



Y2C “Credit Score”



ARS employees have continued to give their “two cents” to “[Your Two Cents](#)” (Y2C) throughout the summer months. A valuable short-term benefit

of the Y2C feedback site has been clarification of some agency policies and procedures that are being interpreted (or sometimes misinterpreted), and implemented inconsistently across the organization. This “myth busting” will go a long way to minimize and, in some cases, eliminate many of the issues of concern by Y2C contributors. Knowledge is power!

Many challenges have been brought to the attention of senior leadership via Y2C, including implementation of widespread telework opportunities, issues with the purchasing and procurement systems, and difficulties with the travel program. The great news is the communication is working! The people in charge of these systems are hearing your thoughts and concerns, and they are working to address them. The not-so-great news is that these challenges take time to fix, especially since they want to get it right. So keep writing in, and please continue to be patient . . . we will keep you updated on our progress.

ARS Scientists Participate in Bread Flour Project

Researchers at the ARS Plant Science Research Unit in Raleigh, NC, are collaborating on the North Carolina Organic Bread Flour Project. This project aims to link the farmer, the baker, and the miller in North Carolina with the goal of providing a viable

market for organic hard and soft wheat and other small grains. ARS scientists, led by Research Leader **David Marshall**, are developing the wheat varieties needed to make this collaboration possible. This project is turning into a very effective research and technology transfer program for the agency.



In addition, a Field Day was held on June 17, 2010, where local bakers in the Asheville, NC, area formed a co-op and purchased a stone mill for milling and producing local flour from two new ARS-developed wheat varieties—NuEast and Appalachian White.

More information about the project can be viewed at: <http://ncobfp.blogspot.com/>.

Explore Autumn Events at the Arboretum

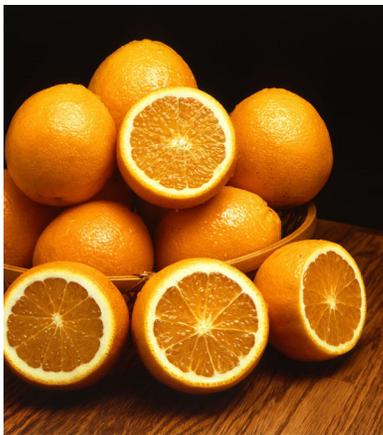


Can't wait for the fall? Well here's something to look forward to . . . mark your calendars for upcoming events at the ARS U.S. National Arboretum (USNA). One event on USNA's fall schedule is a lecture

and tour on “Innovations in Container Gardening,” given by ARS Horticulturist **Bradley Evans**. Participants will learn about container garden design, planting techniques, placement and care. There is a fee for this program, and registration is required. Two dates are scheduled for September and October; please visit the [USNA Calendar of Events](#) for more information.

On October 9–11, USNA will host its 63rd Annual Orchid Show and Sale. Thousands of blooming orchids will be on display. Also, you can get expert advice, see informative presentations and purchase quality plants and orchid-related materials. This year’s theme, “Orchids in the Capital,” focuses on orchids that are easily grown in the Washington, DC area. See the [Orchid Show Educational Programs Schedule](#) for a complete list of **free** lectures and tours presented by the National Capital Orchid Society.

New ARS Functional Foods Research Brochure Available



Cholesterol-reducing compounds have been found in citrus.

Are you familiar with functional foods and the work ARS and its industry partners are doing in this area? Past issues of *ARS & You* have highlighted two functional food products on the market as a result of ARS functional foods research—SunButter® ([ARS & You April 2010 edition](#)) and NatureSeal® ([ARS & You June 2010 edition](#)). Now you can read all about ARS’s functional foods research in a new brochure featuring current ARS research, accomplishments and partnering opportunities. [Click here to view “Functional Foods Research in ARS.”](#)

Around ARS



EBCL staff in garden.

