



AG NEWS

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Professor Scott Miller helps students gain watershed and reforestation data collection expertise in the forests of Panama. SEE STORY PAGE 11



UNIVERSITY OF WYOMING

COLLEGE OF AGRICULTURE
AND NATURAL RESOURCES



Dean Frank Galey

“The time to
repair the roof
is when the
sun is shining.”

John F. Kennedy

Dear Friends and Colleagues,

Like late fall brings shipping and marks a milestone in the cow-calf cycle for many producers in Wyoming, late fall does so for the college also. We can take stock of the academic year.

Our enrollments set a record at approximately 951 students. Most are undergraduates (816) with approximately 135 graduate (master's and Ph.D. candidates) students. Excellent student enrollments are spread across all of our programs. Our students continue to excel in all of their competitive and academic areas.

Although there are probably many reasons for these results, I hope some would include our attention to student needs, providing hands-on learning, and focusing on fields of study important to the state. Thus, we hope students can see an education at this college as a path to not only lifelong learning and being open-minded but also a career important to this state and region.

In research, our faculty members continue to excel at attracting external grant dollars. The last federal fiscal year our faculty members attracted more than \$12 million. Many have heard me say this, but it is important to note that external research dollars attracted to this college usually go toward addressing issues important to the state. These issues vary but include animal nutrition and performance, diseases of wildlife and cattle (such as brucellosis), local economic decision making, reclamation of disturbed lands, and public health, among many other topics.

Our research and extension (R&E) centers are robust. Our James C. Hageman Sustainable Agriculture Research and Extension Center near Lingle is fully built and is conducting research about animal and crop systems utilizing sheep and cattle on the animal side.

Our center in Powell has attracted an excellent new faculty member in irrigation science and is now leading the way in local climate and water delivery issues for producers. Construction of the seed cleaning facility in Powell is complete, and the facility should be operational this spring.

The Sheridan R&E Center has received a great new boost with the hiring of our new director and now is in an extensive planning phase.

We are working to consolidate our research operations in the Laramie area into the Laramie R&E Center. Those operations include the greenhouse, livestock farms, and laboratory animal facilities. This project will result in an R&E center in Laramie that has the same organizational structure as the other R&E centers throughout the state. This consolidation will streamline operations and improve access to research facilities for faculty members and students from within the college and across campus through enhanced planning and more efficient fiscal management.

I have discussed our extensive operations in cooperative extension in prior newsletters, but suffice it to say we remain strong in extension, and our initiative team model is being adopted by other states that wish to provide more focused educational services to their constituents.

In this issue, we have a feature on the dedication of our new Biosafety Level 3 addition to the veterinary laboratory. This facility will allow our faculty members to safely do research and diagnostic testing on diseases common in Wyoming and also on the federal list of controlled select agents. These include brucellosis, plague, and tularemia (rabbit fever).

We also include features on research from the Wyoming Reclamation and Restoration Center on reclaiming radium-contaminated soil, how College of Agriculture and Natural Resources student-athletes balance their academic and athletic activities, and an innovative course on agribusiness strategy where students present their business plans to Wyoming business people.

Thank you for your continued support of your college! We wish you a productive spring season! We can be contacted at (307) 766-4133 or by e-mail at agrdean@uwyo.edu. Our Web site is www.uwyo.edu/UWag/.

Dean Frank Galey

College of Agriculture and Natural Resources

BRONZED NET ANOTHER TROPHY TRADED DURING ANNUAL UW-CSU BORDER WAR

Sure. There's the Bronze Boot that's run back and forth by Army ROTC cadets from stadium to stadium between the University of Wyoming and Colorado State University before the yearly Border War.

UW defeated CSU 44-0 this year in Laramie. But, have you heard of the Bronzed Net? Traded back and forth between UW and CSU entomologists after each Border War?

Didn't think so.

"It is a real net," says Alex Latchininsky, extension entomologist in the College of Agriculture and Natural Resources. "The plaque reads, 'The Bronzed Net presented annually to the winner of the UW-CSU football game to celebrate Colorado and Wyoming entomology.'"

The boot has the somber origins of being worn in Vietnam by CSU ROTC graduate Jeff Romero. The entomological symbol of victory was made by CSU entomologists Frank Peairs and Whitney Cranshaw.

"The idea was obviously a take-off on the Bronze Boot for bug folks," says Cranshaw. "And it was to try and get the bug folks from our two states together more often. For many years, we would have

contingents that attended the CSU-UW football games, during which the trophy would be displayed."

The Bronzed Net is mounted on a wooden plaque with each game marked by a toy insect attached to the net along with a piece of paper and score.

Cranshaw made the plaque and Peairs spray-painted a real sweep net bronze.

"The first insect is a rhinoceros beetle with a note 'Inaugural game. Wyoming 25 CSU 24, Hughes Stadium, 16 November 1996.' I guess that's when it started," notes Latchininsky.



Associate Professor Alex Latchininsky holds the Bronzed Net.

The Bronzed Net has been residing at UW this past year. A toy praying mantis and a piece of paper with UW 17 CSU 16, 27 November 2009 is pinned on the plaque. Fourteen insects and results are now "caught" in the Bronzed Net.

The Bronze Boot is hand-carried across the border, but the Bronzed Net is usually just handed over.

"We usually use an occasion of some meeting to hand it to the opposite side – if they won, although we also entertained an idea to hand it to the losing side – as a consolation prize," quips Latchininsky.



The Wyoming Weed and Pest Council presented the 2010 Harold P. Alley Award to Scott Schell, assistant extension entomologist.

SCHELL RECEIVES HAROLD P. ALLEY AWARD

Assistant extension entomologist Scott Schell was awarded the Harold P. Alley Award by the Wyoming Weed and Pest Council.

The award was presented for Schell's help with grasshopper and other entomology issues in the state.

The Harold P. Alley Award is named after the late Professor Harold Alley, who was a weed scientist at UW, and has been annually presented since 1984. It was presented at the council's annual meeting in November.

The award is defined:

"This award is given in honor of this great scientist to an individual who has provided support, leadership, motivation, and education toward the advancement of weed and pest control programs in Wyoming. Dr. Alley went above and beyond these qualifications."

FIRST CUTTING

RECOGNITION PROGRAM COMMENDS OUTSTANDING STAFF, FACULTY MEMBERS

Outstanding staff awards, teaching and adviser awards were presented December 16 during the Faculty and Staff Recognition Program in the Wyoming Union.

Dean Frank Galey and Associate Dean James Wangberg presented the honors.

Receiving outstanding staff awards from Galey were Mona Gupton, senior office associate in the Department of Family and Consumer Sciences; Elva Hansen, accounting associate in the Administrative Business Office; and Marie Hanson, senior office associate in the state office of the Cooperative Extension Service (CES). Each received a \$500 cash award.

TEACHING, ADVISING AWARDS

Students in the college select recipients of the Lawrence Meeboer Agricultural Classroom Teaching Award and Outstanding Adviser Award. Professor Lee Belden in the Department of Veterinary Sciences and senior lecturer Dave Wilson in the Department of Plant Sciences were presented the classroom teaching awards by Wangberg. Paul Ludden, associate professor in the Department of Animal Science, received the outstanding adviser award. Each received a \$500 cash award.

Wangberg also presented the Outstanding Educator Award. Nominations are peer reviewed with the recipient receiving \$2,500. Receiving awards were Suzy Pelican, educator and food and nutrition specialist with the CES; Rachel Watson, lecturer in the Department of Molecular Biology; and Scott Shaw, professor, Department of Renewable Resources.

AWARD NOMINEES

Nominees for the Dean's Outstanding Staff Awards were Kathleen Bertoncelj, senior office associate, Agricultural Experiment Station; Laurie Bonini, senior office associate, Office of Academic and Student

Programs; Steve Miller, coordinator, public relations, CES Office of Communications and Technology; Dave Moore, farm manager, Laramie Research and Extension Center; Linda Rosa, accountant, Department of Animal Science; Bob Baumgartner (farm manager), Troy Cecil, Larry Howe, Larry Miller, and Al Unverzagt, the farm crew at the James C. Hageman Sustainable Agriculture Research and Extension Center; and Cindy Wood, senior accounting associate, Department of Renewable Resources.

Nominees for the Lawrence Meeboer Agricultural Classroom Teaching Award were Ludden; Brian Mealor, assistant professor, Department of Plant Sciences; Warrie Means, associate professor, Department of Animal Science; Dale Menkhous, professor, Department of Agricultural and Applied Economics; Larry Munn, professor, Department of Renewable Resources; Bill Murdoch, professor, Department of Animal Science; Christine Wade, assistant professor, Department of Family and Consumer Sciences; and Wilson.

