

The Impact of Pinching Technique on Branching of New Poinsettia Cultivars

By John Erwin, Ryan Warner, and Neil Andersen

INTRODUCTION:

Previous research by Berghage et al and Shilo et al., identified that removal of the youngest leaves after a soft pinch on poinsettia increased 1) total branch number 2) the number of branches that contribute to the total floral display, and 3) the uniformity of the floral display (height).

This work was conducted on older poinsettia varieties such as Lilo and Supjibi.

The article presented here shows results of an experiment conducted by students in the potted plant production course on how pinching technique and leaf removal affect branching of newer cultivars: Success, Sonora, Freedom, Orion, and Pepride. Results are shown in Table 1.

A couple key points can be made from these data:

- 1) Newer cultivars are very free branching as evidenced by the total branch number even when plants were not pinched at all. Many older cultivars would not branch unless they were pinched. As a result, many of the new cultivars would not be good selections for 'straight up' poinsettias.
- 2) Pinching increased the total lateral shoot number and the number of lateral shoots that contribute to the floral display.

- 3) Total branch number is not as important as the number of those branches that contribute to the total floral display. Cultivars varied in this. Most notably, Freedom and Success had fewer branches that contributed to the floral canopy than Orion, Pepride or Sonora.
- 4) Leaf removal did not significantly increase total branch number or lateral branch number contributing to the floral display.
- 5) Soft and medium pinches, in general, resulted in more branching and more branches in the floral display when compared to plants that received a hard pinch.

The bottom line is that newer cultivars appear to have no beneficial effect from soft pinching or leaf removal. In fact, there seems to be a greater problem with newer cultivars branching before we would like them too. Because of undesirable early branching, tight scheduling is becoming more and more important. In addition, effective control of elongation during August is becoming also becoming more critical. This means regular Cycocel applications, good day temperature control, and adequate spacing are becoming more and more important as well.

The best thing you as growers can do is to simply trial the new cultivars yourself or visit any industry or university trials. Clearly, different

poinsettia cultivars are needed for different uses. Your 4" cultivars will differ from your 6" and 'straight up' program. Timing is becoming more difficult as well because of the early branching problem. My feeling is that we will have to have a poinsettia short course specifically looking at which cultivars are good for which purposes in our climate.

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Table 1. The effect of pinching technique and young leaf (<2") removal on final lateral branch number (>2") and the number of laterals that contribute to the flowering canopy on five poinsettia cultivars.

Cultivar	Total Lateral Number	Lateral Number in Canopy
Freedom		
Unpinched	4.6 + 1.9	1.0 + 0.0
Soft Pinch	9.1 + 0.6	2.9 + 0.3
Soft + Leaf Removal	8.9 + 0.7	3.3 + 0.5
Medium Pinch	9.0 + 0.5	3.2 + 0.2
Medium + Leaf Removal	9.8 + 1.3	3.2 + 0.4
Hard Pinch	7.5 + 0.7	2.8 + 0.2
Orion		
Unpinched	5.3 + 0.3	1.7 + 0.7
Soft Pinch	10.0 + 0.5	3.3 + 0.3
Soft + Leaf Removal	9.6 + 0.6	3.1 + 0.2
Medium Pinch	9.2 + 0.7	3.1 + 0.2
Medium + Leaf Removal	9.0 + 0.8	4.0 + 0.2
Hard Pinch	8.6 + 0.3	2.8 + 0.3
Pepride		
Unpinched	9.7 + 0.9	2.0 + 0.6
Soft Pinch	12.0 + 0.7	3.9 + 0.3
Soft + Leaf Removal	12.5 + 0.8	3.6 + 0.3
Medium Pinch	12.6 + 0.7	3.8 + 0.4
Medium + Leaf Removal	12.2 + 0.7	3.4 + 0.4
Hard Pinch	10.3 + 0.8	3.2 + 0.2
Success		
Unpinched	10.3 + 1.8	1.3 + 0.3
Soft Pinch	12.8 + 0.5	2.8 + 0.3
Soft + Leaf Removal	12.3 + 0.5	3.3 + 0.3
Medium Pinch	11.1 + 0.7	2.7 + 0.3
Medium + Leaf Removal	11.3 + 0.6	3.0 + 0.3
Hard Pinch	10.6 + 0.8	2.7 + 0.3
Sonora		
Unpinched	13.7 + 1.2	1.3 + 0.3
Soft Pinch	12.8 + 0.5	3.5 + 0.4
Soft + Leaf Removal	13.3 + 1.0	3.7 + 0.3
Medium Pinch	12.8 + 0.8	3.4 + 0.4
Medium + Leaf Removal	13.8 + 0.8	4.4 + 0.4
Hard Pinch	11.3 + 0.9	3.1 + 0.4