Kansas Insect Newsletter

For Agribusinesses, Applicators, Consultants and Extension Personnel

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Wheat Head Armyworm

As the wheat dries down, wheat head armyworms are likely to be noticed hanging upside down from awns and feeding on the maturing grain. Populations last year were quite low in comparison to other years, but there are probably always some fields with noticeable populations. Larvae of the first generation are now growing rapidly and can be best observed in morning and evening hours. Very often they are caught up in the screens as wheat is unloaded at the elevator, leading to some concern. This first generation emerges over an extended period in June and July, laying eggs on summer grasses which give rise to a second generation.

The larvae caught up in harvested wheat pose no threat to the stored grain – they will either die or emerge as moths and disperse. However, the farmer is at risk of having wheat downgraded if a load contains more than 10 'insect damaged kernels', or IDK, per 100 grams upon delivery to the elevator. The problem is caused by 'tunneling' of wheat kernels by young wheat head armyworm larvae that leaves many kernels partially consumed and with damage that is superficially indistinguishable from that caused by stored product pests. Ironically, it is not the damage to the kernels that is the main concern, but the relationship that is assumed between damaged kernels and insect fragments in the grain. IDK caused by stored product pests such as lesser grain borer and weevils tends to correlate well with contamination of the wheat with parts of these insects. These pests feed inside the wheat kernels and thus can be hard to remove from the grain prior to milling, but this is not true for wheat head armyworms.

There is no economic threshold for wheat head armyworm in standing wheat, nor are there any remedial treatments available. Damage only becomes evident when it is too close to harvest to apply an insecticide because of preharvest interval limitations, and it is doubtful whether there would be any return on such an investment in any case. We do know that damage tends to be concentrated around field margins, such that the first load harvested is the one most at risk of a downgrade. In light of this, growers could scout fields for damage prior to harvest and, if appreciable armyworm activity is noted, opt for a harvesting pattern that reduces the downgrade probability: Harvesting the field in four sections will dilute grain from the periphery into four different loads instead of concentrating it in one.

J.P. Michaud

Several General Observations ……

This week's news items are a hodgepodge of various observations:

- "Cabbageworms" --- I may not pass as an accomplished gardener in that my cabbages always appear holey and ragged (Figure 1A). However, there are two advantages to my "neglect". Advantage 1: enough heads escape major damage (Figure 1B), and the recipients of those "freebies" don't mind a worm or two which they simply remove ---- and after a washing, all is edible. Advantage 2: "worms" are permitted to develop, providing photo opportunities.

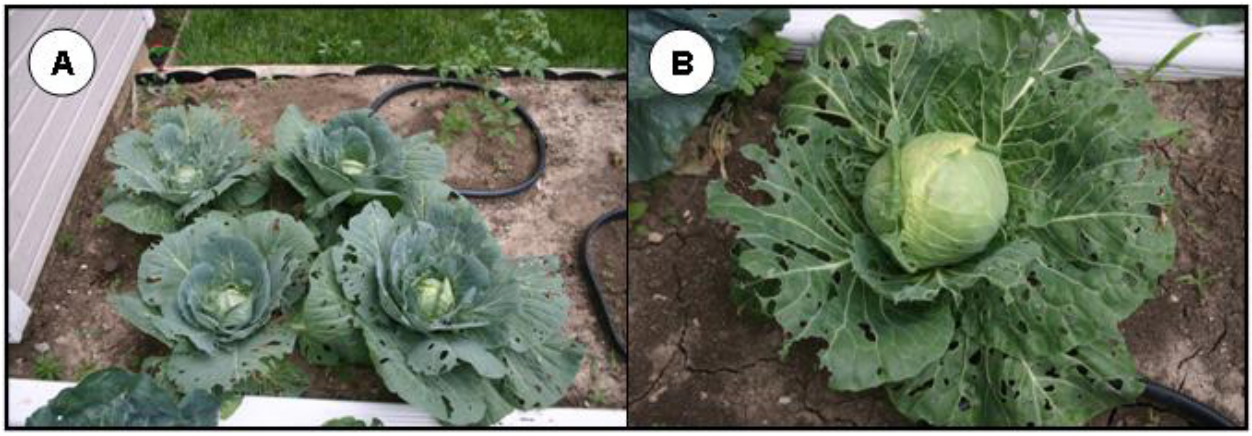

Figure 1

Our two "cabbageworm" species are imported cabbageworms and cabbage loopers. Both undergo complete metamorphosis (4 life stages) (Figures 2 and 3).