Outstanding Adviser Award nominees were Dianne Barden, lecturer, Department of Family and Consumer Sciences; Chris Bastian, associate professor, Department of Agricultural and Applied Economics; Kristi Cammack, assistant professor, Department of Animal Science; Doug Hixon, professor and head, Department of Animal Science; Ludden; Means; Pete Stahl, renewable resources professor and director of the Wyoming Reclamation and Restoration Center; Wade; and Wangberg, director of the Office of Academic and Student Programs.

Outstanding Educator Award nominees included Tom Thurow, professor in the Department of Renewable Resources, and Wilson.



Outstanding staff award nominees were, front, from left, Lanny Hansen, Mona Gupton, Kathleen Bertoncelj. Second, Cindy Wood, Marie Hanson, Linda Rosa, Laurie Bonini. Back, Troy Cecil, Larry Miller, Larry Howe, Al Unverzagt, Steve Miller, and Dean Frank Galey. Not pictured, Dave Moore, Bob Baumgartner.



Nominees for the Lawrence Meeboer Agricultural Classroom Teaching Award were, from left, Brian Mealor, Warrie Means, Lee Belden, Dale Menkhous, Danelle Peck, Christine Wade, and presenter Jim Wangberg. Not pictured, Paul Ludden, Larry Munn, Bill Murdoch, Dave Wilson.



Nominees for the Outstanding Adviser Award were, from left, Warrie Means, Pete Stahl, Jim Wangberg, Christine Wade, Doug Hixon, and Kristi Cammack. Not pictured, Dianne Barden, Chris Bastian, Paul Ludden.



Paul Ludden was presented the Outstanding Adviser Award.



Dave Wilson received a Lawrence Meeboer Agricultural Classroom Teaching Award.



Suzy Pelican was an Outstanding Educator Award recipient.



Scott Shaw received an Outstanding Educator Award.



Lee Belden receives the Lawrence Meeboer Agricultural Classroom Teaching Award from Kimberly Kuhns, a member of the Ag Ambassadors.



Rachel Watson receives the Outstanding Educator Award from Jim Wangberg.



Marie Hanson was one of three who received outstanding staff awards from Dean Frank Galey.



Selected by the Mortar Board as Top Profs were, from left, Donna Brown, Danelle Peck, Pam Langer, and Lee Belden. Not pictured, Randy Lewis.



Lanny Hansen receives the Outstanding Staff Award from Dean Frank Galey.



Dean Frank Galey presents the Outstanding Staff Award to Mona Gupton.

BIOSAFETY LEVEL 3 LABORATORY ENHANCES COLLEGE'S

Wyoming-based research into brucellosis and other select agents took a major step forward with completion of the University of Wyoming's biosafety level-3 laboratory in Laramie.

More than 130 attended the dedication November 19. Governor Dave Freudenthal, UW President Tom Buchanan, UW Board of Trustees chairman Jim Neiman, and College of Agriculture and Natural Resources Dean Frank Galey spoke during the dedication.

Freudenthal was among those who snipped the yellow ribbon.

"This state is going to have to be a leader among the states to figure out how to resolve the issue of brucellosis and the interaction

between livestock and large ungulates," said Freudenthal. "Simply, there are no policy alternatives other than figure out some scientific way to deal with it."

The laboratory is a tool to use in other state relations, noted Freudenthal.

"It has allowed me to advocate fairly aggressively with Montana, Idaho, and the feds that we end up with a research agenda that relates to a number of these diseases, particularly brucellosis, that plagues wildlife and the ungulate population," he said. "I couldn't advocate that unless we have a place to do the work. I have an answer now."

Since the Department of Homeland Security was established following the 9/11

terrorist attacks, research with live *Brucella abortus* bacteria can be conducted only in BSL-3 laboratories.

"The laboratory will allow us to work to help diagnose or identify diseases such as brucellosis and plague in a safe manner for the community as well as for our faculty and staff members," said Galey, who heads the Wyoming Brucellosis Coordination Team established by Freudenthal in 2004.

Support for the laboratory came from numerous groups, including the Wyoming Stock Grower's Association, Freudenthal, and the Wyoming state Legislature, noted Galey.

Jim Magagna, executive director of the stock grower's group, attended the dedication.

"We're thrilled to be here for the dedication of this laboratory," he said. "It really enables us to address some important issues, brucellosis being most immediate but certainly not the only one in Wyoming. We are going to need cooperation from other states and that means federal cooperation."

Magagna emphasized the value of having Wyoming industries participate in the research and thus Wyoming not having to wait on federal government movement.

Groundbreaking for the facility was in June 2009. The 20,000 square-foot addition contains a 1,280 square-foot BSL-3 lab, a 2,600 square-foot BSL-2 lab plus other work rooms. The 5,860 square-foot renovation of the existing Department of Veterinary Sciences building, which houses the Wyoming State Veterinary Laboratory, includes modifications of the existing BSL-



Ken Mills, Department of Veterinary Sciences professor and microbiology program director, leads a tour for UW trustees after the dedication of the new BSL-3 lab. Trustees on the tour were, from left, Dick Davis, Brad Mead, Betty Fear, Ann Rochelle, Dave Palmerlee, Dave Bostrom, Jim Neiman, and Howard Willson.



RESEARCH INTO BRUCELLOSIS, SELECT AGENTS



UW President Tom Buchanan, left, UW Trustee Chairman Jim Neiman, and Governor Dave Freudenthal before speaking at the dedication.

2 lab and conference and administrative offices.

The new laboratory is a perfect example of a land-grant university's research and outreach mission, said UW Trustee President Jim Neiman.

"I was truly amazed when I looked at this facility," he said. "The contribution this lab will provide to the state's management of wildlife and to our livestock industry will be second to none."

The college has more than six researchers and numerous graduate students working on issues related to prion diseases, including Hermann Schätzl, Wyoming Excellence Chair in Prion Biology. Schätzl's specialty is in the study of prions, the proteins that

underlie chronic wasting disease of deer and elk. This is the same class of protein that also causes bovine spongiform encephalopathy (BSE) of cattle and scrapie in sheep.

"Together, all of these researchers are seeking solutions through improved modeling, testing, diagnosis, treatment, and vaccine development," said Buchanan.

"It simply makes sense that UW be at the forefront of research that impacts not only Wyoming's critical agriculture and tourism industries, but simply the quality of what we know as Wyoming's way of life," he said.

Freudenthal joked that figuring out what a BSL-3 lab actually is took him some time during his discussions with Galey.

"They just assume those of us who are lawyers, because we have an opinion about everything, that we actually know everything," he quipped to the crowd.

"The kind of research that needs to be conducted needs to be conducted in this type of secure facility capable of permitting research and the intellectual and mechanical capacity and control mechanisms that can allow (research) to move forward," Freudenthal said.

"This is not just any old lab. There are only 40 of these in the United States, and one of those is located here at the University of Wyoming. It's something we need to be proud of."

VIDEOS AVAILABLE



A video of Governor Dave Freudenthal's remarks is at www.youtube.com/user/UWAgGuy?feature=mhum



A video of Dean Frank Galey's remarks is at <http://www.youtube.com/watch?v=qsItBJcIJfo>



A video of Carol Hearne describing the new electron microscope is at <http://www.youtube.com/watch?v=ZacZwvekBAY>

WHAT'S THIS?



A Quick Response (QR) code like the one at right and those above contains encoded information that can be read by a smart phone. The image, created by a CR generator, could be text, a URL address, or other data. The three QR codes for the videos above contain the URL addresses. QR codes can be compared to a standard bar code, which contains information that can be read by specific bar code readers. Have a smart phone with a reader application? Use it to see where these take you.

FIRST CUTTING



Sublette County 4-H educator Robin Schamber receives the Newer Employee Recognition award from extension associate director Duane Williams, left, and director Glen Whipple.



Extension associate director Duane Williams, left, and director Glen Whipple present the Creative Excellence Recognition award to Nutrition and Food Safety educator Patti Griffith of Fremont County.

UW EXTENSION RECOGNIZES OUTSTANDING EDUCATORS

University of Wyoming Cooperative Extension Service educators were recognized during extension's In-Depth training conference in November.

The awards and recipients are:

NEWER EMPLOYEE RECOGNITION AWARD

4-H educator Robin Schamber in Sublette County received the Newer Employee Recognition Award.

"The complex programming accomplishments and extensive network she has created to facilitate her efforts are absolutely superb," wrote a nominator. "She knows 4-H and what it can do, and is therefore stretching 4-H beyond the places many of us have gone and some fear to go."

Another wrote of her work with the Sublette County Non-Traditional 4-H Afterschool Program. "Her passion to make the afterschool program a venue to impart knowledge, teach life skills and communicate values to non-traditional

audiences in order to help them become productive members of society makes Robin a most deserving candidate for this award."

DIVERSITY ENHANCEMENT RECOGNITION

Wind River Indian Reservation CES office members received the Diversity Enhancement Recognition award. They are educators Tina Russell, office associate Rhonda Bowers, Cent\$ible Nutrition Program coordinators Nan Craft and Jennifer Schaff, and CNP assistant Renee Goetz.

