

POTATOES: A CONSUMER SURVEY OF
CHRISTCHURCH AND AUCKLAND HOUSEHOLDS

M. M. Rich

M. J. Mellon

Research Report No. 105
January 1980

I.S.S.N. 0069-3790

THE AGRICULTURAL ECONOMICS RESEARCH UNIT

Lincoln College, Canterbury, N.Z.

THE UNIT was established in 1962 at Lincoln College, University of Canterbury. Its major sources of funding have been annual grants from the Department of Scientific and Industrial Research and the College. These grants have been supplemented by others from commercial and other organisations for specific research projects within New Zealand and overseas.

The Unit has on hand a programme of research in the fields of agricultural economics and management, including production, marketing and policy, resource economics, and the economics of location and transportation. The results of these research studies are published as Research Reports as projects are completed. In addition, technical papers, discussion papers and reprints of papers published or delivered elsewhere are available on request. For list of previous publications see inside back cover.

The Unit and the Department of Agricultural Economics and Marketing and the Department of Farm Management and Rural Valuation maintain a close working relationship in research and associated matters. The combined academic staff of the Departments is around 25.

The Unit also sponsors periodic conferences and seminars on appropriate topics, sometimes in conjunction with other organisations.

The overall policy of the Unit is set by a Policy Committee consisting of the Director, Deputy Director and appropriate Professors.

UNIT POLICY COMMITTEE: 1979

Professor J. B. Dent, B.Sc., M.Agr.Sc., Ph.D.
(Farm Management and Rural Valuation)

Professor B. J. Ross, M.Agr.Sc.
(Agricultural Economics)

P. D. Chudleigh, B.Sc. (Hons), Ph.D.

UNIT RESEARCH STAFF: 1979

Director

Professor J. B. Dent, B.Sc., M.Agr.Sc., Ph.D.

Deputy Director

P. D. Chudleigh, B.Sc. (Hons), Ph.D.

Research Fellow in Agricultural Policy

J. G. Pryde, O.B.E., M.A., F.N.Z.I.M.

Research Economists

G. T. Harris, B.Com. (Hons), Dip.Ed., M.Ec.

L. J. Hubbard, B.Sc. (Hons)

R. D. Lough, B.Agr.Sc.

S. K. Martin, B.Ec., M.A. (Hons)

R. G. Moffitt, B.Hort.Sc., N.D.H.

M. M. Rich, Dip.V.F.M., B.Agr.Com., M.Ec.

R. L. Sheppard, B.Agr.Sc. (Hons)

A. M. M. Thompson, B.Sc. (Hons)

S. L. Young, M.A. (Hons)

Technical Officer

R. M. MacLean

Analyst/Programmer

S. A. Lines, B.Sc. (Hons)

Post Graduate Fellow

L. J. Wilson, B.A.

Secretary

V. A. Mathieson

C O N T E N T S

	Page
LIST OF TABLES	(iii)
PREFACE	(v)
ACKNOWLEDGEMENTS	(vi)
SUMMARY	(vii)
CHAPTER 1 INTRODUCTION	1
1.1 Purpose of Study	1
1.2 Research Procedure	3
CHAPTER 2 HOUSEHOLD PURCHASING PATTERNS	7
2.1 Outlets Used	7
2.2 Frequency of Purchase	11
2.3 Factors Influencing Purchases	12
2.4 Purchasing Quantity	13
2.5 Quantity Purchased Per Year	14
CHAPTER 3 HOUSEHOLD CONSUMPTION PATTERNS	15
3.1 Persons Influencing Cooking	15
3.2 Meals When Potatoes Are Served	16
3.3 Serving During Weekends	18
3.4 Persons Eating Potatoes	20
3.5 Seasonal Consumption of Potatoes	23
3.6 Reuse of Potatoes	25
CHAPTER 4 STATUS, ATTITUDES AND KNOWLEDGE	27
4.1 Serving to Guests	27
4.2 Attitude Statements	28
4.3 Grading Knowledge	32
4.4 Variety Knowledge	33

	Page
CHAPTER 5 SUBSTITUTES AND COMPLAINTS	35
5.1 Identification of Substitutes	35
5.2 Influences on Substitution	36
5.3 Serving Substitutes to Guests	38
5.4 Complaints	40
CHAPTER 6 OTHER SURVEY DATA	43
6.1 Storage	43
6.2 Processed Potatoes	44
6.3 Home Grown Potatoes	45
6.4 Media Recall	46
CHAPTER 7 IMPLICATIONS	47
7.1 A Strategic Marketing Approach	47
7.2 Stimulating Demand	48
APPENDICES	51
1. Sample Details	53
2. The Questionnaire	57
3. Sample Representation	59
4. Further Survey Results	60

LIST OF TABLES

	Page
1. Potatoes Available for Human Consumption	1
2. Outlet Where Potatoes Obtained	7
3. Reasons Influencing Outlet Used (Chch)	9
4. Reasons Influencing Outlet Used (Akld)	10
5. Frequency of Buying Potatoes	11
6. Importance of Factors Influencing Buying Potatoes	12
7. Quantity of Potatoes Purchased	13
8. Household Member's Cooking Influence	15
9. Frequency of Serving Potatoes During Working Days	16
10. Method of Serving Potatoes During Working Days	17
11. Differences Made to Serving Potatoes During Weekends, Relative to Weekdays	18
12. Weekend Potato Consumption, Relative to Weekdays	19
13. Household Members' Potato Eating Habits	20
14. Reasons for Eating Most Potatoes	21
15. Reasons for Eating Fewer Potatoes	22
16. Seasons When Less Potatoes are Eaten	23
17. Reasons For Reduced Seasonal Potato Consumption	24
18. Reuse of Potatoes	25
19. Method of Serving Potatoes to Guests	27
20. Attitudes Toward Health Value of Potatoes	29
21. Attitudes Toward Value for Money and Nutritional Value	30
22. Attitudes Toward Price of Potatoes	31
23. Knowledge About Potato Grading	32
24. Knowledge About Potato Varieties	33
25. Potato Substitutes at Main Meal	35
26. Influences on Potato Substitution	37
27. Potato Substitutes When Serving Guests	38
28. Reasons for Serving Substitutes to Guests	39

	Page
29. Complaints Concerning Potatoes Purchased	40
30. Where Potatoes Are Stored	43
31. Problems With Stored Potatoes	44
32. Home Grown Potatoes	45
33. Media Through Which Households Have Heard, Read or Seen Something About Potatoes	46
34. Outlet where Potatoes obtained by Occupation and Age of Head of Household	60
35. Outlet Where Potatoes Obtained by Household Composition	61
36. Frequency of Buying Potatoes by Household Composition and Outlet Used	62
37. Factors Influencing Buying Potatoes	63
38. Amount of Potatoes Purchased By Household Composition and Outlet Used	64
39. Frequency of Serving Potatoes by Occupation and Age of Head of Household	65
40. Reasons for Eating Less Potatoes by Occupation and Age of Head of Household	66
41. Method of Serving Potatoes to Guests by Occupation and Age of Head of Household	67
42. Attitude Toward Price of Potatoes by Occupation and Age of Head of Household	68
43. Potato Variety Knowledge by Occupation and Age of Head of Household (Chch)	69
44. Potato Substitutes by Occupation and Age of Head of Household	70
45. Potato Substitutes by Household Composition	71
46. Substitution by Person Influencing Cooking and Frequency of Serving Potatoes	72
47. Complaints With Potatoes Purchased by Occupation and Age of Head of Household	73
48. Purchase and Use of Processed Potatoes	74
49. Types of Processed Potatoes Bought by Age of Head of Household	75
50. Processed Potatoes Bought by Household Composition	76

PREFACE

This report is the fifth in a series of AERU Research Reports aimed at providing information on consumer purchasing and consumption patterns for various agricultural and horticultural products.

The present study focuses on potato consumption patterns and factors affecting these patterns. It has been conducted under a contract with the New Zealand Potato Board to aid in the development of a marketing strategy for the 1980's.

Consumer items previously surveyed include wine, bread, meat, and cheese. Whilst all previous surveys have been based on a Christchurch location, the present study covers both Christchurch and Auckland.

J. B. Dent
Director

ACKNOWLEDGEMENTS

Assistance in questionnaire design came from Michael Laing and Chris Rich; the majority of questionnaire coding was done by Nancy Stirgwolt and Anne Kennedy; computer analysis was carried out by Patrick McCartin. Susan Sheppard typed the final draft. Grateful thanks are extended to Rod Brodie for his penetrating comments at varying stages of the project and to Harold Maunder for his helpful liaison between the Agricultural Economics Research Unit and the New Zealand Potato Board.

Finally, gratitude is extended to the New Zealand Potato Board for granting permission to publish this report.

SUMMARY

A. SURVEY RESULTS

An interview survey was conducted among 930 randomly selected households in Christchurch and Auckland during May and June 1979. The objective of the study was to obtain information about potato purchasing and consumption patterns and factors affecting these patterns. The results can be summarised as follows:

Purchase of Potatoes

Outlets Used The majority of households bought potatoes at the supermarket. The next most important outlets were gate sales in Christchurch and fruiterers in Auckland. There was a tendency for larger households also to use gate sales and smaller households to either 'be given or grow their own', or purchase from smaller retailers such as grocers, dairies and fruiterers.

Frequency of Purchase Seventy-three per cent of households in Christchurch and 85 per cent in Auckland bought potatoes more than once a month. Larger households tended to buy more frequently.

Reasons Influencing Purchasing "Firmness", "freshness", "seeing the potatoes" and "lack of dirt" were important reasons influencing households' purchasing pattern.

Purchasing Quantity In Christchurch the most popular package was the 20 kilogram bag while in Auckland it was 5 kilogram bags.

Quantity Purchased Per Year In Christchurch the average amount purchased per head, excluding pre-school children, was 48 kilograms while in Auckland it was 53 kilograms.

Household Consumption Patterns

Meals When Potatoes Are Served Ninety-five per cent of households served potatoes with their evening meal on working days, 20 per cent also served them at lunch and 10 per cent served them for breakfast.

Weekends One third of respondents ate less potatoes during weekends when roasting became more popular.

The Large and Small Eaters While all members of the household ate potatoes, in most of the households the males tended to eat more. The main reasons given for eating more were a "big appetite" and "likes them most". In most households the females ate less potatoes and the main reasons given were "smaller appetite", "dieting" and "don't like". The last reason was more common in the less than 30 year age groups.

Seasonal Consumption Summer was the most common season for potato consumption to be reduced. The main reasons given for using less potatoes in certain seasons, in order of importance, were the "variety of other foods available" and wanting to "avoid hot vegetables".

Reuse of Potatoes Over one third of households did not reuse potatoes. The main way potatoes were reused was to fry them.

Status, Attitudes and Knowledge

Meals for Guests When preparing meals for guests most households served potatoes (87 per cent in Christchurch and 95 per cent in Auckland). Roasting was the most popular way of serving, especially in the technical and clerical occupations and in the below 45 age groups. Baking potatoes was also a popular serving method particularly by the professional and managerial occupations and the 30 to 34 age group.

Health Sixty-nine per cent agreed that potatoes were essential for a healthy diet but opinion was almost evenly divided over whether potatoes were related to getting fat.

Nutrition Sixty-one per cent agreed that potatoes were more nutritious than bread.

Price There was agreement (83 per cent) that potatoes are good value for money. Even if the price doubled 60 per cent of respondents indicated they would not reduce purchases. However, in contrast, if the price halved almost 90 per cent of respondents would not increase purchases.

Grading Knowledge Only 40 per cent in Christchurch and 26 per cent in Auckland were aware of grading.

Variety Knowledge Eighty-one per cent in Auckland and 20 per cent in Christchurch did not know the names of any potato variety (cultivar). Awareness of varieties was lowest in the technical, clerical, professional and managerial groups and in the age groups under 34.

Substitutes and Complaints

Main Substitutes More respondents in Christchurch had no substitute for potatoes than in Auckland. Younger respondents substituted potatoes out of their meal more than older respondents. The major alternatives to potatoes were rice then pasta. Both rice and pasta had the most popularity in the professional and managerial occupational groups. The third most common alternative in Christchurch was bread while in Auckland it was kumara and other root crops.

Influences on Substitution The main influences causing households to substitute potatoes out of a meal were a desire for "variety in diet", "type of meal served" and "lack of time".

Complaints Only 35 per cent of purchasing households had no complaint about potatoes bought during the last year. The most frequent complaint was "rotteness". The next most frequent complaints in Christchurch were "breaking up in cooking" and "greening" while in Auckland it was "greening" then "cuts and blemishes".

Other Survey Data

Storage Over 80 per cent of respondents indicated no problems with storing. The most common storage places were garages and sheds in Christchurch and cupboards and kitchens in Auckland.

Home growing Sixty-four per cent were growing their own potatoes in Christchurch compared to Auckland's 44 per cent. The main reason for not growing their own was lack of room, whilst the love of gardening was a major reason for activity.

Media Recall Memory of potatoes having been seen, read or heard about totalled only 70 per cent. The media most frequently mentioned were newspapers and magazines. These results were obtained prior to the 1979 promotion campaign.

B. IMPLICATIONS

- * A regional, rather than a national, marketing strategy should be used to achieve marketing objectives.
- * Potatoes are considered cheap in price and demand is unlikely to be greatly affected by different pricing policies.
- * Consumers are demanding higher quality potatoes.
- * Methods of reducing potato preparation time need to be found.
- * Roasted and baked potatoes carry the most prestige.
- * Different retail package sizes could be targeted to particular outlets and regions.
- * Alternative methods of serving potatoes during summer need to be found.

