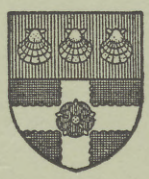
Fruit – Marketing

UNIVERSITY OF READING

Department of Agricultural Economics



The buying and consumption of fruit and vegetables

By

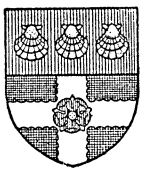
L. G. BENNETT

Miscellaneous Studies No. 30 June, 1963

Price 5/-

UNIVERSITY OF READING

Department of Agricultural Economics



The buying and consumption of fruit and vegetables

By

L. G. BENNETT

Miscellaneous Studies No. 30 June, 1963

Price 5/-

CONTENTS

The buying and consumption of fruit and vegetables

A number of enquiries have been carried out from time to time into the consumption of food in general and the consumption of fruit and vegetables in particular. This report differs from those of previous enquiries in two ways. First, it is concerned not only with consumption but also with the mechanics of buying and getting purchases home. Secondly, while each of the previous enquiries has paid little or no regard to similar work in the same field the present report draws on previous work for points of comparison.

The original material in this report is the result of an enquiry carried out in Basingstoke in March, 1962. It was the first consumer study which the Department had undertaken and was made possible in part by funds provided by the Horticultural Marketing Council. The conduct of the enquiry and the conclusions drawn from it are, however, the sole responsibility of the author.

In planning the enquiry much help and advice on the statistical aspect of sampling was given by Mr. R. H. Tuck of this Department, Dr. R. W. Curnow of the Unit of Biometry of the University of Reading and by Mr. P. R. Fisk of the Department of Statistics, University of Aberdeen. Help was also given by those concerned with the National Food Survey of the Ministry of Agriculture, Fisheries and Food.

Most of the interviewing was done by a small team of students during the 1962 Easter vacation and their help is gratefully acknowledged. The execution of the enquiry was facilitated by Southern Television Ltd., and by the *Hants and Berks. Gazette*, both gave it publicity and helped to ensure a good rate of response. Messrs C. Brooks & Son kindly allowed their shop to be used for filming a television interveiw. Finally, the help and forbearance of all the housewives interviewed must be acknowledged as well as their patience in answering the numerous questions which were put to them by members of the field team.

I. REVIEW OF PREVIOUS ENQUIRIES

According to the report on National Income and Expenditure for 1962[1] the total consumers' expenditure on fruit and vegetables in 1961 was £771 millions, £277 millions for fruit and £494 millions for potatoes and vegetables. Some support for the figure for total expenditure is given by the National Food Survey Committee report for 1960[2] because when the expenditure per head per week is raised to national annual expenditure the total amounts to £780 millions. The National Food Survey figures, however, suggest that the relative importance of fruit expenditure is only slightly less than expenditure on potatoes and vegetables.

---

[1] National Income and Expenditure 1962, H.M.S.O. 1962.

[2] Domestic Food Consumption and Expenditure, 1960. H.M.S.O. 1962.

It is desirable to get some fairly close estimate not only of the retail value but of the wholesale value also because in this way it is possible to estimate the cost of distribution, i.e. what the consumer pays for services as distinct from the good themselves.[1]

The total annual value of home production and importation is known, kind by kind, but only at the farm gate and at the port of entry respectively. Thus, for 1961/62, the value of home horticultural production excluding flowers and nursery stock was £159 millions and for imported produce £146 millions. To these figures must be added the cost of transport, wholesale and retail margins and so on. If the total expenditure is taken at £771 millions and if potatoes account for £131 millions[2] at retail then the cost of distribution must amount to about £378 millions or slightly less than one half of what the consumer pays. The retailers' share of the distribution costs is probably of the order of 45 per cent or £170 millions.

On these assumptions the total amount of £771 millions spent in 1961/62 would then have been made up as follows:—

	£ *millions*
Homegrown produce (except potatoes)	159
Imported produce (except potatoes)	146
Potatoes	88
Wholesale and retail distribution costs	378
	£771

This is not the place to comment either on the size of the bill for fruit and vegetable distribution or on the possible inaccuracies in the estimates given above. It is probable that the annual retail value of fruit and vegetable sales, what is taken over the counter so to speak, is of the order of £131 millions for potatoes, £305 millions for fruit and £335 millions for vegetables other than potatoes. This is the value of produce which the British housewife buys from greengrocers, barrow boys, market stalls, supermarkets and so on in the light of her particular desires, tastes and preferences, her individual and aggregate purchasing power and in the light of conflicting demands of other food and non-food expenditure.

The retail shop (whatever form it may take) has a specially important part to play in the marketing of horticultural produce. Though the services it renders may be thought to be costly it is the place where the aggregate demands of consumers and the total supply available confront one another. It is therefore the place where prices are fixed and the fortunes of the producer in consequence largely determined. While a good deal is known about the supply side—the volume and value, the

[1] The attitude of consumers to the services of retailers is discussed on page 26 et seq.

[2] Obtained by raising National Food Survey figures.

institutions concerned, the rewards of those concerned, and so on—there is little factual information about the complex of motives and desires which determines demand as such—and perhaps even less about the mechanics of purchasing.

Despite a relatively standardised human framework people differ greatly in their capacity to consume fruit and vegetables. There are at least three groups of reasons for this. First, there are what may be called social differences—those due to ingrained or acquired habits and tastes or to the age and the sex of the individual consumer and to the occupation followed. Secondly, there are the economic reasons of which the most important are the actual and comparative cost of fruits and vegetables and other food and non-food items and the purchasing power available. Thirdly, and superimposed on the other two, there are the differences which arise from the physical facilities for buying and preparation; of these the most important seem to be the distance between shop and home, the method of getting purchases back to the home and the storage capacity and facilities for preparation which are found in the kitchen.

It is scarcely to be wondered therefore that in the absence of special studies it would be most difficult to say much about the behaviour of consumers of fruit and vegetables. Classical economic theory (which is, in a sense, a distillation of the results of observation of human beings as economic entities) will come to our aid with the law of diminishing marginal utility, and with price and income elasticities of demand. But only enquiries in the field will provide information on the point at which consumers will equate the marginal satisfaction to be derived from fruit and vegetables with the marginal satisfaction to be derived from expenditure in other ways: only enquiries in the field will provide information on the response of the consumer to changes in price or to changes in spendable income. However refined and sophisticated the theories of demand may be, all concerned need to see these theories given quantitative expression if they are to form the basis of rational action.

Fortunately there is a substantial body of information on fruit and vegetable consumption. The National Food Survey carried out continuously by the Ministry of Agriculture, Fisheries and Food will be recognised by those familiar with the reports on *Domestic Food Consumption and Expenditure* as unique. No other survey has been made on quite such comprehensive lines and it is believed that no similar survey is being carried out elsewhere than in Britain. For these reasons it is obviously sensible for anyone working in this field to link his findings with the National Food Survey and to use it as a standard of comparison. By its very magnitude, however, any enquiry into national consumption must leave out much detail on which it would be highly desirable to have some information and there is obviously a place for other studies with a more limited objective or for other and specific purposes. The National Food Survey is, of course, primarily concerned with quantities consumed, with expenditure and even more particularly with nutrition. The reports

understandably do not concern themselves with the working out of economic theory in the practical affairs of housekeeping budgets, though the most recent gives some information on the income elasticity of demand for many products.

