

February 2016

AGADEMICS

February 2016



COLLEGE OF
AGRICULTURE AND
NATURAL RESOURCES

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Videos

By Ann Tanaka | February 2016

[The Meaning Behind Various Flowers](#)

[Making Potting Mix](#)

[Wreath Making](#)

[Saving Poinsettias for Next Year](#)

[How to Save & Rebloom Christmas Cactus](#)

[Pine Cone Feeders](#)

[Christmas Tree Care](#)

[Pollinators & Pesticides](#)

[Juniper Pruning After a Hard Winter](#)

Publications: 8 New Bulletins

By Ann Tanaka | February 2016

Bulletins

B-1266: [Wyoming Open Spaces: Targeting Conservation Easement Purchases to Benefit Wildlife](#)

B-1267: [Development of a Market-Based Conservation Program in the Upper Green River Basin of Wyoming: Feasibility Study](#)

B-1268: [Wyoming Open Spaces: Residential Development Effects of Firefighting Costs in the Wildland-Urban Interface](#)

B-1271: [Wildland Fire in Wyoming: Patterns, Influences, and Effects](#)

B-1272: [Wyoming's Water: Resources & Management](#)

B-1273: [The Cost of Brucellosis Prevention: Spaying Heifers](#)

B-1274: [Price and Revenue Protection in the 2014 Farm Bill: Update for Wyoming](#)

B-1276: [Wyoming School Integrated Pest Management \(IPM\) for Filth Flies](#)

Calendar

By Ann Tanaka | February 2016

- February 10-11: Fremont County Farm and Ranch Days, Armory Building, Riverton
- February 17-18: Wyoming Agricultural Experiment Station Planning Conference, Laramie
- February 19-20: WESTI Ag Days, Worland Community Center

Proposals Submitted

By Ann Tanaka | February 2016

- Bittner, Mark: \$3,500 to Wyoming Department of Education for “Enhancing Nutrition and Sustainability Concepts in Preschool through Gardening.”
- Ernest, Holly, and Lisa Tell: \$94,191 to Morris Animal Foundation for “Investigating Accumulation of Heavy Metals in Hummingbirds.”
- Ernest, Holly, and Winston Vickers: \$99,903 to Morris Animal Foundation for “Investigating Genomic Health Impacts of California Mountain Lions.”
- Gagne, Roderick, and Holly Ernest: \$99,903 to Morris Animal Foundation for “Impacts of Landscape Structure and Host Demographics on Disease Dynamics of Southern California Mountain Lions.”
- Heitholt, James: \$50,000 to U.S. Department of Agriculture (USDA) National Institute of Food and Agriculture (NIFA) for “Identifying Cultivars and Management Practices to Increase Water and Nutrient Use Efficiency for Dry Bean Production in the Northern Great Plains and Intermountain West.”
- Islam, Anowar, Valtcho Jeliaskov, Augustine Obour, and Doohong Min: \$793,889 to USDA Agricultural Marketing Service for “Fenugreek Has Potential as Alternative Forage, Food, and Medicinal Crop.”
- Latchininsky, Alexandre, and John Connett: \$30,000 to USDA NIFA for “Wyoming School Integrated Pest Management Outreach and Training.”
- Scasta, John, Daniel Rodgers, and Preston Smith: \$130,151 to Bureau of Indian Affairs for “Enhanced Ecological Vegetation Inventory of High-Elevation Basins in the Wind River Indian Reservation to Link Native American Culture with the Rangeland Resource.”
- Scasta, John, and Linda Van Diepen: \$389,109 to Bureau of Land Management for “Linking Soil Ecology with Vegetation Management to Optimize Restoration Efforts of Ponderosa Pine after Catastrophic Wildfires.”

