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In This Issue

Insects, Mites, and Nematodes
- Rootworm Hatch Underway
- **VIDEO:** Armyworm in Soybean, Homeless and Starving
- Armyworm Pheromone Trap Report

Plant Diseases
- Fungicide Efficacy Tables for Field Crop Diseases Available

Agronomy Tips
- Need to Plant Soybeans Still?

Weather Updates
- Weather Outlook by NOAA/NWS
- Moisture and Temperature Accumulations

Insects, Mites, And Nematodes

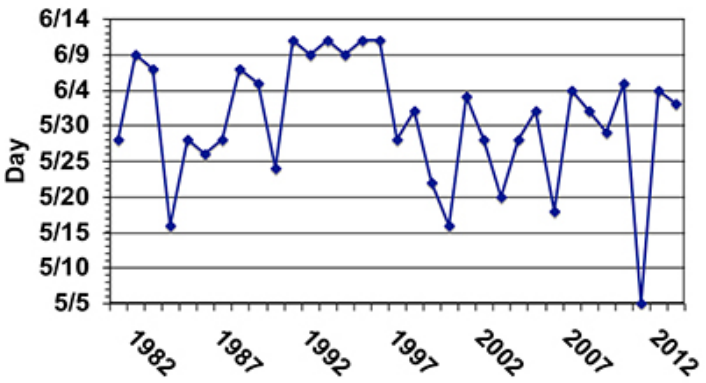
Rootworm Hatch Underway! – (*Christian Krupke and Larry Bledsoe*)

- Rootworm hatch is underway, will continue for many weeks
- More reports of adults last year than previous years may = more eggs
- Watch fields closely this year with reports of resistance to Bt hybrids in many surrounding states

Rootworm hatch has begun, and is estimated to have begun locally (just a few miles south of Purdue campus) on **June 2.** This is in line with recent observations, which typically have occurred during the final days of May. Overwintering mortality is not expected to be especially high, even though the winter was a cold one – rootworm eggs have exceptional cold tolerance and soil temps don't vary nearly as much as air temperatures, especially with abundant snow cover.

This is an important time to keep rootworm monitoring in mind later in the season, when larvae are large enough

First Observation of Rootworm Larvae in Corn Roots, Tippecanoe County, Indiana, 1982-2014



to cause visible damage to roots and plant lodging. Most of our corn hybrids are Bt-expressing hybrids, and as most of you have heard by now, there have been problems with resistance in rootworm populations in many states across the Midwest. The fields with problems are typically continuous corn that has been planted with the same Bt trait for several years in succession. Those are the fields to keep an eye on this year – lots of beetles and lodged corn in July and August will be the early giveaways. More on this later, but for now just rest assured that rootworms have survived the winter.

VIDEO: Armyworm in Soybean, Homeless and Starving – (*John Obermeyer*)

We have received multiple calls recently of concerned pest managers finding armyworm damage to soybean seedlings. The scenarios were the same, that is soybean no-tilled into cereal rye cover crop. Weeks ago armyworm moths were attracted to laying eggs on the grassy cover, in which the hatched larvae were quite content on feeding. Then a burn-down herbicide was applied before/at planting and the armyworm were eventually left with no food except for the emerging soybean seedlings. To satisfy their hunger, armyworm will feed on the soybean, but are unable to properly digest this legume for nourishment.

Obviously a rescue insecticide treatment is not needed, as the armyworm starve to death the tattered plants will give way to undamaged leaves. The accompanying video will demonstrate the situation. Happy Scouting!

Click on the picture to view this YouTube video clip.