A rather different approach to the matter has been made in France where a number of large scale but discontinuous enquiries into the consumption of fruit and vegetables were carried out between 1951 and 1957. The most comprehensive of these was made in 1956/57 and covered a random sample of no less than 20,000 households. It is said to be representative of all regions, social classes, income levels and all the other ways in which populations can be divided for socio-economic purposes. Unlike the National Food Survey, these French enquiries have had a primarily economic purpose. For example, a report issued in 1959 is concerned with, among other things, income elasticity of demand, regional comparisons of consumption, and with the effect on consumption of the various combinations of adults and children in a home.[1] It is not concerned with nutrition in any way.

Despite the size of the 1956/57 French study there was still much which was not covered even if the economic results are, in broad terms, applicable outside the country in which they were obtained. So far as is known no consumer study in Britain has yet been concerned with the mechanics of purchasing, storage and preparation as well as with economic and socio-economic aspects. This remains true despite the three consumer studies which the Horticultural Marketing Council commissioned during its short existence from 1960 to 1963. These studies, however, took a rather different approach to those noted above. Although the counting of people who behaved in different ways as consumers was a part of these studies they differed from the National Food Survey and those carried out in France in that they attempted to probe beneath purchasing habits to find the motives which, consciously or unconsciously, caused the buyers to behave in different ways. A good deal of the preliminary interviewing was conducted by psychologists and it is clear that studies carried out along these lines have an important part to play. This is especially so where the commodity concerned is to be subject to advertising. These three studies, concerned in turn with the demand for fruit, the demand for flowers and the demand for vegetables, were examples of what has come to be called motivational research.[2]

Market research is, in fact, more and more becoming recognised as an essential part of the business of those who want to obtain a bigger share of consumers' expenditure. The success of advertising, for instance, largely depends on preliminary market research. Again, few manufacturers

---

[1] "La consommation de fruits et de legumes" Consommation 1959 No. 4 Centre de Recherches et de Documentation sur la Consommation. Paris.

[2] Consumer Habits and Attitudes Relating to Fruit. Technical and Economic Report No. 8. The Market for Flowers, Report No. 9. Housewives' Attitudes to Vegetables, Report No. 10.

would seek to enter a new market or to launch a new product without some attempt to find out the probable reaction of potential customers. It has been said that "market research is leaving behind its original character of pure commercial fact finding. In advertising, there is a shift of emphasis from the technical characteristics of the product to social and psychological meanings. There is supply and demand on the subtle and sensitive psychological level of symbols and images. Marketing research has got a new branch: motivational research".[1] While the horticultural industry has hitherto shown little interest in advertising its products this attitude appears to be changing. The three studies commissioned by the Horticultural Marketing Council should therefore go some way towards providing a rational basis for any future advertising which may be attempted.

II. THE ENQUIRY IN BASINGSTOKE

For a number of reasons Basingstoke was chosen as the town in which the enquiry was to be made. The first, perhaps, was one of convenience because of proximity to Reading. Secondly, the town was of such a size that even in a relatively short time it would be possible to cover the whole borough at a relatively high rate of sampling. The third reason which suggested Basingstoke as a suitable town was that in the next decade or so it is likely to increase in population very considerably and therefore is likely to provide, if the enquiry were repeated, some comparative data of a 'before and after' kind. A fourth reason was that the town was small enough for it to be possible to get publicity for the study into a high proportion of the households so as to ensure a relatively high rate of response.

There are, however, three reasons why Basingstoke may not be a 'typical town', if, indeed, any town can be described as typical. Of the smaller towns it is said to have the highest rate of personal savings per head. It has overful employment and an expanding demand for labour. It houses many of the staff of the Atomic Weapons Research Establishment at Aldermaston some of whom earn rather higher levels of salary than persons in industrial employment.

Basingstoke is a town of nearly 26,000 inhabitants. Apart from the staff of the A.W.R.E. who live on the northern housing estate, most of the working inhabitants are engaged in industry. Some idea of the composition of the industrial population may be gained from the number of insured persons whose records are kept at the Basingstoke Labour Exchange covering, however, a much wider area than the Borough.

---

[1]Ernest Zahn. The European Market Place. Progress, September, 1962.

Number of insured persons in different industries, 1962

Vehicle building	2,515
Engineering and electrical trades	1,997
Professional services	2,266
Distributive trades	1,937
Printing	1,474
Constructional work	1,679
Public administration	1,271
Transport	729
Chemical industries	463
Clothing and footwear trades	413
Insurance, banking and finance	318
Gas, electricity and water supplies	238
Metal goods	211
Leather goods	90
Timber trade	73
Other manufacturing	385
Miscellaneous services	1,724
	17,994

The high rate of employment is shown by some figures provided by the Ministry of Labour and National Service for 1962. Although 1,937 requests for staff were made to the Ministry (each request being for at least one and up to six workers) only 1,898 persons were placed in jobs. The unemployed represented 1·1 per cent of the total insured but this figure was said to be misleading because it consisted only partly of the genuinely unemployed. In particular, the figure includes those wives of men who had recently come to the town to take jobs, who had registered as available for employment but were not drawing unemployment pay.

This relatively affluent township was sampled by taking every twenty-fifth household on the register of electors for 1962. There were 8,150 households[1] in the electors' list after excluding hotels, public houses, restaurants and common lodging houses[2] and a one in twenty-five sample gave 326 households for interview of which 257 provided relatively complete answers to the questions posed. The result of the interviews with these 257 households is described in the following pages.

Before attempting to draw any conclusions about the buying habits of Basingstoke housewives and before comparing these habits with the findings of other enquiries it will help if the more important characteristics and activities of the 8,150 households from which the sample was drawn are described.

By raising the data obtained from the sample the total population of the 8,150 households appeared to be 24,535. This is 1,055 fewer than the total population in private houses given by the 1961 Census and

[1] The results of the 1961 Census of Population show that there were 8,361 private houses in Basingstoke.

[2] Catering establishments were excluded for a number of reasons. (a) They provide mainly for the needs of non-residents. (b) There may well be a highly seasonal demand for their services especially those on the Basingstoke by-pass. (c) They provide for only a proportion of the eating-out of Basingstoke residents and if they were included in the sample then works canteens would have had to have been included also.

represents four per cent of the Census figure.[1] The difference is explained by the following three factors. The first is that the register of electors covers 211 fewer households than the Census of Population. The second is that some households of minors may well have been missed when visiting sample addresses. The third reason is that it arose partly as an unavoidable risk in sampling.

The total estimated domestic population was made up as follows:—

15,121	heads of households
666	adult relatives (other than children)
6,530	children at or below school age
1,838	children at work but living at home
380	lodgers
24,535	

Types of household

Households were classified by the number of heads of household and by the presence or absence of children of different ages. Thus, by raising the sample there appeared to be 6,976 households headed by both husband and wife (85%) and 1,174 headed by widows, widowers, spinsters or unmarried men (15%). A more detailed classification of the 8,150 households is given below:—

	Number	%
Households with both husband and wife		
and children of school age or younger	3,425	42
and children over school age	824	10
and children of all ages	414	5
and no children at home	2,315	28
Households with one head		
and children of school age or younger	285	5
and children over school age	95	1
and children of all ages	32	—
and no children at home	762	9
	8,150	100

Adult equivalents or consumption units

To regard people of all ages as equal in their capacity to consume food in general and fruit and vegetables in particular would be misleading. There is, in fact, a recognised scale by which persons below the age of 21 and women are expressed as a percentage in consuming power of a male of 21.[2] This entails the recording of the age of each member of the household. It is, perhaps, more important to make this adjustment relatively accurately in studies of nutrition than in studies of expenditure

[1] The total population of Basingstoke in 1961 was 25,980 of which 25,590 lived in private houses. It is this latter figure which corresponds most closely to the population sampled in this study.

