http://www.oznet.ksu.edu/entomology/extension/extensio.htm

Kansas Insect Newsletter

For Agribusinesses, Applicators, Consultants, and Extension Personnel

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First West Nile Virus Activity Confirmed in Kansas This Year: Positive WNV Bird Found in Sedgwick County:

(News release from KDHE, June 28, 2004)

The Kansas Department of Health and Environment has confirmed the presence of West Nile Virus (WNV) in a bird in Sedgwick County. This is the first confirmed WNV activity in 2004.

WNV is carried by birds and transmitted by mosquitoes that bite the infected birds, which then transmit it to horses and people.

"Every Kansan should take precautions against West Nile Virus because we know the virus is in the state and will be here throughout the summer," said Gail Hansen, Acting State Epidemiologist. "While some people are more at risk than others, we have no way of knowing how our body will respond to WNV, and for some individuals it can be an extremely difficult illness, with long-lasting side effects, and in rare cases can lead to death."

Hansen urged Kansans to focus on protecting themselves by being prepared, not scared of the virus. The best way to be prepared includes personal precautions such as use of an insect repellant with DEET, and reducing mosquito breeding grounds. She urged Kansans not to wait for the virus to be reported in their county to take action.

"We cannot wait until the virus is found in the area where we live before taking precautions against WNV," Hansen added. "We must act responsibly and protect ourselves and our families every day through simple actions that reduce our likelihood of getting bitten by a mosquito and reduce mosquito breeding grounds."

There have been no human cases reported to KDHE this season, either through the state laboratory or

through positive lab results from private laboratories in the state. KDHE reminds physicians to report West Nile Virus (WNV) cases with neuro-invasive disease to the state. Physicians may call KDHE's Epidemiology hotline to report cases of West Nile Virus or suspect cases at 1-877-427-7317.

KDHE recommends the following to reduce the risk of WNV: • Use insect repellent with DEET and wear protective clothing when practical • Remove standing water (where mosquitoes breed) • Use larvicide in water that cannot be drained or removed • Change water frequently in bird baths, pet bowls, and wading pools and • Limit outdoor activities at dawn and dusk when mosquitoes are most active

KDHE is asking Kansans to report dead birds to the state by calling the West Nile Virus Hotline at 1-877-228-2287. Birds being tested include: crows, bluejays, magpies, or birds of prey (hawks, owls, eagles), and must meet the following criteria for testing: • Bird should not have been dead longer than 24 hours; • Bird should be intact and should be placed in double plastic bag in freezer until submitted.

Callers will be given directions to their local Kansas State University Extension agent for drop-off of the bird. K-State Extension agents will then ship the specimens to a designated testing lab. Test results will not be released to individuals submitting birds, but birds testing positive will be reported on the WNV Web site.

In 2003, 90 human WNV cases with neurological illness were confirmed through the KDHE Division of Health and Environment Laboratories (DHEL). Of these 90 cases, 7 deaths were confirmed WNV cases. In addition, private labs confirmed 731 human WNV test results. Three additional deaths were attributed to WNV, but unconfirmed through lab work. In 2002, 22 WNV human cases with neurological illness were confirmed through the DHEL and no deaths reported.

For more detailed information on mosquito and virus biology and ecology, personal protection and mosquito control go to: http://www.oznet.ksu.edu/library/ENTML2/MF2571.pdf

Ludek Zurek

"Pantyhose and Walnut Trees?"

An attention grabber! If the header were "Black walnut shoot moth and walnut trees", you might not be reading this. But now that you've taken the bait.....

Every now and than, there are reports of a strange webbing which encases the trunks and large branches of walnut trees. It is a very thick webbing which, in the sunlight, gives the encased trees a shimmery ghostly look. "Shrink-wrapped" trees were last reported in 1991and 1992 at Fort Riley. In 1993 and 1994, the occurrence was observed at Fort Riley and a site in Miami County. In 1995, the webbing disappeared, and had not been reported until 2 weeks ago from a site in Shawnee County.

It is not a mystery as to the cause of the webbing ----- the larvae of Gretchena concitatricana (Heinreich). There are two unofficial common names which are meaningful and descriptive. The first, **black walnut**

shoot moth was proposed by former Kansas State University District Forester Gary Naughton. In his 1970 article, “Black Walnut Deformed by Shoot Moth” [which appeared in the 1970 Journal of Forestry, 68(1)], Naughton described shoot and foliar damage attributable to the larvae of the black walnut shoot moth. Nowhere in publication did he mention webbing. Nor does he remember ever observing any webbing (personal communication).

