Similar to the growing market for craft beers, Thomas Foulke sees an opportunity to create a niche market for first-grains in Wyoming.

Wyoming’s agricultural sector is in need of diversification, Foulke says. And he sees that opportunity in first-grains, or what some call “ancient grains.”

Foulke, a senior research scientist in AgEcon and project director of the Wyoming First-Grains Project, says getting farmers to plant first-grains creates one such opportunity.

“An opportunity exists to bring first-grains to Wyoming and the Front Range, to develop a niche industry around them,” Foulke says. “This would create opportunities for farmers to enhance their incomes and bring new jobs to the state in malting, brewing and baking.”

The Wyoming First Grains Project is a “Hatch” project that began in 2018 using provided for ag research at state research stations originally created in the Hatch Act of 1887. This research and economic development project seeks to build a vertically integrated niche industry around first-grains, and a spin-off company to take the concept out of UW’s hands and into the private sector.

Foulke recently garnered $50,000 of development funding from the newly created Institute of Innovation and Entrepreneurship (IIE) at UW. The IIE calls on innovators from throughout the state as it works to instill entrepreneurial thinking to empower the leaders of tomorrow. Adding needed programs and curriculum that draw together all UW colleges, business services and entrepreneurship competitions, the IIE serves as the university’s front door for the state’s entrepreneurs.

Dubbed the “Neolithic Brand” in marketing materials (www.neolithicbrand.com) the project has the catchphrase, “One Step Away From Wild.”

Ancient grains are those that have been little changed by selective breeding over thousands of years. Most were grown as far back as 12,000 years ago. These include einkorn wheat, barley and Emmer wheat. It’s Emmer wheat and spelt that are the two ancient grains being grown at UW research farms in Lingle, Powell and Sheridan.

“These two grains will be used for malt for beer,” says Foulke, who says UW has partnered with Wyoming Malting Co. in Pine Bluffs. “Craft brewers produce malts. We want them to experiment with this and come up with their own beers.”

The objective is to develop this niche industry and a profitable and sustainable core company to support it, Foulke says. This includes grain processing and handling; product development for first-grain varieties and agronomic expertise to grow these crops in Wyoming; and the business infrastructure to support it.

“Not only are we learning how to grow crops on our research farms, but we are developing a market and a supply chain where they will go,” Foulke says. “What we want is to eventually target the wholesale market.”

Foulke says currently there is only one other malting company using spelt, and it’s located on the East Coast.

“We will be first to market with these beers” that use spelt, he says.

As the project gains traction in the market, Foulke says additional product research and development will be required to build on earlier product streams.

“For example, one early product is naked grains for craft bakers” Continued on back page.
Faculty Profile: Selena Gerace

Our profile this issue is of Selena Gerace who is the Outreach Coordinator on a multi-state project on biofuels and carbon capture technologies and is a recent graduate of the MS program. —The Editor.

What projects are you involved in at the moment?
I’m the Outreach Coordinator for a National Science Foundation funded research project focused on studying climate change mitigation. It’s called WA-FERx (the Water Agriculture Food Energy Research Nexus) and it’s a collaboration between UW, Montana State University, and University of South Dakota. The project began in 2017 and will run for four years.

We’re studying a form of climate change mitigation known as Bioenergy with Carbon Capture and Storage (BECCS, for short). It’s a way of producing energy while at the same time removing carbon dioxide from the atmosphere. Bioenergy crops remove CO₂ from the air as they grow, and then the CO₂ is captured when these crops are turned into energy, and it’s stored in geologic formations underground. It’s an exciting method of producing energy because it actually removes more CO₂ than it produces.

The group of researchers on our project are evaluating what it would mean for our region if BECCS were adopted here on a wide scale. We want to know what the opportunities and tradeoffs would be—for land-use, water, food production, energy production, biodiversity, economic development, and cultural values.

