

COLLEGE OF AGRICULTURE AND NATURAL RESOURCES

AG NEWS

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Films and a website invite visitors to think more broadly about the role of agriculture in a state where 93 percent of privately owned land is classified agricultural.

See page 16.



COLLEGE OF
AGRICULTURE AND
NATURAL RESOURCES



Dean Frank Gale

“ Tell me and I forget. Teach me and I remember. Involve me and I learn.”

Benjamin Franklin

Dear Friends and Colleagues,

Most can readily name teachers who affected our lives. They made a lasting impression and were particularly skilled at sharing their knowledge and passion for a subject area. This past December, our students recognized faculty members who they believe excel at teaching. Reading their recommendation letters reminded me why the college places such importance on teaching skills. I thought I might share some of their comments.

“My instructor goes above and beyond to both assist in our experimenting and teach us exactly how what we have learned in other classes applies in the lab setting and in real-world applications.”

My professor “is always available to talk about anything. When I expressed confusion with a very basic principle, (she) pulled out a book and gave me examples and context with which to understand it. ... Instead of expecting us to adapt to her teaching style and expectations, she tailors the information to us and challenges us in incredibly effective ways.”

These quotes reinforce why 11 percent of the college’s full-time instructional faculty members have won one or more university-wide, regional, or national teaching excellence awards. Some might argue other scholarly activities, such as research productivity, overshadow teaching excellence. I would answer the college places a high value on serving our students and providing a quality education.

The college is very fortunate to have programs in place that publicly and financially reward gifted teaching. A number of years ago, a donor who wanted to encourage teaching excellence created the Outstanding Educator Award. Recipients of this award are recognized during our spring commencement ceremony and also receive a cash award equivalent to the highest teaching award offered by the university. The award is not restricted to classroom teaching but also recognizes UW Extension educators who excel in offering training to Wyoming’s citizens.

Each of our faculty positions includes teaching. Candidates for faculty positions are often asked to give a teaching seminar during their campus interviews. This gives the college’s faculty an opportunity to experience first-hand a candidate’s teaching style and skill. Some departments include students in the seminar or ask candidates to teach a regular class. During their careers, faculty members also have opportunities to receive feedback on their teaching through peer evaluations, mentoring by our associate dean for academic and student programs, and university-wide resources such as the Ellbogen Teaching and Learning Center. They also have opportunities to further their skills through symposiums, seminars, and workshops on campus.

A teaching philosophy called “active and engaged learning” is central to UW’s science initiative. The newly completed Michael Enzi STEM (Science, Technology, Engineering, Math) building contains laboratories and classrooms that support active learning methodologies. The approach moves away from traditional lectures and laboratories to one that involves smaller student groups working collaboratively with instructors. No matter the setting, the essential component remains a dedicated instructor. One student put it quite nicely when asked what separated this particular faculty member from others. He said his “philosophy is essentially that his success is measured by the students’ success.”

Dean Frank Gale
College of Agriculture and Natural Resources

COLLEGE OF AGRICULTURE AND NATURAL RESOURCES RECOGNIZES OUTSTANDING STAFF, FACULTY MEMBERS

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

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



UW Extension state office administrative associate Ann Roberson receives the Dean's Outstanding Employee Award from Frank Galey.



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

FIRST CUTTING

Mortar Board members name three Top Profs

Members of the University of Wyoming Cap and Gown Chapter of Mortar Board in November named three professors from the College of Agriculture and Natural Resources “Top Profs” for the academic year.

Members of the senior honor society selected professors who have made exceptional contributions to their success at UW.

They include:

Family and Consumer Sciences – Professor **Michael Liebman** was selected by Connor Morton of Casper, and Associate Professor **Rhoda Schantz** was selected by Kaitlyn Livingston of Newcastle.

Molecular Biology – Associate Professor **Pam Langer** was selected by Kourtney Puckett of Sheridan.

Membership in Mortar Board is based on students’ scholarship, leadership, and service. Mortar Board members participate in projects and activities throughout the year, both on campus and in the Laramie community.



Michael Liebman



Rhoda Schantz



Pam Langer

continued from page 3

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 Professors **Dannele Peck** and **Ritten**, agricultural and applied economics; and Assistant Professor **Derek Scasta**, rangeland specialist, ecosystem science and management.



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.



Assistant Professor Dan Levy was presented the Lawrence Meeboer Agricultural Classroom Teaching Award.



Educator Tara Kuipers received the Outstanding Educator Award.



UW EXTENSION EDUCATORS, SPECIALISTS RECOGNIZED FOR EXCELLENCE

Outstanding work and team collaboration in University of Wyoming Extension were recognized during the Extension Professional Improvement Conference in Riverton in November.

Julie Daniels, Laramie County community development educator, received the Jim DeBree Award. She was recognized for her efforts to provide training to elected and appointed board members and government.

Daniels spearheaded efforts to develop a multi-year training institute for the Wyoming Association of Municipal Clerks and Treasurers that allows members to

obtain the 100-plus hours of training required to obtain certification. As institute director, she works closely with the association and its international association (International Institute of Municipal Clerks) to oversee curriculum planning, implementation, and recordkeeping.

The institute's popularity prompted the county treasurers to approach Daniels about spearheading a similar training effort on their behalf.

The Jim DeBree Award is named in honor of the retired extension administrator and given to those who demonstrate a

high level of professionalism, performance, and leadership within their program areas and communities.

Newer Employee Award

Effectiveness in working with educators in several specialty areas is among reasons Albany County educator **Brian Sebade** received the Newer Employee Recognition Award.

Sebade was an extension educator based in Crook County and served northeast Wyoming for four years before transferring in 2015 to Albany County

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Julie Daniels, left, community development educator in Laramie County, received the Jim DeBree Excellence in Cooperative Extension Award. Presenting was Uinta County community development educator Kimberly Chapman. The award is the most prestigious in UW Extension.



Albany County educator Brian Sebade, center, received the Newer Employee Recognition Award. Extension associate directors Mary Kay Wardlaw and Kelly Crane presented the honor. Sebade was formerly the educator in Crook County.

FIRST CUTTING

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and working with residents in southeastern counties. He has been the area chair and served on several extension issue teams, including small acreage, management intensive grazing school, Exploring the Nature of Wyoming, Wyoming rangeland plants handbook, living with wildfire guide, and Wyoming Youth 4-H forestry.

Creative Excellence Award

Team members who launched a program that gets youth and parents working together to improve family eating and activity received the UW Extension Creative Excellence Recognition Award.

BodyWorks in Wyoming collaborators are **Melissa Bardsley, Vicki Hayman, Mary Louise Wood, and Kimberly Fry.** Bardsley is the former food and nutrition specialist for Wyoming extension; Wood is the 4-H youth educator in Albany County; Hayman is the nutrition and food safety educator in Weston County; and Fry is a 4-H youth educator in Campbell County.

The team developed the program to teach Wyoming youths and adults strategies to build lifelong healthy habits.

They have led BodyWorks since 2012 in Campbell and Albany counties – with one

12-year-old participant, Dillon Andrews, garnering dinner at the White House after his Indian taco recipe was selected in the 2015 Healthy Lunchtime Challenge.

Youths attended the five-week program with a parent or grandparent, and the kids prepared the meals served at each session. Laramie was one of three state pilot sites for

the program initially developed by the U.S. Department of Health and Human Services Office of Women's Health.



Indian Tacos



A collaborative team received extension's Creative in Excellence Recognition Award for its BodyWorks in Wyoming. From left, Melissa Bardsley, Vicki Hayman, associate director Mary Kay Wardlaw, Mary Louise Wood, Kimberly Fry, associate director Kelly Crane

UW doctoral student awarded scholarship from International Plant Nutrition Institute

Ph.D. student **Mavis Badu** of the Department of Plant Sciences is recipient of a 2015 Scholar Award from the International Plant Nutrition Institute (IPNI).

