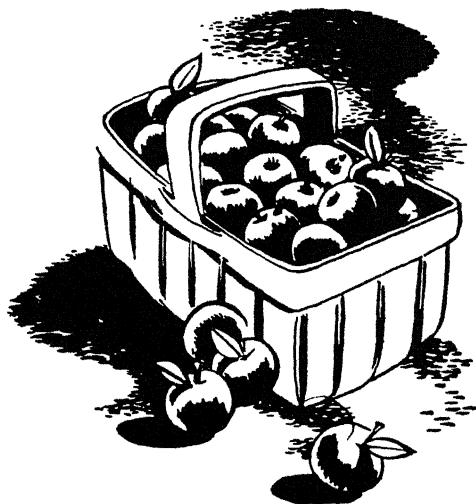


Marketing Apples



through retail
stores in
Cleveland and
the Canton-
Youngstown area

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MARKETING APPLES THROUGH RETAIL STORES IN CLEVELAND AND THE CANTON-YOUNGSTOWN AREA

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SUMMARY

This study was conducted in Cleveland and in the Canton-Youngstown Area of Ohio. A survey was conducted in Cleveland during the week of November 13, 1950 when 118 retail food stores were visited. Eighty-six retail food stores were visited in the Canton-Youngstown Area during the week beginning December 11, 1950. The Canton-Youngstown Survey was the continuation of one made in the fall and winter of 1949 and 1950.

These surveys were conducted to provide both growers and representatives of various marketing agencies with information concerning the marketing of apples through retail food stores so that they might bring about improvement in the marketing of apples.

In Cleveland, 37 to 39 percent of all apple displays in the different types of stores were from Ohio, while from 45 to 67 percent of the apples in the stores in the Canton-Youngstown Area were from Ohio.

McIntosh was the most important variety offered in the retail stores in Cleveland, while Stayman Winesap was the leading variety in the Canton-Youngstown Area at the time of the 1950 surveys.

Shrivelling was not serious in the stores at the time of the 1950 surveys, especially in Cleveland. Only 2.3 to 6.3 percent of the displays in the different types of stores in Cleveland contained shrivelled apples. This compared with from 7.7 to 12.5 percent of the apple displays in the Canton-Youngstown Area in 1950 and from 32 to 55 percent of the displays in the different types of stores during the week of November 28, 1949.

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There was little difference in the bruising of local apples, as indicated by the number of bruises per apple, between independent and chain stores in Cleveland, but there was somewhat more bruising of local apples in the chain stores than in the independent stores in the Canton-Youngstown Area. In terms of the number of apples affected, mechanical breaks was the most important defect other than bruising in all types of stores. Scab was of second importance in independent stores.

Independent retailers in Cleveland were taking an average margin of about 41 percent for local apples and from 33 to 36 percent on western fruit. Chain stores took a margin of 25 or 32 percent on local fruit, depending upon whether or not 10 percent was added to the price paid to compensate for warehouse and other handling costs, and about 28 or 34 percent on western apples.

Independent retailers in the Canton-Youngstown Area took an average margin of from 42 to 46 percent on local fruit and 40 to 41 percent on western fruit. Chain stores took an average margin of about 31 or 37 percent on local and 26 or 33 percent on western apples, the latter percentages being the margin before an adjustment was made for the warehouse functions.

While chain stores ordered fruit much more frequently than independent stores, the latter generally made greater use of refrigeration facilities for holding apples not on display.

Relatively few displays of local apples in the different types of stores in Cleveland were identified as to variety or use. In most cases, a greater proportion of the apple displays in the Canton-Youngstown Area were identified as to variety or use.

The cardboard carton was the container preferred most for local apples with all types of retailers in Cleveland, while the wooden box was preferred by the large independents and the bushel basket by the small independents and chain store produce managers in the Canton-Youngstown Area. The consumer package had been used to a greater extent in the Canton-Youngstown Area than in Cleveland, except in chain stores.

Independent retailers in both areas named color as being the most important factor in purchasing apples. This fact would be expected in view of the development of self-service grocery stores and the importance of appearance in selling.

From this study, some factors which seem to afford an opportunity

for improving the marketing of Ohio apples are:

- (1) Selection of better types of containers for fruit.
- (2) Selection of varieties and adopting practices which provide maximum color.
- (3) Greater uniformity of packs.
- (4) Better handling and storage of apples in the stores, together with identification of apples as to variety or use and price markings on displays.

INTRODUCTION

Ohio apple growers have expressed great concern in recent years regarding problems of marketing their fruit through retail outlets. Some retailers have been reluctant to handle Ohio fruit and have indicated a preference for apples from competing areas.

Ohio normally is a deficit apple producing state. During the period from 1940 to 1949, the average number of bushels produced in Ohio was about three and one-half million, while there were approximately four million bushels consumed fresh based on average per capita apple consumption in the United States.¹ The consumption figure would have been greater had processed apples been included.

Growers are still encountering marketing difficulties despite the fact there are not enough saleable apples produced in Ohio to meet the demand for fresh apples in most years. Ohio growers, in many instances, are not successfully competing with other production areas, as indicated by the predominance of out-of-state fruit in retail stores. A better knowledge of the various factors affecting the consumer's choice of apples should aid the retailer in selling his fruit and should guide the grower in producing and marketing a product more acceptable to the consumer.

PURPOSES OF STUDY

This study was conducted in an effort to determine what can be done to improve the marketing of Ohio apples. The study involved: (1) obtaining source and varieties of apples offered consumers, (2) obtaining information on the quality of apples displayed in stores, (3) sales of apples, (4) determining various merchandising practices followed by retailers, (5) relating margins taken by retailers to various quality and merchandising factors, and (6) obtaining retailers attitudes and opinions.

¹Computed from "Agricultural Statistics," U. S. D. A., 1950; "Crop Production," Crop Reporting Board, U. S. D. A., July 16, 1951.

METHOD OF STUDY

The study was conducted in Cleveland and the Canton-Youngstown Area in Ohio. The latter includes Canton, Youngstown, Alliance and Salem and will be referred to as the Canton-Youngstown Area.

The Cleveland survey was made during the week beginning November 13, 1950, when 116 retail food stores were visited, including 90 independent and 26 chain food stores. Stores were selected by drawing a sample from the route list of grocery outlets published by the Cleveland Plain Dealer. The sample was composed of 4.1 percent of the independent and 10.5 percent of the chain food stores in greater Cleveland.

The Canton-Youngstown survey was conducted during the week beginning December 11, 1950 and included 86 retail stores made up of 68 independent, three fruit and vegetable, and 15 chain food stores. Most of these stores were the same as those covered in a previous study in the 1949-50 marketing season for purposes of comparison.² Four corporate food chain organizations were represented in both areas.

