



## January 2010 Update

- Working with a team of researchers from the Mayo Clinic, K-State Professor Kun Yan Zhu has discovered a key to making insecticides that are safe for humans but will kill the soybean aphid and perhaps other insect pests. Zhu's entomology lab was the first to document a new acetylcholinesterase (AChE) gene in the greenbug. The discovery led to detection of the gene in other insect species and many mutations associated with it. The team's recent paper, "Selective and irreversible inhibitors of aphid acetylcholinesterases: Steps toward human-safe insecticides" (Public Library of Science ONE, 2009), has been featured in national and international media.
- NASCAR driver Jeff Gordon promoted 4-H at the Kansas Speedway in October. At the Sprint Cup Race, Gordon's car, sponsored by DuPont, sported a 4-H Clover logo to celebrate 4-H Week. In addition to attending the race, four Kansas 4-H'ers and 4-H Agent Aliesa Woods, Post Rock District, met with officials from DuPont, National 4-H and the Kansas Speedway, as well as with racing team owner Rick Henrick and Gordon. For a look at highlights, go to <http://4-h.org/4hnascar.html>.
- K-State Research and Extension's *Agriculture Today* radio program is listened to by more than 3,000 farmers every weekday, according to recent ratings data. The one-hour program is carried by KFRM Radio, Clay Center (550 AM); KGGF Radio, Coffeyville (690 AM); and KLOE Radio, Goodland (730 AM). The stations collectively reach 90 counties in Kansas, parts of southern Nebraska and the northern one-third of Oklahoma. The program also can be heard at [www.ksre.ksu.edu/news](http://www.ksre.ksu.edu/news). According to the data, 24.2 percent of farm households in the listening area tune in.
- Grain science Professor Susan Sun's research group has developed a bio-based adhesive that can be used in products such as laminate countertops. The development has received national and international media coverage. Through the Bio-Materials and Technology Laboratory (BTL), her research group is studying adhesives from by-products of soybean, corn, sorghum and biomass fuels. The BTL is part of K-State's outstanding bio-based materials program focused on applied and basic research.
- The Kansas Forest Service was awarded \$204,000 to advance the use of wood as an alternative fuel for public and private energy systems, and \$150,000 to field-test a new approach to identify and prioritize community forests at risk from invasive insects and diseases. Nebraska is a partner on these grants, awarded by the USDA-Forest Service's State and Private Forestry Redesign initiative.
- Phil Stahlman, weed scientist and professor with K-State's Agricultural Research Center in Hays, recently established an education program for Malawian farmers and agro-dealers on the benefits and safe use of herbicides. Through his volunteer efforts with the Citizens Network for Foreign Affairs, he also helped develop 25 demonstration plots throughout the country. Stahlman's work focused on proper herbicide use for small farms, where women are most frequently responsible for weed control.
- K-State research indicates that cap-and-trade legislation pending in Congress would benefit farmers and ranchers. The team of seven researchers analyzed and compared six key studies that looked at the effects of the Clean Energy and Security Act of 2009 (H.R. 2454, also known as the Waxman-Markey bill) on the agriculture sector. Led by Bill Golden, research assistant professor in agricultural economics, the research was funded by American Farmland Trust to improve understanding of the economic implications for U.S. agriculture as Congress considers this legislation to address the impact of carbon emissions on the environment. Other researchers involved include Assistant Professor Jason Bergtold, Professor Michael Boland, Professor Kevin Dhuyvetter, Professor Terry Kastens, and Associate Professor Jeff Peterson, all from agricultural economics; and Professor Scott Staggenborg of agronomy.