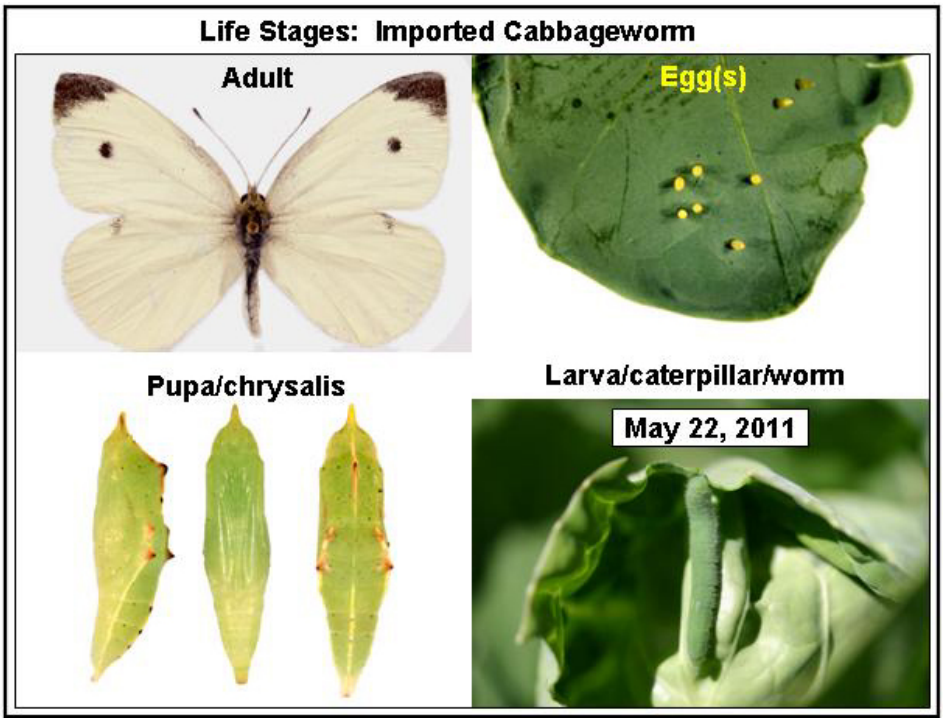

Figure 2

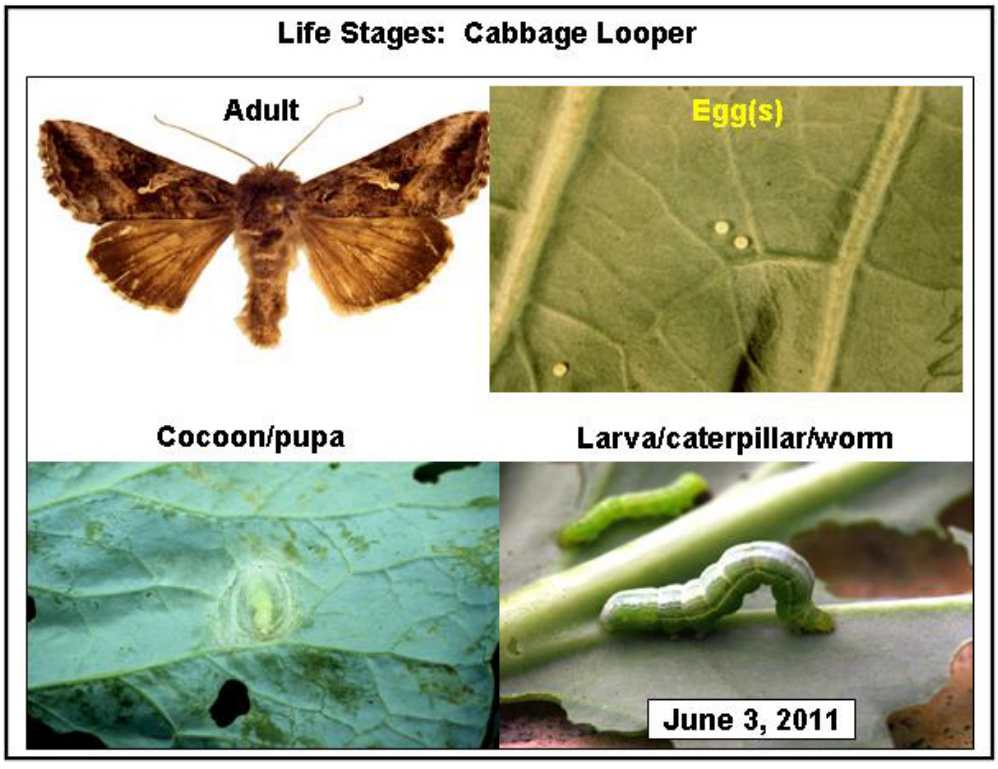

Figure 3

Both species have completed their first of three (possibly 4?) 2011 generations [currently in their transformation stages (Figure 4)]. (An aside --- Last night, the imported cabbageworm butterfly was flying in my basement ---- yes, I pitched it outdoors).

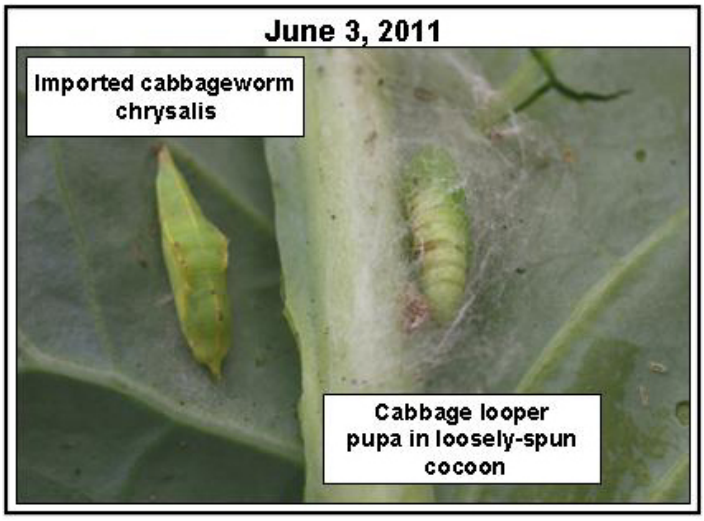

Figure 4

While their preferred "cool season" hosts will soon be wrapped up, these critters will persist on alternate hosts and thus be present and attracted to the fall plantings of cole crops.

- Squash vine borers --- Several County Extension Horticultural agents are using pheromone traps to monitor squash vine borer activities. While many people may not have yet planted squash and pumpkins, Rebecca McMahon (SG Co.) recorded that her first moth was caught on May 24 (Figure 5). Moths are very colorful.

Figure 5

Moths prefer to deposit reddish-brown eggs on the main stems of squash plants. Upon close inspection, eggs can easily be detected (Figure 6).

Figure 6

Pheromone traps are useful in detecting the presence of squash vine borer moths and assist in the timely application of preventative insecticide treatments against borer larvae. It is recommended that individuals who do not employ traps, and who have had (in previous years) problems with this pest, be vigilant during morning hours when moths are active. They can be alerted to the presence of the moths which create an audible buzz as they as they hover over squash/pumpkin plants. Insecticides can then be applied in a timely manner.

- Blister Beetles --- Blister beetles are becoming increasingly active as determined by flight activities recorded in black trap catches in 3 locations. The current beetles are ashgrey blister beetles (Figure 7).

Figure 7

While blister beetles vary in color and size, all species are identifiable by their elongated and cylindrical bodies in combination with "necked appearance" (Figure 8).

