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# FLORAL MARKETING

BY WHOLESALE GROWERS  
IN NEW YORK AND CHICAGO

Marketing Research Report No. 323

UNITED STATES DEPARTMENT OF AGRICULTURE  
Agricultural Marketing Service      Marketing Research Division  
Washington, D.C.



## PREFACE

Greenhouse and nursery products are an important source of income for farmers in many areas. The Department of Agriculture has estimated that in 1958 farmers' total cash receipts from these products were \$632,000,000. The present study, which deals with cut flowers and potted plants in the Chicago and New York City market areas, is part of a broad program of research aimed at improving marketing efficiency and expanding markets for farm products.

This is the second report from a study of floricultural marketing in the New York and Chicago market areas. It is concerned with marketing at the wholesale grower level. It describes (1) the volume of sales and floral commodities sold; (2) marketing methods, practices, and policies; (3) marketing services available; (4) cost of marketing; and (5) gross returns per square foot of greenhouse area. Also, it evaluates the impact of marketing channels, practices, and pattern of distribution on marketing costs.

The first report, "Wholesaling Floral Commodities in the Chicago and New York City Markets," (U. S. Dept. Agr., Agr. Mktg. Serv., Mktg. Res. Rpt. No. 175, June 1957), represents results of research undertaken in the New York and Chicago wholesale markets at the commission and merchant wholesaler level.

Another report, "Expanding the Market for Floral Products--Some Economic Aspects," AMS 286 (U. S. Dept. Agr., Agr. Mktg. Serv., Jan. 1959), has been published. It summarizes economic and statistical information concerning retail marketing of floral products in supermarket food and variety stores.

Data for this group of reports were gathered in 1956 for the 1955 business year. These data are still applicable and usable in appraising the marketing situation for wholesale growers in the two market areas.

Floral wholesale growers and commission and merchant wholesalers in the New York and Chicago market areas supplied necessary data for this study. Assistance in locating and in determining the size of firms and their major floral products in the Chicago market was received from R. H. Roland, formerly Executive Secretary, Society of American Florists; H. J. Wolfe, formerly Secretary, Illinois Florists Association. Similar assistance in the New York market was given by E. R. Hall, Secretary, Wholesale Commission Florists of America; O. W. Davidson and M. R. Harrison, Department of Horticulture, Rutgers University; Arthur Bing, Floriculture and Ornamental Horticulture, Cornell University; and R. H. Brewster, Associate County Agricultural Agent, Suffolk County, New York. A. Z. Macomber assisted in the field observations, obtaining the data from a number of wholesale growers.

CONTENTS

	Page
Summary .....	5
Introduction .....	8
Structure of the New York and Chicago markets .....	8
Greenhouse areas and sales .....	8
Marketing methods, practices, and channels .....	9
Transportation .....	10
Market allocations of products .....	11
Marketing services received by growers .....	12
Marketing information .....	12
Marketing services provided by growers .....	12
Marketing improvements suggested by growers .....	13
Marketing costs--major components .....	14
Evaluation .....	16
Appendix .....	18
The sample .....	19
Limitations of data .....	19
Tables 1 to 27 .....	20-44

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## FLORAL MARKETING BY WHOLESALE GROWERS IN NEW YORK AND CHICAGO

By Elmer J. Moore, agricultural economist  
Market Organization and Costs Branch

### SUMMARY

#### New York

In the New York market potted plants accounted for 42 percent of the total wholesale dollar volume in 1955, the latest year for which data are available. Roses accounted for 24 percent; various cut flowers, 14 percent; orchids, 11 percent; and carnations, 10 percent. Growers of these products included in the sample in the New York market averaged 57,000 square feet under glass, \$89,000 in sales, and gross returns of \$1.56 per square foot of greenhouse area. These and other data in this report on the New York market are derived from a sample of 136 wholesale growers located in this market area.

About three-fourths of the total wholesale dollar volume of roses, various cut flowers, carnations, and potted plants were transported to market by truck. The figure for orchids was about two-thirds.

Only for orchids were rail shipments important. Rail shipments accounted for about one-fourth of the dollar value of orchids.

Chief marketing services provided by growers were delivery and credit. Growers of potted plants provided more credit, on the average, than growers of cut flowers. Essentially, this reflects the difference in methods of sale used by each. Cut-flower growers usually sell on consignment through wholesalers, while potted-plant growers sell directly to retailers for cash.

The principal market outlet for cut flowers, except orchids, was the commission and merchant wholesalers. Orchid growers sold 46 percent of their volume to wholesalers and 45 percent to retailers. Most potted-plant growers sold their products to retail outlets.

Growers in the New York market area sold their products at or near the greenhouse, in New York City, and in distant markets. Small-volume cut-flower growers sold the majority of their products in New York City and locally; large-volume cut-flower growers sold most of their products in New York City and distant markets. Orchid growers sold about three-fourths of their dollar volume in distant markets.

Potted-plant growers sold 34 percent of their total dollar volume in the local market, 27 percent in New York City, and 39 percent in distant markets.

Marketing costs per dollar of sales for each commodity group averaged from 31 to 41 cents. Handling costs per dollar of sales ranged from 7 cents

for potted plants to 21 cents for roses. Selling expenses, including commission charges, telephone, and advertising for each commodity group per dollar of sales, were 15 cents each for various cut flowers and carnations, 14 cents for roses, 10 cents for orchids, and 9 cents for potted plants. Transportation costs ranged from 4 cents for carnations and roses to 8 cents for potted plants.

Other marketing costs, including packaging materials and boxes for each commodity, per dollar of sales were: Potted plants, 9 cents; carnations, 8 cents; orchids, 5 cents; roses and various cut flowers, 2 cents each.

Average gross returns per square foot of greenhouse area less average total marketing costs per dollar of sales, or net returns, for each commodity group were: \$0.71, roses; \$0.59, carnations; \$1.32, orchids; \$0.59, various cut flowers; and \$1.39, potted plants.

Net returns in any particular case are the difference between marketing cost per dollar of sales and associated gross dollar returns per square foot of greenhouse area. This residual (net returns) in any particular case is the income to the grower to cover production costs and profit.

#### Chicago

In Chicago, each of the five commodity groups comprised the following parts of the total wholesale dollar volume of floral marketings: Potted plants, 39 percent; roses, 27 percent; carnations, 16 percent; various cut flowers, 10 percent; and orchids, 8 percent.

The sample in Chicago consists of 96 wholesale growers. This sample represents 85 percent of the total wholesale dollar volume of floral marketings in the Chicago area reported by the 1954 Census of Agriculture.

Wholesale growers in Chicago averaged 58,000 square feet of greenhouse area and \$78,000 in wholesale sales, and had gross returns of \$1.34 per square foot of greenhouse area. Considerable variation occurred among firms of different sizes and among commodity groups.

Between 87 and 100 percent of the cut flowers, except orchids, were transported to market by trucks. The figure for orchids was 65 percent; for potted plants it was 85 percent. Of these shipments, hired trucks accounted for a larger volume of cut flowers than of potted plants. More potted-plant growers than cut-flower growers owned trucks.

Rail shipments accounted for 16 and 5 percent, respectively, of the total dollar volume sold by orchid and carnation growers. Except for a relatively small amount of potted plants, most floral commodities were not shipped to market by rail.

The major market outlet for cut flowers was commission and merchant wholesalers. Wholesalers received between 74 percent and 99 percent of the

total dollar volume sold by each commodity group. Various cut-flower growers sold 74 percent, and orchid growers 99 percent, to wholesalers. One-fifth of the total dollar volume of various cut flowers was sold to retail florists. This represents the largest amount sold to retail florists by any group of growers in Chicago. In contrast, orchid growers in New York sold 45 percent of their total dollar volume to retail florists.

Retail florists were the major market outlet for potted plants. Retail florists, mass market outlets, and truckers received 93 percent of the total dollar volume sold by potted-plant growers. Only small firms with sales of less than \$25,000 sold a significant part of their total dollar volume to commission and merchant wholesalers.

Mass outlets purchased potted plants from large firms, with total sales of \$50,000 to \$99,000.

Chicago was the chief market for both cut flowers and potted plants; distant markets ranked second and local markets third.

One-third of the cut-flower growers and one-half of the potted-plant growers in Chicago said they were willing and able to sell their products to mass market outlets, in contrast to one-half of such growers in New York.

The majority of cut flowers were sold on consignment. The majority of potted plants were sold outright. Large-volume cut-flower growers sold relatively smaller parts of their total dollar volume on consignment than small-volume growers did. Consignment sales were relatively unimportant for potted plants, except for small-volume growers.

Average total marketing costs per dollar of sales were highest for various cut flowers (42 cents) and lowest for potted plants (27 cents.) Also, these costs were higher for cut-flower growers using the local and Chicago markets combined than for growers using Chicago and distant markets combined.

Handling costs made up the biggest part of the marketing costs for potted plants and cut flowers, except orchids; the lowest costs for cut flowers were telephone and telegraph expenses. The lowest cost for potted plants was advertising expenses.

