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**THE DIRECT BUYING
OF FRESH VEGETABLES IN NEW ZEALAND**

- A SURVEY by I.J. Bourke

FEBRUARY 1971
NEW ZEALAND.

Occasional Paper No. 2
DEPARTMENT OF AGRICULTURAL ECONOMICS
AND FARM MANAGEMENT

THE DIRECT BUYING OF FRESH VEGETABLES
IN NEW ZEALAND : A SURVEY

by

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Occasional Paper No. 2
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February 1971

P R E F A C E

This report represents the results of a survey carried out by Mr. I.J. Bourke over the period February-August 1970. The basic objective of the survey was to investigate the practice of selling fresh vegetables directly from grower to retailer, by-passing the wholesale markets.

While some indication of the probable future development of the practice of direct selling was obtained, it should be emphasised that the results given apply primarily to the situation as it existed at the time of the survey. However, market structure (a limited number of large-scale producers and retailers) and market institutions (the system of allocating imported fruit to retailers on the basis of total purchases through the wholesale markets) are likely to limit a rapid expansion of the practice in the near future.

Another guide to the direction of further developments is given by the experience of other countries. This forms the subject matter of a further report: "Direct Selling of Fresh Vegetables in Three Overseas Countries", Occasional Paper No. 3, Department of Agricultural Economics and Farm Management, Massey University, 1971.

Direct selling of fresh vegetables has been an extremely controversial question among vegetable producers. It is hoped that this report will help to clarify some of the issues and allow them to be rationally discussed.

W.R. Schroder,
Reader in Agricultural Marketing.

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SUMMARY AND CONCLUSIONS

Annual retail sales in 1969, of the 18 Auckland firms surveyed, totalled some \$33.5 million. The size of the firms is indicated by the fact that half had annual sales of over \$500,000.

Annual vegetable sales for all firms was about \$2 million, five firms having annual figures of over \$100,000 (compared with the national average for fruit and vegetables of \$11,000 per store).

When questioned about their reasons for selling vegetables, the place of vegetables in creating a 'one-stop-shop' image was rated of most importance, followed by their ability to attract customers into the shop, and their own profitability. This underlines the point that profitability as such is not the major consideration.

Only a limited range of vegetables was bought direct to any extent, these being the bulk lines of carrots, cabbages, onions, and tomatoes. In total, direct purchases amounted to \$325,000 in Auckland, which is approximately 19 percent of the firms' vegetable purchases. For Auckland as a whole, direct purchases might represent between 5 and 10 percent of vegetable purchases. Thus to date direct purchases are not extensive.

In the case of Wellington and Christchurch, much less direct buying is taking place, partly due to a lack of suitable growers, but due more to the imported fruit allocation system, and the smaller number of large scale retail outlets. Many firms not buying direct indicated they would do so if imported fruits were readily available. Direct purchases appear to represent some two to five percent of total fresh vegetable purchases in these areas.

On the assumption that smaller centres will be accounting for even lower levels, an approximate estimate of the proportion of fresh vegetables purchased direct in New Zealand is between one and five percent.

Direct trading in Auckland was dominated by one large grower whose orientation was almost completely towards direct sales. Without this grower, direct sales would be considerably smaller. Handling methods and form of packaging, differed considerably from normal forms, a major difference being that vegetables were delivered to the retail outlets.

Price and quantity arrangements were not fixed, the retailers being free to buy elsewhere if not satisfied with the price being asked. This price was largely based on auction levels, though being much less variable. Of interest is the fact that in general the grower set the price, and the buyer indicated the quantity he desired. This is an example of a degree of power being held by a large grower. In the few cases of small growers selling direct, in Auckland and the other two centres visited, the grower was much more of a price taker, the retailers quoting a price they were prepared to pay.

By far the major reason for buying direct was given as the higher quality of the produce. This represented greater freshness due to better handling and a reduced time between harvest and arrival in-store - other reasons given were that supplies arrived as required, and prices were less variable.

Interest was expressed in buying more vegetables direct if conditions were suitable. These conditions were mainly a change in the system of allocating imported fruit, and availability of suitably organised growers capable of supplying significant quantities of individual vegetables. Little definite can be stated about future growth, but it does not appear likely to be very great, in the near future at least.

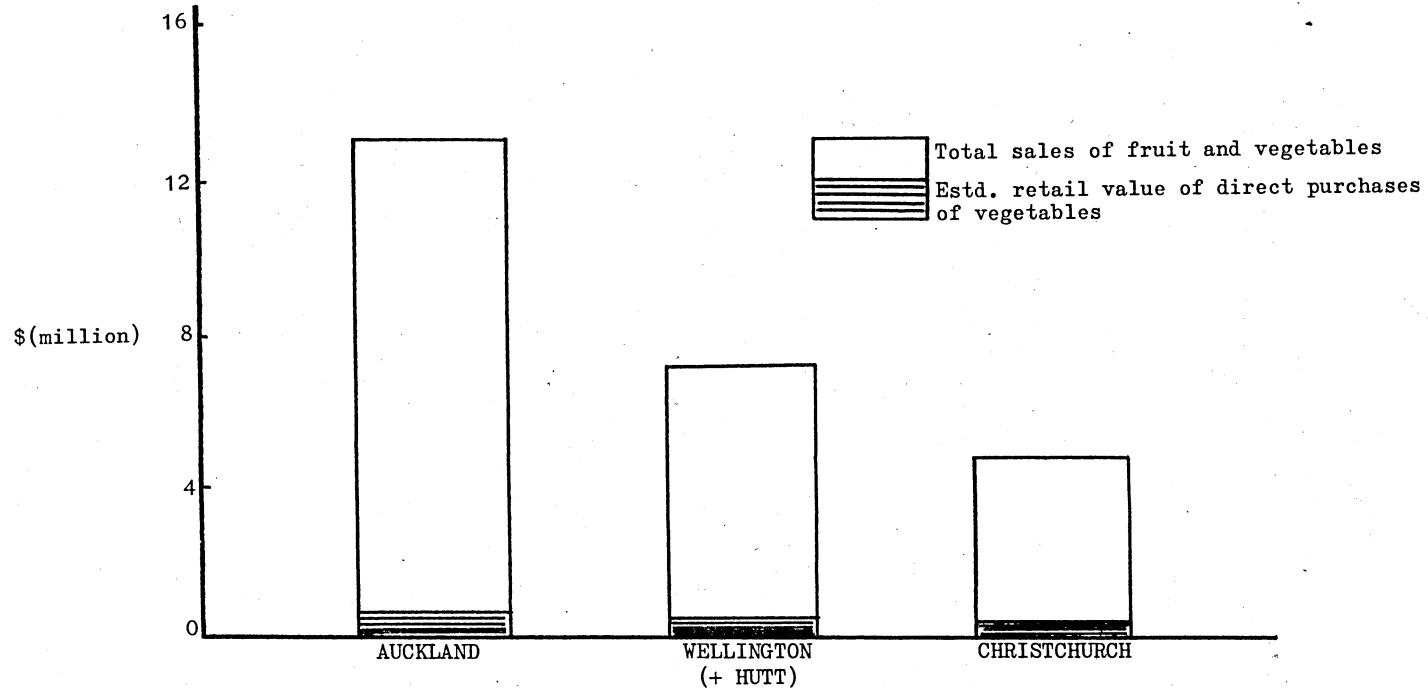
The main conclusions are that:

1. Direct selling in New Zealand is not of great significance at present. Vegetables bought direct are estimated at something less than ten percent for Auckland, about five percent for Wellington, and six percent for Christchurch. Based on these levels, an estimate of

between one and five percent is made for New Zealand.

