Associate Professor Jay Gatlin scores a first not only for the College of Agriculture and Natural Resources but also for the University of Wyoming.

SEE STORY PAGE 5
Dear Friends and Colleagues,

May 8, 1914: On this day the Smith-Lever Act was signed providing funding for the Cooperative Agriculture Extension System – a system we know today in our state as the University of Wyoming Extension. Through “field demonstrations, publications, and otherwise ...” the act cemented a partnership between the United States Department of Agriculture, land-grant universities, and citizens (through county partnerships).

This national network of local-level experts is connected to each state’s land-grant university. Extension programs provide agricultural, natural resource management, community development, youth leadership, and food and nutrition information to citizens in every state. This is an impressive information network and an impressive accomplishment.

Today, smartphones, apps, and readily available Internet makes accessing extension programs easier than at any time in our past. The 100-year history of extension spans changes to our society of which few in 1914 could have dreamed. The percent of Americans living in rural areas has shifted from 50 percent in 1914 to 19.3 percent in 2010. Some readers might ask, “Is extension redundant?” The answer is no.

Throughout its 100-year history, extension system educational programs have adapted to include new technology, focus areas, and up-to-date research methods; however, the underlying principle remains – bring practical information on existing or improved practices and technologies to the public.

Unlike random Internet searches to most inquiries that may produce accurate, questionable, or perhaps entirely incorrect answers, information in extension program bulletins is backed by sound research and is compiled (and reviewed) by experts in that field. It is information consumers can trust. I encourage you to look at UW’s extension publications and those from other states. The range of topics is incredible. Examples include personal financial literacy, energy efficiency assessments, noxious plant controls, food safety precautions for hunters, and a series of short videos answering the question, “What should I plant when it comes to pasture and rangeland grasses?”

UW Extension together with the American Heritage Center at UW compiled an entertaining and informative exhibit highlighting the first 100 years of extension programs in Wyoming. Some of you may have seen the exhibit at the Wyoming State Fair and Rodeo, Ag Appreciation Weekend in Laramie, or while it was in Casper, Powell, or another community. It is a wonderful exhibit containing historical photos and information about extension programs past and present and will continue to travel to other Wyoming communities this fall and winter. You can also view the exhibit on-line at http://wyoextension.org/centennial.

This issue of Ag News also highlights this year’s recipients of our Outstanding Alumni awards, Brad Boner and Joel Bousman; Legacy Award, Bill Baker; Research/Outreach Partner of the Year, the Wyoming Stock Growers Association; and the Andrew Vanvig Distinguished Faculty Lifetime Achievement Award, Professor Don Jarvis. Many of you know one or both of our alumni honorees, are members of the Wyoming Stock Growers Association, have read about Professor Don Jarvis’ work in UWyo Magazine and Ag News, or have benefitted from a scholarship similar to the one created by Legacy Award winner Bill Baker of Saratoga. Alumni, friends, advocates of the college, and donors to our programs are what help make this college exceptional. If you are on campus this fall, please take a minute to look at the banners placed around Prexy’s Pasture. The one in front of the College of Agriculture and Natural Resources features Rachel Watson, a faculty member and winner of numerous teaching awards. The banner reads “Students, the reason we’re here.”

Whether the students are in a classroom in Laramie, participating in an extension program somewhere in Wyoming, or learning a new technique by watching a UW Extension YouTube video, the message is still the same. Students are the reason we are here.
HEITHOLT NEW HEAD OF PLANT SCIENCES DEPARTMENT

A plant scientist with years of experience teaching students and conducting studies at research and extension centers is the new head of the Department of Plant Sciences.

Jim Heitholt left his crop physiology position with Texas A&M University – Commerce and joined the college in August.

“The appointment is a very exciting time for me personally,” says Heitholt, who was a professor in the Department of Agricultural Sciences with Texas A&M University – Commerce, who also had a joint appointment in the Department of Soil and Crop Sciences at College Station.

“I am extremely grateful for this opportunity and intend to serve the students, faculty, staff, and college leadership and stakeholders as wisely and enthusiastically as I possibly can,” he says.

Bret Hess, associate dean of research in the college, served as one of two interim department heads during the search to fill the position.

“I am excited to have an opportunity to work with Professor Heitholt,” notes Hess, who is also director of the Wyoming Agricultural Experiment Station (AES) in the college. The AES, in addition to other responsibilities, directs four research and extension (R&E) centers in Wyoming.

“He brings a wealth of experience and a comprehensive understanding of the land-grant mission to the Department of Plant Sciences,” says Hess. “I believe he is poised to continue the department’s and college’s commitment to research, teaching, extension, and community outreach.”

Heitholt coordinated teaching, service, and research activities while head of the Department of Agricultural Sciences at Commerce prior to returning to the faculty this year. He received his undergraduate and graduate degrees in agronomy from Western Illinois University and the University of Missouri, respectively, and his doctorate in crop science from the University of Kentucky.

Heitholt’s research specialty in recent years is screening genotypes for drought and insect tolerance and studying the yield potential of vegetable crops.

He has also taught for many years, and said he is passionate about teaching the next generation of plant scientists, contributing to the need of an abundant and secure food supply, and encouraging sustainable practices.

Plant sciences department head Jim Heitholt, left, visits with Assistant Professor Brian Mealor during the open house at the James C. Hageman Sustainable Agriculture Research and Extension Center in August.

He and his wife, Debby, have one son, one daughter, one daughter-in-law and identical-twin granddaughters.

He brings a wealth of experience and a comprehensive understanding of the land-grant mission to the Department of Plant Sciences.”

Bret Hess
Agricultural Experiment Station Director
WILLIAMS SERVES AS INTERIM UNIVERSITY ASSESSMENT SPECIALIST

Longtime faculty member and administrator Karen Williams will serve as the University of Wyoming interim university assessment specialist until June 30, 2015.

A professor of human development and family sciences and former head of the Department of Family and Consumer Sciences, Williams will work with the Assessment Coordinators Committee to develop and maintain several projects, including designing an assessment plan for USP (University Studies Program) 2015. “I look forward to working with everyone on assessment. It gives me the opportunity to work with great folks across campus, and to really link my passion for teaching and learning to assessment, really why assessment matters,” Williams says.

