b>3.0</b>	0.8988								
1902	<b>2.4</b>	0.8771								
1903	<b>-0.5</b>	0.8812								
1903	<b>0.0</b>	0.8812								
1905	<b>0.0</b>	0.8812								
1906	<b>6.6</b>	0.8228								
1907	<b>-0.9</b>	0.8301								
1908	<b>0.0</b>	0.8301								
1909	<b>-1.3</b>	0.8412								
1910	<b>1.4</b>	0.8298								
1911	<b>-0.9</b>	0.8372								
1912	<b>3.2</b>	0.8107								
1913	<b>2.2</b>	0.7929								
1914	<b>4.3</b>	0.7589								
1915	<b>7.8</b>	0.6996								
1916	<b>8.0</b>	0.6435								
1917	<b>9.9</b>	0.5798								

**Base Year:**

Year	C.P.I. %	1891	1920	1930	1940	1950	1960	1970	1980	1990
1918	<b>12.2</b>	0.5090								
1919	<b>7.7</b>	0.4696								
1920	<b>13.6</b>	0.4059	1.0000							
1921	<b>3.3</b>	0.3926	0.9672							
1922	<b>-10.9</b>	0.4353	1.0725							
1923	<b>-2.5</b>	0.4464	1.0998							
1924	<b>2.1</b>	0.4371	1.0768							
1925	<b>0.5</b>	0.4348	1.0713							
1926	<b>0.5</b>	0.4326	1.0658							
1927	<b>-0.8</b>	0.4359	1.0739							
1928	<b>0.0</b>	0.4359	1.0739							
1929	<b>-0.3</b>	0.4370	1.0739							
1930	<b>2.01</b>	0.4460	1.0987	1.0000						
1931	<b>7.6</b>	0.4797	1.1819	1.0757						
1932-	<b>7.9</b>	0.5177	1.2754	1.1608						
1933-	<b>4.6</b>	0.5415	1.3341	1.2142						
1934	<b>1.3</b>	0.5345	1.3169	1.1986						
1935	<b>3.8</b>	0.5142	1.2667	1.1529						
1936	<b>2.8</b>	0.5000	1.2319	1.1212						
1937	<b>7.1</b>	0.4643	1.1439	1.0411						
1938	<b>3.1</b>	0.4501	1.1089	1.0093						
1939	<b>4.6</b>	0.4295	1.0581	0.9631						
1940	<b>4.1</b>	0.4118	1.0145	0.9233	1.0000					
1941	<b>3.7</b>	0.3965	0.9768	0.8891	0.9629					
1942	<b>3.1</b>	0.3842	0.9465	0.8615	0.9330					
1943	<b>2.5</b>	0.3744	0.9224	0.8395	0.9092					
1944	<b>1.8</b>	0.3676	0.9058	0.8244	0.8928					
1945	<b>1.3</b>	0.3628	0.8937	0.8314	0.8809					
1946	<b>0.7</b>	0.3604	0.8878	0.8081	0.8752					
1947	<b>3.3</b>	0.3486	0.8589	0.7817	0.8466					
1948	<b>8.0</b>	0.3207	0.7902	0.7192	0.7789					
1949	<b>1.6</b>	0.3157	0.7779	0.7080	0.7667					
1950	<b>5.8</b>	0.2976	0.7331	0.6672	0.7226	<b>1.0000</b>				
1951	<b>10.9</b>	0.2651	0.6532	0.5946	0.6439	0.8911				
1952	<b>7.9</b>	0.2443	0.6019	0.5478	0.5933	0.8211				
1953	<b>4.6</b>	0.2332	0.5745	0.5229	0.5663	0.7837				
1954	<b>4.5</b>	0.2227	0.5487	0.4994	0.5408	0.7485				
1955	<b>2.6</b>	0.2168	0.05342	0.4862	0.5266	0.7287				
1956	<b>3.4</b>	0.2095	0.5161	0.4698	0.5087	0.7041				
1957	<b>2.2</b>	0.2048	0.5046	0.4593	0.4974	0.6884				
1958	<b>4.5</b>	0.1957	0.4820	0.4387	0.4751	0.6575				
1959	<b>7.5</b>	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	<b>-2.7</b>	0.1860	0.4582	0.4170	0.4516	0.6250	1.0000			
1961	<b>1.8</b>	0.1827	0.4501	0.4097	0.4437	0.6140	0.9824			
1962	<b>2.6</b>	0.1779	0.4382	0.3988	0.4319	0.5978	0.9564			
1963	<b>2.0</b>	0.1743	0.4294	0.3908	0.4232	0.5857	0.9371			
1964	<b>3.4</b>	0.1683	0.4147	0.3775	0.4088	0.5657	0.9051			
1965	<b>3.4</b>	0.1626	0.4006	0.3646	0.3949	0.5465	0.8743			
1966	<b>2.8</b>	0.1581	0.3895	0.3545	0.3839	0.5313	0.8500			
1967	<b>6.1</b>	0.1484	0.3657	0.3328	0.3605	0.4988	0.7981			
1968	<b>4.2</b>	0.1421	0.3502	0.3187	0.3452	0.4777	0.7642			
1969	<b>5.0</b>	0.1351	0.3327	0.3028	0.3280	0.4539	0.7262			
1970	<b>6.5</b>	0.1263	0.3112	0.2833	0.3068	0.4245	0.6792	1.0000		
1971	<b>10.4</b>	0.1131	0.2787	0.2537	0.2747	0.3802	0.6083	0.8955		
1972	<b>6.9</b>	0.1053	0.2595	0.2363	0.2558	0.3540	0.5664	0.8338		
1973	<b>8.2</b>	0.0967	0.2383	0.2168	0.2349	0.3251	0.5201	0.7658		
1974	<b>11.2</b>	0.0859	0.2117	0.1927	0.2087	0.2888	0.4621	0.6803		
1975	<b>14.7</b>	0.7333	0.1807	0.1645	0.1781	0.2465	0.3943	0.5806		
1976	<b>16.9</b>	0.0609	0.1501	0.1366	0.1480	0.2048	0.3276	0.4824		
1977	<b>14.4</b>	0.0522	0.1285	0.1170	0.1267	0.1753	0.2805	0.4130		
1978	<b>11.9</b>	0.0459	0.1132	0.1030	0.1116	0.1544	0.2470	0.3637		
1979	<b>13.7</b>	0.0396	0.0976	0.0889	0.0963	0.1332	0.2131	0.3138		
1980	<b>17.1</b>	0.0328	0.0809	0.0737	0.0798	0.1104	0.1766	0.2600	1.0000	
1981	<b>15.5</b>	0.0278	0.0684	0.0623	0.0674	0.0933	0.1493	0.2198	0.8453	
1982	<b>16.1</b>	0.0233	0.0574	0.0523	0.0566	0.0798	0.1253	0.1845	0.7094	
1983	<b>7.4</b>	0.0216	0.0532	0.0484	0.0524	0.0725	0.1160	0.1708	0.6570	
1984	<b>6.1</b>	0.0203	0.0499	0.0455	0.0492	<b>0.0681</b>	0.1090	0.1605	0.6171	
1985	<b>15.5</b>	0.0171	0.0422	0.0384	0.0416	0.0576	0.0921	0.1356	0.5216	
1986	<b>13.2</b>	0.0149	0.0366	0.0333	0.0361	0.0500	0.0799	0.1177	0.4526	
1987	<b>15.7</b>	0.0125	0.0309	0.0281	0.0304	0.0421	0.0674	0.0992	0.3815	
1988	<b>6.4</b>	0.0117	0.0289	0.0263	0.0285	0.0394	0.0631	0.0929	0.3572	
1989	<b>5.7</b>	0.0111	0.0273	0.0248	0.0269	0.0372	0.0595	0.0876	0.3368	
1990	<b>6.1</b>	0.0104	0.0256	0.0233	0.0253	0.0349	0.0559	0.0823	0.3163	1.0000
1991	<b>4.5</b>	0.0099	0.0244	0.0223	0.0242	0.0333	0.0534	0.0786	0.3021	0.9550
1992	<b>0.8</b>	0.0098	0.0242	0.0221	0.0240	0.0330	0.0530	0.0778	0.2997	0.9474
1993	<b>1.4</b>	0.0097	0.0239	0.0218	0.0237	0.0325	0.0523	0.0767	0.2955	0.9341
1994	<b>2.8</b>	0.0094	0.0232	0.0211	0.0230	0.0316	0.0508	0.0745	0.2872	0.9079
1995	<b>2.9</b>	0.0091	0.0225	0.0205	0.0223	0.0307	0.04933	0.0723	0.2788	0.8816
1996	<b>2.4</b>	<b>0.0089</b>	0.0220	0.0200	0.0218	0.0300	0.0481	0.0706	0.2721	0.8604

*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. 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 1997.

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 Lincoln University Farm Advisory Staff.

