

Researchers to fight wheat blast

Kansas State University researcher Barbara Valent and a team of colleagues have been awarded \$5.5 million by the U.S. Department of Agriculture to develop novel disease control strategies for two closely-related diseases in rice and wheat - the latter of which has wreaked havoc in some South American wheat growing areas.

Valent, a university distinguished professor of plant pathology, is leading a team of K-State and national and international collaborators who are studying ways to protect Kansas and U.S. wheat fields from the deadly disease known as wheat blast. The team is also studying ways to protect U.S. rice from the deadly rice blast disease. Unlike wheat blast, rice blast is well established in the United States and in all other rice-growing countries.

"This disease - wheat blast - spreads quickly," Valent said. "It has not been found outside South America, but if we don't prepare by learning and educating others about detection, and look for ways to curb it if it does strike the U.S., the consequences could be enormous."

Both wheat blast and rice blast are explosive diseases under favorable weather conditions.

Blast disease, caused by the fungus *Magnaporthe oryzae* is a major constraint to global rice production and is an emerging and very serious threat to U.S. wheat, Valent said. Rice blast research over the past 20 years has provided a wealth of understanding on the molecular basis for blast resistance in rice.

"Our goal is to leverage this knowledge as part of an integrated approach to improve U.S. rice production and protect the nation's wheat crop," Valent said.

Wheat blast was first discovered in Brazil in 1985, and has since been found in Bolivia, Paraguay and Argentina. Three years ago it cut production in

Brazilian wheat states by up to 60 percent in some areas.

Rice blast caused significant crop losses in fields in Louisiana, Texas and Arkansas in 2012 and the disease has already been reported this year in Louisiana.

"Our goal is to develop resistant varieties for control of both diseases," Valent said. "We plan to use traditional strategies for finding and deploying resistance genes, as well as novel strategies based on new knowledge generated by research on rice blast." Additional outcomes will be diagnostic tools, training resources for first detectors and responders, and a disease forecasting model. "Another important objective for this project is to educate undergraduate students in plant bio-security."

"Arguably, rice and wheat are the two most important crops in the world," said K-State professor of plant pathology, James Stack, who is one of the research team members. "In most countries, either wheat or rice is a staple in citizens' diets. It's hard for people who have ready access to food to understand, but threats to either of those crops can be the difference between food security and hunger."

Typically, about one-fifth of all wheat grown in the United States is grown in Kansas, according to the Kansas Wheat Commission. About half of Kansas wheat is exported to other countries.

In 2012, Kansas produced 382 million bushels of winter wheat and overall U.S. production totaled 1.65 billion bushels, according to the U.S. Department of Agriculture.

One of the many problems posed by wheat blast is that it looks a lot like some other wheat diseases, so it's sometimes hard to detect, said Stack, who serves as the director of the Great Plains Diagnostic Network, a consortium of nine states which is part of the National Plant Diagnostic Center. The GPDN coordinates

diagnostics, communications and trains first detectors of plant diseases.

Because wheat blast has not been found in North American wheat, it is critical that the team's research be conducted in a secure facility. For that reason, the scientists are working in K-State's Bio-security Research Institute, a facility that provides a safe and secure location to study high-consequence pathogens.

The grant, awarded by the USDA's National Institute of Food and Agriculture through the 2012 Agriculture and Food Research Initiative's Food Security program, was part of more than \$75 million in grants recently awarded to teams at 21 universities. The teams are working in research, education and extension activities to ensure greater food security in the United States and around the world, according to the USDA.

"Millions of American households lack the resources to access sufficient food, and many of those, including our children, may go hungry at least once this year," said Agriculture Deputy Secretary Kathleen Merrigan, in making the grant announcement. "The grants announced today will help policymakers and others better recognize the food and nutrition needs of low-income communities in our country, while improving the productivity of our nation's agriculture to meet those needs."

Globally, the population is expected to grow by more than 2 billion people (to more than 9 billion) by 2050. By investing in the science of America's renowned land-grant universities, our aim is to find sustainable solutions to help systems expand to meet the demands of growing populations."

More information about wheat blast is available at www.k-state.edu/wheatblast/.

Grandparents Day



On April 19, Northern Valley's kindergarten through fourth grade students took part in Grandparents Day. Devin Shearer is seen here spending time with his uncle Dean Shearer to celebrate the occasion.

- Photo by Amy McKinney

Public invited to join archeologists

Volunteers are invited to participate in the 2013 Kansas Archeology Training Program (KATP) Field School June 1-16, at the presumed location of the Billy Dixon trading post (14EL311) south of Hays in Ellis County. Also known as Whisky Ranch, this site presents an opportunity to investigate the history of immediate post-Civil War era Ellis County, and to advance understanding of the culture and life-way of the buffalo hunter culture.

