



FLORISTS and NURSERYMEN

FREEMAN, R.
STADY - OSU

Baker Freeman 71

Toward Longer-Lasting Flowers

Editor's Note: A series of articles have been completed and edited by Ralph Freeman, Cooperative Extension Agent, Long Island, on the topic "Toward Longer-Lasting Flowers." The information contained in this series is a comprehensive compilation of many years of research reported in the United States Department of Agriculture Bulletins, College Experiment Station Bulletins, Professional Journals and Research Reports.

This subject has been of interest to the florist industry for many years. Many hours of research work have been expended investigating the problems. All kinds of results have been obtained with all types of interpretations. Sometimes interpretation of these results was based on scientific fact, sometimes folklore. It is the goal of Cooperative Extension to provide flower producers, retail florists, wholesalers and consumers with current recommendations and background information on how to prolong the life of cut flowers and potted plants.

Structure of Plants

Horticultural plants vary greatly in form, structure, and habit; however, they all exhibit one basic configuration. They have roots, stems, leaves and flowers. An understanding of the general activities and functions of each of the major parts of the plants will serve as background information when trying to understand the various concepts of post-harvest physiology of cut flowers and potted plants.

Cells and tissues: All plants are composed of organs, for example, a leaf. A leaf is made up of tissues, for example, the water-conducting system. The tissues are composed of individual cells. The cell is the structural unit of the plant. It is the smallest unit of living matter capable of continued independent life and growth. The cells in some tissues are arranged with a resemblance to

bricks in a brick wall. Many of the cells within particular tissues and organs have specific shapes and specific functions.

Stems: The chief function of stems are mechanical support for themselves and for the leaves, flowers, and fruits; conduction of water, inorganic salts and foods; storage of carbohydrates and other foods in the pith, cortex, phloem parenchyma, and wood rays; storage of water in the plants like cacti; photosynthesis in green stems and a means of reproduction of many kinds of plants.

Leaves: Leaves are generally the most conspicuous part of plants. They are borne on petioles which are attached to the nodes of stems. Green leaves owe their color to a complex pigment called chlorophyll. The two chief parts of the leaf are the leaf blade and the petiole. The usually green, flat extended portion of the leaf is called the blade. The three main types of tissue in the leaf are the epidermis, mesophyll and vascular bundles. The epidermis is usually a single layer of interlocked cells that normally contain no chloroplasts. These cells are continuous over both leaf surfaces except for the stomates which are specialized cells and are present to allow gases to enter and leave the leaf. The mesophyll layer is a group of specialized cells between the epidermal layers where photosynthesis takes place. The vascular bundles are specialized strands of tissue that function both in support and in conduction of water and food.

Roots: Roots anchor the plant, absorb minerals and water from the soil, transport materials from the region of absorption to the base of the stem, and they may serve as food storage organs. The root has two specialized structures which should be mentioned. One is the root cap which is a thimble-shaped cap of specialized cells which covers and protects the growing tip. In many species, the cells of this structure are

loosely attached and the outermost cells are continually worn away. This group of slimy cells facilitates root tip growth through the soil. The second structure is the root hair. The root hairs are specialized structures that absorb water and nutrients into the roots.

Flowers: The basic role of flowers is that they contain the structures for sexual reproduction. They are essential to the production of seed. Many flowers, particularly those of floricultural crops, have aesthetic value. The three main parts of the flower are the sepals which make up the calyx; the petals which make up the corolla; and the sexual organs, stamens and pistil. Edited by Ralph N. Freeman.

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Flower Retailing By Mass Outlets

Note: The following article contains excerpts from bulletin 817, Northeastern Regional Research Publication by Maurice Baker (Rutgers) and Dana Goodrich (Cornell). Most area florists might be too busy to digest all the implications of what this research, which was initiated in 1962, has revealed at this time. However, I thought I'd send it to you now because the impact of the discount store, the chain stores, the food stores, and other seasonal specialists is most evident during the spring. Marketing of floral products by mass outlets is always a hot topic in our area. It's one which evokes a range of industry opinions from "they ought to be outlawed because God put me here to sell flowers" to "let's ignore the mass outlets, they don't have any impact on us professional florists." When you find the time, look this article over. I'm sure you will find it will give you an interesting insight to the potential of mass outlets.

