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FLORICULTURAL SALES IN MASS MARKET OUTLETS

by R. A. Kelly



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BULLETIN 675

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FLORICULTURAL SALES IN MASS MARKET OUTLETS

By R. A. KELLY¹

THE SALE OF POTTED PLANTS is of increasing importance to northern greenhouse operators. Their sales of cut flowers are meeting increased competition because flowers can be raised outdoors in the south and west at considerably less expense than they can be raised in greenhouses. Potted plants grown in those regions do not offer as much competition because the bulkiness and expense of transporting most potted plants for any distance still give the advantage to producers close to the market, even though their production costs are higher. Low-cost cut flowers that are adaptable to northern production methods may offer another way of meeting this competition.

Despite the increase in competition in the sales of cut flowers, decreases in total production in the northern states will probably be slow because of investments in facilities that have limited alternative uses. Therefore, any change in the marketing structure which increases the retail sales of potted plants and of inexpensive cut flowers is important to greenhouse operators. Fortunately, the demand for low-cost plants is increasing as a part of the present emphasis on outdoor and suburban living.

The demand for both cut and potted flowers has traditionally been met, for the most part, by floral shops and, to a limited extent, by other outlets. The object of the present study has been, first, to compare flower and plant sales at a supermarket and at a variety store with sales at a floral shop and, second, to compare the profits on the items offered in this experiment with the profits on other merchandise at outlets comparable to those studied here.

In view of the considerable research that has been done on the marketing problems of other segments of agriculture, it may seem surprising that relatively few resources have been used to analyze the

¹R. A. KELLY, Associate Professor of Agricultural Economics. John R. Culbert, Associate Professor of Floriculture cooperated by rendering technical assistance and by providing flowers, plants, and storage space. The field work was done by Floyd Griffith, Howard Gingerich, and O'Dean Hubbard, graduate assistants in Agricultural Economics. Judith Kingwell, a graduate student in Floriculture, made the floral arrangements.

marketing of horticultural specialties. The lack of such research may have been due to a failure among research agencies to recognize the importance of the industry or to its lack of awareness of the importance of the inefficiencies present in its marketing structure.

The underlying premise of the research project was that total sales of inexpensive potted plants and bunches of cut flowers could be increased if such plants and flowers were offered for sale in mass market outlets. A specific objective was to test consumer acceptance of cut flowers and potted plants offered for sale in different mass market retail outlets.

The reasons for limiting the study to small potted plants and small bunches of cut flowers were:

1. These are grown in Illinois and can compete successfully with out-of-state products.
2. The demand for these products is elastic.
3. These products are satisfactory for "everyday use" as well as for holidays and as inexpensive gifts.
4. They are relatively easy to handle in retail outlets.

The same stores were used during the sales period each year for three years: a supermarket, a variety store, and a retail floral shop. The scope of the study was limited to the number of variables that could be controlled in the stores. The variables included the retail price, the relative quality of the displays between the outlets, the size of the display area, and the kinds of plants displayed.

EXPERIMENTAL PROCEDURE

Display period

During 1955-56, potted plants were sold for 12 weeks from November 7 to February 11, with the two weeks from December 19 to January 2 off for inventory; and cut flowers were sold for 8 weeks from February 13 to April 14. No flowers were offered for sale in the experiment during the week before Easter, the first season. During the second year, the project was begun on October 10, 1956, and ended May 11, 1957. The plants were removed from the three outlets for the two weeks from December 24, 1956, to January 7, 1957. The third year, the experiment was conducted from December 10 to May 10, with inventory from December 30 to January 7. Each year, the changes in the varieties or kinds of flowers on display were almost always made at the beginning of the week.

Methods of procurement

During each year the plants were delivered to each of the outlets on consignment. This arrangement was advantageous in that it permitted control of the factors being studied. Its principal disadvantage was an occasional lack of cooperation by the store personnel in assisting to maintain quality and complete displays, particularly at the mass market outlets.

Sources of supply

The Department of Horticulture supplied the potted chrysanthemums and the bunches of cut chrysanthemums used the first year. During the second year of the study, the project was conducted on a semicommercial basis. A wholesale grower supplied approximately 62 percent of the volume of plants, which included potted chrysanthemums, cyclamens, kalanchoes, and poinsettias. Deliveries were made to the horticulture greenhouse once a week, generally on Wednesday, where they were cared for until they were moved into the stores. The floricultural division grew the chrysanthemums that were sold in bunches, the cinerarias, the coleuses, and the primulas during 1957-58. The other plants were purchased from the wholesale grower.

Packaging

In 1955-56, the chrysanthemum plants were in 3-inch standard clay pots. The clay pots were inserted into 4-inch, green papier maché pots. Each potted plant was placed in a cellophane bag, which was held around the lower part of the pot with a rubber band. The bags were a protection against stem breakage, and they facilitated watering, but the type of bag used permitted condensation, which reduced the attractiveness of the display. The papier maché container and the plastic bag were not used the second and third years. This eliminated the effect of these packaging techniques on the rate of sale and reduced the labor cost. The removal of the plastic bag furnished an opportunity to see how well the plants would stand up without protection. After the first year, 3½-inch stepdown clay pots were used instead of 3-inch pots.

The cut chrysanthemums were packaged in cellophane bags each year, and the bags were fastened at the lower part of the stems with rubber bands or paper-covered wire. The size of the bunches was equivalent to six carnations, regardless of the number of chrysanthemum stems needed. Consequently, the number of stems in different

packages varied from 5 to 12, depending on the variety. With the exceptions of begonias in 3-inch pots and some poinsettias in 5-inch pots, the plants during the last two years were in 3½-inch pots.

The third year floral arrangements were also sold. They were packaged similarly to chrysanthemums.

Displays and equipment

The displays were not alike in every respect at all times, but were comparable in area, number of varieties on display, number of plants on display each morning, price per unit, and general quality. In 1955-56, the bunched flowers were held upright by a wooden and fiberboard box inverted over a watertight pan. The pan was covered with a light chicken wire. The stems were inserted through the holes in the fiberboard, through the chicken wire, and into the water in the pans. However, when the customers examined the flowers, they did not always replace the stems through the wire. Hence the stems frequently were neither in the water nor were they held upright. This problem was eliminated in subsequent years by fastening sheet metal tubes to the underside of the fiberboard rack and eliminating the chicken wire.

The papier maché pots used the first year were a part of the display as well as a means of packaging. The plants were kept fresh by putting water in the papier maché pots. Although the papier maché enhanced the appearance of the display, it had four principal disadvantages: (1) it cost more, (2) additional labor was required for insertion, (3) usually the plant had to be removed from the papier maché pot for watering, which increased labor costs, and (4) when the plants were sold, the water had to be removed. Removing the water took time and required a place to dispose of it.

