

FARMLANDS GRAIN (N.Z.) SOCIETY LTD

- A Marketing Audit, 1980 -84

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Views expressed in Agricultural Economics Research Unit Discussion Papers are those of the authors and do not necessarily reflect the views of the Director, other members of the staff, or members of the Review Committee and Management Committees.

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CONTENTS

	<u>Page</u>	
List of Tables	(i)	
List of Figures	(iii)	
Executive Summary	(v)	
Acknowledgements	(vii)	
 <u>Section</u>		
1	The Commercial Operating Environment 1980-84	1
	1.1 Introduction	1
	1.2 World Grain Market	1
	1.3 New Zealand Agricultural Opportunities	3
2	Performance and Operations, 1980-84	5
3	Farm Contracts and Inventory Control	7
4	Grain Marketing	11
	4.1 Terms and Conditions	11
	4.2 Markets	11
	4.3 Timing of Sales	11
	4.4 Market Share of NZ Barley Exports	12
	4.5 Export Barley Pricing	15
5	Foreign Exchange Operations	19
6	Barley Pool Returns	23
	6.1 Farmer Returns	23
	6.2 Administrative and Marketing Costs	26

LIST OF TABLES

<u>Table</u>		<u>Page</u>
1	Barley Marketing, 1981-84 (Feed and Malting)	8
2	Export Barley Arrangements	11
3	Distribution of Sales over Crop Year	12
4	Total New Zealand Exponents Unmilled Barley, Quantity Unite Value, Destination, 1981-85	13
5	South Island Barley Society Export Price Premiums (+) or Discounts (-) over World Market Indicators	16
6	Foreign Exchange Exposures on Barley 1981-82	20
7	Forward Exchange Rates (\$US/\$NZ)	22
8	Estimated Comparitive Net Farmer Returns by Marketing Agents, Barley, 1982-85	23
9	Barley Pool Payments, 1981-85, Farmlands Grain	24
10	Barley Pool Payments, Other Floating Price Pools	25
11	Administration and Marketing Costs to FOB	26

LIST OF FIGURES

<u>Figure</u>		<u>Page</u>
1	Long Term World Grain Prices	2
2	Malting Premium	4
3	Exporting Price Relatives, Malting Barley	17
4	Export Price Relatives, Feed Barley	18

EXECUTIVE SUMMARY

On July 31, 1985, Farmlands Grain New Zealand Society Ltd engaged the Agricultural Economics Research Unit at Lincoln College to conduct an audit of the marketing and administrative performance of the Society for the four pool years, 1981-85 inclusive. The AERU was given full access to all records of the Society.

Given the growth of the Society, a number of its operational systems are continuing to evolve rapidly. Some suggestions made in this report are already being adopted. Other suggestions and criticisms need to be viewed in the context of this rapidly evolving organisation.

It was wise and indeed fortunate to establish the South Island Barley Society Ltd in the Spring of 1980. This buoyant period of world market demand for coarse grains from non-traditional sources enabled the Society to establish itself firmly in the market. Since that time, the Society has continued to perform at a very high level in a volatile external operating environment, both at home and overseas. The Society has managed its grain marketing operations energetically with a high degree of effort in export marketing. The Society has established a major new New Zealand export product (Triumph Malting Barley). This achievement may be one of the greatest export marketing efforts of the last five years. The risk management procedures of the Society have been prudent and operated in a measured, systematic fashion.

This has resulted in significantly higher pool returns to farmer clients over the four year period 1981-85. There is every indication that the Society can maintain and even enhance its market leadership position in the future.

There is of course, room for some improvement in certain areas. The reporting of management and marketing performance to clients (current and potential) is weak. In one sense the high performance level of the Society has been obvious through pool returns but until very recently, little appears to have been done to explain the source of this performance. It is recommended that the Society produce a management report each year to complement the financial reporting system.

With the rapid developments in financial markets and policy changes in New Zealand, risk management may require increased attention in the future. Increased attention may need to be devoted to establishing longer term marketing arrangements and early sales in the August-November period. Furthermore, a daily system of monitoring the exposure of each pool (and the Society overall) to price, currency and farm contract risk is required for operational purposes. This comment need not be interpreted as a criticism of past performance because most export enterprises are in the same position in New Zealand as a result of the changed exchange rate policy, the opening of futures markets and the removal of a wide array of financial regulations.

PREFACE AND ACKNOWLEDGEMENTS

One of the key ingredients in maintaining a viable farm marketing system is information. When farmers understand and can monitor the marketing systems they use, there is a build-up of confidence which creates a production and marketing environment that enables an industry to grow.

One way to assist in this process is for the industry to regularly publish (or have published) an independent assessment of its marketing performance. This assessment or marketing audit is a valuable adjunct to the accounting audit which examines the financial integrity of the industry or the firms operations. This is especially important for firms of a co-operative nature.

The AERU was keen to publish this marketing audit to increase the market information base. Farmland Grain (NZ) Society Ltd kindly agreed because publication is expected to help in understanding the opportunities and problems associated with grain marketing from New Zealand.

The marketing audit is somewhat tentative because Farmlands is a young firm without a highly developed historical base to draw on. This report is also edited to exclude some sensitive commercial information that any firm would wish to remain confidential.

We are indebted to the Directors of Farmlands Grain for their permission to publish and to the management of the Society for their assistance and tolerance throughout. We are also grateful to Mrs Rosemary Searle, Messrs Peter Grundy and Peter Cosgriff at Lincoln College for computational assistance, typing and advice. Finally the author received valuable assistance from executives of a number of other grain marketing agencies in Canterbury.

J.G. Pryde
DIRECTOR

SECTION ONE

THE COMMERCIAL OPERATING ENVIRONMENT, 1980-85

1.1. Introduction

Farmlands Grain New Zealand Society Ltd is in its sixth year of operations as a producer owned and controlled grain marketing company based in Ashburton. Until 1985, the Society traded under the name of the South Island Barley Society. Since its first year of operations surrounding the 1981 harvest it has increased its throughput more than four-fold with another major increase expected in 1986.

This marketing audit of the Society is designed to assess the level of performance of the Society in marketing grain on behalf of producers.

The objective of this introductory section is to set the scene for the evaluation which is to follow by describing particularly the external environment which surrounded the inception and evolution of the Society.

1.2 World Grain Market

The decade of the 1970's saw a marked expansion in the size of the world grain market. On the demand side, there was a virtual explosion in grain usage for direct human consumption and animal feeding particularly in the developing world and Eastern Bloc countries. On the supply side the United States, Argentina, Australia and Canada all increased exports markedly.

Over this period two changes in world trading patterns are discernible. In 1972 there began a rapid rise in international trade and prices of grain that continued for eight years in current, but not real, price terms. This price movement can be seen in Figure 1 where the price of US maize, c.i.f., Rotterdam rose from US\$57/tonne in 1971/72 to US\$145/tonne three years later. World exports continued to grow throughout the decade until the 1980/81 crop year. Since 1981 world trade in coarse grains (including barley) has been on the decline. In large part, this decline is due to the changing nature of the US grain sector, a strong US dollar over the period 1980-84 and the aftermath of the 1980 grain embargo.

