

# GROWERTALKS

## Pest Management

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### Ace Summer Mum Production With an Agronomic Plan

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Hot, summer temperatures have arrived and the start of garden mum production isn't far behind. Since many garden mums are produced outdoors in the summer for sale in the fall, they're subject to weather conditions favorable for insects and diseases.

*Pictured: Infected plant showing internal discoloration of vascular tissue. Photo by Nancy Rechcigl.*

As you begin planning for mums, help ensure the highest plant quality by preparing for expected and unexpected challenges with proper scouting techniques, cultural practices and an agronomic program.

#### Watch out for troublesome insects

The two most common insects to watch for are thrips and aphids, which can affect garden mums at any stage of production. Controlling thrips is especially important to prevent the spread of viruses such as Tomato

Spotted Wilt Virus (TSWV), which can spread rapidly throughout mums and into other crops. Thrips feed by scraping and piercing plant tissue, resulting in leaf stippling, scarring and distortion. Keeping populations low during production will help minimize pressure when the plants begin to set bud and flower.

Similarly, aphids can spread viruses such as Chrysanthemum Virus B (CVB) and cause physical damage by using their piercing mouthparts to extract fluids from stems, leaves and other plant parts. Scout frequently, as populations can build quickly, especially in warmer conditions. Like thrips, aphids prefer to feed on young, tender terminals, so watch these areas closely. Group susceptible plants together to minimize aphid spread and avoid over-fertilizing with nitrogen-based fertilizers, as this can increase aphid reproduction.

When scouting for these insects, hold white paper under the plants and shake or tap the foliage to dislodge pests or whitish cast skins. This will help reveal thrips and aphid colonies that might be hidden in the foliage. Be sure to inspect new shipments of mums upon arrival for evidence of pests.

Loopers, armyworms and other lepidopteran pests can also damage mums if not found in time. Look for moth activity in production areas and be ready to apply appropriate controls to stop worms before they feed on terminals.

## Keep damaging diseases away

Root and stem diseases caused by *Pythium* and *Fusarium spp.* pathogens are primary disease problems encountered during mum production and are likely to emerge under high temperatures and moist conditions. Repeated wetting and drying can wound and compromise roots, which increases the risk of infection. Growing media with high soluble salts can also cause root burn and make plants more susceptible to attack.

*Pictured: Infected plant showing the development of fruiting structures on stem (advanced infection). Photo by Nancy Rechcigl.*

Frequent rain can cause flooding in the field and lead to infections by *Pythium spp.* Affected plants will appear pale green and show signs of wilt during the warm times of the day, recovering in the evening. As the disease progresses, plants become stunted and fail to recover. While unrooted cuttings and young seedlings in propagation areas are at risk because of the frequent misting and highly humid environment, established plants are also at risk of losing healthy roots under these conditions. Combining proper cultural practices with an effective fungicide rotation program is the most reliable strategy for protecting plants against *Pythium spp.* These cultural tips include:



- Cleaning the benches and growing area of debris and sanitizing between crops
- Providing appropriate plant spacing to allow for good air movement
- Elevating pots in low areas where water may pool
- Immediately removing any diseased plants from the area to limit spread

*Fusarium spp.* infections often begin during early production stages during mid-summer. The pathogen invades compromised roots and moves up into the crown, blocking vascular tissue. It occurs more frequently when plants are stressed, so proper growing practices and environmental conditions are essential. Symptoms of infections often show in late summer, but infections begin much earlier, so it's important to protect crops throughout the season.

Infection symptoms to watch out for include:

- One-sided wilt
- Light-colored foliage
- Wilting from the bottom up
- Internal discoloration of vascular tissue
- Root discoloration and rot

Mums are quite resilient, however, outdoor production during the summer brings favorable conditions for *Fusarium spp.* infections. Summer weather—including high temperatures, direct sun on the container and fluctuation of moisture levels due to over-saturated or overly dry media—can injure and compromise roots, making them susceptible to infection. Some cultural practices to implement for a successful mum crop are:

- Starting with a healthy root system
- Using a level field with good drainage
- Not irrigating late in the day to avoid the plants being wet overnight
- Raising plants off the ground in flooded areas



*Pictured from left to right: Inoculated check, Postiva 21 fl. oz. drench, competitive fungicide 8 fl. oz. drench.  
Photo by Charles Krasnow, Vero Beach Research Center.*

## A programmatic approach

In addition to proper scouting and cultural practices, consider implementing an agronomic program to

ensure the best defense against mum pests. By following an agronomic program, you can better position products to control key insects and diseases during production. Syngenta has developed a complete agronomic program for mums that features a built-in resistance management strategy that rotates products with different modes of action, such as Mainspring GNL and Avid 0.15 EC insecticides, and Postiva and Mural fungicides.

Mum production during the summer brings unique challenges that can risk the health of your crop. By preparing for potential insect and disease pressure, you can help ensure quality mums and successful fall sales. **GT**

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