

AN ECONOMIC SURVEY  
OF NEW ZEALAND WHEATGROWERS:  
FINANCIAL ANALYSIS

1978-79

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RESEARCH REPORT NO. 116

OCTOBER, 1980

I.S.S.N. 0069-3790

THE AGRICULTURAL ECONOMICS RESEARCH UNIT  
Lincoln College, Canterbury, NZ.

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## PREFACE

This report is the second in an annual series of economic surveys which concentrate on financial aspects of New Zealand wheatgrowing farms. These surveys have been undertaken by the Agricultural Economics Research Unit at Lincoln College on behalf of the Wheatgrowers Sub-Section of Federated Farmers of New Zealand (Inc.).

The principal objective of this survey is to establish, from farm accounts and personal interviews, financial data pertaining to wheatgrowing farms in the 1978-79 financial year. Such data will allow a more comprehensive picture of wheatgrowing in New Zealand, in line with that available for other major New Zealand farming industries.

The accounts analysis was carried out by Roger Lough and Robyn MacLean, computer analysis by Patrick McCartin, and the report compiled by Roger Lough and Michael Rich.

J.B. Dent

Director.

## SUMMARY

1. The average value of total assets was \$392,476, 92 percent of which was invested in farm capital, 2 percent in crop on hand and 6 percent in off farm assets.
2. Total liabilities per farm were \$87,423, equivalent to 22 percent of total assets. Current liabilities were 23 percent of total liabilities and this proportion increased on the more intensive cropping farms.
3. Average gross farm income for all surveyed farms of \$68,971 came principally from livestock (62 percent), wheat (16 percent) and other crops including barley, peas and small seeds (18 percent).
4. Expenditure per farm of \$47,506 was made up of farm working expenses (43 percent), tractor and vehicle expenses (21 percent) and debt servicing (18 percent).
5. Average net farm income was \$12,200 or 20 percent of gross farm profit. Net farm income per hectare decreased on the more intensive cropping farms.
6. Available cash per farm of \$31,028 came from direct farm trading (51 percent), increase in term liabilities (24 percent), sale of assets (15 percent) and non farm income (10 percent).
7. Average cash disposition for all surveyed farms of \$33,354 was made up of capital expenditure (42 percent), personal expenditure (43 percent) and loan repayments (15 percent).

8. On those farms where less than 25 percent of gross farm income was from crops, the increase in liabilities was more than twice the level of loan repayments. Therefore, these farms will face an increase in future debt servicing charges. On those farms where the contribution of crop income to gross farm income was greater than 25 percent, increases in liabilities were similar to loan repayments. Therefore future debt servicing on these farms should not change significantly.

9. The average cash deficit per farm of \$2,326, the increase in sundry debtors of \$470 and reduction of sundry creditors of \$635 were financed by a \$3,295 reduction of cash held in the current accounts plus a \$136 decrease in Income Equalisation deposits.

10. The average adjusted cash deficit per farm, that is the cash deficit with allowances for inventory changes, was \$808. The principal inventory changes were increases in the value of livestock and barley held in store.

11. Farms with 25 to 50 percent of gross income from crops experienced the greatest liquidity problem since cash expenditure exceeded total available cash by \$4,272. However this problem was largely a result of increasing inventory amounting to \$3,495. Farms with greater than 50 percent of gross farm income from crops experienced a cash deficit of \$2,833 but this cash deficit would have greatly increased had not inventory levels been reduced by \$2,042.





## CHAPTER 1

### INTRODUCTION

#### 1.1 Background

The purpose of this analysis was to provide financial data relating to those New Zealand wheat-growing farms that participated in the 1978-79 wheat enterprise survey<sup>1</sup>. The analysis was based upon the annual financial statements prepared for wheatgrowers by their accountants.

#### 1.2 Survey Description

Farm accounts for the 1978-79 financial year were collected following the spring visit in 1979 and the autumn visit in 1980. Those available for analysis were grouped, as shown in Table 1, according to the degree of cropping intensity which was determined by expressing crop income as a percentage of gross farm income. Crop income included income from wheat, barley, small seeds and other crops.

Of the 176 farms in the 1978-79 New Zealand wheat enterprise survey, 68 percent provided financial statements suitable for analysis, 13 percent provided

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<sup>1</sup>This is an annual survey undertaken by the Agricultural Economics Research Unit on behalf of the Wheatgrowing Sub-Section of Federated Farmers of New Zealand Inc. Results for the 1978-79 year are contained in Research Report NO. 101 published by the Unit.

financial statements unsuitable for analysis because of insufficient information, while 19 percent either were unable or refused to provide financial statements for various reasons. All farms suitable for analysis were "owner-operator" properties.

TABLE 1  
Farm Groups

| Group     | Crop Income         | Average Crop Intensity | Number of Farms |
|-----------|---------------------|------------------------|-----------------|
|           | % Gross Farm Income | %                      |                 |
| 1         | Below 25            | 12.1                   | 46              |
| 2         | 25 - 50             | 36.8                   | 41              |
| 3         | Above 50            | 77.5                   | 32              |
| All farms |                     | 38.2                   | 119             |

### 1.3 Physical Characteristics

The physical characteristics of the three farming groups are summarised in Table 2. The table shows the emphasis on livestock production in group 1 and an increased area devoted to cropping in groups 2 and 3.

TABLE 2  
Physical Farm Characteristics

| Group                          | 1     | 2     | 3     | All Farms |
|--------------------------------|-------|-------|-------|-----------|
| Total Area (ha)                | 231.8 | 204.6 | 204.7 | 215.0     |
| Stock Units (no)               | 2300  | 1669  | 800   | 1690      |
| Lambing Percentage (%)         | 103   | 103   | 104   | 103       |
| Wheat Area (ha)                | 9.8   | 22.2  | 46.3  | 23.7      |
| Barley Area (ha)               | 3.2   | 12.4  | 23.1  | 11.6      |
| Pea Area (ha)                  | 0.5   | 5.1   | 22.9  | 8.0       |
| Small Seeds Area (ha)          | 1.1   | 6.9   | 22.9  | 8.9       |
| Other Crop Area (ha)           | 1.9   | 4.7   | 10.0  | 5.0       |
| Crop Area<br>(% of Total Area) | 7.1   | 25.1  | 61.2  | 26.6      |

## CHAPTER 2

## CAPITAL STRUCTURE

The capital structure of wheatgrowing farms in New Zealand is detailed in Table 3. Valuations of land and buildings apply as at the start<sup>2</sup> of the 1978-79 financial year while livestock, plant and machinery apply as at the end of the financial year.

