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Martin-Gatton College of Agriculture, Food and Environment

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El Niño Is Making Headlines, but What Does It Really Mean for Kentucky?

Matthew Dixon, Senior Meteorologist, Kentucky Agricultural Weather Center

Weather forecasting has come a long way over the past several decades, but it will never be a perfect science. Even with today's advanced satellites, radar networks, supercomputers, and sophisticated forecast models, meteorologists can still be humbled by Mother Nature. The atmosphere is an incredibly complex and chaotic system, where even a small change can lead to very different outcomes. That is why a winter storm forecast can change significantly just 48 hours before impacts begin. A temperature difference of only a degree or two can separate rain from sleet, freezing rain, or several inches of snow. If predicting snowfall a couple of days in advance can be difficult, forecasting weather patterns months into the future carries even greater uncertainty.

Seasonal forecasts do not predict individual storms. Instead, they describe how large-scale climate patterns may shift the odds toward wetter, drier, warmer, or cooler conditions over a three-month period. One of the strongest climate signals forecasters are watching this year is El Niño, which can tilt the odds toward certain temperature and precipitation patterns across the United States. Still, El Niño influences the deck of cards being dealt, not the exact hand Kentucky will receive.

Lately, social media has been filled with El Niño headlines, sometimes creating the impression that the coming fall and winter are already decided. The attention is understandable, but those claims need to be kept in perspective. El Niño is best viewed as an important clue rather than a final answer. It can increase confidence in certain broad patterns, but many other atmospheric and oceanic factors will determine how temperatures, precipitation, and individual storm systems evolve.

What is El Niño?

El Niño is the warm phase of the El Niño–Southern Oscillation, or ENSO. It develops when waters across the central and eastern equatorial Pacific become unusually warm and the atmosphere responds, altering circulation and rainfall patterns around the globe. The August 2026 ENSO discussion indicated that El Niño was strengthening, with greater than a 90% chance of becoming a very strong event during fall and winter 2026–27.

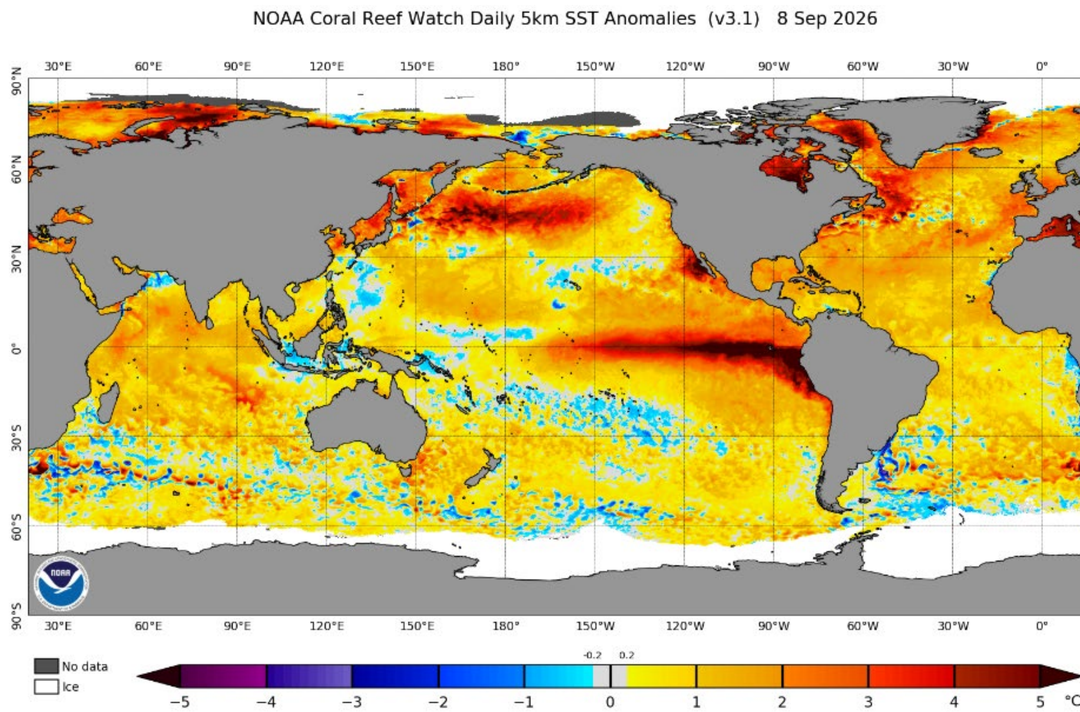

Figure 1. Global sea-surface temperature anomalies on September 8, 2026. Values are in degrees Celsius. Source: NOAA Coral Reef Watch. [View source]

El Niño's influence is usually most pronounced during winter, shifting the average position of storm tracks across North America and other parts of the globe. While El Niño cannot predict individual storms or determine whether a given week will be wet or dry, it can provide valuable insight into which weather outcomes may become more likely over the course of a season. Put another way, El Niño does not write Kentucky's forecast, but it can influence the script.

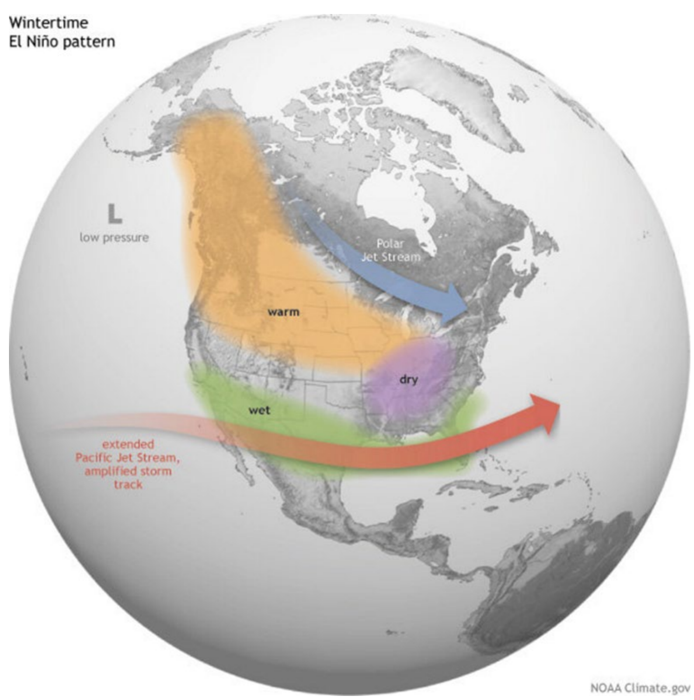

Figure 2. Typical wintertime atmospheric pattern associated with El Niño.
Source: NOAA Climate.gov. [View source]

Why Kentucky Is a Difficult Call

While El Niño is expected to influence weather patterns across much of North America, Kentucky often sits near the transition between stronger climate signals to our north and south. The southern United States frequently leans cooler and wetter during El Niño winters, while portions of the northern tier often lean warmer. This leaves Kentucky in an area where the seasonal outcome is often less clear.