ARS’s People’s Garden efforts are stretching across continents. The ARS European Biological Control Laboratory (EBCL) in Montpellier,

France, has a “People’s Garden” that is coming along nicely, according to EBCL Acting Director **Daniel Strickman**. So far, the garden is producing eggplants, green beans, cucumbers and tomatoes. Produce from the garden is a great reminder of farm productivity for the staff, who are responsible for developing non-insecticidal solutions for pest problems. The focus of EBCL is agriculture, and EBCL’s People’s Garden has been a new experience for some of the employees who have never had the opportunity to grow their own food.

Doyle Niemann, Member of the Maryland State House of Delegates for District 47 in Prince Georges County, visited the ARS National Agricultural Library (NAL) on July 12, 2010. He met with NAL Director **Simon Liu** and NAL Deputy Director **Eleanor Frierson**, and learned about nutrition and farm-related programs from NAL staff.

Tim Allen and **D’Anna Jensen** of NAL’s Animal Welfare Information Center (AWIC) staffed AWIC’s exhibit at the 2010 Annual Meeting of the American Veterinary Medical Association in Atlanta, GA. The meeting, which was held from July 30–August 2, 2010, attracted more than 5,500 veterinarians, veterinary students, technicians and practice managers from North America and around the world.

Three people from ARS’s nutrition program are liaisons to the International Life Sciences Institute’s (ILSI) technical committees—ARS Human

Nutrition National Program Leader **David Klurfeld** (carbohydrates), Supervisory Research Physiologist **David Baer** (lipids) with the ARS Food Components and Health Laboratory in Beltsville, MD, and **Allison Yates** (flavonoids), Director of the ARS Beltsville Human Nutrition Research Center. ILSI is a nonprofit organization that brings together the food industry, academia and government representatives to advance the science of nutrition, food safety and risk assessment.



Eileen Thacker, ARS National Program Leader for Animal Health, attended the XLV Congreso Nacional

AMVEC 2010 on August 4–7, in Acapulco, Guerrero, Mexico. She gave a presentation about *Mycoplasma hyopneumoniae*, which causes porcine enzootic pneumonia and affects the swine respiratory system.

Mary Torrence, ARS National Program Leader for Food Safety, will represent both USDA and ARS at the World Health Organization's Global Foodborne Infections Network (GFN) meeting in Copenhagen, Denmark, on August 26–28. Participants will plan current and future capacity-building needs for foodborne and other diarrheal diseases, and discuss how GFN and partners can address those needs within 5 years. GFN promotes integrated laboratory-based surveillance and fosters international collaborations and communication among microbiologists and epidemiologists in human health, veterinary, and food-related disciplines. This network includes international training courses (epidemiology and microbiology), quality assurance systems, country databanks, reference testing, and focused regional and national projects from all over the world.

Laboratory Director **Adalberto (Beto) A. Perez De Leon**, ARS Knipling-Bushland U.S. Livestock Insects Research Laboratory, Kerrville, TX, updated livestock producers on ARS research supporting cattle fever tick eradication efforts at the 56th Annual Texas A&M Beef Cattle Short Course on August 2–4, in College Station, TX. More than 1,500 cattlemen from the United States and other countries attended this meeting.

Mark Boggess, ARS National Program Leader for Animal Production, and **Matt Smith**, ARS National Program Leader for Agricultural and Industrial Byproducts and Soil Management, attended the USDA-ARS and the Innovation Center for U.S. Dairy–Dairy Research Institute's Joint Research Meeting on August 16–18, in Marshfield, WI. Both NPLs participated in meetings to review the findings and implications of the Dairy Industry Life Cycle Assessment Project, provided global updates for ongoing and relevant research for improving the environmental performance of the dairy industry, and discussed collaborative opportunities to advance the science of managing greenhouse gas emissions on dairy farms. Boggess presented research updates on the ARS Food Animal Production National Program, and Smith discussed research updates for the ARS Manure and Byproduct Utilization and Climate Change, Soils and Emission National Programs.



