

Pest & Crop newsletter

Purdue Cooperative Extension Service and USDA-NIFA Extension IPM Grant

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As Soybeans Mature, Watch For Pod Feeders Moving In Late

(Christian Krupke)

- Many Indiana soybeans are at or near R6
- Stink bugs and bean leaf beetles are attracted to soybeans at this stage
- Scouting and timely insecticide sprays will minimize damage

As the soybean crop begins to mature and the plants “shut down”, many insects are no longer interested in these plants. However, for a different group of insects this is effectively ringing a “dinner bell” – the olfactory signals from developing pods indicate a rich protein source for insects that are doing some fall feeding before going into overwintering stages – these include bean leaf beetles and various stink bug species.



Green stink bug nymph feeding on a soybean pod. Note the bean leaf beetle damage (scarring) in the background. (Photo Credit: John Obermeyer)

We’ve written about stink bugs several times in recent years, as they are one of the few insect pests that are actually on the rise in recent years. Key points to remember are that they are not readily controlled by earlier (i.e. R3) insecticide applications, and they can cause serious quality losses by feeding through pods and introducing fungi and yeasts into the seeds inside.

Similarly, bean leaf beetles, although primarily interested in leaf feeding and not as able to penetrate the pods will feed on and scar pod surfaces – sometimes penetrating to the seeds beneath. In both cases, it’s not

the yield loss due to direct feeding, but the opening of the pod to a range of pathogens that can erode grain quality, including in storage.

To assess risks of both pests, the solution is walking fields and scouting. A sweep net is also useful (but not mandatory). Both of these pests are active during the day, and you will see them and evidence of their feeding quite readily. Even if these are fields you scouted a week or two ago, it is important to return – as the “ripening” pods are the attractant, particularly for stink bugs. They often don’t enter the fields in large numbers until the later stages of pod development. At or near 5% of pods with visible bean leaf beetle damage and/or more than 10 beetles/foot of row are thresholds for bean leaf beetles. Stink bug damage is very difficult to see from the outside of the pod, so a threshold of 20 stink bugs/100 sweeps is recommended. Once the pods are no longer green, stink bug numbers will decline rapidly as the pods are far less attractive when brown and dry.

North-South Split On Rainfall And Pleasant Temperatures

(Austin Pearson)

September has gotten off to a warmer-than-normal start through September 7, averaging 2.1° F above normal across the state (Figure 1). Northern Indiana temperature departures were larger than the rest of the state as temperatures ranged from 2.4-3.2° F above normal. Maximum temperatures were at or below normal through the state, as minimum temperatures ran 1-6° F above normal. Evening temperatures have been pleasant for most, as many celebrated Labor Day with outside activities. Rain and wet conditions did impact weekend plans for some, especially in southern Indiana.

Climate Division Data by State between Two Dates
From Midwestern Regional Climate Center

Indiana 9/ 1/2022 to 9/ 6/2022							
cd	Temperature			prcp	Precipitation		
	temp	norm	dev		norm	dev	percent
1	71.6	69.1	2.4	0.09	0.60	-0.51	16
2	71.7	68.6	3.1	0.04	0.59	-0.56	7
3	71.4	68.2	3.2	0.10	0.60	-0.50	17
4	72.0	70.5	1.5	0.37	0.47	-0.10	79
5	72.1	70.0	2.1	0.66	0.50	0.15	130
6	72.1	69.1	3.1	0.85	0.49	0.35	171
7	73.7	73.0	0.7	1.59	0.54	1.05	296
8	73.7	72.2	1.5	1.62	0.56	1.06	290
9	73.2	71.4	1.8	1.73	0.53	1.20	327
State	72.4	70.3	2.1	0.77	0.54	0.23	142

Midwestern Regional Climate Center
MRCC Applied Climate System
Generated at:
Wed Sep 7 09:58:03 CDT 2022



Figure 1: September 1-7, 2022, climate division (cd) and state average temperatures (temp), normal temperatures (norm), temperature deviations (dev), average precipitation (prcp), normal precipitation (norm), precipitation deviations (dev), and percent of normal precipitation (percent) compared to the 1991-2020 climatological averages.

