



Research for the Growing World

September 2011 www.ars.usda.gov

Around ARS

ARS, the Instituto Paraguayo de Tecnología Agraria of Paraguay (IPTA), and the Cámara Paraguaya de Exportadores de Cereales y Oleaginosas (CAPECO) announced the joint release of a high-yielding soybean cultivar with resistance to Asian soybean rust. This is the first release of a southern U.S. soybean cultivar with soybean rust resistance. Soybean rust occurs in Africa and the United States, but can be especially severe in regions of Asia and South America. It can result in devastating losses to soybean and other legume crops. This new release will be useful in breeding programs for improving soybean rust resistance, while maintaining high yield potential. This release helps ensure continued protection against a major agricultural threat, and it commemorates a partnership between ARS, CAPECO, and IPTA in soybean rust research that is now entering its sixth year. 💠

On September 7, researchers at the ARS Poultry Processing and Meat Quality Research Unit in Athens, GA, signed a Memorandum of Understanding (MOU) with the Korea Food and Drug Administration (KFDA), National Institute for Food and Drug Safety Evaluation (NIFDS). This MOU will encourage and facilitate collaboration between these institutions in an effort to establish long-term cooperation in food safety research. This MOU provides the framework to identify mutual interests between scientists in the United States and the Republic of Korea, broaden research programs, and facilitate cooperative research efforts between ARS and KFDA.



Altheria D. Myers (left) and Peggy Blake at the MLK Expo.

On August 26, 2011, Strategic Programs Librarian **Peggy Blake**, ARS National Agricultural Library (NAL), and Branch Chief **Altheria D. Myers**, ARS Office of Outreach, Diversity, and Equal Opportunity, staffed the USDA information booth at the Martin Luther King, Jr., National Memorial Dedication— "Partners in the Dream" Expo. The Expo was held at the Walter E. Washington Convention Center in Washington, DC. Expo visitors learned about USDA and ARS products and services, student employment opportunities, and hiring flexibilities for veterans and people with disabilities. •

Supervisory Research Entomologist John
Adamczyk, ARS Honey Bee Research Unit, Weslaco, TX, was elected Vice President-Elect of the Entomological Society of America's (ESA) Plant-Insect Ecosystems Section. He will begin his term at ESA's Final Business Meeting in Reno, NV, on November 16, 2011.



ARS Biological Technician Ron Marble delivering peppers gleaned from research fields to the INCA community center for distribution to families.

The ARS Wes Watkins Agricultural Research Laboratory in Lane, OK, has been participating in the USDA Gleaning Program since 1990. It has also been involved in the People's Garden initiative in cooperation with the Choctaw Nation of Oklahoma. As a result of its extensive activities, the lab was ranked 8th (in 2010) out of all participating USDA locations for donations through the People's Garden.



ARS Biological Technician Tim Abney helping to unload watermelon.

In August 2011, it contributed over 6 tons of vegetables to food banks in Atoka County Oklahoma. The location also hosts school children from the county and exposes them to agriculture, emphasizing the role of the farmer in bringing food from the field to the plate. ••



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Ed Knipling, and get engaged. Get connected and stay connected by visiting ARS' Your Two Cents and ARS Cultural Transformation Web sites.



Photo Corner



USDA/ARS Children's Nutrition Research Center and Baylor College of Medicine (BCM) employees in Houston, TX, collect goods for Texas wildfire victims.

From left: Patricia Hernandez (BCM), Janice Betancourt (BCM), Office Automation Clerk Ana Rubio (ARS), Administrative Support Assistant Kristy Wallace (ARS), Lejuana Himes (BCM), Mamie White (BCM), and Hanh Nguyen (BCM).

Notable Awards



The USDA Secretary's 63rd Honor Awards Program was held on September 14 at the Jefferson Auditorium in Wash-

ington, DC. ARS Senior National Program Leader for Food Safety **James Lindsay**, was a member of the USDA Emerging Chemical Threat to Food Issue Team, which was honored at the ceremony. The team won this prestigious award for leading USDA in recognizing an emerging threat from novel chemical agents to the U.S. food supply, and for developing and implementing research and policies to address the threat.