Nominators praised them for their work to develop and facilitate a Cultural Synergy Training event for extension educators in Big Horn, Hot Springs, Park, Fremont, and Washakie counties and Wind River Indian Reservation officials.

"When the staff polled Northwest Area educators to assess what would make the most meaningful and effective training for us, I still thought 'Why?'" wrote

one nominator, who had been raised on a reservation. "Now I know 'why' and I am pleased to report that the time spent in training was very valuable to me. I appreciate the WRIR educators opening my eyes to the cultural differences ..."

CREATIVE EXCELLENCE RECOGNITION

Nutrition and Food Safety educator Patti Griffith in Fremont County received the Creative Excellence Recognition Award.

"Patti Griffith is a prime example of a person who 'thinks outside the box,'" wrote a nominator. "Through her creativity and guidance, Patti's input enables others to blossom and express their creativity. This is a sign of true leadership."

"Patti always has excellent ideas in her programming and management skills," stated another. "Patti always sees the potential in various projects."



WESTON COUNTY EDUCATOR RECEIVES UW EXTENSION'S MOST PRESTIGIOUS AWARD

A Weston County University of Wyoming Cooperative Extension Service (UW CES) educator received the most prestigious honor in UW extension.

Bill Taylor, a community development educator based in Newcastle, received the Jim DeBree Excellence in Cooperative Extension Award during the extension service's annual training conference in Laramie in November.

The award, honoring the retired UW CES administrator, is given to those who demonstrate a high level of professional performance and leadership within their program areas and communities.

"It was a thrill and rewarding to learn that my colleagues think highly enough of my work and effort to award me this high honor," says Taylor. "As I stated at the ceremony, it is really a team award because we, meaning UW CES, work together as a team and, without the support of the rest of the team, I wouldn't be receiving this award."

Taylor began as an agriculture and natural resources educator in Weston County in 1992 and moved to the community development education team in 2003.

"He has led by example; set the standards high and lived up to them, even when that meant personal hardship to himself," wrote one nominator.

Wrote another, "He consistently exhibits solid advocacy and leadership on behalf of his staff, programs, and exten-

sion services ... He is the go-to resource for community development in northeast Wyoming."

Taylor is a member of the community development team within extension that responds to training requests from city and county governments to help properly complete their responsibilities. Training has been provided for several nonprofit boards and county and municipal boards, and Campbell and Crook counties and the city of Gillette have now arranged for Taylor to provide annual board training.

In addition, Taylor provides financial

"He consistently exhibits solid advocacy and leadership on behalf of his staff, programs and extension services ...

literacy training to clients of multiple social assistance and governmental agencies within the area. He is coordinator of the Wyoming Black Hills Leadership Institute and a certified mediator.



Extension educator Bill Taylor, center, receives the Jim DeBree Excellence in Cooperative Extension Award from associate director Duane Williams, left, and director Glen Whipple.



Professor Lee Belden



*Assistant Professor
Danelle Peck*



*Associate Professor
Pam Langer*



*Professor Donna
Brown*



Professor Randy Lewis

Mortar Board names Top Profs in College of Agriculture and Natural Resources

Five College of Agriculture and Natural Resources faculty members were named Top Profs by the Mortar Board Cap & Gown Chapter.

Selected were Lee Belden, professor, Department of Veterinary Sciences; Danelle Peck, assistant professor, Department of Agricultural and Applied Economics; Pam Langer, associate professor, Department of Molecular Biology; Donna Brown, professor and head, Department of Family and Consumer Sciences; and Randy Lewis, professor, Department of Molecular Biology.

"Being selected as a 'Top Prof' is a great honor for professors because they are chosen by the students," says College of Engineering and Applied Science Professor David Whitman, Mortar Board adviser. "All of the members of the senior honor society selected professors who have made a positive impact on their lives at UW. These professors go beyond normal classroom expectations to help their students succeed, both in college and later in their careers."

UW Mortar Board student nominators, their hometowns, and those they nominated are:

Cheyenne – Amanda Staples, Belden

Denver– James Schindler, Peck

Gillette – Sarah Gregory, Langer

North Platte, Neb. – Molly Janak,
Brown

Powell – Saige Albert, Lewis

Renowned livestock facility designer, HBO movie subject will give two presentations at UW

A renowned designer of livestock handling facilities and whose life story of overcoming autism is profiled in an Emmy-award winning HBO movie will give two presentations on the UW campus in February.

Professor Temple Grandin of Colorado State University will present "Animals, Autism, and Sensory-Based Thinking" from 2:10-3 p.m. Monday, February 28, in the College of Arts

and Sciences Auditorium. Her talk will focus mainly on animals and livestock handling, as well as the innovations she has made in the area of humane livestock handling.

At 3:30 p.m., she will discuss her life, career, and obstacles she has overcome living with autism. A question-and-answer session and a book signing will follow.

Grandin was featured in the 2010 film "Temple Grandin," which received seven Emmys.

Grandin has designed livestock facilities in the United States, Canada, Europe, Mexico, Australia, New Zealand, and other countries. She has consulted for firms including Burger King, McDonald's, and others. She speaks around the world on autism and cattle handling.

Her appearance is sponsored by Wyoming AgrAbility, a program in the University of Wyoming Cooperative Extension Service, with help from the Wyoming INstitute for Disabilities (WIND).

Wyoming AgrAbility provides education, networking, and assistance to ranchers, farmers, and agricultural workers with disabilities and their families.



Professor Temple Grandin



Six Environmental and Natural Resources students joined Professor Scott Miller, pictured, College of Agriculture and Natural Resources, and Professor Fred Ogden, College of Engineering, for a three-week course in Panama.

Panama trip provides students valuable watershed, reforestation experience

By Shannon Smith

Crawling on hands and knees through mud to a research site only to spend hours observing trees and shrubs may not sound like fun for most, but this is exactly what some students are looking for.

Six Environment and Natural Resources 5890 students traveled to Panama City, Panama, July 24-August 13 to study watersheds and the effects of reforestation.

“The students focus on understanding the processes that drive hydrological change with reforestation by looking at places with deforestation and the negative effects with runoff and erosion,” says Scott Miller, professor of renewable resources and co-instructor for the project. “The students get a better understanding of how fieldwork is done in science. Not all of the students were scientists, so there was a lot of ground

fieldwork being done by measuring plants and runoff.”

Natalie Macsalka, an agricultural and applied economics graduate student in the class, says students were provided a good mix of tropical biology and ecotourism experiences.

“We measured trees, took soil samples, and examined water movement,” she notes.

Macsalka’s favorite part was navigat-

ing deep into the forests to identify stream origins and take water samples.

“We were also treated to several weekend excursions to important historical, biological, and modern locations within the canal zone,” says Macsalka. “These visits provided an excellent framework to understand the importance of the biological work being conducted there.”

Miller says students made outstanding observations of vegetation growing at vastly different rates but planted at the same time and in the same manner. The students were able to show how and why these differences may have been occurring.

Miller also says these field experiences help give students a sound appreciation for reality and practical use for science or policy. These opportunities allow students to succeed in the future when given data and need to make a decision and to understand the sources and that data can be skewed, he notes.

“The reality check is important for all students to gain – to understand the differences between theory and reality.”

Fred Ogden, the project’s lead instructor, says, “It teaches students that it is a big world with diverse issues and with lots of



Professor Scott Miller, center, and students Nathaniel HadleyDike, left, and Brie Richardson pause during data collection. Students study the processes that drive hydrological change with reforestation.

different ways of approaching those issues; collecting field data on ecosystem services is a lot of work, and they succeeded.”

Ogden, a professor of engineering, started the class after receiving funding in 2007 from the Smithsonian Tropical Research Institute to study the ecosystems of the Panama Canal. Ogden and Miller also say that, while international experiences are important, Panama and the canal bring even more to this project.

“The existence of the canal zone provides data you won’t find anywhere else,” Ogden notes. “You don’t have to wait years and years to see something. Things are growing 365 days a year. You can plant trees and see them within two or three years whereas in Wyoming you would have to wait 20 years.”

Miller also believes Panama is the prime area for these studies.

“The students are exposed to cultural and ecological systems we don’t have in the U.S.,” he notes. “There is nowhere in the U.S. like Panama; it is even unique to the world. If you want to experience tropical hydrology, you have to go there.”

While learning about hydrology and ecological systems, Macsalka says she also learned several things about new regions and cultures.

“It taught me to appreciate access to clean water. Residents often had cell phones and electricity; however, they seldom had access to clean water from the tap,” she says.

Macsalka also gained respect for scientists conducting work in tropical ecosystems.

“I’ve held backcountry field biology positions all over the western United States, but nothing compares to the bugs, humidity, and mud in tropical climates that can try your concentration,” she notes.

Macsalka says she would love to conduct the research project again and hopes to continue to work in developing countries.

“I admire the ingenuity you need to conduct fieldwork in developing countries,” she says. “When you don’t have access to the resources you normally would, you have to make do with what you have.”

