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Consumer Preference for Sized Idaho Russet Burbank Potatoes

by

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University of Idaho Agricultural Experiment Station
in cooperation with
Colorado Agricultural Experiment Station
Oregon Agricultural Experiment Station
and the
United States Department of Agriculture

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**CONSUMER PREFERENCE FOR SIZED IDAHO
RUSSET BURBANK POTATOES**

University of Idaho Agricultural Experiment Station
Colorado Agricultural Experiment Station
Oregon Agricultural Experiment Station
and the
Bureau of Agricultural Economics
Bureau of Plant Industry, Soils,
and Agricultural Engineering
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WESTERN REGIONAL RESEARCH PUBLICATION
WESTERN REGIONAL POTATO MARKETING PROJECT

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Consumer Preference for Sized Idaho Russet Burbank Potatoes

by

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PAUL A. EKE¹

INTRODUCTION

Housewives play a large part in the marketing of any food product. Their reaction to any fruit or vegetable offered for sale in retail stores determines the volume taken and the prices paid. The price which the housewife pays is reflected in large part to the grower in the price which he receives. In the case of potatoes there is competition with other foods which act as substitutes. Improvements in the marketing of these substitutes have enhanced their competitive position. Substitution of food products is one important factor that has reduced the per capita consumption of potatoes. For Idaho Russet Burbanks there is also competition from other potato-producing areas as to varieties, quality, packaging, and merchandising methods. These improved merchandising practices used with those potatoes will tend to force similar improvements in marketing Russet Burbanks. Progress in these matters seems necessary to maintain the steady growth in demand and to continue price premiums heretofore enjoyed.

There is some evidence that potato merchandising has not kept pace with the merchandising of some other produce. In Idaho and other Pacific Northwestern states this fact had been hidden because of a rather rapid growth in the volume of Russet Burbanks which it has been possible to market. The superior quality of Russet Burbanks for certain uses has led to their constant introduction into new markets. This has carried Idaho Russet Burbanks to new records from year to year. Increases in production and consumption of all potatoes, however, have not kept up with the growth of national population. Production and sale of several other kinds of produce have generally exceeded this growth.

Frequent difficulties in marketing large potato crops and the steadily declining per capita consumption have created interest in potato-marketing research throughout the nation. Great losses by the government in supporting prices have further stimulated market research. This bulletin reports results of one segment of such research.

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Prepackaging food products has shown consistent growth over the years. Some perishable produce is being handled so. Some products are uniform in quality from one package to another. Other products, including potatoes, show considerable variation. As a result it has become customary to sell potatoes in bulk, allowing customers to choose the quality they want. This has meant waste and often an unattractive bin of large, small, and damaged tubers on display. Attempts have been made in recent years to improve such marketing practices by retailing potatoes in mesh bags, open paper bags, paper bags with cellophane windows, and in other packages. In some instances, potatoes in these bags were roughly sorted to the same size, particularly those that were small.

It is not possible in one study to measure all features which make up consumer preference. Variety, size of package, type of package, size of tubers, and possibly some other factors are important. In this study, consumer preference for potatoes sorted according to size was measured. It was measured in terms of what the housewife actually bought when choices as to sized grades were available.

These measured reactions of consumers may be of use to potato packers in Idaho and in other areas where Russet Burbanks are grown for sale. Growers' practices in controlling sizes of tubers may also be affected.

OBJECTIVES OF STUDY

The over-all objective of this study was to determine consumer preference and demand for sized potatoes so that consumers' needs and desires may be better served. Information on what the housewives want will assist the potato industry in improving its competitive position in the fresh vegetable markets.

Specific information selected for study during the 1947-48 and 1948-49 marketing seasons was the determination, on a sample basis, of the following data for potatoes packed in 10-pound mesh bags:

1. Preference for size of tuber;
2. Preference for sized potatoes as compared to mixed or random sizes;
3. Price differences per bag necessary to cause consumers to purchase the different sizes in the same proportion as they are produced in the crop;
4. Premiums which consumers are willing to pay for uniformly sized potatoes as compared to the customarily marketed mixed sizes.

There was the further objective of trying different prices to shift the volume purchased among the small, medium, and large sizes of potatoes. This latter test was run to indicate the possibility

were selected for the experient. In each of the three cities the stores were selected so as to represent the various income groups which were found in the entire city. This was to provide a general picture of the city itself with no attempt being made to secure information which would show differences between income groups, nationalities, or types of workers.

