BALLTECH ON DEMAND™

USING GIBBERELLINS TO ENHANCE GARDEN MUM HEIGHT

Once garden mums are induced to flower (cool temperatures and short photoperiods), plants can be restricted in their response to increase vegetative growth and height by conventional methods such as elevated nutrition and warm temperatures. Consequently, it may be appropriate to use gibberellin products to stretch internodes and reach target specifications.



Gibberellin drench vs. spray considerations: Grower feedback suggest that soil drenches with Fresco®, which contains gibberellins 4 & 7 (GA 4/7) plus a cytokinin (BA), provides consistent results versus foliar sprays (Fresco® or Fascination®). It may be more difficult to optimize application uniformity and volume with sprays. Drenches may also have less effect on flower uniformity and timing.

While several gibberellin products are on the market, their labels limit their use on garden mums. Further, while Fascination® and Fresco® appear to be nearly identical products, Fascination's label limits it to foliar spray applications. Like all plant growth regulators, local trialing is needed to develop the optimum rates (concentration plus volume) for the given conditions. Below are considerations for using gibberellins to enhance garden mum height.

Fresco® drench concentrations:

- Drench concentration recommendations vary.
    - Published studies suggest 5 to 10 ppm (GA 4/7; BA)
    - Some growers have reported damage at these concentrations.
    - The studies may have not reflected growing conditions such as temperatures and nutrition to affected growers.
- Start trials at 1 to 3 ppm (0.7 to 2.0 oz/100 gal) concentrations.
- Higher than 5 ppm (4.0 oz/100 gal) may be appropriate if plants are severely below target height specification.

Drench volumes and considerations:

- Low concentrations and high volumes appear to provide desirable results.
  - This helps reduce variability in chemigation volumes/results.
- Many growers have settled on using 8 ounces for an 8-inch container.
- Ensure moist substrate prior to application (level 3).

Fascination® or Fresco® Spray concentrations:

- Start trials at 2 to 4 ppm (1.4 to 3.0 oz/100 gal).
  - Late stages may require a higher concentration.
- Multiple low-concentration applications provide uniform stretch.
- Excess applications cause soft, chlorotic tissue and may affect flowering.
- Add a surfactant to optimize absorption.
- Apply sprays during periods of slow drying, low-stress conditions.

Number and timing of applications:

- Apply early in the crop cycle.
  - Ideally apply before floral initiation (short days or consistent cool nights—<60F°)
  - This provides time for additional applications if needed.
  - Early application reduces impact on flowering.
- Applying within 1 to 3 weeks of floral initiation
  - Provides time for additional applications if needed.
  - Reduces impact on flowering.
- Evaluate results 5 to 7 days after application.
- If desirable results are not achieved, then an additional application may be made.
- Ideally, applications should not be made within 2 to 4 weeks of sending product to market.