Lincoln College
Department of Farm Management and Rural Valuation

Farm Budget Manual
Part 2 Financial 1979

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PREFACE

This booklet, the second of a two part Lincoln College Farm Budget Manual, is revised and published annually. Its companion volume (Part 1, Technical) has also been revised this year, and is usually revised biennially.

Prices quoted in this Manual are those pertaining to the period October 1978 to January 1979. Users should be aware that some prices are likely to change considerably throughout the coming year. Up to date quotations should always be obtained where possible.

A number of people have made contributions to this Manual but two deserve special mention – Mr. J. Clark and Mr. N. Herbert, for their conscientious work with the major task of revising and updating the information contained in this Manual. To all members of the College staff, commercial firms and organizations that gave contributions and assistance in the revision of this Manual, I extend my grateful thanks.

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Editor
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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 advisor. 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_2O –

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_2O;
Nor will my barley ever thrive
Without some more P_2O_5;
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 advisor 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 Accounts 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 and **Section 6** include the information on Income Taxation, Gift and Estate Duty that is to be applicable for the present financial year.

Finally, **Section 7** includes samples of Gross Margin Analyses to demonstrate this particular budgetary technique and current relativity of different enterprises.

SECTION 1

ASSISTANCE AND INCENTIVES FOR FARMERS

1.0 ASSISTANCE AND INCENTIVES FOR FARMERS

1.1 INTRODUCTION

This section contains direct extracts from the M.A.F. Information Services Booklet "Assistance and Incentives for Farmers".

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

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 8½%, 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 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 naturalisiation;
- normally be 25 or more years of age;
- have been engaged principally in farming for at least 12 months immediately prior to applying; and
- as from 1977, although the Board has some discretion, applicants as a rule must -
  - have completed 5 years' full-time farming experience and four-week courses in each of 2 years in basic husbandries and farm management; or
  - have been awarded the Advanced Trade Certificate in farming; 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 8½%. Interest rates are reviewed every three years.

Department of Lands and Survey.

1.2.4 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.

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.

The third of these groups may elect to save under either a grant scheme or a tax-rebate scheme.

(i) Grant Option –

The contributor receives a tax-free grant of between 25 and 50% of his savings, depending on how long the account has been open. The minimum grant is $15 125, on the maximum eligible savings of $30 250. The minimum qualifying period for a grant is 5 years from the date the first $250 is saved, if a farm is being purchased; or 3 years, if stock and plant are being purchased to go sharemilking or share farming.

(ii) Tax-Rebate Option –

A contributor may deposit up to $4 000 per annum (with a maximum of $50 000 per account) in a Farm Ownership Account and claim a tax-rebate of 45c for each $1 of the annual increase in savings.

Each year the depositor is entitled to a tax-rebate of 45c for every $1 of eligible savings. There is a limit of $1 800 (45% of $4 500) or the depositor's tax liability, if it is less than that amount.

Interest at the rate of 3% per annum is payable on balances up to $60 000 in both types of account.

Rural Banking and Finance Corporation and New Zealand Post Office.

1.2.5 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.

Rural Banking and Finance Corporation

1.2.6 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 exemption applies to qualifying documents executed on or after 22 July 1977 and the claim of exemption from stamp duty will normally be made through the purchaser's solicitor.

Inland Revenue Department

1.2.7 Farm Vendor Settlement Finance Schemes

These schemes, announced in the 1977 Budget, 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 8½%. 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 8½% 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 8½%).
- 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 less.
- 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 Special Payment for Sheep and Cattle.

A special payment to farmers is to be made on the basis of all sheep and cattle held on the properties as at 1 June 1978. All owners of sheep and/or cattle (unless the stock are bailed or

leased) are eligible for payment. Bailees or lessees of sheep and/or cattle are also eligible. In sharemilking situations, payment will be made to the owner of the stock. Unless the agreement otherwise specifies, the payment is to be apportioned according to the agreement for the sharing of milkfat revenue.

Payments are as follows:

Sheep: 50 cents a head.

Dairy Cattle: $5.00 a head. Dairy cattle are defined as cows either in milk or in calf, and unmated female replacement stock of all ages in town and factory supply herds.

Beef Cattle: $2.00 a head. Beef cattle are defined as all cattle other than dairy.

The payment is classified as normal farm income and is liable for income tax.

Applicants for the special payment will need to complete a claim form including a statutory declaration. Claim forms will be mailed directly to farmers, and will also be available from all M.A.F. offices.

Ministry of Agriculture and Fisheries.

1.3.2 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)
Sheep and other livestock –	1000 stock units.

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 1979, 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 1977; but when this is less than the 30 June 1976 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.

1.3.3 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 (25 acres) 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) 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 at the end of 5 years.

- 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 8½% 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) **Commencing Date of Scheme:**

Applicants for loans must be lodged with the Rural Bank from 1 August 1978 and will close on 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.

1.3.4 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

1.3.5 Development Expenditure

Refer to Taxation Section.

1.3.6 First-Year Taxation Allowances – Buildings, Plant, and Machinery

Refer to Taxation Section.

1.3.7 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.

1.3.8 Special Plant Loans

To foster progressive farming methods and new techniques, assistance is given to soundly based farmers and agricultural contractors to introduce modern 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 Finance for the Purchase of Plant and Machinery

From 1 August 1978 a limited number of loans for the purchase of plant and machinery will be 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 12% 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 6½% for the first 3 years and 7½% for the next three years, afterwards increasing to 8½%. Advances for amalgamation can attract a concessional interest rate of 7½% for 3 years, after which the rate increases to 8½%. 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, 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 Artificial Breeding Incentive Scheme

The Artificial Breeding Incentive Scheme offers a $2 per cow payment for cows inseminated during 1978 and 1979 which are additional to those inseminated in 1977. The payment will be made on additional cows artificially inseminated, not on additional inseminations resulting from return matings, etc. The scheme covers inseminations carried out by livestock improvement associations, commercial operators, and private operators. Qualifying inseminations are restricted to the use of all dairy bull semen, excluding Dairy Board Sire Proving Scheme semen, but includes semen from beef bulls listed in the Dairy Board's "Sire Catalogue 1978 Dairy and Beef".

Ministry of Agriculture and Fisheries

1.3.12 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 9½%.

Rural Banking and Finance Corporation

1.3.13 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

1.3.14 'Nil' Livestock Values for Taxation

Refer to Taxation Section.

1.3.15 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

1.3.16 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

From 2 June 1978, subsidy of $32.00 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 $32.00 per tonne, and no farmer claims are involved.

Ministry of Agriculture & Fisheries

1.4.2 Fertiliser Aerial Spreading Bounty

From 2 June 1978, 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. From 2 June 1978 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.

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.

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, age bins, and access roading. Preference will be given to co-operative undertakings.

As problems of security and equitable distribution of debt 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.

1.5 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 $450 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.

Qualifying costs are:

- Land clearing and preparation.
- Fencing (costs of new fencing, up to $40 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 Plantings for Shelter or Erosion Control

Refer to Taxation section.

1.5.3 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 unimproved 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.

Inland Revenue Department

1.6 SOIL AND WATER

1.6.1 Irrigation

Assistance is given for approved community irrigation schemes. In general, there must be a minimum of four farms and 400 hectares being irrigated. A Government grant provides the finance for the headworks. There is a 1:1 subsidy for off-farm works; the farmer's share, 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-third of the fixed on-farm costs. This loan is written off after 7 years, provided the farmer does not sell his farm and does meet the requirements of the development programme. The remaining two-thirds of the annual cost of on-farm work is recovered from the farmer at the end of the year. The Rural Banking and Finance Corporation may provide a loan of up to 100% for on-farm works.

In addition, Rural Banking and Finance Corporation loans up to 100%, with provision for deferral of interest, may be given for schemes that do not meet the policy criterion; for example, some spray irrigation schemes, or a scheme covering fewer than four farms or less than 400 hectares.

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.
- River control and flood protection works, and community drainage schemes.
- 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 subsidy for both off-farm and on-farm works. The responsibility for promoting schemes rests with county councils.

Ministry of Works and Development.

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 reactions to either test is as follows:

- In addition to the carcass proceeds, 90% of the difference between an average carcass value and a standard replacement value, assessed each season 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 $70 each.
  - Lactating factory-supply cows, 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, tested between July and December 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.

Ministry of Agriculture & Fisheries

1.7.2 Noxious-Plants Control Scheme

The Noxious-Plants Control Scheme provides for a subsidy of 75% of the cost of the chemicals used to control specified noxious weeks.

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. The administration is co-ordinated by eight regional co-ordinating committees, and the national policy is formulated by the Noxious Plants Advisory Committee.

The 75% 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.

The 1977 Budget provided for an additional noxious plant to be eligible for subsidy in each region, at the discretion of the Noxious Plants Advisory Committee.

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.

1.8 ADVERSE-EVENTS RELIEF

1.8.1 Adverse Climatic Events

In emergencies such as floods and droughts, Government assistance is available to farmers in areas where adverse-events committees are formed. A committee is set up by local farm advisers at the request of the affected farmers. Standard forms of relief are:

- Refund of freight costs up to $25 a tonne on stock feed carried by commercial transport.
- Refund of freight charges for livestock carried by commercial transport from the relief area for grazing elsewhere. The

concession applies to the homeward journey for droughts, and to the outward journey for floods. Freight charges are fully reimbursed up to 200 kilometres and a 50% subsidy is paid on freight costs incurred beyond this distance.

- Transport subsidy on the use of farmers' own vehicles for carting stock feeds, at the rate of 10 cents per tonne per kilometre up to a maximum of $25 per tonne, and for carting livestock, at 10 cents per tonne per kilometre. The concession is limited to the homeward journey in the case of droughts, and to the outward journey for floods with a maximum allowable distance of 200 kilometres. Beyond that the rate of 5 cents per tonne per kilometre applies.
- A subsidy of up to 50% of the actual cost, up to a maximum of $40 per hectare is payable toward the cost of regrassing pastures destroyed by flooding. Expenditure which qualifies for reimbursement includes seed, fertiliser, insecticides, and contractors' charges.
- 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.

If, however, taxation relief is the only form of assistance desired, the local Federated Farmers branch should submit a request to the district MAF office for reference to the Commissioner of Inland Revenue. (There is no need to set-up an adverse-events committee solely to recommend this assistance.)

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 Works 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 $500 a year for the first 2 years may be converted to a suspensory loand. 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.

1.9 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 $600 per annum per eligible child, effective from the beginning of the second school term in 1978.

The Government has recently approved additional assistance 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.

Department of Education

1.9.2 School Transport Assistance

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

All eligible pupils are required to make their own way up to 1.6 kilometres to a bus stop. Thereafter transport assistance is provided. The daily limit is $1 per child.

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.

Enquiries:

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.

1.10 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

board may propose to distribute up to 50% of the surplus and to credit the balance 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% 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 1978/79 season of 180 c/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 1978/79.

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 180 c/kg, if the combined basic price plus 50% of the 1978/79 individual trading surplus of milkfat and SNF are less than 180 c/kg. Regardless of the actual percentage payout by the Board of any trading surplus for 1978/79, the level of any supplement paid by the Government will be based on an assumed payout of 50%.

The 180 c/kg refers to the farmgate prices as paid by the Dairy Board to dairy companies. Company payments to suppliers will fluctuate around the 180 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 'bench Mark' grades of export meat –lamb, mutton, and beef – before the start of each meat year. Minimum and trigger prices for the remaining grades are set by the Meat Board in relation to these bench-mark classes.

Should market realisations prevent exporters paying the minimum price for a given class of export meat, the Meat Board will either make supplementary payments to producers, or intervene in the market itself.

Alternatively, if the schedule for any week exceeds the trigger price for a given grade, a levy of 50% of the excess amount will be deducted from producer's returns and paid into the stabilisation account of the appropriate commodity.

There are separate stabilisation accounts at the Reserve Bank of New Zealand for beef and for sheep meats. Should the funds provided by producers become exhausted, advances will be made from the Reserve Bank at 1%.

New Zealand Meat Producers Board.

1.10.4 Supplementary Minimum Prices for Meat

For the 1978/79 and 1979/80 meat seaons the Government is prepared to underwrite schedule prices to producers up to specified minimum levels. It is intended that the supplementary minimum prices be related to the benchmark grades of lamb, mutton and beef used for the meat income stabilisation arrangements administered by the Meat Board.

The supplementary minimum prices proposed for the benchmark grades for the 1978/79 meat season are:

	c/kg (at schedule)
Lamb	70
Mutton	30
Cow beef	70
Prime beef	80

Ministry of Agriculture and Fisheries

1.10.5 Wool-income Stabilisation Scheme

The wool-income stabilisation scheme provides for a 3% levy on all shorn wool, and on slipe wool from sheep and lambs sold collectively or on their owner's account.

The New Zealand Wool Board sets a table of minimum prices, and movements in the average of the table are limited to a decrease of 5% and an increase of 10% on the previous season. When the price of wool falls below the table of minimum prices supplementation payments will be made from an account funded by the levy. Should the funds collected from the growers become exhausted, advances will be made by the Reserve Bank of New Zealand, at 1%. The interest will be paid when the account is in credit.

When the average price of wool at auction exceeds a 'trigger price' set at the beginning of the season, a further levy is introduced, equivalent to 50% of the amount by which the average price at that auction exceeds the trigger price. This will be applied as a flat percentage levy on all qualifying wool, and will be paid into individual grower's income-retention accounts and released under specified conditions.

New Zealand Wool Board

1.10.6 Supplementary Minimum Prices for Wool

In addition to the stabilisation procedures operated by the wool industry, the Government has established and will underwrite a supplementary minimum price for wool for the 1978/79 wool-selling season. This price is based on an average of 205 c/kg (greasy) at auction floor in New Zealand. A similar price will be set for 1979/80 at a level not less than that set for this season.

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 205 c/kg, expressed as a percentage of that 'average' price. When 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 payments from the Government financed Supplementary Minimum Wool Prices Account at the Reserve Bank of New Zealand.

The supplementary minimum price of 205 c/kg for 1978/79 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 1978/79 Dairy Beef Market Guarantee Scheme

To encourage the retention of dairy beef calves, the 1978 November-December national average price for 'spring-born' dairy beef weaners is being guaranteed at a minimum of $70 per

head. The guarantee is to be made up of a flat subsidy of $10 per head, and the amount by which the assessed national average price is lower than $60.

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 1978 and 31 May 1979 on a dairy farm that has supplied more than 3000 kilograms of milkfat to a milk station or a dairy factory in the 1977/78 season, or that will supply this amount in the 1978/79 season.

Eligible calves that are born between 1 June and 31 October 1978 are to be registered during November 1978, while those born between 1 November 1978 and 31 May 1979 are to be registered during June 1979.

The payments will be made to whoever owns the calves at midnight on 31st October 1978 with regard tothe first registration period, and on 31 May 1979 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 Motor Vehicle – Fuel and Mileage Taxes.

1.12 GENERAL

1.12.1 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

1.12.2 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

1.12.3 Estimation of Provisional Taxation

Refer to Section on Taxation.

1.12.4 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

1.12.5 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.

Rural Banking and Finance Corporation

1.12.6 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 will, until further notice, suspend the payment of these charges from 1 October 1978.

The full list of cancelled inspection fees is:

Meat
Farm Dairy Instruction Levy*
Dairy Produce Grading
Seed Certification
Seed Testing
Livestock Export Inspection
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

1.12.7 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 emergency assistance may be available for the contractor who is in difficulty because of a drop in the meat and wool farmers' income. Special plant loans are also available.

Rural Banking and Finance Corporation

1.12.8 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

1.12.9 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.

- *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.

Electricity Division, Ministry of Energy

1.12.10 Safety Frames on Tractors

Refer to Taxation Section.

1.12.11 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 bona-fide farm workers, finance is not available for the initial purchase of land or for stockor 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 8½%, but with a rebate of 6% for the first three years and 7½% for the second three years.

Rural Banking and Finance Corporation

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.

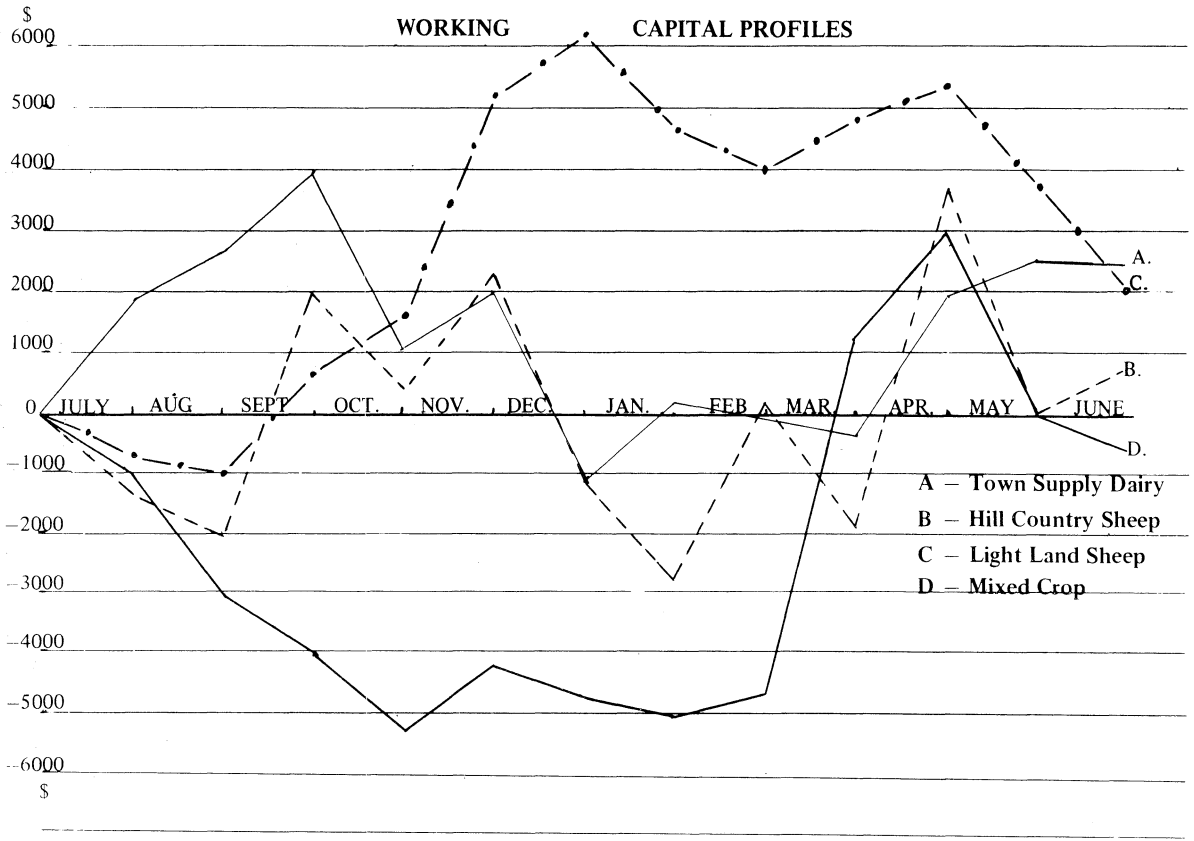
Table 1 Working Capital Requirements of Various Farm Types

Farm Type	Percentage of Value of Land, Building Stock and Plant
Dairying (Intensive)	2%
Dairying and Mixed	3% – 4% depending on comparative size of dairy enterprise
Sheep and Cropping	4% – 5% depending on amount of crop and small seeds.
Sheep (Intensive Fat Lamb)	5%
Sheep (Hill Country Store)	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.


WORKING CAPITAL PROFILES
$
6000
5000
4000
3000
2000
1000
0
-1000
-2000
-3000
-4000
-5000
-6000
$
JULY
AUG
SEPT
OCT.
NOV.
DEC.
JAN.
FEB
MAR.
APR.
MAY
JUNE
A.
C.
B.
D.
A – Town Supply Dairy
B – Hill Country Sheep
C – Light Land Sheep
D – Mixed Crop

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 11½%, term 10 years, first mortgage.

2.2.2 Dairy Companies

Some Dairy companies lend to shareholding suppliers. Security: unsecured, lein on milkfat, or IWS.

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

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

2.2.3 Lands and Survey Department

Land and Settlement Board Finance

Policy – Refer to "Assistance and Incentives to Farmers" (Section 1, 1.2.3).

Deposit requirements – 10% improvements, 25% stock and plant.

Marginal Lands Board Finance

Policy – Refer to "Assistance and Incentives to Farmers" (Section 1, 1.3.10).

2.2.4 Life Insurance Companies

- Policy varies from company to company.
- Two main forms of finance.

Long term mortgage finance – generally up to 50% of valuation, 10–30 year table mortgage, 11½%, 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 policy and funds available.

Specific Policies:

(i) **Farm Settlement**

Policy	–	Refer to "Assistance and Incentives to Farmers" (Section 1, 1.2.1).
Terms	–	Up to 25 year table mortgage. Interest 8½% rebated to 7½% for first three years.
Amount	–	Up to 2/3 value of land and stock within the following guidelines. Sheep farms $95,000 to $125,000. Dairy farms $70,000 to $95,000.

(ii) **Special Settlement Loans**

Policy and terms	–	Refer to "Assistance and Incentives to Farmers" (Section 1, 1.2.2).
Amount	–	Guideline $150,000 plus current account.

(iii) **Development**

Policy	–	Refer to "Assistance and Incentives to Farmers" (Section 1, 1.3.4).
Terms	–	5–7 year table loan secured by Bill of Sale. Interest rate 7½% rebated to 6% for first 3 years.
Amount	–	Guideline $14,000.

(iv) **Refinance**

Policy	–	Hard core debt, estate duty.
Terms	–	Table mortgage at 9½% usually medium term.

(v) **Industrial Lending**

Policy	–	Refer to "Assistance and Incentives to Farmers" (Section 1, 1.12.4).
Guidelines	–	$500,000, 9½%, up to 20 years.

(vi) Fishing Loans

Policy – Parallels to farming policy i.e. purchase, special fishing boat loans, refinance, reconditioning, change of fishing method with table mortgage loans up to ⅔ security value and a basic interest rate 8½%.

(vii) Other

A wide range of other areas 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 ⅔ 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 11% –14%.

2.2.7 Stock and Station Agencies

Have agreed to limit their lending to seasonal only (12½% for arranged finance, 15% for unarranged finance) but some medium term financing of stock and plant is done nevertheless – generally 2–5 year term. Loan facilities are very much on a personal basis and often unsecured, but an increasing trend to take an IWS or mortgage.

2.2.8 Trading Banks

Long term: Farm purchase up to $50,000, first mortgage, 10 years 12%.

Medium term: Plant purchase etc. at 12%, security margin varies.

Bridging finance: 14% on first mortgage.

Seasonal overdraft: 10 ¾–11% on a daily basis charged half yearly, plus a service commitment fee of about ½% charged on the maximum arrangement. Security required – usually Life insurance, stock, personal guarantee.

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: Existing clients 12%, new clients 13%, 3 year bridging with refinance possible if they "play the game".

2.3 FEES AND COMMISSIONS

This section is designed to assist inthe 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. Since these were set in August 1977 and haven't yet been revised, most consultants are operating nearer to the maximum fee.

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

Maximum fee $20.00 per hour

Minimum fee $10.00 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 $30.00 per hour

Minimum fee $12.00 per hour

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

Maximum fee $25.00 per hour

Minimum fee $12.00 per hour.

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

Maximum fee $35.00 per hour with a minimum charge of $70.00 for attendance.

Minimum fee $15.00 per hour.

2.3.4 Legal Fees: Vendor and Purchaser

(i) Purchaser's Solicitor.

- where the consideration does not exceed $650: $30.00.
- where the consideration exceeds $650, a charge of $30.00 plus the following percentages of the balance:

	$		$	%
from	650	to	6,500	.75
over	6,500	to	26,000	.57
over	26,000	to	40,000	.46

over	40,000	to	52,000	.38
over	52,000	to	98,000	.28
over	98,000	to	200,000	.15
over	200,000	to	325,000	.11
over	325,000	to	650,000	.07
over	650,000			.05

For all transactions where the consideration exceeds $1,000,000 charges shall be assessed in accordance with Schedule I but with a maximum of $1,117.00.

(ii) Vendor's Solicitor

- where the consideration does not exceed $650: $27.00.
- where the consideration exceeds $650, a charge of $27.00 plus the following percentages of the balance:

	$		$	%
from	650	to	6,500	.46
over	6,500	to	26,000	.33
over	26,000	to	40,000	.29
over	40,000	to	52,000	.22
over	52,000	to	98,000	.17
over	98,000	to	200,000	.07
over	200,000	to	325,000	.05
over	325,000	to	650,000	.04
over	650,000			.025

For all transactions where the consideration exceeds $1,000,000 charges shall be assessed in accordance with Schedule I but with a minimum of $615.00.

- 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.

(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, Trademarks and Company Shares.

(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.

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 $100,000	2.75%
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%.

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

(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 proerty concerned including the receiving of rent/interest requiring the receipting and accounting of such moneys through the Trust Account, on all moneys received 7.5%.

  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 mortgagees 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

(i) Basic Charge

For a class B (rural) survey.
Minimum charge$153.19
Up to 40 ha add $2.68 per ha.
Over 40 ha add $1.45 per ha.

(ii) Measurement Charge.

This is on the basis of the amount of surveying involved for orientation or positioning. On open land, easy going (0 to 5 degrees slope) 9.1 cents per metre of traverse in addition to the basic charge above.

(iii) Lot Charge.

Where up to 5 lots are involved on easy going flat land

Up to 1000m^2 per lot	$27.26 per lot
1000 to 2000m^2 per lot	$32.63 per lot
2000m^2 to 2 hectares	$38.14 per lot

For the surveying of a new road within a lot there is an additional charge of $32.63 per 200 metres of road or part thereof.

(iv) Easement Charges.

There is a charge of $5.51 for each easement that must be created on a lot. The range of easements cover sewerage, storm water, other drainage, power, telephone and right-of-way.

(v) Miscellaneous

Where the surveyor is to be employed on an hourly basis the charge is to be $10 to $15 per hour.

For each additional survey peg placed or found there is a charge of $5.51 per peg in addition to the basic or lot charge.

2.3.7 Valuation Charges

N.Z.I.V. Scale of Charges

(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 $10 to $18 per hour depending on the skill and experience of the member.

(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. The prices however, may be altered without notice to make allowance for any one or a combination of the following:-

(i) Changes in meat prices due to supply and demand at 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). If the meat and pelt schedules remain relatively stable throughout the season for lambs, then other things being equal there should be an increase in the return per head due to the increased wool pull later in the season.

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 will operate as from 15th January, 1979. Prices are quoted as delivered to works.

Lambs:

PL	8.0 - 12.5kg	73.5¢/kg	OL	8.0 - 12.5kg	69.5¢/kg
PM	13.0 - 16.0kg	73.5	OM	13.0 - 16.0kg	69.5
PH	16.5 - 25.5kg	67.0	A	to 12.5kg	67.5
YL	8.0 - 12.5kg	71.0	F	8.0 - 12.5kg	44.0
YM	13.0 - 16.0kg	73.0			
YH	16.5 - 25.5kg	67.0			
			Cutter 1L	8.0 - 12.5kg	56.5¢/kg
			1M	13.0kg & over	59.0
			Cutter 2	All weights	38.4
			M	All weights	15.4

Mutton:

ML1	Under 22.0kg	30.5¢/kg	MX	Under 26.0kg	25.0¢/kg
ML2	22.5 - 26.0kg	29.5	MM	All weights	16.0

MH1	26.5 - 30.0kg	27.5	MF	All weights	5.5
MH2	30.5 - 36.0kg	20.0	MP1	Under 26.0kg	5.0
			MP2	All weights	4.0

Rams:

All weights 3.0¢/kg

Buffer Account Deduction Percentage: NIL

M.A.F. Inspection Fee withdrawn. 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. The current situation can be determined from the weekly stock reports in the newspapers. The prices at the Addington sales on Tuesday 16th and Wednesday 17th January are shown below.

Prime Lambs:

Best lambs – $15.50 to $16.60
Medium Lambs – $14.50 to $15.20
Light lambs – $13 to $14.20

Prime Sheep:

Best young wethers – $15.70 to $16.50
Medium wethers – $14.50 to $15.30
Light wethers – $13 to $14.20
Four tooth wethers – $10 to $13
Best shorn ewes – $9.20
Medium shorn ewes – $7.30 to $7.80
Light and plain ewes – $5.30 - $6.50

Store Lambs:

Best wether lambs – $12 to $13
Medium wethers – $10.50 to $11.50
Light wethers – $9.00 to $10.00
Best ewe lambs – $16 to $18.50
Good to medium ewe lambs – $12 to $15
Light ewe lambs – $10 to $12

Store Ewes:

Good two tooths – $15 to $16
Plain two tooths – $13 to $14.50
Good adult Corriedales – $12.50
Aged works ewes – $5 to $6.50
Five year ewes – $10 to $10.60

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 12th January 1979.

Description	Weight Range (kilograms)	Price (N.Z. cents per kilogram)	
PL	8.0 - 12.5	210.0 Old Season	218.3 New Season
PM	13.0 - 16.0	205.8	214.2
PH	16.5 - 25.5	193.4	197.5
YL	8.0 - 12.5	196.5	205.8
YM	13.0 - 16.0	189.2	205.8

3.1.4 Store and Breeding Stock Prices

During the last season, store stock prices in most areas reflected lower prices for wool and lamb. Probably more significantly, however, was the poor feed situation in regard to pasture growth and winter cattle feed reserves, due to the prolonged summer/autumn drought.

1978 Autumn Ewe Prices by District, Good and Medium Grades.

District	2th Ewes		4 year ewes		5 year ewes	
	Good	Medium	Good	Medium	Good	Medium
Auckland (Jan)	23.00	13.00	13.00	9.50	13.00	9.50
Te Kuiti (Jan)	22.00	16.00	17.00	12.00	12.00	10.00
Hawke's Bay (Jan)	30.20	21.00	15.50	13.50	16.20	12.80
Canterbury (Feb)	20.00	13.00	14.00	11.00	15.40	12.30
Dunedin (Feb)	21.00	18.00	12.50	8.00	14.00	11.00
Invercargill (Feb)	25.00	20.00	13.00	10.00	14.00	12.00

Source: "Annual Review of the Sheep and Beef Industry, 1977/78", New Zealand Meat and Wool Boards' Economic Service.

The prices for stock can vary quite alot 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 - $80
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	$60 - $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 mid-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 met on September 26, 1978 to determine the minimum and trigger prices for the benchmark grades of export meat for the Meat Board's price smoothing scheme for the 1978/79 season.

The prices were set as follows (with those for last season given in brackets):

Benchmark grades	Minimum (cents/kg)	Trigger (cents/kg)
Lamb – PM (13.0-16.0kg)	72.0 (59.0)	95.0 (78.0)
Mutton – ML (22kg & under)	30.5 (30.0)	42.0 (40.0)
Prime Beef – PL Steer (220.5-270kg)	70.0 (57.0)	96.0 (83.0)
Manufacturing Beef – M Cow (140kg & over)	58.0 (41.0)	80.0 (63.0)

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 has agreed to act as the Government's agent to administer the Government's Supplementary Minimum Prices Scheme as announced in the Budget in June. The minimum prices announced under this scheme relate to the same benchmark grades as listed above and are as follows:

Supplementary Minimum Price

	(cents/kg)
Lamb – PM (13.0-16.0kg)	70
Mutton – ML (22kg & over)	30
Prime Beef – PL Steer (220.5-270kg)	80
Manufacturing Beef – M Cow (140 kg & over)	70

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, as is the case with beef in the 1978/79 season:

(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., as is the case with lamb and mutton in the 1978/79 season:

(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 source for section 3.1.5 was "The New Zealand Meat Producer", Vol.7, No.1 Oct. 1978 published by the New Zealand Meat Producers Board.