The USP plan will be central to UW’s accreditation and the improvement of teaching and learning at the university.

“We are very fortunate that someone of Karen Williams’ stature and experience is willing to step in and support a range of important initiatives in the wake of Erika Prager’s departure,” says Alyson Hagy, associate vice president for academic affairs. “While Prager will still be involved in UW’s assessment efforts, Williams will be the campus contact for deans, department heads, and faculty members who seek support for their critical assessment efforts.”

Williams earned a bachelor of arts degree in English from the University of Illinois; a bachelor of science from UW in home economics in family and community education services; a master’s from Pacific Oaks College in human development and developmental education; and a Ph.D. from UW in curriculum and instruction.

She directs the online Bachelor of Applied Science program in Organizational Leadership. She has taught infants and toddlers, preschoolers, junior high and high school students, as well as college students and other adult learners. She has 40 years of teaching experience, 17 in distance education.

Her research centers on distance education pedagogy, diversity, assessment, and preservice teacher preparation. Williams was the 2011 TIE (Technology in Education) faculty fellow for the UW Outreach School, and has received the Outstanding Educator Award from the College of Agriculture and Natural Resources and the 2012 Western Regional Teaching Award from the USDA.

READY FOR THE NEXT 100 YEARS

UW President Dick McGinity, College of Agriculture and Natural Resources Dean Frank Galey, and Glen Whipple, UW Extension director, were among those attending UW Extension’s 100th anniversary reception at the Wyoming State Fair and Rodeo. The traveling exhibit capturing 100 years of extension in Wyoming was displayed all week at the fair. The displays featured, through photographs, touch-screen computers, and life-size boards, extension’s engagement with citizens since 1913. The exhibit received the Outstanding Educational Exhibit Award in commercial exhibits on behalf of the F.A.I.R. Posse. The posse is a self-supporting, non-profit organization that promotes Wyoming State Fair Park activities.
Jay Gatlin has been named a 2014 Pew Scholar, marking the first time a University of Wyoming faculty member has received this prestigious award.

Gatlin, an assistant professor in the Department of Molecular Biology, is among 22 selected Pew Scholars nationally. The grant award for each is $240,000, or $60,000 per year for a four-year period.

Gatlin says the funding will be used to conduct further research on mitotic spindle assembly. Last November, Gatlin and John Oakey, a UW assistant professor of chemical and petroleum engineering, published a paper in Science, recognized as one of the world’s top scientific journals.

**Studies Mitotic Spindle**

The research focused specifically on how the mitotic spindle scales with changes in cell size. Mitotic spindles are protein-based machines assembled in cells to accurately segregate their chromosomes during division. If the process of building a spindle goes awry, it can result in daughter cells with an incorrect number of chromosomes (called aneuploidy), a condition that has been linked to birth defects and cancer.

“Our research showed that, as the size of the cell in which a spindle is gets smaller, so does the spindle, suggesting that some building block required to make a spindle becomes limiting. If you don't have enough of what that building block might be, you can't build a spindle of the correct size,” Gatlin says. “Now, we're trying to identify the limiting component or components.”

“We found some biomolecule or protein to regulate spindle size. If you don't have enough (of these proteins), you can't grow the spindle size,” he adds. “Now, we're trying to figure out what that component might be. We're conducting biochemical experiments to identify that limiting component.”

The Pew Scholars Program in the Biomedical Sciences provides funding to young investigators of outstanding promise in science relevant to the advancement of human health. Launched in 1985, the program makes grants to selected academic institutions to support the independent research of outstanding individuals who are in their first few years of their appointment at the assistant professor level.

**Pew Eligibility**

The Pew funding will cover salaries for a post-doctoral fellow or several graduate students, as well as the chemicals and supplies for the research, Gatlin says.

“You are only eligible for a Pew within your first three years of being an assistant professor,” Gatlin says. “I just got in under the deadline.”

The Pew Scholar award is the latest for Gatlin, who recently received the Early Career Achievement Award from the Wyoming Agricultural Experiment Station (AES) at UW.

Gatlin received his doctorate in cell and molecular biology from the University of Colorado Anschutz Medical Campus in 2005 and was a post-doctoral fellow at the University of North Carolina-Chapel Hill until 2010.

He joined UW in 2010. In 2012, he received two National Institutes of Health grants totaling more than $1.6 million and, in 2013, he was awarded a Whitman Research Fellowship. The award paid for Gatlin and doctoral student James Hazel to conduct summer research at the Whitman Center at the Marine Biological Laboratories in Woods Hole, Massachusetts.

For the scholars’ full abstracts and more information about the program, visit www.pewtrusts.org/projects/pew-biomedical-scholars/.
Joel Bousman may have earned a bachelor’s degree in agricultural economics, but it’s his communication, leadership, and advocacy skills being acknowledged most as he receives the College of Agriculture and Natural Resources’ 2014 Outstanding Alumni Award.

Generations of Bousmans have worked the Boulder-area land his family still operates. He decided to leave his Sublette County home after high school to attend the University of Wyoming, which he fondly refers to as “the university,” and commission as an Army ROTC officer.

He focused on farm and ranch management.

“My idea at the time when I was in college was to learn the business skills and that sort of thing that I would need to be successful ranching,” he says.

Life Changes Course

His dream had been to return to Boulder to ranch, but his course changed direction again after serving in the military.

“My father impressed on me – he was active and served on the school board, he served time as the county commissioner – he impressed on the entire family the need for public service,” he recalls. “So, partly based on that and partly based on my prior experience, I did the school board route and now I’m running for my third term as (Sublette) County Commissioner.”

Coke Landers, president of the Green River Valley Cattlemen’s Association, described Bousman as, “A strong leader in each and every one of his peer groups,” and went on to say, “Mr. Bousman is recognized and sought out for his expertise in public lands issues. A powerful spokesman for the ranching industry …”

The Wyoming Stock Growers Association states, “Without hesitation the public land-dependent livestock industry is stronger today due to Joel Bousman’s leadership.”