Have you always wanted to be a professional researcher?
I never planned to become a professional researchers! I fell into academia and into economics, just by following my interests. I was curious about food production (how do we feed a growing global population in a way that is healthy, ethical, and environmentally sound) and about the competing narratives around landscapes of the west (how much do we extract from our lands vs. how much do we preserve). It was a fortuitous path that led me to the Ag Econ department at the University of Wyoming—by way of an undergraduate degree in politics and many years of bouncing around Oregon, Washington, and California. I landed out here and I couldn’t be happier.

What have been some of your favorite projects?
My favorite part of my job so far has been the opportunity to learn multimedia skills that allow me to create visually compelling products that tell the story of our research and why it matters. I’ve been learning to make diagrams and graphics, design layouts for publications and websites, and edit photos and videos. This has been a whole new skill set for me which has been fun and inspiring to learn. It’s rewarding when I make a product, send it out into the world, and get feedback that it’s useful and it’s helping people learn.

What do you love to do other than economics?
Other than economics, I love trail running, reading novels, and making pies. I’m signed up to run the Pilot Hill 25k, and my legs are itching to get on the trail. I love the slow, methodic progression of a long run. It’s just one foot in front of another and the path is laid out so clearly before me.

What advice would you give to new graduates?
I would tell new graduates to not be afraid if the path isn’t laid out clearly before them! I’ve meandered my way around from job to job, and even when it felt like I didn’t have any direction, I always landed in good places. There’s nothing wrong with taking the long way home.

Agbusiness Instructor Opening
The Department has been authorized to begin a search for a new, full-time, permanent Academic Professional Lecturer to cover teaching needs in our core agribusiness curriculum. This will be a full-time, benefited position. If you have an interest or if you have a suggestion of someone we should consider, please contact search committee chair John Hewlett at hewlett@uwyo.edu. The aim is to have someone in place to teach classes this fall.

A Favorite Blog
Check out the Agricultural Law and Taxation Blog from Roger McEowen who is an ag lawyer and an excellent resource on current ag and law issues. Sign up at lawprofessors.typepad.com/AgriculturalLaw.
Graduate Student Presents at Symposium

Eilish Hanson presented Bioenergy with Carbon Capture Storage in the Upper Missouri River Basin: Farm-Level Economic Implications at the Second Annual University of Wyoming and Colorado State University Graduate Student Symposium hosted by the UW College of Business Economics Department in April. Hanson said "The Symposium was an opportunity for graduate students to practice presenting our research in front of an audience — after giving a 15-minute presentation and answering questions, I feel much more prepared for my upcoming thesis defense."

Hanson’s work as a graduate student in the AgEcon department looks at farm level effects such as profitability, risk, and cost of production associated with BECCS (bio-energy with carbon capture and storage) scenarios in the Upper Missouri River Basin, and is part of a large project UW is pursuing with Montana State University and the University of South Dakota. "Being part of such a far-reaching, interdisciplinary research team has opened a lot of doors for me. I feel extremely grateful to be able to contribute to this project," Hanson said. Details of the project are at waferx.montana.edu.
Recent Department Work

Hewlett Named Outstanding Educator

At the College of Agriculture and Natural Resources and Agricultural Experiment Station awards ceremony in December, John Hewlett was recognized as the Outstanding Educator. The award recognizes classroom and Extension educators for their excellence. Hewlett is a state Extension specialist in the field of farm and ranch management. John’s efforts have made a tremendous range of programming possible, including educational programs like the Western Integrated Ranch/Farm Education (WIRE) class, the Wyoming Extension Showcase on Technology (WEST), the AgLegacy resources on succession planning, the webinar series Ag in Uncertain Times, Right-Risk and its many outputs of self-study courses and a newsletter, the Challenge Group class, the state-wide conference series Living and Working on the Land, and the Barnyards and Backyards newspaper inserts all happen because of John’s efforts.

Overall, since 2002, John has
- presented/co-presented 521 risk management presentations/webinars, reaching 13,310 individuals;
- was PI/co-PI on 112 risk management grants totaling more than $9.3 million;
- authored/co-authored 545 bulletins/articles/newsletters on risk, including regular appearances in every major Wyoming ag publication: the Wyoming Livestock Roundup, the Wyoming Stock Growers newsletter, the Wyoming Farm Bureau newsletter and the Barnyards and Backyards insert (distributed via 43 newspapers reaching 142,000 subscribers);
- made more than 6 million indirect contacts via e-newsletters/media-based articles/web site and online course access.

