Purdue Cooperative Extension Service June 2, 2006 - Issue 10

In This Issue

Insects, Mites, And Nematodes

Still Moving: Armyworm Larvae Going Strong - (*John Obermeyer, Christian Krupke, and Larry Bledsoe*) -

- A variety of larval instars seen in Indiana wheat and grass pasture fields
- Wheat defoliation and head clipping have been noted in southern counties

Reports continue to stream in regarding armyworm larval feeding in wheat and pastures. Our advice is the same as in past weeks: Stay vigilant and continue to examine plants in different areas of a field, especially where plant growth is dense. If you do the “drive-by scouting” and wait until head clipping is evident, it may be too late – this is usually indicative of a severe armyworm infestation. The current levels are well below where we were in 2001 at this time, but there is still sufficient time for an infestation – the extended cool period in May seems to have delayed the armyworm cycle much as it has other insects and crops. Look for flag leaf feeding, clipped heads, and armyworm droppings on the ground. The worms can be hard to find, and on sunny days will sometimes take shelter under crop residue or soil clods. As we discussed in the May 12 issue of *Pest&Crop*, follow the following scouting guidelines: If counts average approximately 5 or more larvae per linear foot of row, the worms are less than 1-1/4 inches long and not parasitized or diseased, and leaf feeding is evident, control may be justified. If a significant number of armyworm are present and destroying the leaves, or the heads, treat immediately. Again, please let us know what you are seeing.

Armyworm feeding on wheat

Armyworm Insecticides (Read and follow ALL label rate, application, and use directions)

Crop	Product (Formulation)	Restrictions (days to harvest)
Corn	Ambush (EC) Asana XL Baythroid 2 Capture Lorsban (4E) Mustang Max Penncap-M Pounce (EC) Sevin (4F, 80S, XLR) Tracer	30 21 21 30 35 30 12 30 48 28
Soybean	Lorsban (4E) Mustang Max Sevin (4F, 80S, XLR) Warrior T	28 21 14 45
Wheat	Mustang Max Penncap-M Sevin (4F, 80S, XLR) Warrior T	14 15 (harvest or grazing) 21 grain harvest, 7 grazing forage 30
Grass Pasture	Sevin (4F, 80S, XLR)	14 (harvest or grazing)
Alfalfa	Lorsban (4E) Mustang Max Sevin (4F, 80S, XLR) Warrior T	14 3 7 (harvest or grazing) 1 forage, 7 hay

Corn Rootworm Hatch is Underway- (*John Obermeyer, Christian Krupke, and Larry Bledsoe*)

- Egg hatch will continue over the next several weeks
- Assess insecticide performance or need for post-insecticide by sampling at peak hatch

It's always a festive occasion when we find our first rootworm larva of the year, and this year June 1 marked the occasion (May 31 last year). The corn plant in question was located in Tippecanoe County, and according to degree-day calculations, we have accumulated sufficient heat units for rootworm egg hatch throughout Indiana late last week. This date is not particularly significant however, as egg hatch occurs over a period of 3-4 weeks, meaning that anyone planting or replanting corn during the next two weeks should consider using a soil insecticide to protect the roots of emerging plants.

Sampling a corn field at the time of peak rootworm egg hatch (before lay-by) will give an indication of the performance of a soil insecticide, if one was applied at planting, or those waiting to determine the need for a soil insecticide at cultivation. Randomly select 1 plant in each of at least 10 representative areas of a field. Using a shovel, cut a 7-inch cube of soil around the base of each plant, making certain that the blade enters the soil vertically. Lift the plant and soil out of the ground, and place it on a piece of dark cloth or plastic. Slowly break the soil away from the roots and carefully examine the soil and roots for rootworm larvae. Look for small (1/8 to 1/2 inch in length), slender, white larvae with brown head and tail sections.

Count and record the number of larvae found. Repeat the sampling procedure for each plant. After all samples have been processed, determine the average number of rootworms per plant. Two or more rootworm larvae per plant prior to lay-by may signal the need for rootworm larval control.

Soybean Aphids Without a Home? - (*John Obermeyer, Christian Krupke, and Larry Bledsoe*) -

- Soybean aphids found on buckthorn in Indiana
- Late soybean planting may affect soybean aphid colonization patterns

As we continue to navigate through this cool, wet planting season it is worthwhile to take a moment to think of one of our old friends from 2005 – the soybean aphid. Aphids survived the mostly mild winter conditions in the Midwest on their overwintering host, buckthorn, and should be ready to move onto soybeans at any time. However, any of you that have been traveling around the northern half of the state will have noticed that there are precious few soybeans out of the ground, certainly far fewer than at this point last year: 58% planted as of May 30 vs. 88% at this time last year, and 30% emerged vs. 61% last year. What this means for migrating aphids is unknown: will they remain on buckthorn in higher numbers, or perhaps have higher concentrations on all available emerged beans? Could this translate into lower numbers later in the year? None of these questions have answers at this point, and we have not yet found soybean aphid on soybeans in Indiana (or anywhere else throughout the Midwest). For reference, our first confirmed aphid on beans in Indiana for 2005 was May 26 in Miami county. Bottom line here is that if you have emerged beans, it is time to begin taking a quick look around for aphids. We can say with certainty that we will not be at treatable levels for quite some time (and with luck, not at all), but we would love to hear from anyone with observations to report.

