THE NEW ZEALAND

POTATO MARKETING SYSTEM

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August 1982
Research Report No. 130

Agricultural Economics Research Unit
Lincoln College
Canterbury
New Zealand

ISSN 0069-3790

THE AGRICULTURAL ECONOMICS RESEARCH UNIT

Lincoln College, Canterbury, N.Z.

The Agricultural Economics Research Unit (AERU) was established in 1962 at Lincoln College, University of Canterbury. The aims of the Unit are to assist by way of economic research those groups involved in the many aspects of New Zealand primary production and product processing, distribution and marketing.

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The AERU, the Department of Agricultural Economics and Marketing, and the Department of Farm Management and Rural Valuation maintain a close working relationship on research and associated matters. The Unit is situated on the 3rd floor of the Burns Wing at the College.

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ACKNOWLEDGEMENTS

Gratitude is expressed to the New Zealand Potato Growers' Federation for their foresight in recognising the need for this research, their financial support of the project and their permission to publish the report.

Sincere thanks is expressed to the auction companies in Auckland, Hamilton, Wellington, Christchurch and Dunedin for allowing access to potato sales information and to those potato growers who made the time available to fill in the growers' survey questionnaire.

The author wishes to gratefully acknowledge the considerable effort put into the information gathering and analysis for this research by Jenette Biggs, a research assistant employed on this project. Her contribution, especially in the gathering of information from the auction companies and in the computer analysis, was invaluable.

Extensive data manipulation and computer coding for the analysis of the auction company information and the growers' survey was required. This was quickly and accurately completed by Susan Sheppard and Margaret Grigg and their perserverance and dedication is hereby acknowledged.

PREFACE

A significant part of the A.E.R.U. research programme is associated with marketing. Within this programme the need for continued study of marketing systems for primary produce is well represented. This need is recognised for both local and export oriented marketing systems.

In 1979, the New Zealand Potato Board commissioned the A.E.R.U. to carry out a consumer survey of Christchurch and Auckland households with a view to obtaining a description of potato consumption patterns, identifying the importance of potato competitors and identifying market areas that were likely to be the most responsive (in terms of increased consumption) to promotional effort. The findings of this research were published as A.E.R.U. Research Report No. 105.

In 1981, The New Zealand Potato Growers' Federation requested the A.E.R.U. to carry out a study of the New Zealand potato marketing system, intended to identify the present level of use of the various marketing channels and to identify key features of the New Zealand potato marketing system.

This publication presents the findings of that research.

P. D. Chudleigh
Director

SUMMARY

This report presents a description of research methods used to investigate the structure of the New Zealand potato market, the results of that research, implications that can be drawn from the results, and identifies areas where further research is required.

The investigation of the marketing system was carried out using three surveys: a survey of growers, a survey of auction companies and a survey of retailers.

The growers survey was conducted by mail with questionnaires being sent to all potato growers who registered potato areas between 1 April 1979 and 31 March 1981. This population totalled 885 with 143 in Ward 1, 301 in Ward 2 and 441 in Ward 3. The questionnaire was designed to obtain information on grower production, use of different sales channels, returns for each sales channel, opinions on the marketing system and opinions on the New Zealand Potato Board and New Zealand Potato Growers' Federation activities. In addition, some limited information on seed potato sales and purchases was obtained.

The auction companies in Auckland, Hamilton, Wellington, Christchurch and Dunedin were surveyed by personal visits and interviews with company management. A weekly analysis of the potato sales of each company was made using computer records (where available) and "account sale" documents for the two years ending 30 June 1980 and 30 June 1981. The analysis involved the extraction of weekly sales volumes (in bags) and weekly revenue. Discussions with company management involved a review of the potato selling methods used by each company and general discussion on the potato market situation. In addition, weekly information on the Auckland pre-pack operation at Pukekohe was collected.

In each of the five centres that the auction company surveys were carried out, a telephone survey of a sample of potato users/ buyers was undertaken. This survey covered the retail outlets for potatoes, fast food shops, institutions, hotels and restaurants and caterers. The survey was intended to provide information on the

sources of potatoes used by each sector and an estimate of the volume of potatoes used by each sector.

The results of the growers' survey indicated that there are large differences between Wards with regard to many aspects of potato production and sales. Average grower production (annual) ranged from 608 tonnes in Ward 1 to 128 tonnes in Ward 3. Production was spread over the year in a seasonal pattern for all Wards but this was much more marked in Ward 3 where 71 per cent of production occurred in the quarter ending 30 June. For Ward 2, 37 per cent of production occurred in the June quarter and only 23 per cent of Ward 1 production occurred in that quarter. In contrast, 38 per cent of Ward 1 production occurred in the quarter ending 31 December. The sales distribution followed a similar pattern with only Ward 3 growers exhibiting a degree of on farm stock holding by reducing the June quarter sales to 62 per cent of total sales (versus 71 per cent of production).

Growers use, on average, two sales channels for potatoes. The auction commission sale is used by nearly 60 per cent of growers with over 80 per cent of Ward 1 growers using this channel, about 58 per cent of Ward 2 growers and 51 per cent of Ward 3 growers. In Ward 1, pre-packers are used by about 30 per cent of growers, 19 per cent in Ward 3 and 12 per cent in Ward 2. Gate sales are used by 48 per cent of Ward 3 growers, 36 per cent of Ward 2 growers and 23 per cent of Ward 1 growers. The use of traders is important in all Wards, but especially so in Ward 2.

When the distribution of sales volumes is considered, the auction commission sale handles approximately 35 per cent of total sales; the proportions by Ward are 48 per cent, 28 per cent and 39 per cent respectively for Wards 1, 2 and 3. The only other major outlet in Ward 1 is pre-packer purchases taking 27 per cent of sales. In Ward 2, traders take 32 per cent of sales and processors take 14 per cent of sales. Processors take 21 per cent of sales in Ward 3.

The grower returns by sales channel indicate that for Ward 1, sales to pre-packers and gate sales provide a higher average return than auction sales and in Ward 2, all annual average returns (except for sales to processors) exceeded the auction sale return. In Ward 3, sales to processors resulted in much lower returns than all other sales, while the return from other sales were all reasonably even with gate sale returns being slightly higher.

Growers generally were in favour of the implementation of some control over the marketing system. Approximately 24 per cent of respondents wanted better grading controls and minimum standards of presentation, a further 18 per cent wanted a guaranteed floor price, 10 per cent wanted a single marketing board and 8 per cent wanted fixed prices (total 60 per cent). The preference for more control was stronger amongst the larger growers (producing more than 100 tonnes per year). When asked whether a Potato Marketing Board (which acquires all potatoes) is required, 27 per cent of respondents agreed (35 per cent, 19 per cent and 30 per cent for Wards 1, 2 and 3 respectively).

Comments on the performance of the Potato Board and the Potato Growers' Federation were generally neutral with the Potato Growers' Federation tending to attract a higher proportion of "poor" responses than "good". Of the respondents, 59 per cent thought the existence of three potato industry groups was unsatisfactory with 82 per cent of these wanting only one body.

The auction company survey revealed significant differences between the North Island and South Island centres surveyed both in terms of prices achieved and selling practices. In Auckland, two of the three auction companies operated an auction system for potatoes while the third company dealt with potatoes through a trading operation. Prices achieved for the Auckland area at an average of $4.37 and $4.40 per 20 kg bag for 1979/80 and 1980/81 respectively were comparable to prices in Hamilton and Wellington. The central potato market in Auckland is characterised by a high proportion of sales being made through commission buyers with very little supermarket activity. The bulk of the supermarket supply occurs from the pre-pack operations at Pukekohe. Approximately one million bags of potatoes are sold through the central system annually with a further million (bag equivalents) being handled by the Pukekohe pre-pack operations. None of the Auckland companies has a stockholding policy.

The Hamilton auction companies handled approximately 400,000 bags of potatoes in each year. Annual average prices were $4.16 and $4.32 for 1979/80 and 1980/81 respectively. Both companies in Hamilton operate an auction system and they both indicated a willingness to hold stocks in order to maintain prices. The Hamilton market experiences a substantial influence from direct sales from the Rangitikei area and significant quantities are purchased from outside the central system by an independent pre-packer/wholesaler. One auction company operates a pre-pack activity.

In Wellington, approximately 680,000 bags of potatoes are sold annually by the central market companies. The average prices for the two years were $3.97 and $4.50 for 1979/80 and 1980/81 respectively. One company operates a set price system and the other companies operate auction systems. Three of the companies are prepared to hold stock while the fourth has a policy of daily floor clearance. In addition to the central market companies, a company in Lower Hutt has a major influence on the market. This company operates a set pricing policy and sells mainly pre-packs. It has almost exclusive supply to one major supermarket chain. Commission buying is not a feature of the Wellington market but substantial sales are made to buyers using the telephone order facility made available by all the Wellington auction companies.

The Christchurch central market handles approximately 550,000 bags per year. Average prices were $2.87 (in 1979/80) and $2.93 per bag (in 1980/81). Both companies operate a set price system but expressed a desire to "clear the floor" each week. They have a degree of supply control to enable them to maintain the prices established. Some commission buying is evident in the Christchurch market and wholesale companies also purchase a large proportion of total sales. It was considered that a substantial proportion of potato sales are made outside the central system and that generally prices are low because of oversupply and poor quality.

Both the Dunedin central market companies operate a set price system and are prepared to hold a reasonable level of stock. Their supply control is strong and average prices achieved were $3.82 and

$3.95 per bag for 1979/80 and 1980/81 respectively for sales of approximately 240,000 bags per year. Pre-pack operations are undertaken by both companies and a large volume of potato sales are made on an order basis. Commission buyers are not important and one company operates an order company subsidiary. There are only minor influences on the market by supplies outside the central system.

The telephone survey of potato retailers and users indicated that the largest group buying from the central markets in all cities was the fruiterers. Fast food outlets were also important buyers. (In Christchurch information on fast food purchasing patterns was difficult to obtain). In Auckland, the use of commission buyers by fruiterers and fast food outlets was important. The supermarkets did not normally participate in the central market system, except where pre-pack potatoes were available, buying most of their requirements direct from the pre-pack operations. Other smaller potato users used a range of purchasing techniques including direct from growers, from wholesalers and through commission buyers. In Dunedin, almost all potato users and retailers purchased their requirements through the central market.

The examination of the market system allows the conclusion to be drawn that potatoes should be treated as divisible into two products: new potatoes and main crop potatoes. It appears that different demand functions exist for the two potato types and that different supply functions also exist. Regional differences between supply functions are also apparent.

It is apparent that demand for main crop potatoes is relatively inelastic with respect to price, and therefore variations in supply will have a considerable effect on the price. In this situation, an auction approach to selling may not be very useful as, unless supply is strictly controlled, price fluctuations resulting from supply variation can be large. It is probable that a set price system accompanied by a stockholding policy and supply control would be more useful in terms of encouraging use of the central market and in terms of achieving stable returns to growers.

For new potatoes, demand appears to be more responsive to price movements and therefore supply control is not so critical. A continuation of auction selling methods could therefore be justified.

The impact of the distribution allocation system for oranges and bananas is thought to be important. In some situations, it appeared that potato sales were being used to increase the sales turnover in order to achieve a higher allocation of oranges and bananas. This resulted in the achievement of lower prices but greater throughput at the expense of other auction companies.

Significant market changes have been occurring in the retail area. The growth of supermarket activity and their desire for a standardised product, in the form of a high quality pre-pack article, has led to the withdrawal of supermarket demand from the auction system. The setting of prices for pre-packs based on the auction price therefore results in a price set without the direct influence of supermarket demand. It will be necessary for growers and their representatives to consider whether the 20 kg bag is an appropriate standard quantity for labelling requirements and unit sales or whether this should be replaced by the pre-pack unit.

The range of sales channels used by growers indicates their desire to take advantage of all the options available in the anticipation of a higher return. The evidence suggests that the central markets do not always achieve the best returns for growers. This could mean that sales through the central market are of potatoes of a poorer quality and/or that supply is not adequately controlled. Quality is an important feature of the market and efforts must be made to ensure that the highest possible quality standards are maintained through a high standard of grading. Where potatoes are poorly graded the price achieved will normally be the price for the lowest quality potatoes, not the better ones.

Changes in the retail sector could make the use of centralised markets inappropriate. Where supermarkets require a standard product line, they will be interested in buying product by sample and on description. This could result in the direct delivery of appropriate product from growers to supermarkets (via a pre-pack plant) without the necessity for prior inspection and movement through a central market system. Such a situation can only develop effectively where very stringent grading standards are enforced.

In order for better prices to be achieved for potatoes and to increase the demand for potatoes over the longer term, it is necessary that the supply of potatoes be better regulated to match the demand, that potatoes be graded to a high specification level and that potatoes be promoted to facilitate an increase in demand. The structure of the present marketing system means that potatoes are disposed of for what can be obtained for them without any significant controlled marketing effort to influence buyers to pay or purchase more. The auction system does not appear to be appropriate. Where the demand is unknown and supply is variable, an auction system is a useful means of equating supply and demand at a price. For potatoes, supply and demand are able to be identified, therefore a set price system can be used. Relatively constant prices encourage buyer confidence in the market and can result in higher overall demand plus improved prices.

The research carried out on the potato market, both the consumer research and the research into the marketing system, leaves four areas for further research activity. There is a need for more intensive research into the derivation of potato demand functions and the identification of regional differences. Also, the supply of potatoes has not been researched adequately and needs to be investigated before clear direction can be given in the field of marketing control. A major market sector that has not been reviewed adequately is the processed potato market. Research is required to identify the range of products supplied, the demand for those products and the likely future development of this sector. The distribution costs and resale margins for potatoes have not been identified and research in this area would allow recommendations to be made on more cost efficient systems.

CHAPTER 1

INTRODUCTION

The New Zealand potato industry is thought to be moving into a period of change. Historically, potatoes have been sold mainly through the traditional market outlets of the auction centres, either as a commission sale on behalf of the growers, or as a purchase by the auction centre companies. Over recent years, however, this system has been altered by the growth in the importance of other market channels. This has especially been the case with regard to the growing influence of supermarkets on the retail scene and their move away from the auction buying method (in some areas), and the apparent movement of growers away from the auction system to sales to non-auction centre traders and direct sales to retail outlets and potato processors.

Associated with changes in traditional selling methods has been the alteration of the potato distribution pattern in New Zealand. Historically, there has been a flow of main crop potatoes from the Canterbury region to Wellington, and Rangitikei potatoes have moved through the Auckland markets to make up shortages in that area. The expanded use of the higher producing Rua variety in Pukekohe (and elsewhere) has resulted in the Auckland region becoming largely self sufficient in potatoes which has led to increased sales of Rangitikei potatoes in the Wellington area and a reduced demand for Canterbury potatoes in the North Island. The production and yield figures in Table 1 reflect the changes that have taken place on a national scale.

Table 2 illustrates the changes that have taken place in potato consumption since the 1950's.

The extent of the suspected movement away from the auction system was, however, not quantified by commentators on the potato scene and it was partly to enable some quantification of the importance of the various selling methods that the present research was undertaken. As the different marketing channels available have different characteristics in terms of the price setting mechanism, yet are all inter-related in terms of their handling of a similar

TABLE 1

Potato Production and Yield

	Production (000 Tonnes)			Yield (Tonnes Per Hectare)		
	North Island	South Island	New Zealand	North Island	South Island	New Zealand
1950-51	34.8	86.9	121.7	14.9	19.5	17.9
1955-56	41.7	60.6	102.3	14.0	14.5	14.3
1960-61	73.3	120.2	193.5	18.7	23.5	21.4
1965-66	112.2	122.4	234.6	23.3	24.1	23.7
1970-71	126.4	83.5	209.9	27.3	22.9	25.3
1975-76	161.8	86.5	248.3	26.1	22.4	24.7
1979-80	136.5	77.0	213.5	28.5	22.6	26.0

Source: New Zealand Potato Board Annual Report

TABLE 2

Potato Production, Exports and Consumption

	Production (000 tonnes)	Exports (000 tonnes)	Implied Consumption (000 tonnes)	Population (31 Dec.) (000)	Implied Consumption per Head (kg)
1950-51	121.7	5.0[a]	116.7	1927.6	60.5
1955-56	102.3	3.5	98.8	2164.7	45.6
1960-61	193.5	3.6	189.9	2403.6	79.0
1965-66	234.6	15.2	219.4	2663.8	82.4
1970-71	209.9	10.7	199.2	2852.1	69.8
1975-76	248.3	14.6	233.7	3127.9	74.7
1979-80	213.5	11.3	202.2	3150.9	64.2

[a] Estimated

Source: New Zealand Potato Board Annual Report
Department of Statistics

product, it is important that their relative importance be assessed and their influence on the total marketing system be evaluated. This research has not allowed the identification of any movement from one marketing channel to another over a term greater than two years (1979/80 and 1980/81), but the relative importance of the channels in those two years has been established.

Apart from the identification of the relative importance of the marketing channels, the research has also been designed to provide a review of the performance of the auction system in five centres for the 1979/80 and 1980/81 years ending 30 June. The centres chosen for examination, in consultation with the New Zealand Potato Growers' Federation, were Auckland, Hamilton, Wellington, Christchurch and Dunedin. It was anticipated that differences in auction centre practice may be reflected in auction prices achieved and that regional differences would also be exposed.

