

Annual Report 2026

# *Where Agriculture* MEETS INNOVATION

**KANSAS STATE**  
**UNIVERSITY**®

College of Agriculture



**AGRONOMY RESEARCH AND INNOVATION CENTER**





**Dear Friends:**

**2025 has proven to be a transformative milestone for the College of Agriculture.**

In October, we proudly celebrated the opening of the Billbrey Family Event Center, marking a significant achievement in K-State's ambitious \$210 million Agriculture Innovation Initiative. The other two state-of-the-art buildings — the Agronomy Research and Innovation Center and the Global Center for Grain and Food Innovation — are well on their way to completion and will be operational by the end of this year.

We are thrilled to announce that Niche.com has recognized the College of Agriculture as one of the top five agricultural colleges in the nation. The cutting-edge facilities mentioned above will enhance the college's leadership position in higher education, evolving and improving our educational prowess to shape the industry's future leaders and drive innovative research in vital areas such as animal science, biosecurity, regenerative agriculture, and food science, to name just a few.

As we gain momentum, I want to extend our heartfelt gratitude for the unwavering support we receive from the state year after year. Every dollar invested in our mission helps us attract the most talented students, researchers, and instructors to Manhattan. Together, we are committed to bolstering Kansas' agricultural industry and ensuring its bright future.

I also want to take a moment to honor my predecessor, Ernie Minton, whose relentless dedication has significantly advanced our mission to serve Kansas and the global community. The new agricultural facilities stand as a testament to the lasting impact of his leadership.

Thank you for your steadfast support. We will continue to forge ahead and shape a promising future for K-State's College of Agriculture.

Best regards,



**DAN W. MOSER**

Interim Eldon Gideon Dean  
College of Agriculture



## AGRICULTURE INNOVATION INITIATIVE

### K-State opens first building in \$210M Agriculture Innovation Initiative

#### Two additional buildings anticipated to open in 2026

Kansas State University's Billbrey Family Event Center, the first facility to be completed in a \$210 million Agriculture Innovation Initiative, will provide economic and other impacts in the region that extend well beyond the competition arena.

The Center, which officially opened in October 2025, features a 130 by 250 feet arena with bleacher seating for 3,000 people, as well as stock pens, a staging area, covered livestock wash racks, an office and meeting room, restrooms with showers, a first aid and security room, lobby area, concession stand and VIP lounge.

Teresa Douthit, the interim head of the Department of Animal Sciences and Industry, said her department anticipates using the center "for a host of educational events that help us deliver on our teaching and extension missions."

"We will use this facility to support and demonstrate concepts introduced in our classrooms," Douthit said. "It will facilitate live animal demonstrations and observations, but it will also allow learners to practice skills through clinics and hands-on activities that can't be accomplished in a lecture hall."

Popular university events — among them the K-State Rodeo, Little American Royal, Cattlemen's Day, Junior Beef Producer Days, Swine Day and others — are likely to be held in the Billbrey Family Event Center. Douthit said the facility is ideal for 4-H and FFA judging competitions.

She added that student clubs could use the facility for educational demonstrations and learning opportunities.

K-State Foundation President and CEO Greg Willems said officials are planning to host up to 30 events per year, "which will be an economic driver for the community and local businesses."

#### \$201M raised

More than 96% of the \$210M has been raised through state funding and private and philanthropic donations.

#### What People are Saying

We're very proud of Kansas agriculture, and if this project can prepare more future members and industry leaders while providing innovative solutions to make our cattle and grain production more efficient and sustainable, we all win.

— Scott, Brad and Greg Foote

Dan Moser, interim Eldon Gideon Dean of the College of Agriculture, said the new facility will bring many prospective students to campus.

“We believe this facility will heighten education for current and future students and will give them the practical experience they’ll need to succeed later in their lives,” he said.

Alli Nippert, a member of the K-State rodeo team, called the Bilbrey Family Event Center “the nicest (rodeo) facility in the region.”

“That is huge for recruiting and for our current team,” she said. “It gives us consistent, high-quality practices no matter the weather, and really elevates what it means to be part of the K-State Rodeo team.”

Willems said the Bilbrey Family Event Center was supported by “many individual and corporate partners,” including JP and Teresa Bilbrey of the Doubling Gap Ranch in Newville, Pennsylvania, for whom the facility is named.

In 2026, university officials also anticipate opening the other two signature buildings in the Agriculture Innovation Initiative: the Global Center for Grain and Food Innovation, and the Agronomy Research and Innovation Center.

