Fighting the Good Fight Against Bagworms

Many homeowners have started noticing strange paper bags hanging from evergreens in their landscapes. These bags are the nests of bagworms. Bagworms are the larval stage of moths that emerge from their bags in late May and early June to feed on foliage of both deciduous and evergreen leaves. Timing of their emergence depends on the weather of the spring. Cooler and wetter weather as seen this year will delay the emergence of bagworms. Damage ends up being much more severe on evergreen trees and shrubs due to the lack of foliage regrowth during the year. Bagworms are most common on cedars, junipers and arborvitae, but can also be found on shade trees like sycamores and elms. Occasionally, they can also nest on buildings, and can sometimes be seen hanging out of a tree by their silk.

Bagworms form their bags using a combination of plant debris and silk that the worms spin. During the six or so weeks that they feed, they will begin to grow their bags when the worms are 1/8” to ¼” long. Bags that have male larvae are typically near the bottom of the tree and will be abandoned in the fall after the males become moths. Bags with females are where eggs overwinter and are usually found towards the tops of trees. One female bag can produce 500-1,000 eggs that will all hatch the following spring. If trying to control bagworms, prioritize the bags near the top of the tree to better keep bagworm populations in check, as removing these will also remove the eggs.

Once the worms begin to grow their bags, insecticides are largely ineffective, which means that trees must be sprayed before visual evidence of bagworms’ presence appears. In Kansas, these sprays should be applied in early June, and then again in mid-to-late June. Presence of bagworms from previous years is the best indicator for determining if your trees need spraying. There are 522 different insecticides labeled for bagworm control in Kansas, so choosing an insecticide to apply will mostly depend on local availability. If bagworms are already in their bags but still feeding, Spinosad is the most effective insecticide, because it is ingested as a residue and doesn’t depend on contact with the target pest. Hand removal of bagworm bags, though tedious, is the most consistent way to prevent future damage to smaller trees and shrubs. Throw any removed bags into soapy water.

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