Armyworm Pheromone Trap Report - (*John Obermeyer*)

County/Cooperator	Wk 1 = 4/3/14 - 4/9/14; Wk 2 = 4/10/14 - 4/16/14; Wk 3 = 4/17/14 - 4/23/14; Wk 4 = 4/24/14 - 4/30/14; Wk 5 = 5/1/14 - 5/7/14; Wk 6 = 5/8/14 - 5/14/14; Wk 7 = 5/15/14 - 5/21/14; Wk 8 = 5/22/14 - 5/28/14; Wk 9 = 5/29/14 - 6/4/14											
	1	2	3	4	5	6	7	8	9	10	11	12
Dubois/SIPAC Ag Center			2	0	0	1	0	0	1			
Jennings/SEPAC Ag Center	0	0	0	0	0	0	0	0	0			
Knox/SWPAC Ag Center	0	0	0	0	0	0	0	0	0			
LaPorte/Pinney Ag Center	0	0	1	1	14	3	0	0	0			
Lawrence/Feldun Ag Center	1	8	10	10	0	5	0	0	3			
Randolph/Davis Ag Center	0	2	1	1	1	0	0	0	0			
Tippecanoe/Meigs			1	0	0	0	0	0	0			
Whitley/NEPAC Ag Center	0	1	2	17	20	35	0	0	0			

Plant Diseases

Fungicide Efficacy Tables for Field Crop Diseases Available – (*Kiersten Wise*) -

Each year, the national plant pathology groups for corn, soybean, and wheat develop tables that provide efficacy ratings for the most widely marketed fungicides on common diseases of each crop. These tables are updated annually, and the latest versions of each table can be accessed with the following links:

Diseases of Corn: Fungicide Efficacy for Control of Corn Diseases
BP-160-W <https://mdc.itap.purdue.edu/item.asp?item_number=BP-160-W>

Diseases of Soybean: Fungicide Efficacy for Control of Foliar Soybean Diseases
BP-161-W <https://mdc.itap.purdue.edu/item.asp?Item_Number=BP-161-W>

Diseases of Wheat: Fungicide Efficacy for Control of Wheat Diseases
BP-162-W <https://mdc.itap.purdue.edu/item.asp?Item_Number=BP-162-W>

Agronomy Tips

Need to Plant Soybeans Still? - (*Shaun N. Casteel*) -

Spring warm-up and field dry-out has been erratic this planting season of 2014. Cold and wet conditions plagued much of our planting season. We have been able to catch a few good periods to plant as the roller coaster rose for temperatures and dropped for rainfall. Just like any good roller coaster, the rise of temperatures peaked so it could plummet downward while the intensity and frequency of rain skyrocketed. All this occurred in our typically prime planting weeks. Many areas caught up and planted soybeans (some finished while others just started) during the week of Memorial Day. Indiana only had a third of its soybeans planted by May 18, but over the course of the following two weeks nearly 50% of the crop was planted (in total 81% planted as of June 1st, USDA-NASS 2014). We are looking pretty fair at the state level as we near the 5-year average, though 3 of the last 5 years have been late plantings (Figure 1).

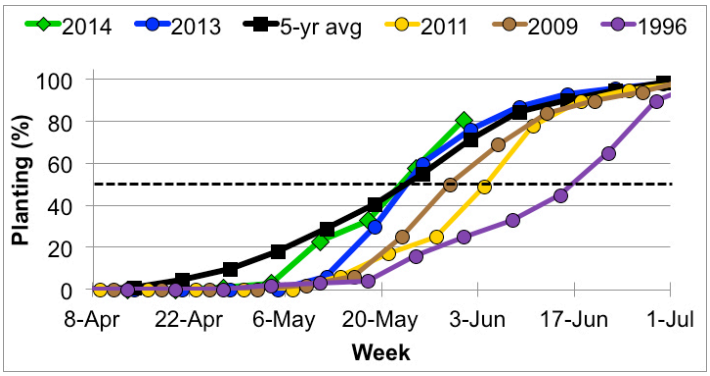


Figure 1. Soybean planting progress of Indiana in 2014, 2013, 5-year average, 2011, 2009, and 1996. 2011, 2009, and 1996 were among of the slowest planting rates. (USDA-NASS, 2014).

