



Colorado Flower Growers Association

IN COOPERATION WITH COLORADO A & M COLLEGE

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Carnation Timing from a Single Pinch
by

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Beginning February 10, 1951, four successive propagations of carnations were made at monthly intervals. These propagations were previously described (CFG A Bul. 29) as the following numbered treatments:

1. Propagated Feb. 10, transplanted to nursery bed March 10, pinched April 15 and benched May 18.
7. Propagated March 15, set in nursery bed April 15, pinched May 15 and benched June 15.
16. Propagated Apr. 15, benched direct May 18, and pinched June 15.
19. Propagated May 15, benched direct June 15, and pinched July 15.

All treatments occupied producing benches 51 weeks. Treatments 1 and 7 also required nursery beds for 8 weeks.

The varieties used were White Sim for treatment 1, Crowley's Pink Sim for 7 and 16 and Red Sim for treatment 19. Large, healthy cuttings were used in each propagation and the first and only pinch was made as high as was possible without getting reproductive breaks.

Three randomized plots of 35 carnation plants each were used for each treatment. The production figures in table 1 represent the total production from all three plots occupying a total of 35 sq. ft. of bench area. Spacing used in all treatments was 6" x 8".

A comparison of quality was obtained by weighing all flowers after side growths had been removed. Weak-stemmed blooms were broken down to lower grades before being weighed.

Table 1. The total production and quality of carnations from four single-pinch cropping systems.

Treatment:	Production		Quality					
number	: Total	: Per ft. ²	: split	: short	: stand.	: fancy	: Q.I.*	
1	: 1234	: 35.3	: 12	: 48	: 468	: 706	: 4.51	
7	: 1411	: 40.3	: 48	: 67	: 422	: 874	: 4.50	
16	: 1396	: 39.9	: 18	: 92	: 648	: 638	: 4.37	
19	: 1133	: 32.4	: 6	: 12	: 674	: 441	: 4.37	

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*Q.I. (Quality Index) determined by arbitrarily assigning the following numbers to the grades: splits = 2, shorts = 3, standards = 4, and fancies = 5. These numbers were multiplied by the production of each treatment in each grade and the total divided by the total production of the treatment. The index number thus obtained gives a quick means of comparison for any treatment or variety.

Treatments 1 and 7 (both transplanted) gave significantly higher quality than the two direct - benched treatments. This additional quality resulted from more fancy and less standard blooms from the transplanted treatments. To get full advantage from direct-benched carnations and a heavy second crop, the first crop must be cut high. This will mean more short and standard grade flowers although their quality is high.

The total production figures are somewhat misleading since three varieties were involved. Treatments 7 and 16 were Crowley's Pink Sim although benched at different dates. Crowley's Pink consistently breaks and produces better than White Sim (No. 1) which in turn performs better than Red Sim (No. 19). Treatment 19 was further retarded by nitrate hunger during the early winter. Based upon observations from this and other work, it is apparent that direct-benching of rooted cuttings will produce as much as older transplants. With the present markets requiring most of our plants to remain in production until May 10, only a part of most grower's plantings can be made in this manner.

Distribution of production

Figs. 1 and 2 show the distribution of production from the four single-pinched treatments.

Treatment No. 1 (Fig. 1) produced a heavy crop of short duration peaking around August 5, returned a crop similar to that resulting from a solid second pinch which flowered steadily from Nov. 18 to Feb. 9. The third crop began March 9 with a heavy cut in April and May. When taken out of production May 9, approximately half of the third crop had been cut.

Treatment No. 7 (Fig. 2) produced a first crop of about five weeks duration, peaking around August 26. The second crop began Dec. 16, peaked January 10 and tailed off toward March 8. The third crop began April 13, cut heavily for early May and on until June 9 when taken out of production. The third crop was approximately half cut off at this time.

Treatment No. 16 (Fig. 1) gave a first crop of two months duration from mid-September to mid-November. By cutting this first crop high (cutting below the first vegetative break) a heavy second crop returned from Feb. 10 to May 9. The second crop was almost complete by this time.