Past strong El Niño winters demonstrate the challenge. As shown below in Figures 3 and 4, Kentucky has experienced warmer and cooler winters, along with wetter, drier, and near-normal outcomes. A strong El Niño may strengthen the broad national pattern, but it still does not guarantee a particular result for the Commonwealth.

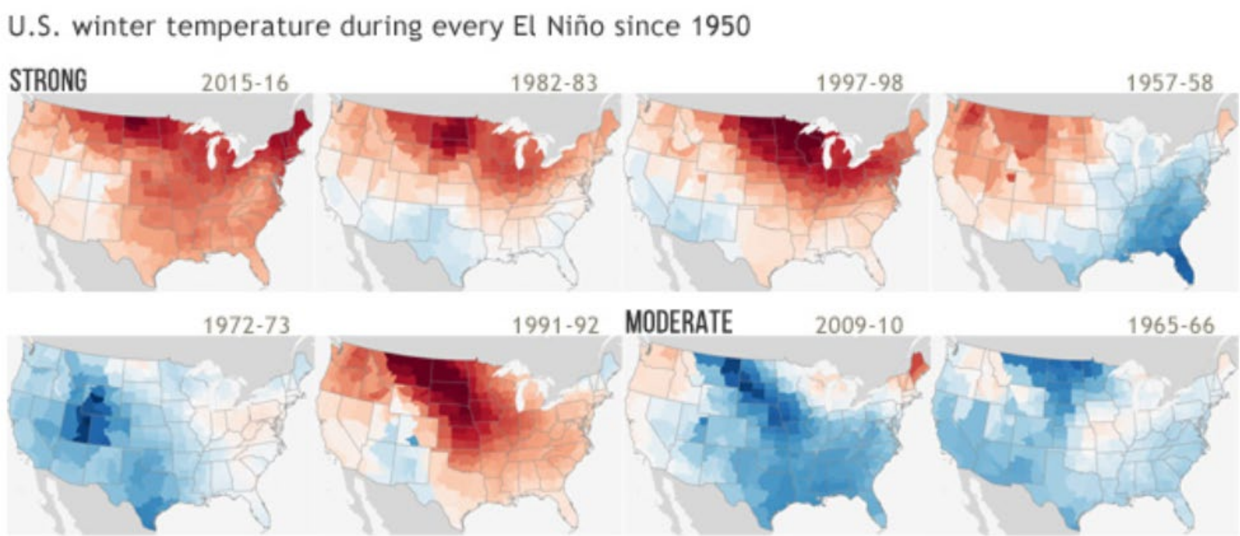

Figure 3. U.S. winter temperature patterns during selected El Niño events since 1950.
Source: NOAA Climate.gov. View source

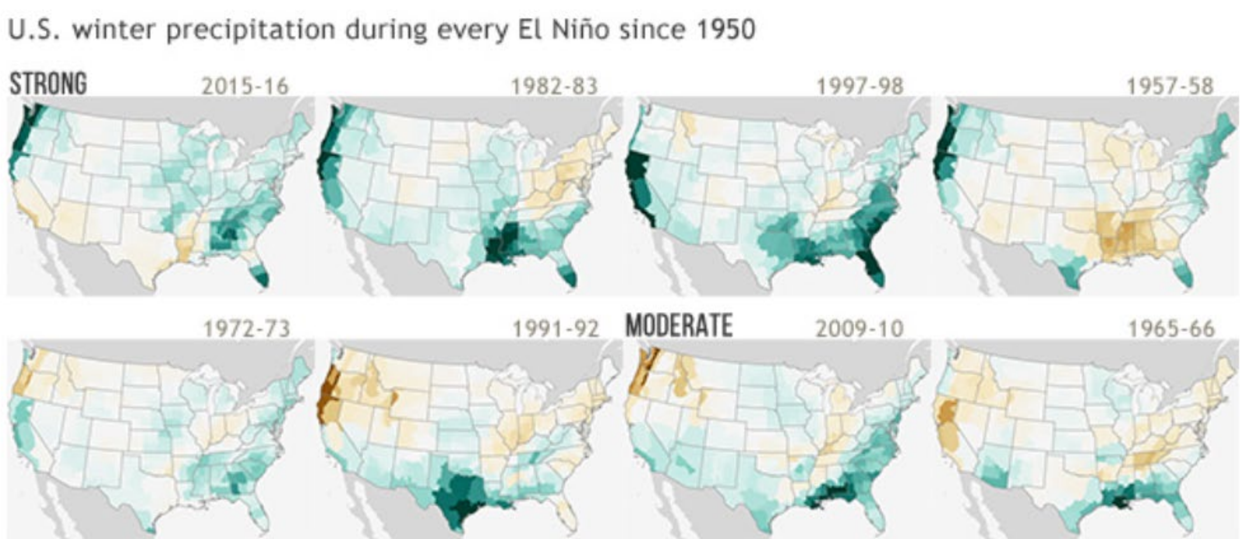

Figure 4. U.S. winter precipitation patterns during selected El Niño events since 1950.
Source: NOAA Climate.gov. View source

What Goes Into a Seasonal Outlook?

Climate Prediction Center forecasters consider much more than El Niño when developing a seasonal outlook. They evaluate the expected evolution of ENSO, long-term climate trends, conditions in other ocean basins, land-surface conditions like soil moisture, model guidance, and how the atmosphere behaved during comparable years (analogs). These pieces are combined to produce a probabilistic outlook, not a promise of what will occur.

The latest winter outlook from NOAA's Climate Prediction Center reflects the uncertainty that still exists for Kentucky. For December 2026 through February 2027 (Figures 5 and 6), the outlook favors above-normal precipitation across much of the Southeast and Eastern Seaboard. It also favors above-normal temperatures across much of the northern United States, with the warm signal extending into Kentucky. For temperatures, NOAA is tilting the odds toward a warmer-than-normal winter based in part on the forecast strength of the current El Niño and comparisons to some of the strongest El Niño events on record.

The precipitation outlook is much less certain. Kentucky remains in the "equal chances" category, meaning the outlook does not favor above-, near-, or below-normal precipitation over the other two categories. As shown in Figure 4, historical comparisons to other strong El Niño events suggest conditions could ultimately trend in either direction. It is important to note that "equal chances" does not mean normal precipitation is expected. Rather, it means none of the three possible outcomes is considered more likely than the others based on the available forecast tools.