Independent stores were subdivided into "large" and "small" depending upon the amount of space allotted to produce.³ It was necessary to classify independent stores according to size because of the difference in buying and selling habits of store operators depending upon the scale of their operations. The grouping of retail stores in Cleveland and Canton-Youngstown is shown in Table 1.

TABLE 1.—Retail Food Stores Surveyed in Cleveland and in the Canton-Youngstown Area, by Type of Store, November-December, 1949-1950

Store type	Number visited		
	Cleveland	Canton-Youngstown	
	1950	1950	1949
Independent			
Large	45	36	36
Small	45	32	32
Fruit and vegetable	—	3	3
Chain	26	15	14
Total	116	86	85

²"Marketing Apples in the Canton-Youngstown Area of Ohio, 1949-50 Marketing Season," Raymond C. Scott, Department of Agricultural Economics, Mimeograph Bulletin No. 218, Ohio State University, Columbus, Ohio.

SOURCE AND VARIETIES OF FRUIT DISPLAYED

Certain information was obtained concerning each lot, or display, of apples, and included in this information was the variety and source of the fruit. The source was divided into two categories, western and local. All fruit originating in Washington, Oregon or British Columbia was classified as western, and midwestern or eastern apples were classified as local.

SOURCE OF APPLES

Several states were supplying apples to the Cleveland market when this survey was made. Some indication of the keen competition encountered by apple growers selling on this market is revealed in a survey of the Cleveland terminal market which was conducted during the same week as the retail survey. Apples from 11 states and British Columbia were offered on this market.⁴

In the retail stores surveyed in Cleveland, apples from eight states and British Columbia were on display. Other states may have been represented, but in many cases it was difficult to determine the source of fruit because the container had been destroyed.

Ohio apples accounted for from 37 to 39 percent of all the fruit displays in all types of food stores in Cleveland. Chain food stores carried the greatest proportion of Ohio apples, although the proportion of Ohio apples did not differ greatly among different types of stores.

In the Canton-Youngstown Area apples from six states and British Columbia were offered, but a large proportion of the displays were made up of Ohio apples. Almost two-thirds of all the displays in small and large independent establishments and about 45 percent in chain stores were from Ohio. Of the 13 lots of apples observed in fruit and vegetable stores in the Canton-Youngstown Area, approximately 85 percent were from Ohio. Most of this Ohio fruit was supplied by nearby growers who delivered directly to the stores. In the study made during the week of November 28, 1949 in the Canton-Youngstown Area, the proportion of Ohio apples in the stores was even greater.

³Those stores in Cleveland having less than 90 square feet devoted to produce were classed as "small" and those having 90 square feet or more in the produce section were called "large". In the Canton-Youngstown Area those stores with produce sections of less than 150 square feet were classified as "small" and those with 150 square feet or more as "large".

⁴"Some Problems of the Ohio Apple Industry from the Point of View of the Wholesaler," Raymond C. Scott, Department of Agricultural Economics and Rural Sociology, Mimeograph Bulletin No. 224, Ohio State University, Columbus, Ohio.

More than three-fourths of the displays in large and small independent stores were from Ohio and about 73 percent of chain food store displays were made up of Ohio apples.

Other midwestern and eastern states were an important source of fruit in the retail stores in Cleveland. About 25 percent of the displays observed in large independent stores and 18 percent in small independent establishments were from midwestern or eastern states other than Ohio. About 24 percent of those displays observed in the Cleveland chain stores were composed of apples from nearby states.

Midwestern and eastern fruit, other than that from Ohio, was relatively unimportant in the Canton-Youngstown Area. Only about six percent of the apples in large independent and two percent in small independent stores came from midwestern and eastern states other than Ohio. This figure for the chain stores was less than 10 percent. It is apparent that the high degree of competition from other midwestern and eastern states which was evident in Cleveland, was lacking in the Canton-Youngstown market. Washington was the only important state competing with Ohio in the Canton-Youngstown Area, although New York was the most important out-of-state source of local apples.

Western fruit was quite important in the independent stores in Cleveland. Of the displays observed in these stores, about 30 percent in the large and 32 percent in the small were western. About 28 percent of the chain store displays in Cleveland were from the west.

Western fruit was less important in the independent stores in the Canton-Youngstown Area than in Cleveland. Only about one-fourth of the displays in both large and small independents consisted of western apples. In the chain stores in the Canton-Youngstown Area, western fruit accounted for almost 46 percent of all fruit displayed in those stores.

VARIETIES DISPLAYED

There were 14 varieties of local apples offered for sale in the Cleveland retail stores and 13 in the Canton-Youngstown Area at the time of the surveys in 1950. The importance of some of the common varieties differed greatly between the two areas (Table 2).

McIntosh was the most important variety offered in Cleveland and retailers asserted that it was an excellent selling variety for their trade. Jonathan and Delicious ranked second and third. In the Canton-Youngstown Area, Delicious ranked first in importance at the time of the 1949 survey and Stayman Winesap was the leading variety when the 1950 survey was made. Delicious was only fourth in importance

**TABLE 2.—Varieties of Local Apples Displayed in Retail Stores,
Cleveland and the Canton-Youngstown Area, Ohio,
November-December, 1949-1950**

Variety	Proportion of displays		
	Cleveland	Canton-Youngstown	
	November 1950	December 1950	November 1949
McIntosh	25.1	5.1	1.5
Jonathan	18.7	12.6	14.8
Delicious	14.8	12.0	18.9
Stayman Winesap	6.9	17.1	15.8
Baldwin	6.4	16.6	13.8
York Imperial	6.4	—	—
Cortland	5.4	5.1	4.6
Greening	4.9	—	—
Rome Beauty	2.5	8.6	4.1
Northern Spy	2.0	2.9	—
Golden Delicious	1.5	4.6	8.2
Grimes Golden	—	9.1	4.6
Other	5.4	6.3	13.7
Total	100.0	100.0	100.0

in 1950, but the season was more than two weeks later when the 1950 study was conducted. The fact that the four leading varieties were the same in both 1949 and 1950 in Canton-Youngstown would seem to indicate that preferences for these varieties are rather definite in this marketing area.

It is interesting to note the absence of Grimes Golden apples on the Cleveland market. Even though the Cleveland study was made much earlier than the Canton-Youngstown survey, there were no apples of the Grimes Golden variety on display in the retail stores visited in Cleveland. This fact coincides with some retailers' opinions that yellow varieties do not sell on the Cleveland market. There were only three displays of yellow apple varieties observed out of a total of 203 in the Cleveland stores and all were Golden Delicious. Yellow varieties were of greater importance in Canton-Youngstown, however, where 16 displays of Grimes Golden and 10 of Golden Delicious out of a total of 175 displays were observed in 1950. Yellow varieties were about equally as important at the time of the 1949 Canton-Youngstown survey.