In succeeding years the potted plants were displayed in metal or clay pans which needed about 2 inches of water a day for evaporation and plant requirements. This method had the disadvantage of keeping the pots wet most of the time and made them unpleasant for the customers to handle. However, this procedure did help decrease the time required to care for the plants and increased their display period by reducing wilting.

Retail outlets

The same supermarket, variety store, and floral shop were used throughout the study, the floral shop being used as a check against the results in the other stores.

The supermarket was near the downtown shopping district and had the largest volume of store traffic. Over the three years, its estimated

store traffic averaged 12,500 customers per week, with approximately half the weekly traffic on Friday and Saturday.

The variety store was located in the downtown shopping district, the second store from the busiest intersection in town, with an estimated weekly store traffic of approximately 9,700 customers for the three years. As in the supermarket, about half of the weekly traffic was on Friday and Saturday.

The retail floral shop was located around the corner from the variety store, approximately half a block from the intersection. The walk-in trade accounted for a substantial amount of its business. By the next year, the floral shop had moved next to a supermarket several blocks from the center of town, where the walk-in trade was approximately half that at the old location. By the third year, the florist moved his store to the edge of a new subdevelopment about two miles from the center of town and the walk-in trade was further reduced. However, the floral shop did much of its business by telephone.

SALES: MASS MARKETS AND FLORAL SHOP

RETAIL SALES

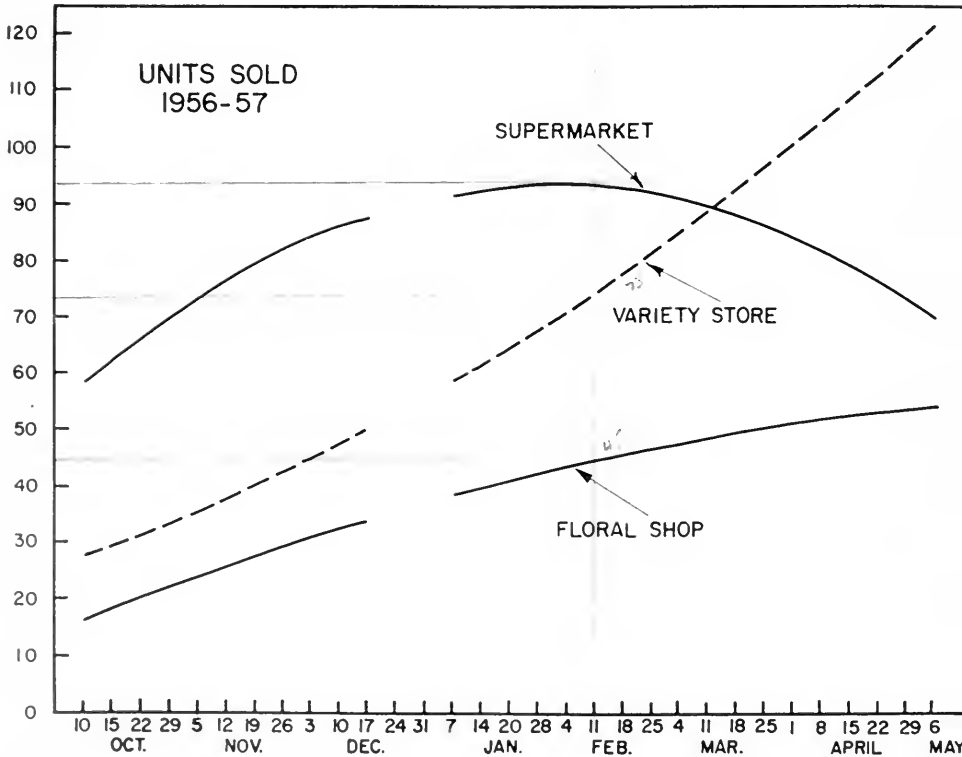
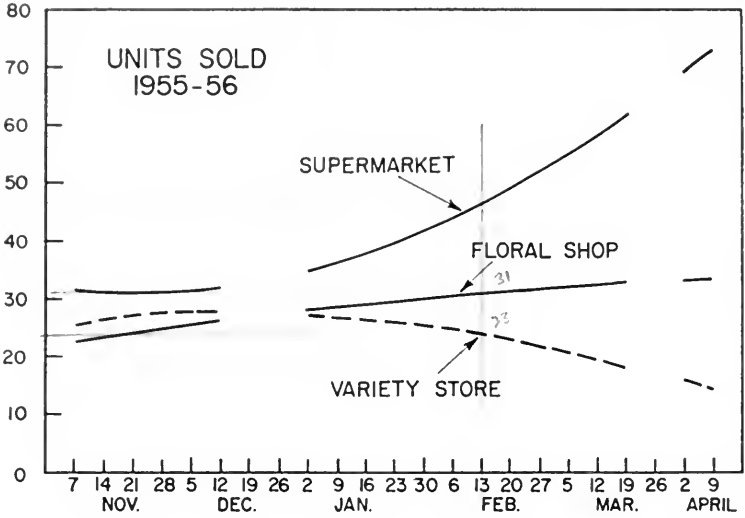
Method of collecting data

Data on the number on hand of each kind and variety of plant and flower, and on the number sold, delivered, and removed were obtained each morning at each outlet as the flowers were delivered and the displays arranged.

Limitations

The analysis of the sale of floral products through mass market outlets was complicated by the difficulty of keeping the outlets supplied with complete and comparable displays. Since the quantity on display varied during the day, the available sales data may not have measured the total potential demand for the floricultural products.

The analysis is further complicated by the fact that the kinds of plants and flowers displayed were different each year. During the first season, only chrysanthemums were offered for sale. Potted chrysanthemums were offered first, then bunches of cut chrysanthemums, but not both at once. The second year, the display was expanded to include asters, begonias, calceolarias, potted chrysanthemums, bunched cut chrysanthemums, cinerarias, coleuses, cyclamens, kalanchoes, poinsettias, and primulas. The third year, the list was the same except that the asters, kalanchoes, and primulas were replaced with schizanthuses and arrangements of cut flowers.



Trends in weekly floricultural sales by outlet, 1955-56 (top), 1956-57 (below), and 1957-58 (opposite page). (Fig. 1)

The lists of flowers sold each year and the number of weeks each was on sale are given in Table 17. Tables 6 and 11 show which weeks each kind of flower was on sale during the second and third seasons.

Trend in weekly sales

In 1955-56, the trend in weekly sales at the supermarket began rising after January 2 and continued upward through the remainder of the period (Fig. 1). In comparison, the sales trend at the other mass market outlet rose slightly until January and then declined. The sales trend at the floral shop increased gradually until about mid-February and then leveled off.