Eileen Herrera, Deputy Director, ARS Office of International Research Programs, Beltsville, MD, and **Lindsay Allen**, Center Director, ARS Western Human Nutrition Research Center, Davis, CA, participated with the Consultative Group on

International Agricultural Research (CGIAR) Centers and other partners in a workshop on July 29–30, 2010, in Addis Ababa, Ethiopia. The CGIAR Centers are being restructured and organized under “Mega Programs” (MPs). The purpose of the workshop was to develop a proposal and forge effective partnerships

for implementing the MP4 on Agriculture for Improved Nutrition and Health. MP4 will contribute to improving food security, enhancing environmental sustainability and reducing poverty through agricultural interventions that improve human health and nutrition. Herrera's and Allen's role was to suggest how the CGIAR Centers could benefit from ARS participation in MP4 research.

On August 8–10, **Mike Shannon**, ARS National Program Leader for Water Availability and Watershed Management, participated in developing CGIAR Mega Program (MP) 1.1, Integrated agricultural production systems for dry areas, at the International Center for Agricultural Research in Dryland Areas, near Aleppo, Syria. MP 1.1 is directed to provide the poor and highly vulnerable populations of dry areas with technology, policy, and institutional innovations to improve livelihoods using an integrated systems approach.

On July 22, 2010, the ARS U.S. Dairy Forage



Dairy cow.

Research Center (USDFRC), in Madison, WI, hosted about 60 members of the Sustainability Council of the Innovation Center for U.S. Dairy.

The Council held its quarterly meeting in Madison in part so that it could learn about USDFRC research that is focused on increasing milk production sustainability. Council members toured the research farm in Prairie du Sac, WI. The Innovation Center for U.S. Dairy and USDA have signed a Memorandum of Understanding to work jointly to reduce the greenhouse gas emissions of dairy production by 25 percent over the next decade, and the USDFRC is a key player in this research effort. The Innovation Center is part of Dairy Management, Inc., which manages the national dairy check-off program on behalf of the Nation's dairy farmers.

On August 17-19, in support of the USDA and Department of the Navy Memorandum of Understanding for advanced biofuels, project coordination meetings were held in the Big Island, Maui and Oahu, HI. Attendees included ARS, NRCS, RD, FSA, the Navy Office of Naval Research, the University of Hawaii (UH) College of Tropical Agriculture and Human Resources, the UH Water Resources Research Center, the UH Hawaiian Open Supercomputer Center, and representatives of the Hawaiian Commercial and Sugar (HC&S) company.

Researchers with the ARS Western Regional Research Center (WRRC), Albany, CA—in collaboration with scientists at the ARS U.S. Horticultural Research Laboratory in Fort Pierce, FL—have initiated a citrus genomic sequencing program, and have launched the USDA Public Citrus Genome Website: <http://citrus.pw.usda.gov/>. These scientists are sequencing the genome of Carrizo, the single most important rootstock of the U.S. citrus industry. The Web site provides the international citrus research community unrestricted access to genomic sequence information being generated at WRRC. This genomic sequence will impact a wide variety of citrus improvement programs, including those addressing Huanglongbing (citrus greening) disease, the most serious threat to citrus production worldwide.



Crosslin removes a shoot from a zebra chip-infected potato.

Research Plant Pathologist **James Crosslin**, ARS Vegetable and Forage Crop Research Unit, Prosser, WA, presented a paper on the bacterium that causes zebra chip disease in potatoes at the Potato Association of America meeting, in Corvallis, OR, on August 15–19. Potato researchers from many countries around the world attend this meeting.

On July 11, 2010, Research Geneticist **Roy Navarre**, ARS Vegetable and Forage Crop Research Unit, in Prosser, WA, gave a presentation on potato cyst nematode research at the Annual Society of Nematology meeting in Boise, ID. Potato cyst nematode is a quarantine pest that was recently found in Idaho and has a potentially devastating impact on the potato industry. Viable cysts can remain in the soil for decades, even in the absence of a host.

