K-State team awarded grant for research on wheat disease

Kansas University searcher Barbara Valent and a team colleagues have been awarded \$5.5 million by the U.S. Department of Agriculture to develop disease novel control strategies for two closelyrelated 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 ricegrowing 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 enor-

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 na-

Wheat in Kansas:

According to the National weeks. Association of Wheat Grow-

• Kansas produces enough wheat each year to bake 36 billion loaves of bread.

• Kansas produces enough wheat each year to feed everyone in the world, over six billion people, for about two

· An acre of Kansas wheat produces enough bread to feed nearly 9,000 people for

National Association of Wheat Growers Fast Facts www.wheatworld.org/wheat-info/fast-

tion's wheat crop," Valent said.

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

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 biosecurity."

"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 ment of Agriculture. who have ready access to food to understand, but threats to either of is available at www.k-state.edu/ between food security and hun-

wheat grown in the United States Blast.aspx.

els, according to

ture.

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 network 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 Biosecurity Research Institute, a facility that provides a safe and secure location to study high-consequence pathogens.

The grant, awarded by the National Institute of Food and Agriculture, 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 Depart-

Information about wheat blast those crops can be the difference wheatblast/. Information about rice blast is available at www.apsnet.org/edcenter/intropp/lessons/ Typically, about one-fifth of all fungi/ascomycetes/Pages/Rice-

is grown in Kansas, according to the Kansas Wheat Commission. About half of Kansas wheat is exported to other countries. In 2012, Kan-

sas produced 382 million bushels of winter wheat and overall U.S. production totaled 1.65 billion bush-

Wheat blast was first discovered the U.S. Department of Agricul-

Brewster school shows off students' artwork at museum Brewster High School art students have artwork on display at

Kara Roulier painted her mug at Summer Art Class.

played through mid-July; stop by and check it out! Many children are enjoying Michele Werth's art classes this summer. Michele does a lot of fun projects with the kids.

the Prairie Museum of Art and

History. The work will be dis-

Another project is being sponsored by the Beta Women's Club, with summer reading from 1 to 2:30 p.m. each Wednesday.

Plans are being made to cel-



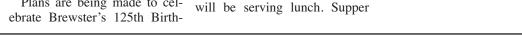
Brewster Correspondent

day on Saturday, Aug. 24, 2013. Activities will include an antique car, tractor, and motorcycle show, 5K and 1 mile run/ walk for all ages, a chili cookoff, a parade, a talent show, and a street dance. The Lions Club

will be provided by the junior class. There will be games and activities for all ages throughout the day. More information will be available soon from the Brewster Library and Heritage Board. Make plans to attend.

ANGIE MOORE/Colby Free Press

If you have Brewster news or upcoming events you would like to share please let me know. E-mail angiem@st-tel.net, call 694-3008, or drop information off at the Prairie Land Insurance



Longest German-language word now gone BERLIN (AP) - A tweak to ungsueberwachungsaufgabenue- from the books last week because state laws in the German state of bertragungsgesetz is no more. Mecklenburg-Western Pomerania to conform with current EU regu-German language.

EPDM Rubber

White TPO Single Ply

The "law delegating beef label changed. monitoring" was introduced by lations has caused an unexpected the state in 1999 as part of meacasualty: the longest word in the sures against mad cow disease. But the dpa news agency reported Rindfleischetikettier- Monday the law was removed

European Union regulations have

The longest word in the German dictionary is Kraftfahrzeug-Haftpflichtversicherung: automobile liability insurance.

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