



USDA's Longest Serving Employee Retires



Richard Anderson and Marilyn Polansky.

USDA's longest serving employee, Chemist **Marilyn Polansky**, ARS Diet, Genomics and Immunology Lab, Beltsville, MD, retired after 57 years of dedicated service—leaving ARS on April 8, 2011. She will continue as an ARS volunteer. She began her USDA career on July 7, 1952—Harry Truman was president—as an ARS nutritionist. When Marilyn started her USDA career, the United States was involved in the Korean War. Her first project dealt with analyzing the chemical content of meat for the U.S. Army.

She then moved to developing assays to determine the vitamin content of foods. She developed several biological assays for foods, including vitamin B6, which served as the standard assay for decades. The assays were also for developing newer hi-tech methods that researchers use today.

Marilyn switched to working on the biological role of chromium in the 1960s and is part of a patent for chromium histidinate, which research indicates may improve glucose tolerance in people whose blood sugar levels range from slightly elevated to full-blown diabetes. In the 1970s and 1980s her work

focused on the requirements and functions of chromium and other trace elements in human and animal nutrition. She was part of the team that demonstrated that trivalent chromium plays a critical role in sugar and fat metabolism. This work was instrumental in determining the dietary intake and setting the requirements for chromium in humans. She also played a key role in related studies demonstrating that dietary and physical stresses such as high-sugar foods, exercise, and other factors that increase glucose and insulin metabolism—also increase chromium requirements. Her recent work has been centered mainly on polyphenols, including those from cinnamon and tea that improve insulin function.

Written by **Richard Anderson**, Research Chemist, ARS Diet, Genomics and Immunology Lab, Beltsville, MD. ❖

Need a few “no-cost” outreach ideas? Check out this list.

- Distribute existing materials to those who can use them effectively, like *Ag Research* magazine. Offer them to educators in your community.
- Offer free subscriptions to one of ARS' information products: ARS' News Service, *Healthy Animals* newsletter, *Food and Nutrition Research Briefs*, or Science for Kids e-mail alerts.
- Appreciate the value of free, small, local venues that may not draw thousands, but often provide the opportunity for quality conversations...try exhibiting at a farmers' market. See “From Farm to Market...to Marketing ARS.”
- Arrange ARS speakers at local meetings of professional societies or community organizations. Include a display table or hand out ARS kit folders.

- County fair coming up? Federal agencies can often negotiate free exhibit space.
- Got an exhibit idea, but lack the funds to pull it off? Partner with other USDA agencies and other Federal organizations, or share costs among ARS locations.

Need more ideas, or have unique strategies you'd like to share with us? E-mail **Dianne Odland**, ARS Information Staff, at Dianne.Odland@ars.usda.gov. ❖

From Farm to Market...to Marketing ARS



Kim Lewers.

Farmers' markets have continued to rise in popularity. According to USDA's Agricultural Marketing Service, over 6,000 farmers' markets are in operation nationwide—so there's

likely one near your location (see directory at <http://farmersmarkets.usda.gov>). Explore the opportunities. They're a great place for community outreach!

In an effort to showcase ARS research to consumers in the Washington Metropolitan Area, ARS Information Staff has exhibited at several farmers' markets in Maryland and Washington, DC—all free. One exhibit featured a mini ARS "Science in Your Shopping Cart" display. (Visit www.ars.usda.gov/is/services/Outreach/index.htm if you'd like to borrow it.) Research Plant Geneticist **Kim Lewers**, ARS Genetic Improvement of Fruits and Vegetables Laboratory, Beltsville, MD, showcased ARS strawberry research at USDA's Farmers' Market in Washington, DC, on June 24, 2011. Most farmers' markets run through the fall, while some operate year round. So, the time's still ripe to get in on the action! ❖

Around ARS



www.ars.usda.gov/yourtwocents

This month we spread the word about ARS' Your Two Cents (Y2C) and cultural transformation efforts and successes to the broader USDA audience, with a prominently placed article in the Secretary's *My USDA* newsletter [July 2011 issue of *MyUSDA*]. We are proud of our program and the continuing (and increasing) way other agencies are looking to our ARS Y2C initiative as a model. We are also proud of the important discussions you are having through Y2C. By the way, have you weighed in on the forgotten RL?