“When you think about the Ag Innovation Initiative at Kansas State University, there’s never been a bigger project when it comes to facilities,” said K-State President Richard Linton. “It’s an incredibly exciting time for the agricultural industry; this project will transform K-State.”

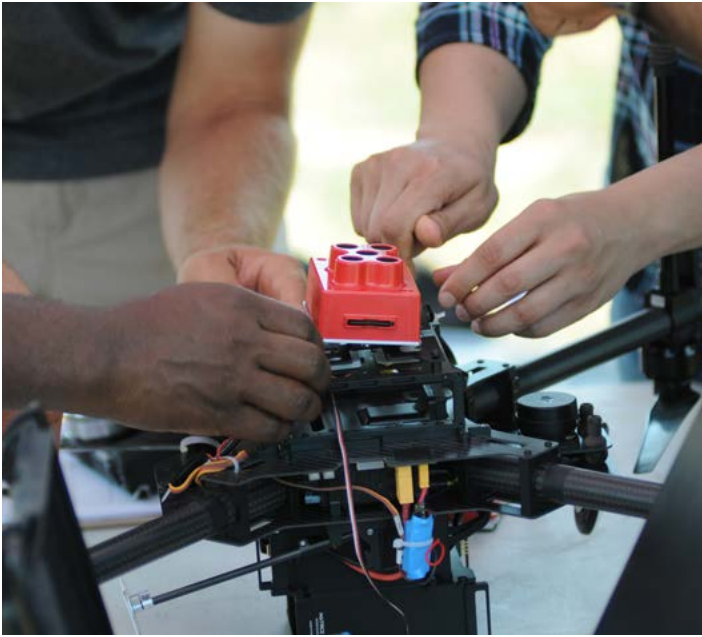
## AGRICULTURE INNOVATION INITIATIVE

Learn more about the Ag Innovation Initiative fundraising, construction updates and view the web cameras by visiting [kstate.ag/innovation](https://kstate.ag/innovation).



**BILBREY FAMILY EVENT CENTER RIBBON CUTTING, OCTOBER 10, 2025**





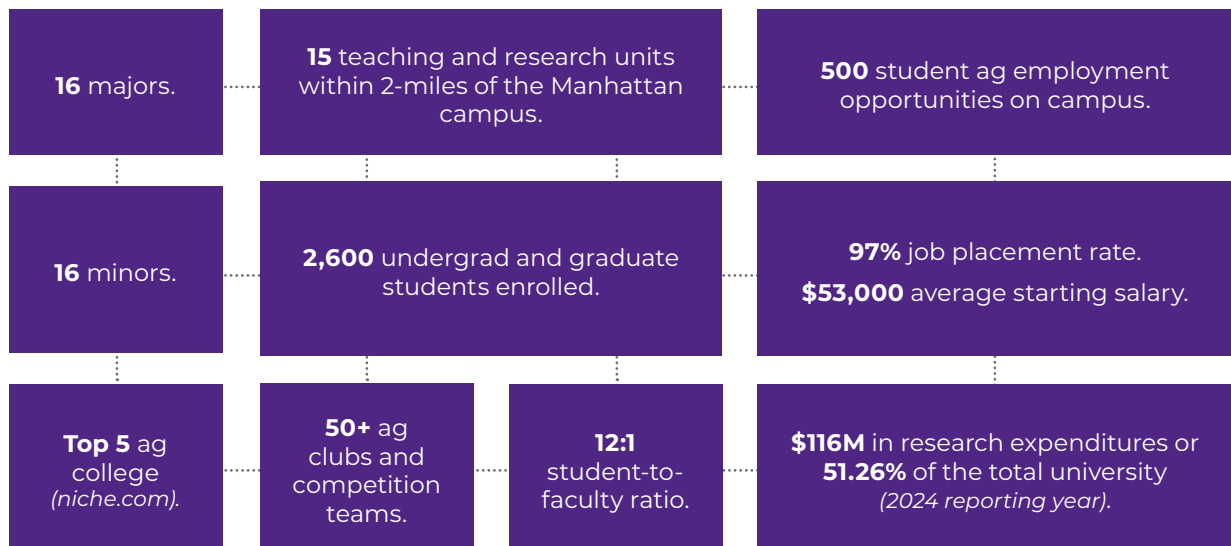
## The next generation of agriculture

The College of Agriculture serves Kansas and the world by providing top-level agricultural, food, and natural resources research, instruction, and outreach to inform decisions and ensure safe, affordable, abundant, and nutritious food for all.

We are grounded in the industries that drive Kansas' economic growth and believe strongly in our mission to develop learners that meet their needs. Creating tomorrow's workforce includes building a foundation in critical thinking, communication, inquiry and technical skills to develop citizens who will lead and support our industries and communities.