Western apples were quite important in both Cleveland and the Canton-Youngstown Area. About 30 percent of all displays observed

in both areas were western apples. Almost all of this fruit was the Delicious variety.

It appears that the grower might gain materially by becoming acquainted with the acceptance of the various varieties in the market in which he expects to move his fruit. Some varieties are definitely more acceptable than others on any one market, and the grower would do well to approach the problem of varieties with this in mind.

QUALITY OF FRUIT OFFERED FOR SALE

Certain information concerning the condition of the apples was obtained by observing the fruit in the retail stores. Ten apples were selected at random from each lot, or display, of fruit in the stores, and the observer recorded the defects on each fruit in accordance with the U. S. Grade Standards.

EXTENT OF SHRIVELLING

Shrivelling was not a serious problem at the time of the 1950 surveys, but was significant when the Canton-Youngstown survey was conducted in November 1949 (Table 3). The unusually warm fall in 1949 was probably responsible for much of the shrivelling since common storages are numerous in the Canton-Youngstown Area. Another factor having an effect upon the severe shrivelling in 1949 as compared to relatively little shrivelling in 1950, is the fact that common storages were probably used to a greater extent for fruit marketed in November when the 1949 study was conducted, than in December when the 1950 study was made. Some of the shrivelling was also due to improper handling of the fruit in the store.

BRUISING

The number of bruises (one-fourth of an inch in diameter and larger) on each apple, as well as the number of apples with severe bruises was recorded for each sample. Severe bruises were those which were discolored or large enough to seriously detract from the appearance of the apple.

While the number of bruises per 100 apples varied little between fruit was more serious in the chain stores than in the independent stores types of stores in Cleveland, severe bruising of both local and western (Table 4).

Bruising of local apples in the Canton-Youngstown retail stores was less serious in terms of the number of bruises than in the Cleveland stores. The local fruit in the independent stores in Canton-Youngstown was bruised less than that observed in the chain stores in both the 1949 and 1950 studies. The number of bruises per 100 local apples in the

TABLE 3.—Proportion of Displays of Local Fruit Containing Shrivelled Apples in Cleveland and the Canton-Youngstown Area, Ohio, November-December, 1949-1950

Type of store	Percent of displays containing shrivelled apples		
	Cleveland	Canton-Youngstown	
	November 1950	November 1949	December 1950
Independent			
Large	6.3	36.3	7.7
Small	4.8	55.2	12.5
Chain	2.3	32.0	—

chain stores was 844 at the time of the November 1949 survey, compared with only 545 in December 1950.

Bruising was approximately the same, on the average, in the independent stores in both 1949 and 1950 surveys amounting to about 500 bruises per 100 apples or less in large and small stores. The relatively low rate of bruising of local fruit in the Canton-Youngstown independent stores can be attributed in part to the direct delivery practice of many growers supplying the stores with fruit.

TABLE 4.—Number of Displays and Bruising Observed on Local and Western Non-Shrivelled Apples, Cleveland, November, 1950, and the Canton-Youngstown Area December, 1950

Type of store	Local Apples			Western Apples		
	Number of displays	Number of bruises per 100 apples	Percent of apples with severe bruises	Number of displays	Number of bruises per 100 apples	Percent of apples with severe bruises
	Cleveland					
Independent						
Large	73	570.1	8.2	31	524.5	2.3
Small	51	569.6	5.9	29	539.7	3.4
Chain	62	571.9	14.4	24	507.1	5.4
	Canton-Youngstown					
Independent						
Large	75	501.3	4.5	33	557.3	5.2
Small	50	473.8	5.2	20	603.5	2.5
Chain	18	545.0	4.4	15	582.7	7.3

This resulted in less handling and consequently, less bruising of the fruit in most cases. The four quart basket was used to a greater extent in the independent stores in the Canton-Youngstown Area, and there was less bruising of the fruit in these containers than in most other types of containers in the independent stores.

Severe bruising of the local fruit was even less significant in the Canton-Youngstown Area than in Cleveland at the time of the 1950 study. Here again the direct delivery practice of many growers in the Canton-Youngstown Area probably reduced bruising. There was slightly more severe bruising observed, however, in the independent stores in Canton-Youngstown in 1950 than in 1949, but considerably less in the chain stores.

There were more bruises per 100 apples of western fruit in the Canton-Youngstown retail stores than in the Cleveland stores in 1950, although the difference was not very great. Severe bruising of western apples was much more serious in the Canton-Youngstown Area when the survey was conducted in November of 1949 at which time about eight to 17 percent of the western apples in the different types of stores were severely bruised.

OTHER DEFECTS

A record was taken of various defects other than bruising on the apples displayed. The number of apples in the sample bearing a defect severe enough to eliminate them from the U. S. No. 1 grade was recorded in each case, except for those with mechanical breaks.

Mechanical breaks was the most serious defect, other than bruising, in terms of the number of apples affected in the retail stores in Cleveland (Table 5). Breaks were more serious in the independent than in the chain stores on local fruit. Scab was the next most important defect in the independent stores while decay was the second most important in chains.

Defects other than bruising were insignificant on the western apples observed in the Cleveland retail stores. Few defects were found on more than one percent of the western fruit inspected.

Mechanical breaks were observed on more apples than any other defect other than bruising in the Canton-Youngstown Area also, although this defect was not nearly so serious as in Cleveland (Table 6). Direct deliveries to the independent stores in the Canton-Youngstown Area and the resulting less handling of the fruit was probably responsible in part for this fact.

TABLE 5.—Proportion of Local Apples Observed with Various Defects, by Type of Store, Cleveland, November 1950

Defect	Proportion of apples with defects		
	Large Independent	Small Independent	Chain
Breaks	22.7	22.0	14.8
Scab	6.8	6.1	1.9
Russetting	3.7	2.7	3.1
Decay	3.7	2.7	5.5
Spots ³	2.6	1.0	5.2
Sting	2.1	3.9	1.3
Worm injury	1.9	1.4	1.8

³Includes Jonathan spot, Baldwin spot, bitter pit.

In general, defects other than bruising were less serious in the independent stores at the time of the 1950 survey than at the time of the 1949 study in the Canton-Youngstown Area. Scab was the second most serious defect on local apples in the independent stores in the 1950 survey and was first in importance in the 1949 study. The extent of injury due to mechanical breaks was not obtained in the 1949 survey, however. Scab was less of a problem in 1950 than in 1949 in the independent stores.