#### 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	376 @	\$40	\$15,040	0.7	263
Rams	20 @	\$100	\$2,000	0.8	16
	1,396		\$66,015		1,279

Dollar Investment in sheep per stock unit                   \$ 51.61

##### 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 @	\$45.00		\$14,175
Store m.s. lambs	345 @	\$30.00		\$10,350
Cull hogget/2ths	82 @	\$55.00		\$4,510
5 year old ewes	140 @	\$35.00		\$4,900
Cull ewes to works	44 @	\$25.00		\$1,100
(Average price)	926	\$ 37.83		
Wool (kg)	5960 @	\$3.00 (net)		\$17,880

TOTAL INCOME

\$52,915

**Expenditure:**

Shearing -				
Sheep	990 @	\$185	per 100	\$1,831.50
Hoggets	370 @	\$185	per 100	\$684.50
Lambs	390 @	\$170	per 100	\$663.00
Tup crutch - ewes	1010 @	\$50	per 100	\$505.00
Main crutch - ewes	990 @	\$65	per 100	\$643.50
Crutch - hoggets	370 @	\$45	per 100	\$166.50
Woolshed expenses - plant, packs e.t.c.				\$350.00
Animal Health -				
Drench ewes pre-lamb	990 @	\$0.06		\$59.40
Drench lambs (doses)	2900 @	\$0.03		\$87.00
(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 @	\$0.85		\$850.00
- lambs	690 @	\$0.65		\$448.50
Cartage - (based on 100km travel)				\$2,536.50
Prime lambs	291 @	\$1.80		\$523.80
Store lambs	303 @	\$1.00		\$303.00
Cull hgts/2th/5yr ewes	273 @	\$1.85		\$505.05
Works ewes	55 @	\$1.50		\$82.50
Wool - bales	33 @	\$12.00		\$396.00
Selling Charges -				
Yard fees - sheep	576 @	\$0.40		\$230.40
Commission -				
- saleyards	\$19,760 @	5.5%		\$1,086.80
- other stock	\$15,275 @	5.5%		\$840.13
Ram Purchase	5 @	\$350		\$1,750.00

TOTAL DIRECT COSTS

\$13,098.18

TOTAL GROSS MARGIN (before interest)	\$39,949.13
GROSS MARGIN per dollar invested in sheep	\$ 0.61
<u>GROSS MARGIN per Stock Unit</u>	<u>\$ 31.23</u>

**Gross Margin per Stock Unit at Various  
Stock Sale and Wool Prices.**

		Wool Price \$/kg (net)		
		\$2.40	\$3.00	\$3.60
<b>AVERAGE STOCK</b>	<b>\$30.52</b>	\$23.11	\$25.91	\$28.70
<b>SALE PRICE</b>	<b>\$38.15</b>	\$28.43	\$31.23	\$34.03
<b>\$/HEAD</b>	<b>\$45.78</b>	\$33.76	\$36.55	\$39.35

**Interest Costs:**

Interest on Capital Stock Value:			
\$66,015 @	7%		\$ 4,621
RETURN per Stock Unit (after interest)			\$ 27.62

### 3.2.2 Sheep - '2 year' Flock

#### SHEEP GROSS MARGIN

Crossbred '2 year' Flock, replacements  
by purchase of 5 year old ewes annually.  
(Easy country)

#### Capital Stock Wintered:

	<u>No.</u>		<u>Total</u>	<u>S.U.</u>	<u>Total S.U.</u>
Breeding Ewes	1000 @	\$30.00	\$30,000	1	1000
Rams	16 @	\$100	\$1,600	0.8	13
	1,016		\$31,600		1,013
Dollar Investment in sheep per stock unit			\$31.20		

#### Production Parameters:

Lambing - survival to sale.	110%
Death rate.	6%
First year ewes culled	25%
Export lamb sire; all lambs sold prime	
Ewes wool clip (kg)	4.5
Lambs not shorn	

#### Income:

Prime m.s. lambs	1100 @	\$45.00	\$49,500
Cull ewes to works	527 @	\$25.00	\$13,175
Wool (kg)	3840 @	\$3.00 (net)	\$11,520

TOTAL INCOME \$74,195.00

#### Expenditure:

Replacement ewes	595 @	\$30.00	\$17,850
Shearing -			
Sheep	960 @	\$1.85 per 100	\$1,776.00
Tup crutch - ewes	418 @	\$50 per 100	\$209.00
Main crutch - ewes	965 @	\$65 per 100	\$627.25
Woolshed expenses - plant, packs e.t.c.			\$250.00
Animal Health -			
Drench ewes pre-lamb	990 @	\$0.06	\$59.40
Drench lambs (3x)	3300 @	\$0.03	\$99.00

Vaccinate ewes	990 @	\$0.42	\$415.80	
Eartags, footrot and docking etc			\$300.00	
Dipping - purchased ewes already dipped				
ewes	418 @	\$0.85	\$355.30	
lambs	850 @	\$0.65	\$552.50	\$1,782.00
Cartage - (based on 50km travel except for replacement ewes, at 70km)				
Prime lambs	1100 @	\$1.20	\$1,320.00	
Works ewes	527 @	\$0.90	\$474.30	
Replacement ewes	595 @	\$2.00	\$1,190.00	
Wool - bales	21 @	\$8.01	\$168.21	\$3,152.51
Ram Purchase	4 @	\$350		\$1,400.00
<b>TOTAL DIRECT COSTS</b>				<b>\$27,046.76</b>
<b>TOTAL GROSS MARGIN (before interest)</b>				<b>\$47,148.24</b>
<b>GROSS MARGIN per dollar invested in sheep</b>				<b>\$1.49</b>
<b><u>GROSS MARGIN per Stock Unit</u></b>				<b><u>\$46.55</u></b>

**Gross Margin per Stock Unit at Various  
Lamb and Wool Prices.**

		Wool Price \$/kg (net)		
		\$2.40	\$3.00	\$3.60
<b>LAMB</b>	<b>\$36.00</b>	\$34.50	\$36.78	\$39.05
<b>PRICE</b>	<b>\$45.00</b>	\$44.28	\$46.55	\$48.83
<b>S/HEAD</b>	<b>\$54.00</b>	\$54.05	\$56.33	\$58.60

**Interest Costs:**

Interest on Capital Stock Value:			
\$31,600 @ 7%			\$2,212.00
<b>RETURN per Stock Unit (after interest)</b>			<b>\$44.37</b>

### 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)	4.2
Hogget wool clip (kg)	3.1
(average 21 and 19 micron diameter, respectively).	

##### Income:

Hoggets (m.s.)	680 @	\$23.00 (net)	\$15,640
Works ewes	100 @	\$21.00	\$2,100
Wool (kg)	4200 @	\$5.50 (net)	\$23,100
Wool (kg)	2635 @	\$7.00 (net)	\$18,445
Average wool price	6835 kg	\$6.08	

TOTAL INCOME

\$59,285.00

##### Expenditure:

##### Shearing -

Sheep	1000 @	\$200 per 100	\$2,000.00
Hoggets	845 @	\$200 per 100	\$1,690.00
Crutch ewes	1015 @	\$70 per 100	\$710.50

Crutch hoggets	850 @	\$45 per 100	\$382.50	
Crutch lambs	900 @	\$35 per 100	\$315.00	\$5,098.00
Woolshed expenses - plant, packs e.t.c.				
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 @	\$0.06	\$291.00	
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 @	\$0.75	\$1,425.00	\$4,227.80
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 @	\$350		\$1,050.00
<b>TOTAL DIRECT COSTS</b>				<b>\$12,926.60</b>
<b>TOTAL GROSS MARGIN (before interest)</b>				<b>\$46,358.40</b>
<b>GROSS MARGIN per dollar invested in sheep</b>				<b>\$0.64</b>
<b>GROSS MARGIN per Stock Unit</b>				<b>\$34.05</b>

**Gross Margin per Stock Unit at Various  
hogget and wool prices**

		Average Wool Price \$/kg (net)		
		\$4.86	\$6.08	\$7.29
<b>AVE HOGGET</b>	<b>\$18.40</b>	\$25.65	\$31.75	\$37.85
<b>PRICE</b>	<b>\$23.00</b>	\$27.94	\$34.05	\$40.15
<b>\$/HEAD (net)</b>	<b>\$27.60</b>	\$30.24	\$36.34	\$42.45

**Interest Costs:**

Interest on Capital Stock Value:			
\$72,250	@	7%	\$ 5.058
<b>RETURN per Stock Unit (after interest)</b>			<b>\$ 30.33</b>

### 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
R 1yr Heifers	43 @	\$200	\$8,600	3.5	151
R 1yr 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 @	\$350 (net)	\$14,700
18 month heifers	24 @	\$300 (net)	\$7,200
Average price of 18 month cattle		\$332	
Cull Cows	15 @	\$200 (net)	\$3,000
Bull	1 @	\$600 (net)	\$600

TOTAL INCOME \$25,500

#### Expenditure:

Animal Health -				
Drench calves (3x)	258 @	\$0.72	\$185.76	
Pregnancy test cows	100 @	\$1.58	\$158.00	\$343.76
Bull purchase - landed				\$2,000
Freight and commission (stock net on farm)				\$0.00

TOTAL DIRECT COSTS \$2,343.76

TOTAL GROSS MARGIN (before interest)	\$23,156.24
GROSS MARGIN per dollar invested in cattle	\$0.41
<u>GROSS MARGIN per Stock Unit</u>	<u>\$26.05</u>

**Gross Margin per Stock Unit at various weaning percentages and selling prices (18 month cattle):**

		AVERAGE SALE PRICE \$/HEAD of 18 month cattle		
		\$282.05	\$331.82	\$381.59
% WEANED	77%	\$19.55	\$22.75	\$25.95
	86%	\$22.20	\$25.86	\$29.53
	95%	\$24.84	\$28.98	\$33.12

**Interest and Feed Costs:**

Interest on Capital Stock Value:			
\$56,425 @ 7%		\$3,949.75	
Feed - Buy in additional hay (bales)			
700 @ \$4.00	\$2,800.00		\$6,749.75
RETURN per stock unit (after interest and feed)			\$18.45

### 3.2.5 Bull Beef

#### BULL GROSS MARGIN

Friesian Bulls purchased as weaners  
sold at 19 to 24 months of age

#### Stock Wintered:

	<u>No.</u>		<u>Total</u>	<u>S.U.</u>	<u>Total S.U.</u>
Rsg 1 yr Friesian Bulls	70 @	\$280	\$19,600	4	280
Rsg 2 yr Friesian Bulls	20 @	\$420	\$8,400	6	120
	90		\$28,000		400

Dollar Investment in beef per stock unit \$70

#### Production Parameters:

Death rate. 3%

Sell majority at 19 to 21 months of age between March and May, retain balance until August (sell at 24 months of age). The assumption is made that prices normally rise during March to August, with an average price for the period being \$2.03/kg.

