Issue #4 – May 16, 2025

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🚜 From South to North: Tracking Indiana's Planting Progress

(Jeferson Pimentel, Dan Quinn, Betsy Bower & Bruno Scheffer)

As of May 16, 2025, **62% of the U.S. corn crop has been planted**, ahead of both last year's pace (47%) and the 5-year average of 56% (Table 1). Favorable weather conditions last week allowed farmers across much of the Corn Belt and northern states to make strong progress.
Southern states continue to lead progress, with Texas (84%), North Carolina (86%), and Tennessee (76%) nearing completion of early vegetative establishment.

Across the Corn Belt, planting activity accelerated sharply. Iowa climbed to 76%, Minnesota reached 75%, and Nebraska advanced to 73%, all well ahead of their historical averages. Illinois also made significant gains, jumping from 32% to 54%. While Ohio (25%) and Wisconsin (44%) remain behind their average pace. Warmer temperatures and drier conditions are expected to support continued improvement in seedbed preparation, emergence, and early stand establishment in the coming weeks.

In Indiana, the USDA-NASS report indicates that **45% of the corn crop has been planted as of May 16**, representing a significant 19 percentage-point increase from the previous week (Figure 1). This sharp weekly gain reflects strong planting momentum, bringing the state ahead of the 5-year average of 42% this time of year. Compared to past seasons (2015–2024), 2025 progress is now on pace with, or ahead of, several years that saw delayed starts but rapid mid-May planting surges.

With recent dry weather and rising temperatures, **planting conditions across the state have significantly improved**. Growers have taken advantage of this favorable window, and continued progress is likely if current weather patterns persist. Emergence is underway for corn already in the ground, particularly in southern Indiana. **Producers should begin evaluating stand establishment** to assess planting depth consistency, spot emergence issues, and plan any needed management interventions.

➡️ Let us know if we can help.

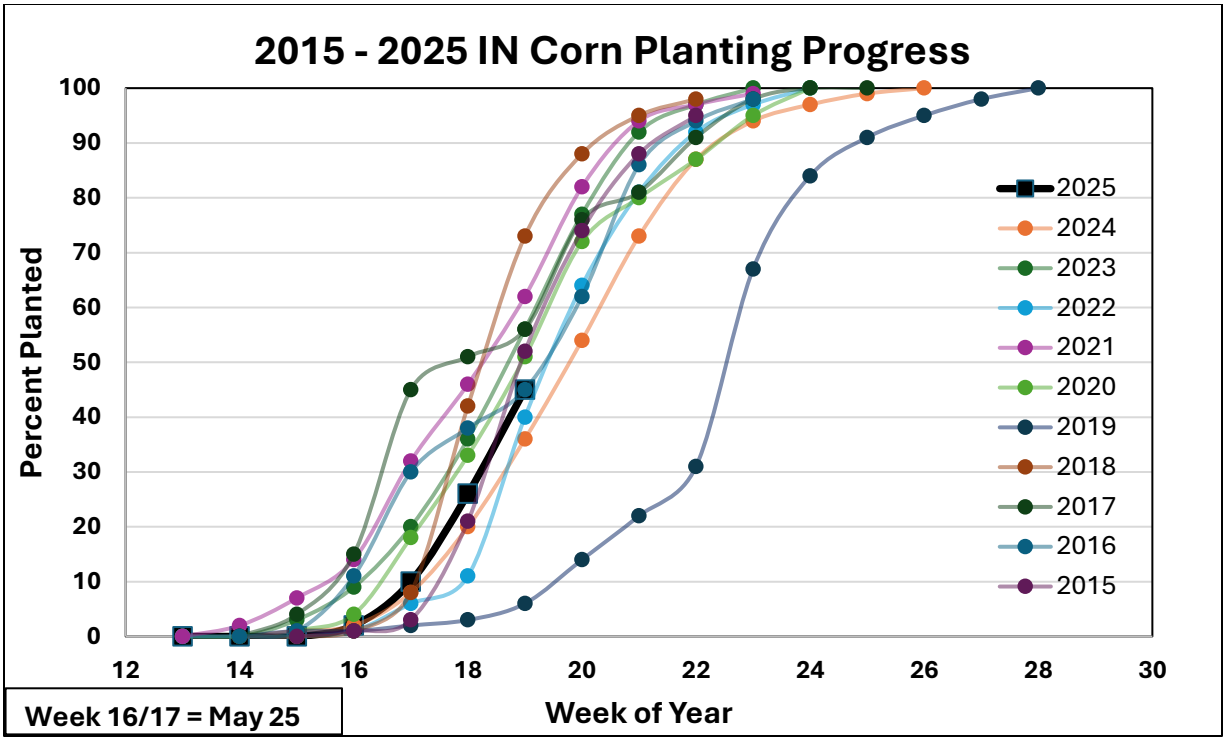

Figure 1. 2015-2025 Indiana corn planting progress by week (USDA-NASS)