### 2.1 Assets

Total assets on the average New Zealand survey farm were valued at \$392,476; 73 percent was invested in land and buildings, 19 percent in livestock and plant, 2 percent in crop on hand and 6 percent in off farm assets.

Total assets per farm in group 3 of \$466,835 were at least 25 percent higher than either group 1 or group 2. This was largely due to the value of land and buildings in group 3 being at least 33 percent higher than either group 1 or group 2.

Total investment in plant, machinery and livestock<sup>3</sup> per farm in group 1 was \$85,816 which was 26 percent higher than in group 2 and 43 percent more than group 3. The value of livestock as a proportion of plant, machinery and livestock per farm was 79 percent in group 1, 69 percent in group 2 and 44 percent in group 3.

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<sup>2</sup> It was not possible to value land and buildings at the end of the financial year because the index, used for updating values, was not available at the time the analysis commenced.

<sup>3</sup> Plant and machinery were valued at book value while market values were used for livestock.

TABLE 3

## Capital Structure

| Group                    | 1       |       | 2       |       | 3       |       | All Farms |       |
|--------------------------|---------|-------|---------|-------|---------|-------|-----------|-------|
|                          | \$      | %     | \$      | %     | \$      | %     | \$        | %     |
| <u>Farm Capital</u>      |         |       |         |       |         |       |           |       |
| Land and Buildings       | 246,872 | 68.6  | 273,367 | 73.7  | 364,114 | 78.0  | 287,507   | 73.3  |
| Tractor, Truck, Header   | 10,586  | 2.9   | 12,713  | 3.4   | 22,147  | 4.8   | 14,428    | 3.7   |
| Other Plant              | 6,943   | 1.9   | 7,507   | 2.0   | 11,393  | 2.4   | 8,334     | 2.1   |
| Sheep                    | 58,685  | 16.3  | 44,811  | 12.1  | 25,328  | 5.4   | 44,935    | 11.5  |
| Cattle                   | 9,265   | 2.6   | 2,365   | 0.6   | 1,424   | 0.3   | 4,777     | 1.2   |
| Other                    | 337     | 0.1   | 302     | 0.1   | 112     | -     | 264       | -     |
| Total                    | 332,688 | 92.4  | 341,005 | 91.9  | 424,518 | 90.9  | 360,245   | 91.8  |
| <u>Crop on Hand</u>      |         |       |         |       |         |       |           |       |
| Wheat                    | 2,071   | 0.7   | 4,230   | 1.1   | 6,127   | 1.4   | 3,906     | 1.0   |
| Barley                   | 441     | 0.1   | 932     | 0.3   | 3,932   | 0.8   | 1,549     | 0.4   |
| Peas                     | 0       | -     | 564     | 0.2   | 941     | 0.2   | 447       | 0.1   |
| Small Seeds              | 338     | 0.1   | 1,423   | 0.4   | 8,041   | 1.7   | 2,783     | 0.7   |
| Other                    | 41      | -     | 73      | -     | 1,340   | 0.3   | 402       | 0.1   |
| Total                    | 2,891   | 0.9   | 7,222   | 2.0   | 20,381  | 4.4   | 9,087     | 2.3   |
| <u>Off-Farm Assets</u>   |         |       |         |       |         |       |           |       |
| Cash                     | 7,325   | 2.0   | 5,265   | 1.4   | 5,321   | 1.1   | 6,077     | 1.6   |
| Sundry Debtors           | 3,381   | 0.9   | 2,007   | 0.5   | 3,916   | 0.8   | 3,051     | 0.8   |
| Income Equalisation      | 700     | 0.2   | 390     | 0.1   | 158     | -     | 477       | 0.1   |
| Other Assets (incl. car) | 3,535   | 1.0   | 3,357   | 0.9   | 4,716   | 1.0   | 3,791     | 1.0   |
| Sundry Investments       | 9,489   | 2.6   | 11,627  | 3.2   | 7,825   | 1.8   | 9,778     | 2.4   |
| Total                    | 24,430  | 6.7   | 22,646  | 6.1   | 21,936  | 4.7   | 23,144    | 5.9   |
| Total Assets             | 360,009 | 100.0 | 370,873 | 100.0 | 466,835 | 100.0 | 392,476   | 100.0 |

TABLE 3 Cont..  
Capital Structure

| Group                           | 1       |       | 2       |       | 3       |       | All Farms |       |
|---------------------------------|---------|-------|---------|-------|---------|-------|-----------|-------|
|                                 | \$      | %     | \$      | %     | \$      | %     | \$        | %     |
| <u>Fixed Liabilities</u>        |         |       |         |       |         |       |           |       |
| Rural Bank/Marginal Lands Board | 21,017  | 26.1  | 12,753  | 15.9  | 17,188  | 16.1  | 17,140    | 19.6  |
| Commercial Bank                 | 2,398   | 3.0   | 2,020   | 2.5   | 3,135   | 2.9   | 2,466     | 2.8   |
| Insurance Company               | 4,158   | 5.2   | 9,578   | 11.9  | 7,475   | 7.0   | 6,917     | 7.9   |
| Stock Firm                      | 2,626   | 3.3   | 0       | 0     | 2,238   | 2.1   | 1,617     | 1.9   |
| Private                         | 31,503  | 39.1  | 32,955  | 41.2  | 38,153  | 35.8  | 33,791    | 38.7  |
| County Council                  | 675     | 0.8   | 441     | 0.6   | 777     | 0.7   | 622       | 0.7   |
| Hire Purchase                   | 890     | 1.1   | 1,276   | 1.6   | 2,227   | 2.1   | 1,383     | 1.6   |
| Other                           | 2,845   | 3.5   | 4,132   | 5.2   | 2,782   | 2.6   | 3,271     | 3.7   |
| Total                           | 66,112  | 82.1  | 63,155  | 78.9  | 73,975  | 69.3  | 67,207    | 76.9  |
| <u>Current Liabilities</u>      |         |       |         |       |         |       |           |       |
| Commercial Banks                | 5,055   | 6.3   | 4,254   | 5.3   | 13,580  | 12.7  | 7,071     | 8.1   |
| Stock Firms                     | 4,150   | 5.2   | 7,266   | 9.1   | 12,374  | 11.6  | 7,435     | 8.5   |
| Sundry Creditors                | 5,137   | 6.3   | 5,155   | 6.4   | 5,292   | 5.0   | 5,185     | 5.9   |
| Other                           | 120     | 0.1   | 252     | 0.3   | 1,458   | 1.4   | 525       | 0.6   |
| Total                           | 14,462  | 17.9  | 16,927  | 21.1  | 32,704  | 30.7  | 20,216    | 23.1  |
| Total Liabilities               | 80,574  | 100.0 | 80,082  | 100.0 | 106,679 | 100.0 | 87,423    | 100.0 |
| Net Worth - (\$)                | 279,435 |       | 290,791 |       | 360,156 |       | 305,053   |       |
| - (% of Total Assets)           | 77.6    |       | 78.4    |       | 77.2    |       | 77.7      |       |

