PURDUE UNIVERSITY | Extension ENTOMOLOGY

Pest&Crop newsletter

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In This Issue

Armyworm Feeding On Soybean, After Cover Crop Termination

(John Obermeyer)

Armyworm primarily feed on grasses. As seen in the past, and now being reported this spring, they will feed on no-tilled soybean into a cereal rye cover crop. Weeks ago, armyworm moths were attracted to laying eggs on grasses, 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. Depending on the size of the larvae, and where they feed on the plant, some soybean seedlings may be killed, Obviously, a rescue insecticide treatment is not needed, as the armyworm slowly starve to death and the tattered plants will give way to undamaged leaves.

Armyworm seeking a grass plant to feed on.

Enjoy this video on “Armyworm in Soybean, Homeless and Starving”.

Soil Critters, Challenged Corn, Replanted Areas

(John Obermeyer)

Standing water and freezing temperatures really put the hurt to some early planted corn. Pest managers have been finding a multitude of critters in the soil, some causing the final death-blow, some feeding on the decaying seedlings. The main question has been, “does one need to protect the replanted corn?” Because of the warmer soil temperatures, and the development of the assortment of grubs, wireworms, and maggots being found, measures beyond a low-rate of a seed-applied insecticide should not be necessary. The insects have now progressed, so they aren’t a threat. Too, replanted corn will “pop out” of the ground with the warm temperatures giving remaining pests little time to cause damage. Happy Scouting!

Challenged corn seedling.

Armyworm Pheromone Trap Report – 2020

(John Obermeyer)

County/Cooperator	Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8	Wk 9	Wk 10
Dubois/SIPAC Ag Center	724	84	4	28	108	83	23	20	69	
Jennings/SEPAC Ag Center	60	75	11	15	35	46	5	9	5	
Knox/SWPAC Ag Center	1162	308	56	168	64	11	49	129	54	
LaPorte/Pinney Ag Center	115	65	0	21	455	176	591	1214	214	

County/Cooperator	Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8	Wk 9	Wk 10
Lawrence/Feldun Ag Center	974	347	57	741	753	416	380	301	81	
Randolph/Davis Ag Center	117	207	16	51	15	18	104	211	22	
Tippecanoe/Meigs	225	wind dmg.	6	54	151	221	360	223	12	
Whitley/NEPAC Ag Center		9		38		214	715	633	128	

Wk 1 = 4/2/20-4/8/20; Wk 2 = 4/9/20-4/15/20; Wk 3 = 4/16/20-4/22/20; Wk 4 = 4/23/20-4/29/20; Wk 5 = 4/30/20-5/6/20; Wk 6 = 5/7/20-5/13/20; Wk 7 = 5/14/20-5/20/20; Wk 8 = 5/21/20 – 5/27/20; Wk 9 = 5/28/20-6/3/20; Wk 10 = 6/4/20-6/10/20; Wk 11 = 6/11/20-6/17/20

Is Your Hay Too Hot?

(Keith Johnson)

Much hay has been made in Indiana the last 10 days. It is important to package hay at the correct moisture content to avoid excessive heating of bales when in storage. Target moisture to begin baling hay without an effective preservative is 20 percent, 18 percent and 17 percent for small rectangular bales, large round bales, and large rectangular bales, respectively. Excessive heating can result in mold formation by microorganisms, the binding of amino acids to soluble sugars that results in reduced available protein, reduced forage quality, and the possibility of storage structure fires.

Moldy hay caused by microorganisms because hay was made at too high a moisture content. (*Photo Credit: Brooke Stefancik, Purdue ANR Educator-Sullivan County*)

It is quite normal for a temperature rise to occur after hay is packaged, but anything greater than 125 degrees F should be intently monitored. My observation has been that hay producers are watchful of the possibility of "hot" hay for several days after it is put into storage. After this time, the hay may be assumed to be okay and not monitored again. With hay storage structure fires, it may take three to four weeks before spontaneous combustion occurs. It is important to note temperature for an extended period of time and not just for a few days.

