Kentucky Field Crops News

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Martin-Gatton College of Agriculture, Food and Environment | Grain and Forage Center of Excellence

UK Wheat Science Group
UK Corn & Soybean Science Group

In This Issue

Grain Markets: A Year in Review & What Lies Ahead

Dr. Grant Gardner, UK Extension Economist

CORN

Corn markets in 2025 remain weighed down by record production and large carryover supplies, keeping prices under pressure despite modest demand improvements. Ethanol use has flattened, feed demand is soft as cattle herd rebuilding remains slow, and exports, led by Mexico, are the strongest demand component but still not enough to meaningfully tighten the balance sheet. Prices have stabilized around $4.25/bu but remain historically low.

Moving into 2026, corn prices are expected to stay relatively weak without a major shift in supply or demand. Acreage reductions will be necessary to rebalance the market, and exports will continue to play a critical role. Trade policy, including tariffs, negotiations, and geopolitical developments, remains the biggest risk factor. Longer-term opportunities like Sustainable Aviation Fuel may eventually add demand, though impacts remain uncertain. Seasonal marketing, early sales during spring strength, and use of storage to capture basis improvements will remain key strategies as the long-term outlook stays generally bearish unless exports improve or domestic demand expands.

SOYBEANS

Soybean prices in 2025 stabilized near $11.00/bu after two years of sharp declines, recovering from the $9.50 harvest low. Domestic crush expansion continues to support demand, but uncertain exports, particularly slow Chinese buying through November, have prevented stocks from tightening. While supply and demand resemble 2022, price behavior looks more like the 2018 trade-war downturn.

Looking ahead to 2026, soybean prices are expected to follow traditional seasonal patterns, with moderate winter or early-spring rallies before falling ahead of harvest. If China maintains steady purchases, average prices around $11.25/bu are possible, though volatility will remain high. Crush capacity will keep expanding through 2030 and will tighten stocks over the long term but crush alone is unlikely to trigger major price rallies. Export performance will remain the deciding factor. Marketing early and using storage to capture basis appreciation will again be important as short-term price behavior remains highly sensitive to trade developments and global weather.

WHEAT

U.S. wheat production increased again in 2025, led by strong Hard Red Winter yields. Prices have improved since late summer, though it is unclear whether the true market bottom has been established. Kentucky's season-average price likely landed near $4.75/bu. Domestic food and seed use remain flat, and the projected increase in feed use may be overstated given ongoing cattle herd constraints. Weak financial conditions and limited planting incentives are expected to reduce double-crop wheat/soybean acreage in Kentucky.

In 2026, wheat acreage nationwide is expected to remain limited, placing more weight on export performance. Tight global stocks and recent quality concerns in the EU and China may create export opportunities for the U.S., although Australia's record crop provides additional competition. Geopolitical tensions in the Russia–Ukraine region could create volatility and short-term pricing opportunities. The 2026 average price is expected to be around $5.00/bu, with potential for higher marketing opportunities if acreage declines materialize.

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Making Profitable Management Decisions in 2026 Corn Fields

Chad Lee, University of Kentucky

As we look back on a low revenue season for 2025 and look ahead to a concerning economic outlook for 2026, some are asking what or where they can cut and still make excellent yields. There is a saying that, "You cannot save your way to profit," which suggests that you cannot do things that cut your revenue stream to be profitable. I would suggest that making random cuts to your production likely leads to economic losses. The challenge for every farmer in a time like this is to identify what adjustments can be made to expenses without damaging that revenue stream of the farm.

Getting the fundamentals correct is critical every year, but especially when margins are tight. "Everybody" is convinced that they already have the fundamentals figured out. The ability of farmers to get most of these fundamentals right most of the time is a massive success story that is not understood outside of agriculture. Even though I think farmers are largely successful at managing the fundamentals, in my opinion, getting the fundamentals right on every acre is a challenge.