An award for classroom teaching was presented to Urszula Norton of the Plant Sciences Department.

Selected Presentations (non-Wyoming)


Publications


Tex Taylor to Retire: Celebration planned for July 9

AgEcon department member David "Tex" Taylor will be retiring in July, with a celebration of his career planned for July 9 from 3:30 to 6:30 in Laramie. Tex has become renowned as a professor in the university with expertise in economic development and recreation economics (using input-output models). When Taylor was awarded the Van Vugt Lifetime Achievement Award in 2017, longtime colleague Dale Menkhaus, Professor Emeritus in the department, noted that Taylor is the go-to guy for economic analyses of environmental, tourism and recreation, endangered species, and many other issues affecting Wyoming and Wyoming communities.

Recently Tex has been working on a Beef Checkoff-funded project to assess the economic value of U.S. beef cattle ranching-based ecosystems services. Writing in BEEF magazine, Wes Ishmael quoted Tex as saying “You can’t go to the store and pick up a six-pack of biodiversity. Measuring the economic value of ecosystem services is difficult because many of the services are not traded in the formal market. Often there is no observed price, so you have to rely on non-market valuation methods.”

Tex’s preliminary attempts at valuing what ranchers do to maintain rangelands puts the value at $57.67 per acre, or $726 per cow, the equivalent of $43 per 5-weight calf (basis 86 cents per pound of retail beef), notes Ishmael. Details of Tex’s retirement celebration can be found by contacting Janet Marsh at (307) 766-2386 or windsong@uwyo.edu.

Recent Master’s Candidate Thesis Presentations

Jessica Windh
To Mooove or Not to Mooove: An Economic Evaluation of Seasonlong Continuous and Rotational Grazing Systems in Northern Colorado

Kaila Willis
Farm-Level Economic Assessment of Alternative Groundwater Management Strategies Over the Ogallala Aquifer in Southeastern Wyoming

Top Work to be Honored
Matt Andersen has been awarded the 2019 Outstanding AJAE Article Honorable Mention for his work A Century of U.S. Farm Productivity Growth: A Surge Then a Slowdown. He will be recognized at an award ceremony the Agricultural & Applied Economics Association’s annual meeting in Atlanta. Congratulations!

In the Margins Spring 2019
Rashford Honored at Staff Recognition Day

Associate Professor Benjamin Rashford in the AgEcon Department was named Supervisor of the Year during the annual Staff Recognition Day in April. Rashford joined UW in 2006 as an assistant professor and was named associate professor in 2012. He is head of the department.

AgEcon Represented at IFMA22 in Tasmania

John Hewlett and Cole Ehmke attended the International Farm Management Association’s 22nd Congress in Tasmania, Australia. Travelling in March, each presented about current work they’re involved in and gained insights on producing food and fiber from a unique location. Specialty crops like industrial hemp and medicinal poppies figure prominently in Tasmanian agriculture, as do fruits (for export to China, often), forestry, prime lamb, wool (especially fine and superfine wool), and beef. Tasmanians contend with issues like invasive species, wallabies, and climate change. The Australian state has set a goal to increase the farmgate value of agricultural production 10x by 2050, and has supported this aim with increased development of their natural resources, especially emphasizing new irrigation efforts and value-added production.

The pair were well represented in the conference schedule, presenting on numerous projects they’ve been involved with:

Ehmke, Cole & Mariah Ehmke. Blockchain Technology Applications in the Wyoming Food System.

Students Recognized

AgEcon is pleased to announce awards to two outstanding students.

Bree Dooley has been chosen to receive the AgEcon Department’s Outstanding Agribusiness Senior Award. She will receive her bachelor’s degree in Agricultural Business, Animal Science and Veterinary Science this spring. She is from the Big Horn Basin area and transferred to UW after getting her associate's degree from Northwest College in Powell, and she has worked in the animal health industry and banking industries.