The major thrust of the research has therefore been to examine the relative importance of the available marketing channels, in terms of the throughput of potatoes handled by each channel, as well as an in-depth review of the auction centre price achievements, throughput and practices. It is intended that the results of this research should provide a base from which to consider potential changes in the marketing system that can be identified as in the interests of potato growers and consumers.

CHAPTER 2

RESEARCH METHODS

In order to provide an adequate coverage of the information requirements of the project, it was decided to implement three surveys each directed toward separate sectors of the industry. Information was obtained from potato growers on the sales channels used and the prices received via each channel through a postal survey. Auction company information was gathered through personal interviews with the potato auctioneer and management of each company and primary data were gathered from the records kept by each company. In order to establish the outlets used by end users in purchasing potatoes, a telephone survey was carried out in the same centres in which the auction companies were surveyed.

2.1 Growers' Survey

2.1.1 The Population

The New Zealand Potato Board made available a list of registered potato growers and their addresses for the 1979/80 and 1980/81 seasons. From these two lists, a composite list was produced that contained all registered growers over both seasons. This list contained 885 names of people who had registered potato plantings with the Board in either of the two seasons. The registration requirements extend to those growers who have an aggregate of at least 0.5 hectares of land planted in the "registration year" which commences from 1 April. Therefore, the names for the 1979/80 season covered plantings from 1 April 1979 to 31 March 1980 and the 1980/81 names covered registrations from 1 April 1980 to 31 March 1981. The composite list therefore covered all registered plantings from 1 April 1979 to 31 March 1981.

The 885 growers were distributed over three "Wards". Ward 1 is the Auckland Province, Ward 2 takes in the rest of the North Island plus Nelson and Marlborough Provinces and Ward 3 is the rest of the South Island. Registered growers totalled 143 in Ward 1, 301 in Ward 2 and 441 in Ward 3. The distribution by Ward was therefore 16 per cent, 34 per cent and 50 per cent respectively of total growers.

The legal requirement for potato plantings of 0.5 hectares and over to be registered with the Potato Board, is associated with a registration fee of $8.00 per hectare planted. This may induce some growers to attempt to avoid registration, but it is considered that the volume of potatoes grown on unregistered areas is likely to be insignificant in relation to the registered area of production. It was therefore assumed that the 885 potato growers represented the potato growing population for the two years from 1 April 1979 to 31 March 1981. As the numbers were manageable, it was decided that a questionnaire be sent to all growers in this population.

2.1.2 The Questionnaire

A copy of the questionnaire used is included in this report as Appendix 1. The questionnaire was designed to obtain quarterly information on production levels, sales volume, and revenue information for the 1979/80 and 1980/81 seasons (ending 30 June each year). These aspects were covered by questions A through F. For each year, respondents were asked to give the total quarterly production broken down by early and main crop and, within each crop type, to identify the quantity of each variety grown. Subsequent questions asked growers to report their quarterly sales (in terms of volume and revenue) by outlet/channel used. The outlets/channels suggested were auction commission sale, sale to auction centre, sale to prepackers, gate sales, sale to fast-food outlets, direct sale to processors, direct sale to traders for export or the domestic market, own account export, direct sale to supermarkets or other retailers (excluding fast-food outlets), direct sales to caterers and restaurants and "other". Growers were then asked to indicate whether any of their sales were made by contract and to what outlets. The use of each auction centre was then established (Question H) and the reason for use of the grower's present marketing system asked for (Question I). Question J asked growers to identify changes they would like to see made in the marketing system and questions K through N dealt with the present industry political structure and the performance of the Potato Board and Potato Growers' Federation in their activities in various areas. Questions O and P dealt with seed potato buying and selling.

The questionnaire was reviewed with a member of the Potato Growers' Federation executive in order to establish the acceptability of the questionnaire design and content. It was sent to growers, with an accompanying letter, on 7 July 1981 with an enclosed return addressed, stamped envelope. On 12 August 1981, a follow up letter was sent out to encourage further responses.

2.2 Auction Centre Survey

Discussions with the Executive of the Potato Growers' Federation resulted in the selection of Auckland, Hamilton, Wellington, Christchurch and Dunedin as auction centres to be surveyed. This selection was based upon the desire to have a broad geographical spread of auction centres and a range of auction centre sizes included in the survey. Auckland, Wellington and Christchurch provided coverage of the large auction centre areas while Hamilton and Dunedin provided representation from the smaller auction centres. Prior to confirming these centres as the survey points, personal interviews with senior management of the companies concerned were conducted to ascertain their willingness to make information available for the study. In all cases, the agreement of management to co-operate was obtained with some companies offering to extract the information from their records themselves. The companies surveyed are listed in Appendix 2.

During July and August 1981, each company was visited and potato sales records for the June years 1979/80 and 1980/81 were examined. From these records weekly high, low and average per bag prices and sales volumes (bags) were extracted. All data were converted to a 20 kg bag basis and, where available, the data were kept separate for new and main crop potatoes. In addition, for Dunedin, data for red and white potatoes were collected separately. The source of the data was copies of the "account sales" held by the companies or computer records produced from the "account sales".

In addition to the collection of sales data, interviews were held with the potato auctioneer/manager for each company to ascertain the methods used by the company to handle potatoes. Where there was a significant potato trading operation, these transactions were included in the sales analysis. Also, in the Auckland area, data were gathered from the prepack operations run in Pukekohe. These data were collected on a weekly basis covering the prices paid to growers and the throughput volumes. Interviews with management were held to ascertain the methods used in price setting and the type of outlets serviced.

The data gathered from the companies have been consolidated to give auction centre results on a quarterly and annual basis.

2.3 End User Survey

In order to ascertain the relative use of supply outlets, a survey of retailers, fast food shops, institutions, caterers, hotels and restaurants was carried out. This survey involved the selection of names from the "yellow pages" of the telephone directory in each area where the auction centre survey was carried out. The sampling procedure involved the random selection of 10 per cent of those listed under the appropriate categories in the "yellow pages" with the addition of residential institutions such as prisons and armed forces' hostels as appropriate.

Each respondent was asked whether they purchased potatoes, from what type of outlet the potatoes were purchased and an estimate of their average weekly usage of potatoes. Where processors were identified as the potato source by a number of outlets, these processors were either contacted by telephone or by mail to ascertain their source of potatoes and their weekly volumes. It was intended that this survey provide a cross-check on the outlet distribution identified through the growers' survey as to the relative importance of each type of distribution outlet. As the aim of the survey was only to provide a check on the growers' survey results, and was intended only to reflect a broad picture and be used to highlight significant differences between the outlets used by different buyers and between the auction centres, the telephone method was considered adequate to meet these objectives.

CHAPTER 3

GROWERS' SURVEY RESULTS

3.1 Grower Profiles

The questionnaire was sent to all registered growers on 7 July 1981 and the acceptance of the questionnaire returns closed on 30 September 1981. From the 885 questionnaires sent out, a total of 209 responses was received. Table 3 depicts the response by Ward:

TABLE 3

Questionnaire Responses

	Ward 1	Ward 2	Ward 3	Total
Questionnaires sent	143	301	441	885
Questionnaires returned as wrongly addressed	-	5	6	11
Actual Population	143	296	435	874
Questionnaires Returned	30	66	113	209
Response Rate	21.0%	22.3%	26.0%	23.9%

In order to check the representativeness of the material contained in the questionnaires returned, the proportion of total production covered by the questionnaires can be determined (Table 4). (Note: Table 4 only covers 1979/80 as the 1980/81 production data were not available at time of writing).

This analysis indicates that the total production covered by the survey responses represents a similar proportion to that given by the grower analysis. As actual production volumes are not available by Ward, the total production numbers given in Table 4 have been estimated. These indicate that the proportion of production covered in each Ward is also similar to the grower representation. Based on this, it can be assumed that the results for each Ward represent a reasonable cross-section of the registered growers in each Ward.

TABLE 4

Potato Production 1979/80

(tonnes)

	Ward 1	Ward 2	Ward 3	Total
Production	62,700[a]	81,157[a]	69,700[a]	213,557
Production covered by questionnaire responses	16,408	22,258	14,072	52,738
Proportion of production	26.2%	27.4%	20.2%	24.7%

[a] estimate based on the registered area by Wards and the average North Island and South Island potato yields.

Source: New Zealand Potato Board Annual Report.

From the questionnaire responses, the average production per grower can be established (Table 5). This indicates that the Ward 1 growers are considerably larger producers than those in Wards 2 or 3 and that Ward 3 growers are producing only about a third of the Ward 2 per grower output. The average New Zealand production is about 250 tonnes per grower.

3.2 Temporal Distribution of Production

In order to better understand the way production is distributed over the year (and over New Zealand), it is useful to look at the quarterly distribution of production by Wards. This is presented in Table 6.

The seasonality of production in Ward 3 is clearly apparent from the analysis in Table 6, whereas this seasonality is not as marked in Wards 1 and 2. However, overall, there is a definite seasonal pattern with the June quarter having nearly half the total production, a quarter in the September quarter and the rest spread between the December and March quarters. Such a distribution of production has implications for the distribution system and the appropriate stockholding policies of the participants in that system.

TABLE 5

Potato Production Per Grower

	Ward 1		Ward 2		Ward 3		Total	
	1979/80	1980/81	1979/80	1980/81	1979/80	1980/81	1979/80	1980/81
Production (tonnes)	16,408	12,121	22,258	22,044	14,072	14,892	52,738	49,057
Number of growers (questionnaire responses)	27	28	64	61	110	110	201	199
Production per grower (tonnes)	608	433	348	361	128	135	262	247

TABLE 6

Quarterly Production Distribution

(Per cent of Annual Production)

Quarter Ending:	30 September	31 December	31 March	30 June	Total
Ward 1					
1979/80	25.2	38.5	12.7	23.6	100.0
1980/81	23.9	36.5	17.0	22.7	100.0
Average	24.7	37.6	14.5	23.2	100.0
Ward 2					
1979/80	31.0	13.3	18.1	37.7	100.0
1980/81	30.4	13.4	18.7	37.4	100.0
Average	30.7	13.4	18.4	37.6	100.0
Ward 3					
1979/80	10.9	6.5	12.1	70.5	100.0
1980/81	11.4	5.6	12.2	70.9	100.0
Average	11.2	6.0	12.1	70.7	100.0
New Zealand					
1979/80	23.8	19.3	14.8	42.1	100.0
1980/81	23.0	16.7	16.3	43.9	100.0
Average	23.4	18.1	15.5	43.0	100.0

3.3 Temporal Distribution of Grower Sales

Table 7 presents a similar analysis to that given in Table 6, but covering grower sales rather than production. Comparison of Tables 6 and 7 (Figure 1) indicates that there is little difference between the production and sales distribution (except for Ward 3). This leads to the conclusion that growers do not make any real attempt to offset the seasonal production pattern through use of a stockholding policy. The situation in Ward 3 does indicate some attempt to smooth sales with a movement of potatoes produced in the June quarter to sales in following quarters of the year.

3.4 Sales Channel Usage

An important part of the survey was to identify the usage of the various channels through which growers sell their potatoes. The survey form identified 12 different channels that could be used by growers, with provision for outlets not covered to be classified as "other". Table 8 presents the distribution of potato sellers by channel and Table 10 shows the distribution of potato sales by channel.

From Table 8, it can be observed that there are marked differences between the use of sales channels in different Wards. Ward 1 exhibits a high degree of usage of the auction commission sale (more than 80 per cent of sellers) while usage of this channel is made by only between 56-60 per cent of Ward 2 sellers and about 50 per cent of Ward 3 sellers. Similarly, large differences occur in the use of prepackers as outlets with Ward 1 sellers being the highest users reflecting the more extensive prepacking facilities in that Ward. Gate sales are used by nearly half the sellers in Ward 3, over a third in Ward 2 but only a quarter (or less) in Ward 1. Ward 2 and Ward 3 have more direct sellers to fast food shops than Ward 1 and potato processors are used by a higher proportion of Ward 3 sellers. Ward 2 sellers use local market traders in a higher proportion than for the other Wards, but the proportion is still quite high for both Wards 1 and 3. For each Ward, the average usage of sales outlets was two per seller, as shown by the (approximately) 200 per cent totals for each column.

TABLE 7

Quarterly Sales Distribution

(Per Cent of Annual Sales)

Quarter Ending:	30 September	31 December	31 March	30 June	Total
Ward 1					
1979/80	24.8	38.2	13.8	23.2	100.0
1980/81	25.0	33.4	18.4	23.2	100.0
Average	24.9	36.2	15.7	23.2	100.0
Ward 2					
1979/80	31.3	12.5	18.1	38.1	100.0
1980/81	31.6	12.8	18.8	36.8	100.0
Average	31.4	12.6	18.5	37.5	100.0
Ward 3					
1979/80	14.4	8.9	13.4	63.3	100.0
1980/81	13.2	10.7	15.8	60.3	100.0
Average	13.8	9.8	14.6	61.9	100.0
New Zealand					
1979/80	24.9	19.8	15.5	39.8	100.0
1980/81	24.8	17.4	18.0	39.8	100.0
Average	24.8	18.7	16.6	39.8	100.0

FIGURE 1

Quarterly Distribution of Sales and Production

(Average of 1979/80 and 1980/81)

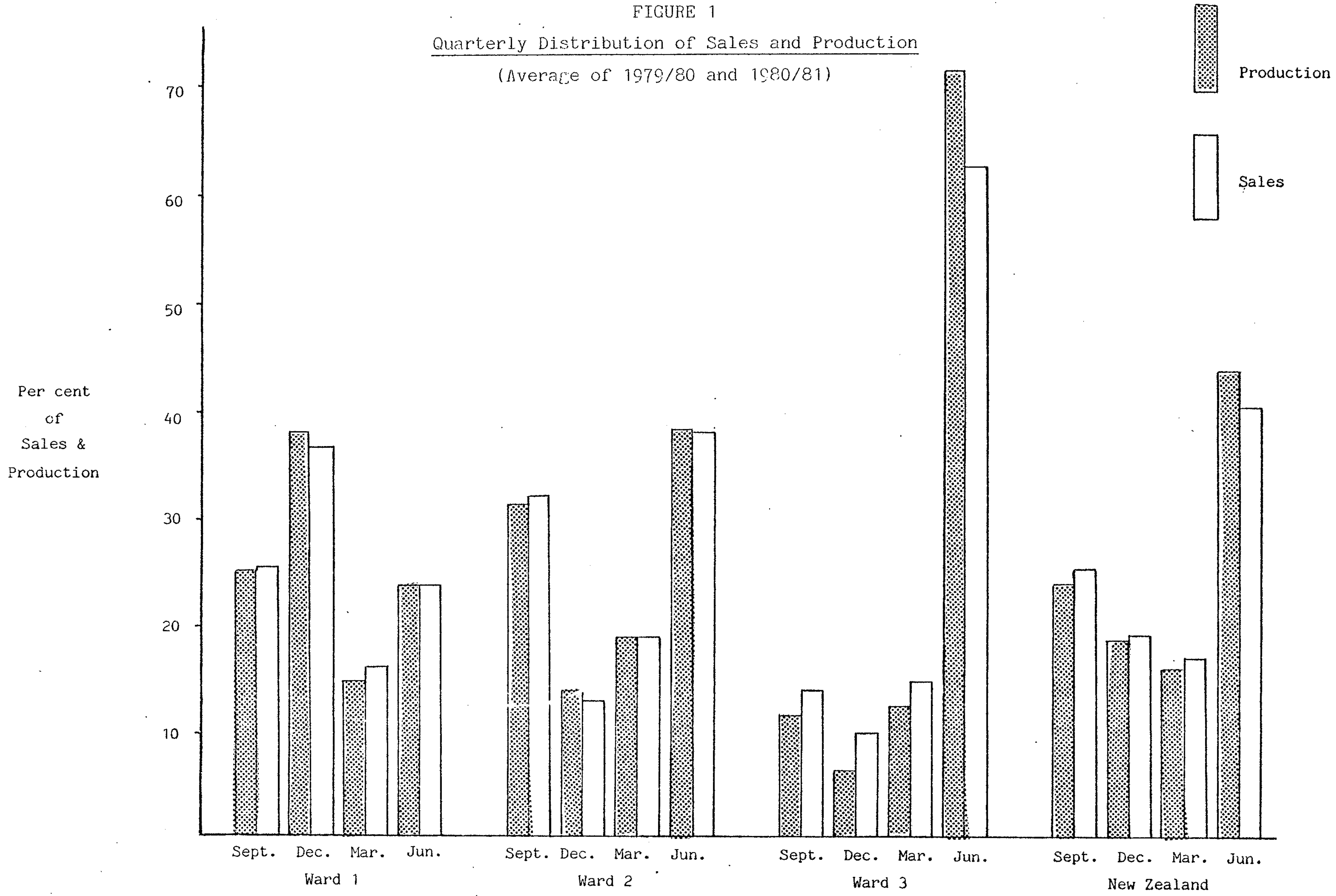

TABLE 8

Distribution of Potato Sellers by Channel Used

(Per cent of Sellers)

	Ward 1		Ward 2		Ward 3		New Zealand	
	1979/80	1980/81	1979/80	1980/81	1979/80	1980/81	1979/80	1980/81
Auction Commission Sale	82.2	85.2	56.4	60.3	51.0	51.9	57.0	59.2
Auction Centre Purchase	7.2	-	12.9	10.4	4.5	2.9	7.5	4.7
Prepacker Purchase	32.1	29.7	12.9	12.1	20.0	17.9	19.5	17.8
Gate Sales	25.0	22.2	37.0	36.2	49.1	47.1	42.0	40.3
Fast Food Purchase	7.2	7.4	14.5	22.4	15.4	15.1	14.0	16.2
Processor Purchase	10.7	11.1	9.7	8.6	13.7	15.1	12.0	12.6
Export-Trader[a]	10.7	7.4	12.9	12.1	11.8	12.2	12.0	11.6
Local Market-Trader	14.2	18.6	24.2	22.4	21.0	19.8	21.0	20.5
Supermarkets	7.2	7.4	12.9	6.9	5.4	6.6	8.0	6.8
Other Retailers	14.2	18.6	11.3	15.5	9.0	9.4	10.5	12.6
Caterers & Restaurants	3.5	3.7	4.8	5.1	5.4	5.6	5.0	5.3
Other	-	3.7	3.2	3.4	3.6	2.9	3.0	3.2
TOTAL[b]	214.3	215.0	209.7	215.4	210.0	206.7	211.5	210.6
Valid Responses	28	27	62	58	110	106	200	191

[a] Export on own account was a very small category and has therefore been included in sales to traders for export

[b] The total percentage exceeds 100.0 as growers may use more than one channel.