Treatment No. 19 (Fig. 2) produced the most of its first crop from Nov. 11 to Dec. 22 though the crop tailed off through January. The second crop returned heavily from April 6 to June 9 at which time most of the crop was cut off.

When compared to various systems of pinching carnations the second time for production timing, single-pinched carnations have produced more blooms in a given area. However, the timing of this production may not be desirable unless carefully planned. The average quality from these single-pinched treatments was less than from second-pinched treatments because:

1. The first crop came earlier in the season than from other treatments, and
2. The first crop was cut shorter to get maximum second crop.

Several trends are apparent in handling carnations with one pinch. The first crop resulting from a single pinch is usually well bunched. The warmer the weather at the time of the first crop, the shorter the duration of that crop. Following the first crop, plants go almost out of production. If the first crop is cut high, the second crop will be much larger and spread over a longer period of time. Probably the longer plants are cut after the second crop the greater the tendency toward steady production instead of cropping.

With single-pinched carnations, most growers should be able to produce two complete crops in a year's time from direct-benched cuttings and two and a half crops from transplanted plants. These estimates are for Sim varieties and those of similar timing that are allowed to grow unchecked.

CONGRATULATIONS TO COLORADO'S ROSE GROWERS on perfect attendance at the Rose Grower's Day at Colorado A & M October 23. It was good to see them all together and to have so many taking part in the discussions. This year's program was rather general, but it is hoped that this can be an annual affair with specific phases of rose growing occupying the attention of future meetings.

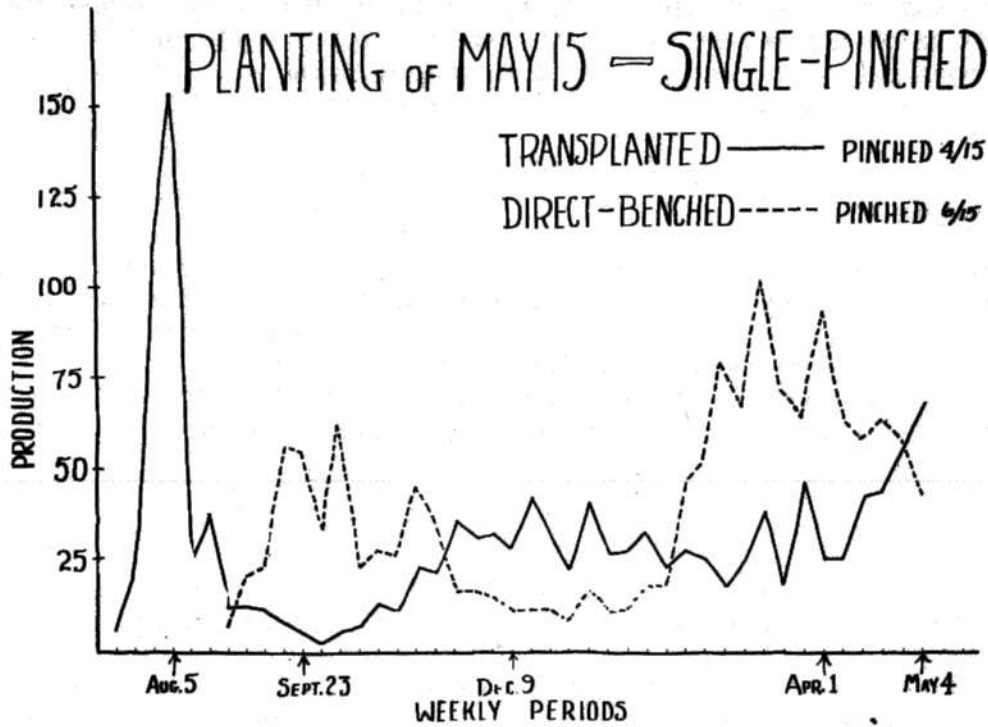


Fig. 1. The distribution of production from single-pinched carnation plants benched May 15, 1951 at Fort Collins, Colorado.