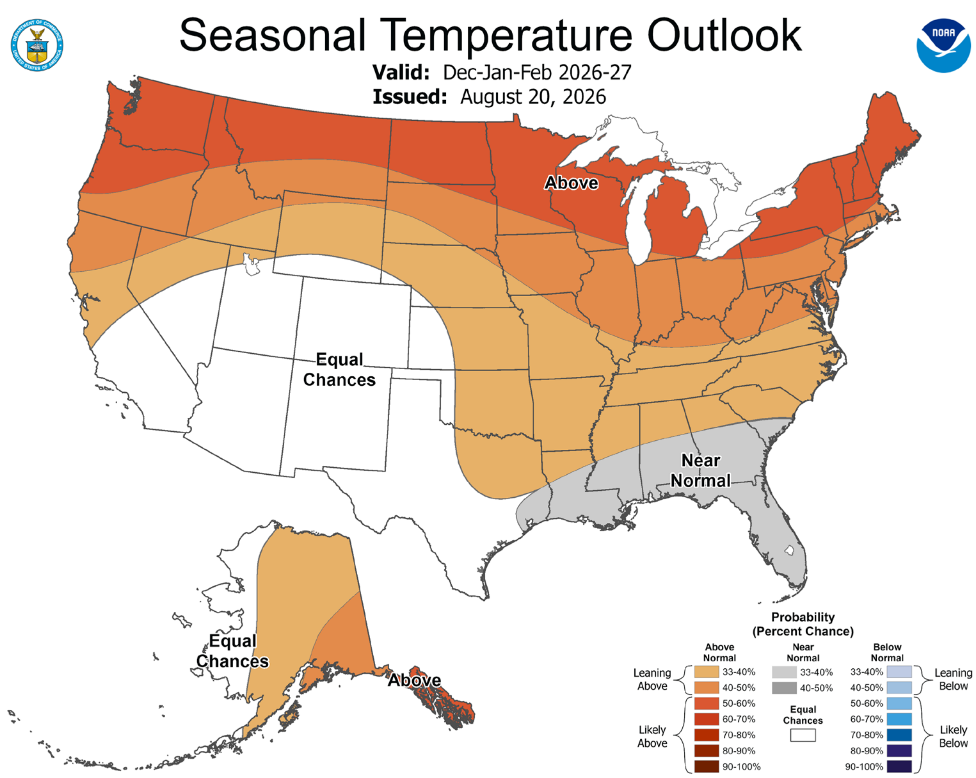

Figure 5. NOAA seasonal temperature outlook for December 2026 through February 2027.
Source: NOAA Climate Prediction Center, issued August 20, 2026. View source

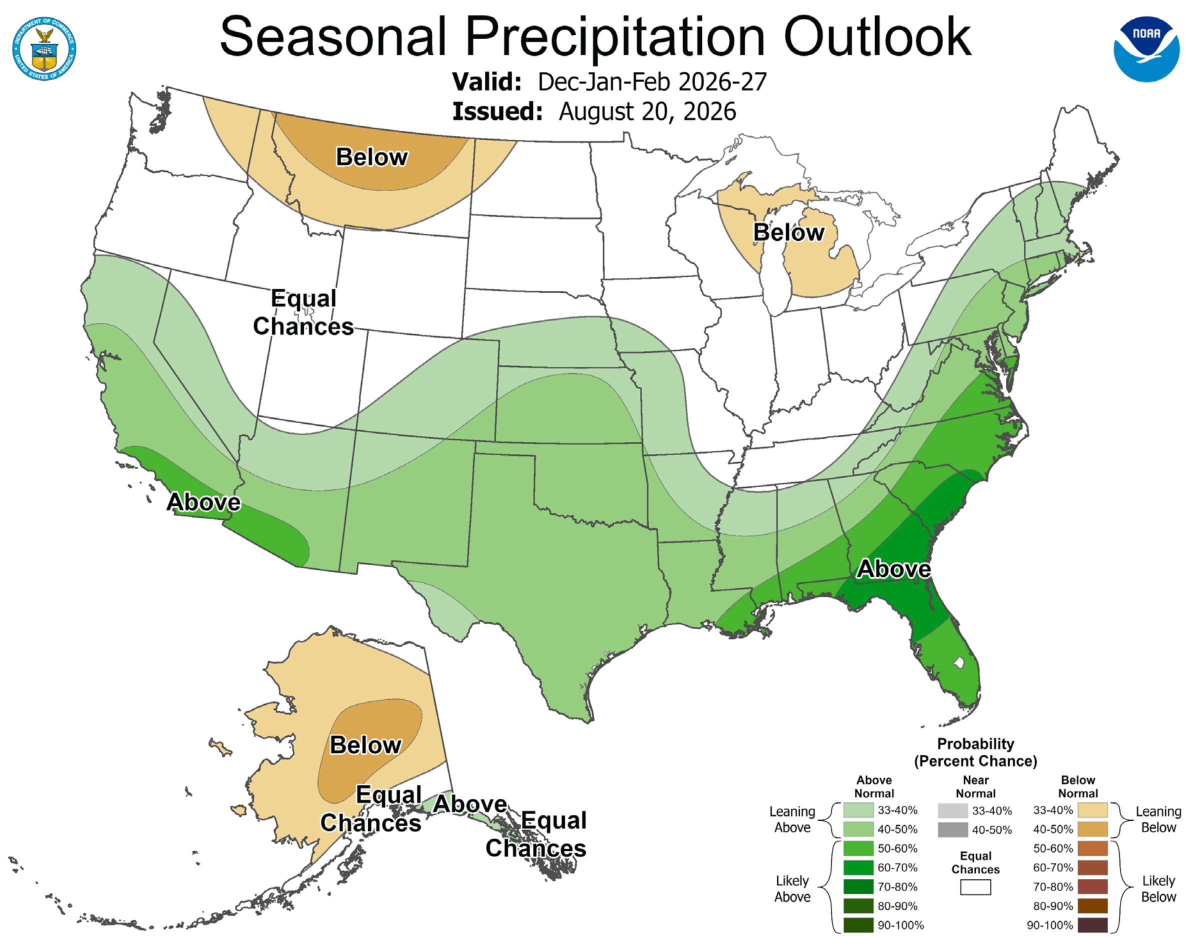

Figure 6. NOAA seasonal precipitation outlook for December 2026 through February 2027. Source: NOAA Climate Prediction Center, issued August 20, 2026. [View source]

What About Fall?

El Niño generally plays a smaller role in the fall outlook because its North American influence is usually strongest during winter. For September through November, the [Climate Prediction Center] outlooks show considerable uncertainty for Kentucky in both temperature and precipitation. Much of the country leans warmer based on model guidance and recent climate trends, but the warm signal is weaker around Kentucky. Precipitation guidance also remains mixed.

That said, historical composites from fall seasons preceding strong El Niño winters (Figure 7) provide some reason for cautious optimism regarding moisture. In those years, the strongest dry signal was centered farther northeast, while wetter tendencies appeared across portions of the central and southern United States.