In addition, the National Centers for Animal Health (NCAH) Green Team, co-lead by ARS Biological Science Lab Technician Ami Frank and APHIS employee H. Joel Hutcheson, also received a USDA Secretary's Honor Award for Management Excellence-A Modern Work Place with a Modern Work Force. The 22-member team consists of APHIS and ARS employees located in Ames, IA. Other ARS team members include Maintenance Mechanical Helper Kevin Lykins, Biological Science Lab Technician Leisa Mandell, Animal Caretaker Avis Pruin, and Supervisory Electron Microscopist Judith Stasko. The team was honored for outstanding accomplishments in environmental stewardship—serving as a model for USDA for sustaining and enhancing the environment. 💠



Carole L. Bassett.

Research Molecular Biologist Carole L. Bassett, ARS Appalachian Fruit Research Station, Kearneysville, WV, was recently named a Fellow of the American Society for Horticultural Science (ASHS), for her contributions to horticultural science in the area of molecular biology of ornamental flower development, peach fruit ripening, and drought resistance

in apples. This is the highest honor that ASHS bestows on its members in recognition of outstanding contributions to horticulture and the Society. She is

being honored on September 25 at the 2011 Annual Conference of ASHS in Kona, HI. *



Sukumar Saha.

International Cotton Advisory Committee (ICAC) honored Research Geneticist **Sukumar Saha**, ARS Genetics and Precision Agriculture Unit, Mississippi State, MS, as the ICAC Cotton Researcher of the Year 2011 at the 70th Plenary Meeting in Buenos Aires,

Argentina, held on September 4–10. He was honored for research achievements that led to improvements for the cotton industry worldwide. This year's selection was made from a group of 10 candidates from 7 countries. •

Several ARS scientists will be recognized at the 2011 joint American Society of Agronomy (ASA), Soil Science Society of America (SSSA), and the Crop Science Society of America (CSSA) International Meeting on October 18, 2011, in San Antonio, TX. Research Soil Scientist Ray B. Bryant, ARS Pasture System and Watershed Management Research Unit, University Park, PA; Research Leader Dong Wang, ARS Water Management Research Unit, Parlier, CA; and Soil Scientist Philip A. Moore, ARS Poultry Production and Product Safety Research Unit, Fayetteville, AR, were named 2011 ASA Fellows.

Research Agricultural Engineer Timothy R. Green, ARS Agricultural Systems Research Unit, Fort Collins, CO; Soil Scientist Peter Kleinman, ARS Pasture Systems and Watershed Management Research Unit, University Park, PA; Soil Scientist John Kovar, ARS Agroecosystems Management Research Unit, Ames, IA; Philip A. Moore, ARS Poultry Production and Product Safety Research Unit, Fayetteville, AR; Research Leader Karamat R. Sistani, ARS Animal Waste Management Research Unit, Bowling Green, KY; Supervisory Research Soil Scientist Brian Wienhold, ARS Agroecosystem Management Research Unit, Lincoln, NE; Soil Scientist William Koskinen, ARS Soil and Water Management Research Unit, St. Paul, MN, were named 2011 SSSA Fellows.

Research Soil Scientist **Jorge A. Delgado**, ARS Soil Plant Nutrient Research Unit, Fort Collins, CO, won SSSA's Soil Science Research Award; and Research Agronomist **David Nielsen**, ARS Central Plains Resource Management Unit, Akron, CO, won SSSA's L.R. Ahuja Ag Systems Modeling Award.

Research Molecular Biologist **Hari Krishnan**, ARS Plant Genetics Research Unit, Columbia, MO, was named a 2011 CSSA Fellow.

Several ARS scientists received Federal Laboratory Consortium (FLC) Far West and Mid-Continent Regional Awards for Excellence in Technology Transfer. Award winners were honored at the joint regional meeting, which was held on August 29–31, 2011, in Monterey, CA.

