NYSFG New York State Flower Growers
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Consumer Preference for Potted Plants*

Easter Lilies and Chrysanthemums

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Preference for Chrysanthemum Height

Displays of yellow potted chrysanthemum plants differing in height and fullness were observed by consumers at the New York State Fair. In the first test three chrysanthemums ranging in height from 15 to 21 inches but similar in all other respects were displayed at a price of $6.00 apiece. This test was repeated with a price of $8.00 apiece.

At the lower price the shortest plant was favored by one-half of the respondents (Table 7). The tallest plant (21 inches) was chosen by the smallest proportion. Within the range of heights tested, the shorter the plant, the greater the preference.

Table 7 SELECTION OF POTTED CHRYSANTHEMUMS OF VARIOUS HEIGHTS AND PRICES
427 Respondents, New York State Fair, Syracuse, New York, 1967

Price of plant	Selection				All selections
	15-inch plant	18-inch plant	21-inch plant	None	
	(percent of respondents)				
Test 18, $6.00 (253 responses)	50	26	18	6	100
Test 19, $8.00 (174 responses)	19	22	8	51	100

In contrast, one-half of the respondents viewing the plants at $8.00 were unwilling to select any of the available plants. The few who did make a selection viewed the tallest plant with little favor. The elevation of price from $6.00 to $8.00 may have exceeded a critical level above which many consumers would refrain from buying. Indeed, the majority of respondents providing reasons for their negative decisions on the $8.00 plants claimed price as the influencing factor.

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*EDITOR'S NOTE—This is the second part of this article continued from NYSFG Bul. 281. The first included the introduction and a discussion of the Easter Lily study. The third part will be in the next issue of the Bulletin.

New York State Bedding Plant Prices

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Bedding plant dealers do not have a precise method of pricing their plants. A vague approach to pricing is not uncommon or always undesirable. Yet, to be insensitive to market conditions for horticultural products is undesirable. A 1966 Cornell study reported that about two-thirds of all sellers of bedding plants reacted directly or indirectly to market conditions by changing their prices during the preceding 5 years.[1] This same report indicated that the industry received too little accurate pricing information on bedding plants. Because of lack of data retailers relied on often inaccurate information from salesmen, county agents and advertisements.

Data from a new survey are now available to compare with the earlier study. A description of 1966 and 1968 bedding plant prices is important for several reasons. Inflation has caused the prices of most commodities and services to rise. In addition, it is suspected that the prices of seed, fertilizer, plastic, containers, and heat have increased during this two years period. Due to these known price increases and suspected cost increases it is apparent that a nurseryman should now reappraise his competitive position. This simple survey of bedding plant prices should facilitate such a reappraisal.

Four hundred retailers of bedding plants (100 located in each of the Buffalo, Syracuse, the Albany-Schenectady-Troy area, and Long Island areas) were personally interviewed during the summer of 1966. This survey reported the start-of-season prices for major bedding plants for 1966. In May and June of 1968, prices on bedding plants were received by mail from 35 of the dealers in each of the four areas who participated in the 1966 survey. The distribution of respondents among garden centers, roadside stands, and other bedding plant outlets was kept approximately the same as in 1966.

Prices for single petunias, zinnias, marigolds, and snapdragons were approximately the same and are reported as a group. The other major item on which prices were reported was the double petunia. All prices are presented on

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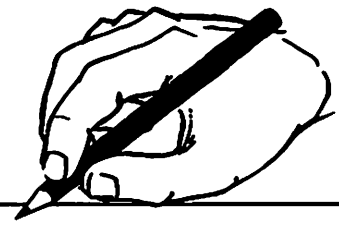
[1] L. John Wilkerson, "Pricing Practices and Attitudes of Rose Bush and Bedding Plant Dealers," Unpublished Masters thesis, Cornell University, June, 1967, p. 35.

DIAGNOSTIC
Check List

IMPORTANT: All questions must be completed for accurate diagnosis.



