Kansas Insect Newsletter

For Agribusinesses, Applicators, Consultants and Extension Personnel

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Is It Too Late To Spray For Bagworms ON EVERGREENS?.....

The ultimate goal for a bagworm spray program is to eliminate larvae, or, at least to reduce their populations to non-damaging levels. Yearly, there is a 4-5 week period during which larvae emerge from eggs. Ideally, the spray schedule for a **twice**-a-year application program should be application #1 the last week of May to first week of June to eliminate the initial hatchlings of the 4-5 week emergence period, with application #2 to be applied during the last week of June to the first week of July to eliminate the remaining larvae which hatched through June and the beginning of July. Or, if a **once**-a-year spray program is adopted, that spray should be applied during the last week of June to the first week of July to eliminate the entire hatch.

Failure to do so brings us to this point in time when people ask, "Is it too late to spray for bagworms?" What especially draws peoples' attention to the presence of bagworms is the appearance of off-color sickly-looking trees (Figure 1A) in stark contrast to healthy green trees (Figure 1B).

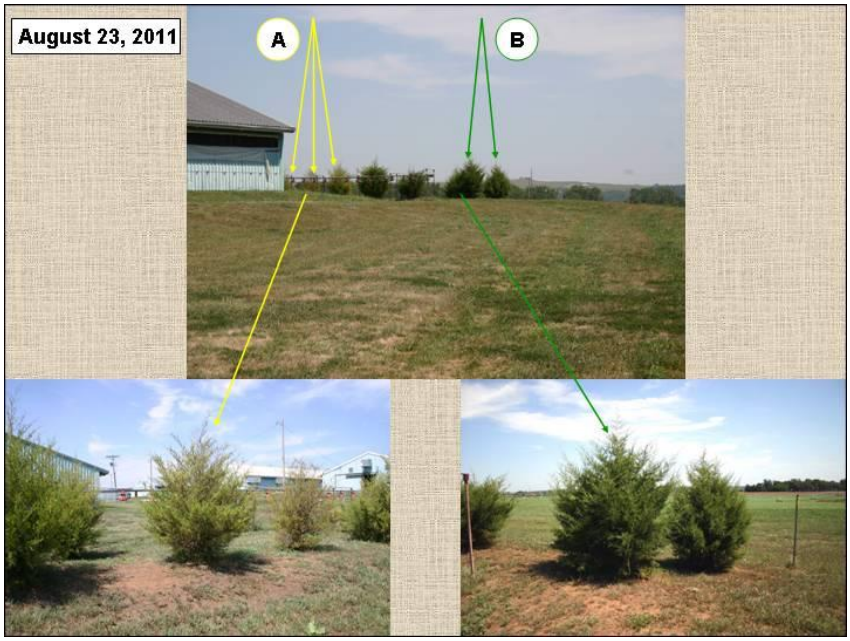

Figure 1

Insecticides need to be applied during the period of time when bagworms are actively feeding. Insecticides directly contact the larva as it extends itself out of its bag (Figure 2).

Figure 2

If (at the time of the insecticide application) larvae are withdrawn into their bags (possibly undergoing a molt, or simply not feeding), when they resume feeding, they will ingest treated foliage and succumb as a result of "stomach poisoning".

So back to the initial question: **"Is it too late to spray for bagworms on evergreens?"** Typically, by mid-August, most bagworms have completed their feeding cycle and remain within the confines of their bags. INSECTICIDES WILL NOT PENETRATE THE THICK LEATHERY SILK-LINED BAGS!

How does a person determine that point in time when larvae have completed their feeding cycle? "Active" bags can be identified by the "greenish" freshly chewed foliage glued to the bags (Figure 3A). The ends of those bags are "open" at the "head end" allowing larvae to "poke out" and continue feeding. These bags are attached by several strands of silk which provide a weak anchor the bags to the **foliage** upon which they are feeding (these bags can easily be pulled off/removed).

WHEN larvae have finished feeding, they move to the **twig/branch**. They then produce a heavy silken sheet (Figure 3B – yellow arrow) which firmly/permanently attaches the bag to the host plant (these bags cannot be simply collected with a mere tug).