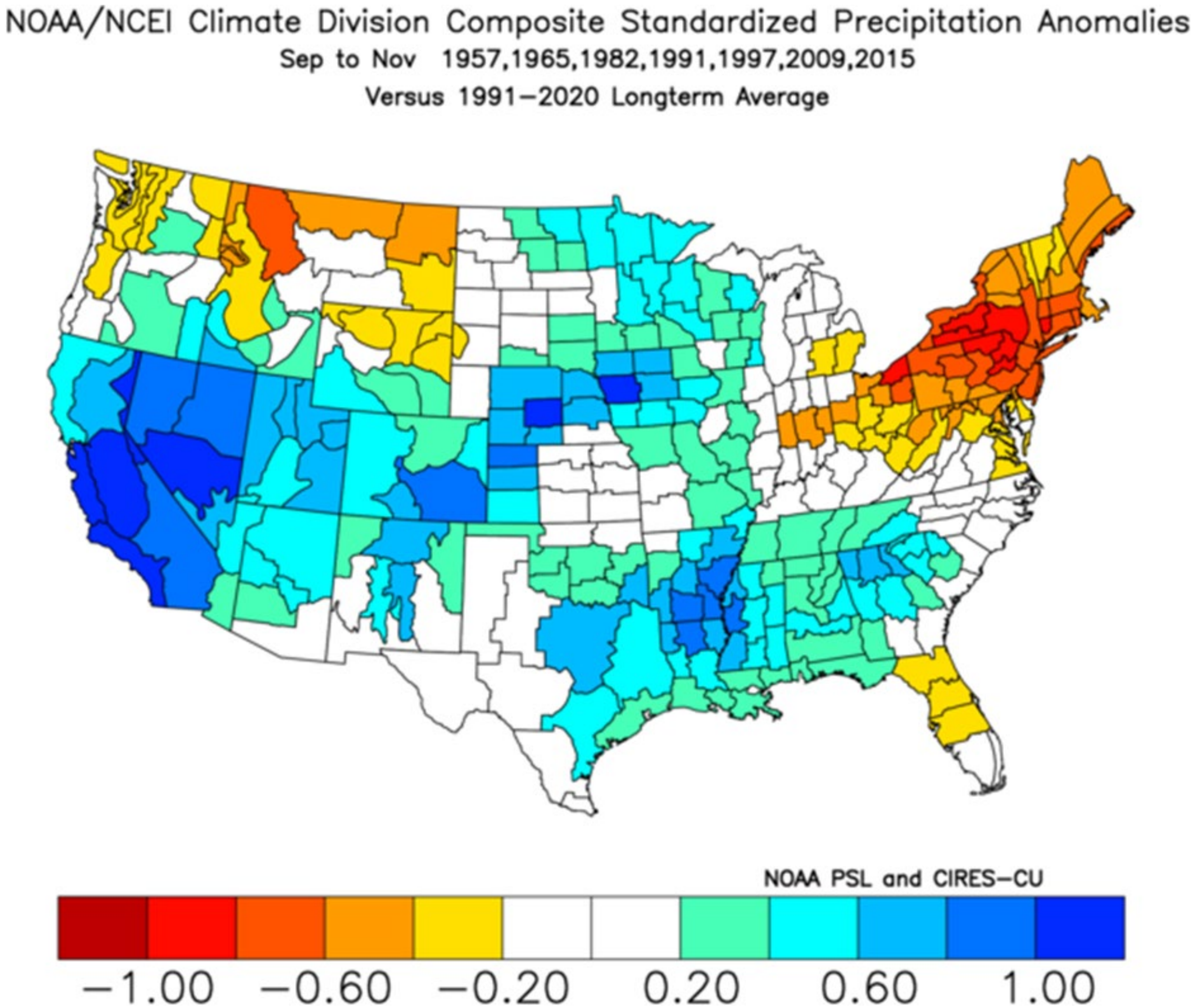

Figure 7. September–November precipitation anomalies for selected falls preceding strong El Niño winters.
Source: NOAA Physical Sciences Laboratory. View source

Potential Grain-Market Implications

Producers should also watch how El Niño affects agriculture beyond Kentucky. Shifts in rainfall across major crop-producing regions of South America and elsewhere (Figure 8) can influence grain production, export supplies, and global grain prices. During El Niño years, portions of northern Brazil often trend drier than normal, while Argentina tends to see increased rainfall, and current seasonal forecast guidance is generally pointing in that direction. More to come on this topic in a future article.

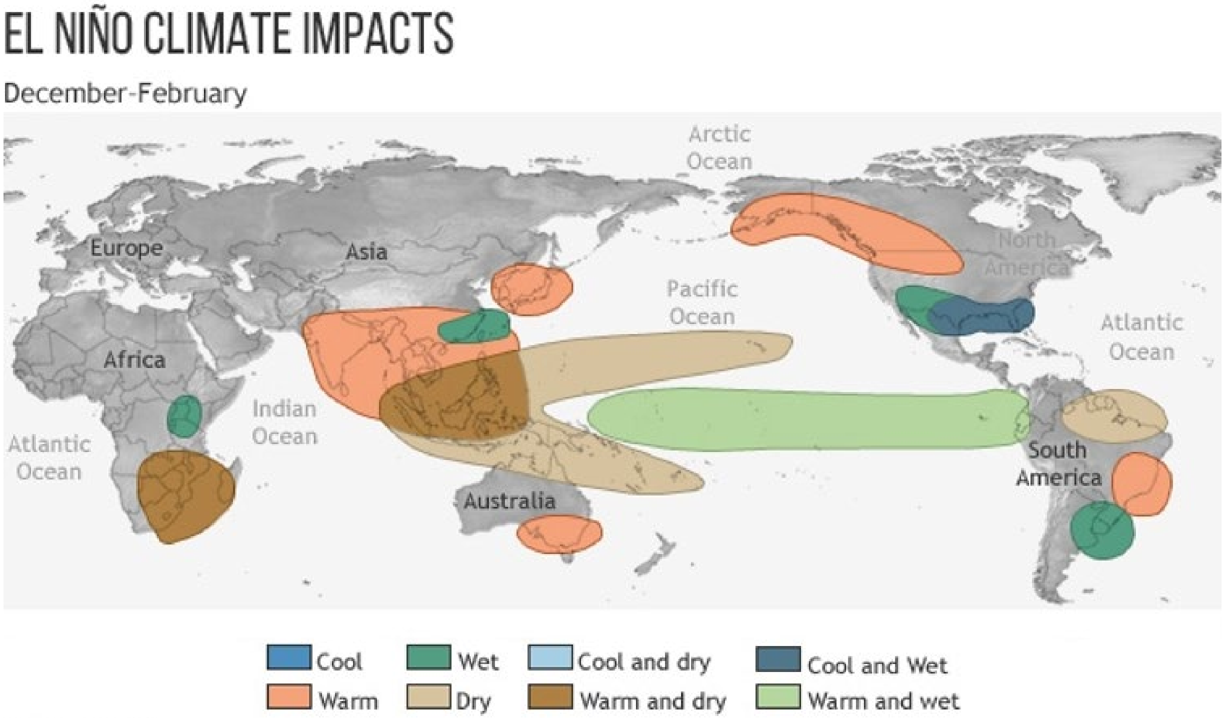

Figure 8. Typical global climate impacts associated with El Niño from December through February.
Source: NOAA Pacific Marine Environmental Laboratory. View source

Bottom Line

This El Niño deserves attention, but not because it guarantees a particular fall or winter for Kentucky. Rather, it provides another piece of information that can help producers better understand potential weather risks and broader agricultural-market influences in the months ahead. While one of the strongest El Niño events on record may increase confidence in certain temperature and precipitation trends, Kentucky's location often makes a clear-cut seasonal signal difficult to identify. El Niño may tilt the odds, but it does not determine the outcome. As Kentucky producers know all too well, Mother Nature has a habit of throwing us a curveball when we least expect it.