Returns to growers, after deducting the average total marketing costs from gross returns per square foot of greenhouse area, were \$1.90 for orchid growers, \$0.38 for various cut flowers, \$1.69 for potted plants, \$0.81 for roses and \$0.45 for carnations.

Such comparisons do not indicate the relative amounts of profit accruing to floral growers in either market area, since production costs were not determined.

## INTRODUCTION

This report is based on data obtained from a sample of 136 wholesale cut-flower and potted-plant growers in the New York market area and 96 growers in the Chicago market area. It describes the marketing channels, methods, practices, costs, and services used by growers in marketing floral products.

The New York market area includes the counties of Bronx, Kings, Nassau, Queens, Rockland, Suffolk, and Westchester in New York; and Bergen, Essex, Hudson, Middlesex, Morris, Passaic, Somerset, and Union in New Jersey.

The Chicago market area includes the counties of Cook, DuPage, Kane, Lake, and Will in Illinois; and Lake in Indiana.

Commodity specialization and classification was determined for each wholesale grower by the total dollar volume of marketings in his major floral commodity (table 1). For example, a rose grower's total marketings may consist of 75 percent roses, 10 percent carnations, 5 percent snapdragons, 5 percent gardenias, 3 percent stocks, and 2 percent lilies. Growers producing and marketing cut flowers in major quantities other than roses, orchids, carnations, and potted plants were classified as growers of various cut flowers. Commodity specialization was highest among growers of potted plants and orchids in each market (table 2).

## STRUCTURE OF THE NEW YORK AND CHICAGO MARKETS

### Greenhouse Areas and Sales

From 1949 to 1954 production of floral products in New York and Chicago shifted, somewhat, from counties near the metropolitan centers to outlying parts of both market areas. At the same time, the number of firms producing floral products in both markets decreased, but the average size of remaining firms increased.

In 1955 wholesale growers in New York averaged 57,000 square feet under glass, \$89,000 in sales, and gross returns of \$1.56 per square foot of greenhouse area. Wide variations occurred among the commodity groups. For example, orchid growers had the greatest average area under glass, with 167,000 square feet, and growers of various cut flowers had the least, with 24,000 square feet. Growers of potted plants, for instance, had averages of 16,000 to 164,000 square feet under glass, but almost all the carnation growers averaged from 23,000 to 67,000 square feet (table 3).

In Chicago, wholesale growers averaged 58,000 square feet under glass, \$78,000 in sales, and gross returns of \$1.34 per square foot of greenhouse area. Considerable variation occurred among commodity groups (table 4).

### Marketing Methods, Practices, and Channels

Methods and practices.--In general, growers of cut flowers reported using the telephone and trade papers to estimate the market situation for floral products. The telephone was more widely used than other means in both market areas (tables 5 and 6).

Growers of potted plants generally sell their products directly to retailers, and, therefore, they have a better opportunity than cut-flower growers to estimate the demand for their products. This function of estimating the demand for floral products, however, is usually performed for growers of cut flowers by commission and merchant wholesalers.

Practices in preparation for market varied considerably among growers. In New York about 52 percent of the growers of cut flowers indicated that receivers influenced their practices in preparing these products for market. Such practices included prepacking, grading, storing at 31° F., instructions on care of the product, and identification tags to show variety, grade, and name of grower.

In Chicago 45 percent of the growers of cut flowers and 44 percent of the growers of potted plants indicated that practices used in preparing their products for market were influenced by the kind of buyers or receivers to whom their products were shipped. Of these practices, two which were generally found among rose and carnation growers in both markets were grading and placing variety, grade, and name of grower on bunches of flowers.

About 10 percent of the growers of potted plants provided identification tags to show name and variety of product in both markets.

Marketing channels.--In New York and Chicago flowers were sold to commission and merchant wholesalers, retail florists, mass-market outlets,<sup>1/</sup> truckers, and other wholesale growers, in about that order, except in Chicago where truckers received more products than mass-market outlets (tables 7 and 8).

In both the New York and Chicago markets, small firms sold proportionately more of their products through commission and merchant wholesalers than the larger firms did (tables 9 and 10).

In addition to size of firm, the commodity had some influence on the market outlets used. For example, growers of orchids in the New York market made 46 percent of their total sales through wholesalers and 45 percent to

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<sup>1/</sup> Mass outlets include supermarket, variety, drug, and department stores, one-stop shopping centers, and garden supply centers.

retailers, while growers of roses made 72 percent of their sales through wholesalers and 26 percent to retailers (table 7).

In both markets, growers of potted plants sold about 75 percent of their volume to retail florists (tables 7 and 8). In the New York market, only growers of potted plants with sales of less than \$50,000 sold their products through wholesalers, while in Chicago growers of all sizes sold some potted plants through wholesalers (tables 9 and 10).

In general, mass market outlets purchased cut flowers and potted plants from the medium and large firms in both markets. Growers differed slightly in their views on selling to mass market outlets depending on their size, market area, and commodity grown. In both markets 50 percent of the potted-plant growers said they were willing and able to sell to supermarkets, variety stores, and department stores. In Chicago 38 percent of the cut-flower growers and in New York 50 percent of such growers were willing and able to do so.

#### Transportation

In both markets, differences existed in the use of the various modes of transportation, depending on the particular product and size of operation. Such differences partially reflect (1) the market value and weight of the product in relation to transportation cost, and (2) perishability and bulkiness of the product. Of course, each of these factors influences the size of the market area for any particular product, since transportation cost increases with distance while perishability of the products limits the distance that it can be shipped.

Trucks.--Trucks (owned, hired or leased) were the chief means of transportation to market for cut flowers and potted plants in both markets. Hired trucks were used to a greater extent to transport cut flowers than to transport potted plants to market. Differences existed in the use of hired trucks between markets and among commodity groups within markets. For example, hired trucks were used to transport between 52 and 96 percent of the cut flowers in the Chicago market area, while they were used to transport between 23 and 63 percent in the New York market area (tables 11 and 12).

Hired trucks were used to transport 96 percent of the dollar volume of roses to market in Chicago, but only 52 percent of the roses in New York.

In each market, trucks which were owned by growers and used to transport both cut flowers and potted plants to market generally increased in importance as the size of operation increased (tables 13 and 14).

Rail.--In New York, rail shipments ranged from 1 percent of the total dollar volume for potted plants to about 27 percent for orchids; in Chicago rail shipments ranged from none for roses and various cut flowers to 16 percent for orchids.

Air.--In New York air transportation ranged from none for potted plants to about 8 percent for orchids. No growers in Chicago reported using air transportation.

Others.--About 21 percent of potted plants in New York and 15 percent in Chicago were transported by bus or parcel post, or picked up by customers. In general, small firms provided proportionately less transportation to market than large firms (tables 11 and 12).

In New York about 6 percent of the growers of cut flowers indicated that wholesalers provided transportation for floral products from greenhouse to market, while in Chicago about 4 percent received transportation to market from wholesalers. This service was not provided growers of potted plants in either market, but sales of potted plants to wholesalers were small.

#### Market Allocations of Products

Sales of growers in each market were classified as local,<sup>2/</sup> city, and distant. Utilization of these markets by growers differed markedly between the New York and Chicago markets.

In general, as the size of firm increased the part of the total dollar volume sold in the local market decreased (tables 13 and 14).

Growers of potted plants in the New York market sold approximately one-third of their total dollar volume locally, a third in New York City, and a third in distant markets.

Potted-plant growers in the Chicago market area sold 70 percent of their dollar volume in Chicago, 20 percent in distant markets, and only 10 percent in the local market.

Chicago was the principal market for all cut flowers and potted plants sold by growers in the Chicago market area. New York City was only the principal market for roses, carnations, and various cut flowers sold by growers in that market area.

Chief reasons given by growers in the Chicago market area for shipping to Chicago were that it is (1) the nearest market, (2) the best market, and (3) the only available market. New York market area growers gave these reasons for shipping their products to New York City: (1) It is the only market available, (2) it is a good market, and (3) shipping costs to other markets are too high.

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<sup>2/</sup> The local market includes sales made on the premises of the firm or at nearby points adjacent to the city limits of New York or Chicago.

### Marketing Services Received by Growers

Information.--Growers of cut flowers in Chicago received more market information from wholesalers than growers in New York did. For example, 95 percent of these growers in Chicago and 32 percent in New York reported that they received general market information from wholesalers.

Approximately 50 percent of the wholesale firms in New York City and 70 percent in Chicago reported that they gave market information to their suppliers. 3/

Credit and supplies.--In New York about 3 percent of the growers of cut flowers received credit and 7 percent received supplies from wholesalers. Such services were provided by about 20 percent of the New York City wholesale firms. In the Chicago market area, about 8 percent of the growers of cut flowers received credit and 20 percent received supplies from wholesale firms. These services were received only by small firms. In contrast to New York City wholesale firms, 50 percent of the Chicago firms gave cash advances (credit) or supplies to growers.

### Marketing Information

In both markets growers were asked: What additional information that is now not available do you need as an aid in marketing your floral commodities?

