

ANNUAL REPORT AND  
FINANCIAL STATEMENTS

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For the year ended 30 June 1991



**Agricultural and Marketing  
Research and Development Trust**

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*Pursuant to section 17 of the Agricultural and Marketing Research  
and Development Trust Deed of Trust, dated 20 October 1987.*

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*Photographing gels containing  
M. bovis DNA under UV light;  
Massey University.*



*The Minister of  
Agriculture and  
Fisheries  
Parliament Buildings  
WELLINGTON*

*Dear Sir,*

*We have the honour to transmit to you the annual report  
of The Agricultural and Marketing Research and  
Development Trust for the year ended 30 June 1991.*

*This Annual report has been prepared pursuant to Clause  
17 of the Deed of Trust dated 20 October 1987.*

*Yours faithfully*

A handwritten signature in blue ink, appearing to read 'C. J. Moyle'.

*C. J. Moyle  
For the Board of Trustees*

## Trustees Report 1990-91

### Applications and Grants

In August of 1990, the Trustees advertised for applications for funding of projects by the Trust. In this round, no limitations were imposed on the subject matter for applications and a total of 449 applications were received.

In all, 284 of these originated in Government research organisations and Universities and 165 came from the private sector.

The total amount applied for was \$56,746,650.

It was manifestly impossible to consider this number of applications in detail and the Trustees determined to set aside for further consideration those submissions which involved:

- Market development, including the development of new products and the investigation of their market potential, together with marketing studies for existing products.
- Educational activities, including the transfer of technology and knowledge.
- Sponsorship of industry conferences with a view to identifying priorities which the Trust may wish to fund.

Those applications deemed to fall into the above categories were considered in February of 1991, and grants totalling \$1,353,100 were

approved (see appendix I).

Following the Trust's initiative in making available the sum of \$2,000,000 in the previous year for research aimed at maintaining meat market access by identifying animal diseases and developing cost effective methods for those that would limit or prevent market access, and also supporting an efficient animal health and residue plan, a request was received from the Minister of Agriculture that the Trustees consider supporting a number of projects falling into these categories which

had been initiated by the Animal Health Board.

The Trustees were pleased to do this and further allocations amounting to \$993,230 were made in February 1991 (see appendix II).

In May 1991, the Trust agreed to sponsor a series of seminars throughout the New Zealand under the auspices of Lincoln University entitled "Marketing New Zealand Meat Products Profitably", with a grant of \$32,000.

During the year, the Trustees made further payments on approved grants to the extent of \$1,280,727.

### Trustees:

In September 1990, the number of Trustees was brought to five with Messrs Colin Moyle and Adhurji

Valabh being appointed to the Board by the Ministers of Agriculture and of Overseas Trade.

### *Statement of Objectives*

*To promote and encourage in New Zealand's interest the agricultural, pastoral and horticultural industries through:*

- *Improved marketing and, where there are market opportunities, increased production;*
- *The development of existing and new products;*
- *Greater efficiency in production, processing and distribution;*
- *Research in relation to these objectives.*

Mr Moyle was Minister of Agriculture at the time of Trust establishment and Mr Valabh is a senior partner with the international chartered accountancy firm, Deloitte Ross Tohmatsu.

In April 1991, Mr W.M.D. Bremner, Chairman of the Trust since its inception, passed away. In May, the Trustees elected Mr Moyle Chairman of the Trust.

### Research Activities:

In its 1990 annual report, the Trustees reported the success of a major meat industry seminar that brought together producers, processors and marketers to discuss, identify and recommend priorities for research and development in the New Zealand beef industry.

The dominant factor that emerged from that seminar was the major threat that animal disease, particularly bovine TB, could have on New Zealand's access to essential world markets.

A project initiated by the Trust to support the research into the diagnosis and control of bovine TB is now well under way.

A new facility has been built at Massey University and the services of outstanding personnel, some from offshore, have been secured. Additional resource has also been contracted from other New Zealand centres.