Citation: *Dixon, M.J. 2026. El Niño Is Making Headlines, but What Does It Really Mean for Kentucky? Kentucky Field Crops News, Vol. 02, Issue 09. University of Kentucky, September 11, 2026.*

Soil pH Management for Corn and Soybean: Fall is the Time to Get It Right

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John Grove, Soil Science Research & Extension

As harvest season approaches and soil sampling begins across Kentucky, now is the time to evaluate lime needs for next year's corn and soybean crops. Liming decisions made this fall will influence nutrient availability, fertilizer efficiency, and yield potential for several seasons.

Soil pH management is the foundation of any fertilization program. Without maintaining pH in the optimal range, even well-planned fertility programs can fall short. This article builds on University of Kentucky Extension recommendations to provide practical, field-scale guidance for corn and soybean production.

Soil pH reflects the level of acidity in the soil, which directly affects nutrient availability and crop growth. Most soil acidity is not in the soil solution itself, but held on clay and organic matter, which is why both soil-water pH and buffer pH are used to guide lime recommendations.

For Kentucky grain crops, the recommended soil pH is 6.4. Below this level, phosphorus availability declines, aluminum toxicity can restrict root growth, and fertilizer efficiency decreases. Maintaining pH near this target is one of the most effective ways to improve return on fertilizer inputs and stabilize yields. Kentucky soils naturally acidify over time due to rainfall, nitrogen fertilization, and crop removal. As a result, liming is a routine and necessary practice.

Lime Quality and Relative Neutralizing Value

Lime is the most effective tool for correcting soil acidity, but its performance depends on material quality. Relative Neutralizing Value (RNV) combines purity and particle size into a single measure of effectiveness.

Purity, expressed as calcium carbonate equivalent (CCE), determines how much acidity can be neutralized, while fineness controls how quickly the material reacts. Fine particles react quickly, while coarser particles provide longer-term pH maintenance. Kentucky regulations establish minimum fineness standards to ensure effectiveness.

University of Kentucky recommendations assume 100% effective lime. Because most materials fall below this level, application rates must be adjusted based on RNV. Failing to do so can result in under-liming and incomplete pH correction. Lime quality can vary within and across quarries, so recent analysis should be used when determining rates.

Lime Sources: Ag Lime vs. Pelletized Lime

Agricultural limestone remains the most economical option for large-acreage crop production, although its RNV and handling characteristics vary. Pelletized lime is easier to handle and apply but is significantly more expensive per unit of neutralizing value.

Research conducted across Kentucky field sites shows that ag lime and pelletized lime perform similarly when applied at equivalent RNV-adjusted rates. The results below illustrate that both materials effectively increase soil pH over time.

Table 1. Ag lime versus pelletized lime effects on soil pH over time. Results are from 16 Kentucky sites with an average initial pH of 5.8.

Treatment	Soil pH After 3 months	Soil pH After 12 months	Soil pH After 24 months
Check	5.6	5.9	5.1
Pelletized Lime	6.1	6.5	6.3
Ag Lime	6.2	6.5	6.2

Application Timing and Management

Fall is often the preferred time for lime application. Lime reacts slowly, and a full pH adjustment often takes six to twelve months. Applying lime after harvest allows sufficient time for reaction before spring planting.

A single application typically maintains pH for three to five years. Where recommended rates exceed four tons per acre, splitting applications can improve uniformity and reduce surface accumulation. Incorporation can speed up pH correction, but surface applications are effective in no-till systems given enough time and moisture.

Managing Higher pH Areas

Although most Kentucky soils are acidic, some areas, particularly in the Inner Bluegrass, may have higher soil pH. In these fields, nutrient availability becomes the primary concern. Corn may exhibit zinc deficiency, while soybean is more prone to manganese deficiency. Management typically focuses on applying these micronutrients as needed rather than attempting to lower soil pH, which is not practical at field scale.

Common Pitfalls

- Liming without soil testing: Applying lime based on habit rather than data can lead to unnecessary cost and over-liming. Always use up-to-date soil tests to guide decisions.
- Assuming all lime products are equal: Lime sources differ in RNV, moisture content, and particle size. Application rates should always be adjusted based on the product's RNV.
- Using pelletized lime for large fields: Pelletized lime is convenient but expensive per unit of neutralizing value. It is generally best reserved for small areas or targeted applications.
- Poor spreader calibration: Uneven application is a common cause of variable soil pH within fields. Regular calibration ensures accurate and uniform distribution.
- Using "miracle" or liquid lime products: Many products marketed as "fast-acting" contain very little neutralizing material per gallon. While they may supply calcium, they do not meaningfully increase soil pH. Always verify guaranteed analysis and RNV before purchase.

- Using gypsum as a lime substitute: Gypsum provides calcium and sulfur and may improve soil structure, but it does not change soil pH and should not be used to correct acidity.

Final Thoughts

As harvest wraps up and soil sampling begins, soil pH should remain central to management decisions. Correcting soil acidity is one of the most reliable ways to improve fertilizer efficiency, reduce input waste, and stabilize yields in corn and soybean systems. Lime is not just another input; it is the foundation of an effective fertility program.

Citation: *Ribeiro R., Ritchey E., Grove, J., 2026. Soil pH Management for Corn and Soybean: Fall is the Time to Get It Right. Kentucky Field Crops News, Vol. 02, Issue 09. University of Kentucky, September 11, 2026.*

Dry Conditions Could Affect Soybeans Through Fall

Mohammad Shamim, Extension Associate Grain Crops

Folks! If I could predict the weather with even 70% accuracy, you probably would not be reading this newsletter. Why? I'd be off enjoying a few million dollars in the bank, finding much more sophisticated ways to stay in touch with you.

Unfortunately, I neither have those millions or a flawless crystal ball, nor the ability to predict the weather that accurately. I rely on the next best thing: the numbers we crunch, the forecasts generated from models that capture large-scale atmospheric patterns, and the guessing game. While none of these can guarantee anything accurately, current outlooks lean heavily toward drier-than-normal conditions persisting through the fall.