## 2.2 Liabilities and Net Worth

Total liabilities on the average New Zealand survey farm were valued at \$87,423; 77 percent of which were fixed liabilities and 23 percent were current liabilities. The two main sources of fixed liabilities in order of importance were Private (39 percent of total liabilities) and Rural Bank/Marginal Lands Board (20 percent of total liabilities). The main sources of current liabilities were equally divided between Stock Firms and Commercial Banks.

Group 3 farms had the highest level of total liabilities at \$106,679, this being 33 percent higher than for either groups 1 or 2. For all three groups, fixed liabilities were 15 to 18 percent of total assets. Between groups, current liabilities increased with greater cropping intensity due principally to the more intensive cropping farms having higher levels of crop on hand.

Net worth, defined as total assets less liabilities, reflects the level of a farmer's investment. On the average New Zealand survey farm net worth was \$305,053 or 78 percent of total assets. Between the three groups, net worth ranged from 77 to 78 percent of total assets.

## 2.3 Capital Structure Per Hectare

A summary of capital structure per hectare is given in Table 4. The table shows that increased cropping intensity, despite an increase in total liabilities, was associated with an increased total farm capital, value of crop on hand and net worth.

TABLE 4  
Capital Structure Per Hectare

| Group              | 1     | 2     | 3     | All Farms |
|--------------------|-------|-------|-------|-----------|
|                    | \$/ha | \$/ha | \$/ha | \$/ha     |
| Total Farm Capital | 1434  | 1663  | 2071  | 1676      |
| Crop on Hand       | 12    | 35    | 99    | 42        |
| Off Farm Assets    | 105   | 110   | 107   | 108       |
| Total Assets       | 1551  | 1808  | 2277  | 1826      |
| Total Liabilities  | 347   | 391   | 520   | 407       |
| Net Worth          | 1204  | 1417  | 1757  | 1419      |



## CHAPTER 3

## INCOME AND EXPENDITURE

Gross farm income and expenditure details along with the disposition of net farm income are given in Table 5.

### 3.1 Gross Farm Income

Table 5 shows gross farm income for the average New Zealand survey farm was \$68,971, 62 percent of which came from livestock production. The other main sources were wheat (16 percent) and other crops including barley, peas and small seeds (18 percent). Gross farm profit (gross farm income less livestock purchases) between groups was highest in group 3 (\$67,437) and lowest in group 2 (\$55,037).

Table 6 shows gross farm income details on a per hectare and per stock unit basis. It is seen that:

1. Total gross farm income per hectare increased with increased cropping intensity.
2. Livestock income per stock unit in groups 1 and 2 was similar, but lower than in group 3.
3. Increased cropping intensity was associated with increased wheat income per total farm hectare, however when this income was expressed on a per hectare of wheat grown basis a decrease occurred because yields dropped as cropping became more intensive.

TABLE 5

## Income and Expenditure

| Group                    | 1      |       | 2      |       | 3      |       | All Farms |       |
|--------------------------|--------|-------|--------|-------|--------|-------|-----------|-------|
|                          | \$     | %     | \$     | %     | \$     | %     | \$        | %     |
| <u>Gross Farm Income</u> |        |       |        |       |        |       |           |       |
| Wool                     | 21,395 | 31.6  | 14,715 | 23.3  | 6,841  | 8.8   | 15,180    | 22.0  |
| Sheep                    | 28,389 | 41.9  | 22,424 | 35.5  | 14,788 | 18.9  | 22,676    | 32.9  |
| Cattle                   | 8,139  | 12.0  | 2,545  | 4.0   | 2,809  | 3.6   | 4,778     | 6.9   |
| Wheat                    | 5,201  | 7.7   | 12,108 | 19.1  | 18,824 | 24.1  | 11,244    | 16.3  |
| Barley                   | 1,007  | 1.5   | 3,009  | 4.8   | 8,046  | 10.3  | 3,590     | 5.2   |
| Peas                     | 56     | 0.1   | 1,712  | 2.7   | 7,877  | 10.1  | 2,730     | 4.0   |
| Small Seeds              | 176    | 0.3   | 2,324  | 3.7   | 10,712 | 13.7  | 3,749     | 5.4   |
| Other Crops              | 453    | 0.7   | 1,711  | 2.7   | 5,136  | 6.6   | 2,145     | 3.1   |
| Rebates & Subsidies      | 1,918  | 2.8   | 1,530  | 2.4   | 766    | 1.0   | 1,474     | 2.1   |
| Produce, Milk, Pigs      | 680    | 1.0   | 275    | 0.4   | 652    | 0.8   | 533       | 0.8   |
| Sundry, Hay, Grazing     | 277    | 0.4   | 909    | 1.4   | 1,678  | 2.1   | 872       | 1.3   |
| Total                    | 67,692 | 100.0 | 63,262 | 100.0 | 78,129 | 100.0 | 68,971    | 100.0 |
| Less Livestock Purchases |        |       |        |       |        |       |           |       |
| Sheep                    | 5,744  |       | 6,496  |       | 8,528  |       | 6,752     |       |
| Cattle                   | 3,440  |       | 1,484  |       | 2,165  |       | 2,423     |       |
| Other                    | 15     |       | 245    |       | 0      |       | 90        |       |
| Total Purchases          | 9,199  |       | 8,225  |       | 10,692 |       | 9,265     |       |
| Gross Farm Profit        | 58,493 |       | 55,037 |       | 67,437 |       | 59,706    |       |