2. Future growth of the practice is likely to occur but it should not be great. Factors restricting its expansion are the system of allocating imported fruit and a lack of suitably organised growers. If a change in the allocation of imported fruit took place, direct selling would be likely to expand to a much higher level.
3. Auction will decline somewhat as the practice grows, but could decline considerably before a lack of competition would be evident. The decline will vary regionally, but will be affected by the degree to which various auctions adapt to large retailers' needs.
4. Auction prices are used as a basis for direct prices, but the latter are much less variable. Should auction disappear completely (a very unlikely assumption) prices might be based on a cost plus system with adjustment for supplies available, and the relative bargaining strengths of the two parties negotiating. Under these conditions the small grower would be likely to be in an inferior position to the large grower.
5. If the aim of the grower is to avoid direct selling's growth, the most effective means is to offer the buyer the features that attract him to it, through existing channels. Some of these features will not be able to be offered, but other channels do have compensating advantages of their own.

ESTIMATED LEVEL OF DIRECT PURCHASES



Source: Total sale - Census of Distribution, 1968.
Est. direct - Field survey, 1970.

Note: Total sales refer to fruit and vegetables, while direct sales refer only to vegetables, hence the above graphs understate the position to a slight extent.

THE DIRECT BUYING OF FRESH VEGETABLES IN NEW ZEALAND: A SURVEY

INTRODUCTION

For the purposes of this paper, direct selling is defined as the sale of fresh vegetables by growers to retailers, bypassing the central wholesale markets. The definition excludes the case where auction firms act as middlemen in the organisation of sale between an individual grower and an individual buyer.

Arguments against direct selling have been based on the growers' fear of:

- (a) domination in the bargaining process, due to lack of grower power, by the large retailers;
- (b) an auction system at which competition is reduced; and resulting from this
- (c) a decline in the price received for produce at auction.

Despite the fact that these arguments have been aired for some years, there had been little formal investigation into direct selling. A study of the whole practice was therefore instituted.

One part of this study involved a field survey of retail outlets in Auckland, Wellington and Christchurch to obtain information on the practice in New Zealand.

This Occasional Paper presents the results of these surveys, together with the broad conclusions of the complete study. The reader interested in a fuller discussion of the problem is referred to the original study.^{1/}

METHODOLOGY

The growth of direct selling appears to be related to the growth of large-scale retailers, and these are more common in Auckland than elsewhere. Moreover a study carried out in Auckland and Christchurch indicated that only in Auckland was direct selling occurring to any extent.^{2/}

For this reason Auckland was selected as the centre in which the major investigation was carried out. Supplementary surveys were carried out in Wellington and Christchurch.

The fears of growers concerning direct selling generally revolve around the detrimental effects on prices. It is considered that a major cause of lower prices is the lack of bargaining power the growers possess when faced by a large buyer.

Therefore, although many small retailers obtain some vegetables direct from the grower, and have been doing so for many years, it is the large retailer that the grower fears.

In the selection of retailers to survey, preliminary culling of all fruiterers/green-grocers, and dairies was done. This was based on:

-
1. Bourke, I.J., An Economic Investigation into the Direct Selling of Fresh Vegetables in New Zealand. Unpub. M.Ag.Sc. thesis, Massey University, Dec. 1970.
 2. Kitson, G.W., Fresh Vegetable Retailing in New Zealand: An Economic Survey. (Lincoln College, 1968), A.E.R.U. Bull. No. 50. Table 5, p.13.

- (a) The fact that the main opposition to direct selling is aimed at the large retailer who may possess power in bargaining;
- and (b) due to limitations in time and money, only those retailers buying a significant amount of vegetables direct were to be visited.

From Kitson's work it appeared that only a very small number of fruiterers/greengrocers were likely to be buying any supplies direct - from his Auckland sample of 40 firms only three were buying in this manner.^{3/}

Auckland Survey

A preliminary questionnaire was sent to all firms selling fresh vegetables, other than those fruiterers/greengrocers and dairies able to be identified prior to mailing; thus no sampling was involved.

Of the 307 firms letters were sent to, 208 replied, and from this 18 were considered suitable for the main survey. Their selection was made on the degree of direct buying they were engaged in.

These 18 firms were visited personally and surveyed. The survey was therefore close to a population study.

The 18 firms were mainly supermarkets, the classifications being shown in Table I.

TABLE I
TYPE OF BUSINESS AS CLASSIFIED BY THE OWNER

<u>Classification</u>	<u>Number of firms</u>
Supermarket	14
Variety store	1
Grocer	2
Supermarket/variety store	1
	<hr/>
	18
	<hr/>

The firms operated 38 stores in the Auckland area, 18 of these stores being operated by two firms. Fifteen of the branch stores were members of affiliated chains (that is, Four Square, I.G.A., etc.), the remaining 23 being operated by two local chains with a total of eight branches, and two national chains with a total of 15 stores in Auckland.

Wellington Survey

In Wellington a similar preliminary culling of the firms selling fresh fruit and vegetables resulted in 33 being contacted by mail. Due to poor response the telephone was used to re-contact many of these firms, and finally one firm was found to be buying a sufficient quantity of vegetables to warrant survey. It was therefore contacted personally.

Christchurch Survey

A similar process to that used in Wellington was used to approach 20 firms. Once again response was poor, but in this case all the firms not replying were visited personally.

3. Kitson, G.W. op.cit., Table 5, p.13.

From this it was found that only one firm bought direct regularly and therefore warranted closer study.

The Wellington and Christchurch surveys showed that many of the features of direct buying in those cities were similar to those in Auckland. This report only discusses those aspects which differed from Auckland.

The Auckland survey took place in February 1970, and Wellington and Christchurch were visited in May/August 1970.

AUCKLAND SURVEY

Total Sales

The distribution of total retail sales is shown in Table II.

TABLE II
APPROXIMATE GROSS ANNUAL RETAIL SALES, 1969

<u>Distribution of total retail sales</u>	<u>Number of firms</u>	<u>Total sales (\$)</u> (b)
Less than \$100,000	1	80,000
\$100,000 - 299,999	3	560,000
300,000 - 499,999	5	1,962,000
500,000 - 699,999	1	500,000
700,000 - 999,999	5 (a)	3,440,000
\$1,000,000 or more	3	27,000,000
	<u>18</u>	<u>\$33,542,000</u>

Notes: (a) Two firms were placed in this group by an estimate, since data given only specified greater than \$500,000 per year.