FLC Far West Regional Award Winners

Research Geneticist **Ken Overturf** and Research Physiologist **Rick Barrows**, with the ARS Small Grains and Potato Germplasm Research Unit, Aberdeen, ID, won an Outstanding Commercialization Success Award for transferring two technologies—a plant-based diet formulation for trout and a new trout line—to the world's largest trout producer, Clear Springs Foods, Inc.

Research Leader Gloria DeGrandi-Hoffman, ARS Carl Hayden Bee Research Center, Tucson, AZ, won an Outstanding Commercialization Success Award for transferring several research innovations that were used in developing HopGuard, a technology used to kill Varroa mites in honey bee colonies.

FLC Mid-Continent Regional Award Winners

Research Rangeland Management Specialist **Terry Booth**, ARS High Plains Grasslands Research Station, Cheyenne, WY, won the Notable Technology Development Award for developing a rangeland monitoring system.

A team of scientists from ARS, universities, and industry won the FLC Mid-Continent Region Excellence in Technology Transfer Award for developing a DNA chip for swine genomics. ARS team mem-

bers include Research Geneticist Gary A. Rohrer, Molecular Biologist Dan J. Nonneman, Research Chemist Timothy P. Smith, and Computational Biologist Ralph T. Wiedmann, with the U.S. Meat Animal Research Center in Clay Center, NE; and Research Geneticist Curtis P. Van Tassell, with the ARS Bovine Functional Genomics Unit in Beltsville, MD.

The **ARS Forage and Rangeland Research Unit** and the **ARS Poisonous Plant Research Unit** both in Logan, UT, won the Mid-Continent Region FLC Outstanding Laboratory Award.

Research Leader **Gregory Holt**, ARS Cotton Production and Processing Research, Lubbock, TX, won the Mid-Continent Region FLC Excellence in Technology Transfer Award for developing cotton gin waste for use in packaging. •



Many of us don't think about the "science" of water. We know we need it to survive. In the United States, we have access to clean drinking water and plenty of recreational bodies of water to boot. Even our fish and wildlife enjoy the benefits of a healthy, vibrant water supply. Researchers at the **ARS Southwest Watershed Research Center** think about water in a different way. Their job is to make sure we continue to find ways to protect our water. To do that, ARS scientists, U.S. Environmental Protection Agency (EPA), and University of Arizona partners developed an award-winning tool that helps keep our nation's watersheds cleaner.

More than 80 percent of our fresh water comes from watersheds. Watersheds collect water from various sources—like rain, snow, or runoff—which drains into nearby waterways such as lakes, streams, and rivers.

The Automated Geospatial Watershed Assessment (AGWA) Tool is a multipurpose computer software designed for managing and analyzing water quantity and quality. Prior to AGWA, no such tool existed. Today, there are more than 2,000 registered users in 146 countries.

The team designed AGWA to assess land use and climate change impacts on water yield and quality. AGWA enables the user to visually compare simulation results under alternative future scenarios. With GIS (geographic information system), a user can link AGWA to other information, which permits the user to understand the impact of a certain practice on a given landscape.

AGWA can be used to predict the effects of land management practices on water. For example, AGWA can estimate the trends and magnitude of runoff, erosion, and sediment yields. Sediment consists of soil particles, debris, and rock fragments of various sizes that commonly build up in lakes, reservoirs, stream beds, and river valleys. Land use in our na-

tion's watersheds is complex and varied—ranging from crop production areas to rangelands, pastures, forests, meadows, and urban areas. How we manage activities that take place on watersheds influences the quantity and quality of water available for domestic, industrial, agricultural, and ecological uses.

For the first time, decisionmakers, land managers, farmers, environmentalists, and others have a single, comprehensive tool that can provide a long-range model to evaluate large, complex watersheds with varying soils, land uses, and management conditions—and their related environmental impact. AGWA is available free of charge at: www.tucson. ars.ag.gov/agwa.

EPA and USDA Natural Resources Conservation Service specialists use AGWA to develop sound policies for managing water.

By Tara Weaver-Missick, ARS Information Staff.



Please submit story ideas and national award items to Tara T. Weaver-Missick, tara.weavermissick@ars.usda.gov or call 301-504-1663.