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## Kansas Insect Newsletter

For Agribusinesses, Applicators, Consultants, and Extension Personnel

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# Optimum Time For Bagworm Control

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The last week of June and first week of July is an optimal time to apply sprays for bagworm control. All bagworm eggs will have hatched. At this time, bags will range in size from  $\frac{1}{4}$  to  $\frac{1}{2}$  -inch (or slightly more) in length (encircled in Red). Even the largest of current the bagworms are still relatively small and, therefore, incapable of causing noticeable feeding damage. Also, small larvae are quite susceptible to insecticidal treatments.



Stages of Bagworms

There is a wide array of chemicals labeled for use against bagworms: 429 insecticidal products registered in Kansas! Homeowners must search-the-shelves of local retail outlets to determine their product-of-choice. What is more important than the final product-of-choice is how products are used. (a) Read and follow all label instructions to ensure proper dosage rates. (b) Do not merely treat peripheral foliage, but strive to achieve thorough coverage including inner foliage where bagworms may be hidden. (c) Treat **ALL** of the infested trees and shrubs ---- not just those which are most heavily infested ---- because bagworms will eventually roam and re-infest adjacent hosts. (d) Conduct follow-up inspections and apply an additional insecticide treatment if necessary.

Extension Publication MF-728, **Bagworms**, May 2005, is electronically available at <http://www.ksu.edu/entomology> Click on Extension. Click on publications. Search: Bagworms

Bob Bauernfeind

## “Masked Chafer” .....

Last week’s hot daytime and warm evening temperatures are responsible for the current escalation of masked chafer activity. Most likely their flights will peak around the (traditional rule-of-thumb) July 4 holiday.



Masked Chafer Beetles

To reiterate from last week’s Kansas Insect Newsletter #17, now is the time to apply automatic systemic grubicide treatments if they are a part of a prescribed preventative turf maintenance program. Refer to the electronically available Extension Publication MF-2635, **Annual White Grubs in Turf**, May 2004 which can be accessed at the above-mentioned web site..

Bob Bauernfeind

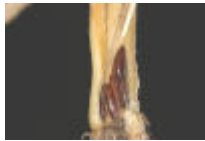
## Resurgence of Hessian Fly in Western Kansas?

We have had several reports of isolated Hessian fly damage in wheat fields in northwestern Kansas. In most cases, the wheat was planted after the ‘fly-free’ date and appears to have been infested this spring, rather than last fall. Although not widely spread, these infestations should serve to raise farmer awareness that this pest has been appearing more frequently in central and western portions of the state than it has in many years.

The affected areas are typically continuous, no-till wheat that was directly seeded into last year’s stubble. This practice is conducive to build-up of Hessian fly populations because it provides a continuous food supply for successive generations. Rotation to other crops is a primary preventive measure where Hessian fly damage has been observed.

Because adults are quite short-lived, the Hessian fly is not an insect with great dispersal ability. An increasing tendency on the part of some growers to ignore volunteer wheat, or purposely utilize it for summer grazing, creates local reservoirs for fly survival that can then serve to re-infest the next wheat crop. Diligence in controlling volunteer wheat is an important component of regional management of this pest.

Not unlike aphids, novel strains or 'biotypes' of Hessian fly evolve periodically that have new capabilities in terms of virulence and climatic tolerance. Thus, it is not inconceivable that changes in the fly population are partly responsible for changes in fly distribution in the state. Similarly, current regional fly-free planting dates are based on 15 yr-old data and may need to be re-examined if recent population changes have occurred. K-State wheat breeders are presently working to produce cultivars with new sources of resistance to current Hessian fly biotypes that should be commercially available within a few years. Until then, farmers should focus on preventive, cultural controls.



Flax seed pupae



Typical damage

Based on some recent reports from Larry McDaniel in Sherman County.

J.P. Michaud

## "Musk thistle problems? Weevils can help."

Historically, the heaviest musk thistle populations have occurred in North Central and Northeast Kansas, but the problem may be spreading to the west. This year, infestations have been increasing at a rapid pace in West Central Kansas. While most farmers will have to resort to spraying herbicides this year to prevent seed set, it might be worthwhile to consider a biological control approach next spring as a preventative measure.

Two weevil species attack musk thistle and can be very effective in eliminating the weed from infested pastures, especially when present together. The head weevil, *Rhinocyllus conicus*, was released in 50 Kansas counties in 1979 and feeds in the flower heads, significantly reducing seed production. The rosette weevil, *Trichosirocalus horridus*, was established through a series of releases in the 1980's and feeds on the growing buds, stunting plant growth during earlier, vegetative stages.

Both weevil species are established in Kansas but typically require introduction to areas newly infested with musk thistle. Spring is the best time to collect and redistribute adult weevils of both species. K-State Research and Extension publication L873 provides information on the life cycle of the weevils and recommendations to follow for farmers interested in establishing them in their fields. It can be downloaded here:

<http://www.oznet.ksu.edu/library/entml2/L873.PDF>

Assistance in obtaining and releasing weevils can also be requested from your local county weed director. Although the rosette weevil can no longer be shipped across state

lines because of concerns about non-target impacts on native thistles, the head weevil remains commercially available from a number of beneficial insect providers and can be purchased online. Complete control of musk thistle by the weevils may take 5-7 years, but the payoff is continued control without the expense of annual herbicide applications.