CROP and VARIETY: _____

SOURCE of PLANTS: _____ **PLANT AGE:** _____

1. PROBLEMS:

A. Description of symptoms:

- ☐ CHLOROSIS
- ☐ WILTS
- ☐ LEAF SPOTS
- ☐ SOFT ROT
- ☐ ROOT ROT
- ☐ FLOWER BLAST
- ☐ LEAF DISTORTION
- ☐ STEM ROT
- ☐ OTHER, Please specify:

_____

B. Conditions general or isolated to a few plants?

_____

_____

C. Percent of plants showing symptoms and/or loss:

☐ 1 or 2 plants ☐ 10% ☐ 25%
☐ 50% ☐ 75% ☐ 100%

D. Length of time symptoms have been observed:

_____ DAYS _____ WEEKS _____ MONTHS

E. Location of plants in relation to the following:

- SIDE WALLS: _____
- DOORS: _____
- HEAT PIPES: _____
- FANS-PADS: _____
- SHADE: _____
- SUNLIGHT: _____

2. SOIL MEDIA:

COMPONENTS:

- ☐ 1/3 SOIL, 1/3 SAND or PERLITE 1/3 PEAT MOSS
- ☐ CORNELL PEAT-LITE MIX
- ☐ 100% PEAT MOSS
- ☐ 1/2 SOIL, 1/2 PEAT MOSS
- ☐ OTHER, Please specify:

_____

VOLUME:

- ☐ RAISED BENCH ☐ 6" DEPTH
- ☐ GROUND BED ☐ 5" DEPTH ☐ 10" DEPTH
- ☐ POTTED CROP—Specify Pot Size: _____
- ☐ FIELD CROP or OUTDOORS
- ☐ OTHER, Please specify:

_____

3. STERILIZATION: (Types Used)

☐ STEAM ☐ CHEMICAL—Specify: _____

4. FERTILIZATION:

Has recent soil test been made? ☐ YES ☐ NO

If yes, where: _____

Has CO_2 been used? ☐ YES ☐ NO

If yes, source: _____

Program used: _____

_____

5. PESTICIDE, WEED KILLER and GROWTH REGULATOR APPLICATIONS:

TYPES USED	CONCENTRATIONS APPLIED	DATE OF APPLICATION

6. WATERING:

Explain METHODS, FREQUENCY and DRAINAGE:

_____

_____

_____

_____

7. TEMPERATURES:

DAY: _____ NIGHT: _____

8. Have plants been diagnosed elsewhere? ☐ YES ☐ NO

If yes, where? _____

9. MISCELLANEOUS INFORMATION:

(Record any additional facts pertinent to the problem.)

_____

_____

_____

_____

_____

_____

_____

_____

_____

A Diagnostic Check List

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Cornell University

A Diagnostic Check List has been developed at Cornell to aid in obtaining pertinent background information important in giving a sound diagnosis to disease problems of florist crops. This DCL pamphlet has been placed in the hands of Cooperative Extension Agent. The DCL will serve as a guide to them in asking the proper questions when they are called to observe a grower's plant problem. Often the Cooperative Extension Agent may be able to give a good diagnosis without sending specimens to the specialist at the college by obtaining the answers to questions listed in the DCL. The DCL which contains his diagnosis may then be placed in his files for his own records. Considerable time and effort can be saved if this type diagnosis is possible. A plant specimen should be sent to the college specialist along with the properly completed DCL if further diagnostic aid is required. The college specialist's diagnosis will then be placed on the DCL and returned to the Cooperative Extension Agent. A copy will also be maintained by the college specialist for his records. Horticulture Inspectors may also wish to use the DCL.

Several benefits will be realized if the DCL is used properly. The grower will benefit since he will be able to initiate more quickly the proper control measures if the Cooperative Extension Agent can give the diagnosis. Answers should be provided more quickly to the grower when specimens are sent to the college, since it will not be necessary to call for additional information. The Cooperative Extension Agent will benefit since he may be able to diagnose many of the problems, and the DCL can be easily filed for his records. Finally the college specialist will benefit since he will obtain the vital background information which is required on the specimens which are sent to the college. In addition, the correspondence can be held to a minimum since the diagnosis will be given and returned on the DCL.