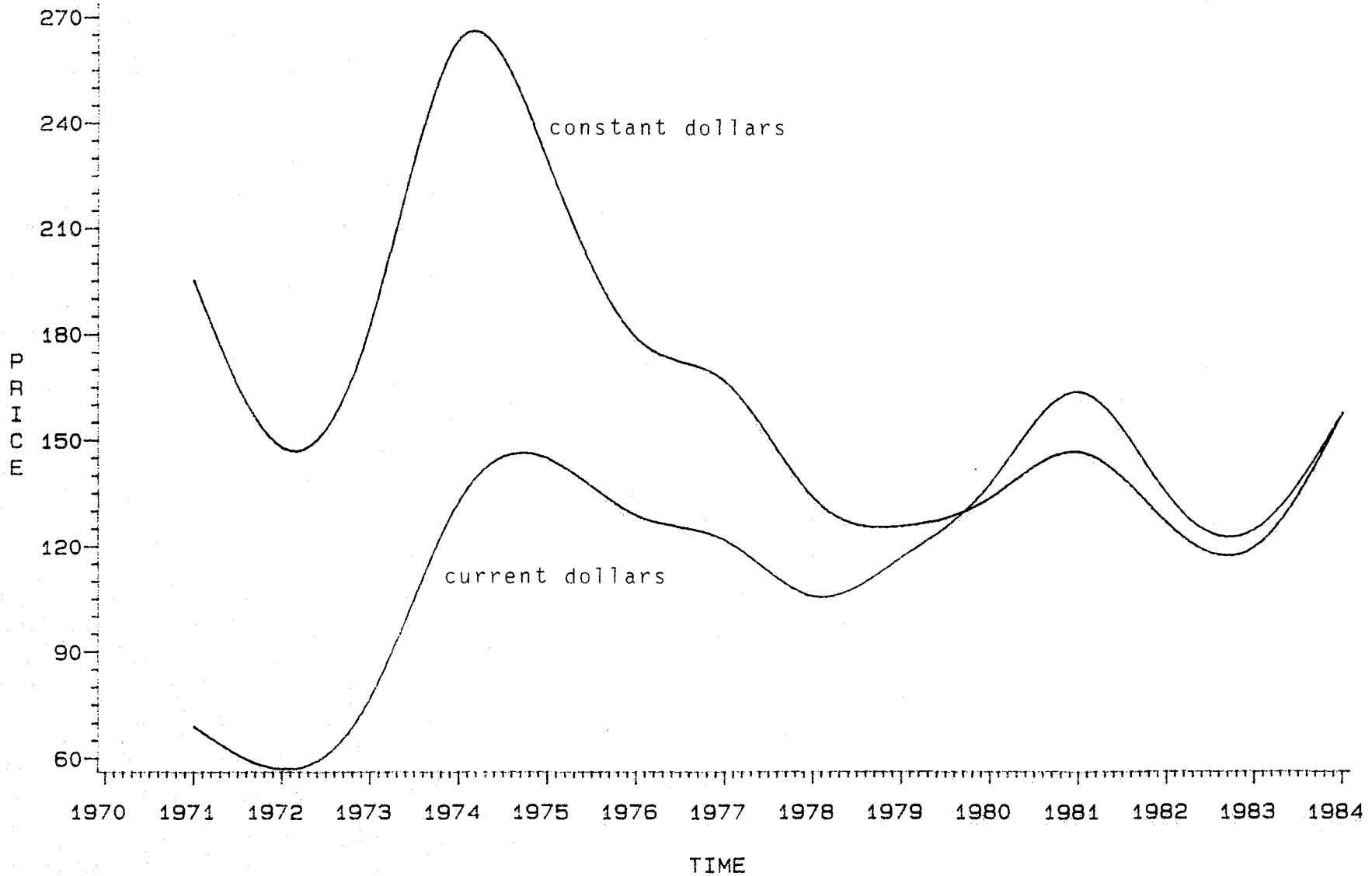
In January 1980, the US announced a partial embargo of grain sales to the USSR. The embargo was supported by the EEC, Canada and Australia and New Zealand and it caused major price disruptions in world markets. Grain available for shipment to the USSR was able to capture a large premium over other grain. In the coarse grain market, feed barley rose in value vis a vis maize and even developed a premium for a time.

The partial embargo was lifted in March 1981 but in the Spring of 1980 the South Island Barley Society had been established. Coarse grain prices were at their highest levels ever, in nominal US\$ terms, and at their highest level for four years in real US\$ terms, Figure 1.

FIGURE 1

LONG TERM WORLD GRAIN PRICES

US\$/TONNE



The Society wisely sold feed barley early (December 1980) at an f.o.b. price, US\$34/tonne above the US maize export price and US\$15/tonne above the c.i.f. price of US maize in Rotterdam.

As world trade has weakened since 1981, prices have continued to be volatile. The competitive positions of individual exporting countries has waxed and waned depending on Government support, inventory policies and exchange rate changes.

