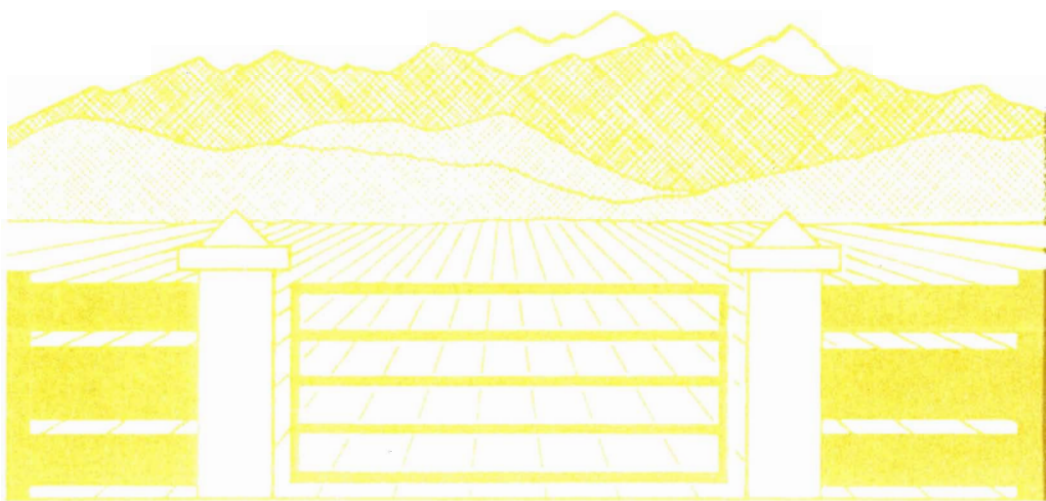




**Lincoln College**

**Farm Management and Rural Valuation Department**

# **1981 Farm Budget Manual**



## **Part 2 Financial**

# **1981 FARM BUDGET MANUAL**

## **Part 2: FINANCIAL**

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## PREFACE

The Lincoln College Farm Budget Manual is published in two parts: Part 1, the Technical Manual, which is revised biennially, and Part 2, the Financial Manual, which is revised every year.

The 1981 edition of the Financial Manual contains seven sections: Assistance and Incentives For Farmers; Farm Capital and Finance; Farm Revenue; Farm Expenditure; Gross Margins; Taxation For Primary Producers 1981; and Estate and Gift Duty.

Prices quoted in this Manual are those pertaining to the period from late 1980 to early 1981. As most people would be aware, prices for many commodities will rise in the coming year. Therefore, the prices contained in this Manual should be used as a guide only. Up-to-date figures should always be obtained where possible in any financial planning.

Trade names of various products are used only to acquaint the reader with some of the types available, and for clarity and convenience. No preferential endorsement by the College is intended. Nor is criticism of similar or alternative products implied.

I would like to express my grateful thanks to Miss Elizabeth Burt and Mr John Clark for their conscientious work in supervising the revision and updating of the Manual, and also to Miss Nicola Bell, Miss Diana Boyle, and Miss Megan Ryde for gathering and collating the information.

To all other members of the College staff, commercial firms and organisations who provided information and assistance in the revision of this manual, I extend my thanks.

I trust all readers of the Manual find it of interest and value.

R.J. Diprose

Senior Lecturer in Farm Management

Editor

March 1981





## INTRODUCTION

In an era of increasing sophistication in farm management analytical techniques, the budget remains the simplest and yet most versatile technique available to the farmer and his adviser. Essentially a farm budget is a written plan which formalizes an anticipated farm programme and translates it into expected financial results.

Some reassurance can be gained from the knowledge, as the following prose indicates, that the basic financial problems have been with us for some time now. However, through budgeting, the requirement for dollars and cents does become slightly more quantitative.

### – IN HOT H<sub>2</sub>O –

*My Grand'fer farmed in days of yore,  
But I must farm in 'eighty-four:  
My Grand'fer grew large crops of grain,  
In spite of drought, disease and rain:  
My Grand'fer farmed, to my surprise,  
Without one expert to advise.  
I wish I'd farmed in days of yore  
Instead of Nineteen-eighty-four  
While thick the experts round me stand  
To guide and lead me by the hand:  
My wheat, they say, will never grow  
Without it's need of H<sub>2</sub>O;  
Nor will my barley ever thrive  
Without some more P<sub>2</sub>O<sub>5</sub>,  
My roots, it seems, will likewise rot,  
Unless I dress with Phos. and Pot.;  
While if I add to ample P.  
A modest dose perhaps of C.  
It seems quite certain I shall then  
Upset the ratio of N.  
It's doubtful if I'll ever see  
A blade of grass on yonder lea.  
Unless I buy, without delay  
One hundred tonnes of S. of A.  
Thus wise I farm in Eighty-four  
Would I had farmed in days of yore.  
  
One day (perchance of experts rid),  
I'll farm as well as Grand'fer did:  
But first I'll need, it's obvious sense,  
A tonne or two of Dollars and Cents.*

ANON.

The final form of any budget will depend on the purpose for which it is to be used and the vocation and point of view of the person doing it. Thus budgets produced for the same farmer by his farm adviser and his accountant might vary quite markedly in approach and presentation.

The Lincoln College budget is designed primarily as a teaching aid and so lays considerable emphasis on formalizing the farm programme for the budget year. The Society of Accountants budget on the other hand is designed for use by accountants whose main interest lies in the finances of the farm rather than the details of the farm programme.

The information in this manual is set out to assist the individual in assessing any farming orientated financial transaction or computation with a reasonable degree of accuracy.

**Section 1, Assistance and Incentives for Farmers,** contains direct extracts from the M.A.F. Information Services booklet of the same name.

**Section 2, Farm Finance,** gives a brief description on the forms of capital and provides information regarding possible sources, lending terms and lending rates.

**Section 3, Farm Revenue,** is an attempt at assessing representative levels for farm prices for the present financial year.

**Section 4, Farm Expenditure,** is likewise an attempt at formalizing a financial basis for assessment of farm costs. The information contained in both Sections 3 and 4 should be regarded in light of present highly inflationary times.

**Section 5,** includes samples of Gross Margin Analyses to demonstrate this particular budgetary technique and current relativity of different enterprises.

**Section 6, Income Taxation,** examines the taxation system in New Zealand with reference to individuals, companies, partnerships, trusts and primary producers. There are several worked examples of taxation liabilities.

**Section 7, Estate and Gift Duty,** contains details of how these Duties are determined for the current financial year, supported by worked examples.

# FARM BUDGET MANUAL

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## SECTION 6 – TAXATION FOR PRIMARY PRODUCERS 1980

## SECTION 7 – ESTATE AND GIFT DUTY





**SECTION 1**

**ASSISTANCE AND INCENTIVES**

**FOR FARMERS**



# 1. ASSISTANCE AND INCENTIVES FOR FARMERS

## 1.1 INTRODUCTION

This section contains direct extracts from the M.A.F. Media Services Booklet "Rural Industry Incentives 1980-81".

Whilst this section sets out briefly those measures of direct benefit to farmers it makes no attempt to include the wider range of Government Support for the primary industry, such as advisory services, research and grants to various bodies and organisations.

## 1.2 FARM SETTLEMENT

Details on available finance and current charges are given more fully in Section 2 - "Farm Capital and Finance."

### 1.2.1 Farm Settlement Finance

Preference for finance for farm settlement is given to:

- applicants such as sharemilkers, farm employees, and farmers' sons who are purchasing a first farm; and
- farmers who are purchasing additional land to make an existing unit economic.

Other factors considered are the applicant's qualifications and experience in the type of farming he proposes, personal contributions (cash, stock, or land), the price being paid, other borrowing, and whether farm earnings will cover commitments such as loan charges, farm expenses, and maintenance, and provide a reasonable standard of living for the applicant and his family.

Though most loans are granted to purchase self-contained viable units, some are granted as a stepping stone to farm ownership, and to help retain competent workers in the industry. Experienced bona fide farm workers, such as shearers, and fencers, with a proven record of thrift and initiative, may be granted loans to purchase suitable smaller units, provided the total loan commitments, as well as farm running and living expenses, can be met from the total income.

*Rural Banking and Finance Corporation.*

### 1.2.2 Special Settlement Loans

The Special Settlement Loans Scheme aims to settle young farmers who would not otherwise have the opportunity of

purchasing a farm, and who have demonstrated qualities of thrift, initiative, and outstanding ability to manage a farm enterprise.

Loans up to 85% of the Rural Bank's valuation of the essential land, buildings, stock and plan may be advanced. Interest is at the current farm purchase rate, presently 9%, rebated to 7½% for the first 3 years, and repayment terms are flexibly administered to accommodate fluctuations in farm income. Applicants must have a minimum unencumbered contribution of 15% of the ingoing total, with a reasonable proportion from personal savings. Preference will be given to applicants in the 25 to 40 year age group, with their own transport and (desirably) with some academic farming qualification.

Properties are at the applicant's own choice, but must be reasonably priced, economic units, with an adequate standard of improvements. Most loans will be made for the purchase of sheep, dairying, or mixed-cropping farms, though other types of agricultural enterprises may be considered.

*Rural Banking and Finance Corporation.*

### **1.2.3. Maori Lands Finance**

The Maori Land Board provides financial assistance to farmers of Maori descent to enable them to develop Maori lands, purchase farms, stock and plant, and for land improvement. The Board's lending policies are flexible, and each case is considered on its merits. It will lend on horticultural enterprises as well as for traditional farming projects.

The Board will lend to Maori incorporations and to trustees for owners of Maori land, and to any company in which the majority of the share capital is owned or held for the benefit of Maoris.

Special assistance may also be available under the Marae Enterprises scheme to assist Maori communities and groups to make more efficient use of their resources.

*Department of Maori Affairs*

### **1.2.4. Land Settlement**

The Land Settlement Board is responsible for the development and settlement of Crown Land.

Each year, Government decides, on the basis of available finance, the number of improved farms to be offered by ballot to landless farmers. To participate in a ballot, applicants must:-

- be New Zealand citizens, by birth or naturalisation;
- not have owned an economic farm;
- normally be 25 or more years of age;
- have been principally engaged in appropriate farming in New Zealand for at least 12 months immediately prior to applying; and
- although the Board has some discretion, applicants as a rule must -
  - have had 5 years' full-time farming experience and completed four week courses in each of 2 years in basic husbandries and farm management to a satisfactory standard; or
  - have been awarded the Trade Certificate in Management; or
  - have been awarded an appropriate diploma by Massey or Lincoln, and afterwards have completed 2 years' full-time farming.

Stock and plant are provided, at current prices, by the Board, on settlement.

Finance is available from the Land Settlement Board for the capital over and above the stipulated deposit or cash contribution required to take over the farm, stock, and plant. Interest payable on the current-account mortgage granted in the first instance is 7½% for the first 3 years, then 9%. Interest rates are reviewed every three years.

*Department of Lands and Survey.*

### 1.2.5 Farm Ownership Accounts

Farm Ownership Accounts, designed to help farm workers, share-milkers, students, and others associated with farming to buy a farm, can be opened with the Post Office Savings Bank, a trustee savings bank, or some building societies.

The account is available for the purchase of a first farm, or for the purchase of stock and plant to go sharemilking or share farming for the first time.

With the written consent of the Rural Banking and Finance Corporation, an account can be opened by any New Zealand citizen who has attained the age of 15 years, and who -

- being a pupil at a secondary school in New Zealand, intends to become a farmer; or

- is undertaking a course of study which will assist him to become an efficient farmer; or
- is principally engaged or employed in the farming industry or in any associated servicing industry in New Zealand; or
- has some other relevant experience or qualification which, in the opinion of the Rural Bank, will enable or assist him to become an efficient farmer.
- is the spouse of a depositor.

The depositor must elect to save under either a grant scheme or a tax-rebate scheme, (ordinary account or special account.)

(i) Ordinary Account

The depositor may save up to \$5,000 per annum and receive a tax-free grant of between 25 and 50% of his savings, depending on how long the account has been open. The maximum grant is \$6,000 on maximum eligible savings of \$60,000. The minimum qualifying period for a grant is 3 years from the date the first \$250 is saved.

(ii) Special Account

A depositor with a Special Farm Ownership Savings Account is able to claim a tax rebate benefit at the end of each tax year.

The amount of tax rebate allowable for each account in each tax year will be calculated at the rate of 45 cents for each complete dollar of allowable increased savings including interest, irrespective of the rate at which the depositor is taxed on his or her earnings, but will only be payable to the extent of the lesser of

- i \$2,250; or
- ii 45% of the increase in allowable savings (including interest) in the tax year concerned; or
- iii the amount of tax payable by the depositor before allowing the rebate.

The limits for qualifying savings in any one tax year is \$5,000 and \$60,000 in total per accounts. Deposits in excess of the \$60,000 limit will not be eligible for a tax rebate. These savings will earn interest at 3% per annum.

There is no upper limit on the length of time for which a depositor can save to reach the limit of eligible savings.

Where a depositor has deposited in a special farm ownership savings account an amount in any one financial year in excess of the allowable maximum, the excess may be

withdrawn from the account during the next succeeding financial year notwithstanding that the balance in the account will be reduced to an amount less than the balance at the last 31 March.

This relates only to any amounts in excess of the \$5,000 yearly maximum.

Interest at the rate of 3% per annum is payable on balances in both types of account. A depositor who commences to save under the purchase grant scheme may transfer to the tax-rebate option during his savings term but not vice-versa.

*Rural Banking and Finance Corporation  
and New Zealand Post Office.*

### **1.2.6. Suspensory Loans for Sharemilkers**

A sharemilker buying his first dairy farm may be forced to sell a substantial part of his existing dairy herd if it exceeds the farm's carrying capacity. To overcome the heavy tax liability on this type of sale, an interest-free suspensory loan may be granted, secured by a mortgage on land. Providing the recipient remains in occupation and actively farms the property on his own account for 10 years, the loan is written off. For tax purposes the amounts written off will be regarded as assessable income but spread equally over the year of remission and next 2 succeeding years.

Applications should be lodged at the nearest office of the Rural Banking and Finance Corporation as soon as an agreement has been signed but not later than the date on which any agreement to purchase becomes unconditional.

*Rural Banking and Finance Corporation*

### **1.2.7. Stamp Duty Exemption on First Farms**

A bona fide farmer who goes into farming on his own account may be exempted from the payment of stamp duty in respect of the purchase of his first farm. In general, the purchase must comply with the following criteria before the exemption will be allowed:

- the purchaser or his spouse, or both together, cannot own or have owned a substantial interest in farm land or a farming company.
- the property must be capable of supporting a full-time farming operation.



- the purchaser must actively farm the property within 2 years of purchase.
- the purchaser must acquire a controlling interest in the farm or farming company and not dispose of it within 2 years of acquisition. In the case of more than one person acquiring the land or shares, each of those persons who qualify for a first farm exemption in their own right must hold, in the aggregate, a controlling interest in the farm land or farming company.

The claim of exemption from stamp duty will normally be made through the purchaser's solicitor.

*Inland Revenue Department*

### 1.2.8. Farm Vendor Settlement Finance Schemes

These schemes provide that 50% of the interest earned by retiring farmers from money left in farms sold to new farm purchasers approved by the Rural Bank is exempt from taxation.

The aim of schemes is to assist suitably qualified and experienced farmers to purchase their first farm by encouraging the outgoing farmer to invest in the industry. It applies to sale and purchase agreements entered into on or after 28 July 1977, with the date of settlement not earlier than 1 April 1978. Retiring farmers have the option of investing in either a farm vendor finance bond issued by the Reserve Bank on behalf of the Rural Bank, or the more familiar farm vendor mortgage guaranteed by the Rural Bank. In both cases the minimum term is 7 years and the interest rate 9%. The maximum amount which can qualify for the concession is \$150 000 and the retiring farmer must have owned the farm for at least 10 years or be selling because of ill health.

There are, however, essential differences between the 2 schemes.

#### (i) Farm Vendor Finance Bonds:

Under the bond option, the vendor accepts a 7 year bond (which can be redeemed at the end of the 7 years or on prior death of the bond holder) for at least 50% of the sale price of the land and buildings.

If the sale price is less than the current Government valuation, the amount of the bond investment is to be not less than 50% of current Government valuation of the

freehold or leasee's interest. The maximum is 80% of the Rural Bank's valuation of the land or \$150 000, whichever is the lesser.

The interest rate payable on the bond is at present 9% per annum for the whole term of 7 years.

The vendor is able to deduct 50% of the interest earned on the bond for income tax purposes, and is able to convert the investment to cash at the end of 7 years. The bonds are redeemable on death to meet the needs of beneficiaries and the payment of estate duty.

Under the bond option the Rural Bank takes a mortgage for a term of up to 25 years on standard Rural Bank lending conditions and thus relieves the purchaser of the need to refinance at the end of 7 years.

The purchaser must have a personal equity (unencumbered capital or farming assets) of not less than 20% of the value of the farm as a going concern.

The bond scheme gives farmers prepared to reinvest at least 50% of the sale price in their property a Government-guaranteed security and relief from the administrative problems of taking and holding a mortgage.

## (ii) Farm Vendor Mortgage Guarantee

The mortgage guarantee option is an extension of the Farm Mortgage Guarantee Scheme operated by the Rural Bank. This option provides the same taxation benefits for the vendor who is unable to invest the full 50% of the sale price as required under the bond option.

The vendor takes a mortgage from the purchaser in the normal way, and is guaranteed by the Rural Bank against loss of capital should the purchaser fail to meet his obligations under the mortgage.

The scheme offers valuable benefits to the vendor. He qualifies for a tax exemption by having 50% of the interest earned on the guaranteed mortgage exempt from income tax. He is protected against loss of capital, can lend relatively smaller sums behind prior mortgages without risk, and can handle his own mortgage administration. Over all, he gains maximum protection with a minimum of inconvenience.

For the purchaser, the scheme has the attraction that he obtains a reasonable fixed interest rate mortgage for at least 7 years on either a first or subsequent security. The

benefits of the guarantee against loss of capital and the taxation advantages are likely to encourage vendors to sell their properties to eligible new farmers.

It should be noted that the mortgage is not refinanced by the Rural Bank at the end of the term, and renewal or repayment must be negotiated by the parties concerned.

The basic conditions laid down by the Rural Bank for the guarantee option are:

- the mortgage may be on a flat or table basis, or on demand if provision is made for repayment over, or at the expiry of, a term of not less than 7 years. The mortgage may be a first, second or subsequent security.
- the interest rate for a minimum of 7 years must not exceed the standard Rural Bank settlement rate (currently 9%).
- the maximum amount of the loan eligible for a guarantee is \$150 000 or 80% of the borrower's mortgageable interest in the land, whichever is the lesser.
- at the date of sale, the vendor must have owned the farm and/or shares in the farm for not less than 10 years, or be selling because of ill health.
- a purchaser, or purchasers, must not hold or have held an interest as owner or shareholder in a farm property which would have been regarded by the Rural Bank as being suitable for his settlement as a full time farmer. He must also personally occupy and farm the property.
- a purchaser must have a personal equity (unencumbered capital or farming assets) of not less than 30% of the value of the farm as a going concern.

All types of farms regarded as suitable by the Rural Bank for the settlement of farmers will be considered, provided they are economic units (or can be developed to an economic standard in a short period). Propositions regarding the strengthening of uneconomic units may be considered in special circumstances.

## 1.3 FARM FINANCE AND DEVELOPMENT

### 1.3.1. Livestock Incentive Scheme

The Livestock Incentive Scheme aims to encourage farmers to achieve a permanent increase in the number of livestock

carried on an existing holding. A farmer whose property has an unexploited carrying capacity, and who intends to permanently increase pastoral production, can seek a suspensory loan or a taxation incentive.

**(i) Loan Option –**

An interest-free suspensory loan of \$12 per qualifying stock unit.

(This loan will be written off if the increase is sustained for 2 years.)

**(ii) Taxation Option –**

A deduction from taxable income of \$24 per qualifying stock unit.

(This deduction may be used, in whole or in part, in any of the 3 tax years after the increase has been sustained for 2 years.)

The scheme applies to farms carrying sheep, cattle (beef or dairy), or deer. Livestock will be converted to stock units to establish the basis for payment of a loan or for the deduction from taxable income. Allowance will be made for land devoted to cash cropping on mixed-cropping properties.

To be eligible, the farm's potential minimum carrying capacity at the end of the program must be:

Dairy –	65 cows and replacements (500 stock units)
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Sheep and other livestock –	1000 stock units.
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The programme must be commercially viable and offer a substantial and permanent increase in livestock numbers and production.

Applicants must have a mortgageable interest, a satisfactory lease or some other written agreement, giving them the sole use of the land to which the programme applies, for the period of the programme and for at least 2 years thereafter.

**Stock Increase Programme**

- The programme may be for a minimum of 1 year and a maximum of 3 years. The scheme is open until 31 March 1982, and the farmer must submit his programme for approval by the Rural Bank before that date.
- The basic number of stock units will normally be calculated on stock held at 30 June 1980; but when this is less than the 30

June 1979 carrying capacity, an average of the two figures may be used by the Rural Bank to determine the basic carrying capacity of a particular property. For farmers buying properties after these dates, and in special circumstances, the Bank will take into account stock carried at 30 June in the 2 years before application, and any other relevant factors.

- Before the increase in livestock units qualifies for either incentive, the farm must achieve an increase equal to 2%, 3% or 4% of the basic livestock units, depending on the length of the programme, with a minimum increase of 50 units spread over the whole programme. This means that a 1-year programme will need to show a more than 2% increase; and a 2-year programme, a more than 3% increase; and a 3-year programme, a more than 4% increase, or more than 50 units in each case, whichever is the greater.

The amount of the suspensory loan or the tax incentive will be calculated on livestock units in excess of these basic increases.

Farm advisers and farm consultants can assist a farmer to prepare his application.

*Rural Banking and Finance Corporation.*

### **1.3.2. Land Development Encouragement Loans.**

The scheme is aimed at encouraging the development of unimproved or reverted land by ensuring that not only is the initial capital available, but that work can continue despite fluctuations in income.

Individual farmers, partnerships, lessees, trusts, Maori land incorporations, private and public companies will be eligible to apply for a loan to assist with the initial development of:

- unimproved land being developed for the first time for farming purposes from the unproductive state.
- reverted land which is capable of being redeveloped to a productive state.
- extensive, clear hill-country grazing land where the dominant cover comprises such species as tussock, danthonia or unimproved browntop. (Where aerial seeding and oversowing are contemplated, it is expected that the area would not previously have been topdressed or oversown with improved species, but in any event not in the 5 years up to 1 June 1978.)

Priority will be given to the development of those areas clearly requiring initial work, such as clearing, drainage, cultivation or oversowing, to establish permanent pasture which can be economically maintained in its improved productive condition.

The scheme does not provide for renewal or upgrading of existing pasture which would normally be carried out under prudent management in line with district farming practice. Areas reserved for soil or water conservation, erosion or river protection, wildlife and other reserves and properties intended for afforestation are not eligible under this scheme.

Applicants must be able to demonstrate the financial viability of their total farming operation and must have a mortgageable interest in land. Where the tenure is leasehold, the minimum term required will normally be 15 years from the commencement of the loan.

**(i) Development Projects:**

A development programme must cover a minimum area of 10ha or a large enough area for carrying capacity to be increased by at least 100 stock units.

Applicants must submit a total development, management and financial programme and define the area to be developed by means of accurate scale plans, aerial photographs, etc., showing both the subject area and its location in relation to the whole property.

**(ii) Qualifying Expenditure:**

Qualifying expenditure is that which is incurred in the development of unproductive land up to and including the sowing down in pasture and may include the cost of clearing, cultivation seed, capital fertiliser and lime, and drainage where this is a prerequisite to the commencement of the development programme. Expenditure on such items as fencing (subdivisional and boundary), tracks, races, water supply and buildings is excluded. Borrowing to meet the cost of non-qualifying expenditure may be undertaken from the farmers usual source of credit, including the Rural Bank, Department of Maori Affairs or Marginal Lands Board.

**(iii) Loan Details:**

Subject to compliance with the general terms of the scheme, the main features of these loans are:

- loans are for a term of 15 years. Payments are made on

application to the Rural Bank as work progresses or on evidence of satisfactory completion of the programme.

- loans cover that portion of the development costs associated with land preparation up to and including the grassing stage up to a maximum of \$250 per ha. Normally this will be based on actual and reasonable costs of approved work carried out to acceptable district standards.
- All interest is deferred and the interest accumulated up to that time, is written off at the end of the fifth, tenth and fifteenth years.
- One half of the loan advanced is repayable by equal amounts spread over ten years commencing after the end of the fifth year.
- the other half of the loan will be written off at the end of the tenth year provided that the development programme has been satisfactorily completed, and the improvements maintained.
- the notional interest rate charged will be in line with the Rural Bank development lending rates which are currently 6% for the first period, 7½% for the second and 9% for the third.

To obtain these maximum benefits, an applicant must retain ownership of the land for the full 15 year term of the loan. If the land is sold or otherwise disposed of (other than to approved family members) within 10 years, the total balance owing, after allowing for any principal repayments, together with any interest not previously written off, becomes repayable. For tax purposes both interest and principal written off will be treated in terms of Section 172 of the Income Tax Act 1976.

**(iv) Closing Date of Scheme:**

Applications for loans may be lodged with the Rural Bank up to 31 March 1981. If applicants already have loans with the Marginal Lands Board or Department of Maori Affairs, their application should be lodged directly with those organisations. All applications must be lodged before the start of the development programme.

### 1.3.3. Development Finance

Any reasonable need for development finance may qualify for a loan, including clearing, grassing, fencing, topdressing, housing, farm buildings, roading, planting, water supply, irrigation, and purchasing stock and essential plant.

Priority is given to applicants who actively farm their own properties, and special attention is paid to farming ability.

*Rural Banking and Finance Corporation*

### 1.3.4. Development Expenditure

Refer to Taxation Section.

### 1.3.5. First-Year Taxation Allowances – Buildings, Plant, and Machinery

Refer to Taxation Section.

### 1.3.6. Stock Loans

#### (i) Short Term: (5 to 7 years)

Sharemilkers and other farmers who do not own the land they farm may obtain loans to purchase stock and plant.

Reasonable security of tenure, or a satisfactory 50/50 sharemilking agreement (normally 3 years) is needed. Provided the applicant can meet his commitments and make a reasonable contribution from his own resources, a loan of up to 60% of the market value of stock and plant may be advanced on first security.

#### (ii) Long Term: (up to 25 years).

These loans are available for –

- Stock purchased or increased (through retention of stock that would normally be sold) in association with development or the purchase of additional land.
- Purchase of stock for diversification, where the new stock is more costly per unit or a change is being made from dry stock to breeding stock.

Loan limits and security are flexible.

*Rural Banking and Finance Corporation.*



### **1.3.7. Maori Land Board Loans**

The Maori Land Board provides loan finance to experienced farm workers of Maori descent to purchase stock and plant for sharefarming purposes (see section 1. 2. 3.).

*Department of Maori Affairs*

### **1.3.8 Special Plant Loans**

To foster progressive farming methods and new techniques, assistance is given to soundly based farmers and agricultural contractors to introduce new types of plant and machinery. The aim is to demonstrate and evaluate the equipment under local farming conditions. Substantial amounts may be granted on a term basis; interest rates depend on the type of proposition and the security offered.

*Rural Banking and Finance Corporation*

### **1.3.9. Plant and Machinery - Finance for Purchase**

A limited number of loans for the purchase of plant and machinery are available from the Rural Bank to:

- farmer group machinery co-operatives or syndicates for plant for use on their own land,
- individual farmers undertaking extensive development projects,
- and soundly established owner/operator agricultural contractors providing an efficient and essential agricultural service to farmers.

Emphasis will be placed on essential requirements, in connection with land development work, rather than the purchase or normal replacement of tractors and plant required by farmers to continue with existing farming systems.

Loans generally not exceeding two-thirds of cost, up to \$25 000 for any one operator for tractors, plant and farm machinery, excluding road transport vehicles and aircraft, will be considered and loan terms will be up to 5 years with interest at 14% per annum on the reducing balance. Loans of up to 50% of value of good second-hand plant not more than 2 years old, subject to an acceptable certificate from an agent as to condition and age, may also be considered. Security arrangements can be flexible, but a mortgage of land would normally be required, in addition to an instrument by way of security over the machine.

The availability of this type of finance from the Rural Bank is intended to complement and not replace the many other sources of credit available. Because of this essentially complementary role, farmers and agricultural contractors will generally have to rely on their traditional sources of finance for their plant and machinery requirements. Similarly, applications to refinance debts incurred with other lenders or hire purchase arrangements cannot be entertained.

*Rural Banking and Finance Corporation*

### **1.3.10 Marginal Lands Board Finance**

The Marginal Lands Board operates as a Government lender of last resort, providing finance to farmers to restore, maintain, and increase production on properties that are not economic, but are potentially so.

The only applications considered by the board are those which are unacceptable to other lenders, or where the terms on which finance is available are so demanding that the property could not service them.

Finance is available, generally, on current-account mortgage in the first instance, for development, to buy stock and chattels, to buy additional land to make a farm economic, and to refinance existing securities to enable additional development to be undertaken.

Finance and advances for development, stock, and plant, can attract a concessional interest rate of 7.5% for the first 3 years and, afterwards increasing to 9%. Advances for amalgamation can attract a concessional interest rate of 7½% for 3 years, after which the rate increases to 9%. No concessional interest rate is available on finance for refinancing. Interest rates are reviewed every 3 years.

The Board has advanced money for orchards, market gardens, pig and deer farming, as well as for traditional farming ventures; it will consider any reasonable proposition aimed at increasing production from the land.

*Department of Lands and Survey*

### **1.3.11 Refinancing of Farm Debts**

When a farmer is in financial difficulty, assistance is available for refinancing his onerous short-term debts. The aim is to provide long-term financial stability for the farmer, within the

limits of his earning capacity, rather than the complete repayment of the debt. First mortgages and institutional mortgages are not normally re-financed.

Priority is given to efficient, credit-worthy farmers who have severe liquidity problems which are hindering further progress or the maintenance of past development. The interest rate is 11%.

*Rural Banking and Finance Corporation*

### **1.3.12 Seasonal Finance**

Seasonal finance on a current account basis is available for tobacco growers, pip-fruit growers, and (as the need arises) for other farmers, especially in periods of depressed farm incomes. First-time farmers and those who are carrying out substantial development programmes may also qualify for seasonal finance, if it is not readily available from other sources.

*Rural Banking and Finance Corporation*

### **1.3.13 'Nil' Livestock Values for Taxation**

Refer to Taxation Section.

### **1.3.14 Energy Conservation Expenditure**

A farmer who incurs capital expenditure (which is not normally deductible for income tax purposes\*) in acquiring and installing certain kinds of new plant, machinery or equipment for use for the purposes of energy conservation may claim an immediate 100% write off in the year the expenditure is incurred. In addition, the cost of improving or altering certain kinds of plant, machinery, equipment, or of insulating such assets or buildings for use for the purposes of energy conservation will also qualify for the 100% first year write off.

\* It would not include, however, energy conservation expenditure of a private nature such as to the family residence.

*Inland Revenue Department*

### **1.3.15 Farm Mortgage Guarantees**

To encourage lenders to invest their funds in farm mortgages, the Rural Bank guarantees farm lenders against loss should the

borrower ultimately fail to repay a loan. The Rural Bank does not itself grant a loan.

Mortgages which qualify for guarantee are those raised for any acceptable farming purpose, including purchase of land, development, working expenses, and the refinancing of current accounts or existing mortgages.

Most competent farmers are eligible, including individuals, a family or other partnership, and private companies or trusts.

*Rural Banking and Finance Corporation*

## 1.4 FERTILISER

### 1.4.1 Fertiliser Price Subsidy

A subsidy of \$15.00 per tonne is payable on locally manufactured and imported fertilisers.

The method of payment for superphosphate is by deduction from the cost of the raw materials used in manufacture. For other imported fertilisers, the subsidy is paid at the point of first sale in New Zealand.

The ex-works or ex-store price has therefore been reduced by the equivalent of \$15.00 per tonne, and no farmer claims are involved.

*Ministry of Agriculture & Fisheries*

### 1.4.2 Fertiliser Aerial Spreading Bounty

Fertiliser spread by a commercial aerial-spreading contractor qualifies for a bounty of \$2.00 a tonne.

The contractor invoices the farmer with the net amount after subsidy.

*Ministry of Agriculture and Fisheries*

### 1.4.3 Transport Subsidies on Fertiliser and Lime

A subsidy is payable on the transport of fertiliser and lime from a works, a merchant, or its port of entry to the farm gate. The rates are:

First 65 kilometres –	8 cents per tonne per kilometre
Next 185 kilometres –	5 cents per tonne per kilometre
Kilometres in excess of 250 –	3 cents per tonne per kilometre

The supplier invoices the farmer with the net amount, after subsidy. For imported fertilizers, the maximum distance subsidised is 435km.

*Ministry of Agriculture & Fisheries*

#### **1.4.4 Subsidy on Transport of Serpentine, Dunite, and Dolomite**

A subsidy is payable on the cost of transporting serpentine, dunite, and dolomite from the point of its production to a fertiliser works, or mixing plant.

The rate of subsidy is:

First 30 kilometres –	8 cents per tonne per kilometre
Next 130 kilometres –	5 cents per tonne per kilometre
Kilometres in excess of 160 –	3 cents per tonne per kilometre

*Ministry of Agriculture & Fisheries*

#### **1.4.5 Co-operative Fertiliser-Spreading Facilities**

To help reduce fertiliser-spreading costs, the Rural Bank will consider applications for loans to construct or upgrade airstrips, storage bins, and access roading. Preference will be given to cooperative undertakings.

As problems of security and equitable distribution of debts between participants can arise in such arrangements, the bank will consider the alternative of making advances to individual contributors, with (if necessary) security over their individual farm properties.

*Rural Banking and Finance Corporation*

#### **1.4.6 Fertiliser and Lime - Deferred Cost**

Refer to Taxation Section.

### 1.4.7 Fertiliser Transported by Air and Sea

Fertiliser conveyed by heavy aircraft to offshore islands and to parts of the Marlborough Sounds is subsidised at 25.0 cents per tonne per kilometre of flying distance.

The distance from the works to the airfield is subsidised at normal transport rates.

Subsidies on fertiliser conveyed in these areas in light aircraft are calculated at ground-transport rates.

Where fertiliser travels by sea during some stage of its delivery from the works, the subsidy is paid, as if the fertiliser had been delivered by rail and/or road directly from the nearest works.

Where delivery by road and rail is impracticable, the subsidy is calculated on the basis of the distance from the nearest works, including the sea portion of the journey.

*Ministry of Agriculture and Fisheries*

## 1.5 FORESTRY

### 1.5.1 Forestry Encouragement Grants

Cash grants, equal to 50% of the qualifying costs of establishing and maintaining an approved woodlot, are available up to a maximum of \$750 per hectare, to persons whose qualifying costs do not exceed \$300 000 in any one financial year. The minimum area of planting eligible for a grant in any one financial year is 2 hectares.

Application must be made to the Forest Service not later than 31 August in the year preceding establishment.

Qualifying costs are:

- Land clearing and preparation.
- Fencing (costs of new fencing, up to \$70 per hectare).
- Trees and planting, blanking and releasing.
- Pruning and thinning.
- Fertilisers and other chemicals and their application.
- Disease and pest control (insect, fungal, and animal).
- Temporary internal roads and access tracks, including any associated culverts and bridges, up to \$40 per hectare.
- Land tax on land used for forestry.
- Rates.

- Insurance against fire.
- Interest on loans for forestry (limited by their impact on profitability).
- Professional forestry services and advice.
- Repairs and maintenance to temporary fences; to plant and equipment used for land preparation and planting, and the tending and maintenance of the tree crop; to temporary buildings and temporary roads and bridges; and to access tracks.
- Fire protection and suppression.
- Rent on land leased for forestry.
- Hired plant and equipment.
- Subscriptions to the Farm Forestry Association or the New Zealand Forest Owners' Association Inc.

*New Zealand Forest Service.*

### **1.5.2. Modified Grants Scheme for Protection/ Production Planting**

The same conditions apply to this as to the grants scheme, except that 66⅔% of the qualifying cost of establishment (instead of 50%) will be met. For costs incurred after establishment, only the usual 50% will be refunded. The area must be one where a protection/production woodlot is considered to be the best land use.

The scheme is available initially to landholders in the Gisborne/East Coast area where soil stabilisation is of major concern but could be extended later to other areas if there is sufficient demand and if finance permits.

*New Zealand Forest Service*

### **1.5.3. Plantings for Shelter or Erosion Control**

Refer to Taxation section.

### **1.5.4. Woodlot Taxation Incentives**

The value of growing trees is specifically excluded from any valuation for assessment of land tax. Where a local authority levies rates on the capital value (as distinct from the land value), the value of timber trees or of trees for shelter or amenity

purposes is exempted by statute from inclusion in property valuations for the purpose of levying rates. Also, the timber value of standing trees is exempted from estate duty. Refer also to Taxation section.

*Inland Revenue Department*

## 1.6 SOIL AND WATER

### 1.6.1 Irrigation

Assistance is given for approved community irrigation schemes. A Government grant provides the finance for the headworks. None of this cost is recovered. The cost of off-farm distribution works is initially met in full by Government grants. Once the scheme is operating the farmers' half share of off-farm distribution works plus ruling rates of interest, is recovered in the water charge over a 40-year period. The Government provides interim finance for the full cost of on-farm works. A suspensory loan is provided for one-half of the fixed on-farm costs. This loan is written off after 10 years with 1/10 being abated each year, provided the farmer does not sell his farm and meets the requirements of the development programme. The remaining one-half of the annual cost of on-farm work is recovered from the farmer at the end of the year, often through normal interest bearing loans provided by the Rural banking and Finance Corporation (up to 100% for these costs.)

In addition, Rural Banking and Finance Corporation loans up to 100%, with provision for deferral of interest and/or principal repayment, may be given for schemes that do not meet the policy; for example, some spray irrigation equipment or a scheme covering less than the requirements for a community scheme.

*Ministry of Works and Development and  
Rural Banking and Finance Corporation.*

### 1.6.2 Catchment Control Schemes, River Control and Land Drainage, and Soil Conservation Works.

Assistance may be available for approved proposals to protect farmland from flooding, for community drainage schemes, and for erosion-control works. The rate of grant varies with a maximum of 3:1, depending on a number of factors (including the off-site, or downstream, value of the works). Assistance is provided on condition that the farmer will contribute, as appropriate, to the maintenance of the works.



The works for which a grant may be available include:

- Catchment control schemes that involve water management and soil conservation works that treat a whole catchment.
- Community drainage schemes involving drainage channels, outfalls, and pumping structures.
- Soil and water conservation plans for individual farms. This may include erosion-control fencing; the provision of alternative grazing where severely eroded country is to be retired; and various structures and planting, over-sowing, and top-dressing specifically to control severe erosion.

*Catchment Authorities*

### 1.6.3 Rural Water-Supply Schemes

Assistance is given for approved community rural water-supply schemes which incorporate a minimum of four farms and service at least 800 hectares. There is a 1:1 grant for most off-farm and on-farm works. The responsibility for promoting schemes rests with county councils.

Design assistance is provided through consultant engineers and Ministry of Agriculture and Fisheries staff. Water treatment requirements are provided through the Health Department. The policy is administered by the Ministry of Works and Development.

*County councils: Ministry of Works and Development;  
Ministry of Agriculture & Fisheries: Health Department.*

### 1.6.4 Pollution Prevention Expenditure

Refer to Taxation Section.

## 1.7 NOXIOUS PLANT, PEST AND DISEASE CONTROL

### 1.7.1 Cattle Tuberculosis and Brucellosis Eradication Schemes

Farmers are responsible for presenting cattle for testing and for arranging the slaughter of reactors. Government contributes the cost of the testing (either by providing ministry staff or, in some circumstances, by paying the farmer's veterinarian to carry out the tests) and pays compensation for any reactors.

The compensation payable on reactors to either test is as follows:

- In addition to the carcass proceeds, 90% of the difference between an average carcass value and an average replacement value, assessed monthly for differing classes of animals over 6 weeks of age.
- Where a reactor is condemned at the works, 90% of the average carcass value, in addition to compensation.
- A seasonal bonus payment on the following classes of reactor, slaughtered within the period allowed –
  - Town supply cows, at \$98 each.
  - Factory-supply cows 18 months of age and over, at a varying rate (according to the month of test) on tests carried out between June and January in the North Island and between July and February in the South Island.
  - In-calf beef breeding cows and heifers, and cows with dependent calves at foot, at a rate estimated as one-half of the average price of weaners for the season.
- Tb-reactor meat is not eligible for export, and a support scheme is operated to ensure that the proceeds to farmers equal the export-schedule rates applying at the date of slaughter. Compensation against discounting at sale of beef-breeding cattle under movement control because of tuberculosis infection is payable up to a maximum recommended each 6 months by the National Animal Health Advisory Committee.

*Ministry of Agriculture & Fisheries*

### 1.7.2 Noxious-Plants Control Scheme

The Noxious-Plants Control Scheme provides for a subsidy of 50% of the cost of the chemicals used to control specified noxious weeds.

The local administration of noxious-plants control is the responsibility of the district noxious plants authority, which is the country (or combined counties) noxious-weeds committee, with the local senior farm advisory officer as an *ex officio* member. Administration is co-ordinated by eight regional committees, and the national policy is formulated by the Noxious Plants Advisory Committee.

The 50% subsidy applies to 'declared' species, but only after the particular control programme has been approved by the district authority. Claims are paid by the Ministry of Agriculture and Fisheries.

*Ministry of Agriculture & Fisheries*

### 1.7.3 Nassella Tussock

The North Canterbury and Marlborough Nassella Tussock Boards derive most of their funds from a Government subsidy, based on county contributions. The boards carry out control work on farms within their districts. (Farmers meet 50% of the cost).

A 'county scheme', administered by 16 local authorities in the South Island and 5 in the North, provides for farmers to be reimbursed for 50% of the cost of undertaking approved nassella-tussock-control programmes themselves. This scheme also operates now in the North Canterbury and Marlborough Nassella Tussock Board's districts, as a complement to those Board's activities.

### 1.7.4. Australian Sedge

North Island local authorities administer a scheme which pays 50% subsidy to farmers towards the cost of controlling Australia sedge by a range of approved control methods.

Farmers arrange with the county to carry out a control programme approved by the Ministry of Agriculture and Fisheries. On its completion, the county pays the subsidy and is reimbursed by MAF.

North Island Local Authorities.

### 1.7.5. Noxious Plant Eradication -Temporary Employment

Under the Temporary Employment Programme it is possible for district noxious plant authorities to offer finite short-term noxious-weed eradication projects to the Department of Labour.

The Department of Labour will reimburse district authorities for the cost of wages and some of the overheads for the workers engaged through the department on approved projects.

The only qualification is that the projects offered must be additional and labour-intensive and not reduce the existing employment opportunities of spraying contractors or staff levels of authorities.

*Noxious plants authorities*

### **1.7.6. Pest Control**

The income of pest destruction boards charged with the control of rabbits, opossums, and other similar pests on rateable land from rates levied on farmers is subsidised dollar for dollar by Government. In addition, district grant payments may be made where the land will not stand sufficient rates to allow adequate control of pests from finance available through rates and subsidy. The subsidy and grants system is however being reviewed by the Government and a revised method of funding pest boards may take effect from 1 April 1981.

*Local authorities: Ministry of Agriculture and Fisheries*

## **1.8 ADVERSE-EVENTS RELIEF**

### **1.8.1 Adverse Events - Taxation Relief**

Taxation relief is available to a farmer who is forced to sell livestock because of an 'adverse event' such as a fire, flood, disease, or drought. Provided certain conditions are met, the excess of the sale price over the standard or 'nil' values used by the farmer is not included in his assessable income until the year in which replacement livestock is bought.

The local branch of Federated Farmers should submit a request to the district MAF office for reference to the Commissioner of Inland Revenue.

*Ministry of Agriculture and Fisheries*

### **1.8.2 Adverse Climatic Events-Emergency Services**

Helicopters, fixed-wing aircraft, and specially equipped ground machinery may be used in certain emergencies for inspection and relief work. Wherever practicable, equipment owned by commercial organisations is used; but if no suitable equipment is available, Ministry of Defence resources can be employed. Farmers must agree in advance to meet half the transit cost of moving the aircraft or the equipment and the personnel to the headquarters established for the emergency operation, and also half the cost of operations on their own properties.

*Ministry of Agriculture & Fisheries and  
Ministry of Defence*

### **1.8.3 Adverse Climatic Events - Loans**

Loans are granted to farmers in Government-designated disaster areas who suffer hardship as a result of severe climatic conditions

such as droughts, hail and snowstorms, and flooding. If an early recovery appears likely, a loan is granted, regardless of the normal security margins.

The terms and conditions vary, according to the degree of hardship; both principal and interest may be deferred for 2 years. In cases of severe hardship, interest of up to \$1200 a year for the first 2 years may be converted to a suspensory loan. Loans may be used for all forms of farm expenditure, including purchase of feed, cartage, sprays, living expenses, and so on.

*Rural Banking and Finance Corporation.*

#### **1.8.4. Adverse Events-Temporary Employment**

There is provision under the Temporary Employment Programme for registered unemployed persons to be made available to local authorities or the Ministry of Agriculture and Fisheries to undertake labour-intensive relief work on farms following floods, droughts or other emergency situations brought about by climatic events.

This assistance is generally organised through committees established following declaration of a disaster area by the Ministry of Agriculture and Fisheries.

The Department of Labour will reimburse the employing authority for the cost of wages and some of the overheads for the workers employed through the Department of Labour on approved projects.

*Department of Labour: Ministry of Agriculture and Fisheries*

### **1.9 EDUCATION**

#### **1.9.1 School Boarding Bursary**

School boarding bursaries are granted to pupils, either primary or secondary, who are obliged to live away from home in order to receive their education.

Eligibility is determined by the distance to the nearest state school or school transport service; for children up to 10 years of age, the distance is 3.2 kilometres, and for those 10 years and over, 4.8 kilometres. Bursaries may also be awarded to children suffering from specific disabilities, who are boarding away from home to receive special education that is not available at their local school. There is no specified period of tenure of the bursary, and there is no limit on the number of bursaries awarded annually.

The school boarding bursary is at the rate of \$700 per annum per eligible child.

Additional assistance is also available in the form of payment towards travel to and from boarding school at the beginning and end of each school term for children who live in very remote areas. Parents will be reimbursed for travel costs in excess of \$10 per return trip for pupils eligible for school boarding bursaries, who are travelling between their home and the nearest suitable boarding school.

Boarding assistance is also available for secondary students to pursue specified academic and technical courses where these are unavailable locally, and for study at the sixth and seventh-form levels where the education that is available locally does not include accrediting of the University Entrance qualification. Where a pupil eligible for these bursaries resides within reasonable travelling distance of a school offering the required course, transport assistance in lieu of a course bursary may be available.

Maori and Polynesian pupils for whom no secondary school facilities are available within daily reach of home or for whom a complete secondary school course is not available locally, may qualify for a Maori and Polynesian Secondary School Scholarship at the rate of \$850 per annum.

*Department of Education*

### **1.9.2 School Transport Assistance**

School pupils under 10 years of age who live more than 3.2 kilometres and pupils 10 years and over who live more than 4.8km from the nearest state school or private school of their denomination, may be eligible for school transport assistance.

Eligible pupils are required to make their own way up to 1.6 kilometres to a bus stop. Thereafter transport assistance is provided.

Transport assistance may also be given to children with serious locomotive difficulties attending ordinary classes at primary or secondary schools and children enrolled at special schools, classes or clinics. Pre-school children attending pre-school groups attached to primary schools, or special classes at pre-school centres may also qualify in certain circumstances, and limited assistance is given for children attending playcentres and kindergartens.

Use is made of public passenger services wherever possible.

Where it is justified, an education board will arrange a special school bus service by way of a contract with a local bus

operator, the NZR Road Services, or a bus owned by the Department of Education. However, in some cases a private transport allowance is paid on the use of private cars to convey children to school or to connect with a passenger-transport service.

*Department of Education*

### **1.9.3 Correspondence School**

Pupils who cannot attend a school daily may be enrolled with the Correspondence School. All materials required are supplied, e.g. art supplies for primary school children, text books for secondary school pupils.

Travel costs incurred by pupils travelling to "school days" are met by the Correspondence School.

Any enquiries regarding assistance to school pupils living in rural areas should be made to the local education board.

*Department of Education*

### **1.9.4 Farm Training**

The Flock House and Telford Farm Training Institutes offer courses related to the Trades Certification Board examinations in farming and the Government Land Settlement Scheme.

Applicants attending either course for the first time are required to pay travel costs one way. Government reimburses course members for surface fares one way, and also provides free accommodation, meals, and tuition. A subsistence allowance is paid to married men who attend land-settlement courses.

*Ministry of Agriculture and Fisheries.*

### **1.9.5 Private-School Fees**

Refer to Taxation Section.

### **1.9.6. Farm Cadet Scheme**

The farm cadet scheme provides assistance to employers of farm cadets by way of a subsidy of 60% of basic or award wages in the first year, 50% in the second year, and 40% in the third year, in respect of a maximum of 7 weeks' training in the first year, 4 weeks in the second year and 4 weeks in the third year. This wage subsidy is available instead of, but not in addition to, assistance under the Additional Apprentice Incentive Scheme

in respect of any one cadet in the same year. The scheme is administered by Federated Farmers.

#### **Primary Industry Cadet Induction Training Incentive.**

This incentive is applicable to new cadets attending basic skills training courses prior to their first job placement. Under this scheme 50% of accommodation, food, tuition and public transport costs are paid.

*Ministry of Agriculture and Fisheries.*

### **1.9.7 Assistance for Training**

In order to promote the training or retraining of persons who have no work skills or whose skills are now outmoded or otherwise in need of updating, several packages are available:

#### **Retraining In Employment**

Organisations with 'hard to fill' vacancies for skilled workers who agree to retrain an involuntarily displaced worker for that vacancy, and offer the retrainee full-time permanent employment (the trainee must be selected from those referred by the Department of Labour) will be eligible for a wage subsidy of \$75 per week. This subsidy is available for a maximum of 6 months (though 6-10 weeks should usually be sufficient).

#### **Young Persons Training Programme**

Assistance is available for training programmes where:

- Emphasis is given to the training of young persons who are not equipped with any work skills which make them readily employable.
- Training is given in a field which will provide the trainees with reasonable job prospects on completion of the course.
- The training places created are additional to the applicants normal training programme.

Under the work-based section of the Programme employers are asked to provide training places for young person, either individually or in small groups, in the following categories -

#### **Job Exploration**

Some young people enrolled with the Department of Labour have little or not idea of the work opportunities available in various enterprises. The training offered:

- Should introduce the trainees to the basic skills involved in the enterprise's activities.
- Will be for a maximum of 3 weeks



- May be in agriculture, commerce, fishing, horticulture or any other industry.

#### Work-based operator training

Where full-time instructor/supervisors are, provided a reimbursement of costs is available to firms or organisations at rates from \$24 to \$32 per trainee per week, for a maximum of 20 weeks (though 6-10 weeks should usually be sufficient). The training provided must be tailored to the needs of the trainees. Under these two schemes the trainees will be paid a training allowance by the Department of Labour.

#### Training-in-employment

As an alternative to work-based operator training, employers may elect to train young persons in employment. Employers who agree to pay full wages to trainees will receive a wage of \$75 per week per trainee, for a maximum of 20 weeks (though 6-10 weeks should usually be sufficient).

*Department of labour.*

## 1.10 STABILISATION

### 1.10.1 Dairy Industry Stabilisation

At the beginning of each season, basic farm gate prices are set for milk-fat and for SNF ('solids-not-fat'). These prices must not be more than 10% up or 5% down on the previous season's basic prices.

At the end of the season, if either or both of the Milkfat Trading Account and the SNF Trading Account indicates a surplus, the Dairy Board may distribute a percentage of this to suppliers, the balance being credited into a reserve account. In the event of the board incurring a loss in milkfat and/or SNF products, it will be granted overdraft facilities at 1% per annum by the Reserve Bank of New Zealand if the loss exceeds the accumulated reserves in the relevant account.

*New Zealand Dairy Board.*

### 1.10.2 Supplementary Minimum Prices for Milkfat

In addition to the stabilisation procedures operated by the dairy industry, the Government has established, and will underwrite a farm gate supplementary minimum price for the 1980/81 season of 230c/kg of milkfat in wholemilk. A similar price will also be set for the subsequent season at a level not less than that set for 1980/81.

For the current season, a supplementary payment will be made by the Government to the Dairy Board to bring the Board's total payout up to 230c/kg if the combined basic price plus 50% of the 1980/81 individual trading surplus of milkfat and SNF are less than 230 ¢/kg. Regardless of the actual percentage payout by the Government will be based on an assumed payout of 50%.

The 230 c/kg refers to the farmgate prices as paid by the Dairy Board to dairy companies. Company payments to suppliers will fluctuate around the 230 c/kg for a number of reasons including the product mix, manufacturing cost levels, and decisions regarding the degree of capital formation to be undertaken.

*Ministry of Agriculture and Fisheries*

### 1.10.3 Meat-Income Stabilisation Scheme

A Meat Export Prices Committee establishes minimum and trigger schedule prices for benchmark grades of export meat-lamb, mutton, manufacturing beef, and prime beef - before the start of each meat year.

If the lowest regional exporters' schedule price for any benchmark grade is below the minimum level, the board must also establish minimum prices for other grades of that type of meat. It must then ensure that producers receive no less than the minimum prices by making supplementary payments from the Meat Income Stabilisation Account held at the Reserve Bank of New Zealand; purchasing the meat itself; or doing both.

When the schedule price of a benchmark grade exceeds its trigger price, a levy is imposed at a rate equivalent to 50% of the excess expressed as a percentage of that schedule price. This percentage levy is also applied to the schedule prices of all grades of that type of meat and deductions made from producers' returns accordingly. The levies are paid into the Meat Income Stabilisation Account and credited as appropriate to the sheepmeats and beef sub-accounts of that account. When funds in the account are exhausted, advances can be made from the Reserve Bank at an interest rate charge of 1% per annum. Credit balances in the account earn interest at a rate of 1% per annum.

*New Zealand Meat Producers Board.*

#### 1.10.4 Supplementary Minimum Prices for Meat

The Supplementary Minimum Prices Scheme was originally introduced for the 1978-79 and 1979-80 meat seasons but was extended to include 1980-81. The Government will continue to underwrite meat export schedule prices to producers, supplementing those set under the meat-income stabilisation arrangements. The supplementary minimum prices (SMPs) are related to the benchmark grades of meat used for the meat-income stabilisation arrangements administered by the Meat Producers Board. These prices for the 1980-81 season are:

	c/kg (at schedule)
Lamb	110
Mutton	43
Manufacturing beef	105
Prime beef	120

The Supplementary Minimum Prices Scheme for meat applies only to export carcass meat from sheep and cattle, excluding bobby calves. If the lowest regional meat exporters' schedule price for any benchmark grade of meat, including any supplement paid by the Meat Producers Board under its meat-income stabilisation arrangements, is below the SMP for that grade, the board will establish SMPs for other grades of that type of meat. The board will then supplement producer prices up to the SMP levels by making supplementary payments from the Government-financed Supplementary Minimum Meat Prices Account maintained by the board at the Reserve Bank.

*Ministry of Agriculture and Fisheries: Meat Producers Board*

#### 1.10.5 Wool-income Stabilisation Arrangements

Under its Minimum Prices Scheme the Wool Board sets a table of minimum prices for all types of shorn wool and dead wool produced in New Zealand. Other than in exceptional circumstances, only one table of minimum prices shall be set in any one season, with movements in the target average of the table limited to a decrease of 5% and an increase of 10% on that of the previous season. The average of the table of minimum wool prices for 1980-81 in 215 c/kg (greasy).

When the sale price of any wool falls below its appraised minimum price, the board will supplement that price up to its minimum level through a supplementary payment made from the Minimum Wool Prices Funding Account held at the

Reserve Bank of New Zealand. The board may also provide minimum price support by purchasing the wool using its own funds and any borrowing for that purpose, or by a combination of both supplementation and purchasing. Should the funds in the account become exhausted, advances can be made from the Reserve Bank at an interest rate of 1% per annum.

The Minimum Price Funding Scheme provides for a minimum price funding levy (currently set at 1% to be imposed on all shorn wool and dead wool produced in New Zealand (i.e. on all wool other than dag wool, slipe wool, fellmongered wool, and wool on the skin). The levy is paid into the minimum Wool Prices Funding Account. Credit balances in the account earn interest at a rate of 1% per annum.

There is provision for the Wool Board to borrow from the funding account for wool trading purposes approved by the Minister of Agriculture. Interest at a rate of 1% per annum is payable to the credit of the account on such borrowings.

Under the Individual Grower Income Levy Retention Scheme when the average price of wool at auction exceeds the trigger price set at the beginning of that season, a further levy called the Grower Retention Levy is introduced on all shorn wool and dead wool. The rate of levy is equivalent to 50% of the amount by which the average price at that auction exceeds the trigger price (330 c/kg greasy for 1980-81) expressed as a percentage of that average price. The levy collected is paid into the Wool Income Retention Account at the Reserve Bank, held on behalf of the grower who paid it, and refunded to him under certain conditions.

*Wool Board*

#### 1.10.6 Supplementary Minimum Prices for Wool

The Supplementary Minimum Prices Scheme for Wool, introduced for the 1978-79 and 1979-80 wool selling seasons, has been extended for the 1980-81 and 1981-82 seasons. The Government will continue to underwrite wool prices to supplement those set under the wool-income stabilisation arrangements. The supplementary minimum price for wool for the 1980-81 season is based on an average price of 235 c/kg (greasy) at auction floor in New Zealand. A similar price will be set for 1981-82 at a level not less than 250 c/kg (greasy).

The Supplementary Minimum Prices Scheme for wool applies only to shorn wool and dead wool. The rate of supplement payable by the Government through the Wool Board is equivalent to the amount by which the 'average' price of such

wool at auction is below 235 c/kg, expressed as a percentage of that 'average' price, provided this percentage is 0.5% or greater. This rate of supplement is applied to the gross proceeds from the sale of qualifying wools and paid to growers through brokers or directly by the Wool Board as appropriate. The Board will make these supplementary payments from the Government financed Supplementary Minimum Wool Prices Account at the Reserve Bank of New Zealand.

The supplementary minimum price of 235 c/kg for 1980-81 is an average price. The guaranteed price to growers for any one lot of wool under the scheme will vary according to several factors including that wool's type and yield.

*Ministry of Agriculture and Fisheries  
and New Zealand Wool Board*

#### **1.10.7 1980/81 Dairy Beef Market Guarantee Scheme**

To encourage the retention of dairy beef calves, the 1980 November-December national average price for 'spring-born' dairy beef weaners is being guaranteed at a minimum of \$80 per head. If the average price of the dairy -beef weaners sold at auction during November and December is below \$80 per head, every eligible calf will attract a supplementary payment equal to the difference between the average price and \$80 irrespective of the weight or the sale price of the particular animal, and whether or not the animal is sold.

The scheme covers beef calves of dairy origin born between 1 June 1980 and 31 May 1981 on a dairy farm that has supplied more than 3000 kilograms of milkfat during November 1980 while those born between 1 November 1980 and 31 May 1981 are to be registered during June 1981.

The payments will be made to whoever owns the calves at midnight on 31st October 1980 with regard to the first registration period, and on 31 May 1981 with regard to the second period.

The claimant need not necessarily be a dairy farmer, but may have purchased calves to rear them.

*Ministry of Agriculture and Fisheries*

#### **1.10.8 Farm Income Equalisation**

Refer to Taxation Section.

## 1.11 TRANSPORT

Refer to Section 4.19 Motor Vehicle, Fuel, Licensing and Road user Charges.

## 1.12 FARM LABOUR

### 1.12.1 Farm-Employee Housing

To help alleviate the remoteness which confronts some farm workers and their families, finance is available to farmers to build or buy houses in nearby townships to accommodate their employees who prefer to live away from the farm. The farm worker and his family will in this way have better access to schooling and other social amenities. Generally, finance will be made available only to farmers engaged full-time on their own properties, who do not already have suitable accommodation on the farm for their employee. Normal terms and the existing conditions of lending will apply, and the proposed dwelling must be located within a workable distance from the farm.

*Rural Banking and Finance Corporation*

### 1.12.2. Farm Employment Scheme

This scheme is aimed at encouraging the creation of additional jobs in the farming sector and provides a wage subsidy for each person engaged through the Department of Labour. All farmers in New Zealand are eligible to participate in the scheme provided:

- only workers referred by the Department of Labour are engaged under the Farm Employment Scheme.
- prior approval to engage staff has been obtained.
- award wages must be paid.
- the vacancy must not have been created by the discharge directly or indirectly of another worker. The amount of the subsidy is \$50 per person per week for up to 6 months starting from the date the person is engaged. In addition, a bonus of \$500 is payable in respect of an employee engaged under the scheme who is employed continuously for 12 months.

*Department of Labour*

## **1.13 GENERAL**

### **1.13.1 Estate Duty**

The Rural Bank of New Zealand assists with loan finance to pay estate duty in cases of genuine need. The bank's normal lending criteria apply to such loans. Preference for the available finance is given where a beneficiary (such as a widow or a member of the family) intends to continue personally farming the property; and it has been established, to the satisfaction of the bank, that the loan is necessary for the retention of sufficient land to constitute an economic family holding.

*Rural Banking and Finance Corporation*

### **1.13.2 Exemption of Matrimonial Homes from Estate Duty**

When a matrimonial home which is also a farm homestead passes, on the death of a farmer, to the surviving spouse, the value of the home is exempt from estate duty. Because it is often not practicable for a farmer to leave the homestead to his wife, there is available an exemption of the wife's entitlement under the will or the value of the matrimonial home, whichever is the lesser. The exemption can be claimed even if the home is on land owned in partnership by the deceased farmer and his wife (or anyone else).

*Inland Revenue Department*

### **1.13.3 Estimation of Provisional Taxation**

Refer to Section on Taxation.

### **1.13.4 Industrial Lending**

The main categories of lending to agricultural industries at present are for

- the establishment of new types of industry and the expansion of existing industries which have potential export and/or regional-development prospects;

- the establishment of veterinary clinics or other activities where the project will service the rural sector; or
- the provision of packing sheds, cool stores, grain dryers, storage, wool-processing facilities, and suchlike.

*Rural Banking and Finance Corporation*

### **1.13.5 Rural-Export Suspensory Loan Scheme**

Suspensory loans are granted to producers and processors to promote the export of agricultural and horticultural products not previously exported, or of products with limited current exports, whose markets can be further developed or expanded.

Up to 40% of the qualifying expenditure may be lent for suitable projects. On the achievement of an export target, the loan is converted to a grant, which is treated as assessable income for income-tax purposes. That income may, however, be spread to include the 2 years following the year in which the loan is converted to a grant.

Additional finance, though not eligible for the grant, may be provided under normal industrial or farm-development lending policies.

For tax purposes the amounts written off will be regarded as assessable income but spread equally over the year of remission and next 2 succeeding years.

*Rural Banking and Finance Corporation*

### **1.13.6 Suspension of Government Inspection Fees**

In order to relieve farmers from the payment of various Government service charges associated with the meat, dairy, seed and other industries, the Government has until further notice, suspended the payment of these charges.

The full list of cancelled inspection fees is:

- Meat
- Farm Dairy Instruction Levy\*
- Dairy Produce Grading
- Seed Certification
- Game Inspection
- New Zealand-grown fruit and vegetables



Fish Inspection  
Plant material for export  
Honey

- \* Although termed “instruction” this includes inspection of dairy plant, equipment and buildings to ensure hygiene standards are maintained, as well as instruction on milking techniques, milk handling and storage, cleaning and efficiencies of milking.

*Ministry of Agriculture & Fisheries*

### 1.13.7 Agricultural Contractors Loans

Loan assistance is given to agricultural contractors who are engaged full-time in the business and who derive the bulk of their gross income from farm contracting. Loans, usually long-term, are granted for the purchase of land or buildings, or for the erection of buildings suitable as a base area of operations. Housing assistance is included.

Typical of the contractors helped so far are weed sprayers, well drillers, and harvesters. Special plant and machinery loans are also available.

*Rural Banking and Finance Corporation*

### 1.13.8 Electricity

Two types of assistance are available through the Rural Electrical Reticulation Council:

- *To Supply Authorities* – Where a supply has been requested by a consumer and it would be uneconomic for the supply authority to provide a supply, despite a guaranteed minimum-revenue from the consumer, the authority may apply to the council for a subsidy. Such a subsidy, if approved by the council is based on the annual running cost of the line and is payable for a period of 10 years, extendable (on application) to a maximum of 20 years.

No subsidy is available on short extensions, that is under 1 kilometre, or where the annual subsidy is estimated to be under \$200. Full details regarding eligibility for any subsidy can be obtained from your local Power Board.

- *On Generating Plants* – For areas too remote for connection to the public supply, a subsidy can be claimed on a private generating plant:

*Diesel plants* – an annual sum which if invested at 5½% per annum, will recover the full capital cost of the plant, plus installation costs, in 7 years.

*Hydro plants* – an annual payment of 5% on the total capital cost of the plant for a period of 10 years.

No assistance is available towards the initial financing of the plant, and both the fuel (if applicable) and maintenance costs are the responsibility of the owner. A condition is that the applicant must obtain the council's approval to a subsidy before arranging to purchase the plant.

*Ministry of Energy*

### **1.13.9 Electricity - South Island Concession**

This scheme provides for a 25% electricity rebate to manufacturing industry, some tourist accommodation facilities, and a few electricity intensive agricultural operations in the South Island. Examples of qualifying farm activities are environmentally controlled horticulture, broiler production and irrigation. Full details of the assistance available can be obtained from any South Island electrical supply authority or offices of the Ministry of Agriculture and Fisheries and the Department of Trade and Industry in Christchurch or Dunedin. Formal application has to be made for this concession.

*Department of Trade and Industry  
Ministry of Agriculture and Fisheries*

### **1.13.10 Safety Frames on Tractors**

Refer to Taxation Section.

### **1.13.11 Intensification of Land Use on Small Holdings**

The Rural Bank's development policy has been extended to enable development loans to be made available to those owners of small holdings wishing to undertake worthwhile productive development, particularly where there is emphasis on export-orientated horticultural production.

Eligible development expenditure will, in general, be confined to improvements of a permanent and productive nature such as drainage, clearing, fencing, grassing, plantings, water supply, irrigation, essential farm buildings for protecting plant or packing facilities. Apart from bonafide farm workers, finance is not available for the initial purchase of land or for stock or the erection of a new house.

Applicants must provide land and meet immediate housing needs, be able to demonstrate their capability and expertise to competently manage the unit, and their total income from all sources must be clearly sufficient to service all commitments, after maintaining the property and meeting all living expenses.

The loan term will vary according to the type of development and ability of the proposition to repay, and will bear interest at 9%, but with a rebate of 7.5% for the first three years, generally available to bona-fide farm workers.

*Rural Banking and Finance Corporation*

### **1.13.12 Rural Landscape Protection**

Farmers, with areas of native bush, wetland, and other important landscape on their farms, which they would like to see preserved, can achieve this by an open space covenant.

An Open Space Covenant is an agreement between a private landowner (or leaseholder) and the QEII Trust. The owner voluntarily agrees, while still retaining title to the land, that it will be managed in the way set out in the Covenant. The agreement binds not only the existing owner, but any subsequent owners, as it is registered against the title to the land. It can be in perpetuity or for a fixed period of years.

Some advantages of the covenant scheme are:

- A covenant will ensure that the area of land is kept as the present landowner feels it should, even though ownership may change.
- The Trust can negotiate with the owner terms that may assist the owner maintain the land.
- If land is set aside for productive use, its valuation will be reviewed and this may affect the level of rates.
- The owner still retains title to the land.
- The owner becomes an automatic member of the Trust.

*Queen Elizabeth II National Trust*

## **SECTION 2**

### **FARM CAPITAL AND FINANCE**



## **2. FARM CAPITAL AND FINANCE**

### **2.1 CAPITAL**

#### **2.1.1 Land and Buildings**

Where a recent Government Valuation is available this is probably the best guide there is to the overall value of the property. If the Government Valuation is three or four years old then some adjustment of the figures may be necessary. This should be done in the light of the movement in land values since its release and include any major improvements made on the farm since the last Valuation.

For budget purposes this is split up between Land and Buildings. If varying grades of land are found on the property then the land value may be split up into several sections valued differently, the total of these summing to the overall Paddock Value. The Capital Value is usually also expressed as a figure per hectare of the farm, and per stock Unit carried on the farm, or per unit of production (e.g. per kg butterfat) for comparative purposes.

#### **2.1.2 Stock**

The numbers used in assessing capital tied up in stock should include only that stock which is considered basic to the running of the farm. Generally this will be the stock that is normally wintered (say on hand in July), and is usually the breeding stock plus replacements; although in a trading situation this will include that trading stock which could be replaced with breeding stock and replacements able to be carried on the farm under normal farming practice.

Value used per head should be clearing sale or ewe fair values interpreted on a reasonably conservative basis.

The overall carrying capacity in stock units can be determined from these stock numbers.

#### **2.1.3 Plant**

Valuations of plant should also be made on the basis of local clearing sales interpreted conservatively. The up-to-date price list for new equipment is very useful in assisting with these assessments.

## 2.1.4 Working Capital

This is a part of the necessary capital needed to run the property but is often forgotten by people when purchasing a property. On sheep farms and certain types of horticultural properties (e.g. tobacco) income is concentrated in one part of the year but expenses must be met throughout the year and money for this purpose must either be set aside or borrowed. On dairy properties incomes are fairly evenly spread and this difficulty is not met to the same extent.

There are two sources of working capital:

- Farmer's own cash.
- Borrowed money. In this case working capital is largely provided by stock firms and Banks. The amount of working capital needed for any one particular farm is a function of total expenditure and the time pattern of income.

With stock firm and bank advances interest is charged on the day to day balance of the account hence the average level of the advance is the working capital figure required for budget purposes. It should not be forgotten however that some farming enterprises reach a peak of advances at certain times of the year much greater than their average level. This may well present financial problems which are not immediately obvious when the average figure is assessed.

Working capital requirements are difficult to assess accurately. Each property and each farming type tend to have their own individual characteristics. The table below presents a rough guide only for student use. It is constructed by considering the working capital requirements as a percentage of the value of land, buildings, stock and plant.

It must be remembered that these percentages approximate the total fluctuation in working capital during the season, and do not necessarily represent the amount which must be borrowed. Neither do they represent the average requirement, but merely the maximum facility which must be available albeit only for a short time.

It must also be considered, that this type of calculation will relate the working capital requirement strongly to the value of land, which is not generally a factor in working capital at all. Therefore these percentages should be treated as guidelines only, and adjusted for the circumstances of:

- the individual farmer and his management system.
- the locality value of the land involved.

The percentage method should only be used where NO OTHER more accurate method (such as monthly cash flow computation) is practicable.

**Table 1 Working Capital Requirements of Various Farm Types**

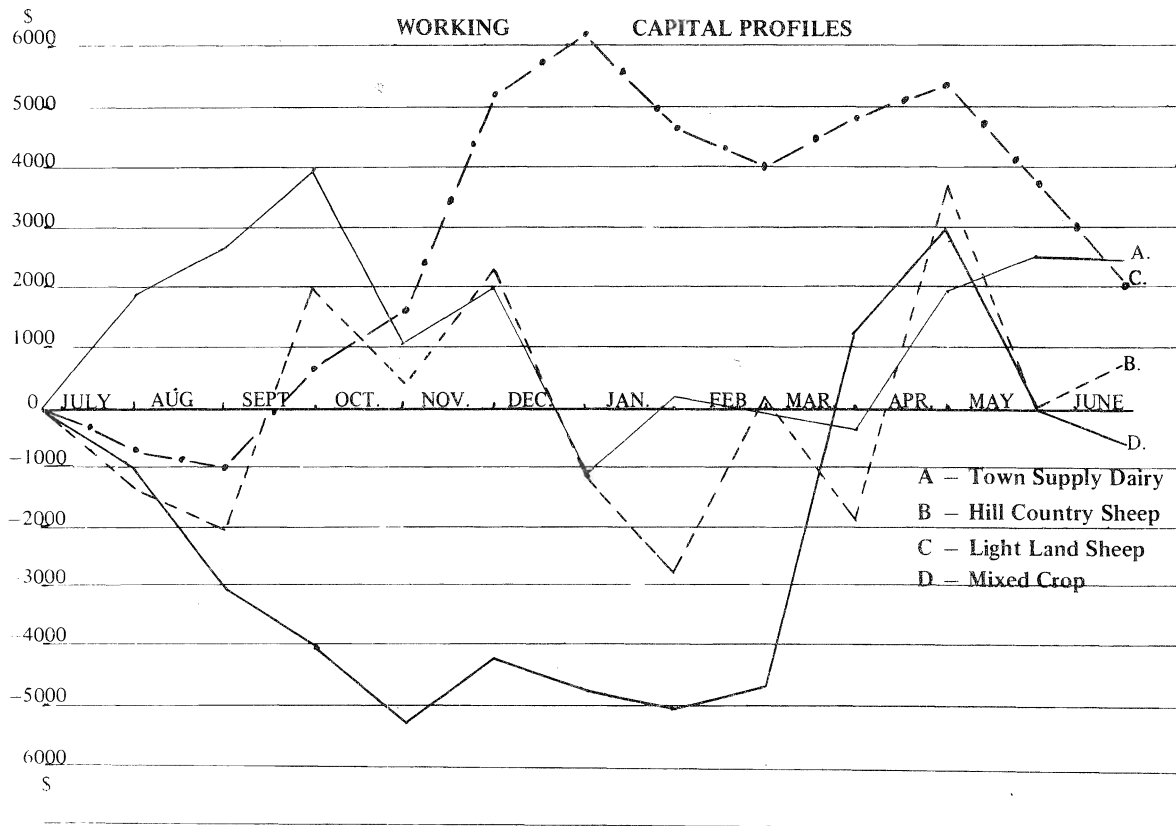
<b>Farm Type</b>	<b>Percentage of Value of Land, Building Stock and Plant</b>
Dairying (Intensive)	2%
Dairying and Mixed	2% – 4% depending on comparative size of dairy enterprise
Sheep and Cropping	3% – 5% depending on amount of crop and small seeds.
Sheep (Intensive Fat Lamb)	4% – 6%
Sheep (Hill Country Store)	5% – 6%
Poultry	5%
Market Gardening	5% – 10% depending on spread of sales
Orchard or Nursery	10% – 15% depending on spread of sales
Tobacco and Hops, etc.	10% – 15% depending on spread of sales

At the end of the set out of capital a summary is usually made showing the total capital involved in the farm. This figure is used later to assess efficiency and it is a very useful guide for later work on farm finance.

### **2.1.5 Working Capital Profile**

This is the term used to describe the way a farmer's net monthly balance of income and expenditure moves over the period of a year. It is important for students to realize that although two farms may have the same average working capital requirements the monthly patterns of these may be entirely different. Some examples of different working capital profiles are illustrated in the following graph.





## **2.2 SOURCES OF FINANCE**

(In alphabetical order)

### **2.2.1 Building Societies**

May lend to build a dwelling on a farm – policies and interest rates vary with the institution. Local example – rate 16%, term 10 years, first mortgage. There is a 50% lending margin and shares in the company must have been held for at least 3 years.

### **2.2.2 Dairy Companies**

Some Dairy companies lend to shareholding suppliers. Security: unsecured, lein on milk fat, or I.W.S. (Instrument by Way of Security).

Loans for seasonal finance or medium term (development stock).

Term: generally on demand, occasionally up to 3 years, interest rate about 12%.

### **2.2.3 Lands and Survey Department**

**Land and Settlement Board Finance**

Money is available for the development and settlement of Crown Land over and above stipulated deposit or cash contribution required to take over the farm, stock and plant.

For full details, refer to Section 1.2.4

**Marginal Lands Board Finance**

Government lender of last resort for properties that are not economic, but are potentially so. Concessional interest rates available. For full details, refer to Section 1.3.10

### **2.2.4 Life Insurance Companies**

Policies vary from company to company.

Two main forms of finance are –

Long term mortgage finance – generally up to 50% of valuation, 10–30 year table mortgage, 15%, mortgagor expected to have adequate life cover for the principal.

Loans against policies – 11%.

## 2.2.5 Rural Banking and Finance Corporation

**General Policy:** To consider any viable farming or fishing requirement subject to Corporation policy and availability of funds.

### **Specific Policies:**

#### **(i) Farm Settlement**

- |        |  |
|--------|--|
| Policy | - Refer to "Assistance and Incentives to Farmers", Section 1.2.1.  |
| Terms  | - Up to 25 year table first mortgage (and first I.W.S. over stock where necessary). Interest 9% rebated to 7½% for first 3 years, reviewed every 3 years.  |
| Amount | - Up to 2/3 security margin within the following guidelines.<br>Sheep and cattle farms \$95,000 to \$125,000.<br>Dairy farms \$70,000 to \$90,000.<br>Mixed cropping farms \$90,000-\$125,000.<br>Orchards, poultry, pig and other intensive enterprises \$35,000 to \$70,000. |

#### **(ii) Special Settlement Loans**

- |                  |   |
|------------------|---|
| Policy and terms | - Refer to "Assistance and Incentives to Farmers", Section 1.2.2. |
| Amount           | - Guideline \$150,000 plus current account.                       |

#### **(iii) Stock Loans**

- |        |  |
|--------|--|
| Policy | - To lessees, sharemilkers etc. Refer to "Assistance and Incentives to Farmers", Section 1.3.6.  |
| Terms  | - 5-7 year table loan secured by I.W.S. over stock (and plant where necessary). 60% security margin. Interest rate 9% rebated to 6% for first 3 years, and 7½% for second 3 years. |

#### **(iv) Development**

- |        |  |
|--------|--|
| Policy | - Medium to long term table mortgage lending to most development propositions. |
| Terms  | - Interest 9% rebated to 6% for first 3 years and 7½% for second 3 years.      |

(v) Development Encouragement

- Policy - 15 year loan for initial development of unimproved or reverted land.
- Terms - Interest 9% rebated to 6% for the first five years and 7½% for the next five years. However provided the development for which loan has been approved is carried out and maintained to the satisfaction of the Rural Bank, and ownership of property is retained, the mortgagor will not be required to pay any interest.
- Amount - Maximum of \$250 per hectare.

(vi) Refinance

- Policy - Hard core debt, and estate duty.
- Terms - Table mortgage at 11% usually medium term.

(vii) Industrial Lending

- Policy - Refer to "Assistance and Incentives to Farmers", Section 1.13.4.
- Guidelines - Up to \$500,000, 20 year table mortgage, 11% interest.

(viii) Fishing Loans

- Policy - Parallels to farming policy i.e. purchase, special fishing boat loans, refinance, re-conditioning, change of fishing method, with table mortgage loans up to ⅔ security value and the current interest rate charged is 8½% (or 9½% for the total loan if greater than \$250,000) p.a. and may be reviewed at intervals during the term of the loan.

(ix) Other

A wide range of other areas are covered. Information on these should be sought from the Rural Bank.

### 2.2.6 Solicitors and Trust Companies

- The Trustees Act defines where and to what extent these funds can be invested (e.g. first mortgage on land up to  $\frac{2}{3}$  of a registered valuers value) unless there are special provisions in the will of Trust investment which govern investment.
- Provide medium term debt finance (3 to 5 years) often renewable or at least able to be refinanced.
- Solicitors generally lend a flat mortgage, some trust companies may include repayment provisions.
- Generally lend up to 50% of valuation on first mortgage or on second mortgage with Rural Bank guarantee.
- Interest rate varies from 15% – 18%

### 2.2.7 Stock and Station Agencies

Have agreed to limit their lending to seasonal only 14½% for arranged finance, 15% - 18% for unarranged finance). Loan facilities are very much on a personal basis and often unsecured, but an increasing trend to take an I.W.S. or mortgage.

### 2.2.8 Trading Banks

Policy varies from Bank to Bank but primarily the Trading Banks are not suppliers of mortgage finance and prefer to concentrate in the field of Short term Seasonal and fully fluctuating working capital finance. There are, of course, exceptions, and when funds permit, the Savings Bank subsidiaries are able to offer longer term funds for land purchase. Dependent on circumstances surrounding each case, a Trading Bank term loan may also be available on extended terms - i.e. beyond basic 5 year stipulation.

The following avenues are generally available:

**Term Loans:** – Maximum Term 5 years Minimum 3 months  
– Current Minimum Rural Rates 14%-15%  
– Livestock, plant, land purchase

**Overdraft:** – Seasonal farm working expenditure  
– Fully fluctuating Working Capital expenditure  
– Renewed annually or as required.  
– Current Minimum rates 12.5% - 14.75%

**Savings Bank Loan:** – No specific ceiling  
(But dependent on funds)

- Rates 12% - 14%
- Term 15-20 years
- Land purchase

**Personal Loans:** – Maximum Term 5 years Minimum 6 months  
– Amounts : Minimum \$1,000 Maximum \$10,000.  
– Rates 17% - 18%  
– Home improvement, personal expenditure-cars, garages, pools, driveways etc.

**Lease Finance:** – Term - 5 years  
– Rates 14% - 17%  
– Minimum amount \$20,000

No capital outlay, ideal for heavy plant purchase opportunity to purchase at end of term, planning and budgeting easier).

**Commercial Bills:**– Minimum amount \$25,000

- Rates 14% - 15%
- Bridging situations where fixed term is envisaged.

Isolated rural application.

**Off Shore Loans:** – No specific ceiling. All negotiable as to term and rate. Only suitable for very large deals.

**Bridging Finance:** – 18% on First Mortgage

Generally used for in-between farm sale - purchase deals.

**Security:**

Generally in all avenues of finance Security will be sought by Bank. Examples are: Landed Mortgage (1st 2nd 3rd Freehold or Leasehold), Livestock/Chattels Mortgage, Mortgage Debenture (in case of Company) assignments over Life Policies, Scrip, Shares, Personal Guarantees.

**Financial Data**

Minimum requirements generally are:

Up-to-date Balance Sheet and Accounts (to include Farm Working Account and details of Livestock holdings), Cash Flow forecast and Budget, Personal Statement of Assets and Liabilities. All either self or professionally prepared.

**Some Other Considerations:**

Taken into account on all applications for finance:-

- Knowledge/Experience in farming
- Character and Capacity
- Age
- Past borrowing record
- Repayment Capacity

## 2.2.9 Trustee Savings Banks

Policy is not to earn profits for shareholders, but to provide community service under the control of local trustees. Farm lending policy varies with the institution, but one local example has as its policy:

- Loans up to 50% of valuation on first mortgage (no limit).
- Terms: 25 years reducing instalment mortgage.
- Interest: 15%

Under some circumstances it is possible to arrange short term finance at slightly higher interest rates, with refinance for a longer term at the lower rates if the client meets his commitments.

## 2.3 FEES AND COMMISSIONS

This section is designed to assist in the assessment of various Fees and Charges associated with the purchase and sale of land such as valuation, surveying, real estate and legal costs.

It also covers the costs or charges of various Institutes and Societies that offer services to the rural community, such as farm consultancies, rural valuers and farm accountants.

### 2.3.1 Accountancy Fees

See 'Administration', in the Farm Expenditure section.

### 2.3.2 Architectural Fees

- (i) **New House:** for a new house costing greater than \$16,000 the minimum scale is 6.6 percent of the capital cost of the building. This includes the full range of services from sketch plan through to supervision of any final alterations. For country work there is usually a travel disbursement usually on a 'flat rate'.
- (ii) **Alteration to Existing Buildings:** There is an additional fee of 2 percent of the capital cost added to the above.

### 2.3.3 Consultancy Charges

N.Z. Soc. of Farm Management Recommendation on Professional Charges.

- (i) Farm advisory services – Where professional services are based on regular consultations and visits to farm properties:

Maximum fee \$35.00 per hour

Minimum fee \$15.00 per hour

Actual time to be charged includes time on farm, preparing reports, and undertaking any special investigations.

- (ii) Consultations, Special Projects, Negotiations – undertaken in a professional capacity. Includes farm inspections, investigations, preparation of reports, where no instruction for regular visits have been received.

Maximum fee \$40.00 per hour

Minimum fee \$20.00 per hour

- (iii) Farm Supervision and Administration – Where consultants take responsibility for supervising management, labour, development, and authorisation of expenditure.

Maximum fee \$40.00 per hour

Minimum fee \$15.00 per hour

- (iv) Appearance in Courts – or before Land Valuation Committees, Special Tribunals, Arbitrations and Umpires Fees.

Maximum fee \$50.00 per hour with a minimum charge of \$100.00 for attendance.

Minimum fee \$25.00 per hour.

Travelling expenses as per Government rates.

Lincoln College operates a commercial Farm Advisory Service which provides a full consultancy, advisory, and rural valuation service to the public.

Over a number of years the Farm Advisory Service has built up a considerable number of contacts with Insurance Companies, Trustee Agencies, other lending organizations, solicitors and private individuals.

The service includes:

- (i) regular advisory services to farmers
- (ii) executive control and administration of properties
- (iii) advice and preparation of reports on specific matters
- (iv) valuations, reports and loan recommendations on rural properties.

The consultancy fees are based on an average of \$160 per day, and valuation charges are according to the N.Z.I.V. scale.

Enquiries should be addressed to: *The Officer in Charge,  
Farm Advisory Service,  
Lincoln College,  
Canterbury.*



The Lincoln College Council has established the Property Management Service as an independant body to encourage and assist the formation of sound farming agreements between land owners and qualified young people. The Service will supervise the fulfillment of the contracts and the preservation of the farming assets.

Land prices have increased rapidly in recent years. Increasing land values create a formidable barrier for potential farm owners to overcome. Despite the difficulties young people continue to enter the farming industry. The Property Management Service aims to facilitate and increase the rate of farm settlement.

A number of land owners have already formed successful agreements with suitable people throughout New Zealand. There are many more situations where agreements could be beneficial to land owners and young farmers alike.

## 2.3.4 Legal Fees

### Vendor and Purchaser

#### (i) Purchaser's Solicitor

- where the consideration does not exceed \$4400:  
\$71.00
- where the consideration exceeds \$4400 a charge of  
\$71.00 plus the following percentages of the balance:

	\$		\$	%
from	4 400	to	8 600	.83
over	8 600	to	34 000	.61
over	34 000	to	53 000	.51
over	53 000	to	69 000	.41
over	69 000	to	130 000	.30
over	130 000	to	270 000	.16
over	270 000	to	420 000	.12
over	420 000	to	900 000	.075
over	900 000	to	1200 000	.05

All fees to be rounded to the nearest dollar.

For any transaction where the consideration exceeds \$1 200 000 charges shall be assessed in accordance with Schedule I but with a maximum of \$1520.

#### (ii) Vendor's Solicitor

- where the consideration does not exceed \$4400: \$54.00.

- where the consideration exceeds \$4400 a charge of \$54.00 plus the following percentages of the balance:

	\$		\$	%
from	4 400	to	8 600	.52
over	8 600	to	34 000	.36
over	34 000	to	53 000	.31
over	53 000	to	69 000	.24
over	69 000	to	130 000	.18
over	130 000	to	270 000	.075
over	270 000	to	420 000	.055
over	420 000	to	900 000	.04
over	900 000	to	1 200 000	.03

All fees rounded to the nearest dollar.

For all transactions where the consideration exceeds \$1 200 000 charges shall be assessed in accordance with Schedule I but with a minimum of \$839.00.

- Where the same Solicitor acts for both Vendor and Purchaser, Vendor's Solicitor's and Purchaser's Solicitor's costs shall be charged to each client respectively.
- Where there are collateral transfers, costs in accordance with the scale shall be charged for each transfer, the consideration being apportioned as nearly as possible according to the respective values of the land transferred.

The following figures are examples of Fees worked out from the above scales.

N.B. The Purchaser's Solicitor's fees also apply to Mortgagee's Solicitor's fees.