For corn in Kentucky, the basics include:

1. choosing excellent genetics
2. highly functioning corn planters
3. adequate soil fertility such as lime, N, P, K, Zn and probably S
4. scouting and timely in-season adjustments as needed
5. excellent weed control from corn emergence to nearly blacklayer
6. scouting and timely application of fungicides and/or insecticides based on thresholds and forecasts
7. timely harvest, grain drying and on-farm grain storage
8. winter cereal cover crop (wheat, barley or cereal rye) following soybeans

The University of Kentucky conducts corn hybrids trials every year and publishes those results online. Unbiased tests like these can help your odds of selecting the best genetics for your farms.

Of the grains we grow, corn probably is the most sensitive to a timely and uniform emergence. Highly functioning planters are critical to that success, especially in no-tillage and low-tillage systems. A planter does not have to be brand new to be highly functioning. In fact, most brand-new planters take time in the shop and several acres in the field to get adjusted into highly-functioning machines. Older planters with proper maintenance and updates can be highly functioning. Take time now during the winter to make sure your planters are running in top condition. Replace worn parts.

Sidewall compaction will reduce corn yields and the revenue stream. One of the greatest challenges for farmers is that sidewall compaction usually occurs by planting a field one day too early. I have made this mistake in my research plots before, and I am supposed to "know better". Getting on a field one day too early is extremely easy to do, especially in a year when planting is difficult. Frequent rains for the first 2 or 3 weeks after planting could alleviate sidewall compaction. We saw that in 2025. If the sidewall compaction is not alleviated by the rains, yields will be damaged and expectations on that field should be reduced. Outside of the frequent rains after planting, there are no other strategies that can alleviate sidewall compaction effectively.

Soil fertility is often a large portion of any corn production costs. Soil pH needs to be adjusted to 6.0 to 7.0 and agricultural lime is the best option to adjust pH. Ag lime is calcium carbonate or magnesium carbonate and the carbonate portion of the molecule helps raise the soil pH. Avoid using liquid “limes” which may not have any carbonate in them.

The updated AGR-1 Lime and Fertilizer Guide has a range of nitrogen rates from about 130 to 190 lb N/acre when corn follows soybeans, corn or another grain and depending on soil drainage classification and tillage type. Applying more of the nitrogen after corn emergence can help improve efficiency of the N fertilizer, especially if following cover crops.

Phosphorus (P) and potassium (K) have thresholds based on soil tests. If soil test P is at 60 lb/acre or above, no additional P fertilizer is needed. If soil test K is at 300 lb/acre or above, no additional K fertilizer is needed. We have conducted trials at soil test values above these thresholds, not applied P or K, and had corn yields at 280 bu/acre and above. Fields (or areas of fields) with high soil tests of P do not need P fertilizer in 2026. Fields (or areas of fields) with high soil test K do not need additional K fertilizers in 2026.

Weeds should not compete with the corn crop from emergence to nearly blacklayer in the field. We have seen more weed escapes the past 2 or 3 years. The 2025 season was especially difficult because the high rainfall in the spring altered planting dates and prevented timely sprayer passes in fields. Keeping nearly all weeds controlled is critical to protecting the revenue stream.

Timely scouting of the corn for disease and insect threats and timely application of fungicides and/or insecticides based on those thresholds improves the chances for a return on that investment. Ideally, a cornfield could be scouted and then sprayed within 48 hours if a threshold is reached. If a scout and applicator can be that timely, they will go a long way to protecting the revenue stream from that field. Applying either of these on a cornfield that does not need them is a wasted expense that did nothing to protect the revenue stream.

Getting corn harvested timely and before too much weathering occurs also protects the revenue stream. Usually, corn should be harvested a little bit early and dried in bins to maximize grain captured by the combine and to maintain higher grain quality for sale.

Once you get past these fundamentals for 2026, any other inputs or products should require a very sharp pencil to determine if they really can recoup a larger revenue stream than they cost. If you really want to try some new products or techniques, this is a year to start small and include check strips or other comparisons to identify the real return on investment.