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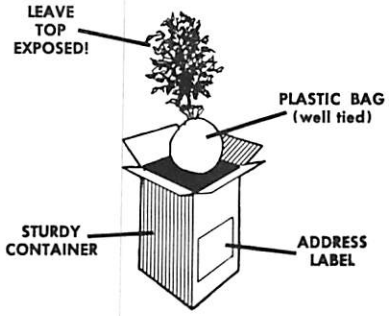
10. MAILING INSTRUCTIONS:

A sample of an entire plant expressing the type of symptoms with which one is concerned should be supplied if possible. The roots with adhering soil should be placed in a plastic bag. The bag should be tied well at the base of the plant just above the soil. The top of the plant (leaves and branches) should not be enclosed tightly in plastic. Separate leaf samples should be enclosed loosely in a ventilated plastic bag. Place the sample in a box or sturdy container to be sent for diagnosis.



CAUTION: This is plant material and is perishable. Refrigeration is required, if samples must be held a few days before a diagnosis is made.

TAKE OR SEND SPECIMENS, ACCOMPANIED BY THIS FORM, TO YOUR COUNTY COOPERATIVE EXTENSION AGENT.

(AGENT'S STAMP)

NOTE: If further diagnosis is required, send to:

LONG ISLAND & HUDSON VALLEY AREAS:
Cornell Ornamental Research Laboratory
Farmingdale, New York, 11735

ALL OTHER NEW YORK STATE AREAS:
Floriculture Pathologist
Department of Plant Pathology
Cornell University, Ithaca, New York, 14850

DIAGNOSIS

(To be completed by pathologist)

DIAGNOSED BY: _____

(Title) _____

DATE: _____

DIAGNOSTIC
Check List

FOR DISEASE PROBLEMS OF FLORIST CROPS

DATE SUBMITTED: _____

GROWER'S NAME and ADDRESS: _____

_____

_____ ZIP CODE: _____

COUNTY: _____

A Service of
DEPARTMENT OF PLANT PATHOLOGY
NEW YORK STATE COLLEGE OF AGRICULTURE
A Statutory College of the State University
CORNELL UNIVERSITY, ITHACA, N. Y.

National Bedding Plant Conference

A Steering Committee for the National Bedding Plant Conference met on January 7 in Columbus, Ohio.

The purpose of the meeting was a discussion of the Industry and formulation of plans for the second National Bedding Plant Conference to be held at Michigan State University October 6, 7, and 8, 1969.

A major part of the discussion evolved around the possibilities of forming a National Bedding Plant Organization. The purpose of a National Organization would be to develop a cohesive, unified approach to the bedding plant business. Members of the committee were urged to investigate the beneficial aspects of developing a National group and reporting these findings at the next business meeting. The meeting was planned to coincide with the George J. Ball Company Field Day scheduled for July 25, 1969 at West Chicago, Illinois

Those attending were:

Paul Randolph, Geo. J. Ball Co., West Chicago, Ill.
George Hardin, Bordines, Rochester, Mich.
Donald Bordine, Bordines, Rochester, Mich.
Alvi Vogt, Pennsylvania State University, University Park, Penn.
Ed Vaughan, Vaughan Seed Co., Downers Grove, Ill.
Al Wilson, Goldsmith Seed Co., Gilroy, Calif.
Leonard Bettinger, Bettinger Farms, Swanton, Ohio
Don Juchartz, Michigan State University, Wayne, Mich.
Henry Levy, Willow Oaks Farm, Brownsville, Tenn.
Lowell Ewart, Harris Seed Co., Rochester, N. Y.
Jim Boodley, Cornell University, Ithaca, N. Y.
John DeWinter, DeWinters Greenhouse, Grandville, Mich.
Al Einert, Michigan State University, East Lansing, Mich.
William Carlson, Michigan State University, East Lansing, Mich.