The potatoes were displayed in sizes 4 to 7 ounces, 7 to 10 ounces, 10 to 12, and 4 to 10 ounces. As previously stated the prices for all sizes were uniform initially. The prices were varied later. Results for each city will be presented separately because there were variations in the conduct of the experiment.

THE SALES RECORD

Sales in Los Angeles were conducted during the 1947-48 season. It is important to note that Los Angeles is supplied during the winter months almost exclusively with Russet Burbanks. Small and large sizes varied somewhat from those offered in this experiment in the other two cities.

Results in Los Angeles

As previously stated, the preference for size of tuber was had by displaying the three uniform sizes so as to provide the consumer with a clear and accessible choice of the size which she preferred. After the first period, the prices on the different sizes were raised or lowered so as to cause consumers to purchase the different sizes in the same proportion as that in which such sizes are produced in the crop. These relative prices used are shown in Table I. There were two periods in which prices were varied.

Table I

Retail Prices Used in Selling Russet Burbank Potatoes by Size for Three Periods* in 8 Selected Retail Chain Stores in Los Angeles, California, March, 1948.

Period	Price per 10-pound bag, by sizes*			
	Small	Medium	Large	Unsize
First	59c	59c	59c	59c
Second	59c	64c	64c	59c
Third	54c	69c	69c	59c

* In the actual day-to-day operations the basic price which is here shown at 59c on unsize potatoes was changed to fit the going price of other varieties of potatoes in the store. The differences in cents between the "sizes" were kept the same at all times. These price adjustments for the experimental sales-display were necessary because no control over store prices of potatoes was granted to those conducting the experiment. The same plan was used in Cincinnati and in Kansas City.

The amounts and proportion of each size sold during the three periods are shown in Table II.

Table II

Proportion of Sizes Sold During Each of Three Periods from One to Three Weeks Duration in 8 Selected Retail Chain Stores in Los Angeles, California, March, 1948

Period	Sizes									
	Small		Medium		Large		Unsize		All Sizes	
	No.	%	No.	%	No.	%	No.	%	No.	%
First	628	23	837	30	564	20	751	27	2780	100
Second	333	30	200	18	189	17	388	35	1110	100
Third	217	54	52	13	44	11	89	22	402	100
Total	1178	27	1089	25	797	19	1228	29	4292	100

When the price was the same for all sizes, more people chose the medium size than any other. The potatoes which had not been sized were next in order of preference. Any other result would have been quite unexpected because of consumers being accustomed to mixed sizes. This would be further promoted by the situation that Russet Burbanks were about the only variety available during the winter and must be used for all cooking requirements. The small size was next, followed by the large size. A summary of the experiment shows a definite desire for the mediums, and a smaller desire for the large size.

During the second period the price was raised $\frac{1}{2}$ cent per pound on the medium and large sizes. The volume sold shifted from the medium and large sizes to the small and mixed sizes. The greatest shift was away from the medium.

During the third period the price was dropped $\frac{1}{2}$ cent per pound on the small size. A shift in sales volume to the small size followed.

A survey of sizes found in the 1947 stored crop of Russet Burbanks in Idaho showed that, of the potatoes between 4 and 12 ounces, 50 per cent were the small size, 37 per cent of medium size, and 13 per cent were large. When comparing these figures with the sales in the third period, it is evident that the price of the small size was too low and the price of the medium size was relatively high to have sold the Idaho potato crop in 1947 sorted and priced on this basis. The experiment was discontinued at this point because of the limitations in supply of potatoes sorted according to size.

Results in Cincinnati

The sales in Cincinnati begun in November of 1948 were made through ten cooperating retail stores. The retail price charged for each size is shown for each period in Table III.

Table III

Retail Prices Used in Selling Russet Burbanks by Size for Five Periods* in 10 Selected Retail Chain Stores in Cincinnati, Ohio, Nov. 11, 1948 to Jan. 18, 1949.

Period	Price per 10-pound bag, by sizes*			
	Small	Medium	Large	Unsize
First				
Nov. 11-22	59c	59c	59c	59c
Second				
Nov. 23—Dec. 6	61c	61c	61c	59c
Third				
Dec. 7—Dec. 27	62c	62c	63c	59c
Fourth				
Dec. 28—Jan. 9	61c	62c	63c	59c
Fifth				
Jan. 10—Jan. 18	62c	63c	64c	59c

* See footnote at bottom of Table I.

The proportion of each size sold during the different periods is shown in Table IV.