The College of Agriculture has a long history of applied and basic research that meets the needs of Kansas communities and pushes the boundaries of knowledge, which leads to positive future impacts. Our diverse faculty, staff, and students touch all aspects of the food, agriculture, and natural resources sector.

### College of Agriculture by the numbers:



## **K-State lab remains vigilant toward protecting food systems**

### **University is part of national plant biosecurity effort**

Americans' trust in the safety of their food is well-founded, says Kansas State University plant pathologist Jim Stack, who credits an extensive system of checks and balances for protecting food from farm to table.

Every step — from crops in the field to processing, transport, and kitchen preparation — requires vigilance to prevent pests, pathogens, or contaminants from threatening the food supply.

“Most of the foods in Kansas grocery stores were produced elsewhere,” Stack said. “That creates the risk of transporting pests and pathogens with foods and their containers.”

Stack directs the Great Plains Diagnostic Network, one of five regional centers of the National Plant Diagnostic Network (NPDN), which was established in 2002 to enhance U.S. agricultural biosecurity. Using software developed initially at K-State, diagnosticians across the country — including pathologists, entomologists, and weed scientists — share data to detect disease outbreaks or bioterrorist threats that could endanger crops and trade.

Stack said that global trade depends on clean, pest-free products, and standards set by international phytosanitary rules, established by the United Nations Food and Agriculture Organization under the International Plant Protection Convention. To meet these, the U.S. relies on field surveillance, diagnostic testing, and best production practices.

At K-State, diagnosticians Judy O'Mara, Chandler Day and others process more than 1,500 samples annually to identify diseases, insects, and other crop problems.

“Diagnostics means not only naming the organism but understanding why the disease or infestation is happening,” Stack said. “Getting it right matters because international and federal response plans depend on correct identification.”

A single misdiagnosis can have global consequences. Stack cites an example in Australia where confusion between two rust diseases delayed containment, allowing the pathogen to spread and threaten 70% of native flora. “We spend a lot of time and effort to get it right the first time,” he said.



K-State researchers are also combating wheat blast, a destructive fungal disease that can wipe out entire fields. Recently retired pathologist Barbara Valent led pioneering research that uncovered a genetic resistance source known as 2NS and developed microscopic imaging techniques to study infections in real time.

Her work continues at K-State's Biosecurity Research Institute, a biosecurity level 3 containment facility that allows scientists to study pathogens safely and develop tools to detect them before they spread.

Stack's team has shown that traditional inspection methods are unlikely to detect wheat blast in seed shipments — even small undetected amounts could spark devastating outbreaks. "If we're not vigilant, we're likely to experience more," he warned.

The NPDN now provides diagnostic services to 97% of U.S. counties and territories, operating about 75 labs across seven time zones. This vast network ensures rapid detection and coordinates response when plant diseases threaten production and trade.

"The result of disease introductions is reduced productivity and lost potential," Stack said. "Wheat, corn, and other Kansas crops support both domestic and export markets. Plant diseases cause ripple effects throughout the food system. We have to be all over this."

**1,500**  
samples annually processed  
by K-State diagnosticians  
to identify diseases, insects  
and other crop problems.



## K-State experts team up to educate Kansans about alpha-gal syndrome

### Humans may contract a red meat allergy from a tick bite

Kansas State University researchers and extension specialists have teamed up on a project to help alleviate the negative impacts of an allergy to red meat that affects an increasing number of people.

K-State Extension nutrition and wellness specialist Priscilla Brenes said alpha-gal syndrome — the term used to describe patients who develop an allergic reaction to dietary red meats and mammalian-related products — is becoming more common across Kansas, especially in rural areas.

K-State entomologist Yoonseong Park said that while the Lone Star tick is the main culprit in causing AGS in humans, studies indicate that less than 10% of those bitten by that tick actually develop an allergic reaction to red meat.

He adds that, like any allergy, people may have varying levels of sensitivity to the allergen: “Some people are not very sensitive,” he said, “and might be able to eat some levels of red meat.”

In 2024, K-State researchers received a university Global Food Systems grant to study consumers’ information needs related to alleviating the negative impacts of alpha-gal syndrome.

“The majority of those who responded (to an initial survey of Kansas extension agents) indicated that there is not enough information available regarding AGS,” she said. “They want to know more about this topic so that they can educate the people in their communities.”

A 2025 survey of 138 Kansas residents supported those findings. Some of the key findings of that work include:

- 95% are aware of alpha-gal syndrome.
- 96% knew that alpha-gal syndrome is related to tick bites.
- 88% are familiar with the symptoms.
- 84% knew someone with alpha-gal syndrome within their county.