Consideration	Purchaser's Solicitor's Fee	Vendor's Solicitor's Fee
\$	\$	\$
4 000	71.00	54.00
5 000	76.00	57.00
10 000	114.00	81.00
20 000	175.00	117.00
30 000	236.00	153.00
40 000	291.00	186.00
50 000	342.00	217.00
60 000	386.00	243.00
70 000	426.00	266.00
80 000	456.00	284.00

90 000	486.00	302.00
100 000	516.00	320.00
120 000	576.00	356.00
130 000	606.00	374.00
140 000	622.00	382.00
150 000	638.00	389.00
160 000	654.00	397.00
170 000	670.00	404.00
180 000	686.00	412.00
190 000	702.00	419.00
200 000	718.00	427.00
250 000	798.00	464.00
300 000	866.00	496.00
350 000	926.00	523.00
400 000	986.00	551.00
500 000	1070.00	594.00
600 000	1145.00	634.00
700 000	1220.00	674.00
800 000	1295.00	714.00
900 000	1370.00	754.00

And thereafter

at the rate / \$1000 of .50 .3

- (iii) Transfers and Assignments of Chattels (where included in the sale of a business), Goodwill, Mortgages, Profits A Prendre, Leases and Licences and all other Interests in Land.

The vendor's solicitors scale is to apply to all the transactions under this heading but does not apply to Unit Flats and the transfers and assignments of Choses in Action not otherwise specifically mentioned, chattels not included in the sale of a business and Ships, Patents and trademarks.

- (iv) Stamp Duty

This is charged at a flat rate of 1 percent of the purchase price of the property to the purchaser. For 'Stamp Duty Exemption on First Farms' see Section 1, 'Assistance and Incentives for Farmer's.

- (v) Formation of Farming Companies, Partnerships and Trusts.

The actual costs involved vary greatly depending on who is employed to do the formation and the complexity involved, since most company, partnership and Trust formations involve individual circumstances.

## Lessor and Lessee, and Bailor and Bailee

### (i) Simple Tenancy Agreements

Lessor's Solicitor:

- Where rent does not exceed \$12.00 per week: \$20.00
- Where rent does not exceed \$40.00 per week: \$28.00
- Where rent exceeds \$40.00 per week: \$42.00

Lessee's Solicitor:

60% of the scale costs allowed to Lessor's Solicitor.

### (ii) Memoranda of Lease, Deeds of Lease, Agreements to Lease and Bailments for any term not exceeding ten years, inclusive of any right of renewal.

Lessor's Solicitor:

- (a) Where the rent does not exceed \$1200 p.a. : \$59.00
- (b) Where the rent exceeds \$1200 p.a. : a charge of \$59.00 plus the following percentages:

	\$		\$	%
from	1 200	to	1 600	3.00
over	1 600	to	8 000	1.39
over	8 000	to	60 000	1.25

All fees to be rounded to the nearest dollar.

For any transaction where the annual rental exceeds \$600,000 charges for the whole transaction shall be assessed in accordance with above schedule but with a minimum of \$7 560.00.

Lessee's Solicitor:

60% of the scale costs allowed to the Lessor's Solicitor.

For terms exceeding ten years, or for those with a right of renewal which would make the total term greater than ten years, the Fees for both Lessor and Lessee's solicitors are as above plus 50%.

### (iii) Renewals of Leases and Agreements to Lease, and Bailments.

Lessor's or Bailor's Solicitor:

	\$
Rental not exceeding \$800 p.a.	28.00
Rental not exceeding \$1600 p.a.	42.00
Rental not exceeding \$2400 p.a.	56.00
Rental not exceeding \$4800 p.a.	84.00
Rental not exceeding \$7200 p.a.	112.00
Rent exceeding \$7200	140.00

Lessee's or Bailee's Solicitor

60% of the above.

(iv) Consents by Lessor or Mortgagee and Deeds of Covenant Required by Lessor or Mortgagee.

	\$
Consent	28.00
Deed of Covenant	28.00
Combined Fee for both of above	56.00
Lessee's or Mortgageor's Solicitor's Fee for perusal of the Deed of Covenant	14.00

(v) Commission on Collection of Rent

Commission on collection of current payments of rent — 5%. The charge covers collection and accounting to clients but not general administration or management.

## Mortgagor and Mortgagee

(i) Memoranda of Mortgage

Mortgagee's Solicitor:

In accordance with the scale shown for Purchaser's Solicitor (under Vendor and Purchaser – see table of examples given) treating the sum secured as the consideration.

e.g. Total purchase price \$100 000 of which \$40 000 is to be Mortgage. Purchaser pays \$516.00 on the total purchase price, plus \$291.00 on the Mortgage sum.

Mortgagor's Solicitor

One half of the Mortgagee's Solicitor's costs.

N.B. When the same Solicitor is acting for both Mortgagor and Mortgagee, the only fee chargeable to either or both parties shall be the appropriate scale fee as for Mortgagee's Solicitor.

(ii) Collateral Securities

For the principal mortgage full scale costs shall be charged.

For collateral securities

Mortgagee's Solicitor:

For first \$400 of consideration in each security	\$ 28.00
For every additional \$200 of part thereof	2.50
Maximum charge for each Collateral security	118.00

Mortgagor's Solicitor:

One half of the Mortgagee's Solicitor's costs.

The consideration upon which the forgoing fees shall be

calculated shall be the amount secured by the principal security or if the collateral security is a life policy the amount assured by the policy, whichever is the lesser.

But if the collateral security is a mortgage of a life policy or policies collateral to a Memorandum of Mortgage or other security where the collateral security can be taken on behalf of a Mortgagee on a settled printed form of security supplied by the Mortgagee without substantial re-drafting thereof:

**Mortgagee's Solicitor:**

Where the amount secured by the mortgage or assured by the policy or policies whichever is the lesser:

	\$		\$	\$
Up to	4 000			28.00
over	4 000	to	7 999	42.00
over	8 000	to	20 000	56.00
over	20 000			84.00

**Mortgagor's Solicitor:**

One half of the Mortgagee's Solicitor's Fees.

Where it is not clear which is the "principal security" the following rules shall apply:

The principal security is the security containing land of greatest value. If only one security is over land then such security is the principal security. If no securities are charged over land or an interest in land, the principal security is that of greatest value.

(iii) Variations of terms of Mortgages and other charges

**Mortgagee's Solicitor:**

On the amount secured in the original Mortgage or if any Variation of Mortgage has been registered, then on the amount of the principal sum shown due in the latest registered Variation altering such principal sum:

	\$		\$	\$
Up to	4 000	to		28.00
over	4 000	to	20 000	56.00
over	20 000			84.00

**Mortgagor's Solicitor:**

One half of the Mortgagee's Solicitor's fee with a minimum fee of \$28.00.

**Affidavit Renewing Registration of instrument:** For preparation, execution and filing: \$28.00.

In the case of an increase of the principal sum the costs in respect of the amount of the increase shall be the appropriate scale fees as for Mortgages.

(iv) Releases and Discharges of Mortgages and Other Charges.  
Mortgagee's Solicitor:

On the amount secured in the original mortgage or if any Variation of Mortgage has been registered then on the amount of the principal sum shown due in the latest registered Variation altering such principle sum:

	\$		\$		\$
Up to	4 000				22.00
over	4 000	to	20 000		34.00
over	20 000				44.00

Mortgagor's Solicitor:

Same as above.

If two or more mortgages are being discharged simultaneously by the same mortgagee then a release fee as above shall only be charged on one release only, and a fee of \$14.00 shall be charged of each of the other releases.

Partial Releases and Memoranda of Reduction:

The fee to be charged shall be as for the release of a Mortgage originally securing the sum by which the Mortgage debt is reduced, with a minimum of \$28.00.

The above shall not include the fees payable for production of documents.

(v) Commission on Collection of Mortgage Interest and Instalments.

Commission on collection of current payments of:

Interest on flat Mortgages ..... 5 percent

Instalments containing principal and interest, 5 percent on the interest (or estimated interest) content of the instalment plus a discretionary percentage up to 2½ percent on the principal, according to the relative amounts of principal and interest.

The foregoing charges are to cover collection and account to clients but no general administration or management, nor preparation of statements involving calculations of principal and interest under Mortgages.

## 2.3.5 Real Estate Charges

### (i) Sales:

- On the sale of all property, freehold or leasehold, and including farms, businesses and motels there shall be a charge on the consideration

Basic fee	\$100
On the first \$125,000	3.0 %
Thereafter	1.5 %

plus in the case of leasehold property, one half of the annual ground rental pertaining at the date of sale.

- Subdivisions. Where the agent advises the vendor from the commencement of planning for subdivision, generally assisting in all phases, subsequently selling the lots - 5 percent of the price of each lot sold.
- Farm Stock, Implements and Farm Chattels. On live and dead stock and farm chattels sold in conjunction with real property, either the subject of a separate valuation or included in the price as a going concern, on the purchase price 2.75 percent.

On live and dead stock and chattels sold by itself, on the purchase price 5 percent.

### (ii) Letting, Leasing and Assignment:

- Farm Properties. (Including assignment of lease), on the average annual rental 10 percent.

### (iii) Miscellaneous.

- Property Management. On receiving of rent and/or interest requiring receipting and accounting of such monies through the Trust Account, on all - money received 5 percent.

Acting under written authority or instruction where the agent supervises the property concerned including the receiving of rent/interest requiring the receipting and accounting of such monies through the Trust Account, on all monies received 7.5 percent.

Acting under written authority or instruction where the agent arranges and supervises repairs and renovations on a property on the cost of repairs and renovations 7.5 percent.

- Sharemilking Agreements. Where sharemilking contracts are arranged by members a charge of \$2.00 per cow will



be made with the cost being debited in equal shares to the farm owner and the sharemilker. These charges apply to both 39 percent and 50/50 types of agreements. Portion of this charge may be deleted where a stock transaction arises directly from the arrangement of a sharemilking contract.

- Auction Sales, Mortgagee, Sheriff sales etc. Where a property is offered under instructions from the mortgagee and is brought in at the mortgagee's estimate, or where a mortgagee holds a sale other than through the Supreme Court and fails to reach the reserve price, an offering fee shall be charged on the mortgagee's estimate or on the reserve price as the case may be 1% with a minimum charge of \$35.00. The fee where the mortgagee withdraws the property within 7 days prior to the sale shall be on the mortgagee's estimate of value or on the reserve price as the case may be 1%. Where the mortgagee withdraws the property prior to seven days before the auction then the above fee shall be ½% with a minimum fee of \$35.00. When the sale is not proceeded with, an inspection fee of \$35.00 shall be paid where the auctioneer provided a description of the property for advertising purposes. When the property is sold to the mortgagee at his estimate of value the offering fee of 1% shall be charged.

### 2.3.6 Surveyors Charges

Registered Surveyors are bound by a Scale of Charges which must be approved by the Minister of Lands before coming into operation.

The scale is complex but takes into account the area of land under survey, the length of lines measured, the number of pegs and reference marks placed or used, the number of easements shown on the plan etc. Travelling times, vehicle mileages, costs of cutting and clearing if necessary, and occupation of trig. stations if necessary are charged on a time basis. Redefinitions of boundaries as distinct from subdivisions are also generally carried out on a time basis.

Where a subdivision is proposed it is necessary to obtain the Local Authority approval and the Local Authority is required to seal the final survey plans. When the proposed subdivision creates more than 2 lots, the scheme plan of the proposed subdivision which is submitted to the Local Authority for approval, must be prepared by a Registered Surveyor and may

be required to show topographical features, buildings, ground heights and title information as well as the details of the subdivision. The charges for the preparation of the scheme plan are on a time basis.

Where a subdivision or other survey work is contemplated it is suggested that a Registered Surveyor or firm of Surveyors be approached and asked to give an estimate of the costs involved. They will be quite prepared to do this and can also advise on all aspects of the subdivision.

### 2.3.7 Valuation Charges

#### N.Z.I.V. Scale of Charges (As at November 1980)

##### (i) Fees for the Valuation of Freeholds:

Urban – Up to \$5,000	\$25.00
\$5,001 to \$100,000	\$25.00 for the first \$5,000 plus \$1.50 per \$1000 or part thereof thereafter.
\$100,001 to \$1,000,000	\$167.50 for the first \$100,000 plus \$1.25 per \$1,000 or part thereof thereafter.
Above \$1,000,000	\$1,292.50 for the first \$1,000,000 plus \$1.00 per \$1,000 or part thereof thereafter.
Rural – Up to \$5000	\$25.00
\$5,001 to \$100,000	\$25.00 for the first \$5000 plus \$1.75 per \$1000 or part thereof thereafter.
\$100,001 to \$1,000,000	\$191.25 for the first \$100,000 plus \$1.50 per \$1000 or part thereof thereafter.
Above \$1,000,000	\$1,541.25 for the first \$1,000,000 plus \$1.25 per \$1000 or part thereof thereafter.

(ii) Additional buildings – Where a property contains more than one building each of a value of at least \$10,000 an additional fee of \$10.00 may be charged for each additional building.

(iii) Block valuation of land – Where a member is required to value a block of land and subdivisional investigation is the basis of the valuation, the fee to be charged shall be as per (i) above, on the final block value plus \$1.00 per section.

(iv) Valuation of leaseholds – For valuation of leasehold properties where lessor or lessee interests require to be assessed, the charge shall be as per (i) above on the freehold capital value plus 10 percent to the nearest dollar.

(v) Consultations – Where members are engaged on consultancy or counselling work the fee shall be based on quantum meruit. Replacement insurance valuations and certificates – the fee for the initial valuation for the replacement insurance purposes shall be calculated at 66⅔% of the prescribed scale relating to the gross replacement of the building.

For annual certificates the fee shall be charged at the rate of:

\$1 million	15% of the scale in (i)
\$1 million to \$5 million	12½ percent
Over \$5 million	10 percent of scale

(vi) Daily rate – Where the prescribed scale fee provides an earning rate of less than \$80 per day or \$40 per half day, the rate of a member shall be in the range of \$18 to \$30 per hour depending on the skill and experience of the member. For work calling for a special degree of skill and responsibility the rate may exceed \$30.

(vii) Court attendances – Valuation fees will be first charged and in addition the member shall charge fees in the following range depending on the skill and experience of the valuer.

- Supreme court including the Administrative Division and Special Tribunals \$80 to \$120 for the first half day plus \$15 to \$30 per hour until released by his principal.
- Magistrates Court, Land Valuation Committees and other Tribunals \$15 to \$30 per hour for the first hour or part thereof, thereafter \$10 to \$20 per hour until released by his principal.

(viii) Assessors Fees – These are the same as ‘Court attendance fees’ (see (vii)).

(ix) Umpire’s Fees – Members agreeing to act as umpires may charge a retaining fee of \$5.00. Where a member is called to act as umpire the fee shall be based on quantum meruit.

**SECTION 3**  
**FARM REVENUE**



## 3.1 SHEEP

### 3.1.1 Export Meat Schedule.

Meat which is destined for export is graded by the New Zealand Meat Producers' Board. The various grades are paid for according to a schedule which is set every week during the killing season. Three main factors influence the prices offered:

- (i) Changes in meat prices due to supply and demand on overseas markets, especially Smithfield.
- (ii) Changes in prices for by-products, and
- (iii) Changes in killing charges.

The payout for ewes, lambs and wethers is based on a separate assessment for meat and another for pelt and wool payment (see Section 3.3). The basis for calculating future lamb schedules has been altered. Exporters derive the schedule price by deducting all known costs (on a per head basis initially) from the estimated selling price. The costs have to be converted from a per head basis to a per kilogram basis. Previously, the costs were divided by an average weight for all lambs, but a new formula uses the average weight for each particular grade. This method reflects the true processing costs of various grades and weight ranges, but does not reflect market differentials in the schedule.

Below is a copy of an export schedule as set by the N.Z. Meat Producers' Board.

#### MEAT EXPORTERS' SCHEDULE PRICES TO PRODUCERS

##### Sheep and Lamb

The following export schedule prices will operate for the week commencing Monday 8 December, 1980.

##### Lambs:

PL	8.0 - 12.5kg	100.0c/kg	OL	8.0 - 12.5kg	104.0c/kg
PM	13.0 - 16.0kg	113.0	OM	13.0 - 16.0kg	103.0
PX	16.5 - 19.5kg	100.0	A	8.0 - 12.5kg	75.0
PH	16.5 - 19.5kg	94.0	F	8.0 - 25.5kg	45.0
PHH	20.0 - 25.5kg	90.0			
YL	8.0 - 12.5kg	106.0			
YM	13.0 - 16.0kg	111.0			
			Cutter 1L	Under 12.5kg	50.0c/kg
			1M	12.5kg & over	60.0
			Cutter 2	All weights	45.0
			M	All weights	10.0

### **Mutton:**

ML1	Under 22.0kg	56.0c/kg	MX	Under 26.0kg	52.0c/kg
ML2	22.5 - 26.0kg	62.0	MM	All weights	41.0
			MF	All weights	12.0
MH1	26.5 - 30.kg	63.0	MP1	Under 26.0kg	3.0
MH2	30.5 - 36.0kg	20.0	MP	Allweights	3.0

### **Hoggets:**

HL	Under 22.0kg
HM	22.5 - 26.0kg
HX	Under 22.0kg

### **Rams:**

All weights	3 ¢/kg
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Buffer Account Deduction Percentage: NIL

Federated Farmers' Levy of 0.5 cents/head is to be shown as a deduction on each weight note.

## **3.1.2 Local Meat Prices:**

There is a large amount of meat sold on the hoof from farms to wholesale buyers, but the weekly sales at Addington and Burnside still set the market in the South Island, as do sales at Stortford Lodge and Papakura in the North Island. The current situation can be determined from the weekly stock reports in the newspapers. The prices at the Addington sales on Tuesday 9th and Wednesday 10th December are shown below.

### **Prime Lambs:**

Light lambs -	\$14.10 to \$16.00
Medium lambs -	\$16.40 to \$17.80
Heavy lambs -	\$18.00 to \$19.60
	(one sale at \$20.00)

### **Store Lambs:**

Romney and Romney cross wethers -	\$11.20 - \$14.50
Romney/Romney x ewes -	\$9.60 - \$15.60
Corriedale and Halfbred wethers -	\$10.40 - \$13.10 (some to \$14.90)
Border Leicester - Corriedale cross ewes -	\$19.60 - \$20.00
Remainder of fine-woolled ewes -	\$11.00 - \$15.00

### **Prime Sheep:**

Heavy hoggets -	\$16.10 to \$18.40
	(some to \$24.60)
Medium hoggets -	\$14.90 to \$16.00
Best 2th wethers -	\$18.00 to \$19.10
Best old ewes -	\$13.50 to \$14.40
	(some to \$16.90)
Medium old ewes -	\$12.00 to \$13.30

### **Store Ewes:**

Border Leicester - Romney corss -	to \$26.20
Corriedale 2th -	to \$25.00
Borderdale 2th -	to \$28.70
Other 2ths -	to \$20.00
Older ewes -	to \$16.00

## **3.1.3 London Wholesale Prices**

The following are prices for New Zealand lambs sold to retailers "ex-hooks" on the Smithfield Market in London during the week ending 28th November 1980.

Description	Weight Range (kilograms)	New Zealand cents per kilogram
PL	8.0 - 12.5	263.7
PM	13.0 - 16.0	236.6
PX	16.5 - 19.5	206.9
PH	16.5 - 19.5	198.5
PHH	20.0 - 25.5	190.6
YL	8.0 - 12.5	248.8
YM	13.0 - 16.0	235.3

### 3.1.4 Store and Breeding Stock Prices

Store stock prices reflected higher prices for wool, lamb and more significantly the record beef prices on the United States market, as well as the good autumn pasture growth.

District	1980 Autumn Ewe Prices by District, Good and Medium Grades.					
	2th Ewes		4 year ewes		5 year ewes	
	Good	Medium	Good	Medium	Good	Medium
Auckland (Jan)	36.00	30.00	27.00	22.00	26.00	22.00
Te Kuiti (Jan)	30.00	24.00	27.00	22.00	24.00	20.00
Hawke's Bay (Jan)	38.00	30.00	25.00	22.00	28.00	20.00
Canterbury (Feb)	28.00	22.00	22.00	18.50	20.00	16.00
Dunedin (Feb)	31.00	25.00	24.00	21.00	20.00	17.00
Invercargill (Feb)	36.00	30.00	29.00	24.00	25.00	20.00

Source: "Annual Review of the Sheep and Beef Industry, 1979/1980", New Zealand Meat and Wool Boards' Economic Service.

The prices for stock can vary quite a lot during a season. The table below has been drawn up to allow the reader to amend the prices for the different classes of sheep as the season progresses. If all sales reports published in the newspapers are noted, any marked changes will become apparent.

#### Class of Stock

2 tooth ewes	Fine wool	Good Average Small
	Medium wool	Good Average Small
	Strong wool	Good Average Small



4 year old ewes	Fine wool	Good Average Small
	Medium wool	Good Average Small
	Strong wool	Good Average Small
5 year old ewes	Fine wool	Good Average Small
	Medium	Good Average Small
	Strong wool	Good Average Small
Aged works ewes		
Ewe hoggets	Fine wool	Good Average Small
	Medium wool	Good Average Small
	Strong wool	Good Average Small
Store lambs	Fine wool	Good Average Small
	Medium wool	Good Average Small
	Strong wool	Good Average Small

## Rams

The following figures are the approximate values for flock rams.

Southdown	\$40 - \$60
Dorset Down	\$60 - \$100
South Dorset Down	\$60 - \$100
Hampshire	\$60 - \$110
South Suffolk	\$60 - \$80
Suffolk	\$60 - \$80
Romney	\$60 - \$100
Corriedale	\$80 - \$120
Perendale	\$90 - \$120
Border Leicester	\$80 - \$130
Borderdale	\$80 - \$100
Coopworth	\$80 - \$140

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

The values of stock sold through Addington in late January are given in Section 3.1.2. These can be used as a starting point for the completion of the above table.

### 3.1.5 Minimum Price Schemes

The Meat Export Prices Committee has set the following minimum and trigger prices for benchmark grades for the 1980/81 season commencing on October 1, 1980.

The prices were set as follows, with those for 1979/1980 in parentheses:

Benchmark grades	Minimum Price	Trigger Price (cents/kg)
Lamb – PM (13.0 - 16.0 kg)	133 (86.0)	155 (120.0)
Mutton – ML (22.0 kg & under)	40 (35.0)	60 (50.0)
Beef – Cow M (145.5 - 170 kg)	103 (100.0)	150 (140.0)
– Bull (220.5 - 245 kg)	120 (110.0)	175 (160.0)
– Steer PL (245.5 - 270 kg)	120 (112.0)	170 (158.0)

The Board's scheme will continue to be administered as it has in the past. If the schedule price for the benchmark grade exceeds

the trigger, levies will be applied at the rate of 50 per cent of the difference between the schedule price and the trigger price for all grades of that meat. The funds derived from these levies, if any, will be deposited in the Meat Income Stabilisation Account at the Reserve Bank.

If the schedule price for the benchmark grade falls below the minimum, the Board has the option of paying supplements up to the minimum price or taking over the product at the minimum price and marketing it on its own behalf.

In addition to the price smoothing scheme, the Board acts as administrating agent of the Government's Supplementary Minimum Prices Scheme. This scheme applies only to export carcass meat from sheep and cattle, excluding bobby calves. The minimum prices relate to the same benchmark grades as listed above and are as follows (last season's prices in parentheses):

#### **Supplementary Minimum Price**

	(cents/kg)
Lamb – PM (13.0-16.0kg)	( 86)
Mutton – ML (22kg & over)	( 40)
Prime Beef – PL Steer (220.5-270kg)	(110)
Manufacturing Beef – M Cow (140 kg & over)	(100)

The Supplementary Minimum Prices Scheme will be run alongside the Board's scheme with similar administration, but separate identification and accounting procedures.

In the possible event of the schedule price for a benchmark grade falling below the supplementary minimum price, the Board will determine the supplementary minimum price for all the other relevant non-benchmark grades of meat and instruct exporting companies to pay those prices to producers. Therefore the prices received by farmers for benchmark grades in the announced schedule will never be below the announced S.M.P. The supplementary minimum prices for other grades and in differing regions of the country could be either above or below that for the benchmark grade. For the purposes of this operation, as well as with the Board's price smoothing scheme, the benchmark price will relate to the lowest-priced region.

Stock sold on an owner account or company pool basis will receive supplements equal to the difference between the exporters' schedule and the supplementary minimum prices, which will be payable in the week in which the stock are slaughtered.

If the S.M.P. scheme is operative, the Board, acting as the Government agent, will arrange for supplementation only. It does not have the option of purchase and marketing, but this possibility will continue to be available under its own scheme.

### **Payments procedure**

Payments of the supplementary minimum prices to producers, if required, will be made by the exporting companies as denoted on the individual killing sheets. Companies will be reimbursed by the board, as the Government's agent, using funds drawn from the "Supplementary Minimum Meat Prices (S.M.M.P.) Account", established at the Reserve Bank.

The operation of the two schemes (i.e. price smoothing and S.M.P.) may result in some combined actions:

(i) Where the Government's Supplementary Minimum Prices (S.M.P.) are above the price smoothing minimum prices:

- (a) If the schedule for a benchmark grade falls below both the S.M.P. and the price smoothing minimum, the producer would receive the relevant S.M.P.

The Board may choose to intervene and purchase at its minimum price in which case producers would still receive the S.M.P. and companies would be reimbursed with a Government supplement of the difference between the Board's buying-in price and the S.M.P.

- (b) If the schedule is above the price smoothing minimum but below the S.M.P., then the S.M.P. would be payable to producers, and companies would receive the Government supplement for the difference.

- (c) If the schedule is above the S.M.P., then producers will receive these schedule prices in the normal manner.

(ii) Where the price smoothing minimum prices are set above the S.M.P.:

- (a) If the schedule price for a benchmark grade is lower than both minimum prices, then producers would receive the price smoothing minimum price. In this instance, however, the Board would have the option of intervening and purchasing at the relevant minimum prices.

- (b) A similar procedure to (a) above would follow if the schedule fell between the S.M.P. and the higher price smoothing minimum price.

- (c) If the schedule is above the price smoothing minimum, producers will receive these schedule prices in the usual way.

In either case, where the schedule for the benchmark grade is above the price smoothing trigger price, producers' returns will be levied at the rate of 50 per cent of the difference between the schedule and the trigger price.

Note: The sources for section 3.1.5 were "The New Zealand Meat Producer", Vol. 7., No.1 Oct. 1978 and Vol. 7., No.10 Sept. 1979 published by the New Zealand Meat Producers Board.

### **3.1.6 Milking Ewe Production**

Milking ewes for dairy production has been undertaken in several parts of New Zealand over the last couple of years. However, although the potential for this enterprise is large, the prices offered for sheep milkfat bear no apparent relation to a competitive world fetta cheese price. At present New Zealand fetta cheese is selling between \$3500 and \$4100 per tonne.

The system of payment for sheep milkfat is similar to that of cow milkfat, but at present there is no set price.

There have been several setbacks for Canterbury sheep dairy farmers, including the closure of the Barry's Bay dairy factory which specialized in the manufacture of fetta cheese. As with many of New Zealand's exports or potentially exportable commodities, there needs to be more "in depth" market research done to ascertain the possible level of success of a New Zealand product. This must be done before the production of a commodity is begun in an enthusiastic manner.

## 3.2 WOOL PRODUCTION

### 3.2.1 Wool Production Statistics

(i) AUCTION SALE PRICES 1979/1980 SEASON (Cents per kilogram clean on Floor)

Selling Centre	October		December		March		May	
	46/48's Coarse Crossbred B Fleece (37F2D)							
	46/48's Coarse Crossbred 2nd Shear (37F2L)							
	F1.	2 Sh.	F1.	2 Sh.	F1.	2 Sh.	F1.	2 Sh.
Dunedin	408	388	381**	368**	380	374	364	330
Timaru	402	386	371	364	345****	327****	N/A	N/A
Invercargill	402	384	369	353	371	359	346	326
Auckland	379*	366*	371**	353	N/A	347****	N/A	329
Napier	402	381	379	353	386	372	353	326
Christchurch	408	397*	370**	347**	367****	360****	357	335
Wellington	399*	389*	371	353	360****	338****	N/A	326*****
Wanganui	401*	376	376	357	377****	339****	N/A	327*****

#### 56's Strong Halfbred B Fleece (28F2W)

Timaru	414	393	399****	N/A
Christchurch	426	397	423****	401
Dunedin	414	405**	425	380
Napier	419*	396	N/A	N/A

#### NOTE:

Sales were not held successively in the order as shown, so that this table does not reflect the progressive movement of prices. Sales held in November, January, February, April and June have been omitted unless otherwise indicated.

*	November
**	January
***	February
****	April
*****	June
N	= Nominal

#### SOURCE:

N.Z. Meat and Wool Boards' Economic Service "Annual Review of the Sheep and Beef Industry, 1979/1980".

(ii) AVERAGE PRICE FOR GREASY WOOL AT NEW ZEALAND AUCTION SALES

Micrometers	All Styles and Types			All Qualities	Total Greasy Auction	Estimated Total Value of Wool Prod
	19-22*	25-27**	35***		Sale Value (\$ million)	(\$ million)
SEASON	(cents per kilogram greasy)					
1960/1961	76.3	76.1	70.1	74.1	141.6	197.6
1965/1966	95.7	82.7	69.4	76.5	176.6	241.0
1970/1971	74.3	56.1	44.8	53.4	116.6	178.4
1971/1972	75.6	60.9	58.7	66.5	139.0	214.3
1972/1973	200.0	157.2	125.0	144.0	282.2	44.7
1973/1974	212.5	154.0	122.5	139.2	271.6	396.4
1974/1975	138.2	89.6	82.6	91.7	192.9	269.7
1975/1976	185.6	139.9	148.1	157.1	333.9	489.8
1976/1977	229.9	216.8	209.9	219.5	441.2	664.0
1977/1978	218.9	193.0	180.3	190.4	378.1	591.8
1978/1979	226.0	217.4	209.3	218.8	447.2	701.5
1979/1980	302.2	263.9	246.3	265.1	624.8	945.1

SOURCE:

N.Z. Meat and Wool Boards' Economic Service "Annual Review of the Sheep and Beef Industry, 1979/1980".

\* = 60/64's and up

\*\* = 58/60's, 58's and 56/58's

\*\*\* = 46/50's and 48's

(iii) STATISTICAL REPORT ON THE 1979/1980 WOOL SELLING SEASON (July - June)

	1978/1979	1979/1980
DISPOSALS:		
1. Sales		
(a) at Auction		
(i) Greasy : bales	1 360 104	1 559 189
: kilograms	204 350 314	235 729 511
: av. price (c/kg)	218.85	265.09
(ii) Scoured : bales	35 543	34 893
: kilograms	4 536 548	4 550 930
: av. price (c/kg)	303.60	353.62
TOTAL BALES SOLD AT AUCTION	1 395 647	1 594 082





### 3.2.2 Wool Prices

The 1980/1981 wool selling season opened in Napier on August 7 on an unspectacular note. Wool from Auckland, Wanganui and Wellington was sold at Napier by separation.

Although the first part of the sale, comprising 10,500 bales of good style second shear and crutchings, attracted good demand, the tone weakened as selling progressed. The market indicator was 249.63 cents/kg. There was greater interest at the first fine wools sale of the season, a combined Christchurch/Invercargill offering at Christchurch on August 15. Wools of 30 microns and finer were included in sellers' favour, and 31-32 micron wools were up to 4% dearer than at the last fine wools sale on June 27. Fine and medium crossbred wools in Christchurch rose slightly on Napier prices, and cross-bred and second shear from Invercargill were also in sellers' favour. The AWASP for the combined sale was 251.26 cents/kg.

September's round of sales was quiet and steady with the Wool Board continuing to play a significant support role.

At the Wellington/Wanganui sale on September 4 the market indicator was 250.06 cents/kg, less than one cent above the season's opening level a month earlier. After the second day of the Christchurch sale on September 26, where the first real signs of stronger competition emerged, the indicator increased to 255.45 cents/kg. Wool Board activity at Christchurch was negligible.

Chinese bidding for full length fleece wools was strong and Western European mills also became active. They were supported to a lesser extent by local mills.

Wool offered was generally well grown but in some areas the wet winter affected the colour.

At the Invercargill/Wellington sale on October 10 the indicator declined from 255.45 cents/kg at the end of September to 252.73 cents/kg.

The Napier sale of October 17 saw the seasonal low point for the indicator of 249.03 cents/kg. The overall market was in the buyer's favour. The final sale of the month at Christchurch on October 31 left the indicator at 250.25 cents/kg, slightly below the 251.51 cents/kg at Timaru on October 24.

While the main buying strength came from China, Eastern and Western Europe and Japan were also active with support from local mills.

There was a slight variation in values at the sale in Christchurch on December 3 with fine crossbred in the seller's favour and medium and strong crossbred staying steady. Merino wools sold in excess of 400 cents per kilogram and a New Zealand record was set when Merino wool of 18.1 microns in diameter brought 530 cents per kilogram.

The Wool Board gave moderate support and the AWASP was 249.93 cents/kg.

### 3.2.3 Wool Income Stabilization Arrangements

- (i) Under its Minimum Prices Scheme, the Wool Board sets a table of minimum prices for all types of shorn wool and dead wool produced in New Zealand. Other than in exceptional circumstances, only one table of minimum prices shall be set in any one season, with movements in the target average of the table limited to a decrease of 5% and an increase of 10% on that of the previous season.

#### MINIMUM FLOOR PRICES:

1975/1976	.....	124 cents/kg
1976/1977	.....	136 cents/kg
1977/1978	.....	150 cents/kg
1978/1979	.....	170 cents/kg
1979/1980	.....	200 cents/kg
1980/1981	.....	215 cents/kg

When the sale price of any wool falls below its appraised minimum price, the Board will supplement that price up to its minimum level through a supplementary payment made from the Minimum Wool Prices Funding Account held at the Reserve Bank of New Zealand. The Board may also provide minimum price support by purchasing the wool using its own funds and borrowing for that purpose, or by a combination of both supplementation and purchasing. Should the funds in the Account become exhausted, advances can be made from the Reserve Bank at an interest rate of 1% per annum.

The Minimum Price Funding Scheme provides for a minimum price funding levy (currently set at 1%) to be imposed on all shorn wool and dead wool produced in New Zealand. This includes all wool other than dag wool, slip wool, fellmongered wool, and wool on the skin. The

## PRICE MARKSHEET – Cents Per Kilogram

		Nap	ChCh	Dun	Tim	Wang	Well	Dun	Nap/Auck.	ChCh	ChCh	Inv	Dun	Nap	Tim	Auck	ChCh
		¾	15/8	21/8	28/8	4/9		18/9	19/9	24/9	26/9	10/10	16/10	17/10	24/10	30/10	31/10
21 F2W	Merino B Fleece							542N		550N	550N		546		552		554
22 F2W	Merino B Fleece							524N		516N	526N		526		524		530
24 F2W	¼ Bred B Fleece							450		456	464N		470		466		466
25 F2W	Ex. Fine ½ Bred B Fleece			422N				424		440	440N		430		430		444
26 F2W	Fine ½ Bred B Fleece	420N	414		412N			412		416	416		416		414		412
27 F2W	Med. ½ Bred B Fleece	402	400	400				400		404	406		404		402		400
28 F2W	Med. ½ Bred B Fleece	395	394	395				395		402	400		396		394		394
29 F2W	Strong ½ Bred B Fleece	388	388	390				390		396	394		388		385		386
30 F2W	Strong ½ Bred B Fleece	380	380	380				382		384	384		378		378		380
31 F2W	Ex. Strong ½ Bred B Fleece	376	374	378				380		384	384		374		370		376
32 F2E	Fine XBd B Fleece	376	376	376	376N			382	382	384	384	384N	374	370	370		368
34 F2D	Fine XBd B Fleece	374	372	372	372			376	376	378	378	376	372	360	362		364
35 F2D	Med. XBd B Fleece	372	364	364	364	367		368	371	372	372	368	352	352	356	353N	358
37 F2D	Coarse XBd B Fleece	372	364	364	367			367	373	370	370	368	352	352	352	353N	354
37 G3F	Coarse XBd Av Inf Soft Cotts	326N	326N	-	324N			-	-	-	-	-	-	-	-	-	-
35 P3G	Med XBd Av Inf Pieces	318	316	320	320N			324	324	330	330	326N	328	320	326	322	326
37 F2L	Coarse XBd B 2/Shear	344	342	348	348	350		352		354	348	344	344	347	348	346	342N

N = Nominal Quotation.

levy is paid into the Minimum Wool Prices Funding Account. Credit balances in the Account earn interest at a rate of 1% per annum.

There is provision for the Wool Board to borrow from the Funding Account for wool trading purposes approved by the Minister of Agriculture. Interest at a rate of 1% per annum is payable to the credit of the Account on such borrowings.

- (ii) At the beginning of each season, the Minister of Agriculture announces a 'trigger' price which is above the minimum price. This price is determined after consultations between the Ministry of Agriculture and Fisheries and the New Zealand Wool Board. Factors that affect the 'trigger' price are the ruling level of prices and prospects for wool as well as other farm products, the maintenance of an expanding sheep industry and the need to promote general economic stability in the economy.

The operation of the 'trigger' price is as follows:

The prices for each grade of wool at a particular sale are weighted up by the national volume of wool of each grade. As a result an Adjusted Weighted Average Sale Price (or commonly known as A.W.A.S.P.) is calculated based on the prices that were achieved at that particular sale and the New Zealand volumes of each grade. It must be stressed that this A.W.A.S.P. value differs from the Actual Sale Average Price (or A.S.A.P.) because of the weighting using New Zealand volumes of wool.

In the event of the A.W.A.S.P. being above the predetermined 'trigger' price, a Grower Retention Levy is introduced on all shorn wool and dead wool. The levy is equivalent to 50% of the amount by which the A.W.A.S.P. exceeds the 'trigger' price, expressed as a percentage of the A.W.A.S.P. This percentage figure is then deducted from all wool sold at that particular sale and applies to all wool sold privately up to the next auction. The percentage levy will usually change at this stage in response to actual prices changing.

The proceeds levied in this way are deposited in the Wool Income Retention Account at the Reserve Bank of New Zealand in the name of the individual grower. Deposits may be withdrawn at the discretion of the Minister of Agriculture. They will be available 5 years after the date of deposit, however, under special circumstances they may be withdrawn or refunded at an earlier

date. These individual grower accounts will not attract tax until the date of withdrawal, neither will they accumulate interest during the time of deposit.

The 'trigger' price that will operate during the 1980/ 1981 season was announced in June 1980 as 330 cents per kilogram. This is 10% up on last season's price of 300 cents per kilogram.

The method of calculating the Grower Retention Levy is shown in the following hypothetical example:

1.	The 'trigger' price for 1980/1981.....	330¢/kg
2.	A.W.A.S.P. at a sale .....	365¢/kg
3.	Difference .....	35 cents
4.	'Specified Percentage' retention	
	$\frac{0.5 \times 35}{365} \times 100$ .....	4.794%

Thus, the 'Specified Percentage' retention of 4.794% would be applied to the gross proceeds of all wool sold at that sale and nationally for all wool sold privately by growers until the next sale.

- (iii) Since 1976, the New Zealand Wool Board (previously the N.Z. Wool Marketing Corporation) has operated a Strata Price Control Scheme to limit the degree to which prices at any auction sale may vary from the price levels prevailing at the previous sale. To do this, the Board bids through a subsidiary (New Zealand Wools) at a fixed percentage below previous prices. In this way, steep falls in the market can be avoided, although it is inherent in the system that the Board could accumulate large stocks of wool on a falling market.

Due to the quiet and steady nature of the wool market in the early part of the 1980/81 season, the Wool Board has increased its activity in the market intervention policy. During the first two months of the 1980/81 season the Board bid on 47.90% and purchased 15.05% of wool offered in New Zealand.

- (iv) Since July 1976, the Wool Board has also offered an alternative to auction or private sale of wool to the growers. The Extra Choice Scheme entails the grower sending his wool to a broker or a private buyer, and asking for it to be made available for valuing by the Board. The grower is then offered the current market price by the Board and if acceptable the grower is paid 10 working days later. This allows the grower to obtain cash quickly at

times when the roster of wool sales may be full and the grower would otherwise encounter delay in the disposal of his product. He is also assured of a fair market price for his wool on the day. It is expected that most of the wool bought by the Board will be fed back into the auction system in due course. The Wool Board is using the E.C.S. as an alternative means of wool disposal. In the 1980/81 season it will be available only during the period between selling seasons. Therefore the Board kept purchases at the 1868 bales recorded during July 1980 until the season closed.

The Board continued to re-sell Extra Choice stock, and the total sales for the three months ended 30th September 1980 amounted to 4232 bales.

- (v) In addition to the stabilization procedures operated by the wool industry, the Government has established and will underwrite a supplementary minimum price for wool for the 1980/1981 wool-selling season. This price is based on an average of 235 cents/kilogram (greasy) on the auction floor in New Zealand. The Minister of Agriculture has announced that the supplementary minimum price for the 1981/1982 season will not be less than 250 cents per kilogram.

The Supplementary Minimum Prices Scheme for wool applies only to shorn wool and dead wool. The rate of supplement payable by the Government through the Wool Board is equivalent to the amount by which the A.W.A.S.P. for such wool is below 235 cents/kilogram expressed as a percentage of that A.W.A.S.P. When this percentage is greater than 0.5%, this rate of supplement is applied to the bulk proceeds from the sale of qualifying wools and paid to growers through brokers or directly by the Wool Board as appropriate. The Board will make these supplementary payments from the Government-financed Supplementary Minimum Wool Prices Account at the Reserve Bank of New Zealand.

After each auction sale, brokers and registered private buyers are advised of the supplement percentage. Brokers then calculate the payment, show it on the account sales and pay it to the growers. The Wool Board Levy and the stabilization levy is deducted from the gross amount, including the supplement. The brokers then reclaim the supplement from the Board. Private buyers – but only those registered – operate the scheme. They are advised of the supplement percentage which they will use to calculate

the gross proceeds and deduct the levy. They then advise the Board which pays the supplement to the grower.

Other points about the scheme are:

- No supplement will be paid if the percentage is 0.5 or less.
- Arrangements with co-operatives and pools are similar to those with private buyers.
- The scheme applies to shorn wool, both greasy and scoured, and to dead wool. It does not apply to dags, dag wool, slipes and sheepskins.
- It does not apply to parcels of less than 100 kilograms unless the wool is going through brokers' bins.

Payment of the supplement to growers who sell privately is made by direct transfer through the banking system. This means that private buyers have to obtain the account number or a cheque-book pay-in slip for each grower so that payment may be made. There is no direct payment to growers by cheque. If growers want their wool proceeds paid to a seasonal financier, e.g. stock and station agent, Rural Bank or to anyone holding security over their wool clip, then there is provision on a special form to instruct the Board accordingly, giving details of the firm and branch where payment is to be made. In these cases, the grower's signature is needed on the form to authorise the Board to make payment to another person. The form leaves space for details of the seasonal financier's account number and the client's reference number. To get these details, the private buyer or the grower should send the form to his financier to be completed and returned either directly to the Board or to the private buyer. The buyer then sends it with the monthly levy return to the Board. Booklets of forms – including an example of one correctly completed – are available from registered private buyers.

The supplementary minimum price of 235 cents/kilogram for 1980/1981 is an average price. The guaranteed price to growers for any one lot of wool under the scheme will vary according to several factors including that wool's type and yield.

### **3.2.4 Summary of Levies Imposed on the Wool Grower**

There are several levy charges that the wool grower faces when he sells his product. The Wool Board levy is used to finance Wool Board activities, and is equivalent to 3% of the grower's

gross proceeds from wool sales, however it is sold. As mentioned above, there are the Minimum Prices Funding Levy 1% of gross proceeds) and the Grower Retention Levy (based on the 'trigger' and A.W.A.S.P. values).

### **3.2.5 Comment on Wool Production, Prices and Consumption during the 1979/1980 Season**

- (i) **PRODUCTION:** As a result of favourable climatic conditions and increased sheep numbers total wool production in the 1979/80 season increased by 11.2% to 356.5 thousand tonnes or 35.9 thousand tonnes more than in 1978/79. (In the 1977/78 season total production was 310.8 thousand tonnes).

The increase of 35.9 thousand tonnes is equivalent to the total annual amount exported to the United Kingdom which until this year has been our largest market.

The above production figures include greasy, slipe and scoured wool, together with wool on sheep skins all converted to the greasy equivalent.

The amount of greasy wool sold at auction in 1979/80 increased by 15.4% over the previous year resulting in extra sales being held in the respective selling centres. All selling centres handled considerably more wool than in the previous season and ranged between Wellington, with a 7.6% increase, and Auckland with a 24.2% increase.

The amount of wool scoured decreased by 6.5% compared with the previous season. In the case of slipe a marginal increase of 2.2% over the previous season was recorded but wool sold on sheep skins increased by 24.9%.

Private sales of greasy wool increased by 16.7% over the 1978/79 season which in turn was 18.7% up on the 1977/78 season.

The average clean yield of wool for the 1979/80 season was recorded at 74.0%. This represented an increase on 1978/79 season.

The change in production of wool by regions and production per sheep based on estimated number of sheep wintered in the hinterlands of the eight wool-selling centres in 1979/80 is shown in the following table.



## N.Z. WOOL PRODUCTION 1979/1980 (Total and Per Sheep Shorn)

District	Sheep No. June 1979 (millions)	Total Prod'n (000 tonnes)	% Change	Production per head (kg)	Change (kg)
Auckland	10.575	53.73	+16.3	5.08	+0.64
Napier	11.441	70.50	+11.8	6.16	+0.52
Wanganui	5.045	28.30	+13.5	5.61	+0.56
Wellington	6.630	37.49	+7.6	5.65	-0.04
North Island	33.690	190.03	+12.4	5.64	+0.46
Christchurch	8.400	45.11	+14.2	5.37	+0.63
Timaru	4.960	26.91	+7.9	5.43	+0.14
Dunedin	7.849	41.08	+ 8.6	5.23	+0.29
Invercargill	8.624	53.37	+ 8.3	6.19	+0.59
South Island	29.833	166.42	+ 9.9	5.58	+0.44
NEW ZEALAND	63.523	356.50	+11.2	5.61	+0.45

The above table shows that overall, New Zealand production increased by 0.45 kg per sheep wintered in the 1979/80 season as compared to the previous year. The 11.2% increase in total production can be partly attributed to increased sheep numbers (up 2.2% on 1978/79) but more important was the 8.7% increase in the per head dip as a result of the favourable climatic conditions.

- (ii) **WOOL PRICES:** The average price of greasy wool sold at auction in New Zealand during the 1979/80 season was 265.09 cents per kilogram. This represents an increase of 21.1% on the 1978/79 season's average price of 218.85 cents per kilogram.

The selling season opened in Napier on 26 July 1979 with prices 10% up on the closing sale of the 1978/79 season. After holding at that level through August prices rose sharply through September and peaked on 26 October at the Christchurch sale, when the AWASP reached 291.13 cents per kilogram. Prices fell sharply through November and after improving in January and early February again fell to reach the season's low at Napier on 1 May with a AWASP of 242.14 cents per kilogram. For the remainder of the season prices held at around the 245 cents per kilogram (AWASP) to close on 27 June of Christchurch with the AWASP at 246.56 cents per kilogram. The seasonal pattern of wool prices reflected activity in the commodity markets generally and prices declined in response to high interest rates and expectations of a period of economic down turn.

- (iii) **COMPETITION:** The significant feature of the 1979/80 season was the growth in purchases by the communist

bloc. The Soviet Union has displaced the United Kingdom as the largest buyer of New Zealand wool. Substantial increases in the equivalent greasy export volume of wool over the previous season were recorded as going to the USSR, France, Iran, Greece, China and Taiwan. Large decreases were noted from the United States, United Kingdom, Japan and Poland.

Locally purchases by local mills declined by 12.5% over the previous season in direct response to the downturn in consumer demand. Local mills in total purchased 6% of the season's production.

- (iv) **MINIMUM PRICES:** For the 1979/80 season the Wool Board raised the minimum price by 30 cents per kilogram to 200 cents per kilogram. Prices remained above the minimum for the total season and so no supplementation was needed. The Minimum Prices Fund stood at \$52.5 million at June 1979 and rose to \$69.5 m by June 1980. As a result of the build up in assets of the Funding Account the Wool Board has reduced the rate of levy from 2% to 1% for the 1980/81 season.
- (v) **WOOL INCOME RETENTIONS:** Throughout the 1979/80 season wool prices remained below the 300 cents per kilogram set as a "trigger" level, as part of the Government's stabilisation measures.

NOTE: This section, 3.2.4., was adapted from Section 6: Wool Production, Prices and Consumption in "The Annual Review of the New Zealand Meat and Wool Boards' Economic Service 1979/1980".

### 3.3 SKINS

The skin payments as at 8 December 1980 were as follows:

Lambs –	0.5 kg	32 cents/kg
	1.0 kg	112
	1.5 kg	192
Sheep –	0.25 kg	6
	0.50 kg	4
	0.75 kg	78
	1.00 kg	117
	1.25 kg	157
	1.50 kg	196
	1.75 kg	233
	2.00 kg	270

plus 16 cents for every 0.1 kg  
over 2.00 kg.

Seedy Wool and Seedy Pelts will be adjusted as follows:-

**LIGHT:** 35¢ per hd deduction

**MEDIUM:** 50¢ per hd deduction

**HEAVY:** 65¢ per hd deduction.

Deduction will also be made for black fibres of 10¢ per kilo.

Inferior and cotted full wools are subject to deduction and also Merino Type Ribby Pelts with a wool count of 60 upwards.

Sheep \$1.50 per head

Lambs \$1.00 per head

Skin payment schedules are published weekly, along with sheep and lamb meat schedules, by the Freezing Companies.

### 3.4 CROPS

#### 3.4.1 Wheat:

(i) Prices –

The prices for milling standard wheat for the 1981 harvest are as follows:

	\$ per tonne
Aotea, Kopara, and equivalent	183
Hilgendorf	219.60
Arawa	173.85
Karamu	169.28 N.I.
	155.55 S.I.

The above prices are fixed as for delivery F.O.R. grower's station and are subject to a continuation of the arrangement with growers for the retention by the Wheat Board of up to 10% of the basic price. A retention of \$2 per tonne will be deducted from growers' prices for the 1981 harvest.

- (ii) **Monthly Storage Increments** - The rate of payment of storage increments is 1.5% per month of the basic price. Payment on wheat grown north of a line drawn from Waikouaiti to Queenstown, South Island, will apply as follows:

For deliveries:		\$ per tonne
April	1-15	4.12
	16-30	5.49
May	1-15	6.86
	16-31	8.24
June	1-15	9.61
	16-30	10.98
July	1-15	12.36
	16-31	13.73
August	1-15	15.10
	16-31	16.47
September	1-15	17.85
	16-30	19.22
October	1-15	20.59
	16-31	21.96
November	1-15	23.34
	16-30	24.71

Increment payments on wheat grown south of the Waikouaiti/Queenstown line will apply one month later than above. These increments re-imburse growers for holding wheat up to the time of delivery.

Delivery of wheat to mills must be completed by a final closing date (not set at time of printing). Delivery of South Island wheat for shipment to the North Island must be made as required to meet planned transport arrangements.

The date of delivery of the wheat to the point nominated by a mill or the Board and its acceptance as milling standard quality fixes the increment payable to the grower and it is not competent for either miller, broker or grower to enter into any arrangement for the disposal of milling standard wheat at any other price.

- (iii) **Levies** – The levies on wheat payable by growers and collected by deduction on the credit notes issued will be at the following rates:-

	Cents per tonne
Wheat Research Institute	18
Wheatgrowers' Compensation Fund	15
United Wheatgrowers' (N.Z.) Ltd.	14
Federated Farmers of N.Z. Inc.	3
Total	50

- (iv) **Premiums and Discounts** – The premium on Hilgendorf is 20% of the basic Aotea price; it amounts to \$36.60 per tonne and will apply only to wheat which has been positively identified as Hilgendorf by the Wheat Research Institute. This will be done in the course of the usual baking test and until the Institute is satisfied as to the authenticity of the sample, it will not issue a test report.

The grower's price for Arawa and Wri-Yielder will be 5%, or \$9.15 per tonne less than Aotea, but if sold for milling, the charge-out price to millers will be the same as for Aotea.

In the North Island, there will be a 7.5% discount on Karamu, or \$13.72, while in the South Island, the discount is 15%, or \$27.45.

**Price Formula** - The basic price for milling standard wheat for the 1981 season is based on a formula announced in April 1980 by the Minister of Trade and Industry. It is the 3 - year moving average of the f.o.b. price for Australian standard white wheat. It is believed that the prices for the three years on which the basic price is based were:

1979 - \$154.55  
 1980 - \$178.75  
 1981 - \$216.30 (estimated)

Under the new arrangements, the B.M.P. in 1982 will be \$165 per tonne, 90% of the 1981 price. For the 1981 season, the B.M.P. announced in April was \$167 per tonne. This has been well exceeded by the new price announced in December 1980.

Wheat will be removed from governmental price control under the Commerce Act.

### 3.4.2 Barley

The Canterbury Malting Company contract price for No. 1 Grade Malting barley for the 1981 harvest is \$145 per tonne in the South Island, and \$130 per tonne in the North Island

delivered to the nearest depot of the malting company. If the distance is greater than 48 kilometres, the malting company will pay the additional cost of cartage to the grower in the South Island. There are specified delivery points in the North Island - Palmerston North, Feilding, Marton, Wanganui and Woodville.

For barley with a screening percentage greater than 5%, the following prices will apply:

Screenings %	\$ per tonne	
	S.I.	N.I.
6	144	149
7	143	148
8	142	147
9	141	146
10	140	145
11	139	144
12	138	143
13	137	142
14	136	141
15	135	140

If the barley does meet the above specifications, the malting company has the option to purchase it at \$135.00 (S.I.) and \$140.00 (N.I.) per tonne net delivered.

Where the malting company requires the contracted grower to store the barley, a storage increment will be paid at the rate of \$3.00 per tonne for delivery during the month of May and a further \$1.50 per tonne per month thereafter. Where the company requires the barley to be stored, the contract price will be paid following delivery and grading. Where the barley is delivered to the factory immediately after harvest, the farmer has the choice of being paid promptly or he can opt for the following payment scheme:

- (i) 50% of the contract price will be paid immediately
- (ii) 25% of the contract price will be paid on the 30th June
- (iii) 25% of the contract price will be paid on the 30th September
- (iv) Interest at the rate of 13% per annum shall run from the date of 50% payment on the unpaid portion of the contract price to 30th September and this shall be paid with the final payment.

The price for seed barley for the 1980/1981 season is:

S.I.	Basic	1st Gen.	2nd Gen.
	(\$ per tonne)		
Zephyr	315		305
Mata/Manapou	305	250	330
	plus \$37 royalty		plus \$25 royalty
N.I.			
Zephyr	378		368
Mata/Manapou	415.50		393
	plus \$37 royalty		plus \$25 royalty

The price for feed barley grown on contract is \$132.50 per tonne.

Due to dissatisfaction among many Canterbury cropping farmers concerning the Canterbury Malting Company's projected 1981 barley price, a Barley cooperative was set up during 1980.

### 3.4.3 Oats

The price offered for good quality oats this season is \$100/tonne in bulk, \$105/tonne in bags. There was no premium for black oats at the time of printing, but as the season progresses, a \$5 premium is expected.

### 3.4.4 Peas

The prices offered for field dressed peas for the 1981 harvest are:

	Contract Price	Free Price
(i) Field peas –	(per tonne)	
White Prolific	\$150	\$150
Huka	\$150	\$180
Ajax	\$210	\$210
Rondo	\$165	\$200
(ii) Garden peas –		
Greenfast, Victory Freezer, D.S.P., New Victory, Patea, Pugets, Puki, Pania, Scouts and Small Sieve		\$225 per tonne
Maro		\$210 per tonne
Onward		\$230 per tonne
William Massey		\$240 per tonne

Note: All the above prices are for bulk seed. Growers are recompensed for sacks if the crop is sold bagged rather than bulk.

(iii) Freezer peas –

Grade	Tenderometer Reading	¢ per kg packed
0	not exceeding 90	24.870
1	over 90, not over 95	22.430
2	over 95, not over 100	19.705
3	over 100, not over 105	17.280
4	over 105, not over 110	15.160
5	over 110, not over 115	14.555
6	over 115, not over 120	13.020
7	over 120	11.580

Note: Freezer pea crops that are passed over are paid for at the market price for seed peas when they are harvested and dressed.

### 3.4.5 Beans

- (i) Beans grown for process freezing are paid for on the following scale.

Grade	Average Seed Length	\$ per tonne packed weight
0	not exceeding 8.5mm	187.06
1	over 8.5mm, not over 9mm	180.37
2	over 9mm, not over 9.5mm	175.00
3	over 9.5mm, not over 10mm	170.81
4	over 10mm, not over 10.5mm	167.69
5	over 10.5mm, not over 11mm	164.31
6	over 11mm, not over 11.5mm	162.62
7	over 11.5mm, not over 12mm	161.00
8	over 12mm, not over 12.5mm	159.44
9	over 12.5mm, not over 13mm	157.87
10	over 13mm	156.00

- (ii) Tick beans grown for seed are currently paying approximately \$190.00 per tonne.



### 3.4.6 Sprouting Broccoli

Sprouting broccoli sown in the autumn for process freezing is paid for at \$316 per tonne packed weight. All harvesting and cartage are paid for by the processing company.

### 3.4.7 Cauliflower

Cauliflower grown for process freezing is paid for at \$285 per tonne packed weight.

### 3.4.8 Brussel Sprouts

Brussel sprouts grown for process freezing are paid for on the following basis:

Grade No. 1	35.0 cents per kilogram
Grade No. 2	32.5 cents per kilogram
Grade No. 3	29.5 cents per kilogram

### 3.4.9 Potatoes

Prices for potatoes vary a lot during a season, due to several factors including the areas planted, the yield per hectare and weather conditions. The N.Z. Potato Board has discontinued the Guaranteed Payout Scheme for surplus potatoes and the contract growing system.

Potatoes used by process freezing companies such as Watties are paid for at \$67.50 per tonne (container supplied by company) or \$69.50 per tonne if in bulk or in grower's own bin.

Seed potato prices vary from year to year with changes in supply and demand. Depending on the harvest later in the year, the price could be higher or lower than those of 1980. There is no way of predicting the price in December.

### 3.4.10 Lucerne

Payment of contract lucerne for the 1980/81 season is as follows:

Whole Season	\$55.00 per dry tonne
One cut	\$45.00 per dry tonne

No greenchop lucerne is purchased by Fletcher Lucerne. All lucerne is baled, yielding a "sun-cured" product.

### 3.4.11 Linseed

The price being offered during the 1980/81 season for Linseed grown on contract to Fletcher Agriculture is \$225 per tonne of 95% pure whole seed. For each 1% above 95% there is a premium of \$5.00 per tonne, while for each 1% below 95% there is a penalty of \$5.00 per tonne.

For each 1% of damaged seed (bolls, broken and sprouted seed) the price will increase by \$2.00 per tonne with a maximum payment of \$10.00 per tonne (i.e. maximum damaged seed attracting payment will be 5%).

Note that these prices are based on seed moisture content being not greater than 10%. If the company purchases at a higher M.C., drying costs are borne by the grower.

### 3.4.12 Lupins

There were few lupin seed contracts this season, presumably as the result of reluctance on the part of the farmers to grow a relatively risky crop. One quoted price was for Uniharvest white lupins at \$150 per tonne.

### 3.4.13 Oilseed Rape

Oilseed rape grown on contract to Fletcher Agriculture this season are worth \$200 per tonne of 95% pure whole seed.

Premiums and penalties for damaged seed, etc, are the same as for linseed.

### 3.5 SMALL SEEDS

The price paid for small seeds is based on machine dressed weights which depend on the purity of the seed line. The prices shown in the table below are representative prices for 1st Generation Certified seed as at mid December 1980. The columns could be completed during the year using information from newspaper Grain and Produce reports, or prices direct from the seed merchants.

	1980 December	March	1981 June	September
	\$	\$	\$	\$
<b>Grass Seed:</b>				
Ruanui Ryegrass	1.15			
Nui Ryegrass	1.35			
Ariki Ryegrass	1.10			
Manawa Ryegrass	.80			
Paroa Italian Ryegrass	.40			
Tama Ryegrass	.65			
Apanui Cocksfoot	3.00			
Crested Dogstail	1.00			
Matua Prairie Grass	-			
Browntop	2.75			
Chewings Fescue	2.50			
<b>Clover seed:</b>				
Huia White	2.30			
Turoa Montgomery Red	2.00			
Hamua Broad Red	1.60			
<b>Lucerne:</b>				
Saranac	1.80			
Wairau	1.00 - 1.20			
<b>Kale:</b>				
Medium Stemmed	3.00			
Giant	3.00			
<b>Turnips:</b>	3.20			

## 3.6 CATTLE

### 3.6.1 Export Meat Schedule

The beef schedule works in the same way as does the sheep meat schedule.

An example is shown below.

#### MEAT EXPORTERS' SCHEDULE PRICES TO PRODUCER

Effective from 8th December 1980

Grading	Weight Range (kg)	Cents per kilogram					Veal
		Steer	Heifer	Cow	Bull		
P1	160.5 - 195	132.0	132.5	119.0	131.5	28.0	All weights
	195.5 - 220	132.0	135.5	123.0	133.5		
	220.5 - 245	135.0	138.5	126.0	133.5	N.B.	
	245.5 - 270	138.0	141.5	128.0	138.5	No grading	
	270.5 - 295	139.0	142.5	129.0	141.5	but M for	
	295.5 - 320	140.0	as above		144.5	bulls	
	320.5 - 345	141.0	as above		147.5		
	345.5 & over	142.0	as above		150.5		
G	160.5 - 195	128.0	128.5	117.0			
	195.5 - 220	128.0	131.5	121.0			
	220.5 - 245	131.0	134.5	124.0			
	245.5 - 270	134.0	137.5	126.0			
	270.5 - 295	135.0	138.5	127.0			
	295.5 - 320	136.0	as above				
	320.5 - 345	137.0	as above				
	345.5 & over	138.0	as above				
T	160.5 - 270	125.0	127.5	118.0			
	270.5 - 295	127.0	129.5	120.0			
	295.5 & over	129.0	131.5	122.0			
E	160.5 - 270	117.0	119.5	105.0			
	270.5 - 295	119.5	121.5	107.0			
	295.5 & over	121.5	123.0	109.5			
L1	160.5 - 195	126.0	128.5			28.0	All weights
	195.5 - 220	126.0	130.5				
	220.5 - 245	127.0	131.5				
	245.5 - 270	128.0	132.5				
	270.5 - 295	131.5	133.5				
	295.5 & over	135.0	133.5				
L2	160.5 - 195	126.0	128.5				
	195.5 - 220	126.0	130.5				
	220.5 - 245	127.0	131.5				
	245.5 - 270	128.0	132.5				
	270.5 - 295	129.0	133.5				
	295.5 & over	130.0	133.5				

M	145.0 & under	110.0	114.5	114.0	28.0 All weights
	145.5 - 195	113.0	117.5	117.0	
	195.5 - 220	116.0	120.5	120.0	
	220.5 & over	118.0	122.5	122.5	
		119.0	123.5	123.0	

NOTE: The above prices are quoted for Hawke's Bay. The prices operative in the rest of the North Island and in the South Island are less than those quoted. The margins are as follows:

Steer:-	All grades for both the rest of N.I. and S.I. were 8.0 cents/kilogram lower.
Heifer:-	All grades for both the rest of N.I. and S.I. were 12.5 cents/kilogram lower.
Cow:-	All grades for both the rest of N.I. and S.I. were 12.0 cents/kilogram lower.
Bull:-	All weight ranges for both the rest of the N.I. and S.I. were 8.5 cents/kilogram lower.
Veal:-	All veal prices were operative nationwide.

### 3.6.2 Local Cattle Prices

As with sheep, the markets at Addington and Burnside tend to set the market in the South Island. Below are prices received for prime and store cattle at the Addington sales on Tuesday, 9th and Wednesday 10th December 1980.

Prime cattle sold well, the sale being consistent and the cattle of high quality. Due to good pasture growth on many North Canterbury farms in recent weeks, some cattle were slightly over-done.

Heifers and steers up to 220 kg sold for between 136¢ and 140¢ per kilogram, from 220 kg to 270 kg for between 133¢ and 137¢, and over 270 kg up to 134¢.

#### Prime Steers:

Heavy - \$433 to \$485, some to \$556

Medium - \$384 to \$426

Light - \$314 to \$374

#### Prime Heifers:

Heavy - \$354 to \$374, some to \$464

Medium - \$304 to \$350

Light - \$250 to \$290

#### Prime Cows:

Heavy - \$324 to \$353, some to \$494

Medium - \$285 to \$309

Light - \$239 to \$277

#### **Vealers:**

The vealer yarding sold at rates that reflected the strength of the prime cattle market. Steers realized from \$160 to \$232; heifers mainly from \$198 to \$240; and bulls from \$182 to \$248.

#### **Store Cattle:**

Yearling cattle had a very good sale and values rose by a firm \$25. Yearling heifers consistently sold between \$180 and \$200, with some as high as \$240. Yearling steers were proportionally dearer. Two year steers sold from \$292 to \$370, while 2 yr. heifers sold from \$232 to \$316. Older cattle, mainly steers, sold from \$290 to \$404. Ten Shorthorn cross steers from Kaikoura sold for \$448.

### **3.6.3 Minimum Price Schemes**

For information on the Government's Supplementary Minimum Prices Scheme and the N.Z. Meat Board's Price Smoothing Scheme refer to Section 3.1.5 in this manual.

## **3.7 DAIRY PRODUCE**

### **3.7.1 Whole Milk for Manufacture**

In June, the Dairy Products Prices Authority fixes two values, one for milkfat and one for solid-not-fat (S.N.F.). When these prices are known, the New Zealand Dairy Board fixes the actual product purchase prices, i.e. the prices for butter, cheese, milk powders, etc. Costs of milk collection and of manufacturing are included. The Board may adjust the prices, by up to 8 cents/kilogram of milkfat to achieve a desired product range. If the reaction of the manufacturing companies to the price is favorable, the prices are confirmed and the companies are then committed to manufacture not less than 90% of the products as set out in their programs.

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.

The advance payment is usually 70% of the expected final payment, and the final adjustment for the year is made in June.

In 1980/1981 the whole milk price as set by the Prices Authority is 218 cents/kilogram milkfat, but there is also a Government guaranteed minimum price of 230 cents/kilogram milkfat, both in 1980/81 and 1981/82. This guarantee scheme means that there will be either a retrospective adjustment during the season, or an end-of-season payment, of at least 12.00 cent/kilogram milkfat. The final price paid by local companies in 1979/1980 was approximately 180 cents/kilogram milkfat.

### 3.7.2 Whole Milk for Town Supply

The national town milk producer price is linked to the average price for whole milk used for the major manufactured products. This relationship is 1 cent/kilogram milkfat equals 0.06 cents/litre of milk. Prices to the producer are varied with the season of the year, to compensate for climatic conditions and to encourage production in the more difficult periods.

In addition, special price supplements are paid in specially difficult areas for dairying.

For example in Canterbury, there is a Special Area Production Allowance of 1.5 cents/litre full price finest and first grade milk payable in March to August (i.e. the winter months).

The national advance town milk price, for the year ending 31st August 1981, is 15.4175 cents/litre of first grade milk. An example of how this price is applied by a producer company is as follows:

#### CANTERBURY DAIRY FARMERS LIMITED

##### Milk Prices 1980/1981

		QUOTA MILK (cents per litre)			SURPLUS MILK (cents per litre)		
Month	Full Price Paid for:	Finest	First	Second	Finest	First	Second
September '80	115% of quota	15.750	15.38	14.651	8.0	7.633	6.101
October	115% of quota	12.774	12.407	11.675	"	"	"
November	110% of quota	"	"	"	"	"	"
December	110% of quota	"	"	"	"	"	"
January '81	110% of quota	"	"	"	"	"	"
February	115% of quota	"	"	"	"	"	"
March	115% of quota	"	17.250	16.883	12.151	"	"
April	115% of quota	21.716	21.349	20.617	"	"	"
May	115% of quota	"	"	"	"	"	"
June	115% of quota	"	"	"	"	"	"
July	115% of quota	"	"	"	"	"	"
August	115% of quota	"	"	"	"	"	"

NOTE: **Finest grade** is milk which passes a 5-hour reductase test and contains not less than 3.5% milkfat, and sediment test of 1 or 2, and freezing point 0.530 or more.

**First grade** is milk which passes a 3-hour reductase test but fails to pass a 5-hour test and/or contains not less than 3.25% milkfat.

**Second grade** is milk which fails to pass a 3-hour reductase test or contains less than 3.25% milkfat, or sediment test 3, or freezing point less than 0.530.

A penalty is applied to quota plus eligible percent of S.N.F. and below. The penalty is applied on a monthly basis on the average of three solid-not-fat tests per month – one in each ten day period.

The three-tiered penalty system introduced this season is as follows:-

S.N.F. rating	Penalty
less than 8.0%	1.0 ¢/litre
8.0% - 8.3%	0.367 ¢/litre
8.3% - 8.4%	0.185 ¢/litre

For purposes of comparison between seasons, the milk prices for the 1979/1980 season are shown below:

### CANTERBURY DAIRY FARMERS LIMITED Milk Prices 1979/1980

Month	Full Price Paid for:	QUOTA MILK (cents per litre)			SURPLUS MILK (cents per litre)		
		Finest	First	Second	Finest	First	Second
September '79	110% of quota	13.288	12.921	12.189	6.3	6.3	6.3
October	105% " "	10.787	10.420	9.688	"	"	"
November	105% " "	"	"	"	"	"	"
December	105% " "	"	"	"	"	"	"
January '80	105% " "	"	"	"	"	"	"
February	120% " "	"	"	"	"	"	"
March	120% " "	14.390	14.023	12.189	"	"	"
April	120% " "	"	"	"	"	"	"
May	120% " "	18.141	17.774	15.940	"	"	"
June	120% " "	"	"	"	"	"	"
July	120% " "	"	"	"	"	"	"
August	120% " "	"	"	"	"	"	"

### 3.7.3 Dairy Industry Stabilization

At the start of each season, basic farm gate values are established for milkfat and S.N.F. (solid-not-fat). Except in exceptional circumstances, these values must not be more than 10% up or 5% down on the previous season's basic values. At the end of the season, if either (or both) of the milkfat Trading Account and the S.N.F. Trading Account indicates a surplus, the Dairy



Board may distribute a percentage of this to suppliers, the balance being credited to a Reserve Account. In the event of the Board incurring a loss in milkfat and/or S.N.F. products, it will be granted overdraft facilities at an interest rate charge of 1% per annum by the Reserve Bank of New Zealand if the loss exceeds the accumulated reserves in the relevant account.

### **3.7.4 Supplementary Minimum Prices for Milkfat**

In addition to the stabilization procedures operated by the dairy industry, the Government has established, and will underwrite, a farm gate Supplementary Minimum Price for the 1980/1981 season of 230 cents/kg of milkfat in wholemilk. A similar price will also be set for the subsequent season at a level not less than that set for 1980/1981.

For the current season, a supplementary payment will be made by the Government to the Dairy Board to bring the Board's total payout up to 230 cents/kg, if the combined basic price plus 50% of the 1980/1981 individual trading surplus of milkfat and S.N.F. are less than 230 cents/kg. Regardless of the actual percentage payout of the Board of any trading surplus for 1979/1980 the level of any supplement paid by the Government will be based on an assumed payout of 50%.

The 230 cents/kg refers to the farm gate prices as paid by the Dairy Board to dairy companies. Company payments to suppliers will fluctuate around the 230 cents/kg for a number of reasons including the product mix, manufacturing cost levels, and decisions regarding the degree of capital formation to be undertaken.

### **3.7.5. 1980/1981 Dairy Beef Market Guarantee Scheme.**

To encourage the retention of dairy-beef calves, the 1980 November-December national average price for spring-born dairy-beef weaners is being guaranteed of a minimum of \$80 per head. If the average price of the dairy-beef weaners sold at auction during November and December is below \$80 per head, every eligible calf will attract a supplementary payment equal to the difference between the average price and \$80.

Every eligible calf will attract the same payment irrespective of the weight or the sale price of the particular animal, and of whether or not the animal is sold. The scheme covers beef calves of dairy origin born between 1 June 1980 and 31 May 1981 on a dairy farm that has supplied more than 3000 kilograms of milkfat to a milk station or a dairy factory in the 1979/1980 season, or that will supply this amount in the 1980/1981 season.

Eligible calves that are born between 1 June and 31 October 1980 are to be registered during November 1980 while those born between November 1980 and 31 May 1981 are to be registered during June 1981.

The payments will be made to whoever owns the calves at midnight on 31 October 1980 with regard to the first registration period, and on 31 May 1981 with regard to the second period. The claimant need not necessarily be a dairy farmer, but may have purchased calves to rear them.

### 3.7.6. Dairy Cattle Prices

The differences in the prices paid for dairy cattle in the various districts of the country are not solely attributable to locality. They are dependant on the type of dairying carried out (i.e. town milk or factory supply), the other farming systems in the district, and the time of year.

The following table shows the variation in dairy cattle during the last year.

District		Northland /Auckland	Waikato	Canterbury	Otago/ Southland
Month/Class of Stock**					
January/ February	1	\$365	\$340	\$370	-
	2	\$270	\$320	-	-
	3	\$220	\$280	\$370	-
	4	\$190	\$260	-	-
May	1	\$380	\$320	\$280	\$245
	2	\$300	\$310	-	-
	3	\$290	\$280	\$280	\$180
	4	\$265	\$275	-	-
July	1	\$390	\$340	\$320	-
	2	\$300	\$310	-	-
	3	\$285	\$315	\$320	\$250
	4	\$255	\$290	-	-
October	1	\$420	\$400	\$340	-
	2	\$350	\$360	-	-
	3	\$230	\$200	-	-
	4	\$200	\$170	-	-

\*\* Class 1 = Friesian 2nd/3rd calver

Class 2 = Jersey 2nd/3rd calver

Class 3 = Friesian heifer i.c. or r.w.b.

Class 4 = Jersey heifer i.c. or r.w.b.

SOURCE: "Marketplace" in New Zealand Farmer magazine; January, February, May, July and October 1980.

The dairy cattle offered at Addington saleyards, Christchurch, are few in number and not of very good quality by and large, except for some lines of yearling heifers. Addington market prices are therefore not the best guide to dairy cattle prices. In Canterbury, with a distinct emphasis on town supply dairying, there is a considerable premium paid for autumn-calving cows and heifers over the prices paid for spring-calving cows and heifers.

## 3.8 PIG PRODUCTION

### 3.8.1 Introduction

The majority of pigs produced in New Zealand are now all meal fed, based on grain from the South Island and the Waikato region. With the increasing costs of grain and protein, and a small increase in the prices for pig meats during the last year, profitability has increased slightly.

### 3.8.2 Prices

The Pork Marketing Board has set a minimum price to maintain the viability of pig production. The Canterbury Frozen Meat Company operates at this schedule, as set out below.

#### MEAT SERVICES LIMITED

A Member of the C.F.M. Group of Companies

Pig Schedule                      On Hooks at Belfast Works

Effective as from Monday, 1st December 1980.

**Note:** Weight ranges and payments based on "hot" scale weight, head and feet on.

### Hot Weights

45.5kg - 72kg	PRIME	178 cents per kilogram
	CHOICE	168 cents per kilogram
	STANDARD	138 cents per kilogram
	MUTILATED	133 cents per kilogram.
72.5kg - 83kg	PRIME	140 cents per kilogram
	CHOICE	—
	STANDARD	118 cents per kilogram
	MUTILATED	111 cents per kilogram

### Manufacturing

All weights	70 cents per kilogram
-------------	-----------------------

These prices are subject to change at short notice.

### Deductions:

Pork Industry Council Administration	.85 cents per pig
Pork Marketing Board Stabilization Levy	1.00 cents per pig
Federated Farmers Levy	.01 cents per pig
Total	\$1.86 per pig.

Most pork is sold on the local fresh meat market where returns are higher. Current retail prices vary from \$2.60 to \$4.90 per kilogram. Most weaners and store pigs are sold between farmers by private contract with prices based on the schedules for slaughter pigs. Breeding stock are marketed similarly with premiums for stock with a Performance Testing background. A limited number of all classes of stock are sold at auction through saleyards.

The Addington sale on Tuesday 9th December 1980 proved to be a continuation of the erratic trend evident in previous weeks.

Although the market of fat pigs was mixed in quality, buyers were not keen to buy even at reduced rates. Only a few choppers were offered but these sold steadily.

Values were:

Light porkers - \$60 to \$65

Medium/Heavy porkers - \$70 to \$80

Light baconers - \$85 - \$95

Heavy baconers - \$95 to \$115

Light choppers - \$80 to \$100

Heavy choppers - \$118 to \$144

The yarding of store pigs, although mixed in quality, sold well. Gilts sold for between \$190 and \$245, while unfinished porkers fetched up to \$62.

Small weaners: \$18 to \$25

Good weaners: \$28 to \$32

Slips and small stores: \$35 to \$42

Large stores: \$45 to \$55

## **3.9 GOAT PRODUCTION**

*(A.R. McIvor – Farm Management Department Lincoln College)*

### **3.9.1 Introduction**

Production from goats within New Zealand can be divided into three categories, meat, milk and Angora mohair. Of these, meat production from feral goats has the highest output but the lowest unit value, whilst milk and mohair from Saanen and Angora strains respectively, with considerably higher unit values, are experiencing a period of growth.

### **3.9.2 Meat Production**

Some 1220 tonnes of chevon (goat meat) was exported in 1977/78. This trade is based on the annual muster and slaughter of feral goats largely in the Hawkes Bay, East Coast, South Auckland, Te Kuiti, and Nelson-West Coast regions. Problems exist in the timing of killing due to pressure on existing killing facilities, and export values for both meat and hides are low.

Current range of values paid by exporters . . . \$5 - \$7 per head  
Feral does for upgrading . . . North Island \$7 - \$10 per head  
Feral does for upgrading . . . landed in Canterbury \$10 - \$15 per head.

### **3.9.3 Milk Production**

Goat milk is produced for three major purposes; for consumption as milk, or for processing into powdered milk, or for Fetta cheese.

Raw milk for consumption as milk is provided to the public from usually small herds of twenty to forty milking does. This tends to be a special need for invalids or people with allergies. Sales may be made at the farm gate, or through retail outlets. Milk powder is at present only made at the Hikurangi Dairy Co. north of Whangarei with a current production of approx. ten

tonnes of powder per annum. Due to the small quantity of milk available for processing and difficulties with marketing, no other companies as yet have developed facilities. Fetta cheese is produced in a number of districts throughout New Zealand.

The following values should be taken as an indication only of relative price levels paid to producers for milk:

Town milk (raw milk)	45¢ – 56¢	per litre
Powdered milk	32¢	per litre
Fetta cheese	17.6¢	per litre
Values of Milking Goats – Saanen		
Doe kids		\$ 50 - \$100
Mature does		\$ 75 - \$500
Bucks		\$100

### 3.9.4 Angora

World Angora wool production has been declining over the last decade and values of wool have tended to fluctuate markedly, but have increased in recent years to the present high level. Unfortunately the genetic pool of Angora stock within New Zealand is very limited, with not only an undersupply of purebred stock, but also a restricted number of blood lines.

Pure bred bucks are used for mating to feral does in an upgrading process which takes three to four generations to attain animals producing quality wool. As a result values for pure bred animals soared in 1978-79 but they have stabilized considerably during 1980.

Angora wool production

(source: Lands and Survey Department)

Kid bucks.....	1.5	kg per annum
Kid does.....	1.2	kg per annum
Kid does .....	1.2	kg per annum
2th does.....	2.5	kg per annum
Dry does .....	3.2	kg per annum
Bucks (2 yrs of age) .....	4.0	kg per annum
M.A. does.....	3.0	kg per annum
Wethers .....	3.5	kg per annum

#### Wool Value

Kid

1st kid super quality free of fault .....	\$10.00	per kg
2nd kid with faults and kemp .....	\$ 5.00	per kg

Adult

Good long staple, good quality.....	\$ 9.00	per kg
2nd quality - with fault and kemp .....	\$ 3.00	per kg
Carding.....	\$ 4.50	per kg
2nd quality.....	\$ 2.00	per kg

### Crosses

¾ and ⅞ Angora cross .....	\$ 5.00 per kg
½ bred Angora/Feral .....	\$1.70 - \$2.20 per kg

Value of mohair is influenced by the very small lots that are able to be offered and an improvement in values may be possible with larger offerings. The demand from local spinners for good quality kid wool is high.

The December 1980 wool sale in Christchurch saw mohair from Angora goats selling to \$9 per kilogram. Although the fibre was of good quality, prices were below those of a year ago. They ranged from \$9/kg for 9.5 kg of first kid combings down to only 20 cents/kg for some black fibre.

### Values of Stock

4th crosses and pure

Kid does	\$ 250
M.A. does	\$ 500 - \$1000
Kid bucks	\$ 500
2th bucks	\$ 800 - \$1000
Mature bucks	\$1000 - \$2200
1st cross does	\$100
2nd cross does	\$150 - \$200
3rd cross does	\$350

## 3.10 DEER PRODUCTION

### 3.10.1 Introduction

Deer farming in New Zealand is a rapidly developing diversification with much promise as an export earner through sales of the two main products - venison and velvet antlers. By-products such as skins, tails, eye teeth, sinews and pizzles also have a good market value.

### 3.10.2 Velvet Prices

Prices as at 26.11.80 were as follows:

	Per lb	Per kg
AA Grade	\$52 per lb	\$114.50 kg
A Grade	\$47 per lb	\$103.50 kg
Sub A Grade	\$43 per lb	\$ 94.00 kg
B Grade	\$32 per lb	\$ 70.50 kg
C Grade	Nil	Nil
Super D Grade	\$16 per lb	\$35.00 kg
D Grade	\$ 6 per lb	\$13.00 kg

The New Zealand Deer Farmers Association operates a velvet pool which is offered as an alternative means of sale, and is of greater benefit to those selling small quantities of velvet at any one time. Prices as at December 1980 are as follows:

Grade	\$/kg
A	110.50
B	77.35
C	33.15
D	11.05

### 3.10.3 Venison

Prices paid for venison vary widely but an average price for farmed venison would be in the region of \$2.80 per kg.

### 3.10.4 Deer By Products

All the following prices given are approximate as a deer carcass is usually bought as a whole rather than as the separate products.

Skins	\$4.00 each
Tails	\$2.00 approx (on a weight basis)
Sinews	Wet - 50c per set
	Dry - \$2.20 per kg
Eye teeth	Stained Stag - \$3.00 per pair
	White Stag - \$2.00 per pair
	Hinds - \$1.00 per pair
Hard antler	\$9.00 per kg

### 3.10.5 Stock Prices

Deer prices as at December 1980. An estimate of current value.

Hinds (MA)	\$850
Stags	\$300
(Velvet)	\$400
Yearling Stags	\$220 - \$230
Yearling Hinds	\$650



3.11 POULTRY PRODUCTION

3.11.1 Introduction

Poultry enterprises can be divided into two categories, meat and egg production. The poultry meat industry covers a range of species - chickens, ducks, and turkeys being the most common, but pheasants and geese are also raised commercially. Egg production (chickens) is estimated to be in the vicinity of 80 - 81 million dozen per annum.

3.11.2 Meat Chickens (Broiler)

Meat chicken production on a large scale is normally a contract operation in which the contracting firm pays most of the expenses such as feed, day old chicks, litter, and most medication, and deducts these costs from the payout. The price paid for the final product is obviously largely dependant on the terms of the contract but in an average situation the payout would be approximately 95¢ per kg on a liveweight basis minus the above costs if applicable. For smaller operations (1 - 3 000 birds per batch as opposed to 20 - 30 000) it is not usual for a contract of the type mentioned above to be involved and the operator pays his own expenses including in many cases the processing costs. He could then expect to receive in the vicinity gate. It must be noted, however, that a price change is due in January, 1981.

3.11.3 Eggs

The Egg Marketing Authority was established in 1953 and its principal functions are to regulate and control the production, marketing and distribution of eggs and egg products within New Zealand and elsewhere. Entitlement Licences are issued to all poultry farmers with more than 100 (egg type) laying birds and each holder of an entitlement licence is levied monthly on the basis of the number of birds he actually has within the confines of his licence.

Of the 81 million eggs produced annually, approx 51 million are received, graded and sold by licensed distributors. The balance is marketed by poultry farmers direct to consumers or retailers situated outside defined Marketing Areas. Of the eggs passing through distributors in the three months ending September, 1980, the prices received by farmer (Entitlement Levy deducted) was:

North Island .....	83.09 cents per dozen
South Island .....	82.98 cents per dozen

The other source of income from a layer enterprise is from cull birds. These usually sell for between \$1.00 and \$2.00 per bird through a retail outlet or at the farm gate, after processing.

### 3.12 FRUIT PRODUCTION

The Prices paid to growers by Christchurch Markets in 1980 are as follows:

	Cherries (per kg)	Feijoas (per c/s)	Grapefruit (per c/s)	Mandarins (per c/s)
Dec 1979	\$2.50 - \$3.00		\$12.00	
Jan 1980				
Feb				
Mar				
Apr		\$ 5.00 ( $\frac{1}{2}$ c/s)		
May		\$ 6.00 - \$7.00	\$10.00	\$12.00 ( $\frac{1}{2}$ c/s)
June			\$ 8.00 - \$10.00	\$18.00 - \$20.00
July			\$ 9.00 - \$10.00	\$10.00 ( $\frac{1}{2}$ c/s)
Aug			\$ 9.00	\$18.00
Sep			\$ 9.00 - \$10.00	
Oct			\$ 7.00 - \$10.00	
Nov	\$2.00 - \$4.00		\$10.00 - \$12.00	
	Kiwifruit (per $\frac{1}{2}$ c/s)	Nectarines	Peaches	Plums (per $\frac{1}{2}$ c/s)
Dec 1979				\$7.00
Jan. 1980.		\$3.00 - \$4.00 (per tray)	\$2.00 - \$6.00 (per tray)	\$8.00 - \$10.00 (p/king)
				\$1.20 - \$1.50 (shiro)
Feb		\$5.00 - \$7.00 (per $\frac{1}{2}$ c/s)	\$5.00 - \$6.50 (per case)	\$3.70 - \$5.00
Mar			\$1.00 - \$1.50 (per tray)	\$5.00 - \$5.50
Apr		\$3.00 - \$3.50 (per tray)	\$4.00 - \$5.50 (per $\frac{1}{2}$ c/s)	
May				
June				
July	\$14.25			
Aug	\$16.30			
Sep				
Oct				
Nov.				
	Raspberries (per punnet)	Strawberries (per punnet)	Tamarillos	Tangelos
Dec 1979	40¢ - 60¢	40¢ - 70¢		\$11.00 - \$15.00 (per 4.5 kg)
Jan 1980		90¢ - \$1.00		
Feb		\$1.10 - \$1.25		
Mar		60¢ - 70¢		
Apr	80¢ - \$1.00	56¢ - 86¢		
May			\$13.00 - \$14.00 (per c/s)	
June			\$10.00 (per c/s)	

July			\$18.00 (per ½ c/s)	
Aug			\$14.00 (per ½ c/s)	\$20.00 (per c/s)
Sep			\$ 6.00 (per ½ c/s)	\$10.00 - \$16.00 (per ½ c/s)
Oct		\$2.00 - \$2.50		\$8.00 - \$12.00 (per ½ c/s)
Nov.	\$1.50 - \$2.20	55¢ - \$1.20		\$10.00 - \$12.50 (per c/s)
	Walnuts (per kg)	Oranges	Apricots	Blackberries (per punnet)
Dec 1979	\$2.00 - \$2.50			
Jan 1980				
Feb			\$5.00 - \$6.50 (per ½ c/s)	\$1.30 - \$1.50
Mar				
Apr				
May				
June				
July				
Aug				
Sep	\$2.00	\$13.20 (per c/s bush)		
Oct				
Nov.				