Table 1. U.S. Corn Planting Progress (USDA-NASS)

State	Week ending			
	May 11, 2024	May 4, 2025	May 11, 2025	2020-2024 Average
	(percent)	(percent)	(percent)	(percent)
Colorado	30	37	**53**	38
Illinois	41	32	**54**	60
Indiana	**34**	**26**	**45**	**42**
Iowa	56	49	**76**	69
Kansas	60	50	**61**	57
Kentucky	56	40	**52**	63
Michigan	25	23	**42**	31
Minnesota	54	44	**75**	61
Missouri	71	54	**68**	71
Nebraska	52	50	**73**	65
North Carolina	94	73	**86**	92
North Dakota	20	17	**41**	16
Ohio	35	22	**25**	27
Pennsylvania	28	15	**32**	25
South Dakota	30	39	**69**	43
Tennessee	72	61	**76**	75
Texas	79	78	**84**	81
Wisconsin	37	16	**44**	40
U.S Total	47	40	**62**	56

Table 2. U.S. Corn Emerged Progress (USDA-NASS)

State	Week ending			
	May 11, 2024	May 4, 2025	May 11, 2025	2020-2024 Average
	(percent)	(percent)	(percent)	(percent)
Colorado	4	-	**2**	5
Illinois	23	8	**25**	26
Indiana	**14**	**6**	**19**	**14**
Iowa	23	10	**30**	23
Kansas	39	24	**42**	30
Kentucky	37	19	**33**	39
Michigan	3	1	**3**	4
Minnesota	13	3	**30**	15
Missouri	53	31	**43**	45
Nebraska	16	8	**36**	20
North Carolina	79	57	**75**	78
North Dakota	1	1	**5**	1
Ohio	23	4	**14**	9
Pennsylvania	3	1	**3**	2
South Dakota	3	4	**21**	5
Tennessee	43	30	**51**	47
Texas	69	70	**79**	68
Wisconsin	7	-	**5**	5
U.S Total	21	11	**28**	21

As of May 11, 2025, **28%** of the U.S. corn crop has emerged, showing a strong uptick from the prior week (11%) and ahead of the 5-year average of 21%. This increase reflects the accelerated planting pace observed the week prior, coupled with improving soil temperatures and moisture conditions across much of the Corn Belt.

In line with planting progress, key Corn Belt states are now reporting notable emergence activity. **Nebraska** leads with **36%** emerged, nearly doubling its average (20%). **Iowa** shows similar trends with 30% of corn emerged, up from 10% the previous week and well ahead of its average (23%). **Minnesota** has also surged to **30%** emerged, doubling its 5-year average (15%) and mirroring strong planting momentum in the region. **Indiana** has 19% of its corn crop emerged, exceeding the 5-year average of 14%, reflecting the quick turnaround in soil conditions and continued dry weather aiding rapid germination and growth.

Illinois (25%) and **Ohio** (14%) remain in line with historical patterns, but emergence in Ohio lags planting pace, indicating potentially cooler soil conditions or rainfall-related delays in germination. **Wisconsin** remains sluggish at 5%, mirroring a later planting start and suggesting the crop is just beginning to emerge in more northern zones.

Continued warm weather and adequate moisture levels across much of the Midwest should support ongoing emergence in the coming week. Farmers are encouraged to scout early planted fields for stand uniformity and emergence issues, especially in fields planted just ahead of recent rains or under marginal seedbed conditions.

Purdue Corn Team Research Update

(Bruno Scheffer, Jeferson Pimentel, Dan Quinn & Betsy Bower)

The first Purdue Corn Team research trials were first planted on April 16th at the Agronomy Center for Research and Education (ACRE), beginning with a planting date study. The majority of planting for our team started on **April 29th**. Currently, the Purdue Corn Team is still planting at many other locations throughout Indiana (Figure 1). In 2025, we have experiments at Throckmorton-Purdue Agricultural Center (TPAC), Davis Purdue Agricultural Center (DPAC), Southeast Purdue Agricultural Center (SEPAC), Northeast Purdue Agricultural Center (NEPAC), and Pinney Purdue Agricultural Center (PPAC).

Figure 1. Corn planting at ACRE.

In total, there are around **50 trials** planned for the 2025 season. Trial focus includes testing a diversity of agronomic management practices with the goal of **improving recommendations** for farmers and helping with the **agronomic decision-making** process.

Research will be aggregated across various locations and environments across Indiana to achieve a comprehensive understanding and improve agronomic practices. Research topics include soil fertility management, nitrogen stability and application rates, the effectiveness of biological and newly developed agricultural products, and the utilization of cover crops. Advances in precision agriculture also play a crucial role in our research program, including spatial management of planting populations, optimal planting dates, and nutrient management involving potassium and sulfur.