The Trustees look forward with confidence to tangible results from this research having a marked effect on what could prove to be a serious threat to New Zealand's meat market access in the future if left unchecked.

### Future Activities:

The Trust will, in line with its stated objectives, continue to call for applications for funding at regular intervals, from all sectors of the agricultural, pastoral and horticultural industries.

When the appropriate areas considered suitable for funding in the 1991-92 year have been established, measurable goals will be identified. Developments and progress of the selected projects will be closely monitored by the Trust.



The Trustees intend to establish an annual memorial lectureship both to honour the memory of Douglas Bremner and to further the contribution the Trust makes to the Primary sector.

It is hoped that the first series of lectures will take place during 1992 and involve a well-known and respected overseas personality whose field has a close relationship to the economics of New Zealand's agricultural exports.

*AGMARDT is funding a major research piece into the control of Bovine Tuberculosis. The Massey University team (above) is: from left to right, Laurie Jandall, Linley Fray, Heinz Gulle, Eamann Gormley.*

## APPENDICES TO TRUSTEES REPORT

### Appendix I – Initial Grants

Applicant	Project	Amount
MAFTech Hamilton	Processed herb & herb extract industry	75,000
AERU Lincoln University	Changing international sheepmeat markets	180,000
Lincoln University	Expert Systems for grazing management	97,650
Massey University	Development in the Japanese fast food markets – implications for beef exports <i>and</i> Developing long-term strategies for NZ beef in Japan	100,000
Massey University	Development and evaluation of an expert system for dairy farmers	44,450
Massey University	Adaptive Research for the NZ Beef industry	180,000
NZ Vegetable & Potato Growers Federation	Agrichemical users code of practice	22,500
NZ Vegetable & Potato Growers Federation	Marketing strategies for the 90s overseas study	20,000
NZ Summerfruit Export Council	New Market Development	50,000
MAFTech, Wellington	Decision Support Systems	150,000
DSIR Plant Protection Division	Integrated Disease & Pest Management for Greenhouse crops: information transfer	210,000
DSIR Crop Research Division	Quality Assurance for essential oil production in New Zealand	40,000
DSIR Plant Protection Division	Pest Control Technology transfer to the apple industry	100,000
Forest Research Institute	High Resolution airborne video for agriculture & forestry	30,000
MAFTech Hamilton	Difficult to de-hair Cashmere goat fleece	16,000
Horticulture Development & Marketing Association	Research & Market evaluation of a unique Kiwifruit drink	37,500
<b>Total allocations this section</b>		<b>\$1,353,100</b>