CHAPTER 1
INTRODUCTION

1.1 Purpose of Study

Actual potato consumption in New Zealand is not known although estimates of the amount of potatoes, both fresh and processed, available for human consumption are known and are shown in Table 1. The table shows a decline in the availability of potatoes for consumption over the period 1969 to 1977.

This decline has led the New Zealand Potato Board to consider a national campaign with the objective of stimulating demand for potatoes. An essential element of developing a successful campaign is the detailed analysis of the market and its environment.

TABLE 1
Potatoes Available for Human Consumption^a

Year	'69	'70	'71	'72	'73	'74	'75	'76	'77
Quantity (kg/head)	73	66	59	59	63	52	52	56	57

Source: New Zealand Department of Statistics

^a Year ending 31 December. Includes fresh and processed potatoes. Assumes wastage is 14 per cent of production and homegrown potatoes contribute 14 per cent to consumption. 1978 figures are not yet available.

A number of factors have affected household purchasing and consumption patterns and attitudes towards potatoes in New Zealand. These include:

- abolishment of the stock food scheme, administered by the New Zealand Potato Board, which kept under-grade potatoes from reaching the consumer.
- eating habits. Continental, oriental and takeaway foods have become more popular. In addition, dining out at restaurants, hotels and clubs is growing in popularity.
- shopping habits. There is an increasing tendency for consumers to buy their food less frequently and from one complex, the "one stop" shopping concept, which is advantageous to supermarkets.
- price of alternative foods. The prices of rice and pasta type foods are low enough so that these foods, when desired in preference to potatoes, can be purchased by the majority of consumers.
- marketing effort by substitute foods. These activities are not easily identifiable and the effects hard to discern.

Whilst it is suspected that these factors are affecting potato consumption, details of the direction and magnitudes of the effects are not known.

This lack of knowledge about changes in consumption, when considering a national campaign, led the New Zealand Potato Board to instruct the Agricultural Economics Research Unit at Lincoln College to carry out consumer research in Christchurch and Auckland, to

1. identify the channels through which, and conditions in which, consumers obtain their potatoes.
2. analyse attitudes or substitutes that threaten current potato consumption.

3. investigate the level of consumer utilisation and satisfaction with potatoes.
4. identify what product improvement is required to achieve greater consumer satisfaction.
5. search for marketing areas that offer greatest potential for increased consumption.

1.2 Research Procedure

The sample In Christchurch the planned sample was 400 households; these were selected using a two stage sample procedure. First the city was divided into 60 suburbs and 41 of these suburbs were selected at random, ensuring a representative socio-economic cross section¹. Then for each of these suburbs an address was randomly selected to act as a starting point for ten interviews at every second house.

In Auckland the planned sample was 500 households. The selection of these households was based on 50 starting points drawn at random from the Auckland telephone directory. Geographical details of the achieved sample are shown in Appendix 1.

The questionnaire A draft format of the questionnaire was developed from background material² and a housewives focus group³. The final format was determined after pilot

-
- ¹ Real estate prices were used as an indication of the socio-economic status of each suburb.
 - ² Collecting this material involved discussions with consumers, supermarket managers, packers, merchants, growers and representatives of the Potato Board.
 - ³ Discussion by a group of housewives talking about potatoes was tape-recorded and later analysed to identify the common words used. These words were then used, where applicable in the questionnaire.

4.

testing, redrafting and consultation with a representative of the Potato Board and the questionnaire was planned to take fifteen minutes. The topics were:

1. Purchasing location, frequency and quantity.
Reasons where and why potatoes are bought.
2. Knowledge of potato grading, varieties and problems.
3. Storage location and problems.
4. Consumption influences. When and how potatoes are consumed. Who consumes potatoes and why. Seasonal consumption patterns. Reuse of potatoes.
5. Foods used as an alternative to potatoes.
6. Attitudes towards potatoes.
7. Processed potatoes.
8. Homegrown potatoes.
9. Communication awareness.
10. Household characteristics.

A copy of the questionnaire is included as Appendix 2. All responses were obtained without prompting except for four questions; the table results that make use of these questions are clearly identified. Often more than one response to a question was recorded and so these extra responses are reported where practical. This is why many columns in Tables 2 to 33 add to greater than 100 per cent. Due to computer limitations, the results in Appendix 4 are based on the first response, except where specific references are made otherwise.

The interviews In Christchurch, the majority of interviews were carried out on Saturday, 19 May 1979, during the morning and early afternoon. The team of interviewers was made up of senior degree students, staff members and associates who all had attended a detailed training and briefing session.

In Auckland the interviews were carried out on three Saturdays, 26 May to 10 June 1979, mainly during the morning. The team of interviewers was organised and controlled by the Auckland branch of Market Research (N.Z.) Ltd.

The analysis A random five per cent of the completed questionnaires were checked by telephone. The collected data were then coded and edited for computer analysis. This analysis involved tabulating question responses and then examining these responses and the relationship between different responses. Chi square tests were used to see if these responses and relationships were statistically significant.

Sample Representation In order to examine whether the achieved sample was representative of the population from which it was drawn, socio-economic characteristics were compared between sample and census data. These details are shown in Appendix 3.

CHAPTER 2

HOUSEHOLD PURCHASING PATTERNS

2.1 Outlets Used

The majority of households bought potatoes at the super-market. The next most important outlets were gate sales in Christchurch and fruiterers in Auckland (Table 2).

TABLE 2
Outlet Where Potatoes Obtained

	Responses				
	1st ^a		All ^b		
	Chch	Akld	Chch	Akld	
	%	%	%	%	
Supermarket	41.6	60.9	49.4	68.6	
Superfruiterer ^c	5.4	0.1	12.5	0.2	
Fruiterer	3.9	16.5	5.8	27.1	
Grocer/Dairy	10.5	7.3	21.5	13.8	
Gate Sales	19.8	8.6	31.5	20.8	
Private Friend	0.5	0.6	2.0	0.6	
Given/Grow Own	12.2	2.8	18.0	4.4	
Other	6.1	3.2	8.8	4.5	
	<hr style="width: 50%; margin: 0 auto;"/>	<hr style="width: 50%; margin: 0 auto;"/>			
	100.0	100.0			
Valid Responses	409	506			

^a 1st response is the 1st unprompted response

^b This included 1st, 2nd, 3rd and, sometimes, a 4th unprompted response.

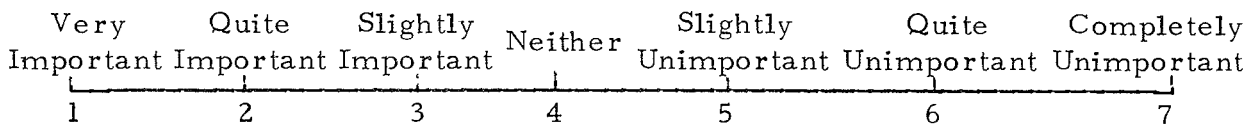
^c Large vegetable store.

Occupation and Age The supermarket was well patronised by age groups below 30 years. Gate Sales obtained more support from the sales and service and unskilled occupational groups. The fruiterer in Auckland was more heavily patronised by the older age groups (Appendix 4, Table 34).

Household Composition There was a tendency for larger households to use gate sales and smaller households to "either be given or grow their own" or purchase from grocers and dairies. In addition, in Auckland there was a tendency for larger households to use the supermarket and smaller households to use the fruiterer (Table 35, i).

Households with children, relative to those without children, used the supermarket and gate sales more and the fruiterer less (Table 35, ii).

Factors Influencing Choice of Outlet In Christchurch respondents were asked to rank, from a card, the relative importance of certain reasons that might influence the outlet from which they obtained their potatoes. The card showed the following scale:



"Closeness to home" and "price" were considered the more important aspects overall (Table 3).

TABLE 3

Reasons Influencing Outlet Used (Chch)^a

	Closeness to home	Price	Ability to buy in bulk	Service	Selection of other Goods
i. <u>Absolute Percentage</u>	%	%	%	%	%
Very Important	26.3	31.8	20.5	15.0	16.8
Quite Important	32.4	26.0	28.3	32.0	31.6
Slightly Important	14.9	13.0	11.7	12.0	9.8
Neither Important Nor Unimportant	4.8	6.1	6.7	10.9	8.4
Slightly Unimportant	7.2	8.2	10.1	5.3	6.1
Quite Unimportant	8.0	9.6	14.1	14.9	14.2
Completely Unimportant	6.4	5.3	8.6	9.9	13.1
	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
ii. <u>Cumulative Percentage</u>					
Very Important	26.3	31.8	20.5	15.0	16.8
Quite Important	58.7	57.8	48.8	47.0	48.4
Slightly Important	73.6	70.8	60.5	59.0	58.2
Neither Important Nor Unimportant	78.4	76.9	67.2	69.9	66.6
Slightly Unimportant	85.6	85.1	77.3	75.2	72.7
Quite Important	93.6	94.7	91.4	90.1	86.9
Completely Unimportant	100.0	100.0	100.0	100.0	100.0
Valid Responses	376	377	375	375	367

^a Prompted question

In Auckland households were asked why they chose to buy potatoes from the particular outlets which they used. Compared to Christchurch, responses were unprompted and not scaled, in order to economise on questionnaire time. The main reasons were "selection of other goods" then "closeness to home" and "price" (Table 4).

TABLE 4
Reasons Influencing Outlet Used (Akld)

	Responses	
	1st	All
	%	%
Selection of Other Goods	61.5	71.3
Closeness to Home	10.4	21.7
Price	11.9	18.7
Quality	5.9	8.6
Ability to buy in bulk	3.1	4.9
Service	2.2	2.8
Other	5.0	13.4
	100.0	
Valid Responses	488	

2.2 Frequency of Purchase

The majority of households bought potatoes more than once a month. This frequency was higher in Auckland than Christchurch (Table 5).

TABLE 5
Frequency of Buying Potatoes

	Outlets			
	1st		2nd and 3rd	
	Chch	Akld	Chch	Akld
	%	%	%	%
More than once per week	8.0	5.0	1.4	1.6
Weekly	15.1	23.8	1.7	3.0
Fortnightly	21.7	29.8	3.1	3.0
3 - 4 Weeks	28.0	26.1	8.0	9.1
2 - 3 Months	14.3	10.9	8.5	9.2
3 - 6 Months	6.0	2.6	8.8	6.4
Less than twice yearly	6.9	1.8	7.1	7.0
	100.0	100.0		
Valid Responses	350	496		

Household Composition There was a tendency for larger households to buy more frequently, especially in Auckland (Table 36, i).

Outlet Used Purchasing at supermarkets was mainly more than once a month, while purchasing from gate sales was more infrequent. The most frequent purchasers were those households that purchased at the grocer and dairy (Table 36, ii).

2.3 Factors Influencing Purchases:

Respondents were asked to rank the relative importance of certain factors that might influence the choice of potato, when purchasing. Four important factors were "firmness", "freshness", "seeing the potatoes" and "lack of dirt" (Table 6).

TABLE 6

Importance of Factors Influencing Buying Potatoes^a

	Chch	Akld
	%	%
Firmness	91.9	92.8
Freshness	88.5	95.6
Seeing the Potatoes	85.8	94.9
Lack of Dirt	74.7	83.2
Shallow Eyes	65.7	62.7

^a As given by Table 37, cumulative percentage, "slightly important".

2.4 Purchasing Quantity

In Christchurch, the most popular package preferences were the 20 kilogram bags, then 5 kilogram bags. In Auckland, it was 5 kilograms, then below 3 kilogram quantities (Table 7).

TABLE 7
Quantity of Potatoes Purchased

	Responses			
	1st		All	
	Chch	Akld	Chch	Akld
	%	%	%	%
Below 3 kg	8.2	21.4	12.4	33.3
3 kg	10.4	7.6	12.6	9.8
4 kg	1.4	1.6	2.1	1.8
5 kg	27.9	38.3	36.3	47.0
6 - 9 kg	2.0	2.2	2.2	2.6
10 - 19 kg	13.5	15.0	18.0	15.6
20 - 49 kg (mainly 20 kg)	33.5	15.0	50.9	29.5
Above 49 kg (mainly 50 kg)	3.1	0.5	4.7	0.9
	<u>100.0</u>	<u>100.0</u>		
Valid Responses	355	495		

Household Composition There was a tendency for larger households to purchase the 10 kilogram and above packages (Table 38, i).

Outlets Used At supermarkets the package preference was 5 kilograms and at gate sales the most popular size was 20 kilograms. At the fruiterers in Christchurch the most popular size was 20 kilograms, while in Auckland it was the below 3 kilogram bag.

2.5 Quantity Purchased Per Year

The average amount of potatoes purchased per head per year⁴ in Christchurch was 43 kilograms when including pre-school children and 48 kilograms when excluding pre-school children. In Auckland it was 51 kilograms when including pre-school children and 53 kilograms when excluding pre-school children. These higher Auckland purchasing figures are consistent with Table 2 which shows that Auckland households obtain a greater proportion of their potatoes through retail outlets, compared to Christchurch households.

⁴ Obtained by multiplying the purchasing frequency (Table 5) by the amount purchased per visit (Table 7). Purchasing frequencies of more than once per week, 3-4 weeks, 2-3 months, 3-6 months and less than twice yearly were assumed to be fortnightly, 1 month, 2 months, 3 months and 6 months respectively. The amounts purchased per visit of below 3 kg, 6 - 9 kg, 10 - 19 kg, 20 - 49 kg and above 49 kg were assumed to be 2 kg, 7 kg, 15 kg, 20 kg, and 50 kg respectively.

CHAPTER 3
HOUSEHOLD CONSUMPTION PATTERNS

Over 99 per cent of households consumed potatoes.

3.1 Persons Influencing Cooking

Females, especially the wife, were the main influence as to the way potatoes were cooked (Table 8).

