

CARNATION TIMING

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To produce carnation flowers for particular marketing periods, information on carnation timing is necessary. Although detailed data on timing are available to growers for Colorado conditions (1,2,3,4), few published facts are known for conditions prevailing in Massachusetts and other New England states. Stinson (6) has reported on the effect of single and double pinches on carnation timing in Connecticut. For a review of the research on carnation timing from various states, the grower is referred to the December, 1953 issue of *Carnation Chats* (5).

Methods of Pinching

The various planting dates with three methods of pinching considered in this experiment are listed in Table 1. In the single pinch method, rooted cuttings were benched directly and pinched one month later. For the solid pinch, plants received a single pinch one month after direct planting, plus an additional pinch of all shoots ready for pinching three months after planting. With the staggered 2 and 2 pinch method, the plants received a single pinch one month after planting; two shoots were pinched three months after planting, and an additional two shoots were pinched one month later.

Rooted cuttings of Red and White Sim were benched directly at a spacing of 6 x 6. Each plot per treatment contained 36 plants and was replicated three times. Flowers were cut three times each week and graded according to the CSW Grading System. For graphing purposes, flower production for each month was grouped into two periods; from the first through the 15th, and the 16th through the end of the month.

Graphs of production, number of splits, and quality for the various planting dates and methods of pinching are presented in Figures 1, 2 and 3. Total production, the average production per square foot, the quality index, and per cent of flowers in each grade are presented in Table 2. The quality index was computed by allotting 7 points for flowers in the Special grade, 6 for Fancies, 4 for Extras, 2 for Firsts, and 1 for Utilities. Splits were included in the Utility grade.

Single Pinch

A sharp production peak occurred following a single pinch. The higher the temperature preceding or during the first crop, the sharper this production peak. Less distinct peaks were recorded for cuttings benched during July and pinched once during August. A period of low production followed this sharp peak with a tendency toward a second but lower production peak occurring later in the cropping season.

Second Pinches

Following a solid pinch, the appearance of the first crop was delayed approximately one to three months when compared to a single pinch. The cropping pattern was relatively even following the first crop in solid pinched plants. A similar production pattern occurred with plants receiving a staggered 2 and 2 pinch.

Quality

The quality of the carnation crop increased during the season from a low index of 2 to an index of 4 or 5. From mid-November, the quality index was high and remained quite uniform during the remainder of the cropping season. The quality pattern was similar regardless of the method of pinching or the planting date indicating that the season of the year or the climatic conditions prevailing during any particular season influence flower quality more than any other factor. Cutting the first crop high to promote a quicker return crop may also have accounted for lower quality in the fall months.

Splitting

As indicated in the graphs, splitting occurred during the late winter and spring months. Whenever a large number of split flowers were recorded, the quality index sharply decreased in value. Otherwise, the quality index would have remained at a uniformly high level during the latter part of the cropping season.

Splitting was not correlated with the date of planting or the method of pinching as the pattern of splitting was similar in all treatments. However, the percent of splits may have been greater in some treatments than others because of peaks of production that occurred at the time conditions were optimum for splitting.

References

1. Wagner, D.L. and W.D. Holley. Carnation Timing. Colorado Flower Growers Assoc. Bul. 20: 1-6. 1951.
2. Holley, W.D. and D.L. Wagner. The role of the second pinch in carnation production timing. Colorado Flower Growers Assoc. Bul. 30:1-3. 1952.
3. . Carnation timing from second pinches. Colorado Flower Growers Assoc. Bul. 40: 1-5. 1953.
4. . Carnation timing from a single pinch. Colorado Flower Growers Assoc. Bul. 38: 1-3. 1952
5. Mastalerz, J. W. Review of research on timing of carnations. *Carnation Chats* 2 (3): 1-5. 1953.
6. Stinson, R.F. Greenhouse carnations: successive direct planting, using single and double pinches. *Storr Agr. Expt. Sta. Inf.* 53. 1953.

Table 1. Planting and pinching dates of various treatment in carnation timing experiment, 1953-54.

Treatment No.	Planting Date	Pinching Dates		
Single Pinch				
1	3/15	4/15		
2	4/15	5/15		
3	5/15	6/15		
4	6/1	7/1		
5	6/15	7/15		
6	7/1	8/1		
7	7/15	8/15		
Solid Pinch				
8	3/15	4/15	6/15	
9	4/1	5/1	7/1	
10	4/15	5/15	7/15	
11	5/1	6/1	8/1	
12	5/15	6/15	8/15	
Staggered 2 and 2 Pinch				
13	3/1	4/1	6/1	7/1
14	3/15	4/15	6/15	7/15
15	4/1	5/1	7/1	8/1
16	4/15	5/15	7/15	8/15