[2] Robert Morse Woodbury. Methods of Family Living Studies I.L.O. Geneva, 1940.

because the diet of very young children is likely to differ in composition from the diet of adults. But in any case, correction for age is bound to be somewhat arbitrary. While an attempt was made to record the ages of all persons in sample households the result was somewhat less satisfactory than could have been desired.

In the circumstances it has been assumed that on average each child of school age or under represents 0·5 adult as a consumer. It has also been assumed that elderly persons consume no less on account of age (though they may on account of low income) than younger people in active work. With this adjustment there were 21,270 'adult equivalent' persons or 'consumption units' in the estimated population.

Age of head of household

Where the household consisted of both husband and wife the age has been taken as the average of both for the reason that where there is any disparity in age and if age has any effect on consumption habits there would be a tendency to compromise in habits between the two partners. Where the household had only one head no complications arise. The age distribution of heads of household in the sample was as follows:—

less than 30 years .	18%
30—40 years . .	31%
40—50 years . .	16%
50—60 years . .	14%
60—70 years . .	17%
over 70 years . .	4%
	100%

Length of stay in Basingstoke and occupation

Basingstoke has been expanding in size for many years but the pace of expansion has quickened appreciably in the last few years. Along with the change in size has come a change in the proportions engaged in the various occupations which the town offers. The number of years which the head of the household has lived in Basingstoke is as follows:—

over 20 years . .	38%
15 — 20 years . .	3%
10 — 15 years . .	9%
5 — 10 years . .	11%
1 — 5 years . .	31%
less than 1 year. .	8%
	100%

These figures show clearly a core of older inhabitants, the slow expansion after the war and the influx of population since 1957.

A classification by length of residence and by occupation shows the importance of the professions and the A.W.R.E. in the recent develop-

ments and the slowness with which retail trades and the services have expanded in comparison.

	Years in Basingstoke		
	Under 5 years	*5–20 years*	*Over 20 years*
	%	%	%
Professions	67	33	—
A.W.R.E.	53	26	21*
Building trades	46	12	42
Vehicle making	36	36	28
Retailing	32	25	43
Civil Service, P.O., Gas and Electricity Services	30	35	35
Pensioners and retired persons	29	18	53

*Older inhabitants who have transferred from some other occupation to A.W.R.E.

In addition to those engaged solely on household duties, those receiving National Assistance and those living on pensions no fewer than 38 industries or services were reported as providing employment to the members of sample households. They were as follows:—

Banking	R.A.F.	Law
Police	Army	Diamond setting
Retailing	British Railways	Insurance
Building	S. Elec. Board	Horticulture
Meat importing	S. Gas Board	Security service
Electronics industry	Post Office	Agricultural merchants
Clock and instrument making	H.C.C. Child Care	Shoe making
Civil engineering	Hospital service	Hairdressing
Vehicle making	Civil service	Clothing manufacturers
Egg packing	Public transport	Funeral directors
Royal Aeronautical Estab.	Corporation	Road haulage
A.W.R.E.	Garage work	War Department
Leather goods making	Tyre remoulding	

Income of principal wage earner

One of the questions asked was about the income of the principal wage earner.[1] This information was obtained for only 64% of the households in the sample not because of any unwillingness to disclose it but because many wives interviewed did not know what their husbands' earnings were. The results for those answering the question are given below:—

Under £5 a week	12%
£5 — £7 10s 0d a week	3%
£7 10s 0d — £10 a week	16%
£10 — £15 a week	38%
£15 — £20 a week	20%
£20 — £30 a week	9%
over £30 a week	2%
	100%

[1] It is probable that the effective family income was considerably above that of the income of the principal wage earner in all those families where the wife had some paid work outside the home and where there were working children living at home and making some contribution to household expenses.

Kind of dwelling and its equipment

Interviewers made a note of the type of dwelling of respondents and put questions to them on the kitchen equipment they used and on whether they obtained any supplies of fruit and vegetables from their own gardens. From the responses the following facts emerged.

(a) That 82% of the families lived in houses, 9% in bungalows, 6% in flats or maisonettes and 3% in caravans.

(b) That 43% of the households were equipped with refrigerators, 16% with pressure cookers, 8% with electric mixers and less than 1% with powered potato peelers.

(c) That space for the storage of fruit and vegetables was adequate in 86% of households but that the remaining 14% had to buy more frequently that they would have done with adequate storage.

(d) That 45% had a garden which was used to provide some fruit and vegetables for home consumption.

III. BUYING HABITS

For the purpose of this study fruit and vegetables are deemed to include potatoes, fresh, canned and frozen kinds of fruit and vegetables and fresh produce in prepacked form. All households bought fresh fruit and vegetables, 73% bought canned fruit and vegetables, 40% bought them in frozen form and 25% prepacked.[1] These four forms were bought in various combinations as follows:—

As fresh produce only by 17% of households, as fresh and canned by 37%, as fresh and frozen by 9%, as fresh and prepacked by 1%, as fresh, canned and frozen by 13%, as fresh, canned and prepacked by 5% and as fresh, canned, frozen and prepacked by 18%.

This 'shopping basket' with varying contents causes the housewife to visit her source of supply a number of times a week. Some buy fruit and vegetables only once a week as a rule while others buy on every day that shops are open. Housewives buying once a week formed 19% of the total, those buying twice a week 52%, three times 19%, four times1% and six times a week 9%. No housewife in the sample bought five times a week.

In broad terms, the H.M.C. study on fruit buying provides some corroborative evidence on frequency of purchasing, 85% of consumers buying once, twice or three times a week as compared with 90% in Basingstoke. Rather more housewives in the H.M.C. study buy once a

[1] An interesting comparison is provided by the H.M.C. report on consumer habits and attitudes to fruit. Taking the housewives for whom information is available 22% stated that they bought prepacked fruit and 78% that they did not.

week (29%) and rather fewer twice a week (35%) than was found to be the case in Basingstoke.

To some extent the preponderance of those who shop for fruit and vegetables twice a week in Basingstoke is a result of there being a twice-weekly market on Wednesdays and Saturdays. It is surprising, however, that nearly one-tenth of the housewives should report going to shop every day.

Most housewives shop at the greengrocer, exclusively or in combination with some other sources of which there are a number in addition to the market stalls. There are the mobile shops, the grocers' shops, the chain store, as well as itinerant vendors of potatoes in bulk. Thus, 46% use one source only, 40% use two sources, 11% use three, and 7% use four sources.

The most important sources or combinations of sources are as follows:—

The greengrocer only for 26% of households, the market stall only for 10%, the mobile shop only for 8%, the greengrocer and market stall for 18%, the greengrocer and bulk potato vendor for 5%, the greengrocer, market stall and mobile shop for 4% and all other combinations for 29% of households.

The greengrocer, in fact, is patronised by no less than 68% of housewives while 32% buy wholly from some other source. Again, a comparison with the findings of the H.M.C. studies suggests that these figures are in line with the situation over a wider area, for the greengrocer and fruiterer was reported as the main source of fruit supplies for 69% and of vegetable supplies for 72% of housewives interviewed.

It is noteworthy that housewives who use sources other than the greengrocer tend to be relatively constant in their patronage and to be more constant even than those housewives who use one greengrocer only. Where the housewife buys from two or more greengrocers she tends to move from one to the other from week to week rather than to buy from all in any one week. To throw some light on this matter housewives were asked whether they invariably used the same source each week, usually did so or moved from supplier to supplier.

