

ANIMAL & RANGE SCIENCES NEWSLETTER

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Introduction from Bret Olson, Interim Department Head



Welcome to the Department of Animal and Range Sciences!

As I write this (late October), we had 3-4" of snow last night here in Bozeman. We had record warm temperatures in September, but then a cool October. No Indian summer this year.

On a positive note, enrollment at Montana State University reached a record high this fall (<http://www.montana.edu/cpa/news/nwview.php?article=7575>). Whether this reflects greater recruitment and retention of students, or the recession, or most likely a combination of these factors is unknown. MSU is doing relatively well compared with land grant universities in other western states which are facing major budget cuts or tuition increases. In our department, enrollment increased from 208 undergraduates in fall 2008 to 238 undergraduates this fall. This increase reflects increases in all of our options in the Animal Science degree program (Science, Equine Science, Livestock Management and Industry), and in our Natural Resources-Rangeland Ecology degree program (<http://animalrange.montana.edu/>). The latter program has almost doubled in enrollment since we changed the name of the B.S. degree in 2006 from "Range Science" to "Natural Resources and Rangeland Ecology", which more accurately reflects the breadth of the material that we have offered for years.

At the end of September, Sandy Gagnon, our long-term equitation and equine science/management instructor, retired after 40 plus years of service to the department and the university. That is long enough to where he was probably teaching grandchildren from some of his first students who attended MSU. Amazing, Sandy!

Also related to our equine-equitation program, only coincidentally timed with Sandy's retirement, the Miller Livestock Pavilion has undergone a major renovation in the last year, primarily to enhance horse and human safety. The Pavilion was built in 1968. It was designed by Bob Miller, a professor in the department at the time who taught Beef Production, Genetics and Horse Management. Note, the Pavilion was named in Bob's honor, but it was named a "livestock", not equine, pavilion because early on, laboratories and demonstrations with all livestock species were conducted in the Pavilion.

Regarding the renovation, 16" of the arena base was removed, the remaining "floor" was compacted and covered with matting, and then 16" of appropriate materials were added back. All of the original wood posts and rails were replaced with "continuous fence". And for us to appreciate these improvements, all lighting was replaced with brighter, more energy-efficient lamps and fixtures.

I would like to thank everyone who helped make these improvements happen, but I do not have enough room, so I will highlight a few: Andi Shockley (Equitation Instructor) for assisting with planning and getting bids, Gene Surber (MSU Equine Boosters) for soliciting "in-kind" contributions, and Tom Pike (MSU Facilities Services) for assisting with the lighting and the overall project.

To make this renovation happen takes considerable funding. Major sources of funding were the Dean's Office of MSU's College of Agriculture, the MSU Equine Boosters (whose mission is to raise funds to improve MSU's Equine Program, contact Diana Alkire for information 587-3153), Shawn Koenig (Scenic City Trucking) for an in-kind donation and coordinating the reconstruction of the arena floor, and MSU Facilities Services who cost-shared the lighting project. And to keep the new arena floor nice and uniform, the MSU Equine Boosters contributed a new Parma Groomer after all was said and done. A sincere thanks to all who have contributed in one way or another.



Renovated Miller Livestock Pavilion

If you have any questions or comments about the department, please feel free to contact me (406 994-3721, bolson@montana.edu). I look forward to hearing from you - we work for you!

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John Paterson, Professor of Animal Science and Extension Beef Specialist: Beef Cattle Nutrition Research and Extension Program



Dr. John Paterson

Our beef cattle research and extension program is focused on conducting applied research and producer education programs that add value to cow-calf operations. The program team is John Paterson, Extension Beef Specialist and Professor of Animal Science; Clint Peck, Director of Beef Quality Assurance (BQA); Mo Harbac, Project Coordinator; and Anita Gray, Administrative Associate.

