



BULLETIN

Secretary, Charles Wilton, Prattsburg,
Steuben County, New York 14873

Will the Structures of the Future Be Insurable?*

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First of all, before we discuss insurability of greenhouse structures, let's examine what kind of greenhouse structures we are talking about. There are several varieties of greenhouse structures presently in existence. More than likely, these same structures will remain with us through the 1970's, with the possible addition of some type of air-inflated balloon structure covered with a polyethylene or vinyl material and also possibly the advent of completely enclosed buildings utilizing artificial lighting techniques. Some of the present types of structures are:

1. Glass greenhouse, free-standing, or ridge and furrow construction. Pipe and frame, steel truss, aluminum structure.
2. Dutch greenhouse—steel structure, 1, 2, or 3 bay structures. Roof glass size 29x63 triple strength; double strength glass on sides. Roof pitch 27°.
3. Fiberglass and plastic film greenhouses—free standing and ridge and furrow construction. Plastic covering is usually 4 to 6 mil with increasing use of UV polyethylene. Polyvinyl chloride (PVC) is also used as a covering. However, PVC has a limited durability factor in terms of structural strength. It tends to sag and has a low impact resistance. "Mylar" (polyester) is a high strength covering; however, it appears to be harder to get. Fiberglass rigid panels are by far the most widely used covering. The corrugated panels have contributed to the structural strength of the greenhouses. Four to 6 oz. panels are usually used.

Tempered glass has not been used to any great extent in greenhouses. This type glass, although weighing the same as double strength glass, has a very high impact resistance. It can withstand a blow from a hammer dropped from above and is presently being utilized in schools and pub-

lic buildings. The cost of this type glass is double the cost of regular greenhouse glass. There are some disadvantages of this glass over the cost factors. Mainly, this glass must be manufactured precisely to size. It cannot be cut on the job; if your roof bars are slightly off measurement, the glass will not fit properly. More research is needed in this area.

When we talk of insuring your greenhouses, we talk about who's going to take what gamble. Insurance companies operate on the "law of large numbers"; that is to say, we collect a small amount of dollars from many to pay the losses of a few. Our wind, hail, snow and additional
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Toward Solving the Labor Problem

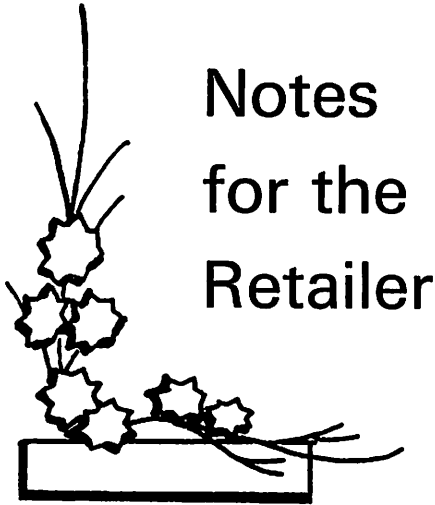
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Everyone in a horticultural business recognizes the serious nature of the labor problem. We as an industry are so dependent on the output of individuals, that any difficulty in attracting and keeping workers soon becomes critical.

The management of labor is caught up in a vicious cycle in horticultural businesses. Having cheap labor means low productivity (output), low output means low profits, low profits means we cannot afford to pay for good labor, and we cannot charge equitable prices because of the competition.

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*Presented at the 1970 New York State Flower Industries Convention, Syracuse, New York.



Notes for the Retailer

General Suggestions on Selling¹

PAUL R. KRONE

A few general suggestions may make selling easier and increase your sales.

★ The store layout and arrangement is part of salesmanship, and so is the attractive display of merchandise in the store. Made-up arrangements, well displayed and priced, can make selling easier, and customers will usually increase the amount they spend.

★ Grouping merchandise intended for similar functions and merchandise in comparable price ranges makes selection easier for the customer. Provide ample lighting. Develop a traffic pattern with impulse items placed near the cash register or attractively displayed in a prominent place. Change the arrangement often to give a new appearance to the store interior and the merchandise.

★ Know your merchandise and how to use it so that your customers get the most for their money. This creates customer good will. It can bring increased sales and higher profits. You'll be able to sell flowers that are plentiful and in season rather than items that cost you so much you can't make an adequate profit on them.

★ Sell a single flower as graciously as you would a hundred. Give even the smallest order the attention it deserves. Remember that a small sale today may lead to a larger one tomorrow.

