

## **Bagworms**

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Bagworms began to hatch in our area from their protective cocoons several weeks ago. A few bagworms do little harm.

However, many bagworms on a shrub or tree can cause excessive defoliation. A severe infestation may kill the plant within one or two seasons.

Bagworms do the most damage on arbor vitae and cedars, but will attack pines, junipers, spruce and at least 130 other trees and shrubs. They may not harm the deciduous trees, but they spread from these trees to more susceptible evergreens.

Larvae will begin feeding and start to build a camouflage bag with plant parts within a few weeks after hatching. They will continue to feed and eventually build a bag that is one to one and half inches long.

Most of the emerging larvae will feed on same tree that contained their overwintering home. Others will form silk threads and allow the wind to carry them to adjacent trees.

The most effective control of bagworms is to apply insecticides about two weeks after the first bagworms begin to hatch. This insures that all of the eggs have hatched from the bags on the tree.

The Hancock County area has reached that two week point and spraying should begin on infected trees and shrubs. Spraying may still be effective until the bags have reached about  $\frac{3}{4}$  inch in length.

Spraying may still work in late July but damage to trees will be reduced the sooner the insecticide is applied. Most foliar applied insecticides should provide effective bagworm control especially when applied to small larvae.

One may want to consider the biological insecticide *Bacillus thuringiensis* var. *kurstaki* (Bt). Bt products are more environmentally friendly since they are selective for larvae of many moths, such as bagworms, without harming beneficial insects.

However, Bt products have short residual activity and may require more than one application for control. Also, complete vegetative coverage is important for Bt products since the worm has to actually ingest the insecticide while feeding to be effective.

Non-Bt products are effective if ingested or come in contact with the worm. Whatever product is selected make sure it is labeled for bagworms and the tree or shrub.

Control will become more difficult once the larvae stops feeding and attaches their protected mobile home to the tree. Hand removal becomes the only effective method of elimination at this time.

Bagworms generally attach their protective home to a stem around mid-August and then pupate inside. About a month later male moths will emerge and mate with females in the bags.

Females never leave the bag. After mating a female will lay 300 to 1000 eggs in the bag, die, and form a mummified body around the egg mass for extra winter protection.

Eggs will hatch the following spring to start the next generation. Tiny emerging larvae (crawlers) will start to emerge late May and early June depending upon air temperature and accumulating heat units.

Bagworms have become more a problem in recent years for our area. It was thought that numbers had increased from milder winters and warmer springs. However populations have increased regardless of the type of winter and populations were not reduced from the past two severe winters.

However, if not controlled, bagworms can eventually kill a row of large trees in windbreaks, evergreen borders and valuable landscape plants. For more information on bagworms, visit the following URL's: <http://ohioline.osu.edu/hyg-fact/2000/pdf/2149.pdf> and <http://cues.cfans.umn.edu/old/Web/071Bagworm.pdf>