Using same source each week	*Buying from sources other than greengrocer*	*Buying from* 1 *green-grocer*	2 *green-grocers*	3 *green-grocers*
	%	%	%	%
Yes	84·0	74·0	61·5	27·9
Usually	14·8	15·0	27·0	17·4
No	1·2	11·0	11·5	55·7
	100·0	100·0	100·0	100·0

Because of the twice weekly market it is to be expected that the number of housewives shopping for fruit and vegetables on these days would be high. Not all housewives, however, have regular shopping habits, 11·5% shopping when the need arises rather than on regular days.

For the majority who shop on regular days the most popular day is Saturday. The following list illustrates the position:—

	Housewives shopping as % of all housewives
Monday .	16·4
Tuesday .	34·2
Wednesday .	55·2
Thursday .	20·8
Friday. .	40·2
Saturday .	72·0

Having purchased their fruit and vegetables, probably the most bulky and cumbersome of the household supplies which are bought regularly, the housewife then has to convey the produce to her home. The only exceptions to this rule are the housewives who buy solely from mobile shops and those who have produce delivered to their houses.

Analysis of the information obtained shows that no less than 87·5% of housewives visit their supplier and themselves carry their purchases home, 5% leave an order for subsequent delivery, 1·2% have orders collected by the supplier for subsequent delivery, while 9·8% buy from mobile shops at their doorsteps. If buying from a mobile shop is construed as delivery then the proportion of Basingstoke housewives who, on the one hand, fetch their purchases and, on the other, have them delivered is almost identical with those purchasers of fruit interviewed in the H.M.C. study where 85% are shown to visit the shops and fetch their purchases.

While there may well be some pleasure and satisfaction to be obtained from buying fruit and vegetables there must also be an element of drudgery, particularly if any distance is involved between shop and home. It might be expected for instance, that housewives would obviate this drudgery by using the telephone for ordering to an appreciable extent and have produce delivered to them. The fact emerged, however, that no housewife used the telephone as the sole means of contact with the retailer. Of the housewives who visit their suppliers and fetch produce less than 1% also occasionally telephone orders to their suppliers. In this connection it is worth stating that the ratio of the number of residential telephones in Basingstoke to the number of households using the telephone to order greengrocery is five to one. But the point must not be overlooked that the infrequent use of the telephone may well reflect two features of the situation. First, the pleasure to be derived from personal shopping. Secondly, and perhaps more importantly, the difficulty of being sure of getting the quality ordered when produce is so variable.[1] It is something of a paradox that while those housewives who have their orders delivered were full of praise for the service they were given, so few follow their example.

The effort involved in getting produce home is shown by an examination of the way in which produce is transported and the distance it has

[1] *See* pages 26 and 27.

to be carried. Of those who visit shops and fetch produce 63% walk to and from the shop carrying their purchases, 25% travel to and from by bus and 12% travel by car. There is a general impression that the prevalence of small-scale fruit and vegetables retailing is due to the desire of most housewives to have a shop within easy distance of the home. This is demonstrably not true of Basingstoke where the greengrocers shops are concentrated in a small area in the centre of the town. The effect of this concentration is shown by classifying the housewives who walk to and from the shops by the percentage living at different distances from their source of supplies as follows:—

2 miles . . .	2%
1½ miles . .	7%
1 mile . . .	15%
½—¾ mile . .	23%
¼ mile . . .	17%
less than ¼ mile .	36%
	100%

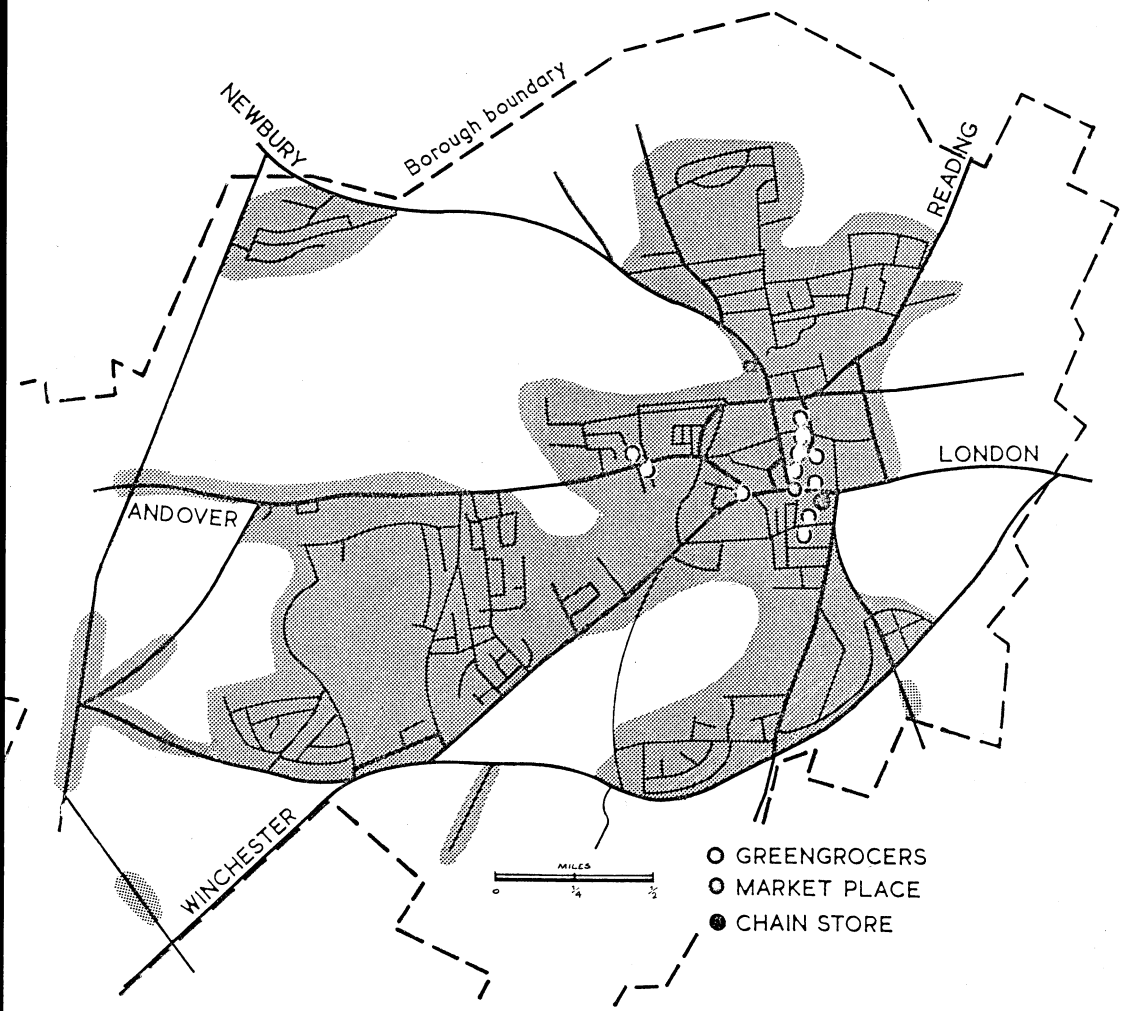
Thus nearly one-quarter carry their purchases for a mile or more, nearly one-quarter for ½ to ¾ mile and only just over one-half have the convenience of a greengrocery supply relatively close at hand.

