

## *A View of Some N. C. Floricultural Facts*

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Federal spending is down and curtailment of funds has eliminated the survey of floricultural crops in 28 selected states. That informative publication enabled us to see where the industry had been, was, and where it was going. North Carolina was one of the selected states. This article hopefully will bring the reader up-to-date on our production figures and give us a chance to remember the past and plan for the future. In some instances we have taken gigantic strides forward but in other cases we have forfeited our national ranking. The impacts some changes have had on individuals and families are of greater importance and concern, however, than how we measure up as a state. We will consider the various crops, with frequent reference to Table 1 and occasional contemplation of Tables 2 and 3.

Carnations. The climate in western N. C. was considered as ideal for carnation production when I came here in 1961, and the nearness to 50% of the U. S. population was also an asset for marketing. W. D. 'Bob' Holley, Colorado State University, once told me he had a spot picked out in western N. C. for a carnation range but he ended up in Colorado instead. People from New York and Pennsylvania were impressed enough to move a greenhouse range down here or to build a new one. Other growers had similar plans. We had 37 carnation growers in 1959. By 1970 we were down to 28 growers and only had 5 growers in 1981. Climate didn't change and the large markets were still within 500 miles but the production in Colorado with direct shipments to retail florists, the volume of California carnations being shipped to the East coast, and the flowers coming in to Miami from Bogota, Colombia were tough competition. In 1971 only 5.2% of the carnations sold in the U. S. were imported; by 1980 the figure had risen to 50%, with 89% of the imported carnations coming from Colombia, 4% from Israel and 4% from Mexico. It is difficult to even guess if North Carolina will ever again be a leading state for carnation production but the climate and proximity to



Figure 1. Carnations - their bright future of 20 years ago has been dimmed.

market shouldn't change. Hopefully we will still have growers around with expertise in carnation culture.

Chrysanthemums (Pompons). The late Dr. A. W. Dimock, internationally known plant pathologist on the faculty at Cornell University, told me all about

Sunshine Gardens of North Carolina in Pittsboro before I ever set foot in North Carolina. He was a good friend of Leo Gould and J. J. McEvoy. This operation was one of the first in the U. S. to produce spray mums out-of-season in the field, and their flowers went everywhere east of the Mississippi River and they occasionally crossed it. The acres of chrysanthemum beds are now gone. We still have some spray mums being grown in the state, and the quality would surpass most of the flowers being shipped in, but only 10 growers were regarded as commercial producers in 1981 with a total wholesale value of \$317,000. Preference of florists for imported pompon chrysanthemums seems to be a major reason why N. C. growers are reluctant to grow this crop. Imported pompon mums are almost identical in percentages to carnations - 5.6% in 1971 and 52.4% of total U. S. sales in 1980.

(Standard mums).

Standard mums are harder to ship because of the bulk, so maybe that is one reason why this cut flower crop continues to increase in N. C. The number of growers is down, but production is up, as shown in Table 1. I have recently visited several of our standard mum growers or seen their products in the wholesale house or florist shop.

We have the Tatarskis growing mums in "pillows", Harry Wilfong getting maximum production with his pinched crops, Dave Webber with high quality in Tabor City, and the same with the mums coming out of Hardin's Florists in Liberty. The flowers Ray Eller from Norlina has brought down to our annual short courses have impressed people almost immune to the beauty of flowers. Many others could be cited and I don't want to slight anyone by not citing them, but the point I am trying to make is that North Carolina is a fine place to grow standard mums and we have people doing it.



Figure 2. Mum production - the major cut flower crop in North Carolina

In 1980 imported mums accounted for 23.8% of total sales compared to 7.3% in 1971. Domestically, California is very big in pompon and standard mum production, but I don't know how much of their production collides with that of North Carolina growers.

Gladioli. We have been "clobbered" is the most scholarly way I can describe our gladiolus production. The primarily Dutch growers who made such great strides with this crop have retired and the new generation preferred to do something else for a living. N. C. State University had a major impact on this crop, particularly the plant pathologists who were stationed at Castle Hayne. Imported flowers had no detrimental impact on this crop, as the demise was internal. In 1950 we had 94 growers of glads - by 1981 we were down to 5.



Figure 3. The N. C. gladiolus crop years ago when the crop was at its zenith, and Charlie Swart and I were a bit younger.

The climate, the soil, and hopefully the market are still there, waiting on a new generation of growers to take on the challenge of producing this crop. Perhaps the stigma of "funeral flower" will decline, and the importance of the crop will go up.

Orchids (Cattleya).

This crop never was a prominent one in the state, compared to the orchid production in states like New Jersey or California, but we did have orchid growers who were experts at it. F. D. Edwards of Lucy B.

