



## April 2010 Update

- An analytical first was achieved by two K-State professors and reported in the March edition of *Applied Spectroscopy*. The work by Grain Science and Industry professors Yong-Cheng Shi and David L. Wetzel was the first chemical imaging of a single modified starch granule with a diameter one-fifth the width of a human hair. Intragranular differences in chemical species population were not possible previously. The purpose was to localize chemical modification within individual granules of the modified starch and determine the coverage to verify the emulsification process. Long-term implications are for those working with starches in the food or industrial fields to determine compatibility or coverage of starches and oils. High-tech instrumentation and synchrotron radiation at a national laboratory were required to finish the project initiated on campus.
- Agricultural economist Ted Schroeder told beef producers that a growing world population – and increasing wealth – will demand more beef. His presentation was part of the 2010 Cattlemen’s Day at K-State. He went on to say new beef production technologies can increase and improve beef’s position in future diets around the world. Cattlemen’s Day attracted 845 registered participants, including 296 students. Weber Arena hosted a record 40 educational poster exhibits along with 77 commercial trade show exhibits.
- Participants in Corporate Meltdown, a post-holiday weight- and health-management program in Finney County, have lost more than four tons since the program began 11 years ago. The program, which focuses on healthy lifestyle decisions after the holidays, had 245 participants (49 teams of five each) resulting in 1,244.5 pounds lost in 2010, according to Linda Beech, Finney County family and consumers sciences agent.
- Kansas State University scientists have completed long-term evaluations of a limited number of independent kochia (*Kochia scoparia*) populations now confirmed to be glyphosate-resistant on privately owned land in western Kansas. Kochia, also called fireweed, is a drought-tolerant weed commonly found in cropland, rangeland, pasture, and nonagricultural sites in arid and semi-arid regions of the western United States and Canada. Phil Stahlman, a weed scientist with K-State Research and Extension based at the Agricultural Research Center in Hays, along with K-State scientists Kassim Al-Khatib, Curtis Thompson, and other colleagues, including Monsanto scientists, have investigated the sites independently. They focused on resistance variability and difficulties in proving heritability – a trait required to confirm resistance. This complicates and may increase control costs for growers who deal with the resistance problem. Stahlman has listed as many as five glyphosate-resistant kochia populations in western Kansas on the International Survey of Herbicide Resistant Weeds Web site: [www.weedscience.org](http://www.weedscience.org).
- Three K-State entomologists received awards at the North Central Branch Entomological Society of America in Louisville, Ky.:
  - John Reese, whose research has centered on host-plant resistance for more than 30 years, received the Entomology Recognition Award, given to entomologists who have made or are making significant contributions to agriculture.
  - Jim Nechols, who has taught at K-State for 25 years and specializes in biological control and alternative pest management, earned the Teaching Distinguished Achievement Award.
  - Raymond Cloyd, horticultural entomologist, received the Excellence in IPM (integrated pest management) Award, which recognizes and encourages outstanding research in economic entomology.