Soybean aphids on buckthorn (*Photo by Ho Jung Yoo*)

Black Light Trap Catch Report - (*John Obermeyer*)

County/Cooperator	5/16/06 - 5/22/06							5/23/06 - 5/30/06						
	VC	BCW	ECB	SWCB	CEW	FAW	AW	VC	BCW	ECB	SWCB	CEW	FAW	AW
Dubois/SIPAC Ag Center	0	0	0	0	0	0	1	0	0	13	0	0	0	8
Jennings/SEPAC Ag Center	0	0	1	0	0	0	1							
Knox/SWPAC Ag Center	0	0	0	0	0	0	2	0	0	2	0	0	0	1
LaPorte/Pinney Ag Center	0	0	0	0	0	0	7							
Lawrence/Feldun Ag Center	0	0	1	0	0	0	3							
Randolph/Davis Ag Center	0	0	0	0	0	0	1	0	0	1	0	0	0	3
Tippecanoe/TPAC Ag Center	0	0	0	0	0	0	1							
Whitley/NEPAC Ag Center	0	0	0	0	0	0	23							

VC = Variegated Cutworm, BCW = Black Cutworm, ECB = European Corn Borer, SWCB = Southwestern Corn Borer, CEW = Corn Earworm, FAW = Fall Armyworm, AW = Armyworm

Weeds

Harvest Aid Herbicides For Winter Wheat – (*Bill Johnson, Glenn Nice, and Tom Bauman*)

The following herbicides (Table 1.) are labeled for use as harvest-aid treatments in winter wheat. These herbicides cannot be used before the hard dough stage of wheat (30% grain moisture or less). Keep in mind that it is likely that weed growth in wheat at that time will likely be over 1 foot tall when wheat is in the hard dough stage. In addition, because weeds will be large, it will take 5 to 15 days for herbicides to desiccate the weeds. Therefore we recommend the use of full labeled rates and tank mixes to increase the chance of success on large weeds. Labeled tank mix partners for harvest aid treatments in wheat include 2,4-D + glyphosate and 2,4-D + Clarity, or Clarity + glyphosate. If soybean will be double-cropped after wheat harvest, it would be advisable to avoid use of 2,4-D and Banvel/Clarity because of the required recropping intervals.

Table 1. Herbicides labeled for use as winter wheat harvest-aid treatment

Herbicide and Formulation	Formulated Product Rate	Weeds Controlled	Application Method and Precautions
2,4-D amine or ester (4 lb/gallon formulations	1 to 2 pts/A	Suppression of wild garlic, wild onion and broadleaf weeds less	Apply when wheat is in the hard dough (30% or grain moisture) stage. Ester formulation may be more active on garlic. Underseeded legumes will be severely injured. Do not graze within 2 weeks after application. Do not use treated straw for livestock feed. If the 1pt/A rate is used, do not plant soybean for 7 (ester) or 15 days (amine) after planting. If greater than the 1 pt/A rate is used, do not plant soybean for 30 days after application.
Glyphosate (Roundup and other formulations)	16 to 32 oz/A the 3 lb acid equivalent formulation, 11 to 22 oz/A of Roundup Weathermax	Suppression of grass and broadleaf weeds	Apply when small grains are in the hard dough stage. Do not apply to wheat grown for seed. Stubble can be grazed immediately after harvest.
Clarity	8 oz/A	Suppression of broadleaf weeds	Apply when wheat is in the hard dough stage and green color is gone from stem. A waiting period of 10 to 14 days is required before harvest. Do not graze or use feed from treated area. Do not plant soybean for 14 days after application.
Brash	2 pt/A	Suppression of broadleaf weeds	Apply when wheat is in the hard dough stage and the green color has disappeared from the nodes of the stem. Apply at least 7 days before harvest. Do not use treated wheat for seed unless a germination test is performed on the seed.

Plant Diseases

***Fusarium* Head Blight of Wheat** - (*Gregory Shaner and George Buechley*)

- The outlook is still favorable for little problem with head scab

Although temperature and relative humidity have been high for the past several days, the weather-based risk model for *Fusarium* head blight of wheat, available at http://www.wheatscab.psu.edu/, continues to indicate a low risk for the disease throughout Indiana. We have been monitoring spores of the head blight fungus at a field research site in Tippecanoe County. We sample air in a wheat field and assay wheat heads directly for spores of *Fusarium graminearum* and other species of *Fusarium*. We must incubate these samples for about a week in a culture medium in order for the fungi to grow sufficiently for identification. We recovered spores each day from heads assayed from 16 through 24 May. The air samples have also yielded low numbers of spores each day. Although spores are in the air and landing on wheat heads, we have yet to see head blight in these plots, with the exception of one blighted spikelet on one head, found last Sunday. During visits last week to wheat fields in southeast, southwest, and north-central Indiana, we saw no head blight. Thus, even though spores are moving about, there has evidently been little or no infection, as of at least a week ago. Most of the wheat in Indiana is probably now past the flowering stage, which is the most vulnerable stage for infection. However, infection can occur even into late milk or very early dough, so it is important to continue to monitor fields.