Ogden will offer the class and international opportunity the next three years.



Natalie Macsalka, a graduate student in the Department of Agricultural and Applied Economics, says she hopes to continue to work in developing countries.

Capstone agricultural economics class members lend suggestions to Wyoming businessmen

Wyoming agribusiness merged with Wyoming agri-economics during the fall semester in a course that pairs students as consultants to business owners and managers.

Students in Assistant Professor Mariah Ehmke's capstone agribusiness strategy and ethics course generated business ideas for Bryant Honey of Worland, Rocky Mountain Agronomy of Riverton, and Anderson Agricultural Enterprises of Pine Bluffs.

The students presented their proposals the end of November.

"It's really valuable to have business managers willing to share their time and information with students," says Ehmke, in the Department of Agricultural and Applied Economics.

Until two years ago, students found businesses on their own and wrote a paper for the course.

"What I found is that students spent three-quarters of their time finding a business and only 25 percent writing the paper," notes Ehmke. "It's hard to find a business willing to offer financial information and other strategic information that's important in a class on strategy."

"It is real work with a real objective, and you work with a group that makes the project fun."

— Kimberly Kuhn

BUSINESSES FOUND AHEAD OF CLASS

So, she changed direction. With the fall 2009 class, Ehmke found businesses ahead of the semester and students then chose which businesses to work with.

A winery, farmers market producers, and a grass-fed beef operation were subjects of last year's class.

She had a welcome coincidence this year.

"Rocky Mountain Agronomy contacted me in August to ask me as a professor to help them develop a business plan," says Ehmke. "I thought, 'Well, what do you know! I have a need for a business for students to work with.'"

She was also looking for an out-of-the-ordinary agribusiness for students and contacted Bryant Honey.

"I believed they would be interesting because, on the one hand, the price of honey is high right now, but there has also been colony collapse disorder killing bees. I thought this would also help students realize how important the honey and sugar industries are in Wyoming. Many students have the idea that Wyoming agriculture is beef, so this is a little more diverse."

Still, she wanted a traditional farm and ranch management business for students with that interest. She contacted Tyler Anderson of Pine Bluffs, a recent college of agriculture graduate whose name Ehmke has seen promoted as a productive young farmer in Wyoming.

"I thought it would be good for the students to work with him, to give a taste for those who plan to farm and ranch soon."



Students, from left, Kimberly Kuhn, Tucker Hamilton, Sam Hansen, and Kaitlyn Foster present information about Bryant Honey.

STUDENTS CREATE TEAMS

Students formed two teams to work with Bryant Honey and one team each for Anderson Agriculture and Rocky Mountain Agronomy. Each team had four to five students. Each student specialized in an area of expertise for the team such as finance, human resources, or marketing.

Representatives of the companies traveled to Laramie in late November to hear proposals from the students.

Student Samuel Hansen of Lingle worked with Bryant Honey.

"Working with a real business in Wyoming was a neat experience," says Hansen.



Mariah Ehmke presents Don Bryant and son, Brady, with certificates of appreciation for working with the students.



Dan Forbis, left, and Rolan Himes of Soilsavers and Rocky Mountain Agronomy in Riverton wait for students to begin presentations.

"I had the opportunity to meet with Don Bryant on a couple of occasions, and it was nice to sit down and discuss real-life issues of the business outside of the classroom."

Kimberly Kuhn also worked with Bryant Honey.

"The interaction with the business instead of just class work made a world of difference," says Kuhn of Cheyenne.

IDENTIFY, BUILD IMPORTANT SKILLS

Hansen identified what skills appeared most valuable.

"Intrapersonal skills seem to perhaps be the most valued by employers, and I feel that this course really helped me to develop them," he notes. "There was also a lot of critical thinking involved as we discussed different cases, and I believe that that is also a very valuable skill as my class mem-

bers think about graduating and future employment."

Adds Kuhn, "It all deals with respect. The skills this class has provided me are skills to meet timelines and work with a group."

Last year was the first Ehmke sought feedback from the business managers.

"I received verbal feedback saying, 'Wow, the students came up with really good ideas that we wouldn't have come up with on our own. I'm going to try a few.' I do know the business managers were generally impressed with the creativity of the students," she says.

For the students' part, they're excited to be exposed to the real world after reading books for four years. "The students offer an outside and creative perspective to the businesses," says Ehmke. "How valuable that is will depend on the business."

Kuhn says she would recommend the class. "It is real work with a real objective, and you work with a group that makes the project fun."

BRYANT HONEY OWNER SUGGESTS OTHER WYOMING BUSINESSES PARTICIPATE IN CLASS

Don Bryant says he would recommend other businesses become involved in future classes.

One suggestion provided by the two teams assigned his business brought immediate results. Student Josh Law created a Facebook page for the business.

"That thing has been getting hits like you wouldn't believe," says Bryant, president of the company. "It's only been a couple days, but people in the community have been saying, 'Hey. We saw your Facebook page, and we like it.' It's an avenue we didn't even think of as an idea or possibility. People have also gotten our Web link off the Facebook page, and a lot of people are using both."

Bryant had already considered some of the ideas presented by the students, "but I thought both groups did a really good job," he says.

National organization president visits College of Agriculture and Natural Resources

By Shannon Smith

The University of Wyoming Phi Upsilon Omicron chapter hosted the organization's national president during its initiation ceremony the fall semester.

Phi Upsilon Omicron is a national family and consumer sciences honorary.

UW chapter president Kati Stoll of Casper says President Corine Carr's visit was a special experience.

"To my knowledge, we have never had the national president visit our chapter before," she says.

Stoll and former chapter president Molly Janak of North Platte, Nebraska, met Carr at a national gathering and invited her to attend their initiation ceremony. Carr, a nutritionist and dietitian from Muncie, Indiana, later accepted the invitation.

"We were both extremely surprised she would go so far out of her way to visit," Stoll says.

Four new members and one honorary member were inducted into the UW chapter during the initiation ceremony October 28. The chapter now has 17 active members.

Christine Wade, an assistant professor in family and consumer sciences, was recognized as the honorary member.

Janak notes the chapter wanted to extend an invitation to Wade as a newer faculty member at UW.

"As faculty, they work tirelessly in the FCS field, and we feel it is Phi U's duty to recognize this. Also, it allows them to display their honors in the field as well," Janak says.

"The students were very excited for her visit and went out of their way to get everything ready for initiation," Stoll notes.



Members of the University of Wyoming Phi Upsilon Omicron chapter with national president Corine Carr are, back, from left, Michaela Kaszuba, Callie Neelands, Lacy Dyer, Natalie Ferguson, Kati Stoll, Molly Janak, Carr, Nicole Macy, Katelyn Thomas, Kaia Christofferson, Assistant Professor Christine Wade. Front, from left, Sarah Oliver, Rachel Schneider, Lisa Baldock, Sophie Pettipiece, Erin Wagner, Jenna Chalcraft.

After the ceremony, chapter members and Carr visited over dinner.

"Carr had a great time and individually spoke with every one of our members during her visit," says Stoll.



Chapter members, from left, Molly Janak, Rachel Schneider, and Callie Neelands visit with Phi Upsilon Omicron national president Corine Carr.

Stoll and Janak toured the UW campus with Carr and discussed the university and its various campus programs.

"Carr greatly enjoyed her visit and personally sent myself and the department thank you letters for making her feel so welcome at our university," Stoll said.

According to its national website, Phi Upsilon Omicron works to promote academic excellence, lifelong learning, and leadership qualities in its members. The UW chapter each semester invites the top 35 percent of family and consumer science majors, junior standing and above, to join the chapter.

Chapter members also participate in service projects. "Each year in the spring, our chapter makes tie blankets and donates them to the Women, Infant, and Children support program in Laramie," Janak says.

The UW chapter, with its newest members, hosted an Adopt-a-Family holiday program in December to help local families in need.

Student-athletes balance academic loads

By Shannon Smith

Time management is the key to success for many University of Wyoming student-athletes – more than practice or even competing well.

It's just one strategy Cole Dallaserra and Ryan Griesbach, both students in the College of Agriculture and Natural Resources, apply to achieve success in competition and in classrooms.

Dallaserra, a senior from Butte, Montana, studying rangeland ecology and watershed management, competes as a third-year starter for the Cowboys' wrestling team. Dallaserra has experienced time crunches between school and wrestling but still strives for academic success, earning a spot on the Western Wrestling Conference Coaches Honor Roll for the 2008-2009 season.

Dallaserra says keeping up with academics is easier because it works hand-in-hand with wrestling.

"I keep up with my academics, so it doesn't affect my athletics, and I keep up with my athletics so that it doesn't affect my academics," he notes.

His love of the sport also provides incentive.

"I've been wrestling since I was 4. I wanted to be the best I could be and achieve at the highest level of wrestling possible. It is a huge part of my life, and it gave me the opportunity to get an education as well," Dallaserra says.