TABLE 8

Household Member's Cooking Influence

	Chch	Akld
	%	%
Husband	9.8	8.3
Husband and Sons	12.3 { 0.5	11.3 { 0.6
Single Male or Sons	2.0	2.4
Wife	54.9	68.2
Wife and Daughters	59.6 { 1.0	73.0 { 0.6
Single Female or Daughter	3.7	4.2
Wife and Husband	8.6	4.6
Whole Household	19.5	11.1
	100.0	100.0
Valid Responses	406	495

3.2 Meals When Potatoes are Served

Frequency Ninety-five per cent of households served potatoes for the evening meal; however, only 69 per cent in Christchurch and 52 per cent in Auckland served them every day with their evening meal. More than 80 per cent of households never ate potatoes for lunch and over 90 per cent never had them for breakfast (Table 9).

TABLE 9

Frequency of Serving Potatoes During Working Days

	Meal-time					
	Evening Meal		Lunch		Breakfast	
	Chch	Akld	Chch	Akld	Chch	Akld
	%	%	%	%	%	%
Never	4.8	2.0	81.4	93.0	92.8	90.3
Once a Week	1.2	2.6	6.0	4.0	4.6	7.7
Twice a Week	3.9	5.1	6.3	1.2	1.5	1.0
3 Times a Week	7.5	16.6	0.7	0.6	0.7	0.8
4 Times a Week	13.5	21.9	1.0	0.4	0.2	-
Every Day	69.1	51.8	4.6	0.8	0.2	0.2
	100.0	100.0	100.0	100.0	100.0	100.0
Valid Responses	415	506				

Occupation and Age The lowest frequency of daily servings was in the technical and clerical occupations. The frequency of daily serving increased in the over 35 age groups (Table 39).

Method For the working day evening meal, the most popular ways of serving potatoes were boiled and roasted. For lunch, the most popular way was boiled in Christchurch and fried in Auckland. For breakfast the most popular serving method was fried (Table 10).

TABLE 10
Method of Serving Potatoes During Working Days

	Meal-time					
	Evening Meal		Lunch		Breakfast	
	Chch	Akld	Chch	Akld	Chch	Akld
	%	%	%	%	%	%
Boiled	77.5	87.0	42.8	23.0	3.3	12.2
Mashed and Other	73.6	35.9	26.0	14.2	3.3	2.8
Roasted	64.8	63.0	23.4	5.7	-	-
Baked	53.2	48.8	16.9	8.5	-	-
Casserole/Stew	17.7	15.5	1.2	-	-	-
Soup	9.1	6.4	1.3	-	-	-
Chips	41.3	7.0	24.7	25.7	23.3	12.2
Fried (pre-cooked)	21.0	9.7	22.1	31.4	63.3	61.2
Potato Salad	17.7	10.9	5.2	5.7	6.6	-
Valid Responses	395	496	77	35	30	49

3.3 Serving During Weekends

During weekends, over half the respondents made no change to the way potatoes were served. Roasting became a more popular way of serving potatoes (Table 11).

TABLE 11
Differences Made to Serving Potatoes During Weekends,
Relative to Weekdays

	Chch	Akld
	%	%
No difference	60.2	69.4
More Boiled	7.0	0.8
More Mashed and other	2.9	5.7
More Roasted	21.2	19.2
More Baked	7.0	4.3
More Casserole/Stew	1.2	1.0
More Soup	0.2	-
More Chips	3.1	3.1
More Fried (pre-cooked)	1.4	1.2
More Potato Salad	1.0	0.4
Valid Responses	415	506

One third of respondents stated they ate less potatoes during weekends, relative to weekdays (Table 12).

TABLE 12

Weekend Potato Consumption, Relative to Weekdays

	Chch	Akld
	%	%
More	12.7	8.5
Less	32.6	35.1
Same	54.2	54.9
Don't Know	0.5	1.5
	<hr/> 100.0	<hr/> 100.0
Valid Responses	393	502

3.4 Persons Eating Potatoes

The person in the average household who ate the most potatoes was a male while the person who ate the least potatoes was a female (Table 13).

TABLE 13
Household Members' Potato Eating Habits

	Eating Habit			
	Who Eats Most		Who Eats Fewer	
	Chch	Akld	Chch	Akld
	%	%	%	%
Husband	48.0	60.0	8.1	8.2
Husband and Sons	67.4 7.2	76.9 2.9	6.4	0.3
Single Male/Sons	12.2	14.0	7.7	3.1
Wife	14.8	9.2	49.2	56.5
Wife and Daughters	0.6	0.8	73.9 5.8	71.7 4.2
Single Female/Daughter	4.2	3.7	18.9	11.0
Wife and Husband	5.5	5.8	1.2	2.0
All Members	7.5	3.6	8.7	14.7
	100.0	100.0	100.0	100.0
Valid Responses	362	377	260	353

The Large Eaters Of those people who ate the most potatoes, the main reasons given were "big appetite" and "likes them the most" (Table 14).

TABLE 14

Reasons For Eating Most Potatoes

	Chch	Akld
	%	%
Growing	6.4	7.7
Fills them up	4.0	4.7
Likes them most	35.1	40.0
Big Appetite	45.1	55.0
Worker Needs More	7.5	8.2
Good for Sportsmen	0.6	0.8
Other	7.0	3.9
Valid Responses	330	362

The Small Eaters The main reasons given for eating fewer potatoes were "smaller appetite", "dieting" and "don't like" (Table 15).

TABLE 15

Reasons for Eating Fewer Potatoes

	Chch	Akld
	%	%
Dieting	32.7	34.4
Don't Like	22.0	29.0
Health	3.5	6.2
Smaller Appetite	39.8	30.4
Other	3.5	5.9
Valid Responses	254	352

Occupation and Age "Smaller appetite" and "dieting", as reasons for eating fewer potatoes, were given most often in the professional and managerial, technical and clerical occupation groups. "Dieting", as a reason for eating fewer potatoes, was also common in the 35 to 54 year age groups. "Don't like", as a reason for eating fewer potatoes, was common in the less than 30 year age groups (Table 40).

3.5 Seasonal Consumption of Potatoes

Summer was the most common season for potato consumption to be reduced (Table 16).

TABLE 16

Seasons When Less Potatoes are Eaten

	Chch	Akld
	%	%
Summer	84.6	91.0
Autumn	0.6	0.5
Winter	7.1	7.0
Late winter/early spring	7.1	1.0
Spring	2.4	2.0
Valid Responses	169	200

Reasons The reasons for using less potatoes in certain seasons were first, the "variety of other foods available", especially in Auckland, and second, wanting to "avoid hot vegetables" (Table 17).

TABLE 17
Reasons For Reduced Seasonal Potato
Consumption

	Chch	Akld
	%	%
Softness	0.5	1.9
Price	2.0	2.9
Potato Too Old	12.0	2.9
Greening	0.5	-
Rotten	-	1.0
Avoid Hot Vegetables	34.7	45.8
Variety of other foods available	55.7	83.4
Other	12.5	17.0
Valid Responses	167	205

3.6 Reuse of Potatoes

Over one third of respondents did not reuse potatoes. The main way potatoes were reused was "fried"(Table 18).

TABLE 18
Reuse of Potatoes

	Responses			
	1st		All	
	Chch	Akld	Chch	Akld
	%	%	%	%
Never reused	38.3	47.5	38.3	47.8
Salad	8.7	5.5	8.6	10.6
Fried	35.6	30.8	40.6	37.3
Cold	1.0	1.0	4.8	3.0
Sandwich	0.2	0.2	0.4	1.2
Cook up (Bubble and Squeak)	5.5	3.8	10.5	8.3
Shepherds pie	5.1	2.6	15.4	8.9
Reheat	2.7	1.4	4.1	3.8
Other	2.9	6.9	9.4	8.0
	<hr/>	<hr/>		
	100.0	100.0		
Valid Responses	415	506		

CHAPTER 4

STATUS, ATTITUDES AND KNOWLEDGE

4.1 Serving to Guests

When preparing dinner for guests most households served potatoes. The most common way potatoes were served was roasted (Table 19).

TABLE 19

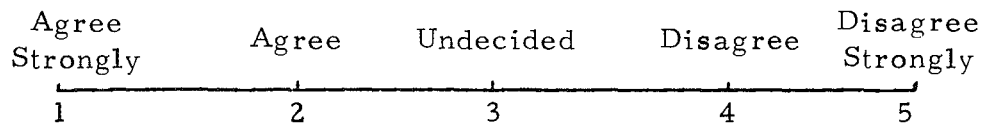
Method of Serving Potatoes to Guests

	Responses			
	1st		All	
	Chch	Akld	Chch	Akld
	%	%	%	%
Boiled	20.4	15.5	33.3	28.3
Mashed	20.2	8.2	42.2	31.6
Roasted	35.8	45.4	62.0	67.4
Baked	16.6	23.6	34.0	39.3
Casserole/Stew	1.6	0.8	3.0	6.3
Chips	0.5	0.6	2.6	5.3
Fried (pre-cooked)	0.2	-	1.0	1.4
Potato Salad	0.8	1.4	3.6	7.6
Other	3.9	4.5	10.2	11.7
	<hr style="width: 50%; margin-left: auto; margin-right: 0;"/>	<hr style="width: 50%; margin-left: auto; margin-right: 0;"/>		
	100.0	100.0		
Valid Responses (1)	362	482		
Total Sample (2)	415	506		
Proportion of Respondents Serving Potatoes to Guests (1/2)	87.2%	95.2%		

Occupation and Age Serving potatoes roasted was most popular in the technical and clerical occupations and the below 45 year age groups. Baked potatoes were popular in the professional and managerial occupations and the 30 to 34 year age groups. Boiled potatoes were most popular with the skilled and unskilled workers, retired people, and over 44 age groups. (Table 41).

4.2 Attitude Statements

Respondents were shown a card with five attitude statements. They were then shown a card with a five point scale as follows:



and asked to indicate the point on the scale which best described their feelings about each statement. After combining the "agree strongly" and "agree" results the statements ranked in order of agreement were:

1. Compared with other things today, potatoes are good value for money.
2. Potatoes are essential for a healthy diet.
3. Potatoes are more nutritious than white bread.
4. We reduce our potato consumption to avoid getting fat.
5. For a restaurant meal, potatoes are out of place.

As attitude statement 5 was inserted negatively as a validation check, it was expected that it would elicit the lowest agreement.

Health There was strong agreement that potatoes were essential for a healthy diet but opinion was almost evenly divided over whether potatoes were related to becoming fat (Table 20).

TABLE 20

Attitudes Towards Health Value of Potatoes

	Attitude			
	Essential for Healthy Diet		We Reduce Consumption To Avoid Getting Fat	
	Chch	Akld	Chch	Akld
	%	%	%	%
1. Agree Strongly	24.2	18.6	8.0	10.2
2. Agree	47.6	48.4	36.9	49.8
3. Undecided	11.6	8.3	11.1	12.3
4. Disagree	15.2	23.5	37.3	25.5
5. Disagree Strongly	1.4	1.2	6.7	2.2
	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
Agree (1 + 2)	71.8	67.0	44.9	60.0
Valid Responses	414	403	415	401

Value and Nutrition Strong agreement was expressed over value. Agreement was expressed about nutrition, although 29 per cent were undecided (Table 21).

TABLE 21

Attitudes Toward Value For Money and Nutritional Value

	Attitude			
	Potatoes Good Value For Money		Potatoes More Nutritious Than Bread	
	Chch	Akld	Chch	Akld
	%	%	%	%
1. Agree Strongly	23.5	16.4	10.2	14.6
2. Agree	60.6	64.9	49.9	47.6
3. Undecided	10.4	11.1	30.8	27.9
4. Disagree	4.1	6.6	8.9	9.7
5. Disagree Strongly	1.4	1.0	0.2	0.2
	<hr/>	<hr/>	<hr/>	<hr/>
	100.0	100.0	100.0	100.0
Agree (1 + 2)	84.1	81.3	60.1	62.2
Valid Responses	414	401	415	502

Price If the price doubled, 60 per cent of respondents would not reduce potato purchases. However, in contrast, if the price halved almost 90 per cent of respondents would not increase purchases (Table 22).

TABLE 22

Attitudes Toward Price of Potatoes

	Attitude			
	Buy Less if Price Doubled ^a		Buy More if Price Halved	
	Chch	Akld	Chch	Akld
	%	%	%	%
Yes	37.4	38.6	12.4	9.8
No	61.0	59.8	87.3	89.2
About the Same	34.3 26.7	35.3 24.5	58.9 28.4	68.1 21.1
Don't Know	1.6	1.6	0.3	1.0
	100.0	100.0	100.0	100.0
Valid Responses	382	498	387	498

^a The measure used for price doubling was 35c/kg or \$6 a sugar bag.

4.3 Grading Knowledge

The awareness of grading was low, especially in Auckland (Table 23).

TABLE 23
Knowledge About Potato Grading

	Chch	Akld
<u>Are the potatoes you buy</u>	%	%
<u>graded?</u>		
Yes	39.6	26.2
No	60.4 [21.8	73.8 [20.6
Don't Know	38.6	53.2
	100.0	100.0
Valid Responses	376	496

4.4 Variety Knowledge

The most commonly known varieties were Ilam Hardy, Chippewa, then Rua. Auckland households knew less about the varieties than Christchurch households (Table 24).