★ The eye is much more effective than the ear in conveying impressions to the brain. Have your salespeople show the merchandise and demonstrate it as they talk. Remember the old selling cliché that emphasizes using the senses to motivate people to act: "Show 'em, Tell 'em. Smell 'em. Sell 'em."

★ Keep your salespeople fully posted on store advertising programs, prices advertised, and other details. This is important to avoid their giving customers the impression that the salespeople don't know what they're doing. Full information about store policies, credit procedures, billing, delivery, and the handling of complaints should be covered in a policy manual available to all employees.

★ Increase sales systematically by developing a sales budget. Decide at the beginning of the year how much you

want to increase your sales of each kind of merchandise or for each type of occasion. Then plan a merchandising and promotion program to achieve your goals.

Tell your salespeople about your plans and provide rewards for those who are most successful in helping to build sales. Competition between salespeople, with sales charts to show their progress, stimulates selling.

★ Have all flowers, plants, and gifts plainly priced, whether they are in the refrigerator, the salesroom, or the display window. Many people hesitate to ask prices. They don't like to risk feeling embarrassed if the price should be more than they want to spend.

★ Use visual aids such as color transparencies, color photographs, and the arrangement charts or selection guides provided by the wireservice organizations. They will help make selling easier. A projector to show slides of arrangements or decorations your firm has prepared is a useful piece of equipment.

Visual aids should be cataloged according to type of arrangement (weddings, funerals, decorations, and other purposes) and price range. You can then show the customer a selection of arrangements especially suited to his needs.

What Retailers Said About Plans for the Future¹

Few florists had plans for improving their shops, nor did they foresee management changes as necessary for long-time shop continuity. Eight out of ten florists stated that they had no investment plans for the future. Inasmuch as so large a proportion of florists in the previous five years had made shop improvements, their stated plans belied their probable future actions.

The reasons florists gave for not planning management changes are indicative of one characteristic of small business operations. Retail florist businesses are usually family businesses. The future of each such business depends upon the family's future and how the succeeding generation looks at the florist business. While family members are commonly involved in the work of florists shops, statements made by florists themselves imply very little commitment of families to the continuation of the business after the present operator becomes inactive. Speaking of their plans for the future florists used expressions of "no plans," "don't know," "none," "retire and go to Florida," "no heirs," "children not interested," "business dies with the owner." Only occasionally did a florist say that he had a partner or a grandson or some member of the family who would carry on the business. Thus, the difficulties of making provisions for the continuation of small businesses is an inherent weakness to this kind of market structure.

¹Excerpts from: *Marketing Floricultural Crops in the Northeast, Part III: Retail Florists*, by A. W. Dewey, Univ. of Conn. Agr. Exp. Sta. Bulletin 379. May 1963

NEW YORK STATE FLOWER INDUSTRIES, INC.

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¹An excerpt from: *Starting and Managing a Retail Flower Shop*, by Paul R. Krone. The Starting and Managing Series, Volume 18, Small Business Administration, Washington, D.C. 1970.

Foliage Plants for Retail Sales

Part I. The Selection of Foliage Plants

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Editor's note: The scientific names of plants listed have been carefully prepared from the manuscripts of Hortus III. This accounts for many specific and cultivar or varietal discrepancies in comparison to old listings.

The proper selection and care of foliage plants by the florist for re-sale in his shop is most important if the plant is to endure once it reaches the customer. We propose to review this subject with a series of articles: I. Selection, II. Cornell Foliage Plant Mixes, III. Care and Handling, IV. Using Foliar Plants in Dish Gardens, V. Palms for Interior Use, and VI. Bromeliads for Pots and Dish Gardens.

Selection of the plants is probably the primary step. It is important to consider the final location of the plant to be sold. Will it be placed in a commercial situation such as a hotel or restaurant, or will it be in a residence? Obviously, the two situations will be different. Our first description will be about individual specimens. Plant selection will again be discussed with dish gardens.

There are 3 major environmental factors that limit the growth and well being of foliage plants—light, temperature and moisture. Many times there is little that can be done to alter or adjust light and temperature. Moisture, however, can be easily controlled. We are proposing the most common foliage plants be classified based on their light, temperature and moisture requirements.

Light. Many authorities group plants according to *high*, *medium* and *low* light—(to simplify the classification we will use just high or low light conditions). Basically, they are referring to the minimum requirements of the various species. There are a few plants which won't grow better with higher light (shaded light in a greenhouse). In all situations the plants should be placed in as bright conditions as possible. Many times when this is not obtainable supplemental lighting should be considered for maximum customer satisfaction.