Clint spent this past summer providing BQA programs (see page 6 of this newsletter) partnering with the Montana Stockgrowers Association at ranches throughout the state. His most recent program is entitled “Ranchers Care” and you may have seen cut-outs of ranchers in different grocery stores around the state. Clint also continues to provide biosecurity evaluation related to health management and is the co-chair of the International Livestock Congress which will be held in Denver on January 11th and 12th.

Mo coordinates the research activities of the graduate students on- and off campus, and has been the primary contact for the statewide BVD (Bovine Viral Diarrhea) testing program. This program has tested over 160,000 animals for BVD. Mo is also responsible for coordinating the Montana Livestock Nutrition Conference and Forum which is held each April in Bozeman.

Anita keeps us all organized and allows us to do our research while she takes care of administrative details. Anita also helps with conferences, mailings, travel, and occasionally ventures out of the office to help with the animals.

Currently we have four graduate research assistants. Their research efforts are focused on either reducing cow input costs by evaluating cows selected for reduced feed intake, or improving nutritional-immune status through mineral supplementation. Bryan Nichols and Ty McDonald have spent the past year evaluating heifers which have either greater than expected, or less than expected feed intakes. Bryan’s emphasis is on the biology of nutrient digestion. Ty is focusing on the economic consequences of selecting for cows that consume 2-4 lbs less forage each day without exhibiting a decline in reproductive efficiency. Their research has been conducted using the new GrowSafe feeding system, which measures individual feed intake and feeding behavior.



Bryan Nichols inserting an EID tag



Tess Norvell and vaccine gun

Tess Norvell and Dr. Bob Sager have projects aimed at improving cow production through mineral supplementation. Tess is determining how forages high in nitrate and potassium can potentially cause winter tetany, especially when cows are fed barley hay. Bob is interested in determining how cobalt supplementation might influence the immune system and improve forage digestion.

The graduate students are also responsible for the daily feeding and health care of animals in the Steer-A-Year program that is managed by Marc King, and helping teach the senior-level Beef Management course.

Support for our research and extension programs has come from the Montana Stockgrowers Association, Montana Beef Council, USDA-CSREES, CHS, Inc., Vigortone, American Simmental Association, North Dakota State University, Midland Bull Test, Bair Ranch Foundation, Novus, Zinpro, and the Montana Agricultural Experiment Station.



Bryan Nichols and Ty McDonald in the GrowSafe barn.

Stop by and visit when you are in Bozeman. The coffee is always hot. 406-994-4323.

Administrative Team Highlight: Lisa White

Lisa is the accountant for the Animal and Range Sciences Department. She moved to Bozeman from Iowa in 2006 after receiving her Bachelor's degree in accounting from the University of Northern Iowa. Upon moving to Bozeman, she started her accounting "career" in the Plant Sciences and Plant Pathology Department before joining the Animal and Range Sciences Department. She has been with our department for almost three years.

Lisa's main job is to keep the faculty out of jail. Just kidding! Lisa's job consists of setting up and keeping track of budgets. She processes payments to vendors and makes sure that all bills are paid. Lisa reconciles all accounts and gives a monthly budget report to the Department Head. She also keeps track of the many grants our faculty and staff bring into our department. Lisa enjoys her job and the great people she works with.

In her spare time, Lisa enjoys reading, taking small hikes with her family, and watching Notre Dame football. And yes, she knows they haven't been that great for a few years.



Other News



Sandy Gagnon retired from the Animal and Range Sciences Department at the end of September after 41 years of service. We hope to still see Sandy, from time to time, here in the Department. We wish Sandy and his family all the best.



Dr. Jane Ann Boles' Meat Processing Class (ARNR 416) was featured in The Prairie Star in September. You can read this article online at: http://www.theprairiestar.com/articles/2009/09/26/ag_news/livestock/livestock1.txt.



MSU Range Club students, under the direction of **Dr. Bok Sowell** and **Dr. Mike Frisina**, identified more than 100 different plants while compiling a species list at the Blue Eyed Nellie Wildlife Management Area (WMA). Montana's Department of Fish Wildlife and Parks (MFWP) greatly appreciates the willingness of MSU to help with establishing a working list of plants on the WMA. Before this visit, MFWP had little data describing floral diversity. The information will be incorporated into management plans for the area.