Soil Scientist **Ashok Alva**, ARS Vegetable and Forage Crop Research Unit, Prosser, WA, presented a paper on conservation tillage for irrigated potatoes in the Northwest at the World Soils Congress in Brisbane, Australia, held on August 1–6. Alva is also a co-convenor for a symposium on “Farming Systems and Environmental Impact.”

Agronomist **Rick Boydston**, ARS Vegetable and Forage Crop Research Unit, Prosser, WA Prosser, WA, presented a paper on controlling weeds in potatoes with new herbicides at the Potato Association of America (PAA) meeting in Corvallis, OR, held on August 15–19. The PAA meeting is attended by potato researchers, potato growers and others associated with potato processing and marketing.

On August 24–25, 2010, **Cyril Gay**, ARS National Program Leader for Animal Health and Safety, attended a workshop on Foot-and-Mouth Disease (FMD) Countermeasures, in Buenos Aires, Argentina. This workshop was sponsored by both USDA and the Instituto Nacional de Tecnología Agropecuaria. The workshop was designed to bring together FMD experts to conduct analysis on countermeasures available to control and eradicate FMD. Scientists from the United States, the European Union, Australia and Argentina participated in the workshop.

Notable Awards

ARS Molecular Biologist **Athanasios Theologis** (retired), formerly with the ARS Plant Gene Expression Center, Albany, CA, won the American Society of Plant Biology’s (ASPB) 2010 Stephen Hales Prize, in recognition of sustained, career-long, and outstanding contributions to plant science. ASPB annually awards the Stephen Hales Prize to an outstanding member of the plant biology community. Theologis made seminal contributions to two major areas of plant hormone biology (auxin and ethylene), and was a central figure in initiating and executing the sequencing of the *Arabidopsis* genome. He was recognized at ASPB’s 2010 meeting held in Montreal, Canada, from July 31–August 4, 2010.

Jorge Delgado, Research Soil Scientist, ARS Soil Plant Nutrient Research Unit, Fort Collins, CO, received the 2010 Hugh Hammond Bennett Award from the Soil and Water Conservation Society (SWCS) for his distinguished service in recognition of national and international accomplishments in the conservation of soil, water and related natural resources. He was recognized at the 2010 SWCS Annual Conference, on July 18–21, 2010, in St. Louis, MO.

The American Chemical Society (ACS) has named three ARS scientists as 2010 ACS Fellows, an honor bestowed upon 192 distinguished scientists who have demonstrated outstanding accomplishments in chemistry, and have made important contributions to ACS. The 2010 Fellows were honored on August 23 during the society’s national meeting in Boston, MA.

The ARS honorees were: Research Chemist **Alfred D. French**, ARS Southern Regional Research Center, Cotton Structure and Quality Research Unit, New Orleans, LA; Research Chemist **George E. Inglett**, ARS National Center for Agricultural Utilization Research, Functional Foods Research Unit, Peoria, IL; and Physical Science Collaborator **Attila E. Pavlath**, ARS Pacific West Area, Albany, CA.

Kelvin Watson, Head of NAL's Acquisitions and Collection Development Branch, received the Black Caucus of the American Library Association Appreciation Award on August 7, during the National Conference of African American Librarians (BCALA) in Birmingham, AL. He was honored for unusual and significant contributions to BCALA and the African-American community.

Research Chemist **Badal C. Saha** with the ARS National Center for Agricultural Utilization Research, Bioenergy Research Unit, Peoria, IL, along with co-authors Yoshikiyo Sakakibara and Paul Taylor, won the Society for Biotechnology's (Japan) Excellent Paper Award for their paper on, "Microbial production of xylitol from l-arabinose by metabolically engineered *Escherichia coli*."



Don Voss, one of the U.S. National Arboretum's most dedicated and long-serving volunteers, was awarded the American Rhododendron Society's Gold Medal, the highest award given by the society. The award recognizes his many contributions

to the society and to people's understanding of rhododendron. He received his medal in June 2010 at a meeting of the society's Potomac Valley Chapter.

