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# 3 problematic pepper pests

Features - Pest & Disease

Learn how to detect, manage and eradicate three of the most common pests in this crop.

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Peppers have become an increasingly valuable crop as the popularity of salsa and other pepper-filled foods has grown. Even ornamental peppers have become desirable among consumers for potted plants and outdoor plantings. Here, I will cover three primary pests that can reduce plant growth and yield, or damage fruit quality.

## Western flower thrips

*(Frankliniella occidentalis)*

**Damage:** Thrips are a primary pest of nearly every crop and peppers are particularly susceptible. Thrips feed on leaves and buds causing leaf scarring, wrinkling and deformation. They also feed in flowers where they consume pollen and can cause blossom drop or scar developing fruit. Perhaps the most devastating damage thrips can cause is by transmitting Impatiens Necrotic Spot Virus (INSV). Western flower thrips acquire INSV during their first larval stage by feeding on infected plants. Once the thrip is infected, it can transmit the virus to other plants throughout its life. It is impossible to cure infected plants and the virus can move as quickly as thrips through a crop.

**Management:** Monitor for adult thrips with yellow sticky cards placed throughout your greenhouse. Also, look for signs of thrips feeding. These include brown or silver patches of leaf tissue, small black fecal pellets, and distorted leaves. Plants with INSV often exhibit symptoms including ring-patterned spots, necrotic spots and streaking on leaves or fruit. However, symptoms may not show up for weeks or months after infection. Some plants never show symptoms.



Thrips and feeding damage on a leaf  
Photo: Matt Bertone – NCSU

One of the most sinister aspects of INSV is that thrips can acquire the virus from asymptomatic plants and spread it throughout the crop before you even know it is there. Thrips are only susceptible to insecticides as larvae and adults. Eggs are tucked safely within plant tissue and pupae are safe in the soil.

Therefore make at least two or three applications at five to seven day intervals to kill new larvae and adults and break the population cycle. Monitor your crop and immediately bag

and discard any plants with INSV symptoms.

## Green peach aphids

*(Myzus persicae)*

**Damage:** Green peach aphids are pests of many vegetable crops and ornamental crops including peppers. They feed preferentially on new stems and leaves but can live on most plant parts including flowers. Feeding damages meristems, flowers, and developing fruits reducing growth and yield. Aphids and other phloem feeders like whiteflies and mealybugs excrete drops of honeydew, which can make leaves shiny and sticky.



Green peach aphids  
Photo: Matt Bertone – NCSU

Honeydew is also a substrate for sooty mold, a black fungus that feeds on the sugars in honeydew. Sooty mold is not a plant pathogen, but reduces photosynthesis and growth by covering leaves. Fruit covered with honeydew or sooty mold will be unmarketable or need to be washed. Some aphid species transmit plant viruses such as tobacco mosaic virus.

**Management:** Green peach aphids feed on hundreds of plant species including many weeds so sanitation and removal of weeds and old plants is critical. Monitor by inspecting the undersides of leaves and looking for shiny patches of honeydew on leaf surfaces. Since aphids don't fly until they reach high populations, sticky cards are not useful monitoring tools.

Many biological control agents are commercially available to manage green peach aphids including several parasitoid wasp species, the aphid midge, *Aphidoletes aphidimyza*, generalist predators, and fungi such as *Beauveria bassiana*. Many insecticides are available that kill aphids including some systemic products, some aphid-specific products, and insecticidal soaps and oils.

## European corn borer

### (*Ostrinia nubilalis*)

**Damage:** Many caterpillars, such as cutworms and loopers, can be pepper pests, but European corn borer is usually the worst of them. Moths lay eggs on leaves. Young larvae feed on leaves, then crawl under the pepper calyx, the leaf-like structure where the stem attaches to the fruit. They bore into the fruit and continue feeding. The hole is often hidden under the calyx, making infestation difficult to detect until fruit are severely damaged. However, any damage or larvae within the fruit makes the peppers unmarketable.



European corn borer larva  
Photo: Matt Bertone – NCSU

European corn borer damage is probably more common in field-grown peppers, though moths can enter greenhouses through open doors and vents and may be attracted to lights. Nearby corn fields may increase the risk.

**Management:** European corn borer has around three generations per year depending on your location. Your local extension service likely conducts light trapping to monitor when adults are present and laying eggs, so this can help determine when insecticide applications are necessary. Insecticides and application schedules vary by location so consult your local extension office or university.

There are, of course, other pests that can damage indoor and outdoor peppers including spider mites, whiteflies, stinkbugs, flea beetles and several caterpillars. The severity of these pests varies by region but the ones we have discussed are universal. Prepare and monitor for these, and you will probably be ready for anything else that comes your way.

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