Figure 2: September 6, 2022 US Drought Monitor.

Northern Indiana was dry this past week with precipitation less than 20 percent of normal. Central and Southern Indiana, however, received between 130-327 percent of normal precipitation. Most of the rain in south-central Indiana was measured on September 4, 2022, where 1-2 inches fell. Columbus, Indiana measured 3.97 inches of rain so far, with over 2.08 inches measured on the morning of September 5. The September 6th US Drought Monitor showed relief to the Abnormally Dry (D0) conditions in southern Indiana and persistent dryness through most of the northern half of the state (Figure 2). Modified Growing Degree Days (MGDD) have accumulated to over 2400 units in the north to over 3200 units in southern counties (Figure 3, Left). Most of the state continued to see above normal MGDD departures (Figure 3, Right).

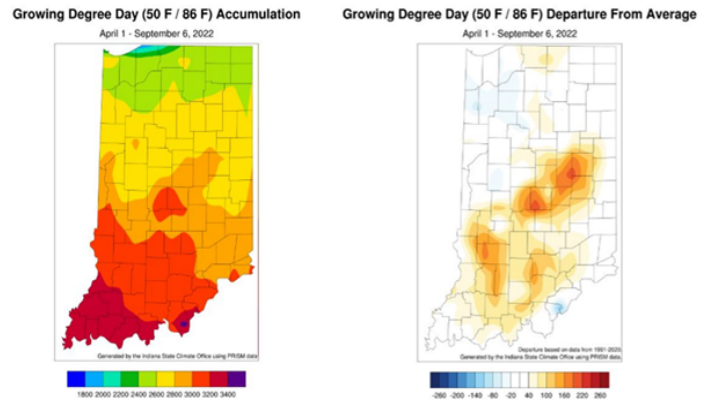
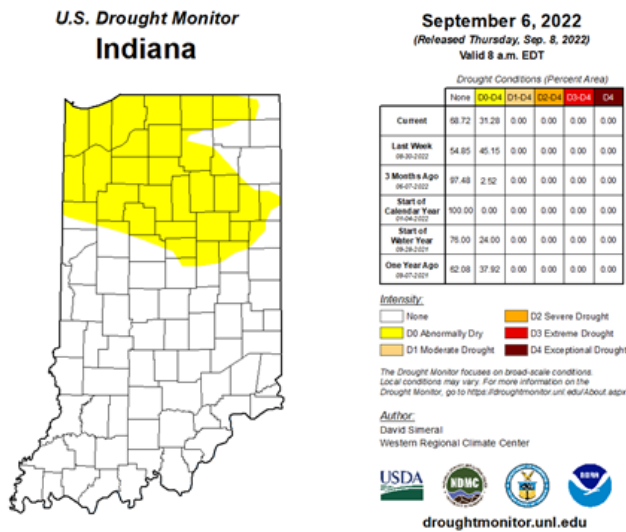


Figure 3. Left - Modified Growing Degree Day accumulations April 1- September 6, 2022. Right - Modified Growing Degree Day accumulations from April 1-September 6, 2022, represented as the departure from the 1991-2020 climatological average.

Northern Indiana could get around an inch of rain between now and mid-September, as indicated by the latest computer predictions. As of now, southern Indiana has lower chances of rain through this period. The Climate Prediction Center 6-10-day outlook (September 12-16) has elevated confidence in below-normal temperatures and near-normal to below-normal precipitation. The 8-14-day outlook has medium confidence in above-normal temperatures and leaning toward near-normal to slightly below-normal precipitation. For the entire month, the Climate Prediction Center expects above normal temperatures and equal chances for above-normal or below-normal precipitation. As for harvest season, the September-October-November outlook has increased confidence in above-normal temperatures and below-normal precipitation. This should hopefully allow a smooth harvest season (knocks on wood).

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Editor: Tammy Luck | Department of Entomology, Purdue University, 901 W. State St., West Lafayette, IN 47907