The Forgotten Research Leaders

More on the Forgotten RL

On Tuesday, July 12, at the School Nutrition Association Annual National Conference in Nashville, TN, **USDA Deputy Secretary Kathleen Merrigan** announced the new [Farm-to-School bibliography](#). The ARS National Agricultural Library's Alternative Farming Systems Information Center created and published the bibliography, which documents existing research and resources on Farm-to-School and Farm-to-Institution efforts and helps identify research gaps for this topic. The bibliography cites peer-reviewed literature, reports, conference proceedings, Cooperative Extension Service publications, organizational Web sites, and more. ❖



Honey donated to the community.

Research Leader **Peter Teal**, ARS Chemistry Research Unit, Gainesville, FL, and his colleagues teamed with the Salvation Army and St. Francis House, a local homeless shelter, to distribute 400 pounds of honey to needy members of the community. The honey, which

contained no pesticides or antibiotics, was scooped straight from the combs of 45 hives that Teal's lab maintains for use in various research projects. Honey from the hives is normally used for research analysis and for insect diets, but this year's output far surpassed what the scientists needed. ❀



Range camp students learn about “fish shocking,” a tool to estimate fish numbers in a stream.

Sixteen high-school-aged students from across Oregon and Idaho gathered June 19-23, 2011, for the first annual High Desert Youth Range Camp at the Northern Great Basin Experimental Range (NGBER) in Burns, OR. NGBER is administered by ARS scientists at the ARS Eastern Oregon Agricultural Research Center in Burns, OR. Range camps are typically associated with Society of Range Management sections in different states. Oregon has not hosted a high-school-oriented range camp in years. ARS employees were instrumental in getting a range camp organized again in Oregon. The camp organizing committee, made up of ARS scientists, Oregon State Cooperative Extension specialists, Treasure Valley Community College instructors, and Harney County school district science teachers collaborated over the past year to develop the curriculum and logistics. The purpose of the camp was to provide the students hands-on experience in rangeland science and develop their leadership and basic range skills. Students also earned college credit for attending the 4-day camp. ❀

As part of the Science, Technology, Engineering, and Mathematics (STEM) outreach and education program, ARS scientists from Pullman, WA, organized and participated in the Fifth Annual Skwant Science Camp, June 27-July 1, 2011, at the Paschal Sherman Indian School on the Colville Reservation. About 40 campers (5th-8th grade) participated in the camp. ❀

ARS and the Federal Aviation Administration have developed a Feedstock Readiness Level tool to track progress on agricultural and forest-based materials needed to produce alternative jet fuels. This tool complements the Commercial Air Alternative Fuel Initiative Fuel Readiness Tool. Using the two tools together can help industry and policymakers identify gaps in the aviation biofuels supply chain and determine where to allocate resources. The FSRL tool supports the Department's Farm to Fly Initiative. For more information about this tool, contact Jeff Steiner, ARS National Program Leader for Biomass Production Systems, at Jeffrey.Steiner@ars.usda.gov. ❀

On June 10, 2011, the National Archives opened its exhibit *What's Cooking, Uncle Sam?* to explore the history of the U.S. Government's involvement in the American diet. USDA's influence on what Americans eat is a large part of the exhibit's focus. Exhibit curator Alice Kamps conducted research at the ARS National Agricultural Library (NAL) and borrowed items unique to NAL: a small, working model of a refrigerated railroad car and four watercolors from the USDA Pomological Watercolor Collection. One of those watercolors is of the Meyer lemon, named for USDA Plant Explorer Frank Meyer. NAL owns transcripts of [Meyer's correspondence](#) with his supervisor, David Fairchild, plus other related documents. ❀

Notable Awards

Soil Scientist **Martin Shipitalo**, ARS North Appalachian Experimental Watershed, Coshocton, OH, received the Soil and Water Conservation Society (SWCS)'s Conservation Research Award. This award is given to SWCS members whose research has led to exceptional improvements in soil conservation, water conservation, and/or natural resources research. He was honored at SWCS' Annual Conference, July 17-20, Washington, DC.