Cites High School, FFA

Bousman credits much of his success to the strong foundation of public speaking and social interaction during his youth. He shared his own accolades for former Pinedale High School teacher Tom Davidson, who wrote in support of his former student’s nomination for the alumni award.

“I graduated in 1966, but Tom was my adviser for four years in high school. I had a great deal of respect for him,” Bousman says. “There’s no question that had a lot to do with it because the leadership skills you learn in FFA during that stage of your life set the stage for realizing the necessity to communicate. Tom was adamant back in those days that we as FFA students participate in public speaking contests year after year.”

His communication and problem solving skills, coupled with his passion for Wyoming’s agricultural and public land…

A strong leader in each and every one of his peer groups, Mr. Bousman is recognized and sought out for his expertise in public lands issues. A powerful spokesman for the ranching industry …

Coke Landers
Green River Valley Cattlemen’s Association
issues, led to a myriad of involvement and accomplishments including but not limited to:

- Public Lands Committee member of the National Association of County Officers,
- Wyoming County Commissioners Association,
- Western States County Commissioners Coalition of Local Governments,
- Wyoming Stock Growers Association,
- Green River Valley Cattlemen's Association,
- Sublette County Conservation District Board of Supervisors,
- 2005 Wyoming Game and Fish Department Pacesetter Award
- 2003 Wyoming Stock Growers Association Environmental Stewardship Award
- Member of the Wyoming Sage Grouse Conservation Planning Committee
- Active member of the Wyoming Public Lands Coalition and National Public Lands Council

“I have testified several times before Congress – before committees, the House Natural Resource Committee, the Senate Public Lands Committee,” says Bousman. “I guess a lot of that ability to do that goes clear back to high school and what we learned in public speaking and FFA – it’s not something to be afraid of. It’s something that you approach with the concept of how can you be the most effective.”

**Strong Collaboration Advocate**

Bousman maintains that local, state, and federal governments’ partnerships and collaboration is what is best for the land and the people dependent upon it.

“One of the things I feel really good about – working a lot with the university and with the state government – is how county commissioners can be effective in helping to maintain the multiple use cultures of our rural communities – the different activities that occur especially in our public lands counties,” he explains. “It involves working with the Forest Service and BLM to maintain public lands, grazing for example, understanding that and understanding the role that local government can play and taking maximum advantage of that role and coordinating with state government with resources through the university.”

Bousman is continually called upon to voice his opinion, share insight, and problem solve. He says whenever he is asked for advice he always provides insight from how he sees “it on the ground – at ground level.” The ground level is where his priorities are heading to next.

As an elected official, Bousman intends to work closely with the governor’s office to further incorporate state and local governments with management of public lands. He cited hopes of involving the Wyoming Department of Agriculture and the university into the plans.

“The concept being that the best decisions are made at the local level with people working together on the ground who recognize what is truly happening on the ground, and making decisions that will benefit the land and the natural resource providers.”

The Bousman’s grazing allotment came under scrutiny by the Forest Service in the 1990s. Joel Bousman’s collaborative, problem-solving skills that created a partnership between federal agencies and the university not only saved the ranch’s grazing area, but also laid the path for other ranchers and agencies to follow across the West.

“We put together an initiative that actually trained the ranchers as well as the Forest Service range staff on how to monitor the impacts of grazing on public lands and furthered that effort,” he says.

An active member of the Public Lands Council at the time, Bousman volunteered to chair a monitoring committee, which had promising results – memorandums of understanding with both the BLM and the Forest Service.

“(The memorandums) provided for the voluntary cooperative rangeland monitoring program that was officially recognized by both federal agencies and was made available to grazing permitees throughout the West,” he says. “It’s been fairly successful in different states across the West, and the university played a huge role in that.”

OUTSTANDING ALUMNI
Progressive efforts help establish lamb market

Frustrated by sheep market, agricultural business graduate and others take control of their market destiny

The steep, downward sloping chart showing Wyoming breeding sheep inventory from 1965 to present looks like a side view of an Olympic ski jumping venue.

Sheep ranchers would probably use other, more descriptive words, but the past 50 years has been gruesome. In the 1990s alone, the USDA estimates more than 40 percent left the business.

Brad Boner joined his father on their Glenrock-area ranch after he graduated from UW in 1982 armed with his passion for livestock production. One-third of the stock on the ranch is Angus, and the rest are Rambouillet and Targhee sheep. He is the sixth generation to live in Converse County on his mother’s side.

Cooperate for Cooperative

Passion alone doesn’t produce profits. He and other producers made a bold move in 2001 – laying the groundwork for the Mountain States Lamb Cooperative.

Boner is one of two Outstanding Alumni Award recipients from the college. One of his nominators, Bob Kidd, says Boner was co-founder of the lamb cooperative group, but Boner is self-deprecating about his involvement.

“Desperate people do desperate things,” Boner says now. “We just got to the point in the sheep industry it was becoming apparent if we didn’t change, our kids, even if they wanted to, couldn’t become sheep producers. There was a core group of us that decided we had to do something. We weren’t sure what when we started, but we dived into it. As fate would have it, with perseverance and good luck, it worked.”

From meager beginnings – the concept started on a bar napkin – the cooperative now markets 250,000 lambs annually through their processing and marketing company in the Bronx. The co-op has members from 13 western states.

“It wasn’t one person but a great core group of us that put in a lot of time and effort,” Boner says.

Outside Comfort Zone

The group’s first meeting was on the Wyoming state fair grounds before the state ram sale.

INDUSTRY INVOLVEMENT RUNS STRONG IN BLOODLINE

Outstanding Alumni Award recipient Brad Boner makes no bones about it — getting involved in professional organizations is important.

The Outstanding Alumni Award recipient belongs to several producer organizations — and credits his family for being able to do so.

“It was ingrained in me that every person owes blood, sweat, and tears to their livelihood and to the associations that help us so we can have a livelihood,” he says.

“I’m blessed to work with my family every day,” he notes. “That has allowed me a little latitude. They pick up the slack sometimes. Without them, it probably would be impossible.”

