



In This Issue:
Your Two Cents
Around ARS
Notable Awards
Photo Corner
Did You Know?

[Click here for HTML version.](#)



www.ars.usda.gov/yourtwocents

Your Two Cents (Y2C)

Happy birthday to [Your Two Cents \(Y2C\)](#)! It's hard to believe that it's been 4 years since we first put up the site to create a two-way line of communication between ARS employees and the ARS leadership team! We have added many functions to [Y2C](#), making it more than just a place to submit ideas, concerns, and best practices. ARS employees can find the latest information about the fiscal year budget, "hot topics" like scientific meeting travel, the new ARS Intranet, and a neat "polling" feature where employees can weigh in on different topics. The current Y2C poll asks: "Which scenario below best describes your Pathways Recruitment experience this summer?" If you use the Pathways program, your feedback is very valuable to us. If you have a moment, check it out on the [Y2C](#) landing page and let us know what you think! And don't forget to get a sneak peek of Axon—the new ARS Intranet—by clicking on the Axon button on [Y2C's](#) main page. Axon is on schedule and will be launching soon. Stay tuned for more details! ❖

OCIO's One-Stop Shop

OCIO's [One-Stop Shop](#) is the central repository for information technology (IT) blanket purchase agreements (BPAs). The software prices in these BPAs are considerably reduced, because OCIO leverages bulk purchasing through BPAs and other discount contract vehicles. For example, Adobe Acrobat Professional retails for \$500. Through the BPA, it costs less than \$100—80% off retail! Additionally, upgrading the software costs around \$200. The BPA annual renewal costs only around \$15. With annual updates, the BPA renewal cost saves us over 92%. Moreover, OCIO provides licensing payment and distribution assistance for some agency-wide IT software, including Adobe Acrobat and Autodesk-CAD. Specifically, OCIO maintains up-to-date quantity information, accounting information, and points of contact for each software. This standardized process minimizes confusion over how much software should cost, what version users are entitled to, and what needs to be done to purchase a new license.

Most recently, OCIO has begun to centrally assist with SAS (Statistical Analysis Software) licensing. Working with Area statisticians, OCIO has begun payment and distribution of SAS across the agency through its software depot/FTP site. The new process facilitates the licensing process, provides a central repository for distribution of the software, helps standardize the process across the agency, and makes it easier for a researcher to get an SAS license.

For discounts on other software, please visit OCIO's [One-Stop Shop](#) at <https://arsnet.usda.gov/sites/ARS/BPA/default.aspx>. For additional information or to add your software contract to the site, contact Katherine Chu-Hickman at Katherine.chuhickman@ars.usda.gov. ❖

Please submit story ideas and national award items to Mina Chung, mina.chung@ars.usda.gov, or call 301-504-1653.

Around ARS



A young visitor at the third Annual USA Science & Engineering Festival watches a demonstration. See [Photo Corner](#) for more.

The third Annual USA Science & Engineering Festival was held on April 25-27, 2014, at the Walter E. Washington Convention Center in Washington, DC. The ARS Systematic Entomology Laboratory in Beltsville, MD,

hosted a tent caterpillar exhibit and a hands-on hissing cockroach exhibit. Sponsored by the Office of Outreach, Diversity, and Equal Opportunity (ODEO), the exhibits were part of a larger USDA pavilion incorporating exhibits from many USDA agencies. There were about 3,000 hands-on exhibits at the Festival, a career pavilion, a book fair, and presentations by well-known personalities like Bill Nye the Science Guy and famous physicist and bestselling author Michio Kaku. More than 325,000 people participated in the Festival, with about 15,000 visiting the USDA pavilion. ODEO's goal in sponsoring the exhibit was to help attract young people to science. See [Photo Corner](#) for more. ❀

Given the ease of collecting massive amounts of data using today's technology, scientists often have to grapple with how to make their technical data accessible and understandable to a general audience. This very challenge was posed to students in several middle and high schools in Las Cruces and Deming, NM, and their teachers by the ARS **Jornada Experimental Range** in Las Cruces, NM, and the [Asombro Institute for Science Education](#). Students in the third annual Desert Data Jam competition created a product to present technical data in a way that is easily understandable to a general audience using an ARS



First-place Desert Data Jam winner, Katie LaPage of Mayfield High School in Las Cruces, NM, with her project "Climate and Physical Variability." See [Photo Corner](#) for more.