EMPHASIZES STAYING ON TOP OF ACADEMICS

Dallaserra studies whenever he has time outside of wrestling, including spare time on away trips. He also says wrestling head



Ryan Griesbach

coach Mark Branch helps focus the team on academics.

"He addresses staying on top of class work every week – almost every practice," Dallaserra says.

Griesbach, a junior UW distance track runner from Laramie, agreed managing time is difficult as an athlete. Serious about his education, Griesbach has a full-ride academic scholarship. He attends classes in the morning until the early afternoon. After class, he practices from 3-6 p.m., eats dinner, studies, and goes to bed around 9 p.m.

His hectic schedule doesn't stop him from accomplishing goals.

"I try to keep up on things and stay ahead and not procrastinate. If I get things done ahead of time, it isn't too big of a deal when I have to miss school," he says. He also



Cole Dallaserra

stays ahead of classwork so he has some time to relax on the weekends when not training.

Griesbach says he usually studies on the way home from a meet. "I like to focus on the race on our way to the meet, but, afterward, I generally try to knock out as much homework as possible," he says.

BOTH SEEK POST-GRADUATE EDUCATION

Griesbach was named Mountain West Conference (MWC) Freshman of the Year in 2008 and named to the second All-MWC academic team in 2010. He wants to attend medical school after completing his degree in molecular biology.

Following his undergraduate degree, Dallaserra hopes to attend graduate school at UW through a student-career experience program before working as an intern for

with sport demands

the Bureau of Land Management or other organization.

While maintaining a chaotic lifestyle at times, Griesbach says his teammates make the hard work all worth it. Griesbach has run track since high school and says it's provided him with numerous life experiences and friends.

"My teammates are some of my best friends, and I enjoy the companionship and camaraderie and the support we give each other," he says.

Dallaserra also enjoys the support of his team, but said the greatest satisfaction of wrestling at UW is a sense of pride.

"Being a student-athlete at the university is like being in a fraternity. We are representing UW and the state and having everyone behind us is a great experience."

HARD WORK REWARDS

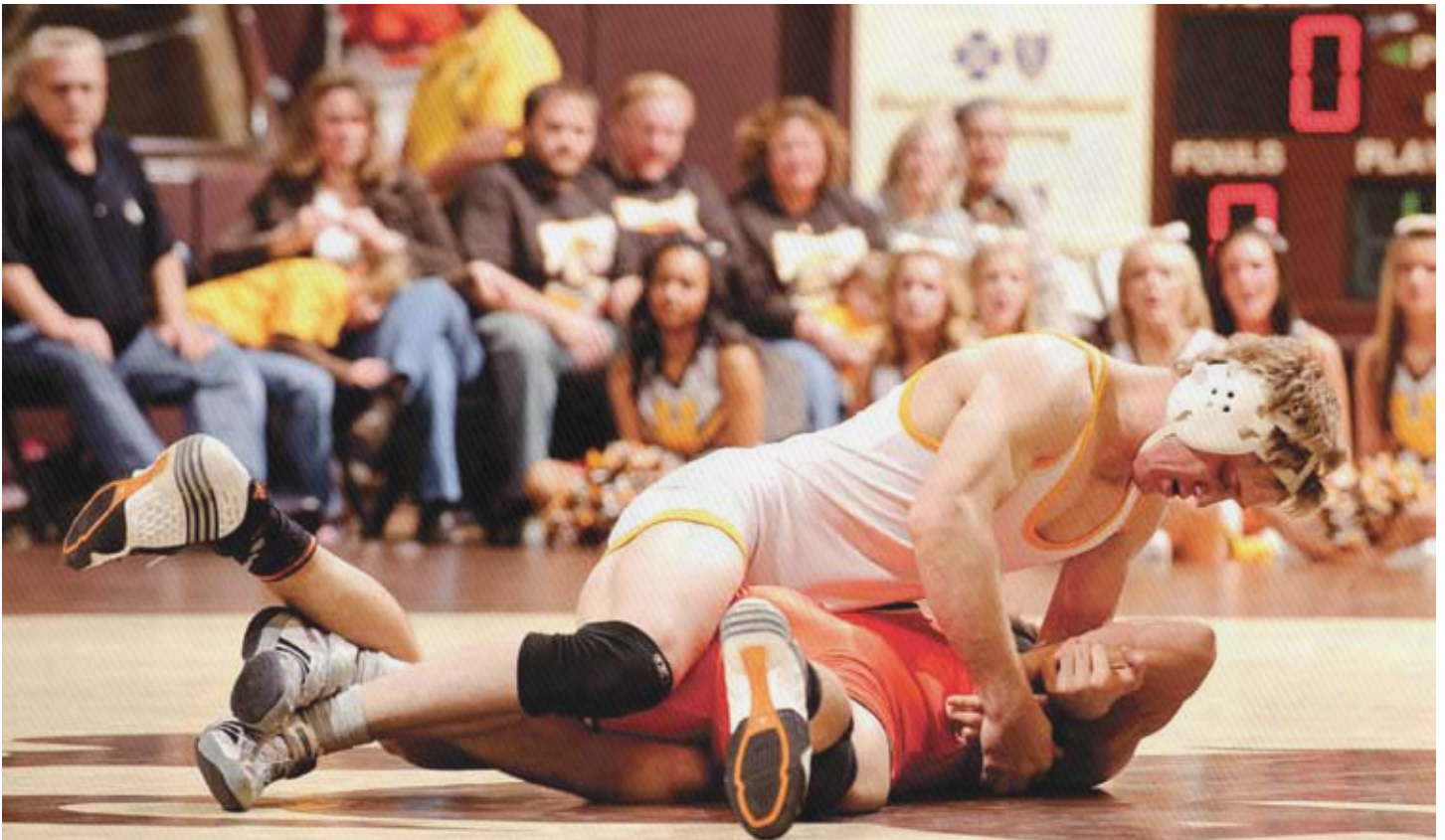
Griesbach says he has learned hard work pays off.

"A lot of life is how hard you are willing to work or what you are willing to sacrifice

to get what you want," he notes.

Dallaserra agrees athletics has taught him a lot. He quoted famous wrestler Dan Gable, saying, "Once you've wrestled, everything else is easy."

"Overcoming adversity and challenges in wrestling has developed me into the person I am and helped me overcome endeavors in life and will, hopefully, allow me to be successful in everything I do," Dallaserra says.



Cole Dallaserra works a move on an opponent. He says his love of wrestling makes him strive for academic success.

\$700,000 grant compares production practices

Researchers working with a \$700,000 grant want to bolster producers faced with rising costs by finding production alternatives that decrease costs, increase yields, or increase value, says Assistant Professor Urszula Norton in the Department of Plant Sciences and project leader.

The grant, announced in October, seeks to provide producers side-by-side comparisons of conventional, reduced input, and organic productions to enhance viability, competitiveness, and efficiency.

“Sound, region-specific information on environmental services provided by organic production is not available for integrated crop-range-livestock agroecosystems prevalent across the Northern High Plains region,” says Norton.

MEMBERS FROM WYOMING, NEBRASKA, COLORADO

The grant has helped assemble a diverse group of investigators, educators, and producers from Wyoming and Nebraska who recognize a unique opportunity to answer region-specific questions about organic production, says Norton.

Participating are assistant professors Axel Garcia y Garcia in the Department of Plant Sciences, Jay Norton in the Department of Renewable Resources, and John Ritten in the Department of Agricultural and Applied Economics.

The focus is to help producers meet the rising costs of inputs and improve environmental services.

Also involved are soil scientist and extension specialist Gary Hergert from the University of Nebraska and Steve Del Grosso, a biogeochemical modeler from the Agricultural Research Station Northern Plains Area office in Fort Collins. Both are co-principal investigators.

DOCTORAL, MASTER'S STUDENTS PARTICIPATE

Joining the group will be one Ph.D. student in plant sciences to study carbon dioxide, nitrous oxide, and methane emissions/potent greenhouse gases contributing to the overall climate change; one master's student in plant sciences to study crop water use efficiency of dryland and irrigated systems; one master's student in agricultural economics to study economic sustainability, carbon sequestration, and perform life cycle assessment analysis of farming systems in transition; and one post-doctoral researcher in renewable resources to oversee and model data inventories.

In addition, one part-time farm manager will be hired at the James C. Hageman Sustainable Agriculture Research and Extension Center (SAREC) to oversee field operations, and one part-time field technician will be hired to conduct fieldwork on sites in Nebraska.

“We are also starting to formulate a list of potential farmer collaborators,” she says. “We intend to form an advisory board consisting of farmer-collaborators who will help us define appropriate cropping technologies and systems and plan our on-farm research trials.”

SUSTAINABILITY IS FOCUS

The focus is to help producers meet the rising costs of inputs and improve environmental services.