TABLE 6.—Proportion of Local Apples Observed with Various Defects, by Type of Store, Canton-Youngstown Area, November-December, 1949-1950

Defect	Proportion of apples with defects					
	Large Independent		Small Independent		Chain	
	1950	1949	1950	1949	1950	1949
Breaks	11.9	¹	12.0	¹	11.7	¹
Scab	8.3	8.5	4.2	5.8	2.2	1.2
Russetting	6.3	7.4	2.8	4.6	3.3	3.5
Decay	2.1	2.0	3.0	2.7	—	—
Spots	1.7	5.4	2.8	1.9	0.6	—
Stings	1.3	3.1	0.6	4.6	1.7	—
Worm injury	0.5	3.4	1.2	1.5	0.6	1.2

¹Injury from breaks not observed in the 1949 survey.

Western fruit in the Canton-Youngstown retail stores was relatively free from defects other than bruising, with less than one percent having severe defects other than decay.

RELATIONSHIP OF CERTAIN FACTORS TO BRUISING BULK AND CONSUMER PACKAGES

An attempt was made to relate the amount of bruising per 100 local apples to the type of container in which apples arrived at the retail store. The types of containers were classified into bulk and consumer packages. Bulk containers included all types other than mesh or transparent bags and four quart baskets.

In only one case were there sufficient lots of local apples arriving at the stores in consumer packages to make a comparison with the fruit arriving in bulk containers, and this was in Cleveland chain food stores. The fruit in bulk packages averaged 661 bruises per 100 apples compared with an average of about 450 bruises per 100 apples in consumer packages. Of the apples arriving in consumer packages, eight lots were in four quart baskets and averaged 325 bruises per 100 apples.

DELIVERING AGENCY

Local apples delivered directly by growers to independent retail food stores in Cleveland were bruised considerably less than fruit delivered by a wholesaler or by a grocer. Apples delivered to the stores by growers averaged about four bruises compared to almost six bruises on the local fruit delivered by the other agencies. Fruit delivered by the wholesaler was bruised slightly more than the apples which were picked up on the wholesale market by the grocer.

Of the local fruit observed in the independent stores in the Canton-Youngstown Area, the apples delivered by the grocer had slightly fewer bruises than those delivered by the grower and considerably fewer than those delivered by wholesalers. Fruit delivered by a wholesaler averaged more than six bruises per fruit compared to less than five per apple in the case of that delivered by the grower and grocer.

All of the local apples displayed in the chain stores in the Canton-Youngstown Area and most of those in Cleveland were delivered by the chain warehouse. There was slightly less bruising of apples delivered by the chain warehouse than those delivered by wholesalers to independent stores.

There was more bruising of western apples in independent stores if they were delivered by a wholesale agency than if the grocer called for the fruit at a wholesale establishment and delivered it himself. There

were about 50 more bruises per 100 apples when delivery was made by the wholesaler rather than the grocer to the independent stores in both areas studied.

All western apples in chain stores were delivered by the warehouse. Western fruit averaged about five bruises per apple in Cleveland chain stores and slightly more than six per apple in the Canton-Youngstown chain stores. The western fruit delivered by the chain warehouses in Canton-Youngstown was bruised more than that in the independent stores in this area delivered by either the grocers or wholesalers. In Cleveland, most bruising occurred when the western fruit was delivered by a wholesaler.

SALES

Retailers were asked to estimate their sales of both local and western apples during the week prior to the survey. Average sales of local apples exceeded those of western in large and small independent stores in both areas studied (Table 7).

There was little difference between the sale of local and western apples in the Cleveland chain stores. It is interesting to note the large sales volume of western apples compared to the relatively small average sales per store of local fruit in the chain stores in the Canton-Youngstown Area. At the time of this survey chains were placing considerable emphasis on western apples and four of the 13 chain stores from which sales information was obtained sold only western apples. While the sample of chains in the Cleveland area contained several small neighborhood units, the chain stores in the Canton-Youngstown Area were all of the large self-service type.

TABLE 7.—Average Sales per Store, by Local and Western Apples, by Type of Store, Cleveland, Week of November 6, and Canton-Youngstown Area, Week of December 4, 1950

Type of store	Cleveland				Canton-Youngstown	
	Number of stores	Average bushels sold		Number of stores	Average bushels sold	
		Local	Western		Local	Western
Independent						
Large	44	6.2	3.6	36	8.9	5.5
Small	37	1.5	1.2	29	2.7	1.9
Chain	25	11.9	12.3	15	8.1	28.3

PRICES AND MARGINS

The price paid and received for each lot or display of apples was obtained. Ten percent was added to the cost of the apples in all chain stores to cover the handling and delivery costs performed by the chain warehouse. The margins taken were related to type of store, source, quality, and color of the fruit.

RELATIONSHIP OF PRICES AND MARGINS⁵ TO CERTAIN FACTORS

Type of Store

There was little difference in the margins taken between large and small independent retailers on both local and western fruit in Cleveland and in the Canton-Youngstown Area (Table 8). In both areas studied, margins taken by independent retailers were greater than those taken by the chain food stores for local and western apples. It must be recognized, however, that independent retailers often perform services such as credit and delivery which add to their cost of operation. The margins are gross and approximate since they are based on a fixed weight (45 pounds per bushel) and do not take into account spoilage losses.

The margins taken on local apples in independent and chain stores in the Canton-Youngstown Area were found to be slightly greater in the survey conducted during the week of November 28, 1949 than in the 1950 survey, but the margins taken on western apples were somewhat greater at the time of the 1950 survey.

Large independent retailers paid an average of 3.4 cents per pound for local apples during the week of the 1949 study and received 6.5 cents per pound with an average margin of almost 48 percent. The small independent store operators paid 3.7 cents per pound for local fruit at the time of the 1949 survey and received seven cents per pound with an average margin of 47 percent.

The average adjusted price paid for local apples in the chain stores was 4.8 cents per pound and an average price of seven cents was received during the week of the 1949 study. The average margin taken on local apples was 31.4 percent.

Large independent retailers paid an average price of 8.6 cents per pound for western apples during the 1949 study and received 13.2 cents per pound, thus realizing a margin of almost 35 percent. The average price paid per pound for western apples by small independent retailers

⁵Margins were calculated by dividing the average mark-up by the average price received.