(Addendum - July 10, 2007 -- In responding to various requests for online sources of weevils for musk thistle control, we have discovered that neither species is now permitted by USDA APHIS for shipment across state lines within the USA due to observations of non-target impacts on native thistle species. However, it is still permissible to collect and redistribute these insects within state borders. We have identified a source of these weevils in central Kansas and individuals interested in obtaining some for release in the spring of 2008 should contact J.P. Michaud at [jpmi@ksu.edu](mailto:jpmi@ksu.edu). Since we cannot predict the numbers that will be available (and the minimum number for release per site is around 80 of each species), units will be distributed on a first come, first serve basis.)



Rconicus



Thorridus

J.P. Michaud

## Rootworm Beetle Scouting

It will soon be time to begin scouting for rootworm beetles. As rootworm larvae complete their development they will pupate and then emerge as beetles. Monitoring beetle numbers this summer is an important factor in managing rootworm larvae next season. Fields should be scouted at least weekly from July 1 through all of August and sometimes into September if results are to be of value. Counts should include only western and northern corn rootworm beetles. Beetles can be monitored by visual counts or pheromone traps. Management can include beetle sprays to reduce egg laying, crop rotation, soil insecticides and rootworm resistant hybrids. More information on rootworm management can be found in our corn insect management guide

<http://www.entomology.ksu.edu/DesktopDefault.aspx?tabindex=241&tabid=591> or in the publication *Corn Rootworm Management in Kansas Field Corn* <http://www.oznet.ksu.edu/library/entml2/MF845.PDF>. In addition you may be interested in reading a journal article entitled: How Kansas Crop Consultants scout for western corn rootworms (Coleoptera: Chrysomelidae) in Field Corn. *American Entomologist* 53:8-11, (<http://www.entomology.ksu.edu/DesktopModules/ViewDocument.aspx?pubid=2144>). This recently published article summarizes a survey of crop consultants conducted in 1999. The results of this survey clearly document that Kansas crop consultants currently rely on visual whole plant counts to make rootworm management decisions. The number

of plants sampled and the damage thresholds used by the consultants varied widely. When asked to rank their satisfaction with their current rootworm management programs, 20% of the consultants reported they were not very satisfied; 67% were satisfied; and 13% were very satisfied with current rootworm management programs. Although most were satisfied with their rootworm management program, about half of the crop consultants thought rootworm problems were worse in 1999 than 5 years earlier. Nearly half (48%) thought rootworm problems were about the same, and only 2% thought rootworm problems were less serious. These and other findings of the survey have implications on how to best scout for and manage rootworm beetles and should be of interest to those involved in rootworm management.

Phil Sloderbeck

## **Time to Rate Roots for Rootworm Injury:**

Well it is almost the 4th of July and that means it is probably a good time to assess corn rootworm injury. Ratings should be done about the time the rootworm larvae begin to pupate, but before roots begin to regenerate. This practice is especially useful to compare various rootworm treatment options, say Bt rootworm corn with soil insecticides.

Assessing damage is really a fairly simple process. Simply dig 10 to 20 roots at random from the management systems you want to compare (ideally a treated area, vs. an untreated area, but one can also compare one treatment option with another (soil insecticide vs. rootworm resistant corn). Take the roots to an area where they can be thoroughly washed to remove all soil and then rate the roots using one of the two damaging rating scales commonly employed for rating rootworm damage. The scales are based on the number of nodes of roots having heavy rootworm injury. One is based on a 3 point scale and the other is based on a 6 point scale. Both focus on the appearance of the three functional nodes (or whorls) of roots on a normal corn plant. On the three point system no damage is rated a zero, and one node (circle of roots), or the equivalent of an entire node, eaten back to within approximately two inches of the stalk is rated a 1, two nodes destroyed gets a rating of 2 and three nodes lost is assigned a 3. On the 6 point scale, no damage is rated a 1, minor root feeding is rated a 2, one root destroyed is rated a 3, one node of roots damaged is rated a 4, two nodes is rated a 5 and three nodes is a 6. (See <http://www.ent.iastate.edu/pest/rootworm/nodeinjury/nodeinjury.html> for more information). While one could debate which scale is better, either one will be useful to determine if there appears to be differences in the amount of damage observed among treatments. Minor differences are probably not too meaningful, but no damage vs. an entire node or two of roots missing will probably be meaningful. Notes on root damage, combined with yield estimates could be very helpful in fine-tuning future management strategies.

Phil Sloderbeck

# Soybean Aphid

Soybean aphids are being found in other states, but none reported yet in Kansas during 2007. Thus, we are still very interested in hearing about any sightings of this aphid in Kansas. If you think you have found this aphid on soybeans in Kansas please fill out a report on exactly where the aphids are being found including Latitude and Longitude if you have access to a GPS unit or at least the legal description of the field. E-mail your sightings to [psloderb@ksu.edu](mailto:psloderb@ksu.edu). For the current status of soybean aphids in Kansas during 2007 and for more information on how to submit information on soybean aphid infestations link to the following web page:

<http://www.entomology.ksu.edu/DesktopDefault.aspx?tabid=668>

Phil Sloderbeck

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Sincerely,

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