On July 19, during its Annual Conference in Washington, DC, SWCS presented its Journal of Soil and Water Conservation Editor's Choice Award to the authors of the article, "Carbon Sequestration in Agricultural Lands of the United States." ARS authors were Research Plant Physiologist **Jack Morgan**, ARS Rangeland Resources Research Unit, Fort Collins, CO; Supervisory Research Soil Scientist **Ronald F. Follett**, ARS Soil Plant Nutrient Research Unit (SPNR), Fort Collins, CO; Soil Scientist **Leon Hartwell Allen, Jr.**, ARS Chemistry Research Unit, Gainesville, FL; Research Soil Scientist **Steve Del Grosso**, ARS SPNR, Fort Collins, CO; Supervisory Research Range Management Specialist **Justin D. Derner**, ARS Rangeland Resources Research Unit, Cheyenne, WY; Ecologist **Alan Franzluebbers**, ARS J. Phil Campbell, Sr., Natural Resource Conservation Center, Watkinsville, GA; and non-ARS authors Feike Dijkstra, Robert Fry, Keith Paustian, and Michele M. Schoeneberger. ❖



Left to right: Ed Knipling, Kayla Dowell, and Karl Norris (ARS Hall of Fame Scientist).

On July 11, high school junior **Kayla Dowell**, a USDA volunteer student at ARS' Center for Grain and Animal Health Research in Manhattan, KS, was one of three high school students in the

Nation to receive a 2011 Life Sciences Student Award from the Christopher Columbus Fellowship Foundation at a ceremony in Washington, DC. She is the

daughter of Research Leader **Floyd Dowell**, ARS Engineering and Wind Erosion Research Unit in Manhattan, KS. Kayla's ARS project involved using near-infrared spectroscopy to determine age and species of mosquitoes that transmit malaria, to detect a malaria drug in tea made from plant extracts, and to measure egg nutrient composition. Her ARS project and others earned her honors at other Science Fair and Junior Academy of Sciences competitions. ❖

The American Society of Animal Science (ASAS) awarded Research Geneticist **Michael D. MacNeil**, ARS Fort Keogh Livestock and Range Research Laboratory, Miles City, MT, its Rockefeller Prentice Award, for outstanding contributions to animal breeding and genetics research.

Research Physiologist **Gary J. Hausman**, ARS Richard B. Russell Research Center, Athens, GA, was elected an ASAS Fellow. The award recognizes his more than 30 years of sustained, original, and creative research in animal science.

ARS collaborator and former Research Leader, **Larry V. Cundiff**, ARS U.S. Meat Animal Research Center, Clay Center, NE, received the Morrison Award from ASAS for outstanding research important to livestock production. The Morrison Award is ASAS' most prestigious award.

Lead Scientist **Brian Kerr**, ARS Agroecosystems Management Research Unit, Ames, IA, received the American Feed Industry Association 2011 Nonruminant Nutrition Research Award in concert with ASAS' Annual Meeting in New Orleans, in recognition of research excellence in the nutrition of nonruminant animals.

Supervisory Research Animal Scientist **Eduardo Casas**, ARS Ruminant Diseases and Immunology Research Unit, Ames, IA, received ASAS' Bouffault International Animal Agriculture Award for distinguished service to animal agriculture that helped developing countries. He conducted this work while at the ARS U.S. Meat Animal Research Center in Clay Center, NE. Casas relocated to the ARS National Animal Disease Center in Ames, IA, on June 5, 2011.

The award winners were honored at the ASAS-American Dairy Science Association Joint Annual Meeting, July 10-14, in New Orleans, LA. ❖

Research Leader **H. Duane Norman**, ARS Animal Improvement Programs Laboratory, Beltsville, MD, received the 2011 American Dairy Science Association (ADSA) Distinguished Service Award, which recognizes individuals for outstanding and consistent contributions to the dairy industry. He also received the Distinguished Service Award from the Northeast Section of ASAS and Northeast Branch of ADSA.

Research Geneticist **Paul VanRaden**, ARS Animal Improvement Programs Laboratory, Beltsville, MD, received ADSA's 2011 Most Cited Award for having the most cited paper published in the Breeding and Genetics section of the Journal of Dairy Science during 2008. Both ADSA award winners were honored at the ASAS-ADSA Joint Annual Meeting on July 10-14, in New Orleans, LA. ❖

On July 11, Research Molecular Biologist **Jo Anne Crouch**, ARS Systematic Mycology and Microbiology Laboratory, Beltsville, MD, as part of a multistate research team, accepted the 2011 Experiment Station Section Award for Excellence in Multistate Research from the Northeastern Regional Association of State Agricultural Experiment Station Directors. The award was given for the team's research project entitled "Biology, Ecology, and Management of Emerging Pests of Annual Bluegrass on Golf Courses." ❖