TABLE 8.—Number of Displays, Average Price Paid¹ and Received, and Average Margins Taken by Retailers for Local and Western Non-Shrivelled Apples, by Type of Store, Cleveland, November, 1950, and Canton-Youngstown Area, December, 1950

Local apples				
Type of store	Number of displays	Average price per pound		Average margin (percent)
		Paid	Received	
(cents)				
Cleveland				
Independent				
Large	70	6.1	10.3	40.8
Small	49	6.2	10.6	41.5
Chain	57	6.7 ²	8.9	24.7 ³
Canton-Youngstown				
Independent				
Large	69	5.2	9.7	46.4
Small	41	5.3	9.1	41.8
Chain	17	5.7 ⁶	8.2	30.5 ⁷
Western apples				
Type of store	Number of displays	Average price per pound		Average margin (percent)
		Paid	Received	
(cents)				
Cleveland				
Independent				
Large	33	10.3	15.4	33.1
Small	27	10.0	15.5	35.5
Chain	25	10.4 ⁴	14.4	27.8 ⁵
Canton-Youngstown				
Independent				
Large	31	9.3	15.5	40.0
Small	18	9.3	15.8	41.1
Chain	15	10.0 ⁸	13.6	26.5 ⁹

¹Price paid per pound determined by dividing the bushel price by 45 pounds.

²6.1 without adjustment for wholesaling function performed by warehouse.

³31.5 without adjustment for wholesaling function performed by warehouse.

⁴9.5 without adjustment for wholesaling function performed by warehouse.

⁵34.0 without adjustment for wholesaling function performed by warehouse.

⁶5.2 without adjustment for wholesaling function performed by warehouse.

⁷36.6 without adjustment for wholesaling function performed by warehouse.

⁸9.1 without adjustment for wholesaling function performed by warehouse.

⁹33.1 without adjustment for wholesaling function performed by warehouse.

during the November 1949 survey was 8.7 cents and the average price received per pound was 13.9 cents. The average margin taken was 37.4 percent. Price paid was obtained only on a limited number of displays in chain stores at the time of the November 1949 study.

Source of Apples

Both large and small independent store operators in Cleveland and the Canton-Youngstown Area took a greater average margin on local than on western apples although the differences were more pronounced in Cleveland (Table 8). The chain stores in Cleveland received a greater average margin for western than for local apples, but the reverse was true in the chains visited in the Canton-Youngstown Area.

Defects

The quality of local fruit in stores was related to the margins taken. The apples observed were classified into two categories, fruit with no defects and fruit with one or more defects. No defects refers to samples that did not have defects serious enough to eliminate them from the U. S. No. 1 grade. One or more defects refers to samples having enough serious defects to eliminate them from the U. S. No. 1 grade. Ten apples from each display selected at random were inspected for defects. Fruit having no defects will be referred to as "high quality" and the fruit with one or more defects will be called "lower quality" in this report.

The average margin taken by large and small independents in Cleveland was about the same on the fruit having no defects as on fruit having one or more defects, even though the price of the fruit was higher (Table 9).

Chain stores in Cleveland took a slightly greater average margin for the lower quality apples than for the apples without defects which would eliminate them from the U. S. No. 1 grade.

The large independent store operators in the Canton-Youngstown Area paid slightly more for high quality fruit, but sold both high and low apples at the same average price thereby realizing a slightly greater average margin on the low quality fruit. The small independent retailers realized about the same average margin on low and high quality fruit. The same average margin was received for both high and low quality apples in the chain stores in the Canton-Youngstown Area.

The information obtained on the relationship of prices and margins to quality of the fruit indicates that there is room for improvement in the pricing of apples in the retail stores. In some of the stores both

TABLE 9.—Average Prices Paid and Received and Margins Taken by Retailers for Local Apples, by Quality and Type of Store, Cleveland, November 1950 and the Canton-Youngstown Area, December 1950

Type of store	No defects			One or more defects		
	Average price per pound		Average margin	Average price per pound		Average margin
	Paid	Received		Paid	Received	
(cents)	(cents)	(percent)	(cents)	(cents)	(percent)	
Cleveland						
Independent						
Large	6.5	11.0	40.9	6.0	10.1	40.6
Small	6.4	10.8	40.7	6.0	10.4	42.3
Chain	6.8 ¹	8.9	23.6 ²	6.6 ³	8.9	25.8 ¹
Canton-Youngstown						
Independent						
Large	5.5	9.7	43.3	5.2	9.7	46.4
Small	5.4	9.4	42.6	5.3	9.1	41.8
Chain	5.7 ⁵	8.2	30.5 ⁶	5.7 ⁵	8.2	30.5 ⁶

¹6.2 without adjustment for wholesaling function performed by warehouse.

²30.2 without adjustment for wholesaling function performed by warehouse.

³6.0 without adjustment for wholesaling function performed by warehouse.

⁴32.6 without adjustment for wholesaling function performed by warehouse.

⁵5.2 without adjustment for wholesaling function performed by warehouse.

⁶36.6 without adjustment for wholesaling function performed by warehouse.

high and low quality fruit was selling at or near the same price despite the fact that retailers were purchasing the low quality fruit at a lower average price in many cases. It must be recognized, however, that the cost of weighing and merchandising lower quality fruit may be as great as for high quality fruit and that spoilage and throwout losses may be greater on lower quality fruit. Therefore, the cost of handling lower quality fruit may be as great or greater than that of handling the high quality apples.

Color

Local apple displays were classified on the basis of color according to U. S. Grade Standards with all varieties combined. All but a few of the displays graded either U. S. No. 1 or U. S. Fancy on color. This information is presented to give some indication of the emphasis which

retailers were placing on the color of apples when purchasing and pricing them.

There was little difference in the margins taken between fruit with U. S. Fancy and U. S. No. 1 color in Cleveland. The large independent store operators paid and received more for U. S. Fancy colored fruit than for fruit with U. S. No. 1 color (Table 10). The small independent retailers paid and received a slightly lower average price for fruit with U. S. Fancy color than for fruit with U. S. No. 1 color. The chain stores paid slightly more for apples with U. S. Fancy color and sold them at a higher price than fruit with U. S. No. 1 color.

Independent store operators in the Canton-Youngstown Area obtained a greater margin on apples with U. S. No. 1 color, but both paid and received a greater average price for fruit with U. S. Fancy color. Chain stores paid about one-third of a cent more for fruit with U. S. Fancy color, on the average, than for U. S. No. 1 colored fruit, but sold both at the same average price receiving a slightly greater margin for fruit with U. S. No. 1 color.

MERCHANDISING PRACTICES AND POLICIES

Information was obtained from all the retailers interviewed regarding the practices and policies which they followed in their apple merchandising programs.

FREQUENCY OF PURCHASES

Independent retailers purchased apples less often than did chain retailers. In Cleveland 73 percent of the large and 45 percent of the small independent store operators purchased apples twice weekly or more often. About seven percent of the large independent retailers purchased apples daily, but none of the small independent operators made daily purchases. About 60 percent of the chain stores ordered apples daily and 72 percent ordered apples from the warehouse either daily or five times weekly.