Members of the Committee not present:

Elichi Yoshida, Sunnyside Nurseries, Inc., Hayward, Calif.
Ted Weber, Weber Brothers Greenhouses, Inc., Oak Park, Mich.
Richard Chamberlain, Ledgehill Greenhouse, Carlisle, Pa.
Melvin Klooster, Klooster Greenhouse, Kalamazoo, Mich.
Russ Carlson, Fairview Plant Farms, Jamesville, Wis.
Ernie Cuzzocreo, Cuzz Acres Nursery, Orange, Conn.

JWB

Bedding Plant Prices

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a per plant basis, thus avoiding the problem of different numbers of plants per container.

Table 1 Bedding Plant Prices and Price Changes in Four New York Markets Summer, 1966 to June, 1968

Plant Group	New York State prices per plant		% change in 4 Markets			
	1966	1968	Buf.	Syr.	Capital District	Long Island
	[cents]		[%]			
Petunia, zinnia, marigold, snapdragon	6.1	6.4	+3	+3.6	+1.6	+10.7
Double petunia	8.3	8.3	—6.2	—2.5	+5.5	+ 2.5

The 1966 and 1968 price figures do not include weighting for volume sold thus the price is not a true reflection of the market wide price (Table 1). Nevertheless this average price is suitable for illustrating the general trend of price movements. It is apparent that Long Island dealers have increased their Group I prices a substantial amount (10.7 percentage points), whereas dealers in the other markets have had increases of 1.6–3.6 percentage points (Table 1).

Group II plants have experienced mixed price changes in the four markets. Prices have dropped in Buffalo and Syracuse and increased moderately in the Capital District and Long Island (Table 1).

Table 2 Consumer Price Index of Selected Items—June, 1966 and June, 1968—United States

	June, 1966[1]	June, 1968[1]	% Change 1966–1968
Food	113.9	119.1	4.6
Housing	111.1	118.7	6.8
Apparel and Upkeep	109.4	119.9	9.6
Transportation	112.2	119.7	6.7
Health and Recreation	118.7	129.7	9.3
Non Durable Commodities	111.5	118.2	6.0
Durable Commodities	102.6	107.4	4.7
Services	122.0	133.9	9.8
All Items	112.9	120.9	7.1

[1] Not seasonally adjusted.
Source: Dept: of Labor, Bureau of Labor Statistics, "The Consumer Price Index," June, 1966 and June, 1968.

A view of overall price changes during this same period indicates the price of food, an essential item, increased 4.6 percentage points whereas the price of services rose 9.8 points. The average rise for all items included in the Consumer Price Index was 7.1 percentage points (Table 2).

Discussion:

There are at least three possible reasons for the bedding plant industry reporting only small percentage increases during this period of rising prices:

1. If, wholesale or growing costs increased only slightly in the industry, then the retailer escaped a cost-price squeeze and suffered no loss of business profit. Nevertheless (assuming costs were constant within the industry) a retailer not increasing his prices by 7% suffered a loss of purchasing power since he paid an average of 7% higher prices for all his consumption expenditures.
2. Marketing information was possibly not adequate and consequently prices were set by relying on information from salesmen and using competitors' advertised prices. It is possible that trade journals did not effectively fill this void by providing information on current price changes in horticultural and related fields.
3. Those retailers who raised prices only a little either felt their prices were as high as they could safely go, or they saw their role as selling *only* a raw commodity. It is possible that these sellers provided few services with their plants and consequently did not feel justified to raise prices as much as prices of of services rose in the overall economy.

   Retailers who achieved substantial price increases were either overdue for a price increase or were successfully identifying the value the affluent consumer receives from services.

Conclusions:

Bedding plant prices increased moderately from June, 1966 to June, 1968. Prices of items metered by the Consumer Index Price generally rose more than did bedding plant prices.

Explanations of this lag in price increases in the bedding plant industry center on poor market information, the question of whether retailers suffered a cost price squeeze, and the amount of service a retailer provided with his bedding plants. Because prices of services rose more than all other prices during this period, a retailer who provided services should have experienced a greater price increase than did dealers who considered their plant a bare commodity. In summary, evidence indicates that the bedding plant industry was somewhat insensitive to the economic trend of spiraling prices.

