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Kansas Insect Newsletter

For Agribusinesses, Applicators, Consultants, and Extension Personnel

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Fall Webworm

The fall webworm, *Hyphantria cunea*, is noticeable throughout Kansas with the presence of webs appearing on many trees. This is the start of the second generation. Fall webworm caterpillars (=larvae) are typically evident in August and September, with silk webbing enclosing the ends of branches and associated foliage. Fall webworm caterpillars are pale green to yellow to almost white in color, and they generally have black spots (two per abdominal segment). Caterpillars are covered with long white hairs, and feed on a wide variety of trees including birch, crabapple, hickory, maple, pecan, and walnut. Fall webworm larvae, unlike Eastern tent caterpillar larvae, remain within the enclosed webbing and do not venture out to feed. Caterpillars consume leaves, resulting in bare branches with dirty webbing attached. Although this feeding injury may ruin the aesthetic appeal of infested trees, it is not harmful to tree health in the long-term since trees are primarily allocating resources for storage as opposed to producing new vegetative growth. The most appropriate control technique (if feasible) is to simply prune out the webs that enclose the larvae. The use of insecticide sprays may be ineffective because the caterpillars remain in the webbing while feeding. If insecticides are applied, be sure to use high-volume sprays that penetrate the protective webbing. The larvae are susceptible to natural enemies including many types of parasitoids and predators, and you can assist natural enemies in reaching and attacking fall webworm larvae by opening-up the webs.

Raymond A. Cloyd

Cicada Killers

We have been receiving inquires regarding the hordes of large wasps flying around. These are primarily the eastern cicada killer, *Sphecius speciosus*, which is actually considered a beneficial insect because it regulates cicada populations. This wasp gets its common name from the fact that it hunts and provisions each cell within its nest with a

cicada, which becomes the food source for young cicada killers. Cicada killers are an urban nuisance pest, especially when nesting, sometimes in large numbers, in a bare area or area around a structure. People get concerned because cicada killers resemble giant yellowjackets.

Cicada killers are approximately 2.0 inches in length and black to red in color, with yellow-banded markings on the abdomen. The head and transparent wings are reddish brown. They are not dangerous, but they are intimidating. Cicada killers are solitary wasps, with the female digging a 6 to 10-inch burrow (1/2 inch in diameter) in the ground. These diggings are usually seen in sandy or loose soil. A pile of soil or sand, depending on the soil type, typically surrounds the entrance. The female locates and stings a large insect such as a cicada or katydid and then brings the “prize” back to the burrow. She then places the paralyzed insect into a chamber and lays an egg on the surface of the paralyzed insect; sometimes she places two paralyzed insects in a burrow but lays an egg on only one. The female cicada killer eventually covers the burrow, digs another, and repeats the process. The egg hatches into a grub-like, legless larva that consumes the paralyzed insect. Full-grown larvae overwinter in the burrow, pupate in the spring, and emerge as an adult during the summer—usually July and August.

Male cicada killers establish aerial territories and patrol for intruders. A male cicada killer wards off other males that enter his territory and attempt to mate with females. Anyone else, such as a human, walking into the territory is typically confronted by a very large wasp, which hovers in front of the face and “zips” to the side and back. However, after determining that the “intruder” is not a rival, the male cicada killer ignores the individual. Unfortunately, as a person walks across a lawn, fairway, or other area where these wasps are nesting, the process is repeated through each male’s territory. Cicada killers are unlikely to sting a person. Wasp and bee stingers are modified egg-laying devices (=ovipositors), so males are unable to sting. Females may sting if crushed, either by being stepped on with bare feet or grabbed with bare hands.

Cicada killers are more common in areas with bare soil, so mulching, planting ground covers, or sodding may reduce associated problems. Cicada killers become a major problem when nesting in areas accessible to or frequented by the public. Applying carbaryl (Sevin) or a pyrethroid-based insecticide (e.g. permethrin, bifenthrin, deltamethrin, and/or cyfluthrin) to the burrowed area should kill females in golf course sand traps. Once the females are gone, males eventually leave. In home yards, sandboxes should be covered with a tarp when not in use since this deters cicada killers (and also keeps cats out). Sand below swings, jungle gyms, or other playground equipment can be replaced with bark mulch or shredded tires.

Managing cicada killers in volleyball courts and baseball infields is more of a challenge because people with minimal clothing and much exposed skin are diving and sliding onto the ground. This makes it difficult to recommend using an insecticide on a volleyball court. In these cases, the use of weed or other barriers beneath the sand may create enough of a disturbance to cause cicada killers to leave. Of course the recommendations mentioned above will only be effective if cicada killer populations are not excessive. For

example, just recently I was informed by an individual who told me he had to discontinue working at a golf course due explicitly to the difficulty in managing the excessive populations of cicada killers.

Raymond A. Cloyd

At the salad bar

Typically at this hot and relatively dry time of year, the greenest and most succulent vegetation is that which has been pampered. Thus the “salad bar is open” in vegetable gardens and flower beds. And the “guest diners” are **grasshoppers**. Probably the two most recognizable species (due to their large size, coloration and body patterns) are **differential** and **two-striped grasshoppers**. Another common but smaller species is the **red-legged grasshopper**.



Differential Grasshopper



Two-striped grasshopper



Red-legged grasshopper

And why do they seem to appear at this time of year? Where have they been up to now? Actually, current-season grasshoppers began last fall when eggs were deposited (preferably) in undisturbed areas (i.e. hatching beds) such as fence rows, roadside areas, native grass stands and untended areas in and around homes/yards. Nymphs emerged from overwintered eggs this spring. Restricted to hatching beds due to their flightless form, nymphs fed/subsisted on vegetation immediately available to them. By late summer (now), grasshoppers have attained adult status, are capable of flight and can travel long distances in search of desirable food sources. This brings them to “the salad bar”.