### 3.13 VEGETABLE PRODUCTION

The Prices paid to growers by Christchurch Markets in 1980 are as follows:

	Asparagus (per kg)	Beans	Beans (Broad) (per ½ c/s)	Beetroot (per ½ c/s)
Dec 1979			\$1.00 - \$1.50	\$1.00 - \$1.20
Jan 1980			80¢ - \$1.00	
Feb				
Mar				
Apr		\$2.60		\$1.60 - \$2.00
May		(per ½ c/s)		\$2.00 - \$2.50
June		\$4.50 - \$5.00 (per 2 kg)		\$1.50
July				\$2.00
Aug				\$1.00
Sep				
Oct		\$3.00 (per kg)		
Nov.	\$2.00 - \$2.50	\$3.00 - \$4.00 (per 4 kg)	50¢ - \$1.00	\$3.00 - \$3.50
	Broccoli	Brussel Sprouts (per 7 kg)	Cabbage (per 8s)	Capsicum
Dec 1979	\$5.00 - \$7.00 (per 4 kg)		\$1.50 - \$2.50	
Jan 1980			\$1.20 - \$3.00	
Feb			\$1.00 - \$4.00	\$3.40 - \$4.00 (per 2 kg)

Mar	\$4.00 - \$5.10 (per 4 kg)	\$3.50 - \$4.00	\$3.00 - \$3.50	\$6.00 (per ½ c/s)
Apr	\$3.90 (per 5 kg)	\$3.00 - \$5.50	\$1.00 - \$1.50	\$7.00 - \$10.00 (per 2 kg)
May	\$6.50 - \$7.00 (per 5 kg)	\$3.50 - \$4.50	\$2.00 - \$3.70	\$6.00 (per 2½ kg)
June		\$4.50 - \$5.20	\$1.50 - \$2.20	\$24.00 (per c/s)
July	\$12.90 (per 4.5 kg)	\$6.10 - \$8.40	\$2.50 - \$4.10	\$22.00 (per c/s)
Aug	\$5.00 - \$8.00 (per 4 kg)	\$6.00 - \$10.30	\$4.40 - \$5.10	\$35.00 (per 5 kg)
Sep	\$4.00 - \$6.00 (per 4 kg)	\$6.00 - \$7.80	\$3.20 - \$5.10	
Oct	\$13.60 (per 4 kg)		\$3.10 - \$5.30	\$30.50 (per 2 kg0)
Nov	\$5.00 - \$8.00 (per 4 kg)		\$6.00 - \$8.50	
	<b>Carrots</b> (per 20 kg)	<b>Cauliflower</b> (per 8s)	<b>Celery</b>	<b>Cucumbers</b> (per ½ c/s)
Dec 1979	\$5.00 - \$7.00	\$4.00 - \$6.00	\$10.00 (per 12s)	\$2.00 - \$3.00
Jan 1980	\$2.00 - \$3.60	\$2.50 - \$4.00	\$2.00 - \$4.00 (per 12s)	.50¢ - \$2.50
Feb	\$4.00	\$5.00 - \$6.00	\$3.00 - \$4.00 (per 12s)	.60¢ - \$2.50
Mar	\$3.50 - \$4.00	\$3.50 - \$6.00		.50¢ - \$2.00
Apr	\$2.00 - \$3.50	\$1.00 - \$2.40	.80¢ - \$1.00 (per c/s)	\$2.50 - \$4.00
May	\$2.50	\$1.20 - \$2.50	\$4.50 - \$5.00 (per c/s)	\$10.50 (per c/s)
June	\$3.00 - \$4.00	\$4.00 - \$5.00	\$4.00 - \$5.00 (per c/s)	\$1.50 - \$3.00
July	\$2.90 - \$3.50	\$7.60 - \$10.60	\$7.80 - \$8.00 (per c/s)	\$9.00 - \$11.70 (per 9s)
Aug	\$2.50	\$4.00 - \$8.80	\$5.00 - \$8.40	\$9.00 (per 6s)
Sep	\$4.00 - \$4.50	\$2.20 - \$4.30	\$7.00 - \$8.00 (per c/s)	\$6.00 - \$6.50 (per ¼ c/s)
Oct	\$5.00 - \$9.00	\$3.20 - \$6.50	\$8.00 - \$9.30 (per c/s)	\$6.00 - \$8.00 (per 6s)
Nov	\$8.00 - 15.00	\$2.50 - \$9.00	\$10.00 - \$19.00 (per c/s)	\$3.60 - \$6.00
	<b>Egg Plant</b>	<b>Garlic</b> (per kg)	<b>Kumera</b> (per c/s)	<b>Leeks</b>
Dec 1979	\$8.00 (per ½ c/s)	\$1.00 - \$2.00	\$10.00 - \$12.00	
Jan 1980				
Feb	\$12.00 (per c/s)	\$2.00 - \$2.50		
Mar	\$ 9.00 (per bushel)	\$1.50		
Apr				\$3.00 - \$5.50 (per 10s)

June		\$1.20 - \$2.00	\$16.00 - \$20.00	\$2.60 - \$5.00 (per c/s)
July				
Aug		\$1.50	\$15.00	\$4.00 - \$8.60 (per c/s)
Sep			\$30.00	\$3.50 - \$5.00 (per c/s)
Oct		50¢ - \$1.00	\$20.00 - \$26.00	\$5.90 - \$7.00 (per c/s)
Nov	\$15.00 (per 10s)	50¢ - \$2.00	\$26.00 - \$27.00	\$3.20 - \$5.20 (per c/s)
	<b>Lettuce</b> (per 8s)	<b>Onions</b> (per 20 kg)	<b>Parsnip</b> (per 18 kg)	<b>Peas</b> (per c/s)
Dec 1979	\$1.00 - \$2.00	\$4.00 - \$5.00		\$4.00 - \$6.00
Jan 1980	\$1.50 - \$2.00	\$3.00 - \$5.50		
Feb	\$1.00 - \$1.50	\$3.00 - \$5.00		
Mar	\$1.50 - \$3.10	\$1.50 - \$4.00		
Apr	\$1.50 - \$3.00	\$2.80 - \$4.00	\$2.50 - \$3.00	
May	\$1.60 - \$2.50	\$4.00 - \$4.50	\$1.50 - \$2.50	
June	\$1.50 - \$2.50	\$2.50 - \$4.00	\$3.00 - \$3.50	
July	\$10.00	\$3.80 - \$4.00	\$2.50 - \$4.30	
Aug	\$7.20 - \$9.50	\$3.50 - \$5.00	\$3.50 - \$4.50	
Sep	\$6.00 - \$8.10	\$5.00 - \$8.00	\$3.00 - \$4.00	
Oct	\$2.00 - \$4.10	\$8.00	\$4.00 - \$5.00	
Nov.	\$1.00 - \$3.20	\$10.00 - \$12.50	\$2.50 - \$3.00	
	<b>Potatoes</b> (per 20 kg)	<b>Pumpkins</b> (per 20 kg)	<b>Radish</b> (per doz. bunch)	<b>Rhubarb</b>
Dec 1979	\$3.00 - \$5.00 (per s/bag)	\$5.00 - \$8.00 (per c/s)	\$1.00 - \$1.50	\$3.50 - \$5.00 (per c/s)
Jan 1980	\$2.50 - \$3.00	\$10.00	\$2.50 - \$4.00	\$2.50 - \$3.50 (per ½ c/s)
Feb	\$3.00 - \$4.00			\$4.00 - \$4.50 (per c/s)
Mar	\$2.80 - \$3.00			
Apr	\$2.80 - \$4.50			
May		\$3.00 - \$4.50	\$2.50	
June	\$2.50 - \$4.00		\$2.00 - \$3.00	
July	\$2.00 - \$4.50	\$8.00	\$3.40 - \$3.50	
Aug		\$12.00	\$4.00 - \$4.50	
Sep	\$2.00 - \$4.00		\$5.00 - \$5.50	
Oct	\$2.80 - \$3.20			
Nov	\$8.50 - \$10.50	\$15.00 - \$24.00	\$2.50 - \$4.00	\$5.00 (per ½ c/s)
	<b>Silverbeet</b> (per c/s)	<b>Swedes</b> (per 20 kg)	<b>Sweetcorn</b>	<b>Tomatoes</b> (per 4.5 kg)
Dec 1979	\$2.50 - \$3.50 (per A c/s)			\$4.00 - \$8.00
Jan 1980	\$1.00 - \$2.00	\$2.50 - \$3.00		\$3.00 - \$6.00
Feb	\$2.00 - \$3.00		\$2.00 - \$2.50 (per tray)	\$2.50 - \$4.00
Mar	50¢ - \$1.00		\$4.50 - \$5.00 (per bag)	\$3.00 - \$4.00
Apr	\$1.00 - \$1.50	\$4.50		\$5.00 - \$6.50
May	\$3.20 - \$3.50	\$4.00 - \$4.50		\$8.00 - \$10.00
June	\$2.00 - \$2.80	\$3.00 - \$4.00		\$7.00 - \$10.00
July	\$3.90	\$2.50 - \$3.00		\$10.00 - \$13.00
Aug	\$7.00 - \$9.20	\$3.00 - \$3.50		\$19.00 - \$20.00

Sep	\$5.60 - \$6.20	\$13.00	\$17.00 - \$20.00 (per 7 kg)
Oct	\$3.20 - \$4.50	\$3.00	\$23.00 - \$35.00 (per 7 kg)
Nov.	\$4.00 - \$5.50		\$4.00 - \$17.00
	<b>Spinach</b> (per c/s)	<b>Turnips</b> (per ½ c/s)	
Dec 1979			
Jan 1980			
Feb	\$2.50 - \$3.00	\$6.00 - \$7.00	
Mar	\$2.50 - \$3.00	\$7.00	
Apr	\$1.50 - \$2.00	\$2.50 (per c/s)	
May	\$2.50 - \$2.70		
June		\$2.50 - \$2.30	
July		\$2.60	
Aug	\$5.00 - \$6.00		
Sep	\$5.70 - \$6.20		
Oct	\$4.00 - \$6.60	\$5.50	
Nov.	\$3.00 - \$4.00	\$2.00	

## SECTION 4

### FARM EXPENDITURE





## 4 FARM EXPENDITURE

### 4.1 WAGES

#### 4.1.1 Dairy Farm Workers

(i) Permanent	Per Week
Under 17 years of age	\$ 82.00
17 years and under 18	\$ 96.15
18 years and under 19	\$110.28
19 years and under 20	\$124.42
20 years and over	\$134.31

The above figures are per week and found minimum rates of pay.

The ordinary hours of work shall be arranged between the employer and the employee, but shall not exceed 108 hours per fortnight. Within every 14 days, one day shall be free of work and 3 days shall be worked as part days. Free time should coincide where possible with weekends. A full day shall not exceed 9 hours and a part day shall not exceed 6 hours.

No employer shall charge any employee for board and lodging. Where the employer does not provide board or lodging, the employee shall be paid an extra \$25.00 per week.

Thus, the adult weekly wage becomes \$159.31.

$$(\$134.31 + \$25.00 = \$159.31)$$

In the case where the employee is provided with a house only, the employee shall be paid an extra \$8.36 per week.

Thus, the adult weekly wage becomes \$142.67

$$(\$134.31 + \$8.36 = \$142.67)$$

The minimum hourly rate to be paid to permanent workers shall be 1/50th of the weekly rate.

#### (ii) Casual

The casual rate for a person not guaranteed a 40 hour week shall be 1/40th of the permanent weekly rate for a permanent worker of the same age.

- (iii) Every worker shall, after each year's continuous employment by one employer, be entitled to 3 weeks paid holiday consisting of 14 days taken consecutively and 7 days which may be taken for one or more days or part of a day.

After 15 years continuous service, a special holiday of 2 weeks may be taken.

After 25 years continuous service, a special holiday of 3 weeks may be taken.

After 35 years continuous service, a special holiday of 4 weeks may be taken.

After 40 years continuous service, a special holiday of 5 weeks may be taken.

- (iv) Workers requesting to attend Lands Settlement courses are allowed from 3 weeks leave without pay per annum to a maximum of 6 weeks, provided normal farming operations are not affected.

- (v) Training Incentives

Workers are entitled to additional payments if they produce suitable evidence of qualifications.

1st qualifying T.C.B. in farming \$1.20 per week

2nd qualifying T.C.B. in farming \$2.09 per week

Trade Certificate in farming \$2.69 per week

Trade Certificate in farm management \$4.78 per week

N.B. These allowances do not accumulate.

- (vi) Wet Weather Gear Allowances

For the purpose of purchasing and maintenance of adequate wet weather gear, an employee shall be paid an additional allowance of \$2.20 per week.

- (vii) Vehicle Use

Where a worker uses his/her own motor vehicle on the employer's business, he/she shall be reimbursed an allowance at the rate of not less than 21 cents per kilometre. In the case of a motor cycle being used, the reimbursement shall be not less than 7.5 cents per kilometre.

#### 4.1.2 Other Farm Workers

- (i) Permanent

	Per Week
Under 17 years of age	\$ 76.84
17 years and under 18	\$ 89.08
18 years and under 19	\$104.63
19 years and under 20	\$115.93
20 years and over	\$125.83

The above figures are per week and found minimum rates of pay.

Where the employer does not provide board and lodging the employee shall be paid an extra \$25.00 per week.

Thus, the adult weekly wage becomes \$150.83.

$(\$125.83 + \$25.00 = \$150.83)$

In the case where the employee is provided with a house only, the employee shall be paid an extra \$10.45 per week.

Thus, the adult weekly wage becomes \$136.28

$(\$125.83 + \$10.45 = \$136.28)$

The minimum hourly rate to be paid to permanent workers shall be 1/45<sup>th</sup> of the weekly rate.

(ii) Casual

The rates of pay for casual workers are as follows:

	Per hour Without rations	Per hour With rations
Under 18 years of age	\$3.03	\$2.63
18 years and over	\$3.70	\$3.30

(iii) Training Incentives

Workers are entitled to additional payments if they produce suitable evidence of qualifications.

1st qualifying T.C.B. in farming	\$1.20	per week
2nd qualifying T.C.B. in farming	\$2.09	per week
Trade Certificate in farming	\$2.69	per week
Trade Certificate in farm management	\$4.78	per week

N.B. The above amounts do not accumulate.

(iv) Wet Weather Gear Allowances

For the purchases and maintenance of adequate wet weather gear, an employee shall be paid an additional allowance of \$2.20 per week.

(v) Travel Allowances

An employee shall be reimbursed 7.5 cents per kilometre travelled on his/her employer's business.

This information was taken from the Agricultural Tribunal of New Zealand provided by the President of the New Zealand Farm Workers Association, Mr D. Hedderwick, Mendip Hills Station, Parnassus.

### 4.1.3 Shearers' and Shedhands' Wages 1980-81

(including General Increase of 4%, made effective from the 1st August 1980).

(i) Shearers Rates (minimum, with rations)

Machine shearing base rate (sheep)	\$40.14 per 100
Machine shearing base rate (lambs)	\$36.36 per 100
Machine shearing with cover comb	\$45.61 per 100
Blade shearers	\$60.32 per 100

All sheep with metal ear tags, other than stud sheep, are to be shorn at a premium of \$2.08 per 100.

The shearing rate for stud sheep, stud lambs and hogget rams is 1.5 times the base rate i.e. \$60.62 per 100.

The shearing rate for other rams is double base rate, i.e. \$80.82 per 100.

Double-fleeced sheep and rams castrated after maturity are shorn at 1.5 times the base rate.

An allowance of \$3.31 per day *in lieu* of rations and accommodation is to be paid to a shearer living away from the farm or contractor's quarters.

A shearer shall be reimbursed \$19.60 cents /kilometre travelled if he provides his own transport on his employer's request.

Shearers who use their own hand piece must be paid a hand piece allowance of 68 cents per 100 sheep shorn.

(ii) Crutching Rates (minimum)

	per 100
Full belly, full crutch, flank and eye wig	\$20.20
Full belly, full crutch, eye wig	\$18.17
Full belly, tail crutch, eye wig	\$14.82
Full belly, full crutch	\$17.10
Full belly, tail crutch	\$13.73
Half belly, full crutch, flank and eye wig	\$18.17
Half belly, full crutch, eye wig	\$16.16
Half belly, full crutch	\$15.04
Full crutch, eye wig – sheep	\$13.46
– lamb	\$12.12
Full crutch – sheep	\$12.38
– lamb	\$11.14
Tail crutch, eye wig – sheep	\$11.16
– lamb	\$10.05
Tail crutch – sheep	\$10.09
– lamb	\$ 9.08
Eye wig only	\$10.09

The same allowances *in lieu* of rations and accommodation, and for travel as for shearers apply for crutchers.

- (iii) Shedhands, Pressers, Daggers and Cooks' Rates (minimum)
- Shedhands with no previous experience in the shearing Industry shall be paid not less than \$3.17 per hour.
- Shedhands with a fortnight or more experience, shall be paid not less than \$3.64 per hour.
- Shedhands holding a wool handling certificate shall have their hourly rate increased by 20 cents.
- Daggers shall be paid not less than \$3.84 per hour, or \$11.88 per 100.
- Pressers shall be paid not less than \$3.84 per hour.
- For cooking for 12 persons and under, cooks shall be paid not less than \$28.65 per day. For over 12 persons the rate is increased by \$0.436 per person per day.
- The same allowances *in lieu* of rations and accommodation and for travel as for shearers apply to these workers.
- All workers reporting to the shed shall be paid a minimum of 4 hours pay, except where more than 4 hours are worked. This is applicable only if normal shearing commences and the sheep are not deemed too wet to shear or crutch. If the sheep are deemed to be too wet by secret ballot, a minimum payment of 2 hours will be paid except where the gang is living on the farm, and, having elected to begin work late in the day, less than 4 working hours remain.

#### 4.1.4 Market Garden Workers

(i) Permanent Workers	Per Week	Per Hour
Foremen/Forewomen	\$156.60	\$3.94
Leading Hands	\$144.00	\$3.60
Adults 20 years & over 19	\$138.40	\$3.46
Minors 19 years & under 20	\$117.60	\$2.94
18 years & under 19	\$ 99.60	\$2.49
17 years & under 18	\$ 84.80	\$2.12
16 years & under 17	\$ 72.40	\$1.81
Under 16 years	\$ 61.20	\$1.53

When piecework is worked, rates will be such as to enable an ordinary capable worker to earn 110% of the above rates. Hours of work shall not exceed 40 per week, or eight per day to be worked within 5½ days Monday to Saturday noon inclusive. Extra hours worked are to be paid at 1.5 times normal pay for the first 3 hours and double time rates thereafter. Work after Saturday noon and on Sundays shall be paid for at double rates. After one year's continuous service as an adult worker with the same employer, a service allowance of 6 cents/hour shall be paid. After 2 years service this allowance shall be raised to 12 cents/hour. After 3 years service, this allowance shall be raised to 18 cents/hour.

(ii) Casual Workers	Per Hour
Adults	\$3.22
Minors 19 years & under 20	\$2.74
18 years & under 19	\$2.33
17 years & under 18	\$1.98
16 years & under 17	\$1.69
Under 16 years	\$1.44

Piecework rates as above in (i)

Workers who work only on Saturdays shall be paid at ordinary rates for first 8 hours, 1.5 times ordinary rate for next 3 hours and at double rates thereafter. Workers engaged on a Saturday who have not worked 36 hours in the preceding five days, shall be paid at ordinary rates for the first 4 hours, 1.25 times ordinary rates for the next four hours, at 1.5 times for the next 3 hours and at double rates thereafter.

Work done on Sunday or on statutory holidays shall be paid for at double rates.

(iii) Harvesters	Per Hour
Adults	\$3.36
Minors 19 years & under 20	\$2.86
18 years & under 19	\$2.43
17 years & under 18	\$2.07
16 years & under 17	\$1.77
15 years & under 16	\$1.49
14 years & under 15	\$1.27
13 years & under 14	\$1.09
Under 13 years	\$0.92

Piecework rates as above in (i)

Overtime shall be paid at 1.5 times ordinary rates for the first 4 hours and double rates thereafter for time worked in excess of:

- 8 hours in any day
- 40 hours in any week
- 5 days in any week

Time worked on Sundays is to be paid at ordinary rates unless the worker has completed 32 ordinary hours during the preceding six days in which case time worked shall be paid for at 1.5 time rates.

Workers who are required to work over time in excess of one hour beyond normal stopping time, shall be paid a meal allowance of \$3.08 or be provided with a meal of equivalent value.

## 4.1.5 Orchard and Vineyard Workers (As at 31 December 1980)

- (i) Permanent Workers  
Minimum rates of wages:

	Per week
Managers	\$148.62
Foremen (persons responsible to the workers for the day to day running of establishment)	\$139.53
Adult workers 20 years and over	\$127.59
Junior workers 19 years and under 20	\$121.21
18 years and under 19	\$108.44
17 years and under 18	\$ 95.70
16 years and under 17	\$ 82.94
Under 16 years	\$ 70.18

Service Payment - After one year's continuous service as an adult worker with the same employer, a worker shall be paid a service allowance of 5.0 cents per hour. After 2 years this is increased to 10 cents per hour. After three years this is increased to 15.0 cents per hour.

- (ii) Casual Workers  
Minimum rates of wages per hour

	Grade 1	Grade 2
Adult workers 20 years and over	\$3.02	\$2.93
Junior workers 19 years and under 20	\$2.87	\$2.78
18 years and under 19	\$2.56	\$2.49
17 years and under 18	\$2.26	\$2.20
16 years and under 17	\$1.96	\$1.90
Under 16 years	\$1.66	\$1.61

- (iii) Overtime

For permanent workers, time worked in excess of 8 hours in any one day or 40 hours in any one week, and for casual workers all time worked in excess of 10 hours per day or 44 ordinary hours per week, shall be overtime, and shall be paid at 1½ times for the first three hours and at double time thereafter.

For permanent workers, all work performed on Sundays is paid at double time.

#### 4.1.6 Nurserymen and Gardeners (as from the 1st August 1980)

Minimum rates of wages

- |   | per week |
|---|----------|
| (i) Nursery technicians   | \$178.50 |
| (ii) Grade 1 Workers:   | \$167.52 |
| <ul style="list-style-type: none"><li>- Landscape or garden adviser, or hire plant adviser</li><li>- Propagation assistant, class (a)</li><li>- Florist</li><li>- Journeyman/nurseryman</li></ul>   |          |
| (iii) Grade II Workers  | \$153.21 |
| <ul style="list-style-type: none"><li>- Agricultural machine operator, class (b)</li><li>- Landscape assistant</li><li>- Nurseryman assistant, class (a)</li><li>- Packer, class (a)</li><li>- Garden centre assistant, class (a)</li><li>- Senior Floral worker</li><li>- School or recreational groundsman</li><li>- Hire plant operative</li></ul>   |          |
| (iv) Grade III Workers:   | \$144.04 |
| <ul style="list-style-type: none"><li>- Agricultural machine operator, class (b)</li><li>- Nursery assistant, class (b)</li><li>- Propagation assistant, class (b)</li><li>- School and recreational groundsman's assistant</li><li>- Garden centre assistant class (b)</li><li>- Senior floral workers assistant</li><li>- Grafter</li><li>- Budder</li><li>- Hire plants assistant, class (a)</li></ul> |          |
| (v) Grade IV Workers:   | \$114.95 |
| <ul style="list-style-type: none"><li>- Nursery assistant, class (c)</li><li>- Propagation assistant, class (c)</li><li>- Potter</li><li>- Floral worker</li><li>- Packer</li><li>- Hire plant assistant class (b)</li><li>- Workers not elsewhere specified.</li></ul>   |          |

(vi) Extra rates for Qualifications Held.

A nurseryman or gardener holding a trade certificate in Horticulture or gardening shall be paid 16.1 cents extra per hour.



Workers who have completed their apprenticeship shall be paid an addition 13.5 cents per hour. Extra rates for the holder of certificates issued under the R.N.Z.I.H. Act 1953 are:

	per week
Junior	\$2.65
Intermediate or National Certificate	\$3.98
Full Diploma	\$3.98
Holders of the Diploma of Horticulture (Massey or Lincoln) shall be paid an extra \$5.30 per week.	

(vii) A foreman or leading hand in charge of 3 or more workers shall be paid \$5.30 per week extra.

(viii) Service allowances

For continuous service with the same employer exceeding:

one year	\$3.20 per week
two years	\$6.30 per week
four years	\$9.05 per week

N.B. This award only operates throughout the Northern, Taranaki, Wellington, Marlborough, Nelson, Westland, Canterbury and Otago Industrial Districts.

## 4.2 ANIMAL HEALTH

### 4.2.1 Dog Registration and Hydatid Control Fees.

These vary depending on the Local Body involved. However, a typical fee would be \$20.00 per dog or bitch over 3 months of age. Fees are usually reduced to \$15.00 if paid before 1 May.

### 4.2.2 Contract Dipping (1979-1980 prices)

(i) Sheep Dipping –

Plunge: total cost, including materials –

1 to 500	27.0 cents per sheep
500 to 1 050	25.0 cents per sheep
1 050 to 2 050	23.0 cents per sheep
2 050 to 4 000	22.0 cents per sheep
Over 4 000	21.0 cents per sheep

## Mobile Shower:

The basic cost is \$7.00 per 100 head, with materials extra. The length of wool on the sheep affects the amount of dip chemical required. The total price ranges from \$14.00 - \$18.50 per 100 head.

## 4.2.3 Sheep and Cattle Dipping Guide

### (i) Sheep

Cost per 100 based on 2 litres of wash per head (these costs can vary depending on wool length).

Parasite	Dip to use	Price	Size	Method of Application	Dilution	Average cost per 100 Sheep
Lice	Trigon D.F.F.	\$426.00	10 l	Plunge	1:2000	\$4.26
Ked					1:4000	\$2.13
Fly				Shower	1:2000	\$4.26
					1:4000	\$2.13
				C.R. Shower	1:1280	\$7.00
		1:2560	\$3.50			
Lice	Asuntol	\$294.12	20 l	Plunge	1:2000	\$1.48
Ked						
Fly				C.R. Shower	1:2000	\$1.48
Lice	Diaz-O-Spray D.F.F.	\$423.00	10 l	Plunge	1:4000	\$2.12
Ked					1:8000	\$1.06
Blowfly				Shower	1:4000	\$2.12
					1:8000	\$1.06
				C.R. Shower	1:2000	\$4.23
		1:4000	\$2.12			
Lice	Numix	\$12.55	5 kg	Plunge	1kg:1000 l	\$3.58
Ked					Shower	1kg:1000 l
				C.R. Shower	1kg: 750 l	\$4.48

(C.R. shower denotes continuous replenishment).

From the above guide it can be seen that cost per 100 head on average varies from \$1.06 to \$7.00 with an average overall cost of \$3.50 per 100 head.

### (ii) Cattle

MSD Ridlice 2 litres \$95.38.

51 - 100 kg	666 Doses of 3 mls per head	14.3
101 - 150 kg	444 Doses of 4.5 mls per head	21.4
151 - 200 kg	333 Doses of 6 mls per head	28.6
201 - 250 kg	266 Doses of 7.5 mls per head	35.8
251 - 300 kg	222 Doses of 9 mls per head	42.9
301 - 350 kg	190 Doses of 10.5 mls per head	50.2
351 - 400 kg	166 Doses of 12 mls per head	57.4
401 - 450 kg	148 Doses of 13.5 mls per head	64.4
451 - 500 kg	133 Doses of 15 mls per head	71.7

## 4.2.4 Sheep and Cattle Dips, Sprays & Dressings

Trigon D.F.F.	6x500 ml	\$127.80
Diaz-O-Spray D.F.F.	6x500 ml	\$126.88
Supreme D.F.F.	1 x 500 ml	\$ 26.79
Bacteriostat Powder	600g	\$ 6.10
Diaz-O-Tas	25 kg	\$ 46.10
Asuntol Powder	4x1 kg	\$ 79.20
Asuntol Liquid	200ml	\$ 4.46
	5 litre	\$ 73.53
Celbar 10%	100 ml	\$ 12.00
Diazinon 40%	5 litre	\$ 59.79
	20 litre	\$238.83
Lucijet	1 litre	\$ 25.00
Mansonil	1 kg	\$ 26.90
Bash Sheep Pour-on	2.5 litre	\$ 52.58
	10 litre	\$200.28
Crumate Pour-on	2 litre	\$ 16.24
	5 litre	\$ 39.15
Rolac Pour-on	5 litre	\$ 10.45
	20 litre	\$ 39.20
Dursban 10E	2 litre	\$ 31.58
	5 litre	\$ 78.10
Entoban 40	5 litre	\$ 68.55
	20 litre	\$266.20
Ridlice (cattle)	2 litre	\$ 95.38
	6x500 ml	\$153.00
Cythion (cattle)	5 litre	\$ 21.45
	20 litre	\$ 83.02
Warbex (cattle)	1 litre	\$ 15.60
	5 litre	\$ 70.00
Tiguvon Pour-on	5 litre	\$ 13.50
Tiguvon Spot-on	500 ml	\$ 13.50
	2.5 litre	\$ 60.75
Defiance Blowfly Dressing	5 litre	\$ 14.25
Ciodrin Animal Spray	6x0.5 litre	\$ 36.30
Ectokil Cattle Spray	5 litre	\$ 26.50
Lypor	2 litre	\$ 55.50
	5 litre	\$104.00
Paraban	5 litre	\$ 53.93
	20 litre	\$203.08
Mange and Lice Dressing	2 kg	\$ 9.05

## 4.2.5 Sheep and Cattle Drenching Guide

### (i) Sheep Drenching (Cost in cents per dose)

#### Nilverm

Type of Animal	Weight Range	Dose Rate	Pack Size & Cost of Pack			
			45 l	24 l	12 l	5 l
Sheep	up to 22.5kg	4 ml	\$560.19	\$311.66	\$158.87	\$71.28
	22.5 - 34kg	6 ml	4.98	5.19	5.30	5.70
	34kg and over	8 ml	7.47	7.79	7.94	8.55
			9.96	10.39	10.59	11.40

#### Panacur

Type of Animal	Weight Range	Dose Rate	Pack Size & Cost of Pack		
			30 l	20 l	5 l
			\$360.00	\$240.00	\$63.15
Lambs	15kg	3 ml	3.60	3.60	3.79
Lambs & Hoggets	21 - 30kg	6 ml	7.20	7.20	7.58
	30 - 40kg	8 ml	8.40	9.60	10.10
Sheep	40kg and over	9 ml	10.80	10.80	11.37

#### Thibenzole

Type of Animal	Weight Range	Dose Rate	Pack Size & Cost of Pack			
			30 l	20 l	10 l	5 l
			\$339.00	\$240.85	\$127.85	\$66.20
Lamb	Up to 20kg	4 ml	4.5	4.8	5.1	5.3
Lambs & Hoggets	21 - 30kg	6 ml	6.7	7.2	7.6	7.9
Hoggets	31 - 40kg	8 ml	9.0	9.6	10.2	10.6
Sheep	over 41kg	10 ml	11.3	12.0	12.7	13.2
Rams	-	15ml	16.9	18.1	19.2	19.8

#### Rintal – 2½% suspension

Type of Animal	Weight Range	Dose Rate	Pack Size & Cost of Pack	
			20 l	2.5 l
			\$200.00	\$30.00
Lambs	Up to 25 kg	5 ml	5.00	6.00
Hoggets	25 to 35kg	7 ml	7.00	8.40
Adults	over 35 kg	9 ml	9.00	10.80

### (ii) Cattle Drenching (cost in cents per dose)

#### Nilverm

Weight Range	Dose Rate	Pack Size & Cost of Pack			
		45 l	24 l	12 l	5 l
		\$560.19	\$311.66	\$158.87	\$71.28
Up to 100kg	20 ml	24.90	26.00	26.50	28.50
100 to 200kg	40 ml	49.80	51.90	53.00	57.00
200 to 300kg	60 ml	74.70	77.90	79.40	85.50
over 300kg	80 ml	99.60	103.90	105.90	114.05

## Thibenzole

Weight Range	Dose Rate	Pack Size & Cost of Pack			
		30 l	20 l	10 l	5 l
Up to 50 kg	17ml	\$339.00	\$240.85	\$127.90	\$66.20
51-75 kg	25ml	19.2	20.4	21.7	22.5
75 - 100kg	35ml	28.2	30.1	31.9	33.1
101 - 125 kg	45ml	39.5	42.1	44.8	46.6
126-150kg	55ml	50.9	54.2	57.6	59.6
151 - 175kg	65ml	62.2	66.3	70.6	73.5
176 - 200kg	75ml	73.5	78.4	83.5	87.1
201 - 225kg	85ml	84.7	90.5	96.1	100.3
226 - 250kg	95ml	96.3	102.4	109.3	114.1
251 - 275kg	105ml	107.6	114.6	121.8	127.3
276 - 300kg	115ml	118.9	126.7	134.6	140.8
		130.3	139.2	148.7	153.9

## Noviben Paste

10 cartridge pack \$193.95 (\$19.40 per cartridge)

20 cartridge pack \$384.10 (\$19.21 per cartridge)

	Doses per cartridge	Cost per dose (cents)
Up to 100 kg	50	39.5
100 to 150 kg	33	59.9
150 to 200 kg	25	79.1
200 to 250 kg	20	98.9
250 to 300 kg	16	123.6
300 to 350 kg	14	141.2
350 to 400 kg	12	164.8

## Rintal 10% suspension

	Dose rate	Cost per dose (cents)
Up to 40 kg	3 ml	11.46
40 to 100 kg	7.5 ml	28.65
100 to 160 kg	12 ml	45.84
160 to 200 kg	15 ml	57.30
200 to 300 kg	22.5 ml	85.95

## 4.2.6 Bloat Control

\*Prices supplied by Tai Tapu Central Co-op Dairy Company Ltd.

Product	Pack Size	Price
Blogon	20 litre	\$ 55.69
	200 litre	\$470.48
No Bloat (N.I.)	20 litre	\$ 34.39
	200 litre	\$288.14
(S.I.)	20 litre	\$ 38.02
	200 litre	\$303.14
Blokure	20 litre	\$ 53.02
	200 litre	\$467.01
Bloatas	20 litre	\$ 86.13
	200 litre	P.O.A.
Bloatenz Two in One	20 litre	\$ 68.77
	200 litre	\$531.97
Bloatenz Premix Drench	200 litre	\$688.69

## 4.2.7 Facial Eczema Control

Product	Pack Size	Price	Price/Litre
Sporex	5 litre	\$ 69.25	\$13.85
	20 litre	\$274.60	\$13.73

## 4.2.8 Vaccines

Vaccine	Size of Pack	Cost	Dose Rate	Cost per Head (cents)
Pulpy Kidney	100 ml	\$ 3.35	Sheep & lambs 2cc.	6.70
	200 ml	\$ 4.25		4.25
	500 ml	\$10.15		4.06
	1000 ml	\$18.25		3.65
PK-Tetanus	100 ml	\$ 4.45	Sheep & lambs 2cc.	8.90
	200 ml	\$ 7.00		7.00
	500 ml	\$16.00		6.40
Black leg-Malignant Oedema	100 ml	\$ 3.10	Sheep & Lambs 2cc	6.20
	200 ml	\$ 5.85		5.85
	500 ml	\$14.25		5.70
Triple (Pk, Bl, Mo)	100 ml	\$ 4.90	Sheep & Lambs 2cc	9.80
	200 ml	\$ 9.35		9.35
	500 ml	\$22.15		8.86
	1000 ml	\$39.85		7.97
Multine 4 (Pk, Bl, Tet, Mo)	100 ml	\$ 5.25	Sheep & lambs 2cc	10.50
	200 ml	\$10.15		10.15
	500 ml	\$24.00		9.60
	1000 ml	\$43.20		8.64
Multine 5 (Pk, Bl, Tet, Mo, Black Disease)	100ml	\$ 6.00		12.00
	200ml	\$11.75		11.75
	500ml	\$26.65		10.66
	1000ml	\$48.00		9.60
Scabine	150dose	\$ 2.64		1.76
Foot Rot	100dose	\$17.36	Hoggets	17.36
Scabby Mouth	125dose	\$ 2.16	Lambs & Hoggets	1.73
	250 dose	\$ 4.12		1.65

## 4.2.9 Penicillin

	Size of Pack	Price \$
Durapen 3 in 1	20 tubes	12.10
Procal 100	20 tubes	6.50
Procal 500	20 tubes	8.30
	40 tubes	15.90
Procal 1500	10 tubes	8.10
Penicillin Udder Injection 50	12 tubes	1.80
P.U.I. 100	20 tubes	5.15
	40 tubes	9.40
Adpen 100	20 tubes	7.10
Penetha-Pen 100	20 tubes	5.90

## 4.2.10 Disinfectants

Hibitane	25 l	\$ 45.65
	5 l	\$ 9.85
Hibitane MCC Mastitis Control and	25 l	\$114.50
Hibitane MCC Plus (with Glycerine)	5 l	\$ 26.24
Syvel	200 l	\$336.00
	5 l	\$ 11.35
Anisep	20 l	\$ 48.00
	5 l	\$ 12.90

## 4.2.11 Metabolics

ICI – Tasman Borophos	450 ml	\$ 4.33
Calcium Borogluconate	450 ml	\$ 2.83
Boromag Plus	450 ml	\$ 3.57
	350 ml	\$ 1.93
Sulphamag Injectable	230 ml	\$ 4.33
Ketol (for Sleepy Sickness & Ketosis)	350ml	\$ 1.20
	5 litre	\$ 22.18
	20 litre	\$ 84.34

## 4.2.12 Poultry Remedies

Antibiotics	Tylan 100	10 kg	\$ 211.00
	Tylan injectable	500 ml	\$ 5.04
	(powder)		
	Tylan soluble	100 gm	\$ 24.90
Anticoccidial	Elancoban	20 kg	\$ P.O.A.
Anthelmintic	Hygromix – 8	22.68 kg	\$ 129.00

## 4.2.13 Stock Identification

### (i) Eartags

	Delta Plastics Ltd	
	Blank	Stamped
	¢ each	¢ each
Small – male (round)	11	15
– female (round)	8	-
Medium – male	17	24
– female	14	21
Large – male	24	32
– female	21	29
Maxi (female)	29	38
Hi-Vu	45	55

All these types can be combined for use on sheep and pigs, and for beef and dairy cattle. All tags are available stamped from 1 - 999, individually or in sequence. Special stampings – names, codes, brands, logos, and 4 or more digits are also available. Colours are: orange, yellow, white, green, red, light blue, purple and black. Tag pen \$2.60 in black only. Applicator \$9.95. Spare applicator pins \$0.80 each. pins \$0.80 each.

‘Kenmor’ Nylon Mainspan Enterprises

One-piece self piercing eartags available in 9 colours – red, blue, yellow, green, orange, purple, white, brown and black. Up to 18 letters, and numerals (incl.spaces) available.

Tags	\$ 8.12 per 100
Stamping – repetitive or consecutive numbers	\$13.12 per 100
– name and consecutive numbers	\$15.64 per 100
Applicator pliers	\$8.24

‘Farm-Acy’

Brass eartags stamped with year date, consecutive numbers and station/stud name.

stamped	\$10.00 per 100
stamped, nickel plated	\$13.00 per 100

Ear punch	\$9.00
Tag Closing pliers	\$2.90

Aluminium ‘Kurl-lock’ eartags stamped with prefix or name to 12 letters or figures, and year date and consecutive numbers to 9999.

stamped	\$8.00 per 100
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Applicators	\$8.50
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(ii) Brands and Tattoos

‘Farm-Acy’ stainless Steel Fire Brands set 0-8	\$95.50
Tattoo Outfit - Basic outfit	\$30.65

(iii) Raddles and Markers

Ford’s Raddle (Blue, Red, Green Yellow, Black) each	\$0.50
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‘Sprayline’ Aerosol Markers (Red, Blue, Green Orange, Purple, Black, Yellow) – 400 gm	\$ 3.32
– 170 gm	\$ 2.25

‘Top-Mark’ Aerosol Markers (Purple, Red, Blue, Green, Yellow, Orange, Black) – 400 gm	\$ 3.73
– 170 gm	\$ 2.40

‘Mannings’ Aerosol stock-mark (red, orange, blue, green) 225 gm	\$2.50
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‘Mannings’ Aerosine (red, blue, green orange, purple) 142gm, each	\$185
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#### 4.2.14 Mating Management Aids

ICI – Tasman Heat Detection Tail Paint 1 litre	\$ 7.50
Ford’s Ram Harness	\$13.06
Fergus Ram Harness (Long Strap)	\$13.26
Matingmark Crayons (Red, Blue, Green, Yellow, Purple)	\$ 2.40



#### 4.2.15 Lambing and Calving Requisites

Maskit Aerosol	\$3.40
'Acceptron' Aerosol	\$4.00
Bay Lambing Instrument	\$3.45
'Lamb - Dry' lamb covers (roll of 100) twin marked (numbered 1 - 100; pk. of 4 rolls)	\$16.95 \$39.80
'Lambjel' Ewe Ointment (per tube)	\$2.35
'Lamblac' Ewe Milk Replacer 3 kg	\$10.80
Denkavit 20 kg	\$26.50
Ancalf	\$27.19
Anlamb	\$17.04
Monojet lamb feeders	\$1.60
lamb teats	\$1.00

#### 4.2.16 Miscellaneous Animal Health Equipment

'Farm-Acy' frustrators - curved	\$ 2.50
- calf	\$ 2.05
Rockgas Searo iron	\$ 60.48
'Farm-Acy' Daroux Emasculators	\$ 39.95
NZIG 'Jason' Lambtailer	\$ 59.50
with hoses, regulators and spanner	\$118.00
Hayes Lamb Tailing Iron	\$ 5.47
Rubber Docking Rings (per packet of 500)	\$ \$6.70
ICI - Tasman - P20 Drench Gun (Auto)	\$ 49.00
- P60 Drench Gun (Auto)	\$ 52.00
- P20 Injection Attachment	\$ 5.75
Flutter valve	\$ 1.54
MSD Cattle Gun 120 ml	\$ 28.00
MSD Paste Gun	\$ 19.76
MSD Sure-Shot Drench Gun 15 ml	\$ 40.00
Mannings Cattle Gun 56 ml	\$ 40.00
MSD Ridlice Applicator	\$ 36.00
Phillips Cattle Drencher	\$ 36.00
Bash Gun (Cooper colt)	\$ 56.25
Vaccinators ICI - Tasman P74 Auto	\$ 30.00
Vaxigun (ICI - Tasman) 4 mls	\$ 4.54
'Farm-Acy' Hoofcutters	\$ 38.20
True Freunde Footrot shears	\$ 14.10
'Farm-Acy' Calf dehorners	\$ 11.70

#### 4.2.17 Miscellaneous Animal Health Products

'Hornex' dehorning paste (per tube)		\$ 1.50
'Vigest' Predigested Tonic	2 litre	\$ 10.66
'Dexolyte' Enteritis & Diarrhoea	3 kg	\$ 10.98
Remedy		
Quixalud Scour Tablets	Pkts of 20	\$ 4.40
'Zawbolyte' Diarrhoea & Scours	1 kg	\$ 8.96
Remedy	20 x 30 g	\$ 10.53
'Vetadine' P.V.P. Iodine Spray	150 g	\$ 3.94
'Vetnuvan' aerosol flea & tick control	170 g	\$ 2.96
'Seleen' Suspension non-specific dermatoses control	125 ml	\$ 4.75
Copper Injection (Cattle)	20 Tubes	\$ 7.60
	40 Tubes	\$ 12.60
Flystrike Dressing (Aerosol can)		\$ 3.50
Formalin	20 litre	\$ 32.70
	200 litre	\$ 238.50
'Ban Mag'	500 ml	\$ 10.66
Fleaban	110 g	\$ 2.97
Flea powder	100 g	\$ 2.52
Mange and Lice dressing	2 kg	\$ 9.05
'Lypor'	5 litres	\$ 104.00
'Paraban'	20 litres	\$ 203.08
Parasite powder	450 g	\$ 2.25
Parasite Spray	50 ml	\$ 2.01
Nilverm Pig Wormer	5 kg	\$ 169.23
Equine Iron tonic	5 litres	\$ 14.60
Systemex	25 l	\$ 283.00
Dizotas	20 l	\$ 229.77
Combat	20 l	\$ 202.35
Footrite	5 l	\$ 25.56
Nutrimol	20 l	\$ 108.15

#### 4.2.18 Veterinary Club Membership

Veterinary club charges vary from club to club. A typical membership fee would be \$25.00 to \$30.00

Standard Visit Fee	Long visit	\$11.00
Short visit \$ 7.00	X-ray	\$12.50
Medium visit \$ 8.00	(additional plate	\$5.00)

Annual animal health expenditure is generally in the range of 60 to 75 cents per stock unit.

## 4.3 BREEDING EXPENSES

### 4.3.1 Artificial Breeding Fee (Canterbury)

For the 6 week group membership, the fee is \$30.00 plus \$5.98 per cow. The seventh week, if required, is at cost.

If a Herd Testing Membership fee is not applicable then the following charges apply.

Cow Numbers	Cost
5	\$ 59.90
10	\$ 89.80
20	\$149.60
30	\$209.40
40	\$269.20
50	\$329.00
60	\$388.80
70	\$448.60
80	\$508.40
90	\$568.20
100	\$628.00
110	\$687.80
120	\$747.60
130	\$807.40
140	\$867.20
150	\$927.00
160	\$986.80
170	\$1046.60
180	\$1106.40
190	\$1166.20
200	\$1226.00

Deduct \$30.00 from the above fees if Herd Testing is carried out. With the Premier Sire Service, 2 free returns with subsequent returns at \$2.50 each.

### 4.3.2 Herd Testing Charges

With monthly testing, all cows tested twice or more are charged for. With alternate monthly testing, charges will be assessed for each cow tested once or more.

Cow No.	Monthly	Alternate Monthly	Production Ranking Test
Basic Herd Fee	\$ 50.00	\$ 30.00	\$ 25.00
Minimum Charge	\$112.70	\$ 67.60	\$ 43.80
11 to 100	\$5.08 each	11 to 100 \$3.05 each	\$1.78 each
20	\$175.40	\$105.20	\$ 62.60
30	\$238.10	\$142.80	\$ 81.40
40	\$300.80	\$180.40	\$100.20
50	\$363.50	\$218.00	\$119.00
60	\$426.20	\$255.60	\$137.80
70	\$488.90	\$293.20	\$156.60
80	\$551.60	\$330.80	\$175.40
90	\$614.30	\$368.40	\$194.20
100	\$677.00	\$406.00	\$213.00
101 to 150	\$5.57 each	101 to 150 \$3.46 each	
110	\$734.70	\$440.60	\$231.80
120	\$792.40	\$475.20	\$250.60
130	\$850.10	\$509.80	\$269.40
140	\$907.80	\$544.40	\$288.20
149	\$965.50	\$579.00	\$307.00
150 onwards	\$5.77	150 onwards \$3.46 each	
150	\$1018.20	\$610.60	\$324.80
160	\$1070.90	\$642.20	\$344.60
170	\$1123.60	\$673.80	\$363.40
180	\$1176.30	\$705.40	\$382.20
190	\$1229.00	\$737.00	\$401.00
200	\$866.00	\$520.00	\$381.00

### 4.3.3 Beef Plan (National Beef Recording Service 1979-80)

Fees are \$1.00 per animal entry for calving and including 200 day figures (20 animal minimum), plus 30 cents per animal entry for further options of 400 or 550 day. Progressive weight gain option is 10 cents.

## 4.4 CASH CROPPING EXPENSES

### 4.4.1 Sacks

(i) Prices 1980/81 (cents per sack)

These prices were still operating in January 1981.

	94cm	104cm	116cm	122cm
New Sacks -	¢	¢	¢	¢
ex wharf	83	91	101	119
ex Christchurch	85	94	103	122
Once shot sacks	81	88	95	116
Second - Hand Sacks	60	65	70	75
incl. chaff sacks				

#### (ii) Quantities of Sacks Required by Farmer

The farmer usually requires sacks to transport his F/D product to the store, and having been M/D there, a heavier weight can be put into the sack. Clovers, phalaris and timothy are delivered in single sacks but when M/D are put into double sacks.

The sacks containing seed bought by the farmer would be used for the seconds off the header and for storing seed held onto by the farmer for future sowings, so discount them in working out a budget.

### 4.4.2 Seed Certification Fees

All seed certification fees were cancelled by the 1978 Budget. The only exception is the 'Late Entry' Fee for all crops including potatoes.

A late entry fee of \$10.00 (covering all entries of any one crop on one farm) is payable by the grower in respect of any application for certification received and accepted after the closing date fixed for a particular crop.

### 4.4.3 Seed Testing Fees

Seed testing charges set by the M.A.F. vary according to the type of seed being tested. To obtain the various fees contact the M.A.F. office in Palmerston North.

### 4.4.4 Consolidated Dressing and Store Handling Charges

These rates include receiving, delivering, sampling weighing, dressing, brushing of sacks and disposal of offal.

Ryegrasses – Ruanui, Tama, Manawa, Ariki,	
Paroa and Nui	6.5 cents per kg
Each additional time through	3.2 cents per kg
Cocksfoot	18.5 cents per kg
Clovers – White, Red and Alsike	18.0 cents per kg
Lucerne	18.0 cents per kg
Grass Seed (Fine) – Browntop, Fescue,	
Dogstail and Timothy	18.5 cents per kg
Turnips, Chou Moellier, Kale and Mustard	17.3 cents per kg
Rape	12.7 cents per kg
Prairie Grass	27.6 cents per kg
Yarrow	36.5 cents per kg



## 4.5 CONTRACTING

### 4.5.1 Contract Heading

Minimum charge in all cases where the crop runs under the specified yield per ha must not be less than \$28.00 per header metre front per hour.

2.4m header	\$ 79.92/hr
3.0m header	\$ 99.90/hr
3.6m header	\$119.88/hr
4.2m header	\$139.86/hr

Wheat: When the crop runs 2.35 tonne/ha or over, \$22.05/tonne

Barley: When the crop runs 1.95 tonne/ha or over, \$26.45/tonne

Oats: When the crop runs 1.55 tonne/ha or over, \$33.05/tonne

Peas and Lupins: When the crop runs 2.0 tonnes/ha or over, \$28.70/tonne

Linseed and Clover: \$72.25 per ha or hourly rates according to the size of header, whichever is the greater.

Grass Seed: \$67.45 or hourly rates according to the size of header, whichever is the greater.

In all cases where heading is carried out on hill country the rate shall be increased by 20%.

All bagging, standing time for trucks and labour requirements are to be by arrangement.

Cartage is to be at Transport Schedule Rates.

### 4.5.2 Contract Mowing, Raking and Baling

Mowing Hay – Cutterbar	\$21.50 per hour
– Disc mowing	\$24.00 per hour
Raking, once over	\$21.50 per hour
Baling hay or straw	\$ 0.45 per bale
Half tonne bales (round)	\$ 6.50 per bale
Sledging by contractor	\$ 0.03 per bale
Picking up bales (hay or straw)	\$ 0.40 per bale

For any quantity less than 20 tonne, price is by arrangement.  
On hill country there is a 20% surcharge.

### 4.5.3 Contract Chaff Cutting

Prices include machine and 6 men.

Oatsheaf	\$0.70 per bag
Straw Chaff	\$1.20 per bag
Oaten Hay	\$1.20 per bag
Lucerne	\$1.20 per bag

### 4.5.4 Contract Windrowing

\$40.50 per ha for 10 cm and above, \$42.00 with conditioner.  
\$42.00 per ha under 10 cm, \$43.50 with conditioner.

### 4.5.5 Potato Contracting

Planting	\$24 - 26/hour
Digging and Picking	85 cents/bag in paddock (14 bags/tonne; cartage extra)
Roguing	\$28/ha \$30/hr. for tractor and digger
Grading	\$22 - \$24/bin (11 sacks/bin) \$28 - 30/tonne

Note: These costs are for an average crop in reasonable conditions.

### 4.5.6 Miscellaneous

Saw Bench	\$22.00 per hour with one operator
Gorse cutting	\$22.00 per hour
Tree topping	\$48.00 to \$54.00 per hour
Stonepicking	\$29.00 per hour
Potato harvesting	\$78.00 per hour, or \$21.30 per tonne whichever is the greater, plus labour.
Drilling	\$24.50 per ha
Direct drilling	\$30.60 per ha
Precision drilling	By arrangement



## 4.5.7 Cultivation Contracts

### (i) Wheeled Tractors

P.T.O. Power kW	(H.P.)	Hourly Rate of Hire
Up to 21	(Up to 29)	\$20.00
22 - 30	( 30 - 40)	\$22.00
31 - 36	( 41 - 49)	\$24.00
37 - 44	( 50 - 59)	\$26.00
45 - 50	( 60 - 69)	\$28.00
51 - 58	( 70 - 79)	\$28.00
59 - 62	( 80 - 85)	\$32.50
63 - 73	( 86 - 99)	\$35.00
74 - 88	(100 - 110)	\$40.00
89 - 103	(102 - 140)	\$43.00
104 - 118	(141 - 160)	\$49.00

### (ii) 4 Wheel Drive Tractors

Up to 11	(Up to 20)	\$17.50
12 - 22	( 21 - 39)	\$20.00
23 - 41	( 40 - 55)	\$26.50
42 - 48	( 56 - 65)	\$28.50
49 - 55	( 66 - 75)	\$31.00
56 - 63	( 76 - 85)	\$34.50
64 - 74	( 86 - 100)	\$37.00
75 - 88	(101 - 120)	\$41.50
89 - 103	(121 - 140)	\$46.00
104 - 118	(141 - 160)	\$53.00
119 - 136	(161 - 180)	\$57.00
Over 136	(Over 180)	\$67.00

### (iii) Track Machines

23 - 41	(40 - 55)	\$23.00
42 - 48	(56 - 65)	\$28.50
Over 48	(Over 65)	\$33.00

### (iv) Extra Implements

Plus the following extra charges for implements

Up to 30	(Up to 40)	\$ 3.50
31 - 45	(41 - 60)	\$ 4.00
46 - 60	(61 - 80)	\$ 5.00
61 - 75	(81 - 100)	\$ 6.50
Over 75	(Over 100)	\$ 8.00

(v) Or plus the following extra charges for Rotary Hoes.

Up to 1.3 metres	\$ 4.50
1.3 - 1.5 metres	\$ 5.00
1.5 - 1.8 metres	\$ 6.00
1.8 - 2.0 metres	\$ 8.00
2.0 - 2.3 metres	\$10.00
2.2 - 2.5 metres	\$11.50
Over 2.5 metres	\$15.00

## 4.5.8 Horticultural Contracting

	\$	¢
Rotary Hoeing	25.00	per hectare
Discing	15.00	per hectare
Spraying	10.50	per hectare
Post driving (70¢ per post)	434.00	per hectare
Subsoiling	40.00	per hectare
Direct drilling	30.60	per hectare
Drilling	24.50	per hectare

## 4.6 DAIRY SHED SUPPLIES

### 4.6.1 Milking Shed Equipment

Inflations –	Efco Monobloc No. 5	\$ 1.92 each
	Monokura No. 6	\$ 2.05 each
	Monobloc No. 15 (with petal mouthpiece)	\$ 2.05 each
	Monokura No. 11 (with petal mouthpiece)	\$ 2.07 each
	Smith No. 4B (for Smith 4-6 cups only)	\$ 2.02 each
	No. 6B (as No. 4 but with larger mouthpiece)	\$ 1.92 each
	4 - 6 rubber Cup base	\$ 1.45 each
	4 - 6 S/S Cup Shell	\$ 3.54 each
	4-6 S/S Cup set (complete)	\$29.68 each
	(All Smith inflations have petal mouthpiece)	
Cups and Claws –	Efco Monokura Cups Bare	\$26.40 set
	No. 9 Cluster Claws	\$21.33 each
	No. 10 Look -in Claw	\$33.05 each
Claw (black and white) Rubber Tubing - Blue Line		
	152mm x 7.9mm x 4mm	\$0.26
	178mm x 7.9mm x 4mm	\$0.33
	3.6m x 7.9mm x 4mm	\$6.14

Claw (Black Moulded	152mm	\$0.45 each
Reinforced)	178mm	\$0.47 each
Air tubing (Black and white)		
	9.5 mm x 4.8mm x 840mm	\$1.63 each
	9.5 mm x 4.8mm x 1.07m	\$2.04 each
	9.5 mm x 4.8mm x 1.22m	\$2.44 each
	9.5 mm x 4.8mm x 1.42m	\$3.18 each
	9.5 mm x 4.8mm x 1.73m	\$3.84 each
	9.5 mm x 4.8mm x 4.27m	\$8.90 each
Milk tubing (black and white)		
	12.7mm x 5.6mm x 840mm	\$2.24 each
	12.7mm x 5.6mm x 1.07m	\$2.91 each
	12.7mm x 5.6mm x 1.22m	\$3.31 each
	12.7mm x 5.6mm x 1.42m	\$4.00 each
	12.7mm x 5.6mm x 1.73m	\$4.85 each
	12.7mm x 5.6mm x 4.27m	\$11.56 each
Milk Pump tubing (black and white)		
suction:	4.27m x 15.9mm	
	x 6.4mm	\$16.49 each
delivery:	3.66m x 19.1mm	
	x 7.9mm	\$20.44 each
suction:	3.66m x 22.2mm	
	x 9.5mm	\$28.73 each
delivery:	1.83m x 19.1mm	
	x 7.9mm	\$7.94 each
Sleeve Tubing (black)		
	1.675m x 28.6mm	
	x 6.4mm	\$16.75 each
	1.675m x 35mm	
	x 6.4mm	\$13.24 each
Sleeves		
	102mm x 28.6mm x 6.4mm	
	for 32mm tubing	\$1.53 each
	102mm x 35mm x 6.4mm	
	for 38mm tubing	\$1.72 each
Spring Bends		
	11.1 mm x 5.6mm	\$1.72 each
	12.7 mm x 7.1 mm	\$1.72 each
	12.7 mm x 22.2mm	
	x 6.4mm	\$2.19 each
	12.7 mm x 28.6mm	
	x 6.4mm	\$2.37 each

	12.7mm x 35mm x 6.4mm	\$2.76 each
Longtail Bends	9.5mm x 7.9mm 12.7mm x 6.4mm	\$1.67 each \$1.47 each
Milk Pump Diaphragms	Efco No. 18A (for Efco 228mm pumps - male thread - moulded insert piston plate)	\$12.10 each
Union Seals	Efco 25.4mm - 50.8 mm nitrile cone seals	\$0.71 - \$0.75
Milking Machine Plugs	(for 12.7mm to 50.8mm tubing)	\$0.43 - \$1.23
Strap Plugs	12.7mm to 50.8mm	\$1.05 - \$3.13
Rubber rings	- vacuum tank - tinned steel test bucket - stainless steel test bucket	\$ 1.41 \$ 2.37 \$ 2.00
Sluicing Nozzles	-25 mm, 31.7mm with tap -25 mm, 31.7mm, without tap	\$27.62 \$ 7.73
Calfetaria Equipment	- Calf valves - 15 teat calfetaria - Calf teats - old type and self sealing - calfetaria tubing - 30m coils	\$ 0.94 each \$94.00 \$ 1.20 \$15.95
Twinflex plastic shed hose	- 25mm x 50m coil - 32mm x 30m coil - 38mm x 30m coil	\$112.80 \$ 81.72 \$100.44
R.D.L. 7 Spray hose (black)	- 9.5mm per metre - 12.7mm per metre	\$21.15 \$ 3.01
Reverse flow clamps		\$ 2.40
Snap clamps		\$ 2.10
P.H.I. Jenson valves		\$ 2.00
228mm S/S pump head (complete)		\$62.50

# Milk Filters (Northland Milk Filters) November 1980

	Regular	Heavy
10cm x 61cm	\$16.10	\$17.20
8cm x 61cm	\$15.85	\$16.00
7cm x 58cm	\$15.80	\$15.95
6cm x 61cm	\$15.65	\$15.90
6cm x 30cm	\$ 9.10	\$ 9.50

## Plate Coolers (N.Z. Dairy & Industrial Supplies)

Model M & MC/MM	No. of plates	Milk Cooled litres/hr	Water Required litres/hr	Cost \$
200	18/33	900/ 900	2700/2700	400/ 600
250	20/39	1150/1150	3450/3450	430/ 650
300	24/45	1350/1350	4050/4050	460/ 740
350	26/51	1600/1600	4800/4800	490/ 830
400	30/57	1850/1850	4700/4700	545/ 915
500	36/67	2300/2300	5800/5800	635/1060
600	42/79	2750/2700	6900/6800	720/1240
700	48/-	3200/-	6400/-	810/-
800	54/95	3700/3700	7200/7400	895/1450

## Zelos Energy Converters (NZDIS) – for water heating

Copper tube models	V1 - Standard with pressure reducing valve	\$385
	R2 - Zelos with Recirculating pump	\$445
	P3 - Standard - no flow controls - suitable for thermosyphon systems; where external recirc. pumps are used; in series with V1 or R2	\$325
	PP4 - Recirculating Pump (240V or 110V) withstands 85°C plus	\$105
Stainless Steel	SR5 - S/S inner core, corrosion resistant fitted with recirc. pump	\$515
	SP6 - S/S inner core, no flow controls - suitable for use in series with SR5; where external recirc. pump is used; direct expansion cooling of liquid food products	\$395
	SSR7 - S/S inner and outer cores with circulating pump; suitable for ammonia refrigeration	\$560
	SSP8 - S/S inner and outer cores without circulating pump - suitable for use in series with SSR7; with external cir.	

pump; in thermosyphon  
systems

\$440

## 4.6.2 Dairy Hygiene

### (i) Detergents and Sanitizers

Mycorinse	5 litre	\$ 7.65
	20 litre	\$ 29.00
Klenz - Iodophor	5 litre	\$ 12.00
	20 litre	\$ 44.54
	200 litre	\$374.12
Klenzade Iodovat	5 litre	\$ 14.23
	20 litre	\$ 53.30
	200 litre	\$458.68
Q - Klenz	5 litre	\$ 14.09
	20 litre	\$ 51.83
	200 litre	\$473.58
Klenzaid	5 litre	\$ 9.55
	20 litre	\$ 30.67
	200 litre	\$240.21
Klenzade Stainless Steel Detergent	5 kg	\$ 12.10
	6 kg	\$ 18.40
	20 kg	\$ 51.40
	25 kg	\$ 55.08
Nu - Klenz Low Foam	5 kg	\$ 11.41
	6 kg	\$ 16.34
	20 kg	\$ 50.44
Tri - Klenz	5 litre	\$ 9.49
	20 litre	\$ 35.17
	200 litre	\$310.00
Klenzphos Super 60	5 litre	\$ 15.48
	20 litre	\$ 60.27
Klenzade zelos step 1	5 litre	\$ 9.49
	20 litre	\$ 33.59
	200 litre	\$275.47
Klenzade zelos step 2	5 litre	\$ 15.54
	20 litre	\$ 55.02
	200 litre	\$495.77

(ii) Dairy Ointments, Soaps and Teat Protectants

Elthamol Ointment	1.5 kg	\$ 5.20
	5 kg	\$14.80
	10 kg	\$27.30
	17 kg	\$43.50
Milkeeze Ointment	450 gm tin	\$ 3.08
	1.75 kg tin	\$ 8.00
	18 kg pail	\$63.00
Hibitane Antiseptic Dairy Cream	3.5 kg	\$11.95
	17 kg	\$49.50
Elthamol Soap	100 x 85 gm	\$23.00
Teatsan Teat Sanitizer	5 litre	\$18.20
	20 litre	\$71.20
Healex	4 litre	\$11.85
Klenzade Teat Guard	5 litre	\$23.44
	20 litre	\$89.76

#### 4.6.3 Miscellaneous

Yard Broom		\$8.16
Rubber Scraper 300mm – 750mm	\$13.81	\$24.50
Scrubbing Brushes – wooden handle		\$3.60
– plastic handle		\$7.68
Gumboots – Marathon knee	\$35.45	per pair
– Redband short	\$25.45	per pair
Dairy Aprons – with pocket		\$13.48
– no pocket		\$12.92
Buckets 23 litre – plastic		\$10.98
– with lid		\$11.30
– galvanized		\$11.80
‘Teatmaster’ Teat sanitizer Spray Kit – including Fox diaphragm pump, 0.12 KW electric motor and 45 litre spray tank		\$330
Kit plus 3 spray guns, 30m outlet hose, wall mounting brackets and other necessary fittings		\$355
Bloatenz Trough feeder – 12 hour		\$ 26.08
– 24 hour		\$ 16.57
Klenzade Magnesium Dispenser		\$ 15.17
Carlyle Bloatenz Dispenser		\$200.00
AHI Mastitis Detector – Electronic conductivity-measuring apparatus		\$ 78.00

## 4.7 ELECTRICITY

- (i) Central Canterbury Electric Power Board Farm Tariffs  
(N.B. These tariffs apply from 1st April 1980).

E. 1 Applicable to all farm installations.

Up to 5 kW installed, fixed charge \$4.70. Plus all units at 8.485¢ each.

Each standard 10 Amp socket for portable appliances will be assessed at 1kW but consumers with installed load of 5kW may have 5kW load limiter fitted and remain on Tariff E. 1.

E. 2 Installed load over 5 kW kVA to be measured. Demand charge \$3.13 per kVA with minimum of \$6.26. Plus all units at 4.761¢ each.

E. 3 Available to all permanently connected water heaters over 12 gallons capacity of the heat storage type used for culinary or ablutionary purposes. All waterheater installations on this tariff must comply with N.Z. Standard Specifications 4602 & 4603. Dairy type water heaters must comply with E.S.A.E.I. Specifications and all will be controlled off-peak at the discretion of the Board.

All units at 3.378¢ each.

E. 4 Available for all farm purposes except controlled water heating, between hours of 8.00 p.m. and 6.30 a.m.

All units at 2.607¢ each.

The Board will install and maintain an approved time switch or other means of control at a monthly rental of 75¢. Any device required to make the demand metering inoperative during the above night hours will be the responsibility of the consumer.

Where supply is on night rate only, fixed charge \$4.70.

- (ii) Some Examples of Electricity usage.

(N.B. These are approximate only and should only be used where no other figures are available).

Milking machine 15 - 25 kWh per cow per 10 month lactation.

Milk Cooler 45 kWh per annum

Water heater (dairy shed) 60 kWh per cow per 10 month lactation

Pressure Water supply (pump) 50 kWh per annum

Average home 6000 kWh per annum

Outbuildings \$130-\$180 per annum depending very much on the type and number of power tools used.

For further information see Lincoln College Budget Manual Part 1 Technical Section 22.3 – Electric Consumption Unit Performance Data.



## 4.8 FEED

### 4.8.1 Baler Twine

Heavy Sisal	4 spools 800 conventional bales	\$85.32 (\$2.37/kg)
Medium Sisal	6 spools: 139 large round bales	\$78.40 (\$2.45/kg)
Superfilm Polypropylene	6 spools: 1270 conventional bales or 129 large round bales	\$95.25 (\$3.81/kg)
Howard Big Baler	4-7 spools: 139 large square bales	\$95.25 (\$3.81/kg)

### 4.8.2 Stock & Poultry Feeds

#### (i) Cattle

	Price per 40kg bag ex store	Price per tonne delivered Bulk	Bagged
Peerless Calf Growa	\$10.10		
Dairy Ration	\$ 6.33 (30 kg)		
Dairy Meal	\$ 6.39 (30 kg)		
Barley Meal	\$ 8.75		
Beef Finisher	\$ 7.99		
Fleming-NRM Calf Crumbles	\$ 8.80		\$205.70
Dairy Meal	\$ 7.60	\$156.50	\$176.10
Cattle Pellets	\$ 8.60	\$180.60	\$200.20

#### (ii) Sheep

Peerless Sheep Nuts	\$ 7.72		
Hogget Grower Nuts	\$ 7.72		
Fleming - NRM Sheep Nuts			\$171.30
Sheep Nuts (Linseed)			\$205.20

#### (iii) Pigs

Peerless Weena Growa Pellets	\$10.15		
Porker Pellets	\$10.20		
Baconer Feed	\$ 9.26		
Fortified Pig nuts	\$ 8.36		
Pig starter	\$14.03		
Fleming - NRM			
Pig Creep Crumble	\$13.30	\$304.50	\$324.10
Pig Weaner Meal	\$10.20	\$219.90	\$239.50
Pig Grower Meal	\$ 9.60	\$206.50	\$226.70
Pig Baconer Meal	\$ 8.80	\$186.10	\$205.70
Pig Breeder Meal	\$ 8.50	\$182.00	\$201.60

#### (iv) Deer

Peerless Deer Nuts 1	\$ 8.66		
Fleming - NRM Deer Nuts			\$191.20

(v) Horses	Price per 40kg bag ex store	Price per tonne delivered	
		Bulk	Bagged
Peerless Horse Pellets	\$8.98		
Fleming - NRM			
Stud horse Pellets	\$9.30		\$213.30
Horse & Pony Pellets	\$8.00		\$180.60
Pony Meal	\$4.80 (25 kg)		\$178.90
Racehorse Pellets	\$8.40		\$192.40
(vi) Rabbits			
Peerless Rabbit Ration No.1	\$10.63		
(vii) Dogs			
Peerless Top Dog Nuts	\$3.34 (5 kg)		
Shep dog Biscuits	\$16.50 (20 kg)		
Tux Dog Biscuits	\$17.95 (20 kg)		
(viii) Poultry			
Peerless			
Chick Pex	\$10.82		
Grower Pex	\$ 9.19		
Layer Pex	\$ 9.20		
H.E. Layer Pex	\$ 9.45		
Breeder Pex	\$ 9.48		
Starter Broiler Feeders	\$14.52		
Finisher No. 1	\$13.38		
No. 2	\$12.63		
No. 3	\$12.48		
Turkey Starter Crumbles	\$14.94		
Turkey Grower Pellets	\$13.23		
Turkey Normal Starter	\$14.74		
Turkey Breeder Pellets	\$ 9.33		
Fleming-NRM			
Chick Crumble	\$11.20	\$250.40	\$270.00
Pullet Grower Pellets	\$ 8.90	\$191.70	\$211.30
Pullet Rearer Pellets	-	\$196.10	\$215.70
Hi-Lay Super Pellets	-	\$205.00	\$224.60
Hi-Lay Pellets	\$ 9.40	\$199.50	\$219.10
Layer Pellets	\$ 9.20	\$195.50	\$215.10
Turkey Starter		\$359.40	
Turkey Grower		\$292.90	
Turkey Finisher		\$274.90	
Turkey Breeder		\$216.40	
General Purpose (Not Ducks)			
Starter	\$14.60		
Finisher	\$12.40		

(ix) Miscellaneous	
Molasses 28kg pail	\$19.19
250kg drum	\$97.16
Agricultural Salt 50 kg	\$ 8.00
Bran	\$ 7.00
Summit Salt Blocks	
Standard - Co,I	\$ 8.60
Copper (Sheep) - Cu, Co, I	\$ 9.04
Copper (Cattle) - Cu, Co,I	\$ 9.24
Magnesium - Mg, Co,I	\$ 9.96
Nutriex	
Seaweed Standard	\$ 9.82
Nutriex Magnesium	\$10.62

### 4.8.3 Grazing Fees

Payment for grazing varies according to the class of livestock, the time of year, seasonal conditions and the district.

Current rates are approximately 15¢ - 20¢/head/week for sheep, and 60¢ - \$1.00/head/week for cattle.

## 4.9 FREIGHT AND CARTAGE

### 4.9.1 Railway Transport Rates

Railway charges are obtained from the Railways Department Tariff book and classifications book.

#### Type of Wagon

Cattle	Stock Capacity	Freight Charge Rate
H wagon	8	M
HC ( $\frac{1}{3}$ bigger than H)	11 - 12	M plus $\frac{1}{3}$
T (Twice as big as H)	17	M double rate

#### Sheep

J wagon	60	M
JC ( $\frac{1}{3}$ bigger than J)	80 - 90	M plus $\frac{1}{3}$

For explanation of M freight charge rate see Goods: Classified Rates below.

(i) Classification of Goods Carried.

Class B	Agricultural implements.
Class C	Tractors, Front end loaders, gates
Class D	Binder twine, Insecticides, Clover Seed, Fencing materials (not including wooden posts, stays, strainers and battens which are class E.)
Class E	Bags, Grain, Seed, Potatoes, Peas, Daggings, Wooden Posts, Stays, Strainers and Battens, Concrete products and Field tiles.
Class E +50%	Hay, Straw, Chaff and Lime
Class H	Wool
Class K	Timber
Class M	Livestock
Class R	Artificial Fertilizers
Class S	Fruit grown in New Zealand

(ii) Goods: Classified Rates

Distance Kilometre	B Per tonne	C Per tonne	D Per tonne	E Per tonne	E+ 50% Per tonne	H Undumped , per bale	K Per cubic metre	M Per wagon	R Per tonne	S Per tonne
65	42.62	28.41	22.73	10.26	15.39	3.36	11.77	66.10	8.62	12.83
80	46.05	30.70	24.56	11.19	16.79	3.64	12.90	73.71	9.49	13.99
95	49.50	33.00	26.40	12.11	18.17	3.91	14.04	81.32	10.36	15.14
110	52.94	35.29	28.23	13.04	19.56	4.18	15.17	88.93	11.23	16.30
146	61.31	40.87	32.70	15.25	22.88	4.84	17.99	108.72	13.48	19.06
186	96.31	50.87	40.70	19.09	28.64	6.02	22.78	140.14	17.19	23.86
226	89.40	59.60	47.68	22.34	33.51	7.07	26.34	168.16	20.49	30.85
266	99.62	66.41	53.13	24.68	37.02	7.87	28.05	191.09	22.71	33.78
306	108.11	72.07	57.66	27.02	40.53	8.54	29.76	211.83	24.28	37.78
358	115.91	77.27	61.82	30.22	45.33	9.16	32.18	235.60	26.33	43.83
438	128.69	85.79	68.63	35.06	52.59	10.17	35.88	272.92	29.64	49.89
518	141.47	94.31	75.45	39.91	59.87	11.18	39.58	310.25	32.96	55.94
598	154.23	102.82	82.26	44.75	67.13	12.18	43.29	347.58	36.27	60.78
662	164.46	109.64	87.71	48.63	72.95	13.00	46.25	377.44	38.92	

### 4.9.2 Road Transport Rates

N.B. The following figures are for the Canterbury area - in other areas the rates may differ slightly. Rates are available on application to the local branch of the New Zealand Contractors Federation (Incorporated).

Rates are as at October, 1980 but changes are inevitable due to recent increases in fuel prices.

- (i) Lime (Bulk) Minimum load 4000 kg.

	Per Tonne		Per Tonne
8 km	\$ 4.60	16 km	\$ 6.08
24 km	\$ 7.23	32 km	\$ 8.29
40 km	\$ 9.46	48 km	\$10.45
56 km	\$11.61	64 km	\$12.44
72 km	\$13.27	80 km	\$14.10

For Transport Subsidies on Fertilizer and Lime, see Subsidies Section, 1.4.3.

- (ii) Fertilizer (Bulk) Minimum load 4000 kg.

	Per Tonne		Per Tonne
8 km	\$ 5.09	16 km	\$ 6.57
24 km	\$ 8.05	32 km	\$ 9.46
40 km	\$10.62	48 km	\$11.61
56 km	\$12.61	64 km	\$13.60
72 km	\$14.60	80 km	\$15.60

- (iii) Fertilizer and Lime (Bagged) Minimum load 3000 kg.

	Per Tonne		Per Tonne
8 km	\$ 7.06	16 km	\$ 8.87
24 km	\$10.35	32 km	\$11.94
40 km	\$13.27	48 km	\$14.60
56 km	\$15.93	64 km	\$17.09
72 km	\$18.08	80 km	\$19.08

For Transport Subsidies on Fertilizer and Lime, see Subsidies Section, 1.4.3.

The subsidy is calculated on the distance from the farm to the nearest fertilizer works, or, in the case of an ordered imported line to the port of entry.

- (iv) Hay Truck and Driver only. Minimum load 120 bales.  
 40 bales or more per tonne – less 3¢ per bale.  
 Picking up unsledged bales or extra high stacking by arrangement.  
 No charges included for extra labour which is to be arranged.

	Per Bale		Per Bale
8 km	\$0.312	16 km	\$0.394
24 km	\$0.476	32 km	\$0.547
40 km	\$0.606	48 km	\$0.664
56 km	\$0.713	64 km	\$0.763
72 km	\$0.805	80 km	\$0.846

- (v) Grain (Bagged) Ex shed or store. Minimum load 39 bags.

	Per Sack		Per Sack
8 km	\$0.443	16 km	\$0.575
24 km	\$0.6773	32 km	\$0.763
40 km	\$0.829	48 km	\$0.896
56 km	\$0.962	64 km	\$1.029
72 km	\$1.095	80 km	\$1.161

Ex paddock – schedule rate plus \$0.108 per sack, includes bag loaded and all labour. Ex heap in paddock – schedule plus \$0.05 per sack.

- (vi) Grain (Bulk) Ex acceptable silo. Minimum load 4000 kg.

	Per Tonne		Per Tonne
8 km	\$ 4.76	16 km	\$ 6.24
24 km	\$ 7.55	32 km	\$ 8.79
40 km	\$ 9.95	48 km	\$10.95
56 km	\$11.94	64 km	\$12.77
72 km	\$13.60	80 km	\$14.43

Where silos are not completely self emptying, add \$0.43 per tonne.

Auger charges \$0.66 per tonne.

Ex header \$1.66 per tonne by arrangement

Converting bags to bulk \$1.66 per tonne

(vii) Grass Seed Boxes over 1000kg. Minimum 8 boxes

	Per Tonne		Per Tonne
8 km	\$ 6.65	16 km	\$ 8.13
24 km	\$ 9.44	32 km	\$10.70
40 km	\$11.86	48 km	\$12.86
56 km	\$13.85	64 km	\$14.68
72 km	\$15.51	80 km	\$16.34

Boxes under 1000 kg. Minimum 16 boxes.

	Per Tonne		Per Tonne
8 km	\$ 8.56	16 km	\$10.03
24 km	\$11.35	32 km	\$12.62
40 km	\$13.79	48 km	\$14.78
56 km	\$15.78	64 km	\$16.61
72 km	\$17.44	80 km	\$18.27

If farmer loads boxes efficiently, deduct \$2.49 per box.  
For less than minimum loads add \$1.66 per box for first 5 boxes and \$0.83 per box thereafter.

Empty Boxes

	Each		Each
8 km	\$1.97	16 km	\$2.14
24 km	\$2.30	32 km	\$2.49
40 km	\$2.65	48 km	\$2.87
56 km	\$3.04	64 km	\$3.15
72 km	\$3.32	80 km	\$3.48

(viii) Grass Seed and other small seeds (Bagged)

16 bags and over to the tonne. Minimum load 48 bags.

	Per Bag		Per Bag
8 km	\$0.394	16 km	\$0.493
24 km	\$0.575	32 km	\$0.647
40 km	\$0.705	48 km	\$0.763
56 km	\$0.821	64 km	\$0.879
72 km	\$0.937	80 km	\$0.995

Ex paddock add \$0.080 per sack.

Ex heap in paddock add \$0.051 per sack.



(ix) Wool by Road. Minimum load 14 bales.

Per Bale (150 kg)		Per Bale (150 kg)	
8 km	\$1.64	16 km	\$2.14
24 km	\$2.51	32 km	\$2.90
40 km	\$3.23	48 km	\$3.53
56 km	\$3.78	64 km	\$3.98
72 km	\$4.15	80 km	\$4.31

Add \$0.29 per bale off ground.

(x) Potatoes

Per Bag		Per Bag	
8 km	\$0.443	16 km	\$0.575
24 km	\$0.673	32 km	\$0.763
40 km	\$0.829	48 km	\$0.896
56 km	\$0.962	64 km	\$1.029
72 km	\$1.095	80 km	\$1.161

These prices are for ex shed or store.

Ex paddock add \$0.108 per bag unless farmer supplies labour in which case only add 3¢ per bag.

Ex heap in paddock add \$0.05 per bag unless farmer supplies labour in which case normal rates apply.

Minimum load 39 bags.

(xi) Sheep, Lambs and Hoggets by Road (all per head)

	Store Lambs	Fat Lambs	Hoggets
8 km	\$0.246	\$0.255	\$0.279
16 km	\$0.304	\$0.337	\$0.366
32 km	\$0.423	\$0.481	\$0.519
48 km	\$0.531	\$0.597	\$0.652
64 km	\$0.630	\$0.697	\$0.771
80 km	\$0.713	\$0.780	\$0.854
97 km	\$0.788	\$0.871	\$0.972
113 km	\$0.855	\$0.955	\$1.047
129 km	\$0.922	\$1.039	\$1.139
145 km	\$0.989	\$1.123	\$1.223
161 km	\$1.061	\$1.212	\$1.313
Minimum load			
Under 40 km	100	100	90
Over 40 km	140	120	100

	Store Sheep	Fat Sheep
8 km	\$0.304	\$0.312
16 km	\$0.394	\$0.411
32 km	\$0.556	\$0.606
48 km	\$0.705	\$0.788
64 km	\$0.846	\$0.946
80 km	\$0.962	\$1.103
97 km	\$1.072	\$1.265
113 km	\$1.139	\$1.399
129 km	\$1.240	\$1.533
145 km	\$1.324	\$1.642
161 km	\$1.414	\$1.751

Minimum load

under 40 km	85	80
over 40 km	100	90

A lamb becomes a hogget on 1 September. A hogget becomes a sheep on 1 January.

Penal rates for Sheep and Lambs:

These will apply where the farmer does not give the cartage contractor 24 hours notice of the job to be done.

Lambs per head \$0.048

Sheep per head \$0.065

Where facilities for loading are inadequate, an additional charge of \$0.017 per head shall be made for sheep and lambs.

(xii) Cattle (all per head)

	Weaners	Yearlings	18 Month Cattle
8 km	\$1.35	\$1.59	\$2.10
16 km	\$1.82	\$2.20	\$2.89
32 km	\$2.70	\$3.30	\$4.11
48 km	\$3.45	\$4.28	\$5.54
64 km	\$4.18	\$5.14	\$6.55
80 km	\$4.84	\$5.97	\$7.35
97 km	\$5.51	\$6.72	\$8.16
113 km	\$6.03	\$7.27	\$8.83
129 km	\$6.42	\$7.77	\$9.37
145 km	\$6.75	\$8.16	\$9.84
161 km	\$7.12	\$8.54	\$10.29
Minimum load			
under 40 km	14	12	10
over 40 km	20	16	14

	2 Year Cattle	Fat Cattle
8 km	\$ 2.50	\$ 2.69
16 km	\$ 3.38	\$ 3.70
32 km	\$ 4.94	\$ 5.54
48 km	\$ 6.27	\$ 7.20
64 km	\$ 7.58	\$ 8.86
80 km	\$ 8.78	\$10.07
97 km	\$ 9.97	\$11.43
113 km	\$10.86	\$12.48
129 km	\$11.49	\$13.20
145 km	\$12.06	\$13.82
161 km	\$12.63	\$14.41

Minimum load		
under 40 km	8	8
over 40 km	12	10

Penal rates for cattle: \$0.48 per head where the farmer does not give 24 hours notice of job to be done.

Bulls over 2 years, an additional \$3.93 per head

Where loading ramp is not provided or is not usable, for loading and unloading, then a charge of \$2.17 per head of cattle shall be made.

(xiii) Horticultural Goods

16 km	\$ 9.69
32 km	\$12.94
48 km	\$15.76
64 km	\$18.25
80 km	\$20.24

### 4.9.3 Air Rates

#### External

Freight Rates:	Fruit	200 kg	400 kg	500 t
	(Sydney)			
	to Australia	97¢/kg	77¢/kg	59
	to Singapore	1.30/kg	1.30/kg	1.16/kg
	to London	7.9¢/kg	3.00/kg	2.82/kg
Flowers:		45 kg min.	100 k min.	
	to Sydney	86/kilo	77/kilo	
	to Singapore	100 kg min.	2.20/kg	
	to London (commodity rate no. 1420)	flowers		
		45 k min.	\$2.78/kg, or 100 kg min.	
			\$2.51/kg.	

Nursery stock, bulbs, seeds and tubers excluding cut flowers.

No. 1402. 45 kg/min \$5.00/kg

2.50 kg/min \$3.98/kg

500 kg min \$3.57/kg

#### Internal

Freight Air Christchurch to Auckland 63¢ per kg

Christchurch to Wellington 37¢ per kg.

Jet X 50% surcharge on Freight Air guaranteed delivery in morning by 9.00 a.m.

## 4.10 FERTILIZERS

### 4.10.1 Fertilizer Subsidies

For price and freight subsidies see "Assistance and Incentives for Farmers", Section 1.3.

## 4.10.2 Ravensdown Fertilizer Co - operative Ltd.

(ex Works Christchurch)

As at November 1980

N	P	K	S	RATING		Farmers	Farmers
						Bulk Per Tonne	Bags Per Tonne
	8	0	10	Flowmaster Super		93.60	108.10
0	9	0	11	Super		95.40	109.90
0	7	0	8	Serpentine Reverted Super		90.95	105.45
0	8	0	10	Boron Super		107.60	122.10
0	8	0	10	Cobalt Super		122.00	136.50
0	8	0	10	Copper Super		113.15	127.65
0	8	0	10	Molybdate Super		110.10	124.60
0	8	0	10	Legume Establishment Fertiliser		125.50	140.00
0	7	7	9	15% Potash Super		104.45	118.95
0	6	14	7	30% Potash Super		114.30	128.80
0	6	14	7	30% Potash Boron Super		126.60	141.10
0	6	14	7	Potash Molybdate Super		129.75	144.25
0	4	24	5	50% Potash Super		127.45	141.95
0	4	24	5	50% Potash Boron Super		140.40	154.90
0	7	0	18	Sulphur Super		101.85	116.35
0	7	0	26	Sulphur Super Extra		109.05	-
0	6	11	14	22% Potash Sulphur Super		114.65	123.55
0	5	14	15	30% Potash Sulphur Super		121.50	127.15
0	7	0	15	Westland Pakihi Starter		124.10	136.00
6	6	0	14	Nitrogen Super		123.50	138.00
6	6	0	14	Nitrogen Super with Double Boron		146.55	161.05
6	5	5	13	Cropmix		127.20	141.70
6	5	5	13	Cropmix with Double Boron		153.10	167.60
2	7	0	11	Cropmix T & R		104.20	118.75
8	4	8	14	Orchard Regular		142.40	156.90
8	4	8	14	Orchard Regular with Boron		146.20	160.70
6	4	12	12	Orchard High K		139.95	154.45
6	4	12	12	Orchard High K with Boron		143.80	158.30
8	4	8	13	Berryfruit Fertiliser		207.00	221.50
18	20	0	0	Cropmaster DAP		466.95	482.80
46	0	0	0	Urea		-	411.40
20	0	0	1	Liquid Nitrogen		205.60	-
26	0	0	0	C A N		-	323.30
21	0	0	24	Ammonium Sulphate		189.90	204.40
0	0	48	0	Potassium Chloride		159.15	173.65
0	0	40	17	Potassium Sulphate		-	417.60

### SPECIAL MIXTURES:

Orders for Special Mixtures will be accepted ONLY for 2 Tonnes or more

\*\*\* DO NOT SOW BORATED FERTILISERS IN CONTACT WITH SEED.