The sales trend lines in the supermarket and in the variety store were almost reversed the second year, declining in the former after mid-February and rising steadily in the variety store (Fig. 1). Even though sales at the floral shop were greater during the second season, the trend was quite similar to that of the first year.

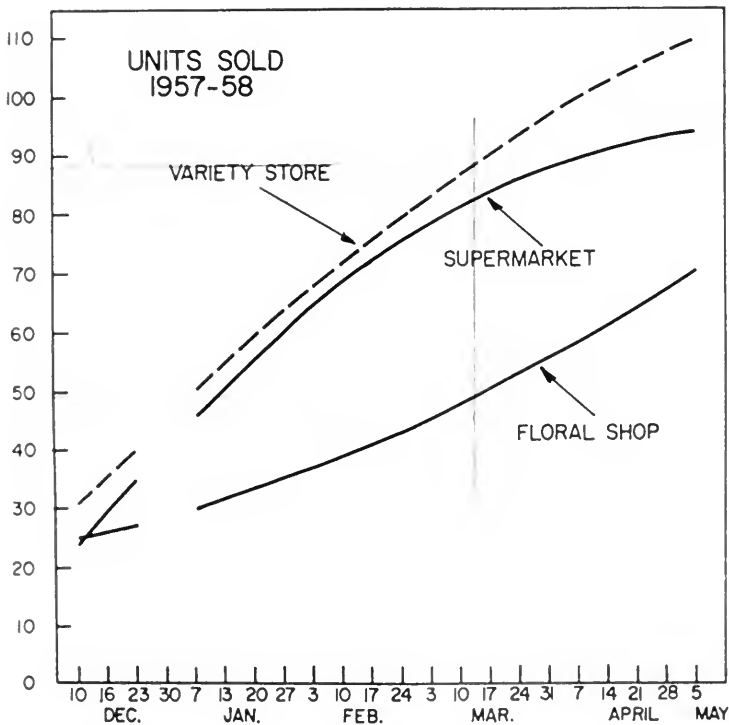


Fig. 1 — concluded

During the third season, the sales trends in the mass market outlets were nearly identical until the last few weeks, when sales at the supermarket began leveling off. The trend in the floral shop was similar to that of the two preceding years but rose slightly faster.

The rising trend at each mass market outlet for 2 years out of 3 and at the floral shop for all three years indicates an increasing consumer acceptance during each season for the low-cost type of items offered in this display.

Total sales

During the three years, 11,535 plants and bunches were sold through the three outlets. Approximately 41 percent of them were sold at the supermarket, 36 percent at the variety store, and 23 percent at the floral shop (Table 1 and Fig. 2). The total number of plants sold through the variety store for the whole period of the experiment was not as great as through the supermarket, but the trend in sales indicated that the variety store was an increasingly acceptable outlet for floricultural products, for its share of the yearly total sales rose by 15.5 percent over the three years and its sales the final season were greater than those at the supermarket.

Total sales declined 27.5 percent during the third year because of the shorter period that the plants were offered for sale. The decrease at the variety store and at the floral shop was 20 and 17 percent, respectively, but total sales at the supermarket fell nearly 39 percent from the previous year.

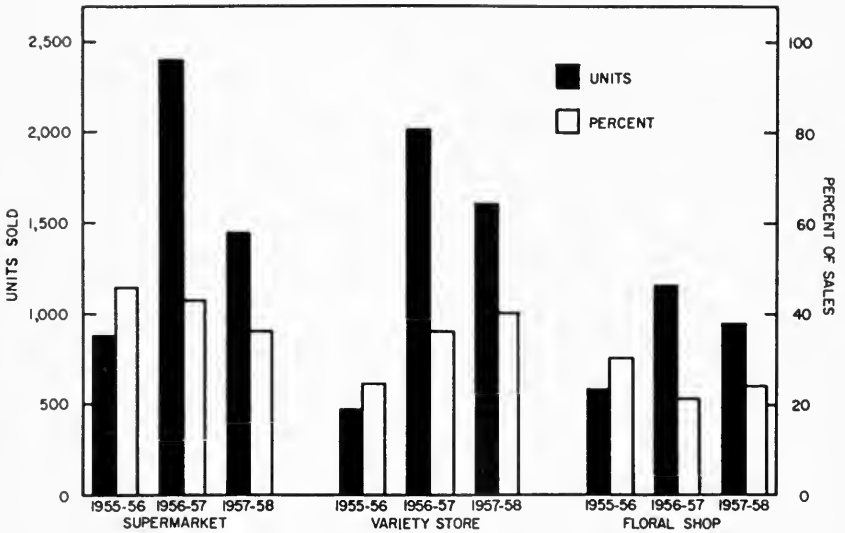
Even though the floral shop moved locations each year, with each move resulting in less walk-in trade, the sales of the inexpensive cash-and-carry items used in the experiment held up remarkably well, indicating a possibility for increased total sales.

Average weekly sales

Weekly sales averaged 64 units per store in 1956-57 and 1957-58 compared with 32.5 the first year, an increase of nearly 97 percent (Fig. 3). Of the three outlets, the variety store had the greatest increase in volume between the first and second year, 191 percent compared with an increase of 86 percent at the supermarket and 35 percent at the floral shop. Average weekly sales further increased at the variety store and floral shop the third year, but the average weekly volume at the supermarket declined 15.5 percent from the weekly average for the second year.

Table 1. — Floricultural Sales by Outlet and Year

Year	Supermarket		Variety store		Floral shop		Total	
	Num-ber	Per-cent	Num-ber	Per-cent	Num-ber	Per-cent	Num-ber	Per-cent
1955-56. . . .	889	45.6	478	24.5	584	29.9	1,951	100.0
1956-57. . . .	2,395	43.1	2,017	36.3	1,145	20.6	5,557	100.0
1957-58. . . .	1,466	36.4	1,610	40.0	951	23.6	4,027	100.0
Total. . . .	4,750	41.2	4,105	35.6	2,680	23.2	11,535	100.0



Total number of sales and percent, by outlet and year.