Groups include the Mountain States Lamb Cooperative (see related story), the Wyoming Wool Growers Association, American Sheep Industry Lamb Council, the Wyoming Angus Association, and the Wyoming Livestock Genetics Association.

That last group is dedicated to the enhancement of marketing and promotion of purebred cattle throughout Wyoming. The association is collaborating with producers in Argentina, with efforts expected to augment U.S. lines.

Such efforts do not aid the competition, he says.

“We’re in a worldwide market place,” says Boner, the group’s vice president. “Our goal is to always improve.”

Brad Boner and Katie Keith
Sheep ranchers who helped create the Mountain States Lamb Cooperative (see related story) pushed themselves into new, perhaps uncomfortable roles — selling themselves and their product, public speaking, banding together.

All meant to improve sales and educate the public about their products and livelihood.

“A lot of times, ag is presented as take, take, take,” says Brad Boner. “Nothing could be further from the truth. We give to our land and livestock and yes, we have to making a living, but all the people I know in agriculture are way more worried about giving something back and leaving things better than they found it.”

Getting that message out and having people understand is harder than agriculture’s opponents spinning misinformation, he says.

Society moves rapidly and people want sound bites or quick images, and emotional statements are more easily believed than providing facts, says Boner. Most people don’t want to spend the time looking into the facts.

“Opponents only have to say something — they don’t have to prove it, he says. “What they say in a few words may take us a year and half to prove them wrong. We’ve been successful in proving them wrong,” says Boner. “It just takes more time.”

Websites, blogs, Twitter, Facebook — all provide opportunities to engage, he notes.

“A positive thing we have now is food is trendy,” says Boner. “We have a window of opportunity to get in there and get their ear. You can work that in and educate the consumers a little bit, which is huge.”
and some are very risk-averse. Venturing into the unknown is difficult.

“The way we did it, we did sort out those most progressive people out there,” he says. “That’s been a very interesting group to work with. They are very willing to change and to try new things. It was a natural selection process of the most progressive producers.”

Process to Establishment

About 124 families from 10 western states were recruited. In 2003, Mountain States bought a half interest in B. Rosen and Sons, a lamb processor and distribution company in the Bronx, New York. The entire company was then bought in 2008. That same year, the company was joined by a veal industry business – Formula One.

The move allowed vertical integration – animals are controlled from birth through the slaughter process.

Some of those producers who initially resisted later joined. Others did not.

“Most ag producers are pretty independent and humble by nature,” says Boner, who works with his two brothers, Rob and Jeff, and their father, Bob. He and his wife, Laurie, have three children – Braden, Meghan, and Ryan.

Many have a real hard time bragging about what they do. When they grew up, it was just something you were expected to do, and not to get accolades. To get out there and sell yourself is hard for producers to do.”

They’re getting better, though.

“It is just hard. It’s not in our DNA,” says Boner.

Vanvig Faculty Achievement

Those migrating the digital highway to Don Jarvis’ molecular biology faculty website will spot him sporting a blue baseball cap next to a sparse, five-link box to his right.

Such simplicity contradicts the academic performance and personal expectations of this year’s recipient of the Andrew Vanvig Lifetime Distinguished Faculty Achievement Award.

To wit:

- 79 primary author peer-reviewed papers, 29 reviews and book chapters
- 40-plus grants
- Two start-up biotechnology companies
- 12 patents
- 10 graduate students

“Part of the reason Don has enjoyed such a high level of funding success is the quality and impact of his science,” wrote fellow molecular biology Professor David Fay when Jarvis received the George Duke Humphrey Distinguished Faculty Award last year. The award is the highest honor a faculty member at UW can receive. “But it also has much to do with Don’s work ethic. Don continues to work with the urgency of a first-year assistant professor who has yet to land their first grant.”

Efforts Create Company

Jarvis was recipient of the Wyoming Agricultural Experiment Station Researcher of the Year Award in 2012 and was selected to give the 2012 President’s Speaker Series Talk. In 2011, he had formed GlycoBac with former UW student Christoph Geisler. The company works to produce glycoprotein drugs using insect cells. To visit Jarvis’ homepage, see http://bit.ly/donjarvis.

Since its inception, GlycoBac has had four Small Business Innovation Research proposals awarded by the National Institutes of Health with total support of over $1.4 million to support efforts to develop new platforms for manufacturing biotechnology products.

Jarvis joined UW in 1998 from Texas A&M University as an associate professor with tenure and became a full professor in 2000.

“His work spans virology, glycobiology and biotechnology, and he enjoys an international reputation in these areas,” says Associate Professor Mark Stayton, head of the Department of Molecular Biology.

Blue-collar Pedigree

That blue cap perhaps symbolizing blue-collar is fitting. His parents – father a welder with Electric Boat Co. (No motorboat business – they build submarines for the U.S. Navy), his mother sorting potatoes in one of Idaho’s many potato packing

“I was lucky to land in the world of virology. It really turned and continues to turn my crank.”

– Don Jarvis
plants – wanted to boost him from such work and so emphasized education. His father made clear Jarvis needed to stay in school for a better life.

A lot of his father’s friends were first-generation Americans.

“Boy, they were hard on me,” recalled Jarvis when he looked back on his career in 2012. “I remember many of those guys telling me, “I better not see you here anytime but summertime, or you’ll have to deal with me.”

His first-semester college flirtation with becoming an accountant ended with him leaving school and driving a logging truck for nine months – then returned to school and took a microbiology course. He’s really never left.

Mentors and professors were vigorous and demanding, which helped cement career habits. The work ethic left a mark on him as surely as the Nautilus, the first atomic submarine, wears his mother’s name, Nancy, welded by his father between bulkheads. Mamie Eisenhower slapped the boat with champagne as it slid down the ways to the river January 21, 1954. It is now moored on the Thames River in Groton, Connecticut, as part of the Submarine Force Museum.

Academic Career Path

Jarvis earned his bachelor’s and master’s degrees at Idaho State University and his Ph.D. in virology at Baylor College of Medicine.