#### Income:

Bulls (260 kg C.W.) 68 @ \$1.40 per kg \$24,752.00

TOTAL INCOME \$24,752.00

#### Expenditure:

Weaner Bulls (100 kg)	72 @	\$200		\$14,400.00	
Animal Health					
Drench (6x)	420 @	\$0.48 / dose	\$201.60		
Pour on (3x)	70 @	\$1.45 / dose	\$101.50		
	70 @	\$2.90 / dose	\$203.00		
	70 @	\$5.80 / dose	\$406.00		
Cobalt injection	70 @	\$0.81 / dose	\$56.70	\$968.80	
Copper Bullet	70 @	\$2.27	\$158.90	\$250.00	
Five in One (2x)	140 @	\$0.21	\$29.40		
Transport					
Weaners to Farm	72 @	\$5.50	\$396.00		
Finished Bulls to Works	68 @	\$11.00	\$748.00	\$1,144.00	
Levies - AHB, Federated Farmers, NZMB					
	68 @	\$12.91 per head		\$877.88	

TOTAL DIRECT COSTS	\$17,640.68
TOTAL GROSS MARGIN (before interest)	\$7,111.32
GROSS MARGIN per dollar invested in cattle	\$0.25
<u>GROSS MARGIN per Stock Unit</u>	<u>\$17.78</u>

**Gross Margin per Stock Unit at Various  
weaner and bull prices**

		BULL SCHEDULE \$/kg		
		\$1.12	\$1.40	\$1.68
<b>WEANER</b>	<b>\$170.00</b>	\$10.80	\$23.18	\$35.55
<b>PRICE</b>	<b>\$200.00</b>	\$5.40	\$17.78	\$30.15
<b>\$/HEAD</b>	<b>\$230.00</b>	\$0.00	\$12.38	\$24.75

**Interest and Feed Costs:**

Interest on Capital Stock Value:	
\$28,000 @ 7%	\$1,960.00
RETURN per stock unit (after interest)	\$12.88



TOTAL GROSS MARGIN (before feed costs and interest)	\$231,575
GROSS MARGIN per dollar invested in cattle	\$1.13
<u>GROSS MARGIN per Stock Unit</u>	<u>\$150.47</u>

**Gross Margin per Stock Unit at various  
milk solids production levels and milk solids prices:**

		MILKSOLIDS PRICE \$/kg		
		\$3.59	\$3.99	\$4.39
kg	270	\$120.92	\$134.92	\$148.92
Milk solids	300	\$134.92	\$150.47	\$166.03
per cow	330	\$148.92	\$166.03	\$183.14

**Interest and Feed Costs:**

Interest on Capital Stock Value:			
\$205,250 @ 7%			\$14,368
Feed - Buy in 20% of total requirement per cow (over whole herd) (i.e. grazing off, hay etc)			
@ \$ 50.00		\$10,000	\$24,368
RETURN per stock unit (after interest and feed)			\$134.64

### 3.2.7 Deer - Finishing

#### RED DEER GROSS MARGIN

All Stag Policy - Buy in  
weaners and kill at 18 months

#### Capital Stock Wintered:

	<u>No.</u>		<u>Total</u>	<u>S.U.</u>	<u>Total S.U.</u>
Weaner Stags	100 @	\$225	\$22,500	1.4	140
Dollar Investment in deer per stock unit			\$ 160.71		

#### Production Parameters:

Death rate.	3%
Carcase weight at Slaughter (18 months)	55 kg
Spiker velvet harvested; proceeds pay for cost of harvesting velvet from all stock	

#### Income:

Stags, 55 kg	97 @	\$6.35 /kg	\$33,877.25
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#### Expenditure:

Weaner stags (50 kg L.W.)	100 @	\$225	\$22,500
Animal Health (per S.U.)	140 @	\$5.00	\$700.00
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 \$27,806.37

TOTAL GROSS MARGIN (before feed costs and interest) \$6,070.88

GROSS MARGIN per dollar invested in deer \$0.27

GROSS MARGIN per Stock Unit \$43.36

**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		
		\$5.72	\$6.35	\$6.99
<b>WEANER</b>	<b>\$247.50</b>	\$3.09	\$27.29	\$51.49
<b>PURCHASE PRICE</b>	<b>\$225.00</b>	\$19.17	\$43.36	\$67.56
<b>\$/HEAD</b>	<b>\$202.50</b>	\$35.24	\$59.43	\$83.63

**Interest and Feed Costs:**

Interest on Capital Stock Value:

\$22,500 @ 7% \$1,575.00

Winter Feed - Buy in additional hay and concentrates

@ \$12 per head \$1,200.00 \$2,775.00

RETURN per Stock Unit (after interest and feed)

\$23.54



Levies -

GIB & AHB Venison levy	3455 @	\$0.26 / head	\$898.30	
Meat inspection fee	62 @	\$12.91 / head	\$800.42	
GIB & AHB Velvet levy	15 @	\$3.50	\$52.50	\$1,751.22

TOTAL DIRECT COSTS \$7,773.22

TOTAL GROSS MARGIN (before interest) \$27,221.03

GROSS MARGIN per dollar invested in deer \$0.29

GROSS MARGIN per Stock Unit \$61.64

**Gross Margin per Stock Unit at Various  
weaner hind prices and venison schedule prices.**

		VENISON SCHEDULE \$/kg		
		\$5.72	\$6.35	\$6.99
<b>WEANER</b>	<b>\$162.00</b>	\$55.06	\$59.89	\$64.71
<b>HIND PRICE</b>	<b>\$180.00</b>	\$56.82	\$61.64	\$66.47
<b>\$/HEAD net</b>	<b>\$198.00</b>	\$58.57	\$63.39	\$68.22

**Interest and Feed Costs:**

Interest on Capital Stock Value:

\$95,100 @ 7% \$6,657.00

Winter Feed - Buy in additional hay and concentrates

@ \$12 per head \$2,880.00 \$9,537.00

RETURN per Stock Unit (after interest and feed) \$40.05

### 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	12 @	\$350	\$4,200	1.8	21.6
Rsg 2 yr Stags	10 @	\$450	\$4,500	2.25	23
Rsg 3 yr Stags	8 @	\$500	\$4,000	2.5	20
M.A. Stags	14 @	\$600	\$8,400	2.5	35
Breeding Stags	6 @	\$800	\$4,800	2.8	17
	50		\$25,900		116
Dollar Investment in deer per stock unit			\$223.47		

##### 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
Breeding Stags	3.8 kg	A grade

No regrowth income is budgeted.

##### Income:

Velvet				
Spiker	12 @	0.25 kg @	\$70 /kg Spiker	\$210.00
2yr Stags	10 @	1.3 kg @	\$75 /kg C grade	\$975.00
3yr Stags	8 @	2 kg @	\$80 /kg B grade	\$1,280.00
M.A. Stags	14 @	3 kg @	\$90 /kg A grade	\$3,780.00
Breeding	6 @	3.8 kg @	\$105 /kg A grade	\$2,394.00
Average price		96.8	\$89	
Cull stags	10 @		\$400 per head	\$4,000.00

TOTAL INCOME \$12,639.00

**Expenditure:**

Weaner stags	12 @	\$225		\$2,700.00
Velvetting using veterinarian -				
1st cut	50 @	\$30	\$1,500.00	
2nd cut	15 @	\$25	\$375.00	\$1,875.00
Animal health				
Pour-on	100 @	\$2.46	\$246.00	
Copper bullet	50 @	\$4.50	\$225.00	\$471.00
Levies -				
Venison				
MAF inspection	10 @	\$12.91	\$129.10	
G.I.B.	1290 @	\$0.26	\$335.40	
Velvet G.I.B & AHB	96.8 @	\$3.50	\$338.80	\$803.30
<b>TOTAL DIRECT COSTS</b>				<b>\$5,849.30</b>
<b>TOTAL GROSS MARGIN (before interest)</b>				<b>\$6,789.70</b>
<b>GROSS MARGIN per dollar invested in deer</b>				<b>\$0.26</b>
<b><u>GROSS MARGIN per Stock Unit</u></b>				<b><u>\$58.58</u></b>

**Gross Margin per Stock Unit at Various  
velvet prices and velvet yields.**

		VELVET YIELD (kg for 50 stags)		
		82.28	96.80	111.32
<b>AVERAGE</b>	<b>\$80.32</b>	\$40.63	\$51.13	\$61.63
<b>VELVET</b>	<b>\$89.25</b>	\$46.96	\$58.58	\$70.20
<b>PRICE</b>	<b>\$98.17</b>	\$53.30	\$66.04	\$78.77
<b>\$/KG</b>				

**Interest and Feed Costs**

Interest on Capital Stock Value:			
\$25,900 @	7%	\$1,813.00	
Winter Feed - Buy in additional feed			
@	\$12 per head	\$600.00	\$2,413.00
<b>RETURN per Stock Unit (after interest and feed)</b>			<b>\$37.76</b>

### 3.2.10 Pig - Breeding

#### PIG GROSS MARGIN Housed Sows Selling Weaners

##### Capital Stock:

Sows	50 @	\$350	\$17,500	
Boars	2 @	\$850	\$1,700	\$19,200

##### Production Parameters:

Weaners sold per sow per year	20
Sow replacement rate	33%
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	1000 @	\$60.00	\$60,000.00	
Chopper Sows	14 @	\$140.00	\$1,960.00	
Chopper Boar	1 @	\$140.00	\$140.00	
TOTAL INCOME				\$62,100.00

##### Expenditure:

##### Replacement Stock Purchase -

Boar	1 @	\$850.00	\$850.00	
Gilts	17 @	\$350.00	\$5,950.00	\$6,800.00
Home milled feed-				
Breeder (t)	64.7 @	\$390.00	\$25,233.00	
Creep (t)	3.1 @	\$600.00	\$1,860.00	
Weaner (t)	22.3 @	\$565.00	\$12,599.50	\$39,692.50
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 \$51,492.50

TOTAL GROSS MARGIN (before interest) \$10,607.50

GROSS MARGIN per sow \$212.15

GROSS MARGIN per \$ invested in pigs \$0.55

**Gross Margin per Sow  
at varying weaner prices and feed costs.**

		WEANER PRICE \$/HEAD		
		\$54.00	\$60.00	\$66.00
<b>Average Feed Cost</b>	<b>\$484.59</b>	\$12.77	\$132.77	\$252.77
<b>Used \$/t</b>	<b>\$440.54</b>	\$92.15	\$212.15	\$332.15
<b>(Breeder Creep &amp; Weaner)</b>	<b>\$396.48</b>	\$171.54	\$291.54	\$411.54