3.2 WOOL PRODUCTION

3.2.1 Wool Production Statistics

(i) AUCTION SALE PRICES 1977/1978 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	295	278N	264	N/A	264	252	283****	266
Timaru	298	278N	270	254	270**	256	270***	250
Invercargill	304	285	263	248N	262***	246	277N	256
Auckland	302	283	290	261	262N***	243	275	257
Napier	304*	285	268	251	264	246	277	249
Christchurch	293	274N	290	260	272	258N	276	262
Wellington	293*	273	268	245	264	252	268N	244
Wanganui	291*	262	290	259	270	255	267N	244

56's Strong Halfbred B Fleece (28F2W)

Timaru	314	300	294	302
Christchurch	315*****	313	304	312
Dunedin	314	290	304N	314****

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
** February
*** April
**** June
***** September
N = Nominal

SOURCE:

N.Z. Meat and Wool Boards' Economic Service "Annual Review of the Sheep and Beef Industry, 1977/1978".

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

Micrometers	All Styles and Types 19-22*	25-27**	35***	All Qualities	Total Greasy Auction Sale Value	Estimated Total Value of Wool Prod
SEASON	(cents per kilogram greasy)				($ million)	($ million)
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

SOURCE:

N.Z. Meat and Wool Boards' Economic Service "Annual Review of the Sheep and Beef Industry, 1977/1978".

* = 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 1977/1978 WOOL SELLING SEASON (July - June)

		1976/1977	1977/1978
DISPOSALS:			
1. Sales			
(a) at Auction			
(i) Greasy	: bales	1 313 563	1 325 163
	: kilograms	200 931 149	198 608 840
	: av. price (c/kg)	219.58	190.43
(ii)Scoured	: bales	32 297	34 938
	: kilograms	4 090 283	4 429 981
	: av. price (c/kg)	293.17	263.24
TOTAL BALES SOLD AT AUCTION		1 345 860	1 360 101

(b) Privately		
(i) Brokers	33 828	13 568
(ii) Private buyers & WMA	300 338	333 489
(iii) Extra Choice	52 552	67 337
TOTAL SOLD PRIVATELY	386 718	414 394
2. Growers' Shipments (in bales)		
(a) Greasy	10 895	9 012
(b) Scoured	36 946	40 395
(c) Slipe	16 631	9 313
TOTAL GROWERS' SHIPMENTS	64 472	58 720
3. Slipe Disposals (in bales)		
Freezing companies and fellmongers	191 650	212 664
TOTAL DISPOSALS		
(a) In bales	1 988 700	2 046 044
(b) In kilograms (greasy equivalent)	312 296 930	317 013 263
SCOURING: (in tonnes)		
(a) On account Growers	7 800	8 577
(b) On account Buyers	93 097	97 218
TOTAL SCOURED	100 797	105 795
EXPORTS: (in tonnes)		
(a) Greasy	124 744	111 324
(b) Scoured	102 087	106 297
(c) Slipe	25 849	25 161
TOTAL EXPORTS	252 680	242 782
LOCAL MILL PURCHASES: (in bales)	156 207	121 492*
BOARD MARKET ACTIVITIES (N.Z. & U.K.) : in bales		
(a) Bids (Market Intervention incl. S.P.C.)	256 762	401 928
(b) Purchases (i) Intervention	75 624	122 256
(ii) Extra Choice	52 552	67 337
(iii) Other	7 019	1 735
(c) Sales – all	80 827	91 430
(d) Supplementation (i) Bales Supplemented	–	–
(ii) Supplement paid ($)	–	–

* = Provisional

SOURCE: New Zealand Wool Board, "WOOLNEWS" Vol.6 No.2 August 1978.

3.2.2 Wool Prices

The following section is taken from the official wool market report on the two day sale held at Christchurch on 15th and 18th January 1979.

Both crossbred and fine wools were described as being firm. The first day of the sale drew an offering of 19 985 bales, a large proportion of it being Corriedale and halfbred. Although the wool was generally well grown, yields were lower than at sales earlier in the season.

More crossbred was on offer than at previous sales, and although colour was average, the wools were high yielding and accordingly fetched good prices.

Compared with the Auckland sale on January 12th, all crossbred fleece was very firm; crossbred skirtings were in the sellers' favour, and crossbred oddments unchanged.

Merino fleece was nominally firm on Dunedin rates of December 11th, fine and medium halfbred in sellers' favor, stronger halfbred firm to sellers' favor, skirtings unchanged, and oddments 2½% stronger.

The Wool Board gave limited support to the market, bidding on 626 bales, or 3 per cent of the offering, and having only 30 bales sold or passed to it.

The range of values on the first day was:

		cents/kilogram
Fine Merino 64/70s	Good	230 to 248
Medium Merino 60/64s	Good to Super	to 262
	Good	230 to 252
Extra Fine Halfbred, and Corriedale 58/60s	Good	209 to 233
	Average	199 to 208
Fine halfbred and Corriedale 56/58s	Good to Super	to 237
	Good	200 to 223
	Average	190 to 199
Medium Halfbred and Corriedale, 54/56s	Good	198 to 219
	Average	190 to 197
Medium crossbred, 46/50s	Good	215 to 235
	Average	208 to 223

Strong crossbred, 44/48s	Good	217 to 237
	Average	206 to 226

Shorn Hogget

Fine halfbred and Corriedale, 56/58s and 58s	Good	207 to 223
	Average	196 to 212
Medium halfbred and Corriedale, 54/56s	Good	208 to 222
	Average	109 to 207
Fine crossbred, 48/50s	Good	220 to 242
	Average	212 to 230

Second Shear

Strong crossbred, 44/48s, 7.5cm - 12.5cm, Good to average	213 to 238

Necks

Fine halfbred, 56/58s Average to good	212 to 222
Medium halfbred, 50/56s and 56s Average to good	190 to 212
Fine crossbred, 48/50s Average to good	208 to 228

Pieces

Merino, 60/64s Average to good	184 to 196
Fine halfbred, 56/58s and 58s Average to good	174 to 186
Medium halfbred, 50/56s and 56s Average to good	170 to 186
Medium crossbred, 46/50s Average to good	172 to 188

Bellies

Merino, 60/64s Average to good	170 to 183
Medium halfbred, 50/56s and 56s Average to good	147 to 164
Medium crossbred, 446/50s Average to good	160 to 173

Locks

Halfbred	122 to 130
Crossbred	132 to 148

All crossbred fleece wools were slightly dearer on the second day of the sale. Halfbred skirtings also showed a similar movement, but for other classes of wool, prices were steady.

The offering on the second day included 18 103 bales, making a total of 38 088 bales for the two day sale.

There was good general competition, with Western Europe, Eastern Europe and the Far East being the principal buyers, supported by the New Zealand mills. The N.Z. Wool Board gave support to the market by bidding on 589 bales, or 3.2% of the offering, and having 69 bales, or 0.38%, sold or passed to it.

A feature of the sale was that two catalogues offered on the second day contained average style wools which were partly discolored but high yielding. A selection of these made higher prices than the good normal yielding styles and this is reflected in the range of prices for average styles.

The range of values on the second day was:

		cents/kilogram
Fine Merino, 64/70s	Good to super	to 261
	Good	240 to 253
Medium Merino, 60/64s	Good to Super	to 256
	Good	230 to 248
	Average	221 to 229
Extra Fine halfbred and Corriedale, 58/60s		
Good to Super		to 236
Good		211 to 230
Average		204 to 211
Fine halfbred and Corriedale, 56/58s		
Good to Super		to 361
Good		198 to 227
Average		190 to 213
Medium halfbred and Corriedale, 54/56s		
Good to Super		to 269
Good		194 to 223
Average		190 to 213
Strong halfbred and Corriedale, 50/54s		
Good		193 to 218
Average		198 to 211
Fine crossbred, 50/52s	Good	218 to 234
	Average	208 to 224
Strong halfbred and Corriedale, 50/54s		
Good		196 to 216
Average		188 to 195
Fine crossbred, 50/52s	Good	214 to 232
	Average	206 to 213

Medium crossbred, 46/50s	Good	213 to 233
	Average	205 to 212
Strong crossbred, 44/48s	Good	214 to 234
	Average	207 to 213
Shorn Hogget		
Fine halfbred and Corriedale	Good	212 to 224
	Average	198 to 210
Fine crossbred	Good	210 to 221
	Average	191 to 207
Fine crossbred	Good	219 to 239
	Average	210 to 218
Second Shear		
Strong crossbred, 7.5cm to 12.5cm, Average to Good		210 to 228
Necks		
Fine halfbred	Average to Good	198 to 221
Medium halfbred	Average to Good	192 to 211
Fine crossbred	Average to Good	205 to 225
Pieces		
Fine halfbred	Average to Good	164 to 184
Medium halfbred	Average to Good	160 to 180
Medium crossbred	Average to Good	170 to 185
Bellies		
Fine halfbred	Average to Good	150 to 170
Medium halfbred	Average to Good	149 to 169
Medium crossbred	Average to Good	158 to 176

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

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 2%) to be imposed on all shorn wool and dead wool produced in New Zealand. This includes 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.

(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 1978/1979 season was announced in July 1978 as 250 cents per kilogram. This was 16% up on last season's price of 215 cents per kilogram.

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

1. The 'trigger' price for 1978/1979 ..... 250 c/kg
2. A.W.A.S.P. at a sale..... 295 c/kg
3. Difference ..... 45 cents
4. 'Specified Percentage' retention

$$\frac{0.5 \times 45}{295} \times 100 \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 7.627\%$$

Thus, the 'Specified Percentage' retention of 7.627% 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.

During the first few months of the current season, the N.Z. Wool Board has been much less active in pursuance of its market intervention policy as compared to last season. For example, at the six auction sales held during October 1978, the Board bid on only 0.62 per cent of the total offering, compared with 35.15 per cent last season. Purchases by the Board at the October sales amounted to 0.03 per cent of the offering compared with 9.57 per cent last season.

(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 extra Choice Scheme is limited to second shear bodywool, lambs and crutchings only. The E.C.S. has proved very popular to growers and this has placed a lot of strain on the Board's valuation capabilities.

As a result, the period before a sale during which the grower must present his wool for valuing has been shortened, and the charges for this service have been increased to make the scheme less attractive to the grower.

(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 1978/1979 wool-selling season. This price is based on an average of 205 cents/kilogram (greasy) on the auction floor in New Zealand. A similar price will be set for the 1979/1980 season at a level not less than that set for this season.

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 205 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 205 cents/kilogram for 1978/1979 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 (2% 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 1977/1978 Season

(i) PRODUCTION: Total wool production in the 1977/1978 season increased by 2.7% to 310.8 thousand tonnes, or 8.3 thousand tonnes more than in 1976/1977. This was lower than in 1975/1976 when 311.8 thousand tonnes of wool

were produced. This production figure includes greasy, slips, scoured and wool on sheepskins converted to the greasy equivalent.

The weight of greasy wool sold at auction in 1977/1978 decreased by 1.2% compared to the previous year. This follows a 5.5% decrease between 1975/1976 and 1976/1977. The amount of wool sold through South Island centres (except Christchurch) and Wanganui increased when compared with the previous year, while the amount sold through Wellington decreased by 12.2% and that through Auckland by 6.4%.

The amount of wool scoured increased by 26.9% in the 1977/1978 season, following increases of 10% and a further 19% in 1975/1976 and 1976/1977 respectively. Slipe disposals increased by 6.4% compared with 1976/1977, part of this increase attributable to the decline in wool prices during the last season. Private sales of greasy wool increased marginally (0.2%) while the sales by brokers decreased by about 60% when compared with the last season. The Wool Board purchased some 67 337 bales of wool from growers under the Extra Choice Scheme during the year, an increase of nearly 30% over 1976/1977. 20 309 bales were sold by the Board before June 30, 1978 from the E.C.S. stockpile. Grower's shipments of greasy, scoured and slipe wool to the United Kingdom fell by 8.9% compared to the previous year. This was largely due to a drop in the amount of slipe wool shipped.

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 1977/1978 is shown in the following table:

N.Z. WOOL PRODUCTION 1977/78 (Total and Per Sheep Shorn)

District	Sheep No. June 1977 (millions)	Total Prod'n (000 tonnes)	% Change	Production per head (kg)	Change (kg)
Auckland	9.323	44.95	+ 0.9	4.82	–0.42
Napier	10.901	63.01	– 0.2	5.78	–0.28
Wanganui	4.700	25.24	+ 6.5	5.37	+0.08
Wellington	6.082	30.40	– 3.1	5.00	–0.48
North Island	31.006	163.60	+ 0.5	5.28	–0.31
Christchurch	7.966	39.00	– 1.1	4.90	–0.21
Timaru	4.646	24.40	+ 7.2	5.25	+0.17
Dunedin	7.232	35.48	+11.0	4.91	+0.36
Invercargill	8.254	48.32	+ 6.1	5.85	+0.20
South Island	28.098	147.20	+ 5.36	5.24	+0.12
NEW ZEALAND	59.104	310.8	+ 2.74	5.26	–0.10

As can be seen in the above table, the overall New Zealand production per head decreased by 0.10 kg per head compared with the 1976/1977 year. However, this drop is overshadowed by the increased total production as a result of the greater numbers of sheep shorn. The lower clip per head was the result of severe drought conditions over most of the North Island and southern districts of the South Island during the 1977/1978 season.

(ii) WOOL PRICES: The average price for wool sold at auction during the season of 1977/1978 was 190.4 cents per kilogram compared to 219.5 cents per kilogram last year, a decrease of 13%.

The season began strongly at the mid-August Dunedin sale with crossbred fleeces up 1½% from the previous season's close. The demand for fine wools became depressed and the Wool Marketing Corporation (since amalgamated with the New Zealand Wool Board to form the new New Zealand Wool Board) bought up to 40% of the wool offered at the next two sales, at Timaru and Christchurch. During September and October, the market firmed and fine wool prices improved slightly. The N.Z.W.M.C. purchased 46% of the wool offered in August, but this dropped to 17% in September. During October, the demand for wool by the local mills and buyers from Europe improved and the market strengthened further. At the Napier sale on October 21, the Corporation bought only 2% of the offering.

However, due to greater amounts of wool being offered, the market slumped dramatically in late October and November, and the Corporation intervened by bidding on 70% of the offering in December sales, and purchasing some 34%. After the Corporation had considered this state of affairs, it reduced its intervention in the market as its funds were running low. The result of this major policy change was a 7-8% drop in auction prices. The market weakened further until the Invercargill sale in mid-December when it began to steady. It was not until the Timaru sale on February 10 that prices rose appreciably. Once again the market weakened in March, as the result of drought-affected wool being offered. The Wool Board's activity (after amalgamation with the Marketing Corporation) was slight and this continued through to the season's close. Although the prices had firmed by June, they were still 10-15 cents per kilogram below the October 1977 rates.

(iii) COMPETITION: In the early sales of the 1977/1978 season, the N.Z. Wool Marketing Corporation was bidding strongly, but Western and Eastern Europe also appeared along with Bradford buyers in some strength. Japan was also active, but to a lesser extent. The local mills were quite inactive as a result of the poor New Zealand economic state. During the latter parts of the season the Western and Eastern European countries, particularly the U.S.S.R., intensified their interest. Japan bought more as a result of the strengthening of the yen in relation to other currencies near the close of the season. New Zealand mills renewed interest in the second half of the season, buying 121 492 bales during the whole season. This was somewhat less than the 156 207 bales they purchased in the previous season.

(iv) EXPORTS: The pattern of exports was much different to that of the 1976/1977 season. Significant increases in wool exports were recorded to China (+110%), Spain (+66%) and smaller increases in shipments to the German Democratic Republic, Ireland, Portugal and the United Kingdom were reported.

Significant decreases were recorded for Turkey (–74%), Poland (–56%) and Egypt (–46%).

(v) THE WOOL INDUSTRY ACT 1977: This act came into effect on February 7, 1978 establishing the new New Zealand Wool Board. This move was aimed at overcoming

the duplicity of operations by the two bodies, particularly in the areas of marketing, promotion and research.

(vi) MARKET INTERVENTION: During the season, the Board bid on 393 065 bales (or 27.7% of the offering) and purchased some 122 244 bales (or 8.6% of the offering in New Zealand. The Board also bid on 8 863 bales (15.5% of the offering) and purchased 1 630 bales (2.9% of the offering) in the United Kingdom.

(vii) MINIMUM PRICES: During 1977/1978, the minimum price was set at 150 cents per kilogram. Throughout the season, prices remained above this level and so no supplementation was needed. At the start of the 1977/1978 season the fund stood at $16 million and by June 1978, $40.4 million.

(viii) WOOL INCOME RETENTIONS: The 'trigger' price of 215 cents per kilogram was not exceeded during the last season. In the previous season, 1976/1977, about $25 million was credited to individual farmers' accounts under this scheme. On February 2, 1978, the Prime Minister and Minister of Finance, Mr. Muldoon, announced that all money held on behalf of growers in the Wool Income Retention Account would be refunded as part of a parcel of economic measures designed to increase liquidity and ease restrictions on consumer spending. About $26.8 million was paid out during February-March 1978.

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, 1977/1978".

3.3 SKINS

The skin payments as at 15 January were as follows:

Lambs –	0.50kg	217 cents/kg
	0.75kg	314 " "
	1.00kg	355 " "
	1.25kg	398 " "
	1.50kg	439 " "
Shorn Lambs –	0.20kg	221 " "
	0.40kg	253 " "
	0.60kg	285 " "
	0.80kg	317 " "
Sheep –	0.25kg	226 " "
	0.50kg	261 " "
	0.75kg	294 " "
	1.00kg	330 " "
	1.25kg	365 " "
	1.50kg	403 " "
	1.75kg	444 " "
	2.00kg	490 " "
	plus 16 cents for every 0.1kg over 2.00kg	

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

LIGHT: 20¢ per hd deduction MEDIUM: 35¢ per hd deduction
HEAVY: 50¢ 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 hd. Lambs $1.00 per hd.

3.4 CROPS

3.4.1 Wheat:

(i) Prices –

The prices for milling standard wheat for the 1979 harvest are as follows:

	$ per tonne
Aotea, Kopara, and equivalent	127.50
Hilgendorf	153.00
Arawa	121.13
Karamu	114.75

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 1979 harvest.

(ii) **Monthly Storage Increments** – The Department of Trade and Industry has approved an increase in the rate of payment of storage increments from 1.125% per month of the basic price to 1.25%. 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	2.39
	16-30	3.19
May	1-15	3.98
	16-31	4.78
June	1-15	5.58
	16-30	6.38
July	1-15	7.17
	16-31	7.97
August	1-15	8.77
	16-31	9.56
September	1-15	10.36
	16-30	11.16
October	1-15	11.95
	16-31	12.75
November	1-15	13.55
	16-30	14.34

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 as 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 $25.50 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 $6.37 per tonne less than Aotea, but if sold for milling, the charge-out price to millers will be the same as for Aotea.

The grower's price for Karamu will be $12.75 per tonne less than Aotea, but if sold for milling, the charge-out price to millers will be the same as for Aotea.

(v) **Sacks** – The Wheat Board's buy-back price for new 116cm x 58cm jute grain sacks will be 52 cents per sack.

3.4.2 Barley

The contract price for No. 1 Grade Malting barley for the 1979 harvest is $110.00 per tonne 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. This price applies to the varieties Zephyr, Mata and Manapou.

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

Screenings %	$ per tonne
6	108.00
7	106.00
8	104.00
9	102.00
10	100.00
11	98.00
12	96.00

If the barley does meet the above specifications, the malting company has the option to purchase it at $86.00 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 $2.40 per tonne for delivery during the month of May and a further 90 cents 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 price will be paid in the following manner:

(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 9% 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 1978/79 season is:

Basic	$270 per tonne
1st Generation	$210 per tonne
2nd Generation	$200 per tonne

The price for feed barley grown on contract is $87.00 per tonne.

3.4.3 Oats

The price offered for good quality oats this season is $90/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.

3.4.5 Peas

The prices offered for field dressed peas for the 1979 harvest are:

(i) **Field peas –**

White Prolific	$160 per tonne
Huka	$160 per tonne
Ajax	$175 per tonne
Rondo	$135 per tonne

(ii) **Garden peas –**

Greenfast, Victory Freezer, D.S.P., New Victory, Patea, Pugets, Puki, Pama, Scouts and Small Sieve	$175 per tonne
Maro	$155 per tonne
Onward	$185 per tonne
William Massey	$200 per tonne

Note: All the above prices are for bulk seed. Seed in sacks receives a premium of about $5 for field peas and $2 for garden peas.

(iii) **Freezer peas –**

Grade	Tenderometer Reading	$ per tonne packed
0	not exceeding 90	215.34
1	over 90, not over 95	194.19
2	over 95, not over 100	170.60
3	over 100, not over 105	149.63
4	over 105, not over 110	131.24
5	over 110, not over 115	126.01
6	over 115, not over 120	112.70
7	over 120	100.23

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

3.4.6 Beans

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

Grade	Average Seed Length	$ per tonne weighbridge weight less deductions
0	not exceeding 8.5mm	122.58
1	over 8.5mm, not over 9mm	118.21
2	over 9mm, not over 9.5mm	114.69
3	over 9.5mm, not over 10mm	111.91
4	over 10mm, not over 10.5mm	109.26
5	over 10.5mm, not over 11mm	107.67
6	over 11mm, not over 11.5mm	106.59
7	over 11.5mm, not over 12mm	105.54
8	over 12mm, not over 12.5mm	104.48
9	over 12.5mm, not over 13mm	103.43
10	over 13mm	102.25

(ii) Tick beans grown for seed are paid for on the following basis:

Grade No. 1 M/D	$165 per tonne
Grade No. 2 M/D	$ 82 per tonne

3.4.7 Sprouting Brocolli

Sprouting brocolli sown in the autumn for process freezing is paid for at $255 per tonne packed weight. All harvesting and cartage are paid for by the processing company.

3.4.8 Cauliflower

Cauliflower grown for process freezing is paid for at $235 per tonne packed weight.

3.4.9 Brussel Sprouts

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

Grade No. 1	29.8 cents per kilogram
Grade No. 2	28.0 cents per kilogram
Grade No. 3	25.9 cents per kilogram

3.4.10 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 $57 per tonne (container supplied by company) or $59 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 1978. There is no way of predicting the price in January.

3.4.11 Lucerne

The 1979 payment schedule for lucerne, both dehydrated and sun-cured, is:

Yields 10 tonne per hectare and above	$40 per dry tonne
Yields below 10 tonne per hectare	$36 per dry tonne

3.4.12 Linseed

There are no contracts for linseed growing during the 1978/79 season.

3.4.13 Lupins

There are 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.

3.4.14 Miscellaneous

There are several other specialist crops that are grown for seed in different areas. The prices for these should be obtained from farmers growing the crop, or from a local seed firm.

3.5 SMALL SEEDS

The prices paid to farmers for small seeds vary a lot during the season.

The price paid 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. The columns could be completed during the year using information from newspaper Grain and Produce reports, or prices direct from the Seed merchants.

	1979			
	January	April	July	October
	$	$	$	$
Grass Seed:				
Ruanui Ryegrass	.48			
Nui Ryegrass	.62			
Ariki Ryegrass	.46			
Manawa Ryegrass	.48			
Paroa Italian Ryegrass	.48			
Tama Ryegrass	.60			
Apanui Cocksfoot	2.15			
Crested Dogstail	1.15			
Matua Prairie Grass	1.80			
Browntop	1.90			
Clover seed:				
Huia White	1.35			
Turoa Montgomery Red	1.60			
Hamua Broad Red	1.70			
Lucerne:				
Saranac	3.55			
Wairau	2.50			
Kale:				
Medium Stemmed	1.75			
Giant	1.70			

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 15th January 1979

Grading	Weight Range (kg)	Steer	Heifer	Cow	Bull	Veal
P1	160.5 - 195	108.5	104.5	96.0	119.5	0 - 160 31.0
	195.5 - 220	108.5	107.5	100.0	121.5	
	220.5 - 245	111.5	110.5	103.0	123.5	
	245.5 - 270	114.5	113.5	105.0	126.5	No gradings
	270.5 - 295	115.5	114.5	106.0	129.5	for bulls
	295.5 - 320	116.5	as above		132.5	
	320.5 - 345	117.5	as above		135.5	
	345.5 & over	118.5	as above		138.5	
G	160.5 - 195	104.5	100.5	94.0		
	195.5 - 220	104.5	103.5	98.0		
	220.5 - 245	107.5	106.5	101.0		
	245.5 - 270	110.5	109.5	103.0		
	270.5 - 295	111.5	110.5	104.0		
	295.5 - 320	112.5	as above			
	320.5 - 345	113.5	as above			
	345.5 & over	114.5	as above			
T	160.5 - 270	106.5	102.5	97.0		
	270.5 - 295	106.5	104.5	99.0		
	295.5 & over	108.5	106.5	101.0		
E	160.5 - 270	97.0	95.0	84.5		
	270.5 - 295	99.0	97.0	86.0		
	295.5 & over	101.0	99.0	88.5		
L1	160.5 - 195	107.5	105.5			0 - 160 30.0
	195.5 - 220	107.5	107.5			
	220.5 - 245	109.5	108.5			
	245.5 - 270	110.0	110.5			
	270.5 - 295	113.0	111.5			
	295.5 & over	116.5				
L2	160.5 - 195	107.5	109.5			
	105.5 - 220	107.5	111.5			
	220.5 - 245	108.5	112.5			
	245.5 - 270	109.5	113.5			
	270.5 - 295	110.5	114.5			
	295.5 & over	111.5				

M	145.0 & under	99.5	103.5	102.5	0 - 160 10.0
	145.5 - 170	102.5	106.5	105.5	
	170.5 - 195	105.5	109.5	108.5	
	195.5 - 220	107.5	111.5	110.5	
	220.5 & over	108.5	112.5	111.5	

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:- P1 = -6.0 cents; -6.5 cents less than Hawke's Bay value
G = as above
T = as above except for 160.5 - 270kg weight range = -8.0¢ & -8.5¢
E = -6.0 cents; -6.5 cents
L1 = as above
L2 = as above
M = as above

Heifer:- P1 = -10.0 cents; -10.5 cents
All other grades = as above

Cow:- P1 = -9.0 cents; -9.5 cents except for 160.5 - 195kg weight range = -7.0 cents & -9.5 cents
All other grades = -9.0 cents; -9.5 cents

Bulls: For all weight ranges = -7.0 cents; -7.5 cents

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 16th and Wednesday 17th January 1979.

Prime Steers:

Heavy steers – to $405

Medium steers – $290 to $340

Light steers – $240 to $280

Heavy steer beef sold at 108 to 110 cents per kilogram, good light to medium steer beef at 112 ¢/kg, with some sales to 114 ¢/kg.

Prime Heifers:

Top-weight heifers – to $304

Medium heifers – $235 to $275

Light heifers – $190 to $225

Heifer beef sold at 110 to 114 cents per kilogram, with some sales at higher money.

Prime Cows:

Butchers' cows – to $299

Medium cows – $225 to $250

Light cows – $195 to $220

Cow beef sold at 95 to 100 cents per kilogram.

Vealers:

The vealer yarding was of good quality, with young cattle in the 170 to 180kg range. Top heifers reached or bettered $200, and there were regular sales at $180 to $190. This meant veal was fetching 105 cents per kilogram.

It appears that cattle markets at Addington will be larger than usual for a time. This revolves on the fact that by selling on the open market, vendors are avoiding the export "skim off" into the industry reserve account. On a 270kg steer, this amounts to almost $15.

Store Steers:

Best Angus 16 month – $211

Good-average 16 month – $165 to $180

Smaller 16 month – $125 to $150

Best Shorthorn adult – $260

Good adult – $225 to $245

Medium adult – $190 to $220

Small adult – $160 to $180

Store Heifers:

Good 16 month – $140 to $160

Small 16 month – $90 to $130

Good adult – to $214

Medium adult – $170 to $190

Store Cows:

Best South Devons – $256

Good Angus & Angus-cross – $198

Most of the 16 month-old steers were a wintering-over proposition, but there were also heifers that would be ready for the local trade by winter. There was a good offering of adult steers, some of which were in killing order.

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.F.N.). 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 1978/1979, the whole milk price as set by the Prices Authority is 165.72 cents/kilogram milkfat, but there is also a Government-guaranteed minimum price of 180 cents/kilogram milkfat, both in 1978/1979 and 1979/1980. This guarantee scheme means that there will be either a retrospective adjustment during the season, or an end-of-season payment, of at least 14.28 cents/kilogram milkfat. The final price paid by local companies in 1977/1978 was approximately 171 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, there is a special South Island allowance of 0.735 cents/litre and a Christchurch area allowance of 0.367 cents/litre which applies to full price milk of finest and first grade in March to August, both inclusive. The national advance town milk price, for the year ending 31st August 1979, is 12.1847 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 1978/1979

		QUOTA MILK (cents per litre)			SURPLUS MILK (cents per litre)		
Month	Full Price Paid for:	Finest	First	Second	Finest	First	Second
September '78	110% of quota	12.525	12.158	11.426	6.367	6.000	5.268
October	105% " "	10.172	9.805	9.073	"	"	"
November	105% " "	"	"	"	"	"	"
December	105% " "	"	"	"	"	"	"
January '79	105% " "	"	"	"	"	"	"
February	120% " "	"	"	"	"	"	"
March	120% " "	13.627	13.260	11.426	"	"	"
April	120% " "	"	"	"	"	"	"
May	120% " "	17.156	16.789	14.955	"	"	"
June	125% " "	"	"	"	"	"	"
July	120% " "	"	"	"	"	"	"
August	120% " "	"	"	"	"	"	"

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 of 0.183 cents per litre 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 solds-not-fat tests per month – one in each ten day period.

For purposes of comparison between seasons, the milk prices for the 1977/1978 season are shown below:

CANTERBURY DAIRY FARMERS LIMITED
Milk Prices 1977/1978

		QUOTA MILK (cents per litre)			SURPLUS MILK (cents per litre)		
Month	**Full Price Paid for:**	**Finest**	**First**	**Second**	**Finest**	**First**	**Second**
September '77	105% of quota	11.452	11.085	10.353	5.617	5.250	4.518
October	100% " "	9.522	9.155	8.423	"	"	"
November	100% " "	"	"	"	"	"	"
December	100% " "	"	"	"	"	"	"
January '78	105% " "	"	"	"	"	"	"
February	120% " "	"	"	"	"	"	"
March	120% " "	12.554	12.187	10.353	"	"	"
April	120% " "	"	"	"	"	"	"
May	125% " "	15.434	15.067	13.233	"	"	"
June	130% " "	"	"	"	"	"	"
July	130% " "	"	"	"	"	"	"
August	120% " "	"	"	"	"	"	"

3.7.3 Dairy Industry Stabilization

At the start of each season, basic farmgate 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 farmgate supplementary minimum price for the

1978/1979 season of 180 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 1978/79.

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 180 cents/kg, if the combined basic price plus 50% of the 1978/1979 individual trading surplus of milkfat and S.N.F. are less than 180 cents/kg. Regardless of the actual percentage payout by the Board of any trading surplus for 1978/1979, the level of any supplement paid by the Government will be based on an assumed payout of 50%.

The 180 cents/kg refers to the farmgate prices as paid by the Dairy Board to dairy companies. Company payments to suppliers will fluctuate around the 180 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 1978/1979 Dairy Beef Market Guarantee Scheme

To encourage the retention of dairy beef calves, the 1978 November–December national average price for 'spring-born' dairy beef weaners is being guaranteed at a minimum of $70 per head. The guarantee is to be made up of a flat subsidy of $10 per head, and the amount by which the assessed national average price is lower than $60.

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 1978 and 31 May 1979 on a dairy farm that has supplied more than 3 000 kilograms of milkfat to a milk station or a dairy factory in the 1977/1978 season, or that will supply this amount in the 1978/1979 season.

Eligible calves that are born between 1 June and 31 October 1978 are to be registered during November 1978, while those born between November 1978 and 31 May 1979 are to be registered during June 1979.

The payments will be made to whoever owns the calves at midnight on 31 October 1978 with regard to the first registration period, and on 31 May 1979 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 the year.