TABLE 24
Knowledge About Potato Varieties

	Responses			
	1st		All	
	Chch	Akld	Chch	Akld
<u>Varieties Purchased</u>	%	%	%	%
Don't Know	19.8	81.4	19.8	81.4
Ilam Hardy	29.2	5.5	46.7	7.2
Chippewa	26.7	0.4	45.9	0.8
Rua	11.1	0.2	30.4	0.4
Sebago	0.2	-	0.6	0.6
Red King	1.4	0.2	2.3	1.0
Kind Edward	0.5	1.2	0.7	1.8
Majestic	-	0.2	0.2	0.8
Arran Banner	1.2	0.4	4.1	1.0
Dakota	0.5	0.6	3.2	0.6
Cliffs Kidney	1.2	1.4	3.1	2.2
Pukekohe	0.5	5.1	1.0	5.7
Other	7.7	3.4	10.9	3.8
	<u>100.0</u>	<u>100.0</u>		
Valid Responses	415	506		

Occupation and Age For Christchurch, the greatest ignorance of varieties came from respondents in the professional, managerial, technical and clerical occupational groups and the younger ages. Greatest knowledge of Chippewa was found in the sales and

service and unskilled groups (Table 43). No further analysis was possible for Auckland because of the low rate of variety knowledge.

CHAPTER 5

SUBSTITUTES AND COMPLAINTS

5.1 Identification of Substitutes

More respondents in Christchurch than in Auckland had no substitute for potatoes. The main substitutes for potatoes, taking into account all responses, were rice and pasta. The next most common alternative in Christchurch was bread, while in Auckland it was kumara and other root crops (Table 25).

TABLE 25
Potato Substitutes at Main Meal

		Responses			
		1st		All	
		Chch	Akld	Chch	Akld
		%	%	%	%
No Substitute		31.6	19.0	31.6	19.0
Rice		34.5	43.9	40.9	52.4
Pasta	Spaghetti	3.9	4.0	12.8	16.1
	Noodles	1.2	2.4	6.2	11.2
	Other Pasta including Macaroni	7.2	6.8	29.2	33.4
		2.1	0.4	10.2	6.1
Bread		10.6	4.7	16.4	13.8
Salad		0.7	3.8	3.1	10.9
Kumara/Root Crops		2.1	12.1	2.4	28.0
Pumpkin/Marrow/Butternut		1.0	2.8	1.1	9.7
Other		12.3	6.9	13.8	18.5
		100.0	100.0		
Valid Responses		415	506		

Occupation and Age Rice and pasta were more common in the professional and managerial occupational groups. Pasta was also popular in the below 35 year age groups. Younger respondents (less than 35 years) replaced potatoes more frequently than older respondents (Table 44).

Household Composition Rice gained in popularity as the number of occupants of the household increased. Rice and pasta were both more popular in households with children, compared to households without children (Table 45).

5.2 Influences on Substitution

Person Influencing Cooking Where all household members influenced potato cooking then pasta and bread were the most popular substitutes. In Christchurch, where the wife only influenced the way potatoes were cooked, substitution was less or else it was by fresh vegetables (Table 46, i).

Frequency of Serving Eighty-nine per cent of those respondents who had no substitute for potatoes ate potatoes daily (Table 46, ii).

Specific Influences The main influences causing respondents to substitute potatoes out of a meal were first a desire for "variety in diet" then "type of meal served" and "lack of time" (Table 26).

TABLE 26
Influences on Potato Substitution

	Chch	Akld
	%	%
Hot weather	4.9	11.2
Lack of time	14.2	9.7
Member of household	3.0	2.7
Variety in diet	40.0	66.0
Cultural tastes	3.0	6.5
Type of meal served	28.8	39.7
Other	21.7	19.0
Valid Responses	267	400

5.3 Serving Substitutes to Guests

When serving meals to guests 38 per cent stated they would not substitute other items for potatoes (compared with 24 per cent for non-guest meals; see table 25). The pattern of substitutes was similar to the situation without guests with rice clearly the first alternative but with pasta's and bread's acceptability down by almost 50 per cent (Table 27).

TABLE 27
Potato Substitutes when Serving Guests

		Responses							
		1st		All					
		Chch	Akld	Chch	Akld				
		%	%	%	%				
No Substitute		35.9	39.2	35.9	39.2				
Rice		40.0	37.7	42.8	43.0				
Pasta	Spaghetti	4.2	4.0	18.1	18.9				
	Noodles					1.0	2.4	5.8	6.9
	Other Pasta					2.2	1.2	7.3	6.1
	Including Macaroni					1.2	0.4	5.0	5.9
Bread		5.5	2.6	7.1	6.1				
Salad		0.2	5.5	1.4	9.0				
Kumara/Root crops		n.a.	5.7	n.a.	11.2				
Pumpkin/Marrow/Butternut		n.a.	1.0	n.a.	2.6				
Other ^a		14.0	4.3	18.8	11.4				
		100.0	100.0						
Valid Responses		415	506						

^a In Christchurch "other" includes kumara and pumpkin.

Reasons The main reason why potatoes were substituted when serving guests, in Christchurch households, were "type of meal served" and "change desired" (Table 28). This question was not asked in Auckland.

TABLE 28

Reasons for Serving Substitutes to Guests

	Chch
	%
Type of meal served	35.5
Change desired	34.7
Convenience	9.7
Guest preference	9.2
Other	13.5
Valid Responses	141

5.4 Complaints

Only 35 per cent of respondents had no complaint about the potatoes they had bought in the past year. The biggest complaint was "rotten". In Christchurch, the next most common complaints were "breaking up in cooking" and "greening", while in Auckland they were "greening" then "cuts and blemishes" (Table 29).

TABLE 29
Complaints Concerning Potatoes
Purchased

	Complaints			
	Chch	1st Akld	All Chch	All Akld
	%	%	%	%
No Complaint	36.4	34.3	36.4	34.3
Greening	9.0	12.8	13.1	23.4
Rotten	25.2	30.1	32.6	40.2
Cuts and Blemishes	7.7	8.3	12.6	16.2
Softness	6.0	5.1	10.6	11.6
Breaking up in cooking	11.2	4.1	21.3	10.6
Small size	1.2	1.3	3.6	4.1
Eyes	1.0	1.4	2.4	5.7
Taste	1.2	1.2	2.4	6.1
Colour after cooking	1.2	1.4	3.2	6.9
	<u>100.0</u>	<u>100.0</u>		
Valid Responses	365	492		

Occupation and Age "Rotten" in Christchurch was most common in the below 35 year age groups and in Auckland it was mentioned most in the professional and managerial and unskilled groups (Table 47).

CHAPTER 6

OTHER SURVEY DATA

6.1 Storage

Location The most common places for storing potatoes were garages and sheds in Christchurch and cupboards and kitchens in Auckland (Table 30).

TABLE 30
Where Potatoes Are Stored

	Chch	Akld
	%	%
Washhouse	19.7	17.3
Garage	31.4	11.0
Shed	13.6	3.4
Pantry	2.9	11.3
Cupboard	17.3	38.7
Kitchen	16.0	26.3
Storage Room	2.0	1.4
Basement	1.7	6.7
Other	5.5	5.5
Valid Responses	411	502

Problems Over 80 per cent of respondents indicated they had no storage problems. Of the limited storage problems, sprouting and rotting were the most common (Table 31).

TABLE 31

Problems with Stored Potatoes

	Chch	Akld
	%	%
None	81.9	83.4
Greening	3.1	3.5
Rotting	7.0	5.7
Sprouting	9.4	6.1
Gone soft	2.2	4.1
Rodents	0.3	0.2
Other	0.3	0.8
Valid Responses	415	506

6.2 Processed Potatoes

Of the four types of processed potatoes examined the most popular was potato crisps. The next two most popular were hot chips⁵ and frozen french fries; these were mainly eaten for the evening dinner. Canned potatoes were the least popular, with over 90 per cent of respondents not buying any in the past two years (Table 48).

⁵ Information on hot chips as a takeaway meal can be found in: Brodie, R.J. and Mellon, M.J. (1979). 'Cheese: a Consumer Survey of Christchurch Households'. A.E.R.U. Research Report No. 102: Lincoln College.

Age Potato crisps, hot chips and frozen french fries were accepted by all age groups up to 44 years (Table 49).

Household Size The popularity of potato crisps, hot chips and frozen french fries increased as household size increased (Table 50).

6.3 Home Grown Potatoes

The proportion of respondents growing their own potatoes was larger in Christchurch than Auckland; 64 per cent compared to 44 per cent. The main reasons for growing own were "cheaper", "freshness" and "like gardening". The main reason for not growing potatoes was "lack of room"(Table 32).

TABLE 32
Home Grown Potatoes

	Chch	Akld
<u>Reasons for growing</u>	%	%
Natural Food	2.6	4.0
Cheaper	38.7	21.2
Freshness	32.3	35.1
Quality	8.2	19.8
Like Gardening	28.6	41.4
Other	31.5	29.7
Valid Responses (1)	266	222
Total Sample (2)	415	506
Proportion growing own (1/2)	64.1%	43.1%
<u>Reasons for not growing</u>	%	%
No Room	62.2	52.4
Cheaper Elsewhere	6.4	2.3
Don't Like Gardening	17.3	14.9
Age)		10.5
Lack of Time)	21.1	21.1
Other)		16.0
Valid Responses	156	275

6.4 Media Recall

Seventy-five per cent of respondents in Auckland recalled having heard, read or seen something about potatoes in the past two years as compared to Christchurch's 64 per cent. On totalling all responses, the media having the biggest recall were newspapers and magazines, although the survey was conducted prior to the 1979 promotion campaign (Table 33).

TABLE 33
Media Through Which Households Have Heard,
Read or Seen Something About Potatoes

	Responses			
	1st		All	
	Chch	Akld	Chch	Akld
	%	%	%	%
Nowhere	36.1	25.0	36.1	25.0
Newspaper	19.3	20.2	26.7	28.7
Magazine	8.4	21.0	14.4	33.4
T. V. / Radio	8.2	10.0	14.5	17.9
Alison Holst	0.2	n.a.	1.2	n.a.
Dr Turbott	2.9	n.a.	4.1	n.a.
Demonstration	1.7	0.6	3.6	0.8
Pamphlets	5.1	2.1	7.7	3.5
Books/Cook books	5.1	17.6	9.4	27.5
Other	13.0	3.5	18.5	5.4
	<hr/>	<hr/>		
	100.0	100.0		
Valid Responses	415	506		

CHAPTER 7

IMPLICATIONS

The potato appeared to be held in high esteem as the majority of households supported it on the more prestigious occasions, such as serving meals to guests (Tables 19, 27) or eating at a restaurant. This chapter uses the survey results to suggest a possible strategic marketing approach and then attempts to identify opportunities that exist for stimulating the aggregate level of demand for potatoes.

7.1 A Strategic Marketing Approach

A first step in developing a marketing strategy⁶ is to identify the different groups of consumers representing potential target market segments. The survey attempted to associate these segments with occupation and age but no clear segmentation resulted. However, an alternative geographic approach appeared to segment the market effectively. This suggests that regional, rather than national, strategies should be used to achieve marketing objectives.

For example, the differences between the two cities of Christchurch and Auckland were quite substantial with respect to where potatoes were obtained (Table 2), frequency of purchase (Table 5), purchasing quantity (Table 7), quantity purchased per year (page 14), frequency of serving potatoes every day for evening meal (Table 9), variety knowledge (Table 24), proportion of respondents without substitutes (Table 25), proportion of respondents growing own potatoes (Table 32).

⁶ A marketing strategy extends beyond advertising and promotion. It reflects an integrated appraisal covering product, price promotion and distribution policies timed to match the market opportunities in target segments (i.e. groups of consumers).

Auckland, as distinct from Christchurch, is a large market, and households within this city use alternatives to potatoes more frequently (Table 25). The Auckland households are also more reliant for their potatoes on retail outlets such as supermarkets and fruiterers (Table 2). These facts suggest that Auckland could be a more worthwhile region to invest marketing effort.

6.2 Stimulating Demand

Lifting the aggregate demand for potatoes can be attempted by focusing either on the particular varieties or packers' brands or by recognising that potatoes, as a whole, are in competition with other staple foods such as rice, kumara and bread. The survey has concentrated on this latter, generic, approach.

Price There was agreement (83 per cent) that potatoes were good value for money (Table 21). Even if the price doubled, 60 per cent of all households would not reduce purchases and to the counter question, 88 per cent stated they would not buy more if the price was halved (Table 22). For consumers to reply in this manner the implication is that potatoes are considered cheap in price and that demand is unlikely to be greatly affected by different pricing policies.

Quality Consumers are demanding higher quality potatoes. The survey showed this in two ways. Firstly, households strongly agreed that "firmness", "freshness", "seeing the potatoes" and "lack of dirt" were important reasons influencing households' purchasing patterns (Table 6). Secondly, 65 per cent of households made a complaint about the quality of the potatoes

they had purchased (Table 29). One way of improving the quality of potatoes that reach the consumer is to introduce a more stringent grading standard and simultaneously obtain industrial outlets for those regular quantities of potatoes that fail to meet the particular standard adopted.

Convenience Foods that require less time in their preparation, such as rice and pasta (i.e. spaghetti, noodles, macaroni) were the main alternatives to potatoes (Table 25). This suggests that, for potatoes to successfully compete with these alternative foods, methods of reducing preparation time need to be found. Possible methods include supplying the consumer with a more equally sized and clean group of potatoes in the package purchased.

Promotion Some discreet public relations activity could be necessary to strengthen consumer confidence in the nutritional and health aspects of the potato (Tables 20 and 21). A useful point for any promotion campaign is that potatoes roasted and baked appear to carry more prestige than those mashed or boiled. This was suggested from Table 41 where potatoes served roasted or baked were popular in the higher socio-economic occupational groups and the younger ages.

Package Sizes Package preferences varied by outlets used and city (Table 38, ii). Therefore, to ensure consumer satisfaction, whilst rationalising distribution costs, emphasis could be placed on selecting specific package weights for the different outlets used in different geographical areas. Another improvement could be to package potatoes suitable for serving in certain ways such as an oven ready "baked potato pack".