1.3 New Zealand Agricultural Opportunities

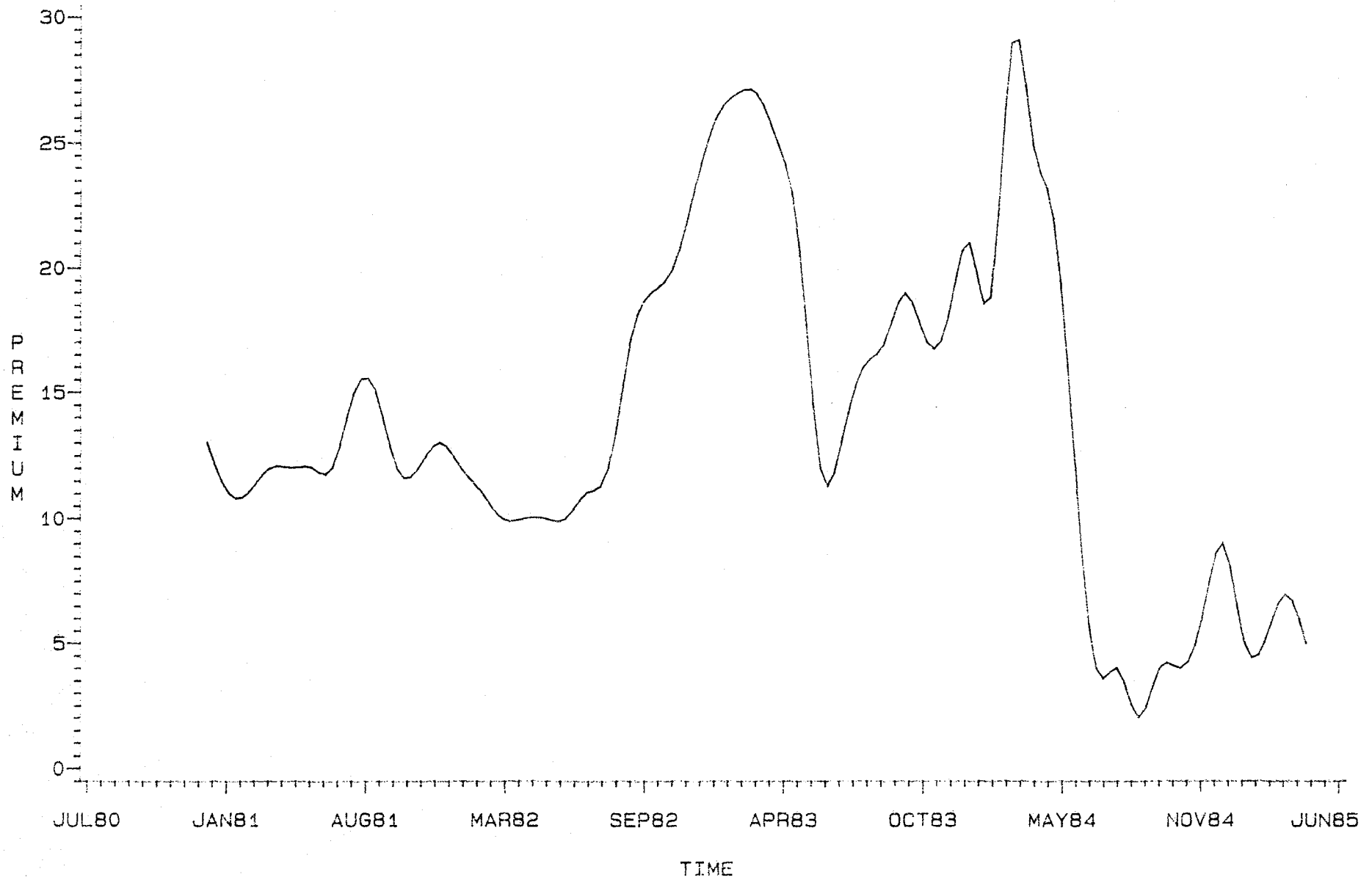
While world market opportunities for grain and oilseeds expanded rapidly during the 1970's, NZ's opportunities for traditional pastoral exports were tending to deteriorate. Towards the end of the decade, Government attempted to support the declining fortunes and made selective moves to bolster the incomes of pastoral farmers. Over this whole period since 1974, the NZ\$/US\$ exchange rate was declining. Even so, the exchange rate was increasingly overvalued throughout the early 1980's as a result of intervention by Government.

The agricultural market environment tended to favour an expanded arable sector and export barley was a leading candidate. First the world market had a premium on barley over maize at the time, NZ was a non-traditional source of supply (embargo), we had the capacity to develop exportable quantities of higher valued malting barley (Figure 2) and there were a large number of farmers who were prepared to expand barley production.

FIGURE 2

MALTING PREMIUM

US\$/TONNE



SECTION TWO

PERFORMANCE AND OPERATIONS, 1980-85

A principal objective of the Society is to maximise the real return to its grower members from the sale of barley and other crops. This task is carried out in a cyclical fashion usually based upon the pool concept. One cycle begins with the signing up of farmers for a new pool for a particular grain and finishes with the repatriation of the proceeds from the sale of the last tonne of grain offered to the pool by the clients.

For performance evaluation purposes, it is convenient to separate the work of the Society into five profit or productivity centres. They are:

- a) Operations and Policy Setting by the Board of Directors
- b) Farmer Contracts and Inventory Control
- c) Grain Marketing
- d) Foreign Exchange Operations
- e) Office Management and Administration

The performance of the Society depends not only on the efficiency with which tasks are performed in each of these areas but also on the degree to which these functions mesh effectively.

In this marketing audit, each of these functional areas will initially be examined separately and finally an overall assessment will be made.

The marketing activities are comprised of functions b), c) and d) above. These activities are carried out each year in a volatile trading environment. Farmer clients have to be convinced that the Society will continue to offer them an excellent marketing arrangement for the pool a year ahead. Other firms are competing for the same clients.

Once a farmer client has contracted to allocate grain from a specified area to the Society for marketing, the Society is accepting the responsibility of marketing the commodity to best advantage. Marketing to best advantage in a volatile market place and exchange rate environment always involves judgement. It is only possible after the pool year has been completed to know with certainty what would have been the best strategy to have followed.

There are two ways to evaluate marketing performance in this type of operating environment. Actual decisions can be assessed against the optimal decisions that could have been taken, had the Board and Management known what was going to happen in the future (at least one year ahead). This evaluation framework is of very limited use because it bears little resemblance to the actual decision making environment and hence provides limited insights into future

opportunities and threats. However, if used with caution this technique may be helpful in clarifying structural change and market evolution.

The more appropriate evaluation framework is to appraise the actual decisions taken and their outcome against alternative decisions or strategies which are based on the same information set that was available at the time the Society actually made decisions. Normally, it is very difficult after the fact to reconstruct historic information of this type unless the firm has had the foresight to record what might have happened if other decisions had been taken (for example, data on lost sales, offer prices for alternative delivery dates or grades etc.)

In the grain business we are fortunate in having data on futures prices for grain and foreign exchange to fill in the information gaps in historic records. Where a future or forward contract was not used by the Society, it represents what might have been achieved instead.

During the pool year, the decision making process at a very basic level consists of a series of daily sell/no sell decisions for grain and foreign exchange based on implicit forecasts of:

- a) the amount of grain that will be made available under the contracts;
 - b) the patterns of world and cereal grain prices for the year ahead;
 - c) the pattern of exchange rate movements for the year ahead;
- and d) the pattern of interest rate movements for the year ahead.

Higher interest rates increase the value of early sales and reduce the real value of late delivery premiums. Rising forward discounts can have the opposite effect on currency transactions. Throughout the year the degree of upside and downside risk can vary for each of these factors. A marketing audit attempts to assess how well these factors were taken into account in the past and to offer suggestions for possible improvement in performance in the future.

SECTION THREE

FARM CONTRACTS AND INVENTORY CONTROL

Table 1 outlines the broad patterns of area committed to the Society's barley pools by clients and the pattern of grain sales for the pool years encompassing the 1981-84 harvests.

The data in this table are taken from summaries of the minutes of Directors' meetings and sales summaries. For this reason the tables are not necessarily complete. The future price data is taken from the maize futures quotations on the Chicago Board of Trade except during the period of the partial grain embargo of the USSR (Oct 80 - Aug 81) when an assessment based on NZ market prices was used.

The rate of farm sign-up has improved to some extent over the four pool years. This may be measured as the proportion of total commitments at drilling time, say September each year. Some deterioration appears to have occurred in the 1983 pool but the situation improved significantly in 1984.

It must be recognised that it will take time for the Society to build confidence amongst growers. The aim ought to be to encourage the earliest possible sign-up. It might be worth considering an early pool(s) with a cut-off date(s) in August/September in addition to normal pools.

The expected farmer supply position is estimated using an expected yield of 4 tonnes/ha. The true supply position was undoubtedly more complex than this calculation implies. Nevertheless it does appear to be roughly in line with expectations at the time. When cumulative sales for the pool year (Column 5) are subtracted from committed supplies, one gets an estimate of unsold committed grain. (In practice a separate record needs to be kept for each grade of grain).