Badu, who earned a bachelor's degree from Kwame Nkrumah University of Science and Technology in Ghana, was one of two recipients for the Sub-Saharan region.

Mike Stewart, southern and central Great Plains regional director of IPNI, came from San Antonio, Texas, to present the award December 14 on the Laramie campus.

Badu is working toward a Ph.D. in agronomy. Her research, which has included fieldwork and a laboratory incubation study, seeks to identify mechanisms underlying the synergistic effects of cattle manure and mineral fertilizer on crop yield.

Thirty-seven students, representing 13 countries, were chosen for the \$2,000 IPNI Scholar Awards for graduate students in programs relevant to plant nutrition science and management of crop nutrients.

IPNI scholar awards are provided with support of IPNI member companies, which produce nitrogen, phosphate, potash, and other fertilizers.



Mavis Badu, center, accompanied by her adviser, Assistant Professor Urszula Norton, is presented a 2015 Scholar Award from the International Plant Nutrition Institute by Mike Stewart, southern and central Great Plains regional director of the IPNI.



GRANT FUNDS BUILDING ORGANIC AGRICULTURE CURRICULUM AVAILABLE TO ANYONE

A University of Wyoming faculty member who believes organic agriculture is often oversimplified and misrepresented has her opportunity to correct that by building a relevant student curriculum, thanks to a \$242,908 Organic Agriculture Research and Extension Initiative grant from the National Institute of Food and Agriculture.

Randa Jabbour in the Department of Plant Sciences and Eric Gallandt of the University of Maine will interview instructors across the country and use a video of several agricultural producers in different regions to create a curriculum open and free for anyone to use.

The focus is creating undergraduate and graduate curriculum.

“A lot of people don’t understand the complexity and the rules behind organic agriculture,” says Jabbour, an assistant professor of agroecology. “I’m excited to introduce the students to that complexity and for them to decide whether or not that’s something they want to pursue.”

Organic is only one method of farming among many, she notes.

“It’s one opportunity people have,” says Jabbour. “I don’t want people to think I’m saying this is the way all agriculture should be. This is just one approach to take.”

The project goal is to provide relevant material to instructors across the country who may not be well-versed in current practices and rules for the National Organic Program, she says.

“We hope to fill a niche by giving the resources to those faculty members who don’t know much about the topic so they can address it in their classes,” says Jabbour. “Our goal is to work with experts to put together a curriculum that provides high-quality, science-based, farm-supported information that can be used across the country, even if instructors don’t necessarily have strengths in that area.”

The project has just started, but Jabbour says she has received letters of support from faculty members in 10 states saying they want to participate.

Once completed, the curriculum will be in a public Web location so other instructors can access the material.

The curriculum draws from different agricultural regions to make the curriculum applicable across the country.

“The idea is to try to give people a better understanding of the diversity of agricultural operations in the U.S.,” she says. “Depending upon where you go to school, a lot of us teach with a regional emphasis because those are examples that are easy to include in the curriculum.”

The combination of interviewing instructors and creating the farmer video (will include a producer from Wyoming) is to show students how different agriculture can be and also what operators or producers have in common.

“These are important concepts our students need to understand, regardless of

“A lot of people don’t understand the complexity and the rules behind organic agriculture. I’m excited to introduce the students to that complexity.”

Randa Jabbour

Assistant professor, Agroecology

where someone farms, that are relevant to building sustainable agricultural systems,” says Jabbour.

That portion of the project will demonstrate the depth and breadth of agriculture in America and help build a curriculum that homes in on critical concepts and skills pertinent to students no matter their locations, says Jabbour.

She will teach the modules online this fall, and other instructors will test the material in face-to-face classrooms.



*Assistant Professor Randa Jabbour,
Department of Plant Sciences in the College
of Agriculture and Natural Resources*

AGRICULTURAL AND APPLIED ECONOMICS RESEARCH ON NATIONAL, INTERNATIONAL STAGE

Department of Agricultural and Applied Economics faculty members presented research in Paris and Washington, D.C., last fall.

Associate Professor **Matt Andersen** argued for a more accurate measurement of economic rate of return on public investment in agricultural research and development at the Impact of Agricultural Research conference November 3 in Paris.

Roger Coupal, professor and head of the Department of Agricultural and Applied Economics, and Associate Professor Robert Godby of the College of Business, as well as panelists from several eastern states, presented at a workshop hosted by the Brookings Institution November 13 in Washington, D.C.

Andersen Recalculates Return on Agricultural Research Investment

In his keynote address, “Econometrics of the impacts of agricultural science,” Andersen cited evidence that current models significantly overstate the benefits that accrue over time, while simultaneously understating the research and development costs.

Science plays an increasingly crucial – and global – role in farm productivity, especially in light of climate change, evolving pests and diseases, and degradation of soil and water, says Andersen. Funding agricultural science is critical to meeting these challenges; therefore, the methods used to evaluate the impacts of agricultural research must be realistic and predictive.

Andersen presented a modified internal rate of return model that showed the real return on agricultural research and development in the United States is approximately 10 percent per year. In contrast, when the

estimations in 30 journal articles since 2000 were averaged, the rate of return was 46.71 percent per year.

The French National Institute for Agricultural Research, the conference organizer, recalculated returns for agricultural research and development in France in response to Andersen’s presentation.

Coupal and Godby Advocate for Communities on the Brink of the Clean Power Plan

The Brookings Institution is a research organization in the Washington, D.C., area that provides research-based recommendations for policymakers and the public on national and international issues.

In his invited presentation “Managing the transition from coal to gas and renewables: Reclamation and community perspective,” Coupal shed light on the costs that could fall to Wyoming communities as the nation moves away from traditional energy sources.

Wyoming schools, colleges, the university, transportation and water infrastructure, the general fund and budget reserves have benefitted from severance taxes, federal mineral royalties, and coal lease bonuses.

Coupal showed that, by 2030, the EPA’s Clean Power Plan could lead to losses in ad valorem taxes in Wyoming of approximately \$200 million. These mineral taxes currently go to county services, school districts, and municipalities.

During ‘bust’ cycles, when industry profits fall, some costs may fall to communities, said Coupal, including those related to reclamation, restoration, and cleanup.



Matt Andersen



Roger Coupal

Tools to manage the legacy of coal, oil, and gas include financial and cash bonds, interim reclamation, and more recently self-bonding programs (although, he noted, some question the value of self-bonding during a downturn). He stated community-level monitoring and review are needed, as well as state and federal support, and greater collaboration with energy industry leaders.

Coupal said the clean power transition, if well-managed, can generate restoration jobs and lead to higher land values and healthier communities. The Wyoming Reclamation and Restoration Center in the College of Agriculture and Natural Resources can ensure initiatives are science-based. He suggested allocating federal Abandoned Mine Lands funds to help the state manage reclamation and the fiscal legacies of coal, oil, and gas.

Godby’s presentation estimated effects the Clean Power Plan might have on Wyoming’s economy with respect to coal production, economic output, and employment. Godby and Coupal’s article, “A Comparison of Clean Power Plan Forecasts for Wyoming: The Importance of Implementation and Modeling Assumptions,” will be published in the June issue of *Electricity Journal*.



FARM CREDIT SERVICES DONATION FUNDS LEADERSHIP COURSE

Farm Credit Services of America (FCSAmerica) is planting seeds with hopes for a bountiful harvest.

FCSAmerica has contributed \$160,000 to the University of Wyoming Foundation to help create an agricultural leadership program in the College of Agriculture and Natural Resources.

FCSAmerica's donation celebrates the centennial of the Farm Credit System. The agriculture lender has made similar contributions to each land-grant university in its four-state territory of Iowa, Nebraska, South Dakota, and Wyoming to advance agriculture for future generations.