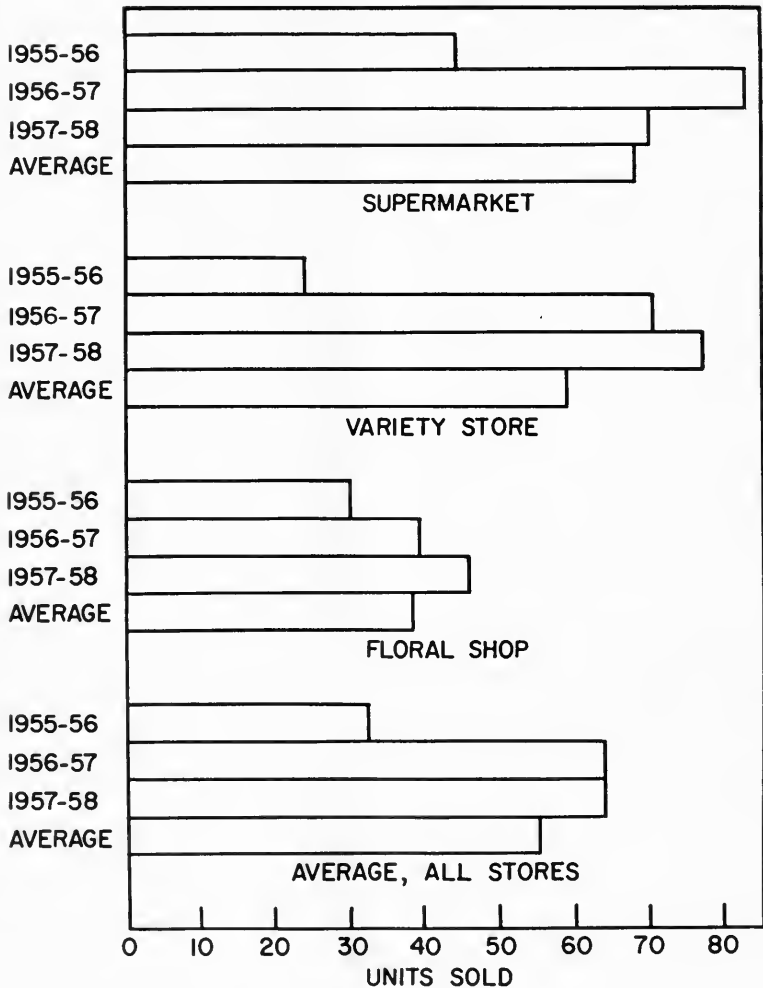
(Fig. 2)

VARIATION IN WEEKLY SALES AT EACH OUTLET

Limitations

Important limitations to the analysis of changes in weekly sales include the base period used and the many variables which could not be controlled. The change in the number of plants sold from the average of the previous two weeks was used as a measure of the result of the introduction of the various factors considered and of their effects on floricultural sales. The adequacy of this base is questionable, yet it

would seem that the factors would show their effects over a short period of time. Also, no measures are available to separate out the effects of the individual variables when two or more occurred simultaneously. For instance, the introduction of a new kind of plant, the occurrence of a holiday, and the addition of competing floricultural products by the stores may all have happened at the same time, and the



Weekly average sales, by outlet and year.

(Fig. 3)

Table 16.—Sales During the Six Days of Sales Preceding Holidays and Special Occasions Compared With the Average Weekly Sale for the Previous 12 Sales Days, 1957-58

Holidays and special occasions	Number sold during the six days of sales preceding a holiday or special occasion	Average weekly sale, previous 12 sales days	Difference in number	Percent change
Supermarket				
Christmas ^a	38	33.0	5.0	15.2
Valentine's Day.....	75	63.0	12.0	19.0
Easter.....	104	113.5	-9.5	-8.4
Mother's Day.....	102	82.5	19.5	23.6
Total.....	325	292.0	33.0	11.3
Variety Store				
Christmas ^a	26	17.0	9.0	52.9
Valentine's Day.....	78	63.5	14.5	22.8
Easter.....	112	108.5	3.5	3.2
Mother's Day.....	115	99.0	16.0	16.2
Total.....	337	288.0	49.0	17.0
Florist				
Christmas ^a	38	9.0	29.0	322.2
Valentine's Day.....	41	40.0	1.0	2.5
Easter.....	77	69.0	8.0	11.6
Mother's Day.....	57	77.5	-20.5	-26.5
Total.....	214	195.5	18.5	9.5
Total				
Christmas ^a	102	57.0	43.0	72.9
Valentine's Day.....	194	166.5	27.5	16.5
Easter.....	293	291.0	2.0	.7
Mother's Day.....	274	259.0	15.0	5.8
Total.....	876	775.5	100.5	13.0

^a Omitting potted chrysanthemums, which were introduced the week before Christmas.

sale. During the same period in 1957-58, only begonias and potted and bunched chrysanthemums were displayed. However, the kinds of flowers sold before Easter were practically the same for both seasons.

Competing products and displays

Competing products are defined as other plants and flowers that the retail outlets offered for sale in the area in which the flowers offered in this experiment were displayed. These flowers helped attract attention to the display area, but they also directly competed for

the customers' preference. The analysis of the effect of the competition of these items is limited by the fact that most of the competing products were added during the holiday seasons, when the sales of the items offered in the experiment usually increased regardless of the presence of other factors.

For short periods in 1955-56, gladioli were added at the supermarket in January and jonquils in February, March, and April. The variety store sold daffodils for a week in March. Sales of the plants in the experiment rose 13 percent at the supermarket and fell 21 percent at the variety store.

In 1956-57, coleuses, African violets, daffodils, philodendrons, rose bushes, pansies, and 2-inch chrysanthemums were displayed all or parts of 10 weeks at the supermarket. Sales of the plants that were a part of the experiment declined from the preceding week in 6 of those weeks and increased in 4. Sales declined 2 weeks in the variety store and rose in 3 when competitive azaleas, daffodils, and jonquils were added, the change ranging from a 56-percent decline to a 75-percent increase. The important changes in competition at the floral shop during 1956-57 occurred at the various holidays when large poinsettias and jonquils were displayed. Sales of the items in the experiment generally increased at all three outlets, even when the additional competitive displays were present. It is not possible to tell, by an analysis of the available data, how much effect the holidays and special occasions had on sales and how much effect the competition had when they occurred at the same time.

In 1957-58, the results were similar to those of the preceding year. Sales of competitive products had no consistent, continuous effect on sales of the plants and flowers in the experiment. The unevenness of the effect of the competition from other plants probably was due to differences in the kinds of plants and in their sizes and prices.

Changes in display location

Changes in the location of the displays were not planned as merchandising techniques for the experiment but resulted from variations in the space allocated to the project by the stores. Relatively few of the weeks during which there was a change in the location of the display were associated with changes in total weekly sales. For the two weeks prior to Christmas the first year at the variety store, the items were placed on racks 6 feet tall. This did not permit customers to get a sufficient view to stimulate impulse buying. Sales decreased by 70 percent but increased when the display was moved back to the table.

At the supermarket the same year, some of the plants were placed atop racks displaying nonfood items. These racks were new equipment, and it was felt that customers regarded the plants as a part of the store decoration because sales from that display were practically nil.

An attractive display was made for a short period at the florist's by displaying the plants in a window with the price plainly marked. This display was not directly associated with increased weekly sales, but it seems probable that the display attracted the attention of passers-by and affected the volume of the walk-in trade of the store.