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

District		Northland /Auckland	Waikato	Canterbury	Otago
Month/Class of Stock**					
February	1	$160-175		$155-120	$155
	2				$110
	3	$100	$105	$115-120	$120
	4	$ 90	$ 90		$110
	5	$ 50- 55	$ 45		$ 60
May	1	$250-280	$160-180	$160	$150
	2	$160	$155-160	$150	$120
	3	$145-150	$130-140	$150	$170
	4	$130-135	$115-135		$140
	5	$ 55			$ 30
August	1	$250	$220	$210	$200
	2	$220	$200		$150
	3	$180	$190	$210	$160
	4	$170	$180		$130
	5	$ 80	$ 70		
November	1	$260		$225-230	$180-200
	2	$200			$150-160
	3	$145		$215-220	$150-180
	4	$130			$140-150
	5	$ 85			

** 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.
Class 5 = Dairy beef weaner

SOURCE: "Marketplace" in New Zealand Farmer magazine; February, May, August and November 1978.

The dairy cattle offered at Addington saleyards, Christchurch, are 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.

There is a shortage of dairy cattle for sale in the Canterbury region at the moment. The improved situation of dairying in the province as a result of irrigation application to previously non-dairying country, has caused the demand for suitable dairy stock to heighten quite dramatically. As a result, the prices for these cattle are higher than would normally be expected.

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 no related increase in the prices for pig meats during the last year, profitability has decreased markedly. This trend is likely to continue and will inevitably lead to more intense and efficient production.

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 22nd January 1979

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

Hot Weights

45.5kg - 70kg	PRIME	126 cents per kilogram
	CHOICE	120 " " "
	STANDARD	98 " " "
	MUTILATED	86 " " "

70.5kg - 83kg	PRIME	102	”	”	”
	CHOICE	92	”	”	”
	STANDARD	82	”	”	”
	MUTILATED	72	”	”	”
Manufacturing					
All weights		40	”	”	”

These prices are subject to change at short notice.

Deductions:

Pork Industry Council Administration Levy	50.0¢ per pig
Pork Marketing Board Stabilization Levy	100.0¢ ” ”
Federated Farmers Levy	0.6¢ ” ”
Total	150.6¢ per pig

Most pork is sold on the local fresh meat market where returns are higher. Current prices are approximately 130 cents 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 results of the Addington sale on Tuesday, January 16th 1979 are shown below.

Most pigs were $3 to $4 easier than last week. The yarding was made up largely of lighter-weight pigs, many of which were inclined to over-fatness.

Light porkers – $40 to $44
Medium and heavy porkers – $45 to $53
Light and medium baconers – $54 to $60
Heavy baconers – up to $67, with the odd sale to $71.50
Choppers, good – up to $70
Choppers, light – $30 to $50.

The small yarding of store pigs had a firm sale. A good selection of slips and small stores. However, very few weaners were on hand.

Small weaners – $17 to $21
Good weaners – up to $27
Slips and small stores – $28 to $33
Large stores – $34 to $37, with odd sales to $40.

SECTION 4

FARM EXPENDITURE

4 FARM EXPENDITURE

4.1 WAGES

4.1.1 Dairy Farm Workers

(i) Permanent

		plus 7% G.W.O.
Under 17 years of age	$58.00	$62.06
17 years and under 18	$68.00	$72.76
18 years and under 19	$78.00	$83.46
19 years and under 20	$88.00	$94.16
20 years and over	$95.00	$101.65

These above figures are per week and found. They also refer to minimum rates of pay.

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 $15.00 per week.

Thus, the adult weekly wage becomes $117.70

(95.00 + 15.00) + 7% = 117.70

In the case where the employee is provided with a house only, the employee shall be paid an extra $8.00 per week

Thus, the adult weekly wage becomes $110.21

(95.00 + 8.00) + 7% = 110.21

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

(ii) Casual

The rate of pay for a casual worker (not guaranteed a 40 hour week) shall be $3.00 per hour. The rates of pay in this award are not to be increased by the 7% cost-of-living allowance of the 25 June 1976 to a maximum of $7.00 per week as this has already been added into the pay rates.

4.1.2 Other Farm Workers

(i) Permanent

		plus 7% G.W.O.
Under 17 years of age	$54.00	$57.78
17 years and under 18	$63.00	$67.41

18 years and under 19	$74.00	$79.18
19 years and under 20	$82.00	$87.74
20 years and over	$89.00	$95.23

The above figures are per week and found. They also refer to minimum rates of pay.

Where the employer does not provide board and lodging the employee shall be paid an extra $13.50 per week.

Thus, the adult weekly wage becomes $109.70

(89.00 + 13.50) + 7% = 109.70

In the case where the employee is provided with a house only, the employee shall be paid an extra $8.00 per week.

Thus, the adult weekly wage becomes $103.79

(89.00 + 8.00) + 7% = 103.79

The minimum hourly rate to be paid to permanent workers shall be 1/45th 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	$2.30	$2.00
18 years and over	$2.80	$2.50

The non-inclusion of the 1976 7% C.O.L. allowance applies to this award also.

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 Shearing Wages (Canterbury 1979)

(i) Shearers Rates (minimum).

Machine shearing base rate	$29.70 per 100
Machine shearing base rate (lambs)	$26.69 per 100
Blade shearers	$44.30 per 100

All sheep with metal ear tags, other than stud sheep, are to be shorn at a premium of $2.00 per 100.

Shearers who use their own hand piece must be paid a hand piece allowance of 60 cents per 100 sheep shorn.

(ii) Crutching Rates (minimum).

	per 100
Full belly, full crutch, flank and eye wig	$13.17
Full belly, tail crutch	$ 9.95
Full crutch, eye wig	$ 9.95
Full crutch only	$ 9.14
Tail crutch	$ 7.52
Tail crutch – lamb	$ 6.77

(iii) Shedhands, Pressers, Daggers and Cooks' Rates (minimum).

Shedhands shall be paid not less than $2.48 per hour.

Pressers shall be paid not less than $2.61 per hour.
Daggers shall be paid not less than $2.61 per hour or $8.74 per 100.

Cooks. For cooking for 12 persons and under, cooks shall be paid not less than $20.43 per day. For over 12 persons the rate is increased by $0.33 per person per day.

All rates included in section (i) are with rations included. Where rations are not supplied, an additional allowance of $2.50 per day per person in lieu of rations must be paid.

Where workers are required to supply their own transport, they shall be reimbursed at the rate of $0.13 per kilometre.

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 $15.00 per dog or bitch over 3 months of age. Fees are usually reduced to half price after October.

4.2.2 Contract Dipping

(i) Sheep Dipping –

Plunge: total cost, including materials –

1 to 500	13.5 cents per sheep
500 to 1 050	12.5 cents per sheep
1 050 to 2 050	11.5 cents per sheep
2 050 to 4 000	11.0 cents per sheep
Over 4 000	10.5 cents per sheep

Mobile Shower:

$65 per 1 000, plus materials, plus $6 setting-up fee

11.5 cents to 14.5 cents per sheep, including materials, depending on length of wool. Rates may be higher under 1 000 sheep, and conversely, lower with large mobs, depending on distance.

4.2.3 Sheep Dip Guide

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.	$ 75.46	3 l	Plunge	1:2000	$2.52
Ked					1:4000	$1.26
Fly				Shower	1:2000	$2.52
					1:4000	$1.26
				C.R. Shower	1:1280	$3.93
					1:2560	$1.96
Lice	Asuntol	$205.00	20 l	Plunge	1:2000	$1.03
Ked						
Fly				C.R. Shower	1:2000	$1.03
Lice	Diaz-O-Spray D.F.F.	$ 80.78	3 l	Plunge	1:4000	$1.35
Ked					1:8000	$ .67
Blowfly				Shower	1:4000	$1.35
					1:8000	$ .67
				C.R. Shower	1:2000	$2.69
					1:4000	$1.35
Lice	Diaz-O-Spray	$169.33	20 l		1:2000	$ .85
Ked				Shower	1:1000	$1.69
Blowfly					1:2000	$ .85
				C.R. Shower	1:500	$3.39
					1:1000	$1.69
Lice	Numix	$ 52.47	5kg	Plunge	1kg:1000 l	$2.10
Ked				Shower	1kg:1000 l	$2.10
				C.R. Shower	1kg: 750 l	$2.79

(C.R. shower denotes continuous replenishment).

From the above guide it can be seen that cost per 100 head on average varies from 67 cents to $3.93 with an average overall cost of $1.50 per 100 head.

4.2.4 Cattle Dipping Guide

Shell Poron 10 2 litres $18.62

Calves up to 75kg	200 head dose rate 10mls	19 cents per head
100 to 225kg	66 head dose rate 30 mls	28 cents per head
325 to 450kg	33 head dose rate 60 mls	56 cents per head

4.2.5 Drenching

(i) Sheep Drenching

Nilverm (Cost in cents per dose)

Type of Animal	Weight Range	Dose Rate	Pack Size & Cost of Pack 45 l $485.66	24 l $265.93	12 l $135.56	5 l $60.82
Sheep	up to 22.5kg	4 ml	4.32	4.43	4.52	4.87
	22.5 - 34kg	6 ml	6.48	6.65	6.78	7.30
	34kg and over	8 ml	8.63	8.86	9.04	9.73

Panacur (Cents per dose)

Type of Animal	Weight Range	Dose Rate	Pack Size & Cost of Pack 20 l $220.00	5 l $61.00
Lambs	15kg	3 ml	3.3	3.66
	21 - 30kg	6 ml	6.6	7.32
	30 - 40kg	8 ml	8.8	9.76
	40kg and over	9 ml	9.9	10.98

Thibenzole (Cents per dose)

Type of Animal	Weight Range	Dose Rate	Pack Size & Cost of Pack 30 l $301.75	20 l $209.53	10 l $111.26	5 l $57.59
Lamb	Up to 20kg	4 ml	4.02	4.19	4.45	4.60
Lambs & Hoggets	21 - 30kg	6 ml	6.03	6.28	6.67	6.91
Hoggets	31 - 40kg	8 ml	8.04	8.38	8.90	9.21
Sheep	41kg over	10 ml	10.05	10.47	11.12	11.51

Rintal – 2½% suspension (Cents per dose)

Type of Animal	Weight Range	Dose Rate	Pack Size & Cost of Pack 20 l $200.00	2.5 l $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.

Nilverm (Cents per dose)

Type of Animal	Weight Range	Dose Rate	Pack Size & Cost of Pack 45 l $485.66	24 l $265.93	12 l $135.56	5 l $60.82
	Up to 100kg	20 ml	21.58	22.16	22.59	24.33
	100 to 200kg	40 ml	43.17	44.32	45.19	48.66
	200 to 300kg	60 ml	64.75	66.48	67.78	72.99
	over 300kg	80 ml	86.34	88.64	90.37	97.32

Thibenzole (Cents per dose)

Type of Animal	Weight Range	Dose Rate	Pack Size & Cost of Pack 30 l $301.75	20 l $209.53	10 l $111.26	5 l $57.59
	Up to 50 kg	17 ml	17.09	17.81	18.91	19.58
	50 to 150kg	50 ml	50.29	52.38	55.63	57.59
	150 to 200kg	70 ml	70.40	73.33	77.88	80.62
	200 to 300kg	100ml	100.58	104.76	111.26	115.18

Noviben Paste (Cents per dose)

10 cartridge pack $148.49($14.85 per cartridge)
20 cartridge pack $294.04($14.70 per cartridge)

	Dose per cartridge	Cost per dose (cents)
	Up to 100 kg	50
Up to 100 kg	50	29.70
100 to 150kg	33	45.00
150 to 200kg	25	59.40
200 to 250kg	20	74.25
250 to 300kg	16	92.81
300 to 350kg	14	106.07
350 to 400kg	12	123.75

Rintal 10% suspension (Cents per dose)

	Dose rate	2.5 litre pack $95.50
Up to 40kg	3 ml	11.46
40 to 100kg	7.5 ml	28.65
100 to 160kg	12 ml	45.84
160 to 200kg	15ml	57.30
200 to 300kg	22.5 ml	85.95

4.2.6 Bloat Control

Product	Pack Size	Price
Blogon	20 l	$ 46.00
	200 l	$388.12
No Bloat (N.I.)	20 l	$ 24.84
	200 l	$182.42
(S.I.)	20 l	$ 29.74
	200 l	$201.62
Blokure	20 l	$ 42.40
	200 l	$405.46

4.2.7 Facial Eczema Control

Product	Pack Size	Price	Price/Litre
Sporex	5 litre	$ 54.15	$10.83
	20 litre	$214.20	$10.71

4.2.8 Vaccines

Vaccine	Size of Pack	Cost	Dose Rate	Cost per Head (cents)
Pulpy Kidney	200ml	$ 3.25	Sheep & Lambs	3.25
	500ml	$ 7.81	2cc	3.12
PK-Tetanus	200ml	$ 5.21	Sheep & Lambs	5.21
	500ml	$12.37	2cc	4.95
Black leg-Malignant Oedema	100ml	$ 2.16	Sheep & Lambs	4.32
	200ml	$ 4.32	2cc	4.32
	500ml	$10.60		4.24
Triple	200ml	$ 6.60	Sheep & Lambs	6.60
(Pk, Bl, Mo)	500ml	$16.40	2cc	6.56
Multine 4 (Pk, Bl, Tet, Mo)	200ml	$ 7.36	Sheep & Lambs	7.36
	500ml	$17.32	2cc	6.93
Multine 5 (Pk, Bl, Tet, Mo,	100ml	$ 4.20	Sheep & Lambs	8.40
Black Disease)	200ml	$ 8.58	2cc	8.58
	500ml	$20.65		8.26
	1000ml	$40.58		8.12
Scabine	150dose	$ 1.85		1.23
Foot Rot	100dose	$13.40	Hoggets	13.40
Scabby Mouth	125dose	$ 2.80	Lambs & Hoggets	2.24

4.2.9 Penicillin

	Size of Pack	Price $
Durapen 3 in 1	12 tubes	$ 6.27
	30 tubes	14.85
Procal 100	12 tubes	2.34
Procal 500	12 tubes	4.32
	36 tubes	12.36
Procal 1500	6 tubes	4.41
	12 tubes	8.37
Penicillin Udder Injection 50	12 tubes	1.80
	36 tubes	5.13
P.U.I. 100	12 tubes	2.67
	36 tubes	7.32
Adpen 100	12 tubes	3.39
Penetha-Pen 100	12 tubes	2.88

4.2.10 Disinfectants

Hibitane	25 l	$31.49
	5 l	$ 7.04
Detol	5 l	$11.62

4.2.11 Miscellaneous Veterinary Supplies

Formalin	60 l	$ 42.97
Formalin	200 l	$121.08
Calcium Borogluconate	450 ml	$2.97
Docking Rings	500 per pack	$6.00
Aerosol markers	200gm	$1.93
	400gm	$3.13

Ear tags:	Sheep, double medium,	stamped	$0.39 each
		blank	$0.27 each
	Cattle, double large,	stamped	$0.53 each
		blank	$0.39 each

4.2.12 Veterinary Club Membership

Veterinary club charges vary from club to club. A typical membership fee would be $12.00.

Standard Visit Fee	$7.00
Examination Fee	$4.00

Annual animal health expenditure is generally in the range of 40 to 50 cents per stock unit.

4.3 BREEDING EXPENSES

4.3.1 Artificial Breeding Fees (Canterbury)

For the 6 week group membership, the fee is $25.00 plus $4.20 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	$ 46.00
10	$ 67.00
20	$109.00
30	$151.00
40	$193.00
50	$235.00
60	$277.00
70	$319.00
80	$361.00
90	$403.00
100	$445.00
110	$487.00
120	$529.00
130	$571.00
140	$613.00
150	$655.00
160	$697.00
170	$739.00
180	$781.00
190	$823.00
200	$865.00

Deduct $25.00 from the above fees if Herd Testing is carried out. With the Premier Sire Service, 2 free returns with subsequent returns at $2.00 each.

4.3.2 Herd Testing Charges

With monthly testing, all cows tested twice or more are charged for. With alternate monthly testing, each cow tested more than once is charged for.

Cow No.	Monthly	Alternate Monthly	Production Ranking Test
Basic Herd Fee	$ 50	$ 30	$ 25
Minimum Charge	$ 93	$ 56	$ 38
	11 to 100 $4.30 each	11 to 100 $2.60 each	$1.30 each
20	$136	$ 82	$ 51
30	$179	$108	$ 64
40	$222	$134	$ 77
50	$265	$160	$ 90
60	$308	$186	$103
70	$351	$212	$116
80	$394	$238	$129
90	$437	$264	$142

100	$480	$290	$155
	101 to 149 $3.80 each	101 to 149 $2.30 each	
110	$518	$313	$168
120	$556	$336	$181
130	$594	$359	$194
140	$632	$382	$207
149	$666	$403	$219
	150 onwards $3.30 each	150 onwards $2.00 each	
150	$670	$405	$220
160	$703	$425	$233
170	$736	$445	$246
180	$769	$465	$259
190	$802	$485	$272
200	$835	$505	$285

4.3.3 Beef Plan (National Beef Recording Service).

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 (1979)

Ex store unless otherwise stated. Price is in cents each.

	94cm	104cm	116cm	122cm
New sacks	61.7	66.5	73.5	86.9
Ex Store Christchurch	64	68	76	89
Buying back	44	47	52	89
Once shot sacks	60	64	72	84
Buying Back	20	35	45	52
Second sacks including chaff sacks	35	50	60	66

(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, effective from 15 November 1978. The only exceptions are the 'Seed Potato Inspection' fee and the 'Late Entry' fee.

(i) Seed Potatoes

There is a certified seed 'Tuber Inspection' fee of 12 cents per 75kg sack.

(ii) Late Entry Fee

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

All seed testing charges were cancelled by the 1978 Budget as of the 15 November 1978.

4.4.4 Consolidated Dressing and Store Handling Charges

Include receiving, delivering, sampling weighing, dressing, brushing of sacks and disposal of offal.

Ryegrasses– Ruanui, Rama, Manawa, Ariki, Paroa and Nui	5.1 cents per kg
Each additional time through	2.5 cents per kg
Cocksfoot	15.2 cents per kg
Clovers – White, Red and Alsike	15.2 cents per kg
Lucerne	15.2 cents per kg
Grass Seed (Fine) – Browntop, Fescue, Dogstail and Timothy	15.2 cents per kg
Turnips, Chou Moellier, Kale and Mustard	14.3 cents per kg
Rape	10.5 cents per kg
Prairie Grass	22.8 cents per kg
Yarrow	30.2 cents per kg

Separating White clover and Ryegrass	78.0 cents per sack
Separating mixed oats and Ryegrass	78.0 cents per sack
Slurry treating (Captan) Wheat & barley	$18.25 per tonne
(Captan) Oats & Peas	$19.75 per tonne
(Vitaflow 200) Barley	$33.25 per tonne
Blending clovers and blending grass seeds	$ 1.40 per sack

	Rates per tonne
Wheat and Ryecorn	$20.10
Barley	$23.50
Field Peas and Lupins	$25.00
Garden Peas and Beans	$31.50
Oats, dressing and clipping	$28.00
Linseed	$41.50

Farmers usually only get their small seeds dressed and under ordinary circumstances seed goes once through the dressing machines.

Field dressed ryegrasses, clovers and timothy usually dress out approximately 25 percent offal and field dressed cocksfoot from 25 to 33 percent offal.

4.4.5 Box Hire

Approximately $4.00 per box depending on size.

4.4.6 Grain and Seed Drying Charges

Peas	to 17% moisture	$ 9.00 per tonne
	17-18% moisture	$11.00 per tonne
	over 18% moisture	$13.00 per tonne
	second time over	$ 6.50 per tonne
Wheat, Oats and Barley	to 17% moisture	$ 8.00 per tonne
	17-18% moisture	$ 9.00 per tonne
	over 18% moisture	$11.00 per tonne
	second time over	$ 5.50 per tonne
Small Seeds	to 17% moisture	4.4 cents per kg
	17-18% moisture	5.5 cents per kg
	over 18% moisture	6.6 cents per kg
	second time over	3.3 cents per kg

For a second run over the dryer, the charge is half the above rates.

4.5 CONTRACTNG

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 $23.00 per header metre front per hour,

2.4m header	$56.00/hr
3.0m header	$70.00/hr
3.6m header	$84.00/hr
4.2m header	$98.00/hr

Wheat:	When the crop runs 2.35 tonne/ha or over, $15.43/tonne
Barley:	When the crop runs 1.95 tonne/ha or over, $18.52/tonne
Oats:	When the crop runs 1.55 tonee/ha or over, $23.15/tonne
Peas and Lupins:	When the crop runs 2.0 tonnes/ha or over, $20.20/tonne
Linseed and Clover:	$50.80 per ha or hourly rates according to the size of header, whichever is the greater.
Grass Seed:	$47.50 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	$18.50 per hour
– Disc mowing	$21.25 per hour
Windrowing and conditioning	$30.30 per ha
Raking, once over	$18.50 per hour
Conditioning hay	$19.50 per hour
Baling hay or straw	$00.31 per bale
Half tonne bales (round)	$ 4.80 per bale
(square)	$ 4.50 per bale
Sledging by contractor	$ 0.05 per bale
Collecting jumble	$ 0.02 per bale
Picking up bales (hay or straw)	$ 0.31 per bale

For any quantity less than 20 tonne, price is by arrangment. On hill country there is a 20% surcharge.

4.5.3 Contract Chaff Cutting

Prices include machine and 6 men.

Oatsheaf	$0.55 per bag
Straw Chaff	$1.00 per bag
Oaten Hay	$1.00 per bag
Lucerne	$1.00 per bag

4.5.4 Contract Windrowing

$27.40 per ha for 10cm and above, $28.85 with conditioner.
$28.85 per ha under 10cm, $30.30 with conditioner.

4.5.5 Potato Contracting

Planting	$20 - $22/hour
Digging and Picking	70 cents/bag in paddock (14 bags/tonne; cartage extra)
Roguing	$23/ha $25/hr. for tractor and digger
Grading	$18 - 20/bin (11 sacks/bin) $23 - 25/tonne

Note: These costs are for an average crop in reasonable conditions.

4.5.6 Miscellaneous

Saw Bench	$16.00 per hour with one operator
Gorse cutting	$12.50 per hour
Tree topping	$35.00 to $40.00 per hour
Stonepicking	$23.00 per hour
Potato harvesting	$15.00 per tonne or $55.00 per hour, whichever is the greater.
Drilling	$17.00 per ha
Direct drilling	$23.50 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)	$13.50
22 - 30	(30 - 40)	$15.00
31 - 36	(41 - 49)	$16.00
37 - 44	(50 - 59)	$17.00
45 - 50	(60 - 69)	$18.00
51 - 58	(70 - 79)	$19.00
59 - 62	(80 - 85)	$21.00
63 - 73	(86 - 99)	$25.00
74 - 88	(100 - 110)	$27.50
89 - 103	(102 - 140)	$29.50
104 - 118	(141 - 160)	$33.50

(ii) 4 Wheel Drive Tractors

Up to 11	(Up to 20)	$12.50
12 - 22	(21 - 39)	$14.50
23 - 41	(40 - 55)	$17.00
42 - 48	(56 - 65)	$18.50
49 - 55	(66 - 75)	$19.50
56 - 63	(76 - 85)	$23.00
64 - 74	(86 - 100)	$27.00
75 - 88	(101 - 120)	$28.50
89 - 103	(121 - 140)	$30.50
104 - 118	(141 - 160)	$35.00
119 - 136	(161 - 180)	$39.00
Over 136	(Over 180)	$44.50

(iii) Track Machines

23 - 41	(40 - 55)	$16.50
42 - 48	(56 - 65)	$20.00
Over 48	(Over 65)	$24.00

(iv) Extra Implements

Plus the following extra charges for implements

Up to 30	(Up to 40)	$2.10
31 - 45	(41 - 60)	$2.65
46 - 60	(61 - 80)	$3.50
61 - 75	(81 - 100)	$4.50
Over 75	(Over 100)	$6.00

(v) Or plus the following extra charges for Rotary Hoes.

Up to 1.3 metres	$ 3.00
1.3 - 1.5 metres	$ 3.50
1.5 - 1.8 metres	$ 3.50
1.5 - 1.8 metres	$ 4.25
1.8 - 2.0 metres	$ 5.30
2.0 - 2.3 metres	$ 6.60
2.2 - 2.5 metres	$ 8.25
Over 2.5 metres	$10.60

4.6 DAIRY SHED EXPENSES

Cow Covers	Lined: Brown Jute – $21.00, Green Jute $23.00 Unlined: Brown Jute – $17.00, Green Jute $20.00
Inflations	1 set moulded cost $10.20 per doz.
Milk Rubbers	$2.17 per metre changed 1 set year
Air Rubbers	$1.64 per metre changed ½ set year
Claw Rubbers	$2.88 doz changed 2 sets year
Inflations 'Alfa Laval' Type	$1.35 each (with petals) $1.35 each (without petals)
Galvanised Buckets	$8.64 (13.64 litres or 3 gals)
Milk Buckets (S.S.)	$26.60 (14 l) Calf bucket $7.70
Polythene buckets	$6.80 (13.64 litres)
Oil – Pump	$1.24 per litre
Teat Salve	$10.40 per 5 kilo tin
Milk Stone Remover	$7.60 per 5 l. $27.20 per 20 litre
Detergents S.S.	$8.55 per 5 kilo tin
Iodophor Sanitizors	$34.50 per 20 l. $9.20 per 5 l.
Iodophor Vat Cleaners	$38.00 per 20 l.
Non Ionic Wetting Agents	$19.80 per 20 l.
Dairy Ointment	$7.33 per 3.5 l.
Healex	$9.55 per 4 l.
Spray on teat lotion	$18.20 per 5 l.
Teatsan	
Brooms (36cm)	$5.95

Costs per cow milked	— factory supply	$2.90 – $4.00
	— town milk supply	$6.00 – $6.50

4.7 ELECTRICITY

Costs per cow milked
- Factory supply shed (milking, water heater, water pump, waste disposal) $7.00 to $11.00 per cow.
- Town milk supply shed (milking and water heater, water pump, waste disposal) $8.00 to $12.00 per cow.
- Owners household is excluded.
- Power to outbuildings, whares, motors, would total $100 to $150 per year.

4.8 FEED

4.8.1 Twine

Baling Twine: 4 balls per bale. 200 hay bales (conventional) per ball.

Heavy Sisal Baler Twine (conventional balers)	$50.76 per bale
Medium Sisal Baler Twine (conventional balers)	$46.72 per bale
Superfilm Propylene Twine (for use in big balers)	$66.00 per bale

4.8.2 Stock Foods

		Weight of sack	Price of sack
(i)	Cattle		
	Calf Growa	40kg	$ 8.07
	Dairy Ration	40kg	$ 6.35
	Dairy Meal	40kg	$ 6.24
	Barley Meal	40kg	$ 6.28
	NRM Dairy Meal		$136.30 per tonne
(ii)	Sheep		
	Sheep Nuts	40kg	$ 6.40
	Hogget Grower Nuts	40kg	$ 6.53
	NRM Sheep Nuts		$148.05 per tonne
(iii)	Pigs		
	Weena Growa Pellets	40kg	$ 8.03
	Porker Pellets	40kg	$ 7.79
	Baconer Feed	40kg	$ 7.03
	NRM Grower		$175.90 per tonne
	NRM Baconer		$152.00 per tonne
	NRM Breeder		$147.80 per tonne
(iv)	Miscellaneous		
	Molactrate block	20kg	$ 4.73
	Denkavit	20kg	$ 16.35
	Molasses (dried)	37.5kg	$ 13.06

Agricultural salt	50kg	$ 7.80
Bran	50kg	$ 6.70
Salt blocks	all 20kg	
Cobaltized and Iodized		$ 5.25
Copperized		$ 5.30
Magnesium		$ 6.00

4.8.3 Grazing Fees

Payment for grazing varies according to the class of livestock, the time of year, seasonal conditions and the district.

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	Stock Capacity	Freight Charge Rate
Cattle		
H wagon	8	M
HC (⅓ bigger than H)	11 - 12	M plus ⅓
T (Twice as big as H)	17	M double rate
Sheep		
J wagon	60	M
JC (⅓ bigger than J)	80 - 90	M plus ⅓

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 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

(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
65	$27.90	$18.60	$14.88	$6.72	$10.08	$2.21	$7.71	$43.27	$5.64
80	$30.15	$20.10	$16.08	$7.33	$11.00	$2.38	$8.45	$48.25	$6.21
95	$32.40	$21.60	$17.28	$7.93	$11.90	$2.56	$9.19	$53.24	$6.78
110	$34.65	$23.10	$18.48	$8.54	$12.81	$2.74	$9.93	$58.22	$7.35
146	$40.14	$26.76	$21.41	$9.98	$14.97	$3.17	$11.77	$71.18	$8.83
186	$49.97	$33.31	$26.65	$12.50	$18.75	$3.95	$14.91	$91.76	$11.26
226	$58.53	$39.02	$31.22	$14.62	$21.93	$4.63	$17.24	$110.11	$13.42
266	$65.22	$43.48	$34.78	$16.15	$24.23	$5.15	$18.37	$125.12	$14.87
306	$70.77	$47.18	$37.74	$17.69	$26.54	$5.59	$19.49	$138.69	$15.89
358	$75.90	$50.60	$40.48	$19.78	$29.67	$6.00	$21.06	$154.25	$17.24
438	$84.26	$56.17	$44.94	$22.96	$34.44	$6.65	$23.49	$178.69	$19.41
518	$92.63	$61.75	$49.40	$26.13	$39.20	$7.32	$25.91	$203.13	$21.58
598	$100.98	$67.32	$53.86	$29.30	$43.95	$7.98	$28.34	$227.58	$23.75
662	$107.67	$71.78	$57.42	$31.83	$47.75	$8.50	$30.27	$247.13	$25.49

4.9.2 Road Transport Rates

(i) Lime (bulk) Minimum load 4000 kg.

	Per Tonne		Per Tonne
8 km	$3.19	16 km	$4.21
24 km	$5.01	32 km	$5.69
40 km	$6.49	48 km	$7.17
56 km	$7.96	64 km	$8.53
72 km	$9.10	80 km	$9.67

Thereafter, $0.060 each additional km.

For Transport Subsidies on Fertiliser and Lime, see Subsidies Section.

(ii) Fertiliser (Bulk) Minimum load 4000 kg.

	Per Tonne		Per Tonne
8 km	$ 3.19	16 km	$ 4.55
24 km	$ 5.57	32 km	$ 6.49
40 km	$ 7.28	48 km	$ 7.96
56 km	$ 8.65	64 km	$ 9.33
72km	$10.01	80 km	$10.69

Thereafter, $0.091 each additional km.

(iii) Fertiliser and Lime (Bagged) Minimum load 3000 kg.

	Per Tonne		Per Tonne
8 km	$ 4.89	16 km	$ 6.14
24 km	$ 7.17	32 km	$ 8.19
40 km	$ 9.10	48 km	$10.01
56 km	$10.92	64 km	$11.72
72 km	$12.40	80 km	$13.08

Thereafter, $0.091 each additional km.

Transport subsidy on Fertiliser and Lime see section on Subsidies.

The subsidy is calculated on the distance from the farm to the nearest fertiliser 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 20¢ per bale.
Over 16 bags per tonne

	Per Sack		Per Sack
8 km	$0.273	16 km	$0.341
24 km	$0.398	32 km	$0.444
40 km	$0.484	48 km	$0.5238
56 km	$0.563	64 km	$0.603
72 km	$0.643	80 km	$0.683

Thereafter, $0.062 each additional km. Ex paddock – schedule rate plus $0.074 per sack, includes bag loaded and all labour. Ex heap in paddock – schedule plus $0.03 per sack.

(vi) Grain (Bulk) Ex acceptable silo. Minimum load 4000 kg.

	Per Tonne		Per Tonne
8 km	$3.30	16 km	$4.32
24 km	$5.23	32 km	$6.03

40 km	$6.83	48 km	$7.51
56 km	$8.19	64 km	$8.76
72 km	$9.33	80 km	$9.90

Thereafter, $0.074 each additional km.

Where silos are not completely self emptying, add $0.30 per tonne.

Auger charges $0.46 per tonne.

Ex header $1.14 per tonne by arrangement.

Converting bags to bulk $1.14 per tonne.