The annual field school is an opportunity for the public to work alongside professional and avocational archaeologists. No experience is necessary, just a desire to learn. Volunteers can participate for a couple of days or the entire 16 days of the project. Participants assist arche-

ologists in surveying for sites, excavating sites, and cleaning/cataloging artifacts in the lab. Archeology technique courses are also offered and can be taken for college credit. Registration fee for the field school is \$20 for members of the Kansas Anthropological Association or Kansas Historical Foundation. Nonmember fee is \$80. Children must be at least 10 years old and accompanied by a parent or responsible adult. After May 1 the participation fee increases to \$30 for members and \$90 for nonmembers. Registration is required for access to the excavation site, which is restricted to project participants only. For more information call Virginia Wulffkuhle at 785-272-8681, ext. 266. The registration packet and related information

is available on the Historical Society's website at www.kshs.org/14622.

A full schedule of evening programs will be free and open to the public at Fort Hays State University and other venues in Hays; the schedule is posted on the KHS website at www.kshs.org/14622 (scroll down and click on embedded link "About KATP 2013"; then scroll down to "2013 KATP Evening Programs").

The 2013 Field School is sponsored by the Kansas Historical Society, Kansas Anthropological Association, Ellis County Historical Society, and Fort Hays State University Departments of History and Geosciences.

HANSEN MUSEUM

The Dane G. Hansen Memorial Museum presents "American Legacy: Our National Parks," April 12 - June 16, 2013. In this exhibit, 38 members and guests of the Plein-Air Painters of America set up their easels in national sites across the country. The artists are among the country's most respected plein-air painters. The adjective plein-air refers to the philosophical be-

lief that creating art on-location, challenging as it may be, is crucial to successfully documenting a visual and emotional point in time and place.

Each artist selected a favorite park to document. The more than fifty paintings depict sites from coast to coast, border to border, and from the earliest park designation to one of the most recent. The exhibition is a "field

journal" experience that draws viewers into seasonal and daily experiences of color and light rendered in pigment on paper or canvas. In some instances, the field studies were used to create larger, studio paintings.

Our Artist of the Month for May will be Theresa Eschliman from Indianola, Neb. She will have crocheted items on display.

PUBLIC RECORD

Municipal Court

These transactions were taken from the records of filings in the offices of the Norton Municipal Court. These cases were given to the paper with the date of the hearings.

April 4

March 18-Regan Simpson, Alma; Charge: Speeding 45 in 35; Plea: No contest; Found: Guilty; Sentence: Fine \$30, costs \$76, total \$106.

Jan. 18-Jason Bowen, Norton; Charge: No driver's license; Plea: Not guilty; Other action: Trial; Found: Not guilty, following interlock restrictions.

April 11

April 1-Lari Ann Nickell, Norton; Charge: Dog running at-large, registered; Plea: Guilty; Found: Guilty; Sentence: No fine-registered, costs \$76.

March 25-David Keller, Norton; Charge: 1. Speeding 40 in 30, 2. No proof of insurance; Plea: No contest; Other action: 2. Dismissed/proof; Found: Guilty; Sentence: 1. Fine \$30, costs \$76, total \$106.

March 24-Richard Estes, Norton; Charge: Illegal tag-expired tag; Plea: Guilty; Found: Guilty; Sentence: \$100 fine, costs \$76, total \$176.

Feb. 14, 2011-Yancy Rogers; Charge: Domestic battery;

Other action: Dismissed at trial/no witness.

April 2-Shane Gjesdal, North Platte, Neb.; Charge: Speeding 50 in 40; Plea: Guilty; Found: Guilty; Sentence: Fine \$30, costs \$76, total \$106.

March 28-Jinnie Williams, Goodland; Charge: Speeding 40 in 30; Plea: Guilty; Found: Guilty; Sentence: Fine \$30, costs \$76, total \$106.

Feb. 16-Samual Weaver, Ellis; Charge: No proof of insur-

ance; Other action: Dismissed/proof.

April 18

April 4-Matthew Taylor, Council Bluffs, Iowa; Charge: Speeding 53 in 35; Plea: No contest; Found: Guilty; Sentence: Fine \$96, costs \$76, total \$172.

March 22-Aaron Roberts, Norton; Charge: Speeding 40 in 30; Plea: No contest; Found: Guilty; Sentence: Fine \$30, costs \$76, total \$106.

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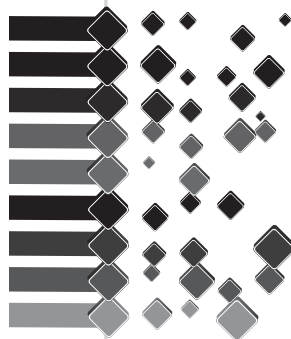
Tuesday, May 7

9:30 a.m. - Registration & Refreshments

10:00 a.m. - Business Meeting

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