As always, local conditions will dictate the real story in your fields. How dry weather hurts your soybeans comes down to planting date, soil type, soil water holding capacity, and rooting depth. It's why two fields five miles apart can look completely different right now.

Full season soybeans that were planted early (late March through mid-April) caught more than enough rain to pull through. Most of these are nearing maturity and won't need more water to finish out. Double-crop soybeans, on the other hand, are currently ranging from beginning seeds (R5) to full seed (R6), depending on planting date.

Figure 1. Soybean at beginning seed (R5) stage (left). Double Crop soybean field in La Center, Ballard County (right). Photos were taken on Aug 28.

At R5, soybeans are beginning to fill their seeds. By R6, the seed has essentially filled the pod at one of the upper nodes on the main stem. These are important stages because the crop is putting substantial resources into determining final seed size and, ultimately, yield. If soil moisture becomes limiting during R5 and R6, soybean plants can produce smaller seeds, mature prematurely, and develop unevenly across the field. Drought stress at these stages is the biggest limiting factor.

Not all fields will respond to dry weather in the same way. Sandy soils, shallow soils, compacted areas, field edges, and slopes generally have less available water or restricted root development and are likely to show water stress first.

If September turns dry, the timing of that dryness will matter. A soybean crop currently around mid-R5 still has considerable seed-filling potential ahead of it. Prolonged water stress during this period can reduce seed size and increase the proportion of small or shriveled seeds. If dry conditions continue through late seed fill, the crop may also mature unevenly, potentially affecting both yield and grain quality. In other words, a soybean plant that looks relatively healthy today may still have a lot of yield to protect.

During recent scouting, double crop soybean looked great. I did not see significant disease or insect pressure. That is good news, but conditions can change quickly as the crop moves toward maturity. Continue checking fields rather than relying on one scouting trip.

When scouting, look at the lower leaves, stems, pods, and upper canopy. Watch for early yellowing, sudden leaf drop, damaged pods, discoloration, defoliation, or insect feeding. Check several areas within each field, especially places with different soil types, planting dates, drainage, or crop growth.

Understandably, we cannot control rainfall or soil moisture, and there is little we can do about water availability in rain-fed systems once the soil profile begins to dry. What we can do, however, is make informed management decisions based on the conditions we have.

When weather conditions are hot and dry and soybean plants have limited access to water, foliar nutrition is unlikely to solve a water-stress problem. In fact, applying foliar fertilizers under drought-stressed conditions can increase the risk of leaf injury, particularly when salts from the spray solution accumulate on the leaf surface. In other words, we may spend our hard-earned money trying to improve the crop while potentially adding another stress to already stressed plants.

Dry conditions may also reduce the likelihood of some fungal diseases becoming severe, but insects can still pose a threat. Continue scouting fields and, if an insecticide application is being considered, base the decision on established economic thresholds and unbiased, research-based information rather than simply applying a product because insects are present.

For growers with access to irrigation, water management becomes one of the few tools available to directly reduce drought stress. Under hot, dry conditions, soybean water use can approach 0.25–0.30 inches per day, although actual crop water use will vary with temperature, humidity, wind, canopy development, soil type, and available soil moisture. Therefore, irrigation should be used to replace water lost through crop use while considering the amount of water already stored in the soil.

If the crop is approaching R5–R6 and the soil profile is becoming depleted, applying approximately 0.25–0.30 inches of irrigation water per day may help maintain adequate soil moisture during peak seed fill. The table below provides estimated soybean water use to help guide irrigation decisions.

Table. Soybean water use for determining irrigation needs.

Days after Planting	Growth Stage	Inches Water per Day	Inches Water per Week
30 – 40	Bloom (R1-R2)	0.20	1.40
50-60	Early Pod (R3)	0.20	1.40
65-75	Elongated Pods (R4)	0.25	1.75
90-105	Seed Development (R5-R6)	0.30	2.10
102-116	Pods Change color (R7)	0.20	1.40
113-130	Mature (R8)	0.05	0.35

Source: University of Missouri Extension

The following formula shows how much water is needed to achieve a target irrigation depth of 0.25 inches of water per acre. It takes 27,154 gallons to apply 1 inch of water over 1 acre. This value is derived from the fact that 1 acre contains 43,560 square feet and 1 cubic foot of water equals 7.48052 gallons.

$$43{,}560\ ft^2 \times 0.12\ ft = 3{,}630\ ft^3$$

$$3{,}630\ ft^3 \times 7.48052 = 27{,}154\ {}^{gal}/_{ac.\,in}$$

Therefore, to apply 0.25 inch of water over 1 acre, approximately 6,789 gallons of water per acre is needed.

$$27{,}154\ {}^{gal}/_{ac.\,in} \times 0.25\ in \times 1\ ac = 6{,}788.5 \sim 6{,}789\ gal$$

Note: This recommendation does not address irrigation scheduling. For irrigation scheduling details, refer to ID-249, University of Kentucky soybean management guidelines.

Citation: *Shamim, M., 2026. Dry Conditions Could Affect Soybeans Through Fall. Kentucky Field Crops News, Vol. 02, Issue 09. University of Kentucky, September 11, 2026.*

A Refresher on Diplodia Ear Rot

Kiersten Wise, Extension Plant Pathologist

Scouting reports have indicated that Diplodia ear rot is present in some Kentucky fields this year. As a reminder, the environmental conditions at and just after silking (R1) influence if ear rots are problematic each year. It is important to identify fields that may have ear rots to ensure timely harvest and proper storage of moldy grain.

Diplodia ear rot

Diplodia ear rot is caused by the fungi *Stenocarpella maydis* and *S. macrospora*, and is very common in cornfields across the Midwest and MidSouth. This fungus survives in residue and infects plants shortly after pollination. Humid weather and rains prior to and after pollination will favor disease development. Diplodia ear rot is identified by white fungal growth on the cob, often forming a mat of fungus across the ear (Fig. 1). Infected kernels may also be brown-gray in appearance. Small, black fungal structures called pycnidia may form on the kernels or the cob. The fungus is reported to produce a mycotoxin called diplodiatoxin in South America and South Africa, however, no reports of toxic effects of grain on livestock or humans due to Diplodia ear rot have been reported in the United States. Grain dockage may still occur, however, due to moldy grain. More information on Diplodia ear rot can be found in University of Kentucky publication Diplodia Ear Rot of Corn.

Figure 1. Diplodia ear rot (picture courtesy Kiersten Wise)

Ear rot management

Regardless of which ear rot is present in a field, farmers should scout fields prior to harvest and determine the level of incidence of any ear rot in the field. If ear rots are observed in a field, affected areas should be harvested early and grain segregated to avoid contamination of non-infected grain. Grain harvested with suspected ear rots should be dried to below 15% moisture. If grain is stored above this moisture content, mold can continue to grow. All grain contaminated by any ear rot fungus should be stored separately from good grain, and if stored long term, it should be stored below 13% moisture to prevent further growth of fungi.