Jornada Experimental Range dataset on the [EcoTrends Web site](#) for the Long-Term Agro-ecosystem Research (LTAR) network and the Long Term Ecological Research (LTER) network. The top prize this year went to Katie LaPage, a student at Mayfield High School in Las Cruces, for her project "Climate and Physical Variability." LaPage used watercolor tiles and splash strips to represent annual variability in solar radiation, air temperature, soil temperature, and precipitation. All three top-prize winners and several honorable mentions were recognized in a ceremony on May 1. See [Photo Corner](#) for more. ❀



"Mad Science of Washington" presenter entertains kids and their parents at Take Your Daughters and Sons to Work Day. See [Photo Corner](#) for more.

On April 24, 2014, about 90 children and their parents were treated to hours of fun, educational activities at this year's Take Your Daughters and Sons to Work Day held at the **National Agricultural Library** in

Beltsville, MD. The children saw many interesting exhibits, including an exhibit for ice-cream-making and one for microgreen sensory evaluation hosted by ARS's Food Quality Laboratory in Beltsville, MD, as well as an observation honey bee colony. In addition to learning about ARS research, the children met with several writers and graphic designers from the ARS Information Staff to learn about their jobs. Among the many activities the children took part in were the ARS "Wheel of Science," a scavenger hunt, and a presentation by special guest "Mad Science of Washington," a company that provides hands-on science experience to children. The event was sponsored by the Office of Outreach, Diversity, and Equal Opportunity. See [Photo Corner](#) for more. ❀

On April 24, 2014, the ARS **Warmwater Aquaculture Research Unit** in Stoneville, MS, hosted 18 juniors and seniors studying geography at the University of Wisconsin-Stevens Point. The focus of their study was "The Environment and Culture of the Mississippi Delta." The students were given a tour of all phases of catfish reproduction and catfish aquaculture production from egg stage through the processing of food-size fish. Some of the students got to handle live catfish during the tour. ❀

Biological Outreach Collaborator **Tracy Clerk**, ARS Genomics and Bioinformatics Research Unit, Stoneville, MS, conducted a plant biotechnology workshop entitled “Strawberry DNA Extraction” on April 25, 2014, at Agriculture Day sponsored by The Piney Woods School in Piney Woods, MS. The daylong event was designed to expose students to careers in agricultural research, biotechnology, veterinary science, and agribusiness. ❀



Biological Science Lab Technician **William Yarnell** explains to visitors how insect incubators control the temperature and humidity for the adult habitat.

On April 14, 2014, around 70 visitors attended an open house at the ARS **Arthropod-Borne Animal Diseases Research Unit (ABADRU)** insectary in Manhattan, KS, which is the largest gnat ranch in the United States. Each year the 2.5 million biting midges produced are used by

researchers around the country. The insectary has maintained midge colonies for over 50 years. The visitors included employees from the ARS Center for Grain and Animal Health Research and students from Kansas State University and Manhattan High School. The visitors saw the custom rearing facilities for mosquitoes and midges, the incubators that house the adults, and the rearing racks. The insectary staff demonstrated biosecurity elements such as air curtains and insect traps to prevent stray insects from escaping the facilities. The history and research accomplishments of ABADRU were discussed. ❀

The National Agricultural Library’s **SNAP-Ed Connection** team hosted an information table at the Pennsylvania Nutrition Education Network Conference in Lancaster, PA, on April 28-29, 2014. More than 300 nutrition educators and program directors were expected to attend the conference. SNAP-Ed Connection team members demonstrated the various nutrition information products available online and spoke with participants to learn more about their information needs. ❀