When he entered Baylor, “I felt I walked in ready and able to compete with anyone in that school, who were among the best in the country,” he recalls. “I certainly was not in that peer group at the time. But, I had the work ethic developed by my family and undergrad and master’s professors. A good work ethic has always been a strength for me, and that’s driven not only by other people but by a basic interest in doing science. I was lucky to land in the world of virology. It really turned and continues to turn my crank.”

Jarvis also teaches in the department and, for his first 13 years at UW, in the Wyoming, Washington, Alaska, Montana, and Idaho Medical Education Program. He developed and still teaches a required course in the graduate program “which is, in essence, a “boot-camp” in scientific thinking and communication,” says Stayton.

Jarvis sets the highest standards of any instructor Fay knows, and pushes the students hard and extracts the best from them.

Adds fellow Professor Peter Thorsness, “I believe that if you were to ask any scientist for their ideal career arc, they would describe one that resembles Don’s – make important discoveries that push forward the frontiers of science and use that knowledge to improve the human condition.”
Most evenings you’ll find Bill Baker sitting in front of his Saratoga apartment basking from the warmth of the chiminea glowing with fire.

The retired Air Force lieutenant colonel, former Halliburton recruiter, and college assistant dean has a great view of the playing fields across Bridge Street to watch evening competition play out.

This year’s Legacy Award recipient, Baker and his wife, Jeannette, who died in August last year, established the Bill and Jeannette Baker Agriculture Scholarship.

Farm to Air Back to Country

The green fields of play brings Baker’s life full circle from an Air Force career and work with Halliburton back to his agricultural beginnings before he left his little hometown of Dickson, Tennessee. Head southwest of Nashville on I-40 for 36 miles to TN-46, turn north, drive five miles and you’ll arrive.

His grandparents and favorite aunt and uncle had farms there. “In my early years, I spent as much time as I could there,” he recalls. There was a small dairy farm, and his uncle raised hay, calves, and pigs.

“When I was first old enough to hand milk a cow or after that to harness a mule and hitch him to a scratcher plow and plow a straight line – those were two really big things, and I was quite concerned with becoming a farmer,” says Baker. “When I got to where I could also pick up a 100-pound sack of feed, I knew then I was a big boy.”

His family would move to Clarksville, about 30 miles away, where his father would open a barbershop, but anytime Baker had time off from school or during summers, you’d find him back at the farm.

“We need you to start working with the home demonstration agent, the county agent, and soil conservation people,” Baker recalls they said. “I got to know a lot of people involved in agriculture, not just those, but the farmers and ranchers. It was just a very good time to develop an interest in agriculture.”

Always Continues Education

He melded his Air Force service with education – he’d take classes at night while teaching at the ROTC program at Michigan State to earn a foundations in education degree. After he retired in 1972, he had made contacts that landed him as assistant dean of admissions at Texas Tech University. And like in Michigan, he took classes at night and earned his agricultural economics degree. That led him to later be recruited by Halliburton.

The oil services group wanted him to recruit college graduates to work as engineers.

“I remember he told me you can have the best job we can imagine and we’ll give you $1.5 million (budget) a year to go to those engineering schools you think would have the kinds of graduates we’d like to have. There was a nice pay raise and a damn good job,” he says, and again laughs.

He visited land-grant universities, including UW, “because a lot of those had first-time college grads. I could usually hire an agricultural engineer,” he says. “Production companies wanted chemical engineers, petroleum engineers to work in

(Continued on page 20)
Bill Baker, 84, sat in his rocking chair in his Saratoga living room after completing the story interview. A handwritten note from President Harry Truman graced an image of a painting on one wall. A Gerald Ford golf tournament watch was nestled somewhere, and examples of flies he tied for President Jimmy Carter (and which Carter used during a fishing trip in Colorado) were probably hiding out somewhere in his collections.

“Now I have a question for you,” this year’s Legacy Award recipient said. Baker, along with the other college award recipients, were to be honored at the dean’s dinner and on the football field of the UW-Florida Atlantic football game September 20.

“The Department of Defense asked two or three years ago for veterans or retired veterans to begin to wear their medals or their ribbons on Memorial Day, the Fourth July, Veterans Day, and special occasions,” the 20-year Air Force veteran said. “This is going to be a very special occasion for me, but I don’t want to look like I’m showboating. Do you think it would be all right if I wore them?”

Becoming Country Strong

The question from the survivor of 739 combat missions in Korea and Vietnam was sincere. The boy from small town Clarksville, Tennessee, brimmed with pride when he was finally able to harness a mule team on his uncle’s farm, plow a straight line, milk a cow, and toss a 100-pound feed sack over his shoulder. He had joined the Air Force in 1951 and went to Korea in 1952. He would later go to Vietnam after completing an assignment at the Air Force Academy.

Pointing his F-94 up into the Korean skies, sometimes joined by another F-94, to check out the weather on top was absolutely delightful. And if joined by two F-80s they’d race, and that was just plain fun.

That was there. Flying the crowded East Coast upon his return from overseas, not so much, and he asked to transfer to Alaska.

The 200-mile long string of 63 radar stations – the Distant Early Warning (DEW) system – was being built above the Arctic Circle to warn of impending Soviet nuclear airstrikes. He’d take off from Fairbanks and fly to Nome and then roam the Bering Sea.

Usually not alone. “We’d fly up and down the Bering Sea, and we’d look into the eastern tip of Siberia, where there was nothing to see and we always had a shadow on our wingtip, either a Russian Badger or Bear,” he recalls. “They were doing the opposite. They were looking to the western edge of Alaska where there was nothing to see, either, but a little farther into Alaska they were building that early warning radar line.”

Vietnam Tour

Years later, flying became more dangerous. He’d flown fighters before, but in Vietnam he was navigator (his eyesight was not as strong as when younger) and sometimes pilot of C-130s. That’s where he got most of his combat missions. “The dangerous part of flying there was take-off and landing,” he recalls. “Because there was always a Charlie at one end of the runway or the other to catch you belly up going in or out.”

Later, Baker would rise out of his rocking chair and point out a photograph of a twisted mass of metal carried on a flatbed truck. That was the F-94 he crashed — and walked away from without a scratch.