(b) Some of these figures are conservative estimates and, therefore, actual total sales could be slightly higher.

The size of the firms is emphasised by the fact that 17 had turnovers exceeding \$100,000 whereas nationally firms selling fruit and vegetables having total turnovers of this size constitute only 11 percent of all firms.

The total sales of \$33.5 million for all firms represented some 23 percent of total retail sales in Auckland.^{4/}

Vegetable Sales

Fresh vegetable sales were approximately two million dollars per year, with sales in individual stores ranging in value from less than \$20,000 to more than \$100,000. Table III

4. Total sales in Auckland in 1967/68 in the category "Food and Drink" were \$151 million. (Source: Census of Distribution.)

shows that most firms had large fresh vegetable turnovers since four had levels of greater than \$100,000, with a further five between \$60,000 and \$100,000.

TABLE III

ANNUAL RETAIL VALUE OF FRESH VEGETABLE SALES, 1969

<u>Vegetable sales (\$)</u>	<u>Number of firms</u>	<u>Total vegetable sales (\$)</u>
Less than \$20,000	3	35,000
20,000 - 39,999	4	120,600
40,000 - 59,999	2	90,000
60,000 - 79,999	4	255,000 (a)
80,000 - 99,999	1	90,000
100,000 and greater	4	1,635,000
	<u>18</u>	<u>\$2,225,600</u>

(a) One firm estimated.

Importance of Vegetables

Questions were asked to determine whether the vegetable department was regarded as an important part of the business and if so, why. All 18 firms stated it was important. The firms were given a list of reasons and asked to rank them in order of importance.

TABLE IV

RANKING OF REASONS FOR THE IMPORTANCE OF VEGETABLES
TO RETAIL FIRMS 5/

<u>Reason</u>	<u>Rank</u>
(a) They attract customers into the shop	2
(b) They diversify the product line	4
(c) They are profitable in their own right	3
(d) Competitors sell them	5
(e) They provide a full range of products and create a 'one-stop shopping' image	1
(f) Other (specify)	-

-
5. A problem existed in determining an overall ranking for the retail outlets as a whole. Statistical ranking techniques studied did not cover the situation where blanks occurred for some reasons. For example, in the survey those reasons given in the questionnaire which the respondent did not agree with were not ranked. Thus blanks existed in the table drawn up from the responses. The method finally used in this study was to sum the rankings the blanks would have been given if all were ranked, and average them out. For example, if two reasons were not ranked, the sum of their possible ranks, namely four plus five, was determined and each then given four and a half. This average was then inserted in the table and the method quoted by M.G. Kendall (in "Rank Correlation Methods" (Griffin: London, 1962) p.101) used. It is felt that the method is reasonable for this purpose.

Table IV shows the reasons agreed with most often were - they attract customers into the shop, they are profitable in their own right, and they create a 'one-stop shopping' image. Of these, the desire to provide 'one-stop shopping' was obviously the most important. Once the customer is in the shop, the larger outlets endeavour to ensure she is able to meet most of her requirements in their store.

The statistical test, Coefficient of Concordance, was used to determine the degree of agreement between the various rankings. It was found that the same underlying standards were being used, and a high degree of agreement existed between rankings ($W = 0.461$).

To some extent two of the reasons given were related - the attraction of the customer to the shop and the 'one-stop shopping' image. These were the only two reasons everyone agreed with. A point brought out in discussion was that vegetables, being in the main perishable, must be bought regularly. They therefore tend to bring customers into the shop more often than do many other lines. Once the customer is in the shop, supermarkets in particular have little difficulty in holding her - therefore lines which bring her into the shop regularly are an extremely important part of the business. Specials are used for this very same reason - attracting the customer in.

From the ranking the conclusion could be drawn that profitability is not the main reason for stocking vegetables - or more precisely they are not carried because they are a high margin line.

Source of Supply

Auction is the major source of supply for most vegetables - if both auction attendance by the firm's own buyer and the use of a commission buyer are combined this becomes very clear. (Table V.)

Direct buying, the major interest of this study, was mainly associated with cabbages and carrots, these two vegetables being bought directly by all firms. The next vegetables most commonly bought direct were lettuce, tomatoes and onions.

In all, 15 of the 22 vegetables listed were bought direct to some extent, but in other than those vegetables already mentioned, the incidence was slight. Usually, for the less important vegetables, the firms involved had a part-time arrangement with a small local grower or else bought the vegetables if approached by a grower with a small quantity to dispose of. Thus many of the arrangements were only very occasional.

Direct Buying

Degree

Accurate assessment of the proportion of vegetables bought direct cannot be given due to the unwillingness of three firms to specify levels. However, the approximate amount and the percentage of the firms' supply that this represents is given in Tables VI and VII. Direct purchases by individual firms ranged from a low of 5 percent to a high of 30 percent of total vegetable turnover (Table VI). In total, 19 percent was bought direct.

It must be appreciated that while approximately 19 percent, by value, of vegetables sold by the surveyed firms were bought direct, the total value bought only represents some 3.3 percent of the total fruit and vegetables sold in the Auckland district. (Total sales in Auckland in 1967/68 were \$13 million.) Even if allowance is made for the numerous fruiterers/greengrocers who obtain small quantities direct, of say half as much again, the proportion of the total quantity bought direct would only be about 5 percent.

Since the total sales for Auckland represent fruit as well as vegetables, this figure will understate the percentage bought direct, but not by very much. A maximum of 10 percent of vegetables bought direct might therefore be involved.

TABLE V
SOURCE OF FRESH VEGETABLES

	<u>Auction</u>		<u>Private Treaty</u>		<u>Grower Direct</u>		<u>Commission Buyer</u>		<u>Other</u>	
	R	S	R	S	R	S	R	S	R	S
Asparagus	4	2	-	-	1	1	9	1	1	-
Beans - Broad	6	-	-	-	-	1	9	-	-	1
Green	6	-	-	-	-	-	9	1	2	-
Beetroot	6	-	-	-	-	-	10	-	2	-
Brussels Sprouts	6	-	-	-	-	-	9	1	2	-
Cabbage	-	3	-	-	16	2	-	4	-	-
Carrots	-	3	-	-	16	2	-	5	-	1
Cauliflower	5	1	-	-	1	5	9	-	2	-
Celery	6	-	-	-	1	1	10	-	2	-
Cucumber	5	1	-	-	2	6	10	-	2	-
Lettuce	3	2	-	-	2	10	9	1	2	-
Parsnip	6	-	-	-	-	-	10	-	2	-
Peas	6	-	-	-	-	1	9	1	1	-
Sweet Corn	6	-	-	-	-	3	10	-	2	-
Tomatoes	4	2	-	-	2	8	10	-	2	-
Kumara	6	-	-	-	1	-	10	-	2	-
Onions	4	2	-	-	4	10	9	1	1	-
Potatoes	3	3	-	-	1	6	10	-	1	-
Pumpkin	5	1	-	-	1	5	10	-	2	-
Spinach	6	-	-	-	-	-	9	-	1	-
Swedes	6	-	-	-	-	-	10	-	2	-
Silver Beet	6	-	-	-	-	-	10	-	2	-

R = Regularly

S = Sometimes

TABLE VI
DISTRIBUTION OF THE PROPORTION OF FRESH VEGETABLES
BOUGHT DIRECT BY FIRMS

<u>Percent bought direct</u>	<u>Number of firms</u>
0 - 5	1
5 - 10	8 *
11 - 15	4
16 - 20	3
21 - 25	-
26 - 30	2
Greater than 30	-
	—
	18
	—

* Two firms not providing specific data were taken as averaging 10 percent, this being a common level amongst other firms of their size. One other was estimated at 12.5 percent.