**Interest Cost:**

Interest on Capital Stock Value			
\$19,200 @	7% per annum		\$1,344.00
Return per pig after interest			\$178.14

### 3.2.11 Pig - Finishing

**PIG GROSS MARGIN**  
Purchase Weaners and Finish  
to 95% Bacon 5% Pork

**Capital Stock:**

Weaners	1000 @	\$60.00		\$60,000.00
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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 @	\$60.00		\$60,000.00
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	\$153,420.00
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TOTAL GROSS MARGIN (before interest)	\$22,376.08
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GROSS MARGIN per weaner	\$22.38
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<u>GROSS MARGIN per \$ Invested</u>	\$0.37
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**Gross Margin per Weaner  
at various Baconer prices and feed costs**

		<b>BACONER PRICE \$/head</b>		
		<b>\$165.33</b>	<b>\$183.70</b>	<b>\$202.07</b>
<b>Grower</b>	<b>\$506.00</b>	(\$2.78)	\$14.23	\$31.24
<b>Feed</b>	<b>\$460.00</b>	\$5.37	\$22.38	\$39.39
<b>\$/tonne</b>	<b>\$414.00</b>	\$13.51	\$30.52	\$47.53

**Interest Cost:**

Interest on Capital Stock Value			
\$60,000 @	7% per annum (13 weeks)		\$1,050.00
Return per weaner after interest			\$21.33

### 3.2.12 Poultry - Eggs

#### POULTRY GROSS MARGIN

##### Egg Production

**Capital Stock:** (average value)

Laying Hens	1000 @	\$3.75	\$3,750.00
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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 @	\$1.60	\$38,400.00
Salvage Value	980 @	\$0.05 per hen	\$49.00
TOTAL INCOME			\$38,449.00

**Expenditure:**

Replacement Pullets	1020 @	\$7.50 per head	\$7,650.00
Feed	@	\$0.72 per dozen eggs	\$17,280.00
Power	@	\$0.02 per dozen eggs	\$480.00
Repairs to caging	@	\$0.02 per dozen eggs	\$480.00
Packaging, Freight to supermarket	@	\$0.25 per dozen eggs	\$6,000.00
TOTAL DIRECT COSTS			\$31,890.00
TOTAL GROSS MARGIN per 1000 Hens (before interest)			\$6,559.00

**Gross Margin per 1000 hens at various  
feed and egg prices.**

		<b>EGG PRICE \$ per dozen</b>		
		<b>\$1.44</b>	<b>\$1.60</b>	<b>\$1.76</b>
<b>FEED COST</b>	<b>\$0.79</b>	\$991.00	\$4,831.00	\$8,671.00
<b>per dozen eggs</b>	<b>\$0.72</b>	\$2,719.00	\$6,559.00	\$10,399.00
<b>produced</b>	<b>\$0.65</b>	\$4,447.00	\$8,287.00	\$12,127.00

**Interest Cost:**

Interest on Capital Stock Value:

\$ 3,750 @ 7%

\$262.50

### 3.2.13 Poultry - Broiler

#### POULTRY GROSS MARGIN

Broiler production

##### Production Parameters:

Farm Size (birds placed)	40000
Runs (per year)	5.5
Deaths	4.0%

Birds and feed are supplied by the company.

##### Income:

Birds	211200 @	\$0.463	\$97,785.60
Manure			\$4,216.00
TOTAL INCOME			\$102,001.60

##### Expenditure:

Power	5.5 @	\$1,710.00	\$9,405.00
Shavings	5.5 @	\$500.00	\$2,750.00
Cleaning	5.5 @	\$500.00	\$2,750.00
Insurance (Birds)	5.5 @	\$200.00	\$1,100.00
Repairs & Maintenance	5.5 @	\$1,500.00	\$8,250.00
TOTAL DIRECT COSTS			\$24,255.00
TOTAL GROSS MARGIN			\$77,746.60

### 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	@	\$335.00 /tonne		\$2,010.00
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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	@	\$710.00 /tonne		\$156.20
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###### Fertilizer -

Cropmaster 20	100 kg/ha	@	\$387.00 /tonne	\$38.70	
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Urea	150 kg/ha	@	\$448.00 /tonne	\$67.20	
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Ammonium Sulphate	100 kg/ha	@	\$254.00 /tonne	\$25.40	\$131.30
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###### Weed, Pest and Disease -

Commando	4 l/ha	@	\$28.23 /litre	\$112.92	
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Cougar	0.8 l/ha	@	\$39.33 /litre	\$29.50	
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Glean	15 g/ha	@	\$1.13 /gram	\$16.95	
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Cereous	0.5 l/ha	@	\$101.13 /litre	\$51.58	
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Cycocel	1.5 l/ha	@	\$13.74 /litre	\$20.61	
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Applications	4	@	\$27.50	\$110.00	\$341.55
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Irrigation - 75 mm	2 x	@	\$29.00		\$58.00
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(Electricity \$19.50; R&M \$9.50)

Harvest -	6 t	@	\$29.30 /tonne		\$175.80
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(in silo; contract)

Freight - 6 t @ \$21.85 /tonne \$131.10  
 (silo to port 40 km)

TOTAL DIRECT COSTS \$1,056.72

GROSS MARGIN per Hectare \$953.28

**Gross Margin per Hectare at various selling prices and yields.**

		YIELD Tonnes/ha		
		5.4	6	6.6
<b>PRICE</b>	<b>\$301.50</b>	\$602.07	\$752.28	\$902.49
<b>PER</b>	<b>\$335.00</b>	\$782.97	\$953.28	\$1,154.28
<b>TONNE</b>	<b>\$368.50</b>	\$963.87	\$1,154.28	\$1,344.69





### 3.3.4 Ryegrass

#### RYEGRASS GROSS MARGIN

(Embassy)

##### Income:

Seed (Machine Dressed)	1250 kg	@	\$1.60 /kg		\$2,000.00
Straw	7 bales	@	\$15.00 each		\$105.00
<b>TOTAL INCOME</b>					<b>\$2,105.00</b>

##### 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	@	\$4.00 /kg		\$40.00
Fertiliser -					
Cropmaster 20	100 kg/ha	@	\$387.00 /tonne	\$38.70	
Urea (split appln.)	260 kg/ha	@	\$448.00 /tonne	\$116.48	\$155.18
Weed, Pest and Disease -					
Roundup	2.5 l/ha	@	\$13.17 /litre	\$32.93	
Trimec	3.5 l/ha	@	\$13.92 /litre	\$48.72	
Commando	5 l/ha	@	\$28.23 /litre	\$141.15	
Folicur	0.75 l/ha	@	\$139.49 /litre	\$104.62	
Application costs	4	@	\$27.50	\$110.00	\$437.41
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	\$234.00
Freight - (F.D.)	1.5 t	@	\$25.00 /tonne		\$37.50
Seed Dressing -	1500 kg	@	\$0.16 /kg		\$240.00
<b>TOTAL DIRECT COSTS</b>					<b>\$1,255.01</b>
<b>GROSS MARGIN per Hectare</b>					<b>\$849.99</b>

**Gross margin per Hectare at various selling prices and yields.**

		YIELD kg (MD)/ Hectare		
		1125	1250	1375
<b>PRICE</b>	<b>\$1.44</b>	\$497.74	\$649.99	\$802.24
<b>\$/kg</b>	<b>\$1.60</b>	\$677.74	\$849.99	\$1,022.24
	<b>\$1.76</b>	\$857.74	\$1,049.99	\$1,242.24

### 3.3.5 Field Peas

#### FIELD PEAS GROSS MARGIN (Marrowfat)

##### Income:

Peas 4 t @ \$530.00 /tonne \$2,120.00

##### 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 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 @ \$9.82 /litre \$19.64

Bladex 2.5 l/ha @ \$19.24 /litre \$48.10

Topas 300 ml/ha @ \$102.30 /litre \$30.69

Applications 2 @ \$27.50 \$55.00 \$153.43

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 \$801.25

GROSS MARGIN per Hectare \$1,318.75

#### Gross Margin per Hectare at various selling prices and yields.

		YIELD Tonnes/ha		
		3.2	4	4.6
<b>PRICE</b>	<b>\$450.50</b>	\$693.83	\$1,000.75	\$1,230.94
<b>PER</b>	<b>\$530.00</b>	\$948.23	\$1,318.75	\$1,596.64
<b>TONNE</b>	<b>\$609.50</b>	\$1,202.63	\$1,636.75	\$1,962.34

### 3.3.6 Maize

(Source : *N.Z. Vegetable and Potatoe Growers Federation (Inc.)*)

**Note:** See Production Cost Module notes in *Section 3.4* for explanation of procedure and disclaimer.

Production Cost Model 1996/97  
*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 years	1.25 t/yr	\$65.00 /t	\$81.25
Preparation of Seedbed			
plough 1 time	1.1 hrs	\$64.61 /hr	\$71.07
disc and harrow 1 time	1 hrs	\$55.81 /hr	\$55.81
power and harrow 2 time	1.5 hrs	\$81.38 /hr	\$122.07
level 1 time	0.4 hrs	\$55.81 /hr	\$22.32
Sowing Contract		\$65.00 /hr	\$65.00
seed	80,000 seeds	\$2.96 /1000	\$236.80
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	\$55.81 /hr	\$55.81
<b>TOTAL GROWING COSTS</b>			<b>\$1,257.29</b>
<b>REVENUE</b>			
Price received per tonne	\$285	\$285	\$285
Crop yield paid weight (tonnes per ha)	7.5	11	15
<b>TOTAL REVENUE</b>	<b>\$2,138</b>	<b>\$3,135</b>	<b>\$4,275</b>
Less costs:			
Cartage \$9.00 per tonne	\$67.50	\$99.00	\$135.00
Drying \$28.50 per tonne	\$213.75	\$313.50	\$427.50
<b>Total</b>	<b>\$281</b>	<b>\$413</b>	<b>\$563</b>
Less growing Costs (from above)	\$1,257	\$1,257	\$1,257
<b>SURPLUS</b>	<b>\$599</b>	<b>\$1,465</b>	<b>\$2,455</b>

