

# Pest & Crop Newsletter

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### In This Issue

- [Timely Soybean Harvest to Save Bushels](#)
- [Forage Management and Use Considerations in the Fall When Drought Occurs](#)
- [Forage Quality Contest Opportunity](#)
- [Drought conditions expand across Indiana](#)

## Timely Soybean Harvest to Save Bushels

(Shaun Casteel)

Soybean development in 2024 has been about 10 days ahead the 5-year average from flowering to pod development to leaf drop (USDA-NASS, 2024). Fast stand establishment and high accumulation of heat units (GDDs) during May and June certainly set the pace. Now in many areas, harvest is fully in gear based on the combinations of early maturities, early plantings, and late season heat and dryness.

Timely planting is foundational for maximizing soybean production. Growing up in the Midwest, the mindset was to plant corn first followed by soybean (as long as it was planted by Memorial Day you were “fine”). That sentiment has changed based agronomic research, Extension recommendations, and farmers’ experience.

Indiana planting of soybean shifted dramatically in 2018 to within ~4 days of corn planting where it had averaged 14 days behind corn the previous ten years. In fact, Indiana farmers continue to place high priority on soybean planting to the point that many plant soybean before corn or at least at the same time as corn. Indiana soybean planting now occurs within just ~1.5 days of corn planting in 2022 and 2023 (USDA-NASS, 2024). The general sweet spot for soybean planting is late April to early May depending on the field conditions. We can certainly plant earlier in April depending on the year. These timely plantings have led Indiana farmers to break yield records in 2018, 2020, 2021, and 2023. The crop forecast for 2024 is set to break another record. Though, late-season drought conditions have likely taken some of the sprinkles and maybe the icing off the cake for soybean yields.

As my dad would say, the crop is not made until it is harvested and in the bin. We need to be ready for the early crop and timely for optimal harvest and return. Soybean harvest doesn’t have the luxury of high moisture harvest like corn, so we have to be timely

on the harvest regardless of stem greenness or pod color.

We sell soybeans on 60-lb nuggets and not truly bushels as a volume. These 60-lb units that we affectionately call bushels are taken at 13% moisture, but they are equally taken at 10% moisture. Unfortunately, we do not get that 3% water weight given back and adjusted accordingly. This 3% difference in water weight would reduce a 60-bu crop to 58 bu/ac and a 75-bu crop to 72.5 bu/ac. These “yield losses” are based on water weight alone (Table 1) and does not account for combine losses such as shattering due to dry seeds.

One should consider yield map corrections based on harvest moisture, so fields are accurately represented agronomically for any management decisions and trends as well as nutrient removal corrections. Please note that adjusting the yield maps has its merits for your agronomics, but it will not change the economics if harvest was below 13%.

**Table 1.** Soybean yield “lost” (bu/ac) based on grain moisture harvest below target delivery of 13% and associated yield levels.

Soybean Harvest Moisture (%)	Yield “Lost” (bu/ac) at Actual Yield (13%) Levels of:						Yield “Lost” bu for every 10 bu
	50-bu	60-bu	70-bu	80-bu	90-bu	100-bu	
15.0	0	0	0	0	0	0	0.00
14.0	0	0	0	0	0	0	0.00
13.0	0	0	0	0	0	0	0.00
12.0	0.6	0.7	0.8	0.9	1.0	1.1	0.11
11.0	1.1	1.3	1.6	1.8	2.0	2.2	0.22
10.0	1.7	2.0	2.3	2.7	3.0	3.3	0.33
9.0	2.2	2.6	3.1	3.5	4.0	4.4	0.44

Another point to consider in setting the combine for harvest is your tolerance for soybean seed loss at the header and the spreader. Depending on seed size, we can lose one bushel for every 4 to 5 seeds per square foot on the ground. Poorly set sieves and high fans can lose many seeds out the rear. Header loss can account for significant loss, especially as the fields dry out or go through several wet-dry cycles. Target seed loss should be less than 3%.

Field variability will certainly play into proper harvest settings and timings. Best of luck as you bring in the 2024 crop timely, efficiently, and safely!

## Forage Management and Use Considerations in the Fall When Drought Occurs

(Keith Johnson), (Ron Lemenager) & (Nick Minton)

Dry weather has become a concern across Indiana for livestock

producers. Purdue Extension publication ID-528, "Forage Management and Use Considerations When Drought Occurs" (ID-528 When Forages are in Short Supply Because of Drought ([purdue.edu](http://purdue.edu)) has many ideas that will help stretch forage resources specifically for beef cattle. Many of the concepts have value for other ruminant species, too.

Within the publication is discussion of the following practices that should be considered now to stretch forage supply and to better manage pastures:

- Monitor cow body condition as a barometer of nutritional status
- Avoid overgrazing
- Provide clean, cool water to reduce heat stress and maintain herd health
- Creep feed calves to obtain near normal weaning weights
- Early wean calves to take pressure off both cows and pastures
- Identify and manage poisonous plants in pastures and hay fields
- Pregnancy check and market cull cows earlier than normal to reduce feed needs
- Inventory hay and other feed resources
- Use a hay feeder design that reduces waste
- Analyze feeds for nutrient profiles to help determine supplemental feed needs
- Use alternative feeds to supplement and stretch forage supplies
- Limit hay access time to stretch forage supplies
- Limit-feed a nutrient-dense diet to stretch forage supplies
- Graze corn residues to reduce harvested feed needs
- Feed an ionophore to increase feed utilization
- Add moisture around electric fence ground rods to maintain a good electrical ground.

Implementing practices above will help protect permanent pastures from overgrazing and resulting productivity loss in 2025.



Typically the pasture should be green, but dry weather has impacted forage growth.