For example, at the Internet of Things for Precision Agriculture (IoT4Ag) testbed, we evaluate both tall and short-stature corn hybrids under varying nitrogen application rates (Figure 2). The primary objective of this testbed is to test and assess the effectiveness of multiple remote sensing platforms, robotics, and handheld proximal sensors for assessing plant nitrogen status and improving in-season nitrogen management practices.

In collaboration with **Corteva**, we are also investigating corn responses to various nitrogen sources, application rates, timings, and stabilizers, including the use of the nitrification inhibitor **Instinct NXTGEN**. The trial has been fully planted, with different nitrogen rates applied, and we are also monitoring nitrous oxide (N_2O) emissions to quantify nitrogen losses.

Figure 2. Partnership between the Purdue Corn Team and the IoT4Ag for the first IoT4Ag soil sampling.

Partnering with **Becks Hybrids**, we have also established an experiment (Figure 3) to examine the differences between hybrid root architecture types (vertical and horizontal) and how these different architectures may respond to banding (Figure 4) versus broadcast fertility in a silt loam soil.

Figure 3. Planting different hybrids for the Beck's hybrids trial at ACRE.

Figure 4. Nitrogen, phosphorus, and sulfur banding application for the Beck's hybrids trial at ACRE.

Cover Crops, Winter Annual Weeds, Caterpillars and Crops

(Christian Krupke)

Every spring, black cutworm moths and armyworms (Figure 1) invade our state. They don't overwinter here, but move north each spring seeking sites to lay eggs. Both are sporadic and unpredictable and although trap counts help, they are not always a reliable predictor of larval populations (Figure 2). At this time, when we may see damage to crops (Figure 3), it's worth reviewing a few key parts of the biology of these annual invaders.

Figure *1.* A true armyworm larva on a grass host.

Larvae of both moths will be actively feeding now. The increased popularity of cereal rye as a cover crop presents new opportunities for egg-laying female **armyworms** to find attractive food sources (grasses are their favored hosts), while **black cutworms** may favor broadleaf weeds, including chickweed and a range of cover crops.

For both species the highest risk for egg laying occurs where dense vegetation (either cover crops or winter annual weeds) is present. Fields with sparse weeds are not likely to harbor as many larvae. In both cases, the risk comes when annual weeds or cover crops are terminated and the hungry caterpillars move onto the main crop for feeding – neither black cutworms or armyworms are obligate corn feeders but both will do

well on corn seedlings, with black cutworm able to feed on soybean as well. Armyworm larvae will attempt to feed on soybean, but cannot effectively digest the foliage and will die shortly afterwards.

Figure *2.* The five larval instars, or stages, of black cutworm.

The question about ideal termination often arises. Ideally, cover crops or dense annual weeds will be terminated 2-3 weeks before corn emergence. With the wet weather of most springs, this often is not possible. A period of weeks is ideal, but there is not a magic number of days to starve out caterpillars. The rule of thumb is that the longer the period between termination of cover crops or weeds and emergence of the main crop, the better. Caterpillars need to feed often to survive and cannot go without food for long, so even a few days of no host plants will reduce their populations dramatically.

One last reminder: Don't be dependent on traited-corn, as high armyworm or cutworm infestations may still cause significant damage before the Bt-proteins suppress their feeding. An ideal reference to understand which Bt-traited corn has efficacy against specific insects is the "Handy Bt Trait Table." This table, produced by Chris DiFonzo, Field Crops Entomologist at Michigan State University, is worth a look. It can be downloaded **HERE**. Remember that seed-applied neonicotinoid insectides do not have efficacy against armyworm, although there are many effective options for control with **foliar insecticide sprays**. A reminder that with this insect, especially when they are "marching" in large numbers, scouting for caterpillars and damage still wins the day.

Figure 3. Only the larger instars damage plants by "cutting", as shown; younger larvae will notch leaf edges.

📈 What Farmers Think About Tariffs: Tight 2025, Strong Future?

(James Mintert, Michael Langemeier, & Chad Fiechter)

When evaluating the U.S. government's tariff policy, farmers express short-term concerns about farm incomes but maintain long-term confidence in the resilience of the U.S. agricultural economy. According to the April survey from the Purdue University – CME Group Ag Economy Barometer, over half of the 400 farmers surveyed (56%) anticipate a negative impact on 2025 farm income due to the tariff policy. However, 70% of respondents believe that the increased use of tariffs will ultimately strengthen the U.S. agricultural economy in the long run.