(vii) Grass Seed and Grain Peas (Bulk) Boxes over 1000kg, Minimum 8 boxes

	Per Tonne		Per Tonne
8 km	$ 4.61	16 km	$ 5.63
24 km	$ 6.54	32 km	$ 7.34
40 km	$ 8.13	48km	$ 8.82
56 km	$ 9.50	64 km	$10.07
72 km	$10.63	80 km	$11.21

Thereafter, $0.091 each additional km.

Boxes under 1000 kg, minimum 16 boxes.

	Per Tonne		Per Tonne
8 km	$ 5.93	16 km	$ 6.95
24 km	$ 7.86	32 km	$ 8.66
40 km	$ 9.45	48 km	$10.14
56 km	$10.82	64 km	$11.39
72 km	$11.96	80 km	$12.53

Thereafter, $0.091 each additional km.
If farmer loads boxes efficiently, deduct $1.71 per box.
For less than minimum loads add $1.14 per box for first 5 boxes and $0.57 per box thereafter.

(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	$0.273	16 km	$0.341
24 km	$0.398	32 km	$0.444
40 km	$0.484	48 km	$0.523
56 km	$0.563	64 km	$0.603
72 km	$0.643	80 km	$0.683

Thereafter, $0.0050 each additional km.
Ex paddock add $0.55 per sack.

(ix) Wool by Road. Minimum load 14 bales.

	Per Bale		Per Bale
8 km	$1.14	16 km	$1.48
24 km	$1.74	32 km	$1.99
40 km	$2.22	48 km	$2.42
56 km	$2.59	64 km	$2.73
72 km	$2.84	80 km	$2.96

Thereafter, $0.0100 each additional km.

$0.25 per bale off ground.

(x) Lambs and Hoggets by Road (all per head)

	Store Lambs	Fat Lambs	Hoggets
8 km	$0.171	$0.176	$0.193
16 km	$0.210	$0.233	$0.254
32 km	$0.290	$0.330	$0.356
48 km	$0.364	$0.410	$0.447
64 km	$0.432	$0.478	$0.529
80 km	$0.489	$0.535	$0.586
97 km	$0.535	$0.592	$0.660
113 km	$0.580	$0.649	$0.711
129 km	$0.626	$0.705	$0.774
145 km	$0.671	$0.762	$0.831
161 km	$0.717	$0.819	$0.887

A lamb becomes a hogget on 1 September. A hogget becomes a sheep on 1 January.

(xi) Sheep (all per head)

	Store Sheep	Fat Sheep
8 km	$0.210	$0.216
16 km	$0.273	$0.284
32 km	$0.381	$0.415
48 km	$0.484	$0.540
64 km	$0.580	$0.649
80 km	$0.660	$0.757
97 km	$0.728	$0.859
113 km	$0.774	$0.950
129 km	$0.842	$1.041
145 km	$0.899	$1.115
161 km	$0.956	$1.183

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 $0.033

Sheep per head $0.044

Where facilities for loading are inadequate, an additional charge of $0.011 per head shall be made for sheep and lambs.

(xii) Store Cattle (all per head)

	Weaners	Yearlings	18 Month Cattle
8 km	$0.93	$1.10	$1.46
16 km	$1.26	$1.52	$2.00
32 km	$1.85	$2.26	$2.82
48 km	$2.37	$2.94	$3.80
64 km	$2.87	$3.53	$4.49
80 km	$3.32	$4.10	$5.04
97 km	$3.74	$4.56	$5.54
113 km	$4.10	$4.94	$6.00
129 km	$4.36	$5.28	$6.36
145 km	$4.59	$5.54	$6.68
161 km	$4.81	$5.77	$6.95

	2 Year Cattle	Fat Cattle
8 km	$1.73	$1.87
16 km	$2.34	$2.56
32 km	$3.39	$3.80
48 km	$4.30	$4.94
64 km	$5.20	$6.08
80 km	$6.02	$6.91
97 km	$6.77	$7.76
113 km	$7.37	$8.48
129 km	$7.80	$8.97
145 km	$8.19	$9.36
161 km	$8.53	$9.74

Penal rates for cattle $0.33 per head where the farmer does not give 24 hours notice of job to be done.

Bulls over 2 years, an additional $2.70 per head.

Where loading ramp is not provided or is not usable, for loading and unloading, then a charge of $1.49 per head of cattle shall be made.

4.10 FERTILISERS

4.10.1 Fertiliser Subsidies

For price and freight subsidies see "Assistance and Incentives for Farmers", Section 1.3.

4.10.2 Kempthorne Prosser Price List

(As of 28 July 1978, current 1 January 1979).

At the time of going to print, price increases were expected in all the potassium and nitrogen containing fertilisers below.

N	P	K	S		Farmers Bulk Per Tone	Farmers Bags Per Tonne
	RATING					
				GENERAL FERTILISERS		
0	8	0	10	Flowmaster Super	37.80	45.80
0	7	0	8	Serpentine Reverted Super	37.15	45.15
0	7	0	8	Lime Reverted Super	35.15	43.15
0	9	0	11	Superphosphate	38.30	46.30
0	6	14	7	30% Potash Super	47.35	55.35
0	7	0	19	10% Sulphur Super	40.85	48.85
0	8	0	10	Cobalt Super	50.50	58.50
0	8	0	10	Copper Super	50.75	58.75
0	8	0	10	Molybdate Super	43.25	51.25
0	8	0	10	Boron Super	47.85	55.85
				CROPPING AND SPECIAL FERTILISERS		
6	6	0	14	Nitrogen Super	56.25	64.25
2	7	0	11	Turnip and Rape Fertiliser	44.65	52.65
6	6	0	14	Boron Turnip & Rape Fertiliser***	73.80	81.80
6	5	5	13	Multipurpose Fertiliser	57.35	65.35
0	8	0	10	Lucerne Sowing Fertiliser	47.65	55.65
0	4	24	5	Lucerne High K Fertiliser	61.85	69.85
0	6	14	7	Lucerne Fertiliser	56.15	64.15
9	3	10	4	Canterbury Orchard Fertiliser	97.50	105.50
8	4	8	16	Horticultural Fertiliser	114.75	122.75
0	6	14	7	Pea Fertiliser	51.80	59.80
6	5	5	13	Potato Fertiliser	57.35	65.35
				NITROGEN AND POTASSIUM FERTILISER		
21	0	0	24	Ammonium Sulphate	95.85	103.85
0	0	48	0	Potassium Chloride	67.75	75.75
46	0	0	0	Urea	–	223.30
26	0	0	0	Calcium Ammonium Nitrate	–	183.00
0	0	40	17	Potassium Sulphate	–	233.05
20	0	0	1	Liquid Nitrogen	93.40	–

				IMPORTED COMPOUND FERTILISERS		
13	14	14	0	Cropmaster 'Extra'	171.00	179.00
18	20	0	0	Cropmaster D A P (Di-Ammonium Phosphate)	214.40	223.45

SPECIAL MIXTURES:

Orders for Special Mixtures will be accepted ONLY for 2 Tonnes or more.

*** DO NOT SOW IN CONTACT WITH SEED

ALL PRICES ARE SUBJECT TO ALTERATION WITHOUT NOTICE

4.10.3 Yates Fertilisers

As at 31 January 1979.

Liquifos	N P K		
	10- 3 - 6	200 litre	$183.00
	8- 5 -10	200 litre	$208.50
Liquid Seaweed		23 litre	$ 43.41
Sporumix A Trace Element Mix		45 kg	$ 17.95
Sporumix B Trace Element Mix		45 kg	$ 17.52
Keiserite		50 kg	$ 19.95
		per bagged tonne	$298.85
Sulphur Flowers		35 kg	$ 39.60
IBDU 31% N		25 kg	$ 18.50
		per bagged tonne	$568.31
Rustica	N P K		
	12- 5 -14	50 kg	$ 17.55
		per bagged tonne	$269.68
	15- 7 - 4	50 kg	$ 18.80
		per bagged tonne	$288.81

4.10.4 Miscellaneous Fertilisers

(i) AMMO-PHOS

N	P	K	S	Per tonne Bulk	Per tonne Bagged
16	9	0	14	$184.50	$195.30
15	7	5	13	$195.30	$206.10
13	6	11	12	$189.80	$200.60
12	10	10	9	$205.15	$215.95
10	18	8	2	$216.85	$227.65
10	18	0	2	$212.70	$223.50
8	14	13	3	$214.05	$224.85
6	10	20	3	$194.75	$205.55

(ii) Canterbury Bye-Products

Meat and Bone Meal	$195.00 per tonne
Dried Blood	$475.00 per tonne

4.10.5 Spreading Fertiliser and Seed

(i) Ground Spread Fertiliser

Average Paddock Size	Cost per hectare
Under 4 hectares	$2.52
4 - 8 hectares	$2.30
8 - 16 hectares	$2.07
Over 16 hectares	$1.96

Minimum cartage as for 3 tonnes.

Stoney, Swampy and hill country – extra by arrangement.

(ii) Aerial Spreading Fertiliser

In the year to June 1977, the average tonnage of lime and fertiliser applied per revenue hour flown was 12.17 tonnes, this being slightly above 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 (1 tonne payloads)	$225	$18.75
James Aviation		
Agwaggon	$175.55	$14.63
Airtruk 300	$197.00	$16.42
Fletcher 300	$181.00	$15.11
Fletcher 400	$218.00	$18.17

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	$45.05	$40.90	$36.70
226 - 905 kg	$40.90	$31.45	$27.25
Over 905 kg	$36.70	$25.15	$20.95

Minimum charge per job $62.00

Under 8 kg per ha $75.45 per 100 kg.

4.11 LIME

White Rock Lime Co.

4.11.1 Cost per tonne on trucks at works.

Green Lime	$4.00
Dry Lime	$6.00

4.11.2 Spreading per hectare.

	Flat Grassed	Flat Worked & Rolled	Hill worked &Grassed
Under 2½ tonnes/ha	$2.84	$3.05	Flat rates plus
2½ tonnes/ha	$3.05	$3.48	up to 61 cents
Over 2½ tonnes/ha	$3.48	$3.94	per hectare extra

Worked paddocks not rolled, orchards, swampy and boulder country are all subject to additional rates by arrangement.

4.12 SEEDS

Ex merchants store. Prices are as of 16 January 1979 and are subject to alteration.

All prices include treating of the seed.

4.12.1 Wheat

Variety	Cost of Seed per tonne Certified 2nd Generation	
	North of Rakaia	South of Rakaia
Kopara, Aotea, Gamenya, Raven, Cross 7-61, Takahe	$230.00	$228.00
Hilgendorf	$252.00	$250.00
Karamu	$227.45	$225.00
Arawa	$222.00	$220.00
Extra for 1st generation	$ 2.00	$ 4.00

4.12.2 Barley

Cost of seed per tonne for Certified 2nd Generation.

Manapou, Mata, Zephyr	$200.00	
Kaniere	$260.00	

4.12.3 Oats

Mapua, Amuri, Taiko	$240.00	per tonne

4.12.4 Lupins

Uni-white, Unite-harvest	$210.00	per tonne
Bitter blue, Borre	$215.00	per tonne

4.12.5 Ryecorn

Rahu	$210.00	per tonne

4.12.6 Linseed

Redwood, Norstar	$500.00	per tonne

4.12.7 Maize

Various hybrids	$290.00	per tonne

4.12.8 Peas

(i) Field	$250.00	per tonne
Maples	$275.00	per tonne
Blue	$275.00	per tonne
White	$275.00	per tonne
(ii) Garden		
Various varieties	$245.00	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 seed.

Rape		$1.75
Swedes		$2.70
Turnips		$2.70
Kale	Medium stemmed	$3.10
	Giant	$3.00
Fodderbeet	Monogerm	$14.00
	Yellow Daeno	$7.50
Lucerne (Uncertified)		
Wairau		$3.45
Saranac		$5.00
Washoe		$6.00
Rere		$5.50

Ryegrasses	Certified 1st Gen.	Certified 2nd Gen.
Ruanui	$0.75	$0.70
Nui	$0.85	$0.80
Ariki	$0.70	$0.65
Manawa	$0.70	$0.70
Paroa	$0.75	$0.65
Tama	$0.80	$0.75
Apanui Cocksfoot	$3.30	
Clovers		
Hamua	$2.95	$2.65
Turoa	$2.35	$2.30
Huia		Permanent Pasture
	$1.85	$1.75

4.12.10 Aerial Sowing of Seed

See 'Fertiliser' Section, 4.10.5 (iii).

4.13 SHEARING EXPENSES

4.13.1 Plant

Vertical Shearing Plant	– Sunbeam	$415
	– Lister	$407
Electric Grinders	– Sunbeam Double ended	$535
	– Lister Single phase	$518
	Three phase	$480

Dagging Plant	– Sunbeam portable petrol	$268
	– Lister portable etc.	$249
	– Tas portable petrol	$229
	– Cam portable 12 volt battery	$281
Handpieces	– Sunbeam 'Super Grip'	$132
	– Lister 'Super 70'	$148
Woolpresses	– Donalds Manual Vertical Hoist	$735
	Electric Vertical Hoist	$1450
	Electric Tip Over (1.5kW)	$1820

4.13.2 Shed Expenses

Wool packs ex store $3.05 Jute, $2.60 Synthetic each. Assess number used as 1 per 150kg. wool (3 per 1000 lbs.)

Twine	$3.08 per hank
Glue	$1.50 per 125ml tin
Eartags	$8.00 per 100 + $2.00 if stamped.
Emery paper – fine	$1.65 per sheet
– coarse	$1.65 per sheet

Shearing plant running expenses

Electricity – approx. $35.00 per 1000.

4.13.3 Wool Charges

Wool Charges Incurred by the Grower as at 1.12.78

(i) Compulsory for all growers:

Receiving, Warehousing, Weighing, Lotting, etc.	6.127 cents/kg
Wool Board Levy	3% of Gross Proceeds
Wool Stabilization Levy	2% of Gross Proceeds
Earthquake Insurance	½¢/$100/month
Testing Clients' Lots	Yield:$21 per lot Yield Micron:$27 per lot

(ii) Optional

Reclassing and Binning Fleece	5.86 cents/kg
Reclassing and Skirting	9.104 cents/kg
Reclassing and Binning Oddments	9.104 cents/kg
Blending all wools	4.4 cents/kg

Grouping	$4.42 per bale
Lot-Building	$3.20 per bale
Re-offering	$3.31 per bale
Straight Repacking	$2.88 per bale
Repacking Overweight Bales	@3.31 per bale
Sheepsback to Store Insurance	12 cents per $100
Extra Choice Lots under 4 bales Handling Charge	4.09 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 5 years since the scheme began to operate so charges this year are $2.25 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. $30.00 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 1978 to 31 March 1979 is $35.00 per unit per year where a unit equals 1000 litres (220 gallons). 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 an unexpected increase in costs.

(ii) County Stock Water Races: The following are the Paparua County stock water race charges for up to 400 ha (1000 acres), based on the area of the property.

0.5 to 8.0 hectares (1 to 20 acres)	$64.50 per ha.

The following rates are total charges for the property.

40 ha (100 ac)	$128.98
80 ha (200 ac)	$245.07
120 ha (300 ac)	$348.26
160 ha (400 ac)	$437.00
200 ha (500 ac)	$515.94
240 ha (600 ac)	$580.44
280 ha (700 ac)	$632.03
320 ha (800 ac)	$670.73
360 ha (900 ac)	$696.53
400 ha (1000 ac)	$709.42

For all properties over 400 hectares, the rates increase at the cost of 10.74 cents per additional hectare.

4.15 WEED AND PEST CONTROL

Many herbicides and pesticides 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 pack size of that chemical that is closest to 20 litres or 20 kg.

For the prescribed application rates, only one example is used and only one concentration. With the pesticides, the cost of a range of the more commonly used application rates is given.

4.15.1 Weed Control

With the following herbicides, the rate of application chosen for each chemical, is in some cases an average for prescribed application rates and where an average is not very realistic, represents the upper rate of application recommended. In all cases it is designed to give an indication only of the cost when the chemical is applied at that particular rate.

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".

Chemical Names Common	Trade	Chemical Application Rate/ha	Cost per litre or kg	Cost of chemical per ha.
Alachlor	Lasso	7.0 litres	$6.06	$42.42
Asulam	Asulox	3.5 litres	$7.35	$25.73
Atrazine	Various	3.0 litres	$7.02	$21.06
Atrazine & Propachlor	Ramrod	2.0 litres	$6.80	$13.60
Atrazine & Metachlor	Primextra 50	2.0 litres	$6.71	$13.42
Barban	Neoban	1.0 litre	$24.22	$24.22
Bentazone	Basagran	3.0 litres	$21.95	$65.85
Benzoylpropethyl	Suffix	8.5 litres	$6.46	$54.91
Carbetamide	Carbetamex 70	3.5 kg	$12.55	$43.93
Chloridazon	Pyramin	4.0 litres	$18.75	$75.0
Cyanazine	Herbitrol	2.0 kg	$5.55	$11.10
2 4-D amine	Various	3.0 litres	$3.46	$10.38
2 4 DB	Various	3.0 litres	$3.73	$11.19
2,4 D ester	Weedone 57	4.5 litres	$2.95	$13.28
2,2 DPA	Dalapon	5.5 kg	$3.68	$20.24
Desmetryne	Semeron	1.0 kg	$14.94	$14.94
Dicamba	Vanas	1.0 litre	$6.56	$6.56
dicamba & nitrofen	Fodagard	5.0 litres	$4.97	$24.80
Diclofopmethyl	Hoegrass	3.0 litres	Not on market yet	
Difenzoquat	Avenge	5.0 litres	$7.59	$37.95
Dinitramine	Cobex	2.0 kg	Not on market yet	
Dinoseb (DNPB)	DNPB	5.0 litres	$2.28	$11.40
Diquat	Reglone	3.0 litres	$8.11	$24.33
EPTC	Eptam	5.0 litres	$8.45	$42.25
Linuron	Linuron 200LC	2.0 litres	$3.80	$7.60
MCPA	Various	3.0 litres	$3.17	$9.51
MCPA & bromoxynil	Buctril M	2.0 litres	$7.47	$14.94
MCPA & Dicamba	Bandamine	3.0 litres	$5.16	$15.48
MCPB	Various	4 0 litres	$3.57	$14.28
MCPB & terbutryne	Igran 50	1.5 litres	$15.98	$23.97
Mecoprop	Mec 40	7.0 litres	$3.60	$25.20
Methabenzthiazuron	Tribunil	3.0 litres	$14.05	$42.15
Metribuzin	Sencor	1.5 kg	$52.25	$78.38
Nitralin	Planavin	1.5 kg	$13.80	$20.70
Nitrofen	Tok E	10 litres	$4.98	$49.80

Paraquat	Gramoxone	3.0 litres	$7.21	$21.63
Pendimethalin	Stomp 33DE	4.0 litres	Not on market yet	
Phenmedipham	Betanal	8.0 litres	$13.13	$105.04
Picloram & Chloronitrofen	Fodderkleen	5.0 litres	$4.44	$22.20
Prometryne	Gesagard	1.0 litre	$14.18	$14.18
Propyzamide	Kerb 50W	3.5 kg	$28.20	$70.50
Triallate	Avadex BW	3.5 litres	$5.25	$18.38
Trifluralin	Treflan	3.0 litres	$8.95	$26.84

4.15.2 Pest Control

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.

Chemical Names Common	Trade	% a.i.	kg or litres a.i. per ha	Cost of chemical per litre or kg	Cost of chemical per hectare
Aldrin	Aldrin 50EC	50%	1.0	$ 4.90	$ 9.80
			2.0		$19.60
Other trade names – Aldrex 2.					
Azinphos-methyl	Gusathion	50%	0.5	$ 9.55	$ 9.55
			1.0		$19.10
Other trade names – Azinphos, Co-thion					
Bromophos	Nexion 40EC	40%	0.5	$ 9.29	$11.61
			1.0		$23.23
Carbaryl	Carbaryl 80	80%	0.5	$ 6.35	$ 3.97
			1.0		$ 7.94
			2.0		$15.86
Other trade names – Septan, Septene, Pestone					
Carbofuran	Furaden 10G	10%	1.0	$ 3.00	$30.00
			2.0		$60.00
			3.0		$90.00
Dieldrin	Dieldrex WP50	50%	2.0	$ 7.68	$30.72
			3.0		$46.08
			4.0		$61.44
Diazinon	Gesapon 80EC	80%	0.5	$12.96	$ 8.10
			1.0		$16.20
			2.0		$32.40
Other trade names – Basudin, Diazinon					
Dichlorvos	De De Vap	55%	0.5	$18.65	$16.95
			1.0		$33.91

Other trade names – Nuvan, Vapona					
Dementon-S-methyl	Metasystox	25%	0.5	$ 7.41	$14.82
			1.0		$29.64
Endosulfan	Malix	35%	0.5	$ 7.50	$10.71
			1.0		$21.43
Other trade names – Thiodan					
Fenitrothion	Verthion EC	60%	0.5	$ 7.03	$ 5.86
			1.0		$11.72
			2.0		$23.44
Other trade names – Fenite, Folithion, Gramothion, Verthion					
Fensulfothion	Dasanit 10G	5%	2.0	$ 3.20	$128.00
			3.0		$192.00
Lindane	Shell Lindane pellets	20%	1.0	$ 2.44	$ 12.20
			2.0		$ 24.40
Maldison	Maldison 50	50%	0.5	$ 3.63	$ 3.63
			1.0		$ 7.26
			2.0		$ 14.52
Methomyl	Lannate L	20%	0.5	$ 7.46	$ 18.65
			1.0		$ 37.30
			2.0		$ 74.60
Oxamyl	Vydate L	24%	1.0	$ 9.10	$ 37.92
			2.0		$ 75.83
Phorate	Thimet 10G	10%	1.0	$ 3.27	$ 32.70
			2.0		$ 65.40

4.15.3 Aerial Spraying

(i) Airwork (N.Z.) Ltd.

Brush weeds	$40.00 per ha
Insecticides	$12.50 per ha
Cereals	$ 8.25 per ha

(ii) James Aviation

Litres per ha	Fixed Wing cost per ha	Helicopter cost per ha
0-30	$ 4.20	$ 4.70
31-60	$ 7.40	$ 7.45
61-120	$11.10	$12.40
121-170	$18.65	$19.85
171-225	$23.45	$24.80
226-280	$25.30	$29.90
281-340	$32.50	$35.25
341-450	$40.15	$49.40
451-570	$46.45	$70.50

Minimum charge for fixed wing and helicopter $85.00

(iii) **Helicopters (N.Z.) Ltd.**

Litres per ha	Cost per ha
0-28	$ 5.41
29-56	$ 9.00
57-112	$14.00
113-169	$22.00
170-225	$28.00
226-280	$33.00
281-237	$39.00
238-450	$49.00
451-560	$56.00

Minimum Charge $280
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 – $175.00 per hour
Spraying flight charge – $250 per flight hour.
Flight charge – fencing – $215 per flight hour

4.15.4 Ground Application (materials extra)

(i) **Gun Spraying**

One man plus fully equipped truck $17.00 per hour varying in scale downwards.

(ii) **Boom Spraying**

Weed and Crops $7.50 per hectare.

4.16 SELLING CHARGES

4.16.1 Yard Fees (Loading charge 5c paid by purchaser).

Addington		Amberley	
Sheep	12¢	All sheep	14¢
Fat Cattle	98¢		
Store Cattle	79¢		
Vealers	79¢		
Dairy Cows	98¢		
Calves	79¢		
Bulls	$1.78		
Porkers	27¢		
Baconers	27¢		
Store pigs	18¢		

Coalgate		Culverden	
Sheep shareholders	10¢	Sheep	17¢
Non Shareholders	11¢	Rams	17¢
Rams	25¢	Horses	N/A
Calves Shareholders	70¢	Dogs	N/A
Non Shareholders	80¢	Calves and Store Cattle	99¢
Cattle shareholders	70¢		
Non Shareholders	80¢		
Horses	25¢		
Pigs	10¢		
Dogs	25¢		

Hawarden		Little River	
Sheep	9¢	Sheep	14¢
		Cattle	25¢
		Rams	25¢

Sheffield		Oxford	
Sheep Shareholders	16¢	Sheep	11¢
Non Shareholders	17¢	Rams	25¢
Ram Shareholders	50¢		
Non Shareholders	50¢		

NOTE: Coalgate, Hawarden, Sheffield and Little River – subject to alteration.

4.16.2 Addington Trucking Charges:

Sheep – 5¢ per head for outward trucking or rail.
Bulls – 30¢ per head for outward trucking.
Cattle – 20¢ per head for outward trucking.

4.16.3 Commissions on Stock sold through a Stock and Station Agent

Sale Yards		Clearing Sales	
Sheep	4.75%	Sheep	5.5%
Fat Cattle	4.75%	Store Cattle	5.5%
Store Cattle	4.75%	Pigs	7.0%
Vealers	4.75%	Dairy Cows	7.5%
Bulls	7.5%		

Sale yards		Clearing Sales	
Dairy Cattle	7.5%	Implements & Sundry	10.0%
Pigs	5.75%	Furniture	12.5%
Horses (Bloodstock)	8.0%		
Horses	8.0%	Special Sales	
Grazing	10.0%	Stud Cattle	7.5%

4.17 TREES AND TREE SEEDS

4.17.1

Price per 100 — Supply only – does not include planting.

Pinus radiata	$ 6.00	18 month trees
	or $35.00 for 1000	
Larch	$20.00	2 year trees
Thuya	$22.00	3 year trees
Muricata	$15.00	2 year trees
Arizonica	$20.00	2 year trees
Benthami	$20.00	2 year trees
Macrocarpa	$20.00	2 year trees
Lombardy Poplar	$20.00	
Poplars (others)	$25.00	
Douglas Fir/Oregon	$20.00	3 year trees
Cedrus deodara	$27.00	3 year trees
Eucalyptus	$50.00	in tubes

4.17.2 Tree Seeds

Albizzia lopantha	500g	$ 8.60
Macrocarpa	500g	$13.93
Pinus radiata	500g	$18.00
Tree Lucerne	500g	$ 6.86

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
Farm buildings	2½ – 5%)	of the building
Piggeries	5 – 10%	
Water supply	up to 5%	depending on water type
Implements and plant	7½ – 15%	depending upon use
Roads, tracks and culverts	5 – 10%	depending on locality
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 5 cents per litre is paid into the National Roads Fund.
- A motor spirits duty of 6.7 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.

Ministry of Transport and
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 or 621 miles.

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

In due course, all vehicles over 3.5 tonnes which require Distance Licences will have to be fitted with approved hubodometers. The introduction of this requirement is being staggered to cope with the difficulties of equipping all the country's vehicles. The timetable which has been set is as follows –

By 1 April 1978	–	All vehicles not fitted with conventional (electric or cable driven) distance recorders, including trailers and semi trailers required to have separate distance licences.
By 1 July 1978	–	All vehicles over 12 000kg gross laden weight.
By 1 October 1978	–	All vehicles over 7 000kg gross laden weight.
By 1 January 1979	–	All vehicles over 3 500kg gross laden weight.

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.

Enquiries

An explanatory booklet is produced by the Ministry of Works and Development and available at most Post Offices. Specific enquiries should be addressed to – The Commissioner of Works, (Road User Charges), P.O. Box 12-312, Wellington North.

Ministry of Transport and
New Zealand Post Office

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, the indemnity surcharge, and the cost of the licence label and (where applicable) the number plates.

Ministry of Transport and
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.
- Bulk milling wheat which requires urgent transport, directly from the paddock to the nearest available dryer, immediately after harvesting.

Ministry of Transport

4.20 VEHICLE RUNNING EXPENSES

4.20.1 Fuel, Oil and Grease

Light trucks and cars	allow 15.0 cents per kilometre
Heavy trucks	allow 25.0 cents per kilometre
Tractors 37.3 kW (50 hp)	allow $1.75 per hour
60.0 kW (80 hp)	allow $2.75 per hour
Crawler tractors	allow $2.95 per hour
Balers (conventional)	allow 60.0 cents per hour
Header – tractor drawn	allow 60.0 cents per hour
– auto	allow $4.10 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 15.0 cents per km
Wheel tractors	allow $1.20 per hour
Crawler tractors	allow $2.70 per hour
Mobile plant	allow 10% of initial value

4.20.3 Tractor Running Costs

1978/79	$per hour basis		
kW	to 48	49-63	above 63
Diesel	$1.56	$2.04	$2.51
Engine Oil	0.35	0.45	0.56
Transmission oil	0.04	0.05	0.07
Filters and Air cleaners	0.07	0.08	0.07
Tyres	0.04	0.04	0.09
Engine	0.08	0.10	0.02
Gearbox, clutch and brake	0.03	0.15	0.09
General R & M	0.13	0.18	0.17
Total Hourly Direct Running Costs	$2.31	$3.09	$3.58

Fixed Costs

Assuming tractors cost (new) for less than 48kW $11330, for 48 to 63 kW tractor $14760 and for greater than 63 kW tractor $23160. Also assuming that the tractor does 4000 hours over 5 years at which stage it is then replaced. Total fixed costs include interest, insurance, registration and depreciation (15% DV per year for five years).

	40-48 kW	49-63 kW	above 63 kW
Total Fixed Cost per hour	$3.43	$4.47	$6.52
Total Cost per hour (excluding labour)	$5.74	$7.56	$10.10

4.20.4 Hourly Header Running Costs

$ per hour for 1978/79
103 kW (140hp) header doing 600 hour over 3 years. The cost of the header (new) was $52000.

Fuel at 17.2 cents per litre (19 litres per hour)	$3.28
Oil and Grease	0.82
Filters and Aircleaners	0.08
Repairs and maintenance	3.68
Total hourly running cost	$7.86

Fixed Costs

These include registration, insurance, interest and depreciation. Because of the high capital cost of headers, and the relatively low number of hours worked, depreciation (15% DV per year) and interest on a per hourly basis is very high. In this example, with a header costing $52000, depreciation and interest amounted to $59.44 on a per hourly basis. This does not take into account the real cost of the header to the farmer after the deduction of various taxation incentives such as the investment allowance. Neither does it take into account other factors affecting the final price of the header such as inflation or appreciation with time. It is therefore suggested that where detailed or accurate figures are needed, this example should not be used i.e. it should only be used as a guide.

4.20.5 Registration Costs

As at June 1978. The revised figures are available in May 1979 and it is suggested that students add $4 - $5 to these figures in the meantime.

Cars	$39.30	per year
Trucks – light	$37.10	per year
– heavy	$52.10	per year
Wheel Tractor	$20.40	per year
Trailers – light	$12.40	per year
– heavy	$35.40	per year
Motor cycles – under 60cc	$13.70	per year
– 60 to 125cc	$30.60	per year
– over 125cc	$40.60	per year

4.20.6 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	10	10	10
2	10	10	12
3	10	10	15
4	10	13	19
5	10	15	22
6	10	18	26
7	11	21	32
8	13	26	38
9	15	31	46
10	18	37	55

(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	4.18	4.18	0.46	0.45	0.45	0.45
2	4.66	4.65	1.12	0.99	0.92	0.91
3	5.22	5.17	2.52	1.86	1.48	1.46
4	5.99	5.82	5.52	3.45	2.25	2.16
5	7.10	6.71	11.35	6.29	3.37	3.16
6	8.77	7.96	21.60	11.11	5.04	4.61
7	11.24	9.72	38.18	18.74	7.50	6.70
8	14.78	12.19	63.38	30.22	11.04	9.67
9	19.72	15.58	99.83	46.71	15.98	13.80
10	26.44	20.13	150.49	69.54	22.71	19.38

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.

4.20.7 Fuels

(i) Petrol – Regular (83 octane) 30.52 cents per litre less 11.7 cents per litre for agricultrual use. Net price to farmer 18.82 cents per litre.

– Super (96 octane) 31.42 cents per litre less 11.7 cents per litre for agricultural purposes. Net price to farmer 19.72 cents.

(ii) Diesel – 17.2 cents per litre.

(iii) Multipurpose oil – 80 cents per litre in a 200 litre drum.

(iv) Grease (multipurpose) $1.30 per kg

(v) Delivery of bulk fuels – free irrespective of distance.

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 $300 to $600.