## APPENDICES TO TRUSTEES REPORT

### Appendix II – Additional Grants 1990/91

Organisation		Research Topic	Status	Funds
MAFQual Ruakura	908	Sensitivity/Specificity field trial of CF intradermal and gamma interferon blood test.	ongoing	45,500
MAFQual Ruakura	909	Antigen Protein 'HP 870' specificity trial	new	9,750
MAFQual Ruakura	910	CCT/IFM Comparative trial	ongoing	11,000
MAFQual Wallaceville	911	Development of Polymerase chain reaction (PCR) test to identify <i>M. bovis</i> in Tb tissues	ongoing	32,700
MAFQual Wallaceville	912	Development of a restriction fragment length polymorphism (RFLP) system to differentiate <i>M. bovis</i> isolates.	ongoing	42,000
MAFQual Wallaceville	913	Epidemiological investigations using DNA restrictions endonuclease analysis (REA)	ongoing	38,700
MAFQual Wallaceville	914	Viral diseases in possums	new	24,500
MAFQual Wallaceville	915	Compound 1080 residue levels in meat	new	18,500
MAFQual Fairlie	916	Farmer "self-help" bait stations	ongoing	11,500
MAFTech Wallaceville	917	Pathogenesis of Tb in cattle and possums	new	171,250
MAFTech Ruakura	918	Poisoned bait shyness in possums	new	34,030
Massey University	919	The Modelling Project	ongoing	29,000
Massey University	920	Development of a decision support system for control of bovine Tb	new	57,500
FRI Christchurch	921	Self feeding bait stations	ongoing	47,000
FRI Christchurch	922	Hohotaka possum population study	ongoing	14,500
FRI Christchurch	923	Behavioural interaction of possums and cattle	new	20,000
FRI Christchurch	924	Toxic baits in bait stations	new	30,800
FRI Christchurch	925	Identification and development of alternative toxin to 1080 for possums	new	62,000
FRI Christchurch	926	Improving the effectiveness of cyanide for possums by novel bait presentation	new	93,700
FRI Christchurch	927	Identification of lures and quantifying their action in attracting possums to baits	new	42,000
FRI Christchurch	928	Aerial surveying of feral pigs in Central Otago	new	8,500
FRI Christchurch	929	Evaluation of a biodynamic 'alternative' possum control technique	new	5,000
DSIR Land Resources	930	Sexual maturation and dispersal of juvenile male possums	new	43,800
AAHL Laboratory	931	Rabbit haemorrhagic disease	new	100,000
			<b>Total</b>	<b>\$993,230</b>

## Report of the Audit Office



TO THE READERS OF THE STATEMENTS  
OF ACCOUNT OF THE AGRICULTURAL AND  
MARKETING RESEARCH AND DEVELOPMENT TRUST

The Audit Office, having been appointed in terms of Clause 16 of the Deed of Trust dated 20 October 1987, has audited the financial statements of the Agricultural and Marketing Research and Development Trust.

The audit was conducted in accordance with generally accepted auditing standards and practices, with the objective of obtaining reasonable assurance that the Statement of Account are free from significant errors or omissions. In our audit we reviewed the evidence to support the amounts and disclosures in the statements. We also addressed the accounting practices used.

In the opinion of the audit office, the attached statements of account appearing on pages 7 to 11 fairly reflect the resources and financial position as at 30 June 1991, the financial results of operations and the cash flows for the period ended that date.

A handwritten signature in black ink, appearing to read 'S. Yap'.

(S.Yap)  
for Controller and Auditor-General  
11 November 1991



**THE AGRICULTURAL AND MARKETING RESEARCH AND DEVELOPMENT TRUST**

**Statement of Income and Expenditure  
for the year ended 30 June 1991**

	Year to 30.6.91 \$	Year to 30.6.90 \$
<b>INCOME</b>		
Interest earned on short term investments	2,560,015	5,394,350
Interest earned on government stock	3,411,538	272,409
	<u>5,971,553</u>	<u>5,666,759</u>
<b>LESS operating expenses</b>		
Administration Costs	208,494	147,648
Audit Fee	14,113	8,803
Lease Charges	10,964	11,383
	<u>233,571</u>	<u>167,834</u>
<b>Surplus Income</b>	<u>5,737,982</u>	<u>5,498,925</u>
<b>LESS</b>		
Costs of providing grants & sponsored research	36,818	22,459
<b>SURPLUS OF INCOME OVER EXPENDITURE</b>	<u>5,701,164</u>	<u>5,476,466</u>
Less transfers to Contingent Grants and Sponsored Research (Note 1.2.6, Note 5)	<u>2,361,930</u>	<u>2,223,060</u>
<b>Surplus of income over expenditure after transfer to/from Contingent Grants and Sponsored Research</b>	<u>3,339,234</u>	<u>3,253,406</u>
Balance of accumulated income at beginning of year	1,665,929	1,504,773
Transfer to special income reserve (Note 4)	(588,350)	(538,650)
Provision for the maintenance of the Capital Fund (Note 3)	<u>(1,012,400)</u>	<u>(2,553,600)</u>
<b>Accumulated income carried forward</b>	<u><u>\$3,404,413</u></u>	<u><u>\$1,665,929</u></u>

The notes to the financial statements on pages 10 & 11 form an integral part of these accounts and should be read in conjunction with these accounts.