ALL PRICES ARE SUBJECT TO ALTERATION WITHOUT NOTICE

### 4.10.3 Yates Fertilizers

As at 31 January 1981

Liquifos N P K		
10 - 3 - 6	200 litre	\$237.20
8 - 5 - 10	200 litre	\$259.20
0 - 7 - 14	200 litre	\$269.30
16 - 2 - 4	200 litre	\$227.70
Liquid Seaweed	24 litre	\$ 92.85
Sporumix A Trace Element Mix	45 kg	\$ 34.48
Sporumix B Trace Element Mix	45 kg	\$ 28.73
Optigrowth (Micro Nutrient supplement)	200 litres	\$371.80
Plus S (Sulphur based soil conditioner)	200 litres	\$190.30
Keiserite	per bagged tonne	\$393.70
Sulphur Flowers	35 kg	\$ 42.45
Zinc Sulphate	25 kg	\$ 29.65
Sulphate Ammonia 21% N	per bagged tonne	\$249.25
Urea 46% N	per tonne	\$464.40
IBDU 31% N	25 kg	\$ 30.95
	per bagged tonne	\$951.10
Rustica N P K		
12 - 5 - 14	50 kg	\$ 33.23
	per bagged tonne	\$510.58
15 - 7 - 4	50 kg	\$ 26.90
	per bagged tonne	\$413.25
Acid Gro Plus	per bagged tonne	\$324.95
	bulk tonne	\$204.64
Bulb Gro Plus	per bagged tonne	\$330.56
Crop Plus	per bagged tonne	\$214.52
Crop Gro Plus	per bulk tonne	\$180.74
Grass Gro Plus	per bulk tonne	\$180.74
Grass Organic Gro Plus	per bulk tonne	\$190.75
Grass Potassic	per bagged tonne	\$180.19
Haypaddock Gro Plus	per bagged tonne	\$259.71
	per bulk tonne	\$214.63
Lawn tone Gro Plus	per bagged tonne	\$349.49
Lucerne Estab. Fert.	per bagged tonne	\$246.45
Lucerne Maint. Fert.	per bagged tonne	\$315.22
Maize Basal Fert.	per bagged tonne	P.O.A.
Rose Gro Plus	per bagged tonne	\$398.14
Strawberry Gro Plus	per bagged tonne	P.O.A.
	per bulk tonne	\$259.74

#### 4.10.4 Olin 'Ammo-Phos'

All prices quoted ex Napier Warehouse.

Grade				Per tonne	
N	P	K	S	Bulk	Bagged
16	9	0	14	\$ 326.80	\$ 343.40
15	7	5	13	\$ 320.95	\$ 337.55
13	6	11	12	\$ 315.10	\$ 331.70
12	10	10	9	\$ 338.50	\$ 355.10
10	18	8	2	\$ 413.30	\$ 429.90
10	18	0	2	\$ 414.30	\$ 430.90
8	14	13	3	\$ 332.70	\$ 349.30
6	10	20	3	\$ 393.55	\$ 410.15

All prices quoted ex Brightwater Warehouse.

				Per Tonne	
N	P	K	S	Bulk	Bagged
19	4	0	20	283.20	299.80
15	7	5	13	323.00	339.60
12	10	10	9	353.40	370.00
11	19	0	3	413.30	429.00
11	15	5	6	388.80	405.40

#### 4.10.5 Canterbury Bye Products

Meat and Bone Meal	\$14.75 per 50 kg
Dried Blood	\$26.00 per 50 kg

#### 4.10.6 Bell - Booth

Maxicrop	5 litres	\$ 12.60
Maxicrop (Agricultural packs)		
Multiple Concentrate	20 litres	\$ 73.20
	200 litres	\$658.80

#### 4.10.7 New Zealand Farmers' Fertilizer Company Limited.

as at 4 July 1980 - ex Auckland Works

		\$ BULK PER TONNE	\$ BAGGED PER TONNE
N.P.K.S.	PRODUCT		
0.10.0.11	Superphosphate	94.35	108.85
0. 7.0. 8	Serpentine Superphosphate	91.95	106.45
0. 7.0. 8	Reverted Super	92.40	106.90
0. 5.0. 5	Super Lime 1/1	53.60	68.10
0. 6.0. 7	Super Dolomite 2/1	91.50	106.00
0.10.1.11	Cobalt Superphosphate	111.80	126.30
0.10.0.11	Copper Superphosphate	104.80	119.30
0.10.0.11	Superphosphate with Molybdenum	105.55	120.05
7. 6.0.15	Ammoniated Superphosphate	133.10	147.60
6. 6.5.13	Crop Fertilizer	134.80	149.30

0. 9. 7. 9	15% Potash Superphosphate	103.90	118.40
0. 8. 7. 9	15% Potash Cobalt Superphosphate	121.35	135.85
0. 8. 7. 9	15% Potash Copper Superphosphate	114.25	128.75
0. 8. 7. 9	15% Potash Super with Molybdenum	115.15	129.65
0. 6. 7. 7	15% Potash Serpentine Superphosphate	102.10	116.60
0. 6.10. 7	20% Potash Serpentine Superphosphate	105.10	119.60
0. 7.14. 7	30% Potash Superphosphate	112.65	127.15
0. 7.14. 7	30% Potash Copper Superphosphate	122.90	137.40
0. 7.14. 7	30% Potash Super with Molybdenum	123.85	138.35
0. 5.14. 6	30% Potash Serpentine Superphosphate	111.20	125.70
0. 5.24. 5	50% Potash Superphosphate	124.50	139.00
0. 4.24. 4	50% Potash Serpentine Superphosphate	123.30	137.80
0. 0.50. 0	Fre Flo Muriate of Potash	152.55	167.05
21. 0. 0.24	Sulphate of Ammonia	207.55	222.05
0. 0.40.18	Sulphate of Potash (in bags)		418.05
46. 0. 0. 0	Urea (in bags)		358.05
20. 0. 0. 0	Liquid Nitrogen		161.35
8. 6.20. 9	Top Crop Green		282.60
8. 6.20. 9	Top Crop Green plus 5% Magnesium		309.35
10. 9.16. 6	Top Crop Blue		310.55
10. 9.16. 6	Top Crop Blue plus 5% Magnesium		344.70
12.12.12. 5	Top Crop Red		338.55
12.12.12. 5	Top Crop Red plus 5% Magnesium		355.90
14.14. 8. 4	Top Crop Brown		358.75
14.14. 8. 4	Top Crop Brown plus 5% Magnesium		381.30
16. 9. 0.15	Ammonium Phosphate Sulphate		263.85
18.20. 0. 2	Di-Ammonium Phosphate		356.90
<b>BAGS ONLY</b>			
0.10. 0.11	Hormophos		92.65
0.10. 0.11	Cobalt Hormophos		109.95
0.10. 0.11	Aerial Hormophos		94.80

These Hormophos lines are available only from 1st May to 31st August each year.  
Prices are plus railage and less transport subsidy ex New Plymouth Works.

4.10.8 Fertilizers for Horticultural Use		\$	¢
Ammophos 12.10.10	5 kgs	3.15	
Ammophos 10	5 kgs	3.10	
Blood and Bone	15 kgs	4.05	
Dolomite	40 kgs	6.85	
Dried Blood	5 kgs	3.85	
Fruitfed Liquid Feed	32 litres	30.72	
Magnesium Sulphate	5 kgs	2.35	
Nitrate of Potash	5 kgs	1.95	
Nitrophoska foliar	20 litres	54.00	
Nitrophoska permanent	25 kgs	20.95	
Potassium Nitrate	5 kgs	3.55	
Berryfruit Fertilizer NPK	8-4-8 bag-	222.50	
	ged tonne		
	/bulk tonne	207.00	
Orchard Regular NPK	8-4-8/bag-	156.90	
	ged tonne		



per bulk tonne	142.40
Wuxal (N.P.K. 9.4.6 plus trace elements) 5 litres	16.70
200 litres	454.00

#### 4.10.9 Spreading Fertilizer and Seed

##### (i) Ground Spread Fertilizer

Average Paddock Size	Cost per hectare
Under 4 hectares	\$3.05
4 - 8 hectares	\$2.80
8 - 16 hectares	\$2.50
Over 16 hectares	\$2.35

Minimum cartage as for 3 tonnes.

Stoney, Swampy and hill country – extra by arrangement.

##### (ii) Aerial Spreading Fertilizer

In the year to 31 March, 1979 the average tonnage of lime and fertilizer applied per revenue hour flown was 11.07 tonnes, this being slightly below the average for the preceding years. However the range varies from 8 tonnes to around 16 tonnes per hour depending on the position of the airstrip, prevailing weather conditions and the nature of the country to be oversown.

Therefore, it is suggested for budgeting purposes that an average figure of 12 tonnes per hour be used.

	per hour	per tonne
Airwork (N.Z.) Ltd.		
Fletcher, Beaver,		
Pawnee, Brave 375	\$312	\$26.00
(1 tonne payloads)		
James Aviation		
Agwaggon	\$270.00	
Airtruk 300	\$326.00	
Fletcher 300	\$294.00	
Fletcher 400	\$352.00	

With some companies there are discounts for heavy sowings or large amounts and penalty rates for light sowings or small amounts.

##### (iii) Aerial Sowing of Seeds and Prills.

All the costs listed below are on a per 100 kg basis. The costs are variable according to the application rate per hectare and the total weight of seed or prills.

Total Weight of Seed or Prills	Rates per hectare		
	9 - 14 kg	15 - 29 kg	Over 30 kg
Under 225 kg	\$81.30	\$68.65	\$61.60
226 - 905 kg	\$68.65	\$52.75	\$45.80
Over 905 kg	\$61.60	\$42.20	\$35.20

Minimum charge per job \$105.00.

Under 8 kg per ha \$125.00 per 100 kg.

## 4.11 LIME

### 4.11.1 Cost per tonne ex quarry. (North Canterbury)

Hydrated Lime	per bag	\$4.45
Crushed Lime	per bag	\$8.61
Green Lime	\$10.00/tonne	

The cost is influenced considerably by the distance from source therefore the cost of lime also differs.

### 4.11.2 Spreading per hectare. (1979-80 rate)

	Flat Grassed	Flat Worked & Rolled	Hill worked &Grassed
Under 2½ tonnes/ha	\$3.40	\$3.60	Flat rates plus
2½ tonnes/ha	\$3.60	\$4.20	up to 73 cents
Over 2½ tonnes/ha	\$4.20	\$4.70	per hectare extra

Worked paddocks not rolled, orchards, swampy and boulder country are all subject to additional rates by arrangement.

## 4.12 SEEDS

The prices quoted in this section are as at late December 1980. All prices are inclusive of seed treating, unless stated otherwise.

### 4.12.1 Wheat

Variety	Cost of Seed per tonne Certified 2nd Generation
Kopara, Aotea, Gamenya, Raven, Cross 7-61, Takahe	\$250.70
Hilgendorf	\$286.50
Karamu	\$233.00
Arawa	\$235.00
Extra for 1st generation	\$ 3.00

#### 4.12.2 Barley

Cost of seed per tonne for Certified 2nd Generation.

Manapou, Mata,	\$330.00
Zephyr	\$305.00

#### 4.12.3 Oats

Mapua, Amuri, Taiko	\$220.00	per tonne
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#### 4.12.4 Lupins

Uniwhite, Uniharvest	\$210.00	per tonne
Bitter blue, Borre	\$215.00	per tonne

#### 4.12.5 Rye-corn

Rahu	\$180.00	per tonne U/D
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#### 4.12.6 Linseed

Redwood	\$450.00	per tonne
Hinu	\$560.00	per tonne

#### 4.12.7 Maize

Various hybrids (treated)	\$396.00	per tonne
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#### 4.12.8 Peas

(i) Field	—	
Maples	\$290.00	per tonne
Blue	\$290.00	per tonne
White	\$290.00	per tonne
(ii) Garden		
Various varieties	\$291.00	per tonne

#### 4.12.9 Small Seeds

The following can only be a rough guide as the small seeds market is extremely variable, with almost daily fluctuations in prices. All prices are per kilogram of basic seed.

Rape Rangi	\$3.00
Swedes	\$3.20
Turnips	\$3.20
Kale Medium stemmed	\$3.00
Giant	\$3.00
Fodderbeet Monogerm	
Yellow Daeno	

Lucerne (Uncertified)	
Wairau	\$3.70
Saranac	
Washoe	
Rere	
Ryegrasses	
Ruanui	\$1.80
Nui	\$3.00
Ariki	\$1.75
Manawa	\$1.20
Paroa	\$0.85
Tama	\$1.05
Apanui Cocksfoot	\$4.50
Clovers	
Hamua	\$3.00
Turoa	\$3.00
Huia	\$2.90

#### 4.12.10 Seed Coating

	¢/kg
Ryegrasses, dogstail, timothy*	62
Cocksfoot*	66
Lucerne**	68
Red, white and subclover***	68
* Phosphatic coat	
** Calcium coat + inoculant	
*** Gassodolomite + inoculant	

#### 4.12.11 Vegetable Seeds

Carrot:	\$    ¢ per 500 g
Egmont Gold	18.96
Manchester Table	21.48
Top Weight	21.21
	\$    ¢ per 500 g
Onion:	
Californian Red	51.43
Pukekohe Ultra	20.90
Pukekohe Long Keeper (M & R)	21.95
White Lisborne	20.00
	\$    ¢ per 1 kg
Bean:	
French bean	4.35

	\$    ¢ per 1 kg
Tender green	4.35
Top crop	4.35
Green Beauty	4.35
Runner bean:	
Mangere pole	4.35
Streamline	4.35
Broadbean:	
Exhibition Long Pod	2.36
Butter Bean	
Golden Wax	4.35
Broccoli:	\$    ¢ per 500 g
Early	197.77
Late	195.97
Medium	195.97
Cabbage:	\$    ¢ per 500 g
Green Gold	116.00
Festival	150.00
Red Cabbage	13.23
Lettuce	\$    ¢ per 500 g
Webbs Wonderfull	17.00
Triumph	39.11
Great Lakes	24.75
Cauliflower	\$    ¢ per 500 g
All year Round	74.65
White Acre	55.00
Selection 174	102.29
Parsnip:	\$    ¢ per 500 g
Hollow Crown	11.00
V.I.P.	11.00
Yates Nip	11.00
Pea	\$    ¢ per 1 kg
Green Feast	1.38
Onward	1.44
W.F. Massey	1.43
Sweet Corn	\$    ¢ per 1 kg
Golden Cross Bantam	3.50
Miracle	6.90
Marcona	4.17
Silver Beet	\$    ¢ per 1 kg
Dark Green	7.00
Master Green	6.90

Tomato	\$	¢ per 10 g
Moneymaker	6.61	
Potentate	6.61	
Potato	\$	¢ per 3 kgs
Chippewa	1.50	
Ilam Hardy	1.40	
Red King Edward	1.50	
Asparagus	\$	¢ per 500 g
Mary Washington	29.50	
Beet	\$	¢ per 500 g
Detroit Dark Red	7.42	
Broccoli (sprouting)	\$	¢ per 500 g
	13.69	
Brussel Sprouts	\$	¢ per 500 g
	27.72	
Squash	\$	¢ per 500 g
Red Warren	13.34	
Swede	\$	¢ per 500 g
	3.72	
Turnip	\$	¢ per 500 g
	5.21	
Marrow	\$	¢ per 500 g
	11.06	
	10.29	
Cucumber	\$	¢ per 500 g
	16.73	
Leek	\$	¢ per 500 g
Musselborough	19.30	
Pumpkin	\$	¢ per 500 g
Whangaroa Crown	14.00	
Radish	\$	¢ per 500 g
White Icicle	6.80	
Spinach	\$	¢ per 500 g
Medania	6.32	

#### 14.12.12 Flower Seeds

	\$	¢ per 100 g
Carnations	50.32	
Freezia	38.54	
Aster	65.54	
Crysanthenum	80.76	

	\$	¢ per 100g
Dahlia	15.24	
Geranium (per 100 seeds)	18.52	
Gerbera (per 100 seeds)	198.02	
Lobelia	91.12	
Marigold	16.82	
Gypsophyla (per 10 g.)	48.82	
Polyanthus	11.80	
Sweetpea	13.44	
Wallflower	11.24	
Zinnia		

#### BULBS

	\$	¢
Daffodils (packs of 15)	5.15	
Hyacinths (packs of 3)	3.66	
Tulips (packs of 15)	6.27	

### 4.13 SHEARING SHED EXPENSES

#### 4.13.1 Plant

(i)	Shearing Machines	
	Sunbeam Heavy Duty S.G.V.	\$ 530
	Multi - purpose Farm Model	\$ 340
	Lister Golden Electric Single phase	\$ 590
	Three phase	\$ 545
(ii)	Electric Grinders	
	Sunbeam Double - ended 37cm	\$ 685
	Lister Double - ended Singlephase	\$ 630
(iii)	Handpieces	
	Sunbeam 'Super - grip'	\$ 187.50
	Lister 'Super 70'	\$ 186
(iv)	Woolpresses	
	Donald 'Sandow' Manual Vert. Hoist - wood	\$ 940
	- steel	\$ 990
	Electric 0.5KW Tipover - steel	\$ 2050
	with castors	\$ 2140
	Electric 1.5KW Tipover - steel	\$ 2550
	Hayes 'Stevlyon' Auto. Hydraulic Press	\$ 3950
(v)	Wool Tables	
	Hayes 'Stevlyon' Fleece Weigher Table	\$ 629.75
	Circular wool table	\$ 266
	Aabaas Round wool table	\$ 238
(vi)	Wool Pack Holders	
	Cyclone On skids	\$ 39.48
	On 2 Shepherd Castors	\$ 57.93
	On 4 Shepherd Castors	\$ 71.47

(vii) Dagging Plant	
Sunbeam portable petrol	\$ 325
Lister portable petrol	\$ 332
Tas portable petrol	\$ 350
Cam portable 12B Electric	\$ 350
(viii) Miscellaneous	
Donald Woolbale barrow	\$ 70.00
Fleece weigher	\$ 160.00
Hand Shears – Small	\$ 10.35
– Large	\$ 12.35

#### 4.13.2 Shed Expenses

Wool packs (1 per 150 kg) Jute	\$ 4.68
Synthetic	\$ 4.83
Twine (per hank)	\$ 2.25
Bale Needles (average price)	\$ 1.00
‘Stendye’ Aerosol Markers (Black, red, green, blue)400gm	\$ 3.65
Wool Bale Stencils - Circular Numerals 75mm	\$14.85
- Circular Letters 75mm	\$31.75
- Wool store Interlocking 75mm 0-9	\$10.83
A-Z	\$27.25
Grinder Papers (each)	\$ 3.30

#### 4.13.3 Wool Charges

Wool Charges Incurred by the Grower as at 11.8.80

- |   |                            |
|---|----------------------------|
| (i) Compulsory for all growers:                 |                            |
| Receiving, Warehousing, Weighing, Lotting, etc. | 6.776 cents/kg             |
| Wool Board Levy                                 | 4% of Gross Proceeds       |
| Wool Stabilization Levy                         | 4% of Gross Proceeds       |
| Earthquake Insurance                            | ½¢/\$100/month             |
| Testing Clients’ Lots                           | Yield: \$18 per lot        |
|   | Yield Micron: \$24 per lot |
| (ii) Optional                                   |                            |
| Reclassing and Binning Fleece                   | 6.204 cents/kg             |
| Reclassing and Skirting                         | 9.638 cents/kg             |
| Reclassing and Binning Oddments                 | 9.638 cents/kg             |
| Blending all wools                              | 4.658cents/kg              |
| Grouping  | \$4.68 per bale            |
| Lot-Building                                    | \$3.39 per bale            |
| Re-offering                                     | \$3.50 per bale            |
| Straight Repacking                              | \$3.05 per bale            |



Repacking Overweight Bales	\$ 3.50 per bale
Sheepsback to Store Insurance	12 cents per \$100
Extra Choice Lots under 4 bales	
Handling Charge	4.33 cents/kg

## 4.14 WATER CHARGES

### 4.14.1 Irrigation

Charges for irrigation vary depending on the length of time the scheme has been in operation, the size of the scheme, the source of water and the number of farmers participating in the scheme.

With older schemes such as the Ashburton-Lyndhurst or Mayfield-Hinds, the rate for irrigation water is \$5.88 per ha of land contracted to irrigate. This may be from none to 100 percent of the farm areas.

Newer schemes such as the Valetta, Levels or Morven-Glenavy use a system where the cost of water increases over an initial period of time to a final static charge. The Morven-Glenavy scheme, which started operation in 1974, has a 10 year build up period to a final charge of \$4.50 per ha. However it has only been 6 years since the scheme began to operate so charges this year are \$2.70 per ha.

Where a farmer is going to sink a well for irrigation or stock water supply on his own property, the only cost for water is with his 'Water Rights' application which must be made to the local board e.g. North Canterbury Catchment Board. \$40.00 per application.

### 4.14.2 Stock Water Supplies

- (i) Community Water Supply Schemes: Here the cost to the farmer varies so we have taken the Malvern Hills Rural Water Supply Scheme as being reasonably representative. The current charges for the malvern Hills scheme for the rating year 1 April 1980 to 31 March 1981 is \$44.00 per unit per year where a unit equals 1000 litres. The number of units used varies depending on the size of the farm, stocking rate and other sources of stock water. This cost per unit could be increased for the next rating year in view of increased charges for electricity.
- (ii) County Stock Water Races: The following table shows the charges made by the Paparua County Council, effective to March 31st 1981.

Area	Initial Charge	Charge per ha
0.5 – 8 ha	\$ 38.99	\$0.82
8 – 40 ha	\$ 54.50	\$1.62
40 – 80 ha	\$163.16	\$1.46

80 – 120 ha	\$310.02	\$1.31
120 – 160 ha	\$440.54	\$1.34
160 – 200 ha	\$554.76	\$0.98
200 – 240 ha	\$652.66	\$0.81
240 – 280 ha	\$734.25	\$0.64
280 – 320 ha	\$799.51	\$0.48
320 – 360 ha	\$848.47	\$0.32
360 – 400 ha	\$881.10	\$0.16
400 ha and over	\$897.41	\$0.13

Examples of this rating system are as follows:

Farm Area = 4 ha; Charge = \$38.99 + (4 x \$0.82) = \$42.27

Farm Area = 20 ha; Charge = \$54.50 + (20 x \$1.62) = \$86.90

Farm Area = 287 ha; Charge = \$799.51 + (287 x \$0.48) = \$937.27

Farm Area = 634 ha; Charge = \$897.41 + (634 x \$0.13) = \$979.83

## 4.15 WEED AND PEST CONTROL

Many herbicides, fungicides, and insecticides are produced by the various chemical companies and these come in ranges of strengths. This Budget Manual doesn't endorse any particular product or company and the trade names given are to serve only as examples of the chemical concerned.

All prices are per litre or per kilogram being determined from the smallest pack size of the chemical available. The second figure in each case is a price for a large pack – 20 litres or 25 kg unless otherwise stated.

### 4.15.1 Herbicides

For the prescribed rates of application for the various chemicals and the weeds they control, see Section 14 in the Technical Manual, "Weed and Pest control".

Trade Name	Chemical Name	Price per kg or per litre	Price of 20 litre or 25 kg pack
(i) ICI - Tasman			
Agroxone M.C.P.A.	M.C.P.A.	\$5.51	\$100.60
Amine 2,4-D	2,4-D (Amine salt)	\$5.96	\$109.20
Atlavar	2,4-D (sodium salt), monuron, sodium	\$4.52	\$114.50 (50 kg)
Avenge 200A	Chlorate	\$10.48	\$209.60

Ban 750	Difenzoquat	\$ 11.16	\$ 221.60
Bexone MCPB	Dicamba, MCPA	\$ 5.25	\$ 105.00
Butoxone 2,4,5-T Vol.	MCPB	\$ 14.10	\$ 261.80
Caragard 500 FW	2,4,5-T (butylester)	\$ 10.44	\$ 205.60
Deurinol	Terbumetron, Terbut- ylazine	\$ 23.56	\$ 58.90 (2.5 kg)
Dicambone 75D	Napropamide	\$ 8.64	\$ 160.40
Dicambone 5G	2,4-D (amine salt), Dicamba	\$ 4.10	\$ 58.80 (15 kg)
Dicamba	Dicamba	\$ 10.08	\$ 196.40
Dinoseb	Dinoseb	\$ 4.17	\$ 83.40
Embark 2s		45.72	91.44 (2 litre)
Ethone 2,4-D Vol.	2,4-D (butylester)	\$ 8.46	\$ 158.00
Frenok	Sodium 2,2,3,3-tetra Fluoropropionate	\$ 21.03	\$ 177.10 (10 litre)
Frenokone	2,4-D (sodium salt)	\$ 5.74	\$ 98.20
Gesagard	Prometryn	\$ 15.84	\$ 154.30 (10 kg)
Gesamil	Propazine	\$ 13.01	\$ 126.80 (10 kg)
Gesaprim 500 FW	Atrazine	\$ 9.07	\$ 178.00
Gesatop 500 FW	Simazine	\$ 9.42	\$ 185.00
Gesatop 80	Simazine	\$ 12.60	\$ 126.00 (10 kg)
Gramoxone	Paraquat	\$ 9.65	\$ 189.20
Herbex D.A.	Amitrole, 2,2- dichloropropionic acid (sodium salt)	\$ 6.90	\$ 63.70 (10 kg)
Igran 500 FW	Terbutryn	\$ 18.55	\$ 92.75
Icipon	2,2-dichloropropionic acid (sodium salt)	\$ 5.20	\$ 90.25
I.C.I. Thistle Dust	2,4-D (sodium salt)	\$ 1.42	\$ 14.20 (10 kg)
I.C.I. 2,4,D.B.	2,4,D.B.	\$ 5.25	\$ 105.00
Nortron	Ethofumesate	\$ 15.96	\$ 308.80
Permex SDA	Amitrole, 2,2- dichloropropionic acid (sodium salt), simazine	\$ 11.34	\$ 105.10 (10 kg)
Preglone Extra	Diquat, Paraquat	\$ 10.22	\$ 200.40
Primextra 500 W	Atrazine, N-(1 - methyl - 2 methoxy - ethyl) - 2 - ethyl - 6 - methyl - alpha - chloroacetanilide	\$ 8.25	\$ 165.00
Reglone	Diquat	\$ 11.44	\$ 224.60
Semeron	Desmetryn	\$ 16.76	\$ 41.90 (2.5 kg)
Tillam E	Perbulate	\$ 13.47	\$ 269.40
Trident	Dicamba, Dichlorprop, M.C.P.A.	\$ 7.90	\$ 150.60
Tandex 80 WP		\$ 39.74	678.06 (18 kg)

(ii) Ivon Watkins-Dow

Actazine 4A	Atrazine	\$ 6.84	\$ 133.40
Actazine 80	Atrazine	\$ 13.62	\$ 133.20 (10 kg)
Bandomine M	Dicamba, M.C.P.A.	\$ 6.21	\$ 122.60
Banvine	2,4-D (amine salt), Dicamba	\$ 8.71	\$ 156.00
Betanal AM II	Phenmedipham	\$ 19.49	\$ 386.60
Brominal M	Bromoxynil, M.C.P.A.	\$ 8.56	\$ 169.60

Dowpon	2,2 dichloropropionic acid (sodium salt)	\$ 5.15	\$ 92.00
Dyram 80	Diuron	\$11.95	\$298.75
Eliminex		\$ 6.65	\$129.80
Fodderkleen	Chlornitrofen, Picloram	\$ 5.68	\$112.00
High-Ester 2,4-D	2,4-D (butylester)	\$ 7.63	\$150.20
Lo Vair D	2,4-D (butylester)	\$ 4.27	\$854.00 (200 litres)
MEC 40	Mecoprop	\$ 4.03	\$ 80.60
I.W.D. Paraquat	Paraquat	\$ 9.65	\$189.20
Permazol SDA	Amitrole, 2,2-dichloropropionic acid (sodium salt), simazine	\$11.48	\$ 97.50 (10 kg)
Phytozol D	Amitrole, 2,4-D, 2,2-dichloropropionic acid (sodium salt)	\$ 7.76	\$ 89.64 (12 kg)
Propazol 50	Propazine	\$12.62	\$120.30 (10 kg)
Scrub Dessicant TD	2,4-D, 2,4,5-T (butylesters)	\$ 8.21	\$164.20
Selecta 4-CPA	M.C.P.A.	\$ 6.71	\$132.60
Simazol 80	Simazine	\$14.29	\$140.00 (10 kg)
Sinox P.E.	Dinoseb	\$ 4.03	\$ 76.29 (18.93 litres)
Teedal	2,2-dichloropropionic acid (sodium salt), T.C.A.	\$ 4.97	\$ 93.60 (15 kg)
Tordon 2G	Picloram	\$ 4.01	\$ 93.00
Tordon 50 D	2,4-D (amine salt), picloram	\$ 9.53	\$ 89.00
Tordon 520	Picloram, 2,4,5-T (iso octyl ester)	\$11.83	\$233.00
Tordon 1050	Picloram, 2,4,5-T (butylester)	\$ 9.61	\$192.20
Turfmaster	M.C.P.A., Mecoprop	\$ 4.89	\$ 85.00
Weedar 77	2,4-D (amine salt)	\$ 4.74	\$ 89.20
Weedar M.C.P.A.	M.C.P.A.	\$ 4.83	\$ 91.00
Weedar Butyrac M.C.P.B.	M.C.P.B.	\$ 5.23	\$102.60
Weedar Butyrac 2,4-DB	2,4-DB	\$ 5.64	\$111.00
Weedazol T-L	Amitrole, ammonium thiocyanate	\$ 4.09	\$ 71.80
Weedone Hi-Ester T	2,4,5-T (butylester)	\$12.83	\$244.60

(iii) May and Baker

Asulox	Asulam	\$11.78	\$224.40
Axall		\$11.80	\$229.00
Buctril M	Bromoxynil, M.C.P.A.	\$ 9.94	\$198.80
Carbetamex 70	Carbetamide	\$15.25	\$ 76.25 (5 kg)
Ronstar		\$25.87	\$127.30 (5 litres)
Totril	Ioxynil	\$18.00	\$ 90.00 (5 litres)

(iv) Redene – Rural/Ispray			
Activated Amitrole	Amitrole, Ammonium thiocyanate	\$ 3.31	\$ 66.20
Caragard 500 FW		\$10.28	\$205.60
Atrex	Atrazine	\$12.25	\$183.75 (15 kg)
Banvel	Dicamba	\$ 9.38	\$187.60
Banweed 750	Dicamba, 2,4-D (amine)	\$ 8.50	\$170.00
Cornox CWK	Benazolin	\$23.68	\$118.40(5 litres)
Duston 15	2,4-D (sodium salt)	\$ 1.55	\$ 31.00
Diuron 80	Diuron	\$11.38	\$227.60
Elapon	2,2-DPA (sodium salt)	\$ 3.74	\$ 93.50
Flowable Atrazine	Atrazine	\$ 8.90	\$178.00
Flowable Simazine	Simazine	\$ 9.25	\$185.00
Fodagard	Nitrofen, Dicamba	\$ 5.60	\$112.00
SDA Longterm	Simazine, 2,2-DPA, Amitrole	\$ 9.73	\$194.60
Simex	Simazine	\$12.88	\$193.20 (15 kg)
Sodakem	Sodium Chlorate	\$ 2.19	\$ 54.75
Tri-Cornox	Dicamba, Benazolin, Dichlorprop	\$ 4.66	\$ 93.20
Treflan		\$ 8.55	\$171.00
Rural 2,4-D Amine 40	2,4-D (amine salt)	\$ 4.77	\$ 95.00
Rural 2,4-DB 40	2,4-DB (sodium salt)	\$ 5.33	\$106.00
Rural 2,4-D Ester 80	2,4-D (Butyl Ester)	\$ 7.87	\$157.40
Rural 2,4-D Sodium Salt 80	2,4-D (sodium salt)	\$ 3.80	\$ 95.00
Rural MCPA	M.C.P.A. (potassium salt)	\$ 4.97	\$ 99.40
Rural MCPB	M.C.P.B. (sodium salt)	\$ 5.24	\$104.80
Rural Paraquat	Paraquat ion	\$ 9.57	\$191.40
Rural 2,4,5-T Ester 80	2,4,5-T (Butyl Ester)	\$13.18	\$263.60
Hoechst Linuron 50 WP	Linuron	\$13.41	\$335.35
Hoechst Aretit 50 EC	Dinoseb acetate	\$ 3.47	\$ 69.40
Hoechst Hoegrass 36 EC	Diclofop-methyl	\$20.40	\$408.00
Hoechst Na TA	TCA (sodium salt)	\$ 2.38	\$ 59.50
(v) Shell			
Avadex B.W.	Tri-allate	\$ 7.03	\$140.60
Atrazine	Atrazine	\$12.40	\$120.00 (10 kg)
Atrazine 50 SC	Atrazine	\$ 9.07	\$178.00
Cearex 4	Dicamba, M.C.P.A., mecoprop	\$ 6.30	\$106.80
DNBP (Amine)	Dinoseb	\$ 3.75	\$ 67.00
Dicamba 2	Dicamba	\$ 9.10	\$177.00
Double Strength 2 4-D	2,4-D (butyl ester)	\$ 8.66	\$160.80
Double Strength 2,4,5-T	2,4,5-T	\$14.12	\$260.40
Herbitrol	Cyanazine	\$ 7.12	\$ 71.20 (10 kg)

Lasso	Alachlor	\$ 8.37	\$156.00
Linuron 50	Linuron	\$13.49	\$337.25
Mataven		\$10.25	\$205.00
Mosskiller	Pentachlorophenol	\$ 2.80	\$ 49.60
Planavin 75	Nitralin	\$19.75	\$197.50 (10 kg)
Prefix granules	Chlorthiamid	\$ 3.53	\$ 67.25
Ramrod 65	Propachlor	\$ 7.10	\$ 63.90 (9 kg)
Residex LT	Amitrole, 2,2 dichloro-propionic acid (sodium salt), Simazine	\$ 9.54	\$232.50
Roundup	Glyphosate	\$25.28	\$444.00
Simazine 80	Simazine	\$12.65	\$ 94.87 (10 kg)
Simazine 50 SC	Simazine	\$ 9.42	\$185.00
Supercearex	Dicamba, dichlorprop, M.C.P.A.	\$ 6.36	\$109.20
Weedkiller W	Oils-mineral-herbicial	P.O.A.	P.O.A.
2,4-D Amine	2,4-D (Amine Salt)	\$ 5.40	\$ 98.20
M.C.P.A.	M.C.P.A.	\$ 5.72	\$ 99.40
M.C.P.B.	M.C.P.B.	\$ 5.36	\$102.80
2,4-D with Dicamber	2,4-D, Dicamba	\$ 6.28	\$121.00
(vi) Yates			
Dalapon	2,2-dichloropropionic acid	\$ 5.25	\$ 91.05
Reglone P	Diquat	\$11.44	\$224.60
Treflan	Trifluralin	\$ 9.20	\$171.00
Universal Weedkiller	Sodium Chlorate	\$ 1.57	\$ 39.20
(vii) Henry York			
Aliceap	Chlorbufam, chloridazon	\$27.60	\$640.00
Basagran Liquid 480 EC	Bentazone	\$29.90	\$673.75 (25 litres)
Dinotate Liquid	Dinoseb	\$ 3.25	\$ 65.00
Linuron 50 WP	Linron	\$13.40	\$313.75
Mecomix		\$ 5.60	\$107.00
Sencor 70 WP	Metrabuzin	\$61.25	\$ 90.68
Tribunil 70 WP	Methabenz thiazuron	\$21.10	\$493.75
Ustilan 70 WP	1,3-dimethyl-3-(5-ethyl-sulfonyl-1,3,4-thiadiazole - 2 - yl) - urea	\$31.95	\$561.60 (18 kg)

### 4.15.2. Insecticides

For full information regarding common names, proprietary names, and percent a.i., refer to the Handbook of Agricultural Chemicals. For full information regarding rates of application and the pests controlled by the various chemicals, refer to the Technical Budget Manual, Section 14 "Weed and Pest Control" or refer to the book "New Zealand Insect Pests" edited by D. Ferro, and published by Lincoln College, 1976.

	Trade Name	Chemical Name	price per litre/kg	price of 20 litres or 25kg pack
(i)	ICI-Tasman			
	Actellic S.G. No. 20		6.13 each	
	Attack		\$28.75	\$469.68
	Dicidex	Trichlorfon	\$ 6.27	\$ 75.24
	Furadan 10G	Carbofuran	\$ 3.31 each	-
	Gammexane 5G	Lindane	\$ 2.61 each	-
	Gromothion 60	Fenitrothion	\$10.15	\$181.00
	Malathion 50	Maldison	\$ 5.70	\$ 98.20
	Pirimor 50	Pirimicarb	\$28.90	\$ 23.90
	Ambush 50 E.C.			\$ 73.25 (500 ml)
	Sytol (Available only through N.Z. Fruitgrowers Federation.)			\$ 89.10 (5 litre)
(ii)	Ispray			
	Azinphos Methyl	Azinphos Methyl	\$13.08	\$196.20
	Carbaryl 80 W	Carbaryl	\$ 8.20	\$205.00
	Dibrom 8 E		\$16.50	\$ 33.00
	Furadan	Carbofuran	\$13.60	\$ 13.60
	Lindane 50 W	Lindane	\$13.25	\$ 26.50
	Exatin 250 EC		\$13.26	\$ 66.30 (5 litre)
	Orthene 75	Acephate	\$23.20	\$232.00
	Phorate 10 G	Phorate	\$ 2.70	\$ 40.50
	Phorate 20 G	Phorate	\$ 3.45	\$ 51.75
	Hosta		\$ 9.55	\$191.00
	Thiodan 35 EC		\$ 8.95	\$179.00
(iii)	Ivon Watkins			
	Dow			
	Dyzol 50 W	Dichlorvos or Diazinon	\$11.49	\$112.00
	Dyzol 80 EC	Diazinon	\$14.86	\$287.20
	Dyzol 20 G	Diazinon	\$ 4.33	\$ 64.95
	Lepidex	Trichlorfon	\$ 5.75	\$112.00
	Lorsban 40 EC	Chlorpyrifos	\$17.41	\$ 86.55
	Lorsban 50 W	Chlorpyrifos	\$23.11	\$ 46.22
	Nexion 40 EC	Bromophos	\$11.81	\$226.20
	Plictran 50 W	Cyhexatin	\$45.95	\$ 91.90
	Saprol	Triforine	\$14.03	\$ 70.15
	Thimet 20 G	Phorate	\$ 3.77	\$ 56.55
(iv)	Rural- Redene			
	Caterkil	Fenitrothion	\$ 7.57	\$151.40

	Malathion 50	Maldison	\$ 4.44	\$ 88.80
	Nuvan 100 EC	Dichlorvos	\$	\$ 88.00
	Silogard	Maldison	\$ 1.19	\$ 29.75
	Ficamz		\$ 3.19	\$ 15.95 (5 pack)
(v) Shell			(sachet)	
	Aldrin 50 EC	Aldrin	\$ 5.85	\$117.00
	Bidrin concentrate	Dicrotophos	\$12.65	(½ litre bottle)
	DDT Concentrate	DDT	\$ 3.43	\$ 57.40
	Dieldrex 50 WP	Dieldrin	\$ 9.87	\$ 98.70 (10 kg)
	Gesapon 10 (granular)	Diazinon	\$ 2.36	\$ 59.00
	Gesapon 80 EC	Diazinon	\$15.13	\$297.40
	Improved Redspray	Oils-mineral-insecticidal	\$ 0.46	\$ 9.00
	Lindane pellets	Lindane	\$ 3.97	\$ 99.25
	Phosdrin (concentrate)	Mevinphos	\$16.02	(½ litre bottle)
	Premium Late	Oils-mineral-insecticidal	\$ 0.86	\$ 17.20
	Winter Oil			
	Sumicidin 10		\$28.00	\$510.00
	Torque 50		\$38.88	\$ 77.75
	Universal Orchard Oil		\$ 2.07	\$ 27.20
	Vapona Concentrate	Dichlorvos	\$10.20	(½ litre bottle)
	Verthion EC	Fenitrothion	\$ 8.06	\$148.60
	Verthion pellets	Fenitrothion	\$ 2.15	\$ 53.75
(vi) Yates				
	Carbaryl	Carbaryl	\$ 6.44	\$161.07
	Yates Carbaryl 80	Carbaryl	\$ 9.35	\$ 18.70 (2 kg)
	Yates Maldison 50% EC	Maldison	\$ 4.74	\$ 8.62
	Maldison 25	Maldison	\$ 5.05	\$ 10.10 (2 kg)
	Yates Thiram	Thiram	\$ 4.94	\$ 75.31
(vii) Henry York				
	Dasanit 5 G	Fensulphothion	2.18	\$ 54.50
	Dedevap 1000	Disulphoton	\$18.65	\$ 93.25 (5 litre)
	Disyston Ten	Disulfoton	\$ 2.60	\$52.00 (20 kg))
	Folidol M 50	Parathion-methyl	\$15.50	\$267.50 (25 litres)
	Folimat 50 LC	Omethoate	\$24.20	\$ 24.20 (1 litre)
	Gusathion M 50 WP	Azinphos-methyl	\$14.95	\$201.75 (15 kg)
	Gusathion A 40 EC	Azinphos-ethyl	\$16.95	\$258.00
	Mesurool 75 WP	Methiocarb	\$60.00	\$1,198.75
	Mesurool Snailbaits	Methiocarb	\$ 3.95	\$ 39.50 (10 kg)
	Metasystox (i) 25 EC	Demeton-S-methyl	\$13.50	\$201.00
	Nemacur 400 EC		\$21.20	\$481.25 (25 litre)
	Peropal 25 WP		\$22.95	\$ 45.90 (2 kg)
	Tamaron 600 LC	Methamidophos	\$18.40	\$432.50 (25 kg)



Thiofor 350 EC	Endosulfon	\$ 9.45	\$172.00
York Diazinon 800 EC	Diazinon	\$17.31	\$334.40
York Diazinon 10 G	Diazinon	\$ 2.36	\$ 59.00
York Fenitrothion 600 EC	Fenitrothion	\$ 8.07	\$161.40
York Fenitrothion 10 G	Fenitrothion	\$ 2.14	\$ 53.50
York Lindane 20 G	Lindane (pellet)	\$ 3.97	\$ 99.25
(viii) May and Baker Kilval		\$17.00	\$ 83.15 (5 litres)

### 4.15.3 Fungicides

	Trade Name	Chemical Name	price per litre/kg	price per 20 litre/25 kg pack
(i)	Henry York			
	Antracol 70 WP	Propineb	\$ 7.50	\$162.50
	Bayleton 5 WP		\$20.75	\$496.25
	Bayleton 250 EC		\$48.95	\$479.50 (10 litre)
	Calirus	Benodanil	\$34.20	\$ 34.20 (1 kg)
	Calixin	Tridemorph	\$10.73	\$264.00 (25 litre)
	Euparen 50 WP	Tolyfluamid	\$29.40	\$683.75
	Pallinal	Metiram, Nitrotal-di- isopropyl	\$ 8.35	\$206.25
	Polyram Combi 80 WP	Metiram	\$ 3.05	\$ 76.25
	Polyram 2000 80 WP	Metiram	\$ 5.75	\$143.75
	Ronilan 50 WP		\$42.40	\$805.00
(ii)	Hoëchst			
	Afugan 30 Ec	Pyrazophos	\$33.15	\$ 33.15
	Chinosol W	8-hydroxyquinoline sulphate	\$75.90	\$189.75
	Copper Oxychloride	Copper oxychloride	P.O.A.	P.O.A.
	Oleocop	Cuprous oxide	\$ 4.98	\$124.50
	Brassicol 75		\$ 9.27	\$231.75
	Morocide 50 WP		\$12.98	\$324.50
(iii)	Ispray			
	Copper Oxychloride	Copper oxychloride	P.O.A.	P.O.A.
	Difolatan 5 F	Captafol	\$ 8.12	\$162.40
	Difolatan 80 W	Captafol	\$11.29	\$282.25
	Dinocap 25 W	Dinocap	\$ 7.31	\$162.75
	Fungaflor 20 EC		P.O.A.	P.O.A.
	Mancozeb 80 W		P.O.A.	P.O.A.
	Orthocide 10 % Dust	Captan	P.O.A.	P.O.A.
	Orthocide 80 W	Captan	\$ 8.50	\$212.50
	Phaltan 50 W	Folpet	\$ 6.80	\$170.00
	Plantvax 75 W	Oxycarboxin	\$29.10	\$ 29.10 (500g)
	Saprol 20 EC	Triforine	\$14.50	\$290.00
	Ridomil 25 WP		\$39.50	\$790.00

Others	Milcurb (ICI Tasman) Dimethirimol	\$ 13.53 per litre
	Topsin M-4A (I.W.D) Thiophanate-methyl	\$ 274.60 per 20 litres
	Kocide 101 (Shell) Cupric hydroxide	\$ 57.50 per 10 kg
	Syllit 40 S (Shell) Dodine	\$ 112.00 per 20 litres
	Benlate Benomyl	\$ 31.20 per 1 kg pack
	Rovral (May and Baker)	\$39.95 per kg

#### 4.15.4 Miscellaneous Chemicals

Omite 30 W (Ispray) - Miticide	\$ 20.70 per 2 kg
Ortho Spray Sticker (Ispray) - Sticking agent	\$ 72.00 per 20 litres
Rural Spreader Sticker 15 - wetting agent	\$ 26.40 per 20 litres
Rural Liquid Spray Marker Dye	\$ 589.20 per 27 litres
Dygal - agrobacterium radiobacter	\$ 10.66 per 160 grams

##### Soil Fumigants

Shell DD (1.2 - dichloroprene 1.3, - dichloropropene)	\$ 55.40 per 20 litre container
Di - Trapex (Ispray)	\$ 387.50 per 50 litres.

##### Growth Regulants

Altar 85 (Ispray)	\$ 145.60 per 2 kg.
Caldon 50 E.L. (Ispray) - Bramble desuckling agent	\$ 56.60 per 5 litres
Fatol Super (Ispray) - Tobacco sucker control agent	\$ 97.00 per 20 litres
Seradix - root forming hormone	\$ 13.80 per 600 grams
Ethrel - ripening agent	\$ 46.70 per litre.

#### 4.15.5 Aerial Spraying

##### (i) Airwork (N.Z.) Ltd.

Brush weeds – High Volume	\$ 50.00/ha
– Low Volume	\$ 29.65/ha
Insecticides	\$ 16.00/ha
Cereals	\$ 13.60/ha
Defoliation and Blight (Potatoes)	\$ 19.26/ha
Pasture	\$ 10.00/ha

(ii) **James Aviation**

Blanket Spraying Rates:

Litres per ha	Helicopter cost per ha
0-30	\$ 6.92
31-60	\$ 11.00
61-120	\$ 17.80
121-170	\$ 30.00
171-225	\$ 40.00
226-280	\$ 51.00
281-340	\$ 61.00
341-450	\$ 81.00
451-570	\$102.00

Minimum charge for flying = \$165.00

Miscellaneous Helicopter Charges:

Crop spraying and liquid fertilizers \$23.00 per hectare

Spot Spraying plusage of 25% to the blanket rates.

Hourly rates for lifting etc (2 hours minimum)

Llama .....	\$590.00
Hughes 500 D .....	\$450.00
Hughes 500 C.....	\$420.00
Hughes 300 C.....	\$290.00
Jet Ranger.....	\$450.00
Solloy .....	\$430.00
Hiller 12 E.....	\$350.00

Hourly rates for fixed Wing.

Agwaggon .....	\$270.00
Airtruk 300 H.P. ....	\$326.00
Fletcher 300 H.P. ....	\$294.00
Fletcher 400 H.P. ....	\$352.00

(iii) **Helicopters (N.Z.) Ltd.**

Litres per ha	Cost per ha
28	\$ 9.14
56	\$10.43
84	\$13.04
112	\$15.65
140	\$18.27
168	\$24.78
224	\$31.31
280	\$41.74
392	\$50.87
448	\$62.61
560	\$83.48

Minimum Charge \$300

Miscellaneous Helicopter charges:-

Spraying with liquid fertilizer – \$13.00 per ha for the first 20 ha and \$11.50 per additional ha over 20 ha.

Positioning – \$230.00 per hour.

Spraying flight charge – \$290.00 per flight hour.

Flight charge – fencing – \$250.00 per flight hour.

#### **4.15.6 Ground Application (1979-80 rate)**

(materials extra)

##### **(i) Gun Spraying**

One man plus fully equipped truck \$20.50 per hour varying in scale downwards according to the type of country.

##### **(ii) Boom Spraying**

Depending on the nature of the crop and situation, boom spraying costs about \$9 – \$10.50 per hectare.

# 4.16 SELLING CHARGES

## 4.16.1 Yard Fees

Addington		Amberley	
Includes loading fee of		All sheep	14¢
	8¢ - sheep		
	30¢ - cattle		
	50¢ - bulls		
Sheep	26¢		
Fat Cattle	1.78		
Store Cattle	1.49		
Vealers	1.49		
Dairy Cows	1.78		
Calves	1.49		
Bulls	3.14		
Porkers	62¢		
Baconers	62¢		
Store pigs	50¢		
Coalgate		Culverden	
Sheep shareholders	10¢	Sheep	17¢
Non Shareholders	11¢	Rams	17¢
Rams	25¢	Calves	99¢
Calves Shareholders	70¢	Breeding Bulls	10.00
Non Shareholders	80¢	Adult Cattle	1.18
Cattle shareholders	80¢	Dairy Cattle	1.18
Non Shareholders	90¢		
Hawarden		Little River	
Sheep	9¢	Sheep	14¢
		Rams	25¢
Sheffield			
Sheep Shareholders	16¢	Cheviot	
Non Shareholders	17¢	Calves	1.10
Rams	50¢		
Cattle Shareholders	70¢		
Non Shareholders	80¢		
Oxford			
Sheep	11¢	(plus loading/unloading fee of 3¢ per head)	
Rams	25¢		
Fat Cattle	70¢	(plus loading/unloading fee of 10¢ per head)	
Store Cattle	70¢		
Dairy Cattle	80¢		
Bulls	1.00		

## 4.16.2 Commissions on Stock sold through a Stock and Station Agent

### Sale Yards

Sheep	4.75%
Fat Cattle	4.75%
Store Cattle	4.75%
Vealers	4.75%
Bulls	7.5%
Dairy Cattle	7.5%
Pigs	5.75%
Horses (Bloodstock)	8.0%
Horses	8.0%
Grazing	10.0%

### Clearing Sales

Sheep	5.5%
Store Cattle	5.5%
Pigs	7.0%
Dairy Cows	7.5%
Implements &	
Sundry	10.0%
Furniture	15.0%

### Special Sales

Stud Cattle	8.0%
Stud sheep	4.75%

## 4.17 PLANTS

### 4.17.1 Farm Shelter Trees

The prices shown below are the approximate cost per 100 for trees commonly grown for farm shelter. The price does not include planting.

Pinus radiata	\$6-\$10 18 month trees or \$50 for 1000.
Larch	\$20-\$25 2 year trees
Thuja	\$28 3 year trees.
Muricata	\$10 1 year trees.
Arizonica	\$15 1 year trees.
Benthami	\$15 1 year trees.
Macrocarpa	\$15 1 year trees.
Lombardy Poplar	\$32 (small)
Poplars (others)	\$50 (large)
Douglas Fir/Oregon	\$22 2 year trees.
Cedrus deodara	\$32 3 year trees.
Eucalyptus	\$40 (small in tubes)
	\$46.50 (large in tubes)

### 4.17.2 Retail Fruit and Nut Trees.

(i) Fruit Trees	\$	¢ each
Fig	7.50	
Apple	4.50	
Pear	7.60	

Plum	5.20
Peach	6.95
Apricot	5.20
Cherry	8.00
Fejoa (grafted)	8.95
<b>(ii) Berry Bushes</b>	
Cranberry	3.80
Blueberry	4.95
Gooseberry	3.45
Raspberry	(per 10) 2.95
Blackberry	1.95
<b>(iii) Nut Trees</b>	
Sweet Chestnut	5.50
Japanese Walnut	7.60
Hazelnut	9.10
<b>(iv) Citrus Fruits</b>	
Lemons (from N.I.)	10.50
(Local)	7.95
Tangelos	10.50
Mandarins	10.50
Grapefruit	10.50
Oranges	10.50

### 4.17.3 Vegetable Plants

	\$ ¢
Beetroot	1.00 per 6
Cauliflower	1.00 per 12
Sweetcorn	.30 each
Green pepper	1.20 per 6
Celery	1.20 per 12
Cabbage	1.00 per 12
Grafted Tomato	1.45 each
Butternut squash	.55 each
Zucchini	.50 each
Parsley	1.20 per 12
Tomato	1.00 per 12
Brussel Sprouts	1.00 per 12
Broccoli	1.00 per 12
Silverbeet	1.00 per 12
Lettuces	1.00 per 12
Leeks	.80 per 25
Onions	.80 per 25

## 4.17.4 Fruit Plants

### Berryfruit:

Strawberry	\$30.00 per thousand
Raspberry	\$200.00 per thousand
Blueberry unrooted cuttings	\$0.25 each
tissue cultured (soft tubes)	\$4.75
tissue cultured (hard tubes)	\$5.75
plants	\$3.00 each
Blackberry (thorn free)	\$600 per thousand
Boysenberry	\$600 per thousand
Blackcurrant cuttings	\$70 per thousand

### Subtropicals:

Tamarillo (yellow)	\$590.00 per thousand
(red)	\$1250.00 per thousand
Kiwifruit	\$0.90-\$1.60 each
Grapefruit (1 year)	\$3.25 each
Lemon (1 year)	\$3.25 each

	each
Feijoas	\$4.50
Black passionfruit	\$1.10
Casana	\$3.00
Avocados	\$5.00

## 4.18 REPAIRS AND MAINTENANCE

The best way to estimate the likely expenditure on repairs and maintenance for all plant, buildings, fences, sheep and cattle yards, tracks and culverts is (1) the close scrutiny of the farm accounts and (2) questioning the farmer directly, on likely expenditure programme.

If the information is not available through such sources, the following rates may be used as an approximate guide. It should be borne in mind that expenditure on repairs and maintenance is strongly dependent upon the income for that particular year.

Dwellings	2½ – 5%	) depending upon the age of the building
Farm buildings	2½ – 5%	
Piggeries	5 – 10%	) depending on water type
Water supply	up to 5%	
Implements and plant	7½ – 15%	) depending on use
Roads, tracks and culverts	5 – 10%	
Yards and dip	2½ – 5%	



## **4.19 MOTOR VEHICLE – FUEL, LICENCING AND ROAD USER CHARGES.**

### **4.19.1 Motor Vehicle Fuel Taxes**

#### **Motor Spirits Duty (Petrol Tax)**

Motor spirits are now taxed as follows:

- A motor spirits duty of 4.24 cents per litre is paid into the National Roads Fund.
- A motor spirits duty of 8.45 cents per litre is paid into the Consolidated Revenue Account.
- A local authority tax of 0.68 cents per litre and an equivalent tax on diesel fuel, are not rebated for motor vehicles under any circumstances.

#### **Exempted Vehicles**

These are vehicles which are not subject to road user charges taxation. Where farmers are concerned they fall into three categories –

- Vehicles with E class A licence labels which are only permitted to use the public highway in connection with their inspection, servicing, or repair, or for the purposes of a drivers licence test; and
- Vehicles with E class B licence labels which are largely limited to gate-to-gate operations, or to laden journeys with a 21 km round-trip limit between separate farms owned or managed by the vehicle owner. There are some exemptions to these restrictions – e.g. there is no limit to the distance for which dogs can be carried to a hydatids dosing centre; there is no limit to the distance which a farmer may cart milk, cream or whey to or from a dairy factory by means of a tractor and trailer; and there is also no limit to the distance which any Class B vehicle may be taken in an unladen condition.
- Unregistered motor vehicles.

A refund of 11.7 cents per litre can be claimed for petrol used in an Exempted Vehicle.

#### **Licensed Vehicles**

These are vehicles which are subject to road user charges taxation. The Second Schedule to the Motor Spirits Duty Refund Regulations 1978 contains a table of Standard Motor Spirits Consumption Rates. A refund of 9.7 cents per litre can

be claimed either on the actual quantity of fuel used in a Licensed Vehicle, or on the quantity arrived at by applying the table of Standard Consumption Rates, whichever is the smaller. This is to offset the tax paid in road user charges.

#### **Stationary Engines and Machinery Such As Chainsaws**

Provided these are used solely for commercial purposes (i.e. for the owner's own agricultural operations), a refund of 9.7 cents per litre can be claimed on the petrol they use.

#### **Boats**

Farmers in some remote areas use boats to transport their produce, stock etc.

A refund of 11.7 cents per litre can be claimed on these commercial vessels.

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New Zealand Post Office*

### **4.19.2 Road User Charges**

All vehicles other than exempted vehicles used on the public highway (except for petrol-powered vehicles and trailers with a manufacturer's gross vehicle weight rating of 3.5 tonnes or less), are liable for road user charges.

Where the farmer is concerned, this will generally apply to farm trucks which are licensed for unlimited road use. All vehicles with Class A or Class B licence labels are exempt.

#### **Road User Licences**

There are two types of road user licence –

- Time licences are available for vehicles described as Off-Road Motor Vehicles in the Second Schedule to the Road User Charges Act 1977. These are largely mobile machines such as Road Rollers, Mobile Cranes and Trench Diggers which do most of their mileage off the road.
- Distance licences are required for all other vehicles subject to road user charges and can be purchased in multiples of 1000 km.

Road user licences can be bought at most Post Offices and their cost depends upon –

- the weight at which the owner elects to operate the vehicle; and

- in respect of distance licences, the vehicle's axle configuration.

Road User Licences are not transferable between vehicles.

Supplementary Licences are available for situations where an owner wants to increase the nominated weight of a current licence.

### **Hubodometers**

All vehicles over 3.5 tonnes that require Distance Licences have to be fitted with approved hubodometers.

Exemptions from fitting hubodometers can be obtained from the Secretary for Transport if it can be demonstrated that is is not practical to fit them.

## **4.19.3 Motor Registration and Licencing**

Normally, farmers pay full registration and licensing fees for their vehicles, with the following exceptions:

Agricultural trailers, that is, trailers such as seeders, ploughs, and rotary hoes, designed exclusively for agricultural operations, are not required to be registered or licensed, if they are towed by a currently licensed vehicle.

Conventional trailers drawn by exempted vehicles with E Class B labels must be registered and licensed, but are exempt from payment of all fees, except for the accident compensation levy, and the cost of the licence label and (where applicable) the number plates.

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New Zealand Post Office*

## **4.19.4 Transport Licencing**

Generally, a farmer may carry his own goods in his own vehicle in connection with his business as a farmer, without restriction. There are, however, some limitations on this.

### **Five-Tonne Payload**

If the load exceeds 5000 kilograms, and if there is an open railway route of not less than 150 kilometres available, the farmer must have a goods-service licence.

### **Exemptions**

The following classes of goods may be carried without restriction, provided they are the farmer's own:

- Livestock, lime, hay or straw, fresh meat, poultry or fresh fish, fresh fruit or vegetables.
- Used, empty fruit or vegetable containers (or empty returnable pallets) on their return journey, when they have carried fresh fruit or vegetables on their outward journey.

*Ministry of Transport*

## 4.20 VEHICLE RUNNING EXPENSES

### 4.20.1 Fuel, Oil and Grease

The prices for fuel, oil, grease and other petroleum products are subject to rapid change. However, the prices to farmers current at 18 December 1980 are:

Petrol - Regular (83 Octane) = 40.1 cents per litre (after Agricultural Use rebate of 11.7¢/litre taken off retail price of 51.8¢/litre.

- Super (96 Octane) = 42.0 cents per litre (after rebate of 11.7¢/litre taken off 53.7¢/litre)

Diesel - 38.8 cents/litre

Multipurpose lubricating oil - \$2.60 per litre in 200 litre drum.

Multipurpose grease - 168.5 cents per litre in 20 kg drum.

Transmission oil - \$2.20 per litre in 200 litre drum.

Antifreeze - \$2.80 per litre.

In general, the cost of fuel, oil and grease is considered in terms of cents per kilometre travelled.

Light trucks and cars	allow 20-25 cents per kilometre
Heavy trucks	allow 36-44 cents per kilometre
Tractors 37.3 kW (50 hp)	allow \$2.70 per hour
60.0 kW (80 hp)	allow \$4.80 per hour
67.1 kW (90 hp)	allow \$8.70 per hour
111.9 kW (150 hp)	allow \$14.70 per hour

Crawler tractors	allow \$5.40 per hour
Balers (conventional)	allow \$1.50 per hour
Header – tractor drawn	allow \$1.50 per hour
– self propelled	allow \$6.00 per hour

## 4.20.2 Repairs and Maintenance

The best way to estimate likely expenditure on repairs and maintenance for all motorised plant is to obtain a figure direct from the farmer. However, if this is not possible then the following can be used as a rough guide.

Cars and light trucks	allow 20-25 cents per km
Wheel tractors	allow \$2.00 per hour
Crawler tractors	allow \$4.00 per hour
Mobile plant	allow 10% of initial value

## 4.20.3 Tractor Running Costs

Supplied by J.M. Snook, Hutchinson Motors, Christchurch.

Updated by R. Webb, Papanui Hutchison Motors

The following is based on running costs over 5 years, using prices as at December 1980.

### (i) 22.35 - 29.8 kW Tractors (30 - 50 H.P.) 3000 hours in 5 years

INITIAL COST FORD 3600 OR EQUIVALENT (35 kW - 47 H.P.)	<u>\$12,600.00</u>
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#### DIRECT COSTS

DIESEL FUEL say 6.75 litres per hour for 3000 hrs at 38.8 ¢ per litre	7857.00
FUEL FILTERS change every 600 hrs = 5 at \$8.00	40.00
ENGINE OIL change every 150 hrs. 10.4 litres per change, plus top up, per litre \$2.80	582.40
OIL FILTERS change at 300 hrs. = 10 at \$10.75	107.50
TRANSMISSION OILS change every 1500 hrs capacity 40.5 litres 2 changes	226.80
INJECTOR SERVICING say 3 cyl. engines at 1500 hrs. 2 services, plus labour	160.00
TOP OVERHAUL including parts, one	500.00
AIR CLEANER oil bath or dry elements	200.00
TYRE MAINTENANCE wear and tear 3000 hrs.	80.00
GREASE (lubricating)	40.00
ANTI-FREEZE radiator and tyres	120.00
GENERAL RENEWAL REPAIRS fan belts, radiator hoses, battery, general servicing etc.	600.00
DEPRECIATION half of diminishing value for 5 years	4365.00

TOTAL DIRECT COSTS	<u>\$14878.70</u>
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TOTAL DIRECT PER YEAR	2975.74
TOTAL DIRECT PER HOUR (Assuming 600 hrs per year)	4.96
TOTAL DIRECT PER HA (Assuming .607 ha/hr)	8.15

#### FIXED COSTS

REGISTRATION agricultural use, 1st year \$25.30 then \$20.30 per year.	106.50
INSURANCE PREMIUM per year for 5 years, allowing for depreciation of tractor	245.46
OBSOLESCENCE half of diminishing value over 5 years	4365.00
INTEREST on \$12,600 for 5 years at 10%	6300.00
TOTAL FIXED COSTS	<u>\$11016.96</u>

#### TOTAL COSTS

TOTAL COSTS FOR 5 YEARS	\$25895.66
TOTAL COSTS FOR 1 YEAR	5179.13
TOTAL COSTS FOR 1 HOUR (Assuming 600 hours per year.)	8.63
TOTAL COSTS FOR 1 Ha WORKED - assuming .607 ha/hr	12.57
COSTS INCLUDING LABOUR AT SAY \$3.80 PER HOUR	
TOTAL COSTS PER HOUR	12.43
TOTAL COST PER Ha WORKED - assuming .607 Ha per hour	18.83

#### (ii) 44.7 - 59.6 kW TRACTORS (60 - 80 H.P.) 4000 hours in 5 years

USING AS INITIAL COST FORD 6600

16 speed 78 B.H.P. 58.2kW \$19,640.00 with Q cab

#### DIRECT COSTS

DIESEL FUEL 12 - 14 litres per hour for 4000 hrs at 38.8 cents per litre	\$ 21728.00
ENGINE OIL sump capacity 10-12 litre. Change every 150 hrs. at average \$2.80 per litre	672.00
ENGINE OIL FILTERS change every 300 hours 14 at \$10.75 each	150.50
TRANSMISSION OIL change at 2000 hours, capacity G.B. & B.A. 58.5 litre at \$2.80 per litre	173.80
TRANSMISSION OIL FILTERS change every 600 hours say 7 at \$16.10 each	112.70
FUEL FILTERS change every 600 hours 7 at \$8.00 each	56.00
AIR CLEANER oil bath or dry element	210.00
INJECTOR SERVICING every 1200/1500 hours say 3 services 4 injectors	270.00
TOP OVERHAUL including parts	500.00
BATTERY one replacement heavy duty	214.69

TYRES 14x30 or 15x30 or relug say one tyre	550.00
ANTI-FREEZE radiator 3-4 litre at \$2.80 per litre plus top up say	22.00
ANTI-FREEZE water filled tyres, Calcium Chloride at \$11.00 per 25kg, say 120kg per 15.30	110.00
GREASE small drum for 4000 hours	35.00
POWER ASSISTED STEERING oil and filters over 4000 hours	30.00
GENERAL RENEWALS AND RUNNING REPAIRS fan belts, radiator hoses brake adjustments, etc.	600.00
DEPRECIATION half of diminishing value for 5 years	6831.00
TOTAL DIRECT COSTS	<u>\$ 32764.09</u>
TOTAL DIRECT COSTS PER YEAR	6552.82
TOTAL DIRECT COSTS PER HOUR	8.19
TOTAL DIRECT COSTS PER Ha WORKED say .81 Ha per hour	10.10
FIXED COSTS	
REGISTRATION \$25.30 1st year thereafter \$20.30 per year. This is for Class B	106.50
INSURANCE average cost \$23.40 on first \$3000.00 then 0.55 per \$100 above \$3000.00 say cover on \$14,000.00	78.95
OBSOLESCENCE half of D.V. for 5 years	6831.00
INTEREST on \$15,460.00 for 5 years at 10%	9820.00
TOTAL FIXED COSTS	<u>\$ 16836.45</u>
TOTAL COSTS	
TOTAL COSTS FOR 5 YEARS	\$49600.54
TOTAL COSTS FOR 1 YEAR	9920.11
TOTAL COSTS FOR 1 HOUR	12.40
TOTAL COSTS FOR each Ha WORKED, say .81 Ha per hour	15.30
TOTAL COST INCLUDING LABOUR AT \$3.80 PER HOUR	
DIRECT COSTS PER HOUR	12.00
DIRECT COSTS PER Ha WORKED	14.79
TOTAL COST PER HOUR	16.20
TOTAL COST PER Ha WORKED	20.00

**(iii) 67.1 - 111.85 kW TRACTORS (90 - 150 H.P.)  
3000 hours in 5 years**

AVERAGE INITIAL COST	\$ 29,950 - \$ 41,900	
DIRECT COSTS		
	90 H.P.	150 H.P.
DIESEL FUEL 19 - 32 litres per hour. at 38.8 cents per litre	\$ 21,816.00	\$ 37248.00

ENGINE OIL sump capacities 11.25 - 13.5 litre oil change every 150 hrs., 20 changes	630.00	756.00
ENGINE OIL FILTERS - change every 300 hrs - 10 changes at \$10.75	107.50	107.50
TRANSMISSION OIL - change every 1500 hrs capacities 70 litre at \$2.80 per litre	392.00	392.00
TRANSMISSION OIL FILTERS change every 400 hrs, say 8 filters at \$6.10	128.80	128.80
FUEL FILTERS, duals, change every 600 hrs. 10 filters at \$8.00	80.00	80.00
AIR CLEANER dry type Cyclopac cartridge, \$100.00 each, say three replacements over 3000 hrs.	300.00	300.00
INJECTOR SERVICING every 1200/1500 hrs. 4 and 6 cylinder, 2 services	180.00	240.00
TOP OVERHAUL including parts	500.00	650.00
BATTERY one replacement in 5 years, heavy duty	214.69	214.69
TYRES 15 x 30 to 18.4 x 38, say one replacement or relug	600.00	800.00
ANTI-FREEZE radiator 4 - 6 litre, plus top up	22.40	28.00
ANTI-FREEZE water filled tyres. Calcium Chloride at \$11. per 25 kg drum. Valve level waterfill dual rears	35.00	35.00
GREASE small drum	35.00	45.00
POWER ASSISTED STEERING oil and filters	30.00	40.00
GENERAL RENEWALS and RUNNING REPAIRS fan belts, radiator hoses, brake adjustment, etc.	400.00	500.00
DEPRECIATION half of diminishing value for 5 years	10,375.00	14,916.00
TOTAL DIRECT COSTS	<u>\$ 35,946.39</u>	<u>\$ 56,520.00</u>
TOTAL DIRECT COSTS PER YEAR	7,189.28	11,304.20
TOTAL DIRECT COSTS PER HOUR	11.98	18.84



TOTAL DIRECT COSTS PER Ha WORKED (say 1.2 Ha per hour)	9.98	15.70
FIXED COSTS		
REGISTRATION \$25.30 1st year, thereafter \$20.30 per year (Class B)	10,375.00	14,916.00
INSURANCE average cost \$23.40 on 1st \$3,000 then .55 per \$100 - say insured at \$20,000 and \$34,00 for 5 years		
OBSOLESCENCE half of diminishing value for 5 years	10,375.00	14,916.00
INTEREST on \$25,000 and \$39,000 for 5 years at 10%	14,975.00	20,950.00
TOTAL FIXED COSTS	<u>\$ 26,041.00</u>	<u>36,942.00</u>
TOTAL COSTS		
TOTAL COSTS FOR 5 YEARS	61,987.39	93,462.99
TOTAL COSTS FOR 1 YEAR	12,397.48	18,692.60
TOTAL COSTS PER HOUR	20.66	31.15
TOTAL COSTS PER Ha WORKED (say 1.2 Ha per hour)	17.20	25.96
TOTAL COSTS INCLUDING LABOUR AT \$3.80 PER HOUR		
DIRECT COST PER HOUR	15.78	22.64
DIRECT COST PER Ha WORKED	12.16	18.88
TOTAL COST PER HOUR	24.46	34.95
TOTAL COST PER Ha WORKED	20.38	29.14

#### 4.20.4 Costs of Cultivation

(adapted from a paper given by G.A.G. Frengley, Farm Management Dept., Lincoln College, to the 'Conservation Tillage' Seminar at Ashburton in October 1980.

- The last paper I gave on this, or a very similar subject, was to the Conservation Tillage Seminar at Christchurch last year. As a consequence of the comments given I will expand on last year's ideas in this paper. Whereas in the last paper I avoided the effects of inflation, in this paper I will allow for it as well as for taxation. The effects are interesting. As well, tractor replacement has been effected by saving money in contrast to borrowing money as in the earlier paper.

This paper is structured to allow direct cost comparisons to be made between conservation tillage and conventional cultivation followed by a consideration of management issues.

Machinery costs have two components - fixed costs and variable costs. As variable costs are easily defined and estimated, I will deal with these first.

#### **A. Variable Costs**

These comprise the costs of running the machinery and the labour to operate it. If labour is permanently available on the farm and is not required for any other urgent job at the same time the cost included can be assumed to be nil. If, on the other hand, additional labour is required to do the job this cost must be included. If the farmer's time is at a premium, labour will be employed. For our purposes we will allow \$4 per hour for the driver.

The next cost is the one farmers are most conscious of - fuel, oil and repairs and maintenance. For a 60 kw tractor, fuel, oil and grease is \$3.70/hour\*. Repairs and maintenance add a further \$1.60. If 12% is added for machinery costs, this gives a total variable cost of up to \$10 per hour if labour is employed. Given that cultivation times will vary according to soil type from 2 to 10 hours per hectare the cost per hectare will vary likewise. However, if a farmer is paying tax, these costs are deductible expenses. At the highest marginal tax rate the costs will be reduced by 60%.

Thus variable costs of cultivation may range from \$8.00 per hectare from one extreme to \$100 at the other. By contrast the variable cost of machinery per hectare for a single spray application will vary according to tax rate from \$2.40 to \$6.00 for a smaller tractor covering 2ha/hour.

#### **B. Fixed Costs**

We now come to fixed costs and it is here that difficulties most often occur. Firstly, fixed costs are not easy to recognise and secondly they are hard to calculate.

We will assume the 60 kw tractor costs \$15,000 will last five years at 800 hours per year, and with 4,000 hours on the clock would sell for \$6,000 today.

Our initial investment is \$15,000 for the tractor which has an alternative investment opportunity of 15% at current rates of interest. We therefore lose \$2,250 potential interest per year or \$900 after tax at the highest rate. Unfortunately, when we go to replace it at current inflation rate (17%) it will cost us \$32,890 in five years time but its secondhand counterpart will now be worth \$13,150. Therefore to replace the tractor we will need to find \$19,740 in five years time. We can estimate how much cash we need to set aside each year to do this using a sinking fund calculation. At our 15% interest rate this amounts to \$2,927 if you can set aside without paying tax or \$7,320 if your tax is hurting.

We are not yet finished our fixed costs. Depreciation (and investment) allowances are granted for tax deduction purposes at the rate of 40% in the first year and 20% of the falling book value in each succeeding year. For a farmer paying the highest tax rate these deductions represent as cash in his pocket \$3,600 after the first year, and \$1,080, \$860, \$750 and \$670 in the following years. Thus, although the high tax payer must set more cash aside each year to replace the tractor, he is able to recover a substantial amount of tax.

To make this clear, we can set up a table.

**Table 1: Cost of Tractor Replacement at 60% Tax Rate and Inflation of 17%**

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Initial Cost	-15,000					(32,890)
Secondhand value	0	+3,600	+1,080	+ 860	+ 760	+13,150 + 670 (-3,549*
Tax Recovered by Depreciation	- 7,320	-7,320	-7,320	-7,320	-7,320	
Cash to set aside for tractor replacement (before tax)						
Annual Cash Cost (Start of each Year)	-22,320	-3,720	-6,240		-6,460	+10,270

\* Tax on difference between depreciated value and secondhand price.  
(Note: cash cost based on saving money for tractor replacement).

As stated earlier, all the costs associated with the tractor could have been invested at 15% interest. By using discounting procedures we can establish the present cost of the annual cash figures given above.

The discount figures for each year:

.869      .756      .657      .571      .497      .432

and the investment required today (at the start of year 1) to meet these costs is \$27,690. This is the present cost of replacing the tractor for a farmer with a high tax bill. (Marginal tax rate 60%).

**Tabel2: Cost of Tractor Replacement at Zero Tax Rate and Inflation of 17%**

	Year 1	year 2	Year 3	Year 4	Year 5	Year 6
Initial Cost	-15,00					(32,890)
Secondhand value						+13,150
Cash to set aside for tractor replacement	-2,927	-2,927	-2,927	-2,927	-2,927	
Annual Cash Cost (Start of each Year)		-17,927	-2,927	-2,927	-2,927	+13,150

For this non tax paying farmer the investment required to replace the tractor is \$19,782 if all costs are brought to the start of year 1.

Thus we now have a tractor replacement cost for 4,000 hours operation, of \$9.42 per hour at the high marginal tax rate and \$4.94 for the non tax payer. With costs of machinery added these figures at 12% of the tractor costs, cultivation costs per hour can be seen as in Table 3.

**Table 3: Machinery Costs per hour and per hectare for Cultivation**

	High	Tax	No Tax	
Fixed Costs	10.55	10.55	5.54	5.54
Running Costs/hour				
with labour	4.00		10.00	
without labour		2.40		6.00
	14.55	19.95	15.54	11.54
<b>Costs per hectare</b>				
(a) Lowest cost x 2 hrs/ha	-	-	-	23.08
(b) Highest cost x 10 hrs/ha	-	-	155.40	

The range of costs for cultivation therefore will lie between \$23.08 and \$155.40/ha.

Our final comparison is with the minimum tillage farmer for whom fixed costs and variable costs are approximately ½ to 2/3rds of the bigger tractor estimates if a small tractor is used. These costs per hour will vary from \$7.30 to \$10.26, and at a spraying rate of 2 ha/hr will amount to \$3.65 to \$5.13 per

hectare, (or \$4.40/ha after taxes at the highest rate). If larger machinery is used, costs per hour will rise significantly but these may be largely offset by faster working times per hectare. With glyphosate costing \$22.00 per litre there is room to consider spraying for minimum tillage as a cost saving measure alone on many properties.

#### 4.20.5 Combine Harvester Running Costs

The following calculations of combine harvester running costs for 1980/1981 assume.

1. The average price for a 4.3m, 80 kW harvester is \$70,500.
2. The harvester is used for 1000 hours over 5 years

##### Direct Costs

Diesel fuel: say 22.0 litres per hour for 1000 hours at 38.8¢ per litre	8536.00
Fuel filters: duals, change every 600 hours say 4 at \$10.00 each	40.00
Engine oil: 12 litres: change every 150 hours say 7 changes at \$2.60 per litre	327.00
Engine oil filters: change every 300 hours say 3 at \$10.00 each	30.00
Air cleaner: dry type, one every 1000 hours	50.00
Injector Servicing: once every 5 years	120.00
Battery: one heavy duty	170.00
Grease; small drum for 1000 hours	34.00
Power steering: oil and filters	20.00
General renewals and	
Running Repairs: fanbelts, radiator hoses, cutter blades, reel tines, conveyor chains, concave fittings etc.	3500.00
Depreciation: half of D.V. for 5 years (25% in first year; 20% thereafter)	24421.00
<b>TOTAL DIRECT COSTS</b>	<b>37248.00</b>
<b>TOTAL DIRECT COSTS PER YEAR</b>	<b>7450.00</b>
<b>TOTAL DIRECT COSTS PER HOUR</b>	<b>37.25</b>
<b>TOTAL DIRECT COSTS PER HECTARE HARVESTED</b>	<b>53.21</b>

##### Fixed Costs

Registration: \$24.60 initial year. \$18.10 per year (Class B)	97.00
Insurance: \$7.00 for first \$400 then 49 cents per \$100 say insured for \$70,500 for 5 years	1752.00

Obsolescence: half of D.V. for 5 years	24421.00
Interest; on \$70,500 for 5 years at 10%	35250.00
<b>TOTAL FIXED COSTS</b>	<b>\$61423.00</b>
<b>TOTAL COST FOR 5 YEARS</b>	<b>\$98671.00</b>
<b>TOTAL COST FOR 1 YEAR</b>	<b>\$19734.20</b>
<b>TOTAL COST FOR 1 HOUR</b>	<b>\$ 98.70</b>

**TOTAL COSTS FOR EACH HECTARE HARVESTED,**  
say 0.7 ha per hour \$ 140.96

**TOTAL COST INCLUDING LABOUR**  
AT \$4.50 per hour

<b>DIRECT COSTS PER HOUR</b>	<b>\$ 41.75</b>
<b>DIRECT COSTS PER HECTARE HARVESTED</b>	<b>\$ 59.63</b>
<b>TOTAL COST PER HOUR</b>	<b>\$103.20</b>
<b>TOTAL COST PER HECTARE HARVESTED</b>	<b>\$147.40</b>

#### 4.20.6 Registration Costs

As at December 1980	\$34.30	per year
Cars		
Trucks - light under 2000 kg	\$32.10	per year
- heavy, 2 axles	\$49.10	per year
- For additional axles add	\$ 4.00	
Wheel Tractor	\$19.60	per year
Trailers - light	\$12.10	per year
- heavy	\$37.10	per year
- with Certificate of Fitness	\$20.10	per year
Motor Cycles - under 60cc	\$13.10	per year
- 60 - 125cc	\$27.10	per year
- over 125cc	\$37.10	per year

#### 4.20.7 Road User Charges(taken from the M.O.T. booklet "Road User Charges").

##### (i) Time Licences

- apply to off-road motor vehicles
- 3 licence categories
- Category A - among others includes tractors other than those exempted, sawing/shearing apparatus for tree cutting, bulldozers and angle dozers
- Category B - among others includes front-end loaders, mobile pile drivers, self propelled trench diggers and excavators.
- Category C - among others, includes mobile cranes.

Maximum Gross Weight (tonnes)	Vehicle Licence Categories		
	A	B	C
1	13.20	13.20	13.20
2	13.20	13.20	16.80
3	13.20	13.20	20.40
4	13.20	18.00	26.40
5	13.20	20.40	31.20
6	13.20	25.20	37.20
7	15.60	30.00	45.60
8	18.00	37.20	54.00
9	20.40	44.40	66.00
10	25.20	52.80	78.00

(ii) **Distance Licences**

These are available in multiples of 1000 km.

Classified according to whether powered or unpowered, the number of tyres per axle and the axle spacing. This results in a total of 24 categories, however in this Manual we have only covered those combinations likely to be owned by farmers.

- Category 1 – powered vehicles, 2 single tyred spaced axles.
- 2 – powered vehicle, 2 spaced axles, one single tyred and the other double tyred
- 11 – unpowered vehicle, 1 single tyred axle
- 12 – unpowered vehicle, 1 twin tyred axle
- 13 – unpowered vehicle, 2 spaced axles, both single tyred.
- 14 – unpowered vehicle, 1 group of 2 close axles both single tyred

Charge Rates for Distance Licences (\$ per 1000 km of distance specified in the licence)

Maximum Gross Weight (tonnes)	Licence Category of Vehicle					
	1	2	11	12	13	14
1	6.01	6.01	6.01	6.01	6.01	6.01
2	6.70	6.68	6.67	6.66	6.66	6.66
3	7.51	7.44	7.36	7.30	7.30	7.30
4	8.61	8.37	8.14	7.98	7.98	7.98
5	10.21	9.66	9.06	8.07	8.68	8.68
6	12.62	11.46	10.23	9.48	9.44	9.44
7	16.17	13.99	11.72	10.34	10.27	10.27
8	21.27	17.54	13.69	11.32	11.20	11.20
9	28.39	22.42	16.24	12.46	12.27	12.27
10	38.06	28.98	19.57	13.78	13.51	13.51

In addition to Time licences and Distance licences, there are supplementary licences and overweight permits for which details can be obtained from the Ministry of Transport.

## **4.21 ADMINISTRATION EXPENSES**

### **4.21.1 Professional Fees**

For the actual charges of the various professional organisations see “Farm Capital and Finance”, section 2.3. The exception is Accountancy which is covered under this section.

#### **(i) Accountancy**

Accountants have a scale of fees based on input of time taken in compiling returns and services required by their clients.

Some of the reasons why fees vary considerably 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 also.
- 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. Budgeting control, receiver of all income, and payee of all expenditure for the farmer.

The fees definitely bear no relationship to the farmer's capital or net taxable balance, or turnover.

For Lincoln College budgeting purposes, assess fees based on the total capital involved, the degree of intensification of the management, and the form of ownership.

The current range of accounting costs lie within the approximate range of \$500 to \$800.



## 4.21.2 Telephone and Toll Charges.

### (i) Rental (2 monthly basis)

Class*	Business Rate			Residential Rate
	B1	B2	B3	
1	\$41.65	\$37.50	\$18.00	\$15.00
2	\$53.10	\$46.00	\$21.25	\$17.70
3	\$56.65	\$54.00	\$23.85	\$20.75
4	\$64.25	\$57.80	\$24.40	\$21.40
5	\$66.00	\$59.40	\$25.00	\$22.00
6	\$69.00	\$62.10	\$25.50	\$23.00
7	\$70.70	\$64.80	\$26.00	\$24.00

- \* Class 1 - Restricted attendance exchanges  
 Class 2 - Automatic exchanges (up to 200 subscribers) and continuous attendance manual exchanges (201 - 3000 subscribers)  
 Class 3 - Automatic exchanges (201 - 3000 subscribers) and manual exchanges (3000 plus subscribers)  
 Class 4 - Automatic exchanges (3001 - 10000 subscribers)  
 Class 5 - Automatic exchanges (10001 - 20000 subscribers)  
 Class 6 - Automatic exchanges (20001 - 80000 subscribers)  
 Class 7 - Automatic exchanges (80000 plus subscribers)

### (ii) Tolls

#### Charges For 3-Minute Calls

The charge for a three minute call to any exchange may be obtained from the local Toll Operator on request.

Distance	Charge		Night Rate
	Code	Full Rate	
Up to 40 km	A	12¢	12¢
Over 40 up to 50	B	24¢	24¢
Over 50 up to 65	C	39¢	33¢
Over 65 up to 100	D	60¢	45¢
Over 100 up to 165	E	90¢	63¢
Over 165 up to 245	F	\$1.20	84¢
Over 245 up to 325	G	\$1.50	\$1.02
Over 325 up to 485	H	\$1.83	\$1.26
Over 485	I	\$2.25	\$1.62

#### Rating Periods. On Week-days:

Full Rate Period: 8 a.m. to 6 p.m.

Night Rate Period: 6 p.m. to 8 a.m.

#### On Sundays and Holidays:

Full Rate Period: 6 a.m. to Midnight

Night Rate Period: Midnight to 6 a.m.

**Additional minutes.** Where the distance is more than 50 kilometres each additional minute after the first three is charged for at one-third of the minimum rate except that toll calls from coin-box telephones are charged for in multiples of three minutes regardless of the distance.

**Urgent Calls.** Double the rate applicable at the time the call is connected.

### Special Services Fees

Person to Person fee: 70¢. Completed Collect and Transferred Charge fee: 25¢.

Price Required call (where cost required before receipt of account) Fee: 20¢

*New Zealand Post Office*

## 4.21.3 Postage and Stationery

Surface Mails - inland

Standard letters 20¢

Non standard articles:

100 g - 1 kg 30¢ - \$1.00 first class

25¢ - 75¢ second class

Over 1 kg 75¢ per additional 1 kg  
up to 10 kg (first class)

PARCELS – Postal Districts of:

ZONE 1: Whangarei, Auckland, Hamilton, Thames  
Tauranga, Rotorua, Gisborne.

ZONE 2: New Plymouth, Wanganui, Palmerston North,  
Napier, Masterton, Wellington.

ZONE 3: Blenheim, Nelson, Westport, Greymouth,  
Christchurch, Timaru.

ZONE 4: Oamaru, Dunedin, Invercargill.

	Local Delivery	Within a Zone	Between zones 1 & 2 or 3 & 4	Between zones 2 & 3	Between zones 1 & 3 or 2 & 4	Between zones 1 & 4
Weight						
3 kg	\$1.30	\$1.40	\$1.50	\$1.75	\$1.90	\$2.10
5 kg	\$1.40	\$1.60	\$1.80	\$2.10	\$2.40	\$2.70
10 kg	\$1.50	\$1.80	\$2.10	\$2.80	\$3.25	\$3.80

The “local” rate applies to parcels delivered from the office of posting or within a radius of 10 km.

Parcels may not exceed 2m in length and girth combined and the greatest length of one side may not exceed 1.05m.

Flat circular parcels are measured for girth across the flat surface and not around the circumference.

*New Zealand Post Office*

Stationery costs are variable depending on the size of the unit and the intensive nature of the management.

#### **4.21.4 Subscriptions**

Both to farming magazines and to various farming organisations. The costs in both instances are fully tax deductible and highly variable.

Some examples are:

- ““New Zealand Dairy Exporter”      \$7.50 per year (monthly)
- ““New Zealand Farmer”      \$19.00 per year (fortnightly)
- “New Zealand Journal of Agriculture” \$12.00 per year (monthly)

#### **4.21.5 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.

#### **4.21.6 Bank and Stock Company Charges**

Banking and various Stock Co. charges do add to total administrative costs and so must be accounted for.

- (i) Banks - Base fee \$1.30 per half year
  - Ledger Activity Fee - 6¢ per chargeable transaction. (This is not charged on the first 100 entries in each half year.)
  - Clearance Fee (on items lodged other than the first one each day) 5¢ per chargeable transaction
- (ii) Stock Companies
  - Client Stamp Duty - 60 cents per activity (e.g. for paying bills or managing wages and documents on behalf of farmers)

### **4.22 STANDING CHARGES**

#### **4.22.1 Insurances**

In the case of fire insurance, premiums vary according to the nature of the risk and the value of the buildings or assets insured etc. Accident premiums vary with the nature of the work, etc. The following figures are from insurance companies as at 1.12.80

- (i) Buildings: per \$100 value
  - Fire Cover:
  - Dwellings – Brick \$0.11
    - Wood \$0.28
  - Outbuildings – Brick - concrete or earth floor \$0.175
    - Wood - concrete or earth floor \$0.26
  - Dwelling Contents - \$0.225 regardless of construction
  - Comprehensive:
    - Dwelling Contents - \$0.172 - \$0.345
- (ii) Plant: per \$100 value
  - Fire Cover:
    - All engine functioned farm machinery – \$4.00
    - Any other farm machinery and equipment including plant, P.T.O. balers and non engine functioned implements anywhere in the district, – \$0.30.
    - Manures and general farm produce whilst on the farm. – \$0.30.
  - Comprehensive:
    - Harvesting: self propelled \$7.00 for first \$400 plus \$0.425 per \$100 thereafter.
    - When mechanical damage occurs, the first \$50 is now payable by the owner. Where internal damage to harvesting equipment occurs, an additional premium of 50% of the basic premium is payable.
    - Tractor: \$6.00 for first \$400 plus \$0.375 per \$100 thereafter.
    - N.B. Tractor-drawn and self propelled harvesters at the same rate.
    - Contractors pay these rates plus an additional premium on their vehicles.
    - All these premiums plus \$0.07 per \$100 Earthquake and War Risk.
- (iii) Tractor Tyre Insurance – Tyres are insured for farmers at 2.75% of their value, and for contractors at 4.13% with a minimum of \$5.00 per tractor. No claim under \$2.00 is now payable.
- (iv) Specialised Farm Equipment – Chainsaws, tools, scana-probe, nitrogen containers, radio telephones etc.
  - All Risks: per \$100 value - between \$0.9 and \$2.50 depending on the nature of the risk.