A field day for citrus thermotherapy (heat therapy) to control citrus greening, organized by ARS and the University of Florida, was held at ARS’s **U.S. Horticultural Research Laboratory** in Fort Pierce, FL, on April 30, 2014. About 170 academic and industry representatives, mostly growers, attended. Many were very impressed by what they learned. Researchers, entrepreneurs, and engineers were encouraged to develop the most practical method of deployment. ❀

Notable Awards

The Federal Laboratory Consortium (FLC) held its national meeting on April 21-23, 2014, in Rockville, MD. Under the theme “Accelerating Innovation for Economic Impact,” this year’s meeting was attended by about 430 technology transfer professionals representing Federal agencies, scientists, and entrepreneurs. Among the exhibits featured at the meeting was one by the ARS Office of Technology Transfer in Beltsville, MD. ARS was honored with four FLC National Awards for Excellence in Technology Transfer during the meeting.

Research Leader **John Stommel** at ARS’s Genetic Improvement of Fruits and Vegetables Laboratory in Beltsville, MD, and Deputy Assistant Administrator **Robert Griesbach** at the ARS Office of Technology Transfer in Beltsville, MD, won for “The Novel Blacked-Leaved Ornamental Pepper.”

A team at ARS’s Engineering and Wind Erosion Research Unit in Manhattan, KS, won for “Development and Transfer of the Wind Erosion Prediction System.” Team members are Soil Scientist **John Tatarko**, Agricultural Engineer **Larry Wagner**, Collaborator and former Research Leader **Lawrence Hagen**, Collaborator and former Agricultural Engineer **Edward Skidmore**, Information Technology Specialist **Fred Fox**, and former Agricultural Engineer **Simon van Donk**.

Research Chemist **Agnes Rimando**, ARS Natural Products Utilization Research Unit, Oxford, MS—along with Walter Chambliss at the University of Mississippi and Thomas Varvaro at ChromaDex, Inc.—won for “Pterostilbene: Its Role in Supporting Multiple Health Benefits.”

Brian Bosworth and **Nagaraj Chatakondi**, two research geneticists at the ARS Warmwater Aquaculture Research Unit in Stoneville, MS, won for “Hatchery Technology for Hybrid Catfish Fry Production.”

See [Photo Corner](#) for photos of the ARS awardees at the ceremony. ❀



Steven Cannon.

On April 14, 2014, Research Plant Geneticist **Steven B. Cannon**, ARS Corn Insects and Crop Genetics Research, Ames, IA, was presented the Presidential Early Career Award for Scientists and Engineers (PECASE) at a ceremony in USDA's Jefferson Auditorium in Washington, DC. Cannon was honored for "distinguished research and leadership in

genomics and legume crops." This award is the highest honor bestowed by the U.S. Government on science and engineering professionals in the early stages of their independent research careers. Cannon became the ARS nominee for PECASE when he was selected as the Herbert L. Rothbart Outstanding Early Career Research Scientist. Established by President Clinton in 1996, this award program is coordinated by the Office of Science and Technology Policy within the Executive Office of the President. ❖

Research Chemist **Girma Biresaw**, ARS Bio-oils Research Unit, Peoria, IL, was inducted as a Fellow of the [Society of Tribologists and Lubrication Engineers \(STLE\)](#) on May 20 during the STLE Annual Meeting in Lake Buena Vista, FL. Biresaw's research interests include biobased lubricants and tribochemistry, biopolymers, bioblends, and biocomposites.



Girma Biresaw.



Thad Stanton.

On March 1, 2014, Research Microbiologist and Research Leader **Thad Stanton**, ARS Food Safety and Enteric Diseases Research Unit, Ames, IA, was honored by the University of Massachusetts at Amherst as the Microbiology Department's Distinguished Alumnus for 2014. He presented a seminar entitled "Life in the Intestine" to current department faculty

members and graduate students. ❖

Research Plant Geneticist **Edward (Ed) Buckler**, ARS Plant, Soil and Nutrition Research Unit in Ithaca, NY, was elected a member of the [National Academy of Sciences \(NAS\)](#) on April 29, 2014. There are currently 2,214 NAS members. Buckler was the ARS Distinguished Senior Research Scientist of 2011.



Ed Buckler.



Gillian Eggleston.