### 3.4 PROCESS CROPS - PRODUCTION COST MODELS

#### Editors' note:

The following production cost models (compiled May 1996) 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 1996/97  
 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	\$55.81 /hr	\$83.72
Preparation seedbed			
roll once	0.4 hrs	\$47.82 /hr	\$19.13
plough once	1.1 hrs	\$64.61 /hr	\$71.07
maxitill 3 times	1.2 hrs	\$55.81 /hr	\$66.97
roll once	0.4 hrs	\$47.82 /hr	\$19.13
Pre-emergence spray contract		\$21.00 /ha	\$21.00
Treflan	2.1 l	\$12.13 /l	\$25.47
Sowing contract		\$110.00 /ha	\$110.00
seed	110 kg	\$6.36 /kg	\$699.60
fertiliser - Cropmaster 15	0.375 t	\$444.89 /t	\$166.83
Post emergence spray contract		\$21.00 /ha	\$21.00
Basagran	2 l	\$37.16 /l	\$74.32
Cittowet	0.1 l	\$10.67 /l	\$1.07
ground spray contract		\$21.00 /ha	\$21.00
Topsin	2.5 l	\$37.51 /l	\$93.78
ground spray contract		\$21.00 /ha	\$21.00
Sumislex	2 l	\$46.71 /l	\$93.42
Irrigation 5 times	30 hrs	\$21.02 /hr	\$630.60
Labour	10 hrs	\$15.00 /hr	\$150.00
<b>TOTAL GROWING COSTS</b>			<b>\$2,405.10</b>
<b>REVENUE</b>			
Price received* (11.5-12mm) per tonne	\$300	\$300	\$300
Crop yield paid weight (tonnes per ha)	8	10	11
<b>TOTAL REVENUE</b>	<b>\$2,400</b>	<b>\$3,000</b>	<b>\$3,300</b>
Less growing Costs (from above)	\$2,405	\$2,405	\$2,405
<b>SURPLUS</b>	<b>(\$5)</b>	<b>\$595</b>	<b>\$895</b>

\* Editors' Note: See also *Section 1.13.2* for further contract price information

**GREEN BEANS (PROCESS)**

Production Cost Model 1996/97

*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	\$70.71 /hr	\$113.14
plough once	1.6 hrs	\$43.66 /hr	\$69.86
roll once	0.6 hrs	\$36.39 /hr	\$21.83
disc harrow & roll 2 times	0.8 hrs	\$43.66 /hr	\$69.86
rollatill 4 times	2.6 hrs	\$43.66 /hr	\$113.52
roll 1 time	0.4 hrs	\$36.39 /hr	\$14.56
Pre-emergence spray contract		\$31.50 /ha	\$31.50
Triflur	2 l	\$13.86 /l	\$27.72
alachlor	5 l	\$17.06 /l	\$85.30
Sowing contract		\$85.00 /ha	\$85.00
seed	111 kg	\$4.80 /kg	\$532.80
fertiliser - AMMO 12:10:10	0.25 t	\$599.35 /t	\$149.84
Cultivation			
harrow 1 time	0.6 hrs	\$36.39	\$21.83
inter row 2 times	3.5 hrs	\$36.39	\$127.37
Post emergence spray contract	0.7 hrs	\$44.85 /ha	\$31.40
Kocide	1.5 l	\$64.05 /l	\$96.08
Metasystox	0.6 l	\$30.00 /l	\$18.00
contract 2 times		\$105.60 /ha	\$105.60
Sumiscelex	4 l	\$53.00 /l	\$212.00
Karate	0.2 l	\$92.00 /l	\$18.40
Irrigation 3 times	20 hrs	\$38.16 /hr	\$763.20
Labour	7 hrs	\$12.00 /hr	\$84.00
<b>TOTAL GROWING COSTS</b>			<b>\$2,792.78</b>
REVENUE			
Price received* (11.5-12mm) per tonne	\$290	\$290	\$290
Crop yield paid weight (tonnes per ha)	10	13	16
<b>TOTAL REVENUE</b>	<b>\$2,900</b>	<b>\$3,770</b>	<b>\$4,640</b>
Less growing Costs (from above)	\$2,793	\$2,793	\$2,793
<b>SURPLUS</b>	<b>\$107</b>	<b>\$977</b>	<b>\$1,847</b>

\* 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 1996/97  
 Rangitikei 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 2 years	1.25 t/yr	\$65.00 /t	\$81.25
Preparation seedbed			
plough once	1.1 hr	\$64.61 /hr	\$71.07
disc and harrow once	1 hrs	\$55.81 /hr	\$55.81
power harrow twice	1.5 hrs	\$81.38 /hr	\$122.07
level once	0.4 hrs	\$55.81 /hr	\$22.32
Sowing contract		\$65.00 /ha	\$65.00
seed	12 kg	\$19.80 /kg	\$237.60
nitro 12:10:10	0.3 t	\$691.00 /t	\$207.30
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	\$94.00 /ha	\$47.00
Inter-row cultivation contract		\$30.00 /ha	\$30.00
Maintenance of Land			
flail stubble once	1 hr	\$55.81 /hr	\$55.81
<b>TOTAL GROWING COSTS</b>			<b>\$1,167.64</b>
<b>REVENUE</b>			
Price received* per tonne	\$120	\$120	\$120
Crop yield paid weight (tonnes per ha)	15	17	19
<b>TOTAL REVENUE</b>	<b>\$1,800</b>	<b>\$2,040</b>	<b>\$2,280</b>
Less growing Costs (from above)	\$1,168	\$1,168	\$1,168
<b>SURPLUS</b>	<b>\$632</b>	<b>\$872</b>	<b>\$1,112</b>

\* Editors' Note: See also Section 1.13.2 for further contract price information

### SWEETCORN (PROCESS)

Production Cost Model 1996/97

*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	\$81.36 /hr	\$130.18
plough 1 time	1.6 hrs	\$63.11 /hr	\$100.98
disc and harrow once	0.6 hrs	\$46.32 /hr	\$27.79
power harrow once	1.2 hrs	\$54.31 /ha	\$65.17
level once	1 hrs	\$54.31 /hr	\$54.31
harrow and roll 2 times	1 hrs	\$46.32 /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	\$46.32 /hr	\$57.90
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
<b>TOTAL GROWING COSTS</b>			<b>\$1,671.69</b>
<b>REVENUE</b>			
Price received* per tonne	\$135	\$135	\$135
Crop yield paid weight (tonnes per ha)	18	20	22
<b>TOTAL REVENUE</b>	<b>\$2,430</b>	<b>\$2,700</b>	<b>\$2,970</b>
Less growing Costs (from above)	\$1,672	\$1,672	\$1,672
<b>SURPLUS</b>	<b>\$758</b>	<b>\$1,028</b>	<b>\$1,298</b>

\* Editors' Note: See also *Section 1.13.2* for further contract price information

**SWEETCORN (PROCESS)**  
 Production Cost Model 1996/97  
 Gisborne District

Growing Costs Operation	Hours/Qty Hectare	Unit Rate	Total Cost \$ per ha
Preparation seedbed			
plough once	2.5 hr	\$54.66 /hr	\$136.65
disc and roll 2 times	1.8 hrs	\$45.86 /hr	\$82.55
disc, harrow and roll 2 times	2.4 hrs	\$45.86 /hr	\$110.06
power harrow and roll 1 time	1.6 hrs	\$71.43 /hr	\$114.29
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	\$47.02 /hr	\$47.02
urea	0.2 t	\$486.00 /t	\$97.20
Pre emergence spray	0.6 hrs	\$55.48 /hr	\$33.29
soil incorporation	1.2 hrs	\$71.43 /ha	\$85.72
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	\$45.86 /hr	\$77.96
<b>TOTAL GROWING COSTS</b>			<b>\$1,346.19</b>
<b>REVENUE</b>			
Price received* per tonne	\$159	\$159	\$159
Crop yield paid weight (tonnes per ha)	15	17	19
<b>TOTAL REVENUE</b>	<b>\$2,385</b>	<b>\$2,703</b>	<b>\$3,021</b>
Less growing Costs (from above)	\$1,346	\$1,346	\$1,346
<b>SURPLUS</b>	<b>\$1,039</b>	<b>\$1,357</b>	<b>\$1,675</b>

\* 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 1996/97  
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	\$55.81 /hr	\$83.72
Preparation seedbed			
roll once	0.4 hrs	\$47.82 /hr	\$19.13
plough once	1.1 hrs	\$64.61 /hr	\$71.07
maxitill twice	0.8 hrs	\$55.81 /hr	\$44.65
Pre-emergence spray contract		\$18.00 /ha	\$18.00
Treflan	2.1 l	\$12.13 /l	\$25.47
Sowing	0.8 hr	\$81.85 /hr	\$65.48
seed	300 kg	\$1.33 /kg	\$399.00
fertiliser - PM super	0.15 t	\$503.56 /t	\$75.53
Cultivation			
roll 1 time	0.4 hrs	\$47.82 /hr	\$19.13
Post emergence spray contract		\$18.00 /ha	\$18.00
MCPB	2 l	\$9.73 /l	\$19.46
Bladex	2.5 l	\$18.13 /l	\$45.33
Irrigation 3 times	15 hrs	\$21.02 /hr	\$315.30
Labour	3 hrs	\$15.00 /hr	\$45.00
<b>TOTAL GROWING COSTS</b>			<b>\$1,280.26</b>
<b>REVENUE</b>			
Price received* (11.5-12mm) per tonne	\$280	\$280	\$280
Crop yield paid weight (tonnes per ha)	6	6	7
<b>TOTAL REVENUE</b>	<b>\$1,624</b>	<b>\$1,792</b>	<b>\$1,960</b>
Less growing Costs (from above)	\$1,280	\$1,280	\$1,280
<b>SURPLUS</b>	<b>\$344</b>	<b>\$512</b>	<b>\$680</b>