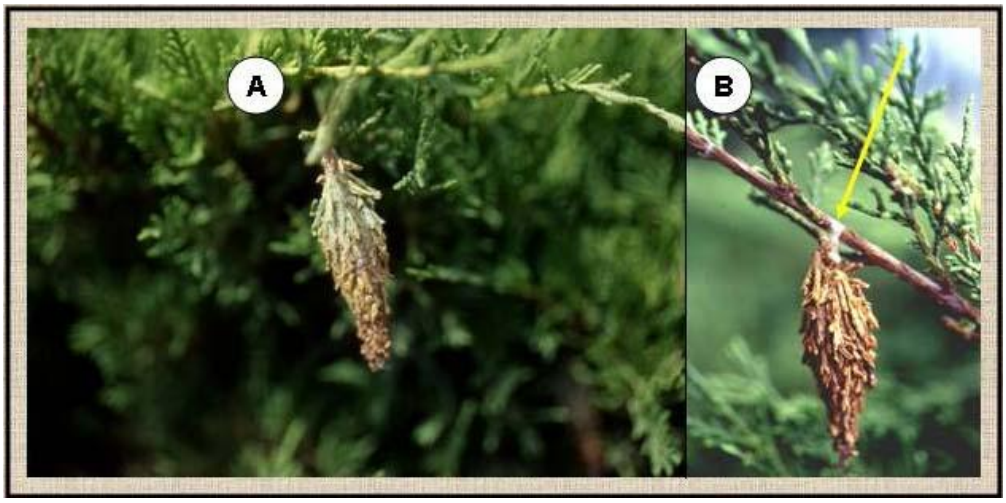

Figure 3

Not all bagworms complete their development simultaneously. So theoretically, a person might yet (at this late date) consider spraying for bagworms. The determining factor would be based upon the condition and appearance of the host and the number of bagworms still actively feeding and.

There is little evidence of feeding on the tree in Figure 4A. It has a full appearance with good color (Figure 4B). Although there are a few bagworms which are actively feeding, most bags are "closed-for-good" as evidenced by the thick silken ties permanently attaching them to twigs (Figure 4C). **Do not spray this tree!**

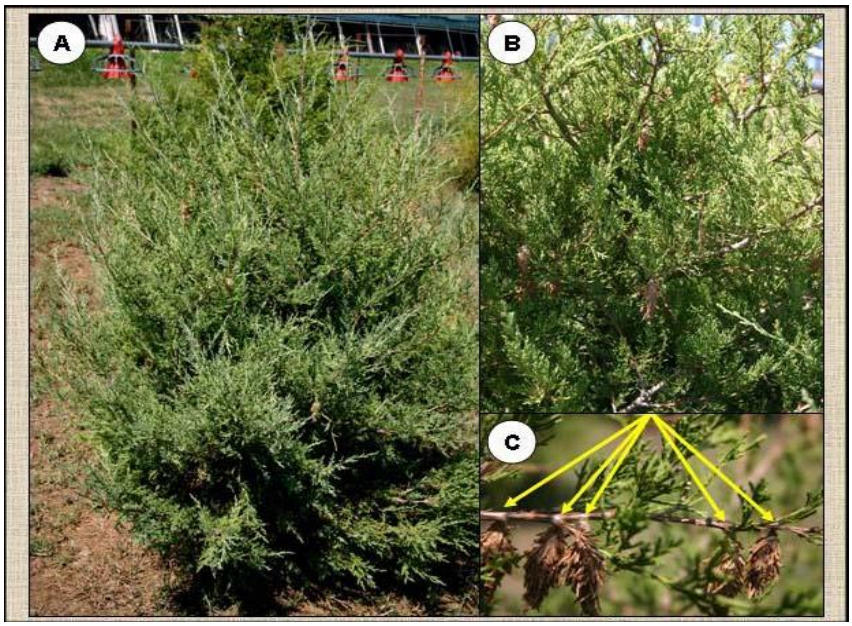

Figure 4

There is evidence of extensive feeding on the tree in Figure 5A. It has a thin, anemic appearance. A person might rush-to-spray this tree. However, most of the bags are "worn and gray" (Figure 5B). These are the 2010 bags in which overwintered eggs produced this year's batch of bagworms. Why are there but few current-year bagworms on this tree? After the larvae completely consumed the most "tender foliage", most abandoned the tree and moved to adjacent trees to continue their feeding activities on lush foliage. **Do not spray this tree!**

Figure 5

There is ample evidence of feeding on the tree in Figure 6. It has a thin appearance (Figure 6A), and looks "anemic" (Figure 6B). Most bags are current-year bags. One might rush-to-spray this tree. However, most bags are "closed-for-good", again as evidenced by the thick silken ties. **Do not spray this tree!**