Temperature. In most situations the temperatures can—
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Table 1. The classification of some common foliage plants according to their temperature, moisture and light requirements.

Cool Temperature Avg 60°F		Warm Temperature Avg 75°F		Cool Temperature Avg 60°F		Warm Temperature Avg 75°F	
High Light	Moist	High Light	Moist	High Light	Dry	High Light	Dry
Flowering plants such as Azaleas, Cyclamen and Primula.		Flowering plants such as chrysanthemum, poinsettia and lilies.		<i>Aucuba japonica</i> 'Variegata'—Gold Dust Plant		Bromeliad spp, and cultivars	
<i>Alsophila australis</i> —Tree Fern		<i>Begonia</i> spp. and cultivars		<i>Clusia rosea</i> —Signature Plant		<i>Cordyline terminalis</i> —Ti Plant	
<i>Asparagus densiflorus Sprengeri</i> —Asparagus Fern		<i>Caryota urens</i> —Fish-tail Palm		<i>Crassula argentea</i> —Jade Plant		<i>Dracaena</i> spp.	
<i>Araucaria heterophylla</i> —Norfolk Island Pine *(<i>A. excelsa</i>)		<i>Chrysalidocarpus lutescens</i> —Madagascar Palm		<i>Pittosporum Tobira</i> 'Variegata'—Pittosporum		<i>Pandanus Veitchii</i> —Screw Pine	
<i>Carissa</i> spp. and cultivars—Natal Plum		<i>Cocos nucifera</i> —Coconut Palm		<i>Rhoeo spathacaea</i> —Oyster Plant		<i>Philodendron</i> 'Red Princess'	
<i>Chamaerops humilis</i> —European Fan Palm		<i>Codiaeum variegatum</i> var. <i>pictum</i> —Croton				<i>Pleomele reflexa</i> —Pleomele	
<i>Cyperus</i> spp.		<i>Diffenbachia</i> spp. and cultivars—Dumb Cane				<i>Sansevieria trifasciata</i> 'Laurantii'—Snake Plant	
<i>Fatsyhedera Lizei</i> —Fatsyhedera		<i>Dizgotheca elegantissima</i> —False Aralia *(<i>Aralia elegantissima</i>)		Low Light	Moist	<i>Schefflera actinophylla</i> —Umbrella Plant	
<i>Fatsia japonica</i> —Japanese Aralia		<i>Ficus</i> spp.		<i>Adiantum cuneatum</i> —Maidenhair Fern			Moist
<i>Hedera Helix</i> —English Ivy		<i>Licuala grandis</i> —Licuala Palm		<i>Asplenium nidus</i> —Bird-nest Fern		<i>Aglaonema</i> spp.	
<i>Pilea Cadiereri</i> —Aluminum Plant		<i>Livistona chinensis</i> —Fan Palm		<i>Cyrtomium falcatum</i> —Holly-fern		<i>Aspidistra elatior</i> —Cast Iron Plant	
<i>Podocarpus macrophylla</i> var. <i>Maki</i> —Podocarpus		<i>Monstera deliciosa</i> —Ceriman		<i>Howea Forsteriana</i> —Kentia Palm		<i>Chamaedorea</i> spp.	
		<i>Phoenix Roebelenii</i> —Dwarf Date Palm		<i>Nephrolepis exaltata</i> —Boston Fern		<i>Philodendron</i> spp.	
		<i>Polyscias Balfouriana</i> 'Marginata'—Polyscias		<i>Polystichum adiantiforme</i> —Leather-leaf Fern		<i>Ptychosperma Macarthurii</i> —Feather Palm	
		<i>Syngonium</i> spp.		<i>Philodendron selloum</i>		<i>Spathiphyllum</i> spp.	
		<i>Veitchia Merrillii</i> —Manila Palm		<i>Rhapis excelsa</i> —Lady Palm			
		*(<i>Adonidia Merrillii</i>)				Low Light	Dry
						<i>Epipremnum arueum</i> —Pothos	
						<i>Epipremnum aureum</i> 'Marble Queen'	
						*(<i>Scindapsus aureus</i>)	
						(<i>Pothos aureus</i>)	

*Reclassified name

Toward Longer-Lasting Flowers . . .