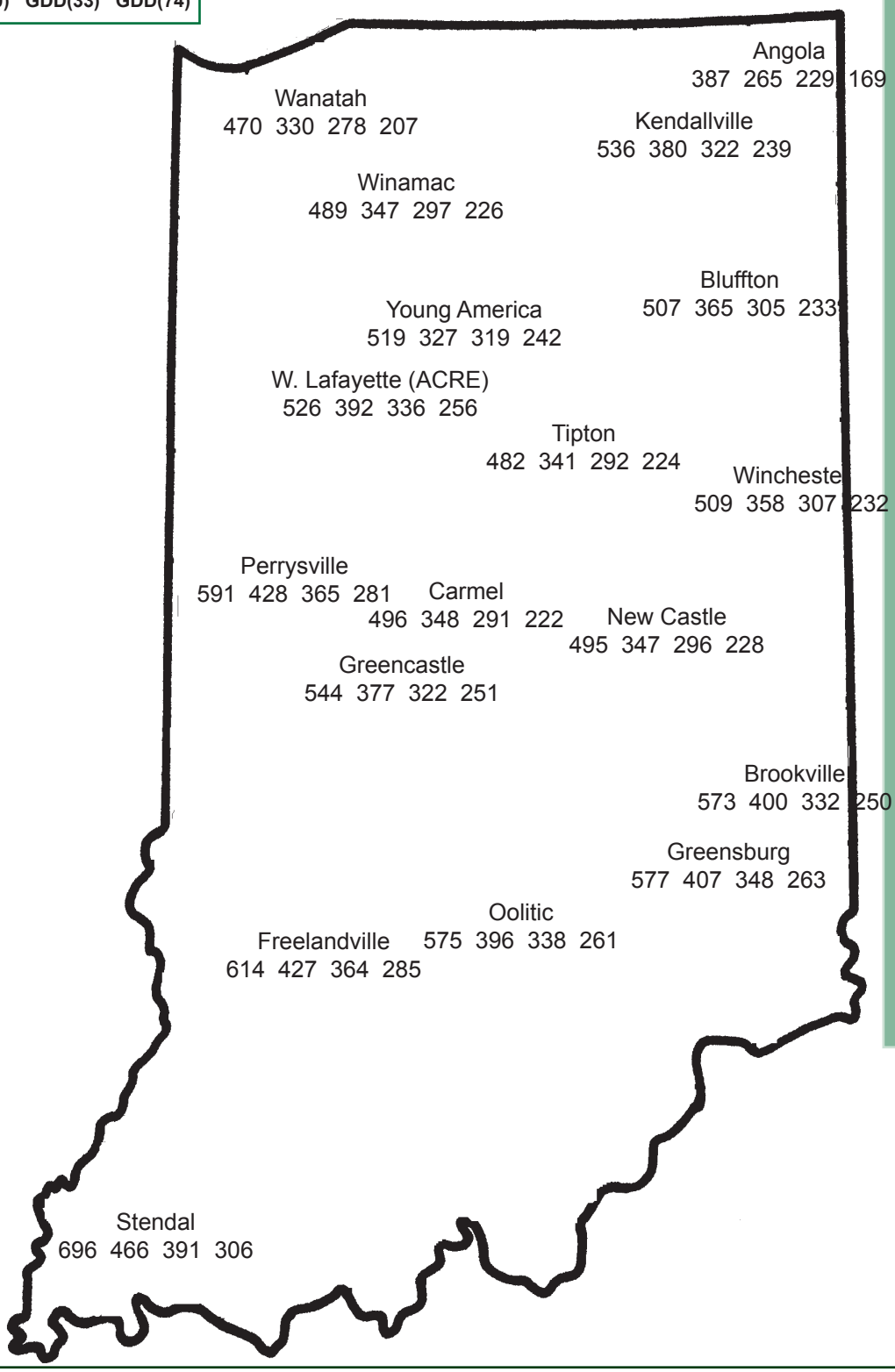
John Obermeyer's idea of a "dream vacation"!

Weather Update

Temperatures as of May 31, 2006

GDD(2) = Growing Degree Days from April 12 (2% of Indiana's corn planted), for corn growth and development
GDD(10) = Growing Degree Days from April 26 (10% of Indiana's corn planted), for corn growth and development
GDD(33) = Growing Degree Days from May 3 (33% of Indiana's corn planted), for corn growth and development
GDD(74) = Growing Degree Days from May 10 (74% of Indiana's corn planted), for corn growth and development

MAP KEY				
Location				
HU50	GDD(2)	GDD(10)	GDD(33)	GDD(74)



4" Bare Soil Temperatures 5/31/06

Location	Max.	Min.
Wanatah	88	71
Columbia City	77	69
Lafayette	88	73
Farmland	91	71
Butlerville	85	71
Vincennes	89	72