Beaverhead County MSU Extension agent Jackie Sutton has spent the last production season helping producers get back to basics to make economic decisions. In the prevailing drought conditions and dropping commodity prices, Beaverhead County producers sought information to manage available resources to optimize returns. These decisions encompassed a variety of topics including nitrate testing, annual and perennial forage production, fertilization and irrigation strategies, range condition monitoring and management, stocking rates, artificial insemination and synchronization, forage grazing vs. harvesting, stockpiling forage in windrows and bale grazing strategies. Other profitability strategies included adding value to calves, and forage that was produced to sell to other producers.

Johnny Harbor asked to nitrate test a barley and oat stand before weaning his lambs onto the forage. Concerns the forage would become unpalatable to his sheep as it matured, coupled with a need to use the crop without harvesting it mechanically were motivating factors. The forage tested high in the field, and showed a toxic nitrate level when re-tested in the office. A month of consistent testing and management discussions resulted in harvesting the barley and oats as silage, with plans for using the regrowth as graze in the fall. He stated “I could have lost my entire lamb crop in one fateful decision. The Extension agent was faithful to my situation until we found a solution I could live with.”

A ranch visit exposed an economic loss in production due to the encroachment of native grasses, loss of alfalfa plants and a large population of ground squirrels on the northwestern third of the Dragging Y Cattle Company’s “big” pivot. “We will be putting money into the farming budget for next year, we had no idea it had gotten that far behind” stated the ranch manager.

Extension agent Jackie Sutton helped farmer and cattle producer Ken Davis test soil type and moisture holding capabilities to map alfalfa loss in a second-year stand. They discovered low water holding capacity and due to pivot speed, loss of alfalfa plants in that section. Davis plans to inter-seed grass into this portion of the pivot to increase production of forage.

With irrigation shares scheduled to end in the next two days, Max Yates needed options for safely harvesting and feeding forage oats from a field that had caused late bred heifer abortions the previous season. The standing oats tested 80 percent positive for nitrates. Within conversation, it was discovered the water rights for his newly purchased ground had enough river rights to keep one of the two pivots running for the next 10 days. This provided enough moisture for the oats to mature enough to test within an acceptable range prior to harvest, and a quantitative lab test gave confirmation he could safely feed this forage to his cattle.
Supporting reclamation efforts after development strikes

Beaverhead County residents, developers, and service contractors have similar questions in mind as they work to create more livable spaces in our communities. Building houses, roads and other infrastructure takes a toll on the land. Previously sodded hay meadows and right of ways become a haven for unidentified, opportunistic plants that can be problematic for homeowners, ranchers, farmers and land managers.

- Ken Thompson, recent homebuyer in Beaverhead County, entered the office in late June with a fistful of plants for identification and needed advice. “My five acres is covered in these plants. “What are they? Are they good?” Thompson had collected kochia, russian thistle, flix weed, common tansy, and poverty sumpweed. A home visit facilitated identification of plant species, and a discussion of strategies to replace unwanted species with more desirable species. Combining chemical and mechanical control measures with careful replanting of desired species, Thompson reported in early November that he has reclaimed “a third of the property and is readying the next strip for planting before the ground freezes.”

- MSU Extension consulted with 3 Rivers Communications about the fiber optic project in southwestern Beaverhead county, making recommendations for reclamation practices and species to plant to control invasive and undesirable species of plants after pulling the fiber optic cable.

- MSU Extension is working with a Dillon resident that is reclaiming a tract of ground along the railroad right of way using exclusively native range grasses and shrubs to create a drought tolerant, low maintenance space.

Welcome to Beaverhead County

Beaverhead County is the largest county in Montana with an area of 5,571 square miles encompassing 3,566 million acres of land, with approximately 69% under public ownership. Beaverhead county’s economy is driven by agriculture, tourism, and recreation. The county is number one in cattle production and perennial and annual forage production. MSU Extension is funded by a three-way partnership between Beaverhead County, Montana State University, and The United States Department of Agriculture. Beaverhead County MSU Extension welcomed new agricultural, and 4-H youth development agent Jacqueline Sutton in late 2015.

ServSafe Food Safety Manager Certification

The ServSafe program provides food safety education to foodservice managers. This training is now required for managers of all retail food establishments, private caterers, mobile food operators and temporary food permit holders by the State of Montana.