# THE AGRICULTURAL AND MARKETING RESEARCH AND DEVELOPMENT TRUST

## Statement of Financial Position as at 30 June 1991

	As at 30.6.91 \$	As at 30.6.90 \$
<b>TRUST FUNDS</b>		
Capital (Note 2)	32,000,000	32,000,000
Capital Fund Maintenance Reserve (Note 3)	5,166,000	4,153,600
Special Income Reserve (Note 4)	5,117,000	4,528,650
Accumulated Income	3,404,413	1,665,929
Contingent Grants and Sponsored Research (Note 5)	3,789,453	2,708,250
<b>TOTAL TRUST FUNDS</b>	<u>\$49,476,866</u>	<u>\$45,056,429</u>
<b>REPRESENTED BY:</b>		
<b>CURRENT ASSETS</b>		
Cash at Bank	9,414	20,067
Call Deposits	189,993	476,359
Interest receivable on Bank Deposits	14,421	998
Interest receivable on Government Stock	1,441,106	688,861
Prepayments	-	3,184
Term Deposit	1,000,000	-
Treasury Bills (Note 6)	6,906,275	21,967,771
<b>TOTAL CURRENT ASSETS</b>	<u>9,561,209</u>	<u>23,157,240</u>
<b>CURRENT LIABILITIES</b>		
Accrued Expenses	21,780	13,659
Net Working Capital	9,539,429	23,143,581
<b>TERM INVESTMENTS (Note 7)</b>	<u>39,937,437</u>	<u>21,912,848</u>
<b>NET ASSETS</b>	<u>\$49,476,866</u>	<u>\$45,056,429</u>

The notes to the financial statements on pages 10 & 11 form an integral part of these accounts and should be read in conjunction with these accounts.

On behalf of the trust board



CJ Moyle

# THE AGRICULTURAL AND MARKETING RESEARCH AND DEVELOPMENT TRUST

## Statement of Cash Flows for the year ended 30 June 1991

	Year to 30.6.91 \$	Year to 30.6.90 \$
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>		
Cash was provided from:		
Interest Earned	5,192,750	5,109,594
Cash was disbursed to:		
Purchase of Term Investments	(17,768,986)	(21,888,892)
Net Cash flows from (to) Investing Activities	<u>(12,576,236)</u>	<u>(16,779,298)</u>
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>		
Cash was disbursed to:		
Payments to Suppliers and Employees	(259,085)	(192,628)
Payments for Grants and Sponsored Research	(1,280,727)	(1,292,256)
Net Cashflows from (to) Operating Activities	<u>(1,539,812)</u>	<u>(1,484,884)</u>
Net Increase (Decrease) in cash held	(14,116,048)	(18,264,182)
Add Opening Cash and Deposits brought forward	22,045,445	40,309,627
Ending Cash and Deposits carried forward	<u>\$7,929,397</u>	<u>\$22,045,445</u>
<b>Note: Cash and deposits are comprised of</b>		
Cash at Bank	9,414	20,067
Call Deposits	189,993	476,359
Term Deposit	1,000,000	-
Treasury Bills	6,906,275	21,967,771
Less accrued interest in Treasury Bills Total of \$6,906,275	(176,285)	(418,752)
Ending Cash and Deposits carried forward as above	<u>\$7,929,397</u>	<u>\$22,045,445</u>

The notes to the financial statements on pages 10 & 11 form an integral part of these accounts and should be read in conjunction with these accounts.

# THE AGRICULTURAL AND MARKETING RESEARCH AND DEVELOPMENT TRUST

## Notes to the Financial Statements for the year ended 30 June 1991

### 1. STATEMENT OF ACCOUNTING POLICIES

The Agricultural and Marketing Research and Development Trust was established by a Deed of Trust dated 20 October 1987 and the financial statements have been prepared pursuant to Clause 17 of the said Deed.