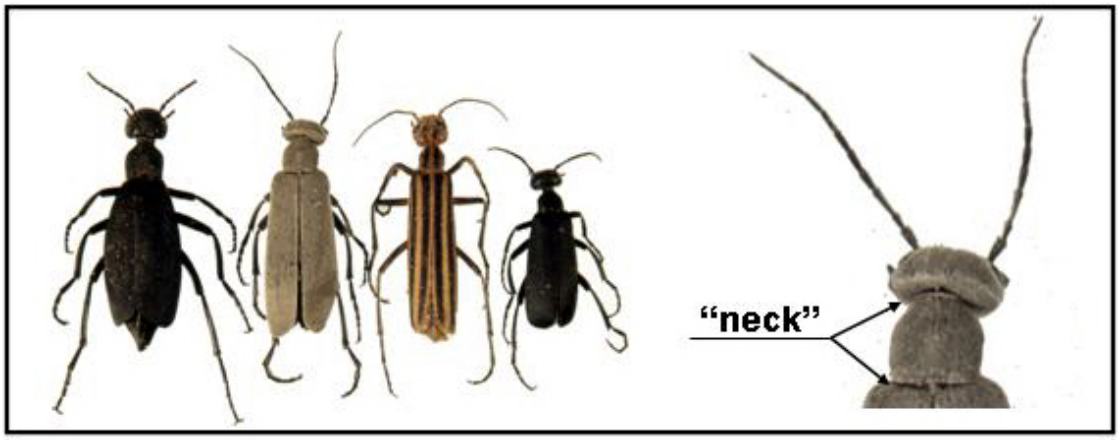

Figure 8

Blister beetles are notorious for their swarms which move into gardens overnight and rapidly defoliate a wide variety of garden vegetable crops. And as quickly as they appear, they up-and-disappear. The dilemma, then, is if an individual revisits a garden after a few days absence, they may be greeted by plants stripped of their leaves. And with the beetles already departed, people may never know what culprits were responsible for the damage. If detected, blister beetles are easily controlled with insecticides registered for use on vegetable crops.

- Eastern tent caterpillars and Walnut caterpillars --- In the same blacklight traps, both of these moth species have also been collected this past. Their appearance is in accordance with expectations. Eastern tent caterpillars completed their feeding several weeks ago. Thus moths (Figure 9) have now emerged to mate. Females are depositing egg masses which (covered with a shellac-like protective coating) survive/endure the hot summer and cold winter months --- egg hatch scheduled for early next spring.

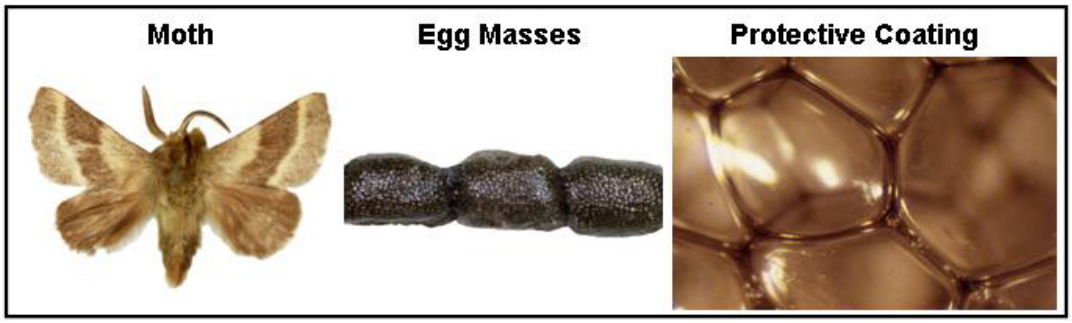

Figure 9

Whereas the 2011 eastern tent caterpillar activities have been completed, walnut caterpillar activities are just getting underway. Moths will mate, eggs will be deposited, and caterpillars will defoliate tree hosts, mainly walnut and pecan in Kansas (Figure 10).