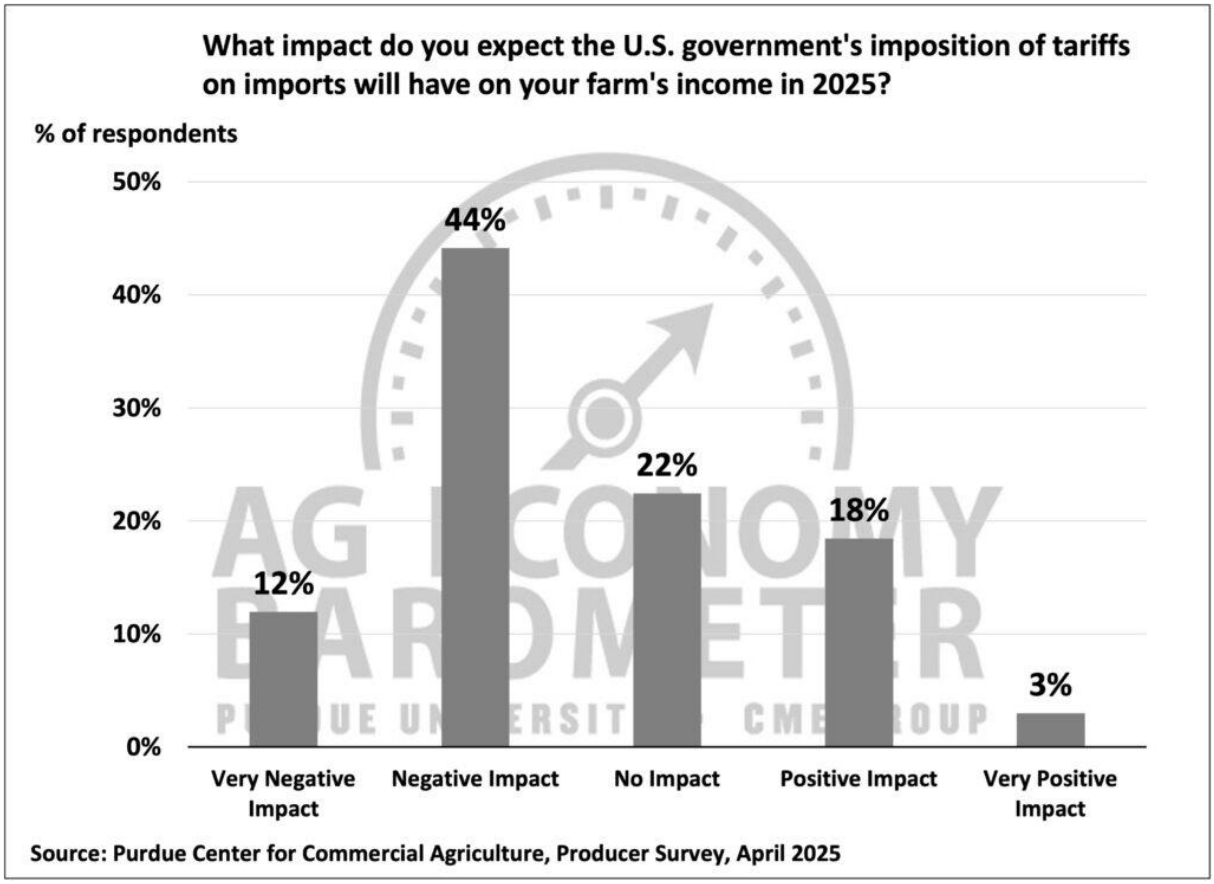

Figure 1. Expected Impact on 2025 Farm Income of U.S. Tariffs on Imports, April 2025.

A Bit of Rain Coming Our Way

(Beth Hall)

The last few weeks have been on the drier side, particularly for northwestern and west-central Indiana (Figure 1). While temperatures have been seasonal, they are still gradually increasing as we approach summer. Therefore, evapotranspiration rates are starting to increase. This has resulted in the U.S. Drought Monitor classifying much of northern Indiana as Abnormally Dry (D0) (Figure 2). Technically, this is not drought, but more a cautionary tale that conditions are drying. The National Weather Service is predicting around two inches of rain to fall across the western and southern parts of the state over the next seven days (Figure 3). A little over half of this will likely come at the end of this week, followed by a break for early next week, closing with another round of decent precipitation next Tuesday-Thursday. It is too early to know if this will be enough to eliminate the Abnormally Dry (D0) areas in our state, but it should not degrade things into official drought status.

Another thing that will help stave off drought is the national Climate Prediction Center is favoring below-normal temperatures for the last few weeks of May. There is no concern at this time for freezing temperatures, but it should keep temperatures pleasant with lower evapotranspiration rates. Climate outlooks for June are slightly favoring above-normal temperatures across Indiana with above-normal precipitation possible for our eastern counties. The 3-month (June-July-August) outlook is slightly favoring above-normal temperatures with no statistically significant guidance about precipitation.

Accumulated modified growing degree days (50°F/86°F) (MGDD) since April 15th (Figure 4) are

running around 10-50 units above normal (Figure 5). With the cooler climate outlooks for the rest of this month, expect that pattern of near-normal MGDD accumulations to continue.

