



Arkansas Garden Helps Build Bonds and Fight Obesity

The ARS Delta Obesity Prevention Research Unit (Delta OPRU), Little Rock, AR, and research cooperator Arkansas Children's Hospital Research Institute (ACHRI) participated in a Delta Garden Study groundbreaking ceremony at Monticello Middle School (MMS), Monticello, AR, on May 24, 2011. The Delta Garden Study is a cooperative nutrition/physical activity research project funded by ARS, and specifically addresses childhood obesity in the Central and rural Delta regions of Arkansas. It is designed to increase students' school bonds to determine if it will increase physical activity and fruit/vegetable intake for ultimately preventing obesity. MMS was selected as a full-scale study school for the 2011–2012 school year, during which a curriculum will be used that aligns with the Arkansas State Frameworks for Science, Math, Literacy, and Physical Education. Groundbreaking participants included Monticello Mayor Joe Rogers; Monticello School Superintendent Bobby Harper; MMS school principal and participating teachers, staff, and students; Delta OPRU staff; ACHRI staff; and community residents and parents. Among the guest speakers was Delta OPRU Executive Director **Margaret Bogle**.



Margaret Bogle (far right) helps cut ceremonial ribbon at groundbreaking.

USDA Small Watershed Program Designated Historic Landmark

The American Society of Agricultural and Biological Engineers (ASABE) designated the USDA Small Watershed Program as a historic landmark for its significant engineering accomplishments. The Natural Resources Conservation Service (NRCS) administers the program by providing financial and technical support for the construction of more than 11,000 flood control dams over the history of the program. NRCS relied heavily on research provided by ARS scientists to develop engineering standards used in dam design and construction. A dedication ceremony was held at the National Watershed Conference in Oklahoma City on May 17, 2011. Among the guest speakers were **ARS Administrator Ed Knipling** and Hydraulic Engineer **Sherry Hunt**, ARS Hydraulic Engineering Research Unit, Stillwater, OK. This program is only the 57th historic landmark designated by ASABE since 1926. The USDA Small Watershed Program established the principle of combining conservation practices in a watershed with flood control dams on tributary streams. USDA Soil Conservation Service (now NRCS) and ARS engineers and scientists developed innovations in engineering, hydraulics, hydrology, and soil mechanics to implement the program.



USDA Small Watershed Program Historic Landmark placed in front of Oklahoma State Capital Agricultural Building.

Around ARS



www.ars.usda.gov/yourtwocents

Thanks to everyone who visited Y2C during our **BirthDay Month**, and thank you (plus congratulations!) for all the positive actions you

initiated in ARS over the past year. Of 111 Action Items logged on Y2C in our first year, 91 have now been completed. **Check out the results** of your voice being heard and **share some new ideas** while you're at it. ❀

The **Administrator's Council (AC)** spent last Thursday talking about Cultural Transformation in ARS. Morning discussions were organized around three areas of effort: ARS national policy initiatives (such as telework and authorship policy), **USDA Cultural Transformation** and Diversity Roadmap Efforts, and the development of a shared learning culture in ARS through the new cultural transformation Web site (to be released in July). In the afternoon, the AC focused solely on the administrative transformation effort in ARS, which you will soon be hearing more about, if you haven't already! ARS leaders are committed to ensuring we continue progress in these areas as we build on what already works in ARS to keep the organization strong for the future. ❀

ARS intern **Stacy Mauzey** was featured in the *Monterey County Herald*. Each year the paper selects a graduating student to feature on its front page. Mauzey, a biology major, graduated from California State University Monterey Bay on May 21, 2011. She worked with ARS Plant Pathologist **Carolee Bull** at the U.S. Agricultural Research Station in Salinas, CA. Bull was not only a mentor to Mauzey, but she also ignited a passion for science in this possible future ARS scientist. Mauzey says in the article, "Once I learned that there's a lot more science involved in agriculture than people realize, I became very interested." She will be attending Washington State University to pursue her master's degree in plant pathology. ❀



Mary Beth Hall (left) and Mary Becker.

