Three K-State graduate programs named among the nation's best

Kansas State University’s graduate programs in the College of Education, College of Engineering and College of Veterinary Medicine are being recognized as among the best in the nation.

According to the U.S. News and World Report Best Graduate School rankings for 2016, the university’s College of Education is No. 88, up from No. 92 in 2015; College of Engineering is No. 94, up from No. 99 in 2015; and College of Veterinary Medicine is No. 14, up from No. 19 in 2015.

"The U.S. News & World Report rankings confirm the College of Education, College of Engineering and College of Veterinary Medicine have graduate programs that are respected by our peers and that our graduates are esteemed in their respective fields," said Kansas State University President Kirk Schulz. "These graduate programs advance a culture of excellence and help the university move forward with our goal to become a Top 50 public research university by year 2025."

The rankings are calculated through national surveys, student selectivity, faculty resources and the institutions’ research activity.

NBAF-focused research enters third year at university's BRI

Although the remaining funding for the National Bio and Agro-defense Facility (NBAF) was just recently finalized, work on the federal livestock research facility has continued to move forward in recent years - including Kansas State University conducting research that will help jump-start future operations at NBAF.

The university’s Biosecurity Research Institute (BRI) is in the third year of a seven-year, $35 million grant from the state of Kansas. The funding supports the development and transition of several NBAF-centric research projects as well as training and workforce development.

Ongoing projects at the aging Plum Island Animal Disease Center will complement collaborative research at the BRI - a state-of-the-art biosafety level-3 and biosafety level-3 agriculture research lab. Moreover, the BRI will kick-start several research projects that cannot be conducted at Plum Island. The projects will eventually transition to NBAF once the federal lab becomes operational in 2022 or 2023.

"We really see that $35 million in research funding as a very positive aspect," said Ron Trewyn, the university’s NBAF liaison. "It enables our faculty and scientists at the USDA's Arthropod-Borne Animal Disease Research Unit in
Manhattan to be involved, move research forward and train the next generation of scientists.”

The BRI focuses on a broad range of animal, plant and foodborne diseases that threaten agriculture, including several that can cause fatal human infections. NBAF - the nation's only biosecurity level-4 livestock facility - will focus exclusively on foreign animal diseases that threaten livestock and, to a lesser extent, human health. These complementary missions make the BRI a natural springboard for launching NBAF-related research projects, said Stephen Higgs, BRI director. Applied research includes studies on diagnostic tools and vaccines.

NBAF will be Homeland Security's premier foreign animal disease research lab. It will research high-consequence livestock diseases that threaten animal and human health. The $1.25 billion lab will be on the northeast edge of Kansas State's Manhattan campus. When completed, NBAF is anticipated to have about 400 employees and generate $3.5 billion into the Kansas economy in the first 20 years of operations. Construction of the facility's central utility plant is more than 90 percent complete.

KSU Dean earns place of honor in Ingram's Icons of Education

Timothy de Noble, professor and dean of the College of Architecture, Planning & Design, has been selected by Ingram's magazine as one of its 2015 Icons of Education.

Ingram's, a Kansas City-based business magazine, compiled the list and announced its selections in its February edition. Read why de Noble and others were selected for the honor HERE.

University develops detection test for subclinical mastitis in dairy cows

Kansas and U.S. dairy producers may avoid some of the billions of dollars lost to mastitis thanks to a Kansas State University technology that is detecting the early stages of the disease in dairy cows.

Kansas State, General Mills fund $400,000 to develop new wheat varieties

Kansas State University officials are hailing a recent partnership with food giant General Mills as a win-win proposition that ultimately will benefit the state’s farmers and consumers worldwide.

The two groups have formed a research agreement to develop wheat varieties with improved nutritional, milling and baking qualities. The multi-year project will pump more than $400,000 into wheat development at the university.

"Kansas State has unique capabilities to connect wheat research all the way from genomics to milling and baking, which makes us a strong partner for these types of research projects,” said Jesse Poland, K-State assistant professor of plant pathology.

Since forming the agreement, General Mills has placed two full-time scientists in the Kansas Wheat Innovation
Deryl Troyer, professor of anatomy and physiology, is leading a project with Stefan Bossmann, professor of chemistry, that uses nanotechnology to positively identify mastitis in dairy cattle earlier and costs less than current technologies on the market. Mastitis is a disease that inflames and eventually scars the udder tissue of dairy cows, reducing milk production and altering milk composition. It is the most common disease in U.S. dairy cattle and costs the U.S. dairy industry more than $2 billion annually in losses.

Early detection will help dairy producers better treat cows with emerging cases of mastitis as well as reduce transmission to other cows in the dairy operation. The project uses the duo’s nanoplatform technology that can quickly detect cancer cells and tumors before physical symptoms ever appear.

The project is funded through the Kansas Department of Commerce, the Kansas Board of Regents and a Global Food Systems Innovation grant.

**DID YOU KNOW?**

K-State's annual All-University Open House will be held on Saturday, April 11 from 9am to 3pm? Visit [www.k-state.edu/openhouse](http://www.k-state.edu/openhouse) for more details.

Center on the north end of Kansas State's Manhattan campus to help with this and other projects.

"The expectation is that Kansas wheat farmers will benefit directly from this research," said Poland.

"Through these projects, we are focused on developing and delivering wheat varieties with superior quality that [might] be grown as high-value contract acres."

He added that while new varieties would help to increase yields, researchers also intend to develop wheat that contains more of the vitamins and minerals that are needed in developing parts of the world, thus addressing a global food challenge.

This is not the first time Kansas State and General Mills have worked together. Poland said the university has provided expertise in milling to General Mills for many years: "We are now connecting this research across the spectrum," he said.

The research agreement is a dollar-for-dollar match, with both groups also providing expertise and staff time toward variety development. Kansas State is providing money awarded by the Kansas Department of Commerce to leverage strengths in food and agriculture.