The principal kinds of marketing information which growers in both markets wanted were: (1) Market supply and demand, including price trends and consumer preferences for particular products; (2) how to improve their packaging methods and practices; (3) how to improve their marketing methods and practices; and (4) how to obtain better cooperation from wholesalers in their handling and selling methods.

In each market growers of potted plants wanted less specific marketing information than growers of cut flowers wanted, probably because prices of potted plants do not generally fluctuate as widely as prices of cut flowers.

### Marketing Services Provided by Growers

Services provided retail florists by growers include delivery, credit, and special prepacking. The service most often provided to buyers by growers of cut flowers was credit in New York, and delivery in Chicago. In each market more growers of potted plants provided delivery of their products to buyers than provided credit (table 15).

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3/ Moore, E. J. Wholesaling Floral Commodities in the New York and Chicago Markets. U. S. Dept. Agr., Agr. Mktg. Serv., Mktg. Res. Rpt. No. 175. June 1957.

This difference between the amount of credit extended by growers of potted plants and that extended by growers of cut flowers is related to differences in marketing channels, type of sales outlets, and physical characteristics of the two commodities.

#### Marketing Improvements Suggested by Growers

Marketing methods and practices.--Net returns of growers are influenced by methods used in marketing floral products. Suggestions of growers in New York for improving marketing methods ranged from abolishing consignment selling to some form of price support for floral products. Other suggestions included: (1) More control by growers in the marketing of their products; (2) stabilized prices for floral products; (3) better handling methods; (4) larger area of distribution; (5) commission charges that would reflect risk borne by wholesalers; (6) closer cooperation between growers and wholesalers; (7) restriction of interregional competition in marketing floral products; and (8) better location of markets.

The principal need of growers in Chicago for improving their economic position was information on (1) market demand for specific floral products to serve as guides to production; (2) effectiveness of various advertising media and methods for floral products; (3) ways of obtaining cooperation between wholesaler and grower and among growers; and (4) impact on supply and demand of the practice of charging different prices to different buyers and receivers (price discrimination).

Suggestions of growers in each market area would be expected to differ because of differences in market organization, location, physical features, and marketing methods and practices in each wholesale market. 4/

Methods of selling.--In each market, most of the cut flowers were sold on consignment, while most of the potted plants were sold for cash. Small firms selling cut flowers or potted plants sold more of their products on consignment than larger firms did.

Growers of cut flowers made their sales through salesmen, standing orders, and telephone. In New York salesmen were employed only by large growers of carnations in selling to wholesalers; but in Chicago salesmen were employed by the smallest and largest growers of various cut flowers and of potted plants (tables 16 and 17). Salesmen were employed by growers of potted plants to sell most of their products to retail florists in New York and about one-third of their products in Chicago (tables 16 and 17).

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4/ Moore, E. J., Wholesaling Floral Commodities in the Chicago and New York City Markets, delves more fully into market location, methods and practices, and marketing costs of wholesalers.

Factors which partially influence growers in selecting their market outlets are: (1) Written or oral contracts or agreements with buyers (table 18); (2) cash advances or production supplies received from buyers (table 18); (3) differences between prices received from wholesale and retail buyers for comparable qualities and quantities of products (table 19); (4) customs, habits, and institutional factors prevailing in the industry; (5) services provided by buyers; and (6) various combinations of these factors.

Contracts or agreements.--In general, small growers did not have contracts with buyers nor did they report any difference between prices paid by wholesalers and those paid by retailers. Of course, these growers, individually, marketed their products through only one or the other of these market outlets. Yet these growers, as a group, received most of the cash advances or production supplies from wholesalers.

Contracts or agreements generally were made by large growers of cut flowers and potted plants.

A few growers of potted plants in the New York market area had agreements with large concerns such as art galleries and museums for specific commodities to be delivered according to a definite schedule of prices, quantities, and dates.

Price differences.--Growers attempt to select sales outlets which will maximize returns or minimize losses in the sale of their products. Thus, growers' choices of outlets are partially dictated by prices received and expected from a particular outlet. Prices received by growers from wholesalers contrasted with prices received from retailers are shown in table 19. Generally, growers whose prices varied widely sold more of their product to retailers than other growers did.

Cash advances or supplies.--In the New York market, only small growers of potted plants and various cut flowers reported receiving cash advances or production supplies from buyers. For the Chicago market, only small growers of each commodity, except orchids, reported receiving cash advances or production supplies from buyers or receivers.

#### Marketing Costs--Major Components

In both markets, marketing cost increased as the size of firm increased. Two factors, in the main, account for this tendency.

First, large growers, in general, marketed more of their dollar volume in distant markets than other growers did. In this case, all cost components did not change in the same direction--some increased while others decreased.

For example, selling a product at the greenhouse may increase handling costs by consuming more labor time and upsetting the planned routine than shipping the same product to the city or a distant market. Thus, handling costs were less for growers marketing most of their products in New York City or distant markets.

Second, transportation and communication costs were increased when the market area was expanded to include distant markets as well as the metropolitan markets.

In both markets, as the size of firm increased, average total marketing costs increased slightly, except for growers of roses in New York and growers of carnations and potted plants in Chicago. Costs for each commodity group and market area are shown in tables 20 to 24.

Handling.--Handling costs include grading, storing, loading, and unloading expenses. In each market, average handling cost varied, depending on the size of firm, commodity handled, and distribution practices followed. This was principally because labor cost in handling, grading, storing, loading, and unloading differs depending on the market outlets and markets used. For example, in New York large growers of orchids marketed 30 percent of their volume in New York City and 70 percent in distant markets; their handling costs averaged 11.8 cents per dollar of sales. On the other hand, medium-sized growers of orchids marketed 5 percent of their volume in local markets, and 95 percent in distant markets; their handling costs averaged 8.5 cents per dollar of sales (table 22). Thus, handling costs might be reduced by adjusting the amounts sold to various markets. Such adjustments should include allowance for differences in net returns from the sale of products in various outlets and markets.

Transportation.--In New York, transportation cost tended to increase slightly as the size of operation increased. This tendency can be largely accounted for by distances products were shipped to market, the type and ownership of transportation employed, and the part of the total volume shipped to various markets.

In Chicago, transportation cost tended to decrease as the size of firm increased. Growers in this market generally sold their products in one market--Chicago. This contrasts sharply with the marketing pattern of New York growers.

Selling.--Selling costs are charges incurred by growers in effecting transfer of ownership of their floral commodities. Such costs include charges for telephone and telegraphic services, advertising, commissions paid to wholesalers and brokers, and compensation to salesmen. The wholesale commission rate is the percentage of selling price which is deducted by the wholesaler for selling consigned floral commodities.

In New York, the wholesale commission rate charged to large firms was greater than that charged to smaller firms, except for various cut flowers where it decreased as size of firm increased (table 25). In Chicago, the wholesale market commission rate was about the same for firms of all sizes (table 25).

In each market, commission charges paid by potted-plant growers averaged about 8 cents per dollar of sales (table 24). These are payments made to salesmen, discounts to buyers, and commission charges paid to wholesalers.

Telephone and telegraphic charges as a percentage of total dollar sales were apparently unrelated to size of firm for both cut-flower and potted-plant growers (tables 20 to 24).

Advertising expenses for growers of cut flowers averaged slightly higher in Chicago than in New York. This difference may be explained by the fact that cooperative advertising organizations embrace most levels of floral trade in Chicago but not to the same extent in New York.

Packaging materials.--Costs of packaging materials for growers of cut flowers varied widely in each market but not so widely between markets. Orchid growers had the highest average cost in each market; growers of carnations and of various cut flowers had the lowest in the New York market. For the Chicago market, rose growers had the lowest.

Variations in the cost of packaging materials and labor are influenced by marketing channels, outlets, and markets used. Such variations are also related to practices used in preparing commodities for market, as well as certain characteristics of the product which may determine the kind of packaging materials used. For example, quantities and costs of packaging materials for orchids differ significantly from those for roses. Orchid tubes and shredded paper are used for orchids; newspaper is frequently used for roses.

#### EVALUATION

Marketing channels for cut flowers are essentially from grower to wholesaler to retailer. Commission charges represent about one-third to one-half of the total marketing costs of cut-flower growers. In their efforts to reduce costs or increase returns, some growers sell directly to retail florists. Growers who sold directly to retail florists had slightly higher handling and transportation costs than growers who sold most of their products through commission and merchant wholesalers, but such increases were offset by the relative decrease in commission charges.

The difference between gross returns and marketing costs was partially the result of the marketing channels used by the grower. Growers who sold

20 percent or more of their total dollar volume directly to retail florists had a larger realized net return after deducting marketing costs from gross returns than growers who sold more than 80 percent of their volume through wholesale commission florists. 5/ For example, the realized net return for New York rose growers averaged 84 to 90 cents per square foot of greenhouse area, in contrast to 18 cents for rose growers who marketed more than 80 percent of their product through wholesalers. Part of this difference is also caused by the higher prices received from retailers. Growers received about 20 percent more for their products when sold to retail florists.