Research Chemist and Lead Scientist **Gillian Eggleston**, Chemist **Marsha Cole**, and Physical Science Technician **Eldwin St. Cyr** at the ARS Commodity Utilization Research Unit in New Orleans, LA, received

the Frank Chapman Memorial International Award during the [International Sugar Industry Technologists \(SIT\)](#) Meeting in



Eldwin St. Cyr.

Toronto, Canada, on May 18-21. Their poster, "A New Look at Starch in the Sugarcane Factory and Refinery: The Presence of Soluble and Insoluble Starch," was presented at SIT's 2013 meeting in Guangzhou, China. ❖



Marsha Cole.

Research Plant Pathologist **Timothy C. Paulitz**, ARS Root Disease and Biological Control Research Unit, Pullman, WA, received a Team Interdisciplinary Award for Excellence from the Washington State University College of Agricultural, Human, and Natural Resources Sciences on March 27, 2014. Paulitz has played a key role in the Washington State Biofuels Cropping System Program with his work on the diagnosis and control of diseases of biofuel crops being developed and grown in the Pacific Northwest. ❖



Timothy Paulitz.



Photo Corner

Gallery 1. Federal Laboratory Consortium (FLC) National Awards Ceremony, April 23, 2014, Rockville, MD.
(See related story in [Notable Awards.](#))



From left: Mark Reeves, FLC Vice Chair; Assistant Administrator Mojdeh Bahar and Deputy Assistant Administrator Robert Griesbach, ARS Office of Technology Transfer; Research Leader John Stommel, ARS Genetic Improvement of Fruits and Vegetables Laboratory; Patent Licensing Specialist June Blalock (retired), ARS Office of Technology Transfer; Ann Bartuska, REE Deputy Under Secretary; Chavonda Jacobs-Young, ARS Administrator; and Paul Zielinski, FLC Chair. Photo by Pavlos Karalis.



From left: FLC Vice Chair Mark Reeves; Assistant Administrator Mojdeh Bahar, ARS Office of Technology Transfer; Director of Technology Management Walter Chambliss, University of Mississippi; Chief Financial Officer Tom Varvaro, ChromaDex, Inc.; Research Chemist Agnes Rimando, ARS Natural Products Utilization Research Unit; REE Deputy Under Secretary Ann Bartuska; ARS Administrator Chavonda Jacobs-Young; and FLC Chair Paul Zielinski. Photo by Pavlos Karalis.



From left: Mark Reeves, FLC Vice Chair; Assistant Administrator Mojdeh Bahar, ARS Office of Technology Transfer; Information Technology Specialist Fred Fox and Agricultural Engineer Larry Wagner, ARS Engineering and Wind Erosion Research Unit; Ann Bartuska, REE Deputy Under Secretary; Chavonda Jacobs-Young, ARS Administrator; and Paul Zielinski, FLC Chair. Photo by Pavlos Karalis.



From left: FLC Vice Chair Mark Reeves; Assistant Administrator Mojdeh Bahar, ARS Office of Technology Transfer; Research Geneticists Nagaraj Chatakondi and Brian Bosworth, ARS Warmwater Aquaculture Research Unit; REE Deputy Under Secretary Ann Bartuska; ARS Administrator Chavonda Jacobs-Young; and FLC Chair Paul Zielinski. Photo by Pavlos Karalis.

Gallery 2. Take Your Daughters and Sons to Work Day at the National Agricultural Library, Beltsville, MD, on April 24, 2014. (See related story in [Around ARS.](#))



Microgreens sensory evaluation (taste testing).



Remote sensing exhibit.

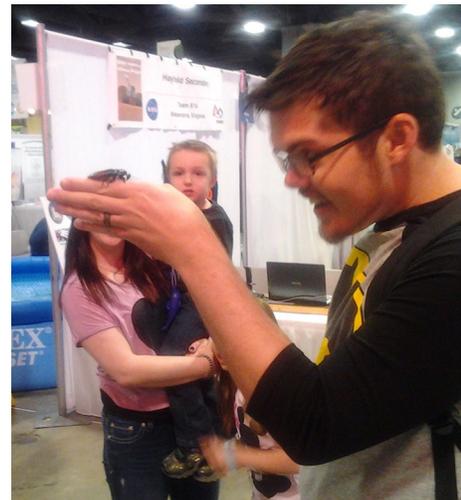


"Mad Science of Washington" presentation.