Table IV

Proportion of Sizes Sold During Each of Five Periods in 10 Selected Retail Chain Stores in Cincinnati, Ohio, Nov. 11, 1948—Jan. 18, 1949

Period	Small		Medium		Large		Unsize		All Sizes	
	No.	%	No.	%	No.	%	No.	%	No.	%
First	804	28	829	29	609	22	597	21	2839	100
Second	640	23	658	24	533	20	901	33	2732	100
Third	1124	22	1273	25	921	18	1788	35	5106	100
Fourth	812	26	728	23	624	20	1014	32	3178	100
Fifth	309	20	434	28	189	12	609	40	1541	100
Total	3689	24	3922	25	2876	19	4909	32	15,396	100

In the first period, when the price was the same on all sizes, approximately an equal number of buyers chose medium and small sizes, followed by the large and unsize groups.

The price changes, in each period after the first, had definite objectives in determining the possible premiums for sized potatoes. With these objectives in mind, the price was raised 2 cents on all uniform sizes, in the second period. Compared to the results when all prices were the same, there was a shift in sales to unsize potatoes. The larger part of this shift was at the expense of the small and medium sizes. These remained, however, 67 per cent of the purchases among the sized grades, as compared to 79 per cent when prices of all samples were equal. These data indicate that there was less variation in the proportion of sales of the large size than in other sizes after the price was raised 2 cents.

In the third period price differences between sized and unsized lots were increased to 4 cents for the large size and 3 cents for the medium and small size potatoes. A slight shift away from the large size and a slight increase in the sale of unsized potatoes followed this price shift. The score now stood at 65 per cent of all sales for sized grades and 35 per cent for the unsized. This was a shift in sales of unsized potatoes from 21 per cent in the first period to 35 per cent in the third period. The difference apparently resulted from the price changes used during the third period as compared to equal prices for all sizes used in the first period.

In the fourth period the retail price of small potatoes was reduced by 1 cent per bag. This was followed by a shift in consumer purchases from the unsized lots to the small. This showed that some potential purchasers of unsized potatoes, even though highly price-conscious, did prefer sized potatoes—even though small—to the extent of 2 cents per bag.

In the fifth period the price was raised 1 cent per 10-pound bag on each of the uniform sizes above those used in the fourth period. The price differences were now 3, 4, and 5 cents per bag, respectively, higher than for the unsized lot. In this instance the proportion of sales of the unsized potatoes increased from 32 to 40 per cent. The proportion of sales of the sized potatoes was reduced from 68 to 60 per cent. Here for the first time sales of large potatoes were considerably diminished. This shift was largely to the advantage of the medium size. Evidently the price differential between the sized and unsized potatoes had reached a critical point in the minds of the buyers. It is evident, though, that sized potatoes were preferred even at somewhat higher prices. The data indicate that rather small price differences of from 3 to 10 per cent of the total cost of a 10-pound bag of potatoes could shift the volume taken in the four groups sold. It might be possible to achieve an orderly allocation of the entire crop by adjusting price differentials. Price differentials may be important in the distribution of total crop because seasonal variations in sizes are great. It should not be assumed, however, that the maximum net income for a crop of potatoes will accrue if the entire crop is placed on the market.

Results in Kansas City

Sales were started in the ten Kansas City retail stores on January 17, 1949. As shown by the sales record during the first period when prices were the same on all sizes (Tables V and VI), more people preferred the medium size than any other. This result was identical with the results in Los Angeles and Cincinnati.

Table V

Retail Prices Used in Selling Russet Burbanks by Sized Grades for 5 Periods in 10 Selected Retail Chain Stores in Kansas City, Missouri, January 17—April 8, 1949

Period	Price per 10-pound bag, by sizes*			
	Small	Medium	Large	Unsize
First				
Jan. 17—Feb. 2	59c	59c	59c	59c
Second				
Feb. 3—Feb. 9	59c	60c	61c	59c
Third				
Feb. 10—Feb. 16	60c	61c	63c	59c
Fourth				
Feb. 17—Feb. 21	61c	62c	64c	59c
Fifth				
Mar. 9—Apr. 8	60c	62c	65c	59c

* See footnote at bottom of Table I.

† In a separate study the distribution of size was sampled for the Russet Burbanks during two seasons in southern Idaho.