\* Editors' Note: See also *Section 1.9.4* for further contract price information

**PEAS (PROCESS)**

Production Cost Model 1996/97

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	\$43.66 /hr	\$69.86
disc and roll 1 time	0.9 hrs	\$43.66 /hr	\$39.29
disc and harrow 2 times	1.6 hrs	\$43.66 /hr	\$69.86
Sowing contract-drill		\$65.00 /ha	\$65.00
labour	1 hr	\$12.00 /hr	\$12.00
roll 1 time	1 hr	\$36.39 /hr	\$36.39
seed	270 kg	\$1.08 /kg	\$291.60
fertiliser -P super	0.25 t	\$286.00 /t	\$71.50
Post emergence spray contract		\$31.50 /ha	\$31.50
MCPB	1.4 l	\$9.90 /l	\$13.86
Bladex	3 l	\$21.10 /l	\$63.30
Restoration of land cultivation			
disc and harrow 2 times	1.6 hrs	\$43.66 /hr	\$69.86
<b>TOTAL GROWING COSTS</b>			<b>\$834.01</b>
<b>REVENUE</b>			
Price received* (11.5-12mm) per tonne	\$298	\$298	\$298
Crop yield paid weight (tonnes per ha)	4	5	5
<b>TOTAL REVENUE</b>	<b>\$1,192</b>	<b>\$1,371</b>	<b>\$1,490</b>
Less growing Costs (from above)	\$834	\$834	\$834
<b>SURPLUS</b>	<b>\$358</b>	<b>\$537</b>	<b>\$656</b>

\* Editors' Note: See also *Section 1.9.4* for further contract price information

**PEAS (PROCESS)**  
 Production Cost Model 1996/97  
*Marlborough*

Growing Costs Operation	Hours/Qty Hectare	Unit Rate	Total Cost \$ per ha
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	\$81.36 /hr	\$130.18
harrow and roll 1 time	0.5 hrs	\$46.32 /hr	\$23.16
plough 1 time	1.6 hrs	\$54.31 /hr	\$86.90
rotatill 3 times	1.5 hrs	\$54.31 /hr	\$81.47
harrow and roll 2 times	1 hrs	\$46.32	\$46.32
Sowing contract		\$46.32 /ha	\$46.32
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
<b>TOTAL GROWING COSTS</b>			<b>\$906.56</b>
<b>REVENUE</b>			
Price received* (11.5-12mm) per tonne	\$306	\$306	\$306
Crop yield paid weight (tonnes per ha)	4.5	5.5	6.5
<b>TOTAL REVENUE</b>	<b>\$1,377</b>	<b>\$1,683</b>	<b>\$1,989</b>
Less growing Costs (from above)	\$907	\$907	\$907
<b>SURPLUS</b>	<b>\$470</b>	<b>\$776</b>	<b>\$1,082</b>

\* Editors' Note: See also *Section 1.9.4* 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**

**Income:** (Based on effective planted area at full production with a conservative yield and an export price averaged over a range of varieties.)

TCE per hectare	2300	\$11.70	\$26,910.00
(TCE = Tray Carton Equivalent)(61% packout)			

**Expenditure** (per hectare):

Fertiliser		\$221.00	
Chemicals		\$2,200.00	
Casual wages - pruning	\$935.00		
- thinning	\$725.00		
- picking	\$2,899.00		
- packing	\$1,251.00	\$5,810.00	
Packing cost		\$4,509.00	
Freight		\$479.00	

TOTAL DIRECT COSTS			\$13,219.00
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GROSS MARGIN PER HECTARE			\$13,691.00
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<u>GROSS MARGIN per Tray Carton Equivalent</u>			<u>\$5.95</u>
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<u>Variety Gross Margins</u>	<u>\$/hectare</u>
Braeburn	10,107
Fuji	4,506
Cox	4,302
Gala	375
Granny Smith	1,651
Pacific Rose	26,913
Red Delicious	-8,251
Royal Gala	8,445

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 @	\$4.15	\$26,145.00
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**Expenditure** (per hectare):

Fertiliser		\$530.00	
Pollination		\$765.00	
Spraying and Chemicals		\$800.00	
Casual Wages - Pruning	\$2,700.00		
- Picking	\$1,020.00	\$3,720.00	
Grade and Pack		\$8,160.00	
Freight		\$800.00	
<b>TOTAL DIRECT COSTS</b>			<b>\$14,775.00</b>
<b>GROSS MARGIN PER HECTARE</b>			<b>\$11,370.00</b>
<u><b>GROSS MARGIN per Tray</b></u>			<u><b>\$1.80</b></u>

### 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
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**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

Lifting and Grading

- labour	250 hrs	@ \$10.00	\$2,500.00
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Lifting

- machinery hire	5 hrs	@ \$50.00	\$250.00
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Washing, Curing and Storing 70 trays (1250mm x 900mm)

(contract)	70	@ \$15.00	\$1,050.00	\$4,240.00
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Fertilizer \$150.00

Weed Control \$250.00

Pest and Disease \$550.00

TOTAL DIRECT COSTS \$9,528.75

TOTAL GROSS MARGIN per 10,000 Tubers (before interest) \$6,221.25

GROSS MARGIN per dollar invested in Calla Tubers \$0.37

**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
<b>PRICE OF FLOWERS/ TUBERS</b>	<b>\$0.90 /</b>	\$3,789.86	\$4,787.63	\$5,785.39	
	<b>\$1.08 /</b>				
	<b>\$1.00 /</b>	\$5,080.13	\$6,221.25	\$7,362.38	
	<b>\$1.20 /</b>				
	<b>\$1.10 /</b>	\$6,370.39	\$7,654.88	\$8,939.36	
	<b>\$1.32 /</b>				

**Interest Costs**

Interest on Capital invested in Tubers

\$17,000 @ 7% \$1,190.00

RETURN per 10,000 tubers after interest \$5,031.25

## **TAXATION**

Contributed by:

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**NOTE:**

At the time of writing (January 1997), there are a number of proposed income taxation changes which have yet to be enacted as legislation, and may ultimately differ from those originally announced.

This manual details both the current 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, with effect from the commencement of the 1996 income year.

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.

Recent developments have included a new way of resolving disputes, a new penalties regime, and changes to a number of rebates and tax credits which apply to individuals.

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.

With respect to farming, the scope of changes to the tax legislation during 1996 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. 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 to the extent required by the Inland Revenue Act, 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 object to his or her income tax assessment. Anyone contemplating objecting is advised to seek professional advice, as there are formal procedures which must be followed. However it should be noted that the process of objecting to a tax assessment has been dramatically changed with effect from assessments issued after 1 October 1996.

Under the new 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 new 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 28%. This withholding rate has been reduced to 24% from 1 July 1996, and will be further reduced to 21% from 1 July 1997. Extra emoluments includes redundancy payments made after 29 November 1992.

*Withholding payments* are payments under contract where there is not an employer-employee relationship. Withholding tax should be deducted when business payments are made to self-employed individuals. 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
Cleaners	20
Honoraria	33
Shearers	25
Shearing shed hands	20

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 1997. 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

A person whose residual income tax is \$2500 or more and with taxable income up to \$70,000 for the 1996 income year, may pay provisional tax based on their 1996 residual income tax. (Previously this was 105% of their 1996 RIT.) Where the 1996 RIT is not known (because the tax return has not yet been filed), the first two instalments of provisional tax may be based on the 1995 residual income tax plus 5%. (Previously this was increased by 10%.)

There has been no change to the provisions for other taxpayers. Provisional tax is 105% of the 1996 RIT, or 110% of the 1995 RIT if the 1996 return has not been filed.

**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 (13.8% previously).
- (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 (8.2% previously).

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 1996 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 1997 provisional tax already paid	<u>10,000</u>
TERMINAL TAX	<u>\$3,084</u>

His 1996-97 terminal tax payment will be due on 7 February 1998. 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 1997 to 7 February 1998 (337 days) would be due on his terminal tax payment (interest of \$396 in this example).

For the 1998 year, his provisional tax will be the same as the 1997 residual income tax, (\$13,084). The provisional tax payments for 1998 are due as follows:

7 July 1997 (one third)	\$4,361
7 November 1997 (one third)	\$4,361
7 March 1998 (one third)	\$4,362

#### 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 \$9,500 from all sources, or \$20,000 if all income was from employment, or \$20,000 if there is not more than \$1,500 of interest included in the income. (Use whichever criterion applies.)
- 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; is not a superannuitant who receives more than \$3,120 of other income.

**Note:** The relevant thresholds are to be amended as follows:

*1997 income year:* The non-filing income threshold is raised from \$20,000 to \$34,200, the distinction between income from interest and dividends and income from employment is to be removed; and the income threshold for superannuitants increases from \$3,120 to \$3,412.50.

*1998 income year:* the non-filing income thresholds increase to \$38,000 for non-superannuitants and \$3,802.50 for superannuitants.

*1999 income year:* The non-filing income for superannuitants increases to \$3,900.

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.

Although there are penalties for filing returns after the due date, in practice these have usually only applied in extreme cases, e.g. where a number of years' returns are overdue.

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**

Penalties include fines, additional tax or penal tax, and, in very rare cases, jail.

##### *PAYE Offences*

Failing to deduct PAYE or withholding tax or to pay it to the Inland Revenue Department is regarded as a serious offence. There is a maximum fine of \$15,000 (\$25,000 for re-offending). In addition this is one of few areas carrying possible imprisonment, for up to 12 months.

##### *Late Payment*

Where any tax is paid late, a penalty called 'additional tax' is added to it. This increases the amount by 10%, and a further 10% (compounding) is added every six months. Additional tax applies to provisional tax, terminal tax, PAYE, withholding tax etc.

##### *Tax Returns and Other Offences*

Failing to provide information required by the Commissioner of Inland Revenue carries a fine of \$2,000 (increasing for re-offenders).

Giving false information, or making a false tax return can lead to a fine of \$15,000 (\$25,000 for re-offenders). These penalties can apply to officers of companies as well as to the company itself.