TABLE 9

Aggregated Distribution of Potato Sellers

by Channel Used

(Per Cent of Sellers)

	Ward 1		Ward 2		Ward 3		New Zealand	
	1979/80	1980/81	1979/80	1980/81	1979/80	1980/81	1979/80	1980/81
Intermediates	146.4	140.9	119.3	117.3	108.3	104.7	117.0	113.8
Final Users	67.9	74.1	90.4	98.1	101.7	102.0	94.5	96.8
TOTAL	214.3	215.0	209.7	215.4	210.0	206.7	211.5	210.6

Further useful information on the use of sales channels is given in Table 9 where the results of Table 8 are aggregated to show the use of sales channels split between what could be called "intermediates" and "final users". Sales through (or to) auction commission, auction centre purchase, prepacker purchase and traders are classified as "intermediate" sales channels, the rest being classified as "final users".

When the distribution of potato sales by channel is considered (Table 10), a slightly different picture emerges to that gained when potato sellers are considered. Although about 80 per cent of Ward 1 sellers used the auction system, only 40-55 per cent of the potatoes sold went through that channel in 1979/80 and 1980/81. For New Zealand, only around 35 per cent (33.5 per cent and 39.6 per cent for 1979/80 and 1980/81 respectively) of potatoes sold went through the auction systems as commission sales. Auction centre purchase can be added to the commission sales to arrive at the total proportion handled by the auction centres. This brings the New Zealand proportion up to approximately 40 per cent. Prepackers handle a large proportion in Ward 1 and gate sales handle a relatively low proportion. Both fast food purchases and processor purchases are particularly strong in Ward 3. Sales to traders for export take around 20 per cent of Ward 2 sales as well as sales to traders for the local market taking about 10 per cent. Direct sales to supermarkets are more predominant in Ward 2 than elsewhere.

Table 11 presents a division of sales between "intermediates" and "final users" (as defined earlier). This analysis highlights the predominance of "intermediates" as potato growers' outlets, in terms of potatoes sold, whereas Table 9 indicates that, overall, growers/sellers are using both "intermediate" and "final users" in an almost equal proportion as outlets for potatoes.

Further comparisons between Tables 8 and 10 for gate sales indicates that although a relatively high proportion of sellers use gate sales, only a low proportion of sales go through this channel. For the processor channel, the situation is reversed (Wards 2 and 3), with the proportion of sales being greater than the proportion of

TABLE 10

Distribution of Potato Sales by Channel Used

(Per cent of Sales)

	Ward 1		Ward 2		Ward 3		New Zealand	
	1979/80	1980/81	1979/80	1980/81	1979/80	1980/81	1979/80	1980/81
Auction Commission Sale	40.2	55.7	27.1	29.8	35.8	42.2	33.5	39.6
Auction Centre Purchase	5.2	-	6.7	5.9	2.1	1.3	5.0	3.2
Prepacker Purchase	35.5	18.9	3.6	2.0	8.2	9.1	15.1	8.1
Gate Sales	2.5	4.6	4.6	3.8	6.6	6.5	4.4	4.7
Fast Food Purchase	0.4	0.6	3.7	4.7	8.8	7.6	3.9	4.4
Processor Purchase	9.3	11.9	14.1	14.1	22.7	18.7	14.7	14.8
Export-Trader[a]	1.0	1.0	20.4	21.7	6.2	5.5	10.5	12.2
Local Market-Trader	4.8	4.9	11.6	10.7	5.2	4.2	7.8	7.5
Supermarkets	0.2	0.6	5.7	4.2	1.9	1.6	2.9	2.6
Other Retailers	0.9	1.2	1.2	1.7	1.0	0.8	1.0	1.4
Caterers & Restaurants	-	-	0.1	0.2	0.9	1.3	0.3	0.5
Other	-	0.6	1.2	1.2	0.6	1.2	0.9	1.0
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[a] Export on own account was a very small category and has therefore been included in sales to traders for export.

\- Less than 0.1 per cent.

TABLE 11

Aggregated Distribution of Potato Sales
by Channel Used
(Per cent of sales)

	Ward 1		Ward 2		Ward 3		New Zealand	
	1979/80	1980/81	1979/80	1980/81	1979/80	1980/81	1979/80	1980/81
Intermediates	86.7	80.5	69.4	70.1	57.5	62.3	71.9	70.6
Final Users	13.3	19.5	30.6	29.9	42.5	37.7	28.1	29.4
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

sellers (indicating that larger growers are involved with this channel). A similar situation exists for sales to traders for export in Ward 2.

To further illustrate the importance of each sales channel, the average sale per seller has been calculated for each of the outlets. This also reflects the difference between the types of growers using each outlet. This analysis is given in Table 12, and in Table 13 the average annual sale through each channel is expressed as a percentage of the average of all sales. The analysis given in Table 12 is useful for making comparisons between channels within Wards. In Ward 1, the importance of sales to the auction centre, to prepackers and to processors is emphasised on a per seller basis. In Ward 2, sales to traders and processors assume a high level of importance (indicating the activities of larger growers). Processors are the major outlet for large growers in Ward 3.

From Table 13, comparisons between Wards can be made. This indicates the relatively higher proportion of larger sales through auction in Ward 3, the lower proportion of large sales to prepackers in Ward 2, the higher average sales to fast food outlets in Ward 3, the large sales to export traders in Ward 2 and the relatively larger sales to supermarkets in Wards 2 and 3.

TABLE 12

Average Annual Sale for Each Sales Channel

(tonnes)

	Ward 1		Ward 2		Ward 3		New Zealand	
	1979/80	1980/81	1979/80	1980/81	1979/80	1980/81	1979/80	1980/81
Auction Commission Sale	293	279	169	187	84	94	149	160
Auction Centre Purchase	435	-	184	216	54	53	174	162
Prepacker Purchase	661	272	98	62	48	58	200	109
Gate Sales	60	89	44	40	16	16	27	28
Fast Food Purchase	34	36	90	79	67	58	72	65
Processor Purchase	517	459	515	621	197	143	317	282
Export-Trader[a]	60	60	558	681	67	52	227	253
Local Market-Trader	202	114	168	181	30	25	96	88
Supermarkets	16	33	155	229	40	27	94	90
Other Retailers	37	29	38	41	13	10	26	26
Caterers & Restaurants	7	8	11	18	19	26	15	22
Other	-	60	130	129	26	46	60	76
Average annual sales per seller[b]	598	428	352	379	120	116	258	240

[a] Export on own account was a very small category and has therefore been included in sales to traders for export.

[b] Average annual sales per seller are through an average of approximately two sales channels (Table 8) and the average annual sale is equivalent to the weighted average of the per sales channel sales using the proportions in Table 8.

TABLE 13

Average Annual Sale for Each Sales Channel as a Percentage of the Average of all Sales

(Per cent)

	Ward 1		Ward 2		Ward 3		New Zealand	
	1979/80	1980/81	1979/80	1980/81	1979/80	1980/81	1979/80	1980/81
Auction Commission Sale	49.0	65.2	48.0	49.3	70.0	81.0	57.8	66.7
Auction Centre Purchase	72.7	-	52.3	57.0	45.0	45.7	67.4	67.5
Prepacker Purchase	110.5	63.6	27.8	16.4	40.0	50.0	77.5	45.4
Gate Sales	10.0	20.8	12.5	10.6	13.3	13.8	10.5	11.7
Fast Food Purchase	5.7	8.4	25.6	20.8	55.8	50.0	27.9	27.1
Processor Purchase	86.5	107.2	146.3	163.9	164.2	123.3	122.9	117.5
Export-Trader[a]	10.0	14.0	158.5	179.7	55.8	44.8	88.0	105.4
Local Market-Trader	33.8	26.6	47.7	47.8	25.0	21.6	37.2	36.7
Supermarkets	2.7	7.7	44.0	60.4	33.3	23.3	36.4	37.5
Other Retailers	6.2	6.8	10.7	10.8	10.8	8.6	10.1	10.8
Caterers & Restaurants	1.2	1.9	3.1	4.7	15.8	22.4	5.8	9.2
Other	-	14.0	36.9	34.0	21.7	39.7	23.3	31.7

[a] Export on own account was a very small category and has therefore been included in sales to traders for export.

\- Less than 0.1 per cent.

3.5 Grower Returns by Sales Channel

From the information collected through the survey, it has been possible to calculate the prices received for potatoes sold through the various sales channels. The following Tables (14, 15 and 16) present the per bag prices for each Ward and Table 17 presents the average New Zealand prices. Only those sales channels where there was a reasonably high usage have been reported in the Tables as results derived from low usage channels may not be representative because of the low number of observations.

Previous analysis has indicated that the auction commission sale is the largest sales channel used (handling between 30 and 40 per cent of potato sales). It is therefore appropriate that this channel be used as a base with which to compare the returns gained through other channels. It is apparent from Table 18 that, with the exception of Ward 3, average returns received by growers from supplying pre-packers exceeds the average return from auction. This is likely to be a reflection of the higher average quality of potatoes accepted for prepacking versus those potatoes sold through auction. In Ward 1, the price for prepack potatoes is set on the Monday auction price, therefore, the price should be close to that at auction. However, competition between prepackers could be having an influence on the return received by growers for prepack supplies.

For all Wards, the returns received from gate sales exceeded the auction return. This probably reflects the reduced costs involved in gate sales.

Fast food outlets paid higher than auction prices in Ward 2 while in Ward 3, the prices were lower than those at the auction.

Suppliers to processors in Ward 2 received returns similar to those from auction. In Ward 3, however, returns from supplying processors were much lower than the auction returns. This difference probably reflects the difference in quality required by the processors for the type of product produced by them.

Local market traders provided grower returns similar to that for auction while supermarkets (Ward 2) paid prices greater than auction (presumably to obtain the quality they require).

TABLE 14

Ward 1 - Returns by Sales Channel

($/bag[a])

	1979/80					1980/81				
Quarter Ending:	Sept.	Dec.	Mar.	June	Weighted Average	Sept.	Dec.	Mar.	June	Weighted Average
Sales Channel										
Auction Commission Sale	3.17	3.05	3.96	2.22	2.99	3.69	4.51	3.05	3.05	3.70
Prepackers	3.93	3.31	5.42	3.79	3.75	3.20	4.98	4.02	2.59	4.34
Gate Sales	3.95	5.11	4.78	6.17	5.24	3.77	4.52	4.09	4.01	4.05

[a] a bag is defined as a 20 kg standard.

TABLE 15

Ward 2 - Returns by Sales Channel

($/bag[a])

Quarter Ending:	1979/80 Sept.	Dec.	Mar.	June	Weighted Average	1980/81 Sept.	Dec.	Mar.	June	Weighted Average
Sales Channel										
Auction Commission Sale	2.07	3.27	3.42	3.01	2.82	3.66	3.91	2.35	2.26	2.94
Prepackers	-	5.60	3.77	2.71	3.85	3.56	5.08	-	-	3.76
Gate Sales	3.14	3.18	3.27	3.11	3.22	3.63	3.51	2.68	3.06	3.27
Fast Food	4.23	2.93	3.55	3.66	3.63	4.07	3.03	3.38	3.29	3.40
Processors	2.35	-	-	2.39	2.35	2.83	-	3.78	2.22	2.87
Export-Trader	2.78	-	3.50	3.36	3.18	-	-	-	-	-
Local Market-Trader	2.58	-	4.46	2.82	3.22	2.82	-	3.18	2.49	2.83
Supermarkets	3.58	3.63	4.86	3.15	3.52	3.00	3.28	2.96	3.87	3.38

[a] a bag is defined as a 20 kg standard.

\- indicates that the number of returns was not sufficient to provide a representative result.

TABLE 16

Ward 3 - Returns by Sales Channel

($/bag[a])

	1979/80					1980/81				
Quarter Ending:	Sept.	Dec.	Mar.	June	Weighted Average	Sept.	Dec.	Mar.	June	Weighted Average
Sales Channel										
Auction Commission Sale	2.23	3.56	2.65	2.49	2.66	2.15	3.86	3.38	2.28	2.79
Prepackers	2.17	2.64	-	1.85	2.04	2.27	3.11	2.40	1.91	2.04
Gate Sales	2.33	4.43	2.79	3.11	2.97	2.93	4.35	2.61	3.15	3.14
Fast Food	2.17	2.61	2.80	2.33	2.36	2.37	3.11	2.26	2.38	2.39
Processors	-	-	1.55	1.36	1.38	-	-	1.71	1.47	1.48
Local Market-Trader	2.15	-	-	2.45	2.41	2.11	-	-	2.36	2.27

[a] a bag is defined as a 20 kg standard.

\- indicates that the number of returns was not sufficient to provide a representative result.

TABLE 17

New Zealand - Returns by Sales Channel

($/bag[a])

Quarter Ending:	1979/80 Sept.	Dec.	Mar.	June	Weighted Average	1980/81 Sept.	Dec.	Mar.	June	Weighted Average
Sales Channel										
Auction Commission Sale	2.52	3.13	3.41	2.59	2.87	3.54	4.25	2.95	2.41	3.20
Prepackers	3.81	3.53	4.95	3.21	3.55	3.17	4.91	2.95	2.06	3.63
Gate Sales	3.03	3.81	3.63	3.62	3.49	3.48	3.93	3.07	3.33	3.41
Fast Food	3.14	2.81	3.38	2.85	3.00	3.25	3.05	3.07	2.93	3.03
Processors	2.35	2.90	2.87	1.47	2.23	2.83	1.84	3.23	1.62	2.18
Export-Trader	2.90	-	3.50	3.15	3.14	-	-	-	-	-
Local Market-Trader	2.51	2.57	4.17	2.74	2.98	2.87	4.67	3.74	2.46	3.24
Supermarkets	3.58	3.54	3.83	2.94	3.33	3.00	3.28	3.12	3.73	3.37

[a] a bag is defined as a 20 kg standard.

\- indicates that the number of returns was not sufficient to provide a representative result.

TABLE 18

Annual Weighted Average Returns by Sales Channel

($/bag)

	Ward 1		Ward 2		Ward 3		New Zealand	
	1979/80	1980/81	1979/80	1980/81	1979/80	1980/81	1979/80	1980/81
Sales Channel								
Auction Commission Sale	2.99	3.70	2.82	2.94	2.66	2.79	2.87	3.22
Prepackers	3.75	4.34	3.85	3.76	2.04	2.04	3.55	3.63
Gate Sales	5.24	4.05	3.22	3.27	2.97	3.14	3.49	3.41
Fast Food	-	-	3.63	3.40	2.36	2.39	3.00	3.03
Processors	-	-	2.35	2.87	1.38	1.48	2.23	2.18
Export-Trader	-	-	3.18	-	-	-	3.14	-
Local Market-Trader	-	-	3.22	2.83	2.41	2.27	2.98	3.24
Supermarkets	-	-	3.52	3.38	-	-	3.33	3.37

TABLE 19

Sales Made by Contract

	Ward 1		Ward 2		Ward 3		New Zealand	
	1979/80	1980/81	1979/80	1980/81	1979/80	1980/81	1979/80	1980/81
Proportion of Growers (%)	6.7	6.7	10.6	9.1	14.2	14.2	12.0	11.5
Proportion of Sales (%)	5.3	8.0	18.0	14.0	22.9	23.3	15.1	15.0
Sales Channel:								
Traders	X		X		X		X	
Processors			X		X		X	
Supermarkets			X				X	

X indicates channel used.

The proportion of sales made by contract is given in Table 19. Also shown in Table 19 are the sales channels which used contract sales. Traders were the most important sources of contracts. The highest proportion of sales by contract was in Ward 3.

3.6 Auction Centre Usage

Ward 1 growers conducted half of their auction sales through Auckland (Table 20) and Hamilton, Rotorua and Tauranga handled approximately 10 per cent each. Slightly in excess of 10 per cent of auction sales from Ward 1 growers took place in Wellington, Christchurch and Dunedin; all these sales occurred in the December quarters when new potatoes were being sold in the southern centres. The remaining auction sales were through Whangarei.