The second important aspect of the farm contracting and inventory situation is the degree of co-ordination between signing farmer contracts and grain sale contracts. When the society signs a farmer contract, it incurs risk or a liability from three major sources. There is the risk that:

- a) the farmer will not or can not deliver the expected yield from the assigned area;
- b) the export market price (US\$) will fall between sign up and the time sales contracts are negotiated;
- c) the value of the New Zealand dollar will rise (appreciate) against the foreign currency used to determine export receipts

TABLE 1: BARLEY MARKETING, 1981-84 (Feed and Malting)

Date	Farmer's Contract Area	Expected Yield t/ha	Expected Supplies t	Sales to Date t	Futures Price (Month) US\$/t	Value Grain Unsold US\$ million
<u>1981 Harvest</u>						
OCT 80	4505	4	18020	0	187(J)	3.37
NOV 80						3.37
DEC 80				18020		0
AUG 81	6012	4.1	24600	24600	159 Actual	0
<u>1982 Harvest</u>						
AUG 81	3533	4	14132	0	123(J)	1.74
SEP 81						1.74
OCT 81	11708	4	46832			5.76
NOV 81						5.76
DEC 81					112(J)	5.25
JAN 82					113(J)	5.29
FEB 82				23000		2.71
MAR 82						2.71
APR 82						2.71
MAY 82				30000	111(J)	1.89
JUN 82						1.89
JUL 82						1.89
AUG 82						1.89
SEPT 82				47000		0
<u>1983 Harvest</u>						
AUG 82	661	4	2644	0	111(J)	0.29
SEP 82						0.29
OCT 82	3802	4	15208			1.69
NOV 82	6144	4	24576		102(J)	2.51
DEC 82	8379	4	33516	24000	100(J)	1.00
JAN 83	9955	4	39820		107(J)	1.71
FEB 83					117(J)	1.87
MAR 83					119(J)	1.90
APR 83					126(J)	2.02
MAY 83			47500	47000	121(J)	0.06
JUN 83			49000			0.24
JUL 83						0.24
AUG 83				49000	142	0
<u>1984 Harvest</u>						
AUG 83				15000	142(J)	0
SEP 83	11900	4	47600		142(J)	4.60
OCT 83	19149	4	76600		138(J)	8.50
NOV 83	23202	4	92800		136(J)	10.58
DEC 83					131(J)	10.19
JAN 84	24615	4	98500	33000	133(J)	8.71
FEB 84					128(J)	8.38
MAR 84					136(J)	8.91
APR 84					138(J)	9.04
MAY 84					136(J)	8.91
JUN 84					136(J)	8.91
JUL 84				54000	123(S)	5.47
AUG 84				60000	117(S)	4.50
SEPT 84				100000	114(S)	0

From this perspective, the Society enters into a speculative position on grain prices (and foreign exchange) from early in the Spring (July/August) except to the extent that sales contracts are signed in parallel with farmer contracts. A rough measure of the size of the speculative position is given by the value of grain unsold (US\$), column seven of Table 1. The value of unsold grain is simply the quantity of grain expected to be supplied by farmers less sales to date, times the value of that grain for delivery after harvest (generally taken as July). Ideally one would like to use the future value of Society grain (based on quotations to it) but in the absence of such data, the Chicago Future price for maize is used as a crude proxy.

From a risk management perspective the 1981 crop was handled well with respect to price risk. Grain sales for the full amount of contracted supplies were arranged in December prior to harvest. In December the speculative price position disappeared. Furthermore, it appears as if the high (US\$3.37 million) price speculative position was in place for only two months. The sales contracts were flexible (14-18,000 tonnes) allowing for some slippage in expected contract supplies.

The sales/supply co-ordination for the 1982 harvest was also handled well bearing in mind it was only the second season of operation. The performance was lower than 1981 with a later initial sale (February v's December) and the last tonnage not sold until September.

The following year 1983 showed a significant improvement. Initial sales were completed in December with the bulk of the crop sold in May. This kept the speculative position to less than US\$2 million in all but two months.

The 1984 year began well with an initial sale in August. However, sales progress did not keep up with the rapid increase in farmer sign-up so that the price speculative position of the Society reached US\$10 million in Nov/Dec. The position was relieved to some extent in January but it remained at a high level until June and was not eliminated entirely until September.

SECTION FOUR

GRAIN MARKETING

4.1 Terms and Conditions

Up until 1985, the Society contracted to sell all grain for export free on board, unstowed and untrimmed from Bluff, Timaru or Lyttelton in US dollars. This has proved to be a low risk procedure that serves the Society and the industry well.

4.2 Markets

Over ninety per cent of barley sales by the Society have been to overseas clients. Local sales have tended to be small and have covered a range of clients.

Over the last few years, all export sales have been contracted through an international agent in return for market intelligence information. Contracts have been arranged through a range of private grain trading houses.

Furthermore, these sales have involved a variety of export destinations for both malting and feed barley, Table 2.

TABLE 2: EXPORT BARLEY ARRANGEMENTS

Crop Year	Export Sales	Number Clients	Export Destinations
1981	1	1	1
1982	2	2	1
1983	3	3	3
1984	7	4	6

4.3 Timing of Sales

There has been a tendency for export sales to occur on or after the month of harvest. The most common month for sales contracts to occur is January (harvest). On five occasions over the last 5 years, contracts occurred prior to the January of harvest. On ten occasions contracts were signed in the February of harvest or later. On six occasions contracts were made in the months of July, August and September following harvest. This distribution of sales is shown in Table 3.

Up until now, the Society has not hedged farmer contracts on the maize futures market.

TABLE 3: DISTRIBUTION OF SALES OVER CROP YEAR

DATE	CROP YEAR				
	1981	1982	1983	1984	1985

Month Before Harvest					

Jul				X	
Aug				X	
Sep					
Dec	X		X		
Jan				XX	XXXX

		HARVEST			
Month After Harvest					

Feb		X			XXX
Mar					X
Apr			X		
Jul				X	
Aug			X	X	
Sep		X		X	
=====					

In this environment, the Society is exposed to price risk while waiting for a marketing opportunity to arise. This is perhaps most important for malting barley where the market is reputed to be more sporadic.

4.4 Market Share of NZ Barley Exports

The Society is the leading NZ exporter of feed and malting barley. Over the crop years 1981-85, the trade statistics (Table 4) reveal that other firms exported only two or three major shipments of barley in addition to small quantities to the Pacific Islands. All other major shipments shown in Table 4 represents sales by the Society.

