

GROWERTALKS

Paul's Pointers

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Fall Pest Management Strategies

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I can't believe summer—and another growing season—is over. Many growers head into the winter assuming their perennials will be free of pests and diseases when they begin production the following spring, as if an automated restart button resets their crops back to a problem-free status. Unfortunately, this isn't the case and some of the existing problems in the fall often carry over and may unexpectedly become troublesome in the spring.

Whether the production facilities have been empty for several months or have crops being overwintered in them, growers are still at risk of harboring certain pests that may become problematic early in the growing cycle the following spring. Here are some potentially persistent pests and management strategies to take into consideration this fall:

Aphids—Aphids can survive through the winter. Not only will they survive on overwintered perennials, they can also be found on nearby weeds. In the early spring, aphids often produce winged forms that can move across the production site, which allows new colonies to become established. Did I mention aphids are active and can feed with temperatures as low as 39F (4C) and begin reproducing at 50F (10C)?

Two-spotted spider mites—As the temperatures cool down and the daylengths become shorter in the fall, two-spotted spider mites enter a hibernation phase called diapause where they often “sleep” in non-crop areas, such as in cracks and crevices around the production site. Once temperatures warm up in the spring (50F or higher), the mites wake up and move to existing or new crops where they resume feeding. In locations without freezing winter temperatures, two-spotted spider mites may remain active throughout the year.

Western flower thrips—Western flower thrips don't have a hibernation phase, but can survive cold periods in unheated greenhouses, especially during mild winters. Thrips are capable of surviving at freezing and below-freezing temperatures. Plant material and crop residues provide a safe harbor and allow thrips to survive the winter. Like spider mites, Western flower thrips become active at 50F.

Whiteflies—Whiteflies also don't have a hibernation phase; however, their eggs are highly tolerant of cold

temperatures. As long as green plant materials are present, there's a good chance whiteflies will survive the winter. They become active again in the spring once the temperatures reach 47F (8C).

Diseases—Many diseases survive the winter months in non-active life stages. Under the right conditions, a few diseases can actively attack plants with cold temperatures. For example, Botrytis can be active with temperatures as low as 34F (1C). However, most diseases aren't very problematic until the temperatures are consistently above 50F.

Growers shouldn't go into fall with the presumption that cold winter temperatures will kill any pests and diseases that may be present. Certainly, some of them might not survive, but don't bet the farm on it. Future problems can be lessened or negated altogether if a few management strategies are implemented now.

Roots and overwintering—When overwintering plants, such as perennials, growers should keep in mind that they're essentially overwintering root systems, not shoots. Therefore, it's very important to have healthy root systems going into the winter months. Many growers have found it beneficial to apply fungicide drenches on their crops before overwintering them. Consider applying fall drenches at least four to six weeks prior to when the soil temperatures fall below 50F. This will provide better control of the soil pathogens, as well as allow adequate time to rebuild damaged root systems prior to overwintering them.

Weeds—Don't forget about the weeds. The presence of weeds in crops or around the production facility isn't only a concern for future weed pressures, but also are a great reservoir for overwintering insects, mites, fungal pathogens and plant viruses. Controlling weeds should be an ongoing task. Remove any weeds present in crops and throughout the production facilities to lessen the incidence of additional problems in the spring.

Cleaning and sanitation—Sanitation isn't just a springtime activity. Fall is one of the most important times to clean and sanitize the production sites. Removing weeds, plant debris and old growing mix from the production site will remove overwintering and breeding sites, which greatly reduces the amount of disease and insect pressures growers face in the early spring. Disinfectants can also be applied in the fall to control algae, bacterial and fungal pathogens that could affect future crop protection.

The best strategies for preventing spring pest problems are to thoroughly clean production facilities in the fall and take the steps mentioned above to improve root health and reduce the presence of insects, mites and diseases prior to overwintering the perennials. **GT**

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