Effect of Gases

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The atmosphere contains many gases in various quantities. The composition of the air varies slightly from day to day, but in general it contains about 78% Nitrogen and 21% Oxygen. The remainder is made up of Argon, Carbon Dioxide and traces of Neon, Helium, Ozone, Xenon, Hydrogen, Methane, Krypton, and varying amounts of water vapor. These gases, when present in their normal concentrations, present few problems to florist crops. However, when gases such as Ethylene, Sulphur Dioxide, and some others are present, deleterious effects on plant life are exhibited. Some of these are discussed below.

Ethylene, is a natural by-product of plants, fruit, and certain diseases. It also results from the combustion of most fuels. The effect of Ethylene, accelerating the processes of growth and maturation, is dependent on the gas concentration, duration of exposure, air temperature and the type of plant. Some symptoms are defoliation of roses; flower drop of snapdragon and calceolarias; dry sepal on cattleya orchids; bud drop; failure of buds to open properly; stimulation of lateral shoots; necrotic spots and blotches on petunias; and sleepiness of carnations. Excellent test plants for the presence of Ethylene are tomato plants and carnation and snapdragon flowers.

Sulphur dioxide results from industrial fumes, smog and the burning of sulphur to control disease organisms. Tissues affected are the interveinal areas of leaves which collapse and become bleached and chlorotic with veins remaining green. Tests plants used to determine the presence of sulphur dioxide are alfalfa, barley, cabbage, potatoes, corn and cornflowers.

Control: A number of methods and procedures must be kept in mind when considering air pollution and its ultimate effects. Some of these are:

GROWER LEVEL: Purchase the best plants; sanitation; prevent the occurrence of diseases; vent boiler rooms properly; oil and gas burners need oxygen to properly burn fuels and should be in top operating order; harvest blooms at the proper stage of development; do not permit blooms to deteriorate in storage; keep buckets and refrigerators clean, and do not store fruit in the refrigerators. Do not allow blooms to remain out of water any longer than absolutely necessary.

WHOLESALE LEVEL: Keep merchandise moving—do not store for long periods, keep buckets and refrigerators clean, and do not store fruit in refrigerators. Do not allow blooms to remain out of water any longer than necessary.

RETAIL LEVEL: Keep buckets and refrigerators clean, keep merchandise moving and do not store fruit in refrigerators.

SOIL TEST REGULARLY

Keeping Quality Affected By Plant Diseases¹

Diseases such as leaf spot, flower spotting, canker root-rots, and rotting affect the quality of cut flowers and potted plants. Unhealthy plants are generally discarded because quality is primarily based on visual characteristics. But where does "Keeping Quality" fit into the picture? This paper will attempt to discuss how keeping quality is affected by various plant disease and offer some suggestions as to how they can be controlled.

Root diseases: A number of root diseases such as *Pythium*, *Rhizoctonia*, and *Thielaviopsis* invade roots. These are common inhabitants of soil. Occasionally one or more organisms are present on the roots but cause no visual symptoms until the plant is placed under stress such as in a home which has a dry atmosphere. Then yellowed leaves, leaf drop, wilting, and shortened life of the bloom may occur. The result is a dissatisfied customer and possibly a loss of future sales.

Vascular diseases are caused by *Verticillium*, *Fusarium* and some bacteria. They get into the plants and move through the water-conducting systems, produce toxins, and mechanically plug the water vessels. These diseases are highly destructive under high temperature conditions resulting in severe wilting and/or death of portions of the entire plant. Cut flowers from infected plants have reduced keeping quality since water uptake is restricted. This is not only true with cut flowers but also potted plants.

Blights and rots: Crops such as chrysanthemums, azaleas, tulips, iris, carnations, snapdragons, roses, geraniums and bedding plants plus many others are subject to blight, spot and rot diseases. When infected by these diseases, tissues are quickly destroyed when environmental conditions are favorable. Fortunately, in homes where dry conditions generally occur, these diseases usually do not develop and become troublesome. Infected blooms are unsightly and unacceptable for marketing. These diseases also have an indirect effect on other blooms through stimulated ethylene production.

In summary, the above information shows plant diseases not only affect quality but also have a very definite indirect effect on keeping quality. The above problems can be alleviated by using good cultural practices and sanitation measures to insure a high-quality product. Control measures for each of the diseases have been discussed earlier. Additional information can be found in the various crop manuals and the current Cornell Recommendations for Commercial Floriculture Crops.

¹ Summarized from *Living Flowers That Last*, A National Symposium, Marlin N. Rogers, Editor, 1963.

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