Several publications on ear rots and mycotoxin management are available through the Crop Protection Network. These publications provide information on ear rot identification and management, as well as answers to frequently asked questions about mycotoxins, and storing moldy grain.

Citation: Wise, K., *2026. A Refresher on Diplodia Ear Rot. Kentucky Field Crops News, Vol. 02, Issue 09. University of Kentucky, September 11, 2026.*

Flexible Plants and Crop Yield

Dennis Egli, Professor Emeritus

The flexibility (plasticity) of a plant plays an important role in many crop management decisions. But what is 'plasticity'? A dictionary definition – "to mold or shape"- doesn't tell us much. A more useful definition describes a plastic crop species as having the capacity to adjust the number of seeds that an individual plant produces when the productivity of the environment changes. Seeds per plant on a non-plastic species doesn't change much as productivity changes.

Plasticity was an important plant characteristic as plants evolved because it allowed a plant to take advantage of a highly productive environment or a low population by increasing its reproductive output (seeds per plant) to help insure survival of the next generation. Consequently, all grain crop species were originally plastic although the mechanisms creating plasticity varied.

Small grains (wheat, barley) increased seeds per plant by producing seed bearing tillers. Soybean and other grain legumes branch in response to increased productivity, increasing pods and seeds per plant. Soybean can also increase flowers and pods at an individual node.

Corn is a unique species. The undomesticated corn plant was very plastic, producing ear – bearing tillers and multiple ears on the main stem. Domestication and the efforts of plant breeders converted it into a largely non-plastic species that seldom produces tillers or multiple ears. It seems that early corn producers preferred hybrids that produced only a single ear. There are, however, some hybrids that will tiller or produce a second ear under the right conditions.

What does plasticity have to do with crop management? Plasticity plays a major role in the response of a crop species to changes in plant population. Increasing population reduces the area per plant and the productivity of the individual plant. A plastic species can adjust seeds and yield per plant as population changes, maintaining a constant seeds per unit area and yield over a wide range in population. A non-plastic species cannot change seed number or yield per plant as population changes, so it is necessary to adjust the population to maximize yield.

To further complicate the situation, the optimum corn population depends upon the yield level (higher yield environments require higher populations), ear (florets per ear) and kernel size (kernels pe pound) (larger ears and kernels require lower populations). For example, a hybrid producing 250 bushels per acre with a 300 mg kernel (1513 kernels per pound) would have to produce 21.1 million kernels per acre. If the hybrid produces an 800 kernels per ear, the population will have to be 26,440 plants per acre. A hybrid with a smaller ear (576 potential kernels per ear) would have to have a population of 36,722 plants per acre to produce the same yield. Ear size is important. Unfortunately, information on these reproductive characteristics may not be readily available for most hybrids.

Recent research in dry climates demonstrated the value of plasticity in corn. The crop in these climates is usually grown at lower populations which limits yield in years with above average rainfall. A hybrid that tillered was able to produce enough kernels at the low population to capture the higher yield in years with higher rainfall. Plasticity (tillering) allowed the crop to adjust to the higher yield environment.

Plasticity also affects the response of a crop to non-uniform spacings of plants in the row or non-uniform emergence. Widely spaced plants or plants that emerge first (dominant plants) receive more sunshine and grow faster than closely spaced plants or late emergers (dominated plants). The dominant plants of a plastic species have the flexibility to increase the number of seeds per plant to compensate for the reduction of seeds on the dominated plants so there is often no effect on yield. The dominant plants of a non – plastic species usually cannot make the adjustment and seeds per unit area and yield may be reduced. Uniform stands are important for maximum yield in corn (non-plastic) but not in soybean (plastic species).

Plastic species adjust to variation in population or productivity level by naturally changing yield per plant while the producer must create 'plasticity' in a non-plastic species by adjusting the population. Management of a plastic crop is easier because plasticity smooths out variation in population or plant spacing. Management of a non-plastic species is more difficult because the producer must adjust population or ensure a uniform stand to maximize yield. Keeping management simple increases the chances it will be done correctly resulting in high yields.

"In this world there are only two tragedies. One is not getting what one wants, and the other is getting it. The last is much the worst". Oscar Wilde (writer, 1854-1900)

Adapted from Egli, Dennis B. 2021. Applied Crop Physiology: Understanding the Fundamentals of Grain Crop Management. p.105-111. CABI.

Citation: *Egli, D., 2026. Flexible Plants and Crop Yield. Kentucky Field Crops News, Vol. 02, Issue 09. University of Kentucky, September 11, 2026.*

Getting Canola Off to the Best Start: Fall 2026 Planting & Early Management

Mohammad Shamim, Extension Associate Grain Crops

It feels like we just finished harvest, but it's already time to talk about canola for the 2027 harvest season. Canola has gained serious momentum across Kentucky and surrounding states, reaching roughly 120,000 harvested acres this past growing season.

While last fall's warm temperatures gave canola a strong start, the severe cold event on March 16–17 of this year combined with a dry spring hit yields hard across several Kentucky counties. For some growers, unfortunately that tough combination was enough to question planting canola again this season. However, field observations across the state revealed an important truth: weather wasn't the only factor. In many fields, yield losses were driven far more by management decisions than by the environment alone. Common issues that hurt performance included:

- Late planting that left stands undersized heading into winter
- Poor weed control (especially early henbit pressure)
- Nitrogen misapplication
- Inadequate pest management and harvest losses

Looking ahead to the 2026–2027 growing season, weather forecasts remain uncertain, with anticipated temperature fluctuations throughout autumn and winter and the possibility of another dry early spring. While growers cannot control late spring freezes or drought, effective fall establishment remains the best safeguard against unpredictable weather conditions. Immediate attention should be given to ensuring canola reaches the rosette stage prior to dormancy, targeting six true leaves and a ½-inch stem/root crown diameter at the soil surface. Although weather is uncontrollable, strategic management decisions are essential to optimize yield potential.