For those housewives who use the bus service the percentages travelling different distances are as follows:—

3 miles . . .	8%
2—3 miles . .	38%
1—2 miles . .	50%
½ mile or less. .	4%
	100%

For the minority who shop by car the distance from the supplier is, of course, of no importance and no point is served in showing what distances are involved, a relatively long distance may well be a matter of choice. It is interesting, however, to compare the distances between home and shop for those who walk or who travel by bus with the ideal suggested by Lord Taylor as contributing, among other features of a town, to a psychiatrically good community. Lord Taylor suggested that houses should be within pram pushing distance of shops.[1] The map on page 18 will show that while there is a concentration of greengrocers' shops in the older part of the town few houses in Basingstoke would meet this requirement. Moreover, as new housing estates fill in the undeveloped parts of the Borough the position is not likely to improve unless new shopping centres of sufficient importance to include greengrocers' shops are developed also. So far, this has not happened. Where new shopping centres have sprung up not one of them has included a greengrocer's shop, though the grocers' shops may well sell prepacked potatoes.

[1] *The Times*, May 1st 1963, Report of the Conference of the Royal Society of Health.



The location of retail fruit and vegetable outlets in Basingstoke
(Residential areas shown hatched)

This absence of greengrocers' shops on the new housing estates may well explain the high incidence of buying from mobile greengrocery vans noted earlier.

IV. EXPENDITURE

Expenditure per household, per person and per consumer unit

There would seem to have been a total sum of approximately £7,450 spent on fruit and vegetables by the 8,150 households in Basingstoke in the week immediately preceding the survey. This is equivalent to 18s 3d a week per household, 6s 2d per person and 6s 10d per 'consumption unit' or 'adult equivalent'. A comparison with the 1961 National Food Survey shows the expenditure per head to be high because the national weekly average expenditure per person is given as 4s 11d.

There are, however, at least two reasons why the Basingstoke figure should be higher than the national. The first is that according to *Domestic Food Consumption and Expenditure* households in the south and south-east spend 27% more on fresh green vegetables and 9% more on fresh fruit than the national average. Adjusting the national figure for expenditure per head for these differences raises it to 5s 3d while if these differences are applied to all fruit and vegetables the figure becomes 5s 6½d a head. The second reason is that in the first half of the year expenditure is shown by the National Food Survey to be well above expenditure in the second half. If the regional adjustments made above are applied to these higher figures then the expenditure per head becomes 5s 8d or 6s 2d according to whether the adjustment is applied to a part or to the whole of the fruit and vegetables purchased.

The adjustments made above bring the Basingstoke figures into line with the national position, or, at least go a long way to explain differences. There are, however, other reasons to be taken into account even though there is no means of making adjustments for them. For instance, in the spring of 1962 vegetables were scarce and prices higher than in 1961, the year to which the latest National Food Survey data relate. Again, the relative affluence of Basingstoke even by southern standards may well be a factor affecting the position. On the other hand, evidence obtained in the 1956/57 survey in France shows that the expenditure per head on fruit and vegetables increased with the size of the community and it must be remembered that Basingstoke is a relatively small town. Nevertheless, for all these reasons it seems that the expenditure of 6s 2d per head or 6s 10d per consumer unit per week fairly well represents the position. The average expenditure of 6s 10d per consumer unit per week is shown overleaf itemised by the kinds of fruit and vegetables purchased.

It would be expected from the results of other studies that expenditure on fruit and vegetables and on food in general would vary directly with the income of the principal wage earner in each family. There is known

	d.
Apples and pears	19·28
Oranges and bananas	7·71
Canned fruit	8·01
Potatoes	15·65
Fresh green vegetables	13·91
Fresh root vegetables	6·43
Onions and leeks	1·32
Mushrooms	1·13
Canned vegetables	3·85
Frozen vegetables	2·68
Salads	1·69
Other	0·34
	82·00

to be a marked income elasticity in the demand for all food and for fruit and vegetables. The information for Basingstoke shows this to be well marked for all food but much less well marked for fruit and vegetables.[1]

Income per week	*Weekly food expenditure per consumer unit*	*% of income spent on food*	*Weekly fruit and vegetable expenditure per consumer unit*	*% of income spent on fruit and vegetables*
over £30	47s 6d	16·0	6s 6d	2·0
£20—£30	47s 2d	28·7	8s 2d	4·5
£10—£20	42s 10d	47·4	6s 4d	7·0
£7 10s—£10	39s 0d	52·5	6s 6d	8·7
£5—£7 10s	32s 0d	46·8	6s 9d	9·8
Under £5	27s 6d	54·5	6s 2d	13·9

Again, the expenditure in Basingstoke seems to be rather higher than the national average for each income group when compared with broadly similar income groups in the National Food Survey. Thus, national expenditure per head on food is approximately 10s below that per consumer unit in Basingstoke except in the lowest income group when it is broadly similar. Some of the explanations advanced earlier may account for this difference. The most striking difference, however, lies in the relative stability of the expenditure on fruit and vegetables at all levels of income. Again, this may well be because consumption in Basingstoke is high for all income groups but it is in marked contrast to the national position where the expenditure per head goes up from 4s 1d to 6s 9¾d for groups with incomes of below £8 to those with incomes of over £34 per week.

Despite this relative stability of expenditure on fruit and vegetables with changes in income there are considerable differences in the contents of the shopping basket as between different income groups. Thus, while expenditure on fresh green vegetables and potatoes remains relatively

[1] Whenever expenditure on fruit and vegetables is given it is accompanied by data on expenditure on all food. To examine fruit and vegetable expenditure in isolation is probably unrealistic because they are consumed jointly with other non-horticultural foodstuffs. On the other hand it may be unrealistic to combine expenditure on fruit and expenditure on vegetables. In many households their function must be very different, impulse eating of fruit contrasting with planned eating of vegetables. This study has followed the traditional practice even though the possible weakness of doing so is recognised.

constant over the whole range of incomes, the expenditure per consumer unit on canned vegetables is greater at the lower levels of income. On the other hand, expenditure on mushrooms, frozen vegetables, oranges, apples, bananas and salads is higher at the higher levels of income and these items tend to replace others found at lower income levels.

It is interesting to note that as total food expenditure rises with income while fruit and vegetable expenditure remains relatively constant there must be great differences in the diets of people in different income groups with non-horticultural products taking an increasingly important place as income rises.

Effect of meals taken outside the home

It is commonplace nowadays for many people to have one main meal daily away from home in a factory canteen or at school or in some other establishment. This practice might be expected to reduce the expenditure on food consumed at home. Information drawn from Basingstoke suggests, however, that the practice of eating-out does nothing to reduce expenditure on home consumed food.

All respondents except old age pensioners living alone were classified by expenditure and by the practice of eating out or not. This showed that 36% of households had one member or more who bought one main meal away from home daily, i.e. not a packed meal made up at home but consumed at work. The home expenditure for these households was 45s 4d per consumer unit for all food and 7s 2d for fruit and vegetables. The 64% of households the members of which consumed all meals at home spent 42s 1d per unit on all foods and 6s 10d per unit on fruit and vegetables. The size of family has no bearing on the matter because the average size in both groups was almost identical at 2·8 and 2·7 consumer units respectively.

Consumers' reactions to changes in price and income

Various estimates have been made from time to time of the price and income elasticities of the demand for horticultural produce. This enquiry did not set out to obtain information which would provide still further estimates but it did attempt to obtain the reactions of housewives to two features of any calculation of demand elasticity. The following three questions were put:

(1) If prices were lower would you buy the same quantity as at present or would you buy larger quantities?

(2) If you had more money to spend on house-keeping how would you spend it—wholly on fruit and vegetables, partly on fruit and vegetables, or wholly on other commodities?

(3) If you had more money to spend on house-keeping on what commodities would you spend it?