Seasonal Consumption Summer was the most common season for potato consumption to be reduced (Table 16) and the main reasons for using less potatoes in certain seasons were "variety of other foods available" and wanting to "avoid hot vegetables" (Table 17). These findings suggest alternative methods of serving potatoes during summer need to be found.

A common theme of these implications is that, with households demanding higher quality and greater convenience, more resources should be directed to product presentation even if it results in higher price. Only when this step is taken will platforms for promotional campaigns have a solid foundation.

Clear distinction should be made between the consumer market and the industrial market for processed potatoes. This survey has concentrated on the consumer market and its associated direct consumption of fresh potatoes by households.

APPENDICES

APPENDIX 1
Sample Details

(i) Christchurch

<u>Suburb</u>	<u>Starting Point</u>	<u>No. of Interviews</u>
Burwood	Kingsford Street	10
Oaklands	Checketts Avenue	10
Hornby	Dufek Crescent, Main South Road, Boston Avenue	32
Beckenham	Colombo Street	11
Dallington	Dallington Terrace	12
Bromley	Keighlys Road	10
Wainoni	Eureka Street	11
Spreydon	Bewdly Street	7
Fendalton	Hamilton Avenue	10
Ilam	Clonbern Place	10
Cashmere	Merlwood Avenue	10
Bishopdale	Kingsgrove Street	10
Somerfield	Somerfield Street	10
Opawa	Bishopworth Street	5
Halswell	Warren Crescent	10
Avonside	Cowlishaw Street	10
Riccarton	Mandeville Street	10
St Albans	St Albans Street	10
Hoon Hay	Green Park Street	10
Bryndwr	Hudson Street	10
Hillmorton	Charles Upham Avenue	10
Waltham	Fifield Terrace Shakespeare Road	25
Sydenham	Hastings Street Brougham Street	21

<u>Suburb</u>	<u>Starting Point</u>	<u>No. of Interviews</u>
Addington	Ruskin Street	9
Woolston	Bamford Street	10
Linwood	Osborne Street	10
St Martins	Centaurus Road	9
Avonhead	Solway Street	10
Upper Riccarton	Main South Road	12
St Andrews Hill	Cannon Hill Crescent	10
Redwood	Cavendish Road	10
Mairehau	Innes Road	10
Papanui	Dormer Street	10
Burnside	Roydvale Avenue	10
Bryndwr	Wairakei Road	12
St Martins	Wilsons Road	10
Aranui	Carisbrooke Street	12
		<hr/>
		418
		<hr/> <hr/>

(ii) Auckland

<u>Suburb</u>	<u>Starting Point</u>	<u>No. of Interviews</u>
Henderson	Millbrook Road	31
	Great North Road	
	Seymour Road	
Massey	Royal Road	14
	O'Reil Avenue	
	Waimumu Road	
Helensville	Puriri Street	12
	Springs Road	
	Garfield Road	
Te Atatu	Colville Avenue	5
	Amberley Avenue	
	Cron Avenue	
Avondale	Westminister Street	30
	Methuen Street	
Point Chevalier	Neville Street	7
	De Leun Street	
Morningside	De Groot Street	13
Mt Roskill	Wainwright Street	10
	Dominion Road	
	Marshal Laing Avenue	
Mt Albert	Ruapehu Street	10
	New North Road	
	Lloyd Avenue	
Mt Eden	Mountain Road	9
	View Road	
Remuera	Clonbern Road	33
	Ngapuhi Road	
	Seaview Road	
Orakei	Ngarie Street	10
Meadowbank	Gowing Drive	24
Mission Bay	Atkin Avenue	10
Kohimarama	Rawhitiroa Road	17
	Tahapa Street	
St Heliers	St Helier's Bay Road	29
	Sylvia Road	
	Maskeu Street	
	Picadilly Place	

<u>Suburb</u>	<u>Starting Point</u>	<u>No. of Interviews</u>
Glen Innes	West Tamaki Road Abraham Place Pt England Road Epping Street	29
Pakuranga	Marrott Road Tiraumea Drive Trust Place Crassways Avenue Fordyce Avenue Paulonge Street Meagan Avenue Studfall Street Luton Avenue	73
Howick	Hurthes Place Rodney Street Bleakhouse Road Priestly Drive	10
Panmure	Tamatea Avenue Riverview Road	25
Mt Wellington	Gollan Street	10
Mangere	Antrim Crescent	11
Takapuna	Coronation Road	12
Castor Bay	Beach Road	10
Glenfield	Glenfield Road	8
Forest Hill	Forest Hill Road Meadow Vale Road Sunnyrock Road	5
Browns Bay	Philson Terrace	3
Mairangi Bay	Hasting Street	7
Ponsonby	Dunedin Street	9
Grey Lynn	Regina Street	11
Devonport	Cambridge Terrace	6
Onehunga	Moana Street Forber Avenue	19
		<hr/> 512 <hr/> <hr/>

Appendix 2: The Questionnaire
POTATO SURVEY

Good morning/afternoon/evening. I am from the Lincoln College Economics Research Department. We are doing a survey about potatoes. Would you help us by answering a few questions.
ASK TO SPEAK TO THE HOUSEWIFE (OR THE HOUSEKEEPER). IF THIS IS NOT POSSIBLE ARRANGE A SUITABLE CALLBACK TIME.

1. Does your household ever eat potatoes? 1. Yes (), 2. No (), 3. Rarely(). IF NO, GO TO Q9.

2. a. Where do you buy your potatoes? RECORD SEQUENCE OF RESPONSE

1. Supermarket (), 2. Fruiterer (), 3. Grocer (), 4. Superfruiterer(), 5. Gate Sales()
6. Private friend(), 7. Dairy (), 8. Other _____ 9. Always given/grown()
IF 9, GO TO Q2i.

b. How often do you usually buy from this/these outlets? USE THIS CODE: 1= more than once/wk, 2=once/wk, 3=every two wks, 4=three wks-one mth, 5=two-three mths, 6=three-six mths, 7=longer.

1. Supermarket () 2. Fruiterer () 3. Grocer() 4. Superfruiterer()
5. Gate Sales() 6. Private Friend() 7. Dairy() 8. Other _____ 9. Auction()

c. What quantity of potatoes do you usually buy from this/these outlets? RECORD ACTUAL QUANTITY IN KILOGRAMS ALONGSIDE ANSWERS TO QUESTION 2b ABOVE(N.B. 1 kg=2.2 lbs, 1 sugar bag=20 kg).

d. We now want to enquire about what might influence where you buy potatoes. Using this scale (SHOW CARD A), could you please tell me how important is

- (i) the selection of other goods available in choosing where to buy potatoes(), (ii) How important is service(), (iii) being close to home (), (iv) being able to buy in bulk (), (v) price ().

e. If the price of potatoes increased to about \$6.00 a sugar bag (35c/kg), would you buy less?

1. Yes (), 2. No(), 3. About the same (), 4. Don't know ().

f. If the price of potatoes halved, would you buy more?

1. Yes (), 2. No(), 3. About the same (), 4. Don't know ().

g. (1) Using this scale card again, please indicate, when buying potatoes, how important is: (i) Firmness() (ii) How important is Lack of dirt(), (iii) Shallow eyes(), (iv) Freshness(), (v) Seeing the potatoes

- (2) Are there any other things you consider important? _____ ().

h. Are the potatoes you buy graded? 1. Yes(), 2. No(), 3. Don't know ().

i. What varieties of potatoes have you bought in the past year? RECORD SEQUENCE OF RESPONSE.

1. Ilam Hardy(), 2. Chippewa/Katohdin(), 3. Rua (), 4. Sebago(), 5. Red King(),
6. King Edward(), 7. Majestic(), 8. Arran Banner(), 9. Dakota(), 10. Cliffs Kidney(),
11. Pukekohe(), 12. Mundy's(), 13. Harvest Fresh(), 14. Market Gardeners(),
15. McFarlane & Growers(), 16. Turners & Growers(), 17. Radleys(), 18. Produce Market()
19. Chapman(), 20. Wilcox(), 21. Washed Potatoes(), 22. Unbranded(), 23. Growers Name(),
24. Other _____

j. Has there been anything wrong with the potatoes you have bought during the past year? RECORD MAXIMUM OF FOUR. 1. Greening(), 2. Rotten(), 3. Softness(), 4. small size(), 5. eyes(),

6. cuts/blemishes(), 7. taste(), 8. colour after cooking(), 9. breaking up in cooking(),
10. NOTHING ().

k. Where do you usually store your potatoes? 1. Wash-house(), 2. Garage(), 3. Shed(), 4. Pantry()
5. Cupboard(), 6. Kitchen(), 7. Storage room(), 8. Basement(), 9. Other _____

l. Have you had any problems with stored potatoes?

1. Yes(), 2. No (), 3. Don't know(). IF NO, OR DON'T KNOW, GO TO Q3.

m. What problems have you had?

1. Greening(), 2. Rotting(), 3. Sprouting(), 4. Gone soft(), 5. Rodents(), Other _____

3. Now some questions about how you prepare and cook your potatoes.

a. Who influences the way you cook potatoes?

1. wife(), 2. husband(), 3. wife & husband(), 4. wife & daughters (). 5. husband & sons ()
6. S. Male/sons (). 7. S. female/daughters (). 8. whole household (). 9. other _____

b. Who decides the way you cook the potatoes?

1. wife(), 2. husband(), 3. wife & husband(), 4. Wife & daughters (). 5. husband & sons ()
6. S. males/sons (). 7. S. females/daughters (). 8. whole household (). 9. Other _____

c. (1) Working days only, how many times a week do you have potatoes for: (WRITE no. of times in brackets)

(2) In what ways do you serve them for: (i) the evening meal() (ii) lunch() (iii) breakfast()

(TICK BOXES)	Boiled		
Mashed			
Roasted			
Baked			
Casserole/Stew			
Soup			
Chips			
Fried(pre-cooked)			
Potato salad			
Other			

d. (i) Do you serve potatoes in the same way at weekends as on weekdays?

1. Yes(), 2. No(), 3. Don't know(). IF YES, OR DON'T KNOW, GO TO Q3e.

(ii) What differences do you make? _____

e. (i) At weekends does your household eat more or less potatoes than on weekdays? 1. More(),

2. Less(), 3. Same(), 4. Don't Know(). IF SAME OR DON'T KNOW, GO TO Q4.

(ii) Why do you eat More/Less? _____

4. We've talked about the ways you cook potatoes

a. (i) Who eats the most potatoes in your household?

1. wife(), 2. husband(), 3. wife & husband(), 4. wife & daughters(), 5. husband & sons(),
6. S. male/sons(). 7. S. females/daughters(). 8. Other _____ IF ALL EAT THE SAME, GO TO Q4. b.

(ii) Why? 1. growing(), 2. fills them up(), 3. likes them most(), 4. biggest appetite(),
5. worker needs more(), 6. good for sportsmen(), 7. Other _____

b. (i) Does anyone eat fewer potatoes? IF NO () GO TO Q4c. IF YES () WHO?

1. wife(), 2. husband(), 3. wife & husband(), 4. wife & daughters(), 5. husband & sons(),
6. S. male/sons(). 7. S. females/daughters(). 8. Other _____

(ii) Why? 1. dieting(), 2. Don't like potatoes(), 3. health reasons(), 4. Other _____

- c. (i) Are there any seasons of the year when you use less potatoes? IF NO () GO TO Q4d.
 1. summer(), 2. autumn(), 3. winter (), 4. late winter/early spring(), 5. spring (),
 6. Other _____
- (ii) Why? 1. softness(), 2. price(), 3. too old(), 4. rotten(), 5. sprouting(), 6. greening(),
 7. avoiding hot vegetables(), 8. variety of other foods available(), 9. Other _____
- d. (i) Do you ever cook extra potatoes for use later? 1. Yes(), 2. No(). IF NO, GO TO Q5.
 (ii) How do you use the left-over potatoes? 1. Potato salad(), 2. Fried(), 3. Eat cold(),
 4. Sandwiches(), 5. Cook up(bubble & squeak)(), 6. Shepherd's pie(), 7. re-heat(), 8. Other _____

5. Now we will talk about the times you have the main meal of the day without potatoes.
- a. When you don't have potatoes, what do you have instead? RECORD SEQUENCE OF RESPONSE.
 1. Rice(), 2. Spaghetti(), 3. Vermicelli(), 4. Macaroni(), 5. Noodles(), 6. Bean salad(),
 7. Corn(), 8. Bread(), 9. Other _____. If 10. Never () GO TO 5D
- b. What influences this decision to replace potatoes? 1. Hot weather(), 2. lack of time(), 3. husband(),
 4. children-males(), 5. children-females(), 6. variety in diet(), 7. cultural tastes(),
 8. type of meal served(), 9. Other _____
- c. (i) Are you eating more or less of these alternatives to potatoes than two years ago? 1. More(),
 2. Less(), 3. Same(), 4. Don't know(). IF SAME OR DON'T KNOW, GO TO Q5d.
 (ii) Why are you eating More/Less? 1. Easier preparation(), 2. No waste(), 3. Faster cooking(),
 4. Like it better(), 5. Cheaper(), 6. Variety to diet(), 7. Less fattening(), 8. Other _____
- Now I want to talk about preparing special meals for guests.
- d. When preparing dinner for guests, do you always serve potatoes? 1. Yes(), 2. No(), 3. Rarely(),
 4. Don't know(). IF NO, OR DON'T KNOW, GO TO Q5f.
- e. How would you usually serve potatoes on these occasions? RECORD SEQUENCE OF RESPONSE.
 1. Boiled(), 2. Mashed(), 3. Roasted(), 4. Baked(), 5. Casserole(), 6. Chips(),
 7. Fried(), 8. Potato salad(), 9. Other _____
- f. If you did not serve potatoes to guests, what would you serve instead? RECORD SEQUENCE OF RESPONSE
 1. Rice(), 2. Spaghetti(), 3. Vermicelli(), 4. Macaroni(), 5. Noodles(), 6. Bean salad(),
 7. Corn(), 8. Salads(), 9. Other _____
- g. Why do you make this change for guests? _____

6. Here is a list of statements about potatoes. Using this scale (SHOW SCALE B), please indicate how much you agree or disagree with each statement. (i) _____ (ii) _____ (iii) _____ (iv) _____ (v) _____

- 7a. Have you bought, during the past two years: 1. Frozen French Fries(), 2. Hot chips(),
 3. Potato crisps(), 4. Canned potatoes().
- b. When are they eaten? (CODE: 1=breakfast, 2=lunch, 3=dinner, 4=snacktimes, 5=entertaining guests).
 1. French Fries(), 2. Hot Chips(), 3. Potato crisps(), 4. Canned potatoes().
- c. Who usually eats them? 1. French Fries(), 2. Hot chips(), 3. Potato crisps() 4. Canned Potato ().
 (USE THE FOLLOWING CODE: 1=wife, 2=husband, 3=wife & husband, 4=wife & daughters,
 5=husband&sons. 6=S. male/sons. 7=S. females/daughters. 8.= whole household. 9=Other)

- 8a. Have you grown your own potatoes in the past two years?
 1. Yes(), 2. No(), 3. Sometimes(). IF NO, GO TO Q8c.
- b. Why do you grow your own potatoes? 1. Natural food (), 2. Cheaper(), 3. Freshness(),
 4. Quality(), 5. Like gardening(), 6. Other _____ GO TO QUESTION 10.
- c. Why don't you grow your own potatoes?
 1. No room (), 2. Cheaper elsewhere(), 3. Don't like gardening(), 4. Other _____ GO TO Q10.