(v) Crops: per \$100 value

– Fire Only

Growing or cut in the field (including threshing) in any building or silo and transit risk, \$0.490 (time limit up to 12 months)

As per above but excluding whilst in any building or silo, \$0.330 (3 month limit of cover.)

– Fire plus Hail, Flood, Stock, Snow and Frost Risk – \$1.00

– Hay: \$0.280

(vi) Wool:

When in farm building the rate is that for contents of the building.

(vii) Shelter belts (excludes live hedge fencing):

Rate 1.406% of assessed value

(viii) Employers' Liability:

Accident Compensation Commission – All employees will be covered by a levy paid to the Inland Revenue Department.

(ix) Personal Accident (owners' personal cover):

Details vary, but a typical cover would be as follows:

Death \$10 000. Total disablement from accident \$60 per week. Total disablement from disease \$60 per week. Premium \$104 per annum.

(x) Public Liability – to cover legal liability arising from negligence caused by employees, stock, farm vehicles or fire and explosion but excludes motor vehicles which should be registered under The Transport Act.

Cover	Premium
\$ 10 000	\$ 3.25
\$ 20 000	\$ 5.00
\$ 40 000	\$ 8.00
\$100 000	\$15.00

The premiums are based on the ownership of one property.

Sale of goods/products Indemnity

Additional premium

\$ 10 000	50 cents
\$ 20 000	60 cents
\$ 40 000	70 cents
\$100 000	75 cents

### 4.22.2 Rates

The main classes of rates are as follows:

- General County rates for the costs involved in administering the County.
- Special rates for ad hoc bodies e.g. Catchment, Drainage Boards.
- 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, County water schemes.
- Pest Destruction Board rates where the farm is in a Board district.

All counties rate on either the Capital or Land values. Water and pest destruction rates may be assessed on either per ha, Capital value or Land value basis.

For budgeting purposes ask the farmer for the total rates.

### 4.22.3 Interest

Interest rates vary with personal element, risks, and security offered. They also fluctuate with the Bank's interest charges. At present:

Flat Mortgage interest rates are	12% – 15%
Table Mortgage interest rates are	11% – 15%
Bank overdraft interest rates are	10½% – 13%
Stock and Station Agents interest rates are	13½% – 15%

Rural Bank Interest Charges are:

All Table Mortgage	1st and Subsequent Securities
Land Purchase	9%, rebatable to 7½% for the first 3 years
Development	9%, rebatable to 6% for the first 3 years, and 7½% for the second 3 years.
Refinance	11%
Stock Purchase	9%, rebatable to 6% for the first 3 years, and 7½% for the second 3 years.
Plant & Machinery Purchase	12%
Settlement Loans	9%, rebatable to 7½% for the first 3 years

For assessment of Working Capital see Section 2.1.4.

With budgeting use 12% - 14% on total working capital.

#### 4.22.4 Rent – charge actual rental paid by the farmer.

Renewed Rents on Crown Renewable Leases are  $4\frac{1}{2}\%$  of Crown Rental Value, as from 1971. Rentals carry a  $\frac{1}{2}\%$  rebate for prompt payment. Thus to calculate C.R.V., gross rentals must be ascertained. Short term lease rents usually assessed within the range of  $4\frac{1}{2}\%$  –  $5\%$  of Capital Value.

### 4.23 WAGES OF MANAGEMENT

For Lincoln College purposes, Wages of Management (W.O.M.) should be based on a married man's salary plus 1% of total farm capital (T.F.C.)

Use the following estimates for a married man's salary, where a house is provided.

Town Milk Dairy	\$8000 - \$10000
Factory Supply Dairy	\$7500 - \$ 9000
Sheep and Mixed Cropping	\$7500 - \$ 8000

Generally within the range \$7000 - \$10000 depending on experience.

### 4.24 SUBSIDIES

For information on Subsidies, see 'Assistance and Incentives for Farmers', Section 1.

### 4.25 FENCING

#### 4.25.1 Wire

	Gauge of Wire	Length of 25kg coil	\$ per coil
(i)	Plain Wire		
	4mm (No. 8)	245m	\$25.25
	3.15mm (No.10)	303m	\$26.13
	2.5mm (No.12½)	656m	\$26.25
(ii)	Barbed Wire		
	2.5mm (barbs 7.0 cm apart)	200m	\$33.88
	2.5mm (barbs 15.0 cm apart)	240m	\$33.88

(iii) Lacing Wire		
2mm glavanised	5 kg coils	\$ 7.31 each
	10 kg coils	\$14.62 each
1.6 mm galvanised	5 kg coils	\$ 7.72 each
	10 kg coils	\$15.44 each

## 4.25.2 Standards

(i) T-Bar Netting Stake	\$ 3.72 ea.
(ii) Waratahs	
1.4m	\$2.86
1.5m	\$2.98
1.7m	\$3.14
1.8m	\$3.32
(iii) Flat Standards 1.36m	\$1.78
1.5m	\$2.00

## 4.25.3 Posts

(i) Concrete Posts (McKendry's)	
1.83m Farm Posts	\$ 5.50
1.98m Cattle Posts	P.O.A.
1.67m Sheep yard Posts	P.O.A.
2.74m Posts	\$ 7.00
1.37m Post butts	\$ 5.50
1.67 - 3.65m Paling Posts	\$ 6.00-\$ 9.00
1.83m x 15cm x 15cm Gate Posts	\$11.50
(ii) Concrete Strainers	
2.1m x 15cm x 15cm	\$12.50
2.1m x 18cm x 18cm	\$13.75
2.4m x 20cm x 20cm	\$14.50
(iii) Tanalised Round intermediates	
1.8m x 9cm	\$2.75
1.8m x 11.5cm	\$3.40
1.8m x 13cm	\$4.05
(iv) Tanalised Half Rounds	
1.8m x 15cm	\$ 3.05
2.1m x 17.5cm	\$ 3.25
2.4m x 17.5cm	\$ 3.67
2.7m x 20cm	\$ 4.16



(v)	Tanalised Strainers	
	2.1m x 17.5cm	\$ 8.70
	2.1m x 20cm	\$ 9.90
	2.4m x 17.5cm	\$11.00
	2.4m x 20cm	\$12.25
	2.7m x 20cm	\$14.85
(vi)	Tanalised Deer Posts	
	2.7m x 13cm	\$ 8.25

#### 4.25.4 Stays

Concrete (incl. small footing block)	\$ 7.20
Tanalized 2.4m x 7.5 - 10 cm	\$ 4.25
2.7m x 7.5 - 10 cm	\$ 4.80

#### 4.25.5 Stay Blocks

Concrete	\$ 2.10
Tanalized 200 mm x 75 mm x .5m	\$ 2.15
200 mm x 50 mm x .5m	\$ 1.43
150 mm x 50 mm x .5m	\$ 1.07

#### 4.25.6 Staples

	Per 25kg Case
(i) Sliced Point Staples	
40mm x 4.00mm	\$36.77
30mm x 4.00mm	\$36.77
30mm or 25mm x 3.15mm	\$39.06
27mm x 2.80mm	\$39.41
25mm x 2.50mm	\$40.50
19mm or 15mm x 2.00mm	\$43.65
(ii) Barbed Staples	
50mm x 4.00mm	\$39.10
40mm x 4.00mm	\$39.10
30mm x 4.00mm	\$39.10
30mm x 3.15mm	\$41.26
(iii) Concrete Post Staples (for single or double hole posts)	
5kg bags	\$ 7.60
25kg bags	\$36.89

## 4.25.7 Battens (Tanalised)

5 cm x 4 cm x 1.0 m (per 100).....	\$54.00
5 cm x 4 cm x 1.05 m (per 100) .....	\$56.70
5 cm x 4 cm x 1.20 m (per 100).....	\$68.40

## 4.25.8 Gates

### (i) McVicars (Wooden)

Hurdles 1.8 m .....	\$16.10
2.1 m .....	\$17.30
Gates 3.6 m .....	\$48.00
4.2 m .....	\$50.55

### (ii) McAlpines (wooden)

Hurdles 1.8 m.....	\$10.00
2.1 m .....	\$10.50
2.4 m .....	\$11.00
Gates 3.0 m .....	\$41.50
3.6 m .....	\$44.00
4.2 m .....	\$47.00
Sheep yard 1.8 m .....	\$35.00
2.1 m .....	\$36.00
2.4 m .....	\$37.00

### (iii) Cyclone (galvanised steel)

	Length (metres)				
	3.05	3.35	3.66	4.27	4.88
Economy			\$58.63	\$62.45	
Standard	\$55.71	\$58.63			
Special			\$70.49	\$86.06	
Special Heavy			\$83.10	\$89.62	
Stressmaster			\$83.28	\$94.38	\$116.63
Stressmaster Heavy			\$85.95	\$98.66	\$131.57

### (iv) Hurricane (galvanised steel)

All purpose	length (metres)				
	3.0	3.5	3.75	4.00	4.25
Standard (Medium)	\$65.29	\$68.95	\$71.90		
Standard (Heavy)	\$82.16	\$86.21	\$91.19		
With Cross Corner bracing (Medium)	\$73.03	\$76.49	\$79.45	\$83.22	\$85.88

With Cross Corner bracing (Heavy)	\$ 92.22	\$ 97.42	\$102.43	\$107.67	\$112.80
Pairs (Medium)	\$ 84.65	\$ 88.13	\$ 91.09	\$ 95.17	\$ 97.96
Pairs (Heavy)	\$106.14	\$111.40	\$116.25	\$122.05	\$127.06
Long pairs	4.50 metres long				\$117.65
(Heavy)	4.75 metres long				\$122.08
Economy	3.75 m long		4.25 m long		
Special	\$58.43 (\$55.91 for 20 or more)		\$62.45 (\$59.76 for 20 or more)		
Heavy weight	\$74.00 (\$70.79 for 20 or more)		\$79.06 (\$75.65 for 20 or more)		

#### 4.25.9 Gate Fittings

- (i) Gudgeons
  - Canadian Screw 12mm - 20mm - \$1.34 - \$1.98 each
  - Drive Gudgeon 20 mm \$3.47 each
  - Std. Through Post 200mm - 400mm  
\$2.98 - \$4.35 each
  - "Lock" Through Post 200mm - 400mm  
\$4.15 - \$5.77 each
  - Square Shank Through Post 250mm - 500mm  
\$4.73 - \$5.71 each
  - 3 post gudgeons 35cm \$4.70 each.
- (ii) Hinge Straps
  - Standard Canadian 150mm - 300mm  
\$2.08 - \$5.24 per pair
  - Heavy duty Canadian 300mm - 600mm  
\$6.88 - \$10.30 per pair



# Tightlock Stiff Stay Boundary

Type	Height	Stay spacing	price/100m
High Tensile			
7 line	600 mm	300 mm	\$ 85.86
7 line	900 mm	300 mm	\$ 92.47
8 line	750 mm	300 mm	\$ 96.96
8 line	800 mm	300 mm	\$ 96.96
8 line	900 mm	300 mm	\$ 98.72
9 line	900 mm	300 mm	\$110.86
Medium Tensile			
7 line	900 mm	300 mm	\$105.78
8 line	750 mm	150 mm	\$138.66
8 line	750 mm	300 mm	\$123.68
9 line	900 mm	150 mm	\$156.80
9 line	900 mm	300 mm	\$139.42
7 line	900 mm	300 mm	\$ 86.24
8 line	800 mm	300 mm	\$ 91.88
Deer Fence			
13 line	1900 mm	150 mm	\$247.13
13 line	1900 mm	300 mm	\$177.01
11 line	1550 mm	150 mm	\$199.55
11 line	1550 mm	300 mm	\$146.27

## (ii) Hurricane

High Tensile			
Type	Height	Stay spacing	price/100m
8 line	900 mm	150 mm	\$121.71
8 line	900 mm	300 mm	\$ 93.48
8 line	800 mm	150 mm	\$117.96
8 line	800 mm	300 mm	\$ 91.12
7 line	900 mm	150 mm	\$112.31
7 line	900 mm	300 mm	\$ 84.99
7 line	800 mm	150 mm	\$108.62
7 line	800 mm	300 mm	\$ 83.13
7 line	725 mm	150 mm	\$105.31
7 line	725 mm	300 mm	\$ 81.85
6 line	700 mm	150 mm	\$ 95.56
6 line	700 mm	300 mm	\$ 73.34
Stiff Stay Type (South Island Only)			
8 line	900 mm	300 mm	\$ 98.72
8 line	800 mm	300 mm	\$ 96.96
High Tensile Deer Fence			
12 line	1800 mm	150 mm	\$208.59
12 line	1800 mm	300 mm	\$155.05

## 4.25.11 Fencing Aids

(i) Straining Equipment	
Hayes 'Smooth-grip' chain grab	\$ 32.09
Tension Handle (for perm. wire strainers)	\$ 35.35
Straining Tension Indicator	\$ 24.05
'Triplex' Permanent Strainers	
– non insulated	\$ 1.28
– insulated	\$ 1.67
'Rotatense' tensioning system	
(steelpost, baseplate, 4 anchors)	\$ 50.54
Boundary Fence Strainer	\$ 52.79
Boundary Fence Clamps	\$ 33.92
Wooden Netting Clamps	\$ 21.56
Ranchman Circular Wire Strainer	\$ 0.75
Handles (pair)	\$ 16.93
(ii) Post and Standard Drivers	
Hayes Tubular Standard Drivers	\$ 20.33
Stake Driver 100 mm	\$ 35.21
150 mm	\$ 61.05
200 mm	\$ 85.16
Donalds P.T.O. Post Driver (new model)	\$1125.00
Manual Post Driver 125 mm 16 kg	\$ 58.00
150 mm 21 kg	\$ 68.00
150 mm 27 kg	\$ 77.00
Manual Standard Driver	\$ 27.50
(iii) Post and Standard Removers	
Donalds Standard Lifter	\$ 27.50
Post and Standard Puller	\$ 55.00
Hayes Standard Lifter	\$ 34.81
(iv) Wire Reels	
Hayes Combination Wire Coiler and Reel	\$125.66
Multiwire Reel 2 Reels	\$ 80.08
3 Reels	\$104.73
Junior Wire Reel Standard	\$ 33.88
Deluxe	\$ 70.08
Bell Booth Spinning Jenny	\$ 31.65
(v) Tools	
Hayes Standard Hammer and Setter	\$ 14.88
Staple Pick	\$ 7.26
Post Rammer – wooden handle	\$ 9.22
– steel handle	\$ 13.63

Channellock Fencing Pliers	\$ 13.35
Crescent Fencing Pliers	\$ 15.10
Plier Pouch	\$ 4.62
Staple Bag	\$ 16.10
Fencing Apron	\$ 25.20
Tool Kit Pouch (Bell Booth)	\$ 39.44

## 4.25.12 Electrical Fencing Components

### (i) Electric Fence Energisers

Mains: 230-240V A.C.

Gallagher BEV II	\$159.00
Gallagher Super 60	\$255.00
Gallagher M.P.E.	\$ 98.00
Waikato Watchdog MF 50	\$121.18
Waikato Watchdog MF-100	\$213.87

Battery: 6V-12V D.C.

Speedrite AN MK5	\$ 64.50
Gallagher E12*	\$ 93.00
Gallagher KM2R*** c/w Charger and Batteries	\$163.00
Gallagher KM2***	\$ 74.00

Solar:

Gallagher SP5 (8W, 12V input) c/w Batteries	\$390.00
Gallagher SP50t(32W, 12V input) c/w Battery Case	\$860.00
Waikato Solapak SP6	\$341.05

\* 12 Volt Wet-Cell battery

\*\*\* 2 x 6 Volt Dry-Cell batteries or 12 Volt Wet-Cell battery

### (ii) Energiser Replacement Modules and Parts

Gallagher Module BEV II Type 10	\$ 43.00
Module Super 60 Type 16	\$ 75.00
Module MPE	\$ 32.00
Module E12 MK III	\$ 43.00
Module KM2R	\$ 59.00
Module KM2	\$ 40.00
Battery Plate KM2	\$ 5.94
H.T. Lead (1m) for E12,KM2,SP5	\$ 2.02

### (iii) Electric Fence Accessories

Waikato Fence Tester	\$ 32.27
Speedrite Fence Tester Model E	\$ 34.50
Gallagher Digital Voltmeter	\$ 86.00
Gallagher Automatic Remote Monitor Systems	
(ARMS) 4 channel	\$640.00
1 channel	\$399.00

Gallagher Flood Gate Controller/Energy Saver	\$ 7.50
STC Battery Charger 6/12 Volt	\$ 52.96
STC Transformer 1.0 KVA	\$102.50
1.5 KVA	\$145.00
2.0 KVA	\$160.00
Wire joint Sealing Compound (per tube)	\$ 3.16
30 Amp Cutout fuses	\$ 8.32
Line Clamps	\$ 0.31
Flexible connector (with leads and bolt)	\$ 0.99
Knife-switch Cut-out (with leads)	\$ 5.76
Gallagher Tool Kit	\$ 39.44
Neon Fence Tester	\$ 9.95
(iv) Insulators	
Rod Type R 10mm and 12mm	\$0.15-\$0.19
Bobbin Type B	\$0.15-\$0.19
Steel Post Type Y	\$0.15-\$0.19
Wooden Post Type W	\$0.15-\$0.19
Type WS	\$0.28-\$0.32
Strain Type S	\$0.27-\$0.31
WP4 Porcelain End and Corner	\$0.63
Bevin Corner	\$0.28
Drive-on for wooden posts	\$0.16
Live-wire screw-on	\$0.20
Beattie Permanent for Y and flat standards	\$0.18
Temporary for Y and flat standards	\$0.15
Pin-lock for Y and flat standards	\$0.15
Pin-lock for wooden posts	\$0.11
10mm Rod	\$0.11
Porcelain Corner Type 107	\$1.00
Bobbin Type 445	\$0.54
Waikato Corner	\$0.17 each
Waikato Waratah	\$0.17 each
Waikato Fence Breaker (spring loaded)	\$2.32
Field Marshall Bevin Gate Break	\$2.32
Wang-on Permanent PK300	\$0.40
(v) Electric Fence Wire, Cable and Netting	
'Livestrand' 200 m	\$ 7.00
500 m	\$18.00
'Spark' 200 m	\$ 6.75
500 m	\$16.85
Waikato Poliwire 200 m	\$ 8.40
500 m	\$20.80
'Livewire' Heavy Duty Underground Cable 100 m	\$42.22



Gallagher Galv. Underground Cable	
Double Insulated 100 m	\$32.00
'Flexinet' 50 yard (45.7 m)	\$85.90
"Bell Booth" undergate cable 100m	\$32.00
Aluminium leadout wire 1600	\$185.00
(vi) Electric Fence Standards	
'Trident'	\$1.74
'Stafix' 10 mm Rod	\$1.35
12 mm Rod	\$1.60
Yates Type D Pigtail	\$2.30
Standard H Hi-Tensile	\$1.16
Type S Hi-Tensile	\$1.01
Type N Hi-Tensile (ex factory only)	\$1.16
(vii) Electric Fence Reels	
'Stafix' Self Insulated Reel	\$11.35
with Carrying Handle	\$13.00
with Mounting Post	\$17.50
'Stafix' Fence-Mounted Mini Reel	\$ 8.60
Single Mini Reel on Standard	\$ 13.30
Double Mini Reel on Standard	\$ 21.85
Triple Mini Reel on Standard	\$ 30.40
Reel Assembly including Bracket and Insulator	\$ 8.55
Reel Standard	\$ 4.75
Yates Single Reel Bare	\$ 4.41
Wheelbrand reel	\$ 14.78
Wheelbrand reel and std.	\$ 19.90
Thompson's Hot-Dip Galvanized	\$ 1.95
'Insultimber' Semi-Permanent 138 cm	\$ 12.70
Permanent 152 cm	\$ 2.44
Droppers 91.5 cm	\$ 1.18
Deer Posts	\$ 3.21

#### 4.25.13 Contract Fencing Rate (1979-80)

- (i) On Canterbury Plains
  - 3 posts per 20 metres, 3-4 standards between post. 5-6 plain and 2 barbed wires, 1 gate per 100m: \$19.00 per 20 metres.
  - 1 post, 5 waratahs, Hurricane boundary netting, 1 barb. \$15.00 per 20 metres
- (ii) On Hills and Downs
  - **Rough Going**  
2 posts, 4 to 5 standards, 5 plain, 2 barbs: \$25.00 – \$28.00 per 20 metres.  
2 T-irons in place of posts: \$18.00 - \$20.50 per 20 metres.
  - **Good Going**  
2 posts, 4 to 5 standards, 5 plain, 2 barbs: \$18.00 – \$20.00 per 20 metres.  
3 posts, Hurricane (boundary) netting, 1 barb wire, 6 plain, \$20 – \$22 per 20 metres.
- (iii) Contract Post Driving  
70 to 80 cents per post, minimum \$15.00 per hour.
- (iv) Contract Post Hole digging 70¢ – 80¢ per hole, minimum \$15.00 per hour according to conditions.

## 4.25.14 Guide to Fencing Cost (January, 1980)

Costs in cents/metre of fence

### (i) Plain Wire

No. of Wires in Fence	1	7	8	9	10
4mm (No. 8)	10.3	72.1	82.4	92.7	103.0
3.15mm (No.10)	8.6	60.2	68.8	77.4	86.0
2.5mm (No.12½ HT)	4.2	29.4	33.6	37.8	42.0

### (ii) Barbed Wire (2.5mm)

No. of Wires in Fence	1	2
<b>Barbs</b>		
7cm apart	16.94	33.88
15cm apart	14.12	28.23

### (iii) Netting

Cyclone Twinlock Boundary	8 line H.T.	92.30
	8 line M.T.	119.80
	5 line S.T.	57.35
Tightlock Boundary	8 line H.T.	98.72
	8 line M.T.	123.68
	13 line Deer	247.13
Hurricane High Tensile	8 line	93.48
Stiff Stay	8 line	97.84
H.T. Deer Fence	12 line	208.59

### (iv) Posts

No. of Post/20 Metres	3	4	5	6
Pine 13 cm Round inter.	60.75	81.00	101.25	121.50
Pine 15 cm Half Round	45.75	61.00	76.25	91.50
Concrete 1.83m	82.50	110.00	137.50	165.00
Waratah 1.7 m	46.20	61.60	77.00	92.40

### (v) Battens

No. of Battens/20 metres	2	3	5	10	15	20
1.0m battens	5.4	8.1	13.5	27.0	40.5	54.0
1.2m	6.8	10.2	17.0	34.0	51.0	68.0

### (vi) Strainers, Stay and Block Assemblies

Length of Strain	100m	150m	200m	250m	300m
<b>Tanalised Pine</b>					
2.1m x 20cm	32.26	21.51	16.13	12.90	10.75
2.4m x 20cm	36.96	24.64	18.48	14.79	12.32
2.7m x 20cm	42.16	28.10	21.08	16.87	14.06

Concrete	100m	150m	200m	250m	300m
2.1m x 15cm x 15cm	43.40	28.93	21.70	17.36	14.46
2.4m x 20cm x 20 cm	47.40	31.60	23.70	18.96	15.80

(vii) Angles (with stay)

No. of Angles/200 metres	1	2	3	4
Tanalised 1.8m x 13cm	4.9	9.8	14.7	19.6
Concrete 1.83m	6.2	12.4	18.6	24.8

(viii) Gates (inc. Hinges, Gudgeon and Catches)

No. of gates/500 metres	1	2	3
Cyclone Economy 3.6m	14.3	28.6	42.9
Special 3.6m	16.7	33.4	50.1
Stressmaster 3.6m	19.3	38.6	57.9
Hurricane Standard 3.75 m	17.0	34.0	51.0
Special 3.75m	14.3	28.6	42.9
Heavy-weight 3.75 m	17.4	34.8	52.2

(ix) Staples, tie down foots, etc, depending on contour  
allow 15 - 25 cents per metre

## 4.25.15 Pricing types of fences

(based on 200m strain on flat country)

- (i) 3 wooden posts/20 metres  
3 battens between posts  
9 x 2.5 mm HT wires

Wire	37.8 cents
Posts	60.75 cents
Battens	16.2 cents
Strainers	16.13 cents
Angles (2)	9.8 cents
Gates	28.6 cents
Staples, etc.	17.0 cents
Total Cost	\$1.86 per metre

With labour at	\$1.75
the price erected is	\$3.61 per metre

- (ii) 4 concrete posts/20 metres  
7 x 4mm wires  
2 x barb wires  
5 battens between posts

Price per metre:

Wire	72.1 cents
Barb	33.88 cents

Posts	110.0 cents
Battens	40.5 cents
Strainers	23.7 cents
Angles (2)	12.4 cents
Gates (2)	28.6 cents
Staples, etc.	17.0 cents
Total Cost	\$3.38 per metre
With Labour at	\$1.98
the price erected is	\$5.36 per metre

(iii) Recommended by N.Z.A.E.I.

4 wooden posts/20 metres

10 x 2.5 mm HT wire

2 battens between posts

K.R.A. horizontal stay - strainer assembly:

3 posts, 2 stays, 30m x 4mm wire, 2 battens and staples

Price per metre

Wire	42.0	cents
Posts	81.0	cents
Battens	16.2	cents
Strainer assembly	37.0	cents
Angles (2)	9.8	cents
Gate (2)	28.6	cents
Staples, etc.	17.0	cents
Total Materials	\$2.32	per metre
With Labour at	\$1.98	
The price erected is	\$4.30	per metre.

Using the above calculations as examples, any type of fence design can be costed out using the tables 4.24.14 i.e. costs/metre of fence.

## 4.26 WATER SUPPLY

### 4.26.1 Polythene Piping

Polipipe Size	Standard/100m	High Density/ 100m
15 mm	\$ 29.96	\$ 24.30
20 mm	\$ 59.89	\$ 45.60
25 mm	\$ 76.99	\$ 60.90
32 mm	\$ 94.08	\$ 81.60
40 mm	\$111.20	\$110.25
50 mm	\$156.25	\$157.18

## 4.26.2 P.V.C. Pressure Pipe

AHI Garnite (N.Z.S. 7648 : 1974) – available in 6m and 10m lengths.

Nominal Bore(mm)	Pressure Class	Mean O.C.(mm)	PRICE \$ PER 100M		
			P.E.	S.O.E.	Z Joint
80	B	88.9	328.00	333.00	340.00
100	B	114.3	492.00	499.00	509.00
125	B	140.3	672.00	681.00	691.00
150	B	168.3	957.00	968.00	990.00
200	B	219.1	1462.00	1477.00	1514.00
50	C	60.3	187.00	191.00	196.00
80	C	88.9	388.00	395.00	402.00
100	C	114.3	641.00	650.00	660.00
125	C	140.3	960.00	972.00	986.00
150	C	168.3	1382.00	1398.00	1419.00
200	C	219.1	2131.00	2154.00	2190.00
32	D	42.2	118.00	120.00	
40	D	48.3	152.00	155.00	
50	D	60.3	229.00	234.00	239.00
65	D	75.3	361.00	367.00	519.00
80	D	88.9	504.00	513.00	859.00
100	D	114.3	838.00	850.00	1419.00
125	D	140.3	1813.00	1836.00	2190.00
150	D	168.3			
15	E	21.3	45.00	46.00	
20	E	26.9	63.00	64.00	
25	E	33.7	90.00	92.00	
32	E	42.4	141.00	144.00	
40	E	48.3	178.00	182.00	
50	E	60.3	284.00	290.00	239.00

Z Joint 80mm - 200m in class E \$519 - \$2839.

P.E. = Plain Ends

S.O.E. = Socketted one end for solvent joining

Z Joint = rubber ring seal at joins – price extra

UNITS CLASS	B	C	D	E
METRES HEAD	60	90	120	150
KILO PASCALS	600	900	1200	1500
P.S.I.	87	130	174	217
COLOUR CODE	RED	BLUE	GREEN	BROWN

Garnite (P.V.C.) Fittings:

Tee joint	15mm - 150mm	\$ 0.63 - \$124.52
Reducing Tee	20x15 - 100 x 80	\$ 0.93 - \$ 13.23
90° Elbow	15mm - 150mm	\$ 0.47 - \$108.20
45° Elbow	15mm - 100mm	\$ 0.54 - \$ 10.82
Plain socket	15mm - 200mm	\$ 0.29 - \$ 39.64
Reducing Socket	20 x 15 mm - 200 - 150mm	\$ 0.58 - \$ 56.32
Valve Socket	15mm - 100mm	\$ 0.48 - \$ 7.02
90° Formed bend		
Socketted ends	32mm - 200mm	\$ 4.14 - \$105.66
Plain ends	50mm - 200mm	\$ 9.98 - \$110.80
45° Formed bends		
Socketted ends	50mm - 200mm	\$ 8.95 - \$105.66
Plain ends	50mm - 200mm	\$ 9.94 - \$110.80
Z Joint Double Socket	50mm - 200mm	\$ 3.91 - \$ 27.19
Z Joint Rubber		
Sealing Ring	50mm - 200mm	\$ 0.59 - \$ 3.56
Garnite Solvent Cement	125 - 4 litre	\$ 2.55 - \$ 26.40
Garnite Jointing	500ml and 2 litre	\$ 3.40 - \$ 14.69
Lubricant		
Expoxy-Coated Steel		
Double coupler	100mm - 200mm	\$48.90 - \$ 86.07
Reducing coupler	125 x 100mm - 200 x 150mm	\$63.72 - \$ 96.32
End cap	100mm - 200mm	\$28.11 - \$ 51.00
Threaded Branch Tee	100 x 80mm - 200 x 150 mm	\$78.77 - \$142.54
Flanged adaptor	100mm - 200mm	\$47.34 - \$ 82.74
Flanged Tee	100 x 80mm - 200 x 200 mm	\$88.69 - \$141.37

Straight Tee	100mm - 200mm	\$83.27 - \$135.35
Reducing Tee	125 x 100mm -	
	200 x 150mm	\$88.03 - \$124.76

#### 4.26.3 Concrete Water Troughs (McKendry's)

Capacity		
1137 litres	round	\$75.00
910 "	round	\$68.50
455 "	round	\$47.50
318 "	long	\$46.50
273 "	long	\$44.00
182 "	round	\$42.50
182 "	long	\$42.50

#### 4.26.4 Concrete Tanks (McKendry's)

Capacity	Width	Height	Weight	Price
22750 litres	3.5m	2.7m	6.2 tonne	\$1078.00
9092 "	2.6m	2.1m	2.1 tonne	\$ 710.00
4540 "	1.8m	1.8m	1.0 tonne	\$ 457.00
3637 "	1.8m	1.5m	0.8 tonne	\$ 413.00
2728 "	1.7m	1.3m	0.6 tonne	\$ 358.00
1818 "	1.5m	1.3m	0.5 tonne	\$ 270.00

#### 4.26.5 Valves & Floats

Fullflow 69	20mm Standard Valve	\$ 10.05
Jobe	20mm trough valve	\$ 12.70
	20 mm Tank level control valve	\$ 40.87
	25mm Tank level control valve	\$ 42.91
	30mm Tank level control valve	\$ 71.52
	36mm Tank level control valve	\$ 75.61
	50mm Tank level control valve	\$ 79.70
	75mm Tank level control valve	\$153.26
Jobe	20mm trough valve - bottom intake	\$ 12.50
	- top intake	\$ 12.50
High/Low	15mm x 220mm trough valve	\$ 6.80
	15mm x 225mm	\$ 7.50
Dolphin	Indestructible Float	\$ 1.38
	Brass Ferrel Float 115mm	\$ 1.40
	150mm	\$ 2.33



## 4.26.6 Pumps

- (i) Piston Pumps (Davies B Series and RO 75)
- |   |       |
|---|-------|
| B1 Standard 23 litres per minute        | \$304 |
| B1LP Low 30 litres per minute           | \$310 |
| B1HP High 15 litres per minute          | \$310 |
| B1HPBF Boiler feed 15 litres per minute | \$353 |
- Pressure systems for the above vary in cost from \$592 to \$1059 depending on tank size (55 to 410 litre) and pressure (345 to 1380 k Pa)
- (ii) Geared Piston Pumps (Davies C Series)
- |   |       |
|---|-------|
| C1 Standard 38 litres per minute        | \$684 |
| C1HP High Pressure 23 litres per minute | \$688 |
| C1HPBF Boiler feed 23 litres per minute | \$737 |
| C12 Low pressure 57 litres per minute   | \$689 |
| C2 C1 less Vee Drive and Motor Bracket  | \$619 |
| C3 C1 less Vee Drive                    | \$637 |
- Pressure systems for the above vary in cost from \$980 to \$1587 depending on tank size (246 to 492 litres) and pressure (690 to 1380 k Pa)
- (iii) Deep Well Gearings (Davies D. Series)
- |                                       |       |
|---------------------------------------|-------|
| 19.8cm Stroke with 5cm gland assembly | \$933 |
| 15 cm Stroke with 5 cm gland assembly | \$750 |
- Pressure systems for the above vary from \$1079 to \$1475 depending on tank size (164 to 492 litres) Pressure is 690 k Pa.
- (iv) Hand Pumps (Davies L. Series)
- |                                 |       |
|---------------------------------|-------|
| L1¼ Double acting 3.175 cm bore | \$199 |
| L1½ Double acting 3.81 cm bore  | \$193 |
| L1¾ Double acting 4.445 cm bore | \$199 |
| L2½ Double acting 6.35 cm bore  | \$225 |
- (v) Hydraulic Water Rams (Davies)
- |       |       |
|-------|-------|
| Ram 3 | \$313 |
| Ram 5 | \$408 |
- (vi) Centrifugal Pumps (Davies K Series)
- Motorised
- |                                     |         |                              |       |
|-------------------------------------|---------|------------------------------|-------|
| K <sup>1</sup> / <sub>6</sub> BSP   | .12 kW  | 2 pole single phase 230 volt | \$202 |
| K <sup>1</sup> / <sub>3</sub> B     | .25 kW  | 2 pole three phase 400 volt  | \$230 |
| K <sup>3</sup> / <sub>4</sub> BSPGM | .68 kW  | 2 pole single phase 230 volt | \$345 |
| K <sup>3</sup> / <sub>4</sub> B GM  | .55 kW  | 2 pole three phase 400 volt  | \$348 |
| K1¼                                 |         |                              |       |
| BSP GM                              | .93 kW  | 2 pole single phase 230 volt | \$417 |
| K2B DV                              | 1.50 kW | 2 pole single phase 230/460  |       |
| DV                                  |         |                              | \$488 |

K3B GM	2.20 kW 2 pole three phase 400 volt	\$494
K3B DV	2.20 kW 2 pole single phase 230/460 DV	\$867
K5B	3.70 kW 4 pole three phase 400 volt	\$993
K75B	5.50 kW 4 pole three phase 400 volt	\$1012
KH5B	3.70 kW 2 pole three phase 400 volt	\$739
K10B	11.00 kW 4 pole three phase 400 volt	\$2256
KH20B	15.00 kW 2 pole three phase 400 volt	\$2085

(vii) Self - Priming Centrifugal Pumps (Davies SP Series)

Engine Driven

SPE2/40 (AL) Aluminium (2.54 kW 4 stroke Kawasaki petrol engine)	\$585
SPE2/40 (AL) BS Aluminium (2.98 kW 4 stroke Briggs and Stratton petrol engine)	\$448
SPE2/50 (AL) Aluminium (3.73 kW 4 stroke Kawasaki petrol engine)	\$629
SPE2/50 (AL) BS Aluminium (3.73 kW 4 stroke Briggs and petrol engine)	\$497
SPE2/40 (CI) Cast Iron (2.54 kW 4 stroke Kawasaki petrol engine)	\$564
SPE2/40 (CI) BS Cast Iron (2.98 kW 4 stroke Briggs and Stratton petrol engine)	\$440
SPE2/50 (CI) Cast Iron (3.73 kW 4 stroke Kawasaki petrol engine)	\$604
SPE2/50 (CI) BS Cast Iron (3.73 kW 4 stroke Briggs and Stratton petrol engine)	\$489

Motorised

SPK $\frac{3}{4}$ BSP .68 kW 2 pole 230 volt single phase	\$375
SPK $\frac{3}{4}$ B .55 kW 2 pole 400 volt three phase	\$378
SPK1 $\frac{1}{4}$ BSP .93 kW 2 pole 230 volt single phase	\$442
SPK1 $\frac{1}{4}$ B .93 kW 2 pole 400 volt three phase	\$417

## 4.27 FARM MACHINERY

### 4.27.1 Tractors

#### (i) Ford: 2 wheel drive models

3600 Vineyard	35.0 kW (47 h.p.)	available indent only
3600	35.0 kW (47 h.p.)	\$12000
4100	38.7 kW (52 h.p.)	\$14100
4600 Narrow Orchard	46.2 kW (62 h.p.)	\$14250
4600	46.2 kW (62 h.p.)	\$15170
5600	50.7 kW (68 h.p.)	\$16640
6600	58.2 kW (78 h.p.)	\$16910
6600	58.2 kW (78 h.p.)	\$18110
6600	58.2 kW (78 h.p.)	\$19640
7600	72.4 kW (97 h.p.) 16 speed	\$22950
7700	72.4 kW (97 h.p.)	\$29950
TW20	114.8 kW (153 h.p.)	\$41900

Safety Cab \$2785 (including fitting)

Deluxe Cambell Q Cab \$3770 (including fitting).

#### New Models

1200 4 W.D.	11.9 kW (16 h.p.)	\$5487
1900 4 W.D.	22.4 kW (30 h.p.)	\$8350
1900 4 W.D.	22.4 kW (30 h.p.)	\$7150

#### (ii) Ford County: 4 wheel drive models (with cab.)

3600	35.0 kW (47 h.p.)	P.O.A.
4100	38.7 kW (52 h.p.)	P.O.A.
4600	46.2 kW (62 h.p.)	P.O.A.
774	58.2 kW (78 h.p.)	P.O.A.
974	72.4 kW (97 h.p.)	P.O.A.
1174	89.5 kW (116 h.p.) with dual wheels	P.O.A.
1474	108.2 kW (148 h.p.) with dual wheels	P.O.A.

#### (iii) Case: All with cab (blower/heater, and radio) power shift, quick hitch and 4 x 8 ram and horses.

2090	94.6 kW (127 h.p.)	\$46925
2290	114.7 kW (154 h.p.)	\$51133
2390	134.1 kW (180 h.p.)	\$55836

#### (iv) David Brown: (Price does not include safety frame.)

1190 NC	36.0 kW (48 h.p.)	\$14219
1290 NC	43.5 kW (58 h.p.)	\$16203
1290 NC 4 W.D.	43.5 kW (58 h.p.)	\$20498
1390 NC	49.9 kW (67 h.p.)	\$18419
1390 C	49.9 kW (67 h.p.)	\$23462
1390 C 4 W.D.	49.9 kW (67 h.p.)	\$26304
1490 NC	61.8 kW (83 h.p.)	\$22210
1490 C	61.8 kW (83 h.p.)	\$26880
1490 C 4 W.D.	61.8 kW (83 h.p.)	\$31793
1690 C	76.7 kW (103 h.p.)	\$32898
1690 NC 4 W.D.	76.7 kW (103 h.p.)	\$38609

- (v) **International Harvester:** Cabs cover the full range. Campbell Cab \$2346 plus fittings, Q cab factory fitted \$3106.

Prices as at 9-12-80

284	22.4 kW (30 h.p.)	\$ 6985
384	34.0 kW (45 h.p.)	\$11464
484	40.2 kW (52 h.p.)	\$14100
584	44.5 kW (62 h.p.)	\$15800
684	53.4 kW (72 h.p.)	\$17800
784	59.5 kW (80 h.p.)	\$19569
786	70.1 kW (95 h.p.)	\$30853
886	80.0 kW (114 h.p.)	\$34735
1086	99.2 kW (133 h.p.)	\$38015

- (vi) **Massey Ferguson:** P.S = Power Steering, M.P.T. = Multi Power Transmission, 4 W.D. = 4 Wheel Drive.

174	4 W.D.	4.71 kW (63 h.p.)	\$21600
194	4 W.D.	55.9 kW (75 h.p.)	\$23500
210		18.6 kW (25 h.p.) 12 speed	\$ 6602
210	4 W.D.	18.6 kW (25 h.p.) 12 speed	\$ 7330
220		22.35 kW (30 h.p.) 12 speed	\$ 7600
220	4 W.D.	22.35 kW (30 h.p.) 12 speed	\$ 8500
245	P.S.	35.10 kW (47 h.p.) 8 speed	\$14420
265		47.1 kW (63 h.p.) 8 speed P.T.O.	\$16500
265		47.1 kW (63 h.p.) 12 speed P.T.O.	\$17245
290		59.3 kW (79 h.p.) 8 speed P.T.O.	\$20000
290		59.3 kW (79 h.p.) 12 speed, P.T.O.	-
575		52.2 kW (cast wheel, pump, coder	\$21175
575		52.2 kW (70 h.p.) 12 speed Factory cab	\$22850
590		59.3 kW (79 h.p.) 12 speed Factory cab	\$25650
595	M.P.T.	67.0 kW (90 h.p.) with cab	\$25,950
1135	M.P.T.	90 kW (120 h.p.) with cab	\$28174
1155	M.P.T.	115.4 kW (155 h.p.) with cab	\$31498
1200	M.P.T., 4 W.D. and Pivot Steer	78.0 kW (105 h.p.)	\$41153
1505		130.3 kW (185 h.p.) Articulated 4 W.D.	\$45403
1744	4 W.D.	46.3 kW (62 h.p.)	\$17519
1944	4 W.D.	55.1 kW (74 h.p.)	\$20879
1805		156.4 kW (210 h.p.) Articulated 4 W.D.	\$567459

Models 1200, 1505 and 1805 have air conditioning and radio in the cab.

Where no cab is fitted, add \$250 for certified safety frame.

- (vii) **Zetor**

4911	34.3 kW (46 h.p.) 2 W.D.	\$ 9712
5911	44.3 kW (59 h.p.) 2 W.D.	\$11247
5745	42.5 kW (57 h.p.) 4 W.D.	\$13247
6911	51.2 kW (69 h.p.)	\$12034
6945	51.2 kW (69 h.p.) 4 W.D.	\$14447
8011	59.7 kW (80 h.p.) 2 W.D.	\$13813
8045Q	59.7 kW (80 h.p.) 4 W.D.	\$22050
12011	89.5 kW (120 h.p.) 2 W.D. With cab	\$22332
12045Q	89.5 kW (120 h.p.) 4 W.D.	\$27237

Safety frames are extra on the above models.

### (viii) Kubota

B7100	11.9 kW	(16 h.p.)	4 W.D.	\$ 5395
L245 DT	18.6 kW	(25 h.p.)	4 W.D.	\$ 7375
L295 FP	22.4 kW	(30 h.p.)	2 W.D.	\$ 6995
L295 DT	22.4 kW	(30 h.p.)	4 W.D.	\$ 8349
M4500 FP	41.0 kW	(55 h.p.)	2 W.D.	\$13200
M4500 DT	41.0 kW	(55 h.p.)	4 W.D.	\$15650
M5500 DT				\$17537 (approx.)
M4500 FP	60.4 kW	(81 h.p.)	2 W.D.	\$15450
M75900 DT	60.4 kW	(81 h.p.)	4 W.D.	\$19200

Safety frames are extra on the above models.

### (ix) Belarus

611	52.2 kW	(70 h.p.)	2 W.D.	\$13450
702	52.2 kW	(70 h.p.)	2 W.D.	\$10691
704	52.2 kW	(70 h.p.)	4 W.D.	\$13250
902	67.1 kW	(90 h.p.)	2 W.D.	\$12989
904	67.1 kW	(90 h.p.)	4 W.D.	\$16262

Safety frames are extra on the above models.

### (x) Hinomoto

E150D	11.9 kW	(16 h.p.)	4 W.D.	\$6400 (est.)
E250D	20.5 kW	(28 h.p.)	4 W.D.	\$7963
E18D	23.1 kW	(31 h.p.)	2 W.D.	\$5500
E280	23.1 kW	(31 h.p.)	2 W.D.	\$7746

### (xi) John Deere

850	18 kW	(24 h.p.)		\$ 5999
950	21 kW	(28 h.p.)		\$ 6999
1050	30 kW	(40 h.p.)		\$11300
1050 4 x 4	30 kW	(40 h.p.)		\$12700
1040	39.7 kW	(53 h.p.)		\$15499
1140	42 kW	(56 h.p.)		\$15999
1140 4 x 4	42 kW	(56 h.p.)		\$21300
1640	49.5 kW	(66 h.p.)		\$17999
1640 4 x 4	49.5 kW	(66 h.p.)		\$22300
2040	59.2 kW	(79 h.p.)		\$19353
2040 4 x 4	59.2 kW	(79 h.p.)		\$23800
2140	67.5 kW	(90 h.p.)		\$20800
2140 4 x 4	67.5 kW	(90 h.p.)		\$26500
3140	77.2 kW	(103 h.p.)		
3140 4 x 4	77.2 kW	(103 h.p.)		\$33500
4040	87.7 kW	(117 h.p.)		\$40500
4040 4 x 4	87.7 kW	(117 h.p.)		\$46000
4240	97.5 kW	(130 h.p.)		\$ 4400
4240 4 x 4	97.5 kW	(130 h.p.)		\$ 4900
4440	116.2 kW	(155 h.p.)		\$52000
4440 4 x 4	116.2 kW	(155 h.p.)		\$57000
4640	135 kW	(180 h.p.)		\$56000
4640 4 x 4	135 kW	(180 h.p.)		\$62000
8440 4 x 4	161.2 kW	(215 h.p.)		\$81000
8640 4 x 4	206.2 kW	(275 h.p.)		\$98000
Chamberlain 4080	72.7 kW	(97 h.p.)		\$28000

Soundguard cab with heater and air conditioning standard equipment inclusive in the above prices.

**(xii) Fiat**

450	35.8 kW	(48 h.p.)	c/w Safety Frame	\$11440
450	35.8 kW	(48 h.p.)	Low Orchard Version /No. S.F.	\$13090
450DT	35.8 kW	(48 h.p.)	c/w Safety Frame and P.S.	\$13800
470 VIG	35.8 kW	(48 h.p.)	Live P.T.O.	\$13200
470 VIG DT	35.8 kW	(48 h.p.)	Live P.T.O. Hydrostatic Steering	\$15500
540	40.3 kW	(54 h.p.)	c/w Safety Frame	\$15850
540DT	40.3 kW	(54 h.p.)	c/w Safety Frame	\$18400
580	44.1 kW	(58 h.p.)	c/w Safety Frame	\$16600
580	44.1 kW	(58 h.p.)	Pininfarina 'Q' Cab	\$20200
580DT	44.1 kW	(58 h.p.)	Pininfarina 'Q' Cab	\$22800
640	47.8 kW	(64 h.p.)	c/w Safety Frame	\$15600
640DT	47.8 kW	(64 h.p.)	c/w Safety Frame	\$19800
640 DT	47.8 kW	(64 h.p.)	c/w Safety Frame (with extra creeper speeds)	\$18000
680H	50.7 kW	(68 h.p.)	c/w Safety Frame	\$24000
680H	50.7 kW	(68 h.p.)	Pininfarina 'Q' Cab	\$20000
680HDT	50.7 kW	(68 h.p.)	c/w Safety Frame	\$26200
680HDT	50.7 kW	(68 h.p.)	Pininfarina 'Q' Cab	\$22200
780	58.2 kW	(78 h.p.)	c/w Safety Frame	\$25000
780	58.2 kW	(78 h.p.)	Pininfarina 'Q' Cab	\$21000
780DT	58.2 kW	(78 h.p.)	Pininfarina 'Q' Cab	\$30350
880	65.7 kW	(88 h.p.)	Pininfarina 'Q' Cab	\$30350
880DT	65.7 kW	(88 h.p.)	Pininfarina 'Q' Cab	\$32800
1000	82.1 kW	(110 h.p.)	Siac Cab	\$29000

**(xiii) Leyland**

245	35.0 kW	( 47 h.p.)		\$12083
262	46.2 kW	( 62 h.p.)		\$14953
272	53.6 kW	( 72 h.p.)		\$15980
285	63.4 kW	( 85 h.p.)	With Cab	\$18424
2100	74.5 kW	(100 h.p.)	With Cab	\$18968

**(xiv) Satoh (Mitsubishi)**

630 x 4	18.6 kW	(25 h.p.)		\$7477
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**(xvx) Howard**

2000	9.6 kW	(13 h.p.)	Garden Tractor	\$4360
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**(xvi) Holder**

A50Cultitrac	36.5 kW	(56 h.p.)	4 W.D.	\$18232
A60 Cultitrac	36.5 kW	(56 h.p.)	4 W.D. with frame	\$21700

**(xvii) Moller**

Power pony				
12T MKII	8.9 KW	(12 h.p.)		\$ 2690
16T MKII	11.9 kW	(16 h.p.)		\$ 2970

N.B. Specialist attachments include mid-mounted mowers, front end loader, rotary hoes, etc.

**4.27.2 Crawlers****(i) Fiat:**

455C	37.5 kW	(50 h.p.)	Hydraulic linkage	\$14900
505 C	45.0 kW	(58 h.p.)	Hydraulic linkage	\$16850
605 CMS	49.2 kW	(66 h.p.)	Hydraulic linkage	\$22900
805C	59.7 kW	(80 h.p.)	Remote linkage	\$36200
805C	59.7 kW	(80 h.p.)	Remote linkage, Angle Blade	\$42200

**(ii) John Deere**

JD 350	34.3 kW	(46 h.p.)		\$39000
JD 450	52.1 kW	(70 h.p.)		\$59000
JD550				\$69000
JD 750		air conditioned cab, rippers		\$128000
JD 850		air conditioned cab, rippers		\$168000

**4.27.3 Trucks****(i) Nissan/Datsun**

Datsun Utility	1 tonne, cab & chassis - petrol	\$ 8690
	- diesel	\$10390
	dropside deck (extra)	\$ 800
	wellside deck (extra)	\$ 970
Nissan Patrol	4 W.D., cab & chassis	\$12 375

**(ii) Mazda**

B1600 S.W.B.	1 tonne, cab and chassis	\$8850
	pickup	\$9100
B1600 L.W.B.	1 tonne, cab & chassis	\$9130
	pickup	\$9450

**(iii) Land Rover**

SWB	Hard Top (Petrol)	\$15 729
	Truck Cab, wellside	\$14 264
LWB	Truck cab, wellside	\$15 543

**(iv) Toyota**

Land cruiser	Hard top, - Petrol	\$13 800
	- Diesel	\$16 250
Land cruiser	L.W.B., cab & chassis - Petrol	\$13 500
	- Diesel	\$15 900
Dyna	2 tonne, - petrol	\$ 9 500
	3 tonne, - diesel	\$11 500

Hi-Lux	1 tonne, cab and chassis, 1.6 litre	\$ 8 250
	2.0 litre	\$ 8 650
	2.0 litre 4 W.D.	\$11 650
	Utility 1.6 litre	\$ 9 595
	2.0 litre	\$10 190
	2.0 litre 4 W.D.	\$11 650
Hi-Ace	1 tonne, cab & chassis	\$ 8 800
	van	\$11 500

(v) **Bedford**

CF	0.9 tonne, cab & chassis	\$10595
CF	0.9 tonne, Van	\$11 730
CF	1.27 tonne, Van	\$13 655
173	0.7 - 0.9 tonne utility	\$10 820
	1 tonne, cab & chassis	\$10 670
J1C2	1.7 tonne, cab & chassis	\$11 140
TLD23	Isuzu 1.7 tonne	\$10 075

(vi) **Mitsubishi**

L200	1 tonne 1.6 litre pickup c/c	\$ 8 275
L300	1 tonne 1.6 litre forward control pick up	\$ 8 350
	C/C	
Sports 2000	500kg 2000 cc Utility	\$ 9 995
L300 van	1.6 litre 6 seater, rear and side loading	\$10 650
Express van	estate car based, 5 door van 1.6 litre	\$10 150

## 4.27.4 Farm Bikes

60 percent deposit on all new bikes

(i) Yamaha	Retail	Sales Tax	Net to Farmer
AG100F	\$1 495	\$270	\$1 225
AG100G	\$1 375	\$184	\$1 191
AG100H	\$1 878	\$351	\$1 527
AG175F	\$1 495	\$270	\$1 225
DT100F	\$1 710	\$140	\$1570
DT125G	\$1 421	\$189	\$1 232
DT175G	\$1 973	\$369	\$1 604
DT250F	\$1 920	\$366	\$1 554
XT250 4 stroke	\$2 299	\$432	\$1 867
TT250 4 stroke	\$2 399	\$450	\$1 949
Tri Moto 125	\$1 636	no deductions of sale tax	



(ii) Kawasaki

KE 100	\$ 999	\$ 174	\$ 825
KV 100	\$1329	\$ 178	\$1151
KE 125	\$1549	\$ 210	\$1339
KL 250	\$2295	\$ 432	\$1863

(iii) Suzuki

RV90	\$ 1 379	\$178	\$1 201
TF100	\$1 375	\$184	\$1 191
TF125	\$1 570	\$203	\$1 367
TF185	\$1 938	\$355	\$1 603
PE175	\$2 294	\$425	\$1 869
PE250	\$2 675	\$502	\$2 173
TS100 ER	\$1 386	\$184	\$1 202
TS125 ER	\$1 595	\$212	\$1 383
TS185 ER	\$1 988	\$367	\$1 621
TS250 ER	\$2 360	\$445	\$1 915

(iv) Honda

CT90K8	\$1 391	\$182.10	\$1 208
XL100SZ	\$1 430	\$183.00 (appx.)	\$1 247
ATC110A	\$1 558	N.A.	\$1 558
XL125SZ	\$1 691	\$222.90	\$1 468
ATC185A	\$2 055	N.A.	\$2 055
XL185SZ	\$1 981	\$363.30	\$1 617
XR200A	\$2 281	\$420.00	\$1 861
XR250A	\$2 254	\$420.00	\$1 834
XL250S	\$2 180	\$405.00	\$1 775

## 4.27.5 Ploughs

(i) Duncan

530 mounted	3 furrow c/w landwheel	\$1910
	4 furrow c/w landwheel	\$2200
540 semi-trailed	4 furrow c/w hydraulic ram	\$4964
	5 furrow c/w hydraulic ram	\$5320

(Deduct \$142 if landwheel is not required)

(Deduct \$110 if Hydr. Ram is not required)

Optional extras

Extra furrow assembly for 530 and 540	\$420
Extra land wheel for 530	\$208
20 cm D/A Ram and Hoses for 540 Draft bar	\$261

## (ii) Clough

	2FW	3 FW	4FW	5FW	6Fw	7FW	8FW
Semi-mounted							
850 (12"13"or 14" Furrows		2215	2639	3234	3988	6058	7780
A.P. Shear Leg		2458	2942	3658	4507	6658	8475
Mounted							
840 Standard							
30 cm	1110	1476	1872				
35 cm	1137	1536	1933				
Shear Leg							
33cm	1230	1656	2112				
38cm	1257	1717	2173				
Special 30cm							
Heavy Duty		1548	1985				
Deduct \$100 for landwheel if not required.							

## 4.27.6 Mole Drain Ploughs

Belgrave Trailing	\$325.00
Three point linkage	\$375.00
Combination	\$425.00

## 4.27.7 Chisel Ploughs and Subsoilers

### (i) Bamford

'Superflow' Heavy Duty Chisel Ploughs (price incl. depth wheels)

	45°Lo-Drift tines	Cushion Springtines
2 Beam Frame		
2m frame 3 tines	\$1019	\$1061
4 tines	\$1205	\$1216
2.4m frame 4 tines	\$1264	\$1317
5 tines	\$1468	\$1533
3 Beam Frame		
2m frame 5 tines	\$1863	\$1917
7 tines	\$2176	\$2252
2.4m frame 7 tines	\$2354	\$2432
9 tines	\$2664	\$2762
3.0m frame 9 tines	\$2833	\$2932
11 tines	\$3144	\$3265

All South Island Prices

'Superflow' Subsoilers	
Single tine unit working depth 60cm	\$ 647
Frame only	\$ 314
Twin Heavy Duty Unit	\$1299
Frame only	\$ 631
With wheels	\$1615

(ii) **Clough**

(Rubber wheels \$355 a pair extra)

5 tine chisel plough	\$1134
7 tine	\$1460
9 tine	\$1854
11 tine	\$2165
13 tine	\$2484
15 tine	\$2888

## 4.27.8 Discs

(i) **Reid and Grey**

2.7m Tandem	-
3.0m Tandem	\$1809

(ii) **American Line**

32 blade trailed	\$3825
36 blade trailed	\$4222
48 blade trailed	\$5902
32 blade mounted	\$2494

(iii) **Duncan**

**Standard Century Disc**

2.1m all plain	\$1790
all scalloped 24 blades	\$1860
2.4m all plain	\$1894
all scalloped 28 blades	\$1982
2.7m all plain	\$2036
all scalloped 32 blades	\$2126
3.0m all plain	\$2237
all scalloped 36 blades	\$2331

### 800 Mounted Disc Series

2.1m all plain	\$2066
all scalloped 24 blades	\$2129
2.4m all plain	\$2129
all scalloped 28 blades	\$2205
2.7m all plain	\$2231
all scalloped 32 blades	\$2299

## 4.27.9 Cultivators

### (i) Duncan

-Standard type	from \$1099 to \$2487
-Multi-Tine	from \$1230 to \$2287
-Heavy Duty	from \$1712 to \$2886

### (ii) Clough

#### Single Bar Cultivators

##### Standard Coil tine.

	1" tine	1¼" tine
1.8m 9 tine	\$1010	\$1474
2.3m 11 tine	\$1098	\$1660
2.7m 13 tine	\$1210	\$1868
3.2m 15 tine	\$1322	\$2011
3.7m 17 tine	\$1433	\$2203
4.1m 19 tine	\$1522	—

Deduct \$140 if steel wheels are not required on 1" tine.

Deduct \$200 if rubber wheels not required on 1¼" tine.

Add/deduct \$120 if rubber required in place of steel or vice-versa.

#### Folding Wing Cultivator

23 tine	\$2245
25 tine	\$2299
27 tine	\$2394

#### Maxitill Cultivators

	With Crumblers(s)	Less Crumblers(s)
1.8m	\$1079	\$ 611
2.4m	\$1188	\$ 689
3.0m	\$1316	\$ 778
3.6m	\$1472	\$ 896
4.2m	\$2708	\$1536
4.8m	\$2836	\$1628
5.4m	\$2992	\$1746
Pair of Wings	\$1520	\$ 850

#### Agritiller Double Bar cultivators

9 tine	\$694
11 tine	\$807
13 tine	\$933
15 tine	\$1041
17 tine	\$1186
19 tine	\$1340

#### Uni-Tiller

9 tine	\$903
11 tine	\$1030
13 tine	\$1208

### Tool Bar Cultivators (2 row, 2.5 m)

#### Solid tine

9 tine (rigid)	\$614
3 tine, 3 moulders	\$528
9 tine, 3 moulders	\$743
Pair of wheels	\$140

### (iii) Vicon Jumbo Busters

#### 4 bar frames

9 tine 3m frame	\$2487
11 tine 3m frame	\$2731

#### 2 bar frames

9 tine 2.5m frame	\$1728
11 tine 3m frame	\$1938

### (iv) Bamford

#### 'Easyflow' spring tine cultivators

7m 69 tines, 4 Bar frame, trailed with crumbler	\$5329
5.6m 55 tines, trailed with crumbler	\$4671

#### 'Turbotiller' Rolling Cultivator

M2 1.8m 2 Gangs 38 Cutters	1048	S.I. (1076)
M6 2.5m 6 Gangs 76 Cutters	2504	(2567)
M116 3.6m 6 Gangs 116 Cutters	3906	(4006)

### (v) Aitchison Trailed Models

5.6m 4 Bar frame, 56 tines, 250mm angled crumbler rollers	\$4561	(\$4671)
7.0m 4 Bar frame, 69 tines, 250mm angled crumbler rollers	\$5197	(\$5329)

## 4.27.10 Rotary Cultivators

### (i) Howard

#### Howard Rotovator

HL40 1.04m Std. Rotor	\$2252
HL50 1.28m Std. Rotor	\$2336
HL60 1.52m Std. Rotor	\$2429
AR50 1.28m	\$3209
AR60 1.52m	\$3290
AR70 1.8m	\$3473
AR80 2.03m	\$3838
AR90 2.28m	\$4012
AH90 2.28m	\$6204
AH100 2.54m	\$6559
AH120 3.05m	\$7239
M80 2.03m	\$15497
M100 2.54m	\$15995
M130 3.30m	\$17530
ST160 4.10m	\$17530
ST160 4.10m Rotospike	\$17800
ST180 4.60m	\$18660
ST180 4.60m Rotospike	\$19688

<b>Howard Rotospreeder</b>		
SPR150		\$5303

#### **Horticultural Rotovators**

200	petrol	\$1247
350	petrol	\$2240
Gem 20	petrol	\$4034
Super Gem 20	petrol	\$5061
Super Gem 20	diesel	\$5541
Super Gem 24		\$4502
Super Gem 30	petrol	\$4937
Super Gem 30	diesel	\$5976

#### **(ii) Gallagher Rotohoes**

Lightweight	800	0.80m	\$1996
	1050	1.05m	\$2102
	1300	1.30m	\$2258
	1550	1.55m	\$2413

(Wheels and roller crumbler extra)

Medium	1330	1.33m	\$2847
	1550 STD	1.55m	\$2954
	1550 CENTRAL	1.55m	\$3010
	1800 STD	1.80m	\$3112
	2050 STD	2.05m	\$3211
	2050 CENTRAL	2.05m	\$3309

(roller crumbler extra)

Heavy Duty	2050 STD	2.05m	\$3747
	2050 CENTRAL	2.05m	\$3862
	2300 STD	2.30m	\$4142

(roller crumbler extra)

Dreadnought	2050 CENTRAL		\$4347
	2300 CENTRAL		\$4617
	2550 CENTRAL		\$5402
	3050 CENTRAL		\$6181

(roller crumbler extra)

### **4.27.11 Harrows (Conventional):**

#### **Duncan**

Zig-Zag Harrows	1 leaf (less drawbar)	\$103
	3 leaf bar	\$102
	4 leaf bar	\$112
	5 leaf bar	\$134

Self-clearing Harrows.	1 leaf (less drawbar)	\$104
	3 leaf bar	\$140
	4 leaf bar	\$165
	5 leaf bar	\$196
Drill covering Harrows.	Single leaf (less bar)	\$ 56
	3 leaf bar and sliders	\$ 64
	4 leaf bar and sliders	\$ 70
	5 leaf bar and sliders	\$102
	3 leaves with bar and sliders	\$217
	4 leaves with bar and sliders	\$273
	5 leaves with bar and sliders	\$356

## 4.27.12 Power Harrows

### (i) Kuhn

HR240	2.4m	\$4750
HR300	3.0m	\$6100
HR360	3.6m	\$7500

### (ii) Vicon

SE 2300	3.0m	\$5700
SE 4500	4.5m	\$8200

### (iii) Gallagher

800	0.80m	\$2152
1050	1.05m	\$2308
1300	1.30m	\$2513
1550	1.55m	\$2719

(wheels or roller crumbler extra)

#### Medium

1550	1.55m	\$3503
1800	1.80m	\$3695
2050	2.05m	\$3971

(roller crumbler extra)

#### Intermediate

1550		\$2899
1800		\$3071
2050		\$3244
2300		\$3416

(wheels or roller crumbler extra)

#### Heavy Duty

	with wheels	with roller
2050	\$4518	\$4562
2300	\$4888	\$5160
2550	\$5219	\$5519
3050	\$5691	\$6243

Dreadnought	with wheels	with roller
2050	\$5645	\$5884
2300	\$6011	\$6278
2550	\$6378	\$6672
3050	\$7469	\$7815
3800		\$10057
4050		\$10182

## 4.27.13 Rollers

### (i) Cambridge Rollers

#### Duncan

300 Field Roller 2.4m, 65 cm rings	\$1495
2.7m, 65 cm rings	\$1600
3.0m, 65 cm rings	\$1680
Roller Seed box 16 run, 2.4m	\$1066
18 run, 2.7m	\$1110
20 run, 3.0m	\$1170

#### Belgrave

2.4m	\$1175
2.4m with Willetts seedbox and clutch	\$1895
2.7m	\$1275
2.7m with Willetts seedbox and clutch	\$2066
3.0m	\$1375
3.0m with Willetts seed box and clutch	\$2191
2.4m with Aitchison sowall seedbox and clutch	\$2166
2.7m with Aitchison sowall seedbox and clutch	\$2373
3.0m with Aitchison sowall seedbox and clutch	\$2516

### (ii) Heavy (Water Ballast) Rollers

#### Springston Agricultural Engineering

8 tonne 2.4 metres long, 13 mm plate steel	\$2500
15 mm plate steel	\$2650
10 tonne 3.0 metres long, 13 mm plate steel	\$2800
16 mm plate steel	\$3200

## 4.27.14 Drills and Seed Boxes

### (i) Duncan

702 Seedliner 24 Run Hoe with telescopic D/B  
from \$4777 to \$6670



730 Multiseeder	16 Run	Mark III	\$ 9096
	24 Run	Mark III	\$12237

Optional extras:

Small Seeds Box	16 Run	\$ 691
	18 Run	\$ 759
	20 Run	\$ 833
	24 Run	\$ 974
Eclipse Box	16 Run	\$ 741
	18 Run	\$ 774
	20 Run	\$ 819
	24 Run	\$ 922

(ii) Aitchison

(S.I. prices in brackets)

'Seedmatic' light drill and under sower

Basic model, 12 row, 1.8m, mounted	\$2491.00 (\$2541.00)
- 12 nozzle strip spray boom	\$251.22
16 row, 2.4m, mounted	\$2930.90 (\$2989.00)
-16 nozzle strip spray boom	\$ 289.38

Deluxe model, 12 row, 1.8m, mounted	
fitted with spray boom and pump	
200 litre fibreglass tank, tank	
transport tray, tank filler	
and hectarmeter	\$3430.00 (\$3499.00)
16 row, 2.4m, mounted (as above)	\$3908.00 (\$3985.60)

Accessories - Hoppers - 1.8m, 12 dropper outlets	\$495.00
- 2.4m, 16 dropper outlets	\$595.00
- 2.7m, 18 dropper outlets	\$703.20
- 3.0m, 20 dropper outlets	\$746.77
- Sunwheel Assembly - 47 different sowing	
speeds, tracgrip wheel,	
driving chain and	
toolbar clamps	\$365.70
- Roller-Seeder Kitset - includes hopper,	
bolt-on frame and sunwheel	
assembly	
2.4m	\$1295
2.7m	\$1356
3.0m	\$1478

## 4.27.15 Precision Drills

### (i) Stanhay

Handpush  
S870 MLW

Single Row

3 row

4 row

5 row

6 row

\$ 479

\$3429

\$3982

\$4550

\$5100

### (ii) Nodet Gougis

1 row c/w fertilizer attachment

\$1700

4 row pneumatic

\$5400

## 4.27.16 Planters

Faun Automatic potato planter

P.O.A.

## 4.27.17 Transplanters

### Howard

Type C Manual gripper 2 row

\$1439

Type T Tobacco

\$1722

Type B Special Nursery

\$2539

## 4.27.18 Top Dressers

### (i) Vicon

PS302

0.5 tonne, 3 pt linkage, 7m spread

\$ 950

PS602

0.5 tonne, 3 pt linkage, 14m spread

\$1650

PS1002

1.5 tonne, trailed, 14m spread

\$2980

### (ii) Hylton Engineering

2 tonne trailed

p.t.o. driven

\$3819

motor driven

\$3739

2 tonne trailed

blower unit

\$4397

3 tonne trailed

p.t.o. driven

\$4386

motor driven

\$4306

4 tonne trailed

p.t.o. driven

\$4798

motor driven

\$4718

Drawbar jack, dual wheels, extra height adjustment and blowers are all optional extras on the above models.

3.7m truck mounted

\$4312

4.0m truck mounted

\$4470

4.3m truck mounted	\$4630
4.6m truck mounted	\$4780
4.9m truck mounted	\$5130
5.2m truck mounted	\$5288
5.5m truck mounted	\$5447

The above prices for truck mounted spreaders exclude the cost of the motor.

Optional extras include extra height adjustment, self unloading for grain, lifting stand (\$510) and a clutch on the spinner.

### (iii) Aitchison Industries

		N.I.	S.I.
'Agrispred' Oscillating pipe			
SP 400	350kg, mounted	\$ 945	\$ 965
SP 500	500kg, mounted	\$ 999	\$1019
SP 600	600kg, mounted	\$1052	\$1072
SP 1000	1000 kg, mounted	\$1495	\$1520
SPT 1000	1000kg, trailed	\$1850	\$1895
SPT 2000	2000kg, trailed	\$2265	\$2310

		N.I.	S.I.
'Agrispred' Spinner			
SN 400	350kg, mounted	\$ 772	\$ 792
SN 500	500kg, mounted	\$ 823	\$ 853
SN 600	600 kg, mounted	\$ 860	\$ 880
SN 1000	1000kg, mounted	\$1416	\$1441
SNT 1000	1000 kg, trailed	\$1735	\$1780
SNT 2000	2000kg, trailed	\$2115	\$2160

Attachments for these spreaders include 2 and 4 - row side dressers, 1,2 and 3 row subsoilers, side spread conveyor chutes (spinner only), hopper extensions, hopper covers etc.

## 4.27.19 Combine Harvesters

### (i) Claas

Dominator 96	5.2m	Hyrostatic and Grain Monitor	\$99880
Dominator 76	4.6m	Hydrostatic	\$85500
Dominator 56	3.6m		\$69920
Mercator 75	4.2m		\$60200

### (ii) Massey Ferguson

440	3.0m		\$51000
750	Hydrostatic	4.8m Air cond. cab.	\$86000
760	Hydrostatic	5.5m Air cond. cab	\$106000

(iii) **International Harvester**

321	56.7 kW (76 h.p.)	3.0m	\$ 44 292
		3.6m	\$ 49 633
431	78.3 kW (105 h.p.)	3.6m	\$103 735
1460	126.7kW(170 h.p.)	5.0m	

(iv) **John Deere**

JD 955	4.2m	\$68 000
JD 975	4.2m	\$78 000
JD 6620	Basic machine	\$82 000
JD 7720	Basic machine	\$90 000

(v) **New Holland/Clayson**

8050	4.6 m	Mech. Drive.	\$ 80400
8060	4.6 m	with Grain monitor, Ford 82kW (116 h.p.) engine	\$ 95 200
8070	5.2 m	with Grain monitor, Ford 96 kW (140 h.p.) engine, tinted glass	\$104 000
8070	5.2m	Hydrostatic Drive, Merc. 96 kW (140 h.p.)	\$110 850
	6.0 m	Hydrostatic Drive, cab, Merc. 100 kW (175 h.p.)	\$126 700

## 4.27.20 Windrowers

(i) **Hesston**

1090	Hydro-swing trailed auger header	3.6m	\$ 9620
		4.2m	P.O.A.

(ii) **International Harvester**

5000	Self propelled 3.8m		\$32 000
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## 4.27.21 Mulchers (Straw Choppers)

(i) **Taarup**

SKT 2100	2.1m	\$4378
SKT 3000	3.1m	\$6728

(ii) **Gallagher**

1.83m	Heavy Duty	\$4043
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## 4.27.22 Forage Harvesters

(i) **Gallagher**

		Single Cut	Fine Cut	Precise Cut
1.07m	Forager	\$2425	\$3038	
1.07m	Forager with swivel chutes	\$2894	\$3307	
1.37m	Forager	\$2688	\$3185	\$4030
1.37m	Forager with swivel chutes	\$3187	\$3675	\$4520
1.37m	Forager with wide mouth chute	\$3004	\$3492	\$4337
1.83m	Central-mounted	\$3300	\$3850	\$4830
1.83m	Central-mounted with wide mouth chute	\$3668	\$4218	\$5198
1.83m	Central-mounted side loading chute			\$5582

	Safety Chutes	\$ 243-\$ 345
	Back loading chutes	\$ 279-\$368
	Top swivel chutes	\$ 180
	Side loading chutes	\$ 421-\$ 549
	Pre wilting chutes	\$ 163-\$ 233
	Fine cut bars	\$ 59-\$ 74
	Roller Assemblies	\$ 344-\$ 401
1.07m	Hayworker	\$2588
1.37m	Hayworker	\$2882
1.83m	Hayworker	\$3533

(Std. single cut forager with hay chute/ pre wilting chute)

**(ii) Taarup**

404	Fine chop side mounted pick-up	\$8200
405	Fine chop trailed offset pick-up	\$8870
502	Double chop	\$9250
602	Fine chop Base unit	\$9550
	Pick-up	\$3350
	2.1m 5 disc mower	\$3950
605	Fine chop trailed Base unit	\$11842
	Pick-up	\$3343
	2.7m 6 Disc mower	\$3950
DMH 1100	Single chop 1.1m	\$3500
1350	Single chop 1.3m	\$4070
DC 1500	Double Chop	\$8000

**(iii) John Deere**

JD 15A	Double chop 1.6m	\$4200
JD 16A	Double chop 1.8m	\$4844
JD 35A	Fine chop 1.6m	\$9200

**(iv) Hesston**

2000/150 Pull-type		\$14100
2000/100 Pull type, std. tyres, no hydraulic rebevel grinder		\$11650
2000/100 Pull Type		\$12950
Optional Equipment		
Two row head 0.76m (disc cut-off)		\$2780
Three row head 0.76m (sickle cut)		\$3550
Field Queen		P.O.A.

**(v) New Holland**

339	1.5 m	Double Chop 540 RPM manual controls	\$6950
		electric controls	\$7590
342	1.7m	Double Chop 1000 RPM (electric controls \$470 extra)	\$6360
890	1.7m	12 Knives base unit 1000 RPM with metal detector and wide windrow pickup	\$16580 \$ 6770
707	1.6m	tractor mount	\$ 9250
770		base unit 540 RPM	\$ 3200
770 N2		2 Row Cornhead attachment	\$ 2000
770 R		1 Row Cornhead	
770 W	1.7m	wide windrow pick up	\$ 3150
717 S	1.5m	Sickle bar	\$ 3100
718		base unit fine chop 1000 RPM	\$ 7890
		540 RPM (electric controls)	\$10410

**4.27.23 Mowers**

**(i) Moller**

**Fieldmaster**

M150	offset orchard	\$1784
M228	M150 with swing arm	\$2298
M225	Pasture topper, reserves	\$2662
M270	Swing over orchard	\$2498
M380	Super cut large pasture topper	\$4392

**Flailmaster**

M60	light rubbish cutter	\$1298
Junior	Med. duty slasher	\$1575
Junior	Med. duty slasher	\$1595
HD60	Heavy duty Scrub Cutter	\$2160
HM60	Haymaster	\$1665

**P.Z.**

135	2 Drum Rotary	\$2160
165	2 Drum Rotary	\$2520
185 HYD2	Drum Rotary	\$3595
210	2 Drum Rotary	\$4190
215	4 Drum Rotary	\$3395

**Kuhn**

GMD 44	4 discs 1.6m	\$3315
GMD 55	5 discs 2.0m	\$4283
GMD 66	6 discs 2.4m	\$4572

**Busatis**

BM	1.5m Double Knife	\$2210
1102kW		
	1.9m	\$2290
	Electric grinder	\$ 350

**Vicon**

CM 165	4 disc 1.6m	\$2995
CM 240	6 disc 2.4m	\$4039

(vi) **New Holland**

442	4 disc	1.6m	\$3315
462	6 disc	2.4m	\$4572

(vii) **Welger**

SM 4	4 disc	1.6m	\$3199
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(viii) **Gallagher**

Multimow	Parks & Verge	1.83m	\$4091
		1.37m	\$3638
Multimow	Heavy Duty	1.83m	no chutes \$4251
		1.83m	back load chute \$4619
		1.83m	safety chute \$4596
		1.37m	no chutes \$3537
		1.37m	back load chute \$3844
		1.37m	safety chute \$3828

(ix) **Taarup**

M204	4 disc	\$3195
M 205	5 disc	\$3765
M 206	6 disc	\$3986

(x) **Turf Care**

Jacobsen 512 Aeroblade (12 h.p.), Petrol	
2 blade tines, 52cm (21") Cutting, 7 optional blades	\$2270

(xi) **Massey Ferguson**

60	1.5m	\$1281
	1.8m	\$1324

## 4.27.24 Ride on Mowers

(i) **Monro**

Cub 3.72 kW (5 h.p.) Manual, 609.6mm (24")	\$1312
Cub 3.72 kW (5 h.p.) Electric, 609.6mm (24")	\$1470
Scout 5.96 kW (8 h.p.) Manual, 685.8mm (27")	\$1709
Scout 5.96 kW (8 h.p.) Electric, 685.8mm (27")	\$1917
Minitractor 8.19 kW (11 h.p.)	\$ 305
Trailing Cutter 5.96 kW (8 h.p.) Manual, 1524mm	\$1456
Trailing Cutter 5.96 kW (8 h.p.) Electric, 1524 mm	\$1808

(ii) **Turftrac**

1900 triplex 11.92 kW (16 h.p.) Electric start, 3 x 660 m 5 blade cutting system	\$7645
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## 4.27.25 Mower Conditioners

(i) **Vicon**

OM 240		\$8700
KM 240	6 disc	\$10300

(ii) **New Holland**

Haybine 477	with hydraulic ram 2.1m	\$6500
Haybine 479	with hydraulic ram 2.7m	\$8800
Haybine 495	with Rolareel 3.7m	\$11870

(iii) **Hesston**

1014	Hydro-swing pull type 2.8m with Crop Divider kit	\$12600
1090	3 pt. Linkage pull type 2.8m with Crop divider kit	\$ 9620
1180	Pull-type 2.4m with Crop divider kit	\$ 7430
PT7	Pull-type 2.2m with Crop divider kit	\$ 5400
6400	Self propelled with hay auger front and conditioner	\$26500

(iv) **Taarup**

305	2.1 m	\$ 7217
307	2.7 m	\$10850

(v) **Kuhn**

FC44		\$ 5756
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#### 4.27.26 Hay Conditioners

(i) **Kuhn**

GRS 21	Gyrotedder	\$2300
GF 25	Gyrotedder	\$3855
GF 452	Gyrotedder	\$3205

#### 4.27.27 Hay Rakes

(i) **Bamford**

R2	Rake	\$2596
RG2	Rake	\$2596
R2	7 Reel Rake	\$2780
RG2	7 Reel Rake	\$2780

(ii) **Kuhn**

GA 280	Gyro rake	\$1976
GA 300	Gyro rake	\$2136
GA 402	Gyro rake	\$2805

(iii) **Vicon**

HKX 620	4 finger wheels, 3 pt linkage	\$1180
H 1020	6 finger wheels, trailing	\$2250
CH 300		\$2498



#### 4.27.28 Balers (Conventional)

##### (i) Massey Ferguson

124		\$10500
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##### (ii) International

*425		\$10100
445		\$11400

##### (iii) New Holland

370	Hayliner	\$10500
377	High Capacity Hayliner	\$12600
386	Hayliner - 400mm x 450mm	\$12890

##### (iv) Welger

AP 52		\$ 9299
AP 61		\$10998
AP 71		\$12199

#### 4.27.29 Big Balers

##### (i) Hesston

5800	Round	\$12590
5500	Round	\$11970
5400	Small Round	\$ 5940
Stak Hand 10		\$ 9800
5540	Round	\$12765
5580	Round	\$15180

##### (ii) International

2401	Big Roll	\$11568
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##### (iii) Howard

Big Baler		\$17300
- gripper kit		\$ 1378

##### (iv) New Holland

840	Round baler	\$12980
846	Round Baler with autowrap	\$15520
851	Round Baler with autowrap	\$18600

##### (v) Welger

RP 150	Round 1.2m wide	\$13600
RP 180	Round 1.5m wide	\$15574

## 4.27.30 Grain Handling Equipment

### (i) Portable Grain Augers

Slade Engineering (N.B. Prices do not include motors)

Double Augers	P.T.O.	Electric	Petrol
200mm diameter			
7.2m	\$1910	\$1730	\$1850
8.4m	\$2010	\$1836	\$1950
9.6m	\$2145	\$1965	\$2079
10.8m	\$2265	\$2085	\$2199
12.2m	\$2385	\$2265	\$2319
13.2m	\$2505	\$2325	\$2439
14.4m	\$2625	\$2445	\$2559

Hydraulic operation available - Electric and \$495.00

175mm diameter			
7.2m	\$1894	\$1704	\$1759
8.4m	\$2014	\$1764	\$1819
9.6m	\$2134	\$1824	\$1879

#### Sweep Augers

150mm diameter			
2.4m	Hand operated		\$229
3.0m	Hand operated		\$250

#### Unloading Augers

50mm diameter			
3.6m			\$214
4.2m	all with detachable power head		\$221
4.8m	discharge guard and motor mounting		\$230

#### 100mm diameter

3.0m		\$296
3.6m		\$316
4.2m		\$343
4.8m		\$372
5.4m		\$402

#### 175mm diameter

3.6m		\$361
4.2m		\$394
4.8m		\$428

#### Rotary Electric Motor Driven Sweep Augers

100mm diameter			
3.0m			\$292
3.6m			\$310
4.0m			\$328

(Rotary Switch not included)

#### Aitchison

		North Island	South Island
9.75 m	PTO - drive	\$1773	\$2023
10.97 m	PTO - drive	\$1995	\$2245
12.1 m	PTO - drive	\$2216	\$2466
13.7 m	PTO - drive	\$2493	\$2743

(ii) **Grain Bins**

**Springston Agricultural Engineering**

3 to 4 tonne, Flat bottom (for tip deck) .....	\$ 680
3 to 5 tonne, V bottom, side unloading (excluding motor) .....	\$1050
5 to 6 tonne, V bottom, centre unloading (excluding motor).....	\$1400

(iii) **Grain dryers**

Moridge Grain dryer \$15966

**Bisley Fans for grain dryer**

41.9 cm	4.16	390 C.P.	\$1932
50.8 cm	5.67	445 C.P.	\$2260
62.2 cm	11.36	490 C.P.	\$2900

(iv) **Feed hoppers**

**Springston Agricultural Engineering**

3 tonne mobile, V-bottom	\$980
5 tonne mobile, V-bottom	\$1120

(v) **Miscellaneous**

Bisley Vertical Mixer 1.00 tonne \$3917

**Bisley Hammermills**

BM2	5.6 kW	\$1645
	7.45 kW	\$1692
BM3	11.2 kW	\$2115
	18.6 kW	\$2505
BM5	37.2 kW	\$3065

## 4.27.31 Hay Handling Equipment

### (i) Hesston

10W Stakmover	\$1500
30 Stakfeeder with Conveyer Extension	\$5500
30 Stakmover	\$3750
5000 Bale Mover	\$ 260

### (ii) Springston Agricultural Engineering

Bale elevator 6 metres long (mobile; petrol or P.T.O. optional)	\$1120
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## 4.27.32 Manure Spreaders

### Springston Agricultural Engineering

Vacuum type complete recirculating 4500 litres	\$2100
3600 litres	\$1750
2250 litres	\$1400

## 4.27.33 Chainsaws

Where chainsaws have variable bar lengths available, price quoted is for smallest bar.