TABLE VII
ANNUAL DIRECT PURCHASES BY RETAIL FIRMS

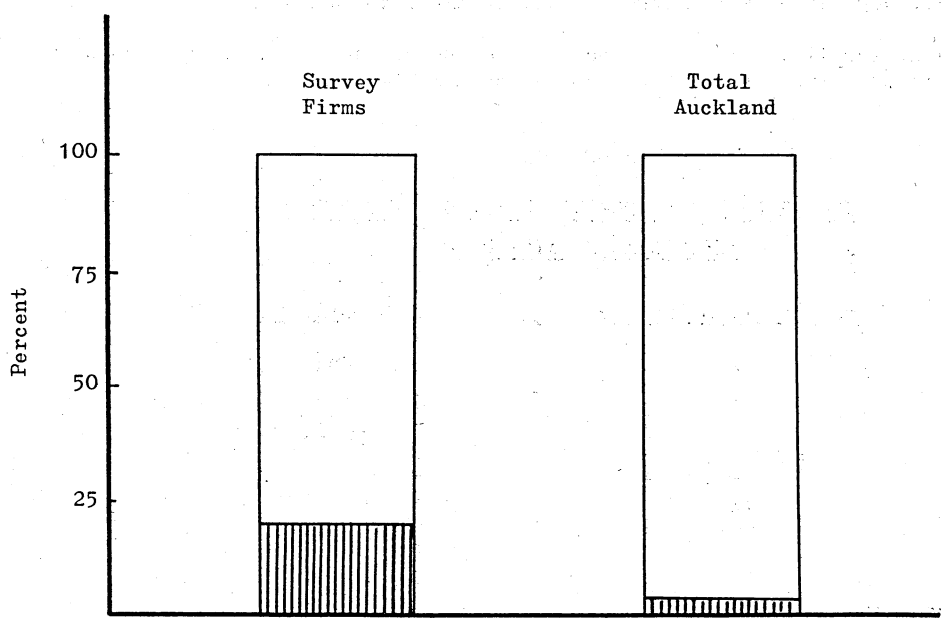
Total value of vegetables bought direct - wholesale prices	\$325,250 (a)
Total value of vegetables bought direct - retail prices	\$422,825 (b)
Total value of vegetable turnover - retail prices	\$2,225,600
Direct purchases as percentage of total turnover	19%



Notes: (a) Levels for three firms were assessed. (See note to Table VI.)

(b) Retail prices estimated using average mark-up level of 30 percent.

FIG. 1.

PROPORTION OF FRESH VEGETABLES
BOUGHT DIRECT - AUCKLAND



 Vegetables bought non-direct.
 Vegetables bought direct.

Vegetables bought direct and their sources

The significant features of the vegetables and their origin were:

- (a) One dominant grower was the main source of direct supply. This grower provided three vegetables regularly, and a further three for certain limited periods.
- (b) Because of this grower's dominance carrots, cabbages and onions were the main vegetables bought direct.
- (c) The volume of onions supplied to retailers by this grower was related to conditions in export markets. The grower was an exporter of onions and therefore, when export markets were favourable, the supplies available to the local retailers were consequently reduced.
- (d) Seven growers were indicated as being significant suppliers.
- (e) Only nine vegetables were bought direct to any major degree.

Taking the main suppliers, 12 firms bought from one grower only, and in all cases this was the same grower. The other six bought as shown in Table VIII.

TABLE VIII

NUMBER OF MAJOR GROWERS SUPPLYING DIRECT TO
INDIVIDUAL RETAIL OUTLETS

<u>Number of firms buying</u>	<u>Suppliers</u>
12	One
5	Two
1	Three
—	
18	
—	

Quantity bought and price paid

(a) Dominant Grower

Unlike other supply channels price was set by the grower at the beginning of each week. The procedure followed was for the grower to ring each retailer on Monday and quote a price for the week. Thereafter the retailer was again contacted each day and an order taken for the quantity of each vegetable required. Thus the quantity bought was the decision of the retailer based on what his requirements were and what price had been quoted on Monday.

Contrary to what might have been expected, no long term agreement was made as to the quantity the retailer would take for any period of time. The grower's only indication of likely sales was past experience; that is, a knowledge of the usual requirements of each firm combined with control through the price he set at the beginning of the week. Therefore, to ensure continued sales at past levels, the prices he set were very important.

Having obtained the order, delivery of the specified quantity was made to the various shops. Here again, a significant difference existed from auction purchases. In this case, any vegetables not meeting the retailer's requirement were able to be rejected, the grower being telephoned and informed what was wrong and what quantity was unsuitable. This quantity was replaced the next day or a credit given thus providing the retailer with the ability to decline or

accept supplies not up to his requirements. In the case of auction, supplies are bought under the condition of "caveat emptor" - let the buyer beware!

This feature of purchase was highly regarded by the retailers and represented an important point in their liking of direct purchases. Although this right of rejection existed, very little was in fact returned, suggesting the degree to which the grower had become aware of the retailers' requirements.

The price set was for the vegetables delivered to the shop. Only one firm indicated any degree of price negotiation took place.

(b) Other Growers

Conditions were generally similar to the above except that the growers did not quote a weekly price. In the main the retailer indicated what he was prepared to pay, in advance, and the grower supplied if he considered it suitable. An example was quoted where one of the largest chains agreed to take a certain quantity later in the season at a given price but offered a lower price when delivery was due. This is one of the growers' fears of direct selling. In point of fact this grower refused to sell, and was forced to seek other outlets. He has had no dealings with that firm since that time.

This is an example of the grower's available reaction. At present, at least, he does not have to sell to that firm if dissatisfied. However this type of treatment did not seem to be typical. If the retailer wishes to maintain good relations with the grower he cannot afford to act in this way.

Price determination

Direct buying is only a minor part of vegetable purchases to most firms and therefore the price quoted by the grower must be competitive with other channels, subject to differences in the marketing functions performed. Two different pricing methods were found - one relating to the dominant grower, and the other to all other growers. In the first case price was set by the grower while in the second it was set by the retailer. However, in both cases prime interest lay in whether or not auction prices were used as a basis for the offer. All 18 firms said price was related to auction.

In a few very minor cases the produce was sent to the retailer and price negotiation took place later - this method, however, was most unusual.

The main reason for all saying price was based on auction was that the major grower determined his offer price by reference to auction. A further probing of price setting methods indicated that 15 of the firms knew what auction prices were at the time.

