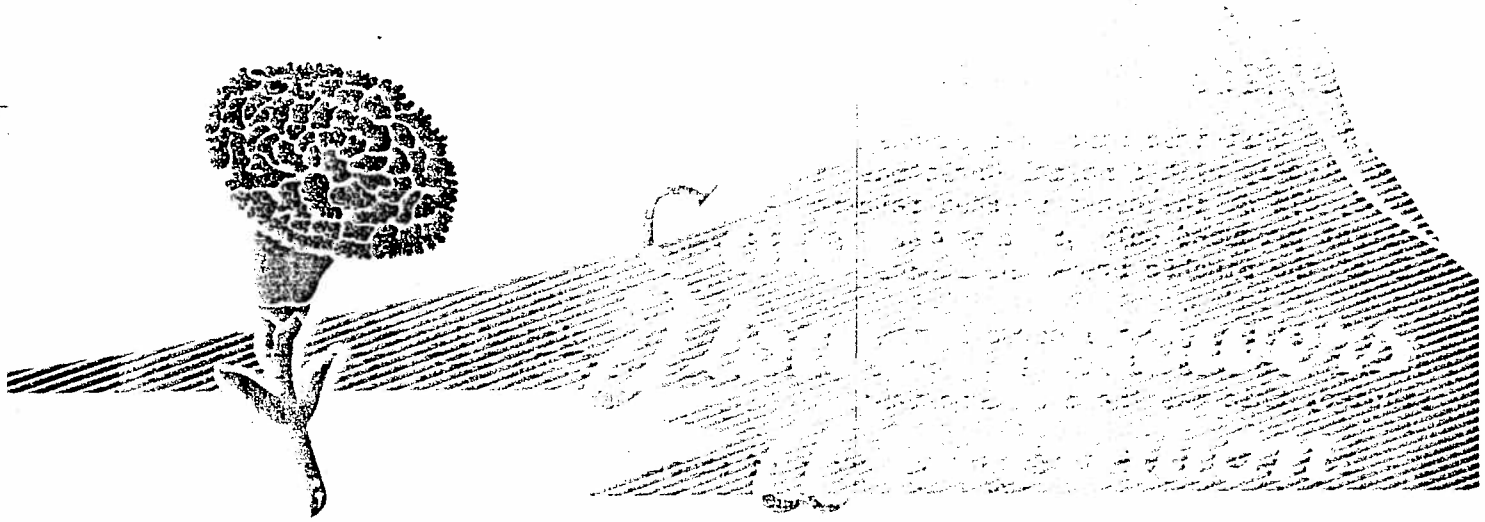

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Holiday Pinching of Roses

by

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Pinching of roses for holidays is an important procedure in the operations of the rose grower, since a large part of his profit comes from the holiday sales. The most profit at holidays should come from the most efficient method of pinching. What is the most efficient method of pinching roses? Are there means at our disposal of increasing holiday crops by using better pinching methods? A rose grower once remarked that one of the most important factors in growing roses was to have a good idea what happens to the cane on a rose plant after the flower has been cut. Will it break? If it does, when and how? This should apply to pinching also. What happens to a shoot after it has been pinched? In an attempt to obtain some answers to these questions, a study was started last fall to determine just what happens to rose canes pinched for the various holidays, and to try to explain these results from an economic point of view.

To carry this out, shoots of all possible description were soft-pinched. That is, shoots of all different sizes, on all parts of the plant, on inside and outside plants in the bench, and on side or terminal growths were pinched simultaneously. Red shoots just clearing a flower bud were pinched for this study. An attempt was made to get a representative sample of all the shoots available for pinching at the time. Shoots from the weakest to the largest and most vigorous were pinched, but each one was a flowering shoot. No blind wood was pinched. Approximately 100 pinches were made on each of two varieties, Better Times and Pink Delight. Three replications were made at various times during the fall, winter, and spring. The number of pinches on which records were taken totaled nearly 600 for the entire study.

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CHRISTMAS PINCH: (See Colo. Bull. 18)

The Christmas pinch was pinched three weeks late, but the results should compare closely with a normal Christmas pinch. By pinching canes of all sizes on Better Times, 81% of the canes pinched returned a flower, while a similar pinch on Pink Delight produced only 55% flowers. Why are these percentages so low? Why didn't all of the pinches break and flower?

In studying our records it was noticed that the size of the shoot pinched was strongly correlated with the percentage that flowered. In fact, of those factors studied, this was the most important.

Let us arbitrarily divide the group of shoots pinched into three sizes; small growths, averaging about 1/8 inch in diameter; medium growths, which average near 3/16 inch in diameter, and large shoots, which average about 1/4 inch in diameter. On normally growing rose plants in the winter and early spring, about the largest 1/4 of the new breaks will be of the designated large size. Medium growths will make up the middle half and the remaining quarter will be composed of the small shoots. The results of pinching canes of these sizes for Christmas and Mother's Day are shown in Table 1.

Table 1. Correlation of Size of Cane Pinched with Percentage Flowering

		Size of Cane Pinched		
		Small	Medium	Large
Christmas Pinch	Better Times	17%	95%	138%
	Pink Delight	26%	89%	105%
Mother's Day Pinch	Better Times	44%	93%	109%
	Pink Delight	23%	97%	105%

For Christmas with Better Times, only 17% of the small shoots flowered. Medium sized canes flowered 95% of the time, and large shoots produced 138% flowers. Often larger shoots, when pinched, will break at two eyes and produce two flowers simultaneously because of their vigor. Pink Delight showed a similar result with 26%, 89%, and 105% flowering from the small, medium, and large-sized canes respectively.

