



April 4, 2008 No. 1

Insects to Watch

Field Crops

Army Cutworm



Army cutworm larva feeding on wheat. (Photo by Phil Sloderbeck)

With temperatures increasing it is time to start watching for insects to begin feeding. One of the earliest pests is often the Army Cutworm this larva can feed on a variety of crops this time of year including Alfalfa, Canola and Wheat. Watch for fields or areas of fields that are failing to green-up. Need for treatment depends on the number of worms and the amount of feeding. Lush rapidly growing stands can support higher numbers of larvae than thin or stressed stands. Since we have not heard of much cutworm activity yet, it would appear that problems are not going to be too severe this year.

Management information for army cutworms can be found at:

<http://www.entomology.ksu.edu/DesktopDefault.aspx?tabindex=173&tabid=510> for army cutworms on alfalfa;

<http://www.entomology.ksu.edu/DesktopDefault.aspx?tabid=646> for army cutworms on canola; and

<http://www.entomology.ksu.edu/DesktopDefault.aspx?tabindex=173&tabid=481> for army cutworms on wheat.

Alfalfa Weevil



Alfalfa Weevil Damage to Alfalfa Stem

The other pest that needs to be watched for this time of year is alfalfa weevil. We got our first e-mail on weevil larvae this week. For comparison last year Jeff Whitworth put out alfalfa weevil plots on March 24, so it would appear that we are running a little behind last year, but probably should begin scouting fields as soon as possible, given that we had another long mild fall that should have an early hatch of weevil larvae early this spring. Alfalfa weevil management information can be found at:

<http://www.entomology.ksu.edu/DesktopDefault.aspx?tabindex=169&tabid=508>

Household Pests



Multicolored Asian Lady Beetle
Photo by J. P. Michaud



Termite Workers
Photo by Phil Sloderbeck



Carpenter Ant (© Photo by Richard Grantham, Oklahoma State University from the PDIS web site)

Samples and e-mails to the Diagnostic Lab in the last few days have included questions on multicolored Asian lady beetles, termites, and carpenter ants. The multicolored Asian lady beetles have spent the winter in homes and are coming out of hibernation looking for a way out of the house. Probably just want to vacuum them up and release them outside and look for ways to reduce entry into the home this fall. The termite question concerned finding termite workers in a yard, but it is the time of year where we can also expect calls about swarming termites in the home. Management options will depend on where the termites are found, previous treatments or prevention activities and the perceived threat to structures. The carpenter ant sample was from Garden City and contained winged ants from a home, finding workers foraging in homes this time of year is fairly common, need to determine where infestations are coming from before getting too concerned.

Information on multicolored Asian lady beetles can be found at:

<http://www.entomology.ksu.edu/DesktopModules/ViewDocument.aspx?DocumentID=4521>

Our termite publication is on the web at:

<http://www.oznet.ksu.edu/library/entml2/MF722.PDF>

Or you may want to look at the termite information at the University of Kentucky:

<http://www.ca.uky.edu/entomology/entfacts/ef604.asp>

The Ohio State University: <http://ohioline.osu.edu/hyg-fact/2000/2092.html>

Or the University of Nebraska:

<http://www.ianrpubs.unl.edu/epublic/pages/publicationD.jsp?publicationId=338>

Information on carpenter ants can be found at:

<http://www.oznet.ksu.edu/library/entml2/MF794.PDF>

Phil Sloderbeck

A TOOL FOR HELPING TO DETERMINE THE ONSET OF INSECT AND MITE PEST ACTIVITIES.....

As you read the “subject matter header”, you might have experienced dejavu ---- it is the same opening used in the February 23, Issue #3, of the 2007 Kansas Insect Newsletter.

The “tool” refers to recording and referencing accumulated Growing Degree Days (GDD’s) as a guideline to forecast the probable onset of seasonal activities for certain “events”. Rather than repeating the explanation of synchronized relationships between different recurring biological entities as regulated by climatological factors, and the calculation, correlation and utilization of accumulated GDD’s, please refer back to the aforementioned 2007 Kansas Insect Newsletter, Issue #3.

Our interest in GDD’s is related to several insect pests of common occurrence in Kansas. For 2008, GDD’s will be recorded for the same 21 locations as was done in 2007.