Numerous products containing the active ingredients bifenthrin, carbaryl, cyfluthrin, deltamethrin, esfenvalerate, lambda-cyhalothrin and permethrin have registered uses on vegetables and/or ornamentals (**be sure to read product labels to ensure their safe and intended uses**).

Eliminating “invading” grasshoppers is an ever-constant battle. People may apply an initial spray when grasshoppers first appear, but become upset with the continued presence of grasshoppers. The first thought is that the initial treatment did not kill the grasshoppers. However, because none of the available insecticides provides long residual control, additional insecticide applications required to eliminate the continued influx of new arrivals.

The electronic form of Kansas State University Extension Bulletin L-868, **Grasshoppers in the Lawn and Garden**, is available and downloadable by visiting: <http://entomology.ksu.edu/> Click on Extension. Click on Publications.

And the other webworm

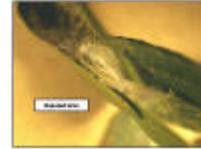
In last week's Kansas Insect Newsletter #23, fall webworms were addressed. But the work of another webworm is quite apparent in locust trees: the mimosa webworm. Webworm. Unlike fall webworms which create large visible web masses, mimosa webworm webbing is not highly visible because the webbing per se is enclosed within browned foliage where the small mimosa webworm feed. Thus the evidence of their presence is patches of dead foliage.



Brown foliage



Webbing and dark frass pellets within



Exposed larva

The current "patchiness" caused by first generation mimosa webworms may soon expand to include entire tree canopies as the second generation reach the end of their feeding cycle in late fall. Despite the startling appearance of "brown trees", there is little detrimental effect as a result of the foliar destruction. Simply, most of the current year's photosynthetic activities were nearly complete. Trees resume their normal appearance the following spring when trees produce a new season's foliage.



Second Generation Mimosa Webworm
Damage--September - October



Recovery - The Ensuing Spring

Bob Bauernfeind

Sorghum: "Headworms"

Cheri Nelsen, Wilson Co. Ext. Agent, reported some sorghum is being treated for "headworms." Sorghum may be vulnerable to infestations from bloom until milk stage. Infestations need to be detected early, while larvae are still small. The best way to detect early infestations is to vigorously shake the sorghum head into a small white container and count the dislodged larvae. Small larvae are sometimes difficult to detect even using this method as there may be florets and pollen also dislodged and the very small larvae may be well camouflaged in the bottom of the container. Generally, consider a yield loss of 5% per larva per head.

Jeff Whitworth

Soybeans: Soybean Aphids

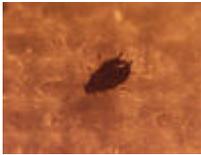
Soybean aphid colonies in Riley Co. dramatically decreased this past week. The colonies we've been monitoring went from several hundred/stem to only a few scattered aphids/plant. This is probably due to the extreme heat reducing reproduction which allows the natural enemies to also negatively impact the colonies. Aphid colonies will thus probably not rebound, at least not for the next week, since the heat is predicted to continue for the foreseeable future.

Jeff Whitworth

Alfalfa- cowpea aphids

Cowpea aphids have been detected in Ottawa and Dickinson counties. These aphids are easily distinguished from other alfalfa-infesting aphids due to their black color. Winged and non-winged adults are usually shiny black and the nymphs are more smoky-gray. Also, if viewed under magnification the basal (bottom) half of the antennae are light-colored, as are the legs.

Cowpea aphids have not been a problem of economic consequence in Kansas, thus we have no treatment threshold or economic injury level. They do seem to feed much like pea aphids, thus damage potential and treatment options are considered to be similar. Both fields that had significant numbers of aphids also had significant number of lady beetles, and "mummies" were also evident. No plant stress due to aphid feeding i.e. yellowing or stunting, was evident even though some stems had 50+ aphids.

			
Non-winged adult	Non-winged adults	Winged adult	Nymphs

Jeff Whitworth and Aqeel Ahmad

Spider Mites

This week's heat wave meant that some corn producers had to make one more difficult decision for this year's corn crop. Spider mite populations began to increase rapidly in some fields. With corn still several days from physiological maturity, weather forecasts calling for several days of triple digit temperatures, excellent yield potential and high market prices, and mite populations still at treatable levels many were making the decision to treat for mites. If one was less than a week from black layer, or if a break in the weather was in the forecast the decision might have been different. But with mite

populations on the increase, and no relief in sight treatment seemed to be the best option. As we move in to the next week things might change, corn will be closer to maturity, the weather may cool, or rain could enter the forecast. And in some cases mite populations or damage may be past levels that would benefit from treatment. However, buying a few more days of green leaf tissue before physiological maturity would seem to be worthwhile at least until we see a break in the weather or until we know that there is little chance of the mites causing premature plant death.

Phil Sloderbeck

Sunflower Moth

Sunflower head moth was still active this week in the Garden City area. While not at the levels we were seeing in Colby and Tribune the last few weeks. Populations in the Garden City area were above treatable thresholds. We were averaging 4 to 6 moths per trap per day. Day time head moth counts were low, but at night we counted 80 moths per 100 heads. These counts were in small plots on the experiment station where the last two years we had not exceeded treatable levels.

Phil Sloderbeck

Sincerely,

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