Ward 2 growers used a wide range of auction centres with Christchurch, New Plymouth, Palmerston North and Wellington being the most important.

For Ward 3 growers, Christchurch and Dunedin were by far the most significant while Timaru was also important. There were very few auction sales of Ward 3 grown potatoes outside the Ward 3 area (Table 20).

Overall, Auckland, Christchurch, Dunedin and Wellington were the most important auction centres (as was to be expected).

3.7 Marketing System and Organisations

Of the 154 growers who indicated why they used their present marketing system (Question I), 63.6 per cent indicated they did so as it was the most convenient and 14.3 per cent felt they achieved the greatest return from the system used. Only 10.4 per cent felt they were constrained by not having any alternative and 5.8 per cent used non-auction methods as they did not like auctions, while 3.2 per cent only used the auction to dispose of surplus production.

When growers were asked what changes they would like made in the marketing system (Question J), 139 responded with 18.0 per cent indicating that no change was required. (If it could be assumed that the 70 non-respondents also wanted no changes, this percentage

TABLE 20

Auction Centre Used by Ward 1, 2 and 3 Growers

(% of auction sales)

	Ward 1 Growers		Ward 2 Growers		Ward 3 Growers	
	1979/80	1980/81	1979/80	1980/81	1979/80	1980/81
Auckland	47.8	54.6	0.4	0.4	-	-
Blenheim	-	-	3.2	3.9	1.1	1.3
Christchurch	4.4	2.1	11.0	9.7	49.5	51.0
Dunedin	1.1	2.0	3.2	3.0	35.6	33.0
Gisborne	-	-	4.0	4.8		
Gore	-	-	1.2	1.5	0.7	1.2
Greymouth	-	-	0.2	0.1	-	-
Hamilton	10.8	9.9	-	-	-	-
Hastings	-	-	5.3	5.6	-	-
Hawera	-	-	0.9	1.4	-	-
Invercargill	-	-	1.9	3.0	3.7	4.4
Masterton	-	-	6.0	8.4	-	-
Napier	-	-	1.6	0.5	-	-
Nelson	-	-	3.8	2.9	-	-
New Plymouth	-	-	9.6	14.5	-	-
Oamaru	-	-	-	-	0.6	0.2
Palmerston North	-	-	13.2	10.2	-	-
Rotorua	11.9	9.9	3.1	2.4	-	-
Stratford	-	-	1.1	1.5	-	-
Tauranga	12.0	9.9	8.3	4.1	-	-
Timaru	-	-	-	-	8.8	8.6
Wanganui	-	-	2.3	1.2	-	-
Wellington	8.6	6.1	19.6	20.7	-	0.3
Westport	-	-	0.1	0.2	-	-
Whangarei	3.4	5.5	-	-	-	-
Total	100.0	100.0	100.0	100.0	100.0	100.0

would rise to 45.5 per cent). Table 21 presents the analysis of changes.

If the percentages requesting a guaranteed floor price, a single marketing board, better grading/minimum standards, and fixed prices are added, a total of 56.0 per cent of 0-100 tonne growers and 64.1 per cent of >100 tonne growers (59.7 per cent overall) appear to be

TABLE 21

Changes to the Potato Marketing System

(% of respondents)

Potatoes Grown 1980/81 (Tonnes)	0-100	>100	All
No change	20.0	15.6	18.0
Guaranteed Floor Price	21.3	14.1	18.0
Single Marketing Board	8.0	12.5	10.1
Better Grading/Minimum Standards	24.0	23.4	23.7
Stronger Auction System	5.3	4.7	5.0
Lower Production	5.3	-	2.9
Reduce Mark-ups	2.7	-	1.4
Fixed Prices	2.7	14.1	7.9
T.V. Advertising	2.7	4.7	3.6
Higher Contract Prices	1.3	4.7	2.9
Other	6.7	6.2	6.5
Valid Responses	75	64	139

in favour of a more controlled marketing situation. To that could be added those requesting lower production and reduced mark-ups (making a total of 64.0 per cent overall) as these would require more controls. The desire for greater control seems to be more significant amongst larger growers with 14.1 per cent asking for fixed prices and 12.5 per cent asking for a single marketing board (2.7 per cent and 8.0 per cent respectively for smaller growers). If the set price situation is considered by itself, 24.0 per cent of smaller growers want either fixed prices or a guaranteed minimum, while 28.2 per cent of larger growers stated such changes were desired (25.9 per cent overall).

In response to the question asking if a Potato Marketing Board is required (which acquires all potatoes) (Question K), 190 responses were received. Of these, 26.8 per cent replied in the affirmative and 73.2 per cent thought not. The response by Ward is given in Table 22. This indicates slightly stronger support from Wards 1 and 3 and less from Ward 2.

TABLE 22

Is a Potato Marketing Board Required?

(% of respondents)

	Ward 1	Ward 2	Ward 3	New Zealand
Yes	34.6	19.0	29.7	26.8
No	65.4	81.0	70.3	73.2
Valid Responses	26	63	101	190

Questions L, M and N of the survey dealt with the attitude of growers to the New Zealand Potato Board and the New Zealand Potato Growers' Federation. Growers were asked to indicate their appraisal of the two organisations in a number of areas and make further comments regarding the organisations. The results from these questions are presented in the following tables (Tables 23, 24 and 25).

TABLE 23

Performance of the Potato Board

(% of responses)

Response	Poor	Neutral	Good	Valid Responses
	%	%	%	
Promotion of Potatoes	35.2	36.7	28.1	199
Grading of Potatoes	21.0	41.0	38.0	195
Statistical Feedback from Surveys	30.9	32.0	37.1	194

TABLE 24

Further Comments on Potato Board

(% of responses)

Potatoes Grown 1980/81 (Tonnes)	0-100	>100	All
Need to Enforce Grading Standards	12.9	40.6	27.0
More Promotion Needed	15.6	19.4	17.5
Board of No Help	9.4	9.7	9.5
Board Unnecessary	6.3	12.9	9.5
Doesn't help when a glut occurs	12.5	3.2	7.9
Does best possible	9.4	6.5	7.9
Needs to exert more control/ Implement Act	-	12.9	6.3
Feedback needs improving	3.1	9.7	6.3
Other	3.1	12.9	7.9
Valid Responses	32	31	63

TABLE 25

Performance of Potato Growers' Federation

(% of Responses)

Response	Poor	Neutral	Good	Valid Responses
	%	%	%	
As a lobby group	35.6	51.1	13.3	188
Promotion of the Industry	36.8	45.8	17.4	190
Stimulating potato research	23.1	49.5	27.4	186

As there were only 24 responses to the request for further comments on the Potato Growers Federation, analysis of those could not be considered representative.

Opinion of the Potato Board was evenly divided over the three areas with some dissatisfaction being expressed regarding promotion (Table 23). This was reflected in the comments on the Board (Table 24) where increased promotion was called for as well as greater enforcement of grading

TABLE 26

Is Having Three Organisations a Satisfactory Situation?

	(% of Responses)
Yes	41.0
No	59.0
Valid Responses	178

If Not, What Changes Would you make?

	(% of Responses)
Respondents' Suggestions:	
Have only one body	75.8
Have only the Potato Board	6.6
Have only the Vegetable Growers' Federation	5.5
Have no organisations	6.6
Other	5.5
Valid Responses	91

standards. The need for more control (grading standards and control itself) was a strong feature amongst the larger growers (53.5 per cent).

The Potato Growers' Federation was listed as neutral in its performance by most growers, with a tendency for the performance to be considered poor rather than good (Table 25).

With regard to the existence of three organisations representing potato growers (N.Z. Potato Board, N.Z. Potato Growers' Federation, N.Z. Vegetable and Produce Growers' Federation), there was expressed a desire for change (59.0 per cent). Of those wanting change, 75.8 per cent wanted only one body representing all potato growers. To this could be added those wanting only the Potato Board bringing the total wanting only one organisation to 82.4 per cent with an additional 5.5 per cent wanting the Potato Board and the Potato Growers' Federation disbanded (Table 26).

3.8 Seed Potatoes

Questions O and P related to the purchase and sale of seed potatoes. Tables 27 and 28 present the results from those questions. Merchants appear to handle at least half of the seed potato market, pay higher prices for seed potatoes and charge higher prices for them. The difference between the average sale price to merchants and the average purchase price from merchants was $116 for Rua and $45 for Ilam Hardy, an overall mark-up of 37 per cent (48 per cent for Rua and 26 per cent for Ilam Hardy respectively). Purchases of Ruas from merchants cost 57 per cent more than those through private treaty while Ilam Hardys cost 32 per cent more through a merchant. Sale prices to merchants were 6 per cent higher for Ruas (than private treaty) and 18 per cent higher for Ilam Hardys.

TABLE 27

Seed Potato Purchases

1980/81

		Yes	No	Valid Responses
Are Seed Potatoes Purchased?		80.3%	19.7%	203
	Merchant	Private Treaty	Both	Valid Responses
Where From?	52.2%	34.8%	13.0%	161
Purchases from a merchant:				
		Rua		Ilam Hardy
Price Range per tonne		$140-$500		$110-$500
Average price per tonne		$356		$217
Purchase Months		February - October		January - October
Main Purchase Months		75% July - September		60% June - August
Purchases through Private Treaty:				
		Rua		Ilam Hardy
Price Range per tonne		$50-$380		$50-$312
Average price per tonne		$227		$164
Purchase Months		April - October		April - December
Main Purchase Months		82% July - September		72% July - September

TABLE 28

Seed Potato Sales

1980/81

		Yes	No	Valid Responses
Are Seed Potatoes Sold?		40.7%	59.3%	199
	Merchant	Private Treaty	Both	Valid Responses
Who To?	55.6%	19.7%	24.7%	81

Sales to a Merchant:		
	Rua	Ilam Hardy
Price Range per tonne	$100-$380	$90-$210
Average price per tonne	$240	$172
Sale Months	February - October	April - September
Main Sale Months	76% July - September	76% May - July
Sales through Private Treaty:		
	Rua	Ilam Hardy
Price Range per tonne	$70-$380	$60-$230
Average price per tonne	$227	$146
Sale Months	June - October	May - October
Main Sale Months	67% August - September	73% June - August

CHAPTER 4

AUCTION CENTRE SURVEY RESULTS

4.1 Auckland

The analysis of the Auckland auction centre data has been carried out on a quarterly basis and has been split between "new" and "main" crop. Table 29 presents the throughput, revenue and average prices achieved for new potatoes for the 1979/80 and 1980/81 years. It should be noted that the definitions used by the three Auckland firms as to what are "new" potatoes may differ and therefore some of the figures may differ if constant definitions were applied throughout.

TABLE 29

Auckland New Potato Auction Sales Analysis

	Bags Sold	Revenue	Price per Bag[a]
1979/80		$	$
Quarter Ending			
September	9,175	45,189.12	4.93
December	182,309	915,374.13	5.02
March	132,870	865,108.49	6.51
June	-	-	-
Annual	324,354	1,825,671.74	5.63
1980/81			
Quarter Ending			
September	2,233	18,793.13	8.42
December	108,080	636,695.11	5.89
March	161,926	651,236.62	4.02
June	-	-	-
Annual	272,239	1,306,724.86	4.80

[a] the price per bag excludes the bag charge.

As one of the three Auckland firms did not clearly define "new" potatoes in their records, Table 29 largely reflects the results obtained from two of the companies.

Table 30 presents the analysis for main crop potatoes and Table 31 contains the results for all potatoes sold.

TABLE 30

Auckland Main Crop Auction Sales Analysis

	Bags Sold	Revenue	Price per Bag[a]
1979/80		$	$
Quarter Ending			
September	253,599	618,908.41	2.44
December	133,325	470,110.41	3.53
March	104,472	610,794.02	5.85
June	240,143	1,087,889.92	4.53
Annual	731,539	2,787,702.76	3.81
1980/81			
Quarter Ending			
September	257,325	1,136,097.27	4.42
December	161,727	924,394.01	5.72
March	92,733	347,801.60	3.75
June	257,179	871,072.45	3.39
Annual	768,964	3,279,365.33	4.26

[a] the price per bag excludes the bag charge.

Broadly, the average price achieved was related to the volume of potatoes sold. This means that as the quantities sold rose, the price fell. For the quarter ending 31 March 1981, this pattern does not appear to have been followed for main crop potatoes. Supplies (sales) in that quarter were reduced as were prices. However, sales of potatoes classified as new were considerably increased in that quarter and much of the demand could have been met by these potatoes.

For all potatoes sold, the average price range from $3.82 to $4.64 per bag over the three companies for 1979/80 and, for 1980/81, the range was $4.22 to $4.48. The ranking of the companies with

TABLE 31

Auckland Potato Auction Sales Analysis

	Bags Sold	Revenue	Price per Bag[a]
1979/80		$	$
Quarter Ending			
September	262,774	664,097.53	2.53
December	315,634	1,385,484.54	4.39
March	237,342	1,475,902.51	6.22
June	240,143	1,087,889.92	4.53
Annual	1,055,893	4,613,374.50	4.37
1980/81			
Quarter Ending			
September	259,558	1,154,890.40	4.45
December	269,807	1,561,089.12	5.79
March	254,659	999,038.22	3.92
June	257,179	871,072.45	3.39
Annual	1,041,203	4,586,090.19	4.40

[a] the price per bag excludes the bag charge.

respect to price was the same for each year. Those companies which were predominantly auction orientated achieved the higher average prices and shares of the total market.

From the interviews carried out with the potato auctioneer for each company, the selling practices of the companies were determined. Estimates of the number of buyers interested in potatoes that were present on the auction floor were 40-50 for two auction companies and 20-30 for the other. Of the buyers, one auction company estimated that on their floor, four buyers were commission buyers (covering about 200 accounts). An estimated 12 commission buyers operated on another floor and it was estimated that two commission buyers (covering 100 accounts) operated on the third floor. The proportion of the potatoes taken by the commission buyers was estimated at between 50 per cent and 60 per cent of the daily sale. The role of the commission buyers in the price setting process was unclear but the impression suggested by all the companies was that the commission buyers did not play an active part in setting the price, rather taking up their requirements once the price had been settled between the remaining buyers on the floor. Each auction company has a policy of attempting to influence the sale price. This is done by having a company representative on the auction floor with one bid allowed from that representative.

Two of the companies also accept telephone orders for potatoes. For one company, this usually accounts for 30 per cent of the daily sale while for the other, between 50 per cent and 60 per cent of daily sales are made on a traded basis with the company assuming ownership and guaranteeing the price to the grower. The third company operates its own commission buyer on the auction floor meeting orders received by the company.

One company is seen as the price setting company for the other two companies with the latter's price arrangements based around the price achieved by that company.

Two of the companies restrict their trading activities (involving potato ownership) to periods when supplies are low and then their trading activity only involves growers from out of the district. The third company has an active trading policy, however, and buys potatoes at negotiated prices for immediate resale. The price paid is often less than the prevailing auction price but is acceptable because of its guaranteed nature. The profit taken by the company is usually less than what would be gained from a 10 per cent commission, making the net price to the grower close to what would be gained at auction. The object of this selling technique has been to increase turnover.

One of the companies expressed the attitude that potatoes are used to keep turnover high in order to gain a greater allocation of bananas and oranges from Fruit Distributors Ltd (this allocation from the sole importers being based on turnover). It was further suggested that because of this, potatoes are used as a bulk turnover line with less regard to unit prices than might otherwise be the case.

None of the companies has a stock-holding policy. All have the expressed aim of clearing the auction floor every day. It was stated that potatoes do not keep well, especially in summer, and that day old stock always receives a lower price. In order to attempt to match supply to anticipated demand, the companies have an extensive liaison system with growers and encourage or discourage supplies as the situation may require. They do not have any firm control over supply, however, merely acting in an advisory capacity.

Two of the companies felt that the auction system was not resulting in the best prices to growers when "the market was weak." It was suggested that direct sale arrangements between growers and buyers would be beneficial in that a guaranteed price and profit would be achieved. Both companies felt further control over supply was essential to achieving better potato returns. The third company considered that the auction system was best and expressed the view that ample information is available to growers to enable them to adjust their supplies according to the demand and so achieve the best available return. This company strongly supported the auction system for selling "highly perishable goods".

All companies considered that the market could be improved to a great extent by the improvement of grading standards. Poor potatoes always received a lower price and the inclusion of some poor potatoes in an otherwise good line would result in a low price for the whole line.

In addition to the analysis of the central market activities of the companies in Auckland, an analysis was carried out of the pre-pack operations at Pukekohe. The data obtained have been converted into 20 kg bag equivalents and are presented in Table 32. The information on quantities was collected as pre-pack sales data and converted into grower supply volumes using an average wastage factor of 7 per cent. The price data reflect those prices paid to growers.