4.21.2 Telephone and Toll Charges.

(i) **Rental**

Automatic exchange – the basic rate is $20.00 per 2 months.

Restricted attendance exchange – the rentals become very complex depending on the number of "parties" on that line and the number of subscribers to that exchange. An example would be $15.30 per 2 months for a 5 party line with an exchange of 3000 to 12000 subscribers.

(ii) **Tolls**

These are variable depending on the type of the farm business and the intensive nature of the management.

4.21.3 Stamps and 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.

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 Other Administrative Charges

e.g. Banking charges, various Stock Co. charges do add to total administrative costs and so must be accounted for.

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 1.1.79.

(i) Buildings per $100 value (Fire Cover only)

Dwellings – Brick $0.175
– Wood $0.26
Outbuildings – Brick – concrete or earth floor $0.125
– Wood – concrete or earth floor $0.280

(ii) Plant: per $100 value

– Fire Only:

All engine functioned farm machinery – $1.00 for first $200 and $0.30 thereafter.

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 $0.875 and $2.35 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, $0.430. 3 month limit of cover.

– Fire plus Hail, Flood, Stock, Snow and Frost Risk – $1.00
– Hay: $0.280

(vi) Wool:

From sheep's back to wool store – $0.15 per $100 gross value plus earthquake $0.004 per $100 gross value for 60 days

(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 $96.00 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% – 14%
Table Mortgage interest rates are	11% – 13%
Bank overdraft interest rates are	10¾% – 11%
Stock and Station Agents interest rates are	12½% – 15%

Rural Bank Flat Interest Charges are:

All Table Mortgage	1st and Subsequent Securities
Land Purchase	8½%
Development	7½%
Refinance	9½%
Stock Purchase	7½% rebatable to 6% for the first 3 years.

For assessment of Working Capital see Section 2.1.4.
With budgeting use 12% on total working capital.

4.22.4 Rent – charge actual rental paid by the farmer.

Renewed Rents on Crown Renewable Leases are 4½% of Crown Rental Value, as from 1971. Rentals carry a ½% 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 4½% – 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	$6 500 – $8 000
Factory Supply Dairy	$6 000 – $7 500
Sheep and Mixed Cropping	$6 000 – $7 000

Generally within the range $6 000 – $8 000 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

25kg per coil.

(i) Plain Wire

Gauge of Wire	Length of 25kg	$ per coil
4mm (No. 8)	245m	25.85
3.15mm (No.10)	303m	20.40
2.5mm (No.12½)	656m	21.40

(ii) Barbed Wire

2.5mm gauge, barb 7.0cm apart 200m	$27.32
2.5mm gauge, barb 15.0cm apart 240m	$27.32

(iii) Lacing Wire

5kg Coils	6.11
10kg Coils	12.22

4.25.2 Standards

(i) T. irons, 1.5m	$3.50 ea.

(ii) Waratahs

1.4m	$1.93
1.5m	$2.00
1.7m	$2.11
1.8m	$2.24

4.25.3 Posts

(i) Concrete intermediates

1.7m Paling Posts	$4.75
2.7m Paling Posts	$5.95
1.8m	$4.30

(ii) Concrete Strainers

2.1m x 15cm x 15cm	$11.50
2.1m x 18cm x 18cm	$12.50
2.4m x 20cm x 20cm	$13.20

(iii) Tanalised Round intermediates

1.8m x 9cm	$1.83
1.8m x 11.5cm	$2.44
1.8m x 13cm	$3.18
1.95m x 13cm	$4.65

(iv) Tanalised Half Rounds

1.8m x 15cm	$1.80
2.1m x 17.5cm	$3.30
2.4m x 17.5cm	$3.80
2.7m x 20cm	$4.80

(v) Tanalised Strainers

2.1m x 15cm	$5.78
2.1m x 18cm	$6.09
2.1m x 20cm	$6.40
2.4m x 15cm	$6.20
2.4m x 18cm	$7.13
2.4m x 20cm	$7.96
2.7m x 15cm	$6.34

2.7m x 18cm	$7.40
2.7m x 20cm	$8.70
3.0m x 15cm	$9.25

(vi) Tanalised Deer Posts

2.7m x 13cm	$5.65

4.25.4 Stays

Concrete	$5.95
Tanalized 2.4m x 9cm	$3.06

4.25.5 Stay Blocks

Concrete	$1.90
Tanalized 60cm	70-80¢

4.25.6 Staples

	Per 25kg Case
(i) **Sliced Point Staples**	
40mm x 4.00mm	$31.49
30mm x 4.00mm	$31.49
30mm or 25mm x 3.15mm	$32.69
27mm x 2.80mm	$33.13
25mm x 2.50mm	$33.59
19mm or 15mm x 2.00mm	$34.66
(ii) **Barbed Staples**	
50mm x 4.00mm	$33.63
40mm x 4.00mm	$33.63
30mm x 4.00mm	$33.63
30mm x 3.15mm	$34.71
(iii) **Concrete Post Staples** (for single or double hole posts)	
5kg bags	$ 6.53
25kg bags	$31.60

4.25.7 Battens – Tanalised

5cm x 4cm x 1.2m (per 100)	$36.00
5cm x 4cm x 1.7m (per 100)	$40.00

4.25.8 Gates – Cyclone & Hurricane

	Economy Gate	Cyclone Special
3.7m	$48.58 each	$58.69 each
4.3m	$51.98 each	$71.63 each

4.25.9 Boundary Fences – Cyclone

		Nominal	Stays	Per 100 metres
(i)	**Tightlock Boundary** Medium Tensile Superweight			
	Tight 8 750mm	8 line	300mm	$ 98.75
	Tight Hog 750mm	8 line	150mm	$110.21
(ii)	**Twinlock Boundary**			
	Medium Tensile Superweight			
	750mm	8 line	300mm	$95.67
(iii)	**Tightlock Boundary**			
	High Tensile			
	900mm	7 line	300mm	$73.85
	800mm	8 line	300mm	$77.38
	750mm	8 line	300mm	$77.14

4.25.10 Contract Fencing Rate

(i) On Canterbury Plains

- 2 posts per 20 metres, 5 standards between posts. 5 plain and 2 barbed wires: $11.00 per 20 metres. Varies according to number of strainers and gateways.
- 1 post, 5 waratahs, Hurricane boundary netting, 1 barb. $10.00 per 20 metres

(ii) On Hills and Downs

- **Rough Going**

  2 posts, 4 to 5 standards, 5 plain, 2 barbs: $13.00 – $15.00 per 20 metres.

  2 T-irons in place of posts: $10.00 – $11.50 per 20 metres.

- **Good Going**

  2 posts, 4 to 5 standards, 5 plain, 2 barbs: $11.00 – $12.50 per 20 metres.

  3 posts, Hurricane (boundary) netting, 1 barb wire, 6 plain, $10 – $12 per 20 metres.

(iii) Contract Post Driving

60 to 70 cents per post, minimum $13.00 per hour.

(iv) Contract Post Hole digging 60¢ – 70¢ per hole, minimum $13.00 per hour according to conditions.

4.25.11 Guide to Fencing Cost (January, 1979)

Costs in cents/metre of fence

(i) Plain Wire

No. of Wires in Fence	1	7	8	9	10
4mm (No. 8)	10.6	73.9	84.5	–	–
3.15mm (No.10)	6.7	47.1	53.6	–	–
2.5mm (No.12½ HT)	3.3	22.8	26.4	29.7	33.3

(ii) Barbed Wire (2.5mm)

No. of Wires in Fence	1	2
Barbs		
7cm apart	13.7	27.3
15cm apart	11.4	22.8

(iii) Netting

Cyclone Medium Tensile		
Superweight (tight 8)	98.75	cents
Twinlock Boundary (7)	95.67	cents
High Tensile Boundary (8)	77.38	cents

(iv) Posts

No. of Post/20 Metres	3	4	5	6
Pine 13cm round	47.7	63.6	79.5	95.4
Pine 17.5cm ½ round	63.8	66.0	82.5	99.0
Concrete Intermediate (1.8m)	64.5	86.0	107.5	129.0
Waratah (1.7m)	31.7	42.2	52.8	63.3

(v) Battens

No. of Battens/20 metres	10	20	30
1.2m battens	18	36	54
1.7m	20	40	60

(vi) Strainers, Stay and Block Assemblies (x2)

Length of Strain	120m	160m	200m	240m
Tanalised Pine				
2.1m x 15cm	16.1	12.1	9.6	8.0
2.4m x 20cm	19.7	14.8	11.8	9.9

Concrete				
2.1m x 15cm x 15cm	32.3	24.2	19.4	16.1
2.1m x 18cm x 18cm	33.9	25.4	20.4	17.0

(vii) Angles (with stay)

No. of Angles/200 metres	1	2	3	4
Tanalised	4.2	8.5	12.6	17.0
Concrete	11.5	23.0	34.5	46.0

(viii) Gates (inc. Hinges, Gudgeon and Catches)

No. of Gates/600 metres	1	2	3
Cyclone Galvanised			
Economy 3.7m	8.1	16.2	24.3
E:conomy 4.3m	8.7	17.4	26.1
Special 3.7m	9.8	19.6	29.4
Special 4.3m	11.9	23.9	35.7

(ix) Staples, tie down foots, etc, depending on contour allow 5 – 10 cents per metre.

4.25.12 Pricing types of fences (excluding labour):

(i) 3 wooden posts/20 metres
3 battens between posts
9 of 2.5mm HT wires
200 m strain.

Price per metre

Wire	29.7	cents
Posts	47.7	cents
Battens	10.8	cents
Stainers	9.6	cents
Angles	8.5	cents
Gates	16.2	cents
Staples, etc.	0.8	cents
Total Cost	$1.23	per metre
With labour at	55	cents
the price erected is	$1.78	per metre

(ii) 4 concrete posts/20 metres
7 of 4mm wire, 2 barb
5 battens between posts

Price per metre:

Wire No. 8	73.9	cents
Barb	27.3	cents

Posts	86.0	cents
Battens	27.2	cents
Strainers	19.4	cents
Angles	23.0	cents
Gate	17.4	cents
Staples, etc.	0.8	cents
Total Cost	$2.75 per metre	
With Labour at	63	cents
the price erected is	$3.38	per metre

(iii) Recommended by N.Z.A.E.I.

4 wooden posts/20 metres
10 of 2.5mm HT wrie
10 of 2.5mm HT wire
2 battens between posts
K.R.A. horizontal stay strainer assembly:
2 stays, 3 posts, 30 metres No. 8 wire, batten and staples.

Price per metre

Wire	33.3	cents
Posts	63.6	cents
Battens	18.0	cents
Strainer assembly	24.0	cents
Angles	8.5	cents
Gate	17.4	cents
Staples, etc.	0.8	cents
Total Materials	$1.66	per metre
With Labour at	63	cents
The price erected is	$2.29	per metre.

As above any particular fence design can be costed using the tables on a price per metre basis.

4.26 WATER SUPPLY

4.26.1 Alkathene Piping

Size	ClassA/100m	Class B/100m
15mm	$12.06	$ 19.70
20mm	$33.55	$ 41.80
25mm	$42.57	$ 54.10
32mm	$53.55	$ 81.10
40mm	$62.35	$110.30
50mm	$89.12	$207.50

4.26.2 P.V.C. Piping

These prices are for socketed P.V.C. pipe which is only available in 6 metre lengths, but priced here per 100 metres.

Size	Class B	Class C	Class D	Class E
15mm	–	–	–	$ 38.00
20mm	–	–	–	$ 52.50
25mm	–	–	–	$ 76.00
32mm	–	–	$ 99.50	$118.50
40mm	–	–	$128.60	$149.80
50mm	–	$159.90	$196.80	$237.00
60mm	$281.70	–	–	–
80mm	–	$334.30	$432.70	–
100mm	$442.60	$552.30	$722.20	–
125mm	$581.40	–	–	–
150mm	$827.30	–	–	–

4.26.3 Concrete Water Troughs

Capacity		
1137 litres	round	$72.00
910 "	round	$62.00
455 "	round	$42.00
318 "	long	$41.00
273 "	long	$40.00
182 "	round	$37.50
182 "	long	$37.50

4.26.4 Concrete Tanks

Capacity	Width	Height	Weight	Price
22750 litres	3.5m	2.7m	6.2 tonne	$710.00
9092 "	2.6m	2.1m	2.1 tonne	$450.00
4540 "	1.8m	1.8m	1.0 tonne	$285.00
3637 "	1.8m	1.5m	0.8 tonne	$255.00
2728 "	1.7m	1.3m	0.6 tonne	$195.00
1818 "	1.5m	1.3m	0.5 tonne	$170.00

4.26.5 Miscellaneous

Ballcock covers (for 182, 273, 318 litre troughs)	$7.00
Ballcocks (20mm)	$5.80

4.27 FARM MACHINERY

4.27.1 Tractors

(i) Ford: 2 wheel drive models

3600	Vineyard			$8200
3600	25.0 kW	(37 h.p.)		$10215
4600	35.3 kW	(47 h.p.)		$11352
6600	58.2 kW	(78 h.p.)	8 speed	$12534
			16 speed	$14389
7600	72.4 kW	(97 h.p.)		$16500
7700	72.4 kW	(97 h.p.)	Q cab	$23420
9700	114.8 kW	(153 h.p.)	Q cab & Duals	$35609

Safety frames $197 extra on models without Q cab.

(ii) Ford County: 4 wheel drive models

4600 x 4	46.3 kW	(62 h.p.)	$24493
6600 x 4	58.2 kW	(78 h.p.)	$26761
7600 x 4	72.4 kW	(97 h.p.)	$32037
774	58.2 kW	(78 h.p.)	$27471
974	72.4 kW	(97 h.p.)	$34056
1174	89.5 kW	(120 h.p.)	$40349
1474	108.2 kW	(145 h.p.)	$60263

(iii) Case: All with cab (blower/heater and radio) power shift. quick hitch and 4 x 8 ram and hoses

970	81.3 kW	(109 h.p.)	$31157
1070	95.5 kw	(128 h.p.)	$33734
1370	146.2 kW	(196 h.p.)	$51000
2470	156.7 kW	(213 h.p.)	$57105
2670	191.0 kW	(256 h.p.)	$60025

Air conditioning $1060 extra.

(iv) David Brown: With 2 post safety frame.

630 Satoh	18.6 kW	(25 h.p.)		$6056
750 Satoh	28.3 kW	(38 h.p.)		$7873
885N	36.0 kW	(48 h.p.)	No safety frame.	$8659
885 Standard	36.0 kW	(48 h.p.)		$9220
885 Deluxe	36.0 kW	(48 h.p.)		$10066
990	43.5 kW	(58 h.p.)		$10840
995	48.0 kW	(64 h.p.)		$11374
1210	54.0 kW	(72 h.p.)		$12691
1210 x 4	54.0 kW	(72 h.p.)		$16271
1212	54.0 kW	(72 h.p.)		$13570
1212	54.0 kW	(72 h.p.)	with VQ cab	$17471
1412	68.3 kW	(91 h.p.)	With 4 post s/f	$16575
1412	68.3 kW	(91 h.p.)	With VQ cab	$20940

(v) **International Harvester:** Cabs cover the full range. Campbell Cab $2346 plus fittings, Q cab factory fitted $3106.
Prices as at 16-11-78

Hydro 84	56.9 kW	(77 h.p.)		$14299
484 Standard	36.9 kW	(50 h.p.)		$10251
584 Standard	43.7 kW	(60 h.p.)		$11369
T.A.				$12017
684 Standard	50.8 kW	(69 h.p.)		$12200
T.A.				$12876
784 Standard	56.9 kW	(77 h.p.)		$13443
T.A.				$13823
884 Standard 8+4	64.9kW	(87 h.p.)		$20373
4 W.D. 12+4	64.9kW	(87 h.p.)		$25572
886	77.0kW	(104 h.p.)		$28730
1086	110 kW	(148 h.p.)		$36203
4386 4 W.D.	172.0 kW	(230 h.p.)		$60800

(vi) **Massey Ferguson:** P.S. = Power Steering, M.P.T. = Multi Power Transmission, 4 W.D. = 4 Wheel Drive.

135 P.S.	33.6 kW	(45 h.p.)		$10168
M.P.T.				$10759
165 P.S.	45.5 kW	(61 h.p.)		$11341
P.S. & M.P.T.				$11790
174 4 W.D.	47.1 kW	(63 h.p.)		$14939
185 P.S.	55.9 kW	(75 h.p.)		$12545
188 P.S. & M.P.T.	55.9 kW	(75 h.p.)		$13899
194 4 W.D.	55.9 kW	(75 h.p.)		$15940

Models 135 to 194 add $217 for safety frame.

210	18.6 kW	(25 h.p.)		$5533
210 4 W.D.	18.6 kW	(25 h.p.)		$6725
245	35.0 kW	(47 h.p.)		$9903
P.S. & M.P.T.				$11007
265 P.S.	47.1 kW	(63 h.p.)		$12232
P.S. & M.P.T.				$13175
285 P.S.	55.9 kW	(75 h.p.)		$14395
P.S. & M.P.T.				$15460
295	67.0 kW	(90 h.p.)	Without cab	$16717
595 M.P.T.	67.0 kW	(90 h.p.)	With cab	$21821
1135 M.P.T.	90.0 kW	(120 h.p.)	With cab	$31881
1155 M.P.T.	115.4 kW	(155 h.p.)	With cab	$35625
1200 M.P.T., 4 W.D. and Pivot Steer	82.0 kw	(110 h.p.)		$32983
1505	130.3 kW	(175 h.p.)	Articulated 4 W.D.	$45403
1805	156.4 kW	(210 h.p.)	Articulated 4 W.D.	$56759

Models 1200 to 1805 all have airconditioning and radio in the cab.

(vii) Zetor

4911	34.3 kW	(46 h.p.)	2 W.D.	$7625
5711	42.5 kW	(57 h.p.)	2 W.D.	$8479
5745	42.5 kW	(57 h.p.)	4 W.D.	$9942
6711	50.0 kW	(67 h.p.)	2 W.D.	$9419
6745	50.0 kW	(67 h.p.)	4 W.D.	$11792
	2 post safety frame for the above models			$225
8011	59.7 kW	(80 h.p.)	2 W.D.	$11998
8045	59.7 kW	(80 h.p.)	4 W.D.	$16493
12011	89.5 kw	(120 h.p.)	2 W.D.	$19692
12045	89.5 kW	(120 h.p.)	4 W.D.	$25016
	4 post safety frame for the above models			$485

(viii) Kubota

B7100	11.9 kW	(16 h.p.)	4 W.D.	$4950
L245 DT	18.6 kW	(25 h.p.)	4 W.D.	$6224
L295 FP	22.4 kW	(30 h.p.)	2 W.D.	$6990
L245 DT	22.4 kW	(30 h.p.)	4 W.D.	$7990
M4000 DT	41.0 kW	(55 h.p.)	4 W.D.	$13800
M7000	60.4 kW	(81 h.p.)	2 W.D.	$14380
M7000 DT	60.4 kW	(81 h.p.)	4 W.D.	$17700

Safety frames are extra on the above models.

(ix) Belarus

702	52.2 kW	(70 h.p.)	2 W.D.	$9223
704	52.2 kW	(70 h.p.)	4 W.D.	$10844
902	67.1 kW	(90 h.p.)	2 W.D.	$11808
904	67.1 kW	(90 h.p.)	4 W.D.	$15225

Safety frames are extra on the above models.

(x) Hinemoto

E150D	11.9 kW	(16 h.p.)	4 W.D.	$5603
E250D	20.5 kW	(28 h.p.)	4 W.D.	$7671
E28	23.1 kW	(31 h.p.)	2 W.D.	$4956

(xi) John Deere (German)

1130	39.8 kW	(53 h.p.)	Standard	$10985
1130	39.8 kW	(53 h.p.)	Delux	$11700
1130	39.8 kW	(53 h.p.)	MFWD	$15350
1630	48.8 kW	(65 h.p.)	Delux	$13354
1630	48.8 kW	(65 h.p.)	MFWD	$16500
2030	53.3 kW	(71 h.p.)	Standard	$11857
2030	53.3 kW	(71 h.p.)	Delux	$13835
2030	53.3 kW	(71 h.p.)	MFWD	$15716
2130	59.3 kW	(79 h.p.)	Delux	$13866
2130	59.3 kW	(79 h.p.)	HFWD	$18741
3130	72.8 kW	(97 h.p.)	Delux	$17974
3130	72.8 kW	(97 h.p.)	HFWD	$22576

Optional Extras:

Selective Control	$215
Base Weights	$70
Suitcase Weights	$30
Safety Frames (1130-2130)	$168
Safety Frames 3130	$258
Double Acting Cylinders	$198
Quick Tach Couplers	$194

(xii) John Deere (U.S.A.)

4040	75.0 kW	(100 h.p.)	Delux	$29584
4240	93.8 kW	(125 h.p.)	Delux	$38750
4440	14.0 kW	(152 h.p.)	Delux	$42000
4640	131.3 kW	(175 h.p.)	Delux	$46000
8440	161.3 kW	(215 h.p.)	Pivot Steer	$63000
8640	206.3 kW	(275 h.p.)	Pivot Steer	$68000

Soundguard cab with heater and air conditioning standard equipment inclusive in the above USA prices.

Optional Extras:

18.4 x 34.0 Dual Rear Wheels	$1886
Selective Control Valve	$215
Base Weights	$94
Suitcase Weights	$36
Power front Wheel Drive	$5850

(xiii) Fiat

450	35.8 kW	(48 h.p.)	c/w Safety Frame	$8100
450DT	35.8 kW	(48 h.p.)	c/w Safety Frame and P.S.	$9310
470 VIG	35.8 kW	(48 h.p.)	Live P.T.O./No Safety Frame	$9800
470 VIG DT	35.8 kW	(48 h.p.)	Live P.T.O./No Safety Frame	$10500
540	40.3 kW	(54 h.p.)	c/w Safety Frame	$10700
540DT	40.3 kW	(54 h.p.)	c/w Safety Frame	$12600
640	47.8 kW	(64 h.p.)	c/w Safety Frame	$11400
640DT	47.8 kW	(64 h.p.)	c/w Safety Frame	$13500
680	50.7 kW	(68 h.p.)	Pininfarina "Q" Cab	$16900
680DT	50.7 kW	(58 h.p.)	Pininfarina "Q" Cab	$19400
780	58.2 kW	(78 h.p.)	c/w Safety Frame	$15300
780	58.2 kW	(78 h.p.)	Pininfarina "Q" Cab	$17500
780DT	58.2 kW	(78 h.p.)	c/w Safety Frame	$18100
780DT	58.2 kW	(78 h.p.)	Pininfarina "Q" Cab	$20300
880	65.7 kW	(88 h.p.)	c/w Safety Frame	$16800
880	65.7 kW	(88 h.p.)	Pininfarina "Q" Cab	$19000
880DT	65.7 kW	(88 h.p.)	c/w Safety Frame	$19700
880DT	65.7 kW	(88 h.p.)	Pininfarina "Q" Cab	$21900
1000 Super	82.1 kW	(110 h.p.)	Siac Cab	$24500
1000 DT Super	82.1 kW	(110 h.p.)	Siac Cab	$29800
1300 Super	111.9 kW	(150 h.p.)	Siac Cab	$33600
1300DT Super	111.9 kW	(150 h.p.)	Siac Cab	$37800

4.27.2 Crawlers

(i) Massey Ferguson:

154C	33.6 kW	(45 h.p.)	3 point linkage	$16510
174C	46.3 kW	(62 h.p.)	3 point linkage	$20889

(ii) Fiat:

605 CMS	49.2 kW	(66 h.p.)	Hydraulic linkage	$14500
805C	59.7 kW	(80 h.p.)	Remote linkage	$24000
805C	59.7 kW	(80 h.p.)	Remote linkage, Angle Blade	$29500

(iii) John Deere

JD 350	$27598
JD 450	$33018

4.27.3 Trucks

(i) Datsun

1 tonne utility (Cab and chassis)	$7180
Caball 2-3 tonne (Cab and chassis)	$9275
Hustler utility 4WD	$9669
Nissan Patrol 4 WD (Cab and chassis)	$10795

(ii) Leyland

Boxer 1000 5 tonne (cab and chassis)	$17000
1200 12 tonne (cab and chassis)	$19000
1300 13 tonne (cab and chassis)	$21000
Mastiff 1600 16 tonne (cab and shassis)	$37000

(iii) Land Rover

SWB	Hard Top (Petrol)	$11293
	Truck Cab, wellside	$10768
	Truck cab, flat deck (Diesel)	$11948
LWB	Truck cab and chassis (Petrol	$11117
	Truck cab, wellside	$11800

(iv) Toyota

Landcruiser	Hard Top	$12650
Landcruiser	LWB, cab and chassis	$12200
Dyna	2 Tonne	$8048
HiLux	1 tonne, cab and chassis	$7200
HiAce	1 tonne, van	$9180
HiAce	1 tonne, cab and chassis	$6800

LWB = Long wheel base
SWB = Short wheel base

4.27.4 Farm Bikes

60 percent deposit on all new bikes

(i) Yamaha

	Retail	Sales Tax	Net to Farmer
AG100	$1040	$138	$ 902
AG175	$1395	$264	$1131
DT100	$ 945	$125	$ 820
DT125	$1349	$182	$1167
DT175	$1557	$297	$1260
DT250	$1899	$360	$1539

(ii) Kawasaki

KM90	$1049	$142	$ 907
KV100	$1289	$174	$1115
KE125	$1479	$204	$1275
KE175	$1729	$330	$1399
KT250	$1569	$294	$1275
KL250	$1989	$381	$1608

(iii) Suzuki

RV90	$ 933	$126	$ 807
TF100	$1295	$174	$1121
TF125	$1380	$183	$1197
TF185	$1666	$307	$1359
PE175	$1989	$374	$1615
PE250	$2388	$461	$1927

(iv) Honda

CT90K8	$1264	$165	$1099
XL100S	$1399	$191	$1208
XL100K3	$1357	$180	$1177
XL125S	$1678	$234	$1444
CT125	$1699	$227	$1472
XL185S	$1981	$378	$1603
XL250S	$2269	$425	$1844
CR250M2	$1655	$333	$1322

4.27.5 Ploughs (Conventional):

(i) Duncan

530 mounted	3 furrow	$1668
	4 furrow	$1938
540 semi-trailed	4 furrow	$3045
	5 furrow	$3400

(ii) Clough

All purpose 'Cropmaster' 35.5cm	Semi-Mounted	Mounted
2 furrow	–	$899
4 furrow	$2144	$1581
5 furrow	$2593	$1967
6 furrow	$3003	–
General purpose 'Stylemaster' 30.5cm		
2 furrow	–	$853
3 furrow	$1720	$1130
4 furrow	$2037	$1450
5 furrow	$2483	$1816
6 furrow	$2897	–

4.27.6 Disc Ploughs

(i) Massey Ferguson

80 - 9 Disc plough	2 furrow	$1632
	3 furrow	$2150
Extra furrow attachment		$ 521

4.27.7 Discs

(i) Reid and Grey

2.7m Tandem	$1706
3.0m Tandem	$1809

(ii) American Line

32 blade trailed	$3284
36 blade trailed	$3656
48 blade trailed	$4949
28 blade mounted	$2065
32 blade mounted	$2320

(iii) Duncan

Standard Century Disc

2.1m	all plain	$1467
	all scalloped	$1552
2.4m	all plain	$1549
	all scalloped	$1647
2.7m	all plain	$1625
	all scalloped	$1738
3.0m	all plain	$1805
	all scalloped	$1932

800 Mounted Disc Series

2.1m	all plain	$1691
	all scalloped	$1751
2.4m	all plain	$1767
	all scalloped	$1835
2.7m	all plain	$1915
	all scalloped	$1993

4.27.8 Cultivators

(i) Duncan

630	11 tine	$936
	13 tine	$998
	15 tine	$1064
	17 tine	$1172
630	17 tine 2 bar	$1682
	25 tine 2 bar with wing assemblies	$2222
633	Cultivator and angle crumbler	$1572
634	Rota-crumbler 21 tine	$1016
	29 tine	$1072
Vibro-Flex Cultivator	9 tine	$1495
	13 tine	$2084

(ii) Clough

Standard with wheels. Deduct $100 without wheels.

1.8m	9 tine	$818
2.3m	11 tine	$902
2.7m	13 tine	$950
3.2m	15 tine	$1016
3.7m	17 tine	$1107
4.1m	19 tine	$1278

Heavy Duty with wheels. Deduct $150 without wheels.

2.0m	9 tine	$1146
2.5m	11 tine	$1296
3.1m	13 tine	$1389
3.1m	15 tine	$1586
4.1m	17 tine	$1735

(iii) Vicon Jumbo Busters

4 bar frames

9 tine	3m frame	$1219
11 tine	3m frame	$2409
13 tine	3.7m frame	$2679

2 bar frames

9 tine	2.5m frame	$1650
11 tine	3m frame	$1820

4.27.9 Rotary Cultivators

(i) Howard

Howard Rotovator

AR50	1.28m		$2529
AR60	1.52m		$2577
AR70	1.8m	Spike with crumble roller	$3788
AR70	1.8m		$2680
AR80	2.03m	Spike with crumble roller	$3833
AR80	2.03m		$2931
AH90	2.28m		$4519
AH100	2.54m		$4809
AH120	3.05m		$5222
M100	2.54m		$10551
M130	3.30m		$11653
ST160	4.10m		$11804
ST180	4.60m		$12395

Howard Rotospreader

SPR150	$3960

(ii) Kobashi

RBS 1650P	1.6m	$2473
RBS 1700	1.7m	$2671
RBS 1800P	1.8m	$2710

4.27.10 Harrows (Conventional):

(i) Duncan

Zig-Zag Harrows	each leaf without the bar	$97
	3 leaf bar	$91
	4 leaf bar	$101
	5 leaf bar	$120
Self-clearing Harrows.	each leaf without the bar	$98
	3 leaf bar	$126
	4 leaf bar	$149
	5 leaf bar	$176

Drill covering Harrows.	each leaf without the bar	$49
	3 leaf bar and sliders	$54
	4 leaf bar and sliders	$59
	5 leaf bar and sliders	$88

4.27.11 Power Harrows

(i) Kuhn

HR240	$4600
HR300	$5840
HR360	$7735

4.27.12 Rollers

(i) Duncan

Cambridge

300 Field Roller	2.4m	$1231
	2.7m	$1327
	3.0m	$1424
Roller Seed Box	16 Run	$901
	18 Run	$946
	20 Run	$993

(ii) Springston Agricultural Engineering (Heavy)

8 tonne 2.4 metres long, 13mm plate steel	$1600
16mm plate steel	$1800

For a 3.0 metre roller add $450 to the above.

4.17.13 Drills and Seed Boxes

(i) Duncan

700 Seedliner	16 Run Hoe	$3471
	16 Run Disc	$3992
	16 Run Hoe with telescopic D/B	$3679
	18 Run Hoe	$3631
	18 Run Disc	$4176
	18 Run Hoe with telescopic D/B	$3848
701 Seedliner	16 Run Hoe	$3864
	16 Run Disc	$4442
	16 Run Hoe with telescopic D/B	$3938
	18 Run Hoe	$4081
	18 Run Disc	$4694
	18 Run Hoe with telescopic D/B	$4327
	20 Run Hoe	$4268

	20 Run Disc	$4909
	20 Run Hoe with telescopic D/B	$4526
702 Seedliner	24 Run Hoe	$5099
	24 Run Disc	$5864
	24 Run Hoe with telescopic D/B	$5394
730 Multiseeder	16 Run	$6615
	24 Run	$9424
Small Seeds Box	16 Run	$626
	18 Run	$676
	20 Run	$758
	24 Run	$890
Eclipse Box	16 Run	$646
	18 Run	$680
	20 Run	$718

(ii) Connor-Shea

2.1m	trailed disc	$2800
2.7m	trailed disc	$3600

4.27.14 Precision Drills

(i) Stanhay

Handpush	Single Row	$324
S870 MLW	3 row	$2268
	4 row	$2633
	5 row	$2996
	6 row	$3348
Jumbo Maize Drill	4 row	$7008

(ii) Nodet Gougis

	4 row	$4852

4.27.15 Planters

(i) International Harvester

400 Cyclo Planters	$11956

(ii) M.I.L.