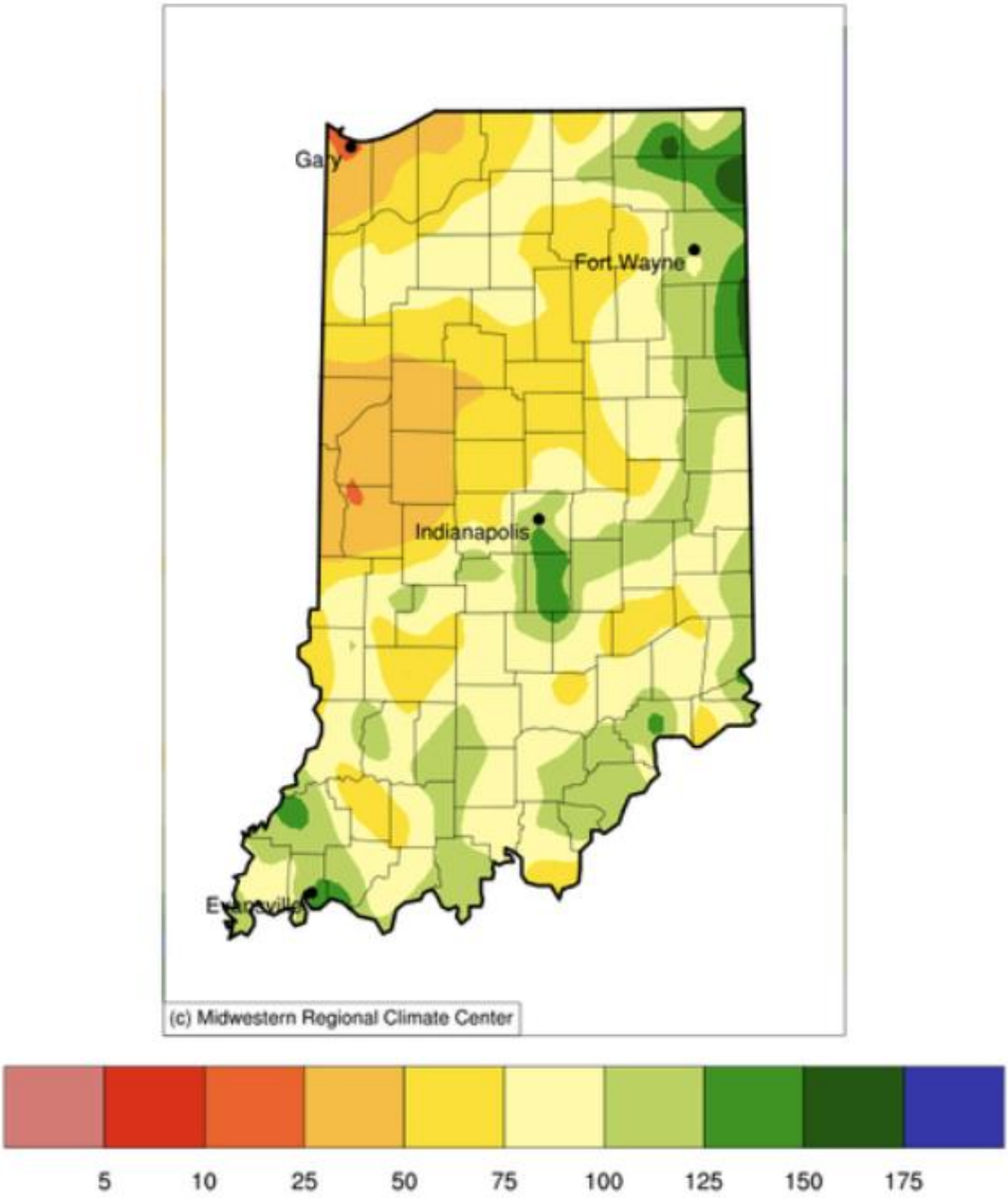

Figure 1. Precipitation from May 1 - 14, 2025 represented as a percentage of the 1991-2020 normal amounts for that period.