Letter Surprises Baker

One more service-related story, and this one describes the roots of his giving to education.

“I guess I’ve tried since I was a young lieutenant to be generous,” he says. “I was sitting at my desk in Alaska in 1956 and in came a letter from a lady in Germany. It had been translated for her, and she said some money I had given to the Marshall Plan after World War II had been given to her. Her husband had been killed during the war, she had two children, and the German Mark was worth nothing. It was amazing somehow or other she got a gift from Lt. Bill Baker. It practically saved her life. That caused me to always try to be generous.”

Decide for yourself whether or not he should wear those medals on view to thousands on the Memorial Stadium Video Board.
Not many state associations can claim to dip their baby boots in pre-Wyoming Wyoming.

This year’s Outreach Partner Award recipient can.

Cattlemen organized the Wyoming Stock Growers Association April 4, 1872 – the first association in Wyoming Territory and the second cattlemen’s organization in the United States. The University of Wyoming wouldn’t open its doors until 1886, and that was only the doors on the Old Main building, which held classes, the library, and administrative offices the first years.

The College of Agriculture and Natural Resources didn’t come along until 1891.

The WSGA and college relationship has been beneficial since the college’s inception, says executive vice president Jim Magagna.

The WSGA was supportive of the creation of UW as a land-grant institution and recognized the crucial role the college of agriculture would play in the development of the livestock industry.

“I think that continues today,” Magagna notes. “Through research, through educating the majority of young people who end up back in our industry, and certainly through the interactions that take place on a daily basis with the extension personnel across the state. Our association places a high priority on our relationship with the College of Agriculture and Natural Resources and the university.”

Handle Old Challenges, Face New Ones

Cattle and sheep ranchers are now four and five generations deep in Wyoming and face some of the same problems – range condition, production – as those first ranchers, but there are new challenges.

“We are facing so many challenges to our use of public lands and resources, both from the environmental community and federal land agencies and others,” says Magagna. “We are engaged in a project with the Department of Ecosystem Science and Management to conduct surveys of producers to determine and demonstrate the importance of public lands to the ranching industry throughout Wyoming and the West. That’s going to have a huge benefit to us as an industry.”

That research will be conducted by master’s student Philip Lavallee in the department under the direction of Professor John Tanaka, head of the department.

The Wyoming State Veterinary Laboratory is an essential tool for cattle producers, he says, noting in particular brucellosis research and testing. The college has assisted sheep producers in the area of diseases, such as scrapie. The college is conducting research into ways sheep ranchers can anticipate and perhaps mitigate outbreaks of the cyclical disease bluetongue in sheep.

Skepticism Healthy

Not every idea from the college is openly embraced by all producers, “and we wouldn’t expect that,” says Magagna.

Certain things work for some depending upon resources and their philosophies.

“And certainly things have probably come out of the university that the industry and at times we as an organization looked at and said, “How is that helping us?” he says. “With the relationship as complex and intense between Wyoming agriculture and college of agriculture, I think that’s inevitable, and it’s healthy there is skepticism at times.”

Another challenge seems tougher to crack – communicating information to producers about useful research information from the college, including tools a producer could use and the applied research being conducted.

“Both the college and the organization work hard to deal with it,” he says. “There will always be room for improvement. We view it as important to help make the ranching community aware of what the university has to offer.”

The association publishes a quarterly magazine, a monthly newsletter, and a biweekly electronic newsletter while maintaining a website directed at producers. The college publishes magazines with research articles.

“The information is out there,” Magagna says. “Getting busy producers to take the time to study it and become aware of it is our ongoing challenge. Despite this being the information age, most farmers and ranchers are too busy to spend too many hours in a day to look at information. I don’t think there is a simple answer.”
Agricultural and Applied Economics

Associate Professor Dannele Peck received the Early Career Teaching Award from the Western Agricultural Economics Association. The award is presented to members with less than 10 years of teaching undergraduate students.

Peck’s areas of expertise include animal disease economics, natural resource economics, and agricultural production under uncertainty. Peck joined the department in 2006.

A paper from the Department of Agricultural and Applied Economics has received the Western Agricultural Economics Association’s Outstanding Published Research Award. The paper, “Committed Procurement in Privately Negotiated Markets: Evidence from Laboratory Markets,” was published in the American Journal of Agricultural Economics. The abstract is at http://bit.ly/2013agecon.

Authors are former graduate assistant Darlington Sabasi, Associate Professor Christopher Bastian, Professor Dale Menkhaus, all in the department, and Professor Owen Phillips in the Department of Economics and Finance at UW.

Ecosystem Science and Management

The summer has been fairly quiet in the department, notes John Tanaka, head of the department. Faculty and students have been in the field conducting their research or working at a variety of jobs.

Derek Scasta joined the department as the new rangeland extension specialist. Derek comes from his Ph.D. program at Oklahoma State University. He was a county extension agent in Texas prior to going back to graduate school. His research at Oklahoma State was on “Implications of pyric-herbivory on central North American grassland ecology, management and production.”

Sarah Kauer joined the staff in the front office as the department’s office associate. Sarah had served in a similar position for the dean of students at Sheridan College. She has an agricultural business degree from UW and was very involved in the Range Club when she was a student.

Professor Larry Munn is retiring after about 30 years at UW as one of our soil scientists. Most recently, he has been teaching our introductory soils and soil morphology and genesis courses. “Many students from across campus have had Larry as an instructor,” says Tanaka. “We are very sorry to lose his many years of experience across Wyoming and his very detailed knowledge of the Snowy Range Mountains.”

Paula Sircin has announced her retirement for early September. “Many of you who are recent alumni or friends of the department have worked with Paula. Paula has worked in our accounting office for about 12 years,” notes Tanaka. “We wish her the best as she moves to her next challenges.”

There are several new graduate students this fall. “Our graduate student numbers are staying constant at about 60 students,” says Tanaka. “At this point in time, our undergraduate numbers are in the mid-90s. We continue to update our rangeland ecology and watershed management curriculum to meet the future needs of employers. By all accounts, our students are sought by employers, and we want to ensure that remains the case.”
Family and Consumer Sciences

Associate Professor Enette Larson-Meyer received the Sports, Cardiovascular, and Wellness Nutrition (SCAN) Achievement Award. Larson-Meyer specializes in human nutrition and is director of the UW Nutrition and Exercise Laboratory. She joined the department in 2005.