Automatic	2 row	$2751

4.27.16 Top Dressers

(i) Puffin

PS400	0.5 tonne, 3 pt linkage, 7m spread	$751
PS400S	0.5 tonne, 3 pt linkage, 14m spread	$803
PS1001	1.5 tonne, trailed 14m spread	$1650

(ii) Hylton Engineering

2 tonne trailed	p.t.o. driven	$2570
	motor driven	$2411
3 tonne trailed	p.t.o. driven	$2799
	motor driven	$2668
4 tonne trailed	p.t.o. driven	$2862
	motor driven	$2730

Drawbar jack, dual wheels, extra height adjustment and blowers are all optional extras on the above models.

3.7m truck mounted	$2693
4.0m truck mounted	$2744
4.3m truck mounted	$2817
4.6m truck mounted	$1897
4.9m truck mounted	$3007
5.2m truck mounted	$3043
5.5m truck mounted	$3148

The above prices for truck mounted spreaders exclude the cost of the motor.

Optional extras include extra height adjustment, self unloading for grain ($223), lifting stand and a clutch on the spinner.

4.27.17 Combine Harvesters (Headers)

(i) Claas

Dominator 105	5.2m	Hyrostatic and Grain Monitor	$82000
Dominator 85	4.6m	Hydrostatic	$73100
Mercator 75	4.2m		$49632
Mercator 50	3.6m		$43400

(ii) Massey Ferguson

520	ATHC	3.7m	$44487
	ATHC	4.3m	$45043
525	ATHC	3.7m	$46072
	ATHC	4.3m	$46628
750	Hydrostatic	4.3m	$68602
760	Hydrostatic	5.5m	$71729

(iii) International Harvester

321	56.7 kW (76 h.p.)	3.0m	$39292
		3.6m	$41777
431	78.3 kW (105 h.p.)	3.6m	$44633
531	78.3 kW (105 h.p.)	4.2m	$49984
1440	100.7 kW (135 h.p.)	6.1m	$89000

(iv) John Deere

JD 455	3.6m	$49500
JD 955	4.2m	$50190
JD 975	4.2m	$53000
JD 6600	Basic machine	$58197
JD 7700	Basic machine	$73789

(v) New Holland/Clayson

TR 70	5.2m	with cab	$80000
1545 Grain Monitor	4.6m		$53800
1530 Grain Monitor	4.0m		$50250

4.27.18 Windrowers

(i) Hesston

6400	Self propelled 3.7m	Does not include front	$18870
		With front	$25745
PT7	Trailing 2.1m		$5945
PT10	Trailing 2.8m		$6495

(ii) International Harvester

5000	Self propelled 3.8m	$30087

(iii) Massey Ferguson

54	Trailing 2.9m	$6364

4.27.19 Grain Driers

(i) Taylor Fans

41.9cm	4.1 kW	$1567
50.8cm	5.6 kW	$1870
62.2cm	11.2 kW	$2468

4.27.20 Hammer Mills

(i) Bisley

BM2	5.6 kW	$1178
	7.5 kW	$1225
BM3	11.2 kW	$1544
	18.6 kW	$1748
BM4	37.2 kW	$2710

4.27.21 Mulchers (Straw Choppers)

(i) Taarup

SKT 1500	1.5m	$2659
SKT 2100	2.1m	$3474
SKT 2150	2.1m	$4373
SKT 3000	3.1m	$6235

4.27.22 Forage Harvesters

(i) Massey Ferguson

260	Hay pickup 1.8m	$8343
	2 Row maize unit	$2325

(ii) Pottinger

Mex II	Single row maize silage harvester	$2540
	Grass pickup attachment	$1530
Mex IV	2 Row maize silage harvester	$7950

(iii) Taarup

404	Fine chop side mounted pick-up	$7116
405	Fine chop trailed offset pick-up	$7521
502	Double chop	$6901
602	Fine chop Base unit	$6970
	Pick-up	$3023
	2.1m 5 disc mower	$3950
	2 row maize head	$3844
605	Fine chop trailed Base unit	$8618
	Pick-up	$2453
	2.7m 6 Disc mower	$4439
DMH 1100	2 row maize head	$3815
DMH 1100	Single chop 1.1m	$2684
1350	Single chop 1.3m	$3119
S 1500	Single chop 1.5m	$4496
DC 1500	Double chop 1.5m	$6753
SE 2100	Fine chop 2.1m Base unit	$4880
	4 Disc mower	$1945
	5 Disc mower	$2285
	2 row maize head	$2545

(iv) John Deere

JD 15A	Double chop	$4844
JD 16A	Double chop	$5094
JD 35	Fine chop	$9779
	Maize head	$11120

(v) New Holland

Crop chopper 339	Double chop	$4930
718 base unit plus chopper	– Manual control	$7760
	– Electric control	$11870
Attachments	Windrow pick-up	$2250
	Sickle bar	$3100
	2 Row Cornhead	$3200

4.27.23 Mowers

(i) Massey Ferguson

60	1.5m	$1281
	1.8m	$1324

(ii) Munro

Dual Master Flail	1.5m	$1270

(iii) P.Z.

165	2 Drum Rotary	$1995
165 HYD	2 Drum Rotary	$2345
215	4 Drum Rotary	$2700

(iv) Taarup

TS 1650	1.7m	$2297

(v) K.M.

KM 22	1.7m	$2561

(vi) Kuhn

GMD 44	4 discs 1.6m	$2404
GMD 66	6 Discs 2.4m	$3028

(vii) Busatis

Double Knife	1.5m	$1500
	1.9m	$1560
	2.3m	$1680
Electric grinder		$300

(viii) Vicon

CM 165	4 disc	$2242
CM 240	6 disc	$3126

(ix) Aktiv

TH sickle bar	$747
THS sickle bar	$824

4.27.24 Mower Conditioners

(i) Taarup

TSC 2100	2.1m Mower-crimper	$7393

(ii) Vicon

KM 165	4 disc	$5752
KM 240	6 disc	$7844

(iii) New Holland

Haybine 477	with hydraulic ram 2.1m	$7431
Haybine 479	with hydraulic ram 2.7m	$9130
Haybine 495	with Rolareel 3.7m	$11870

4.27.25 Hay Conditioners

(i) P.Z.

CK Conditioner	$1095

4.27.26 Hay Rakes

(i) Bamford

R2	Rake	$1830
RG2	Rake	$1830
R2	7 Reel Rake	$1950
RG2	7 Reel Rake	$1950

(ii) Fahr

KH40	Centipede	$1784
KH60	Centipede	$3125

(iii) Kuhn

GF 452	Gyrotedder	$2188
GRS 21	Gyrotedder	$1626
GA 280	Byrorake	$1354

(iv) New Holland

256	Rolabar with Dyna tynes	$2970

(v) Vicon

HKX 620	4 finger wheels, 3 pt linkage	$857
H 820	5 finger wheels, 3 pt linkage	$912
H 1020	6 finger wheels, trailing	$1667
H 1240	8 finger wheels, trailing	$1642

4.27.27 Balers (Conventional)

(i) Massey Ferguson

124	$6649

(ii) International

440	$6992

(iii) New Holland

370	$6980
376	$8890

(iv) Welger

AP 45	$5283
AP 52	$6839
AP 61	$8345

4.27.28 Big Balers

(i) Hesston

5800	Round	$11990
5700	Round	$12480
5400	Small Round	$8094
Stak Hand 10		$13250

(ii) International

241	Bigroll	$11360

(iii) Massey Ferguson

560	Big round with pickup guide and bale carrier	$10396

(iv) Howard

Big baler complete with gripper kit	$16758

(v) New Holland

845	with hydraulic twine wrapper	$10900
850	with electric twine wrapper	$12240
851	with hydraulic twine wrapper	$12700
851	with electric twine wrapper	$13300

(vi) Welger

RP 180	Round	$11958
RP 150	Round	$10469

4.27.29 Grain and Bale Handling Equipment

(i) Portable Grain Augers

13.7m	p.t.o. driven	$2350
	electric motor driven	$2156
	petrol motor driven	$2240
11.0m	p.t.o. driven	$2070
	electric motor driven	$1870
	petrol motor driven	$1943

Dia. of above augers 200mm Prices given exclude the cost of motors.

Harman Engineering

	Basic Cost per metre	Plus Motor and Mount	Plus Assembly
100mm	$35.41	$78.00	$30.00
150mm	$43.45	$84.00	$30.00

(ii) Mixer Bell

Bisleys	1.25 tonne	$2927

(iii) Bag Sewing Machine

Fischbein	$725

(iv) Bale Handling Equipment

Howard

Gripper Kit	$1008
Counter balance weight kit	$285

4.27.30 Light Motorised Equipment

(i) Dolmar Chainsaws

152 Electronic	100cc	64cm bar	$507
CT	118cc	76cm bar	$509
112	51cc	38cm bar	$319
123	70cc	51cm bar	$479

(ii) Stihl Chainsaws

031AV	48cc	41cm bar	$408
041AV	61cc	51cm bar	$466
045Av	80cc	51cm bar	$486
051AV	90cc	64cm bar	$559
075AVE	111cc	76cm bar	$581

(iii) Tas Chainsaws

ECS-5	36cm bar	$191
	41cm bar	$239

(iv) McCulloch

Mac 110	25cm bar	$139
Mac 120	31cm bar	$169
Power Mac 310	36cm bar	$189
Power Mac 320	41cm bar	$209
Pro Mac 510	41cm bar	$269
Pro Mac 1010	41cm bar	$309
Pro Mac 610	41cm to 51cm bars	$349
Pro Mac 650	41cm to 70cm bars	$399
Pro Mac 750	41cm to 70cm bars	$429
Pro Mac 850	41cm to 83cm bars	$454
Hand sharpener		$18.50
Electric 12 volt sharpener/grinder		$34.00

v

(v) Tas Equipment

Portable Electric Generators	OEG 300	$279
	DEG 600	$349
	REG 800	$329
	LEG 1200	$429
Knapsack Sprayer and Duster	JKS 37	$279
Hedge Trimmer	THT 23	$189
Post Hole Borer(Direct Drive)	JEA	$275
(Clutch)		$289
Grasscutters	TGC 23	$195
	TNC 23N	$248
Bushcutters	QUM 2	$246
	SUM 3	$326
	TBC 37	$269

(vi) Generators

McCulloch with Briggs and Stratton Motors

RC 103	1.0 kW	$495
RC 123	1.1 kW	$615
RC 253	2.5 kW	$785

4.27.31 Miscellaneous Equipment

(i) **Kuxmann Vegetable Lifter** 1 Row $1678

(ii) **Loaders**

Jones Engineering

Mechanically operated models	$1200
Hydraulically operated models	$1800 to $3000

Jones Engineering make models for most of the more common tractor models. Begg and Allen make only a few models of loader and adapt them to suit the tractor concerned. Prices in either case are virtually the same.

(iii)	**Grader Blades**	
	2m 232kg	$380
	Heavy duty 420kg for large and 4WD tractors	$795
	All blades tilt, angle, offset and reverse.	
	Multipurpose Blade 1.8m	$465
(iv)	**Offal Cookers**	
	Ace electric 94 litre with tip stand	$125
	electric 14 litre boiler pail	$82
	Wellsford oil fired	$75
(v)	**Portable Sawmill**	
	Varteg p.t.o. driven with hydraulic bench	$5290
(vi)	**Post Hole Digger** Tractor mount 300mm auger	$815
(vii)	**Massey Ferguson Subsoiler** 35-9 HD	$304
	Pipe laying attachment	$44

4.28 BUILDINGS

4.28.1 Dwellings

New Cost varies considerably but on average, $230 to $275 per sq. metre.

4.28.2 Garages

New Cost varies between $60 and $100 per sq. metre.

4.28.3 Woolsheds

(i) **Fletcher Brownbuilt Shearing Shed and Covered Yards**

Total shed area 153.2 sq metres
Yard area 262.0 sq metres
Total Cost (ex works Christchurch)

$16500 in kitset form
$21500 erected

(ii) **Carter Holt Kitset Woolshed**

Total shed area 96.4 sq metres
Total cost $6635 (for sheel only in kiitset form).

Cost of building a woolshed will vary from $60 to $100 per square metre.
Freight, erection costs and equipment will be additional

4.28.4 Haybarns

(i) **Round**

	Length	Kitset form	Erected
2 bay	6 metre	$900	$1150
3 bay	9 metre	$1280	$1620
4 bay	12 metre	$1680	$2100
5 bay	15 metre	$2050	$2570

(ii) **Waikato Farm Buildings Utility Shed**
(for implements or hay).

3 bay	9m x 7.2m x 3m (64.8 sq. metres)	$1890
4 bay	12m x 7.2m x 3m (86.4 sq. metres)	$2490

(iii) **Fletcher Brownbuilt Utility Sheds**

3 bay	14.4 metre	$4350 (kitset at nearest rail).
Additional ba ys		$ 920 (at rail)

Therefore the cost of building lean-to haybarns or utility sheds varies from $20.00 per sq metre to $25.00 per sq metre. Add 50% for labour.

4.28.5 Glasshouses

Fletcher Kitset Glasshouses

Size(m)	Area (sq.m)	Kitset Price Delivered	Price Erected on Prepared site
14.6 x 9.1	133	$6624	$8352
19.2 x 9.1	175	$8448	$10368
24.0 x 9.1	218	$10200	$12360
28.8 x 9.1	262	$11952	$14256
33.6 x 9.1	306	$13507	$15859
19.2 x 18.2	349	$14899	$18355
24.0 x 18.2	437	$17712	$21552
28.8 x 18.2	524	$20966	$24998
33.6 x 18.2	612	$23923	$28627
38.4 x 18.2	699	$26188	$31564
43.2 x 18.2	786	$29030	$35078

4.28.6 Grain Silos

(i) American Line Silos

Wheat tonnage capacity	Silo dia. (m)	Wall Height (m)	Price
50	3.7	2.4	$1061
65	3.7	3.3	$1165
80	3.7	4.1	$1289
95	3.7	4.9	$1413
103	4.6	3.3	$1331
127	4.6	4.1	$1529
150	4.6	4.9	$1706
185	5.5	4.1	$1934

(ii) Springston Agricultural Engineering

10	2.4	2.4	$ 950
20	3.5	2.5	$1250
30	3.5	3.7	$1480
40	3.5	4.9	$1680

These are portable grain silos mounted on skids.

4.28.7 Sheep Yards

Cyclone Sheep Yards (made in panel form, add 30% for cost of erection.)

Yard for handling 1200 sheep	$4485
Yard for handling 500 sheep	$3871
2.4 metre yard gates	$48.00
1.4 metre yard gates	$30.00
1.2 metre drafting gate	$29.00

4.28.8 Cattle Yards

Cyclone cattle yards (materials only)

Standard Cattle Gates 1.3m high by 2.1m wide

– 5 rail	$81.20
– 6 rail	$92.80

Yard Fences 2.0 metre panel, 5 rail from $106 per panel

Forcing Pen Race and Drafting Gates from $44.27 per metre

Dehorning Bail	$347.37
Lifting arm extra	$16.04

4.28.9 Dairy Shed Costs (1978/79)

These vary widely depending on materials used and the costs of labour. Below are some examples:

(i) **10 Aside Herringbone (Highline)**

Contract price; on new site; concrete block walls; factory supply.

Site preparation and tanker track	$440
Building (materials and labour inc. pipework)	$16340
Plastering	$380
Connect power to site	$1760
Electrician	$1980
Milking Machines	$5060
Supply and install washdown and farm reticulation pumps, backing gate drive, effluent pump	$4290
Total Cost	$30250
Cost per set of cups	$3025

Performance: 1 man 50–85 cows per hour.

(ii) **15 Aside Herringbone**

Labour only contract price; second hand pipework, machines and meal feeders; pipework done by farmer; poured concrete walls; town supply.

Site preparation	$220
Building (materials and labour)	$17050
Connect power to site	$160
Electrician	$1320
Milking machine fitted (2nd hand)	$2420
Meal feeders (2nd hand)	$1100
Effluent pump and pipe (installed)	$1650
Total Cost	$23920
Existing vat and refrigeration unit used	
Cost per set of cups	$1600

Performance – 2 men, 100 – 140 cows per hour.

An estimate (not actual costs) of rotary costs for 1978/79 are:

(iii) **17 bail Turnstyle**

Contract price for building, new site, factory supply.

Site preparation and tanker track	$550

Building (materials and labour)	$22000
Connect power to site and electrical	$3300
Machinery (including milking machine, automatic cup removers, water cylinders, rotary platform, effluent pump and pipelines)	$16500
Total Cost	$42350
Cost per set of cups	$2490

Performance – 1 or 2 operators, 95–125 cows per hour.

(iv) **28 bail Turnstyle**

Contract price for building, new site, factory supply.

Site preparation and tanker track	$5500
Building (materials and labour)	$29150
Connect power and electrical	$3850
Machinery (including milking machine, automatic cup removers, water cylinders, cleaning system, rotary platform, effluent pump and pipeline)	$24750
Total Cost	$63250
Cost per set of cups	$2260

Performance – 2 operators, 160–200 cows per hour.

4.29 DRAINAGE

4.29.1 Drainage Materials

			Cost per Metre
(i)	**Field Tiles**	100mm	$0.93
		150mm	$1.31
(ii)	**Plastic Drainage Tube**		
	Coils of 150 metres	50mm	$0.932

(iii) **Backfill shingle** (per cubic metre) $4.20 in the trench. One cubic metre backfills approximately 15 metres of drain.

4.29.2 Trenching Costs:

Trenching (under average conditions) $16.00 per 20 metres. Cartage Costs are extra.

4.29.3 Mole Drainage

Rate of work approximately 2.5 hrs/ha
Hire of suitable tractor $19.00 per hour
Approximate cost $48.00 per hectare.

4.29.4 Well & Drilling

Cost includes drilling, pipe, developing and test pumping.

150mm dia $ 65.96 per metre. (Screen costs $202 extra).
200mm dia. $ 90.88 per metre. (Inc. screen cost)
250mm dia. $103.59 per metre. (Inc. screen cost)
300mm dia. $116.54 per metre. (Inc. screen cost)

Should the well being developed end up dry, some contractors charge only half price for the drilling and withdraw the casing taking it with them. Others leave the casing there and charge the full price or alternatively, withdraw the casing at a cost of $31.00 per hour (2 men plus machine) and reimburse the farmer for the cost of the casing, the contractor taking it with him.

4.30 IRRIGATION

4.30.1 Basic materials

(i) **Aluminium Pipes & Couplings** (Complete, 7.5m lengths)

Diameter	Price Per Metre
50mm	$ 5.54
75mm	$ 7.06
100mm	$ 8.59
125mm	$14.06
150mm	$22.36

(ii) **Sprinklers**
From $7.50 to $12.50 each.

(iii) **Buried Mains** (F.O.R.) 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

Fibrolite (Price per metre complete)

Diameter	Class B	Class C
150mm	$ 8.86	$11.48
200mm	$14.32	$18.93

PVC (price per metre complete)

125mm	$ 5.61	$ 8.37
150mm	$ 8.00	$10.64
200mm	$12.89	$16.67

(iv) **Outlets (cast iron, complete with hydrant)**

150mm x 150mm x 100mm	**$132 each**
200mm x 200mm x 100mm	**$159 each**

(v) **Pumps**

Diesel:

4 cyl Ford 53 kW (71 h.p.) 1800 l/min, 70m head	$6 200
6 cyl Ford 82 kW (100 h.p.) 1800 l/min, 70m head	$7 100
6 cyl for Winch Travelling Irrigator 1900 l/min, 100m head	$8 400

Electric:

Pump sets and motor prices only available once system requirements have been calculated.
Prices range from $500 to $3 000.

(vi) **Suction Delivery Equipment**

Prices only determined once system requirements are known. Range: $100 - $350

4.30.2 Irrigation Systems

(Prices do not include Pumps or Mains)

(i) **Roll Lines:**

100mm Complete with wheels and couplings
$18.34 per metre plus Power Mower at $2,800

(ii) **Tow Lines (Angle Tow Wheels):**

100mm Complete with wheels
$12.30 per metre

(iii) **Travelling Irrigator:**

Pipe Diameter	Length	Price
75mm	200m	$12677
90mm	200m	$13298
100mm	200m	$14491
115mm	200m	$15434

(iv) **Centre Pivotal Systems:**

Hygromatic Fieldhopper
61m length, 15m cantilever and end gun $17500

Hygromatic Centre Pivotal system
Multispan Units each span lengths of 43m

43m
49m at cost of $176.00 per metre
55m (Erected F.O.R. Christchurch)
61m

SECTION 5

INCOME TAXATION

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CONTENTS

5.0 INCOME TAXATION

5.1 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.

5.2 TAXATION IN NEW ZEALAND

5.2.1 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 taypayer – 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.

5.2.2 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).

(b) Extra emoluments, such as back pay or bonuses where tax is deducted at a flat rate of 20%.

(c) Withholding payments, which basically refer to casual payments where there is not a strict employer-employee relationship e.g. labour only contractors, shearing contracts, agricultural contracts etc. Common types of payment and the appropriate tax rates are specified on the back of the "employee's" IR 13 (Withholding Payments Deduction Certificate).

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 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.

5.2.3. 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 $200 ($500 from 1 April 1979). (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 two thirds (or 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.

5.2.4 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.

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 after exemptions, net rent, dividents) if not more than $200 ($500 from 1 April 1979).

IR 5A – Estate or Trust returns.

5.2.4 (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.

5.2.5 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).

5.3 CALCULATING TAXABLE INCOME

Taxable income is calculated in the following way:-

	Income
less	Exempt Income
	Assessable Income
less	Special Exemptions
	TAXABLE INCOME

(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 5.7).

(e) Taxable Income is therefore the residue of assessable income after deducting the taxpayer's special exemptions.

5.4 TAXATION OF INDIVIDUALS

5.4.1 Overview

Individuals are required to file IR 5 or IR 3 returns depending on their sources of income (see section 5.2.4 – 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, section 5.9.2.

Tax is calculated according to the following relationship:

	Income			
less	Exempt Income			
less	Deductions			
	Assessable Income			
less	Special Exemptions			
	TAXABLE INCOME	– calculate –		Tax
			less	Rebates
				Tax Liability
			less	Tax paid during year (e.g. P.A.Y.E.)
				TERMINAL TAX or REFUND

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.

5.4.2 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 rebate.
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. General Interest Exemption:-

   Up to $100 interest from all sources, plus a further $200 for interest from the Post Office Savings Bank, Trustee Savings Banks, Private Savings Banks (e.g. those operated by the trading banks) and Building Societies.
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.

5.4.3 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 and Rebates).

5.4.4 Deduction for Employment Related Expenses

Salary and wage-earners are permitted to deduct employment related expenses from their employment 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 should be provided and all receipts or other documentary evidence kept in support of the claim. 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.

5.4.5 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:

(i) the amount paid; or

(ii) $1,000 ($800 if a member of a subsidised superannuation scheme).

5.4.6 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. PERSONAL

   $77.50 for the 1978/79 income year, after which it has been abolished.

2. SCHOOLCHILDREN

   $39 for the 1978/79 income year.

   $78 per year thereafter.

   Applies to children who are –

   (a) aged under 15 years or who attend school during the year; and

   (b) eligible for Family Benefit.

3. DEPENDENT SPOUSE

   $156, reduced by 25 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 $1,144.

4. YOUNG FAMILY

   $468, reduced by 10 cents for each dollar that the taxpayer's income exceeds $7,800.

This rebate is therefore extinguished when assessable income reaches $12,480.

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.

5. SINGLE INCOME FAMILY

$260, reduced by 25 cents for each dollar by which the income of any other person who also cares for the child exceeds $1,144.

This rebate is therefore extinguished when the income of the other person reaches $2,184.

At least one child must be aged under 12 years at any time during the year, and be eligible for 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.

6. 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.

7. 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.

8. 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.

9. BACK PAY

6 cents for every dollar of back pay received which relates to previous income years.

10. OVERTIME

10 cents per hour of paid overtime.

11. SHIFT WORK

40 cents for each qualifying shift worked.

12. DIVIDEND

The lesser of (i) 10% of dividends or
(ii) $400 reduced by 10 cents for every dollar of taxable income over $4,000.

This rebate is therefore extinguished when taxable income (including dividends) reaches $8,000.

13. 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.

14. INTEREST ON HOME VENDOR MORTAGE

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.

15. 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 – $1,800 ($4,000 savings)

(c) Fishing Vessel account – $1,800 ($4,000 savings)

Maximum savings in any one account are:

(a) Home account – $10,250
(b) Farm account – $50,000
(c) Fishing Vessel account – $50,000

If savings are withdrawn and used for purposes other than that specified, the tax rebate must be repaid i.e. withdrawal tax of 45%.

16. Other rebates are available for more than the standard number of pay periods in one year, visiting experts, war pensioners, and for hardship.

17. Visitors from overseas who work in New Zealand are allowed a proportion (based on time worked here) of the following rebates:

Personal (1978/79 year only)
Schoolchildren
Dependent Spouse
Dependent Relative
Young Family
Single Income Family
Housekeeper
Dependent Relative

An absentee who derives a pension in respect of past employment in New Zealand is allowed a total Personal rebate of $155. (This will apply only to 1978/79).

5.4.7 Example

A married man with 2 children aged 6 and 7 derived the following income during the year ended 31 March 1979:

Salary	$7,500
Mortgage interest	264
Trustee 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 $1,550 and provisional tax paid on other income was $40.

His income tax assessment would be as follows:

Salary	$7,500	
less Standard Deduction	52	
		$7,448
Mortgage interest	264	
less exemption	100	
		164
Trustee Savings Bank interest	220	
less exemption	200	
		20
Dividends		330
ASSESSABLE INCOME		$7,962
less Special Exemptions:		
Life Insurance premiums	480	
Superannuation contributions	325	
	$ 805	
Exemption allowable		800
TAXABLE INCOME		$7,162

Income tax on $7,162		$1,834.85
less Rebates:		
(a) Personal	$ 77.50	
(b) Wife ($1,400-600) x 0.25	136.00	
(c) Single Income Family	260.00	
(d) Donations and School Fees		
Smaller of (i) $175		
or (ii) 50% of ($30 + 20)	25.00	

(e) Dividend:
Smaller of (i) 10% of $330
or (ii) 10% of ($8,000 – 7,162) 33.00
(i.e. $83.80)

(f) Rates –
Smaller of (i) $25
or (ii) Amount paid ($152) 25.00

Total Rebates		556.50
INCOME TAX PAYABLE		$1,278.35
Less P.A.Y.E tax deducted from salary	$1,550.00	
Provisional tax paid	40.00	
		1,590.00
REFUND DUE		$ 311.65

5.5 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 5.2.3. – 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.

5.6 TAXATION OF PARTNERSHIPS

5.6.1 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 (up to $300 exempt), dividends (subject to rebate), and ordinary assessable income. (Refer to section 5.4. Taxation of Individuals). Partnership losses should always be allocated to the constituent partners and cannot be carried forward by the partnership itself.

5.6.2 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.

5.7 TAXATION OF TRUSTS

A trust is a fiduciary obligation imposed upon a person (the trustee) to hold property or income for a particular purpose or purposes, or for the benefit of other persons (the beneficiaries) of whom he may himself be one.

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.

5.7.1 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.

5.7.2 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 5.7.3. 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, but where dividends are included the dividend rebate applies.

(ii) Other Trusts:-

Taxed at the basic rates applicable to individuals after deducting a special exemption of $100. The dividend rebate is also available, if applicable.

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.

5.7.3 Classification of Income

Income derived by a trustee during an income year is classified as Beneficiaries' Income for the same year under the following conditions:

(a) Where an adult beneficiary of any trust or an under-age beneficiary of an "other" trust is entitled to income under a specific provision of the trust deed; or

(b) 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.

5.8 TAXATION OF FARMERS

5.8.1 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 or the supplementary return form 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.

5.8.2 Farm Income

The assessable income of a farmer will include all revenue from product sold, income from contracting, etc. (i.e. the generally accepted accounting definition of revenue), but also includes:-

(i) The value of meat and produce privately consumed.

(ii) Prize money from A & P shows, less entrance fees and other related expenses.

(iii) Rents received for portion of the farm let.

(iv) Stud fees received

(v) Compensation for stock condemned.

(vi) Net receipts from bailed livestock.

(vii) Refunds from income levelling schemes
e.g. Income Equalisation

(viii) Income from the sale of timber.

5.8.3 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.

(iv) Proportion of car expenses (including depreciation) applicable to business use, on the basis of:

(a) Half, where farmer has both car and truck.

(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 outgoings (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 5.8.5 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 farm working duties 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:

ACTIVITY	LEVY PER $100 EARNED
Farming	$1.40
Agricultural Contracting	
Fencing, sheep-dipping, spraying, harvesting, etc.	$1.40
Shearing etc.	$0.80
Scrub cutting, grubbing clearing etc.	$2.20

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% of the years taxable business income, with a maximum of $156 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 30 November 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) Various incentives, income levelling schemes etc. (see below).

5.8.4 Valuation of Livestock

There are a variety of methods available.

1. **Cost, market, or replacement value.**
2. **Standard Value**

   Standard value is the value adopted by a farmer for a particular class of livestock which is maintained over time irrespective of actual cost or market value.

   It is necessary to obtain approval of the Commissioner to establish or alter the standard value, but in practice a note attached to the accounts is sufficient where an increase is still within market value. Over time, the market value of livestock will increase but generally the farmer does not

have to revalue or adopt market value where there is a continuing operation.

Standard values are not available to dealers in livestock or for high priced stud stock (which should be valued at cost 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.

(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, and deer.

(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 head of cattle = 6 sheep = 4 pigs = 4 deer

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 effects 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 30/6/75	Stock on Hand 30/6/76	Basic Number	Standard Value
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	240	Valued at s.v.
		4,260	
	less basic number	4,000	Valued at s.v.
	Net Increase over basic number	260	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.

5.8.5 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)	40%
(c)	Employee accommodation	22%

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
Irrigation plant	10	DV
	or Development	
Milking Sheds – built before1/4/66	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
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.	

5.8.5 (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.

5.8.5 (ii) 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.

5.8.5 (iii) 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.

5.8.6 Farming Investment Allowance

40% 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 is also available for leased plant and machinery. The allowance is not available for cars, office equipment, or any asset which is second hand, costs less than $500, 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. This means that the 40% investment allowance enables 140% of cost to be written off over the working life of the asset.

5.8.7 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. The farmer may elect to defer all or part of this deduction for up to nine years after the expenditure is incurred. The items of expenditure which qualify as development include:-

1. Eradication of vegetable and animal pests.
2. Clearing and cultivation of land in preparation for agriculture.
3. Drainage of swamps or low-lying ground.
4. The sinking of bores, and the construction or dams, stop banks, and irrigation channels.
5. Repairs of flood or erosion damage.
6. Construction of roads, access tracks and landing strips for aerial topdressing.
7. Construction of fences.
8. Pollution prevention expenditure.

In addition, expenditure on fertiliser and lime (including application) may be deferred, either 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.

Expenditure on trees for shelter or erosion control is tax deductible in the year the expenditure is incurred.

5.8.8 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.

5.8.8 (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.

5.8.8 (ii) Deferral of Development Expenditure

– refer to section 5.8.7.

5.8.8 (iii) Nil Value of Livestock

– refer to section 5.8.4.

5.8.8 (iv) Livestock Incentive Scheme

The tax option provides limited flexibility for the smoothing of income – refer to Section 1 of this Manual.

5.8.8 (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 5.2.