#### 1.1 GENERAL ACCOUNTING POLICIES

The measurement base adopted is that of historical cost. Reliance is placed on the fact that the Trust is a going concern. Accrual accounting is used to match expenses and revenues.

#### 1.2 PARTICULAR ACCOUNTING POLICIES

##### 1.2.1 Asset Valuation

Investments are shown at cost. Marketable securities are recorded at cost plus accrued interest.

##### 1.2.2 Foreign Currency Transactions

Foreign currency transactions have been converted to New Zealand dollars at the rate of exchange ruling at the date of each transaction. Any realised exchange gains and losses have been included in the Statement of Income and Expenditure.

##### 1.2.3 Income Tax

There is no provision for income tax in these financial statements. Under current legislation, income derived by the Trust, being a registered Charitable Trust, is exempt in terms of section 61 (25) and 61 (27) of the Income Tax Act 1976.

##### 1.2.4 Goods and Services Tax

The Trust is not a "registered person" in terms of the Goods and Services Tax Act 1985. Consequently all expenses and capital acquisitions are shown inclusive of GST. In total GST of \$19,471 (1990: \$12,840) was incurred during the year and has been included in the Statement of Income and Expenditure.

##### 1.2.5 Revenue Recognition

Interest income is recognised on an accrual basis.

##### 1.2.6 Contingent Grants & Sponsored Research

Any Grants and Sponsored Research approved by the Trustees and subject to any unfulfilled requirements or agreements are transferred to Contingent Grants and Sponsored Research within the classification of Trust Funds. As at 30 June 1991 this represents the only commitments made by the Trust.

##### 1.2.7 Allocations of Income

Provisions are included in the Statement of Income and Expenditure to allocate income sufficient to maintain the real value of the trust capital and to account for the transfer to the Special Income Reserve in terms of Note 4.

##### 1.2.8 Income from Investments

Income from those investments expected to be held for more than one year is calculated on a yield to maturity basis. All other income is apportioned over the number of days the investment is held.

#### 1.3 CHANGES IN ACCOUNTING POLICIES

There have been no changes in the above accounting policies which have been applied on bases consistent with those used in the previous year.

### 2. CAPITAL

The capital of the Trust was set by Clause 1(b) of the Deed of Trust to be \$32,000,000. This capital was settled in April 1988 and is to be retained in perpetuity and used to generate income for the Trust. In terms of Clause 4 (b), only with the approval of the Minister of Agriculture and Fisheries may any of the capital be applied toward the objects of the Trust.

### 3. PROVISION FOR THE MAINTENANCE OF THE CAPITAL FUND

An objective of the Trust is to maintain the real value of the capital fund since 1 July 1988. An amount of \$1,012,400 (1990: \$2,533,600) has been provided for in the current year, representing 2.8% (based on the consumer Price Index movement for the year ended 30 June 1991) of the total of the capital sum of \$32,000,000 and the opening balance of the reserve fund.

### 4. SPECIAL INCOME RESERVE

In terms of Clause 1(a) of the Deed of Trust, an initial amount of \$3,500,000 was received by the Trust in November 1987. This payment was deemed not to be capital of the Trust but instead to form part of the net income of the Trust Fund.

The Trustees have resolved to credit this Reserve Fund with an estimate of income derived from the opening balance. The movement in the Reserve during this year is as follows:

	1991	1990
	\$	\$
Balance 1 July 1990	4,528,650	3,990,000
Income Transferred	588,350	538,650
Balance 30 June 1991	<u>\$5,117,000</u>	<u>\$4,528,650</u>