Table VI

Proportion of Sizes Sold During Each of Five Periods in 10 Selected Retail Chain Stores in Kansas City, Missouri, January 17—April 8, 1949

Period	Sizes									
	Small		Medium		Large		Unsize		All Sizes	
	No.	%	No.	%	No.	%	No.	%		
First	770	25	1037	34	744	24	534	17	3085	100
Second	480	31	382	25	279	18	411	27	1552	100
Third	363	26	340	24	219	15	502	35	1424	100
Fourth	454	27	398	23	258	15	594	35	1704	100
Fifth	1446	27	1238	23	632	12	2089	39	5405	100
Total	3513	27	3395	26	2132	16	4130	31	13,170	100

The pricing plan used in Kansas City was designed to influence the volume of the different sizes purchased in a manner that would conform with the sizes actually found in the 1948 Idaho potato crop of Russet Burbanks. For the 1948 crop the potatoes between 2 inches and 13 ounces approximated 47 per cent small, 34 per cent medium, and 19 per cent large. The 1947 and 1949 crops had a much smaller percentage of large potatoes.

In the second period the price was raised 1 cent on the medium size and 2 cents on the large size in order to increase the proportion of the small group taken. This was accomplished, but the medium size was reduced in sales quite markedly as were the large sizes. The greatest shift was to the unsize lot. The results, if the unsize had not been available, would have been revealing, but no

doubt unrealistic with respect to actual competition to be met in the markets by potatoes sorted by size.

In the third period the price was raised 1 cent per 10-pound bag on the small and medium size and 2 cents on the large size. This resulted in a substantial shift from the small size, slight shifts away from the medium and large sizes, and a substantial increase in the proportion of unsized potatoes sold. This proved again that buyers of small and unsized potatoes are price-conscious.

In the fourth period the price of the uniform sizes was raised an additional 1 cent per 10-pound bag with very little effect on the proportion of each size sold. It seems that a very firm group of purchasers had been discovered who preferred sized potatoes quite definitely at price changed no higher than 2 to 5 cents. Of all purchases, 65 were in the sized samples.

In the fifth period the price of the small size was lowered 1 cent per bag and the price of the large size raised 1 cent. This resulted in a shift with an increase in the sales of unsized potatoes and a decline in the sale of the large size. It appears as though some consumers who preferred large sizes substituted the large sizes for the unsized. There was no apparent change in the sales of the small and medium samples.

Not enough price combinations were tried to find what price put on the small potatoes would encourage sales near the 47 per cent of this size found in the 1948 crop. The price would have had to be below that of the 59 cents per bag asked in all periods for the unsized.

A fairly stable demand for the small size was found at a price of 1 to 2 cents per 10-pound bag above the price of the unsized. For the medium size this stability was found at 2 to 3 cents per 10-pound bag above the unsized. For the large size, stable sales of about 15 per cent were found at 4 to 5 cents above the unsized. It can be seen that in Kansas City rather small percentage shifts in prices are enough to make rather marked changes in the volume taken of any one size.

EFFECT OF SIZING ON THE VOLUME OF POTATOES SOLD

There is need for information on the premium paid for sizing and its effect on sales volume. It was not practical in this study to measure accurately the net effect of sizing on volume handled; however, a good indication of the effect was secured. It is possible that many factors influenced the sales, including location of displays, size of displays, signs accompanying displays, and comparative quality of potatoes. Consumers seemed to think that sizing the potatoes added something to their quality. Perhaps some housewives believe that vegetables have been graded with more scrutiny when they are uniform in size.

The volume of Russet Burbanks sold increased in the stores displaying the sized potatoes. Just how much more could have been sold by advertising and consumer education over a period of time cannot be foretold from this study. Neither is it known whether the increased sales actually resulted in larger per capita consumption.

The following measures were taken in order to get an indication of the effects of sizing on the total sales of Russet Burbanks. Records were kept on 30 stores cooperating in the size-preference study. Data on all of the stores in the district of each cooperating chain were also obtained. The sales were broken down into the following categories:

1. Proportion of all potato sales that were Russet Burbanks in 10-pound mesh bags for all the stores of the district.
2. Proportion of all potato sales that were sized Russet Burbanks in the cooperating stores.
3. Proportion of all potato sales that were Russet Burbanks in all stores of the district. These figures are listed below:

Russet Burbanks in 10-pound open mesh in all stores of chain	Sized Russet Burbanks in 10-pound open mesh In Cooperating Stores	All Russet Burbank Sales in all stores of chains
Per cent 11.4	Per cent 24.9	Per cent 25.4

The proportion of potato sales in the cooperating stores of sized Idaho Russet Burbanks in 10-pound mesh bags was more than double that of ordinary Russets in 10-pound open mesh bags in all other stores in the territory of the cooperating chain store companies. The percentage of sized Russets sold in cooperating stores was nearly equal to the percentage of sales of all Russets in all other stores of the chains. These facts can be taken as an indication of consumer acceptance of sizing. This was the result even when consumers were suddenly confronted without notice of these choices. Apparently housewives buy on the basis of impulse originating from an attractively graded and displayed product.