Doug Stark, CEO of FCSAmerica, is a Riverton native and UW alumnus and has traveled for several years from company headquarters in Omaha to teach a leadership course at UW with Frank Galey, dean of the college

Stark says leadership has been a driving aspect of his life journey since graduating from UW.

"My hope and reason for doing this is that students have an opportunity to start their journey much earlier than I did," says Stark. "That can make a huge difference, not only in their working world but also in their personal lives. Understanding the various aspects of that can be very rewarding in their personal journeys."

Stark can point to a handful of events during his career that took him to new levels or opened his eyes to opportunities for leadership. In a 2013 interview, he said: "I think we all have those turning points in our lives. I have a great quote one of my leadership coaches told me. 'When the heart and mind is open for learning, whether in our careers or personal development, someone will show up in life to help fill the void and take you to another level. I've found that to be the case in my career. When looking for that opportunity, even if it was consciously or not, somebody would come into my life who helped take me to another level. That's just the way it works.'"

Stark most recently shared his views on leadership with UW students this past February when he and Galey co-taught "Elements of Leadership" February 3-5 and all day Saturday, February 6.

"It's a small part of my way of giving back to the university, community, my state, and the industry which I love," says Stark, who earned a bachelor's degree in agricultural business in 1980, then joined FCSAmerica. He has served as president and CEO of FCSAmerica since 2005.

The course is open to all students, but recruitment is geared to students in leadership positions like the Ag Ambassadors,

Associated Students of the University of Wyoming, and leaders in clubs and organizations. Leadership development will be a permanent part of the curriculum in the college.

Stark says those living in rural areas are grounded and have attributes that provide a unique advantage in building a foundation for leadership if they learn to understand how to apply those attributes.

That foundation can help students gain what he calls a conscious competency of attributes inherent in them, abilities they may have a gut feeling about but come to understand from an intellectual standpoint and then learn how to be more effective.

"Learning leadership is a little bit about self-discovery," he says. "You find out who you are and how you operate and why you act the way you do and understand how that affects others and to be more effective in your leadership role."

There is no one way to learn, he says; everyone has their own canvases.

"If they take the basic principles of leadership and play to their own skills and background and passion, that can make a big difference in not only their work but in their personal lives – being better husbands, better wives, mothers, fathers – because of what they've learned."

AGRICULTURAL ECONOMICS GRADUATE RETURNS TO

When he was growing up, Martin Winchell's life spanned the Wyoming-Nebraska border; now it spans borders between the U.S., China, and other nations.

Winchell returned to the University of Wyoming last fall to meet with agricultural and applied economics undergraduate and graduate students, professors, and the college dean. He described living and working in China and the benefits of preparing for a global career – whether at home or abroad.

Winchell is managing director of greater China for Schneider Logistics, responsible for operations in 25 cities in China, Hong Kong, Taiwan, and Macau. Schneider, which is based in Green Bay, Wisconsin, is one the largest providers of truckload, intermodal, and logistics services in North America. In China, Schneider has more than 600 full-time and contract employees.

After graduating from high school in Gering, Nebraska, Winchell crossed the state line to attend the University of Wyoming, where he earned a bachelor's degree in agricultural and applied economics from the college in 1995.

Winchell returned to Nebraska to lead procurement and transportation for a firm that served international clients, and that was his first exposure to international shipping.

Establishes Business Infrastructure

In 2005, Winchell made the move to China. Under his direction, Schneider established ground, ocean, and air operations. Winchell managed the multi-year, multi-million-dollar acquisitions and investment strategy. The comprehensive logistics network Winchell has helped build in China over the past decade includes transportation management, port logistics,

“When I came to UW, I didn't have a passport. Today, it is truly a global world.”

*Martin Winchell,
Managing director, Schneider
Logistics, Shanghai/Beijing*

supply chain management, and energy transportation services. Schneider delivers to more than 1,000 locations in more than 300 Chinese cities.

Winchell has seen revenue grow to more than \$40 million. Approximately 80 percent of that comes from multinational companies such as WalMart, P&G, IKEA, Chevron, and Siemens.

Along the way, Winchell has crossed a lot of territory geographically, culturally, and professionally. He has lived and worked in Europe, the Middle East, and Asia. He credits the early direction he received from agricultural and applied economics Professor Ed Bradley, who encouraged him to pursue a study abroad experience in France.

“I was a small-town kid, and he opened my eyes,” says Winchell. “I drove home and sat down at the kitchen table. My parents said, ‘How's your day?’ and I said, ‘I'm going to Paris.’”

His Expertise Sought

Now, Winchell's perspectives, especially on Chinese start-ups and acquisitions, Asia-Pacific development initiatives, and international supply chains and management, are routinely called upon to foster



Martin Winchell, managing director of Schneider Logistics, Shanghai/Beijing, says demand is high for agricultural skills and products in China.

UW WITH MESSAGE FROM CHINA

trade across a variety of borders. In China, Winchell is a subject matter expert for the Chinese Commerce and Transportation ministries, and he serves as key representative to the American Chamber of Commerce in China.

Winchell serves as an invaluable resource, says Bradley of his former student.

“Marty is working with the State Department and the Wyoming Business Council,” he says. “He is working to set up a day of trade-related activities for former Senator Max Baucus (Montana), who is now the U.S. ambassador to China.”

In a third-floor classroom of the Agriculture Building, Winchell shared insights, impressions, and experiences from his years in China.

The following are comments on some of the topics he addressed.

Infrastructure development. The lack of infrastructure being built in the U.S. continues to shock me, whether that is roads, bridges, airports, or passenger rail. The Chinese built the equivalent of the U.S. interstate system in about 10 years. They have developed infrastructure construction as a basic tenet of their economy. What economic gain has China experienced? What are we leaving behind by neglecting our infrastructure?

Who has the leg up on technology? China. I just swipe my card and shop from my phone. It’s easier for FedEx to deliver to my high-rise apartment building in Beijing than to a farm or ranch in rural America. I use a Chinese app called WeChat. It is Twitter, Instagram, and YouTube all in one.

Differences in education. China is great at producing engineers. I need people with critical thinking and “soft” skills. Ninety percent of my problems are in dealing with people, not technologies. I need middle managers who can manage people and inspire them.

What he looks for on a résumé. I want to see if a student has had a job at Subway or tending bar. I look for demonstrated people skills and experience in running a business.

Public speaking. I consider myself an introvert. I had to practice.

Finding a niche. You have to make an investment in specialized knowledge. I had a professor who told me you have to develop something that is better than what graduates from other universities have. I was lucky to fall into a niche where I used agricultural and applied economics to learn about transportation.

Contracts. In America, a contract’s a contract. In China, a contract is a “suggested behavior.” Here, a deal’s a deal. In China, both sides can change. You have to be a savvy negotiator. They even have haggling in Walmart!

Eat, drink, do business. The Chinese are very welcoming and love to play host. It is a form of status to say they have an international friend. China is a food and beverage culture; a lot of business gets done over meals.

Universal connections. From my travels, I have learned that everyone wants to talk about their hometown, their home country, and their family. I would encourage American students to seek out international students and learn from them. Strike up a conversation. I am still in contact with several German friends I went to school with 20 years ago. I’ve visited them in Germany, and they’ve visited me in China. It all started from a conversation.

No substitute. There is no substitute for living in a place. I encourage students to take advantage of studyabroad opportunities.

Says Winchell, “When I came to UW, I didn’t have a passport. Today, it is truly a global world.”

Resources

The university’s primary resource for student exchanges, study abroad opportunities, travel information, and grants and fellowships is the International Programs Office.

In the College of Agriculture and Natural Resources, the Beyond the Classroom program offers competitive grants of \$500-\$1,000 for international independent study, college- or university-sponsored international study programs, and faculty-led tours.