NEXT MONTH'S ISSUE

WILL CONTAIN INFORMATION

ABOUT

- **1969 Short Course**
- **Proposed Reorganization of the NYSFG Assoc.**

Consumer Preference

(continued from page 1)

Two further tests called for displays of chrysanthemum plants 15 and 21 inches high, with the shorter plant priced at a premium. In the first case the 15-inch plant was priced at $7.00, or $1.00 more than the taller plant; in the second, the premium was $2.00.

At the $1.00 premium, two-thirds of the respondents selected the 15-inch plant, thus expressing a willingness to pay slightly more for the shorter plant of their choice (Table 8). However, when the premium was raised to $2.00, only four respondents in 10 selected the shorter plant. A substantial group evidently found that the $8.00 rather than $6.00 charge was too great a premium to pay for a plant they would otherwise have preferred. One-sixth of the respondents were unwilling to select any plant.

Tests with plants differing by only three inches in height (15 and 18 inches) produced similar results. The main distinction proved to be that respondent selection shifted more readily from one plant to another in reaction to price. Evidently the plants were not sufficiently different to cause consumers to strongly prefer one over the other.

Table 8 SELECTION OF POTTED CHRYSANTHEMUMS WITH SHORTER PLANT PRICED AT PREMIUM

359 Respondents, New York State Fair, Syracuse, New York, 1967

Test and price premium for short plant	Selection: 15-inch plant	21-inch plant	None	All selections
	(percent of respondents)			
Test 20, $1.00 (193 responses)	68	26	6	100
Test 21, $2.00 (166 responses)	39	45	16	100

No relationship was demonstrated between personal characteristics of the respondents and their preferences for plant height.

Preference for Chrysanthemum Fullness

Industry practice usually calls for the planting of five chrysanthemum cuttings in 6-inch clay or plastic pots. However, in order to have plants of different density or fullness for this study, four- and six- as well as 5-cutting plants were grown. Thus, the 6-inch pots containing the larger number of cuttings grew to be the plants that were fuller in foliage and appearance than those with less cuttings.

Four-, five-, and six-cutting pots (representing sparse, normal, and dense plants, respectively) were priced at $6.00 apiece in the first test. The largest group of consumers selected the six-cutting plant although the proportion was not greatly different from those selecting the plant with normal fullness (Table 9). Eight percent selected the four-cutting plant. An equal number made no selection.

When the price for each pot was set at $8.00, more than one-third of the respondents were unwilling to make a selection. However, the proportion selecting the five-cutting plant was about the same as recorded at the $6.00 level. In contrast, fewer respondents than in the previous test chose the four-and six-cutting plants, thus demonstrating the shifts in basic preferences caused by higher than normal prices.

Table 9 SELECTIONS OF POTTED CHRYSANTHEMUMS OF VARIOUS FULLNESS AND PRICES

371 Respondents, New York State Fair, Syracuse, New York, 1967

Test and price	Selection: Sparse plant	Normal plant	Dense plant	None	All selections
	(percent of respondents)				
Test 22, $6.00 (212 responses)	8	39	45	8	100
Test 23, $8.00 (159 responses)	3	37	25	35	100

For a simple and direct comparison of intensities of preference for the four-cutting and the five-cutting plants, the normal plant was priced $1.00 more than the sparse plant. In spite of the premium, 70 percent of the respondents chose the 5-cutting plant. Ninety percent of them cited its greater fullness.

Normal and dense chrysanthemums were displayed together in two tests. First, the six-cutting plant carried a $1.00 premium. In the second test it carried a $2.00 premium. More than half of the respondents chose the normal plant in the first test (Table 10). Nearly four in ten chose the other, while the remainder made no selection. When the premium was increased to $2.00, however, nearly one-fourth of the respondents refused to make a choice. Somewhat fewer than in the previous test chose the 5-cutting plant but there was a proportionately greater reduction in respondents who selected the dense plant.