TABLE 5 Cont..  
Income and Expenditure

| Group                       | 1      |       | 2      |       | 3      |       | All Farms |       |
|-----------------------------|--------|-------|--------|-------|--------|-------|-----------|-------|
|                             | \$     | %     | \$     | %     | \$     | %     | \$        | %     |
| <u>Farm Expenditure</u>     |        |       |        |       |        |       |           |       |
| Farm Working Expenses       |        |       |        |       |        |       |           |       |
| Wages                       | 6,693  | 15.1  | 4,334  | 10.6  | 6,872  | 11.4  | 5,907     | 12.4  |
| Animal Health               | 1,369  | 3.1   | 1,141  | 2.8   | 624    | 1.0   | 1,090     | 2.3   |
| Seed and Fertiliser         | 3,803  | 8.5   | 3,900  | 9.5   | 6,240  | 10.3  | 4,492     | 9.5   |
| Freight                     | 1,276  | 2.8   | 905    | 2.2   | 1,938  | 3.2   | 1,326     | 2.8   |
| Other                       | 6,717  | 15.1  | 6,259  | 15.3  | 10,148 | 16.9  | 7,482     | 15.8  |
| Repairs & Maintenance       | 4,113  | 9.2   | 2,963  | 7.2   | 3,384  | 5.6   | 3,521     | 7.4   |
| Tractor & Vehicle Expenses  |        |       |        |       |        |       |           |       |
| Repairs & Maintenance       | 3,146  | 7.1   | 3,298  | 8.1   | 4,825  | 8.0   | 3,650     | 7.7   |
| Fuel & Oil                  | 2,212  | 5.0   | 2,779  | 6.8   | 3,508  | 5.8   | 2,756     | 5.8   |
| Admin., Rates, Insurance    | 3,065  | 6.8   | 3,340  | 8.2   | 4,890  | 8.1   | 3,650     | 7.7   |
| Debt Servicing              | 7,804  | 17.5  | 7,561  | 18.5  | 10,573 | 17.5  | 8,465     | 17.8  |
| Depreciation                |        |       |        |       |        |       |           |       |
| Buildings                   | 920    | 2.1   | 587    | 1.4   | 821    | 1.4   | 779       | 1.6   |
| Motorised Plant             | 2,465  | 5.6   | 2,940  | 7.2   | 4,970  | 8.2   | 3,302     | 6.9   |
| Non Motorised Plant         | 926    | 2.1   | 919    | 2.2   | 1,530  | 2.6   | 1,086     | 2.3   |
| Total                       | 44,454 | 100.0 | 40,926 | 100.0 | 60,323 | 100.0 | 47,506    | 100.0 |
| <hr/>                       |        |       |        |       |        |       |           |       |
| <u>Net Farm Income</u> - \$ | 14,038 |       | 14,111 |       | 7,114  |       | 12,200    |       |
| - % Gross                   |        |       |        |       |        |       |           |       |
| Farm Profit                 | 24.0   |       | 25.6   |       | 10.6   |       | 20.4      |       |
| <u>Used as follows:</u>     |        |       |        |       |        |       |           |       |
| Personal Drawings           | 7,720  | 55.0  | 8,512  | 60.3  | 8,188  | 115.1 | 8,119     | 66.6  |
| Taxation                    | 2,840  | 20.2  | 5,626  | 39.9  | 3,283  | 46.2  | 3,919     | 32.1  |
| Savings                     | 3,478  | 24.8  | -27    | -0.2  | -4,357 | -61.3 | 162       | 1.3   |

4. Other crop income per hectare of other crops grown increased with increasing cropping intensity. In group 1, this income was similar to livestock income per hectare but less than wheat income per hectare of wheat grown. In group 2, this income was higher than livestock income per hectare but less than wheat income per hectare of wheat grown. In group 3, this income was higher than livestock income per hectare and similar to wheat income per hectare of wheat grown.

TABLE 6  
Gross Farm Income

| Group                                     | 1     | 2     | 3     | All farms |
|---|-------|-------|-------|-----------|
| Livestock (\$/ha)                         | 250   | 194   | 119   | 198       |
| Wheat (\$/ha)                             | 22    | 59    | 92    | 52        |
| Other Crops (\$/ha)                       | 7     | 43    | 155   | 57        |
| Sundry (\$/ha)                            | 12    | 13    | 15    | 13        |
| Total (\$/ha)                             | 291   | 309   | 381   | 320       |
| Livestock (\$/stock unit) <sup>a</sup>    | 25.25 | 23.78 | 30.45 | 25.19     |
| Livestock (\$/live-stock ha) <sup>a</sup> | 270   | 253   | 268   | 262       |
| Wheat (\$/ha wheat grown)                 | 520   | 544   | 407   | 472       |
| Other crops (\$/ha other crops grown)     | 242   | 302   | 402   | 366       |

<sup>a</sup> Excludes livestock purchases.

### 3.2 Farm Expenditure

Table 5 shows farm expenditure for the average New Zealand survey farm to be \$47,506; the main components were farm working expenses (43 percent), tractor and vehicle expenses (21 percent) and debt servicing (18 percent).

Table 7 gives a summary of farm expenditure on a per hectare basis. Groups 1 and 2 had similar total farm expenditure per hectare while group 3 farms had considerably higher farm expenditure per hectare. In group 3, relative to the average of groups 1 and 2, farm working expenses were 52 percent higher, as was tractor and vehicle expenses, and depreciation was 65 percent higher.