The college’s Student Engagement and Networking Drive program supports students attending conferences and pursuing other professional opportunities in the U.S. and internationally.

The College of Arts and Sciences offers undergraduate and graduate degrees in international studies. The program includes options for dual degrees and concurrent majors. Minors are offered in international studies, European studies, and Asian studies. Language study may be included.

The Center for Global Studies sponsors events at UW and around the state. An event calendar is available online.

UW Career Services provides access to two search engines for global internships and job opportunities. These are called “Going Global” and “The Big Guide to Living and Working Overseas.”

In Laramie and on campus, social and academic communities are enriched by 950 students and scholars from 95 countries who have made the move to study internationally.



International Programs Office



Center for Global Studies event calendar

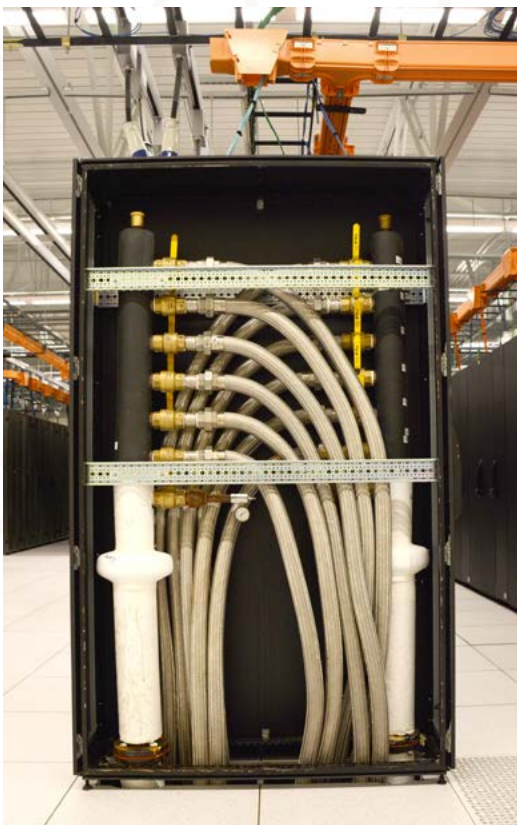
MOUNT MORAN SUPERCOMPUTER HELPS SCIENTISTS

Grab a pencil and write the number 150.

Then add 12 zeros. As in trillions.

That's how many calculations per second the University of Wyoming's Mount Moran supercomputer can use to crunch problems like how life forms evolve, modeling the Snowy Range's water circulatory system, and how electrical transmission line capacity is affected by to what region electricity is sent.

That research, being conducted by the U.S. Department of Energy, has more than 530 million pieces of information stemming from hourly readings for five years from about 180 electrical production sites in the Rocky Mountain Power area.



Part of the coolant system to dissipate the heat generated by the thousands of Mount Moran processors.

Feel intimidated? Don't. In 2014, the fastest supercomputers in the world still took more than 40 minutes to simulate one second's activity in a human brain. And Dane Skow, director of the Advanced Research Computing Center (ARCC) in Information Technology, and probably Mount Moran's chief advocate and shepherd, still has uses for his Amiga computer from his college days (he says there's more computing power in his watch). More from Skow later.

Supercomputer, Super Crunching

Supercomputers are downright handy when munching mountains of data, like that from the U.S. Department of Energy project. That research is a collaboration among agricultural and applied economics Associate Professor Roger Coupal in the College of Agriculture and Natural Resources, faculty members in the College of Engineering, and Associate Professor Robert Godby in the College of Business.

They are studying all electricity production outlets and sources – wind, solar, coal, hydro – and then predicting what happens to prices, costs, and production when transmission capacity is increased in a certain direction, to Denver and the Front Range, for example.

The team's faithful, fast desktop computer took up to five days to chug through the program and, if there were an error, the team had to run the entire program again, which could take another five days.

"It was taking way too long on a fast single computer because we program the simulation model, then we see what happens," says Coupal. "If we missed

“It was taking way too long on a fast single computer because we program the simulation model, then we see what happens. ... Tweaking, fixing the model if you see problems takes an incredibly long time to do.”

Roger Coupal,

Associate professor, College of Agriculture and Natural Resources

something, we had to figure it out and then wait from 18 hours to up to five days. Tweaking, fixing the model if you see problems takes an incredibly long time to do.”

Mount Moran takes about 20 minutes.

Coupal's team plans to next put the data into a large regional economic model that encompasses the economies of Colorado and Wyoming.

"If it's going to take a week for every run to debug the simulation model, it could take months," says Coupal. "Mount Moran turns this around quickly."

Faculty Use of Mount Moran

Coupal's project may be child's play for the nimble computer compared to other campus research. About 30 teams use the supercomputer, says Skow.

Faculty members are modeling the hydrology of the Upper Colorado River Basin, using Mount Moran to teach robots how to learn in situations in which they're disabled or losing capacity – such as a

REACH PEAK PERFORMANCE

six-legged robot losing use of a leg, and how to get the most power out of a wind farm.

Professor Scott Miller in the College of Agriculture and Natural Resources is using Mount Moran to unravel factors that ultimately affect the transport and end fate of the water.

The ARCC potent data munching power sitting on the floor below Skow's office is a reality because the university made supercomputing a priority and the legislature invested in the infrastructure, he says.

Skow notes Wyoming's situation – scientists having access to the high-performance National Center on Atmospheric Research's Yellowstone supercomputer and Mount Moran – is remarkable for such a sparsely populated state.

Yellowstone is rated 50th fastest in the world.

"Staying at the top of the game takes continuous improvement and steady investment," Skow says. "This is a marathon, not a sprint. I think that this is one of the gems of the university we really ought to make sure everybody understands and knows is available."

Super Testing Results

Clocking supercomputer speeds is like new car tests: professional drivers on simulated courses – machines perform a standard test without any other program running to affect performance.

Mount Moran hums along normally at about 80 percent.

"We have run up to 99 percent," says Skow. "But when that happens, it's kind of like congestion on a freeway. Everything



Dane Skow, director of the Advanced Research Computing Center in Information Technology, with the Mount Moran supercomputer cluster.

tends to bog up. The least disturbance causes problems."

Run less than 80 percent and all the calculating power Mount Moran can bring to bear is wasted.

Unlike desktops or laptops, supercomputers use parallel programming – instead of one processor doing all the work, work is delegated among hundreds of processors.

ARCC training and end user support manager Tim Brewer describes the difference. Picture freight being delivered in one city. Now imagine interconnectedness of those deliveries being made in that city PLUS being transported and delivered in many other cities.

Researchers unfamiliar with parallel programming have a learning curve preparing to use Mount Moran.

ARCC staff members help.

"We try to have some feel of what the researchers are doing," says Skow. "Science is their domain, and we are focused on getting the resources to run it. It's helpful to have people spend time advising us and working with us on machine design and new developments."

Most scheduling is first-come, first served, with backfill computing – work not necessarily set for a certain time – filling gaps.

The scheduling system is the most important part of figuring out whose work runs when, says Skow.

"Tuning those scheduling systems is a black art and requires lots of custom tending and expertise to sort out," he says. "In fact, it's an ongoing research topic in computer science to figure out how to do it best."

Today's computers have certain capabilities, but technology is always advancing, as is the ability to create and run machines, notes Skow.

"People's research is evolving and oftentimes is influenced by what they think they can do today with the resources they have," says Skow. "The home run for us is when we can help people do things they didn't think about before because they didn't think it was possible, by creating a capability they didn't know they had. That's the big payoff. That's our Nobel Prize."

MOLECULAR BIOLOGIST USES FROG EGGS TO STUDY

A smiling and very green Kermit looking down from a wall portrait seems to happily give a thumbs- or flipper – up to one of the University of Wyoming’s self-described frog guys trying to unravel the mysteries of what in the world regulates cell nucleus size and its cancer implications.