The second common name, **walnut trunk webbing moth**, is appropriate because it aptly describes “the work” of the moth larvae. Whereas the moths and their larvae are likely present on a yearly basis throughout the native range of black walnut, only in certain years do larval populations occur in the extreme numbers required to create the extensive webbing.

Little is known about the life history of this species. What can be said, however, is that the noticeable webbing is but an after-the-fact artifact of the extreme larval populations. The webbing is formed as mature larvae travel down to the ground where they seek shelter (beneath the ground litter) in the soil where they pupate. In 1993, moths were recovered from pupae (in July) suggesting that a second generation is produced which results in the likely overwintering stage ---- second generation pupae.

Damage/economic consequences? The webbing per se is inconsequential. The incidences of intense webbing appear to be associated with large established trees growing in woodland areas. [Perhaps, then, it is more widespread than is reported ----- simply, people have to be in the right place at the right time to observe the webbing.] Large established trees would be capable of supporting the tremendous populations of larvae. Looking up in the canopies of trees with heavy webbing, foliar skeletonization caused by the feeding of the larvae is readily apparent. Collectively, then, these massive larval populations produce the excessive webbing. Yet, as is the situation with defoliating caterpillars, large healthy established trees apparently are none the worse off despite substantial leaf loss.

Conversely, distorted growth caused by larvae feeding on meristematic tissues of walnut seedlings and saplings is considered a major handicap for the eventual production of straight logs. In these instances, just a few larvae are cause for concern. It is not surprising that the webbing phenomenon is not associated with smaller trees because each tree would support but minimal numbers of larvae.

If you receive reports of walnut trees with “pantyhose” “shrink-wrapped’ tree trunks, please contact Bob Bauernfeind (rbauernf@oznet.ksu.edu or

Think about.....

#1 - Spraying now for bagworms — The first week of July is a good time to spray for bagworms. All eggs should have hatched by this time, and larvae are actively feeding. Bagworm damage probably is not yet readily evident because even those bagworm which got started back in mid-may (and currently are only partially grown) are not capable of consuming enough foliage to initiate noticeable damage. If trees and shrubs have a history of bagworm activity, check closely for the current season presence of bagworms. If present, spray.

Active ingredients registered for use against bagworms include acephate, Bacillus thuringiensis, bifenthrin, carbaryl, cyfluthrin, diazinon, dimethoate, esfenvalerate, lambda-cyhalothrin, malathion, permethrin and spinosid. These active ingredients are utilized by various manufacturers to produce a dizzying array of different insecticide products. **All work!** What is more important than the product-of-choice is **when** and how they are used.

As stated above, now is the time to treat.

Treat all of the infested trees and shrubs! People have a tendency to treat only the most heavily infested plantings. The downside to this situation is that the untreated bagworms will continue feeding and propagating. Eventually they will require treatments whether during the current season or in seasons-to-follow. So treat each and every infested host plant.

Achieve thorough spray coverage! People sometimes lightly mist the periphery of trees and shrubs. While this may be sufficient to kill bagworms feeding on-the-fringes, the greater "untreated population" continues feeding on the deeper inner portions of trees and shrubs. They eventually move to the fringes where they (now larger) quickly consume the outer foliage.

#2 - Preventative treatments for annual white grubs — Flights of "masked chafer" beetles are currently underway, will peak in a 7-10 days and then dwindle and cease by the end of July. Now is the time to think about grub control. Preventative treatments are recommended in situations where "perfect turf" is expected and desired.

"Long-season" insecticides with the active ingredients imidacloprid or halofenozide should be applied now. These materials have plant systemic capabilities — they are taken into plants via root systems. When grubs feed on those root systems, they ingest the insecticides. The imidacloprid active ingredient kills by attacking the nervous system, whereas the halofenozide is an insect growth regulator which interferes with grub development by accelerating the molting process. Application of these materials now will allow adequate time for them to be taken into plants and therefore be "in place" when grubs emerge from eggs.

People who applied imidacloprid and halofenozide insecticides back in April and May [(when they became aware of and were worried by the large flights of May/June beetles whose grub stages rarely are accountable for damage to turf ---- and even then, would not account for damage during the current season)] may lapse into a false sense of security. Despite the "season-long" moniker attached to these products, their residues may be on their-last-legs when actually needed in August to counter the masked chafer grubs.