Initiation of current season activities for five early-season pests (eastern tent caterpillar and European pine sawfly, and first generations of European elm scale, juniper webworm and spruce spider mite) is slated to begin between 100 and 200 accumulated GDD’s according to guidelines listed in Don’Orton’s book, “Coincide”. The operative word is, “guidelines” which are approximations. For instance, in 2007 at a Manhattan site, eastern tent caterpillar and European pine sawfly egg hatch occurred at 26 and 78.5 accumulated GDD’s, respectively. Similar determinations were not possible for European elm scale, juniper webworm or spruce spider mite which are more infrequent pests, and for which no local potential sites were known.

Thus far for 2008, March 1st – March 31st accumulated GDD’s are lagging well behind those for 2007. The 2008 values for each site are followed by the 2007 values in parenthesis: Baxter Springs – 104 (290.5); Clyde – 20 (170); El Dorado – 74.5 (214); Elkhart – 40 (144); Ellsworth – 35.5 (201.5); Emporia – 30.5 (220); Garden City – 79.5 (146.5); Hays – 13.5 (140); Hiawatha – 11.5 (185); Independence – 90.5 (284); Kansas City – 23.5 (202.5); Lawrence – 14.5 (203); Manhattan – 8.5 (195); Newton – 24 (202); Olathe – 25 (221); Pittsburg – 104 (287.5); St. Francis – 12.5 (77); Salina – 21.5 (201.5); South Hutchinson.– 24.5 (214); Topeka – 23.5 (221); Wichita – 57 (225.5).

The cool weather does not mean that some “pest” activities are not currently underway at some locations in Kansas. **Eastern tent caterpillar** emergence occurred (from egg masses under observation in the Manhattan area) on March 28, from two of 4 egg masses positioned in a southern exposure against a concrete background – (76 accumulated GDD’s as per an adjacent Max-Min thermometer). That same day, emergence began from an egg mass in a flowering crab (42 accumulated GDD’s as per an adjacent Max-Min thermometer). A total of only 8.5 GDD’s were accumulated as per determinations based on temperatures recorded from a Manhattan weather station.

It is almost certain that ETC already feeding in areas such as Baxter Springs, El Dorado, Garden City, Independence and Pittsburg. Yet no area in Kansas can be excluded as not having current activity.

Egg masses are the starting point for monitoring the initiation of ETC activities (Figures 1-3).

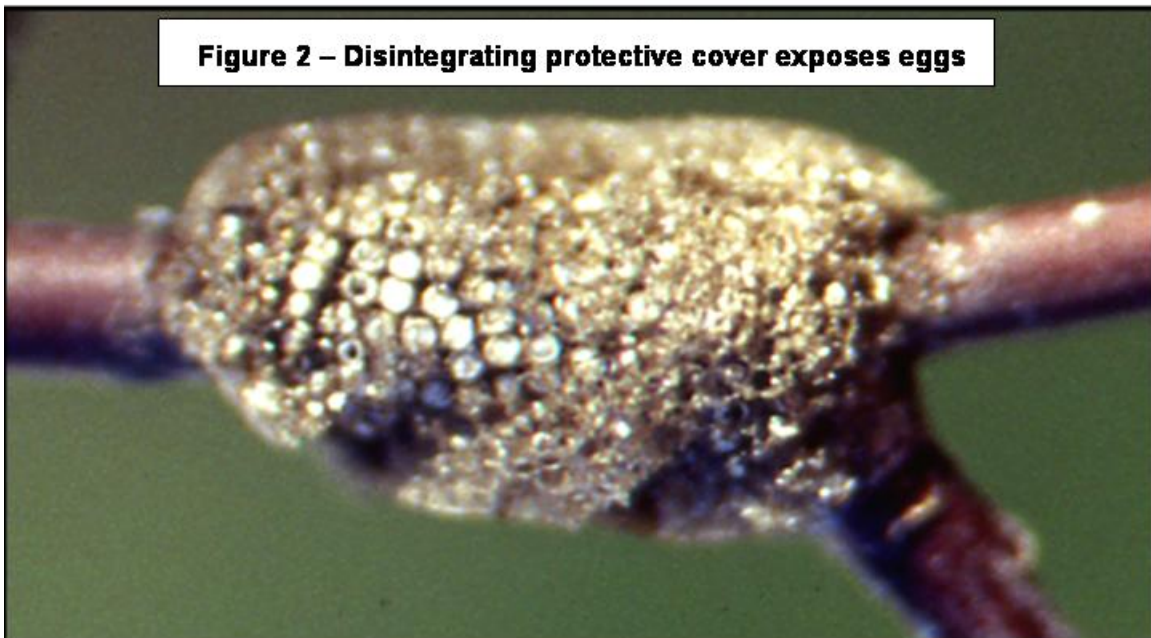


Figure 3 – "Uncapped eggs" – larvae ready to emerge



Newly emerged larvae often remain on egg masses where they initially feed on remnants of egg masses. They soon leave in search of more palatable food available from swelling buds and newly formed leaves. (Figures 4-6)