5.9 APPENDICES

5.9.1 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

5.9.2 Appendix II

RATES OF INCOME TAX FOR INDIVIDUALS
1978/79 INCOME YEAR

TAXABABLE INCOME		AMOUNT AND RATE OF TAX			
$	$	$	%		$
1 –	2,000	0 plus	16.75	of excess over	0
2,001 –	2,500	335.00 "	17.225	"	2,000
2,501 –	3,000	421.12 "	18.4125	"	2,500
3,001 –	3,500	513.18 "	19.6	"	3,000
3,501 –	4,000	611.18 "	20.7875	"	3,500
4,001 –	4,500	715.12 "	21.975	"	4,000
4,501 –	5,000	825.00 "	34.9125	"	4,500
5,001 –	5,500	999.56 "	36.3375	"	5,000
5,501 –	6,000	1,181.25 "	37.7625	"	5,500
6,001 –	6,500	1,370.06 "	39.1875	"	6,000
6,501 –	8,000	1,566.00 "	40.6125	"	6,500
8,001 –	10,000	2,175.18 "	41.8	"	8,000
10,001 –	12,000	3,011.18 "	47.275	"	10,000
12,001 –	14,000	3,956.68 "	47.75	"	12,000
14,001 –	16,000	4,911.68 "	48.225	"	14,000
16,001 –	18,000	5,876.18 "	52.2	"	16,000
18,001 –	20,000	6,920.18 "	53.15	"	18,000
20,001 –	22,000	7,983.18 "	54.575	"	20,000
22,001	upwards	9,074.68 "	58.5	"	22,000

1979/80 INCOME YEAR

$	$	$	%		$
1 –	4,500	0 plus	14.5	of excess over	0
4,501 –	10,000	652.50 "	38.0	"	4,500
10,001 –	16,000	2,742.50 "	48.0	"	10,000
16,001 –	22,000	5,622.50 "	55.0	"	16,000
22,001	upwards	8,922.50 "	60.0	"	22,000

SECTION 6

GIFT DUTY AND ESTATE DUTY

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CONTENTS

6. GIFT DUTY AND ESTATE DUTY

6.1 INTRODUCTION

Both gift duty and estate duty are levied under the Estate and Gift Duty Act 1968 as amended. Both are administered by the Inland Revenue Department.

6.2 GIFT DUTY

6.2.1 Definitions

A gift is any disposition of property made otherwise than by will, without fully adequate consideration in money or money's worth passing to the donor (the person making the gift).

"Disposition of property" is used in its widest sense to cover any alienation of property, such as any conveyance, transfer, settlement or assignment, including transactions which diminish the value of one estate to the betterment of another. It includes all gifts of property in New Zealand and all gifts of foreign property if the owner is domiciled in New Zealand.

"Consideration" is what one party in a transaction gives to the other party. The most common form is money, but it could be a promise to do or not to do something, or another form of property. Whatever form is involved, its value is calculated in monetary terms.

6.2.2 Valuation of Gift

The value of a gift is the monetary value of the property gifted less any consideration paid. The value of land and buildings is determined by agreement between the donor and the Commissioner of Inland Revenue, or by the Valuer-General. All other property is at market value as assessed by a competent valuer.

6.2.2.(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 – (a) the instrument of transfer is registered in the Land Transfer Office; or (b) the beneficiary has possession of all the necessary documents to enable the registration to be effected.
Shares	As for land, except that the instrument of transfer is registered by the company.
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.

6.2.3 Exemptions from Gift Duty

1. Small gifts, not exceeding an aggregate of $400 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.

Dutiable Gifts therefore are gifts which have not been exempted from gift duty.

6.2.4 Calculation of Gift Duty

Gift duty does not become payable until the value of any dutiable gifts over any twelve month period exceeds $8,000 in total value. (See also section 6.2.5.). Rates of Gift Duty are detailed in Appendix 1 (section 6.4.).

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 over the previous twelve months.

(c) is the amount of gift duty payable on item (b).

6.2.5 Assessment and Collection

If the value of a gift exceeds $4,000, or if the aggregated value of this gift and all other gifts made over the previous twelve months exceeds $4,000, a Gift Statement (form IR 635) 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.

6.2.6 Example of Gift Duty Assessment:

Gifts made were $ 6,000 on 14 November 1976
$ 4,000 on 18 August 1977
$12,000 on 17 July 1978

The duty assessment is:

14 November 1976	Total gifts	$ 6,000
	Gift duty payable	NIL
18 August 1977	Total gifts for previous 12 months	$10,000
	Gift duty payable	$ 180
	apportioned:	
	$\frac{6,000}{10,000} \times 180 = \$108$ on gift of	$ 6,000
	$\frac{4,000}{10,000} \times 180 = \$\ 72$ on gift of	$ 4,000
17 July 1978	Total gifts for previous 12 months	$16,000
	Gift duty payable	$ 840
	apportioned:	
	$\frac{4,000}{16,000} \times 840 = \$210$	
	less duty already paid 72	
	$138 Extra duty payable on gift of $4,000	
	$\frac{12,000}{16,000} \times 840 = \$640$ on gift of	$12,000

6.3 ESTATE DUTY

6.3.1 Introduction

Estate duty is a tax levied on a deceased person's wealth as at the date of death i.e. total value of property owned at death or that which passes from one person to another at death.

Estate duty is calculated according to the following general relationship:

	Estate Assets		
plus	Notional Estate		
less	Exempt Assets		
	Dutiable Estate		
less	Allowable Debts		
less	Matrimonial Home Allowance		
	FINAL BALANCE	– calculate –	Estate Duty
			less Reliefs
			NET DUTY

6.3.2 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 made within 3 years of death.
   (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 $5,000.

Amount to be included in the dutiable estate is –

$$\frac{\text{Premiums to date of assignment}}{\text{Total premiums during term}} \times \text{Proceeds}$$

$$= \frac{(8 \times \$200)}{(10 \times \$200)} \times \$5{,}500 = \qquad \$4{,}400$$

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.

6.3.3 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 superannuation 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.)

6.3.4 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.

6.3.5 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.

6.3.6 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 6.2.2 – Valuation of Gift).

i.e. Land is valued by a special Government Valuation (the timber value of growing trees is excluded). Other assets should be valued by a competent valuer. It is not necessary to value personal chattels where they have all been exempted from duty. (Refer to section 6.3.3 – Exemptions).

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. left to beneficiaries, and to apportion the final estate between the beneficiaries.

Where it is necessary to value annuities, pensions, etc., 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 III (section 6.4).

6.3.7 Calculation of Estate Duty

Estate duty is payable on the final balance of the estate at the rate set out in Appendix II (section 6.4).

6.3.8 Reliefs

There are a number of reliefs available which are deducted from the estate duty otherwise payable on the final balance of an estate, where applicable. Available reliefs include the following:

1. **Widow or Widower Relief**

   The duty otherwise payable at scale rates is reduced by an amount calculated as follows:

$$\frac{\text{The lesser of the succession or \$60,000}}{\text{Final Balance}} \times \text{Estate Duty}$$

A succession is the inheritance derived from an estate, including property, pensions, etc. However, where a matrimonial home allowance has been made, the succession of the surviving spouse is reduced by the amount of that allowance.

2. **Children Under 20**

The duty otherwise payable is reduced by an amount calculated as follows:

(a) On the death of one parent, the relief is:

$$\frac{\text{The lesser of the succession or \$1,000}}{\text{Final Balance}} \times \text{Estate Duty}$$

or

(b) On the death of the last surviving parent (i.e. the child becomes an orphan), the relief is:

$$\frac{\text{The lesser of the succession or appropriate \% of \$10,000}}{\text{Final Balance}} \times \text{Estate Duty}$$

The "appropriate percentage of $10,000" is scaled according to the age of the orphan infant child, thus

Age under 5 years	$10,000
5 years but under 10 years	$ 7,500
10 years but under 15 years	$ 5,000
15 years but under 20 years	$ 2,500

3. **Charitable Successions**

Allowable Relief should be calculated as follows:

$$\frac{a}{b} \times c$$

where a = the lesser of the charitable succession(s) or $25 000
b = the Final Balance less item a
c = the Estate Duty on item b."

4. **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, on the basis that the longer the time period the lesser the reduction.

5. **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.

6.3.9 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.

6.3.10 Example of Estate Duty Assessment

Mr. Green died on 30 October 1978, 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 1976 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 1976	$10,000
1 January 1977	$10,000

Gift duty of $660, $660, and $180 respectively had been paid by Green's son.

In his will, Green made the following bequests:

To son John, aged 25, debt forgiven	$25,000
To daughter Sue, aged 19, cash	$30,000
To wife, aged 65 – the residue.	

The final balance on which duty would be assessed is calculated as follows:

Estate Assets:	$	$
Matrimonial home	45,000	
Investments	34,000	
Personal chattels	7,000	
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	10,000 (1)	
		195,000

Plus **Notional Estate:**			
Dutiable gifts to son		20,000 (2)	
Interest in life policy disposed of		2,091 (3)	
Superannuation payable to widow		20,605 (4)	
			42,696
			237,696
Less **Exempt Assets:**			
Personal Chattels to widow			7,000
			230,696
Less **Allowable Debts:**			
Mortgage over home		15,000	
Accounts payable		1,300	
Income tax		1,100	
Funeral expenses		600	
		18,000	
Matrimonial Home Allowance:			
Matrimonial home	$45,000		
less Mortgage	15,000		
		30,000	
			48,000
FINAL BALANCE			$182,696
Value of Successions:			
Final balance of estate			182,696
Plus Matrimonial Home Allowance			30,000
			212,696
Less Successions to:			
(a) Son, John			
Gifts		20,000 (2)	
Bequest		25,000	
		45,000	
(b) Daughter, Sue			
Bequest		30,000	
			75,000
Widow's succession			137,696
Less Matrimonial Home Allowance			30,000
Widow's succession for relief purposes			$107,696

Estate Duty on final balance of $182,696			$44,547.52
less **Reliefs:**			
(a) Widow:			
$\frac{60,000\ (5)}{182,696}$ x 44,547.52		$14,630.05	
(b) Daughter:			
$\frac{1,000\ (6)}{182,696}$ x 44,547.52		243.83	
(c) Credit for gift duty paid (7).			
(i) Duty on $10,000 (1.1.76)	660.00		
Plus interest: 3% p.a. on $660 for 2 years 302 days	56.03		
		716.03	
(ii) Duty on $10,000 (1.1.77)			
Plus interest: 3% p.a. on $180 for 1 year 302 days	9.87		
		189.87	
Total Reliefs			$15,779.78
NET ESTATE DUTY PAYABLE			$28,767.74

NOTES:

1. Green had sold a half interest in the insurance policy to his wife in 1976, so only half the proceeds belong to the estate.
2. Only dutiable gifts made within 3 years of death are included as notional estate.
3. 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	7,000
Amount to be included	$2,091

4. The value of the widow's superannuation is calculated as:

Superannuation	$4,000 p.a.
less exemption	2,000 p.a.
Dutiable	$2,000 p.a.

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.

5. Relief is calculated on the lesser of the widow's succession or $60,000.

6. Relief is calculated on the lesser of the infant daughter's succession or $1,000.

7. 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 tothe son, will be offset against the estate duty payable. The estate should account to the son, John, for these amounts.

6.4 APPENDICES

Appendix I

SCALE RATES OF GIFT DUTY

Value of Dutiable Gifts	*Rate of Duty*
Not exceeding $8,000	Nil
Exceeding Not exceeding	
$8,000 - $10,000	9% on excess over $8,000
$10,000 - $12,000	$180 plus 10% of excess over $10,000
$12,000 - $14,000	$380 plus 11% of excess over $12,000
$14,000 - $16,000	$600 plus 12% of excess over $14,000
$16,000 - $18,000	$840 plus 13% of excess over $16,000
$18,000 - $20,000	$1,100 plus 14% of excess over $18,000
$20,000 - $22,000	$1,380 plus 15% of excess over $20,000
$22,000 - $24,000	$1,680 plus 16% of excess over $22,000
$24,000 - $26,000	$2,000 plus 17% of excess over $24,000
$26,000 - $28,000	$2,340 plus 18% of excess over $26,000
$28,000 - $30,000	$2,700 plus 19% of excess over $28,000
$30,000 - $32,000	$3,080 plus 20% of excess over $30,000
$32,000 - $34,000	$3,480 plus 21% of excess over $32,000
$34,000 - $36,000	$3,900 plus 22% of excess over $34,000
$36,000 - $38,000	$4,340 plus 23% of excess over $36,000
$38,000 - $40,000	$4,800 plus 24% of excess over $38,000
Exceeding $40,000	$5,280 plus 25% of excess over $40,000

Appendix II

SCALE RATES OF ESTATE DUTY

Final Balance of Estate		*Rate*
Not Exceeding $25,000		Nil
Exceeding	Not Exceeding	
$25,000 -	$27,000	7% of excess over $25,000
$27,000 -	$29,000	$140 plus 8% of excess over $27,000
$29,000 -	$31,000	$300 plus 9% of excess over $29,000
$31,000 -	$33,000	$480 plus 10% of excess over $31,000
$33,000 -	$35,000	$680 plus 11% of excess over $33,000
$35,000 -	$37,000	$900 plus 12% of excess over $35,000
$37,000 -	$39,000	$1,140 plus 13% of excess over $37,000
$39,000 -	$41,000	$1,400 plus 14% of excess over $39,000
$41,000 -	$43,000	$1,680 plus 15% of excess over $41,000
$43,000 -	$45,000	$1,980 plus 16% of excess over $43,000
$45,000 -	$47,000	$2,300 plus 17% of excess over $45,000
$47,000 -	$49,000	$2,640 plus 18% of excess over $47,000
$49,000 -	$51,000	$3,000 plus 19% of excess over $49,000
$51,000 -	$53,000	$3,380 plus 20% of excess over $51,000
$53,000 -	$55,000	$3,780 plus 21% of excess over $53,000
$55,000 -	$57,000	$4,200 plus 22% of excess over $55,000
$57,000 -	$59,000	$4,640 plus 23% of excess over $57,000
$59,000 -	$61,000	$5,100 plus 24% of excess over $59,000
$61,000 -	$63,000	$5,580 plus 25% of excess over $61,000
$63,000 -	$65,000	$6,080 plus 26% of excess over $63,000
$65,000 -	$75,000	$6,600 plus 27% of excess over $65,000
$75,000 -	$85,000	$9,300 plus 28% of excess over $75,000
$85,000 -	$95,000	$12,100 plus 29% of excess over $85,000
$95,000 -	$105,000	$15,000 plus 30% of excess over $95,000
$105,000 -	$115,000	$18,000 plus 31% of excess over $105,000
$115,000 -	$125,000	$21,100 plus 32% of excess over $115,000
$125,000 -	$135,000	$24,300 plus 33% of excess over $125,000
$135,000 -	$145,000	$27,600 plus 34% of excess over $135,000
$145,000 -	$155,000	$31,000 plus 35% of excess over $145,000
$155,000 -	$175,000	$34,500 plus 36% of excess over $155,000
$175,000 -	$195,000	$41,700 plus 37% of excess over $175,000
$195,000 -	$225,000	$49,100 plus 38% of excess over $195,000
$225,000 -	$255,000	$60,500 plus 39% of excess over $225,000
Exceeding	$255,000	$72,200 plus 40% of excess over $255,000

Appendix III

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	0.95239
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	19.63398	0.01830	0.98170
83	19.65141	0.01743	0.98257
84	19.66801	0.01660	0.98340
85	19.68382	0.01581	0.98419
86	19.69887	0.01506	0.98494
87	19.71321	0.01434	0.98566
88	19.72687	0.01366	0.98634
89	19.73987	0.01301	0.98699
90	19.75226	0.01239	0.98761
91	19.76406	0.01180	0.98820
92	19.77529	0.01124	0.98876
93	19.78599	0.01070	0.98930
94	19.79618	0.01019	0.98981
95	19.80589	0.00971	0.99029
96	19.81513	0.00924	0.99076
97	19.82394	0.00880	0.99120
98	19.83232	0.00838	0.99162
99	19.84030	0.00798	0.99202
100	19.84791	0.00760	0.99240

SECTION 7

GROSS MARGINS

7. GROSS MARGINS

7.1 GROSS MARGIN ANALYSIS – A CRITICAL EVALUATION

7.1.1 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.

7.1.2 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 $19. At 15 ewes per hectare the gross margin per hectare would be $285. For a cattle policy, buying in weaners and selling prime stock, let us assume a gross margin per stock unit of $23, or at 15 stock units per hectare $345. On this basis of gross margin per hectare cattle look more profitable by $60 per hectare. ($345 compared with $285).

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 $19 and a stock unit in cattle costs $25 (if we assume a weaner steer being the equivalent of 3 ewes this values the weaner at about $75 per head.) With 15 stock units per hectare we find the following position:

Cattle $\dfrac{\text{Gross margin per hectare}}{\text{Livestock capital per hectare}} = \dfrac{\$345}{\$375}$

i.e. a 92% return to livestock capital

Sheep $\dfrac{\text{Gross margin per hectare}}{\text{Livestock capital per hectare}} = \dfrac{\$285}{\$270}$

i.e. a 106% 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 $375 invested returns $345

i.e. a gross margin return of 92 cents per $1 invested.

Sheep $270 invested returns $285

i.e. a gross margin return of $1.06 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	$345	$285
Less interest at 10% on capital Invested in livestock - approximately	$ 37	$ 27
Residual margin per hectare	$308	$258

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 $25000 by running cattle. In the above example the cost of capital would have to be greater than 60% 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 $1060 if he uses the capital to buy sheep but only $920 if he used his capital to buy cattle.

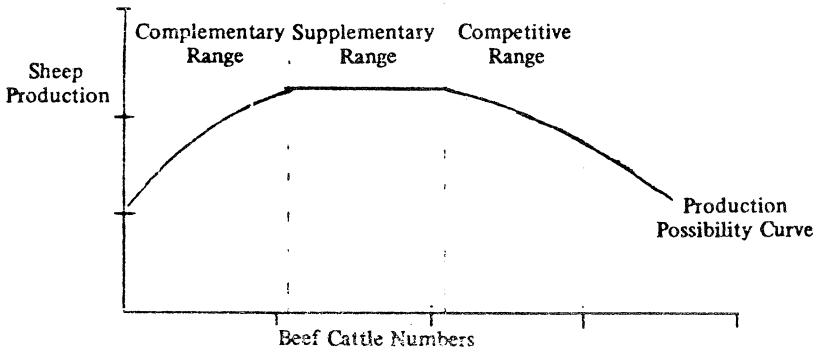
7.1.3 Selecting the Correct Rate of Substitution

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 tooths 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.

7.1.4 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.

7.1.5 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 relianace 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.

7.1.6 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.

(This section was prepared by G.F. Tate, January 1979.)

7.2 GROSS MARGINS

7.2.1 Introduction

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.

7.2.2 Examples of Crop and Small Seeds Gross Margins 1979.

The rotation used is an example of land use possible on medium soils.

pasture → wheat → wheat → white clover → wheat → greenfeed → peas → ryegrass → white clover → pasture 2 years

i.e. a 9 year rotation.

(i) **1st Wheat Crop (Kopara ex old grass):**

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 in October with "Avenge" and "Oxytril P" for the control of various weeds.

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 with own machinery at $3.20/hr	16.00
Seed: 100 kg/ha treated seed at $230/tonne	23.00
Fertilizer: 125 kg/ha superphosphate at $54.00/tonne (includes $5.50 for cartage 12km and spreading at $2.20/ha)	6.75
Weed Control: Oxytril P at 2 litres/ha at $11.10/litre plus ½ hr/ha spraying at $3.20/hr Avenge at 5 litres/ha at $7.80/litre (includes the cost of Agral LN wetting agent) plus ½ hr/ha spraying at $3.20/ha	64.40
Heading: ¾hr/ha at $12.50/hr	9.38
Cartage: from field to silos at $2.05/tonne	8.26

Raking and Ploughing Firebreak: ¾hr/ha at $3.20/hr	2.40
Cartage: from silo to rail (by contract) at $5.23/tonne (24km distance)	21.08
TOTAL DIRECT COSTS	$151.27

Gross Revenue:

Yield: 4.03 t/ha	
Price: $125.50/tonne plus storage increment to July 31st of $8.77/tonne	
Income: 4.03t x $134.27/tonne less levy of 50¢/tonne	539.10
TOTAL REVENUE	$539.10

Thus it appears that in this example using own machinery, the costs are about $151 and the revenue is $539, leaving a gross margin of $388/ha. Using contract harvesters would cost a minimum of $53/ha, reducing the gross margin to about $335/ha.

(ii) **2nd Wheat Crop (Kopara ex wheat):**

Programme:

Cultivation:

The paddock receives 2 grubbings 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.

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 $3.20/hr	9.60
Seed: 100 kg/ha treated seed at $230/tonne	23.00

Fertilizer: 125 kg/ha superphosphate at $54.00/tonne (includes cartage and spreading)	6.75
N.B. Undersowing costs are charged to the white clover gross margin (see later)	
Weed Control: Oxytril P at 2 litres/ha at $11.10/litre plus ½ hr/ha spraying at $3.20/hr	
Avenge at 5 litres/ha at $7.80/litre (includes cost of Agral LN wetting agent) plus ½ hr/ha spraying at $3.20/hr	64.40
Heading: ¾ hr/ha at $12.50/hr	9.38
Cartage: from field to silo at $2.05/tonne	7.59
from silo to rail (by contract) at $5.23/tonne	19.35
TOTAL DIRECT COSTS	$140.07

Gross Revenue:

Yield: 3.7 t/ha	
Price: Same calculations as with first wheat crop	
Income: 3.7t x $133.77	494.95
TOTAL REVENUE	$494.95

In this example the costs are about $140 and the revenue is almost $494/ha, giving a gross margin of $354/ha. If a contractor was employed to harvest the crop, the gross margin would drop to $301/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 2,4-D ester 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 at approx. 70 kg/sack is then carted to a merchant to be machine dressed. Extra sacks are required for double bagging the M.D. seed.

Direct Costs:	$
Seed: Oversowing of 3 kg/ha at $1.85/kg	5.55
plus 0.6 hr/ha at $3.20/hr	1.92
Fertilizer: 125 kg/ha lime reverted superphosphate at $50.85/tonne (includes cartage and spreading)	6.35
250 kg/ha superphosphate at $54.00/tonne (includes cartage and spreading)	13.50
Heavy Rolling: 0.6 hr/ha at $3.20/hr	1.92
Weed Control: Asulox at 0.25 litres/ha at $7.35/litre Carbetamex at 4 kg/ha at $12.55/kg 2,4-D ester at 2 litres/ha at $2.95/litre plus 1¼ hrs/ha spraying at $3.20/hr	100.26
Mowing: 1¾ hrs/ha at $3.20/hr	5.60
Heading: 2½ hrs/ha at $12.50/hr	31.25
Sacks: 14 sacks/ha at 68¢ each	9.52
Consolidated Dressing & Store Handling Charge: 500 kg/ha F.D. at 15.2 ¢/kg	76.00
Cartage: 7 sacks/ha at 34¢ each	2.38
TOTAL DIRECT COSTS	$252.21

Gross Revenue:

Yield: 500 kg/ha F.D.; 30% loss on machine dressing; 350 kg.ha M.D.
Price: $1.35/kg for 1st Generation seed

Income: 350 kg x $1.35/kg	473.00
TOTAL REVENUE	$473.00

In this example, the gross margin is about $221/ha, with direct costs of about $252/ha and revenue of about $473/ha.

To this should be added some return from the winter grazing. A gross margin of $15.60/S.U. can be expected this season (See Sheep Gross Margins, Section 7.2.3) from the consumption of 590 kg 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:

$15.60 x 2.54 = $39.62, which brings the total white clover gross margin to about $261/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 is for insect control.

Direct Costs (per hectare):

As for 1st wheat crop	151.27
Insect Control: Bidrin (for control of chewing insects) at 400ml/ha at $1.07/litre plus ½ hr/ha spraying at $3.20/ha	2.00
TOTAL DIRECT COSTS	$153.27

Gross Revenue:

Yield: 3.7 t/ha
Price: $133.37/tonne including storage increment

Income: 3.7t x $133.37/tonne	494.95
TOTAL REVENUE	$494.95

Thus the Gross margin for this crop (using own harvesting machinery) is about $341.68/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 $3.20/hr	8.00
Seed: 90 kg/ha at $240/tonne	21.60
Fertilizer: 250 kg/ha nitrogen superphosphate at $71.95/tonne (includes cartage and spreading)	17.98
TOTAL DIRECT COSTS	$45.78

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 $15.60/S.U. is therefore:

$15.60 x 6	93.60
TOTAL REVENUE	$93.60

Thus the gross margin is about $48/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, vibratillered 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 $3.20/hr	12.80
Seed: 250 kg/ha Blue Rondo at $275/tonne (Contract price includes treating and sacks)	68.75
Fertilizer: 250 kg/ha molybdate super at $58.95/tonne (includes cartage and spreading)	14.72
Weed Control: 2.5 litres/ha Treflan at $8.95/litre plus ½ hr/ha at $3.20/hr	23.98
Harvesting: 1¾hrs/ha at $12.50/hr	21.88
Sacks: 54 sacks/ha at 76¢ nett	41.04
Cartage: 2.69 tonnes or 40 sacks at 34¢/sack	13.64

Consolidated Dressing & Store Handling Charge:	
2.69 tonnes at $25/tonne	67.25
Raking pea straw (own machinery):	
½hr/ha at $3.20/hr	1.60
Baling pea straw (contract):	
86 bales/ha at 40¢/bale	34.40
TOTAL DIRECT COSTS	$293.19

Gross Revenue:

Yield: 2.69 t/ha	
Price: Contract $135/tonne	
Income: 2.69t x $135/tonne	363.15
Pea Straw: 86 bales/ha at 60¢/bale	51.60
TOTAL REVENUE	$414.75

With costs approximating $293/ha and revenue in the vicinity of $415, the gross margin in this example becomes $122/ha.

(vii) New Grass for Ariki Seed (ex peas)

Programme:

Following the pea harvest in February, the paddock receives two grubbings 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 headed. The field-dressed seed is then carted in sacks to the merchant for machine dressing and sale.

Direct Costs (per hectare):

Seed Bed Preparation: 6½ hrs/ha at $3.20/hr	20.80
Seed: 23kg/ha Ariki ryegrass at 70¢/kg	16.10
3kg/ha Huia white clover at $1.85/kg	5.55
Fertilizer: Lime 2.47t/ha at $7.23/tonne (includes cartage and spreading)	17.86
250 kg/ha superphosphate at $54.00/tonne (includes cartage and spreading)	13.50
250 kg/ha sulfate of ammonia at $111.55/tonne (including cartage and spreading)	27.88
Harvesting: Mowing 1½ hrs/ha at $3.20/hr	4.80
Heading 2¼ hrs/ha at $12.50/hr	28.13
Sacks: 18 sacks at 72¢ each	12.96
Cartage: 18 sacks at 34¢ each	6.14
Consolidated Dressing & Store Handling Charge: 5.1¢/kg F.D. weight x 880kg/ha	44.88
Separating white clover and ryegrass: 18 sacks at 78¢/sack	14.40
Raking ryegrass straw (own machinery): 0.3 hr/ha at $3.20/hr	0.96
Baling ryegrass straw (contract): 100 bales/ha at 36¢/bale	36.00
TOTAL DIRECT COSTS	$249.60

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 46¢/kg	
Income: 675 kg x 46¢/kg	310.50
Ryegrass straw: 100 bales/ha sold in the paddock at 70¢ bale	70.00
TOTAL REVENUE	$380.50

This example suggests a gross revenue of $381/ha with direct costs of $250/ha, giving a gross margin of $131/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 x $15.60 = $57.72, which brings the G.M. to $189. Without the liming charge, the gross margin would be about $18/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 dessicated with Reglone 5-6 days prior to mowing.

Direct Costs (per hectare):

Fertilizer: 250 kg/ha superphosphate at $54.00/tonne (includes cartage and spreading)	13.50
Heavy Rolling: 0.6 hr/ha at $3.20/hr	1.92
Pest Control: Bromophos for case bearer moth 2 applications at $11.61/ha	23.32
Crop Dessication: Reglone plus Agral LN	38.32
Heading and Mowing: as before	36.85
Sacks: 4-5 sacks/ha	3.40
Cartage: 4 sacks/ha at 34¢ each	1.71
Consolidated Dressing & Store Handling charge: 15.2¢/kg F.D. weight x 340 kg/ha	51.68
TOTAL DIRECT COSTS	$170.60

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 $1.35/kg	
Income: 225 kg x $1.35/kg	304.00
TOTAL REVENUE	$304.00

Thus with gross revenue of $304/ha and direct costs of about $171/ha, the gross margin becomes about $133/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 x $15.60 = $71.76.

Thus the white clover gross margin now becomes about $205/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 $54.00/tonne	13.50
Haymaking: Mowing and raking at $37/ha x 0.2	7.40
Baling: 140 bales/ha at 36¢/bale x 0.2	10.08
Cartage: 140 bales/ha at 33¢/bale x 0.2	9.24
TOTAL DIRECT COSTS	$40.22

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 $15.60/S.U., the gross revenue becomes 14 x $15.60

TOTAL REVENUE	$218.00

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 $218 and direct costs of about $40/ha, the gross margin for pasture is $178/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 Ariki 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 contributrion. Given that such anomalies exist, a summary of gross margins for the chosen rotation is presented below:

Year	Crop	Gross Margin $/ha
1	Wheat	388
2	Wheat	354
3	White Clover (sp.)	261

4	Wheat	342
5	Oats, greenfeed	48
	Field Peas	122
6	Ariki Ryegrass	189
7	White Clover	205
8	Pasture	178
9	Pasture	178

The average annual gross margin is therefore $253/ha.