### (i) Dolmar

CT	118cc	76cm bar	\$820
112	51cc	38cm bar	\$459
123	70cc	51cm bar	\$639
114	51cc	38cm bar	\$526.00
117	51cc	38cm bar	\$515.00
119	61 cc	38cm bar	\$628.00
133	85cc	51cm bar	\$679.00
153	110cc	64cm bar	\$759.00

### (ii) Stihl

031AV	48cc	41cm bar	\$520-560
041AV	61cc	51cm bar	\$620-650
056AV	80cc	51cm bar	\$640-660
051AV	90cc	64cm bar	\$719
075AVE	111cc	76cm bar	\$758

### (iii) Tas

ECS-5	36cm bar	\$191
	41cm bar	\$239

<b>(iv) McCulloch</b>		
Mac 110	25cm bar	\$169
Mac 120	31cm bar	\$189
Power Mac 310	36cm bar	\$259
Power Mac 320	41cm bar	\$284
Pro Mac 510	41cm bar	\$329
Pro Mac 610	41cm to 51cm bars	\$430
Pro Mac 650	41cm to 70cm bars	\$445
Pro Mac 750	41cm to 70cm bars	\$479
Pro Mac 850	41cm to 83cm bars	\$574
Pro Mac 1000	70 cm bars	\$629
<b>(v) Homelite</b>		
XL	25 cm bar	\$165
XL2	31 cm bar	\$230
SXL2	36 cm bar	\$270
150AO	31 cm to 41 cm bars	\$340
XL12	31 cm to 50 cm bars	\$390
SXLEZ	31 cm to 50 cm bars	\$390
SXLAO	31 cm to 61 cm bars	\$440
360AO	31 cm to 76 cm bars	\$515
550AO	40 cm to 90 cm bars	\$610
750AO	48 cm to 109 cm bars	\$750
<b>(vi) Solo</b>		
M600	31 cm bar	\$214
M606AV	36 cm to 41 cm bars	\$361
M616AV	36 cm to 45 cm bars	\$483
M650AV	36 cm to 50 cm bars	\$522
M660AV	36 cm to 72 cm bars	\$570

#### 4.27.34 Portable Generators and Welders

<b>(i) McCulloch 'Mite-E-Lite' generators</b> (Briggs and Stratton engines)		
RC 103	220V, 900W, 4.5 Amp	\$545
RC 153	220V, 1350W, 6.8 Amp	\$675
RC 253	220V, 2250W, 11.4 Amp	\$865
BC 153	220V, 1350W, 6.8 Amp	\$435
BC 253	220V, 2250W, 11.4 Amp	\$545
<b>(ii) Tas Electric Generators</b>		
QEG 300		\$279
DEG 600		\$349
REG 800		\$329
LEG 1200		\$429

(iii) **Lincoln Electric**

Lincoln Tractapac - bare shaft unit	\$866
(complete with undercarriage PTO shaft etc - extra)	
Trailer - \$649 (small wheels)	
- \$675 (road wheels)	
Lincoln Weldanpower 150 (petrol)	\$1568
Lincoln Weldanpower 175 (diesel)	\$2540

## 4.27.35 Spray Equipment

(i) **Tanks**

		N.I.	S.I.
'Spraymate' fibreglass reinforced plastic			
SL500	500 litre bare tank	\$225	\$235
SL500-2	with 2 bar hitch frame	\$345	\$355
SL500-3	with 3 pin hitch frame	\$345	\$355
SL200	200 litre bare tank	\$119	\$119
SL200-F	with saddle mount sup- port frame	\$198	\$198
SL1200	1200 litre with tubular steel frame	\$656	\$686

F.M. Winstone medium and high density plastic

Model 500	500 litre tank with 3 pt. linkage frame, line strainer, filling strainer, rubber lid, sight glass, bypass fittings and boom/reel mounts.	\$424
Model 500	500 litre tank as above less suction line strainer and fittings, and filling strainer	\$390
Model 700	750 litre tank with 3 pt. linkage frame filling strainer, 2 Venturi agitators, Venturi refiller, sight glass, 2 emptying taps, mounting facilities for pump, control unit and hose reel	\$979
Model 701 Masotti	750 litre tank as above plus 2 banks of 4 Masotti No. 8 spray guns, IDS 1400 pump, control unit, BYPY drive shaft	\$2710
Model 702 Fan	750 litre tank as above plus 600mm fan P74 pump, control unit, BYPY drive shaft	\$3150
'Sprayrite' (Moller)	polyethelene	
Polytank 500	500 litres freestanding tank with 3 pt. linkage frame	\$345
Mini Tank (less boom)		\$370
		\$980

## (ii) Spray Pumps

F.M. Winstone pump kits

Model 33	Golden Hypro N6400 nylon roller pump W.P. = 1400 kPa; output = 39 litres/minute	\$225
Model 625	Comet P25 double diaphragm pump W.P. = 3000 kPa; output = 23 litres/minute	\$363
Model 648	Comet P48 d.d. pump W.P. = 3000 kPa; output = 51.7 litres/minute	\$446
Model 660	Comet BP 60/20 d.d. pump W.P. = 2000 kPa; output = 58 litres/minute	\$474
Model 668	Comet P68 d.d. pump W.P. = 3000 kPa; output = 69 litres/minute	\$556
Model 6105	Comet BP 105/20 triple diaphragm pump W.P. = 2000 kPa; output = 101 litres/minute	\$572
Model 225	Comet P25 d.d. pump with Comet 5.33:1 reduction gear box and Briggs and Stratton 6 kW petrol motor (4 str.) W.P. = 3000 kPa; output = 23 litres/minute	\$690
Model 248	Comet P48 d.d. pump with Comet 6:1 reduction gearbox and Briggs and Stratton 6 kW petrol motor (4 str.) W.P. = 3000 kPa; output = 52 litres/minute	\$985
Mini Comet	lightweight portable pumping unit W.P. = 1500 kPa; output = 11 litres/minute	
	petrol	\$457
	electric	\$489
R15 Spray Kit	Comet MC15 pump; for attachment to Masport Rotahoe; W.P. = 1500 kPa; output = 11 litres/minute	\$330
'Sprayrite' (bare pump prices shown by *)		
Spartan 600	Double diaphragm pump W.P. = 1400 kPa; output = 32 litres/minute	\$220
	P.T.O. or engine drive available	\$298/\$293
	E.D. unit (includes all extras)	

Defender 25S	Double diaphragm pump W.P. = 1400 kPa; output = 20 litres/minute	\$215.00*
Bertolini 36S	P.T.O. or engine drive available Double Diaphragm pump W.P. = 3420 kPa; output = 36 litres/minute	\$290.00 \$330.00*
Bertolini 55S	P.T.O. or engine drive available E.D. Unit (includes all extras) Double Diaphragm pump W.P. = 3920 kPa; output = 55 litres/minute	\$470.00 \$860.00 \$370.00
Bertolini 85S	P.T.O. or engine drive available Triple diaphragm pump W.P. = 4900 kPa; output = 85 litres/minute	\$480.00 \$470.00 \$785.00
Bertolini 110S	P.T.O. - driven Triple diaphragm pump W.P. = 6370 kPa; output = 110 litres/minute	\$1100.00
Bertolini 140S	P.T.O. or engine drive available Quadruple diaphragm pump W.P. = 6370 kPa; output = 140 litres/minute	\$1300.00
Bertolini 175S	P.T.O. - driven Quadruple diaphragm pump W.P. = 6370 kPa; output = 175 litres/minute	\$1585.00*
Bertolini 67SD	P.T.O. - driven Double diaphragm pump W.P. = 1475 kPa; output = 65 litres/minute	\$295.00*
Bertolini 103SD	P.T.O. - driven Triple diaphragm pump W.P. = kPa; output = 100 litres/minute	\$423.00*
Bertolini 150SD	P.T.O. - driven Triple diaphragm pump W.P. = 1960 kPa; output = 150 litres/minute	\$635.00*



### (iii) Spray booms

#### F.M. Winstone

3m Straight boom, 9 Delavan nozzles, 3m of 13mm plastic hose	\$ 95
6m Articulated boom, 15 Delavan nozzles, 6m of 13mm plastic hose	\$375
10m Articulated boom, 25 Delavan nozzles, 13mm connecting hose	\$480

All booms fitted with LF 1.54 tips as standard

#### 'Sprayrite'

3.5m Straight boom, 9 nozzles, electro-galv. tubing	\$ 71.30
5.5m Articulated boom, 15 nozzles, electro-galv./hot-dip galv. H.D.	\$195.00

### (iv) Hose Reels

F.M. Winstone holds 80m of 13mm hose or 100m of 10mm hose	\$143
'Sprayrite' holds 75m of 13mm hose or 100m of 10mm hose	\$126

### (v) Hoses (H.P.) - price per metre

Kuraray 100m coils; 3 coil bales	
Phoenix 40 m coils	
All others 30m coils	
Outlet hose	
- Kuraray PVC 10mm 2 braid 4250 kPa W.P.	\$2.70
13mm 2 braid 42500 kPa W.P.	\$3.55
- Phoenix Rubber 10mm 'Greystripe' 5 ply 6000 kPa W.P.	\$3.28
13mm 'Greystripe' 5 ply 6000 kPa W.P.	\$4.03
Bypass hose - 13mm Yellow black stripe heavy wall plastic	\$1.16
19mm Yellow black stripe heavy wall plastic	\$1.31
25mm Yellow black stripe heavy wall plastic	\$3.31
Suction hose - 19mm Rubber hose 1400 kPa W.P.	\$9.28
32mm Heliflex PVC spiral reinforced	\$9.40
Rubber Hose	
- Phoenix Rubber 19mm 'Bluestripe' 4 ply 2000 kPa W.P.	\$7.02
25mm 'Bluestripe' 4 ply 1500 kPa W.P.	\$9.11
Connection Hose - Phoenix Rubber 19mm 'Black Garage'	
8 ply 5000 kPa W.P.	\$10.21

### (vi) Spray Guns

Masotti H.P. (2 tips)	\$ 65.00
Masotti Special No. 8	\$330.00
Maxi Gun H.P. (3 tips)	\$ 85.00
Mini Gun H.P.	\$ 51.00
Lancer Gun M.P.	\$ 65.00

Gun Set H.P.	\$110.00
Winstone Spray Pistol H.P. (3 tips)	\$ 39.00
Winstone 'Shorty' Spray Pistol (3 tips)	\$ 39.00
Sprayrite Gun Pistol	\$ 36.00
Spraying Systems Pistol	\$ 52.00
Sprayrite Long Barrelled Pistol	\$ 39.00

#### (vii) Control Units

Winstone MK V	13mm intake 0-2500 kPa pressure guage	\$ 58.00
	13mm intake 0-4000 kPa pressure guage	\$ 58.00
	19mm intake 0-4000 kPa pressure guage	\$ 58.00
Comet BP Series	Control unit with 2m pressure connecting hose 0-4000 kPa glycerine-filled pressure guage	\$ 123.00
Comet AZ Series	4 individually controlled outlets 0-10000 kPa glycerine-filled pressure guage	\$ 148.00
	2 individually controlled outlets (2m H.P. connecting hose \$16 extra)	
Sprayrite	Low pressure C.U.	\$ 75.00
	High pressure C.U.	\$ 75.00

#### (viii) Pressure Guages

0-1000 kPa rear entry	\$16.00
0-1600 kPa rear entry	\$16.00
0-2500 kPa rear entry	\$16.00
0-4000 kPa rear entry	\$16.00
0- 600 kPa bottom entry	\$16.00
0-2500 kPa bottom entry	\$16.00
0-2500 kPa (glycerine)	\$16.00

#### (ix) Strainers

19mm foot strainer 60 mesh Acetyl	\$ 8.20
MOPLN fine mesh linestrainer	\$24.00
MOPLN medium mesh linestrainer	\$24.00
MOPLN coarse mesh linestrainer	\$24.00
MOPLN linestrainer high volume long version	\$30.00
31 mm Nylon foot strainer	\$10.25

### (viii) Nozzles and Tips

Fan tip	L.F. 0.77 - L.F. 15.5	\$1.32
Hollow cone tip	H.C.5	\$2.31
H.S.S. Disc	DC2 - DC6	\$0.50
Core Brass	DC23 - DC56	\$0.50
Off-centre tip		\$3.21

N.B. It is important to discuss the choice of nozzles with your local spray equipment dealer; above prices from Moller (Sprayrite) and F.M. Winstone (Delavan).

Foam Nozzles	- DF Boom 45° or 80° Fan	\$5.00
	- DFA Foam aerial spray/handgun	\$9.00
	- DFOC Foam handgun	\$19.00
	- Foam Tip 20° flat fan	\$5.00

### (ix) Portable Sprayers

'Solo' Knapsack Sprayers		
Hand Operated		\$131.00
accessories- tree spraying extension lance		\$14.00
spray guard		\$10.00
pressure guage and nozzles		\$21.00
pressure valve		\$21.00
Motorized - Junior 35cc		\$398.00
- Port 70cc		\$498.00
accessories- dusting attachment	Junior \$14.00 Port \$24.00	
- flame thrower attachment	Junior \$71.00 Port \$72.00	
- centrifugal pump assembly	Junior \$42.00/Port \$58.00	
- U.L.V. attachment	\$14.00	
- spray lance attachment	\$42.00	
- granular attachment (Junior only)	\$24.00	
Fox Knapsack Sprayer F-230		
with single diaphragm pump, use hydraulic pressure		\$378.00
Tas JKS 37 Knapsack sprayer/duster		\$288.00

### (x) Horticultural Spray Equipment

Trailed P.T.O. - Driven Sprayers		
Cropland 'Cropliner' 2000 litres TU 71 60,000 CMH fan		
AR 1900 pump 191 l.p.m.	-	
AR 1400 pump 140 l.p.m.	\$7404	
AR 110 pump 104 l.p.m.	\$6940	
TU 60 30,000 CMH fan	\$6770	
AR 110 pump 104 l.p.m.		
AR 1400 pump 140 l.p.m.	\$5900	
AR 1900 pump 191 l.p.m.	\$6070	
(less fan)	\$5630	

'Cropliner' Narrow Gauge	700C tank AR85 pump	\$2032
	+ TU60 fan	\$1550
	or + TU71 fan	\$2420

#### Mounted Sprayers

Cropland 'Crop Spray' 500 litres		
	AR 110 pump TU 60 fan 30,000 CMH	\$3605
	AR 110 pump TU 71 fan 60,000 CMH	\$3900

#### Sprayer-metters

AF2 c/w 1900 Litre Tank	\$7,600.00
Solo Knapsack	\$55.90
C.M.W. H.P. Knapsack	\$134.50

### 4.27.36 Horticultural Machinery

- (i) **Hustler Masts Forklift 1360 kg to 2.4m**  
 (Category 'C') rear mounted \$3295  
 front mounted \$3755
- (ii) **Pruners**  
 Hydraulic  
     HFS 12 x 36 \$389  
         24 x 48 \$395  
         36 x 60 \$402  
     H2SA 48 x 85 Trimmer \$598  
     HGS 24 \$456  
 Pneumatic  
     E 12 x 36 \$450  
         18 x 42 \$450  
         24 x 48 \$456  
 Universal Hand Shears \$135  
 Vineyard Pruners  
     V3 without hose \$303
- (iii) **Picking Platforms**  
 Hawke Hydraulic Ladder MK III  
     3 posn. manual swing boom,  
     Kohler engine, Hamilton hydr. motor \$5440  
     picking frame and bucket \$ 170  
 Fruitmaster Platform \$5250
- (iv) **Mechanical Harvesters**  
 Potato Harvester (Viking) \$16000  
 Duo Berrymaster \$40000  
 Blackcurrant Harvester \$20000  
 Raspberry Harvester \$40000

(v) **Mechanical Protection**

Birdscarers:

Exid birscarers c/w clock \$259.50

Frost alarms:

Mini Tiedemann MKII single probe \$247.55

Frost Fighting Equipment

Harvey standard pots (1972) .93

## 4.28 BUILDINGS

### 4.28.1 Dwellings

New Cost varies considerably but on average, \$300 to \$350 per sq. metre.

### 4.28.2 Garages

New Cost varies between \$100 and \$150 per sq. metre.

### 4.28.3 Woolsheds

(i) **Fletcher Brownbuilt Shearing Shed and Covered Yards**

3 bays Woolroom - 3 stand - 5 bays covered yard.

concrete floor - \$22030 (plus erection \$5990) \$28020

wooden floor - \$23977 (plus erection \$5095) \$29072

Woolroom extra bays (grating stands excluded) \$2029

plus erection \$500

complete with grafting board stands etc) \$2659

plus erection \$800

Covered yard extra bays \$1429 (plus erection \$220) \$1649

Extra for netting and oil per bag \$126

(plus erection \$60) \$186

N.B. Erection prices are a guide only as site condition, location, accommodation and other variables have to be considered.

(ii) **Kilkelly Brothers Ltd Woolshed and Yards**

1. Basic Plan - 18m x 9m, 3 stand, concrete floor

31.5m x 18m cover. Erected price \$32500

Extra stand -0.6m added to woolroom \$300

2. Basic Plan - 15m x 9m, 3 stand, concrete floor

31.5m x 12m cover. Erected price \$26000

3. Basic set of yards for No. 1 est

\$4500

No. 2 est

\$3500

## 4.28.4 Haybarns

### (i) Round

	Length	Kitset form	Erected
2 bay	6 metre	\$1125	\$1490
3 bay	9 metre	\$1610	\$2100
4 bay	12 metre	\$2125	\$2750
5 bay	15 metre	\$2635	\$3350

### (ii) Waikato Farm Buildings Implement Shed

3 bay	9m x 7.3m x 3m	\$2490 (erected)
4 bay	12.2m x 7.3m x 3m	\$2977 (erected)

### (iii) Fletcher Brownbuilt Utility Sheds

3 bay (14.4 x 9.3 x 3m high) \$5261 at nearest rail  
(plus \$1360 erection approx)

Additional bays (4.6 x 9.3 m) \$1282 at nearest rail  
(plus \$250 erection approx).

### (iv) Fletcher Brownbuilt Implement Sheds

3 bay (14.4 x 11.4 x 3.3m high) \$5679 at nearest rail  
(plus \$1360 erection approx.)

Additional bays (4.6 x 11.4) \$1376 at nearest rail  
(plus \$250 erection approx.)

### (v) Aabaas Bros Oval Hay Barns

Tunnel Barn	2475 bales (kitset)	\$ 3 541
	5775 bales (kitset)	\$ 7 799
10m Arched	3000 bales (kitset)	\$ 4684
	6000 bales (kitset)	\$ 7990
9m Cabled	2880 bales (kitset)	\$ 5 236
	5700 bales (kitset)	\$ 8 929

## 4.28.5 Glasshouses

### (i) Fletcher Kitset Green houses (Durolite)

Size(m)	Area (sq.m)	Kitset Price Delivered	Price Erected on Prepared site
14.6 x 9.2	133	\$ 9 774	\$11 934
19.5 x 9.2	175	\$12 005	\$14 597
24.4 x 9.2	218	\$14 228	\$16 988
29.3 x 9.2	262	\$16 509	\$19 533
34.2 x 9.2	306	\$18 773	\$21 965

19.5 x 18.3	349	\$21 155	\$25 379
24.4 x 19.3	437	\$24 982	\$29 782
29.3 x 18.3	524	\$28 983	\$34 167
34.2 x 18.3	612	\$32 780	\$38 492
39.0 x 18.3	699	\$36 600	\$43 128
43.9 x 18.3	786	\$40 132	\$47 044
34.2 x 27.4	936	\$46 690	\$54 754
43.9 x 27.4	1204	\$57 508	\$67 616
34.2 x 36.6	1249	\$60 694	\$70 774
39.0 x 36.6	1427	\$67 779	\$79 299
43.8 x 36.6	1605	\$74 581	\$86 677

(ii) “Agrarian” 2.33 metres wide. Range of length:

2.38m = \$650 with glass

3.14m = \$755 with glass

3.93m = \$900 with glass

(iii) “Propagator” 3.8 metres

32 square metres) 3.14 m = \$1000

47.85 square metres) 4.69m = \$1250

(iv) “Lo-Grow” 33 cm high

1.59m x .61 metres wide. \$80 (kitset)

63cm high \$110

\$32.49 per square metre

(v) Tunnel House

6 metres in width

15 metres long (timber hoops) with cover \$1195  
cover only \$259

Can be extended/reduced in 3m module \$195/nodule

Reduction \$160

Cover:

150m (2 yrs) \$111.40 roll (50m) 91¢/square metre

200m (3 yrs) \$153.67 roll (50m) \$1.20/square metre

## 4.28.6 Cool Storage

Coolstores = 2.4m x 3m x 2.4m

Medium temperature 1° - 4°C (18.84 cubic metres)

Insulated panel with plant \$4,300

Freezing = (18.84 cubic metres) \$5,000

Coolpak (hiring)

Berryfruit: 5¢/kilo for first month

(if fruit is soft)

4¢/kilo for first month

(if fruit is frozen)

(3¢/kilo thereafter

Cooltainers 18.5 cubic metres (from New Zealand to  
Melborne) or 14.5 tonne \$2836  
26.4 cubic metres \$3995

#### 4.28.7 Grain Silos

##### (i) American Line Silos

Wheat tonnage capacity	Silo dia. (m)	Wall Height (m)	Price (\$)
22	3.7	2.4	1356
29	3.7	3.25	1491
36	3.7	4.06	1649
36	4.6	2.4	1477
43	3.7	4.9	1807
47	4.6	3.25	1701
58	4.6	4.06	1955
68	4.6	4.9	2182
69	5.5	3.25	2276
84	5.5	4.06	2488
100	5.5	4.9	2827
115	5.5	5.69	3194
131	5.5	6.5	3611
147	5.5	7.3	3997
154	7.3	4.06	3879
182	7.3	4.9	4388
159	6.4	5.69	4158
180	6.4	6.5	4630
201	6.4	7.3	5073
116	6.4	4.06	3304
138	6.4	4.9	3692
210	7.3	5.6	4920
237	7.3	6.5	5453
265	7.3	7.3	6146

##### (ii) Cone based Silos (American Line)

Capacity (tonnes)	price \$
27.1	3263
33.9	3396
40.8	3555
45.4	4083
56.2	4309
67.0	4561
100.5	6138



(iii) **Springston Agricultural Engineering**

Round, flat-bottomed; mounted on skids

20 tonnes	3.5m dia.	2.5m high	\$1800
30 tonnes	3.5m dia.	3.7m high	\$2300
40 tonnes	3.5m dia.	4.9m high	\$2500

V bottom on legs

15 tonnes	\$1800
25 tonnes	\$2300
35 tonnes	\$2500

**4.28.8 Pig Shelters**

Springston Agricultural Engineering

Small	\$120.00
Large	\$135.00

**4.28.9 Dog Kennels**

Aabaas Dog Motels single	\$148.00
double	\$258.00
3 berth	\$368.00
4 berth	\$478.00

**4.28.10 Sheep Yards**

Cyclone Sheep Yards (made in panel form, add 30% for cost of erection.)

Yard for handling 1200 sheep	\$5 191.76
Yard for handling 500 sheep	\$4 510.76
2.4 metre yard gates	\$56.44
1.4 metre yard gates	\$35.90
1.2 metre drafting gate	\$32.27

**4.28.11 Cattle Yards**

Cyclone cattle yards (materials only)

Standard Cattle Gates 1.3m high by 2.1m wide	
– 5 rail	\$87.26
– 6 rail	\$96.46

Yard Fences 2.0 metre panel, 5 rail from \$121.81 per panel  
 Forcing Pen Race and Drafting Gates from \$2188.62.

Dehorning Bail	\$415.90
Lifting arm extra	\$ 17.72

#### 4.28.12 Dairy Sheds

The costs of building dairy sheds vary considerably depending on type of dairy operation, availability of materials and labor, building site (completely new or conversion of existing shed), access to electricity and water, to name but a few factors.

Examples of estimated costs for dairy sheds in 1980/1981 are shown below:

(i) **12 Aside Highline Herringbone -**

Site preparation and tanker track	\$ 600
Building, yards, pipework	\$21500
Electricity	\$ 1150
Milking machines	\$ 7000
Water supply	\$12000
Effluent disposal etc.	\$ 2000
Miscellaneous	\$ 650

Total Cost	\$34100
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Cost per set of cups	\$ 2840
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Performance: 1 man, 60-90 cows per hour

(ii) **20 Aside Highline Herringbone -**

Site preparation and tanker track	\$ 700
Building, yards, pipework	\$30000
Electricity	\$ 1600
Milking Machines	\$12000
Water supply	\$ 1400
Effluent disposal etc.	\$ 2500
Miscellaneous	\$ 1100

Total Cost	\$49300
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Cost per set of cups	\$2465
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Performance: 2 men, 110 - 140 cows per hour

(iii) **22 bail Rotary**

Site preparation and tanker track	\$ 800
Building	\$32200
Electricity	\$ 2500
Milking plant, cup removers, etc	\$14000
Rotary platform	\$ 9000
Water supply	\$2300
Effluent disposal etc.	\$3000
Miscellaneous	\$2000
Total Cost	\$65800
Cost per set of cups	\$2990
Performance: 2 men, 120 - 180 cows per hour	

(iv) **28 bail Rotary**

Site preparation and tanker track	\$ 900
Building	\$38000
Electricity	\$2700
Milking plant, cup removers etc.	\$17000
Rotary platform	\$15000
Water supply	\$2800
Effluent disposal etc	\$3800
Miscellaneous	\$2500
Total Cost	\$82700
Cost per set of cups	\$2953
Performance: 2 men, 160 - 200 cows per hour	

(v) **36 bail Rotary**

Site preparation and tanker track	\$ 1000
Building	\$45000
Electricity	\$ 3000
Milking plant, cup removers, etc	\$21000
Rotary platform	\$20000
Water supply	\$ 3000
Effluent disposal etc.	\$ 4000
Miscellaneous	
Total cost	\$99500
Cost per set of cups	\$ 2763
Performance: 2-3 men, 180 - 250 cows per hour	

### 4.28.13 Building Materials

#### (i) Formwork Plywood

	12mm		17.5mm	
	F15	F25	F15	F25
Creform 2400 x 1200	\$39.80	\$45.50	\$50.56	\$56.30
Plycoform unoilied 2400 x 1200		\$31.83		\$42.08

#### (ii) Construction Plywood

	7.5mm	9mm	12mm	17.5mm
2400 x 1200 DD	\$10.63	\$14.60	\$20.43	\$28.85
2400 x 1200 SFD	\$18.07	\$23.44	\$27.19	\$36.60
2400 x 1200 BD			\$32.89	\$44.30
2400 x 1200 Utility		\$15.03	\$21.03	

#### (iii) Durolite

8½ corrugated Durolite .....	\$11.87 per metre
10½ corrugated Durolite .....	\$13.18 per metre
900mm Flat Durolite.....	\$15.24 per metre
1200mm Flat Durolite.....	\$18.40 per metre

#### (iv) Corrugated Iron

Standard	1500mm	
	1800mm	\$ 4.67
	2100 mm	\$ 5.57
	2400 mm	\$ 6.51
	2700 mm	\$ 7.45
	3000 mm	\$ 8.37
	3000 mm	\$ 9.25
	3300 mm	\$10.24
	3600 mm	\$11.24
Long Run	10½/3 x 26 guage	\$4.29 per metre
	8/3 x 26n guage	\$3.39 per metre

#### (v) Nails

	Steel/case	Steel/kg	Galv./case	Galv./kg
100 x 4	\$46.67	\$2.34	\$63.90	\$3.13
75 x 3.15	\$48.12	\$2.32	\$65.33	\$3.21
55 x 2.5	\$50.84	\$2.45	\$68.61	\$3.37
50 x 2.5	\$50.84	\$2.45	\$68.61	\$3.37
40 x 2.0	\$52.17	\$2.52	\$70.22	\$3.45
30 x 2.0	\$52.17	\$2.52	\$70.22	\$3.45
60 x 3.55] lead	\$68.00	\$3.35		
75 x 3.55] nails	\$68.21	\$3.36		

## 4.29 DRAINAGE

### 4.29.1 Drainage Materials

			Cost per Metre
(i)	Field Tiles	McSkimming 100mm	\$1.07
		150mm	\$1.48
(ii)	Novaflow/Novacoil Pipe		
	Drain Flow (A.H.I.)	65 mm	\$0.92
		110mm	\$1.50
		160mm	\$2.94
(iii)	Backfill shingle (per cubic metre) \$6 to \$7 in the trench. One cubic metre backfills approximately 15 metres of drain.		
(iv)	Sump Pumps		
	Davies N and NC Series, with Float Switch		
	.18 kW 230V 2.54 cm Delivery		\$441
	.18 kW 400V 2.54cm Delivery		\$427
(v)	Marine Sprinklers		
	J 33/3	Mk2 Sprinkler - with sledge mount	\$194.00
	J 35	Quick Release Coupling 5	\$ 19.10
	J 38	Pot Spreader	\$ 45.10
	J 40	5 cm Manure check valve	\$ 40.50

### 4.29.2 Trenching Costs:

Trenching (under average conditions) about \$20.00 to \$25.00 per 20 metres. Cartage Costs are extra.

### 4.29.3 Mole Drainage

Rate of work approximately 2.5 hrs/ha  
Hire of suitable tractor \$31.00 per hour.  
Approximate cost \$77.50 per hectare

### 4.29.4 Well Drilling

Fords Well Drilling Ltd., Southbridge (1979/80)

Cost per metre includes drilling, pipe, 1.5 m of S.S screen, and 8 hours of developing.

Diameter	Cost per metre	Cost of galv. screen	Cost of S.S screen
150mm	\$ 59.06	\$360	\$414
200mm	\$ 88.59	\$408	\$495
250mm	\$ 98.43	\$486	\$596
300mm	\$114.84	\$660	\$891

All screens are 40-slot, wedge-wire design. Stainless screens are more durable than galvanized screens.

If the well needs 'developing' in excess of 8 hours, the charge-out rate is \$30.00/hour.

A standard test for the larger wells costs \$250.

If the well is dry, the farmer pays  $\frac{2}{3}$  the cost and the contractor withdraws the casing.

## 4.30 IRRIGATION

### 4.30.1 Basic Equipment

- (i) Aluminium Pipes & Couplings (Complete, 7.5 m lengths)

Diameter	Price of lengths
50mm	\$ 40.97
75mm	\$ 60.00
100mm	\$ 68.15
125mm	\$109.20
150mm	\$174.53

(ii) **Sprinklers**

From \$12.95 to \$16.20 each.

Naan	213/98 Glass house	\$ 6.50
	233/96 Frost protection	\$13.10
	333/92 General purpose	\$ 8.75

(iii) **Buried Mains** Pipes only. Does not include trenching and laying.

Class B for standard Roll Line, Angle Tow and Hand Shift Systems. Working Pressure 600-690 kPa

Class C for high pressure Travelling Irrigator and Centre Pivotal Systems. Working Pressure 900-1030 kPa

Diameter	Class B	Class C
Fibrolite (Price per metre complete)		
150mm	\$11.78	\$15.43
200mm	\$19.31	\$27.09

PVC Z-Joint (price per metre)

125mm	\$ 6.91	\$ 9.86
150mm	\$ 9.90	\$14.19
200mm	\$15.14	\$21.90

(iv) **Outlets** (cast iron, complete with T-Joint, Valve and hydrant)

150mm x 150mm x 100mm	\$185 each
200mm x 200mm x 100mm	\$200 each

(v) **Pumps**

Pumps for irrigation systems fall into 3 main categories:

Diesel: 4 and 6 cylinder models are available and vary in price from \$7000 - \$9000

Power-take-off: These types of pumps cost in the vicinity of \$1500 – 2500

Electric: The prices for electrically powered pumps range about \$3000

It must be noted that the type and capacity of pump will depend on the scale of the irrigation system.

For information on the pump(s) required for any irrigation system, consult a pump specialist firm, e.g. D.H. Davies & Co, Brown Brothers Engineers, John Burns Engineering, A.M. Bisley & Co, Mono Pumps or Masport-Onga to name but a few.

(vi) **Suction-Delivery Equipment**

The prices for this equipment can only be determined once the system requirements are known. However, as a guide, prices range from \$500, depending on how far the water must be raised from the source and how far it has to travel to the spraylines.

(vii) <b>Controllers (Harvin)</b>	\$
Rain clox RC 7A	308
RC 12B	1743
RC 18B	1976
RC 23B	2116
Internal Pump start	37
Remote Pump start kit	165
Series Controller AG 7	790
MC 4	256
MC 8	398
MC12	508
MC18	925

(viii) **Connectors (Harvin)**

PT - 104	\$12.50 per bag of 10
ST - 103	\$9.50 per bag of 10
PT - S5	\$8.80 per tube

(ix) **Valves**

Harvin:

No. 3 quick coupling	\$27
valve key	\$12
hose swivel 20mm	\$14
No. 5 quick coupling	\$32
quick coupling with athletic top	\$39
valve key	\$21
hose swivel 20mm	\$16
Stopamatic valve	\$35
Gate Valve key	\$ 7
Rainbird:	
Electric remote control (range available)	\$59 - \$215
Hydro rain valves	\$44.60 - \$179
Anticontamination control valve	\$87.00 - \$228
Pressure reducing electric valve	\$114.00 - \$247
manual valve	\$ 89.00 - \$195
Heavy duty electric valve	\$131.00 - \$250
Hydro sense controller plastic - 1 station valve	\$228.00 - \$362
- 5 station valve	\$260.00 - \$394



(x) Rotors (Harvin)

Model 27	\$107	Model 64	\$ 98
47	\$107	81 B	\$197
51	\$113	87	\$224
61	\$ 94	15103 Mini Pour	\$ 23
62	\$ 94	15111 Pop-a-way	\$ 41
63	\$ 98	AT Athletic Top Add	\$ 7

((xi) Spray Heads (Harvin)

171 Pop up	\$20.00
171 Stream Spray Pop up	\$23.00
2200 Flower bubbler	\$ 5.35
2400 Full: square or part circle	\$ 4.50
2400 Strip and three quarter	\$ 5.05
2400 Flat	\$ 5.35
A7 Adapter	\$ 2.50

(xii) Impact Sprinklers (Harvin)

25 AFP	\$36	70 EW	\$61
35 ADJ	\$49	H140	\$18
40 EFCH	\$27	P5 Blackbird	\$15
80 ETNT	\$109	85 ETNT	\$141

(xiii) Irrigators (Soil moisture indicators - Harvin)

15 cm	Model R	\$50	Model RA (automatic)	\$83
30 cm	Model R	\$51	Model RA (automatic)	\$84
45 cm	Model R	\$52	Model RA (automatic)	\$85
60 cm	Model R	\$53	Model RA (automatic)	\$86
90 cm	Model R	\$54	Model RA (automatic)	\$88
120 cm	Model R	\$56	Model RA (automatic)	\$90
150 cm	Model R	\$58		
30cm	Model TG	\$66	Model TGA (automatic)	\$110
45cm	Model TG	\$67	Model TGA (automatic)	\$112

(xiv) Swing Joints (Harvin)

150mm x 25mm	\$9	225mm x 20mm	\$7
200mm x 20mm	\$7	225mm x 25mm	\$9

## 4.30.2 Irrigators

It is important to realize that few irrigation systems can be bought 'off the rack' to perfectly suit all properties. Thus it is unrealistic and unfair to compare prices of the following irrigators directly. The only real comparison can be made when the whole system, of which the irrigators are only a part, is costed out.

(i) **Harvin 'Wade Rain' Hydrostatic Powerroll 400 metre line**  
(All prices ex Factory, Christchurch)

	Pipe diameter		Wheel diameter	
	100mm		125mm	
	145cm	190cm	145cm	190cm
	\$	\$	\$	\$
1 x Hydrostatic mover	2120	2175	2750	2810
1 x End adaptor	40	40	50	50
1 x End plug	40	40	50	50
2 x Stabilisers	110	130	120	140
	<u>2310</u>	<u>2385</u>	<u>2970</u>	<u>3050</u>
2 x 6m T/T lengths (complete)	300	300	280	280
32 x 12m T/T lengths (complete)	8580	9075	8960	9600
	<u>11190</u>	<u>11760</u>	<u>12210</u>	<u>12930</u>

Torque Tube Lengths	Per 12 metre length	
	100mm	125mm
Complete with FWTD Coupler, Drain valve and Ring lock	\$180	\$250
As above plus 145cm wheel	\$245	\$315
As above plus sprinkler	\$265	\$335
As above but with 190cm wheel	\$280	\$350

**Miscellaneous**

In-line Powerroll reducer	12.5cm (F) x 10cm (M)	\$50
	12.5cm (M) x 10cm (F)	\$50
Centre Feed Male x Female (For 48 series)	10cm M x F	\$80
	12.5cm M x F	\$90
Hub size 10cm wheel diameter	145cm	\$70
	190cm	\$95
Hub size 12.5cm wheel diameter	145cm	\$70
	190cm	\$95
Fibreglass engine cover for 70 Series Mover		\$110
Riding stand for 70 Series Mover		\$ 60

(ii) **Harvin 'Omme' Travelling Irrigator**

Retail price (complete): \$21 000 - \$24 000

Irrigating width: 120 metres (arms 25m)

Irrigating run: 660 metres (unit carries 300m x 114mm hose)

Double head sprinklers: 2.6 - 4.6 kPa

Output: 81 m<sup>3</sup>/hr

Three travel speeds; water powered self-propulsion system

(iii) **Briggs 'Roto Rainer'**

Model	75	125	175	250
Price(\$)	19 000	20 000	27 000	28 000
Hose Length (m)	100	200	200	200
Hose Int. Dia. (mm)	76	103/90	112	125
Drum Rope (m)	220	440	440	440
Boom Length (m)	30	43/30	68	68
Irrigating width (m)	60	75/60	100	100
Area Covered/Run (ha)	1.2	3/2.4	4	4

Optimum Working Pressure (all models) 280 kPa

(iv) **Andrews & Beaven 'Water Winch'**

These irrigators are driven by an Ag-Rain radial in-flow turbine. A 3 speed transmission combined with variable speed control enables the unit to move at many different speeds as required. All 3 models operate at between 480-620 kPa in normal conditions but will operate at 345 kPa.

No filtration equipment is required and the 'Water Winch' can handle water containing solids up to 6.4mm in size.

All models are fitted with Nelson 'Big Gun' sprinklers. Applications of between 6.3mm and 178mm per hour are possible by varying the travel speed.

Model	T30	T35	T45
Delivery range (LPM)	445-1365	1725-2070	2760-4140
Hose Size (mm)	76.2/88.9	88.9/101.6	101.6/114.3/127.0
Hose Lengths (m)	100/150/200	200	200
Price (depending on accessories) \$	12 122-14880	16 895-18606	18 831-19985

(v) **Andrews & Beaven 'Higromatic Centre-Pivot'**

Basic unit – 60m long with end gun \$17 500 approx.

Additional spans – \$5000 per tower

– \$80.40 per metre

The area covered by these irrigators can vary from 3ha per shift to almost 200ha, depending on length of the line.

The unit is water-driven, and can handle undulating country quite easily.

(vi) Waterwise Irrigation Ltd.

Waterwise Irrigation System \$29 000

Specifications:	Maximum wetted width	203 m
	Overall boom width	143 m
	Weight (empty)	5.5 tonnes
	(water filled)	6.5 tonnes

(vii) Trickle Irrigation

L.D. Tubing		Cut lengths	\$	¢
20mm	200m	0.60m	53.75	
25mm	200m	0.76m	68.75	
32mm	200m	0.93m	83.75	
40mm	200m	1.08m	97.50	
50mm	150m	1.39m	125.00	

Lateral Tubing

13mm	300m	0.20m	17.50
	100m	0.20m	18.00
15mm	300m	0.23m	20.00
	100m	0.23m	20.50

Southern Cross

Microjets - full circle	\$21.78 per hundred
- half circle	\$21.78 per hundred
Micromist jets	\$32.04 per hundred
Rotating X Series	\$0.42 each
Line Filter 12.5mm	\$3.24 each
19.0mm	\$3.32 each

## 4.31 FARM AIDS

### (i) Weighing Platforms

Hayes Cattle Weighing platform	\$ 556.35
with 3 point linkage	\$ 680.30
Sheep Weighing platform (Squeeze)	\$ 505.39
Sheep/Pig Weighing platform (with crate)	\$ 521.99
Donalds Sheep and Pig Hydraulic weighing platform	\$ 510.00
Cattle Weighing Platform 1000 kg	\$ 630.00
1500 kg	\$ 725.00
3 point linkages for above – removable	P.O.A.
– forklift	P.O.A.
Donalds Grain weigher 120cm x 66 cm	\$ 655.00
Fleece weigher	\$ 160.00

### (ii) Animal Crushes

Donalds Squeeze Cattle Crush (with sliding gate and walk-through head bail)	\$1450.00
Sliding Gate	\$ 155.00
Head Bail Automatic Walkthrough	\$ 455.00
Head Bail Gate Type	\$ 250.00
Calf Handler	\$ 380.00
Hayes Tipping Cattle Crush and Table	\$1825.16
Walkthrough Cattle Head Bail	\$ 288.68
Squeeze Cattle Crush Head Bail	\$ 288.68
Squeeze Cattle Crush with floor (no head bail)	\$ 950.92
Squeeze Cattle Crush with Head Bail (no floor)	\$1156.77
Squeeze Cattle Crush with Head Bail and floor	\$1222.27
Squeeze Cattle Crush with Head Bail, Floor and Rear Operating Attachment	\$1291.74
Sliding Cattle Gates	\$ 183.33

### (iii) Loading Ramps

Donalds sheep Loading Ramps	
40 cm wide, 4.8m long	\$ 720.00
50 cm wide, 6.1m long	\$ 795.00
Springston Agri. Eng. Sheep Loading Ramps	
6.1m long mobile height adjustable	\$820.00
6.1m long stationary height adjustable	\$500.00

### (iv) Sheep Cradles and Chutes

'Roydon' canvas Sheep Cradle	\$ 34.00
S.J. Gallagher Lamb Tailing Chute	\$163.00
Hayes 'Stevlyon' Single Lamb Cradle	\$ 53.16
Multilamb Cradle (4)	\$301.00
Hageron Double Docking Cradles	\$ 37.50

(v) **Miscellaneous**

Johnstone Portable Deer Pen (including metal gate, trip mechanism and netting)	\$400.00
Hayes Cow Lifter	\$ 66.23
Bell Booth Hip - Lifter	\$ 54.70
Wasp Shepherd's Crook	\$ 7.45
Wooden Shepherd's Crook	\$ 7.95
Sav - a - Back Sheeploder (for utility trucks)	
4 sides, 2 gates	\$230
5 sides, 4 gates	\$300
5 sides, 5 gates, centre partition	\$340
Hayes Pulley Blocks - 50mm single, 70kg	\$ 6.37
50mm double, 136 kg	\$ 8.20
75mm single, 114kg	\$28.33
75mm double, 275kg	\$41.56
75mm triple, 430kg	\$48.75
100mm single, 160kg	\$28.83
100mm double, 410kg	\$45.94
100mm triple, 635kg	\$61.63
Hayes Self locking Blocks 230kg (with 18m rope)	\$46.92
Light Blocks 50mm 136kg (with 12m rope)	\$22.38
Hayes Snig Chains 10mm - 16mm with Slip or Grab Hooks and with/without swivel	\$41.84-\$105.78
Hayes Dipping Crutch	\$ 10.48
Hayes Collapsible Sheep feeder	\$208.40
Hayes Tractor Forklift	\$138.61
Hayes Lamb Tailing Iron	\$ 5.47
Hayes Taper Lock Hitchpin	\$3.70-\$7.36
Hayes Standard Type Hitch pin	\$3.96-\$7.43
Hayes Scrub Puller	\$ 33.29
Bay Lambing Instrument	\$ 3.45
Bale Hook - wool	\$ 5.88
Bale Hook - Bent Hook	\$ 6.40
Bag Hooks - narrow and wide	\$ 5.82
Animal Weight Bands	\$ 0.52
Sack Barrow	\$ 51.25
Springston Ag. Eng. 10 bail Calf feeder	\$360.00
Varteg Portable Saw mill	from \$6700 complete
Batten Mill	from \$4800 complete
New World Products Grader blades	
Standard	\$ 585
Big Ed (heavy duty)	\$1060

Wellsford Offal Cooker (oil fired)	\$105.00
Ace 63 litre boiler pail	\$230.00
200 litre boiler pail	\$460.00
Secateurs: Felco No. 2	\$18.90
Pradine	\$21.95
ARS 120B (super sharp precision blade)	\$10.93
Manual Pipe Bender	\$120
Mate Post hole digger 85cc. Two stroke powerhead	\$398.85
100cc. Two stroke powerhead	\$455.60
Full range of augers and accessories available	
Powerhead fits aqua-drilling kit and horizontal drilling platform.	
Fischbein Bag sewing machine.	\$895
Ladders:	
1.8m (steel)	\$70.90
2.1 m (steel)	\$75.60
2.4m (steel)	\$96.95

## 4.32 PROTECTIVE EQUIPMENT AND CLOTHING

Aprons - Hay	\$25.20
- Dairy shed (with pocket)	\$13.48
- Fencing	\$17.20
Gloves - Rubber	\$ 6.00
Hay, (Leather)	\$ 9.00
Goggles - 'Gardwell'	\$ 5.50
- 'North'	\$ 5.75
Ear muffs -	\$19.40
Dust guard Masks	\$ 3.50
filler (8 per pack)	\$ 5.04
Respirators - 'Agriculture' Single Filter	\$16.95
Double Filter	\$21.20
Hood	\$75.00
Filters (6 pack)	\$ 3.10
- 'North'	\$18.45
Overalls - Zip comb. Size 3 - 8	\$23.00
9 - 10	\$27.00
- Bib and brace	\$15.00
- Disposable	\$ 8.45
Boots - Steel cap	\$42.00 pr.
- Plain cap	\$40.00 pr.
Gumboots - Marathon Knee	\$35.45 pr.
- Redband Short	\$25.45 pr.
Shearers Moccasins (leather)	\$18.50
Parkas - Oilskin	\$28.00
- P.V.C. - coated \$ 31.00	\$34.22
Swandri Zip front jacket	\$55.00
Bushshirt	\$48.00
Leggings - Oilskin	\$17.00
- P.V.C. - coated	\$18.50
Welding Masks - Spectacles	\$15 - \$20
- Helmet	\$25 - \$30
Mask, gloves, overalls, goggles	\$43.00
Picking aprons: Coppins	\$23.00
Scott Williams small	\$14.00
large	\$18.50
Picking bags: Coppins	
Scott Williams small	\$17.70
large	\$21.85



## 4.33 PACKAGING MATERIALS

### 4.33.1 Horticultural packaging

	\$	¢
Apple Bags - poly with holes	per thousand	
Printed: 5 kg	52.00	
10kg	93.72	
Plain: 5 kg	42.71	
10 kg	73.62	
Cellophane: 250 x 250 pkt plain	41.76	
300 x 400 pkt plain	61.60	
Containers - Berry		
	\$	¢
	per thousand	
L.M. Strawberry tray with 2 dividers	421.81	
Export Strawberry tray	754.06	
3 kg bulk berry	141.99	
Raspberry pack 6lbs	241.00	
20 lb gate sale box (white)	314.00	
5 lb gate sale box (white)	151.00	
4.5 kg Tomato or cucumber box and full liners	394.00	
	\$	¢
Punnets	per thousand	
802 No. 50	44.00	
1202 No. 75	46.80	
1.5 kg light	108.00	
1.5 kg heavy	162.40	

## 4.34 HORTICULTURAL LEVIES

**Berryfruit:**  $\frac{1}{16}$  - 1 acre = \$44.00

\$11.00 for every further acre until a \$200 upper limit is reached.

**Raspberries:** North Island raspberries under Berryfed. South Island raspberries divided into four regions, each with own levy system.

Canterbury: Levy of \$30.00 per hectare, if a producer. To be a producer, must have a tenth of a hectare.

**Stonefruit:** 5¢ per container of any size taken off at the market by Stone Fruit Advertising Committee.

**Pip Fruit:** APMB

**Citrus Fruit:** \$5 per hectare voluntary levy for promotion.

**Flowers:** Subscription to me Flower Growers Association of:

\$ 67 (0-2 employees)

\$100 (3 employees)

\$200 (4-5 employees)

\$330 (6 employees)

Any producer may pay only \$34.00 in the first year of production.

**Kiwifruit:** 10¢ per tray.

**Subtropical:** \$5 per hectare voluntary levy for promotion.

**Vegetables:** Registration fee to Vegetable Federation.

Fresh vegetables: 5% of purchasing price

Processed vegetables: .5625% of price at which vegetables are purchased for processing or canning.

**Potato:** \$8 per hectare. No levy on early crop

**Orchards:** \$20 per hectare to Fruit Federation for orchards over an acre.

**Nursery Registration:** \$10 per nursery

**Auction Rates:**

Flowers: 15%

Fruit: 10%

Vegetables: 10%

## 4.35 BEES

New hives \$100 (value changes with season)

Second-hand hive with bees \$100 (value changes with season)

(Hive made up of floorboard, lid and queen excluder, plus 4 brood chambers.

Queen \$5 - 7 (varies with time of year)

Protective clothing (veil, smoker, gloves) \$50

Recommended hiring rates \$15.00 - \$45.00 per shift

Returns 90¢ - \$1.07 per kilo.

**SECTION 5**  
**GROSS MARGINS**



## 5. GROSS MARGINS

### 5.1 GROSS MARGIN ANALYSIS – A CRITICAL EVALUATION

*(Prepared by G. Tate, December 1979)*

#### 5.1.1 Introduction

The farm manager is frequently faced with selecting the most appropriate production possibility from amongst several alternatives. If the alternatives or adjustments to be considered involve no significant changes in the fixed cost structure, then some form of partial budgeting can give a satisfactory guide to correct decision. Partial budgeting involves giving consideration only to those cost or income items that are directly affected by the proposed alternatives. Where the proposed change does not involve altering the requirements for a particular resource (e.g. labour), then the costs related to this resource may be regarded as fixed and thus excluded from the analysis without affecting its validity. A partial budget is merely a simplified whole farm budget in which certain fixed considerations are ignored.

The use of partial budgeting has been extended in use by the development of gross margins analysis. This system involves only the consideration of the gross contribution made by a particular enterprise in excess of the additional variable costs necessary to operate it. It assumes complete linearity, that is that each additional unit of production is worth as much as and costs as much as each preceding unit. It also assumes that the enterprise being assessed can be technically and financially isolated from other activities, and thus considered independently.

A knowledge of the gross margins of possible enterprises on the farm is a valuable guide for farmers and their advisers when making decisions on the best combination to adopt. Unfortunately, because of the mechanical and conceptual ease of this method of analysis, there has been a growing tendency for inappropriate and misleading application. The failure to appreciate the limitations of the technique can lead to faulty decision making. In a simple problem, such as the choice between growing Kopara wheat and Arawa wheat in a particular paddock, the use of gross margins analysis gives a quick and reliable answer. The only considerations are the likely yield and price for each variety together with the additional costs of harvesting where the yield differs. Other aspects such as possible marketing difficulties with Arawa can be considered outside the gross

margin framework. Even in this simple example however, and as indeed with any other method of analysis, the reliability with which the critical parameters may be assessed is of great significance to the value of the answer obtained. The critical measures in most considerations are the yield and the price obtained for the product. In general, far too much attention is paid to getting the last detail of cost correct while sweeping a broad brush over the really significant parameters of yield and price.

It is well to be aware that farmers' performance figures are not always reliably recorded and rarely include disaster years. This often means that average yields quoted are the average performance of good years not the average of all years. The significance of the last few kilograms of yields to the profitability of an enterprise is generally appreciated. Any discrepancy in this respect is likely to lead to significant errors in the choice of the most profitable alternative. Where a farmer has a well prepared set of farm accounts extending over several seasons, the extraction of performance figures from these is likely to be more reliable than relying on undocumented opinion.

The effect of not accurately establishing yield performance can be illustrated by the hypothetical example of a Canterbury light land farm where severe drought occurs one year in five, resulting in no harvest.

Wheat may yield an average of 3.5 tonnes per hectare over the four good years, but in the fifth dry season nothing. A gross margin analysis calculated on the 3.5 tonnes yield might show a return of about \$350 per hectare. However, on the true crop mean yield over the five years of 2.8 tonnes per hectare the gross margin would be reduced to about \$280 per hectare.

At all times when considering an individual farm situation, it is the performance on that farm that is relevant, not the district average or some standard obtained from elsewhere. This means that the farm adviser constructing an alternative management policy on two similar farms may well have a differing gross margin for the same crop based on the individual farmer's past experiences in the area.

Among the problems that can arise with the use of gross margins analysis, the following have all been observed by the writer and are provided here to illustrate the dangers of adopting an over-simplified approach to the consideration of farm management alternatives.

### 5.1.2 Choice of the Limiting Resource

Gross margins are customarily expressed in terms of returns per unit of land area or per head of livestock. In many farm management decisions, maximisation of returns to capital may be of greater significance. Occasionally labour is a critical constraint and maximisation of returns to this resource is the farm manager's goal. Perhaps the best known example of conflict between returns to land and to capital lies in a consideration between the alternative enterprise of cattle or sheep.

For the purpose of illustration let us assume that the gross margin per stock unit for a ewe flock is \$20. At 15 ewes per hectare the gross margin per hectare would be \$300. For a cattle policy, buying in weaners and selling prime stock, let us assume a gross margin per stock unit of \$26, or at 15 stock units per hectare \$390. On this basis of gross margin per hectare cattle look more profitable by \$90 per hectare. (\$390 compared with \$300).

For many farmers however, capital or access to it will be the most critical constraint. If a farmer cannot get more capital then looking at a gross margin purely in terms of feed utilisation can give a completely false picture of the most desirable alternative.

Let us assume that a stock unit in sheep costs \$25 and a stock unit in cattle costs \$50 (if we assume a weaner steer being the equivalent of 3 ewes this values the weaner at about \$150 per head.) With 15 stock units per hectare we find the following position:

Cattle	Gross margin per hectare	=	\$390
	Livestock capital per hectare		\$750
	i.e. a 52% return to livestock capital		
Sheep	Gross margin per hectare	=	\$300
	Livestock capital per hectare		\$375
	i.e. a 109% return to livestock capital		

Recognising capital is the limiting resource we should conduct our gross margins analysis to establish relative returns to this factor, i.e. to establish the relative gross margin per \$1 invested.

In the above example we find the following:-

- Cattle \$750 invested returns \$390  
i.e. a gross margin return of 52 cents per \$1 invested.
- Sheep \$375 invested returns \$300  
i.e. a gross margin return of \$1.09 per \$1 invested.

The above illustrates the necessity to decide on any farm what the critical scarce resource is. If the farmer wishes to maximise his return to feed grown and can obtain additional capital cheaply then the absolute return from cattle is going to be higher than for sheep. For example –

	Cattle	Sheep
Gross margin per hectare	\$390	\$300
Less interest at 10% on capital		
Invested in livestock - approximately	\$ 75	\$ 37
Residual margin per hectare	\$315	\$263

If capital is available at 10% then the farmer on a 500 hectare property with the above figures is likely to be better off by \$26000 by running cattle. In the above example the cost of capital would have to be greater than 33% before the residual margin per hectare would favour investment in sheep rather than cattle.

If our farmer has unlimited surplus grass, but only a thousand dollars of capital available to buy livestock then, in the above example, his return to the scarce resource is going to be \$1090 if he uses the capital to buy sheep but only \$520 if he used his capital to buy cattle.

### 5.1.3 Selecting the Correct Rate of Substitution

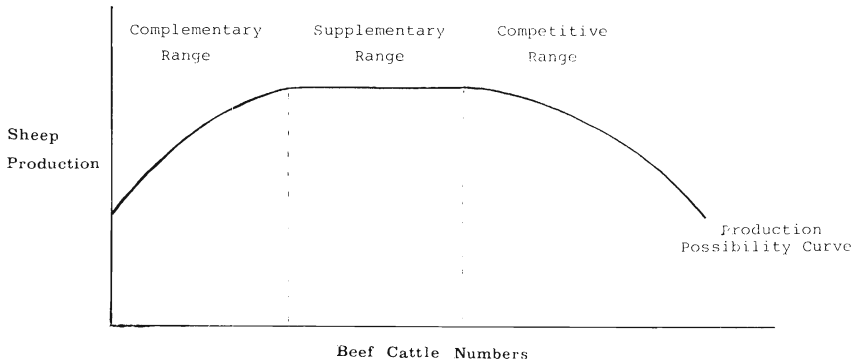
In comparing alternative livestock practices on a gross margin basis, the rate of substitution of one animal for another is critical.

On tussock country the proposal to replace some sheep by cattle may require an entirely different rate of substitution than would be the case for a similar proposal relating to a prime lamb farm. For example, on a tussock block at present carrying sheep it may well be that the replacement of some sheep with cattle will initially give a complementary effect resulting not in a substitution but in an improvement in production by the sheep carried as well as additional production by cattle. As total stocking rate is increased there may be reached the stage of fixed production by sheep, but some addition to total production



by the extra cattle, i.e. a supplementary effect. This may be due to cattle eating different plants to the sheep.

It may only be at a third or higher stocking rate that the competitive effect between sheep and cattle comes into play and any rate of substitution for gross margin analysis is valid. On a prime lamb farm, cattle and sheep will probably be directly competitive from the outset.



A further example where the correct rate of substitution is critical to the problem to be analysed could be seen in considering two alternative enterprises such as the buying of ewe lambs for sale as two tooth ewes and the running of a conventional breeding flock. Common practice is to use the accepted rate of substitution of one hogget being equal to 0.6 breeding ewes. In this example however, there are really three periods of the year to be taken into account when considering the substitution rate in respect to feed supply. Over the winter the hogget must be fed for growth, the ewe requires only maintenance. It may well be that at this period of the year one hogget directly substitutes for one ewe. In spring the breeding ewe with a lamb at foot has a full productive requirement, the hogget has only to maintain itself with some growth. In spring the substitution rate of one ewe for two hoggets may well be applicable. Over the summer season, if good two tooth ewes are to be produced, the hogget must be well fed. The ewe at this time is back to maintenance. One could suggest that over the summer period one ewe may be equal to 0.75 hoggets.

Gross margin analysis for such a problem would require the definition of the period of feed limitation on a particular property and the use then of the appropriate substitution rate. Again it is a matter of accurately defining the scarce resource, i.e. feed, at a particular time of the year, and using the

substitution rate appropriate to that time of the year. Because the above stock policy change is likely to have quite complex effects on farm operation, gross margins analysis is unlikely to yield a satisfactory comparison. Partial or full comparative budgeting would be better methods of comparing the two systems.

Gross margins analysis is sometimes used to compare the returns from a paddock used in growing crop or in carrying livestock. The correct substitution rate to be used in deciding the sheep carrying is not the overall farm position, but the contribution that that particular paddock will make to stock carrying in the feed pinch period, i.e. the time of maximum constraint. For example, if the time of the year which limits increases in carrying capacity is the months of August and September, the correct substitution rate to impose on sheep versus crop is the potential carrying capacity of that paddock in those two months.

It could well be that a farm with an overall carrying capacity of twelve ewes per hectare may be in the position where in August each grass paddock carries 17 ewes. Seventeen ewes then is the substitution rate to be used in comparing the two enterprises, not twelve.

**5.1.4    Complementarity and Supplementarity  
          of Operations**

Complementary and supplementary relationships are important in planning the most profitable programme in mixed arable farming. Because many enterprises require land for widely differing periods of time, simple gross margin analysis may lead to serious errors. For example, a comparison of gross margins on a property farmed with the following rotation could be made:

Old pasture – kale seed – wheat – specialist white  
clover – wheat – peas – new grass – grass seed – white  
clover seed – grazing.

The gross margins for each crop might be:

	Gross Revenue per hectare	Direct Costs per hectare	Gross Margin per hectare
Kale seed	\$1000	\$300	\$700
Wheat	\$ 500	\$150	\$350
White Clover Specialist	\$ 600	\$250	\$350
White Clover Pasture	\$ 300	\$200	\$100
Peas	\$ 500	\$350	\$150
Ryegrass Seed	\$ 600	\$300	\$300
Grazing ewes	--	--	\$285

Looking simply at the calculated gross margins one would say that most of the farm should be in kale seed. The true position however is not so clear-cut. While over a 10 year period the gross margin for kale could be justified, the price and the yields are extremely variable. Interseasonal variation and risk are very high with this crop. A farmer with all his farm in kale might well go bankrupt waiting for the correct combination of yield and price to give him that bumper year that over a long term gives such a high average gross margin. In addition kale occupies the ground over the period from December to the succeeding January. Because nothing effective can be done with the land before the following crop of wheat is sown in June, land is really tied up for 18 months and the gross margin for the crop, as expressed above, makes no allowance for this time period difference.

The specialist white clover permits the carrying of say, five ewes per hectare from May to November, increasing profitability by about \$50 per hectare. The increased nitrogen status of the soil following the white clover crop will also increase the subsequent wheat yield. The white clover in pasture permits the carrying of 15 ewes from February to November, increasing profitability by \$200 per hectare. The ryegrass permits ewe grazing from May to October producing an additional \$120 per hectare of gross margin. The peas boost the subsequent yield of ryegrass by 100 kilograms per hectare. Therefore an additional \$30 per hectare profit is earned from the ryegrass crop, as a result of following peas in the rotation.

Consideration of each enterprise merely on a gross margin basis ignoring the effects of the length of time of land use, availability of stock grazing, carry-over of fertility effect and labour requirement can lead to unsound decision making.

With mixed arable farming it is possible to establish the revenue earning expectations of the whole rotation over its time period. This may then be compared on a yearly basis with the revenue earning capacity of alternative rotations. Consider for example any rotation 'A', which we assume yields a total gross margin return of \$1200 over its six-year time period. Consider also rotation B, which yields a gross margin return of \$1440 over its eight-year time period. Clearly, when the total revenue earned is divided by the number of years involved, rotation A returning \$200 per annum would appear more profitable than rotation B returning \$180 per annum.

By comparing the return from the total rotation, allowance can be made for complementary and supplementary effects. In this

way gross margins analysis can provide a guide to the decision-maker. Unfortunately there are usually many factors in comparing alternative systems that cannot adequately be considered in gross margin analysis. A more detailed technique, such as comparative budgeting is usually advisable in these circumstances.

### **5.1.5 The Allocation between the Variable and Fixed Costs**

By definition, the gross margin is the value of production minus the variable (or direct) costs associated with the enterprise. These variable costs are those which increase or decrease proportionately to changes in the scale of the enterprise's production. Such things as veterinary fees or animal health remedies are typical variable costs in animal production.

The fixed costs are those that will stay the same no matter what the pattern of production – for example rates, insurances, accounting fees. However, this raises some problems because in one sense all costs are variable – land and equipment can be bought and sold or labour hired and fired.

Very few farm operations can be reliably considered as individual processes. For example, in a mixed livestock cropping economy, typical conceptual problems that can arise in preparing gross margin analysis between enterprises might be –

- (i) To which enterprise should the cost of new grass establishment be charged – to the cropping because it is necessary to restore structure or fertility, or to the livestock that are going to eat it?
- (ii) Should the cost of fencing maintenance be a charge against livestock?
- (iii) What is the cost of a fallow and where should it be charged?

The difficulty in resolving these sorts of problems reduces the reliance that can be placed on gross margins analysis. The tendency to disregard side effects or to ignore the overall effect of a management change on the property's fixed costs can result in illogical decision making.

### **5.1.6 Summary**

Used for marginal analysis and clearly defined situations in which the results can be interpreted with a good deal of common sense, gross margins analysis provides a quick, easy

means to assist in evaluating alternatives. A knowledge of the gross margins of possible enterprises on the farm is an extremely valuable guide for farmers and their advisers when making decisions on the best combination of enterprises.

Where problems are complex, or involve considerations embracing interaction between several enterprises, then the preparation of alternative budgets will give a more reliable guide to the decision-maker. Whatever the technique of analysis employed, the conclusion will only be as accurate as the initial data on which it was based. The successful application of the analysis will depend on the skill of the farmer or his adviser in recognising the limitation of the technique employed.

## 5.2 GROSS MARGINS

### 5.2.1 Introduction *(Prepared by B.J.P. Ryde, December 1980)*

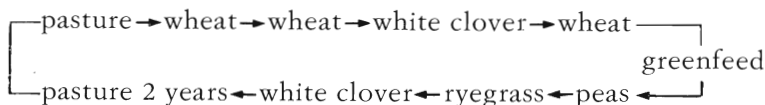
Farmers with a range of alternative crops and stocking systems have to choose which crops and stock systems are the most suitable for their situation. A series of production plans and budgets take a lot of time to show which is likely to be the most profitable plan.

An alternative approach is to first work out the profitability of each crop and system that can be undertaken on the farm. Profitability of each enterprise may be measured in terms of a Gross Margin, the difference between Gross Revenue and Gross Costs. Gross Margins are short-cut methods because they ignore fixed costs. These are taken into account later when a farm plan is budgeted, and income and costs for the whole farm are estimated.

When using the G.M. approach to determine a better farm plan, first list the alternative enterprises and estimate Gross Margins for each. Make sure that the levels of production are relative to each other. Then draw up various rotations taking into account the farmer's preferences and any constraints influenced by soils, climate, capital, etc. The Gross Margin for each enterprise in the rotation (i.e. both crops and stock) will be added together and then averaged per hectare per year. The rotation having the highest G.M. can then be tested by drawing up the whole farm budget to confirm it is a better farm plan.

## 5.2.2 Examples of Crop and Small Seeds Gross Margins 1981

The rotation used is an example of land use possible on medium soils.



i.e. a 9 year rotation.

### (i) 1st Wheat Crop (Kopara ex pasture):

#### Programme:

#### Cultivation:

The paddock is disced twice in March, ploughed in April, heavy harrowed, grubbed and heavy harrowed in May, drilled in late May along with 125 kg/ha of superphosphate.

#### Weed and Pest Control:

The crop is sprayed after 2 leaf stage but before third joint is detectable in wheat crop, for the control of various weeds and wild oats.

#### Harvesting:

The crop is headed in January using own machinery, stored in on-farm bulk silos until August. A firebreak is ploughed after the crop is harvested and the stubble is raked up and burned in late January.

#### Direct Costs (per hectare):

Cultivation: 5 hrs/ha at \$7.00/hr	
(excl. depreciation)	\$35.00
Seed: 100 kg/ha treated seeds at \$318.00/tonne	
fertilizer on farm	\$31.80
Fertilizer: 125 kg/ha super phosphate at \$102.60/tonne on farm	\$12.80
Weed Control: M.C.P.A. at 3 litres/ha at \$5.00/litre plus ¼ hr/ha	
spraying at ¼ ha/hr at \$7.00 hr	
Wild oat spray 5 litre/ha at \$10.00/litre	69.60
spraying at ¼ ha/hr at \$7.00/hr.	
Heading: ¼ hr/ha at \$14.00/hr	
(excl. depreciation)	\$10.50
Cartage: from field to silos at \$2.00/ha	\$2.00

Raking and Ploughing Firebreak:	
\$7.00/hr	.20
Cartage: from silo to rail (by contract) at	
\$5.00/tonne (8 km distance)	\$20.20
<b>TOTAL DIRECT COSTS</b>	<b>\$182.10</b>

#### **Gross Revenue:**

Yield: 4.03 t/ha	
Price: \$183/tonne plus storage increment to	
August 1st of \$15.10/tonne	
Income: 4.03 x \$198.10/tonne less levy of	
75¢/tonne	795.30
<b>TOTAL REVENUE</b>	<b>\$795.30</b>

Thus it appears that in this example using own machinery, the costs are about \$180 and the revenue is \$800, leaving a gross margin of \$620/ha.

#### **(ii) 2nd Wheat Crop (Kopara ex wheat):**

##### **Programme:**

##### **Cultivation:**

The paddock receives 2 grubblings in March-April and another grubbing in May. It is drilled in late May, with 125 kg/ha superphosphate.

##### **Weed Control:**

As for the first wheat crop, but M.C.P.B. at a rate of 3.5 litres/ha.

##### **Undersowing:**

White clover is sown in August at 3.0 kg/ha with 125 kg/ha of lime reverted superphosphate.

##### **Harvest:**

The harvest programme is the same as for the first wheat crop. It is not necessary to bale the straw.

##### **Direct Costs (per hectare):**

	\$
Cultivation: 3 hrs/ha at \$7.00/hr	21.00
Seed: 100kg/ha treated seed at \$318.00/tonne	31.80

Fertilizer: 125kg/ha superphosphate at \$102.60/tonne on farm	12.80
N.B. Undersowing costs are charged to the white clover gross margin (see later)	
Weed Control: M.C.P.B. at 3.5 litres/ha at \$5.00/litre	
Spraying at $\frac{1}{3}$ ha/hr at \$7.00/hr.	
Wild Oat spray at 5 litre/ha at \$10.00/litre, spraying at $\frac{1}{3}$ ha/hr at \$7.00/hr.	72.10
Heading: $\frac{3}{4}$ hr/ha at \$14.00 /hr (excl. depreciation)	10.50
Cartage: from field to silo at \$2.00/ha	2.00
from silo to rail (by contract) at \$5.00/tonne (8 km)	18.50
<b>TOTAL DIRECT COSTS</b>	<b>\$168.70</b>
<b>Gross Revenue:</b>	
Yield: 3.7 t/ha	
Price: Same calculations as with first wheat crop	
Income: 3.7 x \$198.10 less levy of 75¢/tonne	\$730.20
<b>TOTAL REVENUE</b>	<b>\$730.20</b>

In this example the costs are about \$170 and the revenue is almost \$730/ha, giving a gross margin of \$560/ha.

### (iii) White Clover (ex wheat):

#### Programme:

The seed is oversown into wheat in September. Fertilizer is applied at 250kg/ha of superphosphate in March.

#### Grazing:

The paddock is lightly grazed in March and is then consistently grazed over the winter to help spread the straw. Over the spring months, the grazing pressure is about 5 S.U./ha. The paddock is closed in early October and then heavy rolled.

#### Weed Control:

The paddock is spot sprayed with Asulox in July for dock control. It is sprayed in August with Carbatamex and M.C.P.B. for control of annual grasses, flatweeds and suckling clover. In January, the crop is dessicated with Reglone plus Agral LN wetting agent.



### Harvest:

After dessication (5-6 days), the crop is headed. The field dressed seed is then carted to a merchant to be machine dressed. Extra sacks are required for double bagging the M.D. seed, (capacity of a sack is 50 kg.)

### Direct Costs:

Seed: Oversowing of 3 kg/ha at \$3.00/kg	9.00
plus 0.6 hr/ha at \$7.00/hr	4.20
Fertilizer: 125kg/ha lime reverted superphosphate at \$100.00/tonne on the farm	12.50
250kg/ha superphosphate at \$102.60/tonne	25.60
Heavy Rolling: 0.6 hr/ha at \$7.00	4.20
Weed Control: Dock Control, spot spraying	4.00
Weed Control, M.C.P.B. 3.5 litres plus spraying	19.80
Grass Removal: 4 kg/ha, plus spraying	82.30
Dessicating: (a growthy crop) 3 litres, plus spraying	47.30
Mowing: 1¼ hrs/ha at \$7.00/hr	12.20
Heading: 2½ hrs/ha at \$14.00	35.00
Box hire - 1 box (cartage out and in for dressing)	5.50
Consolidated Dressing & Store Handling Charge:	
500 kg/ha F.D. at 20¢/kg	100.00
Sacks 14 at 75¢ (350 kg double sacks at 50 kg/sack)	10.50
<b>TOTAL DIRECT COSTS</b>	<b>372.10</b>

### Gross Revenue:

Yield: 500kg/ha F.D.; 30% loss on machine dressing;  
350 kg/ha M.D.

Price: \$2.30/kg for 1st Generation seed

Income: 350 kg/x \$2.30/kg 805.00

**TOTAL REVENUE \$805.00**

In this example, the gross margin is about \$430/ha, with direct costs of about \$370/ha and revenue of about \$805/ha.

To this should be added some return from the winter grazing. A gross margin of \$19.40/S.U. can be expected this season (See sheep Gross Margins, Section 5.2.3) from the consumption of 590kg D.M. over a 12 month period.

If one hectare produces 1500 kg D.M./ha in the winter-spring period, this represents 254% of the annual requirement of one S.U. Thus the return to be added to the above figure is:

$\$19.40 \times 2.54 = \$49.30$ , which brings the total white clover gross margin to about \$850/ha.

(iv) **3rd Wheat Crop: (ex white clover):**

**Programme:**

Following the white clover harvest, the tailings are fed to sheep and the paddock cleaned up before the cultivation for wheat. The cultivation is the same as for a wheat crop ex old grass and the only additional cost could be for insect control.

**Direct Costs (per hectare):**

As for 1st wheat crop	182.10
Insect Control: Bidrin (for control of aphids) at 400ml/ha at \$35.00/litre plus $\frac{1}{3}$ hr/ha spraying at \$7.00/ha	16.30
<b>TOTAL DIRECT COSTS</b>	<b>\$198.40</b>

**Gross Revenue:**

Yield: 3.7t/ha	
Price: \$198.10/tonne including storage increment	
Income: $3.7 \times \$198.10/\text{tonne}$ less levy of 75¢	730.20
<b>TOTAL REVENUE</b>	<b>\$730.20</b>

Thus the Gross margin for this crop (using own harvesting machinery) is about \$530.00/ha.

(v) **Greenfeed Oats (ex wheat):**

**Programme:**

After the wheat stubble has been burnt off, the paddock is grubbed 3 times in February and the crop is drilled at the end of February. Amuri oats are used at the rate of 90 kg/ha. Nitrogen superphosphate is applied at 250 kg/ha.

**Grazing:**

The paddock is grazed during June and July.

**Direct Costs:**

Cultivation: 2½ hrs/ha at \$7.00/hr	17.50
Seed: 90 kg/ha at \$250/tonne	22.50
Fertilizer: 250 kg/ha nitrogen superphosphate at \$130.00/tonne on farm	32.50
<b>TOTAL DIRECT COSTS</b>	<b>\$72.50</b>

**Gross Revenue:**

If stock consume 590 kg D.M./year, and one hectare produces 3500 kg D.M./ha it would support 6 S.U./ha.

The revenue contribution of these 6 Stock Units at \$19.40/S.U. is therefore:

\$19.40 x 6	116.40
<b>TOTAL REVENUE</b>	<b>\$116.40</b>

Thus the gross margin is about \$45/ha.

**(vi) Field Peas (Blue Rondo ex greenfeed oats):****Programme:**

The paddock is disced twice at the end of July and then ploughed, heavy harrowed, vibratilled to mix in Treflan, rolled and drilled at the end of August. 250 kg/ha of peas are sown with 250 kg/ha of Mo superphosphate.

**Weed Control:**

The paddock is sprayed with Treflan in July at 2.5 litres/hectare.

**Harvesting:**

The crop is direct headed in February into sacks and then carted to a merchant for machine dressing. The pea straw is raked and baled and sold in the paddock.

**Direct Costs (per hectare):**

Cultivation: 4 hrs/ha at \$7.00/hr	28.00
Seed: 250 kg/ha Blue Rondo at \$290/tonne (Contract price includes treating and sacks)	72.50
Fertilizer: 250 kg/ha molybdate super at \$133.60/tonne	33.40
Weed Control: 2.5 litres/ha Treflan at 12.50/litre plus ½ hr/ha at 7.00	33.50
Harvesting: 1¾ hrs/ha at \$14.00/hr	24.50
Sacks: 36 sacks/ha (75 kg/sack) at \$1.03	37.10
Cartage: 2.7 tonnes 2½ boxes to store own cartage.	2.00
Box hire - 2½ boxes at \$5.00/box	12.50

Consolidated Dressing & Store Handling Charge:	
2.7 tonnes at \$32.00/tonne	86.40
Raking pea straw (own machinery):	
½ hr/ha at \$7.00/hr	3.50
Baling pea straw (contract):	
90 bales/ha at 50¢/bale	45.00
<b>TOTAL DIRECT COSTS</b>	<b>378.40</b>

#### **Gross Revenue:**

Yield: 2.7 t/ha	
Price: contract \$200/tonne	
Income: 2.7t x \$200/tonne	540.00
Pea Straw: 90 bales/ha at 75¢/bale	67.50
<b>TOTAL REVENUE</b>	<b>\$607.50</b>
With costs approximating \$380/ha and revenue in the vicinity of \$605, the gross margin in this example becomes \$225/ha.	

#### **(vii) New Grass for Ariki Seed (ex peas)**

##### **Programme:**

Following the pea harvest in February, the paddock receives two grubblings and lime is worked into the soil. To sustain a rotation of this nature, the pH should be brought up to 6.2 at this stage which means 2.47 tonnes of lime per hectare if the pH following peas is about 5.7. Cultivation follows a programme of grub, harrow and roll in sequence three times to achieve effective weed control. New pasture is drilled with a mixture of 23kg/ha Ariki ryegrass and 3kg/ha white clover sown with 250 kg/ha of superphosphate.

##### **Grazing:**

This new grass is given a light first grazing in May and is lightly grazed over the winter to allow light into the clover seedlings. Then although the paddock is not available for the whole spring period, the equivalent spring grazing rate is 6 S.U./ha. The paddock is closed from grazing in the middle of September and at the end of September receives either 125kg/ha of urea or 250kg/ha of sulfate of ammonia

##### **Harvesting:**

In early January the crop is mown and left for 5-6 days before being headed. The field-dressed seed is then carted in sacks to the merchant for dressing and sale.

**Direct Costs (per hectare):**

Seed Bed Preparation: 6½ hrs/ha at \$7.00/hr	45.50
Seed: 23kg/ha Ariki ryegrass at \$1.75/kg	40.20
3 kg/ha Huia white clover at \$3.00/kg	9.00
Fertilizer: Lime 2.47 t/ha at \$14.70/tonne (includes cartage and spreading)	36.31
250 kg/ha superphosphate at \$102.60/tonne	25.60
250 kg/ha sulphate of ammonia at \$207.50/tonne	51.90
Harvesting: Mowing 1½ hrs/ha at \$7.00/hr	10.50
Heading 2¼ hrs/ha at \$14.00/hr	31.50
Sacks: 14 sacks at \$1.25 each	17.50
Box hire 1.5 boxes at \$5.50¢ (cartage out and in)	8.20
Consolidated Dressing & Handling Charge: 7¢/kg F.D. weight x 900 kg/ha	63.00
Separating white clover and ryegrass:	18.00
Raking ryegrass straw (own machinery): 0.3 hr/ha at \$7.00/hr	2.10
Baling ryegrass straw (contract): 100 bales/ha at 45¢/bale	45.00
<b>TOTAL DIRECT COSTS</b>	<b>\$368.00</b>

**Gross Revenue:**

Yield: 900 kg/ha F.D.; 25% loss on machine dressing Thus yield becomes 675 kg/ha M.D.	
Price: 1st Generation Ariki at \$1.00/kg	
Income: 675 kg x \$1.00/kg	675.00
Ryegrass straw: 100 bales/ha sold in the paddock at 70¢/bale	70.00
<b>TOTAL REVENUE</b>	<b>\$745.00</b>

This example suggests a gross revenue of \$745/ha with direct costs of \$370/ha, giving a gross margin of \$375/ha. Some recognition in terms of income should also be attributed to the grazing provided by the paddock during the winter-spring period.

With an estimated feed production of 2200 kg/ha over the grazing period, representing an annual grazing equivalent of 3.7 S.U./ha, then the gross margin contribution is:  $3.7 \times \$19.40 = \$71.80$ , which brings the G.M. to \$450. Without the liming charge, the gross margin would be about \$36/ha extra.

(viii) 2nd Year of New Grass for White Clover Seed:

**Programme:**

Following the ryegrass harvest, the paddock is grazed consistently until being closed in early October. The autumn application is 250kg/ha of superphosphate. The programme is very similar to the earlier white clover crop (example (iii)), except that no weed spraying is done and there is more likelihood of a case bearer problem. The crop is desiccated with Reglone 5-6 days prior to mowing.

**Direct Costs (per hectare):**

Fertilizer: 250 kg/ha superphosphate at \$102.60/tonne	25.60
Heavy Rolling: 0.6 hr/ha at \$ 7.00/hr	4.20
Pest Control: Case bearer sprayed twice at \$15.00/ha	30.00
Crop Dessication: Dessicating a growthy crop	47.30
Heading and Mowing: as before	47.20
Boxhire: 1 box (cartage in and out)	5.50
Consolidated Dressing & Store Handling charge: 9 at 75¢ (double sacks)	6.70
20¢/kg F.D. weight x 340 kg/ha	72.60
<b>TOTAL DIRECT COSTS</b>	<b>\$239.10</b>

**Gross Revenue:**

Yield: 340 kg/ha F.D. (4-5 sacks/ha); 30% loss  
on machine dressing

Thus yield becomes 225 kg/ha M.D.

Price: White clover at \$2.30/kg

Income: 225 kg/ha x \$2.30/kg 517.50

**TOTAL REVENUE \$517.50**

Thus with gross revenue of \$515/ha and direct costs of about \$240/ha, the gross margin becomes about \$275/ha.

Again the grazing contribution should be added to this figure. The estimated feed produced over the grazing period is 2700 kg/ha or an annual grazing equivalent of 4.6 S.U./ha, which means a gross margin contribution of:

$4.6 \times \$19.40 = \$89.20$ .

Thus the white clover gross margin now becomes about \$365/ha.

(ix) **Pasture (2 years grazing):**

**Programme:**

The pasture is grazed, and hay is made in the summer. Fertilizer is applied in the autumn.

**Direct Costs (per hectare):**

Fertilizer: 250 kg/ha superphosphate at \$102.60/tonne	\$25.60
Haymaking: Mowing and raking at 1 hr/ha at 7.00/hr x 0.2	1.40
Baling: 140 bales/ha at 45¢/bale x 0.2 (contract rates)	12.60
Cartage: 140 bales/ha at 45¢/bale x 0.2 (contract rates)	12.60
<b>TOTAL DIRECT COSTS</b>	<b>52.20</b>

**Gross Revenue:**

The estimated utilized feed during the grazing period is 8250 kg/ha D.M., which at 590 kg D.M./S.U. means a stocking rate of 14 S.U./ha. At \$19.40/S.U., the gross revenue becomes 14 x \$19.40

**TOTAL REVENUE** \$271.60

*NOTE:* Regarding the haymaking charges, the cost has been assessed as that of providing the 14 S.U./ha with 2 bales of hay per S.U. for wintering, i.e. 28 bales/ha required. This represents 20% of the normal hay crop of 140 bales/ha.

Thus with gross revenue of about \$270 and direct costs of about \$50/ha, the gross margin for pasture is \$220/ha.

(x) **Summary:**

The gross margin per hectare has been assessed for each crop in the rotation given one set of parameters. Certain anomalies exist, such as the liming charge in the Arika ryegrass direct costs, which, in actual fact should be shared by each crop. Similarly, the seed and cultivation charges for the ryegrass crop should be apportioned over the pasture's life for a more accurate picture of the individual crop's contribution. Given that such anomalies exist, a summary of gross margins for the chosen rotation is presented below:

Year	Crop	Gross Margin \$/ha
1	Wheat	690
2	Wheat	560
3	White Clover (sp.)	850

4	Wheat	530
5	Oats, greenfeed	45
	Field Peas	225
6	Ariki Ryegrass	465
7	White Clover	365
8	Pasture	220
9	Pasture	220
Total for 9 yrs		4170

The average annual gross margin is therefore  
\$463/ha/year.

Following this procedure and by comparing various rotations, a best rotation can be established, which then enables the formulation of a better farm plan.

The above analysis can be carried a stage further to the annual budget where fixed costs are then deducted from the gross margin total for the farm.

An illustration of the effect of varying a critical parameter, is given below:

Enterprise	Yield/ ha	Price	Gross Revenue	Direct Costs	Gross Margin
Wheat	4.0 t	195	780	180	600
	5.0 t	195	975	190	785
Barley	4.5 t	125	560	160	400
	4.5 t	170	765	160	605
	5.5 t	135	740	170	570
Field Peas	5.5 t	170	935	170	765
	2.7 t	150*	450	380	70
Vining Peas	2.7 t	250*	720	380	340
	3.5 t	145*	575	225	350
	5.0 t	125*	690	225	465
Garden Peas	2.0 t	215*	495	230	265
	3.0 t	180*	605	240	365
White Clover	350 kg	1.75	615	240	375
	550 kg	2.30	1265	520	745
Ryegrass	675 kg	75¢	505	370	135
	550 kg	1.00	550	350	200
	800 kg	1.00	800	390	410
Cocksfoot	340	2.00	680	265	415
	340	3.10	1055	265	790
	240	2.90	695	230	465
	240	3.10	745	230	515
Pasture	14SU	\$15GN			210
	14SU	\$20GM			280
	18SU	\$19.40			350
		GM			

\*plus hay/straw



Other Selected Examples of Crop Gross Margins For 1981:

(xi) **Vining Peas:**

**Direct Costs (per hectare):**

Cultivation: 6 hrs at \$7.00/hr	\$42.00
Seed: 300 kg/ha at \$17.75/50 kg	95.80
Fertilizer: 250 kg/ha. Potash molybdate super at \$153.25/tonne	38.30
Spraying: 5 litres weed spray applied	36.20
Irrigation: 2 irrigations at \$7.50/ha/irrigation	15.00
<b>TOTAL DIRECT COSTS</b>	<b>\$227.30</b>

**Gross Revenue:**

Yield: 5.0 t/ha	
Price: \$14.55¢/kg at average tenderometer reading of 110	
Income: 5.0 t x \$145.50	727.50
Plus 45 bales pea straw at \$1.50¢/bale	67.50
<b>TOTAL REVENUE</b>	<b>\$795.00</b>
<b>GROSS MARGIN (approximately)</b>	<b>\$570/ha</b>

(xii) **Garden Peas (William Massey contract):**

**Direct Costs: (per hectare):**

Cultivation: 5½ hrs at \$7.00/hr	38.50
Seed: 270 kg/ha at \$291/tonne	78.50
Fertilizer: 250 kg/ha Mo superphosphate at \$133.60	33.40
Spraying: M.C.P.B. at 4.5 litres/ha	30.20
Heading: 2¼ hrs at \$14.00/hr	31.50
Irrigation: 2 irrigations at \$7.00/ha/irrigation	15.00
Cartage: 3 boxes out and in. Own truck	12.00
Box Hire: \$5.00/box	15.00
<b>TOTAL DIRECT COSTS</b>	<b>\$239.10</b>

**Gross Revenue:**

Yield: 3.0 t/ha	
Price: \$215/tonne (in boxes)	

Income: 3.0t x \$215	645.00
Plus 86 bales of pea straw at 75¢/bale	64.50
<b>TOTAL REVENUE</b>	<b>\$709.50</b>
<b>GROSS MARGIN (approximately)</b>	<b>\$470/ha</b>

**(xiii) Spring Wheat**

**Direct Costs (per hectare):**

Cultivation: 6½ hrs at \$7.00/hr	45.50
Seed: 135 kg/ha Certified 1st Generation at \$273.00/tonne treated	36.80
Fertilizer: 200 kg/ha superphosphate at \$102.60/tonnes applied	20.50
Heading: ¾ hr/ha at \$14.00/hr	10.50
Raking and Ploughing Firebreak:	.20
Cartage: from field to silos at \$2.00/ha	2.00
from silo to rail at \$5.00/tonne	20.00

**TOTAL DIRECT COSTS** **\$135.50**

**Gross Revenue:**

Yield: 4.0 t/ha	
Price \$155.50 plus storage \$15.10 less levies 75¢/tonne	
Income: 4.0t x \$169.85	679.40
<b>TOTAL REVENUE</b>	<b>\$679.40</b>
<b>GROSS MARGIN (approximately)</b>	<b>\$544/ha</b>

**(xiv) Barley (malting):**

**Direct Costs (per hectare):**

Cultivation: 6½ hrs at \$7.00/hr	45.50
Seed: 130 kg/ha at \$250/tonne	32.50
Fertilizer: 200 kg/ha superphosphate at \$102.60/tonne	20.50
Weed Spray: M.C.P.A. applied	21.20
Heading: 1¼ hrs/ha at \$14.00/hr	17.50

Cartage: and box hire at \$5.00/box	25.00
Firebreak:	.20
<b>TOTAL DIRECT COSTS</b>	<b>\$162.40</b>
<b>Gross Revenue:</b>	
Yield: 4.5 t/ha	
Price: \$135/tonne (South Island)	
Income: 4.5 t x \$110	607.50
<b>TOTAL REVENUE</b>	<b>\$607.50</b>
<b>GROSS MARGIN (approximately)</b>	<b>\$445.00</b>

(xv) Lucerne: (1980)

**Establishment Costs (per hectare):**

Cultivation: 13 hrs/ha at \$4.58	59.54
Seed: 12 kg/ha at \$5.50/kg	66.00
Fertilizer: 250 kg/ha lime reverted superphosphate at \$81.50/tonne (including cartage and spreading)	20.38
Lime: 2.5 t/ha at \$14.70/tonne on the ground	36.75
Seed Inoculation: 12 kg	7.20
<b>TOTAL ESTABLISHMENT COSTS</b>	<b>\$189.87</b>

(a) Dryland – Stand life = 9 years	
∴ Annual Establishment Costs =	21.10
Annual Costs:	
Fertilizer: 250 kg/ha lucerne fertilizer at \$117.65/tonne (including cartage and spreading)	29.41
Heavy Roll: 0.6 hr/ha at \$4.58/hr	2.74
Weed Spray: 2, 4-DB at 4 litres/ha at \$3.94/litre	15.76
plus 1/3 hr/ha at \$4.58/hr (Spraying)	1.53
<b>TOTAL ANNUAL COSTS</b> (including establishment)	<b>\$70.54</b>
<b>Annual Revenue:</b>	
Yield: 6000 kg/D.M./ha/year = 11.54 S.U./ha	
Income: \$18.20/S.U. x 11.54 S.U./ha	210.03
<b>TOTAL ANNUAL REVENUE</b>	<b>\$210.03</b>
<b>GROSS MARGIN</b>	<b>\$139.49</b>

(b)	Irrigated (for Dehydration) – Stand life = 7 years	
∴	Annual Establishment Costs =	27.12
	Annual Costs:	
	Fertilizer: 1 tonne/ha lucerne fertilizer at \$117.65/tonne (including cartage and spreading)	117.65
	Irrigation: 3 irrigations at \$6.50/ha/irrigation	19.50
	<b>TOTAL ANNUAL COSTS</b>	
	(including establishment)	\$164.27
	<b>Annual Revenue:</b>	
	Yield: 13000 kg/ha (4 cuts)	
	Price: \$43.00/tonne dehydration contract	
	Income: 13t x \$43/t	559.00
	<b>TOTAL ANNUAL REVENUE</b>	\$559.00
	<b>GROSS MARGIN</b>	\$394.73

(xvi) **Cocksfoot Seed:**

**Direct Costs (per hectare):**

Average Renewal/hectare	30.00
Fertilizer: 375 kg/ha sulphate of ammonia at \$207.50/tonne (including cartage and spreading)	77.80
Windrowing: \$50.00/ha (contract)	50.00
Heading: 1¼ hrs/ha at \$14.00/hr	17.50
Sacks; 10 sacks at \$1.22 each	12.25
Cartage: Box hire plus cartage out and in	6.50
Consolidated Dressing & Handling Charge	
450 kg F.D. at 20¢/kg	90.00
<b>TOTAL DIRECT COSTS</b>	<b>\$266.55</b>

**Gross Revenue:**

Yield: 450 kg/ha F.D.; 25% dressing loss;	
340 kg/ha M.D.	
Price: \$2.90/kg M.D.	
Income: 340 kg x \$2.90/kg	986.00
<b>TOTAL REVENUE</b>	<b>\$986.00</b>
<b>GROSS MARGIN (approximately)</b>	<b>\$720.00</b>

(xvii) **Lupins:**

**Direct Costs:**

Cultivation: 4 hrs at \$7.00/hr	28.00
Seed: 100 kg/ha (Uniharvest) at \$210/tonne	21.00
Fertilizer: 125 kg/ha reverted superphosphate at \$100.00/tonne	12.50
Weed Control: M.C.P.B. at 5.6 litres/ha at \$5.00/litre	28.00
plus 1/3 hr/ha spraying at \$7.00/hr	2.30
Pest Control: Metasystox 25 EC (Demeton-S-methyl 25% a.i.) 2 litres/ha at \$13.50/litre	27.00
plus 1/3 hr/ha spraying at \$7.00/hr	
Irrigation: 2 irrigations at \$7.00/ha/irrigation	14.00
Heading: 2 1/2 hrs/ha at \$14.00/hr	35.00
Box Hire: 2.04 boxes (1.225 tonnes/box) at 5.50/box	11.20
Cartage: Own truck	12.00
<b>TOTAL DIRECT COSTS</b>	<b>193.30</b>

**Gross Revenue:**

2.5 tonnes/ha at \$210/tonne	525.00
<b>TOTAL REVENUE</b>	<b>\$525.00</b>

With gross revenue of approximately \$525 and direct costs of approximately \$195 the gross margin of this crop is about \$330/ha.