Monies Awarded

By Ann Tanaka | February 2016

- **Beck, Jeffrey:** \$20,392 from Wyoming Game and Fish for “Sage-Grouse Histrionics,” and \$12,323 from Wyoming Wildlife Consultants, LLC for “Population and Habitat Response of Greater Sage-Grouse to Wind Energy Development.”
- **Collier, Timothy:** \$3,872 from U.S. Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS) for “Biocontrol of Wyoming Weeds: Implementation and Monitoring.”
- **Cotton, Scott, Caleb Carter, and Kellie Chichester:** \$1,000 from Farm Credit Services of America for “Strengthening Community AgroSecurity in Wyoming.”
- **Coupal, Roger,** Kim Vincent, and Diane Wolverton: \$5,040 from The Local Crowd, LLC for “Enhancing Rural Access to Capital through Development of a Local Crowdfunding Incubator.”
- **Crawford, Warren:** \$196,180 from Bureau of Education and Cultural Affairs for “American Youth Leadership Program with Ghana: Enhancing Global Perspectives in Youth.”
- **Despain, Johnathan and Brittany Johnson:** \$22,264 from Kansas State University for “4-H Military Partnership.”
- **Edwards, Jeffrey:** \$16,000 from Wyoming Department of Agriculture (WDA) for “Pesticide Safety Education Program 2015-16.”
- **Ehmke, Cole, Justina Russell, Mae Lynn Smith, Caleb Carter, Ashley Garrelts, and Hanna Swanborn:** \$15,000 from Iowa State University for “Risk Management Education for Women in Agriculture in Wyoming 2016.”
- **Ernest, Holly:** \$24,070 from Wyoming Wild Sheep Foundation for “Wyoming Statewide Bighorn Sheep Population Genetics.”
- **Gigley, Jason:** \$229,147 from National Institutes of Health (NIH) for “Impact of Fc Glycosylation Profile on HIV-specific bNAbs Functions.”
- **Guo, Wei:** \$140,000 from American Heart Association for “The Role of Posttranslational Modification of RBM20 in Regulating Titin Isoform Transition.”
- **Hansen, Kristiana, Virginia Paige, Roger Coupal,** Melanie Purcell, **Eric Peterson,** Jen Lamb, Graham McGaffin, Anne MacKinnon, and Sara Brodnax: \$18,750 from Environmental Defense Fund for “Implementing a Market-Based Conservation Exchange in Wyoming.”
- **Hewlett, John:** \$293,000 from USDA Risk Management Agency for “Risk Management Education Addressing Specialty and Organic Crop/Livestock Operations; Economic Analysis of Multi-temporal Risk Management Strategies; Risk Scenario Planning and Analysis; and Risk Management for Beginning, Retiring/Transitioning, and Other Farmers/Ranchers and Interested Individuals in Wyoming 2015-16.”
- **Horn, Blaine, John Scasta,** Ryan Fieldgrove, and Barry Crago: \$19,995 from WDA for “Comparing Cattle Nutritional Plane to Forage Quality to Determine Mineral Intake and Deficiencies.”
- **Jabbour, Randa:** \$7,280 from Utah State University for “Conservation Biological Control of Alfalfa Weevil in Wyoming.”
- **Kniss, Andrew:** \$5,600 from DuPont for “Weed Science Research Support.”
- **Lake, Scott, and Douglas Zalesky:** \$10,044 from ABS Global, Inc. for “Impact of PAP Score on Bull Performance and Feed Efficiency.”
- **Latchininsky, Alexandre:** \$16,000 from WDA for “Wyoming School Integrated Pest Management Program 2015-16.”

- **Murphy, Melanie:** \$6,000 from U.S. Fish and Wildlife Service for “Wyoming Toad Recovery Exempt.”
- **Nathanielsz, Peter:** \$73,710 from NIH for “Stable Isotope Evaluation of the Methionine Cycle in Undernourished Pregnancy.”
- **Scasta, John, and Jeffrey Beck:** \$120,000 from WDA for “Wild Horse Spatial Movement Patterns across the Public-Private Land Matrix, Rangeland Habitat Use, and Interactions with Wildlife and Livestock.”
- **Schell, Scott:** \$66,850 from USDA National Institute of Food and Agriculture for “FY2015 Crop Protection and Pest Management Extension Implementation Area.”
- **Schumaker, Brant:** \$12,409 from Utah State University for “Increasing Sustainable Agriculture through Enhanced Diagnostics with *Brucella* Infection.”
- **Smith, Mae, and Brian Mealor:** \$20,000 from WDA for “Bighorn Targeted Goat Grazing.”
- **Sondgeroth, Kerry:** \$44,105 from USDA APHIS for “Determining Seroprevalence of *Brucella ovis* in U.S. Sheep Flocks.”
- **Sylvester, Anne, Cynthia Weinig, Michael Scanion, and Sarah Hake:** \$129,609 from National Science Foundation for “Collaborative Research: Ligule Development in the Proximal-Distal Axis of the Maize Leaf.”
- **Tanaka, John, and Kristie Maczko:** \$70,000 from Bureau of Land Management for “Sustainable Rangelands Roundtable: A Formal Briefing on Usable Science for Sustainable Rangelands and a Rangeland Soil Health Session.”
- **Vaughan, Karen:** \$10,338 from California Polytechnic State University for “Quantification of Outcomes Generated Using Multi-Scale Geomorphic Classification Systems in Predictive and Update Modes of Digital Soil Mapping.”