9. Why do you never eat Potatoes? _____

- 10a. Where have you heard, seen or read anything about potatoes? RECORD SEQUENCE.
 1. Newspaper(), 2. Magazines(), 3. TV/Radio(prompt for detail)(), 4. Alison Holst(),
 5. Dr Turbott(), 6. Home Economists/Dietician(), 7. Recipe Pamphlets (),
 8. Cookbook (), 9. Other _____
- b. What could make your household increase its use of potatoes? _____

11. a. How many people live in your house? _____
 b. (i) How many are pre-school age _____ (ii) at primary school? _____ (iii) at high school? _____
 c. How many people do full time jobs? _____ (FULL TIME 30 HOURS/WEEK)
 d. What jobs do they do? PROMPT FOR POSITION IN HOUSEHOLD AND ENTER HEAD OF HOUSEHOLD AS (i).

	<u>Position in House</u>
(i) _____	<u>Head</u> _____
(ii) _____	_____
(iii) _____	_____

- e. Which age group do you belong to: Younger than 25 (), 25-29(), 30-34(), 35-39 (),
 40-44(), 45-49(), 50-54(), 55-59(), 60-64(), Over 64 yrs ().
- f. (i) Were you (INCLUDE SPOUSE) born overseas? If NO () GO TO Q11g.
 (ii) If YES, where? ENTER 1
 1. U.K. (), 2. Holland(), 3. Other European(), 4. Pacific Islands(),
 5. Asian(), 6. Other() _____ THEN Q12.
- g. (i) Were your parents born overseas? If NO () Q12 (ii) Where? ENTER 2 above.

12. Respondent's address _____ Phone No. _____
 Time of day interview completed _____ date _____ Interviewer's signature _____

(i) THANK RESPONDENT. (ii) CHECK ALL QUESTIONS HAVE BEEN ASKED.

APPENDIX 3

Sample Representation

	Sample Survey		NZ Population 1976 ^a
	Chch	Akld	(excl. Agric. Workers)
	%	%	%
<u>i. Occupation and Head of Household</u>			
Professional and Managerial	20.7	23.7	15.4
Clerical Sales and Service	22.0	27.3	21.3
Tradesman and Labourer	34.9	28.2	33.9
Retired and Other	22.4	20.8	29.4
	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
Valid Responses ^b	401	472	
<u>ii. Age of Head of Household^c</u>			
Less than 25 years	11.5	9.5	7.2
25 - 34 years	27.4	25.9	23.9
35 - 44 years	20.1	18.3	18.3
45 - 54 years	14.7	17.7	18.7
55 - 64 years	13.5	14.0	15.6
Older than 64 years	12.8	14.6	16.3
	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
Valid Responses	408	492	
<u>iii. Household Composition</u>			
Occupants 1 - 2	35.3	39.0	44.1
Occupants 3 - 4	40.7	39.8	34.3
More than 4	24.0	21.2	21.6
	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
Valid Responses	413	505	

^a Source: 1976. N.Z. Census of Population and Dwellings; except for Age which was based on N.Z. Household Survey Report, Department of Statistics, 1976-77.

^b Invalid responses occurred when respondent did not provide an answer to the question or when the response was recorded incorrectly.

^c Age of person who usually buys the groceries was taken as equivalent to the age of head of household.

APPENDIX 4: FURTHER SURVEY RESULTS

TABLE 34

Outlet Where Potatoes Obtained By Occupation and Age of Head of Household

i. Occupation	Professional & Managerial		Technical & Clerical		Sales & Services		Skilled		Unskilled		Retired & Other	
	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld
	%	%	%	%	%	%	%	%	%	%	%	%
Supermarket	44.6	62.5	55.0	62.8	41.7	60.5	44.7	67.8	35.6	67.4	31.4	50.0
Fruiterer/Superfruiterer	9.6	17.9	2.5	16.3	12.5	13.9	8.6	14.9	6.6	17.4	11.6	19.4
Grocer/Dairy	9.6	2.7	7.5	2.3	6.3	7.0	7.5	6.9	15.5	-	15.1	19.4
Gate Sales	16.9	9.8	15.0	9.3	27.1	10.5	22.3	5.7	24.4	10.9	16.3	7.1
Given/Grow Own	14.5	2.7	12.5	4.7	2.1	2.3	10.6	2.3	13.3	-	18.6	4.1
Other	4.8	4.4	7.5	4.6	10.3	5.8	6.3	2.4	4.6	4.3	7.0	-
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Valid Responses	83	112	39	43	48	86	94	87	45	46	86	98
ii. Age	Under 25 Years		25-29 Years		30-34 Years		35-44 Years		45-54 Years		Over 55 Years	
	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld
	%	%	%	%	%	%	%	%	%	%	%	%
Supermarket	65.3	63.8	50.0	65.5	35.1	62.3	43.9	64.4	36.4	59.8	31.7	54.5
Fruiterer/Superfruiterer	6.5	14.9	9.0	15.5	12.3	11.6	9.7	13.4	6.8	21.8	9.6	19.6
Grocer/Dairy	8.7	8.5	8.9	3.4	14.1	4.3	6.1	4.4	12.0	3.4	13.5	14.0
Gate Sales	6.5	6.4	19.6	6.9	19.3	10.1	26.8	13.4	22.4	9.2	20.2	6.3
Given/Grow Own	6.5	2.1	10.7	1.7	12.3	2.9	7.3	2.2	13.8	1.1	7.7	2.8
Other	6.5	4.3	1.8	7.0	6.9	8.8	6.2	2.2	8.6	4.7	17.3	2.8
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Valid Responses	46	47	56	58	57	69	82	90	58	87	104	143

TABLE 35

Outlet Where Potatoes Obtained By Household Composition

i. Household Size	1 - 2 Occupants		3 - 4 Occupants		Over 4 Occupants	
	Chch	Akld	Chch	Akld	Chch	Akld
	%	%	%	%	%	%
Supermarket	42.7	52.3	44.8	65.7	35.4	65.4
Fruiterer/Superfruiter	8.4	21.8	7.9	15.4	13.1	9.3
Grocer/Dairy	11.2	13.2	10.9	4.5	9.1	1.9
Gate Sales	14.0	6.1	21.2	6.5	25.3	16.8
Given/Grow Own	16.8	3.6	10.3	2.5	9.1	1.9
Other	6.9	2.0	4.9	5.4	8.0	4.7
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
	100.0	100.0	100.0	100.0	100.0	100.0
Valid Responses	143	197	165	201	99	107
ii. With Children	No		Yes			
	Chch	Akld	Chch	Akld		
	%	%	%	%		
Supermarket	39.2	54.4	43.5	67.8		
Fruiterer/Superfruiter	11.8	22.2	7.2	10.6		
Grocer/Dairy	11.8	11.1	9.4	3.3		
Gate Sales	16.7	6.5	22.4	10.6		
Given/Grow Own	13.4	3.4	11.2	2.0		
Other	7.2	2.4	6.3	5.7		
	<hr/>	<hr/>	<hr/>	<hr/>		
	100.0	100.0	100.0	100.0		
Valid Responses	186	261	223	245		

TABLE 36

Frequency of Buying Potatoes By Household Composition and Outlet Used

i. No. Occupants	1 - 2		3 - 4		Over 4			
	Chch	Akld	Chch	Akld	Chch	Akld		
	%	%	%	%	%	%		
At least once a week	15.1	19.4	26.9	29.3	27.9	44.3		
Fortnightly	21.8	31.4	23.4	31.8	18.6	23.6		
3 - 4 Weeks	32.8	30.9	22.1	26.3	31.4	17.0		
2 - 3 Months	10.1	12.6	17.9	8.6	14.0	12.3		
Less than 4 times yearly	20.2	5.7	9.7	4.0	8.1	2.8		
	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>		
Valid Responses	119	191	145	198	86	106		

ii. Outlet Used	Supermarket		Fruiterer/ Superfruiterer		Grocer/ Dairy		Gate Sales	
	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld
	%	%	%	%	%	%	%	%
At least once a week	30.1	30.5	13.5	33.7	33.4	40.6	7.8	2.3
Fortnightly	30.1	36.0	16.2	20.5	21.4	27.0	9.1	9.3
3 - 4 Weeks	26.5	25.0	48.6	30.1	21.4	27.0	28.6	30.2
2 - 3 Months	7.8	6.1	16.2	8.4	11.9	2.7	29.8	46.5
Less than 4 times yearly	5.5	2.4	5.5	7.3	11.9	2.7	24.7	11.7
	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
Valid Responses	166	308	37	83	42	77	77	43

TABLE 37
Factors Influencing Buying Potatoes ^a

Reason	Firmness		Lack of Dirt		Shallow Eyes		Freshness		Seeing the Potatoes	
	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld
	%	%	%	%	%	%	%	%	%	%
i. Absolute Percentage										
Very Important	55.1	55.8	25.1	31.0	15.1	12.1	43.7	62.8	39.8	65.5
Quite Important	32.1	30.4	30.2	37.5	31.4	27.4	38.3	26.5	35.1	26.2
Slightly Important	4.7	6.6	19.4	14.7	19.2	23.2	6.5	6.3	10.9	3.2
Neither Important Nor Unimportant	2.8	3.6	4.6	7.9	8.8	16.5	4.2	2.8	5.7	2.6
Slightly Unimportant	2.6	1.4	9.6	5.0	10.1	9.5	2.9	0.6	2.3	0.6
Quite Unimportant	2.1	1.7	7.5	1.5	10.6	6.6	3.4	0.5	3.9	0.9
Completely Unimportant	0.6	0.5	3.6	2.4	4.8	4.7	1.0	0.5	2.3	1.0
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
ii. Cumulative Percentage										
Very Important	55.1	55.8	25.1	31.0	15.1	12.1	43.7	62.8	39.8	65.5
Quite Important	87.2	86.2	55.3	68.5	46.5	39.5	82.0	89.3	74.9	91.7
Slightly Important	91.9	92.8	74.7	83.2	65.7	62.7	88.5	95.6	85.8	94.9
Neither Important Nor Unimportant	94.7	96.4	79.3	91.1	74.5	79.2	92.7	98.4	91.5	97.5
Slightly Unimportant	97.3	97.8	88.9	96.1	84.6	88.7	95.6	99.0	93.8	98.1
Quite Unimportant	99.4	99.5	96.4	97.6	95.2	95.3	99.0	99.5	97.9	99.0
Completely Unimportant	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Valid Responses	386	496	387	496	385	495	384	494	384	496

^a Prompted Question

TABLE 38

Amount of Potatoes Purchased By Household Composition and Outlet Used

64.

i. No. Occupants	1 - 2		3 - 4		Over 4			
	Chch	Akld	Chch	Akld	Chch	Akld		
	%	%	%	%	%	%		
Below 3 kg	12.6	33.0	9.5	16.8	1.1	9.4		
3 - 4 kg	15.1	12.6	12.3	9.1	6.8	3.8		
5 - 9 kg	30.2	36.7	32.7	45.1	23.9	39.6		
10 - 19 kg	11.8	9.4	14.3	13.2	14.8	20.8		
Above 19 kg (mainly 20 kg)	30.3	8.3	31.2	15.8	53.4	26.4		
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>		
	100.0	100.0	100.0	100.0	100.0	100.0		
Valid Responses	119	191	147	197	88	106		

ii. Outlet	Supermarket		Fruiterer/ Superfruiterer		Grocer/ Dairy		Gate Sales	
	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld
	%	%	%	%	%	%	%	%
Below 3 kg	10.2	14.3	2.7	43.3	18.6	51.3	1.2	2.3
3 - 4 kg	16.9	10.4	8.1	9.6	18.6	8.1	3.8	2.3
5 - 9 kg (mainly 5 kg)	41.5	52.4	29.7	24.1	25.6	33.0	16.7	11.6
10 - 19 kg	15.7	16.9	18.9	8.4	9.3	5.4	11.5	7.0
Above 19 kg (mainly 20 kg)	15.7	6.0	40.5	14.6	27.9	2.2	66.8	76.8
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Valid Responses	166	307	37	83	43	37	78	43