Many areas still need to plant soybeans for the first time while others may need to replant based on the large amount of rain in the past few days. We need set the stage for the best possible return on late plantings of soybean. If you are in the situation of planting soybeans in June, you need to consider your seeding rates, row width, and maturity group. Soybeans trip their reproductive trigger (flowering) as the day length shortens, which occurs much quicker with delayed plantings.

SEEDING RATE – Planting in the first weeks of June require 10 to 20% increase in seeding rates to facilitate quicker row closure and higher pod height with fewer days to flowering. Increased seeding rates will also be needed in those fields that have heavy corn residue, which has been prevalent this planting season due to limited breakdown over the winter. For instance if you typically plant 140,000 seeds/acre in 15-inch rows, you need to bump the seeding rate to ~155,000 seeds/acre in the first week of June then to ~170,000 seeds/acre in the second week of June, so forth and so on. Soybeans will produce fewer main-stem nodes (attachment points of trifoliates and ultimately pods) as planting is delayed, so the increasing seeding rates will also help to overcome the shortfall in node production.

ROW WIDTH – If you plant 30-inch rows, you need to look into the possibility of planting narrower rows with the limited time to flowering. We typically see a yield advantage of 5 to 10% for soybeans planted in narrow rows (15 inches or less) compared to 30-inch rows, and this difference will be even more prominent in late planting situations. Wide rows (30-inch) take nearly 25 days longer and 40 days longer to canopy compared to 15-inch and 7.5-inch rows, respectively. This delay will certainly decrease the yield potential as canopy closure would occur well after reproductive initiation.

MATURITY GROUP – Full-season varieties for your respective regions should be planted until June 15 for the northern quarter, June 20 for the central half, and June 25 for the southern quarter of Indiana. Varieties should be dropped a half maturity group after these dates and planted for another two weeks before we consider other alternatives. If you are in a very late planting situation, I suggest back-dating 90 days from the typical fall freeze in your region to determine if you have enough growing season to mature a soybean crop. My hope is that you will not need to make that determination.

Action	Northern IN	Central IN	Southern IN
Stay the course until:	June 15	June 20	June 25
Then, drop 1/2 maturity group and plant until:	June 30	July 5	July 10

References: USDA-NASS. 2014. Crop Progress and Condition. USDA, National Agricultural Statistics Service. [On-line]. Available at <http://www.nass.usda.gov/Statistics_by_State/Indiana/Publications/Crop_Progress_&_Condition/index.asp> [URL accessed June 2014].

Weather Update

Weather Outlook by NOAA/NWS – (*Jim Noel, NOAA/NWS/Ohio River Forecast Center*) -

Weather Pattern for June: It appears a cool low pressure will anchor over southeast Canada in June while a dome of very warm air will anchor over the southern U.S. This will leave the corn and soybean Midwest into the Ohio Valley in the target zone which will bring a more active pattern to the region.

First half of June Outlook: Temperatures will average near normal for the first half of June after a warmer than average finish to May. Rainfall will average 1-3 inches for the first half of June across Ohio which is considered close to normal as well. This should provide good growing conditions across Indiana

June Outlook: June will be slightly cooler and wetter than normal across most of Indiana. <http://www.cpc.noaa.gov>.

Heavy Rain and Flooding: There is a risk of heavy rain and localized flooding at times during June. The chances for > 2-3 inches of rain is about 50% across Indiana.

<http://weather.gc.ca/ensemble/naefs/produits_e.html>

<http://www.erh.noaa.gov/ohrfc/HAs/images/NAEFS16day.pdf>

Drought: Even though we dried out in many areas in late May, rain chances will increase in June so the threat for drought is rather low in June based on the latest weather and climate information. <http://droughtmonitor.unl.edu>

Soil Moisture/River Outlook:

With increased rain chances across Indiana in June, soil moisture and river conditions should be okay. The latest outlooks can get found at the National Weather Service Ohio River Forecast Center. <http://www.erh.noaa.gov/ohrfc/WRO.shtml>.