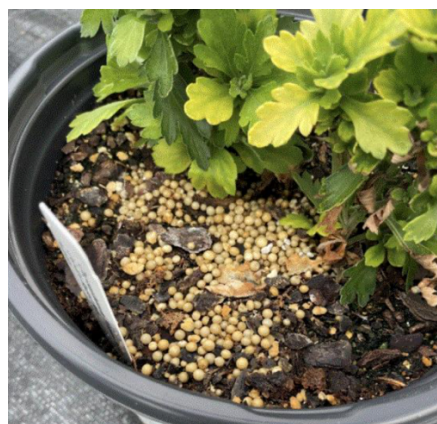


GETTING READY FOR GARDEN MUM SEASON: NUTRITION



Having a good fertilizer plan in place is often the difference between a top-notch and poor-quality garden mum crop. Let's start with "general" mum fertilizer best practices and then move on to some situational nuances.

Mums are often referred to as *heavy-feeding crops* and this should not be taken lightly. Maintaining a higher level of mineral nutrients than your other crops need throughout production is key. Here are some mission-critical words of nutritional advice:

- Push with feed early in production. Water-in your mum liners with about 300 ppm N from an ammonia-based fertilizer like 20-10-20 or even 20-20-20 (just don't use triple-20 more than two or three times). This will encourage axillary shoots to break more rapidly and plants to fill out their containers in a nice "moundy" habit from the start.
- Feeding with controlled release fertilizer (CRF) is a viable strategy to provide mineral nutrients to your mums, but it's not always enough to keep the crop going. If CRF is your preferred way to feed your mum crop, have some water-soluble fertilizer (WSF) on hand in case your crop starts to get a bit hungry.
- As your crop approaches finish, switch from an ammonia-based fertilizer to a nitrate-based formulation. Nitrate-based feeds will promote toned growth as the average daily temperature cools down and your crop approaches visible bud. Applying high amounts of ammoniacal nitrogen late in the production cycle can keep plants soft, prone to lodging, and more vulnerable to damage from wind and the elements.

Now, let's look at some situational feeding best-practices. Adapting your fertilizer strategy to changing production conditions is also critical to producing a high-quality garden mum crop. Keep the following tips top of mind, especially if you are growing your crop outdoors and not under cover of some kind:

- If you experience cool night temperatures early in production (below 65F/18C), a heavy feed response can help combat premature budding, also called "crown budding." An ethephon PGR application like Florel or Collate is the alternative to keep your plants vegetative, but a hard push with fertilizer (such as three to four sequential feed applications at 300 or more ppm N of an ammonia-based feed) is often all you need to get your crop back on track.

- Ethephon PGRs require pH-adjusted spray water, sufficient time on the foliage for absorption, and a uniform spray volume across the crop to have the proper effect. Failure to do can introduce significant variability into your crop and it shows at finish, so responding to cool night temperatures with feed is often the best option.
- During periods of persistent rain, replenish the growing media with high doses of WSF as soon as possible when the rain lets up. It may seem wasteful to feed during a brief period between rain events but allowing your mums' fertilizer reserves in the media to stay depleted for extended periods will encourage crown budding and reduce crop quality.
- High temperatures can cause CRF to “dump” nutrients into the media rapidly, and heavy rains can wash these fertilizer salts out of the media. If CRF is your primary fertilizer source and it has been hot and/or rainy, check the soil's electrical conductivity (EC) regularly to determine whether you need to supplement with WSF. If the EC is low (for example, below about 2.0 to 2.5 mS/cm via the Pour-Thru method), feed with WSF at 300 or more ppm N as soon as possible. Check the EC again after a couple of days and reapply WSF each time plants need to be watered until fertilizer levels in the media are back up to where they need to be.
- Depending on the release time of your CRF (for example 120 days, 180 days, etc.), weather extremes may completely deplete the prills before your mum crop is finished. As such, checking your soil EC is critical and switching completely to WSF may be necessary.