Addition of various kinds of plants to the display

During 1955-56, the change from potted to bunched chrysanthemums had no appreciable effect on sales. In 1956-57, the introduction of poinsettias preceding the Christmas holiday and the reintroduction of cinerarias preceding Easter contributed to the increase in sales. The introduction of cinerarias and the reintroduction of calceolarias in two stores in weeks following holidays were both associated with decreased sales. However, the sales of the calceolarias at the variety store were as high when these flowers were reintroduced as they had been before. Since sales of all other flowers slumped, thus causing the general decline in sales, it appears that the reintroduction of these plants helped somewhat to counteract the slump. Not counting the weeks when special occasions caused sales to increase, the introduction of new plants increased sales over the previous week for five of the remaining six weeks.

It appears that sales were generally larger when new kinds of plants were added to the display. The value of the new introductions as a merchandising technique is difficult to determine because of the large variations in weekly sales and because of the substitution effect of the newly introduced flowers for those already on display. For example, during the 1956-57 season, the influence of the approaching holiday and the introduction of kalanchoes three weeks before Christmas resulted in an over-all increase in sales of 104 percent from the previous week. The kalanchoe sales were larger than the increase in weekly sales, indicating that the new kind of plant was a stimulus to total sales but that it had a detrimental effect on the movement of other plants.

Weekly sales of each kind of plant displayed, with the exception of coleuses and bunched chrysanthemums, generally tended to decrease during the period it was on display. This indicated that introducing

new kinds of flowers at various time intervals would be a merchandising technique that would increase total sales. The most advantageous interval to use would vary with the kinds of plants used and according to the season of the year.

During 1957-58, the introduction of new varieties of a given kind of plant frequently had no appreciable effect on sales, largely because of the small number of units of each variety displayed at each store.

Shrinkage

By shrinkage is meant removal of unsold plants from the display. The term applies to plants removed to make room for the display of new kinds of plants and to plants removed whenever the display was concluded, as well as to the plants removed because they had gone out of condition. Plants which were out of condition usually had suffered wilting, loss of leaves, age of blossom, or stem breakage. The compactness and the self-service aspect of the display encouraged customer handling, and this contributed to the plants going out of condition.

Daily delivery and removal of some plants were made to keep the quality of the displays high and comparable between the stores. Some plants were probably removed sooner than they would have been in normal retail practice. The limited display space allotted to the project necessitated removing a few plants that were still in salable condition when new kinds were introduced. Data on these plants were not separated from the data on those removed when out of condition.

The price was constant over extended periods, and no special mark-down procedure was used (as is done with some products in mass markets) to help sell those plants that had been on display for long periods, that had broken stems, that had lost part of the leaves, or that were for particular holidays, such as poinsettias. Neither were these flowers used in corsages, arrangements, or bouquets as is often done with slightly out-of-condition flowers at floral shops. The slow sale of various kinds of the floricultural division's experimental varieties helped increase the number removed. Some of these plants either were not readily accepted by the customers or were not able to withstand the in-store handling.

The average total shrinkage varied from 25.5 to more than 32 percent during the three years (Table 17). In 1955-56, the variety store had a larger shrinkage than the other outlets due, in part, to the difficulty in keeping the plants properly watered. The evaporation rate was particularly high, and the store personnel assigned to the

Table 17.—Shrinkage as a Percent of Retail Sales*

Plant or flower	Number weeks sold	Outlet			Total	Outlet			Total	Outlet			Total
		Super-market	Variety store	Floral shop		Super-market	Variety store	Floral shop		Super-market	Variety store	Floral shop	
<i>Sales</i>													
1955-56													
Potted mums	5 ^b	180	140	145	465	46	61	50	157	25.3	43.6	34.7	33.7
Bunched mums	8	501	149	261	911	111	112	68	291	22.2	75.2	26.0	31.9
Total		681	289	406	1,376	157	173	118	448	23.0	59.9	29.1	32.6
1956-57													
Asters	5	18	31	29	78	13	9	5	27	72.2	29.0	17.2	34.6
Begonias	10	122	263	74	459	27	24	19	70	22.1	9.1	25.0	15.2
Calceolarias	4	74	112	27	213	13	9	14	36	17.6	8.2	51.9	16.9
Potted mums	29	1,073	679	510	2,262	224	218	109	551	20.9	32.1	21.4	24.4
Bunched mums	6	186	129	154	469	80	102	68	250	43.0	79.1	44.2	53.3
Cinerarias	7	77	79	57	213	24	22	12	58	31.2	27.8	21.1	27.2
Coleuses	18	183	239	60	482	59	49	38	146	32.2	20.5	63.3	30.3
Cyclamens	10	396	250	79	725	48	31	7	86	12.1	12.4	8.9	11.9
Kalanchoes	7	96	73	54	223	58	45	13	117	60.4	61.6	24.5	52.5
Poinsettias	2	146	79	73	298	13	11	0	24	8.9	13.9	.0	8.1
Primulas	2	9	6	4	19	11	6	7	24	122.2	66.7	175.0	126.3
Total		2,380	1,940	1,121	5,441	570	526	292	1,389	24.0	27.1	26.0	25.5
1957-58													
Begonias	10	122	181	114	417	10	5	4	19	8.2	2.8	3.5	4.6
Calceolarias	1	7	5	1	13	0	1	0	1	.0	20.0	.0	7.7
Potted mums	18	250	317	109	676	33	28	12	73	13.2	8.8	11.0	10.8
Bunched mums	21	701	611	472	1,784	253	282	207	742	36.1	46.2	43.9	41.6
Cinerarias	5	46	44	27	117	3	1	0	4	6.5	2.3	.0	3.4
Coleuses	10	126	214	86	426	6	9	16	31	4.8	4.2	18.6	7.3
Cyclamens	2	19	16	10	45	3	1	0	4	15.8	6.2	.0	8.9
Poinsettias	3	52	78	51	181	30	12	19	61	57.7	15.4	37.2	28.2
Schizanthuses	2	11	9	6	26	2	4	4	8	18.2	22.2	66.7	30.8
Arrangements	8	21	36	36	93	22	22	12	56	104.8	61.1	33.3	60.2
Total		1,342	1,500	906	3,748	362	363	274	999	27.0	18.3	30.2	26.7

* Sales data are for weeks in which all outlets were supplied with the given kind of plant.

project occasionally neglected to add water during the day. During the second year, a change in the type of display equipment made it possible to keep the plants watered without having to rely so heavily on the store personnel. The average losses at the variety store were then nearly the same as those at the supermarket and at the floral shop. In 1957-58, the shrinkage at the variety store was more than 8.5 percentage points below that at the supermarket and almost 12 percentage points below the shrinkage at the floral shop.

The floral shop had the second largest amount of shrinkage for the three years. Two major factors were (1) that the turnover at this outlet was relatively slow and (2) that when some of the varieties were not selling as the manager thought they should, the plants were removed, even though not out of condition. However, the better care that the plants and flowers received at the floral shop meant that they could be displayed for longer periods than at the other stores.