Molecular biologist Dan Levy and his collaborators, using frog eggs, found the concentration of particular proteins – the nuclear lamin – appears to play a part in controlling the size of the cell nucleus. His laboratory is one of a few on campus using frog eggs to untangle cell secrets.

Turns out, there is an important cancer connection. The nucleus of a cancer cell becomes enlarged, and the size is even used to determine the stage of cancer, Levy says. If the basic proteins important for regulating nucleus size are understood, scientists might be able to apply that to nuclear size changes in cancer and even use it diagnostically or, perhaps, even in a new treatment approach, he notes.

“If we can make the nucleus size small in cancer cells, that might be a way to treat those cancers,” says Levy.

The research results were in the November 13 edition of *The Journal of Biological Chemistry*, published by the American Society for Biochemistry and Molecular Biology Inc.

Small, Really Small

Anyone wandering into a cell would pass the outer nuclear membrane first, then the inner nuclear membrane. Looking back, the lattice-like nuclear lamina composed of lamins would be seen sitting

against the inner nuclear membrane and, like 2-by-4s in a house, providing shape and support. Electron microscope images show the lattice looking like a volleyball net or a woven basket with horizontal and vertical reeds.

Scientists have known the structure is important for providing mechanical structure to the nucleus and had hints lamins might be involved in regulating size.

“The big question was what the contributions of lamin amounts and types are to controlling the size of the nucleus,” says Levy, who joined UW in 2011 after working as a postdoctoral fellow in molecular and cell biology at the University of California-Berkeley.

And so, scientists injected frogs with a hormone to induce prolific egg production, spun the eggs in a centrifuge to break the eggs and partition the results, and then extracted the proteins, membranes, and cytoplasm. From that, they assemble nuclei in a test tube.

Researchers then add or remove specific proteins and see how those manipulations affect nucleus size.

Low is Big, High is Small

Low additions of Lamin B3 caused nuclei to become larger than control cell nuclei.

“That was already kind of cool, that lamins can increase the size of the nuclei,” says Levy. “But what we were surprised to see is, if we added more lamins, the nuclei became smaller. To us, that was the most interesting part. We don’t totally understand what’s causing the reduction in size,

“If the basic proteins important for regulating nucleus size are understood, scientists might be able to apply that to nuclear size changes in cancer and even use it diagnostically or, perhaps, even in a new treatment approach.”

Dan Levy

Assistant professor,

Molecular Biology

but it is very robust and didn’t depend on the type of lamin.”

The process appears to be the same in human cells. His lab grew tissue cells and found the same results: increase lamins and increase nuclear size; reduce lamins and decrease nuclear size.

He says his lab’s next step is to see if the nucleus can be reduced in cancer cells. Ph.D. candidate Lidija Vukovic will conduct the studies.

“I’m pretty excited about the work she’s doing,” says Levy. “We’re mostly frog people, but we are starting to go a little more in this direction.”

Division Vision

His lab also will study nuclear size during embryogenesis, or cell division.

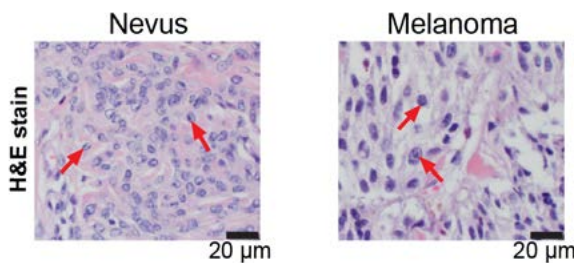
Rather than crushed in the centrifuge and made into a protein cocktail, eggs are

CELL REGULATION AND ITS CANCER IMPLICATIONS

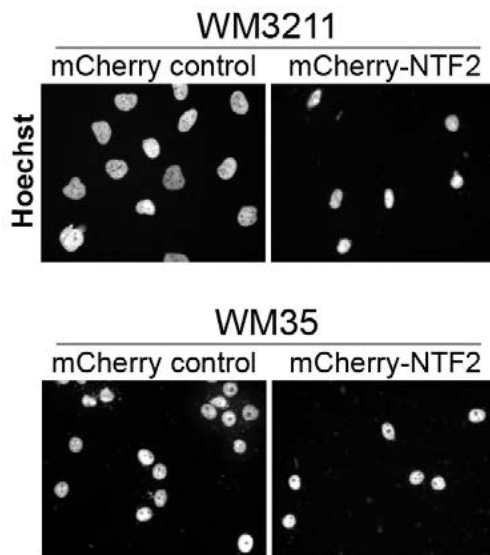
instead fertilized. The eggs begin rapid cell division, creating huge, single cells, which then divide into smaller cells. The cell nuclei are large early in development and decrease as cells become smaller.

Levy says determining whether lamin levels change as the cell moves through division was the real motivation behind the paper.

“There are some changes, but they don’t seem to correlate with the size of the nucleus. We don’t think it’s changes in lamin expression that are regulating the nuclear size,” he says. “That’s kind of a bummer. That’s what we were thinking. But we still think lamin can affect the size of the nucleus, even if they are not the mechanism responsible.”



Nuclear size in a benign mole, left, compared with their increased size in melanoma cells.



Over-expressing the protein NTF2 reduced nuclear size in melanoma cells, left to right. WM3211 and WM35 are two different melanoma cell lines. mCherry is a red fluorescent marker used to visualize protein expression. Hoechst is a fluorescent DNA dye that allows visualization of the nuclei.



Cellular sleuthing

Most people’s workspace is either in the great outdoors or in offices or bland cubicles. Assistant Professor Dan Levy’s desktop is a little smaller – microscopic cellular innards.

He’s always been fascinated by happenings at the cellular level.

“The cell is already so small, and the structures inside the cell are small and their sizes are regulated, and how does the cell know what size those structures should be and what are the mechanisms that regulate that size?” he asks. “For me, it’s a really important question in cell biology.”

Frog guide

If a photograph is worth a 1,000 words, how about a movie? Avis the frog tours Levy’s lab.



Frog Tour

Receives \$729,000 research grant

Information about an American Cancer Society grant to support Levy’s research, is available online.



American Cancer Society grant information

New views of open spaces in agriculture

IF YOU SEE ONLY EIGHT FILMS THIS YEAR...

...make them the eight shorts (approximately four-to-eight minutes each) of Farm Meets Function. In this new series, Wyoming farmers and ranchers give plain-spoken accounts of weeds, water, and what they're growing – plus insights on diverse habitats in agricultural landscapes.

Locations include a prairie bison ranch, a 2,000-acre wheat farm, and high tunnels where salad greens grow at 8,500 feet. The films and website invite audiences to think more broadly about the role

of agriculture in a state



Western kingbird

Is bird song an ecological service?

Carlos Martinez Del Rio, director of the University of Wyoming Biodiversity Institute, and graduate student Cody Porter identified the voices of nine bird species in the film featuring Bryan, Rhett, and Barry Greenwald at the Joe Greenwald Farm.

- Western meadowlark
- Western kingbird (also seen flying from fence), pictured
- Eastern kingbird
- Red-winged blackbird
- Killdeer
- Yellow-headed blackbird
- Common grackle
- Bullock's oriole
- House wren

where 93 percent of privately owned land is classified agricultural.

One of the goals was to represent a diversity of operations, says project originator Randa Jabbour, assistant professor of agroecology.

"You can see how large-scale, small-scale, and organic and non-organic producers feel about the land and the constraints they face," says Jabbour.

Videographer Conor Mullen contributed an artist's eye.

"Randa, it's okay for the videos to be educational and beautiful," he told Jabbour during project planning.

Zoe Nelson, seasonal technician, conducted four of the interviews and developed the Farm Meets Function website.