In the Canton-Youngstown Area, 77 percent of the large and 73 percent of the small independent store operators bought apples twice weekly or more often. Almost 10 percent of the large and four percent of the small independent retailers purchased apples either daily or five times weekly. All of the chain stores ordered fruit twice or more weekly and 45 percent ordered fruit daily from the chain warehouse.

The fact that chain stores in both areas received apples more frequently than independent stores can only be partially explained by the

TABLE 10.—Average Prices Paid and Received and Average Margins Taken on Local, Non-Shrivelled Apples, by Color and Type of Store, Cleveland, November 1950 and Canton Youngstown Area December, 1950

Color	Independent						Chain			
	Large			Small			Chain			
	Average price per pound		Average margin (percent)	Average price per pound		Average margin (percent)	Average price per pound		Average margin (percent)	
	Paid (cents)	Received (cents)		Paid (cents)	Received (cents)		Paid (cents)	Received (cents)		
	Cleveland									
U. S. Fancy	6.4	11.1	42.3	6.2	10.3	39.8	6.8 ¹	9.1	25.3 ²	
U. S. No. 1	6.0	10.2	41.2	6.5	10.9	40.4	6.6 ³	8.8	25.0 ⁴	
	Canton-Youngstown									
U. S. Fancy	6.2	10.8	42.6	5.9	9.4	37.2	5.9 ⁵	8.2	28.0 ⁶	
U. S. No. 1	5.2	9.5	45.3	5.3	9.2	42.4	5.6 ⁷	8.2	31.7 ⁸	

¹6.2 without adjustment for wholesaling function performed by warehouse.

²31.9 without adjustment for wholesaling function performed by warehouse.

³6.0 without adjustment for wholesaling function performed by warehouse.

⁴31.8 without adjustment for wholesaling function performed by warehouse.

⁵5.4 without adjustment for wholesaling function performed by warehouse.

⁶34.1 without adjustment for wholesaling function performed by warehouse.

⁷5.1 without adjustment for wholesaling function performed by warehouse.

⁸37.8 without adjustment for wholesaling function performed by warehouse.

fact that chain stores usually had a greater sales volume and that opportunity for daily deliveries is generally provided by the warehouse. The fact is that some independent retailers were buying apples in relatively large quantities and holding them until needed later the same week or during the following week. Some of the retailers were storing these apples in a back room or basement, while others were placing them under refrigeration until needed.

USE OF REFRIGERATION

Independent retailers in both the Cleveland and the Canton-Youngstown Area used refrigeration to a great extent in storing apples not on display. Chain stores did not generally place as great a proportion of the fruit on display as did the independent store operators.

About 56 percent of both large and small independent store operators in Cleveland placed on display all the apples that they received. Of those not displaying all fruit on hand, 55 percent of the large and 62 percent of the small independent retailers kept extra fruit in a cooler. About one-fourth of the chain stores placed all apples on display and about 10 percent of those not displaying all apples on hand used the cooler for storing apples.

In the Canton-Youngstown Area 31 percent of the large and 56 percent of the small independent retailers kept all apples on display. Of those stores which did not place all apples on display, about 60 percent of both large and small independents used the cooler as a storage place. Thirteen percent of the chain stores kept all fruit on display, while 31 percent of the remainder used the cooler for storage.

These facts might indicate without further analysis that independent retailers were doing a better job of handling apples in the store. It should be noted that independent stores usually do not receive fruit as often as chain stores. Chain stores generally receive apples either daily or every other day and the fruit is stored for a very short time until placed on display. Independent operators for the most part handle smaller quantities of apples and often use the cooler for storing the fruit until needed.

SIZE OF DISPLAY

Eighty-two percent of the local and about 96 percent of the western apple displays in Cleveland chain stores contained one or more bushels. In the large independent stores about 55 percent of the local and 60 percent of western displays consisted of one or more bushels compared with 31 percent of the local and 24 percent of the western displays in small independent stores.

All of the displays of western fruit and about 94 percent of the local apple displays in the Canton-Youngstown chain stores contained one bushel or more. Of the displays observed in large independent establishments, approximately 65 percent of the local and 82 percent of the western consisted of one or more bushels. The displays in small independent stores were relatively small, however, as indicated by the fact that only about 46 percent of the local and 14 percent of the western displays were composed of one bushel or more.

A possible explanation for the larger displays of western apples is that almost all of the western fruit was the Delicious variety and was offered for sale in one or two large displays, whereas there were frequently several varieties of local fruit offered in small displays.

METHOD OF DISPLAY

Bulk, dry rack, including display island, was the most common method employed by independent retailers in both areas studied to display local and western apples. Many other methods were used, however, involving several types of containers.

In Cleveland, about 49 percent of the displays in large and 25 percent in small independent stores were in bulk. The most important wholesale packages used for displaying apples were the bushel basket and cardboard carton with the former being slightly more important than the latter. Consumer packages were not used in the large independent stores and accounted for only about four percent of the displays in the small independent stores.

The consumer package was the most important method of display for local apples in chain stores in Cleveland. It was used for about 46 percent of the displays compared with 43 percent displayed in bulk.

Bulk was the most common method of displaying local apples in the independent stores in the Canton-Youngstown Area where about 37 percent of the displays in the large and 33 percent of those in small independent stores were in bulk, dry rack. Both the wooden box and consumer package were used for about 19 percent of local displays in large independent stores and the bushel basket for 12 percent. The wooden box and bushel basket were each used for about 26 percent of all local displays by small independent retailers. The consumer package was the fourth most common means of display employed by small independent stores and was used for about eight percent of the displays.

The consumer package was the most common means of displaying local apples in the Canton-Youngstown chain stores. Apples offered in one-third of the displays in these stores were entirely in consumer pack-

ages and about 28 percent of the lots of local fruit were displayed in both bulk and consumer packages. Thus, consumers had an opportunity to buy prepackaged, local apples from about 60 percent of the displays. Several of the chain stores followed the practice of packaging apples from bulk displays during slack periods so that time consuming weighing of the fruit could be avoided during busy hours. Bulk, dry rack was the second most important method of display in the chain stores surveyed in Canton-Youngstown, being used for 22 percent of the displays.

Western apples were displayed mostly in bulk in both Cleveland and the Canton-Youngstown Area. The wooden box was used quite extensively by independent retailers in both areas, but was not used in the chain stores as a means of display. Chain stores in both areas made up displays of bulk and consumer packages which were packaged by store personnel.