The Beaverhead County MSU Extension agent is certified to teach ServSafe Manager Certification courses and test participants, and to proctor tests online. Since becoming certified, she has certified 35 food managers with an average score of 83%. Giving the food industry leaders a local option to certify has decreased the financial burden this regulation has placed on their establishments and businesses.
Montana ranks in the top five states in suicide rates, with over twice the national average for the past decade. Beaverhead County, with neighboring counties Madison, Butte-Silver Bow, and Deerlodge rank in the top five counties for suicides per capita. Suicide is the number one preventable cause of death in Montana children ages 10-14, and the suicide rate in young adults ages 15-23 is twice the national average per capita. The highest rate occurs in the Native American population and adults ages 45-64. Montana recorded 518 suicides in the past two years, with 61 confirmed deaths during the first quarter of 2016. Over 90% of suicides in the state of Montana have been linked to mental illness. Major depression is at the top of the list; depression is treatable, and manifests itself in recognizable symptoms.

Mental Health First Aid (MHFA) training mission is to prevent suicide by getting people needed help. Jackie Sutton will be attending an instructor training course to train Extension personnel and residents in rural Montana in MHFA. Sutton is excited to also be trained in Youth Aware of Mental Health (YAM) in March 2017. YAM focuses on giving youth a hands-on approach to mental health issues, providing them with tools to prevent suicide, deal with stress, crisis situations, and depression.

MSU Extension will become active in Southwestern Montana helping equip adults and youth to recognize the signs and symptoms of mental illness, teach them to help someone utilize self-help strategies, seek out a support group among their family and friends and seek medical attention when appropriate.

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2016 Agricultural Highlights

- Twenty two thousand pounds of wool was cooperatively marketed from the Beaverhead/Madison Jefferson Wool Pool, giving small wool producers increased marketing potential for their wool.
- Four hundred and fifty acres of forage was certified weed free adding value to forage products sold.
- Fifty-two participants attended the Veterinary Feed Directive short course, gaining valuable information on the upcoming implementation of the new veterinary feed directive in January 2017.
- Forty-five nitrate tests were done, giving 15 producers timely information their forage was safe to utilize or sell, 30 producers learned additional management was needed to safely utilize their forage.
- Fifty-eight private pesticide applicators earned 4 credits for license renewal. Five additional private applicator licenses were issued in 2016.
- Forty-two samples were submitted to Schutter Diagnostic Lab to identify insects, plants, and diseases, providing valuable economic information to county land owners and producers.
- Twenty-eight on-site yard and garden visits combined with 30 on-site farm and ranch visits saved county residents consulting fees and helped them utilize research-based information in their decision making process.
**Master Gardener Program gets a new start in Beaverhead County**

The Master Gardener program is a three level program that combines horticulture education and community service. Ten participants completed the Level 1 Master Gardener course this spring. They learned about soil types and fertility, plant growth and development, vegetables, small fruit, ornamentals, trees, shrubs, lawn and turf, composting and pest management.

One participant stated “The highlight of the class for me was learning about trees and pruning from MSU Extension Horticultural Specialist Toby Day, and ornamentals from Kellee Anderson, MSU Butte-Silver Bow horticultural agent.” Eight of this spring’s Master Gardener participants will join a Level 2 class scheduled for this winter.

Participants contributed volunteer hours working at the UM-Western community garden, donated produce to the community pantry and local pre-school, helped maintain boulevards in Dillon and volunteered at the Dillon Farmer’s Market. After a five year hiatus from the program, the Extension agent is looking forward to creating a new tradition of Master Gardeners in Beaverhead County.

**Positive identification: Positive results**

MSU Extension helped a homeowner identify and remove a powder post beetle infestation from a newly built home. "A big thanks to all at the County Extension Office for acting so fast, without you we may have been sitting in a pile of dust" stated new Beaverhead county homeowner Lorilee Diaz. The Diaz family moved into their freshly built home in July. In late February, a fine powder appeared under the kitchen island. When Diaz cleaned up the powder, it would rapidly reappear. Upon closer inspection, she discovered small black beetles between the counter top and the framing.

Powder post beetles were positively identified through the Schutter Diagnostic Lab and by the regional expert at the Oregon Department of Agriculture. Diaz’s contractor was uninterested in helping with their “bug” problem until a positive identification was made. “The offending kitchen island has been removed from our home,” stated Diaz with visible relief. Powder post beetles are second only to termites as destroyers of seasoned wood used in buildings and furniture. The adult powder post beetle exits the wood, leaving a small circular hole the size of a pencil lead. Any jarring of the wood causes a fine, flour-like powder to sift from these holes. When cut or broken, the interior of infested wood is laced with this finely-packed powder. If infestations are not treated, the structural strength of the wood becomes seriously impaired.