In New York, gross returns for each floral commodity per square foot of greenhouse area were: Potted plants, \$2.02; orchids, \$1.94; roses, \$1.15; carnations, \$1.01; and various cut flowers, \$1.00. The marketing costs were: \$0.44, roses; \$0.42, carnations; \$0.62, orchids; \$0.41, various cut flowers; \$0.63, potted plants.

Gross returns in Chicago were: Orchids, \$3.02; potted plants, \$2.32; roses, \$1.35; carnations, \$0.78; and various cut flowers, \$0.66. The marketing costs were: \$1.13, orchids; \$0.64, potted plants; \$0.54, roses; \$0.32, carnations; and \$0.28, various cut flowers.

Growers specializing in a particular product usually obtained higher gross and net returns per square foot of greenhouse area than the nonspecialized growers. For example, potted-plant and orchid growers had the highest degree of specialization and also the highest net returns per square foot of greenhouse area.

Distribution patterns followed by growers in marketing their products affect the transportation, handling, and selling costs, which in turn influence net returns.

In general, the larger the grower operation, the greater the total sales. Occasionally, the larger firms did not have greater sales because of differences in utilization of management, capital, labor, and production and marketing techniques. But these factors caused greater variations among small non-specialized firms than among large specialized firms.

A shift is occurring in floral production from some cut flowers to potted plants. During this transition period, total dollar sales of growers involved might be expected to be slightly below the average of both cut-flower and potted-plant growers. In this study, some growers of various cut flowers, particularly, indicated that they were in the process of shifting their production from one commodity to another--usually to potted plants. These growers usually had the lowest average gross returns per square foot of greenhouse

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5/ Realized net returns per square foot of greenhouse area equal total sales less total marketing cost, with the residual divided by total greenhouse area.

area. The adjustments necessary to shift to more specialized production may adversely affect, in the short run, the quality and quantity of products which growers will offer for sale.

Some growers sold their property because of difficulties involved in changing from one commodity to another. Others sold their property because of pressure from increasing suburban development, such as higher land values and taxes. Many of these were growers who had used their buildings and other facilities for several years, and who did not expect to pass their property to younger members of their families.

For two reasons, net returns were greater for growers who sold less than 20 percent of their products in the local market. First, higher prices were received for products sold in the city and distant markets than for products sold in local markets. Prices were higher by more than the amounts necessary to cover the higher transportation and selling costs of growers who sold their products in city and distant markets. Second, handling costs were lower, on the average, for growers selling in city and distant markets.

In each market area, growers indicated a need for information on consumer preferences for particular floral products and for an evaluation of the influence and effectiveness of various means of advertising floral commodities. Such marketing information, when made available to growers, would serve as production and marketing guides.

Marketing methods and practices of cut-flower growers did not differ appreciably within each commodity group; however, they did differ among commodity groups.

#### APPENDIX

This report is concerned with marketing cut flowers and potted plants by wholesale growers in New York (including northeastern New Jersey) and Chicago.

Wholesale growers are defined as firms primarily engaged in the production and selling of floral products for resale. The definitions of the standard metropolitan areas of New York-northeastern New Jersey and of Chicago are those used in the 1950 Census of Population.

Data for 1955 were obtained by personal interviews of wholesale growers in 1956. These growers represented small, medium, and large operations. Sizes of operation were determined by total dollar sales of floral commodities in 1955 or total greenhouse area (table 26).

Five floral commodity groups were surveyed: Roses, carnations, orchids, various cut flowers, and potted plants.

Four basic questions were asked respondents. First, "Which floral commodities do you market, what volume, and how?" Second, "To whom and where are these commodities sold?" Third, "What marketing services do you have available, use and need to efficiently market floral products produced?" Then fourth, "What are your marketing costs as a percentage of wholesale sales for the last fiscal year (1955) for specified cost items?" Thirty-eight specific questions were asked to obtain answers to these four basic questions.

### The Sample

The universe from which the sample for each market was drawn, consisted of all wholesale growers of floral products in the New York-northeastern New Jersey and the Chicago metropolitan areas. The design was a stratified disproportionate probability sample.

The specific method for selecting the sample in each market was as follows: Three primary sampling units--small, medium, and large--were used for each of the five commodity groups. Ranges of total dollar sales for growers of each commodity and each size (small, medium, and large) are shown in table 26.

Sampling rates were determined for the small and medium-size growers of each of the five floral products. All large growers of each product were selected. These growers, generally, accounted for the major portion of sales. In each market, except for growers of carnations and various cut flowers, large growers sold between 58 and 99 percent of the dollar volume (table 27).

The resulting samples, 136 wholesale growers for the New York market and 86 for the Chicago market, are shown in table 26.

The New York market area sample of wholesale growers represent 66 percent of the dollar marketings reported by the 1954 census for this area.

For the Chicago market, the 96 wholesale growers represent 85 percent of the total dollar marketings reported by the 1954 census for this area.

### Limitations of Data

In this report data on product specialization, marketing practices, channels, services, and costs were obtained as percentages of total wholesale dollar sales. In most cases, this probably improved the reliability and accuracy of the data.

Large and medium-size firms frequently referred to their records when necessary. Small firms frequently answered without reference to records. The

bias, if any, introduced by small firms probably had little impact on the overall reliability and accuracy of the data for each commodity group. Within each commodity group, the maximum percentage marketed by small firms in either market was about one-fourth of the total dollar volume, except for small growers of carnations in the Chicago market. These growers sold about one-half of the total dollar volume of their group. However, this was only about one-sixth of the total dollar volume of the other four commodity groups combined.

Some data in this report are incomplete. For example, percentage of total wholesale dollar volume accounted for each cut flower was frequently not available. In production and marketing of cut flowers, however, most of the total wholesale sales are accounted for by a few kinds of cut flowers. Conversely, several kinds of potted plants are usually grown by potted-plant growers. A few firms grow both cut flowers and potted plants.

Benchmarks for much of the data in this study are not available.

Table 1.--Percentages of specified flowers sold in New York and Chicago, 1955

Commodity sold	New York	Chicago
	Percent	Percent
Roses .....	23.6	27.0
Carnations .....	10.7	8.0
Orchids .....	9.9	15.8
Various cut flowers .....	13.7	10.2
Potted plants .....	42.1	39.0
Total .....	100.0	100.0

Table 2.--Percent of total dollar volume obtained from sales of specified flowers by wholesale growers who specialize, New York and Chicago, 1955

Commodity in which growers specialize	New York	Chicago
	Percent	Percent
Roses .....	82	89
Carnations .....	77	83
Orchids .....	96	89
Various cut flowers .....	54	71
Potted plants .....	96	91

Table 3.--Area under glass, sales, and returns per square foot for wholesale growers of specified flowers, by size of firm, New York, 1955

Commodity and value of growers' annual sales	Area under glass	Sales	Returns per square foot
	1,000 square feet	1,000 dollars	Dollars
Roses:			
Less than \$70,000 .....	46.8	32.8	0.70
\$70,000 - \$140,000 .....	80.2	96.4	1.20
More than \$140,000 .....	157.7	203.5	1.29
Average .....	94.1	108.5	1.15
Carnations:			
Less than \$25,000 .....	22.8	12.4	.54
\$25,000 - \$49,000 .....	35.4	33.4	.94
More than \$49,000 .....	66.7	75.3	1.13
Average .....	45.1	45.4	1.01
Orchids:			
Less than \$75,000 .....	12.5	19.3	1.54
\$75,000 - \$150,000 .....	59.2	118.6	2.00
More than \$150,000 .....	239.1	454.0	1.90
Average .....	167.3	320.6	1.94
Various cut flowers:			
\$1,000 - \$10,999 .....	7.0	6.2	.89
\$11,000 - \$19,999 .....	19.9	14.8	.74
\$20,000 - \$40,000 .....	25.8	27.1	1.05
More than \$40,000 .....	76.7	133.8	1.75
Average .....	24.4	24.5	1.00
Potted plants:			
Less than \$25,000 .....	16.1	13.3	.83
\$25,000 - \$49,999 .....	22.5	38.8	1.72
\$50,000 - \$99,000 .....	42.1	74.1	1.76
More than \$99,000 .....	164.4	511.4	3.11
Average .....	110.0	333.2	3.03

Table 4.--Area under glass, sales, and returns per square foot for wholesale growers of specified flowers, by size of firm, Chicago, 1955

Commodity and value of growers' annual sales	Area under glass	Sales	Returns per square foot
	1,000 square feet	1,000 dollars	Dollars
Roses:			
Less than \$70,000 .....	62.4	53.7	0.86
\$70,000 - \$140,000 .....	106.7	115.3	1.08
More than \$140,000 .....	174.3	319.3	1.83
Average .....	103.4	139.8	1.35
Carnations:			
Less than \$25,000 .....	30.4	18.2	.60
\$25,000 - \$49,000 .....	44.9	35.9	.80
More than \$49,000 .....	80.1	79.8	1.00
Average .....	42.5	33.1	.78
Orchids:			
Less than \$75,000 .....	---	---	1/
\$75,000 - \$150,000 .....	---	---	---
More than \$150,000 .....	88.2	266.7	3.02
Average .....	87.7	265.3	3.02
Various cut flowers:			
\$1,000 - \$10,999 .....	15.1	6.5	.43
\$11,000 - \$19,999 .....	---	---	---
\$20,000 - \$40,000 .....	44.7	25.2	.56
More than \$40,000 .....	112.8	82.5	.73
Average .....	72.5	47.9	.66
Potted plants:			
Less than \$25,000 .....	20.3	16.7	.82
\$25,000 - \$49,999 .....	47.7	40.4	.85
\$50,000 - \$99,000 .....	51.1	68.6	1.34
More than \$99,000 .....	110.7	294.7	2.66
Average .....	84.2	195.2	2.32

1/ Consists of one firm.