The supermarket had the least shrinkage of any of the three outlets for the first two years, due largely to the faster turnover of most items and to the cooler and more humid atmosphere in the store.

Shrinkage of the potted and bunched chrysanthemums varied considerably different years. The potted plants showed a decline in shrinkage during the experiment from nearly 34 to under 11 percent. One reason was that they were adequately watered the last two years. This seemed to more than offset the lack of the cellophane bag that was used the first year and then discontinued. But that, of course, does not account for the further decline that occurred during the third year, as compared with the second.

The method of displaying the bunches of cut chrysanthemums was also improved the second year, but the amount of shrinkage increased considerably at the supermarket and floral shop and remained extremely heavy at the variety store. The quality of the flowers used, their ripeness when placed on display, and a lower average sales per week influenced shrinkage. There was little change in percent of shrinkage of the bunched chrysanthemums at the floral shop the third year, compared with the previous one, but the loss was considerably less at the variety store.

The two most important factors affecting the shrinkage rate of the various kinds of plants displayed appeared to be (1) the rate of turnover and (2) the characteristics which determined how well the plants withstood display without being damaged excessively by handling or by having their roots or stems continuously in water. Important factors not measured were the age and ripeness of the plant or flower

when placed on display. Cyclamens, poinsettias, calceolarias, and potted chrysanthemums had high rates of turnover and less than average shrinkage. Begonias, cyclamens, and cut chrysanthemums needed desirable plant characteristics to keep their shrinkage low. Primulas appeared to have neither of these characteristics. Asters, coleuses, cinerarias, and kalanchoes all had relatively low rates of sale but had blossoms or foliage which permitted long shelf life.

Undoubtedly as a result of experience, the loss of arranged cut flowers at the floral shop was only about half that at the variety store and a third that at the supermarket. Much of their shrinkage resulted from the slow rate of sale and from the perishability of those flowers that could not keep well without refrigeration.

Table 18.—Percent of Sales of Each Kind of Plant Displayed, by Outlet and Year

Kind of plant	Super-market	Variety store	Floral shop	Total
1955-56				
Potted chrysanthemums.....	37.3	31.6	31.1	100.0
Bunched chrysanthemums.....	55.0	16.4	28.6	100.0
Average.....	45.6	24.5	29.9	100.0
1956-57				
Asters.....	23.1	39.7	37.2	100.0
Begonias.....	24.7	57.9	17.4	100.0
Calceolarias.....	27.2	59.9	12.9	100.0
Potted chrysanthemums.....	47.4	30.0	22.6	100.0
Bunched chrysanthemums.....	39.7	27.5	32.8	100.0
Cinerarias.....	36.1	37.1	26.8	100.0
Coleuses.....	38.0	49.6	12.4	100.0
Cyclamens.....	54.6	34.5	10.9	100.0
Kalanchoes.....	45.8	30.2	24.0	100.0
Poinsettias.....	49.0	26.5	24.5	100.0
Primulas.....	40.9	40.9	18.2	100.0
Average.....	43.1	36.3	20.6	100.0
1957-58				
Begonias.....	29.2	41.8	29.0	100.0
Calceolarias.....	48.3	37.9	13.8	100.0
Potted chrysanthemums.....	38.9	45.6	15.5	100.0
Bunched chrysanthemums.....	39.3	34.2	26.5	100.0
Cinerarias.....	37.4	35.8	26.8	100.0
Coleuses.....	32.0	52.2	15.8	100.0
Cyclamens.....	42.2	35.6	22.2	100.0
Poinsettias.....	28.7	43.1	28.2	100.0
Schizanthuses.....	42.3	34.6	23.1	100.0
Arrangements.....	28.9	31.4	39.7	100.0
Average.....	36.4	40.0	23.6	100.0

The variety store sold a greater proportion of such relatively low-priced plants as begonias and coleuses, compared with its sales of the other plants and flowers, than the other outlets did (Tables 17 and 18). Possibly this was a shopping habit, but part of it may have been the result of the location of the store. Very little close parking was available, and the smaller plants were easier to carry to a car. However, the variety store also sold more poinsettias and as many arrangements as the floral shop (Table 17). In comparison with the sales at the other outlets, the sales at the floral shop were relatively highest for the more expensive poinsettias and arrangements (Table 17). The florist's sales of bunched chrysanthemums, begonias, and cinerarias were also good.

Sales by color and type

Begonias were considered to be one of the "better buys" of the display because of their lasting qualities and lower price. They were classified according to whether they had light-green or dark-green leaves, rather than by variations in the color or the shade of the flowers. At all outlets, sales of the light-green varieties were greater than those of the dark.

Coleuses were the only plants not in bloom at the time of the study. The many varieties of this plant were also classified by leaf color. The varieties with the more colorful leaves sold better than those with leaves of various shades of solid green. The different rates of sale emphasized the disadvantage of using a large number of varieties and relatively few plants within each of them. Some varieties would be sold quickly, while others would be overstocked. Of the 12 varieties of coleus used, Trailing Queen, Fern Marie, Lincoln, Jane Downs, and Daudet's Sport had above-average sales.

Data were obtained the first two years on sales, by color, of the potted chrysanthemums. Consumer acceptance at the floral shop and at the variety store was highest both years for the plants with dark-pink blossoms. For no discernible reason, the buyers in the supermarket showed a strong preference during the first year for the varieties with yellow blossoms. The daily sales of these plants were 43 percent higher than the daily sales of their nearest competitor. During the second year, consumers in this outlet also preferred the plants with dark-pink blossoms. The bronze-flowered plants had the lowest rate of sale at all outlets. Comparisons of the varieties and colors that were available in both disbuds and sprays generally showed greater sales of the spray types.

RETURNS: EXPERIMENTAL AND OTHER MERCHANDISE

The profitableness of the floricultural displays in each of the outlets is here analyzed in terms of retail margins, weekly gross returns, and weekly profits per square foot of display space. This analysis indicates that inexpensive floricultural products have real merit as sales items in mass markets.

Limitations

The primary limitation is the lack of adequate standards of comparison. The small number of stores involved makes it advisable to employ a general basis for comparison in analyzing the retail margins and profits. Comparisons of profitableness, therefore, must be made with such stores or specific departments for which data are available. Hence the analysis is limited to generalizations.