Hay in the foreground was removed from the hoop building because it was smoldering. (*Photo Credit: Keith Johnson*)

Temperature probes are available through many agricultural vendors. An online search will provide many resources to consider. The probe should be strong so it can penetrate through tightly packed bales to a length of around six feet preferred. Options for making a probe that permits thermometer insertion on a string can also be found with an online search.

The following table provides temperature values and action steps that should be considered when hay is put into storage.

Critical temperature and action steps for hay in storage.

Hay Temperature	Action Steps
125°F or lower	***No action needed.***
150°F	***Entering the danger zone.*** *Check temperature twice daily. If possible, disassemble stacked hay to allow move air to move around and cool heated bales.*
160°F	***Reaching the danger zone.*** *Check temperature every couple of hours. If possible, disassemble stacked hay to allow more air to move around and cool heated bales.*
175°F	***Hot spots or fire pockets are likely.*** *Continue to check temperature frequently. If possible, stop all air movement around hay. Alert fire service of possible hay fire incident.*
190°F	***Fire is likely.*** *Remove hot hay with fire service assistance. The fire service should be prepared for the hay to burst into flames as it contacts fresh air.*
200°F or higher	***Fire is imminent.*** *Remove hot hay with fire service assistance. The fire service should be prepared for the hay to burst into flames as it contacts fresh air.*

Source: Extinguishing Fires in Silos and Hay Mows (*Natural Resource, Agriculture, and Engineering Service publication NRAES-18*).

Much effort goes into the production of high quality hay. Don't let the effort "go up in smoke"!

June Outlook Calling For Above-Normal Temperatures

(Beth Hall)

The month of May was sprinkled with a record-breaking freeze over Mother's Day weekend, followed by heavy rainfall the following weekend, with a roller coaster of cool periods and extremely warm periods. We often think of spring as being that transition between winter and summer with lots of ups and downs, but those extremes from one week to the next made it difficult to know what to expect more than a few days out. By the time the month ended, precipitation was slightly below normal in the southwestern and west-central parts of Indiana with the rest of the state slightly above normal. May's temperatures averaged only 1°F to 2°F below normal. This is a great example of how averaging data can mask the extremes that made up reality!

What will June be like? The latest national Climate Prediction Center outlooks for June are showing increased confidence for above normal temperatures and too much uncertainty for whether precipitation will be above or below normal (Figure 1). Over the next few weeks, temperatures are forecasted to be in the upper 80s to lower 90s with some intermittent rainfall due to convection. After that warm period passes, temperatures are predicted to return to more seasonal levels by mid-June.

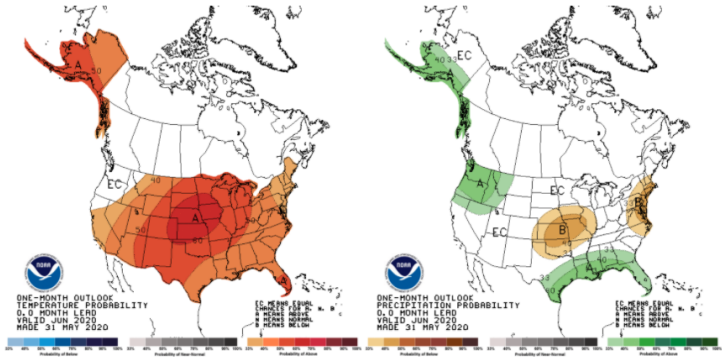

Figure 1. Climate outlooks for temperature (left) and precipitation where the darker the shading indicates the greater the confidence that conditions will be above or below normal.

Modified growing degree day (MGDD) accumulations (since April 1) are still lagging behind previous years with the exception of Lafayette, IN area. The greatest lags are in the southern half of the state (Figure 2). Compared to what is climatologically normal, MGDDs are 120 – 60 units behind (Figure 3).