##### *Tax Evasion*

Taxpayers who evade tax can be fined and charged penal tax, which is a maximum of three times the amount of tax evaded. The Inland Revenue Department assesses the amount of penal tax to be charged in accordance with guidelines. One factor taken into account is the taxpayer's co-operation with the Department. Offences connected with concealing income from overseas investments or trusts carry an additional potential penalty of a fine of up to \$50,000 and imprisonment for up to two years.

## **New Penalties Regime**

### ***Interest***

Use of money interest is not a penalty as such, although it is appropriate to outline the revised provisions here.

The current interest regime has been revised as part of the tax simplification programme. As most revisions commence in the 1998 income year, this section will only outline the features of the new interest regime.

The principle behind the 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 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, while interest on overpayment will be paid to the taxpayer by the IRD. Generally, interest will be charged from the day after the original due date until the tax is paid. The rates of interest will be determined by Government and will be based on market rates. 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.
- Late filing of returns.
- 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**

Under current legislation:

*Income* is not defined in the Income Tax Act, and anything which appears to be income is likely to be taxable. The Income Tax Act specifically sets out a large number of items that must be treated as income, and some items for which there are exemptions.

*Deductions* are only allowed if they come under a specific section of the Act. This includes a general rule that allows the deduction of expenditure incurred in producing assessable income, or in operating a business to produce assessable income. However, there are many special rules which set out limits on particular kinds of deduction.

### **4.3.1 Core Provisions**

The core provisions, which commence 1 April 1997, represent the first phase of the rewrite process and set out the basis of income tax laws in New Zealand. The provisions adopt a "global" approach to the calculation of an income tax liability, and have been written in plain language.

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 4,500m<sup>2</sup> 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 4500m<sup>2</sup> 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 amount of the rebate and the rate of abatement over this period.

	<u>Income Year</u>			
	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>
LIR rebate per \$ income	9.0c	7.125c	5.00c	4.5c
LIR abatement rate per \$ income				
\$9,500 - \$30,875	4.0c	2.875c	1.75c	1.5c
\$30,875 - \$34,200	-	1.875c	1.75c	1.5c
\$34,200 - \$38,000	-	-	1.125c	1.5c

### *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*

\$2,281.50 for the eldest child plus \$1,501.50 for each additional child under 13 years of age or \$1,917.50 if the child is 13 years or more of age. (A weighted average of these rates is used if the child attains the age of 13 during the year.)

The amounts are to increase as follows:

1998 income year: \$2,411.50; \$1,631.50; and \$2,047.50 respectively.

1999 income year: \$2,444.00; \$1,644.00; and \$2,080.00 respectively.

The credit is proportionately reduced if the taxpayer is not eligible to receive a full year's credit.

### *Independent Family Tax Credit*

\$390 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.

No credit is available prior to 1 July 1996, so the maximum credit for the 1997 income year is \$292.50. The maximum amount of the credit will increase to \$682.50 for the 1998 income year and 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 calculated as (\$14,690 - 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 income year, and to \$15,080 for the 1999 income year.

### ***Tax Credit Example***

A married man with one child aged four, derived the following income during the year ended 31 March 1997:

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:	3,000

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 \$4,735

*less* Rebates:

*Donations*

Lesser of \$500 or 33 1/3% of \$30 \$10  
(school fees not eligible)

*Low Income Rebate*

LIR = 20,000 X 0.07125 1,425

Less Abatement 302  
(20,000 - 9,500) x 0.02875

\$1,123

Total rebates

1,133

Total Tax payable

\$3,602

His terminal tax would be calculated as:

Tax payable \$3,602

*less* tax already paid:

PAYE already paid \$3,000

Resident withholding tax paid 240

Imputation credit 100

\$3,340

Terminal Tax

\$262

**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	2,281.50
Independent Family tax credit	<u>292.50</u>
	2,574.00
Less Abatement (10% of \$2,000)	<u>360.00</u>
	<u>\$2,214.00</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 \$6,825 per married couple or \$4,550 for a single superannuitant. (These amounts are to be raised to \$15,444 and \$10,296 respectively for the 1998 income year.

The tax surcharge is limited to a maximum of the net amount of national superannuation received by the taxpayer in that 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, that is:  
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. (Capital plus 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.

These amounts are treated as income to the farmer's spouse.

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.

Changes introduced for the 1993 income year increased the flexibility of the herd scheme while maintaining its basic philosophy.

All classes of livestock are eligible for the herd scheme. The farmer can now 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 and 1996 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 is 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 <sub>2</sub> 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>

$$\begin{aligned} \text{Average cost of lambs} &= \$23,000 \div 1400 \\ &= \$16.43 \text{ per head} \end{aligned}$$

**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 <sub>2</sub> 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>
	600	\$15 772

$$\begin{aligned} \text{Average cost of mature sheep} &= \$15 772 \div 600 \\ &= \$26.29 \text{ per head} \end{aligned}$$

**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

Opening stock numbers x (Year 1 cost + RG<sub>2</sub>)

i.e. 400 x (\$16.43 + \$8)

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

$$(2000 - 600) \times \$25 \quad \$35,000$$

Cost of this year's intake:

$$700 \times \$26.29 \quad \underline{18,403}$$

$$\underline{\$53,403}$$

$$\begin{aligned} \text{Average cost per head} &= \$53,403 \div 2100 \\ &= \$25.43 \text{ per head} \end{aligned}$$

**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 revised Self Assessed Cost (SAC) option simplifies the current guidelines for calculating the actual cost of producing livestock.

The 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:

<b>Livestock Category</b>	<b>Straight Line Rate (%)</b>	<b>Diminishing Value Rate (%)</b>
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). 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)÷2
	=	\$21,000
Depreciation at (say) 22% DV	=	\$21,000 x 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 i.e. 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.

### ***Depreciation Regime for 1995-96 and Future Years***

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, Land Improvements: Qualifying Expenditure and Depreciation Rates*. 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 1997, 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
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#### **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.

##### *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:

<b>Period</b>	<b>Rate %</b>
1 October 1996 onwards	11.1
1 July 1996 - 30 Sept 1996	10.6
1 January 1996 - 30 June 1996	10.4
1 July 1995 - 31 Dec 1996	10.6
1 April 1995 to 30 June 1995	11.0
1 January 1995 to 31 March 1995	9.2
1 October 1994 to 31 December 1994	8.4

For loans made before 31 March 1985 with fixed interest rates, the rate to be used is obtained from the Income Tax (Fringe Benefit Tax, Interest on Loans) Regulations.

### ***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 of 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>
<b>GST PAYABLE</b> (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 96	Feb 96	June 96	Oct 96	Sept 97
Nov 96	March 96	July 96	Nov 96	Oct 97
Dec 96	April 96	Aug 96	Dec 96	Nov 97
Jan 97	May 96	Sept 96	Jan 97	Dec 97
Feb 97	June 96	Oct 96	Feb 97	Jan 98
March 97	July 96	Nov 96	March 97	Feb 98
April 97	Aug 96	Dec 96	April 97	Feb 98
May 97	Sept 96	Jan 97	May 97	Feb 98
June 97	Oct 96	Feb 97	June 97	Feb 98
July 97	Nov 96	March 97	July 97	Feb 98
August 97	Dec 96	April 97	Aug 97	Feb 98
Sept 97	Jan 97	May 97	Sept 97	Feb 98

**Note:** Payment is due on the 7th day of the appropriate month.

## 4.15.2 Rates of Income Tax

### *Individuals*

#### 1997 Income year

Taxable Income	Tax rate per dollar
\$1 - \$30,875	22.125%
\$30,876 - \$34,200	24.375%
\$34,201 and over	33.0%

#### 1998 Income year

\$1 - \$34,200	20.0%
\$34,201 - \$38,000	22.875%
\$38,001 and over	33.0%

#### 1999 Income year

\$1 - \$38,000	19.5%
\$38,001 and over	33.0%

### *Companies*

Domestic companies: 33% of taxable income

Overseas companies: 38% of taxable income

### 4.15.3 Land Improvements: Qualifying Expenditure and Depreciation Rates

**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 I: 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

Section 4.15.3 continued

PART II: 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 74(3A) (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 III: 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

Section 4.15.3 continued

PART IV: 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 V: 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 VI: 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 VII: 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 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.

#### 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

4.15.4 continued

**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

Section 4.15.4 continued

**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 (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



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		

<b>Check</b>	
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	<u>\$170,600</u> (see 1993-94 example)
Decrease in value	<u>\$(44,620)</u>

made up of:

Decrease in capital value of herd (\$170,600 - \$124,585)	\$(46,015)
Taxable income from increased numbers	<u>\$ 1,395</u>
Total decrease in value	<u>\$ 44,620</u>

**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	<u>1,395</u>
Taxable income from sheep	<u>\$38,395</u>

**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	9,660
				<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

<u>Check</u>		
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	<u>3,673.65</u>
Income for 1994	42,573.65
plus Revaluation income deferred from 1993	<u>1,277.66</u>
Taxable income from sheep	<u>\$43,851.31</u>

## 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

=	1993 Value - 1992 Value
=	\$62,640.30 - \$56,560.80
=	<u>\$6,079.50</u>

#### 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.

<u>Income from Livestock Operations</u>	
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:

<b>Expenditure</b>	<b>Limit on Expenditure</b>
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 1996 is listed below. These premiums include the 6 cents Occupational Safety and Health buy, and do NOT include GST.