TABLE 7  
Farm Expenditure Per Hectare

| Group                       | 1         | 2         | 3         | All Farms |
|-----------------------------|-----------|-----------|-----------|-----------|
|                             | \$/ha     | \$/ha     | \$/ha     | \$/ha     |
| Farm Working Expenses:      |           |           |           |           |
| Wages                       | 28        | 21        | 34        | 27        |
| Animal Health               | 6         | 6         | 3         | 5         |
| Seed & Fertiliser           | 16        | 19        | 30        | 21        |
| Freight                     | 6         | 4         | 9         | 6         |
| Other                       | 29        | 31        | 50        | 35        |
| Repairs & Maintenance       | 18        | 14        | 17        | 17        |
| Tractor & Vehicle Expenses: |           |           |           |           |
| Repairs & Maintenance       | 14        | 16        | 24        | 17        |
| Fuel & Oil                  | 10        | 14        | 17        | 13        |
| Admin., Rates, Insurance    | 13        | 16        | 24        | 17        |
| Debt Servicing              | 34        | 37        | 53        | 39        |
| Depreciation                | <u>18</u> | <u>22</u> | <u>33</u> | <u>24</u> |
| Total                       | 192       | 200       | 294       | 220       |

### 3.3 Farm Income Disposition

Table 5 shows net farm income, that is, gross farm income minus livestock purchases and farm expenditure, on the average New Zealand survey farm to be \$12,200 or 20 percent of gross farm profit. This net farm income was used on personal drawings (67 percent), taxation (32 percent) and savings (1 percent).

Table 8 gives a summary of the disposal of gross farm income on a per hectare basis. Despite the large gross farm income per hectare associated with group 3 farms, higher total farm expenditure and livestock purchases per hectare absorbed this advantage to the extent that net farm income for group 3 farms was significantly lower than the other two farm groups.

Group 1 farms accumulated savings due to lower levels of personal drawings and taxation. Group 2 farms had no savings due to high personal drawings and taxation commitments. In group 3 the low net farm income resulted in negative savings for this farm group.

TABLE 8  
Farm Income Disposition Per Hectare

| Group                     | 1          | 2          | 3          | All Farms  |
|---------------------------|------------|------------|------------|------------|
|                           | \$/ha      | \$/ha      | \$/ha      | \$/ha      |
| Gross Farm Income         | 291        | 309        | 381        | 320        |
| Less: Livestock Purchases | 40         | 40         | 52         | 43         |
| Farm Expenditure          | <u>192</u> | <u>200</u> | <u>294</u> | <u>220</u> |
| Net Farm Income           | 59         | 69         | 35         | 57         |
| Used as follows:          |            |            |            |            |
| Personal Drawings         | 33         | 42         | 40         | 38         |
| Taxation                  | 12         | 27         | 16         | 18         |
| Savings                   | 14         | 0          | -21        | 1          |

### 3.4 Economic Indicators

Table 9 shows the average New Zealand survey farm to have a rate of return on total farm capital of 2.9 per cent, and a return on equity capital of 0.9 percent.

Groups 1 and 2 farms showed the same return on total farm capital of 3.5 percent and return on equity capital of 1.8 percent. Group 3 farms however had a return on total farm capital of 1.7 percent and a negative return on equity capital.

TABLE 9  
Economic Indicators

| Group                                    | 1       | 2       | 3       | All Farms |
|--|---------|---------|---------|-----------|
|  | \$      | \$      | \$      | \$        |
| <b>A. <u>Return on Capital</u></b>       |         |         |         |           |
| Cash Farm Expenditure                    | 40,143  | 36,480  | 53,001  | 42,338    |
| Less: Debt Servicing                     | 7,804   | 7,561   | 10,573  | 8,465     |
| Administration<br>and Rates              | 2,212   | 3,340   | 4,890   | 3,650     |
| Wages of Management                      | 9,357   | 9,251   | 10,307  | 9,576     |
| 1. Total Adjusted<br>Working Expenses    | 39,484  | 34,830  | 47,845  | 39,799    |
| Working Capital Allow-<br>ance (0.5 x 1) | 19,742  | 17,415  | 23,922  | 19,899    |
| Farm Capital                             | 332,688 | 341,005 | 424,518 | 360,245   |
| 2. Total Farm Capital                    | 352,430 | 358,420 | 448,440 | 380,144   |
| Net Farm Income                          | 14,038  | 14,111  | 7,114   | 12,200    |
| Debt Servicing                           | 7,804   | 7,561   | 10,573  | 8,465     |
| Less: Wages of<br>Management             | 9,357   | 9,251   | 10,307  | 9,576     |
| 3. Economic Farm Surplus                 | 12,485  | 12,421  | 7,380   | 11,089    |
| Return on Capital<br>% (3/2)             | 3.5     | 3.5     | 1.7     | 2.9       |
| <b>B. <u>Return on Equity</u></b>        |         |         |         |           |
| Farm Capital                             | 332,688 | 341,005 | 424,518 | 360,245   |
| Cash Deposits &<br>Sundry Debtors        | 10,706  | 7,272   | 9,237   | 9,128     |
| Less: Fixed<br>Liabilities               | 66,112  | 63,155  | 73,975  | 67,207    |
| Less: Current<br>Liabilities             | 14,462  | 16,927  | 32,704  | 20,216    |
| 4. Total Farm Equity<br>Capital          | 262,820 | 268,195 | 327,076 | 281,950   |
| Net Farm Income                          | 14,308  | 14,111  | 7,114   | 12,200    |
| Less: Wages of<br>Management             | 9,357   | 9,251   | 10,307  | 9,576     |
| 5. Equity Surplus                        | 4,681   | 4,860   | -3,193  | 2,624     |
| Return on Equity<br>Capital % (5/4)      | 1.8     | 1.8     | -1.0    | 0.9       |



## CHAPTER 4

## CASH FLOW STATEMENT

The cash flow position of wheat growing farms in New Zealand is given in Table 10.