SCAN is the largest practice group of the Academy of Nutrition and Dietetics.

The achievement award recognizes a SCAN practitioner who has played a significant role in the evolution of SCAN through service to SCAN and professional accomplishments in the field.

Emily Schroeder of Gillette was one of two outstanding senior award recipients from Gamma Sigma Delta, the international honor society of agriculture. Emily, who graduated in May, was also the outstanding junior the year before. Emily officially graduated in May. Her program area was textiles and merchandising with the apparel design minor.

Plant Sciences

The department continued to experience changes in the faculty ranks. We were most unfortunate to see one of our dear colleagues, Associate Professor Axel Garcia, extension irrigation specialist at the Powell Research and Extension Center, leave UW to continue his career with the University of Minnesota at the Southwest Research and Outreach Center in Lamerton, Minnesota.

Fortunately, the department was able to hire four faculty members. Assistant Professor Bill Stump, former research scientist in the department, began as the extension plant pathology specialist July 1. Bill’s office will be on campus where he will continue overseeing operations of the plant pathology laboratory.

Assistant Professor Gustavo Sbatella started work as the irrigated crop and weed management specialist July 31. Gustavo will base his program out of the Powell Research and Extension Center.

Rupesh Kariyat has been hired as the small grains agronomist/breeder. His start date has been delayed until the first part of December, and when he arrives, his office and laboratory will be at the James C. Hageman Sustainable Research and Extension Center near Lingle. Although each of these new faculty members will be based at a different location, each has statewide extension responsibilities.

Finally, the department is very excited to announce Professor Jim Heitholt officially took the reins from the college’s associate deans as department head August 18. The department is looking forward to the collective contributions from all four of its newest faculty members.

Veterinary Sciences

The department welcomes two new faculty members this fall, says Professor Will Laegreid, head of the department. Professor Holly Ernest joins us from the University of California at Davis. Holly is an Excellence Chair in Disease Ecology and brings a wealth of experience in use of genetic markers to evaluate population health. Her latest research includes the characterization of an avian poxvirus infecting hummingbirds and dynamics of urban mountain lion populations. She will be a collaborator in the Livestock-Wildlife Disease Center as well as continuing her personal research. Assistant Professor Kerry Sondgeroth recently completed her graduate studies and residency in microbiology at Washington State University. Her current work includes studies of babesiosis in cattle and Q-fever in goats. In addition to other duties, she will serve as a diagnostic microbiologist in the Wyoming State Veterinary Laboratory.

The department was host to Lindsey Branscom, this year’s recipient of the Kelly Palm Memorial Externship. Lindsey is a third-year veterinary student at Colorado State University and University of Wyoming graduate, who grew up on the family cattle ranch in northeastern Wyoming. She was able to combine her animal experience and veterinary training in helping to lead a diagnostic investigation into an outbreak of Brucella ovis on a Wyoming ranch. Brucella ovis is a bacteria that may cause an economically significant disease affecting primarily male sheep. Lindsey was able to visit the ranch, collect diagnostic samples, and perform post-mortem examinations on a number of rams. She determined the extent of the
outbreak and identified some possible sources for the infection.

Associate Professor Todd Cornish organized a workshop on wildlife disease field investigation and a short course on necropsy techniques for wildlife professionals at the 2014 meeting of the Wildlife Society, Central Mountains and Plans Section, in Sheridan. The course included lectures, demonstrations, and hands-on experience in the diagnosis of wildlife disease. Cornish was assisted by BreAnna Bonner, necropsy technician in the Wyoming State Veterinary Laboratory and veterinary sciences graduate students Melia DeVivo and Amy Williams. Also helping in the course were Wyoming Game and Fish Department biologists Terry Creekmore, Ben Wise, and Jeremy Brown, the latter two former UW veterinary sciences graduate students. A total of 25 people attended the course.

Academic and Student Programs

Fall is a busy time in the Office of Academic and Student Programs with two large events coordinated and scheduled by the office; the Ag Day Barbecue and the Brand of Excellence scholarship banquet, said Donna Brown, associate dean and office director.

The 32nd annual Ag Appreciation Day Barbecue was September 20 in the new Tailgate Park venue “Fan Fest” in the southwest corner of the Indoor Practice Facility. College of Agriculture and Natural Resources student organizations prepare and serve the meal.

“Proceeds provide a scholarship for one of our worthy students and help fund various activities for our student organizations,” notes Brown. “Sponsors include the College of Agriculture and Natural Resources, local businesses, agricultural groups, and individual donors.”

The College of Agriculture and Natural Resources Brand of Excellence scholarship banquet is Friday, October 31, at the Crane-Hill banquet room.

“This special event gives us a chance to recognize the college’s outstanding scholarship recipients and the college’s friends who make the scholarship program possible,” says Brown. “This event gives administrators and faculty and staff members the opportunity to congratulate our students on their outstanding achievements and thank our generous donors. The college awarded over 150 scholarships totaling more than $350,000 for the 2014-15 academic year.”

For more information about either of these events, please contact the office at (307) 766-4135.

Agricultural Experiment Station

All Wyoming Agricultural Experiment Station (AES) affiliated research and extension (R&E) centers hosted open houses/field days this summer. The fourth edition of the Field Days Bulletin available at http://bit.ly/2014fielddays includes an extensive set of brief articles describing many of the projects on and off the R&E centers, notes Bret Hess, AES director.