USDA Honor Awards

On August 3, 2010, **USDA Secretary Tom Vilsack** honored USDA employees across the Nation for leadership efforts and accomplishments that have furthered the mission and goals of the Department. The ARS employees honored are:

- **Steven M. Kappes**, ARS Deputy Administrator for Animal Production and Protection, **Cyril Gay**, ARS National Program Leader for Animal Health and Safety, and **Amy L. Vincent**, Veterinary Medical Officer with the ARS Virus and Prion Research Unit, Ames, IA, who received a Group Achievement Award for outstanding dedication and cooperation in developing an interagency-sanctioned flexible and risk-measured approach to finding the H1N1 influenza virus in swine.
- **Tara H. McHugh**, Research Leader with the ARS Processed Foods Research Unit, Albany, CA, who received an Individual Achievement Award in the same category for developing innovative and sustainable food processing solutions, increasing healthfulness and safety of specialty crops, and benefitting rural communities by creating new businesses and job growth.
- **Ronald F. Follett**, Supervisory Soil Scientist at the ARS Natural Resources Research Center, Fort Collins, CO, who received an Individual Achievement Award for outstanding leadership of global climate change research relating to Greenhouse gas Reduction through the Agricultural Carbon Enhancement network (GRACEnet) program.
- Research Geneticists **Curtis P. Van Tassell** and **Tad S. Sonstegard**, with the ARS Bovine Functional Genomics Laboratory, Beltsville, MD, who received a Group Achievement Award as group leaders of the Cattle Genomics Consortium for novel discoveries leading to the development of a commercial cattle DNA assay, and developing methods for incorporating data into the national dairy cattle genetic evaluation system.
- Research Horticulturist **Ralph Scorza**, with the ARS Appalachian Fruit Research Station, Kearneysville, WV; Research Plant Pathologists **William Schneider** and **Vernon Damsteegt**, with the ARS Foreign Disease–Weed Science Research Unit, Fort Detrick, MD; and Research

Leader **Tim Gottwald**, with the ARS U.S. Horticultural Research Laboratory in Fort Pierce, FL, who received a Group Achievement Award for contributions and dedication leading to the eradication of Plum Pox Virus in Pennsylvania in 2009.

- Animal Scientist **Kim McMunn**, with the ARS Livestock Behavior Research Unit, West Lafayette, IN, who received the President's Call to Service Award. This award is given to the employee who has provided 4,000 hours or more of service to a qualifying organization over the employee's lifetime.

The Gold Presidential Volunteer Service Award went to **Sandra Ball**, Information Technology Specialist with the ARS National Agricultural Library, Beltsville, MD; **Joyce Jacks**, Biological Science Lab Technician with the ARS J. Phil Campbell Sr. Natural Resource Conservation Center, Watkinsville, GA; **David A. Lee**, Biological Science Lab Technician with the ARS National Center for Agricultural Utilization Research, Peoria, IL; **Gary Miller**, Research Entomologist with the ARS Systematic Entomology Laboratory, Beltsville, MD; **Brandon Schemerhorn**, Research Entomologist with the ARS Crop Production and Pest Control Research Unit, West Lafayette, IN; and **Charles Webber**, Research Agronomist with the Lane Research Center, Lane, OK.

The Silver Presidential Volunteer Service Award went to **Timmy Abney**, Agricultural Science Research Technician with the ARS South Central Agricultural Research Laboratory, Lane, OK; **James Denzler**, General Engineering, ARS Facilities Engineering Eastern Section, Beltsville, MD; **Buddy Faulkenberry**, Biological Science Technician with the ARS Lane Research Center, Lane, OK; **J. Joe Ford**, Research Physiologist with the ARS Roman L. Hruska U.S. Meat Animal Research Center, Clay Center, NE; **Julie Grogan**, Financial Technician with the ARS Administrative Office, Madison, WI; **Robert Robinson**, Computer Assistant with the ARS U.S. Vegetable Laboratory, Charleston, SC; and

Bruce Zilkowski, Entomologist with the ARS Crop Bioprotection Research Unit, Peoria, IL.