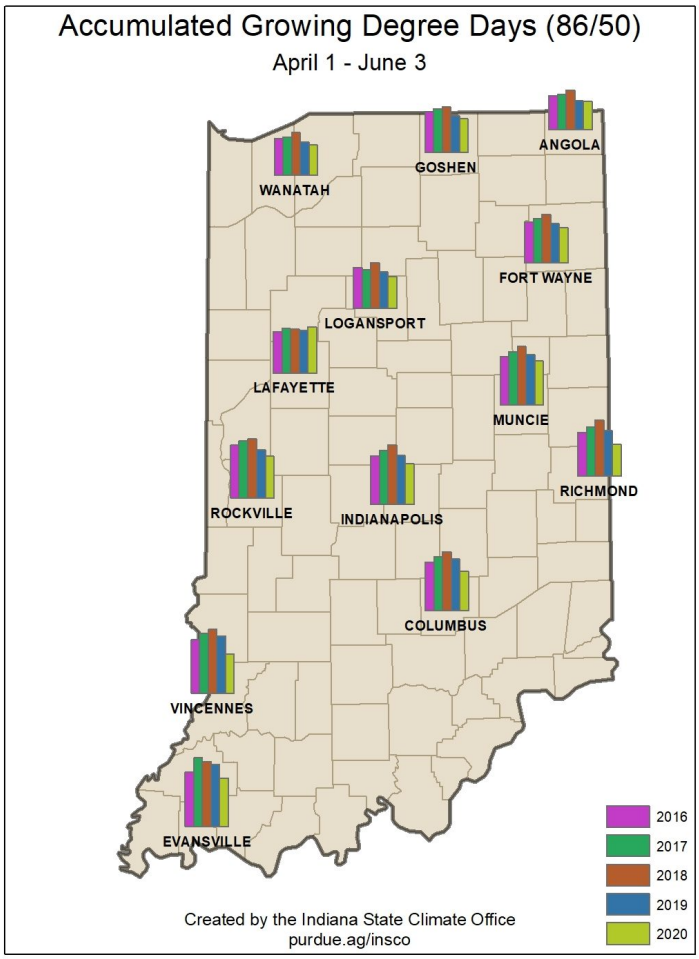

Figure 2. Comparison of accumulated modified growing degree days since April 1 over the past several years.

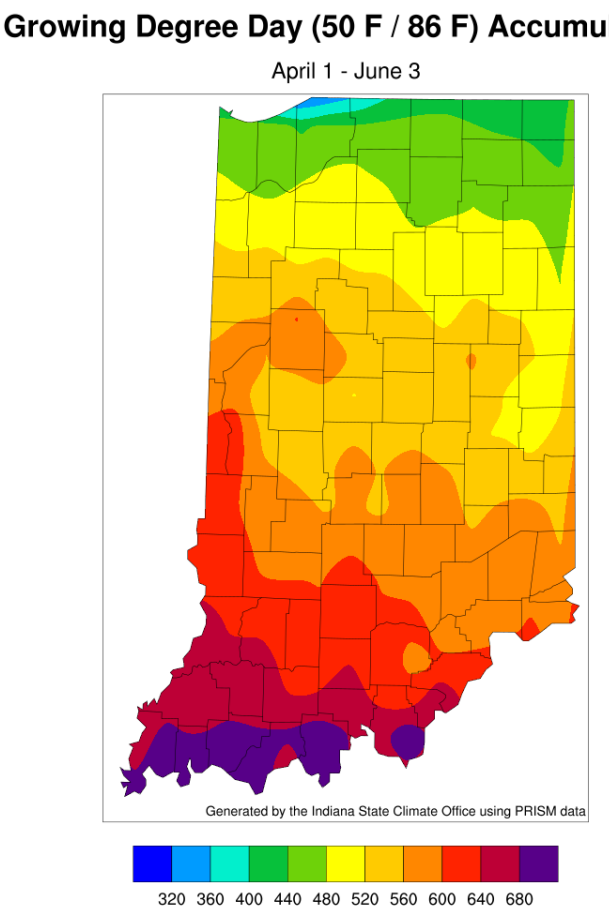

Figure 3. Accumulated modified growing degree days since April 1, 2020.

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