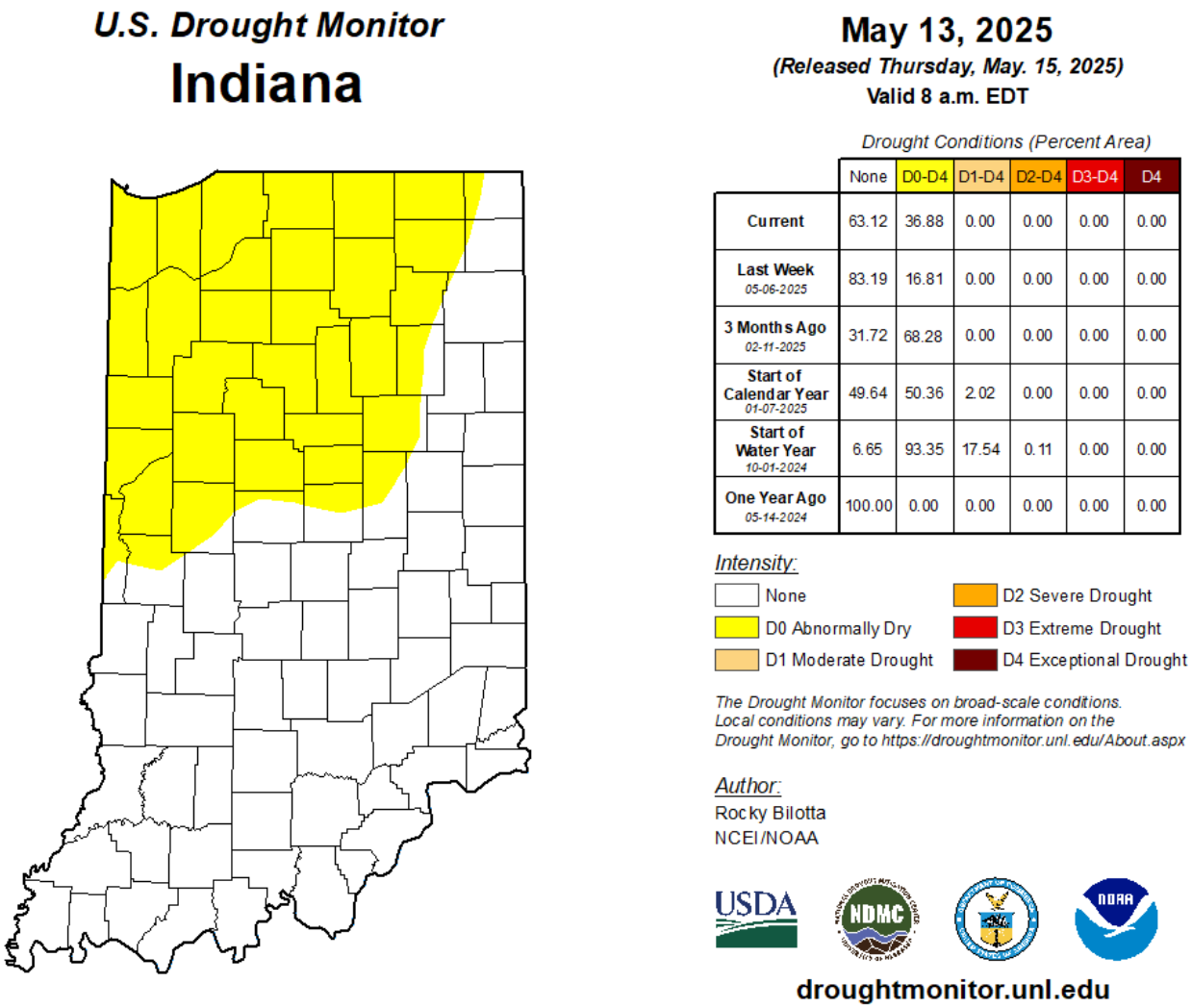

Figure 2. U.S. Drought Monitor status for conditions as of Tuesday, May 13, 2025.