The annual average of the prices paid by the companies is very similar for each company although the market shares are dissimilar. One company had in excess of 50 per cent of the market in both years examined while the other two had between 20 and 30 per cent each. The prices paid by the pre-pack operations are all below the auction

TABLE 32

Auckland Pre-pack Sales Analysis

	Bag Equivalents Sold	Revenue	Price per Bag
1979/80		$	$
Quarter Ending			
September	250,381	495,617.13	1.98
December	252,741	900,452.05	3.56
March	245,320	1,232,753.06	5.03
June	249,550	985,327.72	3.95
Annual	997,992	3,614,149.96	3.62
1980/81			
Quarter Ending			
September	245,541	897,962.99	3.66
December	260,908	1,355,197.09	5.19
March	199,773	686,970.71	3.44
June	204,502	614,847.79	3.01
Annual	910,724	3,554,978.58	3.90

prices given in Table 31. This reflects the adjustment for transport costs and commission between the two selling areas. Prices for the pre-pack potatoes are set each Monday based on the auction prices achieved at the Monday auction sale and therefore move with the auction price. The output from the pre-pack operation is almost exclusively for the large supermarket chains with each pre-pack company having a relationship with particular chains and packing to the specific chain's requirements at arranged prices. In addition to this supply all the companies supply pre-packs to the central market. At times, special "deals" are entered into with a supermarket chain when such a chain wishes to run a "special" on potatoes. It was estimated by some executives in the industry that pre-packs account for 70 per cent of the potatoes sold in Auckland. However, this is not supported by the statistics obtained as the pre-pack operations account for slightly less than what is handled at auction (Table 32 compared with Table 31). The use by the supermarkets of the pre-pack potatoes means that there is minimal representation by supermarkets on the auction floor.

4.2 Hamilton

There are two auction companies operating in Hamilton, one of which has a pre-pack operation associated with it. In addition, there is an independent pre-pack company buying potatoes from the auction companies and direct from growers. Tables 33, 34 and 35 present the sales analysis for the auction companies for the years 1979/80 and 1980/81.

TABLE 33

Hamilton New Potato Auction Sales Analysis

	Bags Sold	Revenue	Price per Bag[a]
1979/80		$	$
Quarter Ending			
September	2,845	13,876.12	4.88
December	45,190	231,180.86	5.12
March	27,595	178,876.11	6.48
June	-	-	-
Annual	75,630	423,933.09	5.60
1980/81			
Quarter Ending			
September	737	8,243.50	11.19
December	90,840	602,066.97	6.63
March	80,923	304,727.04	3.77
June	-	-	-
Annual	172,500	915,037.51	5.30

[a] price excludes bag charge

As a result of problems with defining what are "new" potatoes and differences in that definition between companies, the analysis presented in Tables 33 and 34 may not be entirely representative of the different crop types. The large difference in the volume of new crop potatoes between 1979/80 and 1980/81 indicates the improvement in definition achieved in 1980/81 with better company records from which the data were extracted. Therefore, the data presented in Table 35 provide a better review of the situation.

TABLE 34

Hamilton Main Crop Auction Sales Analysis

	Bags Sold	Revenue	Price per Bag[a]
1979/80		$	$
Quarter Ending			
September	110,598	251,297.34	2.27
December	70,835	276,324.90	3.90
March	64,242	365,148.38	5.68
June	78,639	330,059.56	4.20
Annual	324,314	1,222,830.18	3.77
1980/81			
Quarter Ending			
September	60,712	242,147.71	3.99
December	15,070	71,284.19	4.73
March	29,751	99,990.31	3.36
June	84,798	247,350.06	2.92
Annual	190,331	660,772.27	3.47

[a] price excludes bag charge

Excluding pre-packs, one company has approximately 60 per cent of the total auction market, the other handling the remainder. The average annual prices achieved by each company are very similar. The addition of pre-packs to the bag totals given in Table 35 would add approximately 16-20 per cent to those totals. This means that, from auction centre sources there are approximately 480,000 20 kg bag equivalents of potatoes sold in Hamilton annually. In addition to this, private sales of potatoes are also significant with approximately 50,000 bags being sold annually in the Hamilton area. These sales are concentrated in the May to September period.

Each of the auction companies indicated that approximately 40 regular buyers were present on their auction floors. Approximately 6 of those buyers would take over 50 per cent of the quantity sold, the major buyer being the independent pre-packer who, it was estimated, would buy the equivalent of about 3,000 bags per week, of which two

TABLE 35

Hamilton Potato Auction Sales Analysis[a]

	Bags Sold	Revenue	Price per Bag[b]
1979/80		$	$
Quarter Ending			
September	118,355	296,310.00	2.50
December	117,025	514,145.76	4.39
March	91,837	544,024.49	5.92
June	91,276	388,417.04	4.25
Annual	418,493	1,742,897.29	4.16
1980/81			
Quarter Ending			
September	87,882	363,373.50	4.12
December	109,192	693,891.02	6.35
March	111,597	408,243.45	3.66
June	93,865	275,720.64	2.94
Annual	402,536	1,740,228.61	4.32.

[a] includes traded potatoes

[b] price excludes bag charge.

thirds would be purchased as bulk binned potatoes. The supermarkets purchased from auction on an irregular basis, usually only when purchasing 20 kg bags for a "special". The main supply for the supermarkets was from the two pre-pack operations. Both auction companies accepted orders for potatoes and purchased off the floor to fill these orders.

Both companies operate a "controlled auction". Prices are maintained within an established range and neither company have a clear policy of attempting to clear the floor every day (although one company is more keen to do this than the other; the former company probably has better supply control than the latter company and is therefore better able to match supply with demand and therefore gain a better floor clearance). Although there is an attempt at price setting, both companies consider that throughput is better by operating an "auction" system rather than by using a fixed price.

Both companies will buy potatoes from out of the district, notably Rangitikei. These purchases, which make up about 10-15 per cent of the potatoes sold, are all sold through the auction floor. There is a tendency for these purchases to be greater when prices are rising although some particular lines of potatoes are bought whenever available because of their high quality. The purchases are largely made from trading companies rather than directly from growers.

A large proportion (approximately 70 per cent) of the supply to the auction companies comes from about 12 growers with each company having 6 each. This enables a clear degree of supply control to be exercised and a close liaison between the auction companies and the growers in matters of quality and price acceptability. A significant influence on the Hamilton market is the substantial private supply of potatoes from Rangitikei in the period from May to September. Outside this period, there is a substantial increase in buyer interest in the central markets, especially from fast food outlets.

4.3 Wellington

There are four auction companies operating in Wellington. Two of these have a pre-pack operation associated with them. In addition, there is a major wholesaler handling potatoes in 20 kg bags and pre-packing in Lower Hutt. The following Tables (36 and 37) present the analysis of potato sales for the auction companies.

As it was impossible to separate new potatoes from main crop potatoes for some auction companies, it would not be appropriate to present an analysis of main crop potatoes as they would include a reasonable volume of new potatoes. On an annual basis, average prices for the four companies ranged from $3.72 to $4.33 per bag for 1979/80 and, for 1980/81, $4.40 to $4.62 per bag. Generally, two of the companies had consistently higher average prices than the other two. The market was divided between the four companies in very similar proportions for both years with one company having slightly less than 40 per cent of the market and the others having approximately 20 per cent each. These proportions were reasonably consistent over the years apart from the March quarter each year when one of the smaller companies had a reduced proportion of total sales in favour of the other two smaller companies.

The companies reported that between 50 and 100 buyers are present on the auction floor for each sale with an average over all companies of about 80. In addition to the buyers present on the floor, telephone orders are also accepted by the companies. The volume of this business varies between companies ranging from around 20 to 250 buyers. The orders received by the companies are filled at the prices established for the day. Although there is a range of buyer strength according to the size of outlet being serviced, there is very little commission buying undertaken in Wellington; some commission buying is undertaken on behalf of the Woolworths chain of stores.

TABLE 36

Wellington New Potato Auction Sales Analysis[a]

	Bags Sold	Revenue	Price per Bag[b]
1979/80		$	$
Quarter Ending			
September	1,822	13,017.98	7.14
December	36,320	190,344.78	5.24
March	15,563	100,348.79	6.45
June	-	-	-
Annual	53,705	303,711.55	5.66
1980/81			
Quarter Ending			
September	3,361	21,964.19	6.54
December	49,556	375,057.10	7.57
March	20,418	88,416.50	4.33
June	-	-	-
Annual	73,335	485,437.79	6.62

a as a result of difficulties with data extraction from company records, this table presents new potato data for only some of the Wellington auction companies.

b bag charge excluded.

TABLE 37

Wellington Potato Auction Sales Analysis

	Bags Sold	Revenue	Price per Bag[a]
1979/80		$	$
Quarter Ending			
September	184,191	413,413.49	2.24
December	164,346	682,334.09	4.15
March	142,613	834,497.76	5.85
June	178,667	726,162.57	4.06
Annual	669,817	2,656,407.91	3.97
1980/81			
Quarter Ending			
September	184,775	763,842.19	4.13
December	179,693	1,141,457.69	6.35
March	153,104	617,220.83	4.03
June	177,420	603,506.90	3.40
Annual	694,992	3,126,027.61	4.50

[a] excludes bag charge.

Price establishment practices vary between companies. One company reports that it operates an auction for all potatoes; another often auctions potatoes but sets a price on "good quality lines"; the third company has an auction from October through March with a reserve price while the other company does not auction potatoes at all, using a fixed price for all sales. All companies attempt to control the supply of potatoes to ensure that they do not experience rapid fluctuations in price and it was considered by all company spokesmen that price stability was important in the market to encourage purchases and give a stable return to growers. Further, it was suggested that potato sale prices less than $5.00 per bag resulted in no profit to the companies as the 10 per cent commission at less than $0.50 did not cover the costs. (If this is the case, it could be suggested that potato sales are being used by the companies to increase their turnover as the average prices in 1979/80 and 1980/81 were below $5.00).

With regard to potato trading, all companies indicated a reluctance to trade as the profitability of trading was poor. However, for new potatoes, all companies reported that some trading was undertaken, these potatoes being sold across the floor.

The stock holding policies of the companies varied from nil stock holding (daily floor clearance) to an average stock holding of about 2,000 bags. The other two companies declared an intention to hold 200 and 1,000 bags respectively.

All company representatives suggested that the biggest problem with potato sales in Wellington was the poor grading effected by many growers. This led to reduced prices over all potatoes. It was suggested that strict enforcement of bag labelling requirements might help to offset the poor quality from some growers by allowing buyers to clearly identify good lines of potatoes. A further characteristic of the market was the tendency for growers to sell outside the central market system, through gate sales and truck sales, especially when prices are low. The activities of the pre-pack operation in Lower Hutt was also considered important as this company supplies potatoes to the Foodstuff's chain of stores in the Wellington area. The company buys direct from growers resulting in the buying strength of the Foodstuffs chain not being reflected in the central market. In addition to the pre-pack operation in Lower Hutt, two companies are also preparing pre-packs in Wellington and pre-packs are supplied from companies in Palmerston North.

4.4 Christchurch

Two auction companies operate in Christchurch and they jointly operate a pre-pack company. In addition, there are a number of direct supply companies which buy off growers. Tables 38, 39 and 40 present the analysis for the Christchurch auction companies.

The market is divided between the two companies approximately 30 per cent and 70 per cent respectively. Over the two year period one company maintained a higher price than the other by approximately \$0.30 per bag average. Both companies handle pre-packs through their auction floor from their jointly owned pre-pack operation. The pre-packs are set priced.

TABLE 38

Christchurch New Potato Auction Sales Analysis[a]

	Bags Sold	Revenue	Price per Bag[b]
1979/80		$	$
Quarter Ending			
September	1,510	13,617.60	9.02
December	62,428	258,621.70	4.14
March	64,615	196,876.40	3.05
June	-	-	-
Annual	128,553	469,115.70	3.65
1980/81			
Quarter Ending			
September	1,727	16,741.50	9.69
December	53,201	299,141.30	5.62
March	53,129	128,091.00	2.41
June	-	-	-
Annual	108,057	443,973.80	4.11

[a] this analysis represents new potatoes from both companies but definition differences exist between the companies.

[b] excludes bag charge.

Both companies operate a set pricing system. This is adapted to some extent by the desire to "clear the floor" each week (this being more strongly emphasised by one company than the other). The ability to have a set price system is dependent upon having some control over supplies to the companies. Both companies indicated that they thought they had reasonable control over supply but that problems had been experienced with growers ignoring supply advice. Each potato line is priced according to the merits of the line with premiums being placed on the higher quality potatoes and premiums for potatoes from particular growers based on the grading carried out by those growers.

Both companies accept telephone orders from buyers and both have separate companies "associated" with them which purchase produce

TABLE 39

Christchurch Main Crop Auction Sales Analysis

	Bags Sold	Revenue	Price per Bag
1979/80		$	$
Quarter Ending			
September	133,323	319,027.50	2.39
December	79,703	229,394.10	2.88
March	84,107	232,268.10	2.76
June	142,977	382,089.70	2.67
Annual	440,110	1,162,779.40	2.64
1980/81			
Quarter Ending			
September	150,765	338,708.00	2.25
December	104,742	345,131.00	3.30
March	57,468	140,844.10	2.45
June	126,616	335,362.00	2.65
Annual	439,591	1,160,045.10	2.64

[a] excludes bag charge.

(including potatoes) for resale to shops or who act as commission buyers. Overall, approximately 40 per cent of sales are made to buyers who are either large on their own account or who act as commission buyers. The supermarkets are not big buyers of bag potatoes, on their own account, either taking mainly pre-packs or operating through an order company. (This is with the exception of Woolworths who do operate individually at the market).

Neither company is very involved in potato trading, this only occurring for early new potatoes from Pukekohe.

It was considered by the companies that a significant volume of potato sales occurred outside the central system. This was reflected in the apparent lack of a negative demand response to high prices. When prices rise, a similar volume of potatoes are sold as

TABLE 40

Christchurch Potato Auction Sales Analysis

	Bags Sold	Revenue	Price per Bag[a]
1979/80		$	$
Quarter Ending			
September	134,833	332,645.10	2.47
December	142,131	488,015.80	3.43
March	148,722	429,144.50	2.89
June	142,977	382,089.70	2.67
Annual	568,663	1,631,895.10	2.87
1980/81			
Quarter Ending			
September	152,496	355,449.50	2.33
December	157,943	644,273.20	4.08
March	110,597	268,935.10	2.43
June	126,616	335,362.80	2.65
Annual	547,652	1,604,020.60	2.93

[a] excludes bag charge.

more demand is put through the central system resulting from outside buyers transferring their demand to the central system when supplies are restricted. This occurs when total potato supplies are reduced from September to November.

It was considered by the auction companies that prices were lower in Christchurch than for North Island centres because of an excess supply to the Christchurch market (part of which used to be sent to the North Island but is not now as the North Island is now self sufficient in potatoes) and generally lower quality potatoes being supplied to the Christchurch market. It was suggested that if one third of the potatoes currently supplied to the markets (those that are of low quality) were dumped (at least not made available to Christchurch consumers), the price achieved for the remaining potatoes would probably double. Better prices are paid for high quality potatoes and experience with washed potatoes suggests that sufficient premiums are available to cover their cost of production.

4.5 Dunedin

The Dunedin market has two auction companies and is characterised by firm potato set pricing arrangements by both companies, strong supply control and a commitment to a substantial level of stock. In addition, southern markets identify two clearly different potato types; red and white skinned. Different pricing structures are applicable to these two types of potato. Table 41 contains an analysis of the prices for the different potato types as made available by one of the companies.

TABLE 41

Comparative Potato Price Analysis for One Dunedin Company

	Old Red	Old White	New Red	New White
1979/80	$/bag	$/bag	$/bag	$/bag
Quarter Ending				
September	3.59	3.02	-	-
December	3.54	2.72	8.77	4.67
March	3.72	3.21	5.52	3.16
June	4.12	3.01	-	-
Average	3.80	3.03	7.01	4.21
1980/81				
Quarter Ending				
September	4.83	3.06	-	-
December	4.69	3.46	-	7.25
March	4.41	2.99	-	6.29
June	4.92	2.73	-	-
Average	4.78	2.97	-	7.00

These price comparisons demonstrate the degree of preference for red potatoes (when they are available). The supply of new red potatoes is variable as they are difficult to grow for availability in the December and March quarters. Significant price premiums are therefore necessary to encourage production of new red potatoes. Most of the new white potatoes are sourced from Pukekohe.

Tables 42, 43 and 44 present the analysis of sales for red and white potatoes combined. Again, some definition differences exist between companies as to the classification of new and main crop potatoes; therefore Table 44 provides the best analysis.

TABLE 42

Dunedin New Potato Auction Sales Analysis

	Bags Sold	Revenue	Price per Bag
1979/80		$	$
Quarter Ending			
September	-	-	-
December	41,456	223,049.56	5.38
March	8,846	31,082.27	3.51
June	-	-	-
Annual	50,302	254,131.83	5.05
1980/81			
Quarter Ending			
September	-	-	-
December	39,564	241,193.48	6.10
March	9,853	64,873.88	6.58
June	4,497	15,289.80	3.40
Annual	53,914	321,357.16	5.96

The share of total sales is approximately 70 per cent to one company and 30 per cent to the other. On an annual basis, the average prices achieved by each company for all potatoes were very similar. During the year, however, quarterly average price differences of up to $0.50 per bag occurred. This tended to reflect differences between the companies in the throughput of new potatoes.

As a result of the method of operation of the Dunedin companies, prices were relatively stable from week to week. Supply control is rigidly enforced enabling a matching of supply with demand. Prices are therefore able to be maintained at the set levels without excessive stock build up and resulting pressure to reduce prices.

