

GETTING READY FOR GARDEN MUM SEASON (PART FOUR): BOTRYTIS



Let's discuss Botrytis basics, critical times during production when growers should pay special attention to pressure, and other dos and don'ts for managing this disease.

Factors for Infection, Symptoms & Key ID Characteristics

Gray mold prefers cool to moderate temperatures (about 65 to 75F/18 to 24C) and requires free water on the plant surface or very high humidity to infect. Typical Botrytis symptoms and signs include:

- Chlorotic spots on leaves or stems that develop into brownish or gray, necrotic lesions. Lesions may be circular initially, but become irregularly shaped as disease progresses.
- Characteristic signs include masses of fuzzy looking, grayish clusters of spores (hence the name "gray mold") growing out of infected tissue.

Disease Management

Botrytis is best managed right before or right as environmental conditions become conducive to infection, so keep an eye on the weather—especially if you're growing the crop outdoors. Impending rain and cool, cloudy conditions are a strong indicator that you should apply a fungicide, but here are some additional considerations for managing Botrytis throughout the production cycle.

- From the time liners are planted to when the canopy closes within each pot, regular spraying for Botrytis is rarely necessary. If you can avoid overhead irrigation and rainfall is limited, crops are well fed and pots are spaced to provide ample airflow through each production block, gray mold is rarely a concern on recently planted and immature crops.

- As the canopy first starts to tighten and airflow is restricted, scouting for early symptoms, such as chlorosis on leaves in the middle of the mound, becomes critical.
- Botrytis infects and produces spores quickly on fallen leaves, which increases the chances of infection on living tissue nearby when conditions become optimal. Clean up fallen leaves in and around your pots to reduce the number of “reservoirs” in your crop, even if leaves are senescing naturally due to shading-out by the canopy above.
- In mature crops (often a few weeks before sale), Botrytis leaf and stem blight can become a major concern. If you start to see early symptoms of infection, act quickly! Once a few shoots go down due to stem blight that nice, tight mound of foliage glazed with flower buds can quickly become a lopsided, homely looking mum.

The fact that this often happens when crops that are so close to finish and growers have put a whole season’s worth of inputs put into them drives home the importance of managing Botrytis late in the production cycle. While I don’t advocate overuse of pesticides, exercising caution and doing a few additional sprays later in production may be the difference between a good year and a bad one for those of you who regularly lose plants to Botrytis late in the season.

- Not all fungicides are created equal when it comes to managing gray mold. Check out this [MSU Extension article](#) with info on which active ingredients control Botrytis best.
- Utilize fungicides with a good spreader-sticker (like Daconil WeatherStik) to help ensure good coverage, deep canopy penetration and staying power of the active during periods of persistent rains.
- Be mindful of fungicide applications late in production and potential impacts to crop appearance. While chlorothalonil is highly effective at controlling Botrytis, it can discolor flowers, so avoid applying it to mature crops showing color. Other fungicides may leave a residue on the foliage, which may be unappealing to customers at retail. Be sure to read the label and know of any potential risks of discoloration or residues before applying.