Gross retail margins

Gross retail margins (equal gross profits on selling price) on the various plants ranged from about 34 percent to 41 percent the first

Table 19.—Markup and Margin on Floricultural Products Sold, by Price Class and Year

Retail price	Cost to stores	Gross profit	Markup ^a	Margin ^b
<i>cents</i>	<i>cents</i>	<i>cents</i>	<i>percent</i>	<i>percent</i>
		1955-56		
99	59	40	67.8	40.4
89	59	30	50.8	33.7
79	49	30	61.2	38.0
59	39	20	51.3	33.9
49	29	20	67.0	40.8
		1956-57		
119	75	44	58.7	37.0
89	60	29	48.3	32.6
59	30	29	96.7	49.2
39	20	19	95.0	48.7
		1957-58		
149	125	24	19.2	16.1
139	95	44	46.3	31.7
98	65	33	50.8	33.7
79	50	29	58.0	36.7
49	30	19	63.3	38.8
39	20	19	95.0	48.7

^a Gross profit on cost. ^b Gross profit on selling price.

year, from 33 to 49 percent the second year, and from 16 to 49 percent the third year, depending on the cost of the various items and on their retail prices (Table 19).¹ This compares with gross retail margins a square foot in supermarkets of approximately 18 percent for each of the three years.²

The gross retail margin for the floricultural products sold at the supermarket (Table 20) was considerably higher each year than that for any of the major departments in such stores. In 1957, gross margins for meat departments averaged over 21 percent, grocery almost 16 percent, and produce over 29 percent for stores with sales of more than \$20,000 weekly.³ In 1958, the only nonfood item sold by the supermarket at a higher gross margin was stationery.⁴

In 1958, the variety store had a gross retail margin of 37.7 percent, practically the same as the 38 percent reported for three other variety stores for the same year.⁵

The florist indicated that the gross margin was somewhat less than that generally obtained on his cash-and-carry merchandise, but was about that obtained for his "specials." It is considerably less than the 54.3 percent retail marketing margin reported by Fossum⁶ for retail florists and retail growers in the United States for 1949. It is also less than the 50.9 percent gross margin received by six retail florists in Pennsylvania.⁷ However, the latter project was designed to test promotional activities, and large expenditures were made for advertising. If this cost is taken into account, the adjusted gross profit averaged 14.7 percent.

¹ Plants purchased from the wholesale-grower were consigned to the stores at cost. No delivery charge was added. Plants supplied by the floricultural division were consigned at an estimated cost based upon data supplied by commercial producers. Retail prices were set in line with the objectives of the project and after consultation with several retail florists. Gross profits were a result, not a determinant, of cost or retail prices.

² Super Market Institute. *The Super Market Industry Speaks*, 11th Ann. Rpt. p. 11. 1959.

³ *Progressive Grocer*. *Facts in Grocery Distribution*. p. F-19. 1958.

⁴ *Progressive Grocer*. *Facts in Grocery Distribution*. p. F-13. 1959: Stationery, 41 percent; toys, 33.2 percent; houseware, 33 percent; health and beauty aids, 32.5 percent; soft goods, 31.9 percent; phonograph records, 28.4 percent; and magazines and books, 26 percent.

⁵ *This Week Magazine*. 8th Biennial Grocery Study: *The Big Challenge in Food Marketing*. p. 17. 1959.

⁶ Fossum, M. Truman. *Trade in Horticultural Specialties*. U. S. Dept. Agr. MRR No. 33. p. 114. 1953.

⁷ Pfahl, P. B., *et al.* *Merchandising for Profit in Retail Flower Shops*. Pa. Agr. Exp. Sta. Bul. 659. p. 13. 1959.

Table 20.—Gross Retail Margin for Floricultural Products, by Outlet and Year

Outlet	Retail margin
	<i>percent</i>
	1955-56
Supermarket.....	36.1
Variety store.....	35.8
Floral shop.....	36.1
Total.....	36.0
	1956-57
Supermarket.....	34.8
Variety store.....	37.4
Floral shop.....	35.3
Total.....	35.8
	1957-58
Supermarket.....	36.3
Variety store.....	37.7
Floral shop.....	36.3
Total.....	36.8

Table 21.—Weekly Gross Returns and Profits per Square Foot of Display Space for Floricultural Products, by Outlet and Year

Outlet	Number of weeks	Number of square feet of display area	Weekly sales per sq. ft.	Weekly gross profit per sq. ft.
			1955-56	
Supermarket.....	20	3.75	\$8.83	\$3.18
Variety store.....	20	3.75	4.25	1.52
Floral shop.....	20	3.75	5.55	2.00
Average.....	20	3.75	6.21	2.24
			1956-57	
Supermarket.....	29	7.5	\$9.02	\$3.13
Variety store.....	29	7.5	6.96	2.59
Floral shop.....	29	7.5	4.30	1.51
Average.....	29	7.5	6.76	2.41
			1957-58	
Supermarket.....	21	7.5	\$7.30	\$2.61
Variety store.....	21	7.5	7.60	2.76
Floral shop.....	21	7.5	4.79	1.69
Average.....	21	7.5	6.56	2.35

Weekly gross returns per square foot of display space

Sales of the floricultural items per square foot of space at the three outlets averaged \$6.21, \$6.76, and \$6.56 a week for the three years (Table 21). Gross returns decreased in the supermarket, declining by \$1.53 from the first year to the third. The returns were larger each succeeding year at the variety store, indicating better consumer acceptance. The decline at the floral shop during the second year was attributed to the change in store location and the resulting decrease in walk-in trade.

Data published by the Super Market Institute show that weekly sales in supermarkets during 1956, 1957, and 1958 were \$3.95, \$3.77, and \$3.71 a square foot of sales area.¹ The 1958 figure is higher than that given by the Progressive Grocer, which indicated that weekly sales per square foot of selling area were \$3.04 in downtown supermarkets, \$3.21 in neighborhood units, \$2.38 in those at the edge of town, and \$2.91 in those in shopping centers.² Supermarket sales of the flowers and plants in the experiment were well above these averages, being \$8.83, \$9.02, and \$7.30 for the three periods.

Unfortunately, comparable data were not available for either variety stores or floral shops. Although other goods would have been displayed at the variety store in the space used by the floricultural project, the space at the floral shop would not have been used for other plants except during the weeks of special sales. Therefore, the gross returns per square foot were additional income at the floral shop and were well above the estimated average returns.

Weekly gross profit per square foot of display space

Weekly gross profits per square foot of selling space in the supermarket were \$3.18, \$3.13, and \$2.61 for the three periods of the experiment (Table 21). The comparable figures reported by the Super Market Institute were \$0.71 in 1956, \$0.68 in 1957, and \$0.67 in 1958. The floricultural display at the supermarket had the desirable characteristics of high margins, fast turnover, and above-average profits as measured by relatively high weekly sales and returns per square foot of display space. Although comparable data are not available for the other stores, it is assumed that the high rate of sale and estimated gross profits would make the sale of such plants and flowers a profitable use of selling area for such outlets.

¹ Super Market Institute. *The Super Market Industry Speaks*, 11th Ann. Rpt. p. 12. 1959.