It is well to note here that the total sales of sized potatoes did not decline significantly when the prices were raised on some sizes. Although there was considerable shift between sized purchased, the total sales continued at a high level.

LIMITATIONS TO MARKETING SIZED POTATOES

If sizing is attempted on any appreciable scale, there will be considerable resistance in certain segments of the potato trade.

Sizing would add another expense and service to a product with low unit value. It would add more lines of produce, thus complicating the operations. Many retail stores do not have sufficient space to display more than one or two sizes. Certain markets will undoubtedly take only certain sizes if any premium is to be realized.

Even though the above points are important, the principal limitation is the lack of adequate facilities to size the potatoes. At present, all sizing of long potatoes must be done by hand. This is an expensive operation, and it lacks the accuracy required by existing standards for grades. If only one size is desired, such as the case in the "stripping" of the larger sizes for "bakers" from a particular lot, any potatoes which are of doubtful size can be left with the original lot. However, if the entire lot is to be divided into strict size groups, the tolerance for off-size is equal in each group. It appears that some mechanical means of sizing is essential before that service can be included in potato-marketing practices. Further, the sizing should be done on the basis of weight since there is so much variation in the shapes of Russet Burbank potatoes.

Perhaps the tolerances for off-size should be changed to allow more latitude, particularly in the larger sizes. As an example, if the breaking point between two sizes is 10 ounces, the upper limits of the smaller size could read "not more than 25 per cent of the potatoes over 10 ounces in weight and not more than 5 per cent of the potatoes over 11 ounces in weight." These figures are used as an example in illustrating the type of ruling and are not to suggest the actual specifications.

DISCUSSION AND RESULTS

This study can be summarized under five headings, which follow:

Preference for Size of Tuber

The first phase of the study was to find out preferences for size of tubers where a choice of sizes was placed before the consumer. The second was to find out the choice of sized potatoes as compared to mixed or random sizes. This was done by selling a total of 8704 10-pound bags containing tubers of different but uniform sizes through 28 retail stores in three cities at the same price. The proportion sold of each size is shown in Table VII.

Table VII
Consumer Preference for Sized and Unsized Idaho
Russet Burbank Potatoes in Three Cities
1948 - 1949

Tuber Size Group	Sales in Selected Retail Chain Stores		
	Los Angeles	Cincinnati	Kansas City
Sized:	<u>Per cent</u>	<u>Per cent</u>	<u>Per cent</u>
Small (2 in. to 7 oz.)	23	28	25
Medium (7 oz. to 10 oz.)	30	30	34
Large (10 oz. to 13 oz.)	20	21	24
Sub-total	73	79	83
Not sized:			
2 inches and up	27	21	17
Total	100	100	100

About three fourths of the people who bought from the display of experimentally sorted Russet Burbanks preferred the sized potatoes. Greatest preferences were for the medium size and least for the large and unsized groups. Next to the medium size the small size was the choice of the consumer in all three city markets.

When only the sale of sized potatoes is considered, the proportions of each size sold are shown in Table VIII.

Table VIII
Consumer Preference for Sized
Idaho Russet Burbank Potatoes
1948 - 1949

MSize	Los Angeles	City Cincinnati	Kansas City
	<u>Per cent</u>	<u>Per cent</u>	<u>Per cent</u>
Small	32	35	30
Medium	41	48	41
Large	27	27	29

For comparison, the proportions of these sizes found in that part of the 1948 Idaho late crop (ranging between 2 inches and 13 ounces) were as follows: small 47 per cent, medium 34 per cent, large 19 per cent. There are too few medium and large sizes and too many small sizes to suit a free choice by the consumer at a uniform price for all sizes.