TABLE 39

Frequency of Serving Potatoes By Occupation and Age of Head of Household^a

i. Occupation	Professional and Managerial		Technical and Clerical		Sales and Service		Skilled		Unskilled		Retired and Other	
	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld
	%	%	%	%	%	%	%	%	%	%	%	%
Once - Twice a week	7.2	6.3	10.5	14.6	6.3	8.3	2.1	4.7	-	13.1	8.1	4.2
3 - 4 Times a week	28.9	36.4	28.9	46.4	25.0	52.9	13.7	45.3	34.1	43.5	14.9	25.0
Every Day	63.9	57.3	60.6	39.0	68.7	38.8	84.2	50.0	65.9	43.4	77.0	70.8
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Valid Responses	83	110	38	41	48	85	95	86	44	46	74	96
ii. Age	Below 25 Yrs		25 - 29 Yrs		30 - 34 Yrs		35 - 44 Yrs		45 - 54 Yrs		Above 55 Yrs	
	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld
	%	%	%	%	%	%	%	%	%	%	%	%
Once - Twice a week	4.3	12.8	11.2	8.8	1.8	6.0	4.9	5.5	-	9.5	9.0	7.2
3 - 4 Times a week	30.5	46.8	37.0	52.7	38.6	59.7	20.8	36.6	10.2	38.8	8.8	23.9
Every Day	65.2	40.4	51.8	38.5	59.6	34.3	74.3	57.9	89.8	51.7	82.2	68.9
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Valid Responses	46	47	54	57	57	67	82	90	59	85	90	138

^a Serving confined to evening meal during working days

TABLE 40

Reasons For Eating Less Potatoes By Occupation and Age of Head of Household

i. Occupation	Professional and Managerial		Technical and Clerical		Sales and Service		Skilled		Unskilled		Retired and Other	
	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld
	%	%	%	%	%	%	%	%	%	%	%	%
Dieting	34.4	40.0	43.5	45.5	33.3	30.2	20.0	22.9	38.5	28.6	35.1	41.5
Don't Like	26.2	21.1	8.7	18.2	21.2	28.6	29.2	32.9	7.7	37.1	18.9	34.5
Smaller Appetite	29.5	33.7	47.8	24.2	39.4	33.3	41.5	30.0	42.3	17.1	35.1	14.6
Other	9.9	5.2	-	12.1	6.1	7.9	9.3	14.2	11.5	18.2	10.9	9.4
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Valid Responses	61	95	23	33	33	63	65	70	26	35	37	41
ii. Age	Under 25 Yrs		25 - 29 Yrs		30 - 34 Yrs		35 - 44 Yrs		45 - 54 Yrs		Over 55 Yrs	
	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld
	%	%	%	%	%	%	%	%	%	%	%	%
Dieting	29.0	20.5	29.0	21.2	20.9	25.5	38.3	39.7	43.8	54.2	30.8	36.8
Don't Like	22.6	30.8	25.8	32.7	25.6	23.6	20.0	27.9	21.9	20.3	15.4	25.0
Smaller Appetite	38.7	35.9	41.9	32.7	41.9	41.8	35.0	22.1	31.3	20.3	40.4	25.0
Other	9.7	12.8	3.3	13.4	11.6	9.1	6.7	10.3	3.0	5.2	13.4	13.2
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Valid Responses	31	39	31	52	43	55	60	68	32	59	52	68

TABLE 41

Method of Serving Potatoes to Guests By Occupation and Age of Head of Household

i. Occupation	Professional and Managerial		Technical and Clerical		Sales and Service		Skilled		Unskilled		Retired and Other	
	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld
	%	%	%	%	%	%	%	%	%	%	%	%
Boiled	14.5	13.0	11.4	11.9	14.6	9.5	22.4	18.3	25.0	20.0	28.6	19.8
Mashed	14.5	5.6	11.4	2.4	24.4	6.0	16.5	7.3	19.4	15.6	29.8	8.8
Roasted	29.0	35.2	45.7	52.4	31.7	52.4	48.2	51.2	36.1	33.3	27.4	46.2
Baked	27.5	33.3	20.0	28.6	19.5	27.4	9.4	13.4	16.7	22.2	10.7	22.0
Other	14.5	12.9	11.5	4.7	9.8	4.7	3.5	9.8	2.8	8.9	3.5	3.2
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Valid Responses	69	108	35	42	41	84	85	82	36	451	84	91
ii. Age	Below 25 Yrs		25 - 29 Yrs		30 - 34 Yrs		35 - 44 Yrs		45 - 54 Yrs		Above 55 Yrs	
	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld
	%	%	%	%	%	%	%	%	%	%	%	%
Boiled	15.4	13.0	18.8	9.1	9.5	14.9	17.1	11.6	23.6	15.3	28.7	20.5
Mashed	28.2	19.6	18.8	5.5	19.0	3.0	17.1	4.7	21.8	8.2	19.8	10.6
Roasted	43.6	43.5	45.8	52.7	33.3	43.3	40.0	55.8	32.7	37.6	28.7	44.7
Baked	10.3	19.6	10.4	23.6	33.3	28.4	15.7	19.8	18.2	27.1	13.9	21.2
Other	2.5	4.3	6.2	9.1	4.9	10.4	10.1	8.1	3.7	11.8	8.9	3.0
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Valid Responses	39	46	48	55	42	67	70	86	55	85	101	132

TABLE 42

Attitude Toward Price of Potatoes By Occupation and Age of Head of Household

i. Occupation	Professional and Managerial		Technical and Clerical		Sales and Service		Skilled		Unskilled		Retired and Other	
	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld
<u>"Buy Less if Price Doubled"</u>	%	%	%	%	%	%	%	%	%	%	%	%
Yes	32.0	29.7	40.5	45.2	31.9	43.5	45.6	43.0	26.2	45.7	39.2	35.7
No/About Same	68.0	68.5	59.5	54.8	66.0	55.3	51.1	53.5	71.4	54.3	59.4	62.2
Don't Know	-	1.8	-	-	2.1	1.2	3.3	3.5	2.4	-	1.4	2.1
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Valid Responses	78	111	37	42	47	85	90	86	42	46	74	98
ii. Age	Under 25 Yrs		25 - 29 Yrs		30 - 34 Yrs		35 - 44 Yrs		45 - 54 Yrs		Above 55 Yrs	
	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld
<u>"Buy Less if Price Doubled"</u>	%	%	%	%	%	%	%	%	%	%	%	%
Yes	42.2	43.5	36.5	41.4	30.2	45.6	36.7	35.9	41.1	35.3	38.0	36.4
No/About Same	55.6	52.2	61.5	56.9	67.9	51.4	62.0	64.1	57.1	63.5	62.0	62.2
Don't Know	2.2	4.3	2.0	1.7	1.9	3.0	1.3	-	1.8	1.2	-	1.4
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Valid Responses	45	46	52	58	53	68	79	89	56	85	92	140

TABLE 43

Potato Variety Knowledge By Occupation and Age of Head of Household (Chch)

i. Occupation	Professional and Managerial	Technical and Clerical	Sales and Service	Skilled	Unskilled	Retired and Other
	%	%	%	%	%	%
Don't Know	22.9	30.8	12.2	22.1	17.8	15.6
Ilam Hardy	39.8	23.1	24.5	28.4	24.4	25.6
Chippewa	19.3	23.1	38.8	27.4	33.3	25.6
Rua	9.6	12.8	16.3	7.4	8.9	14.4
Other	8.4	10.2	8.2	14.7	15.6	18.8
	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
Valid Responses	83	39	49	95	45	90
ii. Age	Below 25 Yrs	25 - 29 Yrs	30 - 34 Yrs	34 - 45 Yrs	45 - 54 Yrs	Above 55 Yrs
	%	%	%	%	%	%
Don't Know	46.8	29.2	28.0	9.8	13.3	10.3
Ilam Hardy	21.3	23.6	22.8	36.6	30.0	31.8
Chippewa	8.5	20.0	17.5	37.8	41.7	28.0
Rua	2.1	12.7	17.5	11.0	3.3	15.9
Other	21.3	14.5	14.2	4.8	11.7	14.0
	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
Valid Responses	47	55	57	82	60	107

TABLE 44

Potato Substitutes^a By Occupation and Age of Head of Household

i. Occupation	Professional and Managerial		Technical and Clerical		Sales and Service		Skilled		Unskilled		Retired and Other	
	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld
	%	%	%	%	%	%	%	%	%	%	%	%
No Substitute	26.5	7.1	20.5	11.6	26.5	16.3	36.8	25.3	28.9	19.6	37.8	29.6
Rice	55.4	76.8	51.2	58.1	46.9	52.2	36.9	47.1	35.5	32.6	30.3	39.7
Pasta	38.5	54.5	69.2	30.2	51.0	41.9	24.1	35.6	26.6	13.1	21.7	16.3
Bread	18.1	13.4	15.4	23.3	12.3	17.5	14.8	9.1	22.3	15.2	22.0	25.5
Kumara/Root Crop	n.a.	27.9	n.a.	23.3	n.a.	21.9	n.a.	24.3	n.a.	43.5	n.a.	25.5
Valid Responses	83	112	39	43	49	86	95	87	45	46	90	98
ii. Age	Under 25 Yrs		25 - 29 Yrs		30 - 34 Yrs		35 - 44 Yrs		45 - 54 Yrs		Above 55 Yrs	
	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld
	%	%	%	%	%	%	%	%	%	%	%	%
No Substitute	29.8	12.8	16.4	8.6	24.6	10.1	32.9	23.3	40.0	18.4	39.3	27.3
Rice	42.5	55.2	42.7	51.8	47.4	66.7	48.8	55.5	36.6	58.6	25.2	38.4
Pasta	38.3	36.2	50.9	34.4	38.6	62.2	31.7	32.2	19.9	34.4	12.1	17.4
Bread	14.9	14.9	18.2	12.0	12.3	15.9	20.7	28.9	13.3	10.3	18.7	14.0
Kumara/Root Crops	n.a.	29.7	n.a.	31.1	n.a.	18.8	n.a.	32.2	n.a.	24.2	n.a.	30.7
Valid Responses	47	47	55	58	57	69	82	90	60	87	107	143

^a Substitutes as given by 1st, 2nd and 3rd responses.

TABLE 45

Potato Substitutes Used By Household Composition

i. No. Occupants	1 - 2		3 - 4		Over 4	
	Chch	Akld	Chch	Akld	Chch	Akld
	%	%	%	%	%	%
No Substitute	35.6	24.9	28.0	13.9	30.3	17.8
Rice	25.3	35.5	37.5	47.8	43.4	51.4
Pasta	2.1	6.6	10.1	8.0	10.1	4.7
Bread	15.8	4.1	8.3	5.0	7.1	5.6
Kumara and Root Crop	n.a.	12.2	n.a.	11.9	n.a.	12.1
Other ^a	21.2	16.7	16.1	13.4	9.1	8.4
	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
Valid Responses	146	197	168	201	99	107
ii. With Children	No		Yes			
	Chch	Akld	Chch	Akld		
	%	%	%	%		
No Substitute	33.9	21.5	29.6	16.3		
Rice	29.2	39.5	39.0	48.6		
Pasta	4.2	6.1	9.9	7.6		
Bread	12.5	3.4	9.0	6.1		
Kumara and Root Crop	n.a.	13.0	n.a.	11.0		
Other ^a	20.2	16.5	12.5	10.6		
	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>		
Valid Responses	192	261	223	245		

^a In Christchurch this includes kumara and root crops

TABLE 46

Substitution By Person Influencing Cooking and Frequency of Serving Potatoes^a

	No Substitute		Rice		Pasta		Bread		Kumara	
	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld	Chch ^b	Akld
	%	%	%	%	%	%	%	%	%	%
i. <u>Person Influencing Potato Cooking</u>										
Wife	62.6	65.6	49.6	72.4	60.0	53.1	34.9	54.2	63.1	65.0
Husband	13.4	16.1	12.8	8.6	3.3	6.2	18.6	8.3	9.2	18.3
Females	2.4	4.3	4.3	4.5	3.3	9.4	4.7	8.3	10.8	3.3
All Household Members	22.0	14.0	33.3	14.5	33.4	31.3	41.8	29.2	16.9	13.4
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Valid Responses	127	93	141	221	30	32	43	24	65	60
ii. <u>Frequency of Serving</u>										
Once - Twice a week	1.6	2.2	4.9	4.6	6.6	9.0	7.9	17.3	11.4	11.4
3 - 4 times a week	5.6	13.0	29.6	53.2	40.0	37.4	21.1	34.7	29.6	27.9
Every Day	92.8	84.8	65.5	42.4	53.4	53.6	71.0	48.0	59.0	60.7
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Valid Responses	124	92	142	220	30	32	38	23	61	61

^a Serving confined to Evening Meal during working days.

^b Also includes data on other fresh vegetables.