Figure 4 – Newly emerged larvae

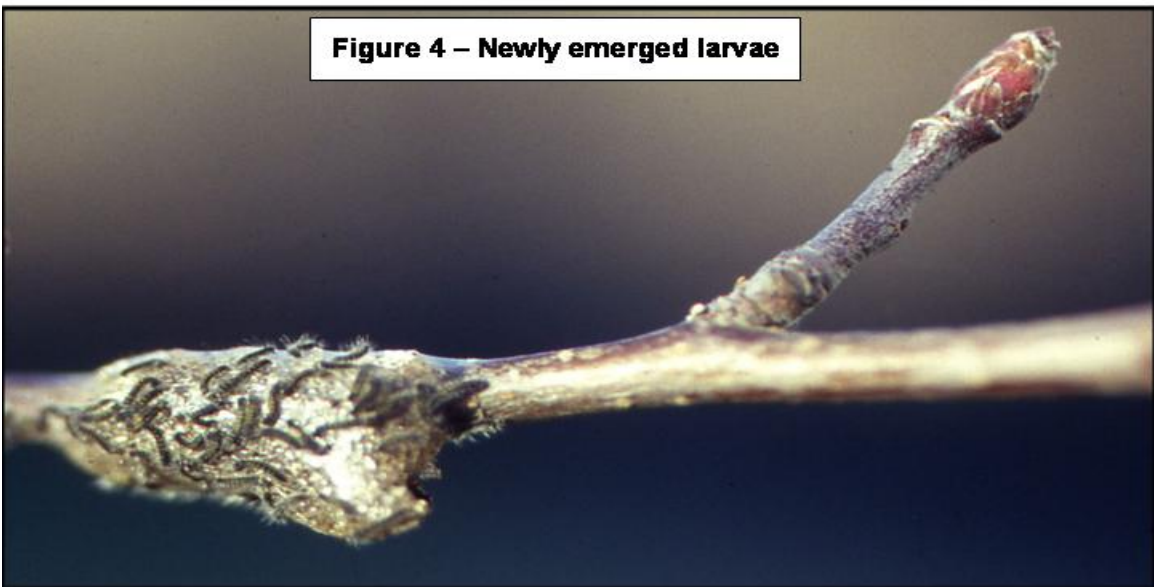
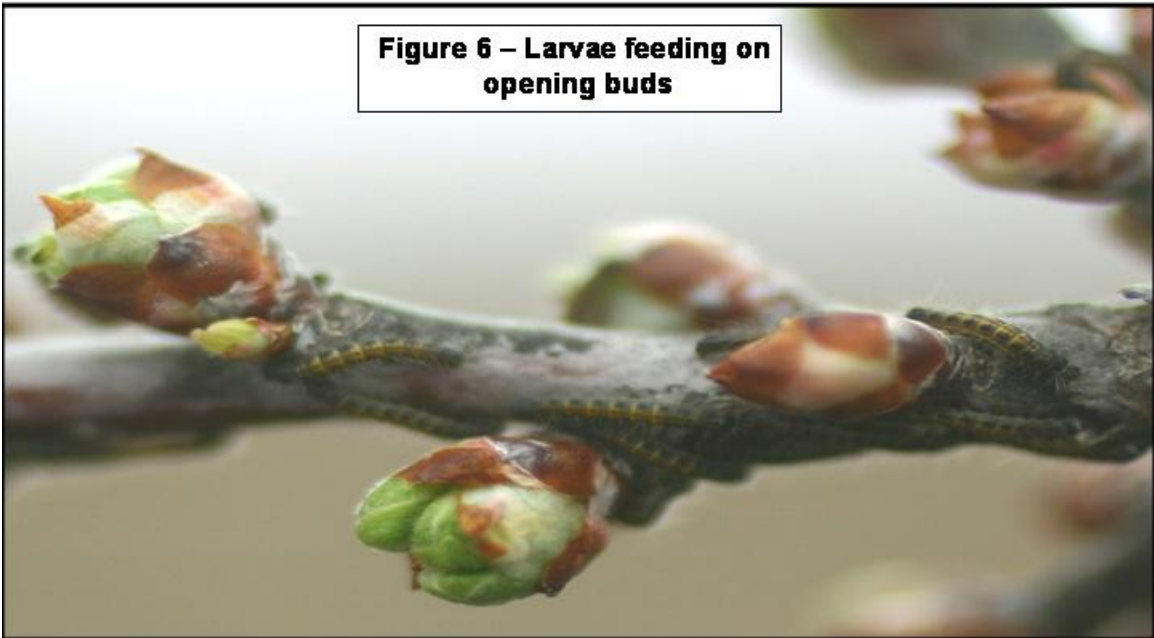