Shooting took place last summer on porches, an open tailgate, and under cottonwoods, often with birds and insects – even trains – contributing to the soundtrack.

What's in a Name?

The films are part of the Farm Meets Function website, which describes ecosystem services (the "functions") encompassed by different habitat types on Wyoming operations ("the farms").

Ecosystem services include food, fiber, and fuel production, soil conservation, water quality, recreation, and historic sites. Habitat types include wetlands, grasslands, and riparian zones along creeks and rivers.

In ecology, functions can be the roles species play, the geochemical and physical processes that take place, and biological processes such as plant growth and decomposition.

Jabbour says, "I am interested in the interaction between the living and nonliving components of agricultural systems." She notes buildings and rocks are nonliving components but adds that soil includes both living and nonliving components.

For the Birds

Rod Morrison of Rocky Mountain Organic Meats is one of several producers dedicated to improving bird habitat.

"I wish I had more trees," he says.

After planting around 500, he finds himself in a philosophical and on-the-ground tug-of-war with hungry deer. He expresses a similar conflict with Russian olive trees, which grow so prolifically, competing for water and other resources, they have found their way onto the Wyoming noxious weed list.

"Birds love 'em," he says.

Clint and Ashley Jessen have partnered with the U.S. Department of Agriculture Natural Resources Conservation Service (NRCS), Laramie County Conservation District, and Pheasants Forever to plant trees and install a drip system, a water well, and a guzzler – a system that provides constant, year-round water for birds and other wildlife.

Migrating sandhill cranes are among the species at Chris and Theresa Shaw's Shiloh Valley Farm and Patrick Zimmerer's Table Mountain Winery. Says Zimmerer, "We'll get thousands just hanging out in the corn field and near the waterways."

Closing Credits

Jabbour sought guidance from three members of the UW Extension

communications and technology staff: Ann Tanaka, website developer; Rachel Mealor, rangeland website developer; and David Keto, producer and director of broadcast media.

“It was in talking with Ann that we came up with the name,” says Jabbour.

For the research study associated with the Farm Meets Function project, Jabbour and Nelson interviewed 12 non-producer agricultural professionals, including University of Wyoming Extension educators, NRCS staff, and weed and pest directors in seven Wyoming counties, to learn how their perspectives match those expressed by the featured producers.

The music of the Superhumanoids accompanies the films’ final credits: Farm Meets Function is a project of the Wyoming Open Spaces Initiative, made possible with funding from the Walton Family Foundation.

The initiative supports the role of citizens in maintaining the state’s open spaces. It is a collaborative effort of the Ruckelshaus Institute of Environmental and Natural Resources, the Wyoming Geographic Information Science Center, the Wyoming Natural Diversity Database, University of Wyoming Department of Geography, Department of Agricultural and Applied Economics, and University of Wyoming Extension.

Says Jabbour, “We wanted to communicate in a simple, approachable way for audiences who want to learn more about agriculture in Wyoming.”

For more information, contact Jabbour at (307) 766-3439 or rjabbour@uwyo.edu.



Farm Meets Function



Wyoming Open Spaces Initiative

Agricultural producers in Farm Meets Function

Bassett Farms, Lovell

Jackson Bassett farms with his dad in the Big Horn Basin, growing crops such as corn, dried beans, alfalfa, and barley and running a cow-calf operation. He highlights the ways non-crop habitats have served their operation.

High Horse Farms, Sheep Mountain

Celeste and Gary Havener live and grow salad greens at 8,500 feet near the Snowy Range. They discuss the challenges and benefits of their innovative high tunnels and sharing the land with wildlife and native pollinators.

Jessen Agribusiness, Inc., Pine Bluffs

Most of the 2,000 acres of Clint and Ashley Jessen’s certified organic farming operation are used to grow wheat and other small grains. The non-crop area they call “the wasteland” provides wildlife habitat and water filtration.

Joe Greenwald, Inc., Lingle

Bryan Greenwald and his sons Rhett and Barry discuss water on their operation in southeastern Wyoming, including how they use sub-surface drip irrigation to conserve water, and labor, in an irregularly shaped field.

Prairie Monarch Bison, Laramie

Dylan Handrich’s bison ranch is rich in wildlife. He purposefully manages for diversity through choices such as planting his hay field with multiple plant species and using gall flies to reduce Canada thistle.

Rocky Mountain Organic Meats, Powell

Rod Morrison raises livestock near Heart Mountain, between Powell and Cody. He explains how his land supports wildlife, recreation, and historic preservation. (“It’s a time machine.”) He also reveals his conflicted feelings about Russian olive trees.

Shiloh Valley Family Farms, Sheridan

Chris and Theresa Shaw farm with their children, raising pastured pigs, goats, and chickens and growing small market gardens. The Shaws discuss managing water, the wildlife on Prairie Dog Creek, and their choice to produce pigs and goats.

Table Mountain Vineyards, Huntley

Patrick Zimmerer describes how his 10-acre vineyard and winery operations fit into the diversified farm and ranch run by his family for generations. They have revitalized wetlands near the winery and built a community center for local events.



Patrick Zimmerer

EVENTS, PROGRAMS CELEBRATE WYOMING AGRICULTURAL

Special events and projects this year highlight the 125th anniversary of the Wyoming Agricultural Experiment Station, notes Bret Hess, associate dean and station director.

“The Wyoming Agricultural Experiment Station (WAES) has been serving the great state of Wyoming by conducting research that transforms life for 125 years,” says Hess.

Passage of the Hatch Act by Congress on March 2, 1887, paved the way for the creation of the WAES.

- The WAES was born upon approval of an act by the Wyoming Legislature January 10, 1891.
- The WAES was established as a division within the College of Agriculture as a federally legislative mandated mechanism to leverage federal financial resources with state funds provided to the university.
- The board of trustees of the University of Wyoming appointed John “Dice” McLaren to the position of director of the WAES March 27, 1891.

In the first publication of the WAES, printed in May 1891, McLaren explained the purpose of the experiment stations created by the Hatch Act was to “aid in acquiring and diffusing among the people of the United States useful and practical information on subjects connected with agriculture and to promote scientific investigation and experiment respecting the principles and applications of agricultural science.”

McLaren also said the WAES would distribute bulletins containing reports of various experiments. He further expressed his desire to have researchers associated with the WAES talk personally about their experiments with Wyoming citizens in what he envisioned as Farmers’ Institutes.

Since its beginning, WAES researchers have been conducting applied and basic research to help solve problems that affect the agricultural sector of the state, region, and nation. Substations, also known as experiment farms, were established at various sites around the state to permit experimentation that had regional relevance within the Cowboy State.

The first experiment farms were near Lander, Saratoga, Sheridan, Sundance, and Wheatland. Researchers affiliated with the WAES and its substations often summarized their studies in a series of experiment station bulletins.

All bulletins from the early days through 1950 can be accessed online via the Wyoming Scholars Repository. The early Farmers’ Institutes involved loading participants on a train and traveling around the

Research and extension centers examine location-specific issues

Researchers affiliated with the Wyoming Agricultural Experiment Station (WAES) conduct fundamental and applied research on agricultural, natural, and community resource issues related to current and future needs of Wyoming, the region, the nation, and world.

WAES operates four branch stations, known as research and extension centers (R&E centers): near Laramie, Lingle (James C. Hageman Sustainable Agriculture R&E Center [SAREC]), Powell, and Wyrno and Sheridan. Like the early days, the R&E centers were placed in these locations to conduct research and educational programs connected to agriculture in their areas, albeit many of the projects may be applicable throughout the state.

“Advances in agricultural science certainly will not lead to development of new technologies or farming practices without transfer of research-based knowledge to society,” notes Bret Hess, associate dean and WAES director. “The WAES publishes the Field Days Bulletin to help educate citizens about research and other activities being conducted by scientists affiliated with WAES and at the R&E centers.”