These three questions attempted to bring out whether the households concerned lacked sufficient fruit and vegetables and whether there were any strong competitors for any extra spending money which a housewife might have. The housewife may well attempt to equate the marginal satisfactions derived from the purchase of different foods but because of the overriding necessity of providing sufficient nutritive bulk for a family she may well find difficulty in doing so.

The answers to the first question on the housewives' reaction to lower prices for fruit and vegetables showed the following situation. If prices were lower 70% of housewives would buy more fruit, 38% would buy more vegetables but only 9% would buy more potatoes.

When households are classified by income then it appears that a rather higher percentage of housewives in the £10-£20 a week group would buy more fruit, vegetables and potatoes than those with incomes below £10 a week and above £20 a week. This no doubt reflects the fact shown earlier that fruit and vegetable expenditure per consumer unit in this group is the lowest of all except in the group with incomes of less than £5 a week.

	Percentage of housewives reacting to lower prices by buying		
Income per week	*more fruit*	*more vegetables*	*more potatoes*
Over £20	63	16	—
£10—£20	73	45	12
Under £10	68	43	8

The evidence suggests that any measures designed to increase consumption would give the best results if directed at the middle group of wage earners. Not only is the urge to buy stronger with that group but it is also the group which embraces the majority of households. It is also important to note that if only prices were lower then a large demand at present dormant would make itself felt.

This view is borne out by an examination of the volume of statistical tables which form the basis of the H.M.C. report on fruit buying. It appears that 14% of those interviewed never bought fruit, 11% stating that it was too expensive. The same set of tables lists the proportion of housewives interviewed who used different criteria as a basis for choice. Thus, 72% bought the best quality within the price range—presumably the price range they could afford, 7% bought the least expensive, 16% bought the best quality regardless of price, while 5% gave no answer. These figures must mean that 79% of the housewives took price into account and by implication that they either did not buy as much fruit or as good a quality fruit as they would have done at lower prices. The published report, however, suggests that most consumers already buy as much fruit as they want. It is stated that 71% of housewives "got quite as much fruit as they wanted".[1] There is a further statement to the effect that even if the price were halved 40% of housewives would scarcely increase their purchases.[2]

[1] Consumer habits and attitudes to fruit. Page 16.
[2] ibid.

It is curious that the published results of the H.M.C. study conflict so strongly with other work and also appear to be at variance with the statistical tables drawn up as a result of the interviews.

The answers to the questions as to how Basingstoke housewives would spend any extra housekeeping money confirm the answers to the previous question on their reactions to lower prices. Again, the group of households with incomes of £10–£20 a week stand out because 3% of them (admittedly, a low figure) would spend it wholly on fruit and vegetables whereas this was reported for no other group.

	Percentage of housewives who would spend extra housekeeping money		
Income per week	*wholly on fruit and vegetables*	*partly on fruit and vegetables*	*wholly on other commodities*
Over £20	–	72	28
£10—£20	3	66	31
Under £10	–	68	32

It would be a mistake, however, to regard differences due to income as important. The evidence shows that at least two-thirds of the housewives would become more important buyers of horticultural produce if they had more money to spend on housekeeping. All these figures indicate that there is a demand for fruit and vegetables in general and for fruit in particular at present unexpressed because of costliness and lack of spending power.

The table above, of course, does nothing to show how much of any extra income housewives would spend on fruit and vegetables. In view of the data given earlier it is probable that fruit would take a larger share than vegetables. It is also probable that fruit and vegetables together would take a smaller share than other foods and other commodities. This view is supported by one of the French studies which gives the indices of expenditure growth for fruit, vegetables, other foods and for a number of durables.[1] Thus between 1950 and 1957 expenditure calculated at constant prices rose by only 8% for fruit and 9% for vegetables but by 41% for meat, chicken, eggs and fish and by no less than 133% for television and 153% for cars.

Further evidence on the link between family income and expenditure on different commodities is given by two other studies in France.[2] Both bear out the evidence obtained in Basingstoke and that given by the National Food Survey, viz. that there is a potential demand at present dormant because of lack of spending power or because of high prices.

It is clearly of interest to know not only that a certain proportion of housewives would spend any extra housekeeping allowance wholly or partly on fruit and vegetables or wholly on other commodities but to know also which commodities would be selected. Again, this sort of information does nothing to help in calculating income elasticities of

[1] La consommation dans l'économie Francaise. Consommation No. 2. 1958.

[2] Niveau de vie et consommation de la population non-agricole. Consommation No. 3 1959. La consommation de fruits et de legumes. Consommation No. 4 1959.

demand but at least it goes some way towards showing the relative importance of different wants. It shows, too, which non-horticultural commodities compete most strongly for any extra expenditure which the housewife may be able to make.

The table below has been constructed by giving the percentages of housewives in different income groups who reported that they would spend some or all of any extra housekeeping allowance on the commodities listed. Because many housewives named two, and sometimes more commodities the totals add to more than 100. It is interesting to note that the percentage of housewives who stated that they would buy two or more horticultural commodities decreases with increasing income.

Commodities on which more would be spent	*Income per week*		
	Under £10	£10—£20	*Over* £20
	%	%	%
Horticultural products			
Fresh fruit	64	64	72
Fresh vegetables	41	30	17
Potatoes	10	3	—
Canned produce	10	4	—
Frozen produce	6	4	11
Prepacked produce	6	—	—
Other commodities			
Meat	27	25	28
Other food	8	6	22
Clothes (adults	23	18	22
(childrens)	2	4	16
Household goods	27	30	5
Savings	12	5	—
Other	23	11	11

This method of approach again shows the extent of unsatisfied demand. Suprisingly, the demand for fruit is least satisfied in the uppermost income group. Fresh and canned vegetables would be purchased more heavily in the lower income group. Potatoes and prepacked produce would attract more attention from the lower income group and frozen produce from the upper group.

Meat would attract more attention from members of all income groups, other foods by those enjoying higher incomes. The unsatisfied demand for clothes, and particularly children's clothes, in the upper income group is noteworthy as well as that for household goods and savings in the two lower groups.

V. INCOME ELASTICITY OF DEMAND

The 1960 National Food Survey gives estimates of the income elasticities of demand for all the main foods defining it as the percentage increase in expenditure on the commodity concerned for every 1% change in net income. The elasticities for the main groups of fruit and vegetables are as follows:—

Potatoes	0·07
Fresh green vegetables. .	0·66
Other vegetables . .	0·26
Fresh fruit	0·64
Other fruit . . .	0·56

The demand for potatoes is clearly, and understandably, not likely to rise with a rise in income even though there may be changes in the form in which they are bought. With increasing income there is a tendency to buy more new potatoes and fewer old potatoes and chips. The income elasticity for fruit and fresh green vegetables is relatively high but for other vegetables relatively low.

Such results as have come from the Basingstoke study corroborate the figures given above. The percentage of consumers who would spend some of any extra housekeeping allowance on named commodities is a rough and ready measure of income elasticity of demand. Thus, only 4% of housewives would spend more on potatoes (indicating an elasticity somewhat lower than the national figure of 0·07), 64% would buy more fresh fruit (0·64), and 31% would buy more fresh vegetables (0·66 fresh green and 0·26 other vegetables). On the other hand the relative stability of expenditure on fruit and vegetables over all income levels in Basingstoke indicates what is apparently a relatively low degree of income elasticity of demand.