TABLE 43

Dunedin Main Crop "Auction" Sales Analysis

	Bags Sold	Revenue	Price Per Bag
1979/80		$	$
Quarter Ending			
September	75,250	260,273.06	3.46
December	13,416	59,447.46	4.43
March	53,275	188,304.36	3.53
June	59,028	197,358.62	3.34
Annual	200,969	705,383.50	3.51
1980/81			
Quarter Ending			
September	59,990	206,112.02	3.44
December	23,284	83,932.11	3.60
March	38,986	133,323.40	3.42
June	59,983	188,602.33	3.14
Annual	182,243	611,969.86	3.36

New potatoes are not sold under the set price system but are auctioned. At times, poor quality potatoes are also auctioned in order to clear them from the floor.

Both companies accept telephone orders for potatoes with one company operating a subsidiary supply company to handle small shop requirements and country orders. There are no commission buyers of importance. Both companies operate pre-pack activities producing 3 kg and 5 kg packs which are sold to supermarkets. The companies suggest that they meet all the supermarket demand. Both companies consider that a proportion of the market is being met by deliveries of potatoes direct to retailers (mainly fish and chip shops) from the Canterbury area. These potatoes are usually sold for cash at a substantial discount from the central market price. This influence on the market is seasonal but can lead to problems for local suppliers to the Dunedin markets.

TABLE 44

Dunedin Potato "Auction" Sales Analysis

	Bags Sold	Revenue	Price per Bag
1979/80		$	$
Quarter Ending			
September	75,250	260,273.06	3.46
December	54,872	282,497.02	5.15
March	62,121	219,386.63	3.53
June	59,028	197,358.62	3.34
Annual	251,271	959,515.33	3.82
1980/81			
Quarter Ending			
September	59,990	206,112.02	3.43
December	62,848	325,125.59	5.17
March	48,839	198,197.28	4.05
June	64,480	203,892.13	3.16
Annual	236,157	933,327.02	3.95

4.6 Volume and Price Comparisons

In order to provide a clear appreciation of the differences between the five markets in terms of prices and quantities, the following tables have been prepared. Table 45 presents the average prices achieved in each market centre for all potatoes sold on a quarterly basis for the two years and Table 46 provides a similar comparison of volumes sold.

It is apparent that, taking the two years together, the Auckland, Hamilton and Wellington markets returned similar prices, Dunedin had prices a little lower and Christchurch prices were approximately $1.00 per bag lower than Dunedin on average. In 1979/80, the Christchurch price was $1.30 per bag lower than the average of the North Island centres and in 1980/81, the difference increased to $1.50 per bag. The North Island centres recorded their highest quarterly prices in the March quarter of 1979/80 and the December quarter of 1980/81 while in the South Island, prices were highest in the December quarter each

TABLE 45

Comparison of Auction Centre Average Prices

($/bag)

	Auckland	Hamilton	Wellington	Christchurch	Dunedin
1979/80					
Quarter Ending					
September	2.53	2.50	2.24	2.47	3.46
December	4.39	4.39	4.15	3.43	5.15
March	6.22	5.92	5.85	2.89	3.53
June	4.53	4.25	4.06	2.67	3.34
Annual	4.37	4.16	3.97	2.87	3.82
1980/81					
Quarter Ending					
September	4.45	4.12	4.13	2.33	3.43
December	5.79	6.35	6.35	4.08	5.17
March	3.92	3.66	4.03	2.43	4.05
June	3.39	2.94	3.40	2.65	3.16
Annual	4.40	4.32	4.50	2.93	3.95

TABLE 46

Comparison of Auction Centre Sales Volumes

(000 Bags)

	Auckland	Hamilton	Wellington	Christchurch	Dunedin
1979/80					
Quarter Ending					
September	263	118	184	135	75
December	316	117	164	142	55
March	237	92	143	149	62
June	240	91	179	143	59
Annual	1,056	418	670	569	251
1980/81					
Quarter Ending					
September	259	88	185	152	60
December	270	109	180	158	63
March	255	112	153	111	49
June	257	94	177	127	64
Annual	1,041	403	695	548	236

year. Annual average prices were higher for 1980/81 than in 1979/80, however, prices in the March and June quarters of 1980/81 were lower than in the corresponding quarters of the previous year.

The volume of potatoes sold through the central markets was reasonably constant on an annual basis with some tendency for reduced quantities in 1980/81. On a quarterly basis, sales were reduced in Christchurch in the March and June quarters of 1980/81 (versus 1979/80) and this appears to have been reflected in an ability to hold prices close to those in 1979/80. A similar situation exists with the Dunedin sales and prices for the March quarter of 1980/81 (versus the March quarter 1979/80). On a quarterly basis, it is not possible to identify a clear price/ quantity relationship for the markets. The difficulty associated with this identification is exacerbated by the situation where potatoes are sold outside the central system and therefore the total market is not included in the analysis.

CHAPTER 5

END USER SURVEY RESULTS

A telephone survey of retailers, institutions, restaurants and caterers was carried out in Auckland, Hamilton, Wellington, Christchurch and Dunedin. The survey was intended to provide information on the sources of potatoes used by the various demand areas and was based on the listings given in the "Yellow Pages" of the telephone directory for each area. Table 47 provides the number of outlets from which the sample was drawn and the sample size. The selection of the sample was random (the use of every nth entry) with n being predetermined for each area based on the number of entries for each group and the desired sample size.

It should be noted that the variation in the sample proportion reflects the variation in the identified population in order that a reasonable sample size was obtained. Also, as the telephone survey was intended to only provide a general indication of potato purchase sources, the potato volume information that was obtained should not be regarded as conclusive.

5.1 Auckland

In Auckland, 85 per cent of the fruiterers and greengrocers surveyed purchased their potatoes from auction, with the remainder buying direct from farmers or using a Commission Buyer. In the fast food area, 57 per cent bought potatoes and of those, 25 per cent purchased from auction, 50 per cent used Commission Buyers and 25 per cent bought direct from growers. The 43 per cent of fast food outlets that did not buy potatoes bought prepared chips. All the caterers surveyed purchased potatoes with 50 per cent buying from auction, the others obtaining their supplies under contract from farmers. In addition to their raw potato purchases, 50 per cent of the caterers purchased processed potatoes. Of the institutions, 20 per cent used the auction system, 20 per cent used a commission buyer and 40 per cent had their own farm. The remainder obtained processed potatoes. All the hotels/restaurants who purchased potatoes used commission buyers.

TABLE 47

Telephone Survey Population and Sample

	Auckland	Hamilton	Wellington	Christchurch	Dunedin
Fruiterers and Greengrocers					
- Population (no.)	230	23	110	60	27
- Sample (no.)	23	9	11	15	5
- % Sample	10%	39%	10%	25%	19%
Fast Food Outlets					
- Population (no.)	190	64	170	120	50
- Sample (no.)	19	16	28	12	12
- % Sample	10%	25%	16%	10%	24%
Caterers					
- Population (no)	92	15	80	37	12
- Sample (no.)	9	5	8	6	4
- % Sample	10%	33%	10%	16%	25%
Supermarkets and Grocers[a]					
- Population (no.)		60	190	180	110
- Sample (no.)		10	19	18	12
- % Sample		17%	10%	10%	11%
Institutions[b]					
- Sample (no.)	5	2	10	3	3
Hotels and Restaurants					
- Population (no.)	300	40	130	150	90
- Sample (no.)	30	9	13	15	16
- % Sample	10%	23%	10%	10%	18%

[a] The Auckland survey was limited to the head offices of the major supermarket chains.

[b] The total number of institutions was not able to be determined for each area. The survey covered hospitals, prisons and military installations.

Supermarket purchasing was almost entirely restricted to pre-packs from Pukekohe.

With the exception of the supermarkets (who handle about 950,000 bags per year), the fruiterers and greengrocers were the most important category, handling an estimated 600,000 bags per year, followed by the fast food outlets which use about 250,000 bags per year. Hotels/ restaurants appear to handle about 30,000 bags per year and caterers about 25,000 bags. Institutions use about 90,000 bags per year. These usage levels are only estimated but serve to provide a measure of the comparative importance of the different outlets. Processed potatoes are additional to these quantities.

5.2 Hamilton

In the Hamilton area, the supermarkets purchase potatoes predominantly as pre-packs from the two Hamilton companies providing this product. In addition, however, purchases from the auction floor and direct from growers are also undertaken. This occurs on a continuing basis but more so when a particular supermarket chain is running a "special" on potatoes. It is estimated that the supermarkets and grocers handle approximately 200,000 bags of potatoes per year.

Fruiterers and greengrocers buy predominantly from auction (85 per cent), the remainder buying direct from growers and traders, predominantly from the Rangitikei area. The volume of potatoes handled is estimated at approximately 200,000 bags annually.

Fast food outlets purchase from a range of sources. Approximately 30 per cent of outlets buy from the auction companies, 25 per cent from wholesalers and traders, 8 per cent direct from growers and the remainder buy their supplies from processors. The total quantity of potatoes handled by fast food outlets is estimated at 60,000 bags per year.

Caterers purchase from auction, through commission buyers and from wholesalers in roughly equal proportions. The total quantity used annually is estimated at 2,000 bags.

The institutions surveyed purchased processed potatoes and potatoes from wholesalers. Some purchases are made from the central market. Total annual potato purchases are estimated as in the range of 1,000 to 2,000 bags.

Hotels/restaurants mainly purchase their potatoes from wholesalers although some are purchased from the central market directly. Approximately 3,000 bags are used per year.

5.3 Wellington

Grocers and supermarkets in the Wellington area buy from two main sources depending on the supermarket chain. One chain buys almost all of their potatoes from the central markets while the other chain buys from an independent wholesaler. Few potatoes are purchased from other than these two areas. Both 20 kg bags and pre-packs are purchased by the supermarkets with some pre-packs being supplied from Palmerston North through the central Wellington markets. The volume of potatoes handled by the supermarkets is estimated at 450,000 bags annually.

Of the fast food outlets, 85 per cent purchased potatoes. Of those, 81 per cent purchased from the auction system, the remainder buying from wholesalers. The total quantity of potatoes handled by fast food outlets is estimated at 190,000 bags annually. In addition to the potato purchases, approximately 50,000 kg of processed chips are also purchased annually.

Fruiterers and greengrocers purchase almost entirely from the auction system. The quantity purchased is estimated at approximately 200,000 bags annually.

Institutions use an estimated 8,000 bags annually plus about 5,000 kg of processed potatoes. Of the potatoes purchased, approximately 80 per cent are obtained through the auction system with the remainder from their own potato growing areas.

Only 15 per cent of the caterers purchased potatoes from the auction system, the rest using commission buyers (50 per cent), wholesalers (30 per cent) and purchased processed potatoes (5 per cent). The volume of potatoes used annually is estimated at 30,000 bags.

The hotels/restaurants surveyed did not purchase potatoes from the auction system. However, 40 per cent used commission buyers. Another 40 per cent purchased from wholesalers while the remainder used processed potatoes. The volume of potatoes used annually was estimated at about 15,000 bags.

5.4 Christchurch

Of the supermarkets and grocers surveyed in Christchurch, 50 per cent bought directly from the auction companies and 40 per cent used commission buyers or wholesalers. The remainder purchased directly from farmers. The majority of the purchases was of pre-packs but a substantial quantity of 20 kg bags was also purchased. The quantity of potatoes purchased has been estimated at approximately 350,000 bags (including pre-pack 20 kg bag equivalents).

Fruiterers and greengrocers purchase almost exclusively through the auction system with both 20 kg bags and pre-packs being bought. An estimated 200,000 bags are purchased by these retail outlets.

Of the caterers surveyed, none purchased their potatoes through the auction system. Most purchased processed potatoes and those who purchased potatoes bought them from growers or wholesalers. An estimated 2,000 bags of potatoes are purchased annually by caterers.

The institutions surveyed all grew their own potatoes.

Considerable difficulty was experienced in obtaining useful information from the fast food outlets as to their potato purchases. Most of those who were prepared to respond to the survey purchased their potatoes through the auction system. However, the majority did not respond to the survey and the indication was that they did not purchase their potatoes through the central system or from wholesalers. Estimates of the quantity used annually are not able to be made.

The hotels/restaurants surveyed mainly purchased their potatoes from wholesalers. In addition there were substantial purchases of processed potatoes, mainly as chips. Some purchases were made direct from the auction system.

5.5 Dunedin

Almost all supermarket purchases of potatoes in Dunedin are made through the central market system with both pre-packs and 20 kg bags being bought.

All the fruiterers and greengrocers surveyed obtained their potatoes from the central market with an estimated 30,000 bags being purchased annually by these retailers.

Of the fast food outlets surveyed, 82 per cent purchased from the central market, the remainder buying direct from growers and traders. An estimated 100,000 bags of potatoes are purchased by fast food outlets annually with very little purchases of processed potatoes.

The hotels/restaurants surveyed indicated that 70 per cent purchased from the central market and 30 per cent purchased from wholesalers. The estimated quantity used was 10,000 bags annually.

Of the caterers surveyed, all purchased from auction, with the estimated annual volume at 5,000 bags.

The Dunedin institutions purchased from auction and grew their own potatoes. Total annual volumes were estimated at about 1,500 bags.

5.6 Summary

The degree of use of the auction centres as supply outlets for potatoes in the five centres is illustrated in Table 48. This indicates the predominance of the Fruiterers and Greengrocers as consistent users of the auction centres and the variation in use by the Supermarkets (according to whether a separate pre-pack facility is available). The predominance of the auction centres in the Dunedin potato market is also clearly illustrated.

TABLE 48

Use of Auction Centres as Potato Supply Outlets

	Auckland		Hamilton		Wellington		Christchurch		Dunedin	
	Major[a]	Minor[b]	Major	Minor	Major	Minor	Major	Minor	Major	Minor
Fruiterers and Greengrocers	*		*		*		*		*	
Fast Food Outlets		*		*	*			*	*	
Caterers	*			*		*		*	*	
Supermarkets and Grocers		*		*	*		*		*	
Institutions		*		*	*			*	*	
Hotels and Restaurants		*		*		*		*	*	

a $\geq$ 50 per cent of potato purchases through the auction centres

b $<$ 50 per cent of potato purchases through the auction centres.

CHAPTER 6

DISCUSSION

6.1 Regional Price and Supply Differences

The New Zealand potato market is characterised by a relatively stable annual demand for potatoes and a fluctuating annual (and weekly) supply. The supply fluctuations are mainly caused by changes in potato prices (resulting from previous supply changes) and the prices that are available to growers for other products. In addition, there appear to be significant regional differences within New Zealand. The Auckland area (Ward 1) contains mainly potato growers who are involved in a range of horticultural activity predominantly involving market gardens. In the lower half of the North Island and Nelson/ Marlborough (Ward 2), growers tend to be of a more part-time nature with a greater predominance of traditional farming activities. In the rest of the South Island (Ward 3), growers are predominantly farmers with potatoes grown as a secondary (or tertiary) activity and, as a consequence, the volume grown can tend to vary and the price received may not be as important as for more specialist growers.

This situation is reflected in the prices achieved for potatoes in the various areas. North Island prices at the auction centres are substantially higher than in the South Island (especially Christchurch) and prices in Auckland tend to be higher than further south. This leads to the conclusion that supply and demand are balanced at a level conducive to a higher price being achieved in the North Island centres.

In the Canterbury area, because potatoes are often a secondary crop, farmers are generally able to maintain a supply of potatoes under lower price structures than elsewhere. This supply response results in the continuation of lower prices as demand remains relatively constant. As there are no restrictions inhibiting the entry of new potato suppliers to the market, the price level in Canterbury is likely to persist, as the present level of prices appears to provide an acceptable return to most farmers. Therefore, in order for prices to be raised, either demand must increase or supply be controlled.

Another important factor is the quality of the potatoes. Under more intensive production systems (such as those that exist in Ward 1), potato quality is likely to be higher. It was agreed by all the companies involved in the central marketing (auction) system that better quality potatoes resulted in the achievement of higher potato prices. It could therefore be suggested that higher North Island (and Dunedin) auction prices also reflect the sale of better quality potatoes than those sold from the Canterbury region.

In addition to the question of quality, but closely associated with it, the level of grading was also considered important by all auction companies. Where potatoes were graded into consistent lines, higher prices were achieved for the top lines and, overall, a higher average price was achieved. The inclusion of low quality potatoes in a line of generally higher quality produce usually resulted in a price consistent with the low quality rather than high quality potatoes. The separation of the good quality potatoes from the poorer ones led to the payment of a premium for the top potatoes and the price for the poorer potatoes was generally in line with the price available for the two grades combined. This is a logical result as a buyer of good quality potatoes does not wish to sort the poorer ones from the purchased line as this is costly. Only a buyer who finds lower quality potatoes acceptable will be interested in mixed quality potatoes; the higher quality potatoes are taken by those buyers as a bonus. This results in a direct loss to growers.

If it can be assumed that potatoes grown under intensive production systems will be better graded than those produced under part-time production systems, the existence of a price differential between Canterbury and the North Island is a logical result.

6.2 The Auction System

Auction market systems are often regarded as appropriate price setting mechanisms where the level of supply of a product and the level of demand for the product are variable. Where supply and demand vary from day to day, the price will usually also vary. Price movements will tend to encourage changes in supply and demand, although over a different time span. For example, where high prices are paid for produce on a particular day, supplies the next day are likely to be increased, and, given unchanged demand, prices will decrease.