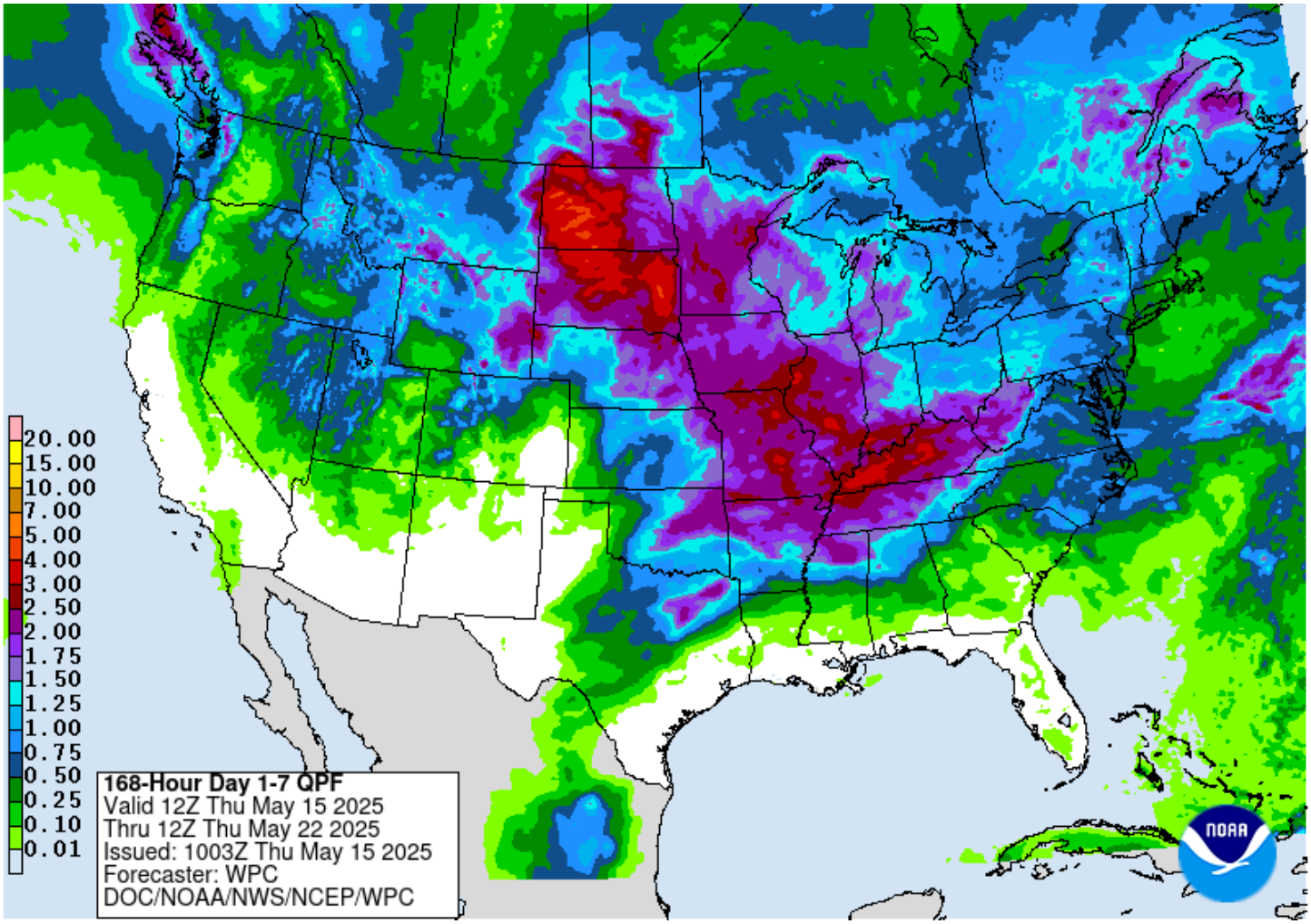

Figure 3. 7-day precipitation total forecasted for May 15-22, 2025.