(xviii) **Main Crop Potatoes**

(Hort. Dept.)

**Gross Returns:**

25 tonne/ha x \$100.00/tonne

**Variable Production Costs:**

Cultivation: 30.00

Seed: \$2.00/tonne

2.5 tonne/ha 500.00

Planting:

fertilizer (Nitrophoska) 130.00

Sprays:

solvirex: 22.5 kg/ha 25.00

Cultivation

harrow: 25.00

grub (2x) 45.00

Irrigation: power and labour	
2 x \$42/ha	84.00
Total Variable Production Costs	839.00
Variable Marketing Costs:	
Harvesting:	
Labour	200.00
Machinery	195.00
Bags	25.00
Total Variable Marketing Costs;	420.00
Total Variable Costs	1,259.00
Gross Margin/ha	\$821.00

(xix) Early Potatoes cv Early Chippewa

Gross Returns:	
20 tonnes/ha x \$130.00/tonne	\$2,600.00
(May, June)	
Variable Production Costs:	$\frac{1}{2}$ labour
Cultivation	\$30.00 (Sept Oct)
Seed	500.00
Planting:	
fertilizer (Nitrophoska)	130.00
Sprays	
solvirex 22.5 kg/ha	25.00
Cultivation	
harrow	25.00
grub (2x)	45.00
Irrigation: power and labour	
2 x \$42/ha	84.00
Total Variable Production Costs	839.00
Variable Marketing Costs	
Harvesting:	
Labour	160.00
Machinery	195.00
Bags	65.00
Total Variable Marketing Costs;	420.00
Total Variable Costs:	1,259.00
Gross Margin/ha	\$1,341.00

<b>(xx) Broadbeans: (dwarf variety) (Hort. Dept.)</b>		
Gross returns: 15 tonnes/ha x \$110/tonne		= 1,650
(minus 10% commission)		= 165
		= 1,485
Variable Production Costs		
Land preparation		150
Fertilizer (Nitrophoska; KCl)		85
Seed (100 kg/ha)		85.90
Drilling		20.00
Sprays		
preglone (1x)		25.00
phosdin (1x)		7.00
metasystox (2x)		12.00
Total Variable Production Costs		384.90
Variable Marketing Costs		
loss on 3000 bags @ 7¢		210.00
ties 3000 @ 1¢		30.00
Picking costs @ \$2.00/hr		1,500.00
Total Variable Marketing Costs		1,740
Total Variable Costs		2,124.9
Gross margins/ha @ 11¢/kg		\$639.91
Gross margin @ 20¢/kg		875.1

<b>(xxi) Carrots: cv. Manchester Table (planted in August)</b>		
Gross Returns:		
100 tonnes/ha x \$48.00/tonne		\$4,800.0
Variable Production Costs:		
Cultivation:	37.00 (Sept) ¼ labour	
Fertilizer:	86.00 (Sept)	
Seed: 2.25 kg/ha x		
\$18.50/kg		41.63
Drilling:	30.00 (Oct) ¼ labour	
Sprays:		
solvirex 15.0 kg/ha x		
\$1.25/kg		18.75
Application:		5.20
Liauron (3x)		
(0.8 kg/ha x 3 kg/33.88)		27.10
Gesagard (3x)		
(3 x \$10.50)		30.50
Irrigation: power and labour		
(2 x \$42/ha)		84.00 (½ labour)
Total Variable Production Costs:		391.68

Total Marketing Costs:

Mowing	
Ploughing	
Harvesting (Jan)	
Labour \$5.50/tonne	
Machinery A 20 hrs at \$5.00/hr	
B 20 hrs at \$3.00/hr	
Loader 20 hrs at \$5.00/hr	
Harvester 20 hrs at \$5.00/hr	
	320
Washing	
Labour 5.50/tonne	550.00
Bags 10.00/tonne	100.00
Cartage 2.00/tonne	200.00
Total Variable Marketing Costs:	1,748.50
Total Variable Costs:	2,140.18
Gross Margin/ha	\$2,660.00

(xxii) Cauliflower: cv Paramount

Gross Returns:

12 tonnes/ha x \$130.00/tonne = \$1,560

Variable Production Costs:

Ploughing	12.40 (Dec) ¼ labour
Cultivation	24.70 (Dec) ¼ labour
Fertilizer	70.00 (Dec)
Application	5.00
Plants; 19,768/ha	180.00 (Nov) sown
Transplanting: Labour	120.00 Jan
Spray: Materials and application	
3 x \$24.70	74.10
Irrigation: power and labour	
2 x \$37/ha	74.00 (Jan, Feb)
Machinery:	
4 hr/ha	12.00 (Jan, Feb)
Total Variable Production Costs	572.20

Variable Marketing Costs

Harvesting:

Labour \$8/tonne	96.00 (July)
Machinery \$11/tonne	132.00
Cartage \$9/tonne	108.00 (¼ labour)
Total Variable marketing Costs:	336.00
Total Variable Costs:	908.20
Gross Margin/ha	651.80



(xxiii) **Onion: (Pukekoe Long Keeper) (Hort. Dept.)**

Gross Returns:

30 tonne/ha x \$95.00/tonne 2,400.00

Variable Production Costs:

Seed bed preparation 37.00

Seed 61.30

Drilling: 40.00

Sprays:

preglone 15.00

gesagand 8.06

linurou 10.32

CIPC 40.00

anthral 8.00

gesagand 5.00

totril 35.00

dyzol 7.80

Fertiliser 40.00

Spray and fertiliser

Application 30.00

Irrigation 14.00

Total Variable Production Costs 351.68

Variable Marketing costs:

Lifting 12.30

Harvesting 900.00

Sorting 150.00

Bags 240.00

Total Variable Marketing Costs: 1,302.30

Total Variable Costs 1,653.98

Gross margin/ha: \$556.28

(xxiv) **Pumpkin: Butternut Hybrid. (Hort. Dept.)**

Gross Returns:

10 tonne/ha x \$200.00/tonne

Variable Production Costs:

Land preparation and cultivation:

Ploughing 15.00

Cultivation 150.00

Seed drill (seed 4.5 kg x \$5/kg) 22.50

Irrigation (2 x \$42.00) 84.00

machinery (4 hr/ha) 35.00

Total Variable Production Costs 306.50

Variable Marketing Costs	
Harvesting:	
Labour	
(cutting 40 hrs x \$3/hr)	120.00
Machinery (Tractor)	150.00
Materials	
(250 bags x 13 c	
labels, twine etc.)	38.00
Cartage \$9/tonne	90.00
Total Variable Marketing Costs	398.00
Total Variable Costs	704.50
Gross Margin/ha	\$1,295.50

### 5.2.3 Sheep Gross Margins

*(Prepared by M.J. McGregor, December 1980)*

#### Introduction

The following two examples show relativity between the same breed of sheep (Corriedale) but under different management policies. It must be stressed that the prices and costs used approximate those ruling at 8 December 1980.

The gross margins should therefore be adjusted as policies, prices and cost parameters, change.

Note: Gross margins are calculated for 1000 ewes. This allows flock composition, deaths, sales and purchases to be shown as whole numbers. The gross margins calculated only apply to small changes in stock numbers as changes in the order of 1000 ewes would require additional labour, feed, etc.

#### Example 1.

This example gross margin is for a Corriedale 2 year flock system, buying 5 year old ewes annually, which are all mated to an export lamb sire.

Production Parameters:-

110% lambing (survival to sale); 10% first year ewes culled; death rate 6%; ewes clip 4.0 kg wool per head; lambs not shorn.

Sheep Reconciliation:-

# SHEEP RECONCILIATION

Stock Units	Opening Rate	Class of Stock	Opening Nos. @	Nat. Incr.	Killed	Deaths and Losses	Sales	Purchases	Closing Nos. @	Class of Stock	Closing s.u.'s
	1/7/80	Breed	1/7/80						30/6/81		30/6/81
		Ewes									
		Lambs		550							
		Unmated Hgts	0					550	0	Unmated Hgts	0
		Mated Hgts								Mated Hgts	
		Ewes: 2th								Ewes: 2th	
		4th								4th	
		6th								6th	
		4yr								4yr	
543	1.0	5yr	543					543	543	5yr	543
457	1.0	6yr	457		10	32	32		457	6yr	457
		Aged TOTAL EWES				27	420		0	Aged TOTAL EWES	
1000	1.0		1000						1000		1000
		Wethers - m.s.									
		and wether Lambs		550	10						
6	0.6	Hgts	10		10			530	10	Hgts	6
		2th							0	2th	
		Aged TOTAL WETHERS								Aged TOTAL WETHERS	
6	0.6		10						10		6
		Rams									
		Lambs									
		Hgts								Hgts	
4	0.8	2ths	5					5	5	2ths	4
12	0.8	Aged	15		4	1			15	M. Age	12
16	0.8	TOTAL RAMS	20						20	TOTAL RAMS	16
1022		TOTAL SHEEP	1030	1100	34	60	1554	548	1030	TOTAL SHEEP	1022
			(a)	(b)	(c)	(d)	(e)	(f)	(g)		

LAMBING PERFORMANCE (Based on Ewes to Ram)

Tailing = NA % Survival to Sale = 110 %

DEATH RATES

Ewes = 6 % Mates = NA % Lambs = NA Rams = 5 %

CULLING RATES

Ewes = 10%

Rams = 25%

RECONCILIATION

(1) Totals a + b + f = 2678

(2) Totals c + d + e + g = 2678

(3) Total (1) must = Total (2)

Gross Revenue (per 1000 ewes):-	\$    ¢
Lamb sales - 1080 prime lambs at \$15.98 (13.5 kg lamb meat at 113¢/kg = \$15.26 plus skin and 0.75 kg woolpull at \$0.72)	17258.40
Cull ewe sales - 474 cull ewes to works at \$14.80 (22.5 kg ewe meat at 64¢/kg = \$14.40 plus skin and 0.5 kg woolpull at \$0.40)	7015.20
Wool sales - 4000 kg at \$2.40 per kg nett (1000 sheep at 4.0 kg allowing for deaths. Wool price is gross less 25¢/kg)	9600.00
<b>GROSS REVENUE</b>	<b>\$33873.60</b>
Direct Costs (per 1000 ewes):-	
Replacement purchase - 543 at \$19.00	10317.00
Shearing (shearers only) - 1000 sheep at \$54/100	540.00
Tup crutch - 457 sheep at \$15/100	68.55
Main crutch - 1015 sheep at \$26/100	263.90
Drenching - 2 drenches at 12.7¢/dose for 1015 sheep (ewes are drenched once before tupping and again before lambing).	257.81
- 1100 lambs: 50% drenched once 30% drenched twice, lamb drench 53¢/dose	46.64
Vaccination - triple vaccine, 980 ewes at 9.8¢/sheep	96.04
Eartags, footrot and docking	350.00
Dipping - purchased ewes have been dipped 457 ewes at 20¢/sheep	91.40
Woolshed expenses - including woolpacks, twine, glue, emery paper and shearing plant expenses approximate cost = 20¢/head	200.00
Ram costs - 2 per 100, 4 year life, 5 at \$80/ram	400.00
Cartage - prime lambs to works, 1080 at \$0.42 each	453.60
- cull ewes to works, 474 at \$0.61 each	289.14
- replacement ewes from North	
Canterbury, 543 at \$1.10 each	597.30
- wool, 4000 kg at 2.0¢/kg	80.00
(Note: All cartage based on 32km travel except for replacement ewes, 80km)	
<b>TOTAL DIRECT COSTS</b>	<b>\$14051.38</b>
<b>GROSS MARGIN PER 1000 EWES</b>	<b>\$19822.22</b>
<b>GROSS MARGIN PER EWE (+ 1000)</b>	<b>\$19.82</b>
<b>GROSS MARGIN PER STOCK UNIT (+ 1022)</b>	<b>\$19.40</b>

#### Summary:

With a gross revenue of approximately \$33.90 per ewe and expenses of about \$14.00 per ewe, the gross margin is in the vicinity of \$19.90 per ewe for a prime lamb 2 year flock system. The direct costs per ewe (excluding replacement cost) are approximately \$3.73.

The gross margin per stock unit is calculated by dividing the gross margin (per 1000 ewes) by the total stock units (1022 stock units). This gives a value of \$19.40 per stock unit.

#### Example 2.

This example gross margin is for a Corriedale flock, selling genuine 5 year old ewes and breeding own replacements. Ewes are on hand for 4 lambings. All ewes are mated to a Corriedale ram. Hoggets are culled as two tooth (20%). Surplus ewe lambs are sold store. 80% of the wether lambs are sold prime for export, the remainder (20%) being sold as stores. Lambs are not shorn but hoggets are.

#### Production parameters:-

93% lambing; 5% ewe culling; 20% two tooth culling; death rate 4%; Ewes clip 4.1 kg of wool as do the hoggets.

#### Sheep Reconciliation:-

# SHEEP RECONCILIATION

Stock Units	Class of	Opening	Nat.	Killed	Deaths	Sales	Purch-	Closing	Class	Closing
Opening Rate	Stock	Nos. @	Incr.		and		ases	Nos. @	of	Stock
1 / 7 / 80	Breed	1 / 7 / 80			Losses			30 / 6 / 81	Stock	30 / 6 / 81
	Ewes									
226	0.6	Lambs	465			89		376	Unmated	226
		Unmated	376						Hgts	
		Mated			15	75			Mated	
286	1.0	Ewes:	286					286	Ewes:	286
		2th			11	14			2th	
261	1.0	4th	261		11	13		261	4th	261
237	1.0	6th	237		9	12		237	6th	237
216	1.0	4yr	216	7	9	200		216	4yr	216
0	1.0	5yr	0					0	5yr	0
		6yr							6yr	
1000		Aged							Aged	
		TOTAL	1000					1000	TOTAL	1000
		EWES							EWES	
	Wethers - m.s.									
	and wether									
	Lambs	465				455				
6	0.6	Hgts	10	10				10	Hgts	6
0	0.8	2th	0					0	2th	
		Aged							Aged	
6		TOTAL	10					10	TOTAL	6
		WETHERS							WETHERS	
	Rams									
	Lambs									
	Hgts								Hgts	
4	0.8	2ths	5			5		5	2ths	4
12	0.8	Aged	15	4	1			15	M. Age	12
16		TOTAL	20					20	TOTAL	16
		RAMS							RAMS	
1248		TOTAL	1406	930	21	56	858	5	TOTAL	1248
		SHEEP							SHEEP	

LAMBING PERFORMANCE (Based on Ewes to Ram)

Tailing = NA % Survival to Sale = 93 %

DEATH RATES

Ewes = 4 % Hgts = 4 % Lambs = NA % Rams = 5 % Total (1) must = Total (2)

CULLING RATES

Ewes = 5 % Hgts = 20 % Lambs = NA % Rams = 25 %

RECONCILIATION

(1) Totals a + b + f = 2341

(2) Totals c + d + e + g = 2341

Gross Revenue (per 1000 ewes):-	\$ ¢
Lamb sales - 364 prime lambs at \$15.98	5816.72
(13.5 kg lamb meat at 113¢/kg=415.26	
plus skin and 0.75 kg woolpull at \$0.72)	
- 180 store lambs at \$12.00	2160.00
Cull ewe sales - 75 two tooth at \$26.00	1950.00
- 189 five year olds in yards at \$19.00	3591.00
- 50 cull ewes to works at \$14.80	740.00
(22.5 kg ewe meat at 64¢/kg = \$14.40	
plus skin and 0.5kg woolpull at \$0.40)	
Wool sales - 4100 kg at \$2.40 per kg nett	9840.00
(1000 sheep at 4.1 kg allowing for deaths.	
Woolprice is gross less 25¢/kg)	
- 1558kg at \$2.50 per kg nett	3895.00
(380 hoggets at 4.1 kg allowing for deaths)	
GROSS REVENUE	\$27992.72
Direct Costs (per 1000 ewes):-	
Shearing (shearers only) - 1000 sheep at \$54/100	540.00
- 380 hoggets at \$54/100	205.20
Tup crutch - 990 ewes at \$15/100	148.50
Main crutch - 990 ewes at \$26/100	257.40
Drenching - 2 drenches at 12.7¢/dose for 1015 sheep	257.81
(ewes are drenched once before tupping and again before lambing)	
- lambs: 1850 doses at 5.3¢/dose	98.05
(replacements drenched 3 times, stores twice, and primes once)	
Vaccination - triple vaccine, 980 ewes at 9.8¢/sheep	96.04
- triple vaccine, 370 hoggets at 9.8¢/hogget	36.26
Eartags, footroot and docking	350.00
Dipping - 990 ewes at 20¢/head	198.00
- 376 hoggets at 20¢/head	75.20
- 660 lambs at 20¢/head	132.00
Woolshed expenses - including woolpacks, twine, glue, emery paper and shearing plant expenses approximate cost=20¢/ewe and 11¢/hogget	241.80
Ram costs - 2 per 100, 4 year life, 5 at \$100/ram	500.00
Cartage - prime lambs to works, 364 at \$0.70 each	254.80
- store lambs to yards, 180 at \$0.63 each	113.40
- cull two tooth and five year olds to yards, 264 at \$1.10 each	290.40

- cull ewes to works, 50 at \$1.10 each	55.00
- wool, 5658 kg at 2.5¢/kg	141.45
(Note: All cartage rates are based on 97km travel, the distance from North Canterbury to Christchurch).	
Selling charges - Yard feeds, 444 sheep at 26¢/sheep	115.44
- Commission, \$7701 at 4.75%	365.80
TOTAL DIRECT COSTS	\$4472.55
GROSS MARGIN PER 1000 EWES	\$23420.17
GROSS MARGIN PER EWE (+ 1000)	\$23.42
GROSS MARGIN PER STOCK UNIT (+ 1248)	\$18.85

#### Summary:

The gross margin per stock unit for a breeding own replacement flock is \$0.55 less than that of an export lamb policy. The factors having the greatest effect on the two examples presented are:

- (i) Lambing percentage
- (ii) Lamb sale price
- (iii) Wool clip per head
- (iv) Wool price
- (v) Cull ewe price

It is stressed that the example gross margins use one set of price and production parameters and when used in practice some account must be taken of likely variations to give a range of expectations.

It is interesting to note the comparison with past years:

	Gross Margin Per Stock Unit			% Change
	1978/79	1979/80	1980/81	(from last year)
Two year flock	15.64	18.17	\$19.40	+ 6.7%
Breed own replacements	14.83	19.86	\$18.85	- 5.1%

The breeding own replacements policy shows wider fluctuations in the gross margin than the two year flock policy. The two year flock farmer is able to work on a margin for purchase and sale of ewes where as the store sheep farmer has no such margin available.

Again, it must be stressed that these gross margins are examples only. As the price, cost, and production parameters change throughout the season, the gross margins must be revised.



## 5.2.4 Beef Cattle Gross Margins

*(Prepared by A. McIvor, December 1979)*

### (i) Introduction:-

The livestock market in New Zealand is divided into three main sections. These are:

- (a) Store sales between farmers of breeding and fattening stock,
- (b) Schedule sales of stock to freezing companies for export to world markets, and;
- (c) Local trade sales of prime quality stock to butchers for sale to New Zealand consumers.

Each of these main markets, though operating on different supply and demand schedules, is related to the other and tends, even if for only short periods, to be influenced by demand from the other sections of the market.

### (ii) Factors Influencing Store Sales:

Though sale values fluctuate from sale to sale and between districts for the same class of stock, in general values tend to follow broad trends over periods of 2 – 3 years. Factors influencing prices paid are:

- (a) General profitability of finishing or breeding from the class of stock concerned at the current schedule or local trade price levels. In cases of forward stock, export schedule values can virtually under-write the sale, setting minimum price levels.
- (b) Trend of schedule or local trade prices and the effect of probable changes on forecasting profit margins.
- (c) Availability of feed, and effect of climate conditions on feed. Generally New Zealand does not experience prolonged periods of drought or feed shortage, and depression of stock prices tends to be transitory frequently affecting sale values for only a part of the season.
- (d) Availability of finance and credit.
- (e) The level of confidence for say beef, sheep or dairying by the farming community and the people who service agriculture.

**(iii) Factors Influencing Schedule Values:**

Schedule prices are assessed by exporters who sell to world wholesale markets. These companies follow world market prices, particularly U.K., U.S.A., Japan and the Pacific Basin area, and assess the level at which they can set their prices to attract prime stock from farmers, meet all costs and attain a profit. Factors which influence price levels are:

- (a) World Market conditions – supply and demand and price trends.
- (b) Tariffs and quotas.
- (c) Shipping and killing charges.
- (d) Time and place of sale.
- (e) Industrial unrest and effect of stoppages.
- (f) To a limited extent competition between local trade and exporters for prime stock may for short periods inflate schedule values. In general during the winter and early spring little or no prime cattle are sold for export.
- (g) The Guaranteed Price Scheme's price for beef and cow beef.

At times, local trade may purchase prime sheep and cattle through the yards at below schedule value due to the inability of exporters to process certain classes of stock because of industrial unrest or limited works capacity.

**(iv) Factors Influencing Local Trade Values:**

Approximately 30% of all beef slaughtered is consumed in New Zealand. In the South Island, because of the lower cattle population relative to people, about 50% of all cattle slaughtered are used for local trade. It is suggested, however, that up to 60% of all prime beef is consumed within N.Z. Most of this stock is bought by buyers for butchers either on the farm or in the prime pens at sale yards. i.e. about 50% of the Christchurch beef requirement is bought through Addington with the remainder bought privately on farms or supplied to the Freezing Company.

In some instances, exporting companies buy stock for wholesale to butchers. In periods of shortage of prime cattle, practically all prime quality beef is bought for local consumption at values above export schedule. Thus the supply demand schedule for local trade works independent

to the export schedule. Practically all prime stock in winter and early spring are bought for the local trade with peak prices usually in October. Once feed supplies ease and most farmers are able to produce prime stock, the supply exceeds local trade requirements and price levels fall to export schedule values.

The influence of local trade buying is greatly affected by seasonal conditions. In general, local trade begins to have an effect on prime stock prices in May, but in periods of shortage may begin in March or conversely as late as July. October appears to be the peak month with demand influence falling rapidly in November and December. Local trade values usually range from 5 cents/kilogram of carcase above schedule for winter months to 5-10 cents/kilogram above schedule in October. Usually stock are bought by eye assessment of weight and it is an advantage to know actual live weight when selling in the paddock. A further point to note is that abattoir weights are taken when the carcase is hot, and includes the channel fats which can increase the killing out percentage by 2% over export weight.

Prices for beef in the 1980 season have varied considerably as indicated by Table 1. which provides a summary of the monthly trends.

(v) **Forecasting of Future Beef Cattle Values for Budgetary Purposes:**

Forecasting the future outcome of events still to occur must be undertaken with reservation. However, for those who trade goods or livestock, the future course of prices is of paramount interest. For budgetary purposes, conservative prices with high probability of realisation are usually adopted. The purpose of the following illustrations is to endeavour to assist in a greater understanding to the influence of changing export schedule values upon cattle prices at various stages of livestock production.

Table 1

## SCHEDULE MOVEMENTS IN THE SOUTH ISLAND

Steer P1 220.5 – 270kg (220.5 – 245kg in 1979)

(cents/kilogram)

	1972	1973	1974	1975	1976	1977	1978	1979	1980
January	50	71	74	29	55	62	57	105	127
February	50	73	72	29	55	67	59.5	111.5	133
March	52	80	65	29	55	63	60.5	131.5	114.5
April	53	73	54	39	55	59	69.5	144.5	109
May	53	71	51	39	55	59	69.5	134.5	108
June	56	69	41	–	55	57.5	74.5	127.5	109
July	–	–	45	–	55	57.5	79.5	106.5	109
August	56	–	45	–	55	57.5	79.5	111.5	125
September	56	–	39	–	55	57.5	84.5	121.5	125
October	56	–	38	55	55	57	87.5	126.5	120
November	63	76	35	55	55	57	87.5	136.5	127
December	63	78	31	55	56	57	95.0	141.5	127

## NOTE:

1972 & 1973 figures are for GAQ; 1974 & 1975 figures are for Chiller Grade.

A brief examination of the price movement for the P1 grade steer over the last three years indicates changes from 57¢ to 141¢ per kg of carcase, with substantial movement within each year. Such major changes in the schedule have a significant effect upon the value of store cattle, and buyers need to take these changes into account when assessing cattle for purchase.

One technique which can be used to study the effect of changing schedules in the “schedule equivalent” approach. This assumes that the assessed carcase weight of an animal at various stages of growth is worth a particular schedule price which gives an indication of the value of the animal at that stage, and the margin in values between stages.

Table 2 illustrates this technique using four assumed schedule levels ranging from \$50 to \$200 per 100 kg and expressing the effect of this on the value of a beast as a weaner, yearling and at final slaughter at 20 months. Killing out percentage is assumed to be 50% for weaner and yearlings, and 53% at 20 months.

## TABLE 2.

The Effect of Four Different Schedule Levels on the Value Margin of a Steer using the Schedule Equivalent approach. (S.E.)

Schedule Value per 100 kg	S.E. Value of Animal			Margin Between Stages		
	Weaner	Yearling	20 mth	Weaner to Yearling	Yearling to 20mth	Weaner to 20mth
	L.W. 200	L.W. 300	L.W. 434			
	kg C.W. 100	kg C.W. 150	kg C.W. 230			
\$50	50	75	115	25	40	65
100	100	150	230	50	80	130
150	150	225	345	75	120	195
200	200	300	460	100	160	260

### Market Premium, Discount, Appreciation, Depreciation

In practice however, the schedule equivalent approach needs to consider the effect of Market premium, discount, Market appreciation and depreciation.

1. Market premium, occurs where buyers, particularly in years of high demand, pay more than the schedule equivalent price to breeders for weaners and yearlings in order to obtain stock. This premium varies from year to year as indicated in tables 3 to 6, with premiums of up to one third of the assessed margin using the schedule equivalent. i.e. A purchaser operating on a \$100 schedule with a schedule equivalent margin from weaner to 20 months of \$130 per head, may pay one third of this margin or approximately \$40 as a premium for weaners, pay \$140 per head or 140¢ per kg of carcase.
2. Market discount is the reverse of the premium. This occurs as a result of poor trading due to lack of demand or where farmers have a pessimistic outlook for prime cattle prices, and buyers pay less than Market schedule.
3. Market appreciation occurs when the schedule moves above the purchase price, and a bonus return is received. i.e. where cattle are bought for \$100 per 100 kg. and sold for \$130, a bonus of \$30 per 100 kg on the original weight is achieved.
4. Market depreciation applies when the schedule falls below the purchase price, on a kg basis. This also applies when a market premium has been paid i.e. when a weaner on a \$100 schedule is bought for \$140 or 40¢ per kg above the schedule of final sale. This loss can only be offset from the income earned by adding carcase weight to the animal.

The questions which a forecaster will ask himself are:

1. What is the likely schedule value for the season, and what does the average buyer expect it to be?
2. How much profit did cattle finishers make last year, and what will they expect this coming year?

A useful indication can be obtained by following sales and calculating the value per kg of carcase actually paid by purchasers.

To assess likely prices for store cattle, one needs to consider both the effect of schedule prices and the likelihood of the sharing of the growth increment. For 1981 the position is likely to be as follows:

- (a) Value of weaner (100kg carcase @ \$1.27      \$127.00  
 Growth Increment range Nil - \$30.00    say    \$20.00  
 Price for Average Weaner Steer (200 kg L.W.)  
 = 73.5¢ kg L.W. or 147¢ kg carcase      \$147.00
- (b) Value of yearling (160 kg carcase @ \$1.27      \$203.20  
 Growth Increment - Nil-\$30,000    say    \$10.00  
 Price for Average yearling 320 kg. L.W.    \$213.00  
 = 66.64 kg L.W. or \$1.33¢ kg carcase.
- (c) Value of 20 month steer  
 230 kg carcase @ \$1.27      \$292.10

#### Summary:

		Margin
Price to store breeder	\$147	
Price as yearling	\$213	\$66 for winter
Price as 20 month prime	\$292	\$79 for summer

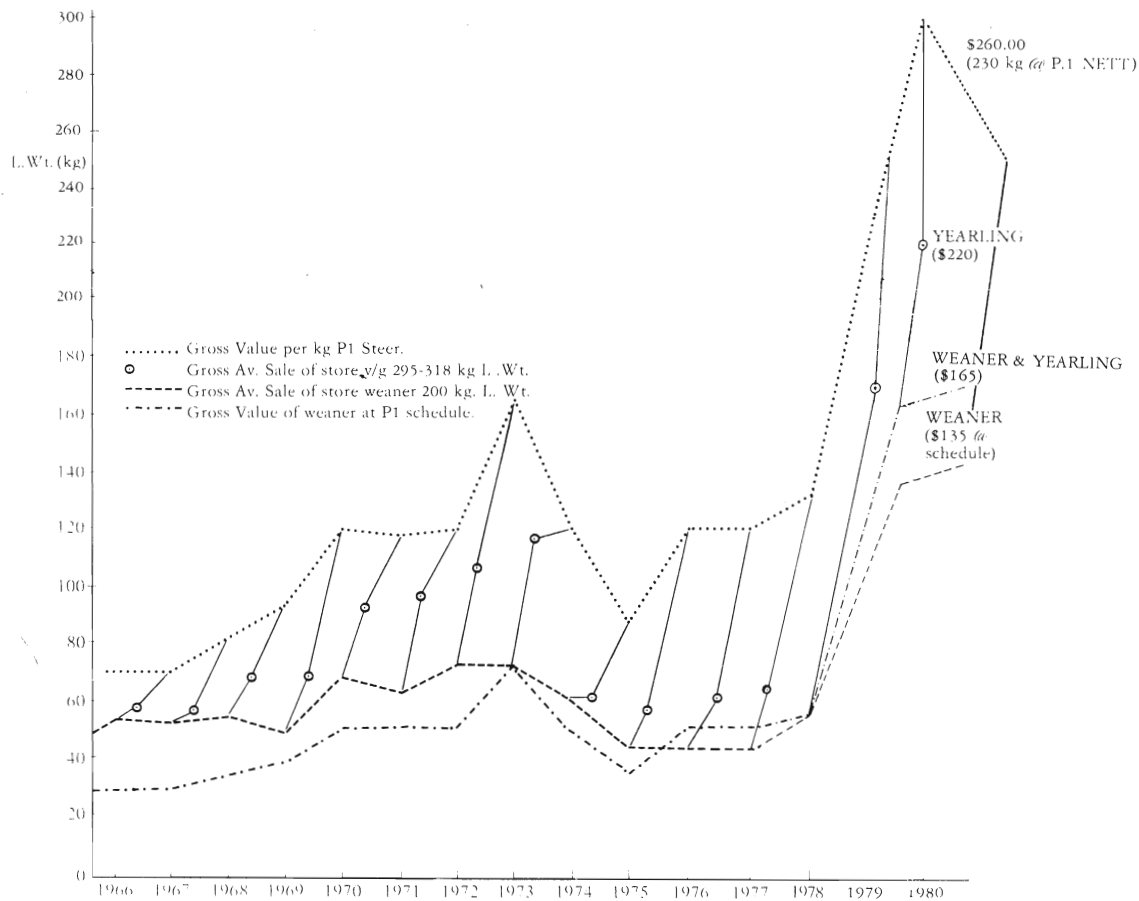


FIG. 5 THE GENERALIZED HISTORICAL TREND OF GROWTH INCOME FOR AVERAGE WEANER STEERS TO SUBSEQUENT SAULGUTER ON SCHEDULE P1 GRADE AT 20 MONTHS AS SHARED BETWEEN BREEDERS, WINTERERS AND SUMMER FATFINERS.

## STORE CATTLE VALUES AT ADDINGTON SALEYARDS

**Table 2 Weaner Steers (April)**

Year	Good \$/head	Medium \$/head	Small \$/head	Av. Price Per Carcase kg	Differential to P1 Schedule
1965	57	—	26	37¢	+ \$ 8 (31.90) GAQ Grade
1966	61	—	49	44¢	+ \$11 (31.30)
1967	58	—	48	41¢	+ \$12 (31.90)
1968	64	—	50	67¢	+ \$10 (37.40)
1969	58	—	44	41¢	+ \$ 6 (41.80)
1970	80	70	50	67¢	+ \$16 (54.30)
1971	75	65	54	61¢	+ \$ 9 (54.00)
1972	90	75	60	75¢	+ \$22 (53.00)
1973	90	75	60	79¢	+ \$ 0 (74.80)
1974	75	63	40	60¢	+ \$ 9 (54.00) Chiller Grade
1975	55	45	30	43¢	+ \$ 6 (39.00) Chiller Grade
1976	55	45	30	43¢	— \$12 (55.00) P1
1977	55	40	25	40¢	— \$17.50 (57.50)
1978	65	55	30	50¢	— \$12.50 (67.50)
1979	190	160	120	160¢	+ \$50 (110.00)
1980	200	165	120	165¢	+ \$56 (109)

NOTE: Figures shown in brackets are differential values in cents/kg.

The Differential is based on 200kg L.W. with carcase at 50%.

The 1978 differential shows the effect of the serious autumn drought in Canterbury.

**Table 3 Weaner Heifers (April)**

Year	Good \$/head	Medium \$/head	Small \$/head	Av. Price per Carcase kg	Differential to P1 Schedule
1965	37	—	28	31¢	Nil GAQ grade
1966	55	—	39	46¢	+ \$15
1967	43	—	35	37¢	+ \$ 5
1968	57	—	46	42¢	+ \$ 4
1969	45	—	33	36¢	— \$ 6
1970	65	55	35	53¢	Nil
1971	67	57	42	57¢	+ \$ 4
1972	80	70	50	68¢	+ \$18
1973	75	60	45	66¢	+ \$ 6
1974	60	50	35	53¢	— \$ 2 Chiller Grade
1975	40	30	15	31¢	— \$ 8 Chiller Grade
1976	40	30	15	31¢	— \$14 P1 Grade
1977	40	25	15	31¢	— \$14
1978	50	30	15	31¢	— \$22
1979	165	140	104	147¢	+ \$42
1980	160	125	90	1.25¢	+ \$17

NOTE: The differential is based on 190kg L.W. with carcase at 50%.



**Table 4 Yearling Steers (October)**

Year	Good \$/head	Medium \$/head	Small \$/head	Av. Price per Carcase kg	Differential to P1 Schedule
1965	70	—	54	42¢	+ \$14 (32.00) GAQ grade
1966	68	—	48	37¢	+ \$ 9 (31.00)
1967	65	—	50	37¢	+ \$17 (28.00)
1968	90	70	65	50¢	+ \$15 (40.00)
1969	82	—	60	48¢	Nil (48.00)
1970	120	95	80	64¢	+ \$22 (49.00)
1971	120	100	85	68¢	+ \$23 (53.00)
1972	125	110	95	70¢	+ \$23 (56.00)
1973	140	120	100	82¢	+ \$ 9 (76.00)
1974	85	67	45	43¢	+ \$ 6 (38.00) Chiller Grade
1975	75	60	40	39¢	— \$15 (55.00) Chiller Grade
1976	80	60	40	39¢	— \$15 (55.00) P1 grade
1977	85	65	45	42¢	— \$23 (57.00)
1978	170	145	120	93¢	+ \$10 (87.50)
1979	250	220	180	142¢	+ \$34 (120.00)
1980	210	165	140	106¢	— \$4 (109)

Note: The differential is based on 310kg L.W. with carcase at 50%.

Figures shown in brackets are differential values in cents/kilogram.

**Table 5 Yearling Heifers (October)**

Year	Good \$/head	Medium \$/head	Small \$/head	Av. Price per Carcase kg	Differential to P1 Schedule
1965	48	—	40	35¢	+ \$ 4
1966	64	—	49	44¢	+ \$15
1967	55	—	47	40¢	+ \$18
1968	64	—	52	44¢	+ \$ 5
1969	66	—	53	46¢	— \$ 2
1970	110	100	75	75¢	+ \$35
1971	111	100	77	75¢	+ \$30
1972	110	95	70	70¢	+ \$24
1973	110	90	60	69¢	+ \$ 6
1974	55	45	35	35¢	— \$ 2
1975	55	40	30	31¢	— \$31
1976	70	50	40	38¢	\$12
1977	70	50	40	38¢	\$22
1978	140	110	70	84¢	+ \$ 4
1979	220	180	160	116¢	+ \$ 6
1980	190	140	95	107¢	— \$ 2

Note: The differential is based on 260 kg L.W. with carcase at 50%.

Table 6 Range of Values for Heifers &amp; Cows

	Unmated Heifers		Cows	
	1½ Yr April	2 Yr Oct.	April	Oct.
	\$	\$	\$	\$
1965	40- 60	73- 79	46- 62	- 61
1966	52- 62	72- 93	70- 79	- 61
1967	60- 70	69- 74	60- 77	75- 80
1968	67- 74	70-106	78- 92	- 82
1969	54- 62	84-110	58- 70	- 71
1970	80- 85	85-110	84-117	-110
1971	80- 90	110-150	85-130	100-130
1972	80- 90	90-145	90-140	116-120
1973	100-140	120-165	110-180	120-150
1974	65-120	60-110	65-140	50- 90
1975	55- 65	45- 70	25- 60	40- 60
1976	60- 65	70-110	50- 80	70-110
1977	50- 65	70-100	40- 60	70-100
1978	80-100	150-200	80-100	180-220
1979	180-100	190-270	250-290	240-310
1980	240-270	230-270	200-240	220-250

Table 7 Estimated Average Gross Profit in rearing steers, purchased at weaner and yearling for fattening with sale at P1 export schedule during the subsequent autumn carcase weight 230 kilograms.

Year	Av. Weaner Purchase	Av. Yearling Purchase	20 mth at P1	Gross Profit from Weaner	Gross Profit from Yearling
	\$	\$	\$	\$	\$
1965	40	62	70	30	8
1966	55	58	72	17	14
1967	54	58	85	31	27
1967	57	70	95	38	25
1969	51	71	124	73	53
1970	70	95	120	50	25
1971	65	100	122	57	22
1972	75	110	168	93	58
1973	75	120	124	49	4
1974	63	65	90	27	25
1975	45	60	126	81	66
1976	45	60	126	81	66
1977	40	65	130	90	65
1978	55	145	230	175	85
1979	160	220	287	127	67
1980	165	165			

NOTE: (a) Though valuation and estimates of sales are given in discreet figures, it should be appreciated that a range of prices will be paid for equivalent beasts, within any sale and that gross profit will vary accordingly.

(b) 1965 - 1973 values are based on the GAQ grade  
1974 & 1975 values are based on the Chiller grade  
After 1976 values are based on the P1 grade and are taken at the subsequent autumn to weaner & yearling sales.

(c) Due to variable weather affecting food supply, cattle values have fluctuated markedly between the autumn and spring, particularly during the 1978 season.

(d) Value of 20 month @ P.1 assumes a nett value after the skin has been removed.

(vi) **Beef Gross Margins:**

The following examples are put forward to illustrate a technique of deriving a gross margin for two beef enterprises and will not necessarily reflect the margin derived by these policies in all situations, or as prices and costs change.

Further, costs for interest and supplementary feeds will not be included but will be discussed separately. To compare beef cattle with sheep or crop margins, it is essential to ensure that all direct costs, applicable to the situation are included, and further, that the comparison is made according to the most limiting resource which may be either capital or land. For this reason, the examples will express the margin in terms of return to Capital invested in stock, per hectare and per stock unit. It is convenient to compare sheep policies with cattle by means of the Stock Unit technique but care should be taken to ensure that the feed supply is adequate for both classes of stock due to the different requirements of cattle to sheep throughout the year.

**Example 1.**

This policy involves breeding from cows and 14 month heifers. All weaners, except replacements, are sold as store cattle in April.

**Production Parameters:-**

Calving, 95% in cows, 80% in heifers; 2% death rate.

**Capital Stock:-**

	No.	Total	S.U.	Total
Cows	128 at \$240 =	\$30 720	6	768
In-calf heifers	24 at \$240 =	\$ 5 760	5	120
Weaner heifers	25 at \$140 =	\$ 3 500	3.5	88
Bulls	4 at \$700 =	\$ 2 800	6	24
	181	\$42,780		1 000 S.U.

Value per stock Unit \$44.30

**Income:-**

70 weaner steers	at \$160 =	\$11,200
46 weaner heifers	at \$120 =	\$ 5,520
5 2-year heifers	at \$240 =	\$ 1,200
16 cull cows	at \$220 =	\$ 3,520
1 bull	at \$350 =	\$ 350

**TOTAL INCOME**

**\$21,790**

**Expenditure:-****Animal Health –**

Drench 25 weaners at 50¢/dose	\$	13	
Spray 181 cattle at 50 cents	\$	90	
Pregnancy test 128 cows at \$1.	\$128		\$231

**Commission on Sale Stock-**

4.25% of \$17,920	\$762
Freight – sale stock	\$800
Yard fees – 121 cattle at \$1.00 per head	\$121
Bull purchase – landed at \$500	\$500

**TOTAL DIRECT COSTS** **\$2414**

**GROSS MARGIN (before feed costs & interest)** **\$19,376**

**Gross Margin per Stock Unit** **\$19.37**

**Gross Margin per hectare (at 10 S.U/ha)** **\$193.00**

**Gross Margin as % of Capital Stock** **45.3%**

**Example 2.**

This policy involves the purchase of medium weaner steers in April, which are then sold at 20 months of age at an average carcass weight of 230kilograms. Death rate = 2%.

**Capital Stock:-**

		S.U.	Total
Weaner steers	250 at \$165 = \$41 250	4	1 000 S.U.
Value per Stock Unit = \$41.25			

**Income:-**

245 steers at \$285 (230 kg at \$1.25/kg) = \$69 825

**TOTAL INCOME** **\$69 825**

**Expenditure:-****Animal health –**

Drench 250 steers at	
50¢/dose	= \$ 125
Spray 250 cattle at 30¢	= \$ 150
Bloat control	= \$ 100
Freight – sale stock at \$6/head	= \$1 470
Stock Purchase – 250 weaners	
at \$165 landed	= \$41 250

**TOTAL DIRECT COSTS** **\$43 095**

GROSS MARGIN (before feed costs & interest)	\$26 730
Gross Margin per Stock Unit	\$ 26.73
Gross Margin per hectare (at 10 S.U./ha)	\$267.00
Gross Margin as % of Capital Stock	64.80%

(vii) **Partial Budgeting for Beef:**

**Interest and Feed Costs.**

For comparison with gross margin analysis of sheep or crop alternatives in the same property, and when interest has been excluded from these analyses, it is necessary to exclude interest from beef analysis also in order to retain relativity.

However, due to the high capital requirements and the fact that in most instances borrowed capital is involved necessitating loan servicing (15% compounded if on current account with the stock firm) a partial budget approach is normally adopted, and includes estimates of interest and feed costs in order to provide a more accurate indication of actual returns.

Feed costs can be ignored where there is no change in the supplementary feed required to implement a cattle policy in place of a sheep alternative. Where there is a change however, all additional supplementary feed costs, should be included. There is a trend towards greater supplementing of beef cattle with hay, grain and green feeds and co-operative ventures involving grazing contracts. It should be noted that the opportunity to improve supplementary feed beef profitability increases with the increase in price per kilogram of carcase. Of the variable costs related to beef enterprises, the most variable excluding the purchase price of replacement stock, and frequently the most critical cost is feed cost. Following are partial budget examples of Examples 1 and 2 including interest at 15% and feed costs. However, as interest rates increase the effect on profitability is interesting to note.

### Example 1

Gross margin before interest & feed cost			\$19,376
Less: Interest on capital in stock at 15% on			
\$42 780 for 1 year		\$6 417	
Feed Costs			
152 cows and heifers, hay 1 bale to 5			
for 120 days – 1600 bales			
25 weaner heifers, hay 1 bale to 7			
for 120 days – 370 bales			
Total hay including bulk reg.			
say 2000 bales at 70¢	=	\$1 400	\$7 817
Gross margin after interest & feed			\$11,559
Return per S.U.			\$11.56
per hectare @ 10 S.U.			\$115.00
As % of Capital in stock			27%

### Winter Feeding Costs.

#### North Island:

Grass wintering – 5 weaners per hectare of A.S.P. + 1 bale hay to 10 weaners per day for 60 days = 6 bales per head.

Kale – 15 - 18 weaners per hectare plus some hay – up to 1 bale to 10 weaners per day.

Cows – pad feeding beef cows 1 bale to 4 cows meadow hay per day as a complete ration.

Grazing charges vary from season to season depending on availability of surplus roughage.

Surplus years – 50 cents per head per week.

Good grazing – \$1.00 per head per week.

Winters following drought - \$1.50 - \$2.50 depending on quality and availability.

#### South Island:

Hay and grain feeding for 100 days.

Weaner steers – full hay ration, 5 kg, (1 bale to 7 weaners)

– hay, 4 kg, (1 bale to 9 weaners) plus 2kg grain

– Turnips (18 beasts per hectare), hay, 3.5kg, (1 bale to 10 weaners) and 2kg grain

### Winter Growth Rates.

Great variability has been experienced in winter growth rate from year to year. Apart from parasitic effects, factors such as pre-weaning competition with cows for available

grass can check calf growth which appears to create a period of slow recovery. The farmer's intuition of paddock shifts and timing and some paddocks of soft grass can slow or check growth. Cold, late springs will continue the winter slow growth period into September and delay the rapid spring growth phase.

In order to assess the various costs of wintering, the following rates of growth have been selected as being the most likely expectation.

#### North Island:

All grass or grass plus hay	0.2 – 0.4 kg per day
Kale	0.2 – 0.25kg per day

#### South Island:

5 kg medium meadow hay plus some grass	0.2 – 0.25kg per day
4 kg medium meadow hay plus 2 kg grain	0.4 – 0.7 kg per day
Ad lib turnips plus 2 kg hay, 1.5kg grain	0.4 – 0.7 kg per day

To assess feed requirements and likely growth rates derived from food stuffs refer to "Livestock Production From Pasture", Section 10 in Lincoln College Farm Budget Manual - Part 1 Technical.

#### Example 2

Gross margin before interest and feed cost		\$26 730
Less: Interest on capital 15% of \$41 250	\$6 187	
Interest on capital in grain silos, roller and feed lot \$2,000 at 12%	\$ 240	
Feed Costs		
250 weaner and 1 bale hay to 8 for 120 days = 3 760 bales at \$1.00	\$3 760	
Grain at 2 kg each per day for 100 days = 50 tonnes at \$140	\$7 000	\$17,187
Gross Margin after interest and feed		\$ 9 543
Return per S.U.	\$9.54	
per hectare @ 1034	\$95.40	
as % of capital in stock	23.1%	

#### Examples of Feed Costing per day for weaners:

Assessed cost of feed –	
Hay 1 bale at 30kg at 60 cents =	2.0¢/kg
Grain – barley	11.0¢/kg
turnips at	1¢/day

Ration	Cost/ Day	Growth/ Day	Carcase/ Day	Income/Day at					
				44¢	55¢	66¢	77¢	\$1.00	\$1.50
5 kg of hay	10.0¢	.25kg	.12kg	5¢	7¢	8¢	10¢	12¢	18¢
4 kg hay, 2 kg grain	30.0¢	.06kg	.13kg	13¢	16¢	20¢	23¢	30¢	45¢
4 kg hay, 1½ kg grain + turnips	22.7¢	.06kg	.13kg	13¢	16¢	20¢	23¢	30¢	45¢

Example of assessing actual value of carcase growth in purchased cattle to time of sale.

	Weaner	Yearling	20 mth	Growth Increment (kg)	
				Weaner	Yearling
Live wgt in kilograms	210	310	400	190	90
Carcase wgt in kilograms	105	155	230	125	75

	Value of animal on sale			Net Increment value per kg	
	Weaner	Yearling	20 mth	Weaner	Yearling
1970/71	\$ 70	\$ 95	\$120	40¢	33¢
1971/71	\$ 65	\$100	\$130	52¢	40¢
1972/73	\$ 75	\$110	\$174	79¢	85¢
1973/74	\$ 75	\$120	\$130	44¢	13¢
1974/75	\$ 63	\$ 70	\$ 90	20¢	27¢
1975/76	\$ 45	\$ 60	\$126	65¢	88¢
1976/77	\$ 45	\$ 60	\$126	65¢	88¢
1977/78	\$ 40	\$ 65	\$131	73¢	88¢
1978/79	\$110	\$170	\$230	96¢	80¢
1979/80	\$160	\$220	\$285	\$1.00	86¢
1980/81	\$165	\$165	\$292	\$1.01	\$1.69

### 5.2.5 Pig Gross Margin Analysis

*(Prepared by J.S. Clark, January 1981)*

Gross Margins are frequently used when assessing the profitability of various production parameters. It should be noted that Gross Margins are not sufficient for comparing different types of pig enterprises as the fixed capital involved in plant and buildings will differ.

This section contains 3 gross margins which give some indication of the cash surplus for each enterprise. Firstly, there are some physical and financial assumptions that must be considered:

#### (i) Physical

- Sow productivity = 15 pigs weaned per sow per year.
- Average weight of weaners = 18kg L.W.
- F.C.R. Bacon = 3.3 : 1 to 82kg L.W.  
Pork = 3.0 : 1 to 53 kg L.W.



- (d) Dressing-out percentage = 75%
- (e) Post-weaning mortality = 3%
- (f) Grading Prime = 60%  
Choice = 30%  
Standard = 10%
- (g) Stock Replacement = 33% sows per annum
- (h) Sow/Boar ratio = 25:1
- (ii) **Financial**
  - (a) Pig meat returns at current schedule rates – see Section 3.8, Financial Manual
  - (b) Feed Cost – Breeder Meal = \$219.90 per tonne  
Creep Meal = \$304.50 per tonne  
Grower Meal = \$206.50 per tonne

(iii) **Gross Margins**

(a) **Weaner Production –**

<b>Returns:</b>	<b>\$</b>
Sale of 15 weaners at \$31.00	465.00
Less breeding stock	55.00
<b>TOTAL RETURNS</b>	<b>410.00</b>

**Variable Costs:**

Food – sow (incl. boar at service)	
1.2 tonnes of breeder meal	263.88
Creep meal at 16kg/piglet	4.87
Veterinary expenses and medicines	13.50
Repairs and Maintenance	33.00
Miscellaneous expenses (e.g. electricity)	24.00
<b>TOTAL VARIABLE COSTS</b>	<b>339.25</b>
Gross Margin per sow	70.75
Gross Margin per weaner	4.72

(b) **Pork Production –**

<b>Returns:</b>	<b>\$</b>
Sale of 38kg pigmeat at 180 cents/kg	68.40
Less weaner	31.00
Less cartage and levy	6.35
Mortality at 2%	1.36
<b>TOTAL RETURNS</b>	<b>29.69</b>

**Variable Costs:**

Food – 35kg gain at 3.0 : 1 at 20.65¢/kg	21.68
Veterinary expenses and medicines	2.80
Repairs and Maintenance	3.50
Miscellaneous expenses	2.40
<b>TOTAL VARIABLE COSTS</b>	<b>30.38</b>
Gross Margin per porker	– 0.69

**(c) Bacon Production –****Returns:****\$**

Sale of 62kg pigmeat at 170 cents/kg	105.40
Less weaner	31.00
Less levy and transport	6.50
Mortality at 3%	3.16
<b>TOTAL RETURNS</b>	<b>64.74</b>

**Variable Costs:**

Food – 65kg gain at 3.3 : 1 at 20.65¢/kg	44.29
Veterinary expenses and medicines	3.30
Repairs and Maintenance	3.40
Miscellaneous expenses	4.30
<b>TOTAL VARIABLE COSTS</b>	<b>55.29</b>
Gross Margin per baconer	9.45

**(iv) Factors Affecting Profitability**

The factors which affect profitability are, in order of importance:

**(a) Pig Meat Prices –**

Returns for pig meats are presently influenced by the minimum price set by the Pork Marketing Board. Various other buyers and the fresh meat trade offer higher prices. Selling at the most profitable carcase weight will also affect returns.

**(b) Feed Costs –**

Feed is the most significant cost in pig meat production. Cost can be reduced by contract buying grain and home milling and mixing. However, it is essential that the quality of feed is not reduced particularly in protein content, as this will affect the Feed Conversion Ratio (FCR).

**(c) Feed Conversion Ratio (FCR) –**

Economy of gain of pigs from weaning to slaughter weight may be improved by the following methods:

- (i) Correct feed formulation
- (ii) Controlled environmental conditions
- (iii) Use of genetically superior breeding stock
- (iv) Accuracy of feeding
- (v) Good pig health

**(d) Breeding Performance –**

This is the area in which most improvement can be made. As the cost of maintaining a sow remains relatively constant regardless of the number of weaners she produces, the margin per weaner will increase when more weaners are produced per sow per year. Factors influencing sow productivity are:

- (i) Age of weaning
- (ii) Number of days from weaning to first service
- (iii) Number of pigs per litter
- (iv) Mortality of pigs to weaning

**(e) Grading –**

Most buyers make differential payments within grades to encourage the production of carcasses preferred by the consumer. The grading profile can be influenced by:

- (i) Breeding
- (ii) Feed ration
- (iii) Feeding rate per day

**(f) Average Daily Gain –**

This parameter has virtually no effect on gross margins but will influence the return on capital.

The return for pig meat is the single most important factor, but unfortunately the producer has little control of the meat prices, nor over feed costs. Therefore, it is better to concentrate on breeding performance and F.C.R. to increase the profitability of a pig enterprise.

(v) **Weighing Procedures at Abattoirs**

According to the Ministry of Agriculture and Fisheries, pig carcasses must be in a clean condition on leaving the work-up area at an abattoir. The regulations do not however specify the procedures that should be followed when weighing pig carcasses. In many instances, the ears and cheeks are removed, presumably to expedite the presentation of clean carcasses. But this does reduce the weight of the carcass, at some loss to the producer. Cleaning of the external ear canals and dehairing the cheeks would overcome this problem, but an increase in killing charges would no doubt follow.

A further weight loss occurs with shrinkage deductions. These vary from zero to 4.5%, depending on the district.

At present, the Pork Industry Council is considering promoting the adoption of Purchase of Pigs Regulations, which would force all abattoirs to pay for pigs on a standard basis. In the interim it may introduce a standard sale by contract which farmers would get buyers to sign before selling pigs.

If these two procedures do not prove satisfactory, the producer can always sell ex hooks rather than ex farm. This is done through a butcher, and is an ideal way to sell pigs, especially if the farmer lives close to the abattoir. The only drawback to this system is having to supply a set number of pigs, at a set time.

The following lists show the different payment systems for the abattoirs throughout the country:

(a) **Baconers –**

Auckland	Hot weight : 3% deduction
Hellabys'	Hot weight
Gisborne	Hot weight : 4% deduction
Wellington	Hot weight
Ashburton	Hot weight
Timaru	Hot weight : 4½% deduction
Longburn	Hot weight
Southland Frozen Meat	Hot weight

(b) **Porkers –**

Whangarei	Hot weight
Auckland	Hot weight : 3% deduction
Hellabys'	Hot weight

Gisborne	Hot weight : 4% deduction
Hawera	Hot weight : 2½% deduction
Wellington	Hot weight
Ashburton	Hot weight
Timaru	Hot weight : 4½% deduction
Westport, Motueka	Hot weight
Christchurch	Hot weight : 3% deduction
Longburn	Hot weight
Southland Frozen Meat	Hot weight

(c) Choppers –

Auckland	Skin on : 3% deduction
Hellabys'	Skin on
Gisborne	Skinned : 3% deduction
Wellington	Skinned : 3% deduction
Wanganui	Skinned : Head removed
Ashburton	Skinned
Westport	Skin on
Motueka	Skinned
Longburn	Skin on
Southland Frozen Meat	Skin on

SOURCE: "Pork Industry Gazette" October 1978, New Zealand Pork Industry Council.

## 5.2.6 Deer Gross Margins

*(Prepared by M.J. McGregor, December 1980)*

The popularity of deer farming has increased greatly over the last few years. New Zealand is establishing markets overseas for venison, velvet and other deer by-products.

Many farmers are attracted to deer farming, either as a sideline to an existing operation or as a specialised venture. Until recently, most deer farmers in New Zealand have been in the velvet business as the returns have been very lucrative. With the low prices currently received for velvet the emphasis is now moving to venison production.

The first herds were based on animals captured in the wild. Since 1970 when the first deer farming licence was issued, the number of deer farms have increased to over 250, and the number of animals carried is in excess of 60,000 (June 1979).

When the first live deer auction was held in 1977 an average price of \$417 was obtained, with the top price being about \$800. By the end of 1979 prices had escalated rapidly from the

1977 levels with hinds costing about \$3000, breeding stags about \$4-4500, yearling hinds about \$2000, and yearling stags \$1200 - \$1600. Recently there has been a decrease in demand for live deer and prices have dropped dramatically. It is estimated that hinds would now cost \$850, breeding stags about \$300 - 450, yearling hinds about \$650, and yearling stags \$220 - 230.

Deer by-products include antler velvet, skins, tails, sinews, tusks, hearts, livers, tongues, kidneys, feet and blood. By products are exported for manufacture into jewellery, leather products, oriental medicines and specialty meat preparations. The following two examples show the difference between two entirely different management and stocking policies. It must be stressed that the prices and costs used approximate those ruling at 18 December 1980.

The following physical parameters are common to both examples:

Breeding and velveting life = 10 years

Fawning percentage (hinds fawn as 2 year olds) = 85%

Death rate - adults = 4%

- yearlings = 5%

Stag: hind ratio = 1:20

Dressed weight - cull stag = 90kg

- C.F.A. stag = 75kg

- cull hind = 60 kg

Velvet yields - 1 year old = 0.6 kg

- 2 year old = 1.1 kg

- 3 year old = 1.8 kg

- 4-9 year old = 2.0 kg

- 10-12 year old = 1.8 kg

Velvet price -

Grade	%	Price (\$/kg)
A	78	103.50
B	14	70.50
Super D	5	35.00
D	4	13.00

Example 1.

This example gross margin is for a policy of live sales of yearling hinds and stags with cull hinds and stags processed as venison.

No. On Hand (1 July)	Stock Units	Capital Value (\$)
100 breeding hinds	150	85,000
16 yearling hinds	16	10,400
5 stags	7	1,500
<u>121</u>	<u>173</u>	<u>96,900</u>

Purchases	Deaths
½ breeding stag	5.5
Natural Increase	Sales
42 hinds	2 cull hinds
43 stags	10 C.F.A. hinds
	25 yearling hinds
	43 yearling stags
<u>85.5</u>	<u>85.5</u>

Gross Revenue (per 100 hinds):-	\$	¢
cull hinds - 2 at \$178.20 each		
(60 kg venison at \$2.85/kg		
plus by-products at \$7.20)		356.40
C.F.A. hinds - 10 at \$178.20 each		1782.00
yearling hinds (sold on farm) - 25 at \$650		16250.00
yearling stags (sold on farm) - 43 at \$225		9675.00
velvet - 5 stags, 2 kg/head at \$92.52/kg(av)		925.20
GROSS REVENUE		\$28988.60

Direct Costs (per 100 hinds):-	
Animal health - at \$2.25/head	272.25
Freight - culled hinds and replacement stag, at \$4.00 per head.	50.00
Supplementary feed - hay, 2 bales per head at \$2.50 per bale	605.00
- concentrates, 100 kg nuts to adult stags and 50 kg to all other stock at \$191.20/tonne	1204.56
Velvet harvesting - vet, etc., at \$12 per stag	60.00
Commission - \$25925 at 8.0%	2074.00
Stock purchase - half stag at \$450	225.00
TOTAL DIRECT COSTS	\$4490.81

GROSS MARGIN PER 100 HANDS	\$24497.79
GROSS MARGIN PER HIND (+ 100)	\$245
GROSS MARGIN PER STOCK UNIT (+ 173)	\$142

Example 2.

This example gross margin is for a policy of running velveting stags and buying replacements. Cull animals are processed as venison.

No. On Hand (1 July)	Stock Units	Capital Value (\$)
100 Mixed aged stags	150	45,000
<u>15</u> yearling stags	<u>15</u>	<u>3,375</u>
115	165	\$48,375

Purchases	Deaths
15 weaner stags	5
	Sales
	2 cull stags
	<u>8</u> C.F.A. stags
<u>15</u>	15

GROSS REVENUE (per 100 stags):-	\$	¢
Cull stags - 2 at \$269.70		
(90 kg dressed @ \$2.85/kg = \$256.50 plus by products at \$13.20)		539.40
C.F.A. stags - 8 at \$269.70		2157.60
Velvet - 100 stags, 2kg/head at \$92.52/kg (av)		18504.00
- 15 yearlings, 0.6kg/head at \$13.00/kg		117.00
GROSS REVENUE		\$21318.00

Direct Costs (per 100 stags):-	
Animal health - at \$2.25/head	258.75
Freight - culled stags plus purchased replacements, at \$4.00 per head.	100.00
Supplementary feed - hay, 2 bales per head at \$2.50 per bale	575.00
- concentrates, 100 kg nuts to adult stags and 50 kg to all young stock at \$191.20/tonne.	2055.40
Velvet harvesting - vet, etc. at \$12/stag	1380.00
Stock purchase - 15 weaner stags at \$200 each.	3000.00
TOTAL DIRECT COSTS	\$7369.15



GROSS MARGIN PER 100 STAGS	\$13948.85
GROSS MARGIN PER STAG (+ 100)	\$140
GROSS MARGIN PER STOCK UNIT (+ 165)	\$85

#### Summary:

The gross margin per stock unit for a breeding policy is \$57.00 higher than that of velveting policy.

It should be noted that the prices for deer products are subject to wide variation, particularly velvet and live animals. In early 1980 the price paid for good quality velvet full to approximately \$150 per kilogram, a drop of almost \$100 from the previous months price. The December 1980 average price of \$98 per kilogram is a reflection of a downturn in the South Korean economy and the increase in availability of velvet from other sources e.g. China and the Soviet Union. There is no real degree of certainty associated with deer product marketing and the price of velvet, and to a lesser extent live animals, could recover as 1981 progresses.

This highlights the fact, that when calculating any gross margin, check on the up to date prices for revenue and expenditure items.

## 5.2.7 Chicken Gross Margin Analysis

Two gross margins for different enterprises are included in this section, the first for meat chickens, and the second for layers. They are intended as a rough guide only, as the size of the enterprise, and whether or not the operator is working within a contract system (meat, chicken system only) affects the costing greatly.

### (i) Physical and Financial Parameters

- (a) Meat Chickens
  - 1 to 2.5% Mortality
  - 1.5 to 2.0 kg liveweight when killed
  - Dressing out percentage 67 to 73%
  - 42 to 52 days from hatch to maturity.
  - 2.0 to 2.4 feed / liveweight conversion
  - Assume 95¢/kg liveweight

- (b) Layers
- 7 to 15% mortality
  - 12 month laying period
  - 220 to 260 eggs per bird
  - Feed conversion of 1.7 to 3.0 kg feed per dozen eggs
  - Eggs 90-95¢/dozen
- However, entitlement and various other levies are imposed and the final returns are likely to be 83.09¢ (N.I.) and 82.98¢ (S.I.).
- Cull bird meat 35¢ per kg (average bird 2.0 kg)

(ii) **Meat Chicken Gross Margin**  
(per 1000 birds)

For the meat chicken gross margin two different costings are given based on:

- (a) A small or part time chicken operator with 1 – 3000 birds per batch.
- (b) A full time meat chicken operator with 20 – 30,000 birds per batch. This is normally a contract operation in which the contracting firm pays for feed, day old chicks, litter, and most health costs and deducts these costs from the payout.

**Physical Parameters**

- 1.5% mortality
- 1.75 kg live weight
- 70% dressing out
- 47 days hatch to maturity
- 2.2 feed/liveweight conversion

**Expenditure**

	(a)	(b)
Day old chicks at 37 to 40¢ each	\$400.00	\$370.00
Feed 3.85 kg/bird at 28¢/kg (bulk)	\$1078.00	\$1078.00
Sawdust or Shavings 1.5¢/bird	\$15.00	\$15.00
Animal health 1¢/bird	\$10.00	\$10.00
Electricity 6 to 9.8¢/bird	\$98.00	\$60.00
Repairs and Maintenance		
1 to 1.1 ¢/bird	\$10.00	\$11.00
<b>TOTAL EXPENDITURE</b>	<b>\$1613.00</b>	<b>\$1544.00</b>

**Revenue**

985 birds at 1.75 kg liveweight at \$1.00/kg	\$1723.75	\$1723.75
<b>TOTAL REVENUE</b>	<b>\$1724.00</b>	<b>\$1724.00</b>

With total revenue being about \$1724 in each case, this gives a gross margin of \$111 per thousand birds in the case of (a) and of \$180 in the case of (b). These are very variable however. An independent operator may decide to have his birds processed (at a cost of approx. 55¢ per bird) and market them himself increasing the gross margin markedly.

E.g. for case (a)

Total revenue becomes \$3073.20 (985 birds at 1.2 kg dressed out weight at \$2.60 per kg) and total expenses are \$2155 (\$542 processing plus \$1613), giving a gross margin of \$918 per thousand birds.

NB. This extra margin will be partially offset by extra costs involved e.g. marketing labour and overheads—costs which are not usually included in gross margin analysis.

### (iii) Layer Chicken Gross Margin (per 1000 birds)

#### Physical Parameters

10% Mortality

12 month lay 235 eggs per bird

Feed conversion 2.1 kg feed per dozen eggs

Eggs 82.98 per dozen net of levy (South Island prices)

Cull birds 35¢/kg – average bird 2.0 kg at end of lay

Average unit has 8000 birds.

#### Expenditure

Stock (layer pullets) at \$3.75 each	\$3750.00
--------------------------------------	-----------

Feed 41 kg/bird at 20.5¢/kg (bulk)	\$8405.00
------------------------------------	-----------

Animal health 5¢ / bird	\$ 50.00
-------------------------	----------

Electricity 28.0¢/bird	\$280.00
------------------------	----------

Repairs and Maintenance 2¢ / bird	\$ 20.00
-----------------------------------	----------

Freight 1.0¢ per dozen	\$194.00
------------------------	----------

<b>TOTAL EXPENDITURE</b>	<b>\$12 699.00</b>
--------------------------	--------------------

#### Revenue

19.5 dozen eggs per bird at 82.98¢ per dozen (net of levy)	\$16 181.10
---	-------------

900 cull birds at 2.0 kg at 35¢ per kg	\$ 630.00
---	-----------

<b>TOTAL REVENUE</b>	<b>\$16 811.10</b>
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With total revenue about \$16 811 and total expenditure of \$12 700 we have a gross margin for this enterprise of \$4 111 per thousand birds.

**SECTION 6**

**TAXATION FOR PRIMARY PRODUCERS  
1981**

**M.B. CLARK M.Com., A.C.A.  
LECTURER IN AGRICULTURAL ACCOUNTING  
LINCOLN COLLEGE**



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## **6.0 INCOME TAXATION**

### **6.1 INTRODUCTION**

The law relating to income tax in New Zealand is detailed in the Income Tax Act 1976, as amended by subsequent taxation legislation and budgets. It must be appreciated that for reasons of brevity, only selected aspects of the taxation law have been included in this section, and that caution must be exercised when applying those guidelines to a particular circumstance. If in doubt, the Inland Revenue Department, your accountant, or financial adviser should be consulted.

### **6.2 TAXATION IN NEW ZEALAND**

#### **6.2.1 Overview**

Income tax is collected throughout the income year by either the P.A.Y.E. or Provisional tax systems. These monies are regarded as advance payments of tax for that year. After the income year has finished the taxpayer completes his Income Tax Return and files it with the Inland Revenue Department. The return is checked and the results notified to the taxpayer – for example, a refund of tax overpaid or an assessment notice requiring more tax to be paid by a specified date. A penalty of 10% is charged if this tax is not paid within one month of the specified due date.

Any taxpayer can object to his income tax assessment where the substance or accuracy is disputed. The requirement for objections are stipulated in the Income Tax Act and any person contemplating such action would be well advised to seek professional advice. It should be noted, however, that the lodgement of an objection does not suspend the taxpayer's obligation to pay the tax assessed, or the right of the Commissioner to collect the tax.

#### **6.2.2 P.A.Y.E. (Pay As You Earn) Tax System**

The P.A.Y.E. system is where source deductions of tax are made by the employer. The P.A.Y.E. system applies to three types of payment:

- (a) Salary and wages – where the amount of tax depends on the tax code on the employee's IR 12 (Tax Code Declaration). The rate of deduction for secondary employment is a flat rate of 35%.

- (b) Extra emoluments, such as back pay or bonuses where tax is deducted at a flat rate of 35%.
- (c) Withholding payments, which basically refer to casual payments where there is not a strict employer-employee relationship. Common types of payment and the appropriate tax rates are specified on the back of the “employees” IR 13 (Withholding Payments Deduction Certificate) and include:
 

Company directors’ fees	35%
Shearing work	15
Droving work	15
Farm work	15
Casual agricultural employees	15
Payments to suppliers of wild deer, pigs, goats (whole carcass or animal parts)	25
Honoraria	35

The employer must pay the total tax deductions for a month to the Inland Revenue Department by the 20th of the following month. Each year he is required to

- (a) complete the pay details on the IR 12’s and/or IR 13’s, and give the yellow (bottom) copy to the employee: and
- (b) provide the Inland Revenue Department with an annual reconciliation of all P.A.Y.E. and Withholding Payments and tax deductions including the top copies of the IR 12’s and IR 13’s.

Relevant records, in English, must be kept for at least 7 years.

### 6.2.3. Provisional Tax System

Provisional tax is paid by all tax payers who receive income which is not taxed at source as P.A.Y.E. income. Therefore the following would be regarded as provisional taxpayers:

- (a) Individuals who derive business or professional income e.g. farmers.
- (b) Individuals where assessable income derived from rents, interest and/or dividends is in excess of \$500. (Otherwise regarded as a P.A.Y.E. taxpayer).
- (c) Companies.
- (d) Trusts.

The provisional tax system works on the basis of advance payments of tax made by the taxpayer himself to the Inland

Revenue Department. The amount of the provisional tax is either:

- (a) the same as last year's tax: or
- (b) based on estimated income for the current year.

Provisional tax may be re-estimated up to the due date for payment of the last instalment. However, a penalty may be payable if there is gross underestimation.

Provisional tax is generally payable in two instalments, the first being one third of the current year's provisional tax and the second being the balance of tax due. Dates for payment are detailed in Appendix I at the end of this section.

The situation may arise when the first instalment of provisional tax is payable before last year's return has been completed, and therefore last year's tax is not known. This is likely to occur when the balance date is between 7 June and 1 October. If the taxpayer has not estimated his provisional tax, the first instalment of tax is based on the last completed tax return (i.e. 2 years ago). The difference between last year's tax and the provisional tax already paid is the amount due as the remaining instalment.

## **6.2.4 Returns of Income**

In general, every taxpayer must furnish a return of income each year setting out details of the assessable income derived by him during the preceding year, plus such supporting information, accounts etc. as may be required. Annual returns relate to an income year ending 31 March unless an alternative balance date has been approved.

All companies, partnerships, trusts, and persons who are in business for any part of the income year must furnish returns of all their income, irrespective of whether a profit or a loss is made.

A return of income is not required from any taxpayer whose only income is from:

- (a) salary or wages not exceeding \$1150 a year; or
- (b) national superannuation.

These taxpayers, known as pay-period taxpayers, may elect to furnish a return in order to get the benefit of any rebate, special exemption or deduction not taken into account in their tax code. Where a return is not furnished the tax already deducted under the PAYE system is not adjusted: where a return is furnished, the amount of tax payable is the true liability of the taxpayer.

It should be noted that shearers are excluded from treatment as pay-period taxpayers.

Return forms are provided by the Inland Revenue Department as follows:

- IR 3 – Individual return for self-employed and others who pay provisional tax.
- IR 3B – Supplementary return of business income.
- IR 3F – Supplementary return of farming income.
- IR 4 – Companies and clubs.
- IR 5 – Individual return for persons who receive income from salary, wages or superannuation, with or without net investment income (i.e. interest and dividends after exemptions, and net rents if not more than \$500.).
- IR 5A – Estate or Trust returns.

#### 6.2.4 (i) Due Dates for Annual Returns

Annual returns for IR 5 taxpayers are due 7 June each year. Annual returns for all other taxpayers are due as follows:-

- (a) Balance dates between 1 October and the following 7 June (inclusive) – return is due 7 August.
- (b) Balance dates between 8 June and the following 30 September (inclusive) – return is due two months after balance date.

### 6.2.5 Assessment

The return of income requires the taxpayer to calculate his actual tax liability and compare this with the tax already paid during the income year. These details are checked by the Inland Revenue Department when the return is furnished, and the result of their assessment is notified to the taxpayer. Even if the result is a loss, the amount is still confirmed by the Department.

In general, the assessment usually results in:

1. A refund of tax (tax paid exceeds the actual liability): or
2. More tax to pay (tax paid is insufficient to meet the actual liability). The assessment notice usually stipulates the due date for payment. Provisional taxpayers, however, pay this “terminal tax” by 7 March in the following year, excepting companies whose due date depends upon their balance date. (Refer to Appendix I).

## 6.3 CALCULATING TAXABLE INCOME

Taxable income is calculated in the following way:-

	Income
less	<u>Exempt Income</u>
	Assessable Income
less	<u>Special Exemptions</u>
	<u><u>TAXABLE INCOME</u></u>

- (a) Income is generally accepted to mean a gain in money or money's worth derived by a person as a reward for services rendered, the profits of a business or a profit-making enterprise, or from property.
- (b) Exempt Income is income specified by the Income Tax Act to be wholly exempt from tax.
- (c) Assessable Income is therefore income of any kind which is not exempted from income tax.
- (d) Special Exemptions are specified types of expenditure which may be deducted from the assessable income of individuals. (See also the taxation of "Other" Trusts in section 6.7).
- (e) Taxable Income is therefore the residue of assessable income after deducting the taxpayer's special exemptions.

## 6.4 TAXATION OF INDIVIDUALS

### 6.4.1 Overview

Individuals are required to file IR 5 or IR 3 returns depending on their sources of income (see section 6.2.4 – 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 detailed in Appendix II.

Tax is calculated according to the following relationship:

Income	
less Deductions	
Assessable Income	
less Special Exemptions	
<u>TAXABLE INCOME</u>	– calculate –
	Tax
	less Rebates
	Tax Liability
	less Tax paid during
	year (e.g. P.A.Y.E.)
	<u>TERMINAL TAX</u>
	<u>or REFUND</u>

Income, excluding exempt income, can be reduced by the deductions allowed to salary and wage earners and/or by appropriate special exemptions in order to obtain the taxable income. Tax is assessed using the appropriate rates and the allowable tax rebates deducted to obtain the actual tax liability. Tax paid during the income year is then credited to ascertain whether more tax is payable (i.e. terminal tax), a refund is due for tax overpaid, or the assessment is correct.

### 6.4.2 Exempt Income

The following items, amongst others, may be applicable to individuals and regarded as exempt income:

1. 50% of interest from Farm Vendor Finance Bonds or from money left in approved farms as Farm Vendor Mortgages. Such interest does not qualify for the general interest exemption or the rebate allowable for interest on home (farm) vendor mortgages.
2. Premiums on redemption of Inflation Adjusted Savings Bonds.
3. Up to \$500 accumulated interest from Post Office National Development Bonds and/or New Zealand Savings Certificates. This interest again does not qualify for the general interest exemption.

4. Up to \$200 interest and dividends from all sources.
5. Any educational scholarship or bursary.
6. Prize money from horse or dog racing, or trotting.
7. Prizes from Post Office Bonus Bonds.

It should be noted that gifts, legacies, capital gains and monies derived by chance i.e. gambling, are not regarded as income unless it can be fairly said to be the taxpayer's business.

### 6.4.3 Assessable Income

Includes, amongst others:

1. Profits or gains derived from any business.
2. Employment income, such as salary and wages, including allowances which benefit the individual e.g. food, board or lodgings supplied to employee. Allowances which reimburse the employee for work related expenditure are not assessable.
3. Earnings related Accident Compensation receipts.
4. National Superannuation receipts.
5. 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. Property refers to all personal property as well as land.
6. Revenues from land e.g. net rents received; profits from extraction, removal or sale of minerals, timber etc.
7. Royalties and know how payments.
8. Interests, dividends, annuities and pensions.  
(See also Exempt Income).
9. Unemployment benefits received by persons without dependent children.
10. As from 1 October 1980 travelling allowances received by an employee will be taxable except those amounts which represent a reimbursement of:
  - (i) expenditure incurred by the employee in gaining or producing his assessable income: and/or
  - (ii) additional transport costs incurred by the employee in travelling between home and his place of work.  
"Additional transport costs" are defined to mean:-

- (a) the excess above normal travel costs where these have been incurred because of:
  - the time of day or day of the week the employee works;
  - the necessity to carry any work related equipment;
  - the fulfilling of any statutory obligation;
  - a temporary change in the place of work;
  - any other condition of work applying to that employee; or
- (b) the excess costs above \$1 per day incurred because of the absence of public transport serving the place of work. Except in special circumstances, the costs incurred in travelling more than 70km per day must be excluded from this calculation.

#### **6.4.4 Deduction for Employment Related Expenses**

Recipients of salary, wages and/or national superannuation, and casual agricultural employees, are permitted to deduct employment related expenses from this income. The allowable deduction is the greater of:

- (a) \$52 or 2% of employment income, whichever is the smaller; or
- (b) The actual amount of employment related expenditure or loss incurred in gaining assessable income. Details of the claim together with supporting evidence for payments in excess of \$20 should be included in the taxpayer's return of income. Allowable expenditures include:
  - (i) Union fees and subscriptions.
  - (ii) Reference books, journals and periodicals.  
(Maximum of \$20 for any one volume or issue).
  - (iii) Special or protective clothing.
  - (iv) Tools of trade and equipment.  
(Maximum of \$100 for any one item).
  - (v) Self-education expenses where they relate to promotion, or for refresher courses, conferences, etc.  
(Maximum of \$400).
  - (vi) Travelling expenses incurred in the course of employment, but not between home and work.
  - (vii) Home office expenses, where a room is set aside wholly or principally for use in employment.  
(Maximum of 15% of total outgoings on the property).



- (viii) Other expenditure incurred for purposes of, and as a condition of employment.

These expenses should be reduced by the amount of reimbursement received from the employer, if any.

### 6.4.5 Special Exemptions

Only one special exemption is currently available, for

- (a) Life, personal accident, or sickness insurance premiums on policies which cover the taxpayer, spouse, or children; and
- (b) Contributions to specified funds, most commonly for superannuation.

The special exemption allowable is the lesser of the amount paid or \$1,000 (\$800 if a member of a subsidised superannuation scheme).

### 6.4.6 Tax Rebates

Rebates are deducted from the actual tax assessed, and give equal benefit to all taxpayers irrespective of their level of income. The total rebates claimed cannot exceed the assessed amount of tax payable. Rebates available to individuals include:

1. **DEPENDENT SPOUSE**

\$156, reduced by 20 cents for each complete dollar by which the spouse's personal income exceeds \$520.

This rebate, which applies equally to a husband or a wife, is therefore extinguished when the spouse's income reaches \$1,300.

2. **YOUNG FAMILY**

\$468 reduced by 12 cents for each dollar that the taxpayer's income exceeds \$12,100.

This rebate is therefore extinguished when assessable income reaches \$16,000.

At least one child must be aged under 5 years at any time during the year, and be eligible for Family Benefit. Only one rebate per family can be claimed in a year and should be claimed by the principal earner, or the recipient of the Family Benefit if two people earn equal income.

**3. LOW INCOME FAMILY**

\$468 reduced by 12 cents for each dollar that the combined income of the family (ie the 2 persons who look after the child) exceeds \$8200.

This rebate is therefore extinguished when the income of the family reaches \$12,100.

The rebate only applies to families who have a child or children eligible for the Family Benefit. Only one rebate per family can be claimed in any one year irrespective of the size of the family, and should be claimed by the principal earner, or the recipient of the Family Benefit if two people earn equal income.

**4. HOUSEKEEPER/CHILD CARE**

The lesser of \$156 or 40% of payments made.

This rebate is allowable for the care of a dependent child (at or away from home) provided the services are deemed necessary or a housekeeper is required because of the taxpayer's disability.

**5. DEPENDENT RELATIVE**

The lesser of \$60 or 40% of contributions made.

A rebate is allowed for each relative supported, but excluding any child for whom Family Benefit is payable.

Where a taxpayer supports a separated spouse, the larger of the dependent spouse or dependent relative rebates may be claimed.

**6. DONATIONS AND SCHOOL FEES**

The lesser of \$175 or 50% of payments made.

Donations must be for a minimum of \$2 and made to approved charities within New Zealand. School fees apply to fees paid for children under 18 years of age at the start of the income year and cover fees for private schools, activity fees paid to State schools, fees paid to schools for the handicapped or disabled, or fees paid to registered Pre-School organisations.

Receipts must be furnished in support of the rebate claimed.

**7. BACK PAY**

6 cents for every dollar of back pay received which relates to previous income years.

8. OVERTIME

10 cents per hour of paid overtime.

9. SHIFT WORK

40 cents for each qualifying shift worked.

10. RATES ON HOME

The lesser of \$25 or the amount of rates paid.

This rebate is available to individuals for rates paid on an owner-occupied home which is the principal residence of the taxpayer.

11. INTEREST ON HOME VENDOR MORTGAGE

The lesser of \$500 or 20% of such interest received.

This rebate applies to individuals who receive interest on a mortgage in respect of money left in on the sale of a home. The mortgage must be guaranteed by the Housing Corporation, and approved by them for this rebate.

12. HOME, FARM AND FISHING VESSEL OWNERSHIP SAVINGS.

45 cents for every dollar saved during the year.

These special accounts are run by the Savings Banks. Maximum rebates per year are:

- (a) Home Account – \$ 900 (\$2,000 savings)
- (b) Farm account – \$2,250 (\$5,000 savings)
- (c) Fishing Vessel account – \$2,250 (\$5,000 savings)

Maximum savings in any one account are:

- (a) Home account – \$10,250
- (b) Farm account – \$60,000
- (c) Fishing Vessel account – \$60,000

If savings are withdrawn and used for purposes other than that specified, the tax rebate must be repaid i.e. withdrawal tax of 45%.

13. Other rebates are available for more than the standard number of pay periods in one year, visiting experts, war pensioners, and for hardship.

14. REBATE FOR CHILD TAXPAYERS.

\$78 per year.

To qualify for this rebate the child taxpayer must be aged

under 15 or attended a school at any time during the income year, and the family benefit must have been payable in respect of that child taxpayer.

This rebate allows the child to effectively earn \$538 before becoming liable to income tax.

15. Visitors from overseas who work in New Zealand are allowed a proportion (based on time worked here) of the following rebates:

Dependent Spouse

Dependent Relative

Young Family

Low Income Family

Housekeeper

Child Taxpayers

#### 6.4.7 Example

A married man with 2 children aged 6 and 7 derived the following income during the year ended 31 March 1981.

Salary	\$10,000
Mortgage interest	264
Savings Bank interest	220
Dividends from N.Z. companies	330

His wife earned \$600 in the same year, and he paid:

Life assurance premiums	\$ 480
Superannuation (subsidised scheme)	325
Donation to Red Cross	30
Activity fees to school	20
Rates for own home	152

Tax deductions from his salary as per his IR 12 were \$1,650 and provisional tax paid on other income was \$40.

His income tax assessment would be as follows:

Salary	\$10,000	
less Standard Deduction	<u>52</u>	
		\$9,948
Mortgage Interest	264	
Savings Bank Interest	220	
Dividends	<u>330</u>	
	814	
less exemption	<u>200</u>	
		614
ASSESSABLE INCOME		<u>\$9,334</u>
less Special Exemptions		
Life Assurance Premiums	480	
Superannuation contributions	<u>325</u>	
	<u>\$805</u>	
Exemption allowable		<u>800</u>
TAXABLE INCOME		<u>\$8,534</u>
Income tax on \$8,534		\$1,961.90
less rebates:		
(a) Wife (\$1,300-600) x 0.20	\$140.00	
(b) Low income family.	260.00	
Combined income = \$9,934		
(\$9,334 + \$600)		
Rebate is (\$12,100 - \$9,934) x 0.12	\$259.92	
(c) Donations and school fees.		
Lesser of (i) \$175 or (ii) 50% of (\$30 + 20)	25.00	
(d) Rates		
Lesser of (i) \$25		
or (ii) \$152	<u>25.00</u>	
Total rebates		<u>\$449.92</u>
INCOME TAX PAYABLE		\$1,511.98
less tax already paid:		
P.A.Y.E. tax deductions	\$1,650.00	
Provisional tax paid	<u>40.00</u>	\$1,690.00
REFUND DUE		<u>\$178.02</u>

## 6.5 TAXATION OF COMPANIES

A limited liability company pays tax in its own right (i.e. it is separate and distinct from its shareholders), and the basic rate of tax on income derived by New Zealand resident companies is 45 cents for every dollar. The basic rate for non-resident companies is 50 cents for every dollar of income. Taxable income generally means business profits (in the normal accounting sense), less any taxation incentives applicable to that company. Dividends received by a company are generally regarded as exempt income, and companies are not entitled to tax rebates or special exemptions.

Companies are provisional taxpayers: they generally pay provisional tax in two instalments, and may be required to pay terminal tax. (For further details refer to section 6.2.3. – The Provisional Tax System, and Appendix I– Dates for payment of provisional and terminal tax).

The IR 4 Company Return of Income is usually due by 7 September following the company balance date, although if the company balances between 8 June and the following 30 September (inclusive), the return is due two months after balance date. Returns must be filed, including accounts, irrespective of whether a profit or loss is disclosed for the year.

Losses can be carried forward and deducted from the first available assessable incomes until extinguished provided 40% of the shareholding is held by or on behalf of the same persons at the beginning and end of each year. This requirement is relaxed in the case of public companies listed on the Stock Exchange but not where one person or group of “associated” persons acquires more than 10% of the shareholding.

Special considerations apply where relatives (i.e. associated persons) 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.

## 6.6 TAXATION OF PARTNERSHIPS

### 6.6.1 Overview

A partnership is not a taxpaying entity and is not itself liable to pay tax. However, the partners must file a separate “partnership” return of income (IR 3) covering their joint income (irrespective of profit or loss) and detailing the distribution amongst the various partners. The partnership accounts or the

supplementary return forms IR 3B or IR 3F should also be furnished.

Each partner is liable for tax as an individual and must add their share of the net partnership income to their income from other sources. Income from a partnership does preserve its identity in the hands of the recipient partners as interest and dividends (up to \$200 exempt), and ordinary assessable income. (Refer to section 6.4. Taxation of Individuals). Partnership losses should always be allocated to the constituent partners and cannot be carried forward by the partnership itself.

### 6.6.2 Family Partnerships

The use of family partnerships, often including trusts for infants, has long been a common device for splitting income among family members, thereby avoiding the high tax brackets. To counteract loss of revenue through this type of income splitting, the Income Tax Act lays down five requirements before a family partnership is deemed to be acceptable for taxation purposes.