Short residual active ingredients (carbaryl, permethrin and trichlorfon) should never be used as preventative treatments at this time of the season. Applied now, they will be long gone by the time small grubs are present in August. Rather, applications of these short residual products must be pinpointed to coincide with the actual presence of small grubs. The optimal 10-day treatment window when an estimated 90% of the grubs will be small 1st and 2nd instars (small = nondamaging) does not occur until 30-40 days past the flight peak which has yet to occur. Optimal treatment dates for preventative treatments with short residual insecticides will be presented (likely) in Kansas Insect Newsletter #19 ---- scheduled for release July 19.

Bob Bauernfeind

COTTON FLEAHOPPER:

It is time to be looking for cotton fleahoppers. If small squares are turning brown and dropping to the ground, the problem could be physiological or it might be due to fleahoppers. In prebloom cotton, if more than 20% of the small squares are being lost; examine the plants for fleahoppers. This is a small 1/8-inch long, yellowish-green insect. It has an elongated, oval-shaped appearance and somewhat flattened over the top as is typical for most bugs. On the adults, a few dark spots are visible near the rear of the upper surface of back. Nymphs may be very small and appear as all legs and antennae. Nymphs of the cotton fleahopper may appear white to light green in color. Alternate hosts for these insects are croton and silverleaf nightshade, thus damaging infestations are more likely where these weeds are abundant. A good description and set of images on this pest can be found at: http://insects.tamu.edu/extension/bulletins/b-933.html#cotten%20flehopper (from Texas A&M publication on the Identification, Biology And Sampling Of Cotton Insects).

Begin scouting for this pest when cotton reaches the 6th leaf stage. Scouting can be difficult as adults can be very flighty and may jump from the plants if they observe an approaching shadow. Thresholds in Oklahoma during the first 3 weeks of squaring call for treatment at levels of 40 fleahoppers/100 terminals. (Note: Based on limited sampling by KSU entomologists, it is not uncommon to find fleahoppers in Kansas cotton fields, but numbers observed, thus far, have generally been below threshold levels.)

Sampling can also be done with a drop cloth or sweep net. With a drop cloth placed between the rows, the threshold usually ranges between 1 bug/ft. of row to 1 bug/3 ft. of row. With a sweep net, the threshold ranges between 1 to 1.5 bugs/10 sweeps.

These insects attack tiny squares so if your are seeing good square retention (75% or greater) then there is probably not a significant fleahopper population. Due to our short growing season, treatment in August after bloom begins for fleahoppers is not economical. In most cases, low potential for yield increases coupled with the chance of unleashing bollworms offsets the advantages of protecting later squares by a late-season infestation fleahopper infestations.

Where significant numbers of fleahoppers are found an effort should be made to conserve beneficials since these applications will occur just before bollworm establishment, thus use lower rates and don't try for 100% control of the flea hoppers. A number of insecticides are labeled for fleahopper control. Examples of some products commonly available in Kansas include: acephate (Address & Orthene), acetamiprid (Intruder), chlorpyrifos (Lorsban), dimethoate (Dimate & Dimethoate), endosulfan (Phaser & Thiodan), imidacloprid (Provado & Trimax), indoxacarb (Steward), oxamyl (Vydate), and thiamethoxam (Centric).

Phil Sloderbeck

Weekly Report from the Kansas State University Insect Diagnostic Laboratory:

The following samples were submitted to the Insect Diagnostic Laboratory from June 24 through June 30, 2004:

6-24-2004, Clay County: Possible Yellow Ants in home.
6-25-2004, Shawnee County: Jumping Leaf Gall on Oak.
6-25-2004, Smith County: Army Ants in garden.
6-25-2004, Riley County: Velvet Ant on KSU campus.
6-25-2004, Sedgwick County: Flatid Planthoppers in garden.
6-25-2004, Graham County: Wood Roach.
6-28-2004, Miami County: Army Ants in basement.
6-28-2004, Riley County: Weevils in home.
6-29-2004, Kiowa County: Possible Leafhopper damage in Verbena.
6-29-2004, Rooks County: False Wireworm adults in yard, home.
6-30-2004, Rawlins County: Harlequin Bugs on Horseradish.
6-30-2004, Miami County: Midges in home.
6-30-2004, Sedgwick County: Sac Spider in home.

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

Bobby Brown

Brand names appearing in this publication are for product identification purposes only. No endorsement is intended, nor is criticism implied of similar products not mentioned.

Sincerely,

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