Table 5.--Methods of appraising the market situation for specified flowers:  
 Percentage of sales by wholesale growers using each method, by size of firm,  
 New York market area, 1955

Commodity and method used by growers	Value of growers' annual sales		
	Less than \$70,000	\$70,000- \$140,000	More than \$140,000
	Percent	Percent	Percent
Roses:			
Telephone .....	38	88	75
Trade papers .....	25	38	25
Analyze sales records .....	12	37	0
Visit market .....	0	0	25
None .....	38	0	12
Carnations:			
Telephone .....	78	73	50
Analyze sales records and forecast demand .....	55	36	88
Visit competitors .....	0	9	12
None .....	0	9	0
Orchids:			
Telephone .....	50	67	50
Analyze sales records .....	0	0	100
Trade papers .....	0	0	50
Visit market .....	0	33	0
None .....	50	0	0
Various cut flowers:			
Telephone .....	63	70	50
Trade papers .....	25	10	0
Observe weekly returns .....	0	10	0
Visit market .....	0	30	0
None .....	38	30	17
Potted plants:			
Confer with competitors .....	15	54	100
Forecast demand .....	40	81	74
Trade papers .....	20	0	25
Telephone .....	20	0	0
Visit market .....	20	0	0
None .....	15	9	0

Table 6.--Methods of appraising the market situation for specified flowers:  
Percentage of sales by wholesale growers using each method, by size of firm,  
Chicago market area, 1955

Commodity and method used by growers	Value of growers' annual sales			
	Less than \$70,000	\$70,000-\$140,000	More than \$140,000	
	Percent	Percent	Percent	
Roses:				
Telephone .....	50	60	77	
Visit market .....	25	40	15	
Trade papers .....	19	--	8	
Confer with competitors .....	6	--	--	
Telephone .....	38	50	42	
Visit market .....	30	25	14	
Analyze sales records .....	--	7	14	
Trade papers .....	15	7	--	
Confer with competitors .....	7	--	14	
Orchids:	Less than \$75,000	\$75,000-\$150,000	More than \$150,000	
Telephone .....	--	--	60	
Analyze sales records .....	--	--	20	
Trade papers .....	--	--	20	
Visit market .....	--	--	--	
None .....	--	--	20	
Various cut flowers:	\$1,000-\$10,999	\$11,000-\$19,999	\$20,000-\$40,000	More than \$40,000
Telephone .....	30	--	60	50
Trade papers .....	20	--	--	17
Visit market .....	10	--	40	17
None .....	10	--	--	--
Potted plants:	Less than \$25,000	\$25,000-\$49,999	\$50,000-\$99,000	More than \$99,000
Trade papers .....	23	20	11	--
Telephone .....	--	40	22	33
Forecast demand .....	22	--	33	13
Confer with competitors .....	15	--	11	55
Analyze sales returns .....	--	--	22	43
None .....	38	40	--	--

Table 7.--Distribution of all sales of specified flowers, by size of grower and type of outlet,  
New York, 1955

		Percentage of total sales volume sold to--			
		Commission and merchant: wholesalers	Retail florists	Mass outlets	Wholesale growers: and others
Commodity and value of growers' annual sales:	Percent	Percent	Percent	Percent	Percent
Roses:					
Less than \$70,000	14.28	13.17	1.11	---	---
\$70,000 - \$140,000	23.34	16.67	6.20	0.07	0.40
More than \$140,000	62.38	42.23	18.40	---	.05
Total	100.00	72.07	25.71	.07	1.70
Carnations:					
Less than \$25,000	20.50	20.50	---	---	---
\$25,000 - \$49,000	40.62	24.62	14.09	---	1.91
More than \$49,000	38.88	29.78	9.10	---	---
Total	100.00	74.90	23.19	---	1.91
Orchids:					
Less than \$75,000	1.93	1.80	.08	.05	---
\$75,000 - \$150,000	21.79	8.80	10.68	.52	1.79
More than \$150,000	76.28	35.17	33.18	---	7.93
Total	100.00	45.77	43.94	.57	1.79
Various cut flowers:					
\$1,000 - \$10,999	9.26	4.95	3.83	.48	---
\$11,000 - \$19,999	36.54	30.13	6.33	---	.08
\$20,000 - \$40,000	43.70	31.53	7.49	3.31	1.37
More than \$40,000	10.50	6.30	.53	1.05	2.62
Total	100.00	72.91	18.18	4.84	1.45
Potted plants:					
Less than \$25,000	4.24	.70	1.81	1.09	.38
\$25,000 - \$49,999	13.74	.42	10.32	2.74	.26
\$50,000 - \$99,000	23.35	---	18.42	4.14	.79
More than \$99,000	58.67	---	47.92	3.46	4.37
Total	100.00	1.12	78.47	11.43	5.80

Table 8.--Distribution of all sales of specified flowers, by size of grower and type of outlet, Chicago, 1955

Commodity and value of growers' annual sales	Percentage of total sales	Percentage of total sales volume sold to--					
		Commission and merchant wholesalers	Retail florists	Mass outlets	Wholesale growers	Truckers and others	
	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Roses:							
Less than \$70,000 :	19.85	19.45	0.3	---	0.1	---	
\$70,000 - \$140,000:	21.27	21.27	---	---	---	---	
More than \$140,000:	58.88	49.38	9.5	---	---	---	
Total .....	100.00	90.10	9.8	---	.1	---	
Carnations:							
Less than \$25,000 :	48.78	48.58	---	0.20	---	---	
\$25,000 - \$49,000 :	37.93	36.53	1.40	---	---	---	
More than \$49,000 :	13.29	5.00	4.89	---	---	---	3.40
Total .....	100.00	90.11	6.29	.20	---	---	3.40
Orchids:							
Less than \$75,000 :	.56	.14	.42	---	---	---	
\$75,000 - \$150,000:	---	---	---	---	---	---	
More than \$150,000:	99.44	99.44	---	---	---	---	
Total .....	100.00	99.58	.42	---	---	---	
Various cut flowers:							
\$1,000 - \$10,999 :	24.82	20.52	4.20	.10	---	---	
\$11,000 - \$19,999 :	---	---	---	---	---	---	
\$20,000 - \$40,000 :	24.85	10.00	10.85	.20	---	---	3.80
More than \$40,000 :	50.33	43.52	6.81	---	---	---	
Total .....	100.00	74.04	21.86	.30	---	---	3.80
Potted plants:							
Less than \$25,000 :	3.90	1.14	1.53	.62	---	---	.61
\$25,000 - \$49,999 :	7.37	.62	1.84	---	2.48	2.43	
\$50,000 - \$99,000 :	30.93	.62	16.62	5.40	.58	7.71	
More than \$99,000 :	57.80	.26	51.29	4.15	1.58	.52	
Total .....	100.00	2.64	71.28	10.17	4.64	11.27	

TABLE 2.-Distribution of sales by wholesale growers of specified flowers, by size of grower and type of market outlet, Chicago, 1955

Commodity and value of growers' annual sales	Percentage of total sales	Percentage of growers' sales volume sold to--					
		Commission and merchant sales	Retail florists	Mass outlets	Wholesale growers	Others 1/	Total
	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Roses:							
Less than \$70,000	19.85	98.0	1.5	---	0.5	---	100.0
\$70,000 - \$140,000	21.27	100.0	---	---	---	---	100.0
More than \$140,000	58.88	83.9	16.1	---	---	---	100.0
Total	100.00	---	---	---	---	---	---
Carnations:							
Less than \$25,000	48.78	99.6	0.4	---	---	---	100.0
\$25,000 - \$49,000	37.93	96.3	3.7	---	---	---	100.0
More than \$49,000	13.29	37.6	36.8	---	---	25.6	100.0
Total	100.00	---	---	---	---	---	---
Orchids:							
Less than \$75,000	.56	25.0	75.0	---	---	---	100.0
\$75,000 - \$150,000	---	---	---	---	---	---	---
More than \$150,000	99.44	100.0	---	---	---	---	100.0
Total	100.00	---	---	---	---	---	---
Various cut flowers:							
\$1,000 - \$10,999	24.82	82.7	16.9	.4	---	---	100.0
\$11,000 - \$19,999	---	---	---	---	---	---	---
\$20,000 - \$40,000	24.85	40.2	43.7	.8	---	15.3	100.0
More than \$40,000	50.33	86.5	13.5	---	---	---	100.0
Total	100.00	---	---	---	---	---	---
Potted plants:							
Less than \$25,000	3.90	29.2	39.2	15.9	---	15.7	100.0
\$25,000 - \$49,999	7.37	8.4	25.0	---	33.6	33.0	100.0
\$50,000 - \$99,000	30.93	2.0	53.7	17.5	1.9	24.9	100.0
More than \$99,000	57.80	.5	88.7	7.2	2.7	.9	100.0
Total	100.00	---	---	---	---	---	---

1/ Includes sales made to landscapers, to cemeteries, and directly to consumers.