Knowledge of auction prices was used to determine the quantity to buy or the price to offer. Information came from commission buyers where these were used, or the firm's own buyers where these existed. Since most firms were buying at auction as well as direct, a comparison could be made readily, but for cabbages and carrots ten firms rarely bought at auction. In this latter case information on auction prices from their buyers was important to allow a check on the price to be paid for direct supply. All other vegetables were bought at auction as well as direct and therefore presented little difficulty.

The auction system obviously plays a major part in the level of prices settled on, both buyers and sellers usually being aware of the price levels. Because of the method of price setting for the main grower - that is, quoting a price and the retailer buying required quantities at this - some relationship to auction would be essential. If prices at auction were lower, the retailer was free to buy there.

A feature of the system was the way in which retailers continued to buy direct even when the prices were above the auction levels. While prices at auction were lower at times, at others they were higher, and retailers felt they were more than compensated over a period. Other compensating factors were higher quality and lower costs.

FIG. 2.

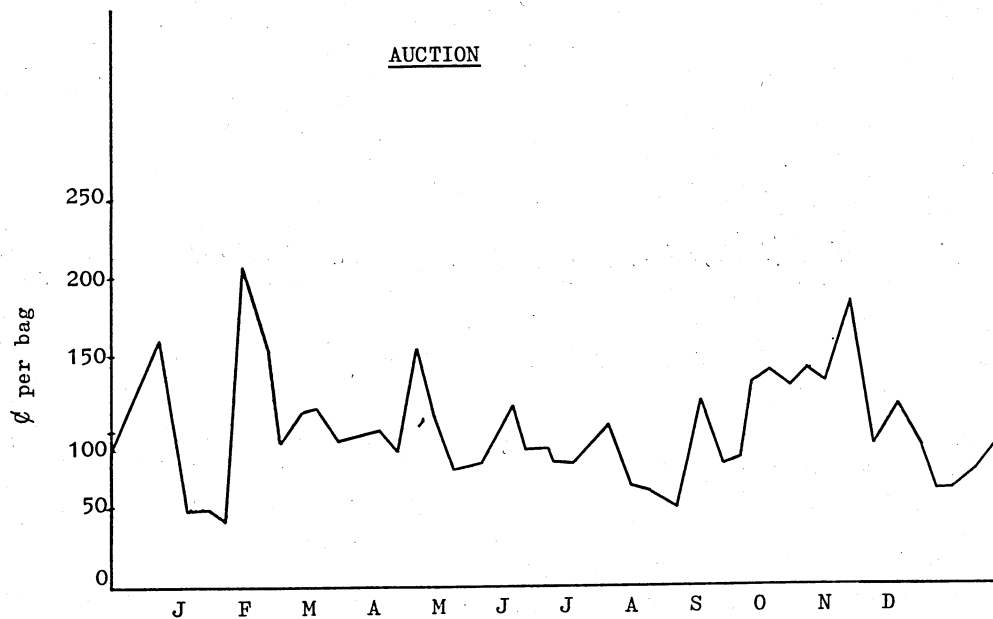
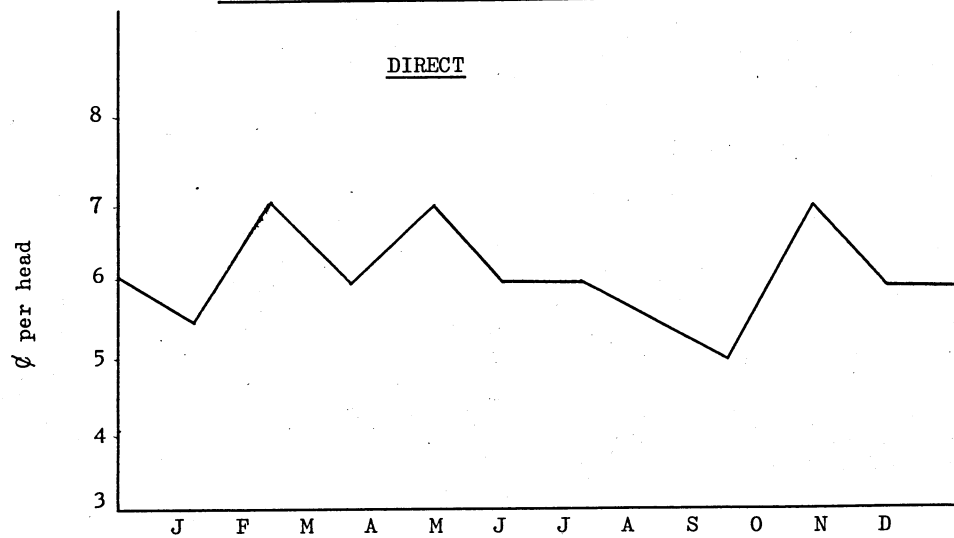
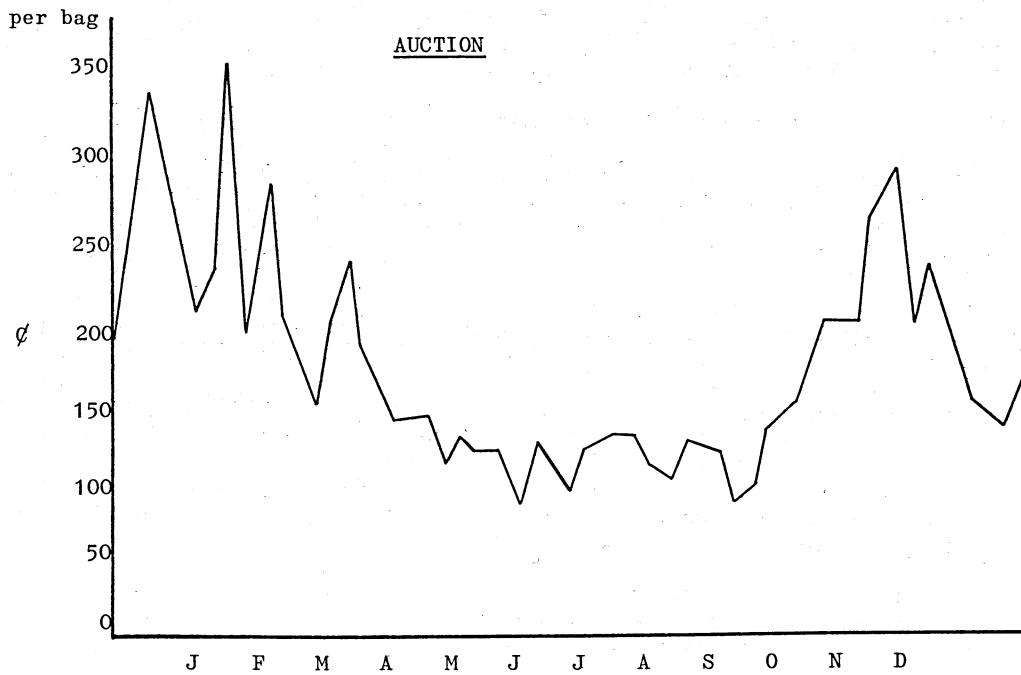
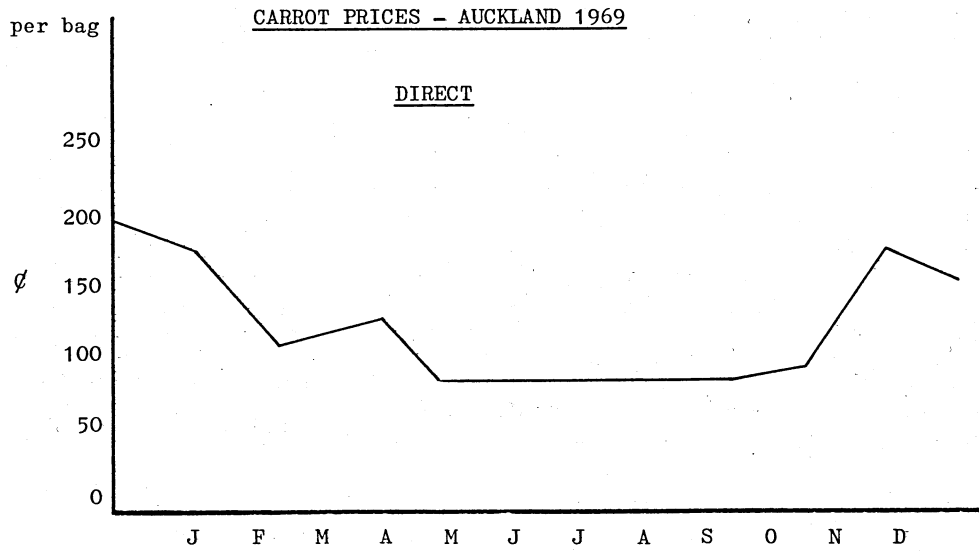
CABBAGE PRICES - AUCKLAND 1969