Diaz has become a repeat Extension customer coming in for information about sustainable landscaping with native plants, weed control and management, and tree recommendations.
Member-leader partnerships fuel successful programming

Successful programs tie interested youth in a meaningful relationship with a caring adult. The 4-H shooting sports program is successful for this very reason. We have an amazing group of caring adults that give freely of their time and energy to make sure our shooting sports members are safe and successful. The Shooting Sports committee has worked hard to give our 4-H members the best possible experience. Shooting Sports has the largest number of youth participating. There were 65 members enrolled in the archery program, 25 members participated in air rifle and air pistol, and 15 members in shotgun. The shooting sports committee received a NRA grant to fund the shotgun program and start an Olympic recurve archery program. The grant award totaled $5922 including six youth shotguns and three Olympic recurve bows. The Beaverhead County 4-H Archery camp celebrated its second year of preparing prospective national team contenders in July, where 15 members and leaders from across the state tested their skills.

The Beaverhead County Shooting Sports program is home to two national shooting sports team members, Sam Peterson competed in compound archery and Christina Mayer shot air rifle in Nebraska in late June. Peterson competed in air rifle two years previous. Dedicated leaders are the reason our members experience success at this project. They spend countless hours on the range, and more traveling and preparing, to give these kids the opportunity to shine.

Beaverhead County enjoys a rich outdoor tradition that makes this project meaningful to families across multiple generations. The program promotes responsibility, decision making, and identifying realistic personal goals. It assists young people in their personal development, helps them explore a life-long vocational activity, and establishes a framework of knowledge and skills for lifetime involvement in recreation, hobbies, and careers related to shooting sports, the environment, and wildlife.

MSU Extension partnered with the Beaverhead FFA Chapter, and Dave Madsen, DVM, to help Beaverhead County 4-H and FFA members have a better understanding on how to best raise their livestock. Participants learned health, nutrition, and management practices to ensure their animals are a safe quality product for food consumers.

Youth had a hands-on opportunity to explore proper injection types and sites with Caleb Igo, Beaverhead FFA Chapter advisor. They learned the importance of proper storage and labeling of medications with 4-H volunteer Kiley Martinell and about proper feed measurement, storage and feeding with Jackie Sutton, Beaverhead County MSU Extension Agent. Madsen hosted two swine workshops, Youth Pork Quality Assurance and market hog husbandry basics. He addressed vet-client-patient relationships, biosecurity, and the need for accurate records. Members learned the importance of high quality feed and clean, cool, readily available water is for animal health and weight gain. The Beaverhead County 4-H members enjoy the opportunity to have Dr. Madsen’s expertise at their fingertips.

Seventy 4-H members attended the three-workshop series to become livestock quality assurance certified. Partnering with the FFA program solidified relationships and unified the expectations for youth livestock produced in Beaverhead county. These workshops are part of an effort to educate 4-H youth on proper animal care to increase the value of products sold to consumers.
Junior 4-H Leaders
Making learning by doing fun

4-H Junior Leaders are serving as mentors for our younger members. Junior Leaders organized and presented fit and show clinics for the poultry, beef, swine, rabbit, and cat projects. Enthusiasm breeds enthusiasm and we have doubled the number of active junior leaders in the past year.

Junior leaders took on leadership roles in the implementation of the Beaverhead County 4-H day camp, leading four separate groups through team challenges and STEM-based workshops exploring food science, solar energy, chemical reactions, and the science of throwing over 500 water balloons in less than 10 minutes. Forty-five 4-H members and their siblings enjoyed the day in the sun at Clark Canyon Bible Camp.

Beaverhead County is excited to highlight their senior ambassador, Katey Sutton. She was elected to serve on the State 4-H Ambassador team as the Montana 4-H Leader’s Council Representative at 4-H Congress this past July. Sutton traveled the state this summer helping with livestock shows at fairs, making friends, and encouraging 4-H members to get active and make a difference. She is enthusiastic about the opportunities 4-H has given her during her 11 year 4-H career and shares her contagious smile and enthusiasm with younger members and teens. “4-H is opportunity, it has opened the whole world to me, it has taught me I can do anything I want with work and determination. I am so excited to share the opportunities 4-H has given me with other 4-H members.”

