



Plant Health Clinic Disease Note

Issue 18

Bagworms

Bagworms have hatched and are actively feeding on host plants. Newly hatched bagworms can be hard to detect as they are VERY small at this time. They are further camouflaged by making a bag of the plant material they are feeding on. Bagworms are moths in the Family Psychidae. The larvae feed on 50 families of deciduous and evergreen trees and shrubs (Rhainds et al. 2009). Severe infestations can seriously damage the beauty and health of host plants, especially juniper, arborvitae, hemlock, fir, pine, and spruce species. They live in a bag made from silk that the caterpillar produces. Pieces of plant debris are incorporated into the bag for camouflage. Female bagworms are wingless and never leave the bag. Males are black to brown with clear wings and have a flexible abdomen that can be extended into the female's bag for mating. After mating, eggs develop within the female, and she dies. There can be as many as 300-1000 eggs in a single bag. The eggs overwinter in the bag until spring when larvae hatch, crawl out, and spin down from the bag by a strand of silk that often acts like a parachute to carry them to new hosts. Once they land, they begin making their own silk bags. Unless trees are touching or are very close to each other, the worms don't move from tree to tree. Many homeowners fail to notice them until they have matured and permanently glued themselves to a stem. At that point they quit feeding and the damage has been done for the year. Non-chemical control is best achieved in late fall or winter because the bags can be picked off the tree

and destroyed. Be sure to remove the silk that binds the bag to the stem as it may cause girdling later. This is only effective if the number of bags is relatively low. Spring is the best time for chemical control because the larvae are small, actively feeding, and don't have the full protection of a completed bag yet. Insecticides readily available to homeowners in Arkansas are: Bacillus thuringiensis (Biotrol WP, Thuricide, Sok-Bt) dinotefuran (Green Light with Safari) malathion (various) other pyrethroids per label instructions Spectracide Triazicide Insect Killer For Lawns & Landscapes Concentrate.

Restricted use insecticides or those not readily available to homeowners: acephate (Orthene) acetamiprid (TriStar) azadirachtin (Azatin) Bacillus thuringiensis kurstaki (BiobitHP, DiPel, or Foray) bifenthrin (Talstar) bifenthrin + clothianidin (Aloft) bifenthrin + imidacloprid (Allectus) chlorantraniliprole (Acelepryn) fluvalinate (Mavrik) indoxacarb (Provaunt) novaluron (Pedestal) spinetoram + sulfoxaflor (XXpire) spinosad (Conserve SC).

Take Aways:

- **Apply insecticides in spring to early summer as soon as newly hatched bagworms are detected.**
- **Pick off any adult bags during the winter and destroy them.**



*27279/project accession no. 1013890] from the USDA
National Institute of Food and Agriculture.*

Bagworms-Family Psychidae



Photo by Sherrie Smith, University of Arkansas
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