

GETTING READY FOR GARDEN MUM SEASON (PART TWO): FUSARIUM



Like many diseases, *Fusarium* hits hardest when plants are under stress. Pressure from this pathogen typically doesn't occur early in production, and most often I see mature crops (very close to their ship date) succumb to *Fusarium*. Indicators of infection are similar to *Pythium*, but there are some key distinctions between the two. Typical symptoms include small or stalled-out plants, lower-leaf yellowing, wilting, and dark-colored lesions on the stem near the soil line.

- Wilting while roots appear to be healthy is a key ID factor for *Fusarium* versus *Pythium*.
- Initial wilting caused by *Fusarium* is often localized to one section of a plant rather than the entire canopy, like we see with *Pythium*. In containers with multiple plants per pot, check whether wilting is occurring only on part of a symptomatic liner or the whole plant.
- Lesions on stems near the soil line are generally reddish-brown in color, and pinkish or white mycelium (fungal "roots," if you will) may be growing out of the infection site.

Disease management. *Fusarium* survives in soil and infested plant debris. As such, one of the first lines of defense is to source growing media from a reliable supplier, and only plant into fresh media and clean containers. Other key management strategies include:

- Avoid drought stress, nutrient deficiency, and minimize exposure to extreme temps. Reduce crop stress to create a greater ability for your mums to stave off infection.
- Exercise good sanitation practices. Spores can be transferred via handling and tools, so be sure to wash your hands frequently or change gloves after handling growing media before working in your mum crop.
- Reduce splashing water. *Fusarium* spores spread easily via splashing rain and irrigation water. If possible, avoid overhead irrigation and use drip or subirrigation instead.

Have a fungicide plan in place at the beginning of the season. Start thinking about preventative applications as the crop canopy begins to tighten up and plants are about 1/2 to 2/3 of their desired finished size, and apply appropriate fungicides when early symptoms appear (such as lower-leaf yellowing).

- We advise you apply preventative applications to outdoor-grown crops after periods of heavy rainfall and warm temperatures (about 75–85 F).
- Strobilurin (FRAC 11) fungicides are some of the most effective chemistries for managing *Fusarium*. Fludioxonil (FRAC 12) is another highly effective active ingredient, and iprodione (FRAC 2) and triflumizole (FRAC 14) are also effective options. Be sure to rotate between FRAC codes to ensure the highest level of disease control and to reduce the chance that *Fusarium* in your operation will develop resistance to the fungicides you use.