TABLE 47

Complaints With Potatoes Purchased By Occupation and Age of Head of Household

i. Occupation	Professional and Managerial		Technical and Clerical		Sales and Service		Skilled		Unskilled		Retired and Other	
	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld
	%	%	%	%	%	%	%	%	%	%	%	%
No Complaint	22.5	33.9	47.1	26.8	31.3	34.5	42.4	35.3	30.8	13.0	45.9	43.9
Greening	16.9	10.1	2.9	22.0	2.1	14.3	5.9	15.3	15.4	10.9	8.1	10.2
Rotten	26.8	37.6	26.5	29.3	10.7	32.1	27.1	24.7	28.2	43.5	23.0	19.4
Cuts and Blemishes	9.9	4.6	11.8	4.9	6.3	8.3	8.2	5.9	-	15.2	9.5	13.3
Softness	7.0	4.6	5.9	4.9	14.6	2.4	5.9	8.2	2.6	6.5	2.7	5.1
Breaking up in Cooking	14.1	4.6	2.9	4.9	16.7	2.4	10.5	4.7	23.0	6.5	5.4	3.1
Other	2.8	4.6	2.9	7.2	18.6	6.0	-	5.9	-	4.4	5.4	5.0
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Valid Responses	71	109	34	41	48	84	85	85	39	66	74	98
ii. Age	Below 25 Yrs		25 - 29 Yrs		30 - 34 Yrs		35 - 44 Yrs		45 - 54 Yrs		Above 55 Yrs	
	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld
	%	%	%	%	%	%	%	%	%	%	%	%
No Complaint	38.6	41.3	36.7	29.8	20.0	29.9	31.6	28.4	44.2	34.9	44.9	41.0
Greening	11.4	8.7	-	12.3	10.0	19.4	13.2	12.5	7.7	16.9	7.9	9.4
Rotten	29.5	30.4	34.7	31.6	36.0	35.8	21.1	31.8	17.3	34.9	7.9	22.3
Cuts and Blemishes	4.5	8.7	10.2	7.0	6.0	7.5	5.3	5.7	7.7	3.6	10.1	13.7
Softness	4.5	4.3	2.0	7.0	6.0	3.0	7.9	9.1	13.5	2.4	3.4	4.3
Breaking up in Cooking	6.8	4.3	12.2	5.3	18.0	4.4	15.8	4.5	7.7	2.4	7.9	2.9
Other	4.7	2.3	4.2	7.0	4.0	-	5.1	8.0	1.9	4.9	5.6	6.4
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Valid Responses	44	46	49	57	50	67	76	88	52	83	89	139

TABLE 48

Purchase and Use of Processed Potatoes

	Frozen French Fries		Hot Chips		Potato Crisps		Canned Potatoes	
	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld
	%	%	%	%	%	%	%	%
<u>i. Have Bought In Past 2 Years</u>								
No	56.9	69.8	26.3	27.3	25.1	20.2	96.6	93.9
Yes	43.1	30.2	73.7	73.7	74.9	79.8	3.4	6.1
	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
Valid Responses	415	506	415	506	415	506	415	506
	%	%	%	%	%	%	%	%
<u>ii. When Eaten</u>								
Breakfast	-	1.2	0.3	1.0	-	-	-	-
Lunch	15.6	11.0	13.1	20.0	4.6	5.0	8.0	8.8
Dinner	66.4	80.0	60.1	57.4	2.6	1.2	68.0	67.6
Entertain Guests	2.3	2.0	-	1.6	25.2	20.1	8.0	17.0
Snacks	13.3	5.8	23.1	20.0	63.6	73.7	8.0	5.9
Other	0.6	-	3.4	-	4.0	-	8.0	-
	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
Valid Responses	173	155	298	366	301	400	13	34

TABLE 49

Types of Processed Potatoes Bought By Age of Head of Household

	Below 25 Yrs		25 - 29 Yrs		30 - 34 Yrs		35 - 44 Yrs		45 - 54 Yrs		Above 55 Yrs	
	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld	Chch	Akld
	%	%	%	%	%	%	%	%	%	%	%	%
i. Frozen French Fries												
No	42.6	72.3	49.1	67.2	46.4	65.2	51.2	56.7	61.7	70.1	75.5	80.4
Yes	57.4	27.7	50.9	32.8	53.6	34.8	48.8	43.2	38.3	29.9	24.5	19.6
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
ii. Hot Chips												
No	12.8	12.8	16.4	10.3	9.1	7.2	9.9	21.1	31.7	29.9	61.7	49.0
Yes	87.2	87.2	83.6	89.7	90.9	92.8	90.1	78.9	68.3	70.1	38.3	51.0
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
iii. Potato Chips												
No	21.3	10.6	21.8	13.8	7.3	7.2	6.1	15.6	36.7	14.0	49.5	37.8
Yes	78.7	89.4	78.2	86.2	92.7	92.8	93.9	84.4	63.3	86.0	50.5	62.6
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Valid Responses	47	47	55	58	56	69	82	90	60	87	106	143

TABLE 50
Processed Potatoes Bought By Household Composition

No. Occupants	1 - 2		3 - 4		Above 4	
	Chch	Akld	Chch	Akld	Chch	Akld
	%	%	%	%	%	%
i. Bought Frozen French Fries						
No	73.1	74.6	48.5	65.7	49.5	68.2
Yes	26.9	25.4	51.5	34.3	50.5	31.8
	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
ii. Bought Hot Chips						
No	49.3	39.1	16.3	22.9	12.2	13.1
Yes	50.7	60.9	83.7	77.1	87.8	86.9
	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
iii. Bought Potato Crisps						
No	45.9	28.9	18.7	16.4	9.1	9.4
Yes	54.1	71.1	81.3	83.6	90.9	90.6
	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
Valid Responses	145	197	167	201	99	107

RECENT PUBLICATIONS

RESEARCH REPORTS

70. *A Practical Guide to Tax Planning using Procedures for Income Equalisation*, P. J. Charlton, 1975.
71. *Studies in Costs of Production: Process Peas and Beans, 1974-75*, W. O. McCarthy, R. G. Moffitt, P. W. Cosgriff and P. D. Chudleigh, 1975.
72. *Location of Farm Advisory Officers in New Zealand—an Application of Facility Location Analysis*, Joan R. Rodgers, Owen McCarthy and Vicki Mabin, 1975.
73. *The Ambulance Facility Location Problem—a Survey of Methods and a Simple Application*, Janet Gough and W. O. McCarthy, 1975.
74. *Studies in Costs of Production: Town Milk Supply Farms 1973-74*, R. J. Gillespie, 1976.
75. *Stabilising Post-Tax Incomes of New Zealand Sheep Farms*, P. D. Chudleigh, M. J. Blackie and J. B. Dent, 1976.
76. *Studies in Costs of Production: Town Milk Supply Farms, 1974-75*, R. J. Gillespie, 1976.
77. *Studies in Costs of Production: Town Milk Supply Farms, 1975-76*, R. J. Gillespie, 1977.
78. *Response Patterns to a Mail Survey of New Zealand Farmers*, T. I. Ambler, 1977.
79. *Wine: A Consumer Survey of Christchurch Households*, R. J. Brodie and M. J. Mellon, 1977.
80. *The Energy Requirement of Farming in New Zealand*, W. A. N. Brown and R. G. Pearson, 1977.
81. *Survey of New Zealand Farmer Intentions, Expectations, and Opinions, April-May 1977*, J. G. Pryde, 1977.
82. *Meat: A Consumer Survey of Christchurch Households*, R. J. Brodie, 1977.
83. *Marketing Costs for New Zealand Wool: 1970-71 to 1975-76*, P. D. Chudleigh, 1977.
84. *National Wheatgrowers' Survey No. 1, 1976-77*, R. G. Moffitt and L. E. Davey, 1977.
85. *Shipping New Zealand's Agricultural Exports: Background and Issues*, P. D. Chudleigh, 1978.
86. *Current Cost Depreciation Methods and the Valuation of Farm Tractors and Headers*, L. E. Davey, 1978.
87. *Optimum-Seeking Designs for Simulation Experiments with Models of Agricultural Systems*, S. R. Harrison, 1978.
88. *Production and Supply Relationships in the New Zealand Beef and Sheep Industries*, K. B. Woodford and L. D. Woods, 1978.
89. *Computer Simulation Models of Pasture Production in Canterbury: Description and User's Manual*, G. W. Fick, 1978.
90. *A Transport Survey of South Island Farmers*, S. L. Young, T. I. Ambler, S. J. Filan, 1979.
91. *Bread: A Consumer Survey of Christchurch Households*, R. J. Brodie and M. J. Mellon, 1978.
92. *An Economic Survey of New Zealand Wheatgrowers. Survey No. 2. 1977-78*, 1978.
93. *An Economic Survey of New Zealand Town Milk Producers, 1976-77*, 1978.
94. *Marketing Costs for New Zealand Meat Exports, 1970/71 to 1975/76*, P. D. Chudleigh, M. Clemes, L. D. Woods, 1978.
95. *Interfibre Relationships and Textile Marketing in Japan*, G. W. Kitson, 1978.
96. *Survey of New Zealand Farmer Intentions, Expectations, and Opinions, June-August 1978*, J. G. Pryde, 1978.
97. *Peak Wool Flows through the Marketing System*, S. K. Martin, 1979.
98. *An Economic Survey of New Zealand Town Milk Producers, 1977-78*, R. G. Moffitt, 1979.
99. *The Regional Impacts of Irrigation Development in the Lower Waitaki*, L. J. Hubbard, W. A. N. Brown, 1979.
100. *Recent Trends in the Argentinian Wool Industry*, S. K. Martin, 1979.
101. *An Economic Survey of New Zealand Wheatgrowers: Enterprise Analysis, Survey No. 3, 1978-79*, 1979.

102. *Cheese: A Consumer Survey of Christchurch Households*, R. J. Brodie, M. J. Mellon, 1979.
103. *A Study of Excess Livestock Transport Costs in the South Island of New Zealand*, R. D. Inness, A. C. Zwart, 1979.
104. *An Economic Survey of New Zealand Wheatgrowers: Financial Analysis, 1977-78*, 1979.
105. *Potatoes: A Consumer Survey of Christchurch and Auckland Households*, M. M. Rich, M. J. Mellon, 1980.

MARKET RESEARCH REPORTS

4. *The Japanese Distribution System and Implications for New Zealand Traders*, G. W. Kitson, 1973.
5. *Prospects and Strategies in Promoting Tourism Between Japan and New Zealand*, G. W. Kitson, 1973.
6. *Market Assessment*, W. O. McCarthy (ed.), 1973.
7. *Optimum Site, Number and Location of Freezing Works in the South Island, New Zealand — A Spatial Analysis*, R. J. Brodie and W. O. McCarthy, 1974.
8. *The Japanese Food Market and Implications for New Zealand*, G. W. Kitson, 1975.
9. *Structure and Corporate Relationships in the Japanese Wool and Wool Textile Industries*, G. W. Kitson, 1976. In 1977, this separate report series was discontinued—Market Research Reports are now included in the Research Report series.

DISCUSSION PAPERS

29. *Christchurch Tomorrow—A discussion of the future development of Christchurch as a Regional Centre*, J. W. Wood, 1975.
30. *Use made of Transport by Farmers: A Pilot Survey with Findings Relating to Ashburton County, New Zealand*, T. I. Ambler, 1975.
31. *A Postal Sample Survey of Sheep Farmer Attitudes to Incentives and Obstacles to increasing Farm Output and other Agricultural Policy Issues*, J. G. Pryde, 1975.
32. *Proceedings of a Seminar on Costs Beyond the Farm Gate, 12th March 1976*, J. G. Pryde, W. O. McCarthy, D. L. Fyfe (eds.), 1976.
33. *A Postal Survey of the Opinions of a Group of Farm Management Society Members on Incentives and Obstacles to Increasing Farm Output*, J. G. Pryde, 1976.
34. *A Statistical Analysis of Sources of Variance of Income on Sheep Farms in New Zealand*, P. D. Chudleigh and S. J. Filan, 1976.
35. *Rate Regulation and Economic Efficiency in Rural Road Goods Transport*, T. I. Ambler, 1976.
36. *Proceedings of a Seminar on Wool Marketing in the 1980's—Held at Lincoln College 21 October, 1976*, W. O. McCarthy and J. G. Pryde (eds.), 1976.
37. *Some Economic Aspects of Conference and Non-Conference Wool Shipping*, P. D. Chudleigh, 1976.
38. *A Comment on Fisheries and Agricultural Trade Relationships between New Zealand and Japan*, G. W. Kitson, 1978.
39. *A Survey of Mid Canterbury Farmers' Attitudes to Growing Sugar Beet*, D. Leitch, P. D. Chudleigh and G. A. G. Frengley, 1978.
40. *New Zealand Agriculture and Oil Price Increases*, P. D. Chudleigh, S. L. Young, W. A. N. Brown, 1979.
41. *Proceedings of a Seminar on The Development of Rational Policies for Agricultural Trade between New Zealand and Japan*, A. C. Zwart, L. J. Wilson (eds), 1979.
42. *A Review of the New Zealand Goat Industry*, R. L. Sheppard, D. K. O'Donnell, 1979.
43. *Goats: A Bibliography*, D. K. O'Donnell, R. L. Sheppard, 1979.
44. *Proceedings of a Seminar/Workshop on the New Zealand Goat Industry*, R. J. Brodie, R. L. Sheppard, P. D. Chudleigh (eds), 1979.
45. *An Evaluation of the Southland Flood Relief Temporary Employment Programme*, G. T. Harris, T. W. Stevenson, 1979.
46. *Economic Factors Affecting Wheat Areas Within New Zealand*, M. M. Rich, A. C. Zwart, 1979.
47. *Japanese Food Policy and Self Sufficiency—An Analysis with Reference to Meat*, R. L. Sheppard, N. J. Beun, 1979.

Additional copies of Research Reports, apart from complimentary copies, are available at \$4.00 each. Discussion Papers are usually \$2.00 but copies of Conference Proceedings (which are usually published as Discussion Papers) are \$4.00. Remittance should accompany orders addressed to: Bookshop, Lincoln College, Canterbury New Zealand. Please add \$0.50 per copy to cover postage.