### 5. CONTINGENT GRANTS & SPONSORED RESEARCH

	1991	1990
	\$	\$
Balance 1 July 1990	2,708,250	1,777,446
Add Grants and Sponsored Research applications approved during the year	2,378,330	2,223,060
Less contingent grants cancelled during the year	(5,000)	-
Less contingent grants relinquished during the year	(11,400)	-
Appropriation from current years surplus	2,361,930	2,223,060
Less Grants and Sponsored Research payments during the year	(1,280,727)	(1,292,256)
Balance 30 June 1991	<u>\$3,789,453</u>	<u>\$2,708,250</u>
Comprising:		
1989 Grants not paid out	374,749	563,440
1990 Grants not paid out	1,539,919	2,144,810
1991 Grants not paid out	1,874,785	-
	<u>\$3,789,453</u>	<u>\$2,708,250</u>

## 6. SHORT TERM INVESTMENTS

As at 30 June 1991, apart from Cash at Bank of \$9,414, money market call deposits of \$189,993 and term deposits of \$1,000,000 all other short term funds, totalling \$6,906,275 were represented by the following investments:

Nature of Investment	Term Days	Interest Rate	Maturity Date	Amount Face Value \$	Cost Plus Accrued Interest \$
Treasury Bill	84	11.62%	3/07/91	3,500,000	3,497,830
Treasury Bill	168	11.70%	25/09/91	3,500,000	3,408,445
				<u>\$7,000,000</u>	<u>\$6,906,275</u>

As at 30 June 1990, short term investments comprised cash at bank of \$20,067, money market call deposits of \$476,359, and treasury bills of \$21,967,771 (cost plus accrued interest).

## 7. TERM INVESTMENTS

At 30 June 1991, the following term investments were held.

Nature of Investment	Interest Rate	Maturity Date	Amount Face Value \$	Premium not yet Amortised (discount not yet recognised) \$	Book Value \$
Government Stock	12.62%	15/11/93	12,000,000	(633,012)	11,366,988
Government Stock	13.12%	15/07/92	7,850,000	68,071	7,918,071
Government Stock	9.615%	15/07/97	7,500,000	129,354	7,629,354
Government Stock	12.10%	15/02/95	5,100,000	(308,526)	4,791,474
Government Stock	12.63%	15/11/93	3,000,000	(158,833)	2,841,167
Government Stock	11.93%	15/07/92	3,000,000	58,709	3,058,709
Government Stock	13.40%	15/11/93	2,500,000	(168,326)	2,331,674
			<u>\$40,950,000</u>	<u>\$(1,012,563)</u>	<u>\$39,937,437</u>

At 30 June 1990, the following term investments were held.

Nature of Investment	Interest Rate	Maturity Date	Amount Face Value \$	Premium not yet Amortised (discount not yet recognised) \$	Book Value \$
Government Stock	12.62%	15/11/93	12,000,000	(847,598)	11,152,402
Government Stock	12.63%	15/11/93	3,000,000	(212,668)	2,787,332
Government Stock	13.12%	15/07/92	7,850,000	123,114	7,973,114
			<u>\$22,850,000</u>	<u>\$(937,152)</u>	<u>\$21,912,848</u>

## 8. CONTINGENT LIABILITIES

The Trust has no contingent liabilities at balance date other than those referred to in Note 5. (1990: \$NIL)

# Statement of Resources as at 30 June 1991

**PERSONNEL.** At the beginning of the year there were three Trustees. In September 1990 the Minister of Agriculture appointed two further Trustees. From April 1991, following the death of the then Chairman, these were reduced to four. The Trust employs a part-time secretary.

**FIXED ASSETS.** No fixed assets are owned except for sundry office equipment. Appropriate furnished office space and a motor vehicle are leased. This position is unchanged from the previous year.

**FINANCIAL.** The Trust contracts accountancy and financial advisory services from independent sources. This position is unchanged from last year.



Heinz Gulle separating complex mixtures of proteins from *M. bovis*.

## Bovine Tuberculosis: Diagnosis and Control.

A comprehensive industry seminar, funded by AGMARDT and organised by the N.Z. Meat Producers' Board, was held in April 1990 to discuss problems facing the meat industry.

