

A Comparison of Three Cutting Heights on Carnations

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Cutting the first crop of carnations low raised average quality but reduced total production. Conversely, cutting the first crop high gave increased production and lower average quality. Total production and average quality were closely related to the height at which the first crop of flowers was cut.

The differences in quality occurred during the first crop. Differences in production came later.

Stem length was the only measurable segment of quality affected by height of cutting. Flower size and fullness, and stem diameter were not different in any of the treatments.

Two 35-foot benches of Crowley's Pink Sim were used in this study. Bench A was planted with nursery bed grown plants on May 22, 1953. One-half of the breaks from the first pinch was pinched a second time during June and July. The transplants used in Bench B were single-pinched on May 30, and transplanted June 23.

In table 1 are shown production data for each bench. The multiple pinched plants produced more flowers but occupied a producing bench and nursery bed space longer. The cutting methods yielded similar results on both sets of plants. More flowers of slightly lower average quality resulted from high cutting. Low cutting gave the reverse.

Table 1. The effect of three cutting heights on production and quality of Pink Sim carnations.

Multiple pinched plants bench A

Height first crop cut	Grades				
	Split	Short	Stand.	Fancy	Total
High	30	121	248	587	986
Intermediate	37	32	268	540	877
Low	34	11	176	618	839

Single pinched plants bench B

High	15	56	307	473	851
Intermediate	16	7	283	456	762
Low	12	6	179	499	696

To examine these data further, let us look at the quality of flowers cut during the 10-week treatment period, and that following when all flowers were cut low (Tables 2 and 3).

Table 2. The quality of Pink Sim flowers cut during the treatment period and of those cut following---

The benches were divided into nine plots each with buffer rows of red or frosted sports of Sim. Three heights of cutting were replicated three times within each bench. To establish the three cutting heights on the fall crop, flowers were cut with the following stem lengths:

- 1). 14 to 18 inches,
- 2). 17 to 22 inches, and
- 3). 22 to 26 inches.

Cutting was started on bench A, August 16 and on bench B, September 13.

All treatments on bench A were cut low after October 23, taking the flowers off at or near their origins. The same low cutting was started on bench B after November 20. This allowed a return crop from the first 10 weeks of cutting. All other production from the plants was from growths which originated before the cutting of flowers was started. Flowers were graded by a combination of weight plus length. Records on both benches were terminated May 8, 1954.

Results

Production to October 23

Cutting height	\$				
	Split	Short	Stand.	Fancy	Total Fancy
High	16	116	158	14	304 4.6
Int.	17	28	202	48	295 16.3
Low	19	10	94	156	279 56.0

Production after October 23, all cut low

1st crop cut					
High	14	5	90	573	682 84.0
Int.	20	4	66	492	582 84.5
Low	15	1	82	462	560 82.5

Table 3. The quality of Pink Sim flowers during the treatment period and of those following --single pinched plants, bench B.

Production to November 20

Cutting height	\$				
	Split	Short	Stand.	Fancy	Total Fancy
High	3	50	161	18	232 7.8
Int.	1	4	190	37	232 16.0
Low	1	3	104	101	209 48.3

Production after Nov. 20, all cut low

1st crop cut					
High	12	6	146	455	619 73.5
Int.	15	3	93	419	530 79.0
Low	11	3	75	398	487 81.7

It is apparent from these tables that the differences in quality occurred during the 10-week treatment period. Since the plants and flowers in all treatments were

height. were in stem length only. Later when all flowers were cut low, the percentage of fancy blooms was the same for the three treatments on bench A. High cutting reduced the percentage of fancy blooms on bench B when compared to the other two treatments, however, the actual number of fancy flowers produced on both benches during the second period was greatest for the high cutting and least for low cutting.

In a way, average quality is somewhat misleading. If we look back to table 1, we see that all cutting methods yielded similar numbers of fancy flowers in the yearly total. In addition, higher cutting increased the total production of

flowers. This increase was in short and standard grade flowers for high cutting and mostly in standards for intermediate cutting. Only low cutting gave appreciable fancy blooms during the fall months (Table 2). Cutting low to get these fancy blooms significantly reduced total production. This reduction was accomplished entirely in the short and standard grades.

If all grades of carnations could be sold at all times, high cutting of the first crop would be advantageous. Should sales of short or standard grades lag, cutting low to take fancy flowers could prove a financial advantage to the grower, especially during short periods.

Fig. 1. The distribution of return crops from three heights of cutting carnations.