Supermarkets and variety stores added flower retailing to their multi-product business several years before World War

II. Since then, however, the so-called mass outlets have substantially increased their flower-marketing efforts. If quantitative evidence of this expansion is lacking, a qualitative indicator is the deep concern many traditional retail florists have for the future of their business under the stepped-up competition.

Economists have examined this competitive pressure in flower marketing with an eye toward determining the likely impact of such floral sales upon the traditional flower shop. Results of such investigations have, for most part, supported the hypothesis that flower sales through mass outlets are largely additional to sales made by retail florists.

For example, it was found that in the mass outlets the proportion of flower sales that represented substitutions for sales which might have been made by the retail florist was indeed small. Services offered by the typical retail florist, such as arranging and delivering flowers, most likely contributed to this finding.

Several studies of new merchandising practices adapted for the mass outlets have represented virtually the only research efforts by agricultural economists in the marketing of flowers by nonflorist outlets. The consequence is a wealth of data describing sales responses to selected packaging, display, or pricing techniques. At the same time there remains a dearth of statistical information on the extent of day-to-day involvement in flower marketing by the nonflorists. Just how far these more progressive merchandisers have gone in developing ongoing or even intermittent or seasonal flower-marketing programs has not been fully assessed. Also scarce is information that will, first, assist the florist industry in evaluating the overall opportunity for flower sales through mass outlets, and second, enable the individual grower or supplier to correctly weigh the advantages and disadvantages

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of specific business deals offered by these retailers.

This publication represents efforts by researchers in the Northeastern U.S. to provide the missing information. The role of the mass outlets in flower marketing is discussed, and their merchandising practices and problems defined. Finally, for those in the flower industry with interest in mass outlets as markets for their goods, this report suggests the patterns of operation that appear most desirable from both the supplier's and the mass outlet operator's standpoint.

Development

In the Northeast, nearly two-thirds of the variety chains and more than one-half of the food chains offer floricultural crops. Of these, two out of three of the variety chains but less than one out of four of the food chains have offered floral products for more than 13 years. In many instances, part of the stores in a chain reporting flower retailing do not offer floral products.

Growers and wholesalers interested in developing the mass market may find the variety chains more receptive to the inclusion of floricultural items in their product line.

Seasonality

Except for foliage plants, the proportion of flower-selling chains reporting year-round offerings of major types of plants averages no more than 10 percent. Suppliers of floricultural products cannot expect mass outlets alone to level out market peaks for these products. Suppliers must be prepared to service the food and variety chains during many of the same holiday peaks that confront the retail florists.

Sales Volume and Type of Flower Offered

Among the stores offering flowers, average annual sales of those crops averaged about

\$1,200; however, stores in food chains had significantly higher volumes than did the variety stores. Further, small food chains (less than 10 outlets) reported greater sales per store than their larger counterparts.

Cut flowers were offered less frequently than growing plants by both the food and variety chains. Food chains more frequently offered a greater variety of products than did variety stores. Likewise, the large food chains offered a greater variety of products than did their smaller counterparts, and they were more likely to carry cut flowers as an item in the floricultural product line.

Suppliers for food stores might well be prepared to offer a greater variety of plant materials than those who supply variety stores. Those who can meet this need of the food chains can expect a larger sales volume than from variety stores.

Cut flower suppliers are more likely to find the large food chains receptive to the inclusion of their products in the chains' floral offerings. Although the degree remains undetermined, chains can expect higher floral sales volumes when a greater variety of products is offered.

Floral Products and Future Plans

Food and variety chains gave profitability as the most frequent reason for entering flower retailing and for retaining the floral line. Other reasons included customer convenience, build customer traffic, and "dress up the store." Few firms reported grower or other supplier requests as a reason for starting this line of merchandise.

One chain in three indicated plans to expand their floricultural business. Greater initiative and better salesmanship on the part of suppliers could result in increased sales through mass market outlets to the mutual benefit of supplier, retailer, and

consumer.

Responsibility for Procurement Policy

Responsibility for procurement was vested in store management more often by variety chains than by food chains. Except in the case of foliage plants, chains with less than 10 stores delegated authority for establishing procurement policy to store personnel more often than larger chains. Such a situation offers a sales potential in variety chains for the small to medium grower who can supply only one or two stores. However, the volume of sales can be expected to be less than in food stores. If a larger supplier can offer the selection and volume of plant material, he may be able to deal either with one or two of the large food stores, or with food chains operating 10 or more stores. Any supplier, large or small, must first learn who is responsible for procurement if he is to develop a sales program with mass market outlets.

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