The 1956/57 study made in France illustrates differing income elasticities of demand in different social classes and with different types of family. It would be tedious to recount all the evidence here but it is worthwhile stating that the lowest elasticities of demand for vegetables were shown by those in the professions and those households consisting of one adult below the age of 70. The lowest elasticities of demand for fruit were shown again by those in the professions and by households consisting of one adult with children. The greatest elasticities of demand for both fruit and vegetables were shown by households of one or two adults over the age of 70 and by those who had retired from active life.[1]

As family size and composition appear to have an important effect on demand the households in Basingstoke were classified by the number of consumer units with a view to showing whether or not there was any change in expenditure on all food and on fruit and vegetables with family size. If old age pensioners are left out of account then as the number of consumer units per family increases there is a decreasing expenditure per consumer unit as follows:—

Number of consumer units per family	*Weekly expenditure on food per consumer unit*	*Weekly expenditure on fruit and vegetables per consumer unit*
2 or 2½	48s 7d	8s 0d
3 or 3½	37s 10d	6s 2d
4 or 4½	34s 4d	5s 5d
5 or more	29s 6d	4s 6d

The figures above throw useful light on the situation and provide some evidence to support the view that there is a relatively high income

[1] Approximately the same group of persons under two names.

elasticity of demand for fruit and vegetables as well as for food in general. On the assumption (which is broadly correct) that income bears no relation to family size then the income per consumer unit in any family is inversely related to family size. Inability to afford a higher level of expenditure must therefore be one of the most important factors limiting the consumption of food of all kinds as well as of fruit and vegetables with the larger families.

VI. RETAIL SERVICES

As income appears to have a marked effect on the total amount of food purchased per consumer unit and on the composition of the shopping basket, housewives must in general be particularly concerned with prices and price ticketing. Housewives were asked whether when shopping for fruit and vegetables they always looked for price tickets or asked prices, whether they sometimes did so, or never. The results classified by income bear not this view and show that only where the income is more than £20 a week does any significant proportion of housewives become unconcerned with price and price ticketing. Thus, where the income is over £20 a week 69% of housewives always look at price tickets or ask prices, 10% do so sometimes and 21% never. For those in the group with incomes of £10 to £20 and under £10 the percentage are identical with 85% always, 6% sometimes and 9% never looking at price tickets.

Merely to give the percentage of housewives who always look at price tickets or ask prices, however, is to do less than justice to the situation. Experience of interviewing, as well as the remarks recorded on questionnaires, shows that where the answer was "always" it was most fre quently an emphatic answer and often accompanied by such remarks as "if I didn't I wouldn't be able to make the housekeeping money spin out".

If a relatively high proportion of housewives are concerned about prices then they must be in a position to pass an opinion on the adequacy of the price ticketing displayed by greengrocers.

It is somewhat surprising that despite the fact that they were less concerned with prices and price ticketing the more affluent housewives were more critical of the extent to which greengrocers displayed prices. Thus 56% of the housewives in the upper income group, 67% in the middle group and 72% in the lower group rated the price ticketing in the the shops they patronised as good.

These figures, perhaps, illustrate the generally more critical attitude of the more affluent housewives because much the same kind of situation arose in answer to questions on the quality of produce and on the range of products available. The position is probably most strikingly illustrated by stating the percentage of housewives who rated the retailer for each of these features as 'not good', i.e. those who had some complaint to make. Thus, 18% of the upper income group, 15% of the middle group but only 2% of the lower group rated the supplier as not good in respect of

the quality of produce on offer. The question on the range of products on sale gave much the same result, 22% of housewives in the upper group, 15% in the middle group and only 4% in the lower group complaining on this score.

There is a belief that while displaying the best produce the retailer tends to serve from a lower grade so that what the customer gets in the bag is of a lower standard than that from which she has made her choice. On the score of fairness of sample displayed the more affluent housewives were slightly less critical than the less well off, the percentage rating the retailer as good were 78%, 76% and 74% for the upper, middle and lower income groups respectively. Differences between income groups, however, are very slight and in so far as the more affluent customers choose better qualities (where there is a choice) they are likely to find that the produce they buy more nearly corresponds with that displayed. Nevertheless for there to be as many as one-quarter of the housewives expressing some criticism on this score is a reflection of the variability in quality which characterises a good deal of horticultural produce. Some confirmation of the position shown above is provided by the H.M.C. study of vegetable buying where it is stated that 77% of housewives agreed "that greengrocers put the nice things in front and serve from the back".[1] The H.M.C. report, however, laid the responsibility wholly on the retailer without any regard to the variability of the produce which the retailer has to handle.

Respondents in Basingstoke often qualified their criticism of retailers on the score of differences in quality displayed and sold by saying that the market stalls were more culpable than the greengrocers' shops.

It would be expected, of course, that as judgements of good and bad performance are highly subjective the figures given above represent not only what they purport to measure but also the ability of housewives to express an opinion. When housewives are classified by income and whether they thought that wastage in preparation was high, moderate or low it seems that the upper income group buys better quality produce and thus has less wastage while the lower income groups tend to put a greater proportion into the pot and to be less critical.

Perhaps the most significant feature of the results of questioning about wastage is shown by an examination of the relationship between source of supply and degree of wastage. Housewives were asked whether, when there was a choice, they bought British produce for preference or whether they were indifferent and selected on other grounds. Of those who preferred to buy British produce 44% reported wastage as low and 56% as moderate or high. In contrast, 57% of the households indifferent as to source reported low wastage and 43% that it was moderate or high. If one were to look on wastage more tolerantly and combine those reporting low or moderate wastage the position is scarcely altered. Thus, those reporting high wastage (as opposed to high and moderate) formed 39%

[1] Housewives attitudes to vegetables. p. 23.

of those buying British where possible but only 31% of those who were indifferent as to source.

British growers have for a long time been criticised on the scores of grading and the quality of their produce but impartial evidence on the matter has been lacking. This study has shown that despite the goodwill towards home grown produce (for over one-third of housewives reported that they bought British for preference) growers are failing to exploit it, or perhaps they are exploiting it in the worst sense of the word. It has shown also that the criticisms of the quality of home grown produce are in general quite justified. Whatever the merits of grade examination and assessment may be in the wholesale markets, the final proof is only to be obtained in the kitchen where waste has to be sorted out from the edible parts of the products concerned. Products which would fail a test of grading may well pass the test of little or no wastage in the kitchen and the evidence given above reflects no great credit on British growers.

VII. SUMMARY AND CONCLUSIONS

This study has been concerned with an examination of the pattern of consumer purchases of fruit and vegetables in Basingstoke. Despite the fact that the town has special characteristics which make it by no means typical—rapid expansion in size, no worker brought in without a job to go to, relatively high level of personal income, and so on—the results of the study show great similarity with those of other studies of the same type. Where differences exist they are susceptible to rational explanation.

It has been stated earlier that one of the aims of consumer studies in the field of horticulture is to show growers and members of the distributive trade how best they can exploit existing conditions. Four conclusions may be drawn from this study which growers, and the retail trade in particular, would do well to heed. In brief they are as follows:—

(a) In the consumers' interest there is a need for more mobile shops or for a better classification of produce leading to more ordering by telephone and delivery by the retailer.

(b) In their own interest greengrocers should consolidate their position as the most important suppliers in view of possible competition from new forms of retail outlet likely to be seen and better delivery service might well be the best means to this end.

(c) The retailer would do well to reconsider his pricing policies.

(d) The grower would do well to pay greater heed to standards of quality and the retailer to the way in which he displays and prices different qualities of produce.

These conclusions which have general relevance despite the fact that they are based on a study covering a very circumscribed community are elaborated below.