2 AND 2 PINCH

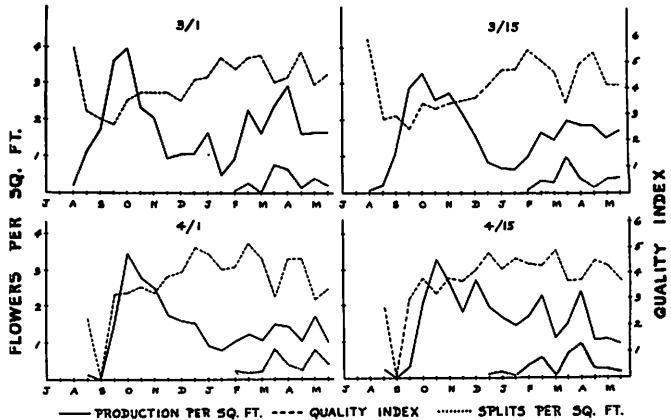
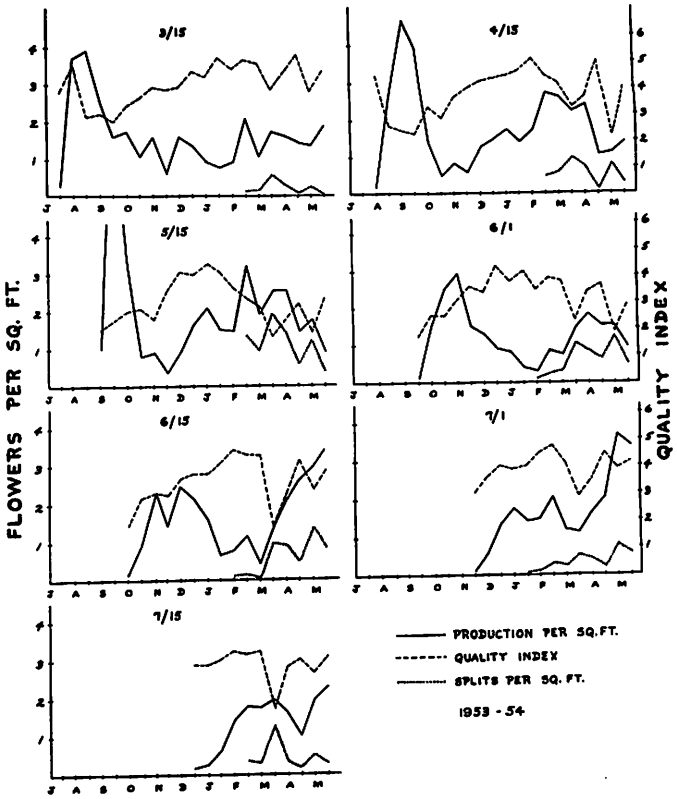


Table 2. Production, quality, and per cent of flowers in various grades with various planting dates and methods of pinching. Varieties Red and White Sim. 1953-54.

Treat. No.	Plant. Date	Total Prod. per Plot	Ave. Prod. per sq.ft.	No. Months in Bench	Ave. Prod. per sq.ft.	Quality Index	Per cent of total production in each CSW grade.					
							Spec.	Fancy	Extra	First	Utility	Splits
#1	3/15	303.7	33.7	14	2.4	4.2	3.6	28.9	44.0	17.0	6.5	4.5
2	4/15	322.3	35.8	13	2.8	3.6	1.4	20.9	39.7	25.4	12.5	10.8
3	5/15	326.0	36.2	12	3.0	3.0	0.5	13.8	32.5	29.5	24.1	21.9
4	6/1	188.7	21.0	11.5	1.8	3.1	1.1	14.3	37.5	21.7	25.4	22.6
5	6/15	236.3	26.3	11	2.4	3.6	2.0	20.0	46.8	12.1	19.0	18.3
6	7/1	195.0	21.7	10.5	2.1	4.1	2.9	24.3	54.2	4.3	14.4	14.2
7	7/15	132.0	14.7	10	1.5	4.0	0.8	30.6	45.2	2.3	21.2	21.2
8	3/15	304.4	33.8	14	2.4	3.8	4.3	24.3	34.4	26.4	10.6	9.1
9	4/1	250.0	27.8	13.5	2.1	3.9	3.3	22.7	44.9	20.4	9.1	6.8
10	4/15	292.7	32.5	13	2.5	3.7	2.4	18.2	46.7	21.1	12.0	9.9
11	5/1	257.7	28.6	12.5	2.3	3.5	0.9	17.3	45.3	17.3	19.1	18.0
12	5/15	227.7	25.3	12	2.1	3.2	0.7	13.9	43.3	12.0	30.0	29.0
13	4/1	313.0	34.8	14.5	2.4	4.0	3.5	27.2	41.0	19.7	8.6	6.6
14	4/15	279.3	31.0	14	2.2	3.8	4.4	24.3	36.8	23.9	10.6	9.2
15	5/1	236.7	26.3	13.5	1.9	4.1	3.8	22.0	44.8	14.6	14.0	11.7
16	5/15	264.3	29.4	13	2.3	4.1	3.3	25.9	50.1	11.0	13.6	11.6

SINGLE PINCH



SOLID PINCH