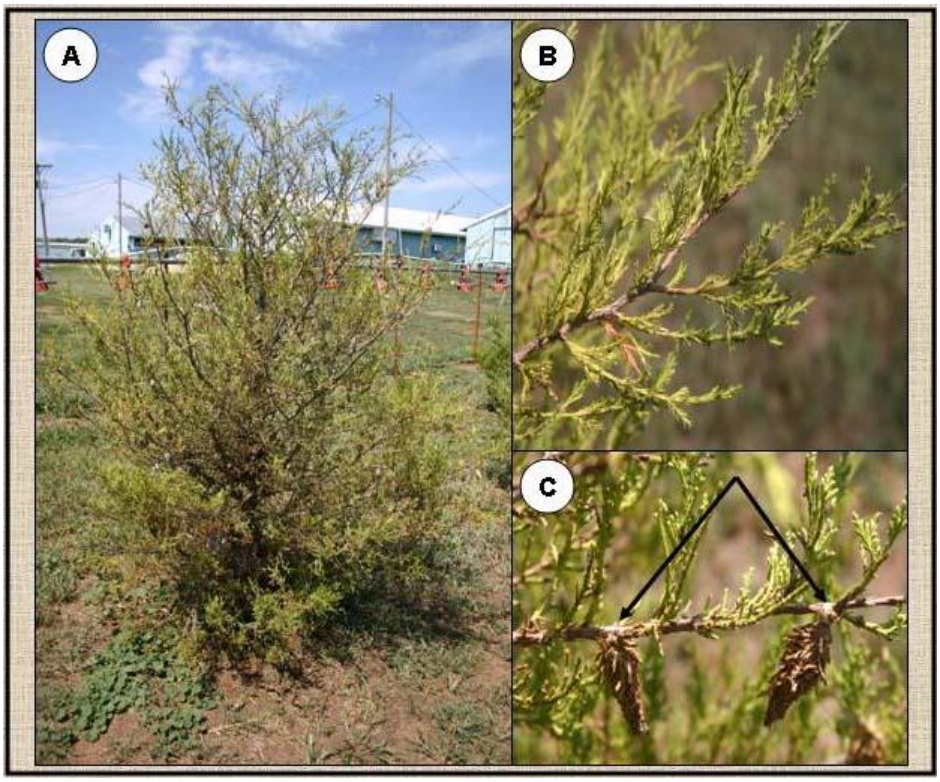

Figure 6

Only if trees appear heavily damaged AND ONLY IF MOST BAGWORMS ARE ACTIVELY FEEDING, an insecticide application might be considered?

What the outlook for trees is such as appearing in Figures 5 and 6? From this point onward into Fall and Winter, they will slowly produce new foliage, and regain a fuller/greener appearance. And this will continue into the spring. By next Spring, people might be lulled into a false sense of security, thinking that the trees are recovered, look healthy, and will need no help. In fact, bagworm populations and damage may be greater the ensuing year if ignored. People will need to be planning to implement a spray program to prevent a repeat of the previous year's situation.

Bob Bauernfeind

Green Cloverworms

Worms are causing considerable concern in sorghum and soybeans. Corn earworms (often called soybean podworm or sorghum headworm, respectively) have been discussed in previous issues of the Kansas Insect Newsletter and can also be reference in this week's Agronomy e-Update (Aug. 26 issue): http://www.agronomy.ksu.edu/extension/p.aspx?tabid=58

However, there are also many green cloverworms (see photo) in soybeans and these have a completely different feeding behavior than corn earworms. Green clover worm larvae feed on the leaf tissue between the veins (see photo) and can skeletonize leaves in a few days. However, they don't feed on pods or seeds within pods so defoliation is the concern. Often, when populations become noticeable, natural enemies effect a degree of suppression to reduce cloverworm populations. There are several predators and parasitoids that attack the larvae as well as a fungus that can really decimate the worms quickly. However, if these natural regulators are not effective and the worms are up to 6-8/row foot in the R2-R4 stage, insecticide treatment may be justified. Rarely does this occur in KS, but if you do feel justified spraying your beans to control green cloverworms, the insecticides listed in Soybean Insect Management Guide, 2011, work very effectively to control this pest: http://www.ksre.ksu.edu/library/ENTML2/Mf743.pdf

Jeff Whitworth *Holly Davis*

Report from the Kansas State University Insect Diagnostic Laboratory:

The following samples were submitted to the Insect Diagnostic Laboratory from August 19th to August 25th.

August 19 2011 – Wyandotte County – Polyphemus moth cocoon in tree
August 22 2011 – Clay County – Asian tiger mosquitoes around home
August 23 2011 – Kingman County – German cockroach nymphs in commercial building
August 25 2011 – Leavenworth County – Wolf spider, *Hogna* sp., found in home
August 25 2011 – Cowley County – Damsel bugs in home
August 25 2011 – Riley County - Leaf-footed bug, carpenter bee, and cicada found around home

If there are any questions regarding these samples or about the identification of any arthropod please contact the Insect Diagnostician at (785) 532-4739 or GotBugs@ksu.edu.

Holly Davis

Sincerely,

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