Research Food Technologist **David "Andy" King**, ARS U.S. Meat Animal Research Center, Clay Center, NE, received the American Meat Science Association Achievement Award for outstanding research and service to the livestock and meat industries. He was recognized at the Reciprocal Meat Conference on June 21, 2011, in Manhattan, KS. ❖

Research Fisheries Biologist **Andrew J. "Drew" Mitchell** (retired), ARS Harry K. Dupree Stuttgart National Aquaculture Research Center, Stuttgart, AR, received the S.F. Snieszko Distinguished Service Award on June 16, 2011, at the American Fisheries Society's Fish Health Section Annual Meeting in Nanaimo, British Columbia, Canada. He is the first

ARS employee to receive this award. His distinguished career includes significant contributions to fisheries and aquaculture. ❖

On June 10, 2011, Lab Director **Calvin Arnold**, ARS U.S. Horticultural Research Laboratory (USHRL), Fort Pierce, FL, accepted the first Employer Appreciation Award for Biotechnology presented by Keiser University, a statewide university in Florida. USHRL partners with Keiser University to provide formal internships to biotechnology students who have completed classroom and laboratory coursework required for their degree. This internship is the transition between classroom and actual employment. It gives students the opportunity to apply theory learned in the classroom to a research setting through hands-on experience. Many Keiser interns return to work at USHRL after graduating. ❖



Ralph Scorza.

The National Peach Council (NPC) presented the ARS Genetic Improvement of Fruit Crops research with the 2011 Carroll R. Miller Award for Outstanding Research related to peaches. Kay Rentzel, NPC managing director, presented the award at a ceremony at the USDA headquarters in Washington DC, on June 9, 2011. Lead Scientist (stone fruit breeder) **Ralph Scorza**, ARS Appalachian Fruit Research Station, Kearneysville, WV, accepted the award on behalf of the team, whose achievements include developing peach varieties 'Bounty', 'Crimson Rocket', 'Sweet-N-UP', 'Tru-Gold', 'SummerFest', 'Flavrburst', and the nectarine variety 'Earliscarlet', and plum varieties 'Bluebyrd' and 'Orablue', named in honor of Senator Robert Byrd and his wife Emma Ora Byrd (both deceased). ❖

On June 8, 2011, the Eastern Panhandle Federal Executive Association awarded Research Molecular Biologist **Carole Bassett**, ARS Appalachian Fruit Research Station, Kearneysville, WV, the "Outstanding Manager" Award for her work in molecular biology and for her community service. She received one of three awards given, which was selected from the approximately 3,000 Federal employees who work in the region. ❖

Did You Know?

Today, cotton textile products are lightweight, soft, easy-to-wear, wrinkle-free, and durable (and some even flame-retardant) thanks to revolutionary contributions of scientists more than 60 years ago at ARS' Southern Regional Research Center (SRRC), New Orleans, LA.

At a facility then named the Cotton Chemical Reactions Laboratory, the ARS researchers developed new processing methods that have had significant and lasting impact on the U.S. cotton textile industry. Countless innovations relating to cotton led to the Center being designated an [American Chemical Society landmark in 2004](#).

The creation of “wash-and-wear” cotton fabric is among the team’s most notable achievements. In addition to freeing 1950s-era consumers from having to iron the wrinkles out of their cotton garments, the invention put the straggling natural plant fiber squarely back in contention against the likes of nylon, polyester, and other synthetic fabrics.

The hard work and creativity of the researchers at the laboratory (known today as the ARS Cotton Chemistry and Utilization Research Unit) also gave rise to other key inventions.

In addition to wrinkle-free clothing, the team also created a way to make cotton fabrics stain-resistant and flame-retardant. Spaghetti lovers rejoice! Drip-dry and permanent-press fabrics also got their starts in the New Orleans laboratory—as did renewed hope for a U.S. cotton industry reeling from the loss of prized markets to nylon and other synthetic fabrics.

ARS scientists filed several dozen patents associated with these pioneering technologies. According to Cotton, Inc., “cotton is the single best selling fiber in America today, outselling all man-made fibers combined.”

The dog days of summer may be upon us, but at least we can rely on the cooling comfort of our favorite cotton garments. And, if you happen to be wearing cotton today, give thanks to those ARS pioneers’ contributions!

Written By **Jan Suszkiw**, ARS Information Staff.



Cotton socks.



Cotton boll.

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