Where sales of a product are being made through an auction system, the supply of product on any one day is fixed by the deliveries (assuming there is no storage). The price for that product will be set according to the demand on that day and the supply response will occur on the next day (assuming a daily delivery and sale system).

The assumption behind an efficient auction system is that a large proportion of the available demand and supply is expressed through that system. Where this is not so, the price formed can be an inaccurate reflection of the true market situation. Also, where either supply or demand is relatively fixed for each auction, large price differences can occur between auctions where either factor changes from one auction to the next. This price variability can be considered inequitous for both buyers and sellers.

Therefore, auctions can only be considered appropriate where there is a high degree of uncertainty concerning the level of supply and demand. Where this doesn't exist, the establishment of periodically fixed prices would be appropriate, with supply and demand either stabilising about the price or the price being altered marginally to ensure a balance is achieved. Where set pricing is not appropriate, the establishment of storage criteria is required to enable actions to be taken to bring about some level of price stability. Both actions imply the need for supply control, especially where demand is known to be reasonably stable.

This discussion makes the assumption that both producers and consumers prefer price stability. This may not be the case in some circumstances but, generally, the assumption is probably valid as more effective decisions can be made where the level of risk is reduced through price stability.

Where potato sales are made through an auction system, and the existence of an inelastic demand function is apparent, prices will depend, to a large extent, on the level of supply and supply variability. If reasonably fixed and stable quantities of potatoes are demanded, supply changes will have a major effect on prices. This means that short-term supply control is an essential factor in the achievement of stable prices at levels acceptable to growers. In this situation, the use of an auction system could not be supported. Where daily supplies of highly perishable products must be sold, an auction system is appropriate. This results in a matching of supply and demand on a daily basis and the achievement of appropriate prices. However, where a product can be stored and therefore supply can be controlled, a system which is useful for clearing all available supplies is not appropriate as it results in a high level of price variability and uncertainty which can be detrimental to a market where price stability is seen as a desirable feature and encourages buyer confidence. Therefore, for main crop potatoes, the market situation is such that an auction system may not be appropriate. Rather, selling companies could establish a set price system along with a stockholding policy (to offset small demand variations) and ensure that supply is well controlled. This would result in greater confidence in the central marketing system, in terms of the achievement of price stability (buyer cost stability) and encourage more buyers to use the system. Also, as a result of the increased stability and buyer confidence, average prices higher than those achieved under an auction system may be obtained.

For new potatoes, the situation appears to be slightly different. Opinion within the trade suggests that the demand for new potatoes is more elastic than for main crop potatoes, as is the supply. (Further research is necessary to confirm this assumption). This means that supply fluctuations will not have as major an influence on price as in the main crop potato market, as demand will move in response to the supply change so dampening the price effect. Also, as there seems to be a higher demand function (higher in terms of price/quantity relativities) for new potatoes than for main crop potatoes, prices achieved for a given level of supply will be higher so allowing an increased return to the grower of new potatoes to offset the higher production costs. In a situation where demand is reasonably buoyant and supply is generally limited (by growing conditions and grower expertise) an auction system is likely to result in attractive prices to growers. At the same time, price fluctuations will probably not have as severe an effect on the level of buyer confidence (as for main crop potatoes) as there is a level of unsatisfied demand available for the new potatoes. In this situation, demand has a greater influence on auction prices than supply and it is in market situations such as this that an auction system is appropriate.

An auction sale, to be efficient, requires that there be a large number of buyers competing for the available produce. Where there is only a small number of buyers, collusion between buyers is possible, so enabling the produce to be purchased at a lower price. This does not appear to be a problem with potato auctions in New Zealand as all markets report a reasonable number of buyers. However, where any particular buyer (or buyers) require only part of a line being sold, it is in the interests of other potential buyers to withhold their bids in order to obtain the part of the line left over at a price lower than what would be achieved if they competed for the produce. This means that smaller buyers may not participate in the price setting process and therefore their demand is not translated into price competition. Also, in Auckland, it was reported that the Commission Buyers, acting on behalf of the smaller users, did not usually participate in the auction but obtained their requirements at the price established. As the Commission Buyers were thought to take up to 50 per cent of the sale, this lack of buyer competition could have a serious effect on the price achieved.

The attitude of growers to the auction system is also important. If growers are selling mainly through other sales channels, the auction could become a channel handling only the left-over, perhaps poorer quality potatoes. As the auction (or central market) price is used as a general market indicator, this could result in a depression of the total market from the price level it would otherwise reach.

Recognition must be given to the changing retail situation for potatoes. The major supporters of the central markets are the fruiterers and grocers plus the fast food outlets. Where pre-pack operations are a part of the central market system, the supermarkets are also active in the central market. However, the supermarkets generally are not interested in the purchase at auction of 20 kg bags of potatoes. The emphasis is on the sale of pre-packs of 3 kg, 4 kg, 5 kg and 10 kg sizes. This means that the supermarkets, which have become the main retail shopping sector, do not purchase through the traditional system. Prices for pre-packed potatoes are usually set on the basis of the "auction" prices; these auction prices are set more on the degree of supply control than the level of total demand excluding translation of supermarket demand into the price fixing mechanism. This means that almost by default the "auction" companies have given away the pretence of meeting the demand through the central system and are now meeting the demand from the major market sector outside the traditional system.

6.3 Sales Channel Importance

The New Zealand potato market exhibits a wide diversity of sales channel usage with only about 40 per cent of potato sales being through the central market system (as a grower sale) (Table 10). It is on these potatoes that the potato market price is established. Prices in other market channels follow the central market price which other market channels tend to orientate their prices towards. It is questionable whether the auction price is a good indicator especially when all other sales channels (except Fast Food and Processors in 1980/81 and only Processors in 1979/80) paid higher returns to growers than that achieved from auction commission sales (Table 18). This pattern was consistent over Wards 1 and 2, the only exception being Ward 3 where pre-pack sales and local market trader sales were at lower than commission sale prices. It therefore appears that growers can obtain higher returns from outside the central market system for a proportion of their potatoes and this would tend to explain the diversity of sales channel usage reflected in Table 10. From Table 8, it can be observed that the majority of potato sellers use the central market system with 60 per cent of sellers doing so, but only 40 per cent of total sales go through that system. This would tend to imply that the sales through the central system are less than the average annual sale volume for each grower. This is confirmed by the analysis on Tables 12 and 13 where the average auction centre commission sale per seller is only 57-67 per cent of the average annual sales per seller (Table 13).

The importance of the auction commission sale is greater in Ward 1 in terms of the proportion of sellers using this channel (Table 8) and, in terms of the proportion of sales (Table 19), Ward 1 auction commission sales maintain their position relative to other Wards (closely followed by Ward 3). However, in terms of per grower sale size (Table 13), the importance of the Ward 1 auction commission sale is second to that in Ward 3 with the pre-packer sales channel being more important. For Ward 1, the importance of the pre-packer sales channel is a significant feature. The prices paid to growers by this sales channel are based on the prices achieved at auction. The potatoes that go through pre-packers meet close to all the demand from Auckland supermarkets. Therefore, a high proportion of the Ward 1 (Auckland) demand is not expressed in the setting of the auction price. At periods of relative potato shortage, this could have a large effect on the potential auction prices achieved.

In the Ward 2 area, there is a strong emphasis on sales to traders with a total of 32.0 per cent and 32.4 per cent of sales being made to traders in 1979/80 and 1980/81 respectively (Table 10). The proportion of sellers using this sales channel is similar (Table 18). As a consequence, the relative importance of auction commission sales is reduced, especially in terms of the proportion of sales going through that channel. This indicates that relatively small sales are being made through auction commission sales, the larger sales being made to export traders and processors (Tables 12 and 13). As the prices paid by export traders will be influenced by export market returns, the degree of reliance on auction sales for price setting is reduced. However, traders will only pay what is necessary to secure the product required and this will be influenced by alternative prices available. Returns received from sales to traders were, in fact, greater than those received from auction commission sales in Ward 2 (Table 15) but this probably reflects the need for a higher quality standard for export potatoes, and more extensive trading in new potatoes on the local market (relative to main crop potatoes).

6.4 The Markets

6.4.1 Ward 1

Ward 1 is a more densely populated area than the other Wards and therefore potato production is mainly directed toward sale to consumers with reduced potato processor activity. With a more dense population, there is a greater consumer reliance on retail outlets for food supplies and the growth of the supermarket strength is an example of this. As a consequence, potato sales tend to be concentrated on outlets which lead directly into the retail area. Therefore, central merchandising of potatoes assumes more importance than elsewhere as this is an efficient means of distributing potatoes to a wide range of retail outlets, especially the fruiterer outlets (85 per cent of which purchased direct from the central system - more when the commission buyers are included - taking approximately 60 per cent of the potatoes handled by the central marketing system). In addition, the supermarkets are a very large buying force in the Ward 1 (Auckland) area and their standardised requirements are mainly met by the pre-pack operations. A further feature of Ward 1 is the slightly negative balance of the Ward 1 supply and demand. This means that there is no incentive to move potatoes out of the Ward (with the exception of new potatoes prior to Christmas), therefore there has been very little development of a trading activity (either inter-regional or local) based on potatoes produced within Ward 1.

In the Auckland situation, where there is a reasonably close matching of supply from local growers with the demand (with a tendency to have a lower supply than is required), an auction system can result in the achievement of reasonably high prices. (The higher cost supply function (versus the rest of New Zealand) means that higher prices are essential to the gaining of an adequate supply). However, unless stringent control over daily supply is maintained, prices will fluctuate considerably, there being no stock-holding policy to enable the balancing of any short term supply/demand imbalance. This can result in individual sales being made at low prices so penalising a grower on a particular day by obtaining unrepresentative prices.-

It is suggested by the Auckland companies that storage of potatoes to enable achievement of higher prices is not desirable as a quality/freshness problem exists with potato storage. However, this does not appear to be the case elsewhere.

The existence of higher prices in Auckland serves to attract supplies from the lower part of the North Island. Where the release of those supplies is not controlled so as to avoid over-supply at any particular time, the total market can be seriously affected by the achievement of lower prices generally until the excess supply has been used. A lack of strong control over supply and the dispersion of demand away from the auction floor (to the pre-pack operations at Pukekohe) therefore made the operation of the Auckland auction system subject to price fluctuation and uncertainty.

In the Hamilton area, there is a strong influence on the market from outside the central system. Deliveries of potatoes from the Rangitikei area result in prices being significantly affected. As these direct sales tend to be at lower prices (it is suggested) than those achieved by the auction companies, there is a tendency for Hamilton area prices overall to be reduced. Also, there are companies operating in the Hamilton area that purchase potatoes direct from farmers. In this situation, the prices achieved by the auction system are subject to the variability in total supply to the Hamilton area market. However, this variability will be reduced by the tendency for trade relationships to be established between a small number of growers supplying each company (up to 10 growers for each company) and the demand from fruiterers and supermarkets for potatoes and their allocation of bananas and oranges.

A further significant influence is the Auckland market which growers will service in preference to Hamilton if the net returns from Auckland exceed those available from Hamilton. The Hamilton area can therefore be considered to be subject to a range of influences on the potato price without any particular system being dominant.

6.4.2 Ward 2

Potatoes from Ward 2 have traditionally been used to help meet the demand for potatoes from Ward 1. This has led to the development of trading activities to facilitate the movement of potatoes and the concentration of these trading activities in Ward 2, particularly the Rangitikei area. In addition, the surplus of local potatoes over local demand has facilitated the development of extensive processing activities in the region.

The demand for potatoes by retailers has been met by the central (auction) market system in the urban areas with the addition of pre-packed potatoes from the Palmerston North area and the Wellington/ Lower Hutt area. The Wellington central market is characterised by relatively greater supermarket strength (versus Auckland) with sales outside the central system (including the Lower Hutt wholesaler) being at a lower proportion than in Auckland.

6.4.3 Ward 3

Within Ward 3, the Canterbury region can be classified as an area different from the remainder of the Ward. This is largely a result of the supply function differences postulated earlier and the geography of the area. As potato growing areas in Canterbury are readily accessible to the public, especially in the vicinity of Christchurch, there is a tendency for there to be a higher proportion of direct sales (gate sales). In addition, purchases direct from farmers by retail outlets (notably fast food outlets) are facilitated by the easier access to potato growing areas. This tends to remove a proportion of the demand from the central marketing system during the potato production season. Also, the supply of potatoes from the Canterbury area has been traditionally used to meet excess demand from the North Island. Over recent years, however, this trade has been very much reduced, although the remnants of it are evidenced by the existence of a reasonable usage of traders as a sales channel. Of more importance has been the growth of the potato processing sales channel in Canterbury, in spite of the low returns received by growers from this channel (Table 18), to take up some of the excess supply in the Canterbury area. It is likely that the continued growth of convenience foods (e.g. takeaways) will lead to growth in the importance of the processed potato sales channel.

It is apparent that, while the supply conditions prevalent in Canterbury continue, the price for potatoes in the area will remain lower than elsewhere in New Zealand. Any changes in marketing activities under the present demand structure are unlikely to have very much impact on potato prices as there is a considerable ability by both buyers and sellers to alter the marketing channel used were prices to be held up artificially by any segment of the marketing system. The "set pricing" activities of the Christchurch central market companies can therefore be viewed as an artificial attempt to equate supply and demand at a level which will ensure their throughputs are satisfactory. Movement away from such a price level would result in loss of throughput as buyers and growers moved outside the central market system.

In contrast, the market system in Dunedin reflects a clear ability to establish prices under a firm supply control situation. It is apparent from the survey of the central market companies and the telephone survey of potato users and retailers that a very high proportion of potato purchases are made through the central market companies. This means that a high proportion of the total demand is focussed on those companies. In addition, the companies have a very firm supply control policy that ensures that supply is maintained at a level equivalent to the demand. This is "guaranteed" by the willingness of the companies to hold sufficient stock to ensure a balanced situation. At times, the market is influenced by deliveries of potatoes outside the central system (from the Canterbury area) but the effect of this over total potato sales is thought to be minimal. Such a controlled situation enables the central market companies to fix potato prices at a level remunerative to growers, recognising that there is a relatively constant demand structure. These prices are in excess of those achieved in the Christchurch market (Table 46). Also, prices are stabilised on a weekly basis allowing potato users and resellers to have confidence in the cost to their enterprise and, because of the stockholding function, have confidence in potato availability. Remunerative prices mean that growers are reasonably happy with the return from the central system and supplies are therefore readily available and not moved outside the central system.

It is apparent that higher prices are achievable through the controlled release of potatoes to satisfy the demand and the system operated in Dunedin is dependent upon there being an overall matching of supply and demand. Excess supply, which would be forced outside the central system, would result in a lowering of prices and the need for the central system to take similar price action to recover the confidence presently held in the system. The present situation is therefore dependent upon the central market companies maintaining control over the potato supply.

6.5 Oranges and Bananas

The distribution of oranges and bananas in New Zealand is under the monopoly control of Fruit Distributors Ltd, a company whose directors are, with one exception, drawn from the central produce market (auction) companies. Oranges and bananas are allocated to the auction companies on the basis of the total turnover (in dollars) achieved by each auction company. In turn, the auction companies will allocate oranges and bananas to auction buyers based on their dollar turnover with the auction company. Oranges and bananas are not allocated to produce suppliers who operate outside the central auction system.

It is apparent that the availability of oranges and bananas at the central market companies has an influence on the usage of those companies for potato purchases. This is especially so for fruiterers and probably explains to a large extent the predominance of their purchasing of potatoes from the central system. It was suggested by some company representatives that potatoes were used as a bulk turnover item in order to expand their allocation of oranges and bananas and companies outside the central system suggested that a lack of an oranges and bananas allocation restrained their business development.

It is not possible to define quantitatively the effect of the oranges and bananas allocation system but it is apparent that the system does serve to distort the market situation for potatoes and may result in lower returns to growers as the central market companies may use potatoes to increase turnover at the expense of a higher price.

6.6 Marketing Changes

From the results of the grower survey, it is possible to identify a tendency amongst growers to consider favourably a system of greater market control (Table 21). This tendency is more predominant amongst the larger growers, reflecting their concern over the viability of their greater investment in potato production and their need for greater price stability. The support for control is expressed through the desire of growers for changes to the marketing system in various areas. These changes (i.e. guaranteed floor price, improved grading, fixed prices, single marketing board) could only be achieved through the exercise of more direct control over supplies and prices. The evidence indicating a desire for greater control is further strengthened by the 26.8 per cent of growers who would prefer that a Potato Marketing Board be established which acquires all potatoes (Table 23). The proportion is lower in Ward 2 than the other Wards, reflecting the more private enterprise orientation of the Ward 2 growers which is evident from their use of potato traders.

With regard to the responses to the questions on the performance of the Potato Board and Potato Growers' Federation, there appeared to be a lack of strong feelings either commending or criticising with the majority of responses indicating neutral feelings about the performance of the two bodies. This could indicate a lack of communication between the bodies and growers and it could be suggested that the two bodies should make more effort to inform growers of their activities.