Assistant Professor John Ritten

“Reduced input and organic production approaches may achieve these goals while at the same time providing important environmental services such as improvement of soil quality and mitigation of climate change by sequestering carbon,” says Norton. “Such services may provide alternative income streams via carbon markets or incentive payments, but the magnitude of the services provided by reduced-input and organic production practices relative to conventional practices is undocumented for the Northern High Plains region.”

Norton says researchers believe evaluating organic practices side by side with both conventional and reduced-tillage approaches is important for two reasons: 1) to determine whether organic production practices achieve environmental services provided by reduced-tillage practices already incentivized under USDA conservation programs, and 2) to investigate possibilities for better integrating reduced-tillage practices into organic production.

to determine most profitable, sustainable



Assistant Professor Urszula Norton



Assistant Professor Jay Norton



Assistant Professor Axel Garcia y Garcia

WHO'S INVOLVED?

Principal investigators and their responsibilities are:

Urszula Norton – Conduct research on assessing carbon dioxide, nitrous oxide, and methane emissions that are potent greenhouse gases contributing to the overall climate change and perform life cycle assessments of farming systems in transition and long-term use to evaluate sustainability.

Jay Norton and Gary Hergert – Conduct research on assessing soil carbon sequestration and create data inventories for prognostic biogeochemical models.

Axel Garcia y Garcia – Research water use efficiency in dryland and irrigated systems and conduct model simulations to assess crop performances under variable environmental conditions.

John Ritten – Assess agroecosystem performance and sustainability by evaluating economic feasibility, carbon sequestration, and energy budgets.

Steve Del Grosso – Utilize large data inventories to run prognostic biogeochemical models to assess long-term ecosystem sustainability and ability to mitigate and adapt to climate changes.

In-situ leaching involves the use of a group of injection wells surrounding a production well. The arrangement is called a five-spot or seven-spot. (Photo courtesy Cameco Corp.)



Radium-contaminated soil remediation focus of project through Wyoming Reclamation and Restoration Center

Helping power the future may depend upon first stepping into the past.

A master's student research working with Professor Peter Stahl's Wyoming Reclamation and Restoration Center will examine ways to cleanup radium contamination without hauling away metric tons of topsoil to approved sites.

Research by Lisa Cox seeks to make cleanup safer and more cost-effective for in-situ mining than it was for conventional mining.

"I thought with alternative energy being a big topic politically and in the media and with uranium mining possibly coming online with uranium prices rising, it might be a good idea to help the process along in Wyoming," says Cox.

Her early efforts to address energy concerns in a master's project sputtered. She had planned to look at bond issues on Wyoming natural gas reclamation but that was dropped. Next came a plan to conduct an economic analysis determining what

amounts should be on uranium mining bonds and proper capping procedures for wells. Support for that proposal fell through.

When an industry person suggested looking at remediation of topsoil, Cox was able to put to use the background material compiled on uranium mining.

"The person said a lot had been done on wastewater treatment and how to remediate that, but, no one was effectively looking at the soil," says Cox. "When we

take uranium out of the water in the in-situ leaching process, we have radium left over. Radium, when exposed to air, degrades into radon gas. But the biggest problem is the radium itself present in the soils following a leak or spill.”

The Wyoming Mining Association uranium committee agreed to fund half her work. The UW School of Energy Resources is also a collaborator.

During the in-situ recovery process, several injection wells surround a single well. Carbonated water is injected into a uranium ore body to force the uranium up through the well. The intense pressure can crack the pipes causing contamination. The EPA sees the top 15 centimeters, about 6 inches, of soil as separate from the soil below in terms of judging acceptable levels of radiation, based on background levels found in soil on-site prior to mining.

“I think the general public looks at water as the issue and so not only has the industry not looked at remediation of the soil much, but the public doesn’t realize a potential problem there,” notes Cox. “There is. If there is a leak or spill, there are radioactive soils leftover. The EPA and DEQ, as an arm of the EPA, and the Nuclear Regulatory Commission have strict standards as to what degree of radiation can exist in these soils.”

Radiation from past mining has been mediated through fenced ponds or by the expensive process of removing and hauling topsoil to approved sites.

There might be a better way.

“The objective of my research is to provide possible alternatives to removal and disposal of contaminated soil that are more economical to uranium operators, more supportive of future reclamation efforts, and that reduce transport of hazardous wastes on public roadways.”

— Lisa Cox

“The objective of my research is to provide possible alternatives to removal and disposal of contaminated soil that are more economical to uranium operators, more supportive of future reclamation efforts, and that reduce transport of hazardous wastes on public roadways,” notes Cox.

Using plants to uptake the radium is one promising alternative. Of the lands where uranium may be obtained or has been obtained, land is generally used by wildlife and livestock for grazing and as recreation areas by the public.

Cox noted a 1970s Colorado State University study eyed using Wyoming big sagebrush to wick radium from the soils.

“I think there is a possibility of using phytoremediation (decontaminating soil by

using plants to absorb heavy metals or other pollutants). That’s one avenue we will be looking at more in-depth,” she says.

In addition to sagebrush, other plants could include needle-and-thread grass, western wheatgrass, common buffalo grass, and blue gramma. Once the radium has been taken up, the plant material would be harvested and hauled to an approved site. That would still be cheaper than hauling soil, she says.

Prairie fires and keeping livestock and wildlife off the areas are issues that would have to be addressed.

“We will look at a number of strategies and gauge their feasibilities,” says Cox. “Companies are looking for us to throw a bunch of strategies out there that have been tried elsewhere that might be feasible in these kinds of soils and what we need to do to make them work here.”

Research by Cox will be part of the 2011 *Reflections* magazine, a yearly publication showcasing research in the College of Agriculture and Natural Resources.



Mary Ellen (MEd) Harte, Beyond.org

PROGRAM NOTES



Research Scientist
Tom Foulke

AGRICULTURAL AND APPLIED ECONOMICS

With concern over rising energy prices, increased interest in personal energy independence, and a desire to be environmentally conscientious, some agricultural producers are interested in how biodiesel production might play a role in their operations. Research scientist **Thomas Foulke** examines the economics of producing biodiesel on a farm or ranch in an article that appeared in the December 4 *Wyoming Livestock Roundup*. Current fuel prices do not favor the economics for on-farm biodiesel production, he found. Foulke used a systems approach to understand how biodiesel production would fit into a dryland wheat farm. Budgeting software was used to evaluate the costs and returns of growing camelina in place of fallow. Then, the process was taken further with consideration of the costs of pressing, the substitution

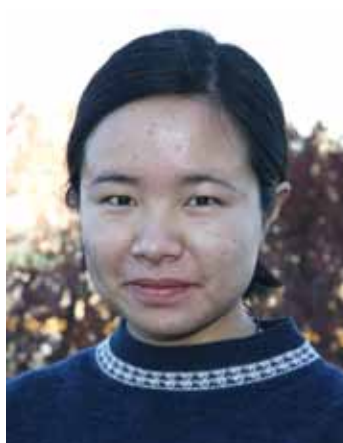
of camelina meal for other grains as a feeding supplement for cattle, and the costs of biodiesel from oil.

The process would be prohibitive for an individual producer, especially to pay for the processing equipment, including a press, and the tanks, pumps and piping, and testing equipment, he found.

The cost of producing a gallon of biodiesel would be about \$4.89 if a producer shouldered ownership costs, including depreciation and the costs of growing camelina. The cost of producing a gallon of biodiesel would be about \$1.97 without ownership costs. The figures were produced using a price of \$2.78 per gallon for diesel. "If the price of a gallon of diesel were to rise, then one would expect growing costs to rise as well, effectively making the break-even cost of producing biodiesel a moving target," says Foulke

ANIMAL SCIENCE

Katie Kessler, a master's student from Lander who is working under the direction of Assistant Professor **Kristi Cammack**, won first place in the Graduate Student Poster Competition at the 2010 Colorado Nutrition Roundtable in Fort Collins in September. Her poster was entitled "Use of Supplemental Molybdenum to Improve Performance of Feedlot Steers Administered High-Sulfur Water." **Rebecca Cockrum**, a



Jai Hu

Ph.D. student also working with Cammack, placed third in the same competition with a poster entitled, "Evaluation of Commercial Rams for Feed Efficiency Using the GrowSafe System."

Jai Hu, a Ph.D. student working with **Meijun Zhu**, assistant professor of food microbiology in the department, placed first in the graduate student poster competition at the Rocky Mountain Branch of the American Society of Microbiology meetings at the University of Wyoming in October. Her poster was entitled, "Overexpression of a cyclic di-GMP-specific phosphodiesterase increases Shiga toxin II production and virulence of *E. coli* O157:H7." Jai arrived in Zhu's lab after first initiating her graduate program in the Molecular and Cellular Life Sciences (MCLS) program at the University of Wyoming.