**LONE STAR TICK**





- 89% felt there is not enough information about alpha-gal syndrome for the public.
- 32% have been diagnosed with alpha-gal syndrome.

“Our focus is shifting toward the development of educational materials, including fact sheets designed for extension professionals,” Brenes said. “These resources can be used in programming or shared directly with community members.”

K-State researchers are also involved in work to determine how people impacted by AGS can reintroduce red meat into their diet. The studies focus on testing the reaction of various meat products — including hot dogs, steak, jerky, and others — in individuals affected by AGS.

For those still concerned about contracting the disease, Park suggests avoiding woody or grassy areas during times when tick activity is high — which, in Kansas, is April or early spring. When that’s not possible, make sure you check your body for ticks that may be attached to your skin, and remove them promptly.

Brenes said the state’s extension service will be conducting another survey of consumers, this time encouraging residents in the state’s 105 counties to participate. Those who participate in the survey will receive a financial incentive.”

More information is available at local extension offices in Kansas and online by visiting [k-state.edu/ags](http://k-state.edu/ags).





## **K-State researchers aim to reduce gluten allergenicity in wheat**

### **Technology could lead to celiac-safe wheat without sacrificing bread quality**

Kansas State University researchers and the state's farmers are collaborating on a project to reduce the allergenicity of gluten in wheat, while maintaining the grain's ability to produce bread and other products.

Eduard Akhunov, a University Distinguished Professor in K-State's Department of Plant Pathology, said his team is identifying proteins in the wheat genome that trigger allergic reactions in people with celiac disease. The autoimmune disorder causes the immune system to react abnormally to gluten, a protein found in wheat, rye and barley.


Once they find the problematic proteins, the researchers will use a gene-editing technique known as CRISPR-Cas9 to target changes in the genome, which they hope will reduce or eliminate the allergic response in future varieties grown by U.S. wheat producers.

According to the Celiac Disease Foundation, the disorder affects 1 in 100 people worldwide, including about 2 million Americans.

"Our dilemma in doing this work," Akhunov said, "is that in the past we have successfully reduced immunotoxicity in wheat by suppressing the expression

**"It's particularly positive for the wheat industry and, more specifically, wheat farmers. It's exciting to have Kansas State as a partner on this project."**





of gluten-encoding genes. But, in most cases, this inevitably leads to the reduction of bread-making quality of that wheat.

“We are working to develop wheat varieties that have a lower abundance of gluten proteins that cause allergic reactions, while at the same time maintaining bread-making quality.”

The three-year project began earlier this year and is funded by a \$990,000 grant from the Foundation for Food and Agriculture Research. Project partners include K-State, Kansas Wheat, University of California-Davis, the California Wheat Commission and the Celiac Disease Foundation.

“Globally, the world is now consuming more than 800 million metric tons of wheat, and the United States mills almost 1 billion bushels of wheat annually into flour that produces wheat products,” said Justin Gilpin, chief executive officer of Kansas Wheat, which is funded by Kansas farmers through a checkoff program.

“We all know the benefits that whole grains play in a balanced diet, and yet there is a segment of the population that is trying to avoid those due to risk of an allergic reaction,” Gilpin said. “This is research that addresses a specific consumer need.

“It’s particularly positive for the wheat industry and, more specifically, wheat farmers. It’s exciting to have Kansas State as a partner on this project.”

Aaron Harries, Kansas Wheat’s vice president of research and operations, said the organization has been working for many years to identify proteins most reactive for those with celiac disease.