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Dr. David Van Sanford receives 2025 USWBSI Lifetime Achievement Excellence Award

Jennifer Elwell, M-G CAFE Marketing and Communications

David Van Sanford, professor and wheat breeding specialist in the Department of Plant and Soil Sciences at the University of Kentucky Martin-Gatton College of Agriculture, Food and Environment, was selected as the 2025 recipient of the U.S. Wheat and Barley Scab Initiative (USWBSI) Lifetime Achievement Excellence Award.

This prestigious national honor recognizes individuals with more than two decades of impactful work on Fusarium head blight (FHB), a devastating disease affecting wheat and barley production across the U.S. The award was presented at the National FHB Forum on Dec. 7 in Denver, Colorado.

“I was thrilled, honored and humbled to be selected for this award,” Van Sanford said. “There are so many great scientists in the US Wheat and Barley Scab Initiative that I couldn’t imagine I was even in the running. It means a great deal to me because research on FHB has been the centerpiece of our breeding program since the late 1990s. Beyond that, I believe the Initiative has succeeded in fulfilling its purpose because all of its scientists understand that our efforts must benefit the farmers, millers, bakers, maltsters, brewers and distillers. Everyone buys into that ethic, and it has led to a very strong collaborative effort.”

Van Sanford (center) received his USWBSI Lifetime Achievement Excellence Award from USWBSI executive committee co-chairs Richard Magnusson (left) and Ruth Dill Macky (right). Photo provided by USWBSI.

Van Sanford was nominated by faculty at the University of Minnesota and the University of Kentucky, underscoring the breadth of his contributions to addressing FHB. Carl Bradley, professor of plant pathology at Martin-Gatton CAFE, made the nomination on behalf of UK.

“I was honored to nominate Dr. Van Sanford for the U.S. Wheat and Barley Scab Initiative’s Lifetime Achievement Excellence Award,” Bradley said. “His leadership has transformed how the wheat and small grains community addresses FHB, leaving an indelible mark on both the Initiative and the broader field of small grain improvement.”

Background and accolades

Since joining the university in 1981, Van Sanford has led the UK wheat breeding project, focusing on the development of soft red wheat cultivars tailored to Kentucky and the Mid-South. His research has advanced FHB resistance, improved nitrogen use efficiency and enhanced climate resilience in wheat. These efforts led to the release of two wheat cultivars — Pembroke 2014 and Pembroke 2016 — as well as a scab-resistant soft red winter wheat germplasm.

Van Sanford’s leadership extends beyond the lab and field. He served for 12 years as co-chair and director of the USWBSI Networking and Facilitation Office, helping shape the Initiative’s strategic direction and collaborative framework. He also chaired the National Wheat Improvement Committee for five years, advocating for research priorities and stakeholder engagement at the national level.

His scholarly contributions include more than 100 peer-reviewed publications and pioneering work in genomic selection and phenotyping methods, such as optical sorting for deoxynivalenol reduction. These innovations have helped redefine breeding strategies for FHB resistance and influenced research nationwide.

Equally significant is Van Sanford's role as a mentor and educator. He has advised 33 graduate students, including many who have gone on to lead their own research programs in plant breeding and pathology.

Bradley also noted Van Sanford's collaborative spirit is evident in long-standing partnerships with growers, end users and industry stakeholders, including efforts to sustainably produce high-protein bread wheat in central Kentucky.

"Van Sanford is deserving of this award for his extraordinary contributions to wheat breeding, his enduring research on Fusarium head blight resistance and his tireless dedication and lasting influence on both the scientific community and agricultural production," Bradley said.

Rebecca McCulley, chair of the UK Department of Plant and Soil Sciences, emphasized the national significance of the award and Van Sanford's contributions.

"This is a significant award at the national level, and Dave Van Sanford is thoroughly deserving," McCulley said. "The USWBSI Lifetime Achievement Excellence Award celebrates Van Sanford's enduring impact on wheat breeding, his visionary leadership, and his unwavering commitment to improving crop resilience and farmer livelihoods. His work continues to shape the future of small grain research and production in Kentucky and beyond."

