



# Colorado Flower Growers Association

IN COOPERATION WITH COLORADO A & M COLLEGE

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## Carnation Flowers Keep Best from Mature Plants

by W. D. Holley

Cut flowers from carnation plants in their second year of production have kept 15 percent longer than flowers from the first crop on young plants. Differences in keeping have been consistently in favor of older plants. Flowers from unpinched plants had the shortest cut flower life, followed by flowers from the first crop of single pinched plants, with flowers from first-year plants in steady production having intermediate and those from two-year plants the longest cut flower life.

Flowers from White Sim plants of different ages were placed in a draft-free room from December 1954 to March 1955. The temperature of this room ranged from 66° to slightly over 70°F. The flowers were kept in water to which 100 ppm of chlorine had been added to keep down bacterial growth. The life of any flower was counted from the time that flower was placed in the keeping room until the petals began losing turgor minus one day. Counts were made early each morning. Although many tests were made during this period, the ones listed below are typical and their comparability is unquestionable.

Three tests were made on the cuts of February 23, 25 and March 2, which compared the life of flowers from 2-year plants, one-year plants in steady production and the first crop from single pinched plants. These tests involved 21 flowers from each age group.

Age of plant	Mean life of cut flowers in days	Difference
1st crop from young plants	8.43	
One-year plants in steady production	9.00	.57
Two-year plants	9.95	.95

Although the differences in keeping are small, they are large enough to give us concern in our cropping practices. The improvement in keeping of the flowers from 2-year plants over those from plants in the other two age groups was highly significant when analyzed statistically. The difference of .57 days in average keeping between flowers from the first crop and those from plants in steady production was not quite enough for statistical significance. In all other tests, results were always in the same relation, with flowers from the middle group of plants keeping almost as well as those from 2-year plants in occasional tests.

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### *Pinched vs. Unpinched Plants*

The life of flowers from unpinched plants was tested against that of the first crop from single-pinched plants on March 29. Red and White Sim flowers were included in this test with 12 flowers per variety from each plant age group.

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	Mean cut flower life in days	Differ- ence
Unpinched plants	6.50	
Pinched plants	7.29	.79

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The difference of .79 days in average keeping of the flowers from pinched plants was sufficient to be highly significant when analyzed statistically.

Evidence is building up rapidly that flowers from immature plants do not keep as well as those from plants in a slower, more settled type of growth. Richard Knappenberger is correlating sugar content of the cut flowers with their potential life. Perhaps young carnation plants in their extreme vigor use a part of the sugars which should go to the flowers, thereby reducing the life of their flowers. The flowers from unpinched plants in this test contained about half as much total sugars as did those from the pinched plants.

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Ed. Note: A brief section in Bulletin 62 on the keeping of flowers from first and second crops is in error. Your editor misunderstood this section and changed the meaning entirely. The data in the table were obtained from flowers coming off plants the same age.

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