Table 10 SELECTION OF POTTED CHRYSANTHEMUMS WITH DENSE PLANT PRICED AT PREMIUM

371 Respondents, New York State Fair, Syracuse, New York, 1967

Test and price premium for dense plant	Selection: Normal plant	Dense plant	None	All selections
	(percent of respondents)			
Test 24, $1.00 (173 responses)	55	38	7	100
Test 25, $2.00 (203 responses)	49	27	24	100

No relation between characteristics of the respondents and their preferences for plant density or fullness was demonstrated.

Retail Prices for Potted Easter Lilies

For comparison with expressed preferences of consumers for potted Easter lilies, retail florist prices were

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Consumer Preference

(continued from page 5)

collected for two 5-bloom lily plants differing only in height (18 and 28 inches). The majority of florists stated that prices for both plants were within the $4.50 to $5.99 range although there was some tendency to charge a premium for the shorter lily (Table 11). Twice as many florists charged $6.00 or more for the 18-inch plant as for the 28-inch plant.

Table 11 RETAIL PRICES FOR POTTED EASTER LILIES OF VARIOUS HEIGHTS

109 Retail Florists, New York State, 1967

Price range	Plant height 18 inches	28 inches
	(percent of florists)	
Less than $4.50	6	12
$4.50 to $5.99	60	71
$6.00 to $7.99	23	16
$8.00 or more	11	1
Total	100	100

This tendency for florists to charge somewhat higher prices for shorter lilies was consistent with the results of preference tests for these plants. Although the majority of florists did not differentiate prices, it was evident that some had discovered that a few of their customers were willing to pay significant premiums for shorter plants.

Florists also provided price information on eighteen-inch lilies which differed only in bloom count. More than seven of ten florists priced the three-bloom plants in the $2.50 to $4.49 range (Table 12). More than half indicated that their 5-bloom lily prices fell within the $4.50 to $5.99 range. More than six out of ten florists said their prices for lilies with seven blooms were in the $6.00 to $7.99 range.

Eighty percent of the florists reporting prices in the $2.50 to $7.99 range arrived at those prices by applying the industry rule-of-thumb of $1.00 per bloom. Most of the rest used $1.50 per bloom.

Table 12 RETAIL PRICES FOR POTTED EASTER LILIES OF VARIOUS BLOOM COUNTS

100 Retail Florists, New York State, 1967

Price range	Number of blooms per plant Three	Five	Seven
	(percent of florists)		
Less than $2.50	9	0	0
$2.50 to $4.49	71	14	0
$4.50 to $5.99	20	52	13
$6.00 to $7.99	0	26	62
$8.00 or more	0	8	25
Total	100	100	100

Retail Prices for Potted Chrysanthemums

Florists were asked to indicate prices for fifteen, eighteen, and twenty-one inch chrysanthemum plants with yellow blooms and five cuttings per pot. Little difference in price between the three chrysanthemums was reported by florists (Table 13). They appeared not to differentiate price on the basis of plant height. The greatest proportion of florists priced their chrysanthemums within the $4.50 to $5.49 range. One-quarter charged between $5.50 and $6.49 for the shortest plants. More than one florist in six charged $7.50 or more.

Table 13 PRICES FOR POTTED CHRYSANTHEMUM PLANTS OF VARIOUS HEIGHTS

132 Retail Florists, New York State, 1967

Price range	Plant Height 15 inches	18 inches	21 inches
Less than $4.50	18	17	15
$4.50 to $5.49	38	37	39
$5.50 to $6.49	24	24	23
$6.50 to $7.49	4	4	4
$7.50 or more	16	18	19
Total	100	100	100

These results were inconsistent with those of the consumer tests reported earlier in which clear preferences were expressed for the shorter chrysanthemum plants, and in which some consumers claimed they would pay more to acquire them. Practices of florists gave no evidence of their having recognized this pricing opportunity.

An effort was made to compare retail prices for potted chrysanthemums differing in density or fullness. Insufficient numbers of florists were able to provide information on four- and six-cutting potted chrysanthemums since trade practices restricted available supplies mainly to the five-cutting plant.

TO BE COMPLETED IN THE NEXT ISSUE

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Bul. 282, May '69

YOUR EDITOR,

Bob Langhans