² Progressive Grocer. *Facts in Grocery Distribution*. p. F-10. 1959.

As was discussed on page 34 and following, shrinkage was a major problem under the conditions of this experiment and was larger than it would have been under normal retail operations. Nevertheless, after adjusting gross profit by the cost of flowers and plants removed for all reasons, the supermarket still had an average adjusted gross profit of \$1.15 per square foot per week, the variety store \$1.38, and the floral shop \$0.68 for the three years.

SUMMARY AND CONCLUSIONS

The objective of the study was to test consumer acceptance of low-cost potted plants and cut flowers in a supermarket, a variety store, and a floral shop. An increase in the "everyday" use as well as in the holiday use of such floricultural products would result in increased satisfaction for the final consumers, more income for the retailer, and greater utilization of the available greenhouse production facilities. The plants and flowers used in this experiment are adaptable to the production methods and geographic location of the greenhouse producers in Illinois.

In 1955-56, potted and bunched chrysanthemums were used in the experiment. The next year, asters, begonias, calceolarias, potted chrysanthemums, bunched cut chrysanthemums, cinerarias, coleuses, cyclamens, kalanchoes, poinsettias, and primulas were sold. In 1957-58, the asters, kalanchoes, and primulas were replaced by schizanthuses and arrangements of cut flowers.

Flowers and flowering plants are not generally thought of as food- and variety-store merchandise, yet the customers accepted such stores as outlets for the type of floricultural products displayed. These products can be marketed profitably through mass market outlets. In comparison with available data for supermarkets and variety stores, on average retail margins, gross returns, gross profits per square foot of display space, and net returns, the units displayed in the experiment showed that the floricultural products competed favorably with other items in the stores. The less-expensive units sold relatively better, in comparison with the more expensive, at the variety store while the more expensive were more acceptable than the other items at the supermarket and floral shop. However, the more-expensive items sold as well at the variety store as at the other two outlets.

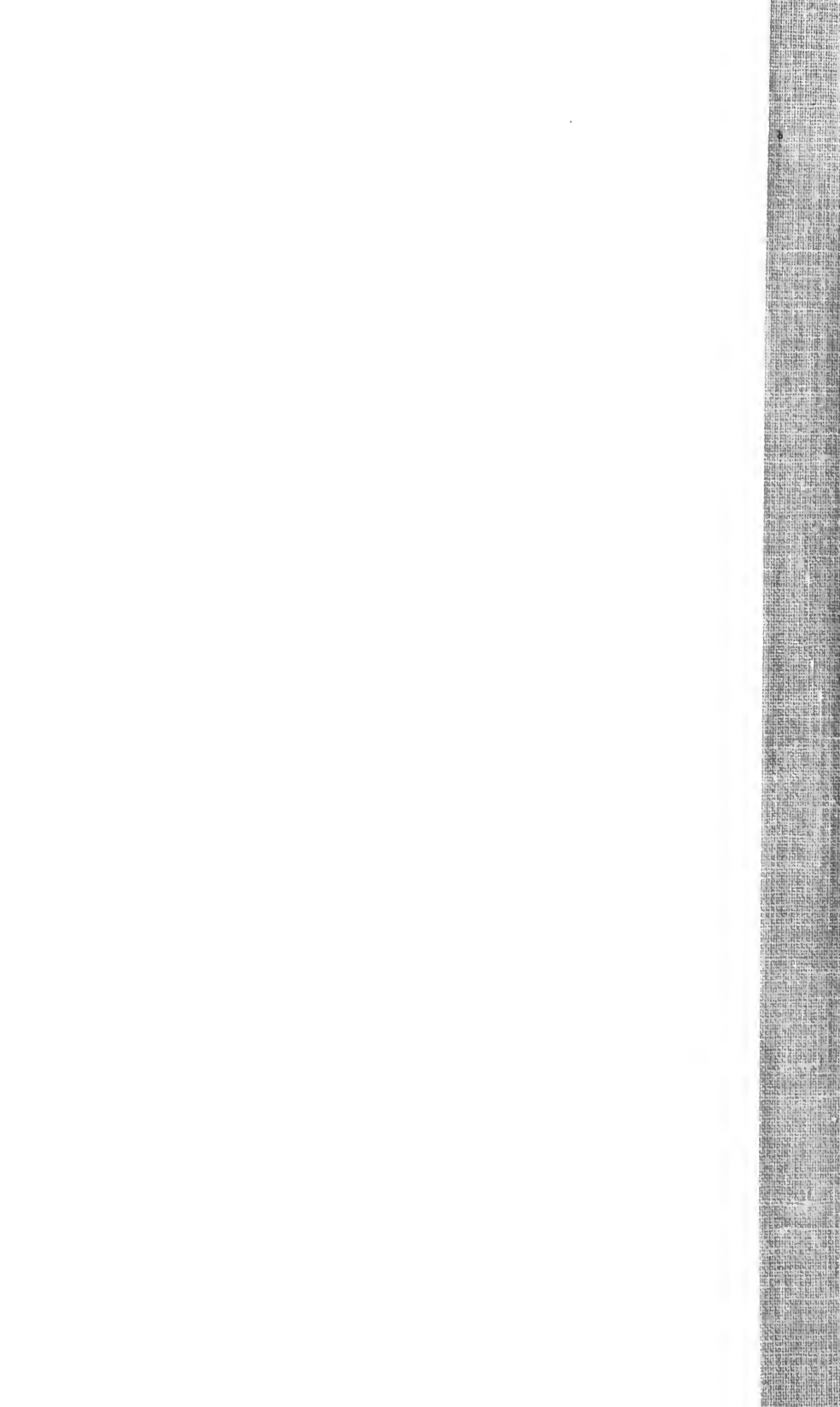
Compared with the other plants and flowers offered by the floral shop, the items offered in this display were profitable, and net

returns were increased by the addition of these plants to the normal operation.

Holidays and special occasions had the largest positive influence on weekly sales. Quality was also an important sales factor with all floricultural products at each of the outlets. The number of different kinds of plants on display at the same time, as well as their introduction and reintroduction, also stimulated sales.

These findings suggest that to encourage the "everyday" use of flowers and plants, an adequate display of good-quality merchandise should be maintained at all times. To interest consumers and to stimulate repeat purchases, a selection of various kinds, varieties, and colors of plants and flowers should be displayed. Changing the kinds of plants on display as well as the use of specific "holiday" plants is an advisable merchandising technique. Although not used in this study, promotional materials could be used to accentuate the everyday and the holiday use of flowers and plants and their low prices.

The merchandising methods employed in this study could be used in other mass market outlets and floral shops, very probably with similar results. The procedures are also applicable to other kinds and types of inexpensive plants and flowers besides those discussed here.





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