Moore Florists in Wilmington, Hazel Bridges in Pinehurst and Wilma Oliver at Cyn-Mar Greenhouses in Pine Level were 3 leaders when I first became acquainted with orchids in North Carolina. Changes in society, such as the decline in popularity of corsages for proms and similar events, had a negative impact on orchid demand and consequently on production. Imported orchid blooms also were highly competitive, price-wise. Orchid plants probably account for more sales than the cut flowers, as there are many orchid enthusiasts who are constantly searching for new selections.

Roses. We can't tell what the 1981 status of our rose production was because data are lacking. The wholesale value had been steadily increasing from 1950 up to 1970. New growers have come in to the state since then, such as Ron

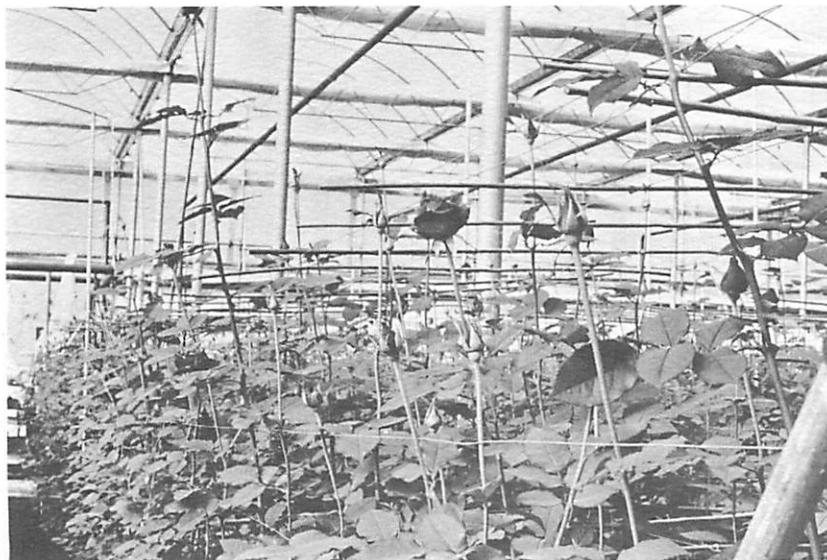


Figure 4. Rose production in a N. C. greenhouse.

Spanbauer at Carolina Roses in Horse Shoe, and longer established growers have expanded, so one might guess that roses are continuing on a positive note. Out-of-state visitors at our short courses often have commented on the high quality of roses exhibited by Fred Henderson of Wilkesboro or the ones Erik Ing Ingwersen would bring down when he ran Patterson's Flowers in Montezuma.

Slightly more than 9% of the roses sold in the U. S. in 1980 were import-

ed, primarily from Colombia, with Israel and The Netherlands in distant second and third place. One shouldn't discount the possibility of greater increases in imported roses, however, as only 0.2% of the roses were imported in 1971. Some Israeli researchers have developed strong credentials as rose authorities and they haven't done it simply for academic reasons, or to supply roses to Tel Aviv.

Snapdragons. This is a crop Joe Love and I have suggested to growers who wish to continue in cut flower production but our suggestions usually are met with apathy or completely ignored. Some growers have tried snapdragons once, had difficulty and never grew them again. There is plenty of cultural information available, and a good assortment of varieties to fit the



Figure 5. A bed of snapdragons flanked by carnations.

seasons. Shipping snapdragons is a major headache, so they haven't been on the list of imported flowers so far. Those produced in the U. S. but shipped long distances can't compare with the ones that Helms and Cox in Monroe or Forney Huffman in Newton provide their wholesalers, or what Jim Weaver will send from Fallon's Greenhouse to the florist shop a couple of miles away.

Azaleas. The azalea was the premier flowering pot plant at one time and N. C. was a leading place to grow it. I have visited azalea growers in much of this country and in Belgium, the center of European azalea production, and some of the finest azaleas I have seen were forced in N. C. They might have had their start as cuttings or liners in Florida, Alabama, Virginia, South Carolina, California or Oregon but they reached their ultimate in North Carolina. The economic values of the crop in the state and nation are unknown, however, as azaleas were not included in the most recent survey. The long duration of the azalea crop, in comparison to the 3-month pot mum, generally swings the grower to pot mums. Mark-up practices of retail florists put the azalea out of reach of many customers. I wrote a rather gloomy article about the azalea's economic



Figure 6. Azaleas - a premier pot plant excluded from statistical surveys.

status and possible decline (not caused by Phytophthora) in a national trade journal and a prominent azalea supplier informed me azalea sales are better than ever on the eastern seaboard. I hope he's right, because I do believe the azalea is an excellent item in the florist industry.



Figure 7. The #1 pot plant in North Carolina.