WAES Field Days Bulletin reports are online.

The R&E centers also host annual field days to update the public on the centers’ activities and to discuss research projects at various stages of completion.



UW AES 2015
Field Bulletin



WAES Bulletins

EXPERIMENT STATION'S 125 YEARS OF SERVICE

state to learn about the latest research findings.

The 125th celebration planning committee has already recommended several ways to increase awareness of the College of Agriculture and Natural Resources' research branch. The college's sheep wagon will be refurbished for display as well as be pulled by a recently acquired team of horses at various events.

"The plan is to offer rides in the sheep wagon at events that allow for such an activity. Rides will be offered at our field days this summer for sure," Hess says.

The committee has also commissioned David Kruger, agricultural research librarian and liaison librarian for the College of Agriculture and Natural Resources, to research and write a comprehensive history of the WAES.

"David's insight and enthusiasm for the project is sure to bolster the excitement revolving around the experiment

station's 125th anniversary celebration," notes Hess.

This history will include significant accomplishments of each R&E center, which will include a celebration of each of their years of existence at their respective field days. Brief video clips of the history will be included in a traveling display.

The committee hopes to reach as many people as possible, notes Hess. Please contact the WAES at (307) 766-3667 or aes@uwyo.edu if you have historical information and/or an experience you would like to share, are aware of an event at which attendees would be interested in rides in the historic sheep wagon, or are interested in learning more about the history of agricultural research in Wyoming.

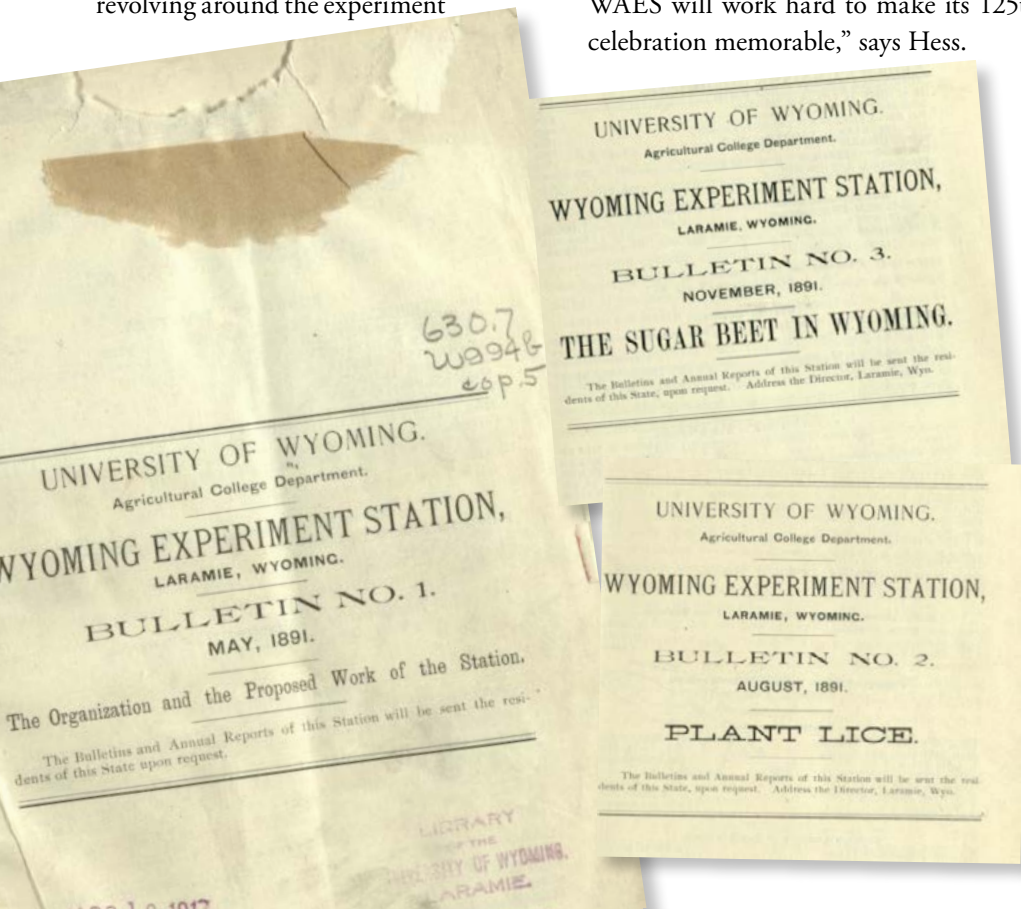
"Thanks to a highly capable and thoughtful planning committee, the WAES will work hard to make its 125th celebration memorable," says Hess.



Fundraising campaign benefits research and extension centers

The Wyoming Agricultural Experiment Station is kicking off a \$125K campaign to establish permanent funding sources to support research at each of the four R&E centers, says Bret Hess, associate dean and WAES director.

Contact Hess at (307) 766-3667 or aes@uwyo.edu for more information or fill out the form in this edition of Ag News if interested in contributing (be sure to indicate which center you are interested in supporting).



UW MEAT JUDGING TEAM FINISHES SEASON WITH RESERVE NATIONAL CHAMPION HONOR

University of Wyoming Meat Judging team members broke team records and posted a perfect score in specifications en route to its reserve national champion meat judging team honor to finish the fall season.

The finish came at the November International Intercollegiate Meat Judging contest in Dakota City, Nebraska.

Wyoming also had three team members selected to the eight-member All-American team, says coach Zeb Gray, who is assisted in coaching by student John Lacey of Highlands Ranch, Colorado.

Texas Tech won the competition. The UW team posted the fifth-highest team score ever, which makes the 2015 team hold three of the top five Wyoming team scores, says Gray.

The team lost a tiebreaker to finish second in specifications. UW also earned

second in beef judging and placings. The team was third in lamb judging and fourth in pork judging and reasons.

Three team members were in the individual top 10. Eli Lindsey of Taylorstown, Virginia, finished third and won beef judging and was second in beef. Beth Lenz, Wray, Colorado, was sixth overall and second in pork judging and placings and fifth in lamb judging. BW Ochsner of Torrington finished eighth and was second in lamb judging and third in reasons with a score that broke the Wyoming reasons score, says Gray.

McKenna Brinton of Jackson finished fifteenth and was eighth in overall beef. Erin Hansen of Laramie was ninth-high individual in the alternate contest.

Eight team members posted perfect specification scores: Brinton, Taryn Chapman, Cañon City, Colorado, Cole

Foreman, San Jose, California, Jessie Gunning, Tolleson, Arizona, Hansen, Lenz, Lindsey, and Ochsner.

Ochsner, Lindsey, and Lenz were named to the eight-member All-American team. Wyoming has only had two previous All-Americans, says Gray.

The team had notched another reserve champion and two fourth places earlier this season with team members setting team records and winning divisions.

The previous reserve champion performance came at the American Royal contest in September. Ochsner led the team finishing as the second-high individual while winning two divisions, says Gray.

Brinton was seventh overall and won the beef grading division. Hansen was fourth in lamb judging. Lenz was fourth in placings and fifth in specifications. The team score was the seventh highest posted by a Wyoming team.

The team finished fourth at the October Eastern National contest in Wyalusing, Pennsylvania, and at the November Cargill High Plains competition in Friona, Texas. Team members posted the third-highest total team score and broke its beef grading record at the High Plains contest, says Gray.

The team was led by Brinton, who finished second overall with a score that was the third highest in Wyoming history, notes Gray. The team also had three individuals finish in the top 10 in the alternates division: Lindsey, third; Chapman, fourth; and Foreman, seventh.

Also on the team was McKenzie Hatch of Kersey, Colorado

Chapman broke the team individual beef grading record, and Brinton and Lindsey both had perfect specification scores, says Gray.