Tommy Bass, along with other MSU Extension specialists and MSU faculty, began a project to study how livestock producers may be able to create a product that can increase revenues by composting manure. The complete story is online at: <http://www.montana.edu/cpa/news/nwview.php?article=7523>.

Upcoming Dates

November 11	Veteran's Day Holiday
November 12-14	Ag Days (http://ag.montana.edu/students/agdays.htm)
November 12-14	Ag Appreciation Weekend (http://ag.montana.edu/excellence/agappreciation.htm)
November 13	Animal & Range Sciences Advisory Committee Meeting (Bozeman, MT)
November 25-27	Thanksgiving Day Holiday
December 4-5	Montana Woolgrowers Annual Convention (Billings, MT)
December 4-6	MSU Horseshoeing School—Barefoot Trimming Short Course (Bozeman, MT) (http://animalrange.montana.edu/horseshoe.htm)
December 9-13	MSU Horseshoeing School—Blacksmithing Short Course (Bozeman, MT) (http://animalrange.montana.edu/horseshoe.htm)
December 10-12	Montana Stockgrowers Association Annual Meeting (Billings, MT)
December 14-18	Final Exams
December 25	Christmas Holiday
January 1	New Year's Day Holiday
January 13	Classes Begin (Spring Semester)
January 4—March 19	Winter 2010 Horseshoeing School

ARNR 309—Introduction to Livestock Evaluation (Marc King and Dr. Jane Ann Boles, Animal and Range Sciences)



Marc King with ARNR 309 class

“What do you think of these Angus heifers?” This question is often posed by Marc King (County Agent, Sweet Grass County) to the students in the ARNR 309 Introduction to Livestock Evaluation. “Where are you going to look to evaluate volume and capacity?” This question is often heard from Dr. Jane Ann Boles (Associate Professor, Animal and Range Sciences) who helps Marc teach the class. The class is designed to give the students the basics of evaluation. How do you identify poor feet and leg structure? Why does structure matter? How do you select a bull for a set of heifers reared on pastures in Eastern Montana? What does the data on this set of bulls tell you? Live evaluation trains students to find answers for problems by reasoning in a sound, sane and logical fashion. The students must analyze a situation, compare information and make decisions based on sound judgment and comparative reasoning.

The class also develops communication skills. The students are required to orally defend their decisions based on the facts that are presented and the information they collect by evaluating the live animal.

One of the most important reasons for learning to evaluate live animals, for those who intend to pursue a career in the animal industry, is the ability to intelligently describe and discuss the products and end products of animal agriculture. The class provides the participants with knowledge of the nomenclature, vocabulary and vernacular. Furthermore, knowledge of the products and end-products can "jump-start" one's career in animal agriculture. But, you do not have to be an student in animal agriculture to benefit from the class. The decision making, critical thinking and oral communication skills are invaluable to all students regardless of their chosen career paths.

Student Quotes:

“Great overall material that is useful – I will definitely use what I learned in the future.”

“Best class I had at MSU.”

“Loved the hands on approach and practical application of information learned in class and from other classes.”

Student News:

Jyme Peterson, current M.S. student in Animal Science, “Rodeo standout now wins prizes for horse research.” See complete article at: <http://www.montana.edu/cpa/news/nwview.php?article=7612>.

Animal & Range Science’s recently graduated M.S. student, **Wade Black**, is currently teaching two classes in the AG program at Treasure Valley Community College in Ontario, Oregon.