Chrysanthemums (Potted)  
Year-round flowering of chrysanthemums did not become a reality until around 1950 and that fact is revealed by the dash showing the wholesale value of pot mums in 1950. Daylength control, plus the elimination of chrysanthemum stunt, immediately had an impact on chrysanthemum culture and economics. Fred Gloeckner told me that he convinced U. L. Patterson, Sr. to try pot

mums year-round when the concept first originated, and Mr. Patterson's biggest complaint was that he didn't start out with more plants. Improved varieties, height control, improved growing media, better fungicides and insecticides, all have combined to make this crop the #1 flowering pot plant in N. C. (Nationally the economic value of poinsettias exceeds that of pot mums by about one million dollars). We have more growers involved in the production of geraniums and poinsettias, but the \$4,343,000 wholesale value of pot mums in 1981 gave it top ranking. More poinsettias are sold in N. C., but the unit price is less.

Other potted crops, with the exception of the poinsettia, have suffered perhaps as the pot mum gained so much. The long-lasting quality of the pot mum, with the wide assortment of flower colors and forms, make it a favorite with the florist and their customers.



Figure 8, Easter lilies - highest wholesale value per square foot in 1981.

Easter lilies. This crop's popularity among growers really does seem to rise and fall. Only 22 greenhouse ranges in N. C. reportedly had Easter lilies in 1981. Growers I have visited since Easter of this year seemed pleased with their crops and said it was the best Easter holiday in 10 years. One interesting statistic, shown in Table 2, is that the wholesale value of Easter lilies on a square foot basis is the highest of pot plants in the state (\$4.13 in 1981, compared

to \$4.10 for pot mums and only \$1.63 for poinsettias). I'm no economist, and I know that wholesale value does not indicate net profit, but those figures probably will surprise some readers. Having Easter lilies on the list of plant material available might make selling some other Easter crops a bit easier.

Root rot, height, timing and flower number are some worries faced by the lily grower but the problems have solutions.

Geraniums. When I arrived in North Carolina in 1961 I noticed the scarcity of potted geraniums in greenhouses. Jimmy Melton thought the prominence of red brick homes in the South had something to do with its low popularity, as the red geranium flowers weren't as attractive with that background as they would be against a home with white siding. Memorial Day also wasn't as big a day for selling plants as it was in the North. Whatever the reason, geraniums have steadily been gaining in



Figure 9. More growers in N. C. grow geraniums than any other pot plant.

sales and number of growers producing them, until in 1981 there were 97 establishments selling 1,164,000 pots of geraniums at a wholesale value of \$1,187,000. Growers in N. C. and California were much lower than Minnesota, New York and Ohio in wholesale value on a square foot basis.

Geraniums listed in this category in the survey primarily are those vegetatively propagated. Seedling geraniums often would be classified as bedding plants.

Hydrangeas. I mentioned the rise and fall of the popularity of Easter lilies. Hydrangea popularity is like a yo-yo, and that fact is indicated by the statistics shown in Table 1. I don't know how hydrangea propagators can make any long-range guesses as to what quantities they should produce. Hydrangeas I saw in 1982 were some of the finest I have ever seen - the Rose Supreme plants we had in our study on height control impressed people who aren't even fond of hydrangeas. The pink sepals were truly pink, the "flower heads" were huge but attractive, foliage was dark green, and very few blind shoots were present. We didn't do anything special - other greenhouse ranges had excellent plants.

I mentioned 'Rose Supreme'. The selection of varieties is much better than it was years ago. Harry Neely of Brighthampton Greenhouses in Southern Pines had several different varieties, ranging in sepal color from white to bright blue and deep rose. The plants were short and the numbers of shoots per plants were impressive.



Figure 10. Hydrangeas - popularity among growers goes up and down.



Figure 11. Poinsettia production on a grand scale. Three or 4 growers produced nearly half of the plants in 1981.

The hydrangea season seems to be getting extended, with flowering plants available and in demand well in advance of Easter. Perhaps it should be considered simply as a spring-flowering pot plant, and not gear its' production primarily to Easter and Mother's Day.

Poinsettias. Nationally this is the top pot plant but in North Carolina it is second in wholesale value, third in number of growers and in number of pots sold, and sixth in wholesale value per square foot. According to the USDA survey there were 1,403,000 potted poinsettias sold in N. C. in 1981. One can quickly pick out 3 or 4 large growers who account for at least half of that production. There have been 2 types of poinsettia crops being grown - one for the retail florist and one for the mass markets - but the differences have been lessened with varieties such as Glory (V-14).

Growers formerly confined to bedding plant production have been trying to make year-round use of their structures and employees. The poinsettia was one of the first alternatives selected by many of them. Often the plants are almost ready to sell before much thought is given to marketing. A few years ago it was a poinsettia seller's market but the tremendous increase in production has somewhat altered the situation. An extended holiday season, the fact that a large segment of the population still remains untouched as flower purchasers, and the available technology to produce high-quality poinsettias should prompt optimism and reasonable prices rather than pessimism and depressed prices.