Effect of Price Differentials on Sizes Sold

In most seasons the quantities available within each size group probably will not be in the same proportion as the sizes desired by consumers. Therefore, if sorting by size is to become general it will be important for shippers and distributors of Idaho potatoes to

know the price differences necessary to encourage consumers to purchase the different sizes in the same proportion as they are produced in the crop. To answer this question, the following phase of this study was designed: A total of 24,154 ten-pound bags of the various sized potatoes was sold at different prices through the 28 cooperating retail stores. The details of price changes by size are listed in the body of the report. The results indicate that relatively small price differentials will encourage substitution of one size for another. It appears that many of the customers are extremely price-conscious or that size of potatoes is not a highly significant factor in their buying. This is particularly true in the case of the small and unsized potatoes. It is less true in the case of medium size. In the case of the large potatoes, a substantial premium was paid before the users of large potatoes shifted to some other size.

In an experiment of this nature it is not possible to indicate exact differentials that will be required to stimulate specific shifts between sizes and the premium which would be paid for sizing. Doubtless this will vary from year to year according to general economic conditions, consumer buying power, and other factors. The results of this study do indicate the possibilities of maximizing the total returns for potatoes sorted according to size.

Premiums Paid for Sizing

The pricing schedule used in Kansas City was such that the data yielded an estimate of the premium paid for sizing in that market. A premium of approximately 25 cents per 100 pounds was paid for the uniform sizing when approximately 65 per cent of the potatoes sold were from the uniformly sized groups. (The remainder was regular 2-inch minimum). The premium varied considerably for the different sizes. When the proportion of each size sold was approximately equal to that produced in the 1948 crop, the price relationship is shown in Table IX.

Table IX
Relationship of Prices and Sales of Various Size
Groups in Kansas City, 1949

Tuber Size Group	Price per 10-pound Bag		Sales
		Cents	Per cent
Small		20	28
Medium		62	24
Large		65	12
Not sized		59	36

Results of Sizing on Volume Sold

In addition to the premium derived from sizing, the sales of prepackaged Russet Burbanks in several of the cooperating stores were more than doubled. Although all of this increase cannot be

attributed to sizing, it was undoubtedly an important factor. For retailers competing for sales it might prove profitable to those first introducing sized potatoes.

Obstacles to Sizing Russet Burbanks

Sorting potatoes according to size adds considerably to the cost of packing. The present method of doing it by hand is prohibitive in cost except where one particular size group is graded out. There is no feasible mechanical method yet available for cutting costs and speeding up the process.

CONCLUSIONS

An analysis of the information obtained in this study indicates that:

1. More housewives prefer medium-sized Russet Burbank potatoes than any other size. This was true in all the cities investigated although the degree of preference for medium-sized potatoes varied slightly between the cities. When considering the three cities as a group, the small size was second and the large size last in order of preference.

2. Approximately three-fourths of the housewives prefer a particular size over a mixture of sizes. This varied from 73 per cent in Los Angeles to 83 per cent in Kansas City.

3. A substantial portion of the housewives are price-conscious as indicated by the reaction to price changes of 1 or 2 cents per 10-pound bag of potatoes which was priced at approximately 60 cents in the three cities investigated. After the first price change, the majority of the consumers who shifted bought the next lower priced size rather than those which had not been sized. By pricing the medium size 2 cents per 10 pounds higher than the small and the large size 5 cents per 10 pounds higher than the small, the proportion of each size sold was approximately equal to that size produced in the 1948 crop.

4. Housewives as a group are willing to pay a premium to have choice of size among uniformly sized Russet Burbank potatoes. The amount of this premium will depend on the proportion of sized potatoes sold. This study indicates that a premium of approximately 25 cents per 100 pounds could be derived when approximately 65 per cent of the potatoes sold were from the uniformly sized groups in a marketing season such as that of the 1948-49 late crop.

5. The cost of sizing potatoes of the long varieties with present facilities is greater than the premium which could be obtained through sizing a significant portion of the crop. A machine which will handle a large volume of potatoes and will size them accurately according to weight must be developed before sizing can be adopted

on a large scale. Present sizing of Russets is largely confined to the so-called "baker" trade. This sizing is done by hand selection.

6. Sizing would offer indirect benefits in the form of increased sales of prepackaged potatoes. In addition, potatoes which are uniform in size have the appearance of higher quality since the smaller potatoes often appear quite undesirable when mixed with large ones.

7. If sizing is attempted on any appreciable scale, there will be considerable resistance on the part of some wholesalers and retailers. The direct benefits must be substantial or these dealers will object to adding any more lines of produce to their selection. Many stores do not have the space to display more than one or two sizes, and it is likely that some markets would take only certain sizes. The marketing practices with sized potatoes would likely be comparable to that of certain fruits and vegetables which are presently graded according to size. It is quite possible that the large potatoes would bring a greater premium in the hotel and restaurant trade than from the household consumers.