PLANTING OF JUNE 15 - SINGLE-PINCHED

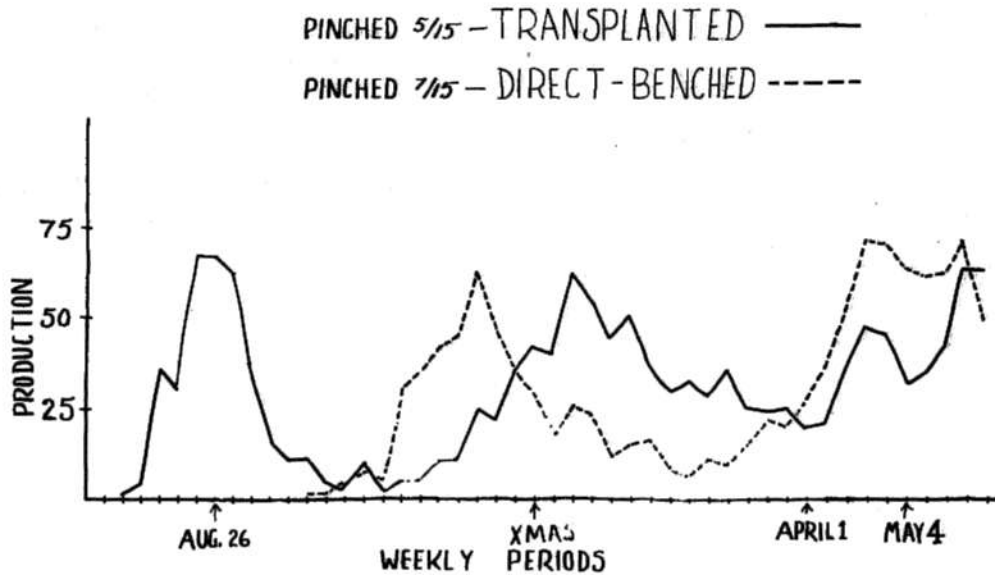


Fig. 2. The distribution of production from single-pinched carnation plants benched June 15, 1951 at Fort Collins, Colorado.

SLUG BAIT---When your editor was in Robbin's Flower Shop of Loveland recently, his attention was called to a slug bait which they have been using with great success. The product is called SUISLUG, is imported, and so far as we can determine, is obtainable in this country only from Fight Floral Company of New York City. Being patented the ingredients are not known. No doubt it contains metaldehyde as the poison but the reason for its attractiveness to slugs is apparently because of its odor. It contains oil of anise and possibly other aromatic oils. Suislug is expensive--\$3.00 per lb.--but a very small amount does the trick.

Positive Rust Control

At the recent College Day session in Fort Collins, Dr. W. D. Thomas showed by charts how condensation occurs on plants in the greenhouse due to mishandling of the ventilators. He stated that carnation rust and similar diseases can be controlled during the heating period by preventing this condensation, in other words, by proper handling of the ventilation of greenhouses. We know this to be factual for we have been using proper ventilation as the only control for rust since the research greenhouses have been in operation (3 years).

Here is the program as we use it:

1. We try to get our watering done at least an hour before we begin lowering the vents.
2. We close the vents gradually when the outside temperature begins to drop - never all at one time.
3. We never close the vents tight unless some heat is circulating through the house.
4. We like the outside temperature to be at least 5° cooler than the desired inside temperature before closing tight. This insures the heat coming on periodically, if it does not stay on all the time.
5. During early fall and some periods in the spring, when the outside temperature goes no lower than 40-50°, we leave both vents open an inch or two. These are the most critical periods for condensation in greenhouses.
6. During the winter we turn thermostats up 6 or 8 degrees in the morning. They are not turned down until dusk so help to catch the drop in temperature which we get during the afternoons of sunny days.
7. During the summer the ventilators are never closed tight. We are as careful as possible to prevent the July and August showers from wetting ventilator benches in later afternoon. This means the men working around the houses must be on the ball to get those vents down as fast as possible when a shower approaches.

This may seem to readers as a waste of heat. It all comes back in less spraying, healthier growth and higher quality blooms.

Your editor,

W.D. Thomas