Gallery 3. The third Annual USA Science & Engineering Festival, April 25-27, 2014, Washington, DC. (See related story in [Around ARS.](#))



Lots of fun, educational displays to see.



Up close and personal with a hissing cockroach.



Mesmerized by science.

Gallery 4. Miscellaneous.

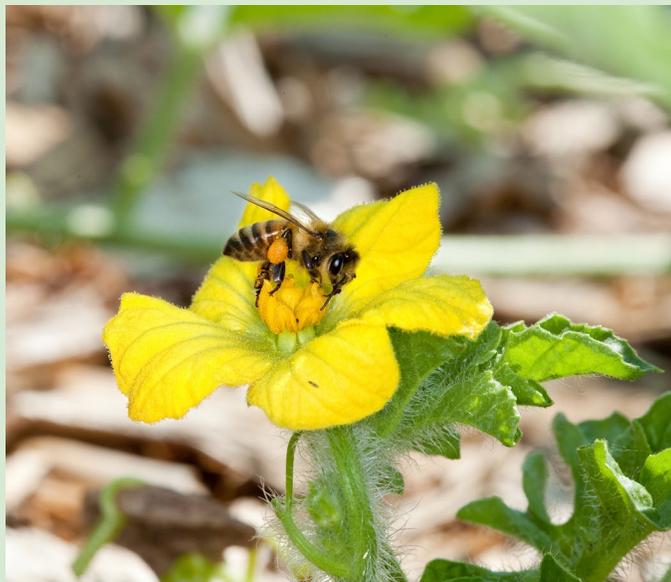


Second-place Desert Data Jam winner, Tristin Schlothauer of Mayfield High School in Las Cruces, NM, with his project "Population and Agriculture." (See related story in [Around ARS.](#))



Lindsay Fry, a veterinarian and Pathway student at ARS's Animal Disease Research Unit in Pullman, WA, hosting an exhibit at a joint USDA–College of Veterinary Medicine of Washington State University open house on April 12, 2014.

Did You Know?



You've probably heard that the honey bees are in trouble in this country. About one out of three of our managed bee colonies has been dying each winter for the last few years.

There is good news on the honey bee front this year. Losses this winter were down to 23 percent of managed colonies, compared with 30.5-percent losses for the winter of 2012-2013, according to a survey of beekeepers co-authored by Research Leader Jeff Pettis at the ARS Bee Research Laboratory in Beltsville, MD, and Dennis vanEngelsdorp, an assistant professor at the University of Maryland and the director of the Bee Informed Partnership.

But you can't count a one-year decline in losses—even one as notable as this—as solid improvement. Losses the year before last were 22 percent, so the numbers have been up and down.

Yearly fluctuations in the rate of losses like these only demonstrate how really complicated the whole issue of honey bee health has become. Since the 1980s, honey bees and beekeepers have had to deal with a whole host of new pathogens from deformed wing virus to nosema fungi, new parasites like varroa mites, pests like small hive beetles, nutrition problems from lack of diversity in pollen sources, and even sublethal effects of pesticides. These

problems, many of which honey bees might be able to survive if it was the only one, often are hitting in a wide variety of combinations and weakening and killing honey bee colonies.

There is also the mystery problem—Colony Collapse Disorder (CCD)—which is defined as a dead colony with no adult bees or dead bee bodies, but with a live queen and usually honey and immature bees still present. No one has been able to prove a cause for CCD, despite a number of claims in the media from a variety of sources.

ARS is one of USDA's lead agencies when it comes to finding ways to help honey bee health. Our scientists are looking to the DNA of honey bees and their pathogens and pests to develop long-term solutions. Other ARS research is working on enhancing epidemiological monitoring, finding biological or chemical disease and pest controls, developing better artificial diets to improve nutrition, and creating best management practices.

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