



## Welcome to Carbon County Extension

This past year has been a busy one for MSU Extension in Carbon County. The Extension Office has hosted, facilitated, and taught many educational classes in the areas of agriculture and natural resources, 4-H and youth development, gardening, rural health, and much more. This report highlights a few of the programs facilitated in the last year to meet the need of community members.

In addition to these programs, the office has provided resources and one-on-one education to agricultural producers in many areas; including hay nitrate testing and education, weed, plant disease, and pest identification and management recommendations, land leasing rates and contracts, and seeding recommendations. The most prevalent questions were related to the topics of alfalfa weevil control, tree diseases, powdery mildew in crops, noxious weed control, and rental/lease agreements for both grazing land and crop land. These needs have been met through individual consultations, classes, community outreach events, and written publications.



**Carbon County 4-H Congress Gavel Games State Champions!**



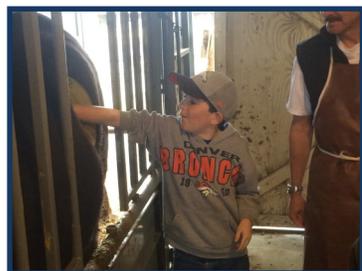
**Western Pine Gall Rust on pine tree**

4-H in Carbon County also continues to flourish and the Extension Office has worked with numerous leaders and youth members to create new and exciting educational opportunities. The Extension Office has worked to create more interactive quality assurance trainings, organize a multi-county 4-H camp, organize and manage a well attended fair, and assist numerous county teams to compete in state contests at 4-H Congress.

## Exploration & Education: Natural Resource Science Discovery 4-H Program

Both at a local level and nationally there is a need for additional k-12 education in the fields of agriculture, natural resource sciences, and STEM (science, technology, engineering, and mathematics). Through a partnership with MSU College of Agriculture, Agriculture Education Department and MSU Extension in Carbon County, 50 4-H youth from Carbon, Stillwater, and Gallatin counties had a unique opportunity to learn more about natural resources and STEM programs on the MSU campus. With funding

procured through the MSU Instructional Innovation Grant, MSU college students in Agriculture Education worked with Carbon County Extension to design and teach a day camp for 9-14 year old 4-H members.