Table 10.-Distribution of sales by wholesale growers of specified flowers, by size of grower and type of market outlet, New York, 1955

Commodity and value of growers' annual sales	Percentage of total sales	Percentage of growers' sales volume sold to--					
		Commission	Retail	Mass outlets	Wholesale growers	Others	Total
	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Roses:							
Less than \$70,000	14.28	92.0	8.0	---	---	---	100.0
\$70,000 - \$140,000	23.34	71.4	26.6	0.3	1.7	---	100.0
More than \$140,000	62.38	67.7	29.5	---	0.1	2.7	100.0
Total	100.00	---	---	---	---	---	---
Carnations:							
Less than \$25,000	20.50	100.0	---	---	---	---	100.0
\$25,000 - \$49,000	40.62	60.6	34.7	---	---	4.7	100.0
More than \$49,000	38.88	76.6	23.4	---	---	---	100.0
Total	100.00	---	---	---	---	---	---
Orchids:							
Less than \$75,000	1.93	93.3	4.1	2.6	---	---	100.0
\$75,000 - \$150,000	21.79	40.4	49.0	2.4	8.2	---	100.0
More than \$150,000	76.28	46.1	43.5	---	---	10.4	100.0
Total	100.00	---	---	---	---	---	---
Various cut flowers:							
\$1,000 - \$10,999	9.26	53.5	41.4	5.1	---	---	100.0
\$11,000 - \$19,999	36.54	82.5	17.3	0.2	---	---	100.0
\$20,000 - \$40,000	43.70	72.2	17.1	7.6	3.1	---	100.0
More than \$40,000	10.50	60.0	5.0	10.0	25.0	---	100.0
Total	100.00	---	---	---	---	---	---
Potted plants:							
Less than \$25,000	4.24	16.5	42.7	25.7	9.0	6.1	100.0
\$25,000 - \$44,999	13.74	3.0	75.1	20.0	1.9	---	100.0
\$45,000 - \$99,000	23.35	---	78.9	17.7	3.4	---	100.0
More than \$99,000	58.67	---	81.7	5.9	7.4	5.0	100.0
Total	100.00	---	---	---	---	---	---

1/ Includes sales made to landscapers, to cemeteries, and directly to consumers.

Table 11.--Distribution of sales by wholesale growers of specified flowers, by size of firm and method used to transport product to market, Chicago, 1955

Commodity and value of growers' annual sales	Truck		Rail	Air	Other	1/	Total
	Owned	Hired or leased					
	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Roses:							
Less than \$70,000 ..	0.1	99.8	99.9	---	---	0.1	100.0
\$70,000 - \$140,000 ..	10.0	90.0	100.0	---	---	---	100.0
More than \$140,000 ..	3.2	96.8	100.0	---	---	---	100.0
Average .....	4.1	95.9	100.0	---	---	---	100.0
Carnations:							
Less than \$25,000 ..	5.1	78.9	84.0	10.0	---	6.0	100.0
\$25,000 - \$49,000 ..	.1	99.9	100.0	---	---	---	100.0
More than \$49,000 ..	15.0	45.0	60.0	---	---	40.0	100.0
Average .....	4.5	82.4	86.9	4.9	---	8.3	100.0
Orchids:							
Less than \$75,000 ..	---	100.0	100.0	---	---	---	100.0
\$75,000 - \$150,000 ..	---	---	---	---	---	---	---
More than \$150,000 ..	6.3	58.3	64.6	16.6	---	18.8	100.0
Average .....	6.3	58.5	64.8	16.5	---	18.7	100.0
Various cut flowers:							
\$1,000 - \$10,999 ..	25.5	73.1	98.6	---	---	1.4	100.0
\$11,000 - \$19,999 ..	---	---	---	---	---	---	---
\$20,000 - \$40,000 ..	10.0	77.5	87.5	---	---	12.5	100.0
More than \$40,000 ..	64.1	28.6	92.7	---	---	7.3	100.0
Average .....	41.1	51.8	92.9	---	---	7.1	100.0
Potted plants:							
Less than \$25,000 ..	15.6	23.8	39.4	---	---	60.6	100.0
\$25,000 - \$49,999 ..	70.7	16.7	87.4	---	---	12.6	100.0
\$50,000 - \$99,000 ..	88.3	.3	88.6	---	---	11.4	100.0
More than \$99,000 ..	77.5	7.8	85.3	.2	---	14.5	100.0
Average .....	77.9	6.8	84.7	.1	---	15.2	100.0

1/ Includes flowers shipped by bus and parcel post and those picked up by customer.

Table 12.--Distribution of sales by wholesale growers of specified flowers, by size of firm and method used to transport product to market, New York, 1955

Commodity and value of growers' annual sales	Truck			Rail	Air	Other 1/	Total
	Owned	Hired or leased	Total				
	Percent	Percent	Percent				
Roses:							
Less than \$70,000 .:	4.4	90.0	94.4	2.8	---	2.8	100.0
\$70,000 - \$140,000 .:	30.6	55.2	85.8	7.1	---	7.1	100.0
More than \$140,000 .:	41.0	43.2	84.2	9.2	1.9	4.7	100.0
Average .....	33.5	52.4	85.9	7.9	1.2	5.0	100.0
Carnations:							
Less than \$25,000 .:	20.0	80.0	100.0	---	---	---	100.0
\$25,000 - \$49,000 .:	16.9	55.7	72.6	2.7	---	24.7	100.0
More than \$49,000 .:	12.5	60.6	73.1	12.5	1.3	13.1	100.0
Average .....	15.8	62.7	78.5	6.0	.4	15.1	100.0
Orchids:							
Less than \$75,000 .:	49.2	45.6	94.8	1.6	3.6	---	100.0
\$75,000 - \$150,000 .:	38.0	11.7	49.7	33.3	10.0	7.0	100.0
More than \$150,000 .:	42.0	25.2	67.2	25.8	7.0	---	100.0
Average .....	41.2	22.7	63.9	27.0	7.6	1.5	100.0
Various cut flowers:							
\$1,000 - \$10,999 .:	4.8	66.6	71.4	---	---	28.6	100.0
\$11,000 - \$19,999 .:	15.0	69.0	84.0	2.5	5.0	8.5	100.0
\$20,000 - \$40,000 .:	12.5	70.3	82.8	5.9	---	11.3	100.0
More than \$40,000 .:	59.6	---	59.6	6.7	4.5	29.2	100.0
Average .....	17.7	62.1	79.8	4.1	2.3	13.8	100.0
Potted plants:							
Less than \$25,000 .:	60.8	---	60.8	---	---	39.2	100.0
\$25,000 - \$49,999 .:	36.8	9.3	46.1	5.1	---	48.8	100.0
\$50,000 - \$99,000 .:	64.2	5.0	69.2	---	---	30.8	100.0
More than \$99,000 .:	80.1	8.9	89.0	1.2	---	9.8	100.0
Average .....	69.7	7.7	77.4	1.3	---	21.3	100.0

1/ Includes flowers shipped by bus and parcel post and those picked up by customer.