#### 4.1 Source and Disposition of Cash

Table 10 shows that the available cash on the average New Zealand survey farm was \$31,028; 51 percent of which came from direct farm trading. The other main sources were an increase in term liabilities (24 percent), sale of assets (15 percent) and non farm income (10 percent). Total cash disposition on the average New Zealand survey farm was \$33,354. The components of this expenditure were capital expenditure (42 percent), personal expenditure (43 percent) and loan repayments (15 percent). The cash deficit of \$2,326 was aggravated by an increase in inventory especially livestock (\$793) and barley held in store (\$962).

In group 1 the cash surplus from farming was enough to cover personal expenditure and 75 percent of existing loan repayments. The balance of loan repayments, and the capital expenditure was financed by an increase in liabilities (\$10,039), sale of assets (\$3,177) and non farm income (\$3,064). The increase in fixed liabilities (\$10,039) was greater than loan repayments (\$4,445) therefore significant increases in future debt servicing is expected.

TABLE 10

## Cash Flow Statement

| Group                              | 1      |       | 2      |       | 3      |       | All Farms |       |
|------------------------------------|--------|-------|--------|-------|--------|-------|-----------|-------|
|                                    | \$     | %     | \$     | %     | \$     | %     | \$        | %     |
| Cash Sales                         |        |       |        |       |        |       |           |       |
| Wool                               | 21,018 |       | 14,717 |       | 6,841  |       | 15,035    |       |
| Sheep                              | 25,791 |       | 22,164 |       | 15,904 |       | 21,883    |       |
| Cattle                             | 8,667  |       | 2,508  |       | 2,761  |       | 4,957     |       |
| Wheat                              | 5,494  |       | 10,728 |       | 20,886 |       | 11,436    |       |
| Barley                             | 707    |       | 2,565  |       | 5,467  |       | 2,627     |       |
| Small Seeds                        | 257    |       | 1,709  |       | 11,052 |       | 3,660     |       |
| Other Crops                        | 549    |       | 2,880  |       | 14,002 |       | 4,970     |       |
| Rebate Subsidies                   | 1,923  |       | 1,530  |       | 766    |       | 1,476     |       |
| Sundry - Produce                   | 680    |       | 41     |       | 814    |       | 496       |       |
| - Hay, Grazing                     | 277    |       | 909    |       | 1,692  |       | 876       |       |
| 1 Total Cash Farm Income           | 65,363 |       | 59,751 |       | 80,185 |       | 67,416    |       |
| Stock Purchases                    | 9,199  |       | 8,225  |       | 10,692 |       | 9,265     |       |
| Cash Farm Expenditure              | 40,143 |       | 36,480 |       | 53,001 |       | 42,338    |       |
| 2 Total Cash Expenditure           | 49,342 |       | 44,705 |       | 63,693 |       | 51,603    |       |
| Cash Surplus from Farming<br>(1-2) | 16,021 | 49.6  | 15,046 | 53.4  | 16,492 | 50.2  | 15,813    | 51.0  |
| Non Farm Income:                   |        | 9.5   |        | 8.5   |        | 12.8  |           | 10.2  |
| Contracting                        | 531    |       | 510    |       | 1,518  |       | 789       |       |
| Interest, Fees etc                 | 1,128  |       | 1,090  |       | 619    |       | 987       |       |
| Insurance Claims etc               | 1,052  |       | 271    |       | 1,875  |       | 1,004     |       |
| Tax Refunds                        | 353    |       | 529    |       | 208    |       | 375       |       |
| Increase in Term Liabilities:      |        | 31.1  |        | 21.0  |        | 16.3  |           | 23.7  |
| Fixed Liabilities                  | 9,335  |       | 4,963  |       | 4,260  |       | 6,464     |       |
| Hire Purchase                      | 704    |       | 937    |       | 1,105  |       | 892       |       |
| Sale of Assets:                    |        | 9.8   |        | 17.1  |        | 20.7  |           | 15.1  |
| Mechanised Plant                   | 1,655  |       | 1,549  |       | 2,476  |       | 1,839     |       |
| Non Mechanised Plant               | 373    |       | 557    |       | 629    |       | 505       |       |
| Car                                | 373    |       | 708    |       | 464    |       | 513       |       |
| Investments                        | 776    |       | 2,007  |       | 3,184  |       | 1,847     |       |
| 3 Total Available Cash             | 32,301 | 100.0 | 28,167 | 100.0 | 32,830 | 100.0 | 31,028    | 100.0 |

TABLE 10  
Cash Flow Statement cont'd

| Group                                     | 1      |       | 2      |       | 3      |       | All Farms |       |
|---|--------|-------|--------|-------|--------|-------|-----------|-------|
|   | \$     | %     | \$     | %     | \$     | %     | \$        | %     |
| Capital Expenditure :                     |        | 47.5  |        | 37.0  |        | 41.2  |           | 42.1  |
| Land                                      | 2,957  |       | 1,463  |       | 0      |       | 1,647     |       |
| Buildings                                 | 2,784  |       | 888    |       | 1,250  |       | 1,719     |       |
| Mechanised Plant                          | 5,607  |       | 5,871  |       | 9,283  |       | 6,687     |       |
| Other Plant                               | 2,496  |       | 1,944  |       | 2,758  |       | 2,377     |       |
| Car                                       | 1,623  |       | 1,819  |       | 1,388  |       | 1,627     |       |
| Loan Repayments:                          |        | 13.7  |        | 15.6  |        | 16.3  |           | 15.1  |
| Rural Bank                                | 731    |       | 670    |       | 1,327  |       | 870       |       |
| Private                                   | 2,556  |       | 2,299  |       | 1,192  |       | 2,101     |       |
| Other                                     | 926    |       | 1,256  |       | 1,569  |       | 1,212     |       |
| Hire Purchase                             | 232    |       | 839    |       | 1,714  |       | 839       |       |
| Personal Expenditure:                     |        | 38.8  |        | 47.4  |        | 42.5  |           | 42.8  |
| Personal Drawings                         | 7,720  |       | 8,512  |       | 8,188  |       | 8,119     |       |
| Taxation                                  | 2,840  |       | 5,626  |       | 3,283  |       | 3,919     |       |
| Sundry Investments                        | 2,088  |       | 1,252  |       | 3,711  |       | 2,236     |       |
| 4 Total Cash Disposition                  | 32,560 | 100.0 | 32,439 | 100.0 | 35,663 | 100.0 | 33,354    | 100.0 |
| 5 Cash Surplus/Deficit (3-4)              | -259   |       | -4,272 |       | -2,833 |       | -2,326    |       |
| Change in Inventory:                      |        |       |        |       |        |       |           |       |
| Livestock: Sheep                          | 2,598  |       | 260    |       | -1,116 |       | 793       |       |
| Cattle                                    | -528   |       | 37     |       | 48     |       | -178      |       |
| Other                                     | 277    |       | 216    |       | -162   |       | 138       |       |
| Crop: Wheat                               | -293   |       | 1,380  |       | -2,062 |       | -192      |       |
| Barley                                    | 300    |       | 444    |       | 2,579  |       | 962       |       |
| Peas                                      | 0      |       | 505    |       | 41     |       | 185       |       |
| Small Seeds                               | -81    |       | 615    |       | -340   |       | 89        |       |
| Other                                     | -40    |       | 38     |       | -1,030 |       | -279      |       |
| 6 Total Inventory Change                  | 2,233  |       | 3,495  |       | -2,042 |       | 1,518     |       |
| 7 Adjusted Cash Surplus/<br>Deficit (5+6) | 1,974  |       | -777   |       | -4,875 |       | -808      |       |