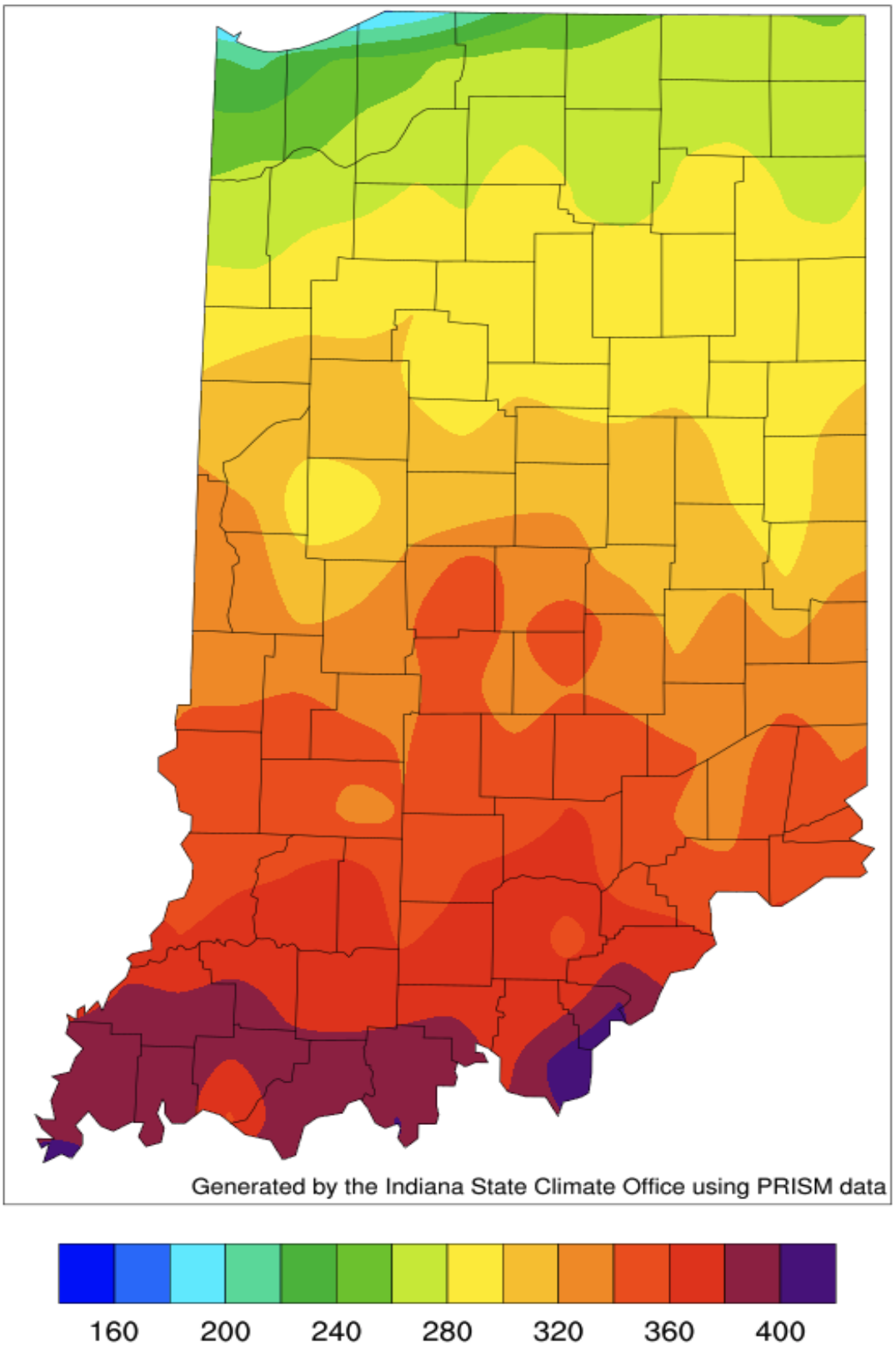

Figure 4. Modified growing degree day (50°F / 86°F) accumulation from April 15 – May 14, 2025.

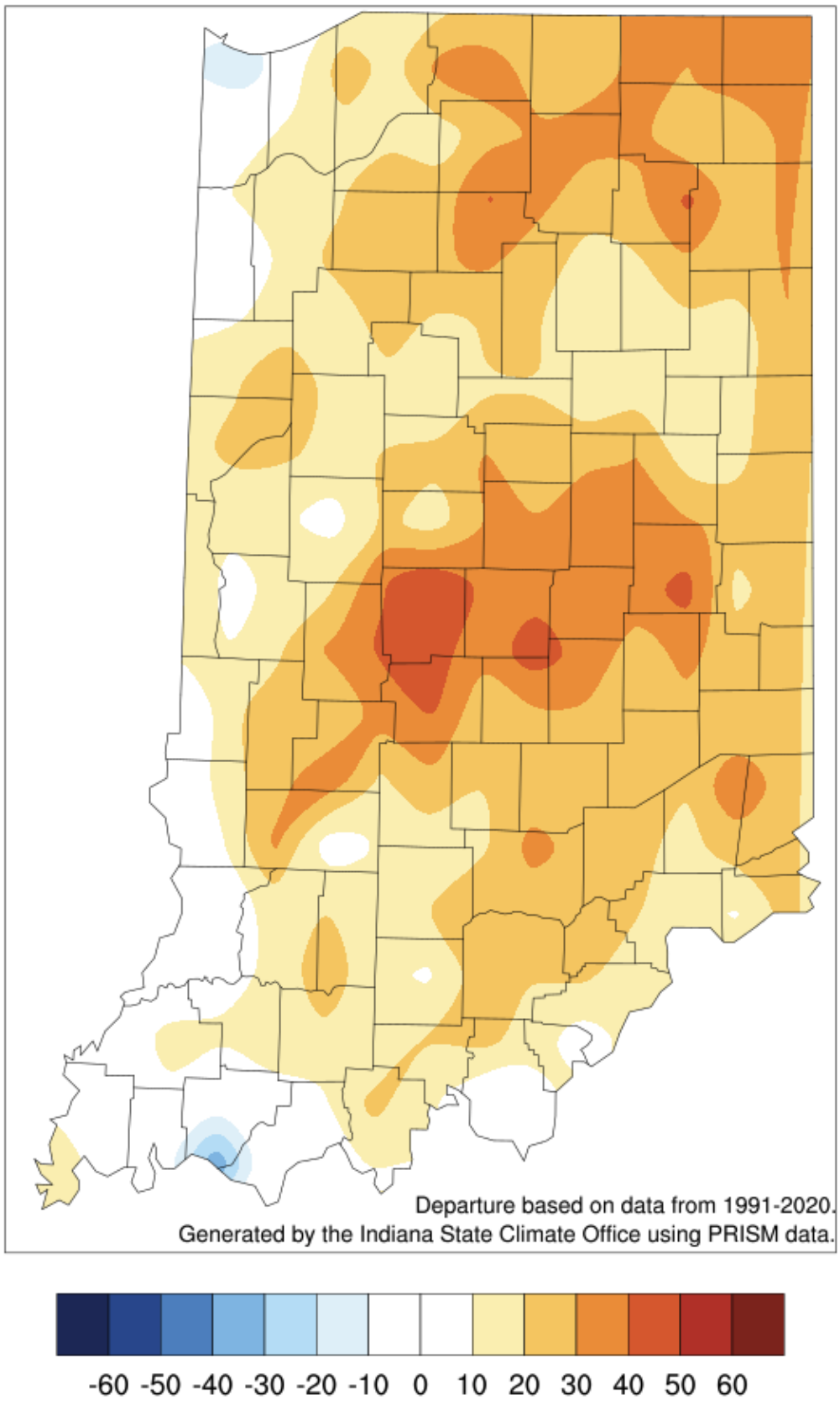

Figure 5. Modified growing degree day (50°F / 86°F) accumulation from April 15-May 8, 2025, represented as the departure from the 1991-2020 climatological average.

Acknowledgments

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