I have been acquainted with poinsettia production in much of the U. S. and this area has some real climatic advantages.

Bedding plants. This crop is the "foot in the door" for many commercial growers. They get their start with bedding plants, expand to other crops, and suddenly bedding plants aren't grown there anymore, or only in token amounts. I could

cite several establishments who have gone that route. Greenhouse ranges vary tremendously in size of operation. Some growers express volume in dozens and some talk about thousands.

So many bedding plant growers seem to exude enthusiasm about their plants. They can identify a variety half way across the greenhouse and they can tell you what's right and what's wrong about it. Peggy Peyton at Baucom's, Irene May at May-Mak, Jim Gapinski at Van Wingerdens, Ed Winborne at Fowler's - I wouldn't care to compete with them in a contest identifying varieties. There are many other growers with similar abilities.

Many bedding plant growers are not inhibited by history or tradition and they are quick to try innovative ideas. I have been in small bedding plant ranges where the last thing I thought I would see is a vacuum seeder, but I'll see a Van-Dana and a Hamilton in the headhouse.

Bedding plants have come on strong in N. C., and 1982 will probably be one of the biggest years yet.



Figure 12. Bedding plants - constantly increasing and improving.

Figures in Tables 1, 2 and 3 are for flowering bedding plants only, excluding 2 very big items, tomatoes and peppers. I don't know of any bedding plant grower who does not have those 2 items.

Foliage plants. This group of plant species is lacking in the USDA census, for N. C. We apparently don't have enough growers or a large enough volume to report, while states considerably north and particularly south of us have impressive statistics. Our nearness to Florida perhaps has a great deal to do with our poor showing as a foliage plant state. N. C. flower growers have truck drivers, or sons, who are well acquainted with I95 or I85, as they frequently head for Apopka or a similar site to pick up foliage plants.

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I have tried to bring you up-to-date on the status of the floriculture industry in N. C. Not all crops were included, and we have some growers doing extremely fine jobs with those crops.

Most of the pictures used in this article were taken by Joe Love, and I want to thank him for the use of them.

Table 1. A tabular history of the economics of some floriculture crops in North Carolina, 1950-1981.

Crop	Number of growers				Wholesale value x 1000			
	1950	1959	1970	1981	1950	1959	1970	1981
Carnations	27	37	28	5	52	535	1037	356
Chrysanthemums								
Pompon	--	47	38	10	193	485	877	317
Standards	--	47	59	25	59	403	1367	1408
Gladioli	94	54	23	5	668	1306	1341	169
Orchids, Cattleya	8	7	7	--	32	42	41	---
Roses	7	13	13	--	95	178	573	---
Snapdragons	--	33	23	17	--	56	149	176
Azaleas	52	29	56	--	110	111	565	---
Chrysanthemums, pot	--	34	38	51	---	620	1421	4343
Easter lilies	55	42	24	22	57	148	160	578
Geraniums	--	63	92	97	--	79	230	1187
Hydrangeas	47	28	19	22	88	84	111	199
Poinsettias	47	47	35	78	75	221	503	3634
Bedding plants	45	84	--	112	69	298	523	4215

Some data taken from Trends in Commercial Floriculture, Crop Production and Distribution 1945-1970, by M. Truman Fossum, 1973 and from Floriculture Crops, Production Area and Sales, 1980 and 1981, compiled by the Statistical Reporting Service, Crop Reporting Board, USDA, March 1982.

Table 2. Wholesale value in dollars per square foot for selected pot plants in 5 states, 1981.

Crop	N. C.	Minnesota	California	New York	Ohio
Pot mums	\$4.10	\$4.87	\$4.42	\$3.84	\$4.02
Geraniums	1.98	2.81	1.56	2.76	2.59
Hydrangeas	3.16	----	1.98	3.19	----
Easter lilies	4.13	4.36	3.59	4.23	3.59
Poinsettias	1.63	2.59	2.21	2.42	2.33
Bedding plants, flowers	2.54	2.56	3.39	3.02	2.54
Foliage	----	5.53	4.42	4.07	8.79

Taken from Floriculture Crops, Production Area and Sales, 1980 and 1981. Compiled by the Statistical Reporting Service, Crop Reporting Board, USDA, March 1982.

Table 3. Numbers of units sold by North Carolina flower growers in 1981.

Crop	Number of units sold X 1000	Wholesale price/ unit
Carnations	2,546 blooms	\$ .14
Chrysanthemums		
Pompon	166 bunches	1.91
Standard	3,815 blooms	.37
Gladioli	1,676 spikes	.10
Snapdragons	685 stems	.26
Chrysanthemums, pot	1,328 pots	3.27
Easter lilies	180 pots	3.21
Geraniums	1,164 pots	1.02
Hydrangeas	56 pots	3.55
Poinsettias	1,403 pots	2.59
Bedding plants	880 flats	4.79