Junior leaders Deacon Stewart (left) and Jacelyn Stewart (above) lead camp activities.

Junior leaders Alison Bramlet and Bailee Doering teach swine fitting and showmanship to 4-H swine members (left). Poultry members learn safe handling practices and showmanship from Harleigh Johnson and Alison Bramlet.
Carcass quality and meat cut identification: The missing link

Beaverhead County 4-H leaders reported a disconnect in 4-H member’s knowledge linking production practices with carcass quality. L and S Meats shop owner Paul Lamey held a captive audience as he took 25 4-H members and six leaders on a facility tour, tracing the steps from a live animal to cut and wrapped frozen product. They learned how each species is broken down into wholesale and retail cuts. 4-Hers learned the difference in pricing for different types of retail cuts and the importance of proper animal husbandry to the final product. The members were able to see firsthand the effects that rough handling of an animal had on the carcass. Trimming out bruises or abscesses takes extra time and diminishes the quality of the finished product.

Caden Hansen, Stock “N” Stitch 4-H club member, stated “That was so cool, did you see that huge steak?” Hansen was in awe as Lamey placed the porterhouse on the counter alongside the equivalent pounds of hamburger and two chuck roasts for price comparison. In response to member and leader demand, more educational events on carcass measurement and quality will be scheduled in the future.

Beaverhead County Beef
Born, Raised and Fed at Home

Beaverhead County Youth Kaleb Probst, Reese Meine, and Sara Malesich rank in the top five steer carcasses statewide in 2016, proudly showing steers from their family beef operations.

Beaverhead County 4-H has 235 members involved in 11 4-H Clubs. Members explore interests, participate in educational programming and build positive relationships with interested adults. Beaverhead county 4-H has 82 volunteer adult and youth leaders. 4-H empowers youth to take on leadership roles, speak in front of a group, run a public meeting, and engage in community service and service learning.

One hundred seventy members participated in a market livestock project. These projects develop leadership, initiative, goal setting and sportsmanship while mirroring the livestock industry that drives the economy of Beaverhead county. We celebrated eight Steers of Merit, 10 Montana Certified Lambs, and 17 Symbol of Excellence swine.

Beaverhead County 4-H Foundation awarded two scholarships to local 4-H youth pursuing an agricultural career. These scholarships were awarded Cierra Lamey (Pre-Vet) and Ty McKay (Ag Tech and Diesel Mechanics).
Warming our Communities one Heart at a Time

The Beaverhead County 4-H Junior Leaders Council (JLC), wanting to make a real difference within their combined communities, decided to make homemade fleece blankets and deliver them in person to community members. The JLC applied for a People Partner Grant to help fund their service project. A goal of 50 blankets was set to provide shut-in elderly and special needs adults with warmth, comfort, and more importantly, the affirmation that someone cares about them as a person and member of our communities. In partnership with the Montana 4-H Foundation and utilizing JLC funds, the teens were able to purchase over 100 yards of fleece and build 52 blankets.

- Thirteen blankets were delivered to the Building Self Worth (BSW) community home in Dillon.
- Twenty-nine hand-made fleece blankets were delivered throughout Dillon.
- Ten blankets were distributed in the Lima and Dell communities.

The members learned that many residents of the BSW do not have family to enjoy their holidays with. JLC members were able to give special attention to personal likes, favorite colors, and designs in presenting the blankets to the BSW clients. The youth leaders learned about the true circumstances some of the residents of Beaverhead county face every day. The majority of our recipients live on a fixed budget, lacking ideal circumstances. Something as simple as a blanket can make a real difference for someone. Little did the kids realize the power of a smile and a heartfelt thank you would have in their lives. “We could truly see the happiness, we really made a difference for some of our recipients. We hoped to lift their spirits and wish them to stay warm as winter approaches.”

Contact Us

Jacqueline L. Sutton
Agriculture Extension Agent; 4-H Development

Shannon McWilliams
Administrative Assistant

MSU Beaverhead County Extension
2 S. Pacific #11
Phone: 406-683-3785
E-mail: jacqueline.sutton@montana.edu
beaverhead@montana.edu

MSU BEAVERHEAD COUNTY EXTENSION SUPPORTED BY:

Beaverhead County Commissioners
Michael J. McGinley
C. Thomas Rice
Garth Haugland