



CARNATION VARIETY TRIAL

and cultural tests

Dr. J. B. Gartner* & Francis Mason**

To test the adaptability of carnation varieties to climatic conditions found in North Carolina, a series of trial plots were set up at the Horticulture greenhouses at State College.

In the variety trials twenty-four varieties were used. Rooted cuttings were benched direct February 27 to March 2, 1953. A randomized block design was used with a block being one-half of a $3\frac{1}{2} \times 10$ foot raised bench. The plants were spaced 7 x 8 inches giving six plants per row and fifteen rows per bench. One or two buffer rows were used on the ends of each bench. There were four replications of each variety. The temperature was held between 50 and 55°F. by thermostatic control.

A steam sterilized soil mixture of one part peat moss and three parts clay loam soil was used. The soil mixture was tested by the Spurway system before benching. The results were: pH 5.3, Calcium, high; Magnesium, high; Phosphorus, high; Potash, very high, and organic matter 3.88%. Superphosphate was added at the rate of eight pounds per 100 square feet before planting, and after planting eight pounds per 100 square feet of hydrated lime was added to raise the pH. Fertility levels were checked monthly and maintained at the following levels: Nitrates, 20 to 35 ppm.; Phosphorus, 3 to 5 ppm.; Potash, 20 to 25 ppm.; Calcium, 200 ppm. Nitrogen and potassium were added weekly through complete liquid feeds.

Records were kept on the number of flowers cut, average stem length, average flower size, and average stem quality from February 27, 1953 to June 2, 1954.

A cultural test was set up to exhibit differences in production between direct benching of rooted cuttings versus benching of established plants. The varieties used were White Sims and Sidney Littlefield. The soil mixture and fertilization program were the same as in the variety trials. A randomized block design was used with six, 6-plant replications in each block. Rooted cuttings were benched direct March 2, 1953, and rooted cuttings were potted in 3-inch pots on the same date, grown in pots for eleven weeks and benched on May 18, 1953.

*Professor of Ornamental Horticulture

**Student in Floriculture

Records were kept from Feb. 27, 1953 to May 31, 1954.

TABLE 1. Trial Results of Twenty-seven carnation varieties from Feb. 27, 1953 to June 2, 1954.

VARIETY	Salable flowers per sq. ft.*	Average stem length (inches)	Average flower diameter (inches)	Average stem quality**
Adonis	36.8	19	2	H
Aphrodite	33.6	21	2 1/4	H
Dark Red Sims	30.5	24	2 1/4	VH
Eros	29.2	24	2 1/4	VH
Harvest Moon	30.3	24	2 1/4	H
William Sims	32.2	24	2 1/4	VH
Midas	32.0	23	2 1/8	H
Pandora	24.8	22	2 1/4	H+
Pink Sims	28.8	24	2 1/8	H
Sidney Littlefield	28.8	21	2 1/2	H
Siren	29.1	22	2 1/4	VH
White Littlefield	24.4	21	2 3/8	VH
Apollo	46.8	21	2 1/4	VH
Aurora	38.7	18	2 1/4	H
Minerva	37.0	21	2 1/4	H
Saturn	31.5	19	2 1/8	H+
Red Beauty	30.1	23	2 1/4	H
White Sims	28.6	24	2 1/4	H
Achilles	33.2	22	2 1/8	H-
Cassandra	36.2	24	2 1/8	VH
Geiger's Variegated	26.0	24	2 3/8	H
Jupiter	27.3	19	2 1/4	VH
Northland	24.0	18	2 1/8	H-
Vulcan	36.2	23	2 1/8	H+

TABLE 2. Cultural Test Results of direct benching vs. benching potted plants from March 2, 1953 to May 31, 1954.

VARIETY	Cultural practice	Salable flowers per sq. ft.*	Average stem length (inches)	Average flower size (inches)	Average stem quality**
White Sims	Direct				
	Benching	36.0	24	2 1/4	H
White Sims	Potted	20.2	24	2 1/4	H
Sidney Littlefield	Direct				
	Benching	26.5	20	2 1/4	VH
Sidney Littlefield	Potted	12.9	19	2 1/4	VH

* Splits and culls were not included in these figures.

** H = Stems semi-rigid with slight bend when held at stem end and parallel to floor.

** VH = Stems rigid and straight when held at stem end and parallel to floor.

Draw a big circle on your calendar around October 2, 3, and 4, 1955. These dates have been set aside for the 35th Annual Convention of the N. C. State Florists' Association. The convention will be held at Asheville, with the Asheville and Buncombe County Florists Club acting as host for the meeting.

theme is chosen, the flowers may be arranged around a Madonna figurine, or St. Francis of Assisi with bird figurines.

For long-lasting Easter enjoyment, there are many delightful flowering plants, such as the traditional Easter lily, calla lily, Kurume and Indica azaleas, pastel and white hydrangeas, vivid-hued cinerarias, rambler rose plants, potted tulips in single and double varieties and fragrant hyacinths. The fancy-leafed caladium is another interesting house plant, which can be transferred later to a window or porch box.