Members of the UW Meat Judging team who competed at the International Intercollegiate Meat Judging contest are, from left, Cole Foreman, Eli Lindsey, Erin Hansen, McKenzie Hatch, coach John Lacey, Taryn Chapman, McKenna Brinton, Jessie Gunning, coach Zeb Gray, Beth Lenz, BW Ochsner

PROGRAM NOTES



Glenn Owings



Laura Balis



Cinnamon Lenhart



Stacey Fitzgibbons

University of Wyoming Extension

Glenn Owings began in his position with extension in August. Owings serves as an area educator contributing to extension's statewide effort to provide sustainable management of rangeland resources educational programs. Owings is based in Sublette County. He holds a B.S. degree in natural resources and rangeland ecology and an M.S. degree in animal and range sciences from Montana State University in Bozeman. Owings had worked for the Sublette County Conservation District as a range specialist since 2012. His knowledge of Sublette County and western Wyoming range issues will be an asset in his educational role.

Laura Balis joined the extension team in August as the Northwest Area nutrition and food safety educator; the position is based in Fremont County. Balis has a B.S. degree in public health education and health promotion from Central Michigan University. She received

an M.S. degree in health and human performance from the University of Montana in Missoula in 2009. In 2015, she completed a certificate in preparing the future professoriate at Virginia Polytechnic Institute and State University in Blacksburg, Virginia. She brings experience working with youth and adult audiences, with previous employment with Missoula Early Head Start as the health and nutrition manager, and also worked with the Tucson Council on Aging, where she recruited and trained volunteers to lead cardiovascular health programs.

Cinnamon Lenhart filled the second 4-H youth development educator position in Campbell County in October. She earned her B.S. from the University of Wyoming in 2014 with a double major in agricultural education and agricultural economics. Lenhart is a fifth-generation rancher from northeast Wyoming and is continuing the legacy by raising Black Angus cattle with her husband. As a youth, she was an active member of 4-H and FFA.

Stacey Fitzgibbons began as the Converse County 4-H youth development educator in December. She earned a B.S. degree in animal science with a business concentration from the University of Wyoming in 2014. She also completed a successful internship with UW Extension rangeland and livestock programs in Platte County and most recently worked as the livestock show coordinator for the National Western Stock Show and Rodeo. Other relevant experience includes her involvement in diverse 4-H projects, such as sewing, cake decorating, showing livestock, and livestock judging.

Family and Consumer Sciences

Assistant Professor **Alyssa McElwain** joined the department in August. She is teaching professional practices in human development and family sciences. This spring, she is teaching professionalism and communication in family and consumer sciences and parent-child relationships. Her

PROGRAM NOTES



Alyssa McElwain

research is focused on development and interpersonal relationships during adolescence. Prior to her appointment at UW, McElwain worked with the Alabama Healthy Marriage and Relationship Education Initiative, where she facilitated and evaluated relationship education programs for adults and youth. Through a partnership with Auburn University, she taught an undergraduate service learning course in which students provided relationship education for adolescents in the local community. McElwain obtained her bachelor's degree in psychology from Kansas State University, her master's degree in marriage and family therapy from Purdue University, and her doctorate from Auburn University in human development and family studies.

Assistant Professor **Bernard Steinman** also joined the department in August, from the University of Massachusetts Boston. He is a social scientist by training and has research interests in aging, health, and disability, as well as social policy pertaining to families and older adults. His current interests



Bernard Steinman

focus on factors that improve the ability of older people to age in place successfully in rural communities. At UW, he teaches in the area of human development and family studies, including an undergraduate course in family relations last fall. He is teaching courses in aging and human development and family stress and coping this spring. Steinman has a bachelor's degree from the University of Washington, a master's degree in experimental psychology from Mississippi State University, and a doctoral degree in gerontology from the University of Southern California.

Kristin McTigue, director of the Didactic Program in Nutrition and Dietetics (DPND), and five Student Dietetic Association (SDA) members – **Christine Davis, Katie Jacobs, Erin Lindorfer, Kaitlyn Livingston, Taylor McShea** – attended the 2015 Food and Nutrition Conference & Expo (FNCE) in October in Nashville, Tennessee. FNCE is the world's largest annual meeting of food and nutrition professionals, and the conference provides networking and educational opportunities for students and professionals. This year's educational offerings spanned 16 specialty tracks, including current nutrition issues related to dietetics

education, child health, sports nutrition, global hunger, and career development.

One of the tracks specifically targeted students and included sessions with seasoned as well as newly credentialed dietetics professionals who offered advice to students on how to earn a competitive dietetic internship, how to pass the National Registration Examination for Registered Dietitian Nutritionists, and how to carve out a nontraditional career path in dietetics.

College Relations

As this is written, 2015 is drawing to a close, students are busy completing their final assignments, and the fall semester is ending; an appropriate time for an update on comings and goings within the college.

Many businesses are experiencing a record number of retirements from baby boomers, and the college is no exception. Five long-time faculty members retired this past summer and fall. All had been with the college for decades and taught many, many students.

Robin Goose, who was with UW for 28 years, retired from the plant sciences faculty this summer. Goose's specialty was breeding plants, and he helped breed the WyoWinter feed pea among others.

Karen Williams was a cornerstone of the human development and family sciences division and also a past department head of family and consumer sciences. She was also active in launching the distance learning and Bachelors of Applied Sciences programs in the college.



Long-time veterinary sciences department veteran **Merl Raisbeck** retired in December.

Raisbeck's specialty in veterinary toxicology was selenium poisoning and metal intoxication in wildlife and livestock.

Ed Bradley, who advised many students over the years and also served as department head, retired this fall from the Department of Agricultural and Applied Economics. Bradley was also instrumental in encouraging students to gain international experience. He oversaw the exchange program with the agricultural university in Angers, France, for many years.

Animal science alumni probably remember **Gary Moss**, who was at UW from 1985 until this fall.

Moss was best known for his work in reproductive physiology.

This fall, the dean's office started a new feature for the college website. To help promote the amazing range of career opportunities available to graduates of the college, a feature section on the Web page titled Success after College was started. Graduates of the past five years are highlighted who are now working in their fields. Recent stories highlighted **Brittany Schaneman**, who graduated in 2012 with a B.S. in agricultural communications and is the assistant director of Web content for the National Cattle-men's Beef Association. **Wade Allnutt** is another recent featured graduate. Allnutt returned to his hometown of Walden, Colorado, and is a livestock producer.

The college's goal is to highlight two or three recent graduates each semester. The feature includes photos, a brief overview of their current positions, and advice for incoming as well as current students. If a recent graduate and would like prospective students to learn more about your career path, consider including your story in the Success after College column. Please contact Anne Leonard at aleonard@uwyo.edu. Go online to learn more about the alumni mentioned here and to see the current stories.



Alumni stories

Please accept my/our gift to the University of Wyoming in the amount of:

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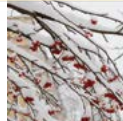
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2015-2016 Ag Ambassadors

The College of Agriculture and Natural Resources Student Ambassadors promote the college at a variety of events throughout the year. They make presentations and answer prospective students' questions during Admissions Discovery Days three times a year, serve at the Ag Days Barbecue, assist Anne Leonard of the dean's office with alumni and donor events, and write blog posts. In December, they handed out "good luck on finals" cookies to students.



The Ag Ambassadors are, front row (on knees) – Kailin McClung, Megan Weisensee. 2nd row (lying on sides) – BJ Bender, Tevyn Baldwin. 3rd row (on one knee) – Jemma Woods, Emily Sikorski. 4th row (standing) – Callie Wilson, Katie Jacobs, Bailie Dannels, Emilee Brinton, Cody Negri, Talayna Leonard, Rachel Purdy, Preston Talbert, Laura Fereday, Michelle Bartlett, Eilish Hanson, Nika Martin