Source: Ronnie Boehm, Spencer County forage/beef producer

## Forage Quality Contest Opportunity

(Keith Johnson)

Under-utilized forage management practices in the beef, small ruminant, and horse businesses are forage analysis and ration formulation based on the forage test. *If these practices are done properly, they will result in correct livestock body condition, wellbeing, and improved profit.*

The Indiana Forage Council organized the opportunity for hay producers to enter samples in the "Hoosier Hay Contest". The deadline for hay and baleage sample submission is September 30. Forage quality results for the categories that a producer enters will be shared with them. Quality results will also be shared with all entrants in a specific category, but results of others will be anonymous.

Details about the "Hoosier Hay Contest" can be found at the Indiana Forage Council's website (<https://indianaforage.org/>)

Later in the fall, a hay quality seminar on "Forage Quality" will be offered. Details will be shared when known by Purdue Extension and the Indiana Forage Council.



Use of a hay probe results in more accurate forage quality data as compared to sample collection by hand.

Drought conditions expand across

# Indiana

(Beth Hall)

Over the past several weeks, temperatures across Indiana have averaged within the normal range for this time of year. We may recall periods of extreme heat, but there were also periods that felt cooler with fall-like temperatures. Daytime maximum temperatures have averaged near normal whereas nighttime minimum temperatures have averaged slightly below normal. This has offered welcomed relief not only for livestock, pets, and humans, but has provide some much needed nighttime moisture recovery for vegetation, particularly as precipitation events have been few and far between.

Abnormally dry and moderate drought conditions have gradually been expanding and intensifying almost everywhere (Figure 1). The only locations that have been mostly spared - or more likely, still benefiting for recent storm tracks - is from west-central Indiana into central Indiana (Benton and Warren counties toward Madison County). However, even those counties are starting to show stress and could soon be classified as *Abnormally Dry* (D0) in the U.S. Drought Monitor if significant rain does not come soon. Elsewhere across the state, the drying tend has been relatively continuous and gradual except for southwestern Indiana. For those counties, the combination of no precipitation, a dry atmosphere, and very warm temperatures has set up a situation of rapid drought intensification — or what some may call a “flash drought”.

Forecasters are keeping an eye on what computer models are predicting regarding tropical storm Francine that has been developing in the Gulf of Mexico. Current models are favoring a path that will take the remnants of this storm northward toward Indiana. If this happens, southwestern Indiana is likely to benefit the most, but with only around a few inches (Figure 2). There rest of the state is likely to be too far from the storm track to get much precipitation. However, so many factors could influence amounts, location, intensity, and timing. At this time, there are doubts that this event will be a “drought buster” for Indiana, but it will certainly be welcome wherever it occurs to keep water supplies strong and vegetation without too much stress.

Beyond this weekend, climate outlooks over the next few weeks are strongly favoring above-normal temperatures and near-to-below-normal precipitation. Average high temperatures for this

time of year are typically in the mid- to upper-70s (F), so expect highs to be in the 80s (F) if not teasing the low 90s (F) range. Average accumulated precipitation (1991-2020) has typically favored higher amounts (2-2.5 inches) in southern Indiana with 1-1.5 inches in the northern half of the state. Therefore, climate models are predicting similar or less amounts this year over the next few weeks.

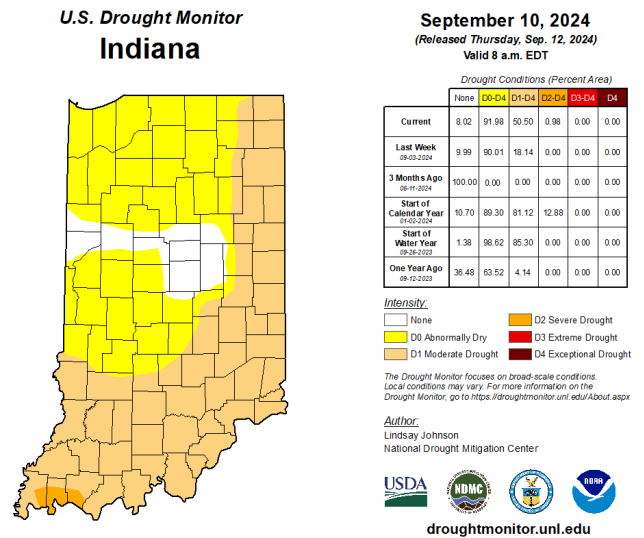


Figure 1. U.S. Drought Monitor for conditions through early September 10, 2024.

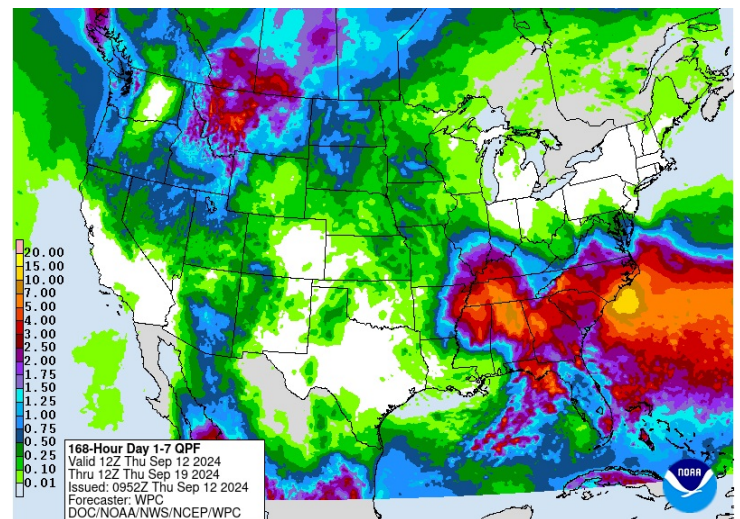


Figure 2. Forecasted precipitation over the 7-day period from September 12th through 19th.

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