TABLE 4: TOTAL NEW ZEALAND EXPONENTS UNMILLED BARLEY, QUANTITY
UNIT VALUE, DESTINATION, 1981-85

DATE	QUANTITY (tonnes)	UNIT VALUE (NZ\$/tonne, fob)	DESTINATION
1981			
January	-		
February	-		
March	-		
April	-		
May	33,612	182.7	All
July	-		
August	-		
September	180	200.0	United Arab Emirates
October	-		
November	-		
December	-		
1982			
January	-		
February	-		
March	Neg		Norway
	16.9	500.0	Sweden
April	0.1	566.4	United Kingdom
	23.0	171.7	Singapore
May	22,285.9	180.0	Singapore
	17.5	192.4	Western Samoa
June	-		
July	-		
August	34.9	180.0	Western Samoa
September	18.1	180.0	Western Samoa
October	-		
November	-		
December	18.0	180.0	Western Samoa
1983			
January	-		
February	Neg		
March	5.1	468.8	United Kingdom
	Neg		Norway
	17,000.0	185.0	Singapore
	17.0	180.0	Western Samoa
April	Neg		French Polynesia
	17.3	180.0	Western Samoa
May	54.2	174.4	Phillipines
	17.7	180.0	Western Samoa
June	17.7	180.0	Western Samoa
July	23,195.6	170.6	Taiwan
August	726.0	178.0	New Caledonia
September	773.5	184.1	New Caledonia
October	24,445.3	196.9	Belgium
November	17.3	202.9	Western Samoa
December	-		

continued over

Table 4 continued

DATE	QUANTITY (tonnes)	UNIT VALUE (NZ\$/tonne, fob)	DESTINATION
1984			
January	17.4	203.0	Western Samoa
February	Neg		Canada
	17.1	203.0	Western Samoa
March	-		
April	23,750.0	247.1	Saudi Arabia
	17.0	220.0	Western Samoa
May	8.0	540.0	Mauritius
	52.6	214.0	New Caledonia
	23,775.5	182.5	Saudi Arabia
	17.2	220.0	Western Samoa
June	12,500.0	269.4	Unknown (EEC)
July	90.0	263.9	New Caledonia
	24,744.9	179.8	Saudi Arabia
	21,440.9	241.0	Singapore
	20,000.0	261.4	Taiwan
	12,600.0	229.8	United States of America
	16.9	220.0	Western Samoa
August	52.6	214.0	New Caledonia
	17.8	220.0	Western Samoa
September	790.3	199.5	New Caledonia
	17.8	200.0	Western Samoa
October	Neg		New Caledonia
November	26,100.0	206.2	Singapore
	9,700.0	204.0	United States of America
December	35.3	200.0	Western Samoa
1985 (Provisional)			
January	6.0	365.0	Australia
	36.0	200.0	Western Samoa
February	Neg		West Germany
	53.3	500.0	Ireland
	23,750.0	236.4	Saudi Arabia
March	Neg		United Kingdom
	4.0	365.0	Mauritius
	82,426.1	200.3	Saudi Arabia
	24,469.2	200.0	U.S.S.R.
April	344.4	300.0	United Kingdom
	24,000.0	216.1	Jordan
	27,500.0	211.2	Saudi Arabia
	3.9	434.9	United States of America
	35.8	222.8	Western Samoa

Source: Department of Statistics, External Trade Statistics, INFOS system.

Footnotes:

- means zero
- neg means quantities < 1 tonne

4.5 Export Barley Pricing

The FOB export prices negotiated at contract date by the Society have been compared with two indicator prices of competing exporters; the price quotations for feed and malting barley exports by the Western Australian Grain Pool and the export price of US maize from Gulf Ports. These comparisons are shown in Table 5 as Society percentage premiums (or discounts) over the Australian and US prices. The comparisons with WA Grain Pool prices are also shown in graphical form in Figures 3 and 4. The WA pool prices are shown by the continuous line and sale prices by the Society as a cross or an asterisk.

The WA Grain Pool is a major competitor with the Society. Its price quotations probably exaggerate actual transactions prices because they are offer prices. For this reason, the positive premiums (to the Society) probably underestimate the pricing performance of the Society and the negative premiums probably overestimate the degree of discounting by the Society.

The export prices achieved by the Society represent near future prices because they refer to future deliveries rather than spot sales.

The Society's feed barley sales have been at a discount relative to the WA Grain Pool of 4.9 per cent. The Society on average has realised a premium of 1.2 per cent on malting barley sales. Given the bias mentioned above and the transport cost gradient between New Zealand and Perth for many markets this is an excellent result.

The US comparison is far more tentative for a variety of reasons. It shows a switch from largely premiums from 1980-83 to largely discounts in 1984-85. Part of the explanation for this may be the effect of the growth in Australian export supplies in recent years.

TABLE 5: SOUTH ISLAND BARLEY SOCIETY EXPORT PRICE
PREMIUMS (+) OR DISCOUNTS (-) OVER WORLD MARKET INDICATORS

Year	Contract Month	Crop	Western Australian Grain Pool Quotations Barley, f.o.b. Freemantle		US Maize No. 2 Yellow f.o.b. Gulf
			Feed	Malting	
1980	DEC	80	+3.8		+22.2
1982	FEB	82	-4.9		+17.4
	SEP	82		-2.9	+35.0
	DEC	83		+0.6	+37.6
1983	APR	83	-7.3		-14.9
	JUL	83/84		+8.3	+2.1
	AUG	83	-11.6	+10.3	-28 to par
1984	JAN	84		-4.4	+4.8
	JUL	84	-2.7		-24.3
	AUG	84	-4.4		-21.7
	SEPT	84		+5.1	-7.5
1985	JAN	85	-13.0	-8.1	-22 to -11
	FEB	85	+1.1	-2.0	-20 to -18
	MAR	85		+3.8	-11.5

SOURCE: Computed on the basis of monthly average US dollar prices from Bureau of Agricultural Economics, Canberra and Foreign Agricultural Circular, USDA, Washington