In group 2 the cash surplus from farming covered 98 percent of personal expenditure only. Loan repayments and capital expenditure amounting in total to \$17,049 were largely financed by an increase in liabilities of \$5,900, sale of assets of \$4,821 and non farm income of \$2,400. The balance was funded by a decrease in working capital of \$4,272. This cash deficit was largely a result of an increase in the value of livestock and crop on hand estimated to be \$3,495. The increase in fixed liabilities exceeded loan repayments by \$836.

In group 3 the cash surplus from farming covered personal expenditure and 22 percent of loan repayments. The cash surplus therefore made no contribution towards the balance of the loan repayments and capital expenditure amounting in total to \$19,171. This was financed by an increase in liabilities (\$5,365), non farm income (\$4,220), sale of assets (\$6,753) and a decrease in working capital (\$2,833). This cash deficit would have been greater if inventory levels had not been reduced by \$2,042.

#### 4.2 Financing the Cash Deficit

Table 11 shows that the decrease in working capital on the average New Zealand survey farm was financed by a \$3,295 reduction of cash resources held in the Bank and Stock Firm current accounts, a decrease of \$136 in Income Equalisation deposits, an increase of \$470 in sundry debtors and a decrease of \$635 in sundry creditors.

TABLE 11  
Financing the Change in Working Capital

| Group                             | 1     | 2      | 3      | All Farms |
|-----------------------------------|-------|--------|--------|-----------|
|                                   | \$    | \$     | \$     | \$        |
| Change of Funds in                |       |        |        |           |
| Current Accounts:                 |       |        |        |           |
| Bank                              | -81   | -1,979 | -3,234 | -1,583    |
| Stock Firm                        | -573  | -2,590 | -2,224 | -1,712    |
| Sundry Debtors                    | 1,092 | 217    | -101   | 470       |
| Income Equalisa-<br>tion Deposits | -4    | 122    | -656   | -136      |
| Sundry Creditors                  | -693  | -42    | 3,382  | 635       |
| Cash Surplus/<br>Deficit          | -259  | -4,272 | -2,833 | -2,326    |

Within the different farm groups the significant factors were:

1. In group 1, the marginal cash deficit was due to a substantial increase in sundry debtors funded by a decrease in the Stock Firm current account and an increase in sundry creditors.
2. In group 2, the cash deficit which is largely attributed to an increase in the value of livestock and crop retained was financed principally by a decrease in the current accounts at both the Bank and Stock Firm.
3. In group 3, the cash deficit and reduction in sundry creditors was funded mainly by a decrease in the Bank and Stock Firm current accounts and a reduction in the Income Equalisation account.

## CHAPTER 5

## TRENDS IN FINANCIAL PERFORMANCE

This chapter compares the financial returns of the average New Zealand wheatgrowing farm as determined from wheatgrowers financial statements for the period 1977-78 and 1978-79.

### 5.1 Capital Structure

Table 12 shows that total assets increased nearly 20 percent to \$1,826 per hectare and total liabilities increased 5 percent to \$407 per hectare. This resulted in net worth increasing from \$1,136 to \$1,419. The major factor affecting the increase in total assets was a 19 percent increase in the value of land and buildings and a 49 percent increase in the value of livestock. This livestock value increase was principally due to an increase in the value per head rather than an increase in total stock units carried.

TABLE 12  
Capital Structure Comparisons

|                      | 1977-78    | 1978-79    | Change |
|----------------------|------------|------------|--------|
|                      | S/ha       | \$/ha      | %      |
| Land and Buildings   | 1,120      | 1,337      | 19.4   |
| Plant and Machinery  | 101        | 107        | 5.9    |
| Livestock            | <u>156</u> | <u>232</u> | 48.7   |
| Total Farm Capital   | 1,337      | 1,676      | 21.7   |
| Plus Crop on Hand    | 40         | 42         | 5.7    |
| Plus Off Farm Assets | <u>108</u> | <u>108</u> | 0      |
| Total Assets         | 1,525      | 1,826      | 19.7   |
| Fixed Liabilities    | 296        | 313        | 5.6    |
| Current Liabilities  | <u>93</u>  | <u>94</u>  | 1.1    |
| Total Liabilities    | 389        | 407        | 4.6    |
| Net Worth            | 1,136      | 1,419      | 24.9   |

## 5.2 Farm Income and Expenditure

Table 13 shows that an 11 percent increase in gross profit from livestock was offset by a 20 percent decline in the gross profit from wheat and other crops. Therefore, total gross farm profit increased by only 3 percent to \$277 per hectare. Total farm expenditure increased by 7 percent to \$220 per hectare. These movements caused net farm income to fall by 12 percent to \$57 per hectare. The accompanying 3 percent rise in personal drawings and 22 percent decline in taxation resulted in savings falling by 83 percent to \$1 per hectare.