FIG. 3.



Since the dominant grower offered a price to the buyers, it is of considerable interest to determine his method of arriving at this offer price. The average of auction prices for the previous week was taken as a price base. To this was added a transport cost, which was an estimated average cost from auction to various stores. This base price was further adapted in terms of the level of supply held by the grower and levels that appeared to be held by other growers. This was the basic system used, but the policy was to neither follow auction completely during times of low prices, nor high prices. Greater price stability existed and buyers were expected to be prepared to pay slightly higher prices at some periods, in return for slightly lower prices at others.

Price stability

The extent to which direct prices are more stable than auction prices is an important feature since retailers prefer a greater degree of stability.^{6/}

This greater stability is shown in Figures 2 and 3. The direct prices are those of the major supplier while the auction prices are those quoted on the main Auckland auction each Monday. The prices are not directly comparable as they stand, but it should be realised that the reason for showing them is merely to indicate the stability of direct prices as against auction prices. Obviously it is of considerable interest to know how the level of direct prices relates, but this can only be done in a very general way from the data presented. The greater stability of direct prices would have been even more evident if day to day prices had been quoted.

Reasons for buying direct

Many reasons have been put forward at various times as to why retailers buy vegetables direct, but no attempt has been made to check their validity. In an endeavour to see whether or not they truly reflected the retailers' attitudes a number of reasons were given and the retailer asked whether or not he agreed with them. He was then asked to rank those he did.

Table IX sets out the retailers' feelings towards these reasons.

The degree of agreement between the rankings was again tested by the statistical test, Coefficient of Concordance. This indicated the firms exhibited a high degree of agreement in their rankings ($W = 0.22$). It is possible to suggest, therefore, that the rankings do give an accurate indication of the firms' order of preference.

Higher quality was clearly the first ranked reason, all firms stating that greater freshness was possible direct than through other channels. This factor would be more important for the more perishable vegetables, the direct supplies being delivered to the stores much sooner after cutting, and receiving less damage in transit. It was not necessarily that a higher quality product was grown - but speed of delivery to the shop and the way in which it was handled resulted in a better product going on to the shelf. The importance of this was stressed by Mr T. Ah Chee, President of Foodtown Supermarkets Limited, in considering changes being made by his firm in distribution techniques. The major reasons for these changes was to reduce the time between the harvesting of vegetables by the grower and their arrival into a controlled environment at the store.^{7/}

A second reason ranked highly was the greater price stability. This resulted from price levels being changed much less frequently and in smaller steps. The price policy of the dominant grower was a major factor in this stability.

6. The section following considers this point.

7. An address given by Mr T. Ah Chee, to the Vegetable Producers' Short Course, Massey University, May 1970.

TABLE IX
RETAILERS' REASONS FOR BUYING DIRECT AND THEIR
ORDER OF IMPORTANCE

<u>Reasons</u>	<u>Rank</u>
(a) Supply is guaranteed	4
(b) Supplies arrive as they are required	2
(c) Large quantities can be obtained more easily	6
(d) Quality is higher	1
(e) Lines are more even (size, etc.)	5
(f) The method is more convenient than others available	11
(g) Prices are less variable	3
(h) Prices are lower	8
(i) Costs are lower	9
(j) Supplies are pre-packed by the grower	7
(k) There are advantages in a closer liaison with the grower	10

This stability preference was associated with, amongst other things, specialling. Generally stores were required to present advertising copy about three days prior to the day of the special. The problems associated with this when buying at auction are well known.^{8/}

The interesting point in the ranking was the low rank of lower costs and lower prices. Only two of the firms gave lower prices as the most important reason for buying direct, one of these being a large firm while the other was amongst the smallest visited, but that higher quality (or more precisely greater freshness) made this worthwhile.

A lower price would not necessarily be more attractive than a higher one if higher costs were to result in a reduced margin, but again "lower cost" was ranked even further down the list than "lower price".

Firms did agree that their costs were lower to a degree due to lower transport, no commission payment to a buyer, less changing of price tags on produce in the shop, less trimming being necessary, and less waste (through the greater freshness).

Despite these reasons lower costs was ranked very low, suggesting either the total cost saving was not very large or that some of the other reasons carried more weight.

It is interesting to observe that these rankings show that, contrary to growers' popular belief, the main aim of the retailer is not to get produce for as low a price as possible and/or for the least cost. If other channels could provide produce as fresh, with less variable prices, and more certainty of the vegetables being available, direct buying might not have quite the attraction it appears to have at present. Or put another way, they might be more competitive with direct buying as a channel to the larger retailer.

Price determination without auction

The firms were questioned as to how price might be established if no auction was present to serve as a base.

8. For example, see Kitson, G.W. op.cit., p.35.

Table X shows the views of the firms interviewed, the first point being that six (one-third) of the firms were unable to give an opinion, a reflection of the fact that only conjecture is possible on this topic.

TABLE X

SUGGESTED METHOD OF DETERMINING PRICE IF NO AUCTION EXISTED

<u>Method</u>	<u>Firms suggesting</u>
(a) Cost plus method	3
(b) Based on the major grower	1
(c) Competition amongst growers	3
(d) Negotiation	5
(e) No opinion	6
	<hr/>
	18
	<hr/>

Method (c) could represent a combination of (a) and (d), cost plus a margin being used as a starting point, followed by negotiation to settle on the actual price.