The Bronze Presidential Volunteer Service Award went to **Brant Bigger**, Biological Science Lab Technician with the ARS Weed Biology Research Unit, Fargo, ND; **Charlene Brown**, Legislative Assistant with the ARS Employee Development, Performance and Recognition Staff, Beltsville, MD; **Johnnie Davis**, former Microbiologist with the ARS Richard B. Russell Research Center, Athens, GA (now with the Food and Drug Administration); **Harvey Freetly**, Research Leader with the ARS Roman L. Hruska U.S. Meat Animal Research Center, Clay Center, NE; **S. Adam Fuller**, Animal Geneticist with the ARS Harry K. Dupree Stuttgart National Aquaculture Research Center, Stuttgart, AR; **Ricky Houser**, Agricultural Science Research Technician with the ARS South Central Agricultural Research Laboratory, Lane, OK; **Ronald Marble**, Biological Science Technician with the ARS South Central Agricultural Research Laboratory, Lane, OK; **Phyllis Martin**, Research Microbiologist with the ARS Invasive Insect Biocontrol and Behavior Laboratory, Beltsville, MD; **David Nielsen**, Research Agronomist with the ARS Central Great Plains Research Station, Akron, CO; **Sharon Sheffield**, Program Assistant with the ARS South Central Agricultural Research Laboratory, Lane, OK; and **David Straus**, Research Toxicologist with the ARS Harry K. Dupree Stuttgart National Aquaculture Research Center, Stuttgart, AR.

Steven M. Kappes, ARS Deputy Administrator for Animal Production and Protection, Beltsville, MD, and **Dennis Gonsalves**, Director, ARS Pacific Basin Agricultural Research Center, were also recognized for receiving 2009 Presidential Rank Awards ([ARS & You May 2010 edition](#)).

All award recipients are listed on the USDA homepage at: <http://www.usda.gov/documents/HonorAwardsProgram-2010.pdf>.

Did You Know?



As consumers we demand the highest quality beef products, and the freshest, tastiest dairy products. But how do we get it? It's not something done at the supermarket; cattle must be born with these qualities.

ARS researchers in Maryland and Nebraska are trying to speed the process of identifying cattle with desired traits, and make it more efficient by using more precise techniques to look at a cattle's genetic makeup based on DNA markers.

Using technology originally used in the human genome project, the BeadChip (a glass slide containing thousands of DNA markers), ARS scientists worked with university professors and Illumina, Inc. (a San Diego firm that manufactures BeadChip) to design a chip for genomics-based studies on dairy cattle. The researchers developed a new genomic method—called genome-enhanced improvement—to identify bulls that produce offspring with optimum milk production and other traits.

The BeadChip can be used to specifically characterize single DNA markers in over 50,000 locations, distributed relatively evenly across the bovine genome. The researchers are using this tool to examine DNA from more than 50,000 cows and bulls representing several commercial dairy and beef breeds and ARS populations.

This technology has revolutionized dairy breeding efforts. The information is being used to correlate DNA data to traits of interest, such as milk, fat and protein production. Eventually, information derived from the markers will help beef producers streamline their identification and

breeding efforts. Cutting test costs, while increasing the genetic improvement rate in dairy cattle, will help make the U.S. breeding industry more globally competitive.

ARS researchers worked with Illumina to commercialize this new hi-tech tool, the BovineSNP50. Since its inception in early 2008, sales of the BovineSNP50 total more than \$50 million (more than 500,000 samples) for 23 scientific locations in 11 countries.

The research was so intriguing and valuable to scientists worldwide that the researchers formed the CGC—Cattle Genomics Consortium—to continue sharing and exploring genetic data generated using the BeadChip. This technology is also being used to identify genetically important traits in sheep and pigs.



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