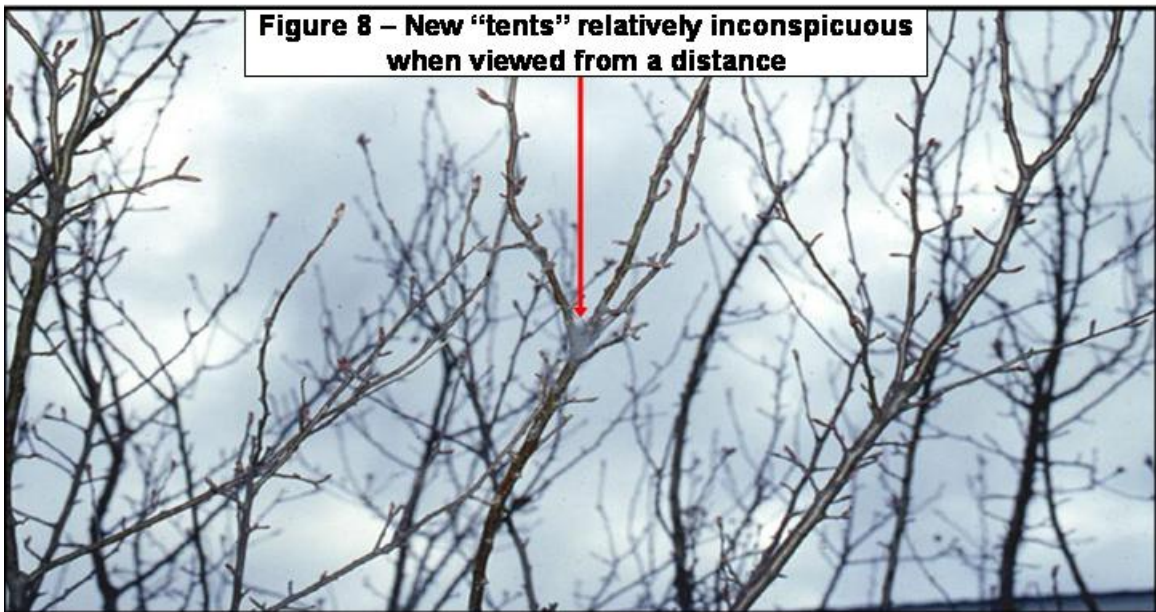
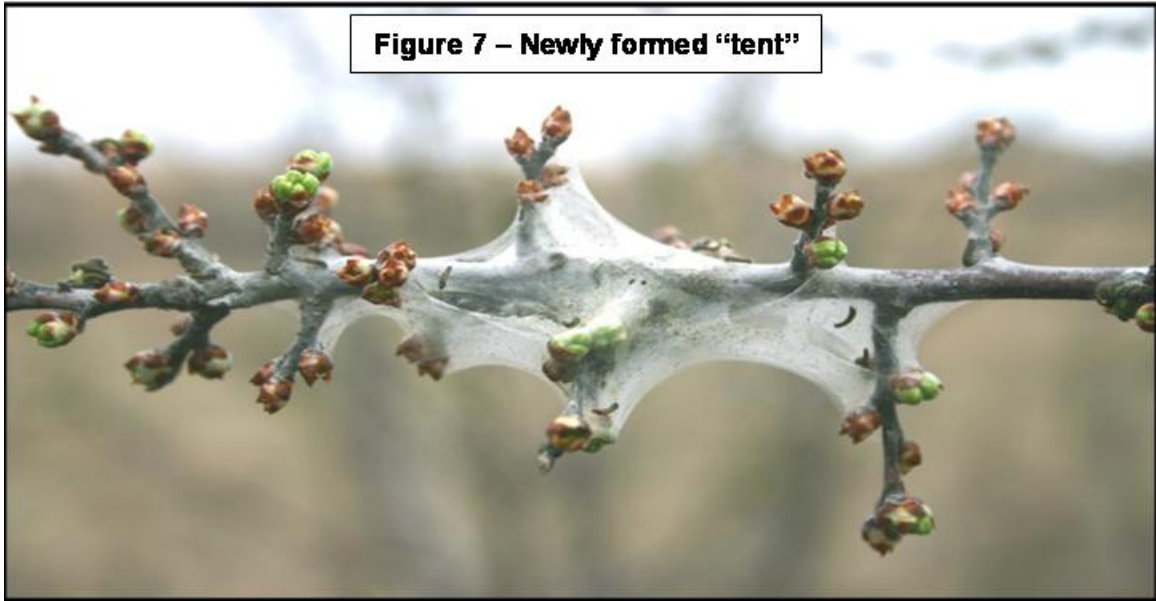
Figure 5 – Newly emerged larvae seeking/foraging on swollen buds