A second pinch made on January 13 gave results quite similar to the ones just discussed.

MOTHER'S DAY PINCH:

Is these any difference in results when light, temperature, and growing conditions in general have improved? Better Times produced 88% flowering from a Mother's Day pinch, and Delight returned 64%, when all sizes of shoots were pinched. Breaking the pinch down into the three sizes again, (Table 1), we have the following results: 44%, 94%, and 109% for small, medium, and large sized shoots on Better Times, and Pink Delight produced 23%, 97%, and 105% for the three different sizes. In general, these figures show one thing of prime importance. Only about 30%, on the average, or one third of the small size shoots will flower from a pinch. In other words, you much pinch 3 flowers to get one back under conditions of winter and early spring.

From the results obtained in this experiment we can predict results for other methods of pinching. Table 2 shows the expected results from three methods of pinching.

Table 2. Expected Flowering Results from Three Pinching Methods

		Pinching Methods		
		Small and Medium canes	All three sizes	Medium and Large canes
Christmas Pinch	Better Times	70%	80%	100%
	Pink Delight	40%	55%	95%
Mother's Day Pinch	Better Times	80%	90%	100%
	Pink Delight	55%	65%	100%

By pinching only small and medium growth there would be a 70% return on Better Times and 40% on Pink Delight from the Christmas pinch. Pinching canes of all sizes would give 80% on Better Times, and 55% on Delight. However, by pinching only the larger two sizes 100% would flower on Better Times, and Pink Delight would produce a 95% return crop.

For a Mother's Day pinch, the relationship between the three methods of pinching remained the same. Table 2 shows that a higher percentage of flowers can be expected, even from the smaller canes at this time of year.

Small shoots break and flower less often because of a carbohydrate or plant food relationship. A large shoot has a better chance to produce a flower than a small growth under the same conditions. The small shoot after it is pinched, seldom can manufacture enough food or gain it from the rest of the plant to permit it to break and flower. Therefore, two-thirds of the time it will remain dormant or come back blind.

Second only in importance to getting a flower back from a pinch is to get it at the right time, that is, to cut that flower when it can be sold on the holiday market. Up to now, I have discussed the total number of flowers returning from a pinch, but how many of these will hit the intended market?

Here again, the size of the cane pinched is of great importance in determining when the flower will bloom. Table 3 is compiled to show the number of days from pinch to peak of cut from shoots of three sizes.

Table 3. Correlation of Size of Cane Pinched with Days Required to Flower

		Size of Cane Pinched		
		Small	Medium	Large
Christmas Pinch	Better Times	61	54	53
	Pink Delight	65	59	58
Mother's Day Pinch	Better Times	49	43	42
	Pink Delight	49	46	44

For the Christmas pinch on Better Times, it took 60 days for small shoots, 54 days for medium growths, and 53 days to flowering peak for large shoots. Sixty-five, 59, and 58 days were required for peak production of the three sizes on Pink Delight at the same time of year. The Mother's Day pinch, while flowering between 10 days and two weeks earlier, still shows comparable results between the effects of cane sizes.

On an average, small growths will peak their flowers from 3 to 7 days later than those of medium size, while the large canes peak either 1 or 2 days before the majority of pinches. Timing a crop would therefore be much easier if the grower is pinching only the large and medium sized growths.

Combining the percent flowering from a pinch and the time of flowering, gives the results in Table 4, perhaps the most practical of all. What percentage of a pinch can you expect to hit a given holiday market period, assuming the timing of the crop is accurate. After all, the aim of pinching is to get the most production possible from the pinch during the holiday market period. Ten days has been taken to be the maximum period during which flowers could be cut and sold for a holiday. Any flowers cut on either side of this would miss the marketing period under most conditions.

Table 4. Percentage Flowering during Peak 10-Day cut for three Pinching Methods

		Pinching Method		
		Small and Medium canes	All three sizes	Medium and large canes
Christmas Pinch	Better Times	45%	50%	65%
	Pink Delight	20%	30%	70%
Mother's Day Pinch	Better Times	60%	65%	75%
	Pink Delight	30%	40%	75%

Again we compare the three methods of pinching to determine which will give the most flowers from a holiday pinch. From the Christmas pinch on Better Times we would expect, for the peak cutting period, 45% by pinching only the small and medium canes. Fifty percent by pinching all sizes, and 65% by pinching medium and large growths. Pink Delight would give for that peak cut 20%, 30%, and 70% return from the three different methods. The Mother's Day results, while somewhat higher, are quite similar in relation.

I should like to emphasize at this point, however, that these figures, at most, show a relation between methods of pinching. Date of pinching and varieties, as well as growing conditions and cultural practices will all influence these results. A grower could probably raise the percentages in Table 4 by 10% or reduce figures in Table 3 a few days by increasing temperatures during the peak cutting period prior to holidays. Night temperatures were maintained at 60-62° F. throughout this study.

In summary, the results of this study indicate that a practice of pinching only the medium and large sized rose canes for holiday periods will give higher production from a given pinch and will permit more accurate timing of the holiday crop.