Changing Faces, Changing Places

By Ann Tanaka | February 2016

Welcome:

- **Evans, Mary:** Platte County UW Extension, Cent\$ible Nutrition Program assistant (1/4)
- **Fitzgibbons, Stacey:** Converse County UW Extension, 4-H educator (12/7)
- **Powers, Mercedes:** Goshen County UW Extension, administrative assistant (11/2)
- **Radtke, Seth:** Sweetwater County UW Extension, horticulture assistant (1/7)

Farewell:

- **Geiger, Milt:** UW Extension, energy extension coordinator (1/29)
- **Greear, Betty:** Natrona County UW Extension, Cent\$ible Nutrition Program coordinator (1/6)

Department of Molecular Biology Seminars

By Ann Tanaka | February 2016

Fridays, 2:10-3 p.m., Animal Science/Molecular Biology building, room 103 -

- **February 5:** "Development and Commercialization of Fermentative Isobutanol," Chris Smith, Gevo, Inc.
- **February 12:** "An Adaptor Hierarchy Regulates Protein Destruction during the Bacterial Cell Cycle," Peter Chien, University of Massachusetts Amherst
- **February 19:** "CodY Prioritizes Metabolism and Virulence Gene Expression in *Staphylococcus aureus*," Shaun Brinsmade, Georgetown University
- **February 26:** "Translational Control of the *Caulobacter* Cell Cycle," Jared Schrader, Wayne State University

Department of Animal Science Seminars

By Ann Tanaka | February 2016

Fridays, 12:10-1 p.m., Animal Science/Molecular Biology building, room 103 -

- **February 5:** “Metabolic Adaptations in the Liver of the Growth Restricted Fetus,” Stephanie Weslowski, University of Colorado

Farm Credit Services donation funds leadership course

By Ann Tanaka | February 2016

Farm Credit Services of America donated \$160,000 to the University of Wyoming Foundation to fund an annual leadership class in the College of Agriculture and Natural Resources.

Dean Frank Galey and Doug Stark, CEO of Farm Credit Services of American, are teaching “Elements of Leadership” this semester. The four-day course will meet evenings February 3-5 and all day Saturday, February 6. Enrollment was limited to 25.

The course is open to all students, but recruitment efforts are geared toward students in current leadership positions like the Ambassadors, Associated Students of the University of Wyoming, and leaders in clubs and organizations.

GMOs, getting better prices topics at WESTI Ag Days in Worland

By Ann Tanaka | February 2016



Extension specialist Cole Ehmke, right, visits with Fred Drake of Ten Sleep after an estate planning session at last year's WESTI Ag Days.

More than 35 sessions, including presentations on soil health, native grasses for range and pasture and composting with worms, are part of WESTI Ag Days for agriculture producers Friday, February 19, and small-acreage landowners and gardeners Saturday, February 20, in Worland.

WESTI (Wyoming Extension's Strategically and Technologically Informative) Ag Days registration begins both days at 8 a.m., with closing remarks and a raffle both days at 4:30 p.m. at the Worland Community Center Complex at 1200 Culbertson Ave.

The Washakie County office of University of Wyoming Extension and Washakie County Conservation District sponsor the annual event, now in its 19th year.

A private pesticide applicator's class is 12-4 p.m. Thursday, February 18, at the Washakie County Extension office in the Worland Community Center. Caitlin Price Youngquist, UW Extension educator, recommends the course for those needing to renew their licenses and notes that registration is required.

Experts from the University of Wyoming and USDA present ways at WESTI to improve safety, profitability, and enjoyment. The schedule and more information are at bit.ly/2016westiagdays. Lunch is provided by the Washakie County Cowbelles both days.

Friday topics for farmers and ranchers include herbicide resistance, nutrient management, livestock market outlook, futures, water rights, sage grouse, mobile apps and Google Earth for agriculture, and communicating about GMOs (genetically modified organisms).

Saturday topics for small-acreage landowners and gardeners include weed and pest management, pollinators and irrigation, native landscaping, livestock genetics, horse management, alternative energy, and how to prepare for a disaster, and preserving the garden harvest.

For more information, contact UW Extension's Janet Benson at (307) 347-3431 or jbenso19@uwyo.edu.