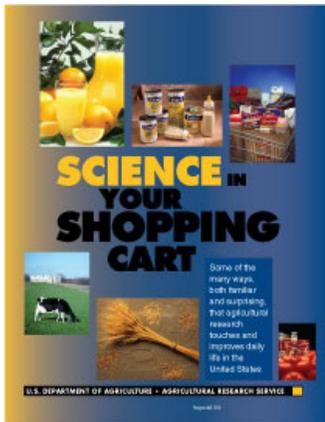
On May 21, 2011, ARS' U.S. Dairy Forage Research Center, Madison, WI, reached out to 1,400 young people, their parents, and youth leaders at the Baraboo Circus Heritage Days, an annual

event open to all organized youth groups in southern Wisconsin and neighboring states. The display was titled, "Cows are Good Citizens" and explained how cows make good use of food and land resources; are great at recycling (eat byproducts from the production of food, fuel, and fiber); play well with others (symbiotic relationship between cow and rumen microbes); and share with others (delicious dairy products made from their milk). Research Dairy Scientist **Mary Beth Hall** and Biological Science Technician **Mary Becker** helped organize the event. ❀

Since July 2010, Research Ecologist **Andy Lenssen**, ARS Agricultural Systems Research Unit, Sydney, MT, and Research Leader **Brenton Sharratt**, ARS Land Management and Water Conservation Research, Pullman, WA, have been participating in the Sustainable Aviation Fuels Northwest Initiative for evaluating opportunities and challenges of producing jet fuel for the Pacific Northwest aviation industry. ARS is one of about 40 stakeholders who provided technical input on a report, which was released on May 25, 2011. This is part of a region-based effort that the USDA Biomass Research Centers is participating in to support USDA's Farm to Fly Initiative. ❀

ARS has online training and technical support available for scientists and staff interested in using geographic information systems (GIS) software. GIS software allows the user to link highly complex information from a database to specific points on a map—bringing together diverse data in a more easily understood presentation. GIS technology use is increasing for analyzing data from plant and animal genetic

information across ecosystems. It is also being used for managing ARS facilities, buildings, measurement sites, underground cables, and other resources. You can participate in the GIS monthly net conferences by visiting the GIS SharePoint site [<https://arsnet.usda.gov/sites/ARS/GIS/default.aspx>], or you can contact ARS GIS Coordinator **Greg Wilson** at Greg.Wilson@ars.usda.gov or (301) 504-1058. ❀



Need *Science in Your Shopping Cart* or ARS bags for upcoming county/state fairs or other outreach activities? Contact Public Affairs Specialist **Dianne Odland**, ARS Information Staff, at Dianne.Odland@ars.usda.gov or (301) 504-1633. ❀

On May 16–20, 2011, researchers from EMBRAPA Brazil and Agriculture and Agri-Foods Canada visited the ARS National Center for Genetic Resources Preservation in Fort Collins, CO, to meet with scientists and staff of the National Animal Germplasm Program. The groups reviewed progress to date and addressed database design issues for managing the conservation and use of animal genetic resources for Brazil, Canada, and the United States. The database will be the first multi-country database of its kind for tracking animal genetic resource activities. ❀

On May 18–19, 2011, approximately 60 Agriculture Network Information Center representatives convened at the ARS National Agricultural Library (NAL) in Beltsville, MD, to hold their annual planning meeting. Attendees included participants from U.S. land grant institutions, along with visitors from Argentina, Costa Rica, Italy, and the Philippines. **Caird Rexroad**, ARS Associate Administrator, and **Simon Liu**, NAL Director, welcomed participants.

Anne Kenney, Cornell University's Carl A. Kroch University Librarian, delivered the keynote address focusing on 2CUL [<http://2cul.org/>], a transformative partnership that seeks to broadly integrate resources,

collections, services, and expertise between the library systems at Cornell and Columbia universities. Kenney's address aligned with the meeting's focus on radical collaborations among institutions. ❀

On Friday, April 29, 2011, the USDA-ARS Children's Nutrition Research Center (CNRC) in Houston, TX, gave a research tour to **Project La Cena** members as part of ARS' support of the Hispanic Serving Institute—Capacity Building Grant. Project La Cena (Spanish for "the supper or dinner") exists through the partnership of Northeast Lakeview College, San Antonio College, Texas State University, and the University of the Incarnate Word. Its goal is to help underrepresented students who are nutrition majors. The group visited CNRC's greenhouse, body composition lab, observation rooms, and calorimetry lab, and heard presentations on current research in those areas. The event concluded with a panel discussion from CNRC research coordinators who shared their research experiences. ❀