EXTENT TO WHICH PRICE WAS INDICATED ON DISPLAYS

The selling price was definitely lacking on many displays in the independent stores surveyed in Cleveland. Of the displays of local fruit, only about 30 percent in the large and 22 percent in the small independent stores had price markings. Price was indicated on about one-fourth of the displays of western fruit in independent stores.

Price markings were more numerous in the independent stores in the Canton-Youngstown Area, especially in large independent stores. Price was indicated on 67 percent of local displays in large independents compared with 45 percent in small independent stores. Of the displays of western fruit, about 88 percent in the large and 32 percent in the small independent stores had price markings.

The chain stores in both areas were showing the selling price on a large proportion of the displays. In the Cleveland chain stores, price was shown on 71 percent of local displays and 88 percent of the western displays, while in the Canton-Youngstown chain stores price was indicated on 83 percent of the local and on all the western apple displays.

EXTENT TO WHICH USE OR VARIETY WAS INDICATED ON DISPLAYS

Some advantage might accrue to the retailer and grower if the consumer were informed as to the variety and the use or uses for which apples offered at retail are best adapted. Many consumers cannot recognize varieties and have no knowledge of the best use of an apple merely by observing it. In a recent consumer survey conducted in several retail stores in Columbus, Ohio in which seven varieties of local

apples were displayed, the proportion of customers identifying certain important varieties of Ohio apples varied from one to 26 percent.⁶

Relatively few independent retailers in Cleveland identified apples on display as to variety or use. A larger proportion of the independent retailers in the Canton-Youngstown Area marked variety and use on displays.

In general, a greater proportion of the apple displays in chain stores were marked as to variety or use than in independent stores, the main exception being on local apples displayed in the Canton-Youngstown Area. With the exception of small independents in Canton-Youngstown a much greater proportion of western apples were marked as to variety than local apples.

The extent to which displays were marked as to variety or use in the various types of stores is shown in Table 11.

TABLE 11.—Proportion of Apple Displays which were Marked as to Variety or Use, Cleveland and Canton-Youngstown Area, November-December, 1950

Area and type of store	Percent of displays identified as to			
	Variety		Use	
	Local	Western	Local	Western
Cleveland				
Independent				
Large	11.0	11.8	1.4	—
Small	3.7	17.2	1.8	—
Chain	19.0	52.0	19.0	—
Canton-Youngstown				
Independent				
Large	35.5	63.6	6.6	9.1
Small	21.6	18.2	9.8	4.6
Chain	11.1	93.3	33.3	6.7

⁶"A Study of Customers Knowledge of Certain Apple Varieties, Purchasing Habits, Uses of Apples in the Home and Related Factors, Six Selected Stores, Columbus, Ohio, December 1950 and January 1951," James W. Neu and Raymond C. Scott, Department of Agricultural Economics and Rural Sociology, Mimeograph Bulletin No. 229, Ohio State University, Columbus, Ohio, October 1951.

RETAILERS' ATTITUDES, PREFERENCES AND RECOMMENDATIONS

Part of the study consisted of obtaining retail food store operators' opinions, attitudes and recommendations concerning certain factors involved in the marketing of apples. It is essential that the grower have an understanding of the retailers' point of view so that he will appreciate the problems encountered by the retailer, will be in a position to carry on a more satisfactory relationship with him and be in a position to supply the retailer with the type of product best adapted to meet the needs of his trade. It is really the ultimate consumer who makes the final decisions and these decisions are reflected to the grower through the retailer and other marketing agencies.

TYPE OF CONTAINER

The cardboard carton, usually jumble packed, was definitely the most popular type of container in Cleveland. Roughly 45 percent of the retail store operators of both independent and chain stores expressed a preference for this container over all others for local apples primarily because of less bruising and ease of handling. The bushel basket was the next most popular with between 19 and 29 percent of the retailers in the different types of stores indicating a preference for this type of container. Various reasons were given for its popularity, the most common being; easier to handle, more weight, and can sell or use when empty. Consumer packages were the third choice of chain store produce managers, but were not mentioned by independent retailers in Cleveland.

The cardboard carton was not so popular in the Canton-Youngstown Area except in the chain stores where 40 percent of the produce managers indicated a preference for it primarily because of less bruising. The leading container (preferred by 31 percent of the retailers) in the large independent stores was the wooden box and this container ranked second (preferred by 31 percent of the retailers) in popularity with the small independent store operators. Retailers preferring the wooden box expressed the opinion that there was less bruising of the fruit in this type of container. Another reason for the popularity of the wooden box was the fact that nearby growers were delivering to the stores in boxes and the store operators could sell the fruit directly from them. The growers would then pick up the empty containers when later visits were made to the store. The same container could be re-used many times in this manner, resulting in a savings to both the retailer and the grower.

The bushel basket (ring faced) was first in popularity (about 35 percent of the retailers) among operators of small independent stores and second (about 17 percent of the retailers) with large independent retailers and chain store produce men in the Canton-Youngstown Area. The most common reason given by retailers in that area who preferred the bushel basket was that less bruising occurred.

Field crates were the third most popular type of container preferred by operators of independent stores in the Canton-Youngstown Area. Various opinions were offered by retailers preferring this container including less bruising, more weight, and easier to handle.

Consumer packages were mentioned by less than seven percent of chain store produce managers and by about three percent of the small and eight percent of the large independent retailers in the Canton-Youngstown Area as the preferred container.

TYPE OF PACK

Operators of large independent stores in both Cleveland and Canton-Youngstown preferred jumble packed apples over faced packages. Of those operators indicating a choice for either faced or jumble packed fruit, slightly more than 55 percent preferred jumble packed apples. Most of these retailers commented that they placed much mistrust in faced packaged fruit due to previous experience with "false packs," and for this reason preferred jumble packed fruit. Other reasons frequently given were: uniform grading throughout pack and less bruising.

Operators of small independent stores in both areas, however, preferred faced packages. Sixty-six percent of the operators in Cleveland and 57 percent of those in the Canton-Youngstown Area who indicated a preference for either faced or jumble packed fruit named faced packages as their choice. Most of these operators indicated that the appearance of faced packages was the reason for their choice because they could sell more apples due to the attractiveness of this type of pack. The fact is that few apples are sold by the bushel and there is little advantage from the ring face since it is destroyed after the first few sales. A few were of the opinion that they received better quality fruit in faced packages.

Faced packages were preferred in 68 percent of the Cleveland chain stores because of appearance, but jumble packed fruit was the preference in 57 percent of the chains in the Canton-Youngstown Area largely because of uniform quality throughout the pack.

CONSUMER PACKAGES

An attempt was made to ascertain the attitudes of retailers toward prepackaged apples. Due to the recent widespread development of consumer packages it should be of interest to see what faith retailers are placing in them.