“Where are they now?” **Susan Schoenian**, M.S. Animal Science, 1988. Susan has been a consistent donor to the scholarship fund for the Animal & Range Sciences Department. She grew up on a farm in Maryland, and received her B.S. degree in Animal Science at Virginia Tech. While at MSU for her M.S. program, Susan’s research was associated with the “High Line/Low Line” selection of sheep flocks at the Red Bluff

Research Ranch with **Drs. Pete Burfening, Rodney Kott, and Verl Thomas**. After leaving MSU, she served as an agricultural agent in Wicomico County, Maryland, and has conducted educational programs in livestock production, farm business management and 4-H. Currently Susan is the Extension Sheep and Goat Specialist at the University of Maryland Western Research and Extension Center. Susan has traveled internationally as a consultant in Asia, Europe and the Middle East. She maintains an extensive photo collection of sheep health disorders and many other topics at her “Baalands” site on Flickr:

<http://www.flickr.com/photos/baalands/collections/>

Susan recently received the 2009 Distinguished Service Award from the National Association of County Agricultural Agents at its national meeting in Portland, Oregon.

Adjunct Instructor Highlight: Andi Shockley



Andi and Kryka

Andi Shockley grew up in a world of horses, acquiring her first pony at age seven and never looking back! Growing up her mom ran a large horse boarding business near Four Corners and then in Gallatin Gateway. Her mom was and still is her greatest teacher and those of you who know her mom (Sue) most certainly know why. Andi never lost sight of her love for horses even when most teenage girls do. I am sure she would say it reflects that she dabbled in many aspects of equine entertainment, from Jumping to Reining to Driving her big ol' heavy horse PETE (yes that is the correct spelling), and she actually did all of those things with her gentle giant.

When she took that first big step out on her own to enter college she did not really know what she wanted to do with her life. However, she knew horses would always be part of her life so she followed a friend to Powell, Wyoming to acquire an associate degree in Equine Studies. What a ride those two years were (pun intended)! Once the degree was in hand (with honors) and much learned about herself, compliments of a few instructors who told the truth more often than she wanted to hear. Horseback riding instructors also double as psychologists – maybe that is why Andi has an interest in that area as well. Andi's father told her that she needed to get a “real degree”, something she could use to find a job. So back to Bozeman she came to acquire her “real degree” in Biotechnology. She had her sights set on being a vet because that was all she could remember ever wanting to be. However, she soon realized that being a vet is actually more about dealing with people than with the animals themselves, and that she would have to euthanize animals. More importantly, Andi admits that even the lowest ranked vet schools would not accept her with her grades. Science was not her forte, but she graduated with her B.S. degree.

A year and a half later she returned to MSU to obtain a M.S. degree in Agricultural Education with the intent to become a county extension agent, where-upon she became an instructor for several of the equitation courses in the Animal and Range Sciences Department. This, she realized, was what she was really meant to be doing. Two years later she was hired full-time to teach all of the equitation classes and to manage MSU's horses and any other horses housed at the BART Farm (formerly Towne Farm) except for rough stock used by MSU's Rodeo Team. Her duties include supervising the crew that feed and take care of the horses, and the individuals who maintain the Bob Miller Livestock Pavilion.

She loves her job, her family, where she lives and most of all the newest member of her family, her beautiful baby girl Kryka Alexandra. So in the end her hobby took her where her heart desired to a position of fulfillment everyday; teaching others to appreciate horses and themselves.

Awards, Publications & Presentations

Dr. Pat Hatfield along with Andrew Lensen (USDA), Fabian Menalled (MSU), Upendra Sainju (USDA), Kevin O'Neill (MSU), Duane Griffith (MSU), **Hayes Goosey** (MSU), and **Dennis Cash** (MSU) were awarded a large grant from the USDA. The title of the grant is “Sheep Grazing as a Pest Management Tactic.”

Dr. Dennis Cash received the Distinguished Service Award from the National Association of County Agricultural Agents (NACAA) at its recent national meeting in Portland, Oregon. Dennis is the MSU Extension Forage Specialist and his program emphasis is management of alfalfa, perennial grasses and cereal forages for sustainable livestock production. He has been active in providing professional development opportunities for county agents in Montana since 1992.