The Advanced Equine Judging Team did an excellent job of representing the department and the Wyoming equine industry

this fall at the All-American Quarter Horse Congress in Columbus, Ohio. Competing in the Limited Division, Cori Slingerland of Hudson placed third and Lisa Eckhardt from Watkinsville, Georgia, placed fifth. No team scores were kept in this division. Other team members included **Lindsey Hankins** of Wellington, Colorado, **Kacy Hattan** of Wheatland, **Callie Rulli** of Cheyenne, and **Stephanie Schroeder** of Douglas. They followed this by competing at the Arabian Nationals in Tulsa, Oklahoma. Here they were first in Halter and Reasons; fifth in Performance and second overall. Lisa, Cori, and Kacy were third, fourth, and fifth individuals overall. The Horse Judging Team is coached by **Amy McLean**.

The 2010 UW Meat Judging Team placed third out of 14 teams at the American Royal Contest at Nebraska Beef in Omaha in October. The team, coached by **Lander Nicodemus**, a meat science graduate student from Cheyenne, was first in Placings, second in Beef Judging and second in Overall Beef. **Jessi Larsen** of Gardiner, Montana, was eighth-high individual while **Brogan Clay** of Laramie placed eleventh overall. They completed their fall campaign at the International Contest in Dakota City, Nebraska, where they placed ninth out of 17 teams. **Jaymes Talbott** of Laramie was eighth-high individual overall. Other team members included

Becky Vraspir of Emerson, Nebraska, **Wade Allnutt** of Walden, Colorado, and **Chris Kelly** of Longmont, Colorado.

FAMILY AND CONSUMER SCIENCES

Brenna Randall is the new lead toddler teacher at the UW Early Care and Education Center. Brenna moved with her family from Bozeman, Montana, in August to take the position at the ECEC. In Bozeman, Brenna owned and operated her own nationally accredited preschool program and has worked with children from infants to school-agers. Brenna has a bachelor's degree in early childhood education with a dual emphasis in special needs and family support from the University of Montana – Western. Brenna and her husband, John, have three children; Courtney, Lee, and Kelli, and a grandson, Nicholas.

Wyoming AgrAbility Project has announced **Kelley Dees** has begun as project coordinator.



Kelley Dees

Wyoming AgrAbility (www.uwyo.edu/agrability/) provides education to service providers and producers, information, and networking with providers and directs assistance to ranchers and farmers whose families are affected by a disability, says Kelley. Wyoming AgrAbility is part of a national program focused on promoting independence in ranchers, farmers, farm workers and their families who have injuries or limitations leading to disability.

Kelley grew up on a small farm in rural Alabama. Having participated in 4-H for



Professor Enette Larson-Meyer

many years, she has a strong understanding of agriculture, says Professor **Randy Weigel**, AgrAbility Project director. Her college education also provided training in assistive technology, Americans with Disabilities Act guidelines, and other areas related to disability.

Assistant Professor **Enette Larson-Meyer** was an invited member of the International Olympic Committee (IOC) Consensus Conference on Sports Nutrition held in Lausanne, Switzerland, October 24-27. She was one of 26 international scientists and sports nutritionists selected. Consensus from the committee will be posted on the IOC website (see group photo lower left).

Becce Birdsley, former project coordinator for Associate Professor **Rhoda Schantz's** HACCP Food Safety grant and current graduate student in the department, received the Excellence in Agriculture Award from the Wyoming State Department

of Agriculture at the Wyoming State Fair and Rodeo in August. **Kathy Tatman**, a former Cent\$ible Nutrition Program educator, received the Wyoming Agriculture in the Classroom Educator of the Year Award from the Wyoming Department of Agriculture, also at state fair.

Phi Upsilon Omicron, the Honor Society of Family and Consumer Sciences, was honored to have Corine Carr, the National Phi Upsilon Omicron president, attend their fall initiation ceremony on campus in November. Assistant Professor **Christine Wade** was initiated as an honorary member at the ceremony. Carr spent time the following day visiting and touring the department and the UW campus before continuing her travels. Carr lives in Muncie, Indiana.

MOLECULAR BIOLOGY

Associate Professor **David Liberles** is a member of a UW team that has sequenced the entire genome structure of an organism that is seen as a model for understanding rapid evolution.

The article, "Plasticity of animal genome architecture unmasked by rapid evolution of pelagic tunicate," was published Thursday, November 18, in the journal *Science Express*. The entire genome sequence of *Oikopleura dioica*, a tunicate, was determined.



Professor Enette Larson-Meyer, fifth from right in front row, with members of the International Olympic Committee Consensus Conference on Sports Nutrition.

PROGRAM NOTES



*Associate Professor
David Liberles*

The genome sequencing project was an international collaborative effort involving research groups in Europe, Canada, Japan, UW, the universities of Iowa and Oregon, and the National Institutes of Health.

"The genome is extremely divergent from other multicellular animal genomes, showing hallmarks of rapid evolution," notes Liberles.

The researchers at UW analyzed the evolutionary turnover of duplicate genes in this organism, which he says is among the contributing factors to the rapid divergence of the genome. "It is seen as the main mechanism by which genes can change functions," he says.

Snehalata Huzurbazar, associate professor in the Department of Statistics, added that the contribution of the UW researchers was also important because statistical analysis of the duplicate gene data accounting for data-generating mechanisms is new in this research area.

"Statisticians are infrequently co-authors on articles in science," she notes. Other UW scientists contributing to the research are Ph.D. students **Anke Konrad**, molecular biology, and Sarabdeep Singh, statistics.

Found mainly on the ocean floor, tunicates are commonly known as sea squirts and sea pork. Tunicates apparently evolved in the early Cambrian period, beginning around 540 million years ago. Despite their simple appearance, tunicates are closely related to vertebrates, which include fish and all land animals with bones.

PLANT SCIENCES

Augustine Obour has moved his family from Florida to Lingle, filling the academic professional research scientist position at the James C. Hageman Sustainable Agriculture Research and Extension Center (SAREC). Obour received a bachelor's degree in crop science from Kwame Nkrumah University in Ghana (2002), a master's degree in agronomy (2007) and a Ph.D. in soil and water sciences (2010), both from the University of Florida. He will support research projects by plant sciences faculty members and others at SAREC and also initiate his own research program in soil fertility and irrigation management. Visitors to SAREC are encouraged to seek out Obour and welcome him to the UW community. With his



*Senior Lecturer
Dave Wilson*

arrival, the number of academic appointees in plant sciences rises to 16, six of whom are based outside Laramie.

Plant sciences faculty members and graduate students led another field course to Kenya over Christmas break. Senior lecturer **Dave Wilson**, assistant professor **Urszula Norton**, and Ph.D. students **Nate Storey** and **Emmanuel Omondi** departed from the Laramie Research and Extension Center greenhouse complex December 9 and returned shortly before Christmas. The course is "Karibu Kenya." It is focused on small-scale sustainable agriculture as taught to local farmers by the Manor House Agricultural Center near Kitale, Kenya, of which Omondi is director. Fourteen undergraduate students participated in the course, the second time the class has been offered.

RENEWABLE RESOURCES

The department welcomed **Melanie Murphy** as the new rangeland systems ecologist. Melanie will teach ecological applications for wildland management, rangeland management planning, will develop a graduate course in systems ecology, and will develop her research program. Also joining the faculty is **Craig Cook**. Craig is the Stable Isotope Facility manager. He has held the same position at the University of Utah for many years. "We are very pleased to welcome both Melanie and Craig to UW and the department," says **John Tanaka**, professor and head of the department.

Indy Burke, director of the Haub School of Environment and Natural Resources, was appointed to the Environmental Protection Agency's Science Advisory Board.

Clay Buchanan, Ph.D. student in rangeland ecology and watershed management, won the best Ph.D. poster and best overall poster at The Wildlife Society annual meeting.

"Our student clubs have been very busy this fall," says Tanaka. The newest club, Reclamation Outreach and Research (ROaR), has been involved in two service projects. They have assisted in the reclamation along the Laramie River and have led a cleanup and signing of a piece of state land outside of Laramie. The graduate student



*Professor and Department Head
John Tanaka*

Colorado, and **Sydney Burek**, Elizabeth, Colorado.

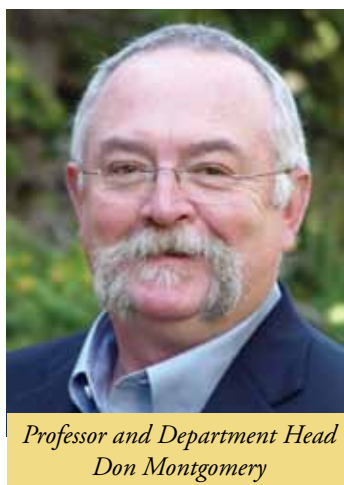
Extemporaneous Speech Contest – First, **Amanda Jones**, Casper, second, **Ryder Sime-niuk**, Opheim, Montana, third, **Wade LaCount**, Rifle, Colorado

Plant ID – First, Sage Askin, second, **Bailey Terry**, Newcastle

VETERINARY SCIENCES

Although a few weeks of construction remain, the dedication ceremony for the new addition to the Veterinary Sciences and Wyoming State Veterinary Laboratory (WSVL) facilities on November 19 marks the beginning of a new era and new capabilities for the University of Wyoming, notes **Don Montgomery**, professor and head of the department.

