

Post Rock Answers

By Cassie Homan May 21, 2021

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Bagworm Control

If you have cedar trees or other evergreens on your property you have probably seen bagworms. Most of us are familiar with the brown bags made of leaf matter and the devastating defoliation these pests can do to our trees, shrubs, and other plants. Unfortunately, by the time we notice the new bags hanging from our trees, it is too late to treat. Plan ahead to get a jump start on them this year.

Bagworm Life Cycle – Bagworms overwinter as eggs protected by the females' bags. The larvae hatch and emerge from the old bag from mid-May through the end of June. It is a continual hatch during that time period. The larvae immediately construct their own bag and begin feeding. These new bags are covered with bits of foliage.

The bagworms continue feeding and growing until mid-August. Then, the larvae anchor their bags to a branch and seal themselves inside. At this point, no chemical treatment is effective because it cannot get through the barrier created by the sealed bag. The larvae pupate into adults. The males are black moths with clear wings, and the females are worm-like in appearance and remain inside their bags. The males mate with the females in their bags then the females lay the eggs in the bags and then die. The cycle is repeated with the overwintering eggs.

Host Species and Damage – The most common hosts for bagworms are cedar and juniper trees. However, they may also attack other evergreens, such as arborvitae, spruce, and pine. They can also feed on deciduous trees and shrubs, such as: willow, maple, oak, box elder, sycamore, poplar, locust, rose, barberry, cherry, peach, and blackberry. In the absence of these other hosts, bagworms could even feed on other plants such as clover, ragweed, parsley, and nightshade. If

the bagworms defoliate one host plant, the larvae can migrate to another host plant nearby. It could be the same species or a completely different host.

Most of the time, we don't notice that a bagworm problem is present because the smaller larvae do not feed as much or as rapidly as larger larvae. Then, in a short amount of time, a tree is defoliated, seemingly overnight. Deciduous trees are better able to withstand foliar feeding damage than evergreen trees because deciduous trees can replenish their foliage faster. If evergreen trees experience successive years of heavy foliar feeding by large bagworm populations, even well-established trees could be lost.

Control of Bagworms – If you had an outbreak of bagworms in previous years, you should consider chemical control to eliminate the bagworm larvae. Remember that insecticidal control will be most effective when the larvae are actively feeding on the foliage. Once they have sealed up their bags, they will not consume the chemical and the bags are impervious to the spray.

If the previous year's bagworm feeding was severe, you should consider two insecticide applications. The first should be applied when the larvae are emerging in mid- to late-May, followed by a second application approximately three weeks later to get any larvae that hatched after the first treatment.

If the infestation was slight, you could get by with one application in late-June. If you can only spray once per year, then the late-June spray is recommended. It is important to get thorough spray coverage to get a better treatment of bagworm larvae. Insecticides must be applied with sufficient sprayer pressure in adequate amounts of water to ensure both the interior and exterior foliage is covered. This can be difficult to do, especially on a windbreak, but it is crucial to the success of the application.

Insecticides commonly used for controlling bagworms include spinosad, acephate, cyfluthrin, or permethrin. Products containing *Bacillus thuringiensis* (Bt) are effective when the larvae are small. Not all garden centers or hardware stores may have all of these products; therefore, it is important to read the label and make sure the product you select is labeled for bagworm treatment. If you have questions on how to protect your trees from bagworms contact your local Post Rock Extension office.

Post Rock Extension District of K-State Research and Extension serves Jewell, Lincoln, Mitchell, Osborne, and Smith counties. Cassie may be contacted at choman@ksu.edu or by calling Beloit (738-3597).