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, in this case price paid to the farmer, is given below:

Crop or Enterprise	Price	Gross Margin $/ha
Wheat	$100/tonne	255
(4.0t/ha Kopara)	$120/tonne	336
	$140/tonne	416
Barley	$100/tonne	323
(4.5t/ha Zephyr)	$100/tonne	368
	$120/tonne	413
Field Peas	$120/tonne	83
(2.7t/ha Rondo)	$135/tonne	122
	$150/tonne	164
Vining Peas	$100/tonne	239
(3.7t/ha Greenfeast)	$115/tonne	294
	$120/tonne	313
White Clover	$1.20/kg	264
(specialist crop)	$1.40/kg	334
(350 kg/ha M.D.)	$1.50/kg	369
Ariki Ryegrass	$0.40/kg	152
(675 kg/ha M.D. from	$0.45/kg	185
1st year pasture)	$0.50/kg	219
Cocksfoot	$1.50/kg	325
(340 kg/ha M.D.)	$2.00/kg	495
	$2.50/kg	665
Pasture – sheep grazing	$20/S.U.	138
(14 S.U./ha)	$25/S.U.	208
	$30/S.U.	278

Other Selected Examples of Crop Gross Margins For 1979:

(xi) **Vining Peas:**

Direct Costs (per hectare):

Cultivation: 6 hrs at $3.20/hr	19.20
Seed: 270 kg/ha at $13.00/50kg	70.20
Fertilizer: 250kg/ha lime reverted superphosphate at $50.85/tonne (including cartage and spreading)	12.71
Spraying: M.C.P.B. at 5.6 litres/ha at $3.57/litre	19.99
plus ½ hr/ha at $3.20/hr	1.60
Irrigation: 2 irrigations at $4.12/ha/irrigation	8.24
TOTAL DIRECT COSTS	$131.94

Gross Revenue:

Yield: 3.7t/ha	
Price: $126.01/tonne at average tenderometer reading of 110	
Income: 3.7t x $126.01	466.24
TOTAL REVENUE	$466.24
GROSS MARGIN	$334.30

(xii) **Garden Peas (William Massey contract):**

Direct Costs: (per hectare):

Cultivation: 5½ hrs at $3.20/hr	17.60
Seed: 236 kg/ha at $245/tonne	57.82
Fertilizer: 250 kg/ha Mo superphosphate at $58.95 (including cartage and spreading)	14.73
Spraying: M.C.P.B. at 4.5 litres/ha at $3.57/litre	16.19
Heading: 3½ hrs at $12.50/hr	43.75
Irrigation: 2 irrigations at $4.12/ha/irrigation	8.24
Cartage: Full boxes at $6.54/tonne (1 full box = 1.225 tonnes)	22.24
Empty boxes at $1.50/box	3.80
Box Hire: $4.00/box	11.10
TOTAL DIRECT COSTS	$195.47

Gross Revenue:

Yield: 3.4 t/ha
Price: $200/tonne

Income: 3.4t x $200	680.00
TOTAL REVENUE	$680.00
GROSS MARGIN	$484.53

(xii) **Spring Wheat (Karamu):**

(xiii) **Direct Costs (per hectare):**

Cultivation: 6½ hrs at $3.20/hr	20.80
Seed: 112 kg/ha Certified 1st Generation at $229.45/tonne	25.70
fertilizer: 200 kg/ha superphosphate at $54.00/tonne (including cartage and spreading)	10.80
Irrigation: 2 irrigations at $4.12/ha/irrigation	8.24
Heading: ¾hr/ha at $12.50/hr	9.38
Straw Disposal:	2.10
Cartage: from field to silos at $2.05/tonne	8.20
from silo to rail at $5.23/tonne	20.92
Levies: 50¢/tonne	2.00
TOTAL DIRECT COSTS	$108.14

Gross Revenue:

Yield: 4.0t/ha	
Price: $112.75/tonne plus storage increment to 31st July $7.97/tonne	
Income: 4.0t x $120.72	482.88
TOTAL REVENUE	$482.88
GROSS MARGIN	$374.74

(xiv) **Barley (Zephyr for malting):**

Direct Costs (per hectare):

Cultivation: 6½ hrs at $3.20/hr	20.80
Seed: 130 kg/ha at $200/tonne	26.00
Fertilizer: 200 kg/ha superphosphate at $54.00/tonne (including cartage and spreading)	10.80
Weed Spray: M.C.P.A. at 3 litres/ha at $3.17/litre	9.51
plus ½ hr/ha at $3.20/hr	1.60
Irrigation: 2 irrigations at $4.12/ha/irrigation	8.24
Heading: 1¼ hrs/ha at $12.50/hr	15.63

Cartage: 32km at $7.34/tonne	33.03
Firebreak: ¾ hr/ha at $3.20/hr	2.40
TOTAL DIRECT COSTS	$128.01

Gross Revenue:

Yield: 4.5t/ha	
Price: $100/tonne	
Income: 4.5t x $110	496.00
TOTAL REVENUE	$496.00
GROSS MARGIN	$367.99

(xv) **Lucerne:**

Establishment Costs (per hectare):

Cultivation: 13 hrs/ha at $3.20	41.60
Seed: 12 kg/ha at $5.00/kg	60.00
Fertilizer: 250 kg/ha lime reverted superphosphate at $50.85/tonne (including cartage and spreading)	12.71
Lime: 2.5 t/ha at $7.23/tonne on the ground	18.08
Seed Inoculation:	8.20
TOTAL ESTABLISHMENT COSTS	$140.59

(a) Dryland – Stand life = 9 years

∴ Annual Establishment Costs =	15.62
Annual Costs:	
Fertilizer: 250 kg/ha lucerne fertilizer at $71/85/tonne (including cartage and spreading)	17.96
Heavy Roll: 0.6 hr/ha at $3.20/hr	1.92
Weed Spray: 2,4-DB at 4 litres/ha at $3.73/litre	16.52
TOTAL ANNUAL COSTS (including establishment)	$52.02

Annual Revenue:

Yield: 6000 kg/D.M./ha/year = 11.54 S.U./ha	
Income: $15.60/S.U. x 11.54 S.U./ha	180.02
TOTAL ANNUAL REVENUE	$180.02
GROSS MARGIN	$128.00

(b) Irrigated (for Dehydration) – Stand life = 7 years

∴ Annual Establishment Costs =	20.08
Annual Costs:	
Fertilizer: 1 tonne/ha lucerne fertilizer at $71.85/tonne (including cartage and spreading)	71.85
Irrigation: 3 irrigations at $4.12/ha/irrigation	12.36
TOTAL ANNUAL COSTS (including establishment)	$84.21

Annual Revenue:

Yield: 13000 kg/ha (4 cuts)	
Price: $40.00/tonne dehydration contract	
Income: 13t x $40/t	520.00
TOTAL ANNUAL REVENUE	$520.00
GROSS MARGIN	$435.79

(xvi) **Cocksfoot Seed:**

Direct Costs (per hectare):

Average Renewal Costs/hectare	16.84
Fertilizer: 375 kg/ha sulfate of ammonia at $111.55/tonne (including cartage and spreading)	41.83
Windrowing: $27.40/ha (contract)	27.40
Heading: 1¼ hrs/ha at $12.50/hr	15.63
Sacks: 17 sacks/ha at 72¢ each	12.24
Cartage: 17 sacks at 34¢ each	5.79
Consolidated Dressing & Handling Charge: 450 kg F.D. at 15.2¢/kg	68.40
TOTAL DIRECT COSTS	$188.09

Gross Revenue:

Yield: 450 kg/ha F.D.; 25% dressing loss; 340 kg/ha M.D.	
Price: $2.15/kg M.D.	
Income: 340 kg x $2.15/kg	731.00
TOTAL REVENUE	$731.00
GROSS MARGIN	$542.91

(xvii) **Potatoes (Ilam Hardy)**

Direct Costs:

Cultivation: 10 hrs/ha at $3.20/hr	32.00
Seed: 3.7t/ha at $100/tonne	370.00
Cutting and Dipping: 22 bags at 15¢/bag	3.30
Planting: 2 hrs/ha at $20/hr (contract – 2 men + machine)	40.00
Fertilizer: 625 kg/ha potato fertilizer at $73.05/tonne (including cartage and spreading)	45.65
Spraying: Prometryne at 1 litre/ha at $14.18/litre	14.18
Disulfoton at 1 kg/ha at $3.27/kg	3.27
Reglone at 3 litres/ha at $9.18/litre	27.54
plus 1½ hr/ha (3 sprayings) at $3.20/hr	4.80
Roguing: $23.00/ha (contract)	23.00
Digging and Picking: 3 hrs/ha at $25/hr	75.00
Grading: 370 sacks at $1.65/sack	556.05
Sacks: 370 sacks/ha at 69¢ each	255.00
Cartage: 370 sacks to rail at 70¢ each	259.00
TOTAL DIRECT COSTS	$1708.79

Gross Revenue:

	$/tonne	$/ha
5.02 t/ha Table potatoes	80	402
10.04 t/ha Seed potatoes (112-170g)	90	904
13.81 t/ha Seed potatoes (28-112g)	100	1381
1.29 t/ha Waste	–	–
30.13 t/ha TOTAL		

TOTAL REVENUE	$2687
GROSS MARGIN	$ 978.21

7.2.3 Sheep Gross Margins

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 are those ruling as at 15th January 1979.

The gross margins should therefore be adjusted as policies, and price and cost parameters, change.

Example 1.

This example gross margin is for a Corriedale 2 year flock system, buying 2 year ewes annually, which are all mated to an export sire.

Production Parameters:-

110% lambing; 105% sold; 5% retained for home consumption; 10% of first year ewes culled; death rate 6%; ewes clip 4.5kg of wool; lambs are not shorn.

Gross Revenue (per ewe):-	$ ¢
Lamb sales – 1.05 lambs at $12.69	13.23
(Lamb price 13kg at 73.5¢/kg = $9.55 Skin payment + 0.75kg woolpull at $3.14)	
Cull ewe sales – 0.462 ewes at $10.23	4.72
(Cull ewe 25kg at 30.5¢/kg Skin payment + 0.5kg woolpull at $2.61)	
Wool Sale – 4.2kg at $1.90 nett	7.98
(Wool yield 0.98 sheep at 4.25kg allowing for deaths and culling. Wool price is gross less 20¢/kg)	
GROSS REVENUE	$25.80

Direct Costs (per ewe):-

	$ ¢
Replacement purchase – 0.54 ewes at $14.00	7.56
Shearing (shearers only) – 0.96 sheep at $35/100	.33
Tup crutch – 0.46 sheep at $13.00/100	.06
Main crutch – 0.99 sheep at $17.50/100	.17
Drenching – ewes are drenched once before tupping and again before lambing i.e. 2 drenches at 10¢/dose for 0.99 sheep	.19
– lambs: 50% drenched once, 30% drenched twice, lamb drench 4.2¢/dose	.05
Vaccination – triple vaccine, 0.98 at 6.5¢/sheep	.06
Eartags, footrot and docking	.30
Dipping – purchased ewes are dipped, 0.46 sheep at 14¢/sheep	.07
Ram costs – 2 per 100, 4 year life, 0.005 at $60/ram	.30
Woolshed expenses – including woolpacks, twine, glue, emery paper and shearing plant expenses approximate cost = 12¢/head	.12

Cartage – cull ewe to works, 0.46 at 38 cents	.17
– replacement ewe from N. Canterbury, 0.54 at 66 cents	.37
– lambs to works, 1.05 at 33 cents	.35
– wool, 4.2kg at 1.3¢/kg	.06

(Note: All cartage based on 32km travel, except for replacement ewes, 80km)

TOTAL DIRECT COSTS	$10.16
GROSS MARGIN PER EWE	$15.64

Summary:

With a revenue per ewe of approximately $25 and expenses of about $10 per ewe, the gross margin per ewe in an export lamb, 2 year flock system is in the vicinity of $15. The direct costs per ewe (excluding replacement cost) are approximately $2.50.

The above gross margin of $15 can also be regarded as the gross margin per stock unit.

Example 2.

This example gross margin is for a Corriedale flock, selling genuine 5 year old ewes and breeding its own replacements. Ewes are on hand for 4 lambings. All ewes are mated with a Corriedale ram. Hoggets are culled as two tooths (15%). Lambs are not shorn, hoggets are. 80% of the wether lambs are sold prime for export, the remaining 20% being sold as stores.

Production Parameters:-

93% lambing; 5% culling; death rate 4%; ewes clip 4kg of wool, as do the hoggets.

Gross Revenue (per ewe):-

	$ ¢
Lamb sales – 0.37 lambs at $13.44	4.97
(Lamb prices 13kg at 73.5¢/kg = $9.55	
Skin payment + 0.2kg woolpull at $3.89)	
– 0.09 lambs at $10.50	.95
Cull ewe sales – 2 tooths, 0.15 at $20.00	3.00
– 5 year olds in yards, 0.16 at $14	2.24
– cull ewes to works, 0.05 at $10.23	.51
Cull ewe 25kg at 30.5¢/kg = $7.62	
Skin payment + 0.5kg woolpull at $2.61)	

Wool sale – 3.9kg at $1.90/kg nett	7.41
(Wool yield 0.98 sheep at 4.0kg allowing for deaths and culling. Wool price is gross less 20¢/kg.)	
– 1.8kg at $1.95/kg	3.51
(0.45 ewe hoggets at 4.0kg)	
GROSS REVENUE	$22.59

Direct Costs (per ewe):-	**$ ¢**
Shearing (Shearers only) – 0.96 ewes at $35/100	.34
– 0.45 ewe hoggets at $35/100	.16
Tup crutch – 0.99 ewes at $13.00/100	.13
Main crutch – 0.99 ewes at $17.50/100	.17
Drenching – ewes are drenched once before tupping and again before lambing i.e. 2 drenches at 10¢/dose for 0.99 sheep	.19
– lambs are drenched 3 times i.e. 3 drenches at 4.3¢/dose x 0.66	.08
Vaccination – triple vaccine, 0.98 at 6.5¢/sheep	.06
– triple vaccine, 0.46 at 6.5¢/lamb	.03
Eartags, footrot and docking	.30
Dipping – 0.46 hoggets at 14¢/head	.07
– 0.66 lambs at 14¢/head	.09
– 0.99 ewes at 14¢/head	.14
Ram costs – 2 per 100, 4 year life, 0.005 at $80/ram	.40
Woolshed expenses – including woolpacks, twine, glue, emery paper, and shearing plant expenses approx. 12¢/ewe + 6¢/hogget	.18
Cartage – 2 tooths and 5 year olds to yards 0.31 at 73 cents	.23
– cull ewes to works, 0.05 at 73 cents	.04
– fat lambs to works, 0.36 at 59 cents	.21
– store lambs to works, 0.08 at 54 cents	.04
– wool, 5.7kg at 2.1¢/kg	.12

(Note: All cartage rates are based on 97km travel, the distance from North Canterbury to Christchurch).

Selling Charges – Yard fees, 12¢/sheep x 0.31	.04
– Commission, 4.75% of $6.19	.29
TOTAL DIRECT COSTS	$3.31
GROSS MARGIN PER EWE	$19.28

This gross margin is for a ewe replacement and thus to compare it on a gross margin per stock unit basis, we must divide $19.28

by the 1.3 S.U. i.e. 1 ewe = 1 S.U.; (0.45 – 0.15/hoggets = 0.3 S.U.) which results in a Gross Margin per S.U. of $14.83.

Summary:-

The gross margin per stock unit for a breeding own replacement flock is 81 cents greater than that of an export lamb policy. This is somewhat greater than the G.M. has been in the past few years.

The factors which will have the greatest effect on the above gross margins are:

(i) Lambing percentage
(ii) Wool clip per head
(iii) Lamb sale price
(iv) Cull ewe prices
(v) Wool prices

The breeding own replacement policy shows wider fluctuations in the gross margins than the export lamb policy. The export lamb producer is able to work on a margin for purchase and sale of ewes whereas the store sheep farmer has no such margin available.

Once again, it must be stressed that these gross margins are examples only. As the price and cost parameters change throughout the season, the G.M.'s must be revised.

7.2.4 Beef Cattle Gross Margins

(Prepared by R.H. Shelton, January 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 markers, 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, 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.

The 1978 season saw a steadily increasing price being paid for cattle. The export schedule also rose to its highest point ever in December 1978.

(v) **Forecasting of Future Beef Cattle Values for Budgetary Purposes:**

Forecasting the future outcome of events still to occur is a dubious pastime and 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 of 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
January	50	71	74	29	55	62	57	105
February	50	73	72	29	55	67	59.5	
March	52	80	65	29	55	63	60.5	
April	53	73	54	39	55	59	69.5	
May	53	71	51	39	55	59	69.5	
June	56	69	41	–	55	57.5	74.5	
July	–	–	45	–	55	57.5	79.5	
August	56	–	45	–	55	57.5	79.5	
September	56	–	39	–	55	57.5	84.5	
October	56	–	38	55	55	57	87.5	
November	63	76	35	55	55	57	87.5	
December	63	78	31	55	56	57	95.0	

NOTE:

1972 & 1973 figures are for GAQ; 1974 & 1975 figures are for Chiller Grade.

Figure 1 illustrates the growth in value of a weaner to slaughter at 20 months at export values ranging from $22 to $100 per 100kg of carcase. The killing out percentage is assumed at 50% until yearling, increasing to 53% at 20 months. The figure not only shows the growth in the basic value of the 200kg weaner with increased schedule prices, but also the marked increase in the value of the additional weight grown between weaner and 20 months (127 kg carcase weight).

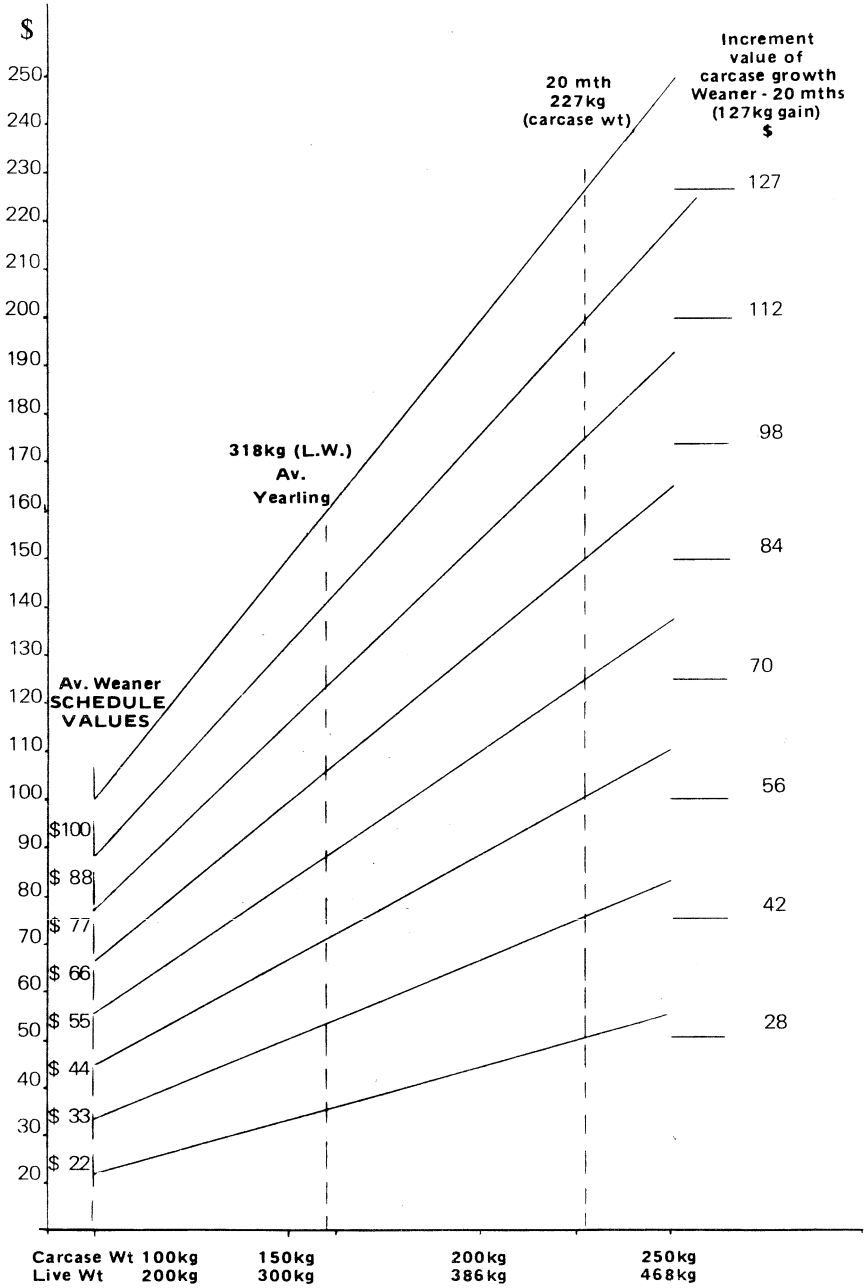


Fig. 1 VALUE OF CATTLE CARCASE WEIGHT AT DIFFERENT STAGES OF GROWTH AT SCHEDULE VALUES.

$20 – $100 per 100kg (for steers)

Historically, purchases of store weaners and yearlings for fattening on grass have paid a premium over export schedule values. This premium has fluctuated from year to year and is influenced by both the schedule value and the demand for stock due to availability of feed. The division of the value of the growth increment is shown in Fig. 2.

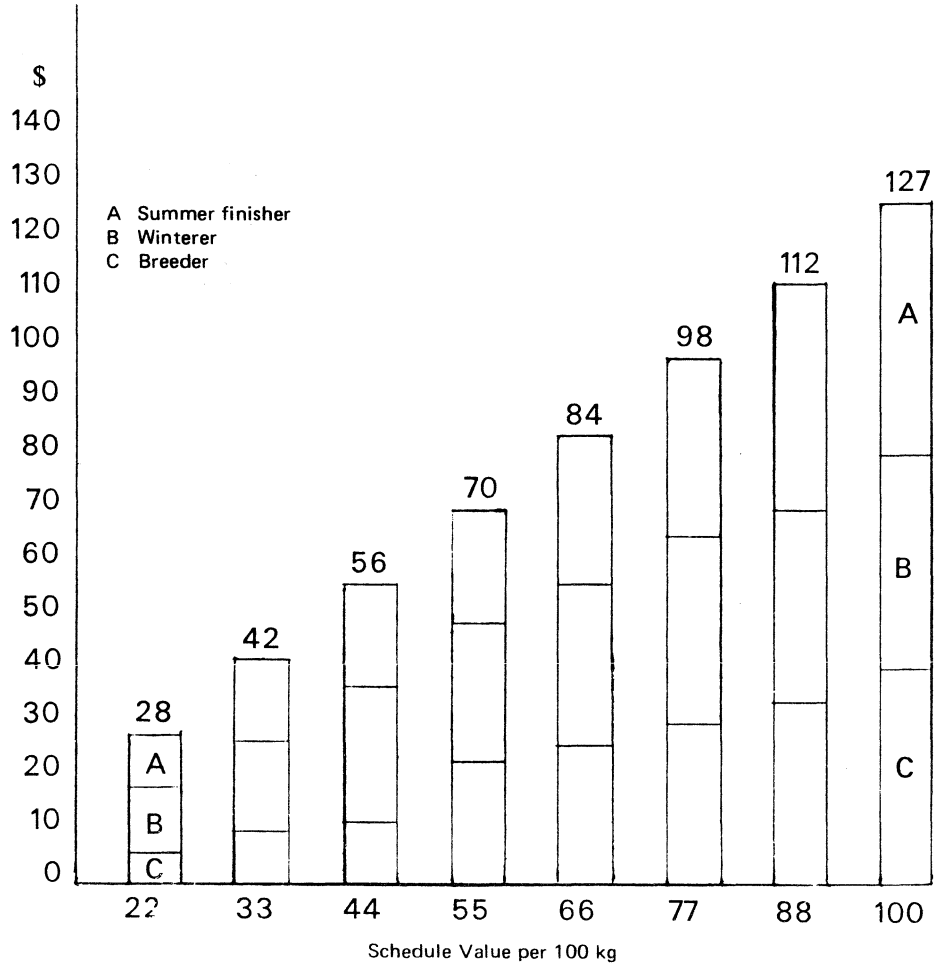


Fig 2 VALUE OF GROWTH AT SCHEDULE

An illustration of the general trend of how the value of growth from weaner to slaughter has been shared between breeder, winterer and summer finisher of steers. Values for $77 to $100 schedule projected estimates.

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 1979 the position is likely to be as follows:

(a)	Value of weaner (100kg carcase @ $1.00)	$100
	Growth Increment share Nil – $10	$ 10
	Price for Av. Weaner steer (200kg L. W.)	$110
	55¢/kg L.W. (110¢/kg carcase)	
(b)	Value of yearling (160 kg carcase @ $1.00)	$160
	Growth Increment share Nil – $10	$ 10
	Price for Av. yearling steer (320 kg L.W.)	$170
	53¢/kg L.W. (106¢/kg carcase)	
(c)	Value of 20 month steer (227kg carcase @ $1.00)	$227
	Value of 20 month steer (219kg carcase @ $0.95)	$208

Summary:

		Margin
Price to store breeder	$110	
Price as yearling	$170	$60 for winter
Price as 20 month prime	$227	$57 for summer
Price as 20 month prime (under 220kg carcase)		$38 for summer

Due to the increased schedule above 220.5kg it is essential that the summer cattle farmer achieves maximum growth rates. This will ensure the carcase falls in the higher schedule payment range ($38 – $57 return).

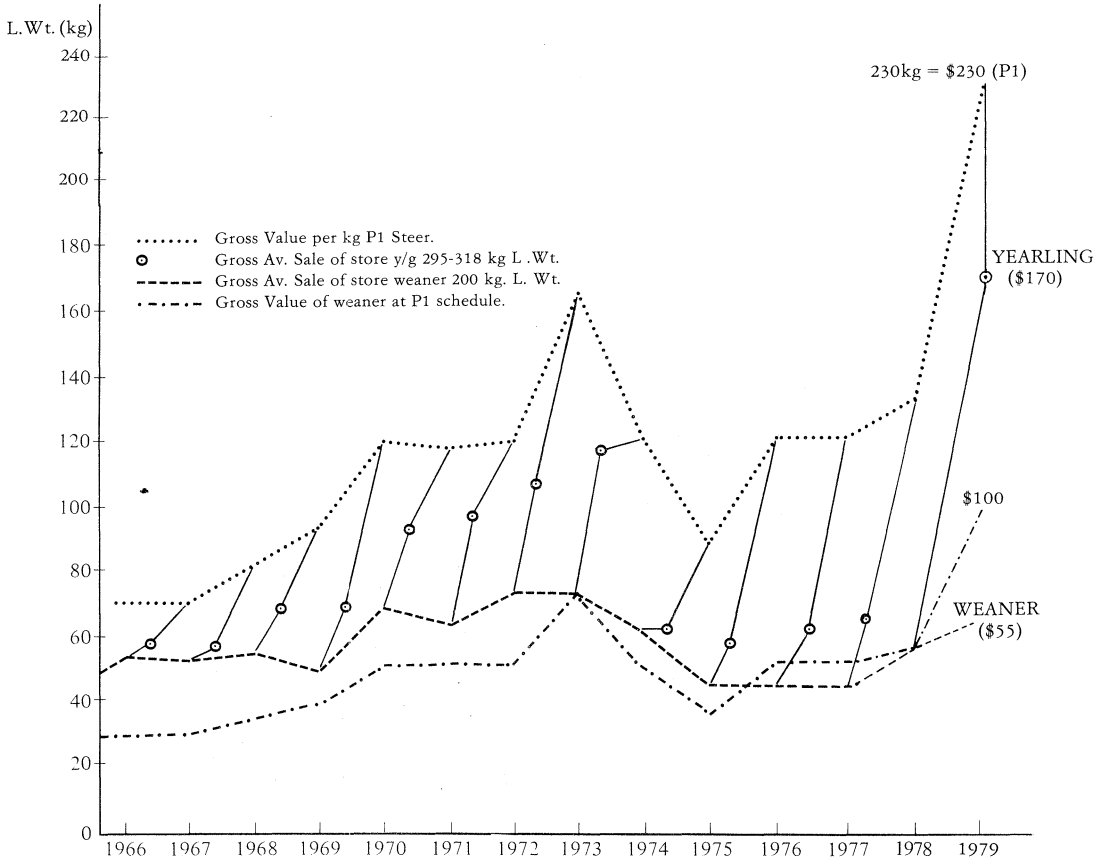


Fig. 3. THE GENERALIZED HISTORICAL TREND OF GROWTH INCOME FOR AVERAGE WEANER STEERS TO SUBSEQUENT SLAUGHTER ON SCHEDULE P1 GRADE AT 20 MONTHS AS SHARED BETWEEN BREEDERS, WINTERERS AND SUMMER FATTENERS.

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)

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

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)

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¢	

Table 6 Range of Values for Heifers & 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

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

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.

(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 $180 =	$23 040	6	768
In-calf heifers	24	at $180 =	$ 4 320	5	120
Weaner heifers	25	at $100 =	$ 2 500	3.5	88
Bulls	4	at $500 =	$ 2 000	6	24
	181		$31 860		1 000 S.U.

Value per stock Unit = $31.86

Income:-

70 weaner steers	at $ 85 =	$5 950	
46 weaner heifers	at $ 65 =	$2 990	
5 2-year heifers	at $160 =	$ 800	
16 cull cows	at $180 =	$2 880	
1 bull	at $330 =	$ 330	
	TOTAL INCOME		$12 950

Expenditure:-

Animal health –			
Drench 25 weaners at 44¢/dose	=$ 44		
Spray 181 cattle at 40 cents	=$ 73		
Pregnancy test 128 cows at $1.	=$128	$245	
Commission on Sale Stock –			
4.25% of $9 740		$414	
Freight – sale stock		$700	
Yard fees – 121 cattle at 98¢ per head		$118	
Bull purchase – landed at $800		$800	
TOTAL DIRECT COSTS			$2 277
GROSS MARGIN (before feed costs & interest)			$10 673

Gross Margin per Stock Unit	$10.67
Gross Margin per hectare (at 8 S.U./ha)	$85.36
Gross Margin as % of Capital Stock	33.49%

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 carcase weight of 230kilograms. Death rate = 2%.

Capital Stock:-

		S.U.	Total
Weaner steers	250 at $110 = $27 500	4	1 000 S.U.

Value per Stock Unit = $27.50

Income:-

245 steers at $230 (230kg at $1.00/kg) = $56 350

TOTAL INCOME $56 350

Expenditure:-

Animal health –		
Drench 250 steers twice at 44¢/dose	= $ 220	
Spray 250 cattle twice at 20¢	= $ 100	
Bloat control	= $ 50	
Freight – sale stock at $5/head	=$1 225	
Stock Purchase – 250 weaners at $114 landed	= $28 500	
TOTAL DIRECT COSTS		$30 095

GROSS MARGIN (before feed costs & interest)	$26 255
Gross Margin per Stock Unit	$ 26.26
Gross Margin per hectare (at 8 S.U./ha)	$210.08
Gross Margin as % of Capital Stock	95.49%

(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			$10 673
Less: Interest on capital in stock at 15% on @31 860 for 1 year		$4 779	
Feed Costs			
152 cows and heifer, 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 50¢	=	$1 000	$5 779
Gross margin after interest & feed			$4 894
Return per S.U.		$4.89	
per hectare		$39.12	
As % of Capital in stock		15.36%	

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 – $1.00 to $1.50 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 section "The Food Requirements of Ruminants", K.T. Jagusch. (Technical Manual)

Example 2

Gross margin before interest and feed cost			$26 260
Less: Interest on capital 15% of $27 500		$4 125	
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 50 cents		$1 880	
Grain at 2 kg each per day for 100 days = 50 tonnes at $105		$5 250	$11 495
Gross Margin after interest and feed			$12 765
Return per S.U.	$14.76		
per hectare	$118.08		
as % of capital in stock	53.69%		

Examples of Feed Costing per day for weaners:

Assessed cost of feed –	
Hay 1 bale at 30kg at 50 cents =	1.6¢/kg
Grain – barley	10.5¢/kg
turnips at say	1¢/day

Ration	Cost Day	Growth Day	Carcase Day	Income Day at 44¢	55¢	66¢	77¢	$1.00
5 kg of hay	8.3¢	.25kg	.12kg	5¢	7¢	8¢	10¢	12¢
4 kg hay, 2 kg grain	27.4¢	.06kg	.03kg	13¢	16¢	20¢	23¢	30¢
4 kg hay, 1½ kg grain + turnips	22.7¢	.06kg	.03kg	13¢	16¢	20¢	23¢	30¢

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 Weaner	Yearling	20 mth	Net Increment value per kg 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¢

7.2.5 Pig Gross Margin Analysis

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**

(a) Sow productivity = 15 pigs weaned per sow per year.

(b) Average weight of weaners = 18kg L.W.

(c) 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 = $147.80 per tonne
Creep Meal = $264.50 per tonne
Grower Meal = $175.90 per tonne

(iii) **Gross Margins**

(a) **Weaner Production –**

Returns:	$
Sale of 15 weaners at $20.50	307.50
Less breeding stock	37.00
TOTAL RETURNS	270.50

Variable Costs:	
Food – sow (incl. boar at service)	
1.2 tonnes of breeder meal	177.36
Creep meal at 16kg/piglet	42.32
Veterinary expenses and medicines	7.50
Repairs and Maintenance	17.00
Miscellaneous expenses (e.g. electricity)	12.00
TOTAL VARIABLE COSTS	256.18
Gross Margin per sow	14.32
Gross Margin per weaner	0.95

(b) **Pork Production –**

Returns:	$
Sale of 38kg pigmeat at 130 cents/kg	49.40
Less weaner	20.50
Less cartage and levy	3.50
Mortality at 2%	0.99
TOTAL RETURNS	24.41

Variable Costs:

Food – 35kg grain at 3.0 : 1 at 17.59¢/kg	18.46
Veterinary expenses and medicines	1.00
Repairs and Maintenance	1.70
Miscellaneous expenses	0.75
TOTAL VARIABLE COSTS	21.91
Gross Margin per porker	2.50

(c) **Bacon Production –**

Returns:	**$**
Sale of 62kg pigmeat at 124 cents/kg	76.88
Less weaner	20.50
Less levy and transport	3.60
Mortality at 3%	2.30
TOTAL RETURNS	50.48

Variable Costs:

Food – 65kg gain at 3.3 : 1 at 17.59¢/kg	37.73
Veterinary expenses and medicines	1.30
Repairs and Maintenance	1.60
Miscellaneous expenses	1.35
TOTAL VARIABLE COSTS	41.98
Gross Margin per baconer	8.50

(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 abbattoir. 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 abbattoir. The only drawback to this system is having to supply a set amount of piigs, 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.

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K.

L

V.

W.

Purchase orders to: Accounts Office,
Lincoln College,
Canterbury,
New Zealand.