TABLE 13  
Farm Income and Expenditure Comparisons

|                              | 1977-78   | 1978-79   | Change |
|------------------------------|-----------|-----------|--------|
|                              | \$/ha     | \$/ha     | %      |
| <b>Gross Farm Profit:</b>    |           |           |        |
| Livestock                    | 140       | 155       | 10.7   |
| Wheat                        | 60        | 52        | -13.3  |
| Other Crops                  | 61        | 57        | -6.7   |
| Sundry                       | <u>9</u>  | <u>13</u> | 44.4   |
| Total                        | 270       | 277       | 2.6    |
| <b>Farm Expenditure:</b>     |           |           |        |
| Farm Working Expenses        | 88        | 94        | 6.8    |
| Repairs & Maintenance        | 13        | 16        | 23.1   |
| Tractor and Vehicle Expenses | 29        | 30        | 3.5    |
| Administration and Rates     | 15        | 17        | 13.3   |
| Debt Servicing               | 37        | 39        | 5.4    |
| Depreciation                 | <u>23</u> | <u>24</u> | 4.4    |
| Total                        | 205       | 220       | 7.3    |
| Net Farm Income              | 65        | 57        | -12.3  |
| <b>Used as follows:</b>      |           |           |        |
| Personal Drawings            | 37        | 38        | 2.7    |
| Taxation                     | 23        | 18        | -21.7  |
| Savings                      | 6         | 1         | -83.3  |

### 5.3 Cash Flow Statement

Table 14 shows that an 8 percent increase in cash farm income to \$314 per hectare was offset by a 14 percent increase in cash farm expenditure resulting in the cash surplus from farming falling to \$74 per hectare. Non Farm Income fell by 19 percent, term liabilities remained constant and the sale



of assets increased by 10 percent. These movements resulted in total available cash falling by 5 percent to \$145 per hectare.

The total disposition of cash resources declined by 5 percent to \$154 per hectare. The major factors contributing to this situation were a 12 percent reduction in capital expenditure, a 4 percent reduction in personal expenditure (including sundry investments) and a 17 percent increase in loan repayments. The cash deficit of \$10 per hectare in 1977-78 was reduced to a cash deficit of \$9 per hectare in 1978-79.

TABLE 14  
Cash Flow Statement Comparisons

|                              | 1977-78 | 1978-79 | Change |
|------------------------------|---------|---------|--------|
|                              | \$/ha   | \$/ha   | %      |
| Total Cash Farm Income       | 291     | 314     | 7.9    |
| Total Cash Farm Expenses     | 210     | 240     | 14.3   |
| Cash Surplus from farming    | 81      | 74      | -8.6   |
| Non Farm Income              | 18      | 15      | -18.5  |
| Increase in Term Liabilities | 34      | 34      | 0      |
| Sale of Assets               | 20      | 22      | 10.0   |
| Total Available Cash         | 153     | 145     | -5.2   |
| Capital Expenditure          | 74      | 65      | -11.7  |
| Loan Repayments              | 20      | 23      | 16.8   |
| Personal Expenditure         | 69      | 66      | -3.8   |
| Total Cash Disposition       | 163     | 154     | -5.5   |
| Cash Surplus/Deficit         | -10     | -9      | 10.0   |
| Inventory Change             | 7       | 7       | 0      |
| Adjusted Surplus/Deficit     | -3      | -2      | 33.0   |

## ACKNOWLEDGEMENTS

The Agricultural Economics Research Unit gratefully acknowledges the co-operation of the wheat growing farmers and their accountants who participated in this survey and made time and information freely available to field staff. Mr Derek Newman and Mr Murray Clark of the Farm Management Department, Lincoln College provided constructive criticism on the draft report. Miss Vicki Mathieson typed the final report.

## APPENDIX A

## SURVEY DEFINITIONS AND DATA TREATMENT

Capital Structure

1. Value of land and buildings was taken from the latest Government valuation figures and updated using their "Farmland Sales Price Index".
2. Plant and machinery valuations were taken from the depreciation schedule of the 1978-79 financial statement. They exclude cars, boats and caravans as these items were included under Other Assets.
3. The following per head figures have been used to assess the value of livestock on hand at the end of the 1978-79 financial year:
 

|             |         |       |
|-------------|---------|-------|
| Sheep       | Ewes    | \$25  |
|             | Hoggets | \$15  |
| Cows        |         | \$200 |
| 2 yr Cattle |         | \$150 |
| Yearlings   |         | \$125 |
| Calves      |         | \$75  |
| Bulls       |         | \$200 |
4. Values of crop on hand were obtained from the crop accounts for the 1978-79 year.
5. Off-farm assets were valued at the end of the 1978-79 financial year.
6. Both fixed and current liabilities were as recorded in the balance sheet at the end of the 1978-79 year.

Gross Farm Income

1. Gross income for wool, sheep, cattle, wheat, barley,

small seeds, other crops, produce and sundry income, were assessed as follows:

Gross Income = Cash Sales  
 + Stock on hand at end of year  
 - Purchases  
 - Stock on hand at start of year

2. Rebates, subsidies and contracting are as presented in the financial statements for 1978-79.

#### Gross Farm Expenditure

1. Gross farm expenditure is as presented in the financial statement for 1978-79 with the following adjustments if applicable:
- (i) Appropriation of private car expenses
  - (ii) Deletion of managerial salaries
  - (iii) Deletion of special depreciation allowances.
2. Breakdown of farm expenditure items can be summarised as follows:
- (i) Repairs and maintenance includes that done to buildings, fence, tracks, culverts etc plus any development expenditure.
  - (ii) Tractor and vehicle expenses includes all expenses associated with both mechanised and non-mechanised plant and machinery.
  - (iii) Administration, rates, insurance include all administrative, power, telephone and overhead expenses.
  - (iv) Debt Servicing includes all interest and rent charges.

3. Savings is the residual after personal drawings and taxation have been deducted from net farm income.

#### Economic Indicators

1. Wages of Management is assessed as \$6,000 plus 1 percent of total farm capital.

#### Cash Flow Statement

1. In assessing the cash flow statement, an attempt was made to delete from the financial statement:
  - (i) All non-cash transactions.
  - (ii) All current assets subject to valuation, that is livestock and crop on hand.



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