

GROWERTALKS

Columns

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To Pinch or Not to Pinch

Dr. Royal Heins

Garden mum season is almost upon us. Pinching is one task that challenges many growers for various reasons. Understandably, many growers are thinking about moving to the “no-pinch” technique but have many questions.

Garden mums can be direct stuck in the finish pot or rooted in a liner before pinching and transplanting. The decision about which method to use depends most often on available propagation space, as well as the method of pinching used: mechanical or manual.

It's difficult to mechanically pinch (often called “mowing”) direct-stuck garden mums due to differences in bench uniformity and shoot height. Direct-stuck garden mums generally remain more compact than tightly spaced plants in liners and, therefore, very small differences in height between plants can make it hard to get a good pinch with a mower. Generally, the only way to successfully mechanically pinch a direct-stuck mum is to allow the plants to grow to a “large” size, which can result in excessively hard pinches on some plants when plants are pinched (Figure 1). A hard pinch generally doesn't break as well as a soft pinch and adds time to the crop.



Figure 1. Garden mum with the center cut out during pinching.

Figure 2. Garden mum Spicy Cheryl Orange stuck week 21 and mowed week 23.

Figure 3. Garden mums cut back way too much.

Mechanically pinching plants in liners is easier than direct stick because tightly grown plants don't immediately branch, but elongate upward. Elongated shoots are much easier to mow in a liner. Timing of mechanical pinching is critical—as one must wait until plants are well rooted and have started elongating—

but not so late that lateral branching is inhibited on hard and old lateral shoots on the bottom of a tall plant. When done properly, plants have multiple nodes below the pinch or mow height with healthy leaves remaining on the plant (Figure 2).

The biggest problems associated with mowing a short plant is mowing too deep and scalping. Or as I often say, “butchering the plants” by cutting off most or all of the leaves and leaving a naked stem (Figure 3). However, I’ve seen as many tall plants butchered as short ones, so the person operating the mower must be well trained and on their game.

If one allows plants to get too tall before mowing, plants develop mature lower nodes that don’t readily branch after pinching. In my experience, garden mums are normally mowed about 16 to 18 days after sticking and as early as 14 days and sometimes as late as 21 days. In this window of time, plants are generally tall enough to easily mow without scalping, but not so tall and old that basal nodes don’t branch. Of course, manual pinching by hand is possible at essentially any time using either production method, as workers can get to the plants and remove the growing tip at the right time without worrying about height for a cutter.

The “no-pinch” method is by no means new, but many people don’t realize the many advantages this method holds. Growers using non-pinched plants benefit from savings in labor and reductions in production time. Producing unpinched plants can also be achieved by direct stick or by rooting in a liner. Direct sticking to the finish pot and then growing the plant as unpinched is very easy. Production in liners is also easy, but the key difference is that one ideally transplants the plant as soon as it’s rooted. Growers who switch to no-pinch mums often initially make the mistake of using the same amount of time from stick to transplant as they used in the pinch program. This extra time in the liner results in a naked stem at the base of the plant as shoots develop from the upper part of the plant versus the lower part of the plant (Figure 4).



Figure 4. No pinching leads to poor lower branching.

Figure 5. Garden mum pinched (left) and not pinched (right.)

Figure 6. Garden mum not pinched with strong apical shoot or king bud.

In my experience, the time from stick to start of short days (either by black cloth or by natural short days) should be less when plants aren’t pinched compared to pinched plants if one wants the same final plant size. This is because non-pinched plants grown with the same time schedule tend to finish larger than pinched plants (Figure 5). A general rule of thumb is to reduce the grow time by one week, as one is no longer removing part of the plant when one doesn’t pinch.

For example, if one was rooting in liners and normally transplanted three weeks after sticking and then grew

the plant for an additional four weeks before short days (for example, a typical 8-in. production schedule), one could reduce this seven weeks from stick to short days to six weeks. Failing to transplant at two weeks rather than three weeks will almost certainly result in a taller plant with a naked basal part of the plant.

Essentially, all mum cultivars can be produced non-pinched in larger pots under normal day conditions. Most garden mum suppliers will indicate in their cultivar listings which cultivars perform well in a non-pinch production schedule. However, production of non-pinched blackout mums is less common, but not impossible. Genetics play a large part in the successful production of black cloth non-pinched mums. There can be more than one reason a cultivar doesn't perform well as a non-pinched plant produced under black-out conditions, but the typical reason is that the plant doesn't branch properly to form the "mounding" habit typically desired for a finished flowering garden mum. (Note the plant in Figure 6 where the plant has developed a dominant terminal bud with apical dominance over lower lateral shoot development.)

Producing high-quality mums can be achieved by many different methods, but growers need to pay attention to the small details. If you're currently pinching all of your crops, consider trialing a no-pinch crop this summer using the concepts above. **GT**

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