Britton Bentz has been chosen to receive the Western Agricultural Economics Association’s Outstanding Senior award for the University of Wyoming. Britton is pursuing a major concentration in Farm and Ranch Management with a minor in Agroecology, and has proven to be a capable student. In addition he has work experience with harvest management on an Oregon ranch, having stepped up from horse trainer and ranch hand responsibilities, and he has been involved in supporting the less fortunate in the community while doing his degree.

Photos show Professor Chris Bastian, chair of the department’s Undergraduate Committee, presenting certificates to the two honorees.
New online resources focus on community development, leadership

Two new online learning activities free from University of Wyoming Extension are now available online for Wyoming community leaders and anyone interested in working to improve their communities.

“Clues to Successful Community Development” focuses on core characteristics researchers have identified in thriving rural communities. Access it at bit.ly/Clues_Community_Development.

“Community Development: What’s HOPE Got to do With It” explores the concept of hope and how it is reflected in successful leaders. Access it at bit.ly/Leadership_HOPE.

Each self-paced program provides information, interactive elements and practical research and advice and can be completed in about 30 to 60 minutes.

Duane Williams, University of Wyoming Extension community development educator based in the AgEcon department, said participants will take away tangible skills they can use in their communities.

He said, “Knowing how your community measures up on factors for success can be helpful in guiding future actions and investment. Successful community development is not magic or accidental but rather the accumulation of hard work and sound investments.”

Other free courses from UW Extension include “Wyoming Tax Facts” and “Personal Financial Literacy: Understanding and Avoiding Credit Pitfalls.” Go to www.uwyo.edu/uwe and click the Extension Online Courses button.

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who prefer to mill their own flour,” Foulke says.

These naked grains can be enhanced for restaurants with milling and mixes — such as biscuits and tortillas — that can capture an untapped value-added market. Pancakes, dumplings, noodles, pasta and, of course, breads are other products that would benefit.

“I think we’re ripe for a revolution in the world of flour and bread where people look for different sources beyond white and wheat bread,” Foulke says.

Thus far, the first-grains project has signed up three bakers and eight brewpubs/breweries in Wyoming to take out naked grain and malt as testers and promoters for the current year.

For 2019, the First Grains Project has applied for a $50,000 Western Sustainable Agriculture Research and Education (WSARE) grant that will be used in collaboration with six farmers to grow first-grains to expand production. If the WSARE grant is secured, the partner farmers will be given seed for the acreage agreed upon for them to plant. Farmers will be reimbursed for their costs.

“We will get the resulting grain, which we will process into malt, in partnership with Wyoming Malting, and flour. For 2018-19, we are giving out ‘free samples’ to some craft brewers and bakers to try our products and develop products,” Foulke says. “Starting with the 2019 fall harvest, we will be charging for our products like everyone else. The idea is to build the Neolithic brand name with awareness and customer acceptance for our products.”

The project is purchasing a dehulling machine that will be operational for this year’s harvest. The dehuller will be located in Powell. The machine is needed because first-grains largely do not thresh free of the hulls during the combining process. Once harvested, the crop will be delivered to the Wyoming Malting Co. and to the partner bakers.

To scale up the business rapidly, additional funding is needed for infrastructure, buildings, another dehuller, trucks, storage, loading equipment and business development. Depending on the ongoing success of the project, an additional $300,000 to $500,000 will be needed, Foulke says.

While he is invested in the project, Foulke says he has no plans to leave UW if this project takes off. “I’ll be a success if I can help foster and create jobs in the state,” he says.

For more information about the Wyoming First Grains Project, contact Tom at (307) 766-6205 or foulke@uwyo.edu.

Structuring the Business for Tax Planning

The latest RightRisk news letter features tax planning. Owners must decide what form of business entity to establish when beginning a business. The form of business will determine which income tax forms to use and whether the profits, losses, and other information will be held within the business entity or flow through to the owners. When choosing a form for the business, one should also carefully consider other goals, such as transition to the next generation, liability protection, allowing the business to grow, etc. To read more or subscribe, go to: http://RightRisk.org/news