Two main types of process were suggested, one a cost plus system and the other bargaining, haggling or a private treaty form. The cost plus method referred to involved the retailer in paying a margin above the growers' costs. Such a method is used in many non-agricultural lines, the manufacturer estimating his costs, adding a margin and offering it to the buyer at that level. The quantity sold then becomes associated with what the buyer is prepared to take at that price - if the price has been set too high little will be sold, and vice versa.

The second method, of bargaining, would appear to be similar in method to the private treaty system used instead of auctions in many countries of the world. It is without the redeeming features of all sellers being in the one area and thus being aware of other prices being quoted. This is one of the problems where direct purchase takes place at scattered points - market information is very difficult. Where two parties negotiate a price in private they are often unwilling to publicise the price arrived at, resulting in a very diffuse and unco-ordinated price setting system.

One retailer suggested the price of the major grower operating at present would replace the auction level - once again conforming to the method often found in the pricing of other than agricultural goods, namely, that of follow-the-leader.

Three retailers felt competition amongst growers would soon determine price levels - presumably offer and rejection would take place with the bargaining strength of each side determining the level prices settle at.

It is here the growers at present feel threatened, the impression being that the large retailer will always hold more power than a small grower. Factors which will affect this situation are the level of supplies existing at the time, the particular quality level of the individual's produce, the number of retailers buying at the time, and the quantity each requires.

It is extremely unlikely that auctions would disappear, particularly nationwide. It is more likely to decline to some degree. Under these circumstances the auction price would provide a base below which price would not go, and negotiation coupled with competition would establish the actual level of direct selling prices. Whether or not an actual "cost plus" system was used to determine a starting point for negotiation is irrelevant since "cost plus" would not be likely to persist if competitors were able to obtain supplies from other growers at lower prices. Studies on bargaining practices have shown that, depending on the industry and the associated features of it, it is possible for variations in price to exist, and that therefore there is no guarantee the cost base will become that of the most efficient firm.

Influence of imported fruits

Imported citrus fruits, bananas and pineapples are brought into N.Z. under licence by Fruit Distributors Limited, a company with the wholesale merchants as its shareholders. This fruit is allocated to the various wholesale firms on the basis of their fruit and vegetables turnovers, and they in turn allocate it between retailers in a similar manner. This means that those retailers doing little trade with the firm will only receive minor allocations.

A generally held belief is that retail firms are restricted in their vegetable purchases from channels outside auction by the need to ensure sufficient turnover to get supplies of the imported fruits.

The extent to which this is true obviously has a bearing on direct buying, the important question being whether or not more would be bought direct if this restriction was not present.

Fifteen of the 18 firms stated the imported fruit allocation system affected the amount of vegetables they bought direct. The three unaffected by the system did, however, indicate that if they expanded direct purchases, it might become a problem.

Imported fruit is an important restricting factor, even for the large firms where it might be expected that quantities bought at auction were sufficiently high to allow adequate imported fruits. These fruits were considered very important in attracting customers, one firm stating that vegetable turnover dropped by \$60-\$100 per week if adequate supplies of imported fruit were not available. It is very likely, therefore, that while the present method of allocating imported fruits exists, a restricting influence on direct buying is present.

Expansion of direct buying

The extent to which firms will increase direct purchases depends on a number of factors. These are:

- (1) the system of allocation of imported fruits,
- (2) the suitability of the various vegetables to direct purchase,
- (3) the availability of suitable growers,
- (4) the willingness of growers to sell in this manner,
- (5) the benefits offered by other alternative channels,
- (6) the buyers' desire to increase these purchases,
- (7) the growth of large-scale retailing.

Point (7) could place a limit on expansion, but it does not appear likely to do so; for the firms questioned, 14 indicated they would increase direct buying - but subject to other conditions being favourable. The willingness is therefore there. It becomes a question of whether or not the other conditions will be favourable.

Only five firms stated they could buy from other growers if they wished (Table XI). Most of the others felt they could if they looked around.

Therefore the opportunity did exist for further expansion, but a critical point in the decision is whether the growers available are suitable. Fourteen of the firms would increase direct purchases if suitable growers were offering. The features of 'suitable' growers necessary to interest large retailers are:

- (1) Product quality. The retailers wished to be assured of vegetables meeting their quality standards, and have the opportunity to reject produce if it did not meet these standards. Confidence in the grower was therefore essential, the retailer being unwilling to buy direct if consistent quality levels were not assured.
- (2) Continuity of supply. The grower must be able to supply on a regular basis (when the vegetable is in season). No interest existed in dealing with growers only

wishing to use the supermarket as an occasional outlet.

- (3) Adequate size. The grower must have a sufficient quantity to go part way at least towards satisfying the supermarket's total requirements in that vegetable. This meant an unwillingness to buy only a minor proportion of a vegetable and go to other sources for the rest. Probably of more importance was the desire to keep the number of suppliers down - if two growers could meet total requirements of (say) tomatoes, even though one supplied three-quarters and the other only one-quarter, conditions might be suitable. However, no interest would exist in four growers each providing a quarter.

A point to be noted here is that this applies to the situation where each grower was contacted, negotiated with, etc., separately, not where they could be dealt with as a group.

- (4) Suitable vegetables. The general view appeared to be that only bulk lines were of interest - for example, carrots, cabbages, potatoes, onions, lettuce, and tomatoes. Many vegetables sold were not sold in large quantities - brussels sprouts, parsnip, and swedes to name a few - and in these cases not a great deal of interest existed.

To expand direct buying, the firms required "suitable" growers as defined by the points discussed above, and the removal of the present method of allocating imported fruit.

Under the assumption of the existence of these two requirements, it is possible to consider the question of whether or not the firms will increase direct buying. As mentioned, 14 said they would.

The extent of the increase presented problems, however. Firstly, the estimate of the level was just that - an estimate - and must therefore be treated with care. Secondly, the expansion rests completely on the conditions of buying the produce and these are subject to doubt.

TABLE XI

FIRMS ABLE TO BUY DIRECT FROM GROWERS OTHER THAN THOSE
DEALT WITH AT PRESENT

	<u>Numbers</u>
Able	5
Unable	6
Unsure	7
	—
	18
	—

Table XII shows the response to a request for an estimate of the amount of produce they would be willing to buy direct. Under conditions as they are at present, and assuming suitable growers, the maximum level any firm was likely to go to was 50 percent of their requirements, although half the firms were not prepared to give an estimate.

Under a second assumption of no restriction to their purchases by the tie of imported fruit, eight indicated a level of more than 75 percent of supplies, three a level of less than 75 percent and seven were unwilling to estimate.

Perhaps all that can be concluded is that imported fruit allocations exert a major influence on the level of direct purchases. It would appear fairly unlikely that the system will be changed in the near future and therefore the responses under these assumptions are likely to be largely of academic interest.

Even the levels given under present conditions are of limited value since they rest on the assumption of availability of suitable growers, a somewhat doubtful assumption for many vegetables.