A project that began with design planning in spring 2007, which included a biosafety level-3 (BSL-3) laboratory, is now close to reality. Faculty and staff members of the department and the WSVL view the state of Wyoming's \$24.9 million investment as a vote of confidence that excellence in the diagnosis of animal disease and research on diseases that occur at the interface between wildlife and domestic animals will continue and progress, notes Montgomery. The new facilities will allow this work to be conducted in a safe, secure, environmentally conscious, and efficient manner.



*Professor and Department Head
Don Montgomery*

Wyoming is home to many diseases that affect diverse animal populations and include several that can be transmitted from animals to humans. Included among these are brucellosis, plague, tularemia, and Q-fever. It has been decades since anthrax was last diagnosed in Wyoming, but outbreaks have occurred in neighboring states as recently as this year. Diagnostics and research with these pathogens must be done in the safe and secure environment of a BSL-3 laboratory. Elk and bison in the Greater Yellowstone Area represent the last reservoir of brucellosis in the United States. As recent cases in Park County illustrate, this potential source of infection and the threat of exposure to domestic cattle will persist for years to come, underscoring the importance of this facility for conducting diagnostics and research, he says.

Along with completion of the new facility come added responsibilities and challenges that we take seriously, says Montgom-

ery. One major responsibility and certainly a challenge will be to work toward certification from the Centers for Disease Control to operate the new facility as a BSL-3 select-agent laboratory.

"This effort will take teamwork and will involve several individuals from the department and the university to get certification accomplished over the next few months," says Montgomery.

AGRICULTURAL EXPERIMENT STATION

Fall was extremely busy for the Wyoming Agricultural Experiment Station (AES). The AES office administers two competitive grant programs during this time: the Global Perspectives Grants and the Agricultural Experiment Station Competitive Research Grants. The office received 15 Global Perspectives Grant applications and 19 competitive research grants. Both grant programs require a great deal of coordination because the grants undergo a fairly stringent review process, says **Bret Hess**, associate dean and director of AES.

The AES office also has been engaged in planning efforts for all of the research and extension (R&E) centers, including the James C. Hageman Sustainable Agriculture R&E Center near Lingle, Laramie R&E Center, Powell R&E Center, Sheridan R&E Center, and the Rogers Research Site near Fletcher Park.

PROGRAM NOTES



AES Director Bret Hess



Tory Mobley



Jerrica Lind



Whitney Stewart

This fall also marked the first-ever call for nominations for the Agricultural Experiment Station Outstanding Research Award and the Agricultural Experiment Station Early Career Research Achievement Award. Winners will be announced at the first R&E center planning conference banquet February 23. Organizing the R&E center planning conference is yet another activity that occurs during the fall.

Lastly, the AES office has been working closely with the college's Office of Academic and Student Programs to deliver a series of training workshops to provide timely information to college professionals – the Timely Topics training series.

"Many AES activities would not be accomplished if not for the devotion of the people we call upon for assistance," notes Hess. "Thus, the AES office wishes to express its sincere appreciation to all of those who assist with our activities. The AES office anxiously awaits spring and summer to see the many fruits of all our labors."

COOPERATIVE EXTENSION SERVICE

Tory Vanderpool Mobley began October 29 as the half-time 4-H educator in Weston County. Mobley is a December 2009 graduate of Black Hills State University in Spearfish, South Dakota, with a bachelor's degree in education. Mobley has been working in a temporary part-time 4-H position in Weston County since February. Tory grew up on a ranch in Idaho and brings strong organizational skills to the program.

Jerrica Lind began November 29 as the 4-H youth educator for Sheridan County. Lind is a May 2010 graduate of Montana State University (MSU) in Bozeman with a bachelor's degree in agricultural education. A Montana native, Lind brings a strong 4-H background; she completed a 4-H internship in Yellowstone County, Billings, Montana, and also worked in the MSU state 4-H office under the state program leader facilitating a survey about the program.

Jennifer Anderson started November 15 in a new position as the Sublette County 4-H afterschool coordinator, providing leadership for a program started by Sublette County 4-H educator Robin Schamber. The program provides supplemental/recreational enrichment activities for Sublette County elementary students through an afterschool program that provides education in life skills, leadership, civics, and healthy lifestyles. Anderson has a bachelor's degree in agricultural education – extension from Montana State University. This position is funded through the University of Wyoming Cooperative Extension Service, Sublette County Partnership, and Sublette County.

Whitney (Whit) Stewart began January 10 as the Northeast Area profitable and sustainable agricultural systems educator. Stewart is a December 2010 graduate of Oregon State University in Corvallis, Oregon, with a master's degree in animal science. This position will be



Jennifer Anderson

based in Gillette and serves Campbell, Crook, Johnson, Sheridan, and Weston counties. He has a bachelor's degree in agricultural education from Brigham Young University-Idaho in Rexburg, Idaho. He is fluent in Spanish and English.

ACADEMIC AND STUDENT PROGRAMS

The Discovery Days program at the University of Wyoming now offers potential students another way to discover what UW – and the College

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*Associate Dean
Jim Wangberg*

of programs and majors students can pursue at UW.

At the event November 13, students also had the opportunity to participate in an interactive session, three of which were hosted by departments in the College of Agriculture and Natural Resources.

"We wanted to give students the chance to see the broad spectrum of programs available, so we offered an assortment of experiences from different programs," notes Wangberg. Some students chose to tour the Wyoming State Veterinary Laboratory, including the new BSL-3 portion, with Professor **Don Montgomery**, chair of the Department of Veterinary Sciences. Another group participated in a game theory experiment led by Assistant Professor **Mariah Ehmke** from the Department of Agricultural and Applied Economics. A third group took a tour of the facilities available in the Department of

Family and Consumer Sciences with Professor **Donna Brown**, department chair, and other FCS faculty members, learning about the opportunities in food and human nutrition, textiles and merchandising, and human development and family sciences.

"These unique experiences allow students to get a taste of the type of work they might be doing as a college student," says Wangberg. "They really highlight the hands-on nature of many of the courses offered through our college."

Future Discovery Days events will include interactive sessions hosted by different departments within the college.

"We look forward to helping our future students discover the wealth of opportunities in our college," says Wangberg.



*Director of College Relations
Anne Leonard*

of Agriculture and Natural Resources – has to offer, notes **Jim Wangberg**, associate dean and director of the office.

Discovery Days are group visits offered on select Saturdays throughout the year. Potential students attend a resource fair, a "nuts and bolts" session that gives students an overview of university life, and an academic session hosted by the various colleges that details the variety

COLLEGE RELATIONS

The WyoAlumni program sponsored by the UW Center for Advising and Career Services that links alumni with potential employers was highlighted in the fall *Ag News*. Over the past year, various partners within the university have been working to expand the on-line services available to alumni, notes **Anne**



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Leonard, director of College Relations. Last October saw the launch of the new on-line alumni community. Toby Marlett of the UW Foundation, one of the coordinators for this project, provided the information below. "I encourage you to spend some time browsing the new WyoAlumni community," says Leonard. This October also saw the launch of a redesigned UW website. This campus-wide effort hopes to streamline the Web pages, increase the ease of navigation, and reduce end users' search time. "This is certainly a work in progress, and, if you have suggestions, please contact me at agrdean@uwyo.edu," she notes.

The University of Wyoming launched a new online community and social networking tool October 11 to connect alumni, friends, and donors with UW. It's called WyoAlumni, and it provides enhanced social and career networking, an interactive alumni directory, event management,

and secure e-commerce for membership renewals and online donations. To learn more about WyoAlumni, visit <http://wyo-alumni.uwyo.edu>.

It's a powerful tool.

- You can lookup old friends and make new ones.
- You can see what your graduating class is up to these days.
- You can message or chat or post photos.
- You can network for your job or with the people you serve.
- You can get the word out on things that are important to you.
- You can set up an event and invite people to attend and manage RSVPs and coordinate details.
- You can arrange a visit to campus or get involved.

And much more.

UW is partnering with iModules Software, a Kansas City-based company that builds Web-based software, to manage online communities. Several campus partners, including the university colleges, are providing funding for the product, and people from across campus are involved, including the UW Alumni Association, UW Foundation, IT, Registrar's Office, Center for Advising and Career Services, Admissions, Student Affairs, Institutional Marketing, and the colleges and units.

This engaging online community will allow alumni, donors, and friends to link with their Wyoming friends and feel even more connected to their UW roots.

For more information, contact the UW Foundation at (888) 831-7795 or foundation@uwyo.edu, or the UW Alumni Association at (307) 766-4166 or uwalumni@uwyo.edu.