Dr. Rodney Kott was a speaker at “Jornadas Ganaderas de Magallanes 2009” conference held in Punta Arenas, Chile, August 19-23, 2009. In addition to Kott, speakers for the conference came from Uruguay and New Zealand. The invitation came from area livestock organization, via Raul Lira who received his masters from Utah State University. Raul works at

the same station as Oscar Strauch, who received his masters degree from our department in 2005, mentored by **Dr. Dennis Cash**. Dr. Kott spoke on Sheep Nutrition to an audience of sheep producers from the Patagonia region of Chile and Argentina.

Dr. Wayne Gipp was inducted into the 4-H Hall of Fame at the 4-H Leaders Forum held in Sidney, Montana. Wayne was honored for his dedication to the youth of Montana and for being an enthusiastic educator. Under his direction, the 4-H Swine Project has become the most popular livestock project in the state. Wayne also developed and worked each year with the Symbol of Excellence Swine Program to reward those youth who raised quality market hogs. Wayne recently retired from his Extension Swine Specialist position after 29 years of service.

Dr. Bret Olson was awarded a grant to draft “Best Management Practices for the Grant Kohrs Historic Site” in Deer Lodge, and to assess whether cows trained to graze weeds (in 2004) and their offspring consume more weeds than untrained cows.

BQA Program Wraps Up “Twilight Training” Series for 2009

The Montana Beef Quality Assurance Program (BQA) administered through MSU’s Animal and Range Sciences Department and Dr. Paterson’s Montana Beef Network recently completed a series of 10 “Twilight Training” sessions around Montana. Of the more than 400 people attending the sessions that started near Judith Gap last February, about 275 Montana beef cattle producers became newly BQA-certified or renewed their BQA certifications. Each session included a stockmanship and cattle handling clinic, a BQA chute-side cattle treatment demonstration, animal care/health discussions, a cattle industry update, and a beef supper.

Many thanks go out to those who helped with the success of the Twilight Trainings. The events were sponsored by the Montana Stockgrowers Association (MSGA) through a grant from the Montana Beef Council. Stockman Banks of Billings, Havre, Belgrade and Dillon helped provide meals for the programs.

Tim Evans, Billings, representative for Novus, International, Inc., boosted promotion of the programs through a \$5,000 grant to BQA. Tahnee Syzmanski, DVM, Montana Department of Livestock was our “traveling veterinarian” and Rose Malasani from MSGA organized the events.

A special thanks go to the volunteer efforts of Ed and David Fryer from the Castle Mountain Ranch, White Sulphur Springs. The father and son team are professional livestock “trainers” and exemplary stockman. They logged nearly 2,000 miles this summer pulling their pick-up and horse trailer around the state to conduct the horseback stockmanship clinics that were a major component of the Twilights.

Locations for the 2009 BQA “Twilight Trainings”

- Judith Gap - Swanz Ranch
- Chester – Fritz Charolais
- Three Forks – KG Ranch
- Columbus – Midland Bull Test
- Lewistown – Lewistown Livestock Auction
- Townsend – Ehlike Herefords
- Baker – Wang Ranch
- Box Elder – Rocky Boy’s Indian Reservation
- Gold Creek – Thomas Herefords
- Dillon – Reminisce Angus

Hosting the Twilight Trainings were ranches, feedlots, livestock markets and a combination of hosts including local livestock associations and county Extension programs (see list). BQA Twilight Training sessions conducted by the Montana BQA training team will be scheduled for other locations around Montana in 2010. Contact Clint Peck, Billings, MT (BQA Director) at (406) 896-9068 or cpeck@montana.edu for more information.



David Fryer, Castle Mountain Ranch

Help Support Animal & Range Sciences

A gift to the Department is a great way to support student and faculty endeavors. Donations can be earmarked for student scholarship funds, faculty research, the new Animal Bioscience Building, and more.

For more information about making a donation to the Department contact:

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With special thanks to the entire A&RS Administrative Team



Construction of the new Animal Bioscience Building