It appears that a reasonable proportion of growers consider they may be over-represented by the number of bodies servicing them (Table 27) with 59 per cent of growers suggesting that three bodies is unsatisfactory and 82 per cent of those wanting change suggesting only one body would be sufficient. However, as the Vegetable and Producer Growers' Federation represents "new" potato growers and as new potatoes should be considered a different product from main crop potatoes, it would be appropriate for separate representation to continue. Such a separation can only be useful, however, where it is used to facilitate differential action regarding the different potato products where there are differences in the growers benefitting from such action. It is apparent that the problems facing potato producers are more evident for main crop producers than new potato producers and therefore the Potato Growers' Federation have more incentive to act to improve the marketing system than the Vegetable and Producer Growers' Federation.

6.7 Potato Packaging and Labelling

The purchase of pre-pack potatoes by the supermarkets (generally the largest market segment) has implications for grower packaging of potatoes. If the growth in supermarket activity and retail dominance is to continue (and, from observation of overseas trends, this is likely), the importance of the standard 20 kg bag will rapidly decline. Supermarkets want a standard product presented in a standard pack of 3 kg to 10 kg in size that can be guaranteed as a quality product. Therefore, pre-pack operations are likely to grow in importance and the potato supplies they require will be bins of potatoes, grown to a fairly even size, ready for packing into the standardised containers. It is probable that the situation will develop where growers will be paid on the basis of the output of pre-packs achieved from the bins of potatoes they supply after rejects have been eliminated. This would mean that only the better quality potatoes would be paid for as this is what the supermarket demand requires. With the continued developments in this field, including the introduction of improved packaging and potato washing, the importance of the 20 kg bag as a consumer pack will diminish with returns for such a package possibly falling as a result of the higher costs of producing those packs over the bulk handling of potatoes in bins.

This has implications for the labelling of the potatoes. If the 20 kg bag is to move away from the consumer market (as it has with the supermarkets and fruiterer loose sales or repacking), it will not be necessary for the bag to be presented or labelled in a way attractive to consumers. Rather, the label on the package (be it bag or bin) should contain information relevant to the description of the contents to enable the easier selection of potato lines by buyers. Therefore, in order to enhance consumer knowledge and selection patterns, labelling requirements may have to be concentrated on the pre-packs rather than the 20 kg bag.

The further development of the pre-pack sector of the market could result in the movement of growers toward producing their own pre-packs to the requirements of supermarket chains, but this is not likely as there is a need for a considerable throughput of potatoes to make efficient use of the equipment required for pre-packing.

6.8 Seed Potatoes

The seed potato market affects the majority of growers with only 19.7 per cent indicating they never purchased seed potatoes (Table 28). The market is split between merchants and private treaty sales with private treaty sales handling a considerable proportion. There are substantial price differences between purchases made from merchants and through private arrangements. These price differences should reflect the higher quality (implied) available from merchants with a consequent implication of better germinating and growing qualities.

Seed potatoes are sold by 40.7 per cent of potato growers (Table 29) indicating that the production of seed potatoes is not a completely specialised operation but is often carried out in conjunction with the production of table potatoes. The prices achieved for sales of seed potatoes to merchants are not very much different to the prices from private sales. This implies that merchants add considerable value to seed potatoes before they are resold at a significantly higher price (see Tables 27 and 28). As the majority of purchases are made from merchants, it appears that either the improved quality from merchants is recognised (and paid for) by growers and/or, that merchants are able to provide a convenient market mechanism for growers, for which growers are prepared to pay.

As would be expected, there is a close similarity between the average private treaty prices paid and prices received as there would be very little secondary trading through this mechanism.

CHAPTER 7

FURTHER RESEARCH AREAS

7.1 Introduction

The extent of the research completed to date allows the discussion and implications described in Chapter 6 to be presented with varying degrees of certainty. In particular, it must be noted that at this stage the accurate evaluation of demand and supply characteristics not been undertaken, nor has there been the establishment of a proven product differentiation between new and main crop potatoes. Of equal importance is the need to complete the review of the potato marketing system by fully investigating the situation with regard to processed potatoes, both in terms of the actual processing and the market for the processed products. A further area of importance is the field of distribution costs and marketing margins.

7.2 Demand Characteristics

In order to complete the work on demand characteristics, it will be necessary to undertake further consumer research. It is apparent from the previous consumer survey and the present review of the marketing system that major regional differences occur. To enable a clear view of the demand situation to be obtained, it will therefore be necessary to carry out regional consumer surveys. In addition, further information on prices paid by consumers and quantities of potatoes eaten will need to be gathered before the demand characteristics that are presently indicated can be firmly established.

It is anticipated that such research would provide detailed consumer behaviour evaluations, essential for planning product promotion programmes, and would provide sufficient detail to enable retailing and wholesaling techniques to be modified according to the marketing requirements of each region. As it appears that there are differences between the demand characteristics for new and main crop potatoes, it is essential that the characteristics (and the differences) are quantified in order to provide for the useful development and assessment of marketing techniques for the two products.

7.3 Supply Characteristics

It is apparent from the research into the marketing system that the reaction of potato growers to different prices varies from one region to another. Therefore, it can be suggested that the supply relationships differ between regions. However, the relationships and the differences between them have not been quantified, therefore it is not possible, at present, for a clear definition of the point of supply and demand equilibrium to be given for each region. The differences between grower motivations and intentions between regions and between products (new and main crop potatoes and between potatoes and other products) is obviously an important feature of the production system but this has not been clearly established or described. There is a need for extensive work in the development of potato supply functions before the market can be fully understood and, if necessary, manipulated.

7.4 Processed Potatoes

The present research has identified the potato processing sector as a major outlet for sales of potatoes by growers. The relative importance of this sector varies between regions for reasons of processing facility location and the related availability of potatoes. From the grower survey undertaken, the quantity of potatoes being purchased by processors can be estimated. However, information on the products manufactured by the processors is not readily available. Also, very little data are available on demand patterns for processed potato products. As this is a major market sector, and will probably grow in importance as the demand for convenience foods increases, it is essential that research on the sector's characteristics be undertaken. This would involve consumer research to identify demand patterns for processed potato products, research at the processor level to ascertain their supply and demand relationships and research at a grower level to establish the types of growing systems used to supply potatoes for processing.

7.5 Distribution Costs and Margins

In order to complete an analysis of the potato market, there is a need for an examination of potato movement patterns, distribution costs and marketing margins. Such an examination would allow recommendations to be made on changes to the pattern of distribution that could result in lower cost structures and allow the evaluation of different market outlets in terms of their cost effectiveness. The distribution system plays an important part in ensuring that both sectors of the market system receive appropriate signals as to the type of potatoes available and required.

APPENDIX 1

THE GROWERS' SURVEY QUESTIONNAIRE

AGRICULTURAL ECONOMICS RESEARCH UNIT
LINCOLN COLLEGE, CANTERBURY

7 July 1981

SURVEY OF POTATO GROWERS' MARKETING METHODS

Dear Sir/Madam,

This survey, relating to table potatoes[1] only, has been undertaken with the intention of identifying ways of increasing the returns gained by potato growers. The Potato Growers Federation has commissioned the Agricultural Economics Research Unit at Lincoln College with the task of reviewing the present market structure. In order to do this, we are having discussions with the companies responsible for the auctioning of potatoes in various centres. In addition, we are conducting interviews with the main buyers of potatoes to identify the buying method that they use and to evaluate its effectiveness.

A vital part of the review of the market structure is the collection of information from growers on the methods they use to sell their potatoes. We have therefore designed this questionnaire for that purpose.

We would like to stress that the information which you provide to us on the questionnaire is completely confidential to myself only. You will note that we have not asked you to provide us with your name on the questionnaire. It is not necessary for us to be able to identify the questionnaire respondents. The information which you provide to us will be used in an aggregate result only. Individual questionnaire returns are only needed to build up this aggregate. In order to identify the appropriate people to contact, we have obtained from the N.Z. Potato Board a copy of the list of registered growers for the 1979/80 year and the 1980/81 year. This list has been used to send the questionnaires out. The Agricultural Economics Research Unit has a lot of experience in conducting farmer surveys. Information from farmers is always held confidentially on an individual basis. Only consolidated results are ever released. All farmers can, therefore, be assured that the information they provide to us will not be available to anyone on an individual basis.

We would very much appreciate your help in putting together the information we need to evaluate the marketing system. The survey is being carried out for the benefit of growers and any recommendations we make as a result of the review will be designed to assist growers to achieve the maximum return possible for their crop.

The questionnaire takes up nine pages. The first three pages relate to the 1979/80 year. The second three pages (4, 5 and 6) relate to the 1980/81 year. Pages 7, 8 and 9 are more general questions, some of which relate to both years. Page 1 of the questionnaire relates to the volume of potatoes produced. We would like you to tell us what was the total volume of potatoes produced, how much of this was early crop production

[1] Two questions on seed potatoes on page 9.

Postal and telegraphic address: AERU, Lincoln College, Canterbury, New Zealand
Telephone Christchurch 252 811

and how much of this was main crop production. We would appreciate this being divided into the quarters we have indicated. We would also appreciate your dividing the main crop and early crop according to the variety of potatoes grown.

Page 2 of the questionnaire relates to potato sales volume. All the information on this page is to be given in tonnes. The top line requests the total potato sales volume for the four quarters. These numbers should be the same as those at the bottom of the page. In order to give us some idea of the outlets used directly by potato growers we would like you to fill in the quantity of potatoes sold to the various outlets in the quarters given. If you do not have accurate information available, please provide estimates.

Page 3 of the survey requests similar information to that requested on page 2. However, the page 3 data is to be in sales dollars for the top line and as a percentage of the total for the rest. This information will allow us to assess the importance of the various outlets used in terms of the proportion of the total dollars received. Again, if you are unable to give accurate information for these percentages, estimates will be most acceptable.

Pages 4, 5 and 6 request similar information for 1980/81. Please note that the quarters which we are referring to throughout the questionnaire are those ending September, December, March and June.

On page 7 question G relates to the sale of potatoes by contract for each year. Question H requests you to identify the auction centres that you use. We would also appreciate your telling us how many tonnes of potatoes were sold to each centre in each year. Question I is a general question on the reasons for your use of your present marketing system. On page 8 further general questions are asked. These are continued on page 9.

In order for the results of the questionnaire to be meaningful, it is necessary for everybody to provide answers to the questions asked. We would therefore appreciate your assistance in completing the questionnaire and returning it in the enclosed reply paid envelope. The results of our research will be reported to the Annual General Meeting of the Potato Growers Federation in November this year. It is therefore important that we receive the completed questionnaires as soon as possible.

Thank you for your assistance.

Yours faithfully,

R.L. Sheppard,
Research Economist.

Encl.

1979-80

A. Volume of Potatoes Produced

For Quarter Ending

		30.9	31.12	31.3	30.6
(i) Total	Tonnes				
(ii) Early Crop Production	Tonnes				
(iii) Main Crop Production	Tonnes				

(iv) Varieties Grown:

	Main Crop (Tonnes)	Early Crop (Tonnes)
Ilam Hardy		
Rua		
Red King		
Katahclin (Chippewa)		
Other		

1979-80

B. Total Potato Sales Volume (TONNES)

	For Quarter Ending			
	30.9	31.12	31.3	30.6
Total (Tonnes)				
Sales Volume by Outlet - TONNES				
1. Auction Centre (a) Commission Sale				
(b) Auction Centre Purchase				
2. To Pre-Packers				
3. Gate Sales				
4. To Fast-Food Outlets (e.g. fish & chip, takeaways)				
5. Direct Sale to Potato Processors (excluding fast-food outlets)				
6. Direct Sale to Traders/Merchants (a) For Export				
(b) For the Domestic Market				
7. Export Market On Own Account				
8. Direct Sale to Retailers (a) Supermarkets				
(b) Other Retailers (excluding fast-food outlets)				
9. Direct Sales to Caterers and Restaurants				
10. Other				
TOTAL: (TONNES)				

1979-80

C. Total Potato Sales Dollars

For Quarter Ending

	30.9	31.12	31.3	30.6
DOLLARS				
Sales Dollars by Outlet (Percentage)	%	%	%	%
1. Auction Centre (a) Commission Sale				
(b) Auction Centre Purchase				
2. To Pre-Packers				
3. Gate Sales				
4. To Fast-Food Outlets (e.g. fish & chip, takeaways)				
5. Direct Sale to Potato Processors (excluding fast-food outlets)				
6. Direct Sale to Traders/Merchants (a) For Export				
(b) For the Domestic Market				
7. Export Market On Own Account				
8. Direct Sale to Retailers (a) Supermarkets				
(b) Other Retailers (excluding fast-food outlets)				
9. Direct Sales to Caterers and Restaurants				
10. Other				
TOTAL PERCENTAGE:	100%	100%	100%	100%

1980-81

D. Volume of Potatoes Produced

		For Quarter Ending			
		30.9	31.12	31.3	30.6
(i) Total	Tonnes				
(ii) Early Crop Production	Tonnes				
(iii) Main Crop Production	Tonnes				

(iv) Varieties Grown:

	Main Crop (Tonnes)	Early Crop (Tonnes)
Ilam Hardy		
Rua		
Red King		
Katahclin (Chippewa)		
Other		
....		

1980-81

E. Total Potato Sales Volume (TONNES)

	For Quarter Ending			
	30.9	31.12	31.3	30.6
Total: (Tonnes)				
Sales Volume by Outlet - TONNES				
1. Auction Centre (a) Commission Sale				
(b) Auction Centre Purchase				
2. To Pre-Packers				
3. Gate Sales				
4. To Fast-Food Outlets (e.g. fish & chip, takeaways)				
5. Direct Sale to Potato Processors (excluding fast-food outlets)				
6. Direct Sale to Traders/Merchants (a) For Export				
(b) For the Domestic Market				
7. Export Market On Own Account				
8. Direct Sale to Retailers (a) Supermarkets				
(b) Other Retailers (excluding fast-food outlets)				
9. Direct Sales to Caterers and Restaurants				
10. Other				
TOTAL: (TONNES)				

1980-81

F. Total Potato Sales Dollars

	For Quarter Ending			
	30.9	31.12	31.3	30.6
DOLLARS				
Sales Dollars by Outlet (Percentage)				
1. Auction Centre (a) Commission Sale				
(b) Auction Centre Purchase				
2. To Pre-Packers				
3. Gate Sales				
4. To Fast-Food Outlets (e.g. fish & chip, takeaways)				
5. Direct Sale to Potato Processors (excluding fast-food outlets)				
6. Direct Sale to Traders/Merchants (a) For Export				
(b) For the Domestic Market				
7. Export Market On Own Account				
8. Direct Sale to Retailers (a) Supermarkets				
(b) Other Retailers (excluding fast-food outlets)				
9. Direct Sales to Caterers and Restaurants				
10. Other				
TOTAL PERCENTAGE:	100%	100%	100%	100%

G. Were any of your sales made by contract? If Yes, what volume?

Total Volume (Tonnes)	1979-1980		1980-1981	

If yes, to which outlet(s) listed on the previous page? ____________________

____

H. Which auction centre(s) do you use and how many tonnes of potatoes do you sell through each centre?

Auction Centre		For Quarter Ending			
		30.9	31.12	31.3	30.6
____________	1979-80				
	1980-81				
____________	1979-80				
	1980-81				
____________	1979-80				
	1980-81				
____________	1979-80				
	1980-81				
____________	1979-80				
	1980-81				

I. Why do you use your present marketing system? ____________________

____

____

J. What changes would you like to see made in the potato marketing system?

____

____

____

K. Is a Potato Marketing Board required (which acquires all potatoes)?

Please tick Yes ☐ No ☐

L. How do you rate the performance of the Potato Board in the areas indicated? (Please tick).

	Poor	Neutral	Good
(a) Promotion of Potatoes	☐	☐	☐
(b) Grading of Potatoes	☐	☐	☐
(c) Statistical feedback from surveys	☐	☐	☐

Further comments: ____

____

____

M. How do you rate the performance of the Potato Growers' Federation in the areas indicated? (Please tick).

	Poor	Neutral	Good
(a) As a Lobby Group	☐	☐	☐
(b) Promotion of the industry	☐	☐	☐
(c) Stimulating potato research	☐	☐	☐

Further comments: ______________________________

____

____

N. There are at present three organizations with responsibilities to potato growers: The Potato Board; The Potato Growers' Federation; The Vegetable and Produce Growers Federation. Do you think that this is a satisfactory situation? (Please tick).

Yes ☐ No ☐

If not, what changes would you make? ______________________________

____

____

____

____

____

APPENDIX 2

LIST OF AUCTION COMPANIES SURVEYED

List of Auction Companies Surveyed

AUCKLAND

Produce Markets Ltd
PO Box 1513

Radley & Co. Ltd
PO Box 665

Turners & Growers Ltd
PO Box 56

HAMILTON

A. B. Donald (Hamilton) Ltd
PO Box 9008
Hamilton North

Turners & Fows Ltd
PO Box 145

WELLINGTON

Laery & Thompson Bros Ltd
PO Box 9060

Market Gardeners Ltd
PO Box 9083

Thomas, Geo. & Co. Ltd
PO Box 26

Turners & Growers (Wellington) Ltd
PO Box 615

CHRISTCHURCH

MacFarlane & Growers Ltd
PO Box 580

Market Gardeners Ltd
PO Box 22-222

DUNEDIN

Brays City Markets Ltd
PO Box 69

Lovell Reilly Ltd
PO Box 668

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