FIGURE 3

EXPORT PRICE RELATIVES, MALTING BARLEY

US\$/TONNE

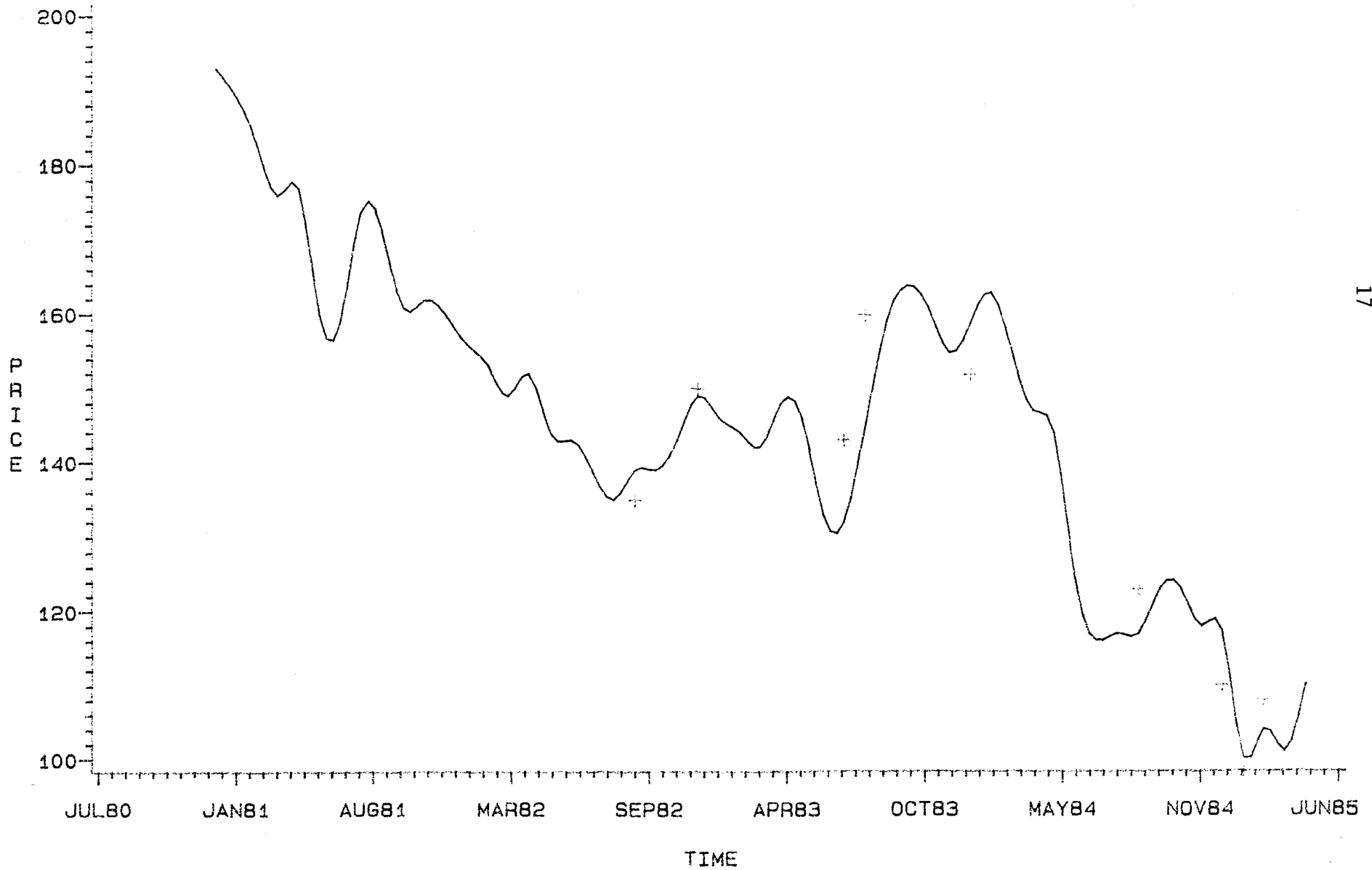
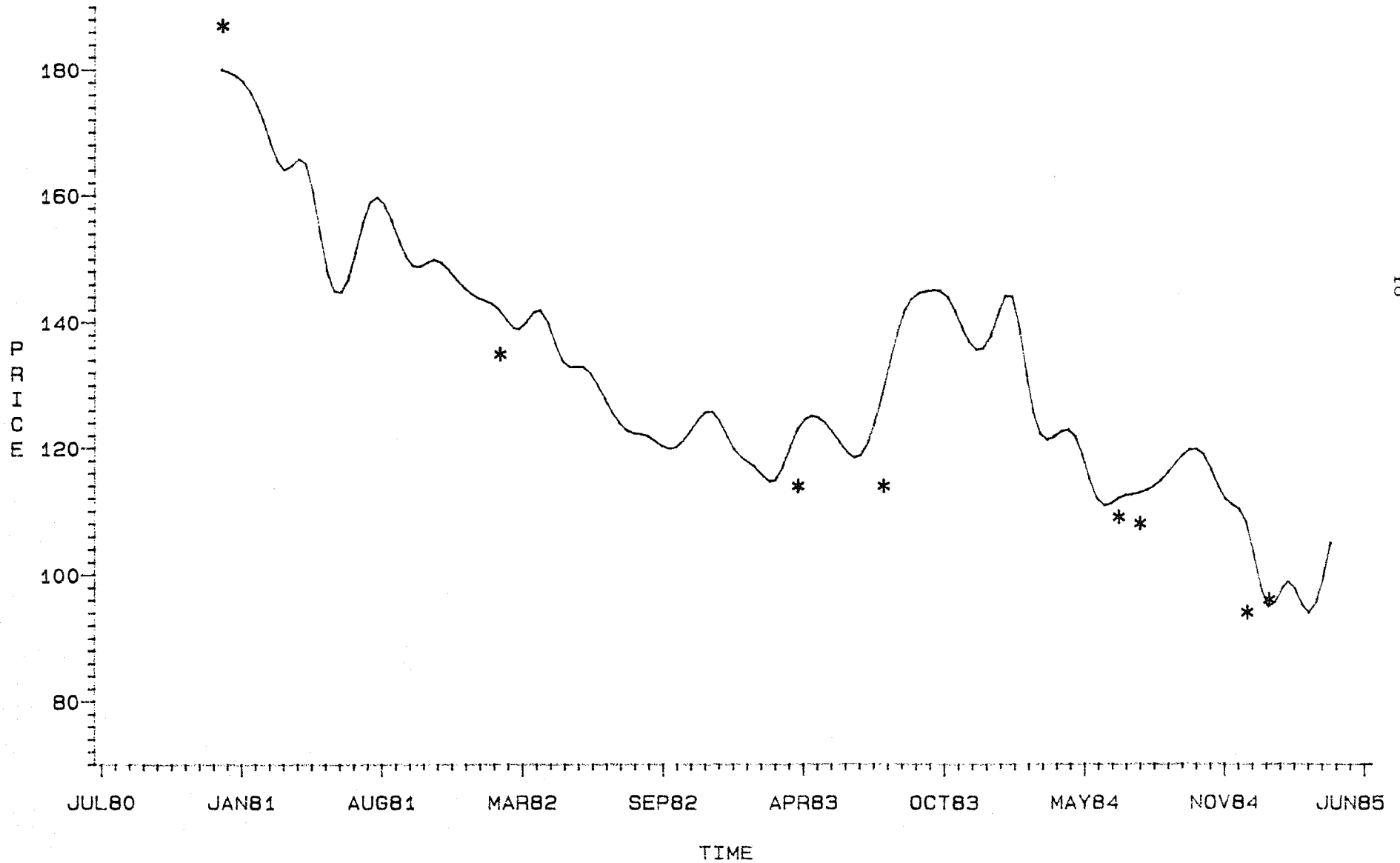


FIGURE 4

EXPORT PRICE RELATIVES, FEED BARLEY US\$/TONNE



SECTION FIVE

FOREIGN EXCHANGE OPERATIONS

The currency contracts entered into by the Society between 1980 and 1984 comprise three types of transactions: offshore borrowing, current spot transactions and forward cover.

The forward cover contracts are closely tied to sales contracts. As such they form an important part of the sales strategy. Given the fluctuations that have occurred in the foreign exchange market, the forward cover operations are part of the risk management process. The strategy that has been used can be evaluated in the same way as export sales arrangements.

The borrowing and spot transactions can not be similarly evaluated without the term and repayment terms of the loans and the context of the transactions. In any event the forward contracts represent the bulk of the transactions. For these reason no attempt is made to evaluate the borrowing transactions.

Given the payment terms used by the Society it is exposed to foreign exchange risk whenever the US dollar value of undelivered grain and net overseas balances exceed the current amount of forward cover. This foreign exchange exposure can be measured in dollars or as a percentage of the value of undelivered grain. The latter measure is called the degree of foreign exchange exposure.