Van Sanford's legacy also includes recognition from the Kentucky Small Grain Growers Association, which named a new graduate student housing facility in his honor and awarded a $250,000 grant to the Grain and Forage Center of Excellence. His previous accolades include the University of Kentucky Research Professorship Award (2018–2019), the Thomas Poe Cooper Award for distinguished research (2014), and election as Fellow of both the American Society of Agronomy and the Crop Science Society of America (2011).

To learn more about the Department of Plant Pathology at Martin-Gatton CAFE, visit
https://plantpathology.mgcafe.uky.edu.

Jennifer Elwell, M-G CAFE Marketing and Communications

Tickets are now available for 2026 Kentucky Crop Health Conference

Mark your calendars for a supercharged conference scheduled just a few weeks before next year's planting season starts to accelerate.

Tickets are now on sale for the Kentucky Crop Health Conference scheduled for Thursday, February 5, 2026, from 9 a.m. to 3:30 p.m., at the National Corvette Museum conference room in Bowling Green, Ky. Sign-in will begin at 8 a.m. CST when museum doors open. Breakfast and lunch will be included in the ticket purchase. For conference tickets visit https://kchc2026.eventbrite.com.

In its fourth year, this unique conference offers guidance on integrated pest management through University of Kentucky extension specialists as well as pest management specialists from across the United States.

Guest speakers for 2026 include Horacio Lopez-Nicora from Ohio State University**;** Jocelyn Smith from University of Guelph, Ridgetown in Canada, and Rodrigo Werle from the University of Wisconsin-Madison. Also speaking this year will be University of Kentucky's Matthew Springer discussing methods to reduce wildlife losses in row crop production. They will join University of Kentucky extension specialists Travis Legleiter, Kiersten Wise, Carl Bradley and Raul Villanueva for in-depth discussions in the disciplines of weed science, plant pathology and entomology.

Educational credits include 6 CEUs in IPM for Certified Crop Advisors. Kentucky pesticide applicators will receive 5 CEUs for Category 1A and 1 CEU for Category 10. Tennessee applicator credits will also be available.

University of Kentucky

2026 Winter Wheat Meeting

Tuesday, February 3, 2026
9 a.m. – 3 p.m.
The Bruce Convention Center
303 Conference Center Dr, Hopkinsville, KY 42240

Changes in Kentucky Wheat Over the Past 40 years
Dr. Dave Van Sanford

Best Practices for Drone Applications
Dr. Tim Stombaugh

Driving Innovation in Wheat Production with AI and Precision Tools
Dr. Katsutoshi Mizuta

Planting Wheat Autonomously
Quitt Pottinger, Affinity Farms

Educational Credits
CCA: Pending
Pesticide applicator: Pending

Wheat Disease Management Update
Dr. Carl Bradley

Aphids, Hessian Flies and Occurrence of Resistant Pockets of Fall Armyworm Populations in Wheat in Kentucky
Dr. Raul Villanueva

Wheat Economics

Wheat Crop Update - UK Specialist & Researchers

Verdict on Harvest Weed Seed Control of Ryegrass in Wheat
Dr. Travis Legleiter

For more information on the 2026 Kentucky Crop Health Conference contact (859) 562-2569.
Ticket sales close on January 29, 2026. Refunds will not be issued after that date.

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Kentucky Small Grain Growers' Association

Upcoming Events

January 15, 2026, Kentucky Commodity Conference, Bowling Green, KY

February 3, 2026, Winter Wheat Meeting, The Bruce, Hopkinsville, KY

February 5, 2026, Kentucky Crop Health Conference, Bowling Green, KY

February 26, 2026, Pattern Drone Testing, Princeton, KY

March 26, 2026, Italian Ryegrass Field Tour, Princeton, KY

March (TBA) Soil Properties Workshop at Spindletop Farm, Lexington, KY

May 12, 2026, UK Wheat Field Day, Princeton, KY

May 28, 2026, Crop Scouting Clinic, Princeton, KY

June 25, 2026, Pest Management Field Day, Princeton, KY

July 21, 2026, UK Corn, Soybean and Tobacco Field Day, Princeton, KY

July 23, 2026, High School Crop Scouting Competition, Princeton, KY

TBA 2026, Drone Pilot Certification Workshop, Madisonville, KY