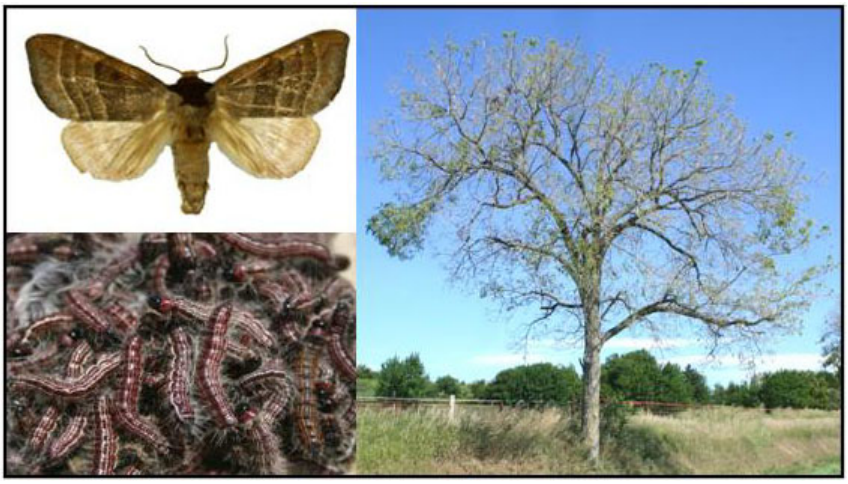

Figure 10

Unless one is alerted very early in the developmental cycle, there is little to be done to thwart walnut caterpillars ------ one never knows from year to year (specifically) which tree(s) will be attacked. By the time defoliation is noted, caterpillars will be near the completion of their feeding cycle, and there would be little to be gained by spraying to kill the caterpillars. Trees defoliated by first generation caterpillars will issue forth (within a month) a new flush of growth while trees defoliated by second generation caterpillars were scheduled for natural fall "leaf-drop".

Parting note: Although I have not looked for (nor have I heard of) bagworm larvae, by now they should be nearing the middle of their 4 – 5 week hatching period. Especially if individuals encountered bagworms last year, they should inspect plantings/trees for current activities. At this time, bagworms will be small. Thus detecting them may require patience as they thoroughly inspect for the presence of small bags (Figure 11).

Figure 11

Timeliness is important for managing bagworms. Although there might be a tendency to immediately apply an insecticide treatment against small bagworms once they are detected, it is recommended that treatments be withheld until the end of June to the first week of July. This will ensure that all eggs have hatched and all bagworms be subjected to exposure of treatments. There are exceptions ----- should populations be so high that the cumulative feeding of small bagworms causes noticeable damage; an immediate treatment would be advisable.

There currently are 514 products registered for use (in Kansas) against bagworms. It therefore becomes necessary that individuals visit local retail outlets to check for product availability in their area. More important than answering the question, "What should be my final product of choice?" is how the product is used. That is, there is a tendency for insecticide treatments to be hastily applied. The drawback to this is that insecticides to not reach both hidden foliage and bagworms. Rather, a slow and deliberate/directed application will achieve thorough coverage which will ensure the sufficient population reductions required to minimize bagworm damage.

Bob Bauernfeind

Report from the Kansas State University Insect Diagnostic Laboratory:

The following samples were submitted to the Insect Diagnostic Laboratory from June 3rd to June 9th.

June 3 2011 – Sedgwick County – False chinch bug nymphs on playground
June 3 2011 – Dickinson County – Male lone star tick
June 5 2011 – Osage County – Periodical cicada
June 6 2011 – Riley County – Mealworm adults in animal feed
June 6 2011 – Ellsworth County – Springtails (Collembola) in home
June 6 2011 – Shawnee County – Brown recluse in home
June 7 2011 – Dickinson County – Female brown dog tick on human
June 8 2011 – Wabaunsee County – Brown spider beetles in basement
June 8 2011 – Wabaunsee County – Periodical cicadas in lawn
June 8 2011 – Sumner County – European fruit lecanium on maple
June 8 2011 – Pottawatomie County – Male American dog tick and Comb-footed spider
June 8 2011 – Riley County – Female American dog tick on human
June 8 2011 – Leavenworth County – Millipedes around pool

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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