<b>Class</b>	<b>Description</b>	<b>1997 Premium (per \$100)</b>
<b>Horticulture and Fruit Growing</b>		
01110	Plant nurseries	\$3.20
01120	Cut flower and flower seed growing	3.20
01130	Vegetable growing	3.20
01140	Grape growing	3.20
01150	Apple and pear growing	3.20
01160	Stone fruit growing	3.20
01170	Kiwi fruit growing	3.20
01190	Fruit growing (not elsewhere classified)	3.20
<b>Grain, Sheep and Beef Cattle Farming</b>		
01210	Grain growing	3.20
01220	Grain-sheep and grain-beef cattle farming	2.93
01230	Sheep-beef cattle farming	2.93
01240	Sheep farming	2.93
01250	Beef cattle farming	2.93
<b>Dairy Cattle Farming</b>		
01300	Dairy cattle farming	2.93
<b>Poultry Farming</b>		
01410	Poultry farming (meat)	2.93
01420	Poultry farming (eggs)	2.93
<b>Other Livestock Farming</b>		
01510	Pig farming	2.93
01520	Horse farming	4.89
01530	Deer farming	2.93
01590	Livestock farming (not elsewhere classified)	2.93
<b>Other Crop Growing</b>		
01690	Crop and plant growing (not elsewhere classified)	3.20
<b>Services to Agriculture</b>		
02120	Shearing services	4.89
02130	Aerial agricultural services	4.89
02190	Services to agriculture (not elsewhere classified)	2.95
02191	Animal or pet boarding	2.93
02192	Sphagnum moss processing	2.95

<b>Class</b>	<b>Description</b>	<b>1997 Premium (per \$100)</b>
<b>Forestry and Logging</b>		
03010	Forestry	\$9.18
03020	Logging	9.18
03021	Forest products gathering	2.95
03030	Services to forestry (excluding tree cutting and felling)	9.01
03031	Forest nursery, operation or service	3.20
<b>Marine Fishing</b>		
04110	Rock lobster fishing	6.00
04120	Prawn fishing	6.00
04130	Fishing, finfish trawling (including processing on board)	6.00
04140	Squid jigging (including processing on board)	6.00
04191	Shellfish and paua fishing (not from cultivated beds)	6.00
04192	Seaweed, shellfish and other seafood, handgathering (not from boat)	2.95
<b>Aquaculture</b>		
04200	Aquaculture	2.95

*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).

#### 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	<b>10</b>	12.5	7	8.5
Self propelled equipment	<b>20</b>	25	13.5	17.5
Aircraft:				
Fixed wing agricultural aerial work aircraft, including wing attachments for spraying, dusting and distributing seed:	<b>33</b>	41.3	24	31
Helicopters from and including year ended 31 March 1969				
- Airframe, engine, rotor system	<b>25</b>	31.3	17.5	22
- Spraying tanks and attached spraying mechanism	<b>33.3</b>	41.7	24	32
Barns:				
Simple loafing barns	15		<b>10</b>	
Wintering barns all types of construction	15		<b>10</b>	
Beehives	*			
Boats - see Vessels				
Boilers	<b>10</b>	12.5	7	8.5
Bores and wells	*			
Bridges:				
Wooden	3	4	<b>2.5</b>	3.1
Others	2.5	3	<b>2</b>	2.5
Buildings:				
Reinforced concrete, steel or reinforced concrete framed with brick walls or permanent materials.	1		<b>1</b>	
Brick, stone or concrete walled without steel or reinforced concrete frame, stucco, steeltex or other similar construction with wooden frame.	2.5		<b>2</b>	
Wooden framed - not specified elsewhere.	3		<b>2.5</b>	

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	<b>10</b>	12.5	7	8.5
Fowl houses - see poultry				
Frost protection plant - pumping unit, sprinklers, standards and pipelines	<b>10</b>	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	<b>S.V.</b>			
Gas water heaters	<b>10</b>	12.5	7	8.5
Glasshouses:				
Wooden framed	7		<b>5</b>	
Metal framed	4		<b>3</b>	
Grain drying and storage bins	<b>5</b>	6.3	3.5	4
Grain drying plant	<b>10</b>	12.5	7	8.5
Grain - portable silos - see silos				
Hay balers	<b>20</b>	25	13.5	17.5
Header harvesters	<b>20</b>	25	13.5	17.5
Heating systems	<b>10</b>	12.5	7	8.5
Helicopters - see aircraft				
Hop frames	*			
Hop kilns	<b>15</b>	18.8	10	13
Incinerators	<b>15</b>	18.8	10	13
Land Improvements - see Section 4.15.3.				
Lawnmowers:				
Motor driven	<b>20</b>	25	13.5	17.5
Others	<b>10</b>	12.5	7	8.5
Lime spreaders bulk	<b>10</b>	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		<b>4</b>	
Built after 1 April 1966	15		<b>10</b>	
Cost of converting to herringbone design after 1 April 1966 -	15		<b>10</b>	
Rotary Herringbone	<b>10</b>	12.5	7	8.5
Motor vehicles, trucks and scooters	<b>20</b>	25	13.5	17.5
Office equipment and machines	<b>20</b>	25	13.5	17.5
Pallets	*			
Pig houses - all types	15		<b>10</b>	
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	<b>10</b>	12.5	7	8.5
Plastic pots for tomato growing	<b>S.V.</b>			
Poultry:				
Battery type cages	<b>10</b>	12.5	7	8.5
Colony houses with wooden frames, iron roofs and netting sides and bases	<b>10</b>	12.5	7	8.5
Fowl houses-steel framed	3		<b>2.5</b>	
-wooden framed	7		<b>5</b>	
Saddlery and harnesses	*			
Saleyards:				
Constructed after 1 April 1971	2.5	3	<b>2</b>	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		<b>10</b>
Additions:	Spread over remaining life			
- if part of an existing yard	2.5	3	<b>2</b>	2.5
- if virtually a new yard	<b>50</b>	62.5	40	51
Saws - chain	<b>50</b>	62.5	40	51
Sawmillers- diesel or petrol tractors, locomotives and power units used for log hauling	<b>20</b>	25	13.5	17.5
Scales and weighing machines				
- mechanical	<b>10</b>	12.5	7	8.5
- electronic	<b>20</b>	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	<b>15</b>	18.8	10	13
Sheep and cattle dips:				
Shower type				
- tanks and pipes	<b>10</b>	12.5	7	8.5
- dip or shower (including pumps)	<b>10</b>	12.5	7	8.5
- electric motor and fitting	<b>10</b>	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	<b>10</b>	12.5	7	8.5
Silage storage bunkers	<i>Development expenditure and maintenance</i>			
Silos - Grain:				
- with built in drying and loading/unloading machinery	<b>10</b>	12.5	7	8.5
- With separate drying, loading/unloading machinery	<b>5</b>	6.3	3.5	4
- if erected on farms	<b>10</b>	12.5	7	8.5
- portable	<i>Cost of replacement or scrapping if abandoned</i>			
Slaughterhouse on farms:				
Concrete	7		<b>5</b>	
Timber and concrete	8		<b>6</b>	
Timber	15		<b>10</b>	
Spray plant - orchardists:				
Self propelled and air blast units	<b>20</b>	25	13.5	17.5
Others	<b>10</b>	12.5	7	8.5
Stock food manufacturing plant	<b>15</b>	18.8	10	13
Storage tanks - underground	<i>Appropriate building rate</i>			
Tarpaulins	*			
Threshing plant	<b>20</b>	25	13.5	17.5
Tomatoes:				
Plastic pots for growing	<b>S.V.</b>			
Structure for shading	2.5	3	<b>2</b>	2.5
Tools	<i>See Section 4.8.4</i>			
Traction engines	<b>10</b>	12.5	7	8.5
Tractors	<b>20</b>	25	13.5	17.5
Trailers	<i>Rate applicable to vehicle by which drawn</i>			
Trickle irrigation equipment in glasshouses	<b>25</b>	31.3	17.5	22
Trucks - see motor trucks				
Tunnel houses P.V.C.	11		<b>7.5</b>	

Section 4.15.8 continued

	DV	DV+	SL	SL+
Underground silage pits - concrete walled with sliding roof	<b>10</b>	12.5	7	8.5
Vessels (Registered for fishing):				
- Hulls including fixed gear and refrigeration rooms	<b>10</b>	12.5	7	8.5
- Deck machinery, winches, and motors	<b>15</b>	18.8	10	13
- Main engines	<b>20</b>	25	13.5	7.5
Waggon, carts and drays	<b>10</b>	12.5	7	8.5
Water towers		<i>Appropriate building rate</i>		
Weighing machines and scales	<b>10</b>	12.5	7	8.5
Wells and water bores *				
Windmills	<b>10</b>	12.5	7	8.5
Wine making industry:				
Tanks and vats				
- stainless steel	<b>10</b>	12.5	7	8.5
- Wooden	<b>10</b>	12.5	7	8.5
- Concrete:				
for fermentation.	<b>10</b>	12.5	7	8.5
for storage	<b>6</b>	7	<b>4</b>	5
Casks and barrels				
- both circulating or storage	<b>S.V.</b>			
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.

<b>Industry Categories</b>	<b>Estimated Useful Life (Years)</b>	<b>DV Depn Rate (%)</b>	<b>SL Equiv Depn Rate (%)</b>
<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

<b>Industry Categories</b>	<b>Estimated Useful Life (Years)</b>	<b>DV Depn Rate (%)</b>	<b>SL Equiv Depn Rate (%)</b>
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 <sup>1</sup>	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

<b>Industry Categories</b>	<b>Estimated Useful Life (Years)</b>	<b>DV Depn Rate (%)</b>	<b>SL Equiv Depn Rate (%)</b>
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 (auxillary)	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

<b>Industry Categories</b>	<b>Estimated Useful Life (Years)</b>	<b>DV Depn Rate (%)</b>	<b>SL Equiv Depn Rate (%)</b>
Engines	12.5	15	10
Floodlight systems	3	50	40
Freezers (Blast)	10	18	12.5
Generators (auxillary)	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

<b>Asset Categories</b>	<b>Estimated Useful Life (Years)</b>	<b>DV Depn Rate (%)</b>	<b>SL Equiv Depn Rate (%)</b>
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

<b>Asset Categories</b>	<b>Estimated Useful Life (Years)</b>	<b>DV Depn Rate (%)</b>	<b>SL Equip Depn Rate (%)</b>
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*

<b>Asset Categories</b>	<b>Estimated Useful Life (Years)</b>	<b>DV Depn Rate (%)</b>	<b>SL Equiv Depn Rate (%)</b>
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**

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## 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:

<b>Description of Gift</b>	<b>When Complete</b>
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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