It was first determined how many retailers had tried to sell consumer packages in their stores. Of the large independent store operators, 20 percent had handled prepackaged apples in Cleveland whereas almost 64 percent had sold them in Canton-Youngstown. Of the small independent store operators, only about eight percent had handled prepackaged apples in Cleveland and about 35 percent in the Canton-Youngstown Area. The fact that consumer packages have been handled by a greater proportion of the retailers in the Canton-Youngstown Area is no doubt partly due to the fact that some growers in this area were providing direct delivery of their own prepackaged apples to retail stores.

All chain stores in Cleveland had handled prepackaged fruit and all but one in Canton-Youngstown had sold apples in consumer packages.

In addition to determining the extent to which consumer packages had been handled by the stores, information was obtained concerning store operators' attitudes toward the future of the consumer package. Twenty percent in Cleveland and about 40 percent in Canton-Youngstown of the large independent retailers indicated a favorable attitude toward consumer packages. Of the attitudes of small independent retailers, 21 percent in Cleveland and 17 percent in Canton-Youngstown were favorable.

About the same proportion of the large independents in Cleveland were favorable toward consumer packages as had handled them. In Canton-Youngstown, however, only 40 percent of the large independent retailers indicated a favorable attitude toward the future of consumer packages, whereas almost 64 percent had sold them. Obviously some of the retailers either had not been successful in selling consumer packages or were not fully satisfied with them.

Of the small independent store operators in Cleveland, a greater proportion indicated a favorable attitude toward prepackaged apples than had attempted to sell them. In the Canton-Youngstown Area, about one-half as many of the small independent operators indicated a favorable attitude toward consumer packages as had sold them. Here again is an indication of dissatisfaction with prepackaged apples on the basis of past experience.

Chain store produce managers in both Cleveland and Canton-Youngstown were very enthusiastic about the future of consumer packages. Only two in Cleveland revealed an unfavorable attitude, while two were indifferent. In the Canton-Youngstown Area all but one showed a favorable attitude when approached on this subject.

FACTORS CONSIDERED IN BUYING APPLES

All independent retailers were asked to name the most important factors they considered when buying apples to satisfy their trade.

Color was by far the factor named most by retailers. In Cleveland about one-half of both the large and small independent store operators designated color as one of the most important considerations in their selection of apples. This included those who designated either red color, good color, or both. In the Canton-Youngstown Area this figure was even higher as three-fourths of the large independents and two-thirds of the small independents indicated color as one of the most essential factors in their purchase of apples.

Freedom from defects, including the absence of insect, disease, and mechanical injury was the second most important factor in the selection of apples by retail store operators with the exception of small independent operators in Cleveland who considered it third in importance. About 40 percent of both large and small retailers in Canton-Youngstown mentioned freedom from defects as one of the most important factors. One-third of the large and one-fourth of the small retailers in Cleveland mentioned defects as a prime factor.

Over 30 percent of the operators of small independent stores in Cleveland said that when purchasing apples, variety was one of the important considerations. This was the second most important factor in the minds of operators of small independent stores in Cleveland. More than 10 percent of the operators of large independent stores in Cleveland also mentioned a desire for particular varieties compared with less than seven percent of both large and small independent store operators in the Canton-Youngstown Area.

Firmness was the third most important factor according to operators of large independents in both Cleveland and the Canton-Youngstown Area. The operators of small retail stores in Cleveland and Canton-Youngstown ranked firmness fifth and fourth respectively.

Many other considerations were given by retailers which were not so important as the aforementioned factors. Some of the others mentioned were: freedom from bruising, eye appeal, medium size, uniform size, large size, reputation of distributor and right price.

IMPROVING THE MARKETING OF OHIO APPLES

All retailers interviewed were asked to give recommendations on how Ohio growers could improve the movement of their apples through retail stores. These recommendations are presented in Table 12.

Nearly 45 percent of the operators of large independent stores in Cleveland and Canton-Youngstown suggested that growers grade more carefully. This was also the leading recommendation given by the operators of small independent stores in both areas, being mentioned by 37 percent in Cleveland and 39 percent in Canton-Youngstown.

In Cleveland, one-third of the chain store produce managers suggested that the growers handle the apples more carefully to prevent bruising and mechanical injury. In the Canton-Youngstown Area, 60 percent of the chain store produce managers recommended that growers strive to market fruit with better color.

Color was not mentioned to the extent which was expected in view of the fact that it was the most important factor considered by all independent retailers when purchasing apples. However, it was suggested by about 21 percent of the large and 26 percent of the small independent retailers in Cleveland and 60 percent of the chain store managers in Canton-Youngstown as a recommendation to growers. It is possible that many retailers were of the opinion that Ohio growers could do little to improve the color of their apples.

An interesting and perhaps significant fact is that one-fourth of the operators of large and one-fifth of the operators of small independent stores in Canton-Youngstown had no recommendations to offer Ohio growers. One-third of the chain store retailers interviewed also had no suggestions to offer for the same reason. Only about one-tenth of all retailers in Cleveland gave no recommendations.

TABLE 12.—Percent¹ of Retail Store Operators Offering Various Recommendations to Apple Growers to Improve the Movement of their Apples through Retail Outlets, by Type of Store, 146 Retailers, Cleveland and Canton-Youngstown Area, November and December, Ohio, 1950

Recommendation	Independents				Chain	
	Large		Small		Cleveland	Canton-Youngstown
	Cleveland	Canton-Youngstown	Cleveland	Canton-Youngstown		
Grade more strictly as to defects . . .	44.74	44.44	37.04	39.13	19.05	40.00
More uniform sizing	26.32	7.41	18.52	34.78	4.76	20.00
Market apples with better color . . .	21.05	7.41	25.93	8.70	9.52	60.00
Handle apples more carefully	15.79	14.81	22.22	13.04	33.33	30.00
Improve the package	13.16	18.52	3.70	8.70	23.81	10.00
Employ a cold storage	7.89	11.11	3.70	—	—	—
Grade out small apples	5.26	7.41	11.11	13.04	4.76	20.00
Grow better varieties	5.26	—	11.11	—	—	—
Eliminate false packs	5.26	3.70	3.70	4.35	4.76	—
Reduce the price	2.63	7.41	3.70	—	—	—
Eliminate culls	2.63	7.41	3.70	—	—	—
Polish the apples	—	11.11	—	8.70	—	—
Other	—	—	7.41	—	19.05	—
Percent of total answering who registered no complaints	9.52	25.00	12.90	20.69	8.70	33.00

¹Columns add to more than 100 percent because many retailers gave more than one recommendation.