- (a) There must be a contract of partnership in writing or by deed signed by all parties;
- (b) No partner can be under 20 years of age;
- (c) The agreement must bind the partners for at least three years;
- (d) Each partner must have real and effective control of their remuneration; and
- (e) No part of the remuneration or share of profits would be regarded as a gift and thereby subject to Gift Duty.

In determining whether a gift exists, consideration would be given to the following factors, amongst others:-

- (i) The nature and amount of the capital contributions or the value of the services performed.
- (ii) The proportions of such contributions to the remuneration or share of profit between partners.
- (iii) Whether the arrangement would be acceptable under normal commercial standards; etc.

Where the above five 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.

## 6.7 TAXATION OF 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. It must be emphasised, however, that 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.

### 6.7.1 Classification of Trusts

The Income Tax Act distinguishes between two types of trust:

(a) Specified Trusts

Generally speaking, these are trusts created during the lifetime of the settlor (i.e. an inter vivos trust) on or after 19 July 1968; and

(b) Other Trusts.

### 6.7.2 Liability for Income Tax

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” (see section 6.7.3. below), the taxation liability is determined by providing for the special exemptions and rebates which the beneficiary himself is eligible for. Obviously, if the beneficiary derives additional income a personal return of income should be filed incorporating his trust income and the tax already paid by the trustee on his behalf.

“Trustees’ Income” is any income other than Beneficiaries’ Income, and the trustee is assessed for tax on the income in one sum as follows:

(i) Specified Trusts:-

Taxed at 35 cents per dollar of taxable income or at the basic rates applicable to individuals, whichever is the greater. No special exemptions are granted,



(ii) Other Trusts:-

Taxed at the basic rates applicable to individuals after deducting a special exemption of \$100.

Tax on the income of a trust will normally be paid on a provisional basis, the return of income for the trust (IR 5A) being 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.

### 6.7.3 Classification of Income

Income derived by a trustee during an income year is classified as Beneficiaries Income for the same year under any of the following conditions:

- (a) Where an adult beneficiary of any trust is entitled to income under a specific provision of the trust deed or by the discretionary act of the trustee: or
- (b) Where an under-age beneficiary of an 'other' trust is entitled to income under a specific provision of the trust: or
- (c) Where the trustee pays or applies 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 capacity as trustee of that trust, provided that if the beneficiary of a specified trust is under-age, the income must remain out of the trust or any business in which the trust is interested whilst the beneficiary is under-age.

Any other income not coming within the above is then Trustees' Income.

It should be noted that the test for Beneficiaries' Income stresses the physical parting of possession and/or control over the funds.

## 6.8 TAXATION OF FARMERS

### 6.8.1 Liability for Income Tax

All farmers are liable for income tax as provisional taxpayers. The appropriate return form depends on the entity involved:

- |            |  |
|------------|--|
| Individual | – IR 3 plus either completed accounts<br>or the supplementary return form<br>IR 3F |
| Companies  | – IR 4   |
| Trusts     | – IR 5A  |

Generally, provisional tax is paid in two instalments (for payment dates see Appendix I), although a farmer may pay in three equal instalments, the last days for payment being 7 September, 7 March and 7 June, in that order, provided all the following conditions are met:

- (i) Balance date is between 1 April and 30 September (inclusive);
- (ii) More than half of the assessable income regularly comes from farming or an agricultural business; and
- (iii) Half or more of the gross cash income is regularly received after 7 February.

Certain features of the taxation system apply specifically to agriculture because of its place in the economy. These provisions are intended to encourage capital investment, development, increased stock numbers, etc., as well as providing facilities to smooth the large fluctuations in income which are inherent in the agricultural industry.

The department accepts that any of the following are carrying on their activities for farming or agricultural purposes:

- livestock farmers (eg sheep, cattle, deer, pigs, goats, horses).
- dairy farmers including sharemilkers.
- grain and seed growers
- apiarists
- poultry farmers
- orchardists
- horticulturists (eg market gardeners, tomato growers, berry fruit growers, flower growers).
- viticulturists

The Department does not regard dealing in farming stock as an agricultural or farming business.

### 6.8.2 Farm Income

**The assessable income of a farmer will include the following:**

- (i) Business profits from trading operations - i.e. the generally accepted accounting definition of profit, being **SALES less PURCHASES, plus or minus CHANGES IN VALUE OF STOCK ON HAND** at the end of the year (increases are added, decreases are subtracted).
- (ii) The value of meat and produce consumed domestically.
- (iii) Income from contracting.

- (iv) Rents received from leasing farm property, including grazing fees.
- (v) Receipts from the hire of livestock and plant, including stud fees.
- (vi) Insurance proceeds in respect of the loss of crops or stock.
- (vii) Prize money from A & P shows, less entrance fees and other related expenses.
- (viii) Compensation for stock condemned.
- (ix) Refunds from Income Equalisation scheme.
- (x) Decreases in the number of livestock held at Nil Value (See section 6.8.4. Valuation of Livestock).
- (xi) Net Income from the sale of timber.  
Provisions relating to farm forestry are contained in section 6.8.8.

### 6.8.3 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 domestic expenses, electricity and car depreciation should also be regarded as drawings.

In addition to the appropriate business expenses, farm expenses will include the following:-

- (i) Legal expenses incurred in arranging finance for the purchase of, or in arranging for the lease or renewal of a lease of, income producing assets.
- (ii) Legal expenses incurred in borrowing or renewing loan moneys employed as capital in the production of assessable income.
- (iii) Telephone (excluding personal toll calls).
- (iv) Proportion of car expenses (including depreciation) applicable to business use, on the basis of:
  - (a) Half, where farmer has both car and truck. (It should be noted that the costs associated with the truck are deductible in full).
  - (b) Three-quarters, where farmer has a car only.
- (v) Rations provided to employees: The actual cost is deductible if adequate records are kept, otherwise \$2 per employee per week.
- (vi) Lodgings provided to employees – Depreciation and out-goings (e.g. repairs) relating to the lodgings are deductible.  
Note that the value of non-cash benefits such as food and

lodgings provided to an employee is regarded as assessable and should be added to wages and tax deducted accordingly.

- (vii) Depreciation – see section 6.8.5 below.
- (viii) One quarter of total expenditure on the farm dwelling if situated on the farm – e.g. repairs and maintenance, depreciation, domestic power etc.
- (ix) Repairs and Maintenance costs on sheep yards, sheep dips and fencing. Depreciation may NOT be claimed on these assets, but the outlay costs on these items are usually claimed as development expenditure.
- (x) Cost of papers and magazines containing farming information.
- (xi) Wages paid to wife.

- (a) Payments for cooking duties in respect of permanent employees (including adult members of the farmer's family employed full-time) will be allowed on the basis of –

- 1 permanent employee – \$12 per week

- 2 permanent employees – \$18 per week

- and thereafter an additional \$3 per employee per week.

It is necessary that the requirements for the payment of wages from husband to wife are met i.e. declaration that the wages are for genuine services, IR 12 completed, regular cash payments, tax and Accident Compensation levy deducted and accounted for.

This payment is in addition to any special arrangements made in respect of seasonal or part-time employees, e.g. shearers.

- (b) Payments for work performed on, or on behalf of, the farm may be deductible if the Commissioner of Inland Revenue has given his 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 (or at least as soon as possible after) the wife's employment commences.

(xii) Cost of transporting employees' children to school. The cost of transporting the farmer's own children is regarded as private and therefore not deductible.

(xiii) 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 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 30 June each year, based on the amount of leviable earnings paid to employees during the year ended 31 March. Levy rates vary according to the industrial activity of the employer.

For example:

Industrial Activity	Class No	Levy Per \$100
Agricultural Contracting (Fencing, sheep dipping, spraying, harvesting, haymaking, baling, hedge cutting)	104	1.70
Agricultural Contracting (Scrub cutting, grubbing, burning, stumping and clearing)	124	3.15
Shearing	105	1.75
Cereal growing	101	1.20
Drainage or Sewer System	104	1.70
Construction on agricultural land		
Non-mechanised	104	1.70
mechanised	507	1.90
Eel Farming	130	1.75
Fencing-erecting and repairing	104	1.70
General Farming	100	1.70
Fish Farming	130	1.75
Hop Growing	101	1.20
Market Gardening	101	1.20
Orchards-including berry fruit	101	1.20
Poultry Farming	101	1.20

Spraying- agricultural excluding aircraft	104	1.70
Stock Buying	831	0.60
Tobacco Growing	101	1.20

### LEVIES ON THE SELF-EMPLOYED

Generally, all farm owners (whether owner/operators or partnerships) and sharemilkers are regarded as self-employed for accident compensation purposes. The levy payable is 1.07% of the years taxable business income, with a maximum of \$200.30 and a minimum of \$36 (\$10 for part-time self-employed). Further considerations apply where dual earnings are received (i.e. a person is both self-employed and an employee). This levy must be paid by 7th March each year.

The above is a general introduction only, and queries regarding levies should be directed to the Inland Revenue Department. Queries regarding compensation claims should be directed to the State Insurance offices except in Dunedin where queries should be directed to the Accident Compensation Commission itself.

#### (xiv) Energy Conservation Expenditure.

The total cost of acquiring and installing new plant, machinery or equipment for the purpose of energy conservation may be written off in the year the expenditure is incurred. (This excludes expenditure of a private nature such as to the family residence.) In addition, the cost of improving or altering plant, as insulating such assets or buildings for the purposes of energy conservation will also qualify for the 100% first year write-off.

(xv) Various incentives, income levelling schemes etc. (see below).

## 6.8.4. Valuation of Trading Stock

### 1. General Principles

Trading stock includes any thing produced or manufacture; anything acquired or purchased for purposes of manufacture, sale or exchange; livestock; but excludes land.

In the case of any **business** owned or carried on by the taxpayer, the value of the trading stock at the beginning and at the end of every income year must be taken into

account when calculating assessable income. Where the value of the trading stock at the end of the income year has increased over the value at the beginning, the amount of the increase is to be included in assessable income for that year. Conversely, where the value at the end of the year has decreased compared to the value at the beginning, the amount of the decrease is an allowable deduction against assessable income for that income year.

In general, the taxpayer has the option of valuing his trading stock at:

- (i) cost price or;
- (ii) market selling value; or
- (iii) replacement price.

However, the Commissioner of Inland Revenue may approve a lower valuation for trading stock other than livestock where obsolescence or other special considerations materially affect its value.

## **2. 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.

## **3. Growing Crops, Fruit and Vegetables**

Crops, fruit and vegetables, standing timber 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.

## **4. Valuation of Livestock**

Livestock is regarded as ordinary trading stock and the taxpayer has the following options:

1. Cost price, market selling value, or replacement price.

### **2. Standard Value**

A “standard value” is the value selected by the farmer and approved by the Inland Revenue Department, for each particular class of livestock. This value is maintained over time, irrespective of actual cost or subsequent market

value. Generally the market value will greatly exceed standard value, but the farmer does not have to revalue or adopt market value where he continues his farming operation.

Standard values may be altered but only with the approval of the Commissioner. In practice, however, a note attached to the accounts is sufficient where the increase is to an amount less than current market value.

It should be noted that the Inland Revenue Department has now established minimum standard values as follows:

- Sheep, mixed \$6
- Cattle, dairy and beef
  - rising one year \$30
  - others \$70
- Deer

	Red/Wapiti	Fallow/Sika
All female animals	\$200	\$100
All male animals	\$150	\$ 75

(The previous approved values were hinds \$150, stags \$100, and yearlings \$50).

These values apply to persons who commenced farming on or after 1 July 1980 for sheep and cattle, or 25 October 1979 for deer. It is proposed to review these standard values every three years.

Standard values are not available to dealers in livestock or for high priced stud stock (which should be valued at purchase price, with annual revaluations downwards over its useful life).

In addition:

- (a) Where new or additional property and livestock are purchased, the value of livestock may be progressively written down to standard value over a period of up to three years. A farmer is not bound to immediately adopt standard values. He may adopt cost price, market value or replacement value for a period not exceeding three years, and then elect to adopt standard values. However, once the write-down commences, it must take place over no more than three consecutive years.



- (b) Reliefs are available by allowing the spreading of resultant large incomes either forward or backward over three years in the event of a sale occasioned by death, retirement, adverse events, expiry of lease etc.
- (c) For income tax purposes, gifts of livestock to children who are at least 18 years old and who use those stock in a farming operation, may be made at a reasonable standard value i.e. not unduly low. Note, however, that if gift duty is payable it is assessed on market value less consideration paid (if any).

### 3. Nil Value Scheme

The nil value scheme is an incentive scheme aimed at deferring the tax liability on increases in certain livestock numbers over a basic number until the stock is sold or otherwise disposed of, or revalued. The scheme is optional and applies to any taxpayer carrying on a farming business on land in New Zealand.

Main features of the scheme are as follows:

- (a) Applies only to cattle, sheep pigs, deer (from 1978 income year) and goats (from 1981 income year).
- (b) The “basic number” of the herd or flock is the greater number of a particular class of stock held in the two income years prior to the year when the farmer elects to join the scheme.
- (c) At the end of each income year, all or part of the excess over the basic number in respect of each class may be valued at nil.
- (d) Any decrease in livestock numbers below the basic number of one class can be offset against any increase over the basic number in the other classes on the basis of “specified equivalents”, defined as  

$$1 \text{ head of cattle} = 6 \text{ sheep} = 4 \text{ pigs} = 4 \text{ deer} = 6 \text{ goats}$$

All categories within each class of livestock are regarded as equal e.g. ewes, lambs, wethers etc. all have the same equivalent rating.
- (e) The Commissioner has power to make an equitable adjustment where there is a change in the basic nature of the farming operation, or an adverse event affects the farm, or other special circumstance.

### Example:

A sheep and cattle farmer with a balance date of 30th June, elects to join the scheme at 1 July 1976. His year of first election is therefore the year ended 30 June 1977.

His basic number is established as follows:

	Stock on Hand		Basic Number	Standard Value
	30/6/75	30/6/76		
Sheep	3,100	4,000	4,000	\$ 5
Cattle	160	140	160	\$50

#### Year Ended 30/6/77

Closing Stock: Sheep 4,300, Cattle 160

Valued as:	Sheep – basic number at s.v.	4,000 @ \$5
	increase over basic number	300 @ Nil
	Cattle – basic number at s.v.	160 @ \$50

#### Year Ended 30/6/78

Closing Stock: Sheep 4,500, Cattle 120

The decrease in cattle below the basic number in this year will necessitate a reduction to the 'increase' in sheep numbers closing stock, the reduction being made at the specified equivalent of 1 head of cattle = 6 sheep.

	Sheep numbers	4,500	
	less decrease in cattle at specified equivalent 40 cattle x 6	<u>240</u>	Valued at s.v.
		4,260	
	less basic number	<u>4,000</u>	Valued at s.v.
	Net Increase over basic number	<u><u>260</u></u>	Valued at Nil
Valued as:	Sheep – number at s.v.	4,240 @ \$5	
	increase over basic number	260 @ Nil	
	Cattle – number at s.v.	120 @ \$50	

Year Ended 30/6/79

Closing Stock: Sheep 5,000, Cattle 240

Valued as:	Sheep – basic number at s.v.	4,000 @ \$5
	increase over basic number	1,000 @ Nil
	Cattle – basic number at s.v.	160 @ \$50
	increase over basic number	80 @ Nil

If the farmer wished to value part of the increase over Basic Number at Nil Value, the number valued at standard value is the Basic Number plus the additional stock not valued at Nil. The Basic Number, however, is not altered.

### 6.8.5 Depreciation

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), and under no circumstances can depreciation extend beyond cost. 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).

There are two basic types of depreciation:

#### 1. FIRST YEAR DEPRECIATION ALLOWANCES

A single first year allowance will be deductible in the year in which certain assets are first used in the production of assessable income, and include:-

- |     |  |     |
|-----|--|-----|
| (a) | New or used plant and machinery  | 25% |
| (b) | New farm buildings, extensions and capital alterations (not dwellings) | 20% |
|     | (40% prior to 22 June 1979)  |     |
| (c) | Employee accommodation   | 20% |
|     | (22% prior to 22 June 1979)  |     |

#### 2. ORDINARY DEPRECIATION ALLOWANCES

In the second and subsequent years, ordinary depreciation will be allowed as a deduction from assessable income provided adequate records are maintained. Depreciation is usually calculated as a fixed percentage of either the cost price of the asset (CP method) or the diminishing

book value (DV method), and the Inland Revenue Department specifies both the rate and method of depreciation. These schedule rates are the maximum allowable for income tax purposes, although a lesser rate may be claimed if desired.

Selected examples of Schedule Rates  
of Ordinary Depreciation.

ITEM	%	
Barns – loafing and wintering	10	CP
Bridges – wooden	2½	CP
other	2	CP
Buildings – reinforced concrete	1	CP
brick, stone, concrete	2	CP
wooden	2½	CP
“temporary buildings”	10	DV
Chainsaws	50	DV
Crates – sheep and cattle	15	DV
Dams and Reservoirs – reinforced concrete	1	CP
other		Maintenance
Dips – shower type	10	DV
Effluent disposal units on farms	10	DV
		or Development
Electric Fences	10	DV
Ensilage Pits – concrete walls with sliding roof	10	DV
Feeding out units for cattle	4	CP
Freezers – for dog meat	10	DV
Glasshouses – wooden framed	5	CP
metal framed	3	CP
P.V.C. Tunnel House	7½	CP
		and Maintenance
Irrigation plant	10	DV
		or Development
Milking Sheds – built before 1/4/66	4	CP
built after 1/4/66	10	CP
conversion to herringbone	10	CP
herringbone or rotary	10	CP
Motor Vehicles, trucks, bikes and scooters	20	DV
Pig Houses – all types	10	CP

Plant and machinery – motorised	20	DV
non-motorised	10	DV
Poultry		
Battery type cages	10	DV
Colony houses with wooden frames, iron roofs and netting sides and bases	10	DV
Fowl houses		
Steel framed	2½	CP
Wooden framed	5	CP
Silos – erected on farm	10	DV
Slaughterhouses on farms –		
concrete	5	CP
timber and concrete	6	CP
timber	10	CP
Tractor safety frames	100	CP
Trailers		At the rate of the towing vehicle.

#### 6.8.5 (i) Depreciation of Cars

For tax purposes, the depreciable cost of motorcars and station-wagons (excluding utility vehicles e.g. landrover, and vehicles of a “specialised nature” e.g. hearse) has been limited to:

\$8,000 if purchased after 31 March 1978

\$7,000 if purchased between 31 March 1977  
and 31st March 1978.

\$6,000 if purchased between 23 October 1974  
and 31st March 1977.

Actual cost if purchased before 23 October 1974.

#### 6.8.5. (ii) Beekeepers.

The cost of frames for supers and hives of a new apiarist or for additional supers and hives of an established apiarist is capital expenditure and not deductible. Ordinary depreciation is not allowable, but first year depreciation may be claimed. However, the full cost of repairs and the cost of replacement frames is a tax-deductible expense.

#### 6.8.5. (iii) Assets Acquired During the Income Year:

- (a) BUILDINGS – Depreciation should be claimed on the cost of the building only (excluding land) for each whole or part month used.

- (b) **OTHER ASSETS** – A full years depreciation is allowable if the asset was used for more than 6 months of the year or more than half a season if used for seasonal work; otherwise half of the years depreciation is allowable.

#### **6.8.5. (iv) Assets Sold During the Income Year.**

- (a) **AT A LOSS** (i.e. sales price is less than book value).
  - (i) **Buildings:** Any loss on sale is not tax deductible. However, if no depreciation has been previously claimed, then accumulated depreciation at schedule rates can be claimed in the year of sale.
  - (ii) **Other Assets:** Any loss on sale is deductible in the year of sale. If no depreciation has been previously claimed, the total loss (i.e. cost less sales price) can be claimed when the asset is sold.
- (b) **AT A PROFIT** (i.e. sales price exceeds book value).
  - (i) **Buildings:** Ordinary depreciation recovered is not assessable, but if owned for less than 10 years, any write-back for tax purposes is merely to the extent that the disposal proceeds over and above book value represents a recovery of special, additional, or first year depreciation.
  - (ii) **Other Assets:** Any depreciation recovered is assessable in the year of sale, although it can be used to offset (i.e. reduce) the cost of a replacement asset. If the depreciation recovered exceeds \$1,000, the taxpayer may elect to spread the amount recovered over the year of sale and up to three years back.

It should also be remembered that any excess of disposal proceeds above cost price represents a capital gain which is not taxable.

### **6.8.6 Farming Investment Allowance**

20% of the cost of new plant and machinery used for farming or agricultural purposes may be deducted from assessable income in the year the asset is first used. (The allowance was 40% prior to 22 June 1979).

The allowance is available to lessees provided the asset qualifies for the allowance, the lease period is not less than 3 years, and both the cost price and the residual value (viz: cost less depreciation at tax rates) are specified.

The allowance is not available for cars, office equipment or any asset which is secondhand, costs less than \$500, has been claimed as development expenditure (see 6.8.7.), or where another investment allowance has been claimed for that asset.

The allowance does not affect first year or ordinary depreciation, and is in addition to depreciation claims. This means that the 20% investment allowance enables 120% of cost to be written off over the working life of the asset.

Where the asset, or an interest or share in the asset, is sold, disposed of, or ceases to be used (which includes the termination of a lease agreement) within 12 months of the date of first use, then that asset, or the portion disposed of, no longer qualifies for the investment allowance. If the allowance has already been claimed, then the tax assessment (s) involved would be amended by the Department.

The provision concerning the disposal of an interest or share in an asset is particularly important in the case of the formation, dissolution, or variation of the membership of a partnership.

## **6.8.7 Development Expenditure**

### **6.8.7. (i) Development Expenditure**

Certain expenditures incurred during an income year which normally would be regarded as capital expenditures and therefore not deductible, may be treated as a tax-deductible expense.

Such expenditure may be deferred in whole or in part and claimed at the written election of the taxpayer in the year of expenditure and over not more than nine succeeding years. The types of expenditure which qualify are:

- (a) Any expenditure incurred in any income year in:
  - (i) The eradication or extermination of animal or vegetable pests on the land;
  - (ii) The felling clearing, destruction, and removal of timber, stumps, scrub, or undergrowth on the land;
  - (iii) The destruction of weeds or plants detrimental to the land;
  - (iv) The preparation of the land for farming or agriculture including the cultivation and grassing thereof, but excluding items specified in (b) below;

- (b) Any expenditure incurred on or before 31 March 1982, in:
- (i) The draining of swamp or low-lying lands;
  - (ii) The construction of access roads or tracks to or on the land;
  - (iii) The construction of dams, stopbanks, irrigation or stream diversion channels, or other improvements for the purpose of conveying water for use on the land or for preventing or combating soil erosion;
  - (iv) The repair of flood or erosion damage;
  - (v) The sinking of bores or wells for the purpose of supplying water for use on the land;
  - (vi) The construction of aeroplane landing strips to facilitate aerial topdressing of the land;
  - (vii) 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;
  - (viii) The erection on the land of electric power lines or telephone lines;
  - (ix) The construction on the land of feeding platforms, feeding yards, plunge sheep dips, or self-feeding ensilage pits;
  - (xi) The construction on the land of supporting frames for growing crops;
  - (xi) 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.

Such expenditure incurred after 31 March 1982 may be regarded as development expenditure provided the necessary steps have been taken before that date to enter into a binding contract involving substantial expenditure as part of a development plan which has been approved by the Commissioner of Inland Revenue.

Where the taxpayer ceases to carry on business before the total amount is deducted, the taxpayer has the option of:

- (a) deducting the balance remaining in the year he ceased business, or
- (b) reapportioning the amount over the year incurred, and the other years in which he carried on the farming business.



When farming or agricultural land is sold at a profit within five years after its acquisition any development expenditure which has been allowed as a tax deduction, can be recovered. Similarly, any development expenditure allowed on assets purchased can also be recovered if the asset is sold within five years of acquisition.

#### **6.8.7. (ii) Fertiliser and Lime**

Expenditure on the purchase and application of fertiliser and/or lime may be deferred in whole or in part, and claimed at the written election of the taxpayer in the year of expenditure and over not more than four succeeding years.

#### **6.8.7 (iii) Tree Planting**

Expenditure on planting or maintaining trees which have been planted to provide shelter or to prevent erosion or otherwise for agricultural or pastoral purposes, or in erecting or maintaining fences to protect any such trees, is tax-deductible in the year the expenditure is incurred.

### **6.8.8. Farm Forestry**

#### **1. Overview**

The net profit from the sale of timber will be assessable income i.e. sale proceeds less the 'cost' of the timber. Where the actual cost is not known, the general position is as follows:

- (a) The assessable profit is the value of the timber when sold less the estimated value of the timber when the land was purchased; or
- (b) Where significant quantities of native timber are involved, the cost may be calculated as the difference in value between land with standing timber and the same land when cleared.

For income tax purposes, a sale of land with standing timber on it will be regarded as a sale of timber. Under these circumstances, the Commissioner can determine the sale price of the timber and include that value in the vendor's assessable income. (The 'cost' of that timber is an allowable deduction, however). This provision does not apply:

- (a) Where the trees were planted to provide shelter, prevent erosion, or for other agricultural purposes on the farm; or

- (b) To trees planted or maintained under a forestry encouragement agreement under the Forestry Encouragement Act 1962.

#### **Spreading the cost of timber.**

The cost of timber is ordinarily deductible in the year the timber is sold. Where income from the sale of timber is derived in two or more financial years, the total cost of that timber may be apportioned and claimed over the years of sale.

#### **Spreading income derived from timber.**

Income from farm forestry qualifies for the Farm Income Equalisation scheme (refer section 6.8.8. (i)), except where the timber sold was from trees:

- (a) planted to provide shelter or prevent erosion for an agricultural or farming business; or
- (b) planted or maintained under the Forestry Encouragement Act 1962.

when the income may be spread over the year of sale and up to four succeeding years provided the taxpayer makes written application within 12 months after the end of the year of sale.

### **2. Forestry Encouragement Loans** (Made under the Forestry Encouragement Act 1962).

Under this scheme, farmers were granted loans to meet the cost of establishing and maintaining limited areas of plantations on farms for commercial purposes. The object of these loans was to encourage the planting of woodlots on “difficult” land with a view to ensuring an adequate supply of timber for the future. The incentives offered included low interest rates and the remission of half the loan moneys where all obligations are carried out successfully.

#### **Tax implications are as follows:**

1. Loan moneys when received are not assessable.
2. Tax-deductible costs allowable are:
  - (a) Expenditures incurred in planting and maintaining trees in excess of any advance made under the agreement.
  - (b) Interest paid under the agreement.
  - (c) Repayments of principal of the loan.

Any taxpayer can claim against income from salary, wages, business or farming, the difference between the amount spent on the woodlot and the advance obtained under the loan scheme.

3. The amount of the loan written off (i.e. remitted) is not assessable income, nor is it tax deductible. However when the timber is eventually sold, the cost of timber is reduced by the amount written off.
4. Where the taxpayer has been relieved of his liability for unpaid interest and the interest has not been claimed as a tax deduction, the amount so relieved does not form part of his assessable income.

### 3. Forestry Encouragement Grants (1970)

The grants scheme has replaced the loan scheme with respect to farm woodlots under this scheme, the landholder receives a cash grant of 50% of the qualifying expenditure (which includes the labour of the landholder and his family) where trees are planted for commercial purposes in approved woodlots (Refer section 1.5).

#### Tax implications are as follows:

1. The amount received (if any) in respect of labour of the taxpayer and/or his family will be regarded as assessable income of that taxpayer for that year.
2. The amount received (if any) in respect of 'qualifying expenditure' will not be assessable income.  
Qualifying costs include:
  - (a) Expenditures incurred in planting or maintaining trees on the land or in preparing or otherwise developing the land for forestry operations: or
  - (b) Rent, rates, land tax, insurance premiums and other like expenses: or
  - (c) Interest on money borrowed for forestry business.
3. Qualifying expenditure in excess of twice the amount of the grant can be claimed for tax purposes. This excess expenditure is not tax-deductible in the year the expenditure is incurred: it must be carried forward and deducted under the "cost of forest formula" which is a means whereby the costs of establishing, managing, and developing a forest are capitalised and carried forward until final yield or clear felling begins, when they can be progressively claimed as costs against income in proportion to the area felled each year.

A forestry company has two other alternatives as well as carrying the cost forward — deduct from general income, if any, or carry forward as a loss.

Other costs not qualifying for a grant may nonetheless be tax deductible, such as:

- (a) Depreciation of assets not directly associated with management of tree crop such as administration buildings and workshops.
- (b) Repairs to and maintenance of permanent assets, including permanent roads, bridges, fences and buildings.
- (c) Capital costs of assets other than land and roading, such as machinery and equipment directly associated with management of tree crop. (Treat under “cost of forest formula”. Note that depreciation is unnecessary under this method).

The following items also represent costs, which do not qualify for the grant. Those of a capital nature will be added to the value of the appropriate asset, and may be depreciated for tax purposes (except land). Where alternative treatments may be available, the Inland Revenue Department or your accountant should be consulted. Examples of these costs are as follows:

- (a) Land, as well as legal, survey and valuation fees and mortgage expenses.
- (b) Initial consultancy fees relating to the feasibility of a forestry project.
- (c) Permanent buildings erected or purchased.
- (d) Machinery and equipment not directly associated with the management of the tree crop e.g. roading equipment.
- (e) Permanent roads and bridges. (If road formation is on a permanent access route or is to be used during the life of the crop and for successive crops, it is a capital improvement to the land).

#### 4. Conversion of ‘Loan’ to ‘Grant’

Farmers who have established woodlots under a Forestry Encouragement Loan may convert to the Forestry Encouragement Grants Scheme. When converted the following provisions apply:

- (a) The outstanding balance of the loan is written off. It is not regarded as assessable income, nor is it tax-deductible. However, when the timber is eventually

sold, the cost of timber is reduced by the amount written off.

- (b) Accumulated interest on the loan is written off.
  - (i) Interest previously claimed as a tax deduction is added back to assessable income.
  - (ii) Unpaid interest not claimed as a tax deduction is written off. it is not regarded as assessable income nor is it tax-deductible.
- (c) Future expenditure on the woodlot qualifies for the cash grant under the normal provisions of the Grants scheme.

### 6.8.9 Income Levelling Schemes

Several schemes are available to taxpayers who derive income from agriculture which may serve to dampen the fluctuations inherent in farm incomes and subsequent taxation payments.

#### 6.8.9 (i) Farm Income Equalisation Scheme

The scheme allows a farmer to smooth his income from year to year by permitting him to reduce his assessable income by the amounts which he deposits with the Inland Revenue Department. These deposits are retained in the Farm 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.

- (i) 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 with the shorter of:
  - 6 months after balance date; or
  - 1 month after the due date for filing the return of income.
- (ii) 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).
- (iii) 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.

- (iv) Generally no deposit can be made in a year when the farmer voluntarily withdraws funds from his reserve account.
- (v) 3% interest is paid on deposits held from 1/4/77 (except those withdrawn within one year), and credited to the appropriate deposit.

#### **Refunds.**

- (i) Compulsory refunds are made if a deposit reaches the maximum term of five years, and voluntary refunds (withdrawals) can be made upon the taxpayers written application.
- (ii) 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.
- (iii) A refund will not attract more tax than the deposit saved.
- (iv) Refunds are made from the oldest deposits first.
- (v) The minimum refund is \$200 unless the account balance is smaller; the maximum is the account balance.
- (vi) Special rules apply where the refund is due to the retirement, death, or bankruptcy of the farmer.

#### **6.8.9. (ii) Deferral of Expenditures on Development and Fertiliser and lime.**

– refer to section 6.8.7.

#### **6.8.9. (iii) Nil Value of Livestock**

– refer to section 6.8.4.

#### **6.8.9. (iv) Livestock Incentive Scheme**

The tax option provides limited flexibility for the smoothing of income – refer to Section 1 of this Manual.

#### **6.8.9. (v) Estimates of Provisional Income**

A provisional taxpayer can estimate his provisional income and pay provisional tax accordingly. Re-estimates can be made upto the due date of the last instalment of provisional tax – refer to Section 6.2.

## 6.9 HORTICULTURE

The following provisions relate specifically to horticulture, but readers should also familiarise themselves with the general farming provisions.

1. 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.
2. Buildings are capital expenditure and subject to depreciation allowances as for a farm (refer section 6.8.5.)

i.e. New farm buildings and	First year
employee accommodation	and ordinary depreciation
Taxpayer's dwelling	$\frac{1}{4}$ ordinary depreciation
3. Shelter belts.  
The cost of planting and maintaining shelter trees is tax deductible (refer section 6.8.7. (iii) )
4. **Development expenditure.**  
The cost of preparing land for agricultural purposes, including the cost of original fencing, is tax deductible as development expenditure (refer section 6.8.7. (i) ). Note that this applies to the preparation of the land only. Thus the cost of fruit trees and of planting them would be capital expenditure of a fruitgrower as it is not regarded as preparation of the land, but rather is part of the operation of fruit growing.
5. 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., until the trees reach fruit bearing age.
6. 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.
7. 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 (refer section 6.8.4.)
8. Horticulturists qualify for the Farm Income Equalisation Scheme (refer section 6.8.9. (i)) and the Farming Investment Allowance (refer section 6.8.6.)

## 9. Schedule Rates of Depreciation

ITEM	%
Agricultural plant, and equipment including tractor drawn implements.	10 DV
Self-propelled equipment	20 DV
Cloches	Replacement or Annual Revaluation or Standard Value
Irrigation/Frost protection plant - pumping unit, sprinklers, standards and pipelines.	10 DV or Development
Glass houses - wooden framed	5 CP
metal framed	3 CP
Hop frames	Replacement or Annual Revaluation or Standard Value or Development
Hop kilns	15 DV
Plastic pots for tomato growing	Standard Value (20c each)
P.V.C. Tunnel houses	7½ CP plus maintenance
Spray plant (orchardists)	20 DV
Self propelled and air-blast units	
Others	10 DV
Tomatoes-structure for shading plants	5 CP
Trickle irrigation equipment in glasshouses.	25 DV

## 6.10 FISHING INDUSTRY

The following provisions relate specifically to the fishing industry but readers should also familiarise themselves with the previous sections.

In general "fish" includes shellfish and crustaceans.

### 6.10.1. 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).

## 6.10.2 Depreciation

### 1. First Year Depreciation.

Allowances available to the fishing industry include:

- |  |     |
|--|-----|
| (a) New or used plant and machinery  | 25% |
| (b) New buildings or building improvements<br>required for fish export hygiene purposes. | 30% |
| (c) Employee Accommodation   | 20% |

### 2. Ordinary Depreciation

In addition to the relevant items specified in section 6.8.5., the following schedule rates may apply.

ITEM	%
Cool stores and freezing chambers	3 CP
Buildings	
Plant	10 DV
Fishing Vessels	10 DV
Registered Hull, including fixed gear and refrigeration rooms.	
Deck machinery, winches and motors	15 DV
Main engine	20 DV
Fish Processing Buildings	4 CP
Fish Processing Plant	15 DV
Wooden fish boxes and plastic fish containers.	Replacement only or Standard Value or Annual Revaluation
Radio-Receivers	20 DV
Telephones	20 DV
Testing equipment	20 DV
Transmitters	20 DV

### 3. Additional Depreciation on Certain Capital Expenditure on Fishing Boats.

Capital expenditure arising from compulsory surveys of fishing boats carried out by the Marine Department may be written off at the rate of 25% of the expenditure in the year incurred and

acquiring, installing or extending equipment or machinery for use in a fishing boat.

It is necessary that the taxpayer keeps full and satisfactory accounts.

### **6.10.3 Fishing Investment Allowance.**

40% of the cost of new fishing boats (including a small boat belonging to a fishing boat), new plant and machinery permanently on a fishing boat, or new plant and machinery used in rock oyster farming, mussel farming, or fresh water fish farming, may be deducted from assessable income in the year the asset is first used. Expenditure on converting or making structural alterations to a fishing boat to enable it to be used or continue to be used as a fishing boat also qualifies.

The allowance is available to lessees provided the asset qualifies for the allowance, the lease period is not less than 3 years, and both the cost price and the residual value (viz: cost less depreciation at tax rates) are specified.

The allowance is not available for road vehicles, buildings, wharves, jetties and shore installations; office equipment; nets, baskets, ropes, buoys etc; containers, assets costing less than \$500: any asset which is secondhand; where the expenditure has been claimed as development expenditure; or where another investment allowance has been claimed for that asset.

The allowance does not affect first year or ordinary depreciation and is in addition to depreciation claims.

### **6.10.4. Development Expenditure - Fish Farming**

Certain capital expenditure by rock oyster or mussel farmers or freshwater fish farmers may be claimed as a tax deduction if incurred prior to 31 March 1981. Such expenditure 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 nine succeeding years. The types of expenditure which qualify are:

#### **(a) Rock Oyster Farming**

- (i) Acquisition and preparation of spatting sticks;
- (ii) Construction and erection of posts, rails, or other structures for the holding of spatting sticks during spat catching and maturing;
- (iii) Construction of fences (including breakwater fences).

#### **(b) Mussel Farming**

- (i) Acquisition, preparation and mooring of pontoons, rafts, or other floating structures for collecting spat;
- (ii) Acquisition, mooring and outfitting of moored floating platforms from which the collected spat is suspended for subsequent growth;
- (iii) Collecting and depositing of shell or other suitable material on the sea bed to create spatting surfaces.
- (iv) Acquiring, outfitting and mooring of the special long lines on which mussels are cultivated.

#### **(c) Freshwater Fish Farming**

- (i) Ground testing and drilling of water bores;
- (ii) The draining of land and the excavating of sites for ponds tanks, and races;
- (iii) The construction of races, sluices, ponds settling ponds, and tanks of impervious materials to conduct and contain water;
- (iv) The supply and installation of pipes for water reticulation;
- (v) The construction of walls, embankments, walkways, service paths, and access paths;
- (vi) The supply and installation of baffles and screens for the containing or excluding of fish;
- (vii) The construction of fencing on the fish farm;
- (viii) The construction of effluent ponds and channels.

All provisions relating to deductibility of farm development expenditure apply similarly to this expenditure, including the position on termination of the qualifying period where the taxpayer has embarked on an approved “development plan” before that date, as well as recovery of developmental allowed if the area is sold within five years. (Refer section 6.8.7.)

### **6.10.5 Income Equalisation Scheme**

Taxpayers engaged in the business of fishing are able to make deposits under the farm income equalisation scheme, and for this purpose “fishing” includes rock oyster farming, mussel farming, and freshwater fish farming. For details, refer to section 6.8.9. (i).

## 6.11 EXPORT INCENTIVES

The following section outlines the major incentives which could apply to primary producers who are involved in exporting. For reasons of brevity, only selected aspects have been included, and care must be exercised when applying these guidelines to any particular circumstance. Your accountant or the appropriate authority should be consulted regarding queries.

The following table summarises the previous export incentives:

- Increased exports incentive deduction.  
Terminates on 31 March 1983, although exporters may irrevocably adopt the export performance incentive for qualifying goods before that date.
- New markets exports incentive.  
Terminates on 31 March 1981, although exporters may irrevocably adopt the export performance incentive for qualifying goods before that date.
- Exports incentive schemes for qualifying services and/or projects.  
Terminated on 31 March 1980, and replaced by the tax credit schemes for qualifying services and/or projects.
- Export-market development expenditure - (ordinary claim).  
Terminated on 31 March 1980, and replaced by the tax credit scheme for export-market development incentive.
- Export-market development activities - (self-employed persons).  
Terminated on 31 March 1980, and replaced by the tax credit scheme for export-market development activities for self-employed persons.

The following summarises the tax credit export performance incentives which have been operative since 1 April 1980. All of these incentives currently terminate on 31 March 1985.

- Export performance incentive for qualifying goods.
- Export performance incentive for qualifying services and/or projects.
- Export-market development incentive.
- Export-market development incentive for self-employed taxpayers.

### 6.11.1 Increased Exports Incentive

The increased exports incentive is intended to encourage the exporting of certain goods (other than the traditional basic primary products) by allowing a tax deduction based on the value of the increased export sales made in an income year up to the terminating date of 31 March 1983.

The amount of the deduction is the greater of:

- (i) 25% of the increase in export sales; or
- (ii) an amount calculated as  $\frac{X}{Y} \times Z$

where      “X” is the value of export sales for the current year.  
              “Y” is the value of export sales for the preceding year.  
              “Z” is 25% of the previous years increase in export sales.

The “increase in export sales” for an income year is the excess of the value of the taxpayer’s export sales in that income year over the average annual exports in his “base period”. The base period is the first three years of the seven income years immediately preceding the income year under consideration.

The deduction may be claimed by any “exporter” or “export merchant” of “qualifying goods” except a co-operative dairy company, a co-operative milk marketing company, a co-operative pig marketing company, or a mineral or petroleum mining company.

An “exporter” is a manufacturer, producer or processor of qualifying goods who must have

- (a) exported the goods from New Zealand; and
- (b) sold or otherwise disposed of the goods to an overseas purchaser; and
- (c) been the owner of the goods at the time of the sale or disposal.

He can engage a commission agent to export the goods on his behalf so long as he remains the owner of the goods up to the point of sale to the overseas purchaser; but if the goods are sold or otherwise disposed of to the agent then it is the agent and not the manufacturer who can claim the incentive deduction.

An “export merchant” is the person or firm that:

- (a) purchases goods from the manufacturer or other supplier and directly contracts the sale of those goods with an overseas buyer; and
- (b) is responsible to the overseas purchaser for the quality, quantity and delivery of the goods sold; and

- (c) is entitled to receive payment for the goods from the overseas purchaser; and
- (d) is actively engaged in seeking out export opportunities for New Zealand products.

### Qualifying Goods.

In general all manufactured goods (i.e., goods incorporating a significant degree of domestic processing) qualify for the incentive but there are specific exclusions.

These are:

- (a) Goods sent overseas by way of gift.
- (b) Goods exported with the intention that they will be returned to New Zealand.
- (c) Goods imported and subsequently exported from New Zealand after being processed, packed, graded, sorted, or incorporated with another product in New Zealand unless the duty free selling price exceeds the original landed cost by at least 35%.
- (d) Goods re-exported from New Zealand without processing, packing, grading, or sorting in New Zealand.

Goods derived from primary industries and unprocessed goods are excluded from the incentive under four categories.

- (a) Animals and animal products and by-products (including fish, dairy produce, meat, meat products, wool, and their respective by-products).
- (b) Agricultural and horticultural products and by-products.
- (c) Forest products and by-products.
- (d) All minerals, metals occurring in their natural state, metal ores, raw scrap metal, and primary aluminium and aluminium alloys.

There are however certain processed products which specifically qualify for the incentive despite their being excluded under one of the above general headings. These are listed in Appendix III.

### Example:

An exporter has achieved export sales during the years ended 31 March as follows:

	Year	Export Sales	
Base period for 1979	1971	\$6,000	Base period 1978
	1972	7,000	
	1973	8,000	
	1974	12,000	
7 years immediately preceding 1979.	1975	14,000	7 years immediately preceding 1978.
	1976	16,000	
	1977	18,000	
	1978	15,000	
	1979	12,000	

The value of export sales for 1979 is \$12,000. The base period for the 1979 year is the 1972 to 1974 years, during which the total export sales were \$27,000.

The increase in export sales for the 1979 year is therefore:

$$\begin{aligned} \$12,000 - \frac{27,000}{3} &= 12,000 - 9,000 \\ &= \$3,000 \end{aligned}$$

The value of export sales for 1978 was \$15,000. The base period for the 1978 year is the 1971 to 1973 years, during which the total export sales were \$21,000. The increase in export sales for the 1978 year is therefore:

$$\begin{aligned} \$15,000 - \frac{21,000}{3} &= 15,000 - 7,000 \\ &= \$8,000 \end{aligned}$$

The increased exports incentive deduction for 1979 will be the greater of the amounts calculated as follows:

$$\begin{aligned} \text{(i) } 25\% \text{ of } \$3,000 &= \$750.00 \\ \text{or (ii) } \frac{12,000}{15,000} \times (25\% \text{ of } \$8,000) &= \$1,600.00 \end{aligned}$$

The deduction is therefore \$1,600

### New Exporters

Where there have been no previous export sales, exporters qualify for the additional 25% deduction on all their qualifying export sales in an income year until a base period has been established, i.e. until the sixth year of export.

### 6.11.2. New Markets Increased Exports Incentive.

Exporters who export qualifying goods in more than token quantities before 1 April 1981, to new markets as approved by the Department of Trade and Industry, will qualify for a 15% deduction from assessable income for increases in export sales to a new market in each of the first 2 years of the market development. The deduction is in **addition** to the basic 25% allowance for the increased exports incentive (above) and applies to the same exporters and range of goods that qualify for that incentive.

A "new market" is an area which the Department of Trade and Industry considers to be a district and separate market, and to which no New Zealand exporter has sent more than token quantities of similar goods in the previous 3 years. A new market can thus include:

- an existing product to a new market, or
- a new product to an existing market.

The allowable deductions are:

- (i) For the first 12 consecutive month's export sales of particular kinds of goods to new markets, the deduction will be 15% of the value of those export sales, and should be claimed in the income year in which the first 12 months are completed.
- (ii) For the second 12 month period, the deduction will be 15% of the **increase** in export sales of those goods over the export sales of the same goods in the first 12 month period, and should be claimed in the income year in which the second 12 months are completed.

Example:

A taxpayer with a 31 March balance date.

Product	Approved New Market	Date of First Sale	1st 12 months ends	Sales 1st 12 months
A	X	1/8/75	31/7/76	\$100,000
B	Y	1/12/75	30/11/76	\$50,000
C	Z	1/6/76	31/5/77	\$160,000

Product	2nd 12 months ends	Sales 2nd 12 months
A	31/7/77	\$140,000
B	30/11/77	\$40,000
C	31/5/78	\$200,000



### **1977 Income Year.**

The first 12 month's sales of products A and B expires within the 1977 income year. Therefore the incentive deduction allowable is:

$$\begin{array}{rcl} \text{Product A } 15\% \text{ of } \$100,000 & = & 15,000 \\ \text{B } 15\% \text{ of } 50,000 & = & \underline{7,500} \\ & & \$22,500 \end{array}$$

### **1978 Income Year.**

The second 12 month's sales of products A and B expires during the 1978 income year, and the incentive deduction is based upon the increase in sales over the first 12 month period, for each product. The increase in sales for product A is \$40,000, while the increase in sales for product B is nil.

Also, the first 12 month's sales for product C expires within the 1978 income year.

The allowable deduction is therefore.

$$\begin{array}{rcl} \text{Product A } 15\% \text{ of } \$40,000 & = & 6,000 \\ \text{C } 15\% \text{ of } 160,000 & = & \underline{24,000} \\ & & \$30,000 \end{array}$$

### **1979 Income Year.**

The second 12 month's sales of product C expires during the 1979 income year. The incentive deduction is based on the increased sales of product C, and the deduction would be

$$\text{Product C } 15\% \text{ of } \$40,000 = \$6,000$$

## **6.11.3. Tax Credit Scheme for Exporters.**

Where an exporter or export merchant is eligible for the increased exports incentive or the increased new markets exports incentive but is unable to receive the full tax saving because of a loss situation or having insufficient assessable income, the taxpayer can convert the lesser of the value of the incentives or the loss for the current income year into a refundable tax credit of 45c in the dollar. This tax credit is paid to the taxpayer as though it was refund of tax overpaid. Alternatively, the taxpayer can carry forward the loss in the normal manner.

## **6.11.4. Export Performance Incentive for Qualifying Goods.**

This incentive basically applies to the same goods and the same exporters and export merchants who qualify for the increased exports incentive and the new markets increased exports

incentive. The incentive commences on 1 April 1980, and will allow exporters to choose between the 'new' export performance incentive and the existing increased exports and new markets export incentives (which terminate on 31 March 1983). Once made, the election to adopt the export performance incentive is irrevocable.

The incentive allowance is given as a refundable tax credit, the rate of which varies according to the local domestic content of the goods exported. The amount of tax credit is calculated by multiplying the total value of f.o.b. export sales for a particular product by the specified rate of tax credit. The specified rate of tax credit is found in a schedule prepared by the Department of Trade and Industry which lists export commodities and their associated value added band and the rate of tax credit. The following table shows the domestic value added bands and rates of incentive allowance:

Band	Domestic Value Added	Rate of Tax Credit
A	80 - 100%	11.9
B	70 - 80	10.5
C	60 - 70	9.1
D	50 - 60	7.7
E	40 - 50	6.3
F	20 - 40	4.2
G	0 - 20	1.4

Example:

Assume qualifying goods exported were:

Band	A	f.o.b. sales	\$100,000
	B	"	\$200,000
	C	"	\$300,000

Export Performance Incentive is calculated as:

\$100,000 x	11.9% =	11,900
200,000 x	10.5% =	21,000
300,000 x	9.1% =	<u>27,300</u>
Total incentive tax credit		<u>\$60,200</u>

#### 6.11.5. Export Performance Incentive for Qualifying Services and/or Projects.

As from 1 April 1980, any taxpayer who provided professional or technical services overseas will be entitled to a refundable tax credit of 11.9% of the net foreign currency earnings which are either remitted back to New Zealand or are paid out of funds held in New Zealand. Qualifying services are defined and

include advisory services relating to the establishment or development of any farming, agricultural, horticultural, fishing, or forestry project.

Example:

Gross fees from qualifying services.	\$20,000
less overseas expenditure	<u>5,000</u>
Net foreign currency earnings	<u>\$15,000</u>
Net foreign currency earnings transferred to New Zealand through the N.Z. banking system	\$10,000
Tax Credit is 11.9% of \$10,000 i.e.	<u>\$1,190</u>

#### 6.11.6. Export-Market Development Expenditure Incentive.

As from 1 April 1980, any taxpayer who incurs qualifying export-market development expenditure will be entitled to refundable tax credit of 67.5% of such qualifying expenditure.

To qualify for the incentive, the export promotion expenditure must.

- (i) be tax-deductible under general taxation law (i.e. capital expenditure would not qualify); and
- (ii) have been incurred primarily and principally for the purposes of seeking markets (including the retention of existing markets) or the obtaining of market information or market research, or creating or increasing demand for the export of goods that have been manufactured, produced, assembled, processed or packed or graded and sorted in New Zealand. "Services" means services in relation to construction projects, courses of educational training or the furnishing of technical advice or assistance.

Qualifying expenditures in general, are only those costs which are incurred outside New Zealand in promoting exports, and include, amongst others:

- Overseas travel and accommodation expenses.
- Salaries and wages paid to New Zealand based employees in respect of the time spent outside New Zealand.
- Expenses (including those incurred in New Zealand) of advertising outside New Zealand.

- Direct costs of providing samples or technical information to persons outside New Zealand, reduced by any consideration received.
- Costs incurred outside New Zealand in the preparation or submission of tenders or quotations, or in sales promotion activities or campaigns.
- Payments to overseas agents for the purposes of activities carried on outside New Zealand.

Expenditures which do not qualify for the incentive include:

- Entertainment expenses.
- Director's fees.
- Salaries and wages paid in respect of employee's time within New Zealand.
- Payments to agents for work carried out within New Zealand.
- Costs of advertising inside New Zealand.
- Commissions on sales.
- Expenditure in respect of which an Export Program Grant has been received. However, the proportion of expenditure not reimbursed by the grant will be allowed as an ordinary deduction from assessable income.

Where the tax incentive credit is allowed in respect of qualifying expenditure, the same expenditure can not be deducted from assessable income.

Example:

Assume that the taxpayer has received an export program grant (of \$12,800) in respect of qualifying expenditure of \$20,000.

Qualifying Expenditure:

Salaries and Wages	\$17,000
Overseas travel and accommodation	5,250
Net cost of samples	750
Advertising overseas	<u>2,000</u>
Total qualifying expenditure	25,000
less Qualifying expenditure in respect of which a grant was made	<u>20,000</u>
Expenditure which qualifies for the tax credit.	<u>\$5,000</u>
Tax Credit is 67.5% of \$5,000 i.e.	<u>\$3,375</u>

### 6.11.7. Export Market Development Activities Incentive for Self-Employed Taxpayers.

As from 1 April 1980, any taxpayer (not being a company) who is in business on his own account or as a member of a partnership who has engaged in market research, securing publicity or soliciting business, or supplying services outside New Zealand in relation to construction projects, educational training courses, or technical advice or assistance, will be entitled to a refundable tax credit of 67.5% of the "value of time" spent on these export-market development activities outside New Zealand.

The "value of time" is calculated as:

$$\frac{(a \times b) - (c \times \frac{100}{64})}{2}$$

where:

a is half the minimum hourly rate usually charged by the principal of a New Zealand firm for the particular profession or occupation of the taxpayer. If there is no customary rate, the Commissioner may determine a reasonable rate.

b is the number of complete hours spent on export-market development activities in the income year.

c is the amount of any export program grant or export market development grant received in respect of the time spent by the taxpayer in export market development activities.

Example:

Assuming:

- (i) the taxpayer spent 1,000 hours on qualifying export-market development activities;
- (ii) the minimum charge-out rate for the taxpayer's profession is \$20 per hour; and
- (iii) during the year, the taxpayer received an Export Program Grant in respect of the value of time of \$1,920, then the value of time will be:

$$\frac{(\$20 \times 1,000) - (\$1,920 \times \frac{100}{64})}{2}$$

$$= \$3,500$$

Tax Credit is 67.5% of \$3,500 i.e. \$2,362.50

### 6.11.8. Export Program Grants Scheme

This incentive scheme is to replace both the export-market development grants and the new markets export development grants schemes as from 1 April 1980. The export program grants scheme is formulated to encourage thorough and co-ordinated research into the development and marketing of New Zealand goods and services overseas.

The export program grants scheme provides a cash grant of 64% of the agreed amount of qualifying expenditure for the coming program year. The grant is not assessable for tax purposes, but will reduce the expenditure deductible for tax purposes. The remaining expenditure may be claimed as an ordinary tax deduction. Expenditure which is the subject of a grant does not qualify for the export market development taxation incentive.

Eligible expenditure	\$100	
Export program grant		\$64.00
Tax saving on balance (at normal company rates) is $(\$100-64) \times .45$		<u>16.02</u>
Overall level of assistance		<u>\$80.20</u>

Grants will be available for a period of up to three years in respect of any one program with payments being made in annual instalments in advance. At the end of each program year an adjustment will be made to the amount of the following year's grant (or the final grant in the case of the last year in the program) in such a way that the total rate of the incentive on actual expenditure is maintained at 80.2 cents in the dollar.

Expenditure qualifying for the grant includes all expenditures eligible for the export market development taxation incentive, plus costs incurred within New Zealand such as salaries and wages and value of time in promoting overseas markets. To qualify under the grants scheme the overseas markets must be approved by the Department of Trade and Industry as having potential for future development.

## 6.12 APPENDICES

### 6.12.1 Appendix I

#### LAST DAYS FOR PAYMENTS BY PROVISIONAL TAXPAYERS

PROVISIONAL TAX						TERMINAL TAX			
Balance Month		1st Instalment		2nd Instalment		Companies		Others	
Oct	19A1	7 Mar	19A1	7 Sept	19A1	7 Nov	19A2	7 Mar	19A3
Nov	19A1	7 Mar	19A1	7 Sept	19A1	7 Nov	19A2	7 Mar	19A3
Dec	19A1	7 Apr	19A1	7 Oct	19A1	7 Dec	19A2	7 Mar	19A3
Jan	19A2	7 May	19A1	7 Nov	19A1	7 Jan	19A3	7 Mar	19A3
Feb	19A2	7 Sept	19A1	7 Mar	19A2	7 Feb	19A3	7 Mar	19A3
Mar	19A2	7 Sept	19A1	7 Mar	19A2	7 Mar	19A3	7 Mar	19A3
Apr	19A2	7 Sept	19A1	7 Mar	19A2	7 Mar	19A3	7 Mar	19A3
May	19A2	7 Sept	19A1	7 Mar	19A2	7 Mar	19A3	7 Mar	19A3
June	19A2	7 Sept	19A1	7 Mar	19A2	7 Mar	19A3	7 Mar	19A3
July	19A2	7 Nov	19A1	7 May	19A2	7 Mar	19A3	7 Mar	19A3
Aug	19A2	7 Mar	19A2	7 Sept	19A2	7 Mar	19A3	7 Mar	19A3
Sept	19A2	7 Mar	19A2	7 Sept	19A2	7 Mar	19A3	7 Mar	19A3

### 6.12.2 Appendix II

#### RATES OF INCOME TAX FOR INDIVIDUALS 1981 INCOME YEAR

TAXABLE INCOME		AMOUNT AND RATE OF TAX			
\$	\$	\$			\$
1 -	5,000	0 plus	14.5% of excess over		0
5,001 -	11,683	725.00 "	35.0 "		5,000
11,684 -	16,266	3,064.05 "	48.0 "		11,683
16,267 -	22,000	5,263.89 "	55.0 "		16,266
22,001 upwards		8,417.59 "	60.0 "		22,000

#### 1982 INCOME YEAR

\$	\$	\$			\$
1 -	5,500	0 plus	14.5% of excess over		0
5,501 -	12,600	797.50 "	35.0 "		5,500
12,601 -	17,600	3,282.50 "	48.0 "		12,600
17,601 -	22,000	5,682.50 "	55.0 "		17,600
22,001 upwards		8,102.50 "	60.0 "		22,000

### 6.12.3 Appendix III

## GOODS WHICH SPECIFICALLY QUALIFY FOR THE INCREASED EXPORTS INCENTIVE

Reconditioned or rebuilt secondhand plant and machinery.  
Any produce, being fruit, legumes, vegetables, or cereals (including extracts, fats, oils, concentrates, powders, soups, juices, jams, jellies, pastes or purees derived from fruit, legumes, vegetables, or cereals), which has been canned, dried, dehydrated, evaporated, individually quick frozen, or otherwise incorporates a significant degree of local processing.

Retail packet seeds.

Wine and grapejuice.

Prepared dinners containing either meat and vegetables or game and vegetables.

Fresh fruit (other than apples and pears).

Block frozen berry fruit.

Bulbs.

Fresh cut flowers.

Trees and shrubs.

Cholic acid, and products and by-products of cholic acid.

Fats and oils of fish, canned and bottled fish, prepared fish dinners, prepared consumer fish packs, fish paste, fish balls, fish cakes, fish fingers, fish sausages, fish extracts, fish soups, and fishmeal.

Sera derived from animal blood.

Lactose and products and by-products of lactose.

Denatured and processed lamb caeca.

Leather and leather products.

Pulp, paper (including newsprint), sawn timber, woodchips, and manufactured articles of wood and reconstituted wood.

Wool grease and products of wool grease.

Woollen and worsted yarns.

Refined beeswax.

Comb honey in consumer packs and honey dew.

Whole smoked eels and smoked eel fillets.

Spray-dried goat milk powder.

Fresh vegetables.

Beef powder.

Soup Stock

Catgut processed to a quality suitable for use for surgical, sporting, or musical purposes.



Kauri gum.

Fish and shellfish of the following species:

Barracouta, Kahawai, Kingfish, Mackerel, Mullet, Pilchard, Trevally, Black Bream, Creamfish (Leather Jacket), Blue Hake, Mao Mao, Moki, Monkfish, Red Cod, Warehou, Octopus, Squid, and Mussel, farmed or cultivated.

Smoked fish, excluding Snapper and Blue Cod.

Dried mucosa.

Processed cheese.

Pollen.

Propolis in cake form.

Pure dried vacuum salt.

Selected and tubed sausage casings derived from animals other than pigs.

Dried and processed deer by-products.

Flat galvanised steel products.

Animal gland or organ extracts and chemicals resulting from the same, for use in the pharmaceutical industry or for research purposes.

Chilled or frozen retail consumer packs principally comprising edible meat portions, which have been processed beyond the primal cut stage, have a minimum packing standard of clipped, tied, or sealed wrapping and are sold for retail consumption without further processing or packaging.

Chilled or frozen retail consumer packs comprising edible poultry portions only, which have a minimum packing standard of clipped, tied, or sealed wrapping and are sold for retail consumption without further processing or packaging.

Chilled or frozen portion controlled cuts of meat which have been processed beyond the primal cut stage, have been produced with an exacting weight tolerance and are sold for consumption without further processing or packaging.

Chilled or frozen edible fancy meats (including poultry fancy meats) which are sold for consumption without further processing or packaging.

Dried, concentrated, or evaporated meat or poultry products (other than canned goods) which are sold for consumption without further processing or packaging.

Manufactured meat or poultry smallgoods (other than canned goods).

Pet foods not fit for human consumption.

Pottery clay body.

Processed deep frozen semen.

Edible powders of, or edible powdered offal from, meat or poultry or fish.

Extracted honey in consumer packs, weighing 3 kilograms nett or less.

Farmed salmon.

Fish and shellfish of the following species: Hoki (Whiptail), Ling, Pacific Oysters, Rock Oysters, and Southern Blue Whiting.

Frozen fertilised ova.

Precious and semi-precious stones (excluding greenstone) which have been fully worked and cut for use in jewellery or goldsmith's or silversmith's wares.

Processed bentonite.

Taxidermy products.

**SECTION 7**  
**ESTATE AND GIFT DUTY**

**M.B. CLARK M.Com A.C.A.**  
**LECTURER IN AGRICULTURAL ACCOUNTING**  
**LINCOLN COLLEGE**



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## 7. ESTATE AND GIFT DUTY

### 7.1 INTRODUCTION

Both estate duty and gift duty are levied under the Estate and Gift Duty Act 1968 as amended. Both are administered by the Inland Revenue Department.

### 7.2. ESTATE DUTY

#### 7.2.1. Introduction

In broad terms, estate duty is a tax on the total value of property that was owned by a person who has died as that passes from one person to another because of his death.

Estate duty is calculated according to the following general relationship:

Estate Assets	
plus Notional Estate	
less <u>Exempt Assets</u>	
Dutiable Estate	
less Allowable Debts	
less Matrimonial Home Allowance	
less <u>Charitable Allowance</u>	
<u>FINAL BALANCE</u>	– calculate – Estate Duty
	<u>less Reliefs</u>
	<u>NET DUTY</u>

#### 7.2.2. Property Liable to Estate Duty

1. All property situated in New Zealand. (Property is used in the widest sense to cover all assets including land, cash, proceeds of life insurance policies, etc.)
2. All property outside New Zealand if the deceased was domiciled in New Zealand at the date of death. A credit is allowed in respect of estate duty paid overseas.
3. “Notional Estate”, being:-
  - (a) Dutiable gifts (i.e. gifts which are or may be liable to gift duty) made within 3 years of death. Gifts which are exempt from gift duty are also exempt from estate duty - refer section 7.3.3.

- (b) Gifts made before death where the donor has reserved an interest for his lifetime (i.e. gifts with strings attached.)
- (c) Property disposed of before death where a benefit passes back to the estate upon his death.
- (d) The deceased's share or interest in any property held jointly, other than a joint family home.
- (e) Where all or part of the deceased's interest in a policy of life insurance on his life has been disposed of to a relative by the deceased within 3 years of death, a proportion of the gross benefits payable at death is included in the dutiable estate. This provision does not apply to a genuine disposition for full consideration to non-relatives.

The value to be included in the dutiable estate is calculated according to the following formula:

$$\frac{\text{Premiums up to disposition}}{\text{Total premiums to death}} \times \text{Gross Proceeds} \times \text{Proportion of interest disposed of}$$

Allowance is then made for any consideration paid to the deceased when the policy was assigned.

Example:

Policy taken out by deceased in 1968. Annual premium \$200. Assigned by way of sale to his wife in 1976 for the surrender value of \$2,000. Deceased dies in 1978, and the policy realises \$5,500.

Amount to be included in the dutiable estate is –

$$\frac{\text{Premiums to date of assignment}}{\text{Total premiums during term}} \times \text{Proceeds}$$

$$= \frac{(8 \times \$200)}{(10 \times \$200)} \times \$5,500 = \$4,400$$

less consideration paid on assignment	2,000
Amount to be included	\$2,400

If the deceased has continued to pay the premiums after assignment, then the annual premiums so paid would be treated as gifts within three years of death and included in the notional estate – see (a) above.

- (f) The value of any pensions payable to a survivor on the death of the deceased.

### **7.2.3. Exemptions**

1. Non-dutiable gifts made absolutely.
2. The first \$2,000 p.a. of any pension or annuity payable to the surviving spouse of the deceased from a group super-annuation scheme.
3. The total of any such annuity payable to a child of the deceased until the child attains the age of twenty years.
4. Accrued War Pensions and Social Security benefits.
5. Personal chattels.

The following exemptions apply to estates of all persons dying on or after 1 June 1978.

- (a) The total value of personal chattels which pass to the surviving spouse.
- (b) Up to \$6,000 for personal chattels which pass to other beneficiaries.

(Between 30 May 1974 and 1 June 1978, the maximum exemption for all personal chattels was \$4,000.)

6. The deceased's share of a residence registered as a joint family home. (Applies to the estate of the first spouse to die.)

### **7.2.4. Allowable Debts**

Debts which are owing by the deceased at the time of his death may be deducted from his estate. It does not matter whether the debt was incurred in New Zealand, or overseas.

Reasonable funeral expenses and income tax on income to date of death are regarded as allowable debts. However, no allowance should be made for any expenses of administering the estate or remuneration of the executor(s).

The amount of any debt owing under any mortgage, charge, or other encumbrance over the joint family home is not an allowable debt.

### **7.2.5. Matrimonial Home Allowance**

In the case of a matrimonial home, the allowance is in respect of the value of the family residence (i.e. the matrimonial home), or other property if the home does not pass to the surviving spouse. The allowance is restricted to one home only, and does not apply to a joint family home.



#### **Value of the Allowance:**

- (a) Where the matrimonial home passes to the surviving spouse, the value of the home is the matrimonial home allowance.
- (b) Where property other than the matrimonial home passes to the surviving spouse, the allowance is the lesser of :-
  - (i) the value of the matrimonial home; or
  - (ii) the value of the other property passing.

NOTE: Debts secured over the matrimonial home or equivalent property reduce the value of the allowance.

### **7.2.6. Charitable Allowance**

The charitable allowance applies only to estates of persons dying on or after 21 June 1979. Estates of persons dying before that date do not qualify for the allowance, but qualify for the Charitable Succession Relief (refer section 7.2.10).

The level of exemption, however, is the same whichever method of calculation is followed.

#### **Value of the Allowance:**

The charitable allowance is the lesser of:

- (i) The value of the charitable succession(s) or
- (ii) \$25,000

### **7.2.7. Valuation of Estate**

All property included in the dutiable estate will be valued as at the date of death, except that gifts will be valued as at the date of gift. In general, the same principals apply to valuations for both estate duty and gift duty purposes. (Refer to section 7.3.2. – Valuation of Gift).

The value of land and buildings is determined by a special Government valuation, and specifically excludes the timber value of any growing trees. All other property should be valued by persons competent to value the assets concerned. However, it is not necessary to value personal chattels where they have all been exempted from duty. (Refer section 7.2.3.)

Special provisions apply regarding the valuation of annuities, pensions etc. for estate duty purposes, and care should be exercised in assessing such values. Calculation is necessary to establish the value of pensions etc. and reference must be made to the tables contained in the Second Schedule to the Estate and

Gift Duty Act. There are four tables in all, and these refer to life expectancies for males and females, expectancy of widowhood for females of various ages, and financial factors for specific time periods. These are reproduced as Tables A,B,C, and D, respectively, in Appendix II (section 7.4). Reference should be made to the Valuation of Succession (section 7.2.8) and to the Example of Estate Duty Assessment (section 7.2.12).

### 7.2.8 Valuation of Successions.

The whole of the estate is divided into various successions (i.e. inheritances) as at the date of death, and each succession, whether it be property, an annuity, or some other future interest, must be valued. The general rules of valuation are outlined in section 7.2.7. (above). In calculating the value of each succession no deduction should be made for administration expenses, the administrators' commission or remuneration, the estate duty payable, or any mortgage or encumbrance where the beneficiary has a right to be reimbursed in respect of such charge. Also, it should be noted that where a matrimonial home allowance has been made, the succession of the surviving spouse is reduced by the amount of that allowance.

#### Valuation of Annuities, Life Interests, etc.

Where an annuity or some other form of future interest is involved, the value of each inheritance is calculated using the tables in Appendix II and the total estate then apportioned between the beneficiaries. Thus if a widow is to receive an annuity for the rest of her life, the value of that annuity is calculated (based on her life expectancy), and this value is the widow's succession; the balance goes to the remainderman. The combined total of the two equals the value of the estate.

An annuity is a fixed sum of money payable each year for a number of years or for life. An annuity may commence as at date of death, or some time thereafter, such as after a certain number of years or upon the happening of some specific event.

Example:

Son aged 45 is left an annuity of \$2,000 for life. Value of his succession would be:

Present value of \$1 per annum for life of a male aged 45 (from Table A) is \$14.92971.

Present value of \$2,000 pa =  $\$2,000 \times 14.92971$   
= \$29 859

A life interest is the right to receive the income for life from a certain fund, or specified assets, or to have the use of an asset for life. The successor entitled to this is the life tenant.

Example:

A dies on 18 November 1973 leaving a final balance of \$100,000. Under his will his widow (age 63) receives income for life and on her death estate assets pass to surviving children.

#### Successions

Widows:	Present value of income on capital of \$1 for life of a female age 63 (from Table B) is \$0.54800.	
	Present value of income on \$100,000 is	\$54,800
Remainderman:	Present value of interest	\$45,200
		<u>\$100,000</u>

Interests may terminate otherwise than on death.

Common examples would include:

- (1) Income from residue of estate during her widowhood. Table C should be used.
- (2) Income from estate's farming activities to widow until the youngest child attains the age of 21. Table D should be used.
- (3) Annuity of \$1,040 to son until he attains age of 25. Table D should be used.

## 7.2.9. Calculation of Estate Duty

Estate duty is assessed on the final balance of the estate at the rate set out in Appendix I (section 7.4). The allowable reliefs are then deducted in order to obtain the actual estate duty payable.

### 7.2.10 Reliefs

Reliefs are deducted from the estate duty assessed, where applicable. Available reliefs include the following:

1. Relief from Successive Estate Duties (i.e. Quick Succession).

If the estate of a deceased person includes property which was inherited within 5 years of death, relief from duty may be given in the second estate in order to reduce the effect of a double impact of estate duty.

The reduction is applied to the lesser of the duty payable on the particular property in the first and second estates. The reduction is graduated according to the period which has passed between the two dates of death, as shown in the following table.

<b>Period between Death of Successor and Predecessor</b>	<b>Duty Reduced by</b>
0 - 4 months	75%
4 - 8 months	60%
8 - 12 months	50%
1 - 2 years	40%
2 - 3 years	30%
3 - 4 years	20%
4 - 5 years	10%

## **2. Relief for Gift Duty Paid**

Where gifts have been included in the notional estate, the gift duty paid plus interest at 3% p.a. from the date the gift duty was paid to the date of death, will be refunded to the person who paid it. If the donor (i.e. the deceased) paid the gift duty, the amount of gift duty refunded (excluding any interest) is included in his dutiable estate. The total refund under these circumstances is first applied towards the payment of any estate duty and then any excess is refunded to the administrator of the deceased donor's estate.

### **7.2.11 Assessment and Collection**

The administrator must file an Administrators' Statement together with various supporting forms within six months after the grant of administration. The forms prescribed for filing are available from the Inland Revenue Department.

An assessment is issued immediately after the accounts are filed, but this assessment may be amended as a result of the Department's examination or from further information received. After any queries have been satisfied, the Department then certifies the final balance and that duty is, or is not, payable.

Once this notice of assessment has been issued, any estate duty payable should be paid within three months after which a penalty of 5% of the unpaid duty is imposed.

Interest at 5% p.a. is charged on the amount of duty unpaid after six months from the date of death. Interest at 5% p.a. is

also charged on any unpaid penalty on estate duty calculated from the date the penalty became payable.

### 7.2.12 Example of Estate Duty Assessment

Mr. Green died on 30 October 1980 and his estate included the following property (at market value):-

Matrimonial home	\$45,000
Investments in shares	34,000
Personal chattels	7,000
Cash at P.O.S.B.	3,250
Interest accrued at P.O.S.B.	50
Car and boat	15,000
Mortgage over son's farm	80,000
Interest accrued on mortgage	700

His liabilities were:

Mortgage over home	15,000
Accounts payable	1,300
Income tax assessed to date of death	1,100
Funeral expenses	600

In May, 20 years ago, Green took out a policy of life assurance which has annual premiums of \$300. In June 1978 he sold a half interest in the policy to his wife for \$7,000 which was half the then surrender value. Green continued to pay the premium until his death. The gross proceeds at death were \$20,000.

Green had also contributed to a superannuation scheme which, on his death, would provide his widow with \$4,000 per annum for the remainder of her life.

In addition, Green had forgiven debts to his son as follows:-

1 January 1975	\$10,000	1 January 1978	\$10,000
1 January 1976	\$10,000	1 January 1979	\$10,000
1 January 1977	\$10,000	1 January 1980	\$10,000

Gift duty of \$660, \$660, \$180, \$180, \$180, and \$NIL respectively, had been paid by Green's son. (Refer to section 7.3.4, Calculation of Gift Duty).

In his will, Green made the following bequests:

To son John, aged 25, debt forgiven	\$25,000
To daughter Sue, aged 19, cash	\$40,000
To St. John Ambulance Association	\$5,000
To wife, aged 65 – the residue.	

The final balance on which duty would be assessed is calculated as follows:

<b>Estate Assets:</b>	\$	\$
Matrimonial home	45,000	
Investments	34,000	
Personal chattels	7,000 (1)	
P.O.S.B. – cash plus accrued interest	3,300	
Car and boat	15,000	
Mortgage and accrued interest	80,700	
Proceeds of insurance policy	<u>10,000 (2)</u>	
		195,000
<b>Plus Notional Estate:</b>		
Dutiable gifts to son	30,000 (3)	
Interest in life policy disposed of	2,091 (4)	
Superannuation payable to widow	<u>20,605 (5)</u>	
		<u>52,696</u>
		247,696
<b>Less Exempt Assets:</b>		
Personal Chattels to widow (1)		<u>7,000</u>
		240,696
<b>Less Allowable Debts:</b>		
Mortgage over home	15,000	
Accounts payable	1,300	
Income tax	1,100	
Funeral expenses	<u>600</u>	
	18,000	
<b>Matrimonial Home Allowance:</b>		
Matrimonial home	\$45,000	
less Mortgage	<u>15,000</u>	
	30,000	
<b>Charitable Allowance:</b>		
Value of bequest	5,000	
		<u>53,000</u>
<b>FINAL BALANCE</b>		<u><u>\$187,696</u></u>
<b>Value of Successions:</b>		
Final balance of estate		187,696
plus Matrimonial Home Allowance		30,000
plus Charitable Allowance		<u>5,000</u>
Net value of the estate		<u><u>\$222,696</u></u>

Successions.	
Son (John)	
Gifts	30,000 (3)
Bequest	<u>25,000</u>
	55,000
Daughter (Sue)	
Bequest	40,000
St. John Ambulance Association	5,000
Widow (Mrs. Green) - the residue	<u>122,696</u>
NET VALUE OF THE ESTATE	<u><u>\$222,696</u></u>

Estate Duty on final balance of \$187,696      \$13,193.60  
less Reliefs:

Credit for gift duty paid: (6)	
(i) Duty on gift dated 1.1.78	\$180.00
Plus interest: 3% on \$180	
for 2 years 302 days	<u>15.27</u>
	195.27
(ii) Duty on gift dated 1.1.79	\$180.00
Plus interest: 3% on \$180	
for 1 year 302 days	<u>9.87</u>
	189.87
(iii) Duty on gift dated 1.1.80	NIL

Total Reliefs	<u>385.14</u>
NET ESTATE DUTY PAYABLE	<u><u>\$12,808.46</u></u>

NOTES:

1. The value of personal chattels passing to the widow is totally exempt from Estate Duty. Thus the \$7,000 could be omitted from the calculation.
2. Green had sold a half interest in the insurance policy to his wife in 1976, so only half the proceeds belong to the estate.
3. Only dutiable gifts made within 3 years of death are included as notional estate.
4. Green's interest in the life policy is calculated as:

$\frac{20 \times 300}{22 \times 300} \times 20,000 \times \frac{1}{2} =$	\$9,091
less consideration received	<u>7,000</u>
Amount to be included	<u><u>\$2,091</u></u>

5. The value of the widow's superannuation is calculated as:

Superannuation	\$4,000 p.a.
less exemption	<u>2,000 p.a.</u>
Dutiable	<u>\$2,000 p.a.</u>

Life expectancy for a female aged 65 is 14.84 years, and the present value of \$1 p.a. for her life is \$10.3027 (from Table B). The value of the superannuation is therefore \$2,000 x \$10.3027 i.e. \$20,605.

6. The gift duty paid is not included in the notional estate as it was paid by the son. The estate, however, does receive a credit for the gift duty paid to be offset against the estate duty payable. Similarly, the interest due by the Crown on the gift duty paid, although strictly payable to the son, will be offset against the estate duty payable. The estate should account to the son, John, for these amounts.



# 7.3 GIFT DUTY

## 7.3.1. 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.

## 7.3.2. 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.

### 7.3.2.(i) Date of Valuation

A gift (and any consideration) is valued as at the date the gift is made, which is taken to mean the date at which the donor has put himself in the position where the gift cannot be revoked (i.e. the gift is complete).

The completion dates of some of the more common forms of gift are illustrated in the following chart:

Description of Gift	When Complete
Cash	On delivery to the beneficiary.
Cheques	When the cheque has been cashed. (Until then it can be revoked).
Land	Except where a valid trust is created, the earlier of the dates on which –

	<ul style="list-style-type: none"> <li>(a) the instrument of transfer is registered in the Land Transfer Office; or</li> <li>(b) the beneficiary has possession of all the necessary documents to enable the registration to be effected.</li> </ul>
Shares	As for land, except that the instrument of transfer is registered by the company.
Chattels	Where there has been effective delivery of the chattels or there has been a deed of assignment.
Release and forgiveness of debt	Normally the execution of a legally effective deed of release or forgiveness will be required.

### 7.3.3. 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 \$1,000 (\$400 prior to 1 January 1979) 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 to employer to employee
  - settlement of a joint family home.

### 7.3.4. Calculation of Gift Duty

Gift duty does not become payable until the value of any dutiable gifts over any twelve month period exceeds \$15,000 in total value. (Prior to 30 July 1976, gift duty did not become payable until the aggregated value exceeded \$4000. Between 30 July 1976 and 21 June 1979 (inclusive), this amount was increased to \$8,000). Rates of Gift Duty are detailed in Appendix III (section 7.4.)

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

### 7.3.5. 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 \$12,000 made on 1 August 1980.

Gift to B of \$13,000 made on 31 July 1981.

These gifts would be aggregated and be liable to gift duty of \$750, even though each gift is below the exemption level of \$15,000. Note that if the gift to Q was made on 1 August 1981, no aggregation would occur as the gifts are not **within** a twelve month period.

Example 2:

Gift to C of \$18,000 made on 1 August 1980 - duty of \$150 paid.

Gift to D of \$15,000 made on 1 January 1981.

These gifts would be aggregated and duty of \$1,850 on the sum of \$33,000 would be payable, less the \$150 already paid.

Special transitional provisions apply where the twelve month period includes gifts made before 22 June 1979. Where the aggregated figure does not exceed \$15,000, the duty on these aggregated gifts will not change. Where the aggregated figure exceeds \$15,000, the duty on the gift made prior to 22 June 1979 will be assessed at the rates applying at the time of the gift - i.e. at the old rates.

Example:

Dutiable gift made before 22 June 1979 aggregates with a gift made after that date, together totalling more than \$15,000.

Gift of \$10,000 made on 6 June 1979-duty of \$180 paid.

Gift of \$18,000 made on 24 December 1979.

Total gifts during 12month period \$28,000

Duty on \$28,000 at **old** rate is \$2,700

Therefore duty on \$10,000 is

$$\frac{\$10,000}{\$28,000} \times \$2,700 = \$964.28$$

Duty on \$28,000 at **new** rates is \$1,050

Therefore duty on \$18,000 is

$$\frac{\$18,000}{\$28,000} \times \$1,050 = \$675.00$$

less duty paid

Duty Payable.

\$1,639.28

180.00

\$1,459.29

### 7.3.6. Assessment and Collection

If the value of a gift exceeds \$8,000 or if the aggregated value of this gift and all other gifts made over the previous twelve months exceeds \$8,000, a Gift Statement (form IR635) must be delivered to the Commissioner by the donor within three months of making the gift.

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.

### 7.3.7. Example of Gift Duty Assessment:

Gift made to D on 14 August 1979 of \$12,000

Gift made to E on 18 November 1979 of \$12,000

Gift made to F on 31 October 1980 of \$25,000

Duty assessment is as follows:

Gifts to D and E aggregated - \$24,000

Gift to E and F aggregated - \$37,000

Duty on gift to D is calculated as  $\frac{12,000}{24,000} \times 650 = \$325.00$

Duty on gift to E yields more revenue when aggregated with gift to F, being charged with duty at a higher rate than if aggregated with gift to D.

Therefore, duty on gift to E is  $\frac{12,000}{37,000} \times 2,650 = \$859.46$

Duty on gift to F is  $\frac{25,000}{37,000} \times 2,650 = \$1,790.54$

Total gift duty for gifts to D,E, and F: \$2,975.00

This calculation has been performed with hindsight, after all gifts are known. However, it must be realised that Gift Statements would be filed for each gift (as they exceed \$8,000), and that gift duty would be assessed on those statements. On a progressive basis, therefore, the duty assessment is as follows:

14 August 1979

Total gifts	\$12,000
Gift Duty payable	Nil

18 November 1979

Total gifts for previous 12 months.	\$24,000
-------------------------------------	----------

Gift Duty payable apportioned:	\$650.00
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Gift to D: $\frac{12,000}{24,000} \times 650.00 =$	\$325.00
--	----------

Gift to E: $\frac{12,000}{24,000} \times 650.00 =$	\$325.00
--	----------

31 October 1980

Total gifts for previous 12 months	37,000
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Gift Duty payable apportioned:	\$2,650
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Gift to E: $\frac{12,000}{37,000} \times 2,650.00 =$	\$859.46
--	----------

less duty already paid = 325.00	534.46
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Gift to F: $\frac{25,000}{37,000} \times 2,650.00 =$	1,790.54
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Total gift duty for gifts to D,E, and F: \$2,975.00

As can be seen, the total gift duty is unaltered.

## 7.4 APPENDICES

### Appendix I.

#### RATES OF ESTATE DUTY

##### PART A

###### PERSONS DYING BETWEEN 1 APRIL 1980 AND 31 MARCH 1981 (INCLUSIVE)

Final Balance		Amount and Rate of Duty
Up to	\$150,000	Nil
\$150,000–\$250,000		\$ 0 plus 35% of excess over \$150,000
Over	\$250,000	\$35,000 plus 40% of excess over \$250,000

##### PART B

###### PERSONS DYING ON OR AFTER 1 APRIL 1981

Final Balance		Rate of Duty
Up to	\$250,000	Nil
Over	\$250,000	40% of excess over \$250,000

## Appendix II

### 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 per Annum for Life	Present Value of \$1 Payable on Death	Present Value of Income on Capital of \$1 for Life
	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*PRESENT VALUE OF ANNUITY OR OTHER INTEREST FOR LIFE OF MALE  
OR EXPECTANT ON DEATH OF MALE—*continued*

Years of Age	Expectation of Life of Male	Present Value of \$1 per Annum for Life	Present Value of \$1 Payable on Death	Present Value of Income on Capital of \$1 for Life
	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	0.46956	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



TABLE A—*continued*PRESENT VALUE OF ANNUITY OR OTHER INTEREST FOR LIFE OF MALE  
OR EXPECTANT ON DEATH OF MALE—*continued*

Years of Age	Expectation of Life of Male	Present Value of \$1 per Annum for Life	Present Value of \$1 Payable on Death	Present Value of Income on Capital of \$1 for Life
	Years	\$	\$	\$
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
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 per Annum for Life	Present Value of \$1 Payable on Death	Present Value of Income on Capital of \$1 for Life
	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	0.95259
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
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

TABLE B—*continued*PRESENT VALUE OF ANNUITY OR OTHER INTEREST FOR LIFE OF FEMALE  
OR EXPECTANT ON DEATH OF FEMALE—*continued*

Years of Age	Expectation of Life of Female	Present Value of \$1 per Annum for Life	Present Value of \$1 Payable on Death	Present Value of Income on Capital of \$1 for Life
	Years	\$	\$	\$
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
71	10.83	8.20702	0.58965	0.41035
72	10.22	7.85036	0.60748	0.39252

TABLE B—*continued*PRESENT VALUE OF ANNUITY OR OTHER INTEREST FOR LIFE OF FEMALE  
OR EXPECTANT ON DEATH OF FEMALE—*continued*

Years of Age	Expectation of Life of Female	Present Value of \$1 per Annum for Life	Present Value of \$1 Payable on Death	Present Value of Income on Capital of \$1 for Life
	Years	\$	\$	\$
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 Termination of Widowhood	Present Value of Income on Capital of \$1 for Widowhood
	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
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

TABLE C—*continued*PRESENT VALUE OF ANNUITY OR OTHER INTEREST FOR WIDOWHOOD OR  
EXPECTANT ON TERMINATION OF WIDOWHOOD—*continued*

Years of Age	Expectation of Widowhood	Present Value of \$1 per Annum for Widowhood	Present Value of \$1 Payable on Termination of Widowhood	Present Value of Income on Capital of \$1 for Widowhood
	Years	\$	\$	\$
Up to 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
31	15.59281	0.22036	0.77964
32	15.80268	0.20987	0.79013

TABLE D—*continued*PRESENT VALUE OF ANNUITY OR OTHER INTEREST FOR PERIOD OTHER THAN LIFE OR EXPECTANT ON EVENT OTHER THAN DEATH—*continued*

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
	\$	\$	\$
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



TABLE D—*continued*PRESENT VALUE OF ANNUITY OR OTHER INTEREST FOR PERIOD OTHER THAN LIFE OR EXPECTANT ON EVENT OTHER THAN DEATH—*continued*

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
	\$	\$	\$
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
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	19.63298	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	0.99240

## Appendix III

### RATES OF GIFT DUTY

#### PART A

#### GIFTS MADE BETWEEN 30 JULY 1976 AND 21 JUNE 1979 (INCLUSIVE)

Value of Dutiable Gifts made within 12 months.	Amount and Rate of Duty			
\$ 1 - 8,000	Nil			
8,001 - 10,000	\$ 0	plus	9% of excess over \$8,000	
10,001 - 12,000	180	"	10%	" 10,000
12,001 - 14,000	380	"	11%	" 12,000
14,001 - 16,000	600	"	12%	" 14,000
16,001 - 18,000	840	"	13%	" 16,000
18,001 - 20,000	1,100	"	14%	" 18,000
20,001 - 22,000	1,380	"	15%	" 20,000
22,001 - 24,000	1,680	"	16%	" 22,000
24,001 - 26,000	2,000	"	17%	" 24,000
26,001 - 28,000	2,340	"	18%	" 26,000
28,001 - 30,000	2,700	"	19%	" 28,000
30,001 - 32,000	3,080	"	20%	" 30,000
32,001 - 34,000	3,480	"	21%	" 32,000
34,001 - 36,000	3,900	"	22%	" 34,000
36,001 - 38,000	4,340	"	23%	" 36,000
38,001 - 40,000	4,800	"	24%	" 38,000
Over \$40,000	5,280	"	25%	" 40,000

#### PART B

#### GIFTS MADE ON OR AFTER 22 JUNE 1979

Value of Dutiable Gifts made within 12 months.	Amount and Rate of Duty			
\$ 1 - 15,000	Nil			
15,001 - 20,000	\$ 0	plus	5% of excess over 15,000	
20,001 - 30,000	250	"	10%	" 20,000
30,001 - 40,000	1,250	"	20%	" 30,000
Over \$40,000	3,250	"	25%	" 40,000

## SECTION 8

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