Table 13.--Distribution of sales by wholesale growers of specified flowers in New York market area: Percentage sold in local, city, and distant markets, by size of firm, 1955

Commodity and value of growers' annual sales	Principal markets			Total
	Local	New York City	Distant	
	Percent	Percent	Percent	
Roses:				
Less than \$70,000 .....	8.8	91.2	---	100.0
\$70,000 - \$140,000 .....	29.9	55.2	14.9	100.0
More than \$140,000 .....	9.4	63.5	27.1	100.0
Average .....	14.1	65.5	20.4	100.0
Carnations:				
Less than \$25,000 .....	28.2	71.8	---	100.0
\$25,000 - \$49,000 .....	39.0	52.6	8.4	100.0
More than \$49,000 .....	32.7	56.7	10.6	100.0
Average .....	34.3	58.2	7.5	100.0
Orchids:				
Less than \$75,000 .....	4.0	93.0	3.0	100.0
\$75,000 - \$150,000 .....	5.0	---	95.0	100.0
More than \$150,000 .....	---	30.0	70.0	100.0
Average .....	1.2	24.7	74.1	100.0
Various cut flowers:				
\$1,000 - \$10,999 .....	45.0	55.0	---	100.0
\$11,000 - \$19,999 .....	14.0	77.0	9.0	100.0
\$20,000 - \$40,000 .....	20.0	45.0	35.0	100.0
More than \$40,000 .....	31.0	8.0	61.0	100.0
Average .....	21.3	53.7	25.0	100.0
Potted plants:				
Less than \$25,000 .....	75.0	7.0	18.0	100.0
\$25,000 - \$49,999 .....	68.0	32.0	---	100.0
\$50,000 - \$99,000 .....	59.0	17.0	24.0	100.0
More than \$99,000 .....	12.0	32.0	56.0	100.0
Average .....	33.4	27.4	39.2	100.0

Table 14.--Distribution of sales by wholesale growers of specified flowers in Chicago market area: Percentage sold in local, city, and distant markets, by size of firm, 1955

Commodity and value of growers' annual sales	Principal markets			Total
	Local	Chicago	Distant	
	Percent	Percent	Percent	
Roses:				
Less than \$70,000 .....	---	79	21	100
\$70,000 - \$140,000 .....	---	90	10	100
More than \$140,000 .....	---	75	25	100
Average .....	---	79	21	100
Carnations:				
Less than \$25,000 .....	5	95	---	100
\$25,000 - \$49,000 .....	---	100	---	100
More than \$49,000 .....	10	90	---	100
Average .....	4	96	---	100
Orchids:				
Less than \$75,000 .....	---	---	---	1/
\$75,000 - \$150,000 .....	---	---	---	---
More than \$150,000 .....	---	89	11	100
Average .....	---	89	11	100
Various cut flowers:				
\$1,000 - \$10,999 .....	2	98	---	100
\$11,000 - \$19,999 .....	---	---	---	---
\$20,000 - \$40,000 .....	13	87	---	100
More than \$40,000 .....	6	83	11	100
Average .....	7	88	5	100
Potted plants:				
Less than \$25,000 .....	29	71	0	100
\$25,000 - \$49,999 .....	0	100	0	100
\$50,000 - \$99,000 .....	28	50	22	100
More than \$99,000 .....	0	76	24	100
Average .....	10	70	20	100

1/ Only one firm.

Table 15.--Percentage of sales of specified flowers for which wholesale growers provided 3 marketing services to buyers, New York and Chicago, 1955

Market and commodity	Delivery	Credit	Special prepacking
	Percent	Percent	Percent
New York:			
Roses .....	14	22	8
Carnations .....	10	1	1
Orchids .....	3	8	1/
Various cut flowers .....	31	35	20
Potted plants .....	82	76	---
Chicago:			
Roses .....	14	7	---
Carnations .....	6	3	1/
Orchids .....	---	---	---
Various cut flowers .....	16	6	---
Potted plants .....	80	64	---

1/ Less than one-half of 1 percent.

Table 16.--Distribution of sales to wholesale and retail florists by wholesale growers of specified flowers, by size of firm and method used in selling, New York, 1955

Commodity and value of growers' annual sales	Wholesale florists			Methods used in selling to--			Retail florists		
	Delivery:	Standing:	Tele-	Delivery:	Without:	Standing:	Tele-	Salesmen:	Telephone:
	prior orders:	Salesmen:	phone:	Total:	prior orders:	order:	orders:	phone:	Total:
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Roses:									
Less than \$70,000	92.0	0	0	92.0	0	0	0.4	7.6	8.0
\$70,000 - \$140,000	49.5	2.6	0	19.2	71.3	0	0.2	13.6	27.1
More than \$140,000	66.3	.1	0	1.3	67.7	4.5	0	4.3	29.5
Carnations:									
Less than \$25,000	100.0	0	0	100.0	0	0	0	0	0
\$25,000 - \$49,000	57.6	0	3.0	60.6	9.3	0	9.6	15.8	34.7
More than \$49,000	66.9	5.9	1.9	76.6	0	8.7	10.9	3.8	23.4
Orchids:									
Less than \$75,000	93.3	0	0	93.3	0	0	0	6.7	6.7
\$75,000 - \$150,000	22.4	9.0	0	40.4	0	12.4	19.5	19.5	51.4
More than \$150,000	27.9	18.2	0	46.1	0	43.5	0	0	43.5
Various cut flowers:									
\$1,000 - \$10,999	36.6	0	0	16.9	53.5	0	0	.9	45.6
\$11,000 - \$19,999	82.5	0	0	0	82.5	0	9.8	.9	6.6
\$20,000 - \$40,000	72.2	0	0	0	72.2	0	0	1.9	22.8
More than \$40,000	60.0	0	0	0	60.0	0	0	13.2	1.8
Potted plants:									
Less than \$25,000	9.2	0	0	7.3	16.5	0	6.6	45.4	16.4
\$25,000 - \$49,999	3.0	0	0	0	3.0	0	25.0	30.8	68.4
\$50,000 - \$99,000	0	0	0	0	0	0	21.8	39.3	95.1
More than \$99,000	0	0	0	0	0	0	0	35.2	96.6

Table 17.-Distribution of sales to wholesale and retail florists by wholesale growers of specified flowers, by size of firm and method used in selling, Chicago, 1955

Commodity and value of growers' annual sales	Wholesale florists			Methods used in selling to--			Retail florists		
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Roses:									
Less than \$70,000	98.0	---	---	---	98.0	---	---	---	1.5
\$70,000 - \$140,000	100.0	---	---	---	100.0	---	---	---	0
More than \$140,000	48.9	---	---	35.0	83.9	15.4	0.3	0.3	16.1
Carnations:									
Less than \$25,000	88.6	11.0	---	---	99.6	---	2.0	2.2	35
\$25,000 - \$49,000	96.3	---	---	9.4	96.3	---	2.0	1.7	36.8
More than \$49,000	28.2	---	---	37.6	37.6	6.6	10.3	19.9	36.8
Orchids:									
Less than \$75,000	---	---	---	25.0	25.0	---	4.0	71.0	75.0
\$75,000 - \$150,000	---	---	---	25.0	25.0	---	---	---	---
More than \$150,000	75.0	0	0	100.0	100.0	---	---	---	---
Various cut flowers:									
\$1,000 - \$10,999	52.1	---	20.7	9.9	82.7	---	8.6	8.7	17.3
\$11,000 - \$19,999	---	---	---	---	---	---	---	---	---
\$20,000 - \$40,000	30.2	---	10.0	40.2	---	20.0	24.5	---	44.5
More than \$40,000	80.4	---	2.6	3.5	86.5	---	8.8	4.7	13.5
Potted plants:									
Less than \$25,000	8.2	7.3	2.0	11.7	29.2	---	9	18.0	26.2
\$25,000 - \$49,999	---	---	---	8.4	8.4	---	1.5	7.2	16.3
\$50,000 - \$99,000	1.0	0.5	0.4	0.1	2.0	---	0.1	40.5	30.6
More than \$99,000	---	---	---	0.5	11.5	0.1	4.8	51.8	27.8

Table 18.--Percentage of wholesale growers of specified flowers having agreements with or advances from buyers, New York and Chicago, 1955

Market and commodity	Contracts or agreements	Advances (cash or supplies)
	<u>Percent</u>	<u>Percent</u>
New York:		
Roses .....	21	0
Carnations .....	25	0
Orchids .....	17	0
Various cut flowers .....	8	8
Potted plants .....	16	10
Chicago:		
Roses .....	15	0
Carnations .....	39	0
Orchids .....	25	25
Various cut flowers .....	36	11
Potted plants .....	17	14

Table 19.--Range of differences between net prices offered wholesale growers by wholesale and retail buyers of specified flowers, New York and Chicago, 1955

Commodity	New York	Chicago
	<u>Percent</u>	<u>Percent</u>
Roses .....	6-35	19-25
Carnations .....	5-20	10-21
Orchids .....	15-20	0-20
Various cut flowers .....	10-40	5-100
Potted plants .....	10-100	0-50

Table 20. - Wholesale rose growers: Estimated marketing costs as percentage of dollar sales, by cost item and size of grower, New York and Chicago, 1955

Cost item	New York			Chicago		
	Value of growers' annual sales:			Value of growers' annual sales:		
	Less than \$70,000	More than \$70,000	Average	Less than \$70,000	More than \$70,000	Average
Percent	Percent	Percent	Percent	Percent	Percent	Percent
Handling, storing, loading, and unloading	31.4	21.0	15.3	21.3	13.7	19.8
Transportation	3.4	2.4	4.0	3.5	2.1	1.5
Selling costs:						
Telephone and telegraph	1.2	2.1	0.4	0.9	0.4	0.5
Advertising	---	.3	.3	.3	1.0	1.2
Commission charges <sup>1/</sup>	14.3	12.6	12.1	12.5	17.8	17.7
Total selling costs	15.5	15.0	12.8	13.7	19.2	19.4
Materials: Packaging, boxes, cartons, etc.	1.3	1.0	2.3	1.8	1.0	.6
Other marketing services	---	.1	.3	.2	.4	.6
Total marketing costs	51.6	39.5	34.7	38.2	36.4	41.9

<sup>1/</sup> Commission charges were determined by dividing total commissions paid by total sales.