TABLE XII

LEVELS TO WHICH FIRMS ARE WILLING TO BUY DIRECT

<u>Percent</u>	<u>Under present conditions</u> (Number of firms)	<u>If a change in imported fruit allocation</u> (Number of firms)
More than 75	-	8
50 - 74	-	2
25 - 49	2	-
Less than 25	7	1
Don't know	9	7
	<u>18</u>	<u>18</u>

A further point to be stressed is that considerable variation would exist between different vegetables, and while these levels might be high for the large volume selling lines, it would not be so for the minor lines.

WELLINGTON SURVEYDirect BuyingDegree

Of the 33 firms contacted only one indicated it bought direct, although one other was unwilling to specify its policies, this latter being a large national chain (Table XIII). One other firm did buy an occasional supply of potatoes from growers, but this occurred on a very irregular basis.

TABLE XIII

DIRECT BUYING IN THE WELLINGTON AND HUTT AREA

<u>Buying Direct</u>	<u>Number of firms</u>	<u>Percent</u>
Regularly	1	3.0
Sometimes	1	3.0
Never	30	91.0
Unspecified	1	3.0
	<u>33</u>	<u>100.0</u>

No direct indication is possible on the amount bought direct for two reasons:

- (a) lack of knowledge of the activity of the chain declining to answer; and
- (b) the fact that the large chain buying direct was unable to separate its Wellington operations from other areas.

Using a number of assumptions a very general estimate of maximum levels of direct buying may be attempted. These assumptions are:

- (1) Assuming this chain's stores in Wellington have similar total turnovers and vegetable turnovers to those in Auckland, the average turnover per store for Auckland can be used as an estimate for Wellington;
- (2) Using the firm's level of direct purchases for Auckland as a guide, an estimate of the value of direct purchases can be made.

On this basis, the estimated annual direct purchases by the chain for Wellington are \$59,000.

This estimate will almost certainly be too high since on average, stores in Auckland are larger than those in Wellington and the presence of the major grower in Auckland would suggest that direct purchases are higher in that area.

Fruit and vegetable sales for all shops in the Wellington and Hutt areas totalled \$6.9 million in 1968.^{9/} Therefore the estimate represents one percent of the total. If an allowance is made for some direct purchases by small shops direct purchases may be in the order of five percent.

Price determination

Price was again based on auction to a degree. The firm estimated what prices might be in the future, based on trends in the past and expectation of future supplies. Using this price as a guide, an adjustment was made for transport and any extra costs involved.

An offer based on these calculations was made to the grower who was free to accept or reject, based on his own calculations. A degree of haggling resulted in a price being settled on. For asparagus this was done weekly, for tomatoes yearly.

Quantity bought

The firm buying direct gave the growers supplying it direct only a general indication of the quantity it would take each week. A specific quantity was indicated later. If auction prices were lower at the time, any extra quantity above the base level indicated could be bought at auction rather than from the grower. Similarly any quantity above the base level that the grower had available could be sold by him through the auctions, or to the firm if they required it.

The system is therefore in essence an agreement on a basic quantity, with freedom on both sides to choose where to buy or sell any additional quantities.

Influence of imported fruit

Imported fruit allocations did not affect direct purchases, since a sufficient quantity was bought through auction to ensure a reasonable allocation. The allocation system did, however, restrain a number of firms not buying any vegetables direct from doing so.

CHRISTCHURCH SURVEYDirect BuyingDegree

Twenty firms were contacted (see Table XIV for details) and again a very low proportion were buying direct. Only one bought on a regular basis, this being the same national chain mentioned in the Wellington discussion. Again, one firm (the same as in Wellington) was not prepared to discuss its practices. Of the remainder, eight had bought direct at some stage, but in seven of these cases this was very irregularly, and also referred to potatoes only. No other vegetables were bought direct by these seven.

TABLE XIV

DIRECT BUYING IN THE CHRISTCHURCH AREA

<u>Buying direct</u>	<u>Number of firms</u>	<u>Percent</u>
Regularly	1	5.0
Sometimes	8 *	40.0
Never	10	50.0
Unspecified	1	5.0
	<u>20</u>	<u>100.0</u>

* This referred to only potatoes in seven cases.

Using the same assumptions as for Wellington, a generous estimate for the chain buying direct suggests total direct vegetable sales of the order of \$78,600.

Since fruit and vegetable sales for Christchurch were \$4.9 million in 1968, direct purchases represent approximately 2 percent. If an allowance is made for small shops, a maximum of 6 percent would seem reasonable.

The experience of one firm visited is of interest. This firm had bought cauliflowers direct for one year, but discontinued the practice because its imported fruit allocation was suffering. Moreover, the grower was unwilling to continue supplying as he considered the auction prices for his other produce was being depressed by the auction firms' actions.

APPENDIXRETAILING STATISTICS

TABLE A.1

FRUIT AND VEGETABLES HANDLED BY VARIOUS TYPES OF RETAIL
STORES AND SERVICE ESTABLISHMENTS

<u>Store type</u>	<u>Number of stores handling commodity</u>				<u>Sales and turnover of commodity</u>			
	1963		1968		1963		1968	
	No.	Percent	No.	Percent	Amount (\$000)	Percent	Amount (\$000)	Percent
Fruit and Vegetable Shop	1135	20.4	1064	21.6	27,820	61.3	30,451	56.5
Grocery	3161	56.7	2724	55.4	8,568	18.9	14,697	27.3
Variety Store	47	0.9	74	1.5	1,102	2.4	3,044	5.6
Dairy	481	8.6	404	8.2	1,450	3.2	1,612	3.0
General Store	390	7.0	327	6.6	1,908	4.2	1,270	2.3
Department Store)			47))		748	1.4
Milk Bar)	363	6.4	120)	6.7	4,532)	10.0	577	1.1
Other)			164))		1,517	2.8
TOTALS	5577	100.0	4924	100.0	45,380	100.0	53,916	100.0

Source: N.Z. Dept Statistics Census of Distribution.

TABLE A.2

FRUIT AND VEGETABLES HANDLED BY RETAIL STORES AND
SERVICE ESTABLISHMENTS BY TURNOVER SIZE GROUP

<u>Amount of total sales or turnover</u>	<u>Number of retail stores or service establishments handling commodity</u>		<u>Sales or turnover during 1967-68</u> (\$000)	
	<u>1963</u>	<u>1968</u>	<u>1963</u>	<u>1968</u>
Under 2,000	11	17	10	22
2,000 - 5,999	96	37	238	126
6,000 - 9,999	167	92	790	537
10,000 - 19,999	940	503	5,914	3,979
20,000 - 39,999	2,289	1,575	15,086	14,148
40,000 - 99,999	1,762	2,137	13,902	21,656
100,000 - 199,999	183	297	2,314	3,850
200,000 - 399,999)		131		2,631
400,000 - 599,999)	129	55	7,126	1,930
600,000 - 999,999)		46		2,353
1,000,000 and over)		34		2,687
TOTALS	5,577	4,924	45,380	53,919

Source: N.Z. Dept Statistics Census of Distribution.