The degree and amount of foreign exchange exposure of the Society has been estimated on a monthly basis for the 1981 and 1982 harvests and is given in Table 6. In this table, expected supplies have been taken from Table 1 and valued at the future market price. The third and fourth columns detail current and cumulative deliveries (exports and local market) all valued in US dollars. The quantity and value of undelivered barley is obtained simply by subtracting deliveries to date from supplies.

The value of undelivered grain is a gross measure of foreign exchange exposure. Net foreign exchange exposure (final column) is obtained by subtracting outstanding forward exchange contracts from the value of undelivered grain.

In the 1981 crop year, the Society was exposed 100 per cent to exchange rate changes during October and November. This exposure was reduced to 5 per cent in December when forward cover was taken out in conjunction with the export sales contract. Subsequently, the exposure rose slightly as additional grain supplies came to hand but as of March 1981, the degree of foreign exposure was zero.

The first point to note is that as soon as grain supplies are committed to the Society, the Society (or the growers) are subject to foreign exchange risk. This does not mean that forward cover needs to be obtained necessarily, but the risk of New Zealand dollar appreciation is present. The amount of cover to be obtained is related to the perceived riskiness of the exposure. Second, changes in financial institutions make it considerably easier to offset US dollar exposure today than was possible in 1981/82. This is because the US dollar futures market is a flexible tool to assist in coping with these risks and one that is particularly useful early in the season prior to the negotiation of sales contracts. The forward market is most suitable for cover once contracts are in place.

TABLE 6: FOREIGN EXCHANGE EXPOSURES ON BARLEY 1981-82

Month	Expected Supplies		Deliveries This Month		Deliveries To Date		Undelivered		Forward Cover, US\$m		Foreign Exchange Exposure US\$m (% Undelivered)
	t	US\$m	t	US\$m	t	US\$m	t	US\$m	Month	To Date	
1981 Harvest											
Oct 80	18020	3.37			0	0	18020	3.37	0	0	3.37 (100%)
Nov 80	18020	3.37			0	0	18020	3.37	0	0	3.37 (100%)
Dec 80	18020	3.37			0	0	18020	3.37	3.20	3.20	0.17 (5%)
Jan 81	18020	3.37			0	0	18020	3.37	0	3.20	0.17 (5%)
Feb 81	24600	3.91			0	0	24600	3.91	0	3.20	0.71 (18%)
Mar 81	24600	3.91	7400	0.71	7400	0.71	17200	3.20	0	3.20	0 (0%)
Apr 81	24600	3.91			7400	0.71	17200	3.20	0	3.20	0 (0%)
May 81	24600	3.91	17200	3.20	24600	3.91	0	0	0	3.20	0 (0%)
1982 Harvest											
Aug 81	14132	1.74			0	0	14132	1.74	0	0	1.74 (100%)
Sep 81	14132	1.74					14132	1.74	0	0	1.74 (100%)
Oct 81	47000	5.76					47000	5.76			5.76 (100%)
Nov 81	47000	5.76									5.76 (100%)
Dec 81	47000	5.25									5.25 (100%)
Jan 82	47000	5.29									5.29 (100%)
Feb 82	47000	5.29							1.25	1.25	4.04 (76%)
Mar 82	47000	5.29					47000	5.29	0	1.25	4.04 (76%)
Apr 82	47000	5.29	23100	3.10	23100	3.10	23900	2.19	1.38	2.63	0 (0%)
May 82	47000	5.22	6900	0.21	30000	3.31	17000	1.91	-2.63	0	1.91 (100%)
Jun 82	47000	5.22							0	0	
Jul 82	47000	5.22									
Aug 82	47000	5.22									
Sep 82	47000	5.22									
Oct 82	47000	5.22									
Nov 82	47000	4.70									
Dec 82	47000	4.70									
Jan 83	47000	5.03									1.91 (100%)
Feb 83	47000	5.50					17000	2.19			2.19 (100%)
Mar 83	47000	5.59	17000	2.28	47000	5.59	0	0			0 (0%)

The Society has not consistently covered foreign exchange exposure after harvest as the estimates for 1982 show. The degree of exposure was high until April. It was temporarily eliminated and then remained at 100 per cent for the following ten months.

In considering these two years, does it appear that the pattern of exposure was appropriate? First, the 1981-84 period was a difficult one to develop a foreign exchange policy as Table 7 shows. The forward premiums increased rapidly over the period to devaluation in 1984 and still they were not able to keep up with changes in the spot rates. Looking back it would have been better not to have had forward cover over much of this period. However, that is not the recommendation for future Society policy. In retrospect, the rising premiums in the forward market look startling and do point towards the collapse that was to come. Such an outcome is never certain before the event however.

While the N.Z. Government maintains a floating exchange rate policy, the value of the exchange rate against the US dollar is highly likely to both rise and fall frequently. It is imperative that the Society know on a daily or weekly basis, the degree of foreign exchange exposure of its operations taken as a whole. Secondly, it is highly desirable that management be protected from adverse events that result from a high degree of foreign exchange exposure when there is a chance of the NZ dollar appreciating. This can be done by means of regular direction from the Board of Directors on the degree of exposure they require. It is the Board that must accept such responsibility.

As mentioned earlier the US dollar was tending to appreciate over the period 1981/82. Had the Board believed that this trend would continue it would have been possible for it to instruct management to keep the degree of exposure at a high level, say at 50 per cent. In fact, the policy of the Society was to hedge all confirmed sales of grain on or about the date of sale. While this policy was probably not the ideal strategy in the fixed and crawling peg system that operated prior to 1985 it is more appropriate under the present floating exchange rate system.

With a floating exchange rate system there is a strong tendency for the rate to fluctuate (over a period of months) both positively and negatively around its trend value. This is due to the major effects that short-term capital flows and expectations have on the exchange value. However, there is a serious question as to the appropriate point to hedge the future currency contracts. It is most unlikely that the date of sale is always the optimum because as we have seen, the sale may take place many months after the foreign exchange liability is incurred.