Goats, drones, getting better prices topics at Farm and Ranch Days in Riverton

By Ann Tanaka | February 2016



Frank Galey, dean of the College of Agriculture and Natural Resources, visits with Lois Herbst during last year's Fremont County Farm and Ranch Days.

Alternative meat cuts, cold-climate fruit trees, and legislation affecting raw milk sales give farmers, ranchers, and small-acreage owners ideas to chew on during the 32nd annual Fremont County Farm and Ranch Days in Riverton.

Free, concurrent sessions are Wednesday and Thursday, February 10-11, in the Armory Building at the Fremont County Fairgrounds. Sessions both days start at 9 a.m., and the last sessions begin at 3 p.m. The Fremont County office of University of Wyoming Extension sponsors the annual event.

Drones in agriculture and diseases in brew barley are among the 38 sessions offered. The schedule is at bit.ly/2016farmranch. Sponsors provide free lunches both days.

Private applicator pesticide training is Wednesday, and Chris Jones of the National Weather Service is Thursday's featured lunch speaker. Jones is the warning coordinator meteorologist for western and central Wyoming.

Experts from the University of Wyoming, Montana State University, USDA, and state and local agencies will present topics for improving land, herds, safety, operations, and profitability.

Sessions address subjects including cattle valuation, genetics and reproduction; sheep vaccination and residual feed intake; post-fire rehabilitation; sage grouse and brucellosis updates; farm and ranch management and estate planning; and wild horse and wildlife conflicts.

For more information, contact UW Extension educator Chance Marshall at (307) 332-2363 or cmarshal1@uwyo.edu.

Cheyenne conference illustrates organic certification, production systems

By Ann Tanaka | February 2016

Production in the High Plains is difficult and margins are slim, but raising certified organic crops could increase profit margins, according to Jay Norton, University of Wyoming Extension soils specialist who helped organize the February High Plains Organic Farming Conference in Cheyenne.

The conference is Tuesday and Wednesday, February 23-24, at Laramie County Community College, 1400 E. College Dr.

Registration and agenda information is at <http://uwextension.wix.com/organicfarming>.

In response to audience suggestions from last year, this year's conference features presentations by six producers from Wyoming and Colorado talking about their production systems, cover crops, marketing, pest control, and other topics, says Norton.

The conference targets dryland crop, irrigated crop, and forage and livestock producers, and focuses on crop, soil, pest, and livestock management, marketing, and USDA National Organic Program updates.

"Organic production is definitely not for everyone, and the conference does not emphasize ideological reasons for going organic," says Norton.

The certification process and transition are potential barriers to some producers, Norton says. The first day is an afternoon workshop showing how to become certified organic producers. That workshop features hands-on activities, such as an experienced organic certifier helping producers complete an application for a hypothetical farm.

The second day is a full-day conference for experienced, new, or interested producers and is open to anyone.

Norton said the conference is centered on three themes: dryland and irrigated cropping systems and livestock production. Producers and researchers will speak about each, including a rancher/veterinarian who will talk about animal health in organic production.

Research presentations include soil fertility options in organic dryland and irrigated crop production, and pest control options.

The conference ends with a panel discussion about marketing, National Organic Program-approved inputs, and other topics from the audience.

In addition to producers, speakers include University of Wyoming and Colorado State University researchers and Renee Gebault King from the USDA National Organic Program in Washington, D.C.

Organic production relies on healthy soil, so a lot of focus will be on building and maintaining soil health in dryland, irrigated, and livestock operations, says Norton.

"The market for certified organic products continues to expand, and for producers from the High Plains of Wyoming, Nebraska, and Colorado, it may represent a value-added approach that makes their operations more sustainable," notes Norton.

For more information, contact Norton at (307) 766-5082 or at jnorton4@uwyo.edu.

UW Livestock Judging team posts best scores since 1995 at National Western Stock Show

By Ann Tanaka | February 2016



Back, from left, Mike Day, animal science department head, with team members Tyler Mackey, assistant, Nolan Woodruff, Molly Diefenbach, Kasey Miles, Caleb Boardman, coach. Front, Bill Dalles, Bobby Dorvall, Sadie Yates, Tate Chamberlain, BW Ochsner.

The University of Wyoming Livestock Judging team posted its best scores since at least 1995 in all categories at the National Western Stock Show en route to its sixth-place finish among 24 teams, according to coach Caleb Boardman.

The Denver competition January 14-15 was the second over the holiday break. The team finished third among seven teams at the Arizona National in Phoenix on New Year's Eve, said Boardman, who added he only has records dating back to 1995.

Students returned from break on December 28 and were on the road until January 16.