The field day events kicked off with the Sheridan R&E Center June 14 hosting a series of field tours in the morning followed by oral presentations during the afternoon. The Powell R&E Center field day July 17 included an introduction to research activities during a field tour followed by a more in-depth discussion during a poster session. The last two events were one week apart near the end of August. Attendees of the Laramie R&E Center August 28 enjoyed a combination of descriptions of research projects and walking tours outside as well as inside the greenhouse complex. Participants of the James C. Hageman Sustainable Agriculture R&E Center (SAREC) open house August 21 were treated to one in-depth discussion of an ongoing crops and livestock systems research project and a series of three-minute research highlights before receiving more in-depth information at various field sites.
The SAREC Administrative Advisory Committee also introduced the Wyoming Restoration Challenge 2015: Cheatgrass. This “learning by doing” challenge will involve four-person teams competing to determine the most effective, cost-efficient methods to restore cheatgrass-dominated systems to a higher-functioning status. A formal announcement of the challenge will be released this fall with entries being accepted through mid-January.

**UW Extension**

**Liz Shaffer** started as the 4-H educator in Sheridan County June 30. Liz is a recent graduate of UW’s College of Agriculture and Natural Resources with a degree in microbiology. She was a 10-year 4-H member from Sublette County. She served two summers as an intern in her home county and one summer working in the State 4-H Office.

**Caitlin Youngquist** joined UW Extension August 29 as the Northwest Area educator for our Agricultural and Horticultural Systems Initiative Team in Worland. Caitlin comes to Wyoming from Washington’s Skagit Valley, where she was a farm planner-compost and manure specialist for the Snohomish Conservation District. Her prior professional experience includes positions as a research assistant with Washington State University (WSU) Extension and a ranch manager. Caitlin holds a bachelor’s degree in animal science and a master’s degree in soil science. She completed her Ph.D. in soil science this past May from WSU.

**Mary Kay Wardlaw** started as associate director with UW Extension in late July. Mary Kay received her Ph.D. in adult education in 2009; she also received a master’s degree in agriculture/cooperative extension and a bachelor’s degree in agricultural communications. All degrees are from UW. Since 2006, she served as director of the Cent$ible Nutrition Program. She will work with extension educators based on the east side of the state.

**Marie Hanson,** administrative associate in the extension administrative office, retired August 1 after 16 years with UW Extension and over 29 total years with the University of Wyoming. Marie was honored at a reception August 1. In addition to her work with extension, Marie also served as adviser to the UW Golden Key Junior Honorary, where she was named a regional adviser of the year.

**College Relations**

For me, a new school year conjures memories of the dreaded, “How you spent your summer vacation” essay in grade school, says *Anne Leonard*, college relations director. While the college relations office does not have a summer vacation per se, I want to tell you about some recent activities. Each event either highlighted career opportunities within the agriculture industry, academic programs within the college, or current research conducted by faculty members. Each event showcased agriculture’s role as a Science, Technology, Engineering, Mathematics (STEM) discipline.

Each year, UW hosts approximately 600 junior high and high school-aged women at the Women in Science conference. The college’s booth included a soil erosion demonstration, microscopic samples of various textile fibers (cotton, polyester, wool, etc.), and various fungi (including a portabella mushroom) molds, and other microbial organisms. In previous years the college has offered hands-on displays in plant sciences, range management, food safety, vet-
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**Wyoming Department of Education’s Roadmap to STEM conference** gave secondary school educators the opportunity to connect with faculty members at UW and included hands-on workshops, tours of STEM facilities, and half-day workshops. The response from faculty members to host facility tours or workshops was overwhelming. Ginger Paige, a water resources faculty member in ecosystem science and management (ESM), led a hydrology field trip and workshop for 12 high school educators. Participants also explored a K-12 water hydrology science kit developed by Ginger and Scott Miller, another faculty member in ESM.

The departments of animal science and agriculture and applied economics teamed to also offer a half-day workshop titled “Fat or just Feed-Efficient.” Associate Professor Kristi Cammack hosted educators at the livestock unit to demonstrate how she uses a technologically advanced tracking system called GrowSafe to monitor feed intake and help identify genetic markers of feed-efficient animals. John Ritten, an agricultural economist, conducted a brief data analysis looking at the economic significance of Cammack’s feed efficiency trials. To end their day, educators also conducted their own DNA tests using cheek swabs.

Our college booth at the Wyoming State Fair and Rodeo also attracted many visitors. Emily Schwaller, a student in the college and our intern for the summer, compiled hands-on activities including diseases found in livestock and wildlife transmitted by insects; insect specimens for visitors to examine; a stocking rate tool developed by the Department of Agricultural and Applied Economics; a rumen animal stomach model; and hands-on soil testing demonstration.

John Willford, who teaches in our microbiology program, also prepared a microbial display of the fungi, molds, and bacteria that naturally occur in soils. We also stumped the public with the “Ag Trivia Question of the Day.”

Regardless of the venue, every time a visitor says, “Well, I didn’t know that,” our college has helped that person appreciate the breadth and impact of agriculture.

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the oil fields. There was nothing better than an ag engineer. He knew something about mechanical engineering, electrical engineering, civil engineering, he always had a good work ethic, was accustomed to a calendar and watch, and working in all kinds of weather.”

Eventually Lands Near Saratoga

But the boom fell out in the mid-1980s, and he accepted early retirement. That led him to the Vee Bar Guest Ranch west of Laramie to see if he could live and retire in Wyoming.

After a year, he knew. “My brother was a member of the Old Baldy Club here in Saratoga,” Baker says. “He said, “Bill, you’re country, and Saratoga is country. You would be a good fit in Saratoga.”

So, after a 16-horse trailer was loaded with his belongings at the Vee Bar, he crossed the bridge the west side of the Snowies and has been in Saratoga since.

Purposeful Generosity

A heartfelt note he received while serving in Alaska (see accompanying story, page 13) started a life of generosity. He helped a Vee Bar employee obtain a degree and later another employee who earned his Ph.D. from Harvard in hospital management.

Baker then met and married his wife, Jeannette, who already had a heavy-duty relationship with UW.

Her late husband had bachelor’s and master’s degrees from UW, she had a degree from UW, her three children had degrees from UW, one grandchild is attending UW, and another will soon be at UW.

Wed the UW relationships and his agricultural interest, and they created the scholarship.

Explains Baker, “I have tried to support others who were in education and particularly in agricultural education because I think we are going to have a time when there is going to be too many people and too little land to feed them and too few educated farmers and ranchers, and if I can help toward that off, I’d like that to be my legacy.”