TABLE 7: FORWARD EXCHANGE RATES
(\$US/\$NZ)

MONTH	SPOT MARKET		FORWARD MARKET	
	(midrate)		90 day	180 day
	<u>Reserve Bank Rates</u>		Buy/Sell (Premiums - subtract)	Buy/Sell
1981	J	.9611	Par/48	48/48
	F	.9302	P/47	47/47
	M	.9212	P/23	46/Par
	A	.9020	23/P	45/P
	M	.8794	P/22	P/44
	J	.8581	21/P	43/P
	J	.8396	63/31	126/63
	A	.8204	72/31	144/62
	S	.8289	93/P	187/P
	O	.8293	93/P	187/P
	N	.8315	94/P	187/P
	D	.8235	93/P	185/P
1982	J	.8116	91/P	183/P
	F	.7890	94/P	187/P
	M	.7785	102/P	204/P
	A	.7637	100/P	200/P
	M	.7719	101/P	203/P
	J	.7531	108/P	217/P
	J	.7388	115/P	231/P
	A	.7266	136/P	272/P
	S	.7232	140/18	280/36
	O	.7171	139/18	278/36
	N	.7121	156/18	312/86
	D	.7234	172/36	344/72
1983	J	.7315	174/37	347/73
	F	.7222	172/36	343/72
	M	.6602	173/37	347/66
	A	.6582	173/49	346/99
	M	.6641	174/50	349/100
	J	.6523	245/82	489/163
	J	.6526	294/131	587/261
	A	.6494	292/130	584/260

Trading Ceased Temporarily

Oct 83 - May 84 -18% -8% -18% -8%

1984 June -12% -20% -25 %

July -25 % -25 %

July 15 Devaluation trading ceased

	SPOT MARKET		FORWARD MARKET	
	(midrate)		90/day	180/day
	<u>Private Market Rates</u>			
	Buy/Sell			
1984	Aug	.5060/.4960	.5665/.4925	.5020/4850
	S	.4963/.4863	.4955/.4835	.4948/4798
	O	.4904/.4804	.4844/.4729	.4824/4660
	N	.5010/.4910	.4957/.4837	.4930/4780
	D	.3890/.4790	.4839/.4724	.4773/.4656
	J	.4732/.4632	.4647/.4534	.4567/.4447
	F	.4590/.4490	.4487/.4387	.4405/.4280
	M	.45/.44	.4380/.4145	.4305/3875
	A	.4620/.4520	.4505/.4370	.4375/.4220
	M	.4520/.4420	.4360/.4220	.4225/.4065
	J	.4555/.4455	.44/.4260	.4260/.4100
	J	.5050/.4950	.4850/.4720	.4725/.4575

SOURCE: Reserve Bank Of NZ, Andrew Hopkinson, pers. comm.

SECTION SIX

BARLEY POOL RETURNS

6.1 Farmer Returns

The terms and conditions of the barley pools operated for farmers by the Society are presented in detail in Tables 8, 9 and 10. It is not possible to compare the performance of the Society's pool directly with marketing arrangements by other firms because the terms and conditions can vary considerably. However, in this report we have estimated the returns offered by the society for malting and feed pools for 1981-85 with the returns of other pool marketers.

The comparative results in Table 8 show that the Society has performed very well relative to other pools, especially in the early years. Pool returns have been consistently higher for the Society particularly for malting barley which has become a specialty product.

Details of the payment procedures are given in Tables 9 and 10.

TABLE 8: **Estimated Comparative Net Farmer Returns by Marketing Agent, Barley, 1982-85**

South Island

=====			
Agent			
Crop Year	Barley Type	'Farmlands'	Other Floating Price Pools

\$/tonne f.a.s. at 1 April (1)			
1981	Feed	179	144
1982	Feed	157	148
1983	Feed	149	138
1983	Malting	176	155
1984	Feed	185	183
1984	Malting	204	189
1985	Feed	184	176
1985	Malting	188	179

Note

- (1) The returns are estimated as being equivalent to the net return after interest costs, free along side ship, nearest port as at 1 April following harvest. No account is taken of farmer storage costs which will vary according to date of delivery and type of storage used. Farmer interest costs were taken as 18% p.a. for years 1981-84 and 25% in 1985.

Source: Table 9 - 10 following

TABLE 9: Barley Pool Payments, 1981-85, Farmlands Grain

Year	Barley	Payment	Date of Payment	Amount
				\$
1981	Feed	Initial	1 June	172.00
		Final	10 December	10.63
		Storage (1.5 monthly at \$2.00)		3.15
1982	Feed	Initial	1 August	100.00
		Interim	31 August	52.50
		Final	31 May 1983	10.00
		Storage (4 months at \$2.00/t/m)		8.00
1983	Feed	Initial	20 July	100.00
		Interim	1 August	42.00
		Final	15 December	9.00
		Storage (4 months at \$2/t/m)		8.00
1983	Malting	Initial & Interim	13 September	172.00
		Final	15 December	12.22
		Storage (4.5 months at \$2/t/m)		9.00
1984	Feed	Final	21 August	190.17
		Storage (4.5 months at \$2/t/m)		9.00
1984	Malting	Initial	15 July	130.00
		Interim	28 September	50.00
		Final	15 December	30.21
		Storage (3.5 months at \$2.5/t/m)		8.75
1985	Feed	Initial	1 May	110.00
		Interim	21 May	60.00
		Final	2 December	20.03
		Storage (30 days at 7c/t/d)		2.10
1985	Malting	Initial	1 June	130.00
		Interim	21 October	50.00
		Final	18 December	20.57
		Storage (60 days at 8c/t/d/)		4.80

Source: Farmlands Grain (NZ) Society Ltd, Ashburton

TABLE 10: Barley Pool Payments, Other Floating Price Pools

Other Floating Price Pools				
Year	Barley	Payment	Date of Payment	Amount
1981	Feed	Final	1 June	148.00
1982	Feed	Final	1 June	153.00
1983	Feed	Final	1 June	142.00
1983	Malting	Initial	1 June	100.00
		Final	15 November	65.00
1984	Feed	Initial	5 May	108.00
		Interim	24 August	40.00
		Final	14 December	45.00
1984	Malting	Initial	5 May	108.00
		Interim	24 August	40.00
		Final	14 December	52.95
1985	Feed	Initial	9 April	108.00
		Interim	19 August	60.00
		Final	7 November	17.58
1985	Malting	Initial	9 April	108.00
		Interim	19 August	60.00
		Final	7 November	20.97

Source: 1981-83 Farmlands Grain, 1984-85,
Cereal Exports, Christchurch

Notes: These pools included a number of marketing agents other
than Farmlands Grain

6.2 Administration and Marketing Costs

The efficiency of the Society can be measured finally by the productivity of the administrative systems. This productivity can be measured as the costs of getting the grain to market. In the case of export grain this cost includes expenses from the time of contracting with farmers to fob the export port. These costs can be subdivided into the administrative cost directly associated with operating the Society and its offices, port or fob'ing charges incurred in loading for export and other marketing costs associated with arranging export sales. These costs are presented in Table 11.

Total marketing and administration rose initially from the first year of operation but have since steadily declined from 8.8 per cent of receipts in 1982 to 7.1 per cent last year. Port charges have taken an increasing share of total costs and this is a disturbing trend. In 1981, fob'ing charges were 3.4 per cent of total sales but rose to 5.3 per cent in 1984. Other marketing charges have remained constant in relative terms.

Table 11: Administration and Marketing Costs to FOB

Crop Year (Pool)	Administration (\$ Revenue)	Fob'ing Charges	Other Marketing	Total Costs	Revenue	Cost % Revenue
	-----\$ thousands-----					
1981 (feed)	67 (1.5%)	154	17	238	4553	5.2
1982 (feed)	170 (1.8%)	610	36	816	9,304	8.8
1983 (feed)	76 (1.6%)	302	21	400	4,706	8.5
1983 (malting)	65 (1.3%)	316	25	405	4,971	8.1
1984 (feed)	84 (1.4%)	309	30	423	5,978	7.1
1984 (malting)	286 (1.3%)	1,152	107	1,546	21,674	7.1