"While most other students were enjoying Christmas break, students on the livestock judging team were hard at work preparing for the team's first two contests," Boardman notes.

The team travelled almost 4,000 miles, judged over 100 classes of livestock, and gave over 50 sets of reasons, he says.

"The hard work definitely paid off as the team got off to a great start for the year," he says.

The team finished second in reasons and sheep/goats, and third in cattle and hogs at the Arizona competition.

At the Denver competition, UW was first in placings, fourth in hogs, tied for fifth in sheep/goats, and seventh in cattle and reasons.

There were 117 competitors at the Denver show. Individual results included:

- Hogs - Tate Chamberlain, Casper, 5th; BW Ochsner, Torrington, 6th; Bill Dalles, Laramie, 7th.
- Sheep/goats - Chamberlain, 10th.
- Feedlot cattle - Ochsner, (tie) 1st.
- Overall - Chamberlain, 18th, Bobby Dorvall, Fromberg, Montana, 23rd, Ochsner, 26th, Sadie Yates, Hesperus, Colorado, 44th, Dalles, 49th.

Team members also include Molly Diefenbach, Bellefonte, Pennsylvania, Kasey Miles, Hotchkiss, Colorado, and Nolan Woodruff, Ventura, California

The team competes next at the Nebraska Cattleman's Classic February 20 in Kearney, Nebraska.

For more information, contact Boardman at 307-766-2159 or Caleb.Boardman@uwyo.edu.

Program recognizes college's outstanding staff, faculty members

By Ann Tanaka | February 2016

Outstanding staff and faculty members in the College of Agriculture and Natural Resources were honored in December during its annual Employee Recognition Program.

Dean Frank Galey presented Outstanding Employee Awards to Kelli DeCora, senior office assistant in animal science; Ann Roberson, University of Wyoming Extension administrative associate; and Holly Steinkraus, molecular biology instructional laboratory coordinator. Each received \$500.

Also nominated were Amy Boerger-Fields, veterinary sciences laboratory technician; Kelly Greenwald, administrative associate at the James C. Hageman Sustainable Agriculture Research and Extension Center; Carolyn Herman, staff assistant in the dean's office; and Kassandra Thomas, plant sciences office associate.

Outstanding Educator Award

The Office of Academic and Student Programs honored Tara Kuipers, UW Extension community development educator, with the Outstanding Educator Award. Kuipers is based in Park County and serves northern Wyoming. She received \$2,500.

Also nominated were Paul Ludden, associate professor, animal science; and Dallas Mount, UW Extension educator in Platte County and also serving southeastern Wyoming.

MeeBoer, Outstanding Adviser Awards

Agriculture students presented two honors. Molecular biology Assistant Professor Dan Levy received the Lawrence Meeboer Agricultural Classroom Teaching Award and \$500. Molecular biology lecturer Rachel Watson was presented the Outstanding Adviser Award and \$500.

Meeboer nominations included Associate Professors Chris Bastian and John Ritten, agricultural and applied economics; Assistant Professor Erin Irick, family and consumer sciences; Assistant Professor Karen Vaughan, ecosystem science and management; and lecturer John Willford, molecular biology

Also nominated for the Outstanding Adviser Award were Bastian; Kristin McTigue, lecturer, family and consumer sciences; Professor Kurt Miller, molecular biology; Associate Professor Dannele Peck and Ritten, agricultural and applied economics; and Assistant Professor Derek Scasta, rangeland specialist, ecosystem science and management.



Frank Galey presents one of three Dean's Outstanding Employee awards to Kelli DeCora, senior office associate in the Department of Animal Science.



UW Extension state office administrative associate Ann Roberson receives one of three Dean's Outstanding Employee awards from Frank Galey



Molecular biology instructional laboratory coordinator Holly Steinkraus receives the Dean's Outstanding Employee Award from Frank Galey.



Educator Tara Kuipers received the Outstanding Educator Award.



Molecular biology Assistant Professor Dan Levy received the Lawrence Meeboer Agricultural Classroom Teaching Award

Lawrence Meeboer Agricultural Classroom Teaching Award

Lawrence Meeboer Agricultural Classroom Teaching Award



Assistant Professor Dan Levy in the Department of Molecular Biology received the Lawrence Meeboer Agricultural Classroom Teaching Award.

Rachel Watson in molecular biology received the Outstanding Adviser Award. From left, Callie Wilson, Watson, Caleb Brackett, Michelle Bartlett, Rael Otuya. Students nominate and select the award recipient.