PURDUE UNIVERSITY

PURDUE EXTENSION
Department of Entomology
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# HOT NEWS

## QUESTIONS AND ANSWERS ABOUT FALL WEBWORM

*Cliff Sadof, Extension Entomologist*

**What is webbing and defoliating the shade trees?**

Fall webworm caterpillars are covering shade trees with webs throughout much of Indiana. These caterpillars are fuzzy, with black dots on their back and can extend to about 1 1/2" by the time they complete their development. When unchecked, webs can cover the entire tree and consume all leaves in the process. To make matters worse, caterpillars can leave behind massive amounts of black fecal pellets. Fortunately, most trees can survive several defoliations. Controls are readily available for home and woodlot owners. Effective use of these controls requires a good understanding of the biology of this pest.

**What is the life cycle of the fall webworm?**

Fall webworms feed on a wide variety of shade and nut trees. Wintering in cocoons in sheltered areas, adults emerge as a white moth that glues large clusters eggs under leaves. These eggs are almost always laid on leaves near the tips of branches. Eggs hatch into caterpillars that feed in groups. South of Indianapolis where the webworm has 2 generations a year, the first webs are seen in late June, with a second set of webs being produced in August. North of Indianapolis where there is one generation a year, the first webs can be seen in late July. By the end of August trees can be covered with webs. Feeding will continue and webs will continue to grow until mid- September.

**What is the best way to prevent extensive webbing?**

The trick to managing this pest is act when the caterpillars are small and the webs are still restricted to the branch edges. Small webs can simply be pruned off and destroyed. When webbing covers too much of the tree, or pruning is impractical, you can use an insecticide.

**What can be done in late summer after the webs have nearly covered the tree?**

Most of the insecticides listed below, except *Bacillus thuringiensis*, will kill late stage caterpillars and stop further defoliation. High pressure sprays are needed to knock the webs from the trees, or they will be visible most of the winter.

**Can the webs be burned to control the caterpillar?**

Absolutely NOT!! The fire is likely to kill all or part of the tree. Worse yet, fire could also get out of control during drought conditions and burn down nearby homes.



Early defoliation (*Cliff Sadof*)



Late season fall webworm defoliation (*Cliff Sadof*)

**Will the fall webworm kill my tree?**

Healthy deciduous trees can easily survive losing all their leaves during the month of August. From the tree's perspective, the leaves were busily providing energy for the three from May through July. By August the leaves have already earned their keep. Losing them in August rather than October will have a minimal impact on tree health. Repeated defoliation by fall webworm (loss of over half the trees leaves) over the course of several years can weaken trees. Trees that suffer other stresses caused by drought, or recent planting or construction, are less likely to survive.

**Now that my tree has been defoliated, what can I do to help it survive?**

After defoliation there is nothing you need to do. Next spring be sure the tree gets enough water to produce healthy leaves and new growth. Most trees need at least one inch of irrigation or rain each week. Fertilizer is not really required for established trees.

**Will the webworms be back next year?**

Probably yes. However, there is a definite cycle to the webworm problem. Webworms have a wide variety of insects and diseases that feed on them. Eventually, these beneficial organisms will bring the webworms back to a more tolerable level. Homeowners can help them along by refraining from unnecessary insecticide use, and by using biorational pesticides when they need immediate control.

**Recommended Pesticides**

Homeowners can get very effective control with a relatively **new biorational** material called spinosad. It is marketed under a number of labels including Fertilome BorerCaterpillar Leaf miner and Tent Caterpillar Killer, and Bulls-Eye Bioinsecticide. This material provides the added benefit of not killing many of the beneficial insects. A **second biorational**, the microbial insecticide *Bacillus thuringiensis* (e.g., Dipel, or Thuricide) is only effective on younger caterpillars.



Fall webworm caterpillars produce webs on edge of tree branch (*Cliff Sadof*)

Good control may also be achieved with traditional broad spectrum insecticides like cyfluthrin (Bayer Advanced Product), permethrin (Eight), carbaryl (Sevin), and acephate (Orthene).



Adult fall webworm laying eggs on crabapple leaf (*Cliff Sadof*)



Young fall webworm caterpillars and fecal pellets in webs (*Cliff Sadof*)

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