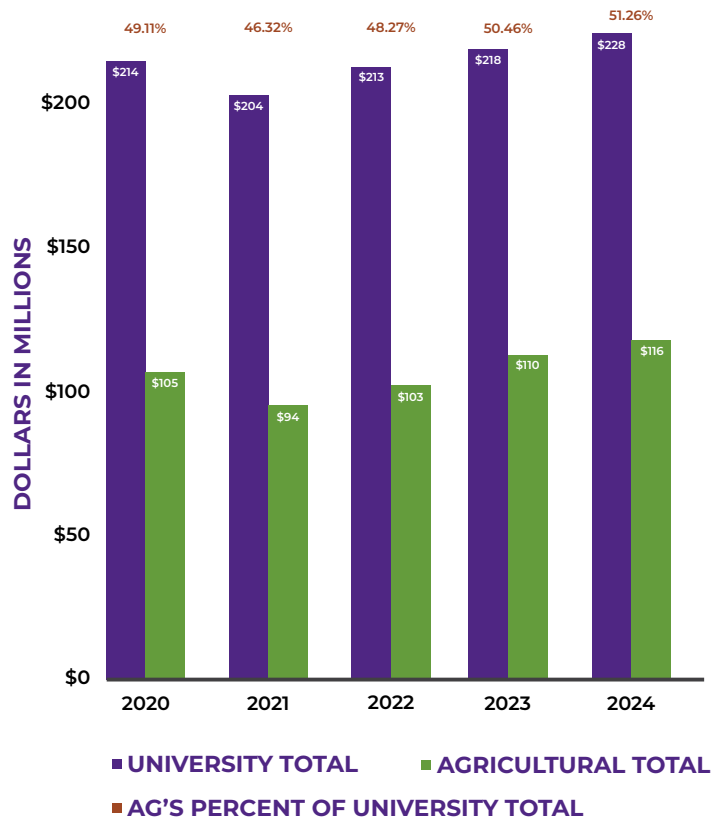
“I give tours of our Wheat Innovation Center (in Manhattan) to farmers who have kids with celiac disease,” Harries said. “So, they’re growing wheat for a living, but at the same time, they can’t have it on their dinner table. I just feel like there’s an obligation to try to do something about this.”

In 2023, K-State reported a breakthrough in developing wheat-based foods that contain lower amounts of gluten, while maintaining the quality of flour for baking. The current study will build on that work, further investigating the precise proteins that trigger gluten allergies.

## Excellence in Research

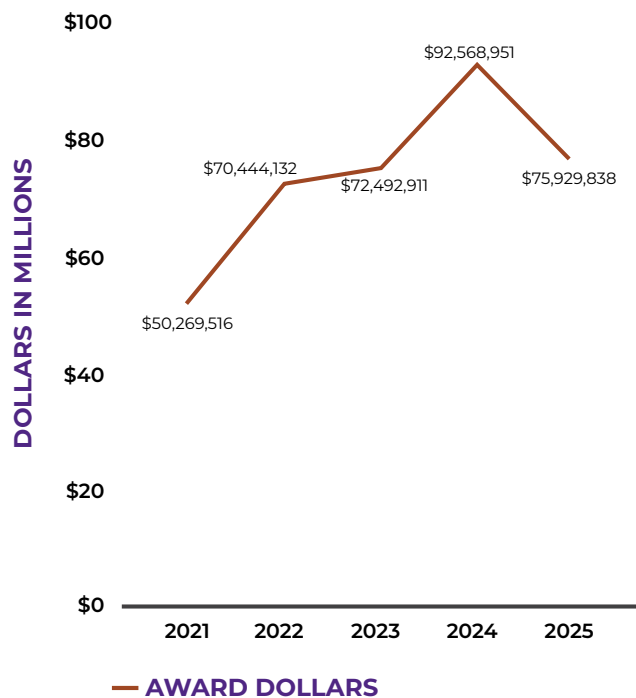
### Research Expenditures

Research expenditures are the funds spent to conduct research. The term refers to the nationally accepted method to measure research activities, since it showcases the amount of work that is accomplished and the impact to the economy when research funds are spent during a specific time period. In the 2024 reporting year, the College of Ag represented more than half of the university's total research expenditures with \$116 million.



### Extramural awards

Extramural funding is the money that is awarded from outside the University and used to support a program or project. It typically comes from federal, state or local governments, businesses, private foundations, or individuals.





## Our Funding Sources

### Fiscal Year 2026

| <b>AGRICULTURAL EXPERIMENT STATION</b>                        |                      |
|---|----------------------|
| State Appropriation   | \$35,746,334         |
| Federal Appropriation (Hatch, Multi-St., Mcint.-Stennis)      | 4,500,000            |
| Main Campus Allocation  | 0                    |
| Grants, Contracts, Other Funds                                | 59,570,535           |
| <b>Total Ag Experiment Station</b>                            | <b>\$99,816,869</b>  |
| <b>COLLEGE OF AGRICULTURE</b>                                 |                      |
| State Appropriation and Tuition                               | \$12,723,037         |
| Grants, Contracts, Other Funds                                | 7,442,981            |
| <b>Total College of Agriculture</b>                           | <b>\$20,166,018</b>  |
| <b>TOTAL AG EXPERIMENT STATION AND COLLEGE OF AGRICULTURE</b> | <b>\$119,982,887</b> |

# DRIVING INNOVATION IN AGRICULTURE

**KANSAS STATE**  

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**UNIVERSITY**®

College of Agriculture

[ag.k-state.edu](http://ag.k-state.edu)



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