(a) In addition to covering ground which previous studies have dealt with this study has broken new ground by getting information on the mechanics of purchasing—the frequency of purchasing, the distance purchases have to be carried and the means by which they are transported. If this new information is of any significance at all then it points to the need for better delivery services and the opportunities which exist for more ordering by telephone. This view is borne out by the way in which those housewives who made use of a greengrocer's delivery service praised its effectiveness. If ordering by telephone and subsequent delivery by the retailer is not so practicable as it might at first sight appear because of the inherent variability of horticultural produce and the fact that not every house has a telephone then two other conclusions follow. The first is the need for a better and more exact classification of produce so that it can be sold on description. The second and alternative conclusion is that a more widespread use of mobile shops would meet the case by providing both delivery to the customer's door and the opportunity of purchasing after inspection—while at the same time relieving the housewife of the drudgery of carrying heavy weights relatively long distances.

(b) Previous to this study the only information on the frequency with which horticultural produce is purchased in this country, the days on which purchases are made and the sources of supply has been that contained in the H.M.C. reports. The data obtained in the present study therefore add materially to the somewhat meagre stock of information on these points. All this information goes to show how well entrenched are the greengrocers and those who set up stalls in the twice weekly markets. As Basingstoke expands to its projected size of nearly 100,000 inhabitants (approximately four times the present population) new forms of retailing—the self service store and supermarket—will almost certainly be seen alongside the present dozen or so greengrocers. Whether or not these newcomers make serious inroads into the retailing of fruit and vegetables will depend largely on how well the present established suppliers take steps to secure their present customers more tightly and to extend their sphere of influence to new inhabitants. In this connection a good delivery service and the wider use of mobile shops serving new housing estates could well play an important part, while at the same time relieving the housewife of the drudgery of shopping in a way not possible with any other form of retailing.

(c) This study took a simplified approach to the question of price and income elasticity of demand and, while getting the reactions of consumers to changes in prices and in spendable income in broad terms, regarded any more precise attempt to calculate elasticities as outside the scope of a broadly based enquiry. The results, however, even though

they cannot be reduced to a figure measuring elasticity, nevertheless show that there is a negative income elasticity of demand for canned fruit and vegetables and a well marked postive income elasticity of demand for fresh fruit, salads and frozen vegetables. It has also shown that there is a marked price elasticity of demand.

Two conclusions follow from this situation, one for retailers and one for growers.

Retailers are often thought to prefer a "low turnover and high profit" regime to one of increased turnover with lower profits per unit sold. Evidence for this view is scanty and is likely to remain so in the absence of some special study to find out the true position. But if anything will show that a 'low turnover, high profit' regime is not in the interest of those retailers who subscribe to it it is a high degree of price elasticity of the commodity concerned. This and other studies have shown that the price elasticity of demand for fruit is relatively high, for vegetables lower, while for potatoes the demand is highly inelastic in respect of price.

Growers are perhaps understandably more concerned with getting higher prices for their produce than they are with reducing production costs and with sharing these reductions with consumers. If the price elasticity of demand for fruit, say, is high then if reduced production costs are passed on to consumers the increased quantity which may be sold more than compensates for any lower profit margin per unit and the producer is better off. This is the basis of voluntary price reduction which is sometimes seen with industrial products and growers would in their own interests do well to reconsider their attitude to horticultural prices. It is perhaps only in this way that the fortunes of producers can be improved in the long run.

(d) For as long as horticultural marketing has been a subject of discussion—forty years or more—criticism has been levelled at the quality of produce coming from British holdings and at the standards of grading which British growers have adopted. Purely objective evidence in support of these criticisms, however, has been scanty and has related more to grading and the precision with which produce has been classified by some obvious characteristic such as size or absence of blemish than to the quality of the produce concerned when quality is defined as the proportion of that purchased which is finally eaten. This study has attempted to make an assessment of the quality of British produce by asking at different points of interviews with housewives two distinct questions and then relating the answers to one another. While all horticultural produce, whatever its country of origin, tends to contain a proportion of waste it has been shown that British produce, in general, gives rise to more waste in preparation and in consumption than similar imported produce.

The conclusion to be drawn by growers from this state of affairs is the obvious one that more effective culling is desirable if they are to

retain the support which, as this study has shown, many consumers are predisposed to give them. It may also be concluded that standards of quality related to edibility are more important to the consumer than standards of quality related to size or superficial appearance.

The variability now seen in all horticultural produce, British and imported, has given rise to criticisms of retailers on the score that they display the best while selling from lower quality stocks. Retailers can be excused for wishing to mount an attractive display of produce in their shops. There seems, however, to be good reason to suppose that the practice of displaying different qualities and marking them with different prices would engender in the buyer a feeling of confidence in the retailer. Such a feeling of confidence would go a long way to still further entrench the greengrocer as the most important single outlet for horticultural produce and minimise the undoubted attraction which the new forms of retailing appear to have in most urban communities.

QUESTIONNAIRE

UNIVERSITY OF READING

Survey of fruit and vegetable consumption in Basingstoke

I. BUYING HABITS

Do you normally buy your fruit and vegetables from:—

		How many?
Greengrocers?	.....	.....
Market Stall?	.....	.....
Mobile Shop?	.....	.....
Supermarket?	.....	.....
Other source?	.....	.....

Do you patronise the same each week? Yes Usually No

How often do you buy each week?

On what days?

Do you (except for Mobile Shop)

(i) Visit shops and fetch?

(ii) Visit to leave order?

(iii) Telephone order?

(iv) Obtain in any other way?

If (i) or (ii) give

(a) Distance

(b) Mode of transport of buyer

Do you buy:—

fresh loose produce?
prepacked fresh produce?
frozen produce?
canned produce?

(Tick as appropriate)

II. SPENDING

Do you observe price tickets or ask prices before buying?

How much do you normally spend weekly on:—

	Fresh	*Frozen*	*Canned*
Fruit			
Potatoes			
Green vegetables			
Root vegetables			

If possible complete this as a sample budget with kinds and quantities bought last week

If prices were lower would you

	buy more	buy the same quantity
Fruit		
Vegetables		
Potatoes		

If you had more money to spend would you spend it

(i) wholly on fruit and vegetables

(ii) partly on fruit and vegetables

(iii) wholly on other commodities

If (iii) on what commodities?

If (i) or (ii) on

(a) fresh fruit

(b) fresh vegetables

(c) potatoes

(x) prepacked produce

(y) frozen produce

(z) canned produce

III. THE PRODUCE AND SERVICES

Where there is a choice do you buy British produce?

imported produce?

or are you guided by relative prices?

or are you indifferent?

Give your comments on:—

Wastage

Freshness

Grade the services provided by retailers into

For:—	Good	Indifferent	Bad
Price ticketing			
Fair sample displayed			
Range of produce available			
Standard of quality			
Delivery			
Any other service			

IV. THE HOUSEHOLD

Type of dwelling

Sole occuptation or shared?

Separate or shared kitchen?

Vegetable garden?

Kitchen fittings:—

Refrigerator
Potato peeler
Kenwood equipment
Pressure cooker
Other

Storage space

How long in Basingstoke?

Number, relationship and approximate ages of family (note any taking meals out)

Occupation and industry of income earners (note if wife works)

Income of head of household per week

Total spent on food of all kinds per week

Note here if any married couples under 22 occupy part of home and **Maintain a separate establishment. If so,** attempt to interview.

Printed by Bradley & Son Ltd. at The Crown Press, Caxton Street, Reading

BRADLEY & SON LTD
THE CROWN PRESS · CAXTON ST · READING