Figure 6 – Larvae feeding on opening buds



Tents are constructed in the crotches of twigs and branches. They are not easily visible in their initial stages of construction due to their small size and loosely woven pattern. Detection requires close scrutiny and patience. Once located, tents can easily be removed and destroyed.



Higher Commodity Prices Will Increase the Need for Proper Pest Management

Spring is here and that means that bugs will soon be active. This year's higher commodity prices are going to trigger some changes in treatment thresholds for many pests. As commodity prices rise the economic thresholds will generally go down, because it will take fewer bushels to pay for treatments. However, one must be careful not to forget the basic importance of proper insect identification, scouting and timing of insecticide applications.

The following is a recent press release stressing the need to stick to the basics of good pest management practices even though the stakes have changed.

Released: February 19, 2008

Crop Production: The Stakes Have Changed But Should Your Betting Strategy? *K-State Entomologist Encourages Producers to Remember Sound Practices*

GARDEN CITY, Kan. – Even as historically high crop prices have producers working to figure out the best way to proceed in cropping decisions this year, a Kansas State University entomologist is encouraging them not to forget basic best management practices.

“Today's commodity prices have people thinking about their cropping decisions, but just because you have moved from the penny ante table to the high stakes table doesn't mean your betting strategy should change,” said K-State Research and Extension state leader in entomology, Phil Sloderbeck. “Your odds of return don't necessarily change just because of the size of the bet.”

True, it may take fewer bushels to pay for an insecticide treatment or other chemical application, said Sloderbeck, who is based in the K-State Research and Extension southwest area office. However, if the pest is not there or if other factors are limiting yields, there may be little chance of a positive return.

“Coffee shop discussions this winter seem to be focusing on all sorts of questionable practices trying to maximize crop yields,” he said. “That's not too surprising given the record high commodity prices. However, the smart investor should probably still focus on proven best management practices even though the economics have changed.”

Variety selection, fertility, pest management, irrigation, timely planting and harvesting are still going to be the critical decisions between profit and loss, the entomologist said. Betting on proven practices such as using certified seed, soil testing, field scouting and irrigation scheduling will all tend to improve a grower's chances of positive returns.

Higher grain prices will lower economic thresholds, however they don't eliminate the need for scouting and applying treatments in a timely manner, Sloderbeck said.

“Adding insecticides or fungicides to fertilizer or herbicide applications only makes economic sense if pests are present and the timing is correct,” he said. “Otherwise you are just making a random bet. Sure, there are times that you may win, but the only proven winner is the house that gets a percentage of the money bet or, in this case, the companies selling the product.”

So, as the stakes go up, it actually may be more important to make safe bets, he added.

“Pay down the loans, purchase new equipment to improve efficiency and timeliness of practices, adjust fertilizer rates to rebuild soil that may have been mined during years of poor returns, pay more for improved higher yielding seed, update or improve irrigation equipment, and hire a crop consultant to improve pest management decisions,” Sloderbeck said.

“As for new or unproven practices, there is nothing wrong with experimenting with these on a few acres, but just be careful not to bet the whole farm, and don’t expect these practices to make up for other major problems,” he said. “In other words, even with higher commodity prices, one needs to focus on the proven best management practices and only make small side bets on unproven practices.”

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[K-State Research & Extension News](#)

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