Key Fall Management Decisions

- **Target Date (Sept 15–25):** Planting too early causes excessive fall growth, while planting too late leaves crops under-developed. Both increase winterkill. With unpredictable temperatures ahead, targeting the mid-September window gives your crop the best odds for ideal rosette development.
- **Seeding Rate:** Aim for a target plant population of 270,000 pure live seeds (PLS) /acre (roughly 2.9 to 3.1 lbs/acre depending on seed size). You can calculate lives seeds per acre and adjust your seed rate based on the following equations:

$$PLS\ \% = \frac{Germination\ \%\ x\ Purity\ \%}{100}$$

Example: If your seed tag shows **95% Germination** and **99% Purity**:

$$PLS\ \% = \frac{95\ \%\ x\ 99\ \%}{100} = 94.05\%\ (or\ 0.9405)$$

To ensure you get your target number of live seeds in the ground, adjust your target population by the PLS percentage. For example, if your target is **270,000 live seeds/acre**:

$$Bulk\ seed\ (acre) = \frac{Target\ Live\ seeds\ per\ Acre}{PLS\ (decimal)} \approx \frac{270{,}000}{0.9405} = 287{,}081$$

Using the seed count per pound (listed on the bag, e.g., 100,000 seeds/lb for canola):

$$Seeding\ Rate\ (lbs/acre) = \frac{287{,}081}{100{,}000} = 2.87$$

This seeding rate leads to an established stand of 4 to 8 plants per foot-row in 15-inch rows and up to 4 plants per foot-row in 7.5-inch rows, which provides the optimal stand count and canopy closure

- **Row Spacing:** Observations show that 7.5-inch or 15-inch row spacings consistently outperform wider rows (with the exception of specialized 20-inch no-till setups following corn).
- **Hybrid Selection:** Stick with **PT-303**. While a few people were happy with **PT-314**, I was not. Field observations over last growing season showed higher vulnerability to spring frost damage, white mold, pest pressure, and standability issues.

Rotational Considerations

- **Following Corn:** Managing heavy residue is essential for uniform emergence. Use aggressive shark-tooth row cleaners or a pass with a high-speed disk to create a clean seedling zone.
- **Following Soybeans:** Watch out for early weed competition; especially **henbit**, which can quickly choke out establishing canola. Either use light vertical tillage to clear volunteer soybeans and break up residual barriers or apply a solid pre-plant herbicide program (such as Triflan or Command).

Fall Fertility Reminder

If your soil needs a boost to get canola established, check the University of Kentucky AGR-1 recommendations. As a general rule, **do not exceed 30 lbs/acre of actual Nitrogen in the fall** to avoid over-stimulating top growth before the first hard freeze.

Citation: *Shamim, M., 2026. Getting Canola Off to the Best Start: Fall 2026 Planting & Early Management. Kentucky Field Crops News, Vol. 02, Issue 09. University of Kentucky, September 11, 2026.*

Register for Fall Crop Protection Webinar Series

Register now for a five-part webinar series focusing on agronomic crops and Integrated Pest Management. The University of Kentucky Martin-Gatton College of Agriculture, Food and Environment and the Grains Crop Pest Management Group will present the 2026 Fall Crop Protection Webinar Series beginning at 10 a.m. ET/9 a.m. CT on Thursday, Oct. 22, 2026, and will continue consecutive Thursday mornings through Nov. 19, 2026, at the same time. Each webinar will be one hour in length. Continuing Education Units for certified crop advisors will include 1 CEU in Integrated Pest Management per webinar, or a potential of 5 CEUs total for participation in all five webinars; Kentucky pesticide applicator credits are pending.

The webinars are open to agriculture and natural resource county extension agents, farmers, crop consultants, industry professionals, and others, whether they reside or work in Kentucky or outside the state. Those planning to view the webinars must provide their name and email address on the registration website. Select the desired webinar dates to join and then click the register button. To add an additional webinar before it's aired live, return to the registration website and select the webinar date. An email will confirm the dates selected. For questions, contact Jason Travis, UK Extension Associate, at 859-562-2569.

The webinar schedule follows with presenters and their topics:

Oct. 22, 2026—*Webinar #1*: 10 a.m. ET/ 9 a.m. CT; **Marcelo Zimmer**, Extension Weed Science

Biology and Management of Johnsongrass in Row Crops, Forages, and Roadsides

Oct. 29, 2026—*Webinar #2*: 10 a.m. ET/ 9 a.m. CT; **Felipe Batista**, Department of Entomology

Management of Insecticide Resistance in Field Crops

Nov. 5, 2026—*Webinar #3*: 10 a.m. ET/ 9 a.m. CT; **Kiersten Wise**, Extension Plant Pathologist

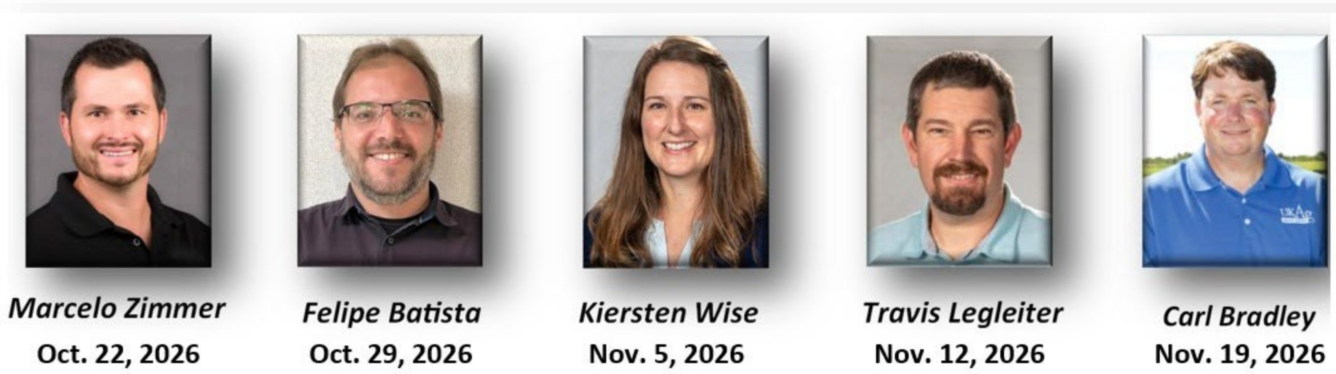
Curvularia leaf spot—Understanding Our Newest Corn Disease Threat

Nov. 12, 2026—*Webinar #4*: 10 a.m. ET/ 9 a.m. CT; **Carl Bradley**, Extension Plant Pathologist

Soybean Disease Review for 2026

Nov. 19, 2026—*Webinar #5*: 10 a.m. ET/ 9 a.m. CT; **Travis Legleiter,** Extension Weed Science

EPA Herbicide Strategy for Protection Endangered Species - What Is It and How to Implement it on Your Farm



Upcoming Events

2026

Fall Crop Protection Webinar #1 - Marcelo Zimmer
October 22, 2026

Fall Crop Protection Webinar #2 - Felipe Batista
October 22, 2026

Fall Crop Protection Webinar #3 - Kiersten Wise
October 22, 2026

Fall Crop Protection Webinar #4 - Travis Legleiter
October 22, 2026

Fall Crop Protection Webinar #5 - Carl Bradley
October 22, 2026

2027

Kentucky Commodity Conference - Bowling Green, KY
January 21, 2027

UK Winter Wheat Meeting – Princeton, KY
February 2, 2027

Kentucky Crop Health Conference - Bowling Green, KY
February 4, 2027

UK Wheat Field Day – Princeton, KY
May 11, 2027