Table 21.-Wholesale carnation growers: Estimated marketing costs as percentage of dollar sales, by cost item and size of grower, New York and Chicago, 1955

Table 22.-Wholesale orchid growers: Estimated marketing costs as percentage of dollar sales, by cost item and size of grower, New York and Chicago, 1955

Cost item	New York			Chicago		
	Value of growers' annual sales:			Value of growers' annual sales:		
	Less than \$75,000	\$75,000-\$150,000	More than \$150,000	Average	Less than \$75,000	More than \$150,000
Percent	Percent	Percent	Percent	Percent	Percent	Percent
Handling, storing, loading, and unloading	8.9	8.5	11.8	11.0	---	7.7
Transportation	3.0	4.6	5.3	5.1	---	2.3
Selling costs:						
Telephone and telegraph	.2	.5	2.5	2.0	---	.1
Advertising	---	---	.8	---	---	.7
Commission charges <sup>1/</sup>	16.8	7.6	8.3	8.3	---	18.0
Total selling costs	17.0	8.1	11.6	10.3	---	18.8
Materials: Packaging, boxes, cartons, etc.	2.4	3.0	5.0	4.5	---	5.0
Expenses:						
Administrative	---	---	---	---	---	3.4
Other marketing services	.2	---	.2	.2	---	.1
Total marketing costs	31.5	24.2	33.9	31.7	---	37.3

<sup>1/</sup> Commission charges were determined by dividing total commissions paid by total sales.

Table 23.-Wholesale growers of various cut flowers: Estimated marketing costs as percentage of dollar sales, by cost item and size of grower, New York and Chicago, 1955

	New York			Chicago		
	Value of growers' annual sales			Value of growers' annual sales		
Cost item	\$1,000-\$11,000	\$11,000-\$20,000	More than Average	\$1,000-\$11,000	\$11,000-\$20,000	More than Average
Cost item	\$10,999	\$19,999	\$40,000	\$10,999	\$19,999	\$40,000
	\$10,999	\$19,999	\$40,000	\$10,999	\$19,999	\$40,000
Percent	Percent	Percent	Percent	Percent	Percent	Percent
Handling, storing, loading, and unloading	20.3	21.0	17.2	25.2	19.7	17.8
Transportation	3.1	4.8	5.0	2.6	4.3	6.1
Selling costs:						
Telephone and telegraph	---	1.0	1.8	1.5	1.6	1.8
Advertising	---	---	---	---	1.0	---
Commission charges <sup>1/</sup>	10.7	16.4	13.6	10.5	11.0	16.5
Total selling costs	10.7	17.4	15.4	12.0	12.6	19.3
Materials: Packaging, boxes, cartons, etc.	3.7	1.9	1.1	1.4	1.6	1.3
Expenses:						
Administrative	---	---	---	---	---	---
Other marketing services	---	---	---	---	---	---
Total marketing costs	37.8	45.1	38.7	41.2	44.5	40.1

<sup>1/</sup> Commission charges were determined by dividing total commissions paid by total sales.

Table 24.--Wholesale growers of potted plants: Estimated marketing costs as percentage of dollar sales, by cost item and size of grower, New York and Chicago, 1955

Cost item	New York			Chicago		
	Value of growers' annual sales			Value of growers' annual sales		
	Less than \$25,000	\$25,000-\$50,000	More than \$50,000	Less than \$25,000	\$25,000-\$50,000	More than \$50,000
Cost item	\$25,000	\$49,999	\$99,000	\$25,000	\$49,999	\$99,000
Percent	Percent	Percent	Percent	Percent	Percent	Percent
Handling, storing, loading, and unloading	12.8	8.3	9.1	5.3	6.8	20.2
Transportation	3.3	6.2	8.7	8.2	8.0	7.0
Selling costs:						
Telephone and telegraph	1.0	.7	.7	.8	1.6	.3
Advertising	1.0	.9	.4	.8	.7	1.1
Commission charges 1/	4.6	8.2	---	7.7	7.6	4.5
Total selling costs	6.6	10.1	1.1	9.2	9.1	7.2
Materials: Packaging, boxes, cartons, etc.	2.2	1.7	1.9	2.1	2.0	1.8
Expenses:						
Administrative	1.0	.7	10.5	6.5	6.7	2.0
Other marketing services	---	.2	.1	.7	.6	---
Total marketing costs	25.9	27.2	31.4	32.0	31.1	38.2

1/ Commission charges were determined by dividing total commissions paid by total sales.

Table 25.--Average wholesale commission charges paid per dollar of sales by growers of specified flowers, by size of grower, New York and Chicago, 1955

Commodity and value of growers' annual sales	New York	Chicago
	<u>Cents</u>	<u>Cents</u>
Roses:		
Less than \$70,000 .....	15.6	18.2
\$70,000 - \$140,000 .....	17.6	17.7
More than \$140,000 .....	17.9	15.6
Average .....	17.5	16.6
Carnations:		
Less than \$25,000 .....	17.1	18.0
\$25,000 - \$49,000 .....	17.6	18.3
More than \$49,000 .....	18.7	20.0
Average .....	17.9	18.4
Orchids:		
Less than \$75,000 .....	18.0	---
\$75,000 - \$150,000 .....	18.7	---
More than \$150,000 .....	18.0	18.0
Average .....	18.2	18.0
Various cut flowers:		
\$1,000 - \$10,999 .....	20.0	20.0
\$11,000 - \$19,999 .....	19.9	---
\$20,000 - \$40,000 .....	18.9	22.5
More than \$40,000 .....	17.5	18.8
Average .....	19.3	19.1

Table 26.--Small, medium, and large wholesale growers of specified flowers:  
Estimated number in market area and number in sample, New York and Chicago,  
1955 1/

Market and major floral commodity of growers	Size of establishment 2/			Total		
	Small	Medium	Large	:		
	Number	Number	Number	Number	Number	Number
Chicago:						
Roses .....	1	1	8	8	7	7
Carnations ...	35	7	20	9	9	9
Orchids .....	1	1	0	0	3	3
Various cut						
flowers ....	50	10	12	6	5	5
Potted plants:	24	12	16	8	10	10
Total .....	111	31	56	31	34	34
New York:						
Roses .....	12	6	7	7	3/13	12
Carnations ...	30	7	20	11	10	10
Orchids .....	2	2	1	1	5	5
Various cut						
flowers ....	90	19	15	7	2	2
Potted plants:	50	30	20	8	9	9
Total .....	184	64	63	34	39	38

1/ New York market area includes the following counties: Bronx, Kings, Nassau, Queens, Richmond, Suffolk, Westchester in New York; and Bergen, Essex, Hudson, Middlesex, Morris, Passaic, Somerset, Union in New Jersey. Chicago market area includes the following counties: Cook, DuPage, Kane, Lake, Will in Illinois; and Lake in Indiana.

2/ Size of establishment refers to value of growers' annual sales, as follows:

	Small	Medium	Large
Roses	Under \$40,000	\$40,000 - \$99,999	\$100,000 and over
Carnations	Under \$20,000	\$20,000 - \$37,999	\$ 38,000 and over
Orchids	Under \$60,000	\$60,000 - \$99,999	\$100,000 and over
Various cut flowers	Under \$20,000	\$20,000 - \$49,999	\$ 50,000 and over
Potted plants	Under \$50,000	\$50,000 - \$99,999	\$100,000 and over

3/ Usable information not obtained from one respondent.

Table 27.--Number of wholesale growers of specified flowers and their sales as percentage of total sales in market area, by size of firm, New York and Chicago, 1955

Commodity and value of: growers' annual sales:	New York		Chicago	
	Establishments:	Percentage of sales	Establishments:	Percentage of sales
	Number	Percent	Number	Percent
Roses:				
Less than \$70,000 ...	7	14.28	6	19.85
\$70,000 - \$140,000 ...	8	23.34	3	21.27
More than \$140,000 ...	8	62.38	3	58.88
Total .....	23	100.00	12	100.00
Carnations:				
Less than \$25,000 ...	6	20.50	9	48.78
\$25,000 - \$49,000 ...	10	40.62	11	37.93
More than \$49,000 ...	8	38.88	3	13.29
Total .....	24	100.00	23	100.00
Orchids:				
Less than \$75,000 ...	2	1.93	1	.56
\$75,000 - \$150,000 ...	3	21.79	0	---
More than \$150,000 ...	3	76.28	3	99.44
Total .....	8	100.00	4	100.00
Various cut flowers:				
\$1,000 - \$10,999 ...	7	9.26	8	24.82
\$11,000 - \$19,999 ...	9	36.54	0	---
\$20,000 - \$40,000 ...	7	43.70	5	24.85
More than \$40,000 ...	2	10.50	6	50.33
Total .....	25	100.00	19	100.00
Potted plants:				
Less than \$25,000 ...	16	4.24	6	3.90
\$25,000 - \$49,999 ...	13	13.74	3	7.37
\$50,000 - \$99,000 ...	8	23.35	8	30.93
More than \$99,000 ...	9	58.67	10	57.80
Total .....	46	100.00	27	100.00