The problem of bovine tuberculosis was identified as a potentially hazardous threat to beef exports from New Zealand.

With growing international import restrictions, designed to protect importing countries from real or imagined risks associated with animal disease or chemical residue, bovine TB, uncontrolled, has the potential to



MAFTech Beef Cattle feedlotting research.

## Beef Cattle Feedlotting.

Export of New Zealand beef to some countries is limited by our reliance on pasture finishing systems.

Desired quality characteristics – in terms of taste, colour and marbling – in other countries, such as Japan are based on beef from animals finished on expensive concentrate rations prior to slaughter.

Grain production in New Zealand is expensive and alternate methods of short-term finishing of animals reared on pasture are being sought.

A two-year project looking at short-term finishing for Angus steers has recently been completed by MAFTech



Pest control research is reducing the reliance on insecticide sprays.

## Pest Control Technology Transfer to The Apple Industry.

Export of New Zealand apples is dependant upon effective pest control, particularly of insect leafroller species. Standard control measures for these insects currently require the application of insecticide sprays in a regular, programmed way, from early November until two or three weeks before harvest.

There is a strong incentive to reduce the number of such sprays because of a need to reduce costs, the risk of developing resistance and the level of insecticide residues.

# FUNDING GRANTS

jeopardise one of the country's major export industries.

In response, AGMARDT undertook to support a major research investigation into tuberculosis in cattle.

As a result, a new bovine TB research unit, under the leadership of Associate Professor K.M. Moriarty, has been established in the Department of Veterinary Pathology and Public Health at Massey University.

The University has provided laboratory and office space and the unit has been equipped by the Trust.

Dr Alan Murray, of the University, devotes 50 percent of his time to the unit and takes responsibility for its day to day management. Two research scientists – Dr Eamonn Gormley, a molecular biologist, and Dr Heinz

Gulle, an immunologist – were recruited to the unit in mid-1991. Each has had extensive experience in their respective fields in leading European laboratories.

The unit also employs two research technicians and one research student is associated with it.

The work of the unit is confined to the disease in cattle and has two basic aims:

- to improve diagnosis of the disease in cattle, *and*,
- to investigate the possibilities of vaccines for cattle.

With the new equipment now largely in place and the research scientists at work, the unit is now fully operational. AGMARDT has undertaken to support the Unit over four years.

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in the Hawkes Bay with the support of funding from AGMARDT.

This trial compared the growth and carcass characteristics of animals finished on rations which are less expensive than grain alone, and the conventional ration of 30 percent pasture silage and 70 percent grain.

Treatments tested included a mixture of maize grain, maize silage and brewers grains and maize grain fed at pasture, rather than in feedlots.

Animals finished on any of the tested feeding regimes achieved both higher liveweight and higher carcass weight than animals finished on pasture only.

A significant improvement in lean meat colour was obtained in the feedlotting treatments. The yellow fat colour associated with pasture feeding was significantly reduced by feeding a concentrate ration – 12 weeks feeding appeared to be necessary to achieve 70 percent of carcasses being graded as “good” according to Japanese grading specifications.

Grain feeding had only a minor effect on taste and acceptability.

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One approach to reducing sprays is to obtain more accurate data on the level of leafroller moths in individual orchards. With this information it is possible to apply insecticide sprays only when they are specifically required, rather than adhering to a calendar-based programme. In this manner a significant reduction can be made in the number of sprays applied.

The use of traps containing pheromones (insect sex hormones) has been developed by the DSIR in recent years as a specific method of monitoring insect numbers.

Use of this technology requires the education and training of individual orchardists as well as advisory officers and consultants.

AGMARDT is currently funding a three-year programme to transfer the required technology and expertise to the apple industry.

The Plant Protection Division of DSIR is training two field officers who will undertake the task of passing on the necessary skills to industry personnel.

The New Zealand Apple and Pear Marketing Board is also playing a funding role in this project.