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Why Worry about Weeds

If you aren't managing weeds in your greenhouse, you may be hindering your pest management efforts

Have you thought about weeds lately? Not the kind that are posing all kinds of legislative debates in various U.S. states, but the kind on your greenhouse floor or in potted crops (Figure 1)? Hopefully you have very few weeds to worry about. But, if you have even a few in your greenhouse, you may be hampering your pest management strategy without even knowing it.

The primary problem with weeds is that they may serve as a home, overwintering site, or source of food for insect and mite pests such as aphids, leafminers, spider mites, thrips, and whiteflies. These pests may survive on weeds (either on the greenhouse floor or within the crop itself) where

you may not notice them (Figure 2). Then, as conditions change, the pests may move to the desirable crop, causing crop damage.

The same is true for plant debris that is not discarded in a timely manner (Figure 3). One study found nearly 500 whiteflies in a

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Figure 1. Weeds and plant debris on a greenhouse floor

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plant debris container that had not been emptied in a week. If the container is not tightly sealed or removed from the greenhouse regularly, as the plant debris dries out, the pests may migrate back to the desirable crop.

Weeds also may contain plant pathogens, especially viruses. Insects can vector (transmit) the virus to the crop as they move from weeds to crop. Some weeds that may be harboring tospoviruses (like impatiens necrotic spot virus (INSV) or tomato spotted wilt virus (TSWV)) include:

bindweed, bittercress, chickweed, dandelion, jewelweed, lambsquarters, nightshade, oxalis, pigweed, and shepherd's purse.

Research has also found that plant debris placed into uncovered containers in the greenhouse may allow fungi such as botrytis to sporulate. If the debris is not promptly removed, the released spores may spread to infect the crop.

No matter your pest management strategy, if you are diligent about controlling pests



Figure 2. Thrips damage on a greenhouse weed. Notice that even with concrete floors and a weed barrier over dirt/gravel floors that weeds are still present in this greenhouse. Photo Credit: Dr. Erik Runkle, Michigan State University

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in the crop, but ignoring the weeds, you are missing a potential source of inoculum. And it makes little financial sense to treat the weeds themselves for pests/diseases. Instead, learn to control your weeds by reading the recent e-gro article titled "Using herbicides in a greenhouse is risky business".



Figure 3. Plant debris in this uncovered container may contain insects or pathogens that can migrate/infect the crop.