ARS Summer Research Interns and their mentors. ❀

On May 10, 2011, ARS' Root Disease and Biological Control Research Unit in Pullman, WA, hosted high school seniors from Washington State University's Upward Bound Programs in Omak, Moses Lake Yakima, and Springdale, WA, who will participate in the 2011 ARS Summer Research Internship Program. The future interns spent the day listening to research presentations, meeting their mentors, and touring labs. Gail Casper, Upward Bound Director in Omak, stated how important the pipeline internship program is to "our underserved and underrepresented students." ❀

On May 20–22, 2011, ARS Post Doc **Jon Moyle** and Research Leader **Annie Donoghue**, ARS Poultry Production and Product Safety Unit, Fayetteville, AR, co-hosted the Armed to Farm Sustainable Livestock Workshop with the Farmer-Veteran Coalition, the National Center for Appropriate Technology, and the University of Arkansas. Armed to Farm is sponsored by the Farmer-Veteran Coalition of Davis, CA—a nonprofit organization that assists veterans with employment, training, and placement on America’s farms—and USDA’s Risk Management Agency. ❀

ARS’ National Laboratory for Agriculture and the Environment (NLAE), Ames, IA, participated in the Iowa Children’s Water Festival held at Des Moines Area Community College in Ankeny, IA. The festival focuses on educating Iowa students about the importance of water in a fun and interactive way. This annual event is geared toward 5th graders and has an annual attendance of nearly 2,000 students, 60 presenters and exhibitors, and 200 volunteers. NLAE developed hands-on displays to introduce students to the concepts of water and herbicide movements through the soil, the role of soil in the water cycle, water erosion, composting and renewal of the soil, and the water cycle as an integral part of agriculture. ❀



Plant Physiologist Tom Kaspar interacting with festival participants.

Notable Awards

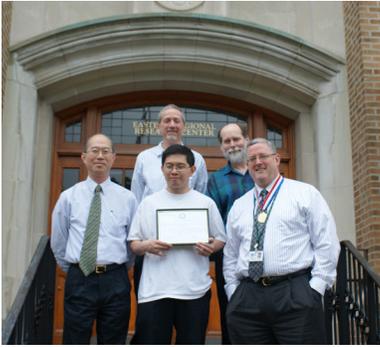
Hydraulic Engineer **Darrel Temple** (retired), formerly with the ARS Hydraulic Engineering Research Unit in Stillwater, OK, received the Hunter-Rouse Award at the 2011 World Environmental & Water Resources Congress in Palm Springs, CA, on May 26, 2011, for outstanding research contributions to hydraulics and waterways. Although retired from ARS, the award is based on his body of work during his career and continued collaboration with ARS. ❀



On May 11, 2011, Research Plant Molecular Geneticist **Sheila McCormick**, ARS Plant Gene Expression Center, Albany, CA, was named a Fellow of the American Society of Plant Biologists (ASPB), in recognition of her distinguished and long-term contributions to plant biology and service to ASPB. This prestigious honor is granted to no more than 0.2 percent of ASPB’s current membership each year. ❀



Research Chemist **Gillian Eggleston**, ARS Southern Regional Research Center, New Orleans, LA, received the 2011 Iota Sigma Pi Violet Diller Award for Professional Excellence for “outstanding contribution to chemistry and allied fields by a woman.” The triennial award will be presented during their national convention held on June 23–26 in Cleveland, OH. ❀



Front row: Dan Solaiman (left), Bun-Hong Lai (center, holding plaque), and Rick Ashby. Back row: Nereus Gunther IV (left) and Jon Zerkowski.

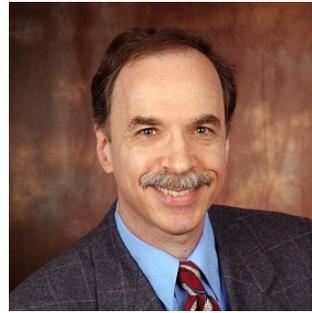
Research Molecular Biologists **Dan Solaiman** and **Nereus (Jack) W. Gunther IV**, Research Microbiologist **Rick Ashby**, Research Chemist **Jon Zerkowski**, Biological Science Lab Technician **Nicole Crocker**, and Physical Science

Technician **Bun-Hong Lai**, with the ARS Biobased and Other Animal Co-Products Research Unit, in Wyndmoor, PA, received a Gold Medal for Outstanding Scientific Accomplishment from the Philadelphia Federal Executive Board's Excellence in Government Awards program held on May 17, 2011, in Philadelphia, PA. The team was honored for developing and integrating biotechnology techniques for using surplus agricultural byproducts to produce biodegradable and eco-friendly plastic, adhesives, and detergent ingredients. ❖



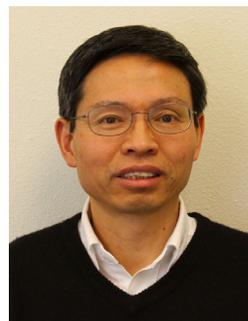
Research Geneticist **Mike D. MacNeil**, ARS Fort Keogh Livestock and Range Research Laboratory, Miles City, MT, received the Pioneer Award from the Beef Improvement Federation for his leadership to the beef industry by making out-

standing contributions to genetic improvement. He was recognized at the Beef Improvement Federation meeting on June 3 in Bozeman, MT. ❖



David Klurfeld, National Program Leader for Human Nutrition in ARS, received a Commissioner's Special Citation on May 23, 2011, from Margaret Hamburg of the Food and Drug Administration for exemplary interagency collaboration

in establishing national science-based dietary intake objectives and 10-year targets to improve Americans' health through the Healthy People 2020 Initiative. ❖



Research Chemist **Keshun Liu**, ARS Small Grains and Potato Germplasm Research Unit, Aberdeen, ID, was named a Fellow of American Oil Chemists' Society (AOCS) for more than 25 years of research on chemistry, processing, and using oilseeds and grains. He is

well-known for his outstanding contributions to the science of soybeans and soy foods. He was recognized at AOCS' annual meeting held on May 1-4, 2011, in Cincinnati, OH. ❖

Annual Recognition Program and Award Recipients

Distinguished Senior Research Scientist

Sarah Hake, Pacific West Area, Albany, CA, for scientific leadership and major impact on plant developmental genetics.

Herbert L. Rothbart Outstanding Early Career Research Scientist

Jonathan G. Lundgren, Northern Plains Area, Brookings, SD, for innovative, outstanding research emphasizing how predators are affected by farm management, and how biodiversity improves pest management.

Area Senior Research Scientists

Joan K. Lunney, Beltsville Area, Beltsville, MD, for significant research contributions and leadership in determining protective immunity and genetic resistance for infectious pathogens of importance to the U.S. swine industry.

N. Andy Cole, Southern Plains Area, Bushland, TX, for outstanding research in beef cattle nutrition and in managing environmental impacts of beef cattle feeding operations.

Robert A. Graybosch, Northern Plains Area, Lincoln, NE, for sustained research innovation and productivity leading to wheats with improved yield, quality, and disease resistance.

Karamat R. Sistani, Mid South Area, Bowling Green, KY, for outstanding research and leadership in the area of animal waste management.

Roger P. Wise, Midwest Area, Ames, IA, for distinguished research and leadership in genomics of disease interactions in cereal crops.

James Giovannoni, North Atlantic Area, Ithaca, NY, for international leadership in tomato genomics research, including pioneering discoveries in fruit ripening.

Thomas E. Carter, Jr., South Atlantic Area, Raleigh, NC, for pioneering research on genetic diversity in soybeans and for developing the first high-yielding drought-tolerant soybean germplasm.

Area Early Career Research Scientists

Amy L. Vincent, Midwest Area, Ames, IA, for excellence in conducting swine influenza research supporting the U.S. swine industry.

Brandon T. Bestmeyer, Southern Plains Area, Las Cruces, NM, for excellence in rangeland research resulting in ecologically based technologies used in managing rangelands worldwide.

Jeffrey A. Fabrick, Pacific West Area, Maricopa, AZ, for innovative application of insect biochemistry and molecular biology in integrated pest management.

Russell C. Nuti, South Atlantic Area, Dawson, GA, for conceiving and conducting research and transferring it to the peanut industry.

Helen L. Ngo, North Atlantic Area, Wyndmoor, PA, for outstanding research in developing processes for converting fats and oils into biobased products and biofuels.

Ryan P. Viator, Mid South Area, Houma, LA, for identifying, conducting, and transferring research to the sugarcane industry.

George E. Liu, Beltsville Area, Beltsville, MD, for conducting outstanding research on cattle genome relating to economically important health and production traits.

T.W. Edminster Research Associate Award

Richard Beeman, Northern Plains Area, Manhattan, KS, for the outstanding proposal “Characterization of *Tribolium* Cell Lines for Initiating the Cellomics of Coleopteran Pests.”

Technology Transfer Awards

An **Outstanding Efforts Award** was presented to **Chris M. Maragos**, Midwest Area, Peoria, IL, for developing antibodies essential to manufacturing improved toxin detection kits.

The other **Outstanding Efforts Award** was presented to a team of ARS scientists for developing and transferring new potato varieties in the Pacific Northwest. This team includes **Charles R. Brown**, **Roy Navarre**, and **James Crosslin**, Pacific West Area, Prosser, WA; and **Richard Novy** and **Jonathan Whitworth**, Pacific West Area, Aberdeen, ID.

Superior Efforts Awards were presented to the following individuals and teams:

Xiaoliang Cui, Mid South Area, New Orleans, LA, for efforts supporting the transfer of the USDA-AMS cotton classification process, which helped facilitate the sale of U.S. cotton into China.

C. Corley Holbrook, South Atlantic Area, Tifton, GA, for developing and transferring Tifguard, a high-yielding, disease-resistant peanut cultivar.

H1N1 Pandemic Influenza Veterinary Diagnostic Test Development Team for timely developing and transferring H1N1 pandemic influenza diagnostic tests. The team includes **David Suarez** and **Erica Spackman**, South Atlantic Area, Athens, GA; and Beverly Schmitt, Sabrina Swenson, Mary Lea Killian, Janice Pedersen, Leo Koster, and Melinda Jenkins-Moore, APHIS Diagnostic Virology Laboratory, Ames, IA.

Aerial Application Technology Team for effective transfer of spray application technology to the Florida citrus industry for controlling citrus greening disease. The team includes **W. Clint Hoffmann**, **Bradley K. Fritz**, **Daniel E. Martin**, and **Christopher T. Parker**, Southern Plains Area, College Station, TX.

Food Safety Team for developing, implementing, and expanding the USDA Pathogen Modeling Program, Predictive Microbiology Information Portal to enhance food safety of the Nation's food supply. The team includes **Vijay Juneja**, **Cheng-An Hwang**,

Lihan Huang, **Tom Oscar**, and **Shiowshuh Sheen**, North Atlantic Area, Wyndmoor, PA.

Winter Barley Ethanol Initiative Team for developing and transferring technology for the Mid-Atlantic winter barley ethanol industry. The team includes **Kevin Hicks**, **John Nghiem**, **Andy McAloon**, **David Johnston**, **Robert Moreau**, **Mike Kurantz**, **Gerard Senske**, **Jhanel Wilson**, **Winnie Yee**, **Frank Taylor**, **Edna Ramirez** (formerly with ARS), and **Rolando Flores** (formerly with ARS), North Atlantic Area, Wyndmoor, PA; Jay Shetty, Gerhard Janda-Konieczny, Bob Randle (formerly), and Mian Li with Genencor International, Palo Alto, CA; Pat Simms, Eric Lee, Hank Bisner, Craig Shealy, John Warren, and Bill Scruggs with Osage Bio Energy, Glen Allen, VA; Wynse Brooks, Carl Griffey, Wade Thomason, and Mark Vaughn with Virginia Tech, Warsaw, VA; Dan Brann with Brann Farms, Christiansburg, VA; and Bruce Beahm with Virginia Crop Improvement Association, Mount Holly, VA.

Administrator's Outreach, Diversity, and Equal Opportunity Awards

Kim E. Hummer, Pacific West Area, Corvallis, OR, received the **Supervisory/Managerial Category** award for excellence in student and community outreach.

Savithiry Natarajan, Beltsville Area, Beltsville, MD, received the **Non-Supervisory/Non-Managerial Category** award for extraordinary efforts in motivating K through 12 minority students to pursue careers in science.

Excellence in Information Award

Andrew Meerdo, Northern Plains Area, Logan, UT, for developing unique informational and instructional videos and Web site renovation for the ARS Forage and Range Research Laboratory.

Office Professional of the Year

Beth A. Holt, Southern Plains Area, Bushland, TX, for outstanding contributions to the Conservation and Production Research Laboratory and the Southern

Plains Area that have enhanced scientific productivity.

***Administrative and Financial Management (AFM)
Support Awards for Excellence***

The **AFM Gold Award for Excellence** was presented to **James W. Tyler** (retired), Mid South Area, New Orleans, LA, for outstanding management that reduced indirect research costs, improved the support programs, and contributed to enhancing SRRC's research mission.

The **AFM Silver Award for Excellence** was presented to **Sandy Morgan**, Administrative and Financial Management, Beltsville, MD, for initiative in reestablishing and reinvigorating the ARS Energy Program.

The **AFM Bronze Awards for Excellence** was presented to the **Research Position Evaluation Staff** for exemplary, sustained excellence in performing administrative functions essential to the Research Grade Evaluation System that services all ARS Category 1 scientists. Team members include **Merle Cole, Pat Humphrey, Dana Lamberti, and Wendy Hatcher**, Administrative and Financial Management, Beltsville, MD.

The **AFM Bronze Awards for Excellence** was also presented to **Debra Vandergrift**, Administrative and Financial Management, Washington, DC, for outstanding contributions to the management of the EEO MD-715 program.

Did You Know?

Rift Valley fever (RVF) is a viral disease spread to livestock (cattle, sheep, goats, and camels) and humans via mosquitoes that transmit the virus.



This disease is a major human, agricultural, and economic threat in Africa and the Middle East. It has not reached the United States, but having a way to predict potential outbreaks allows the United States to

implement preventive measures. The rapid spread of West Nile virus—identified in Uganda's West Nile District in 1937, and first appearing in the United States in 1999—demonstrates the nature of disease threats, and the importance of being able to track and prevent insect-transmitted diseases.

ARS researchers partnered with the United Nations Food and Agriculture Organization (FAO), the World Health Organization (WHO), and Federal partners from the National Aeronautics and Space Administration (NASA), the Centers for Disease Control and Prevention (CDC), and the U.S. Department of Defense (DoD) to form the Rift Valley Fever Outbreak Early-Warning Team in a global effort to develop and transfer an early-warning system to detect and predict RVF.

The model is based on analyzing satellite images to detect elevated temperatures in the Pacific and Indian oceans and subsequent heavy rainfall, elevated temperatures, and increased moisture in Africa. These conditions flood mosquito-breeding habitats and lead to major increases in the number and longevity of infected mosquitoes that spread RVF. Similar models can also help predict outbreaks of other diseases of livestock and people such as malaria, cholera, and dengue.

A Rift Valley fever outbreak was successfully predicted several months in advance for the first time with a model developed by a team assembled by ARS scientists. In October 2006, when the model

predicted that RVF would flare up within 3 months in sub-Saharan Africa, a warning was sent to FAO and WHO, who then passed on the warning to countries such as Kenya, Ethiopia, Tanzania, Uganda, and Somalia. The early warning allowed countries most likely to be in harm's way to ramp up surveillance and insect control efforts. Subsequently, from 2007–2010, additional warnings were issued to Sudan, Southern Africa, and Madagascar months prior to detecting RVF in animals and people. An RVF outbreak was blamed for the deaths of hundreds of people in Kenya in 1997–1998, and in 1977–1978, an RVF epidemic in Egypt involved 600 fatalities.

ARS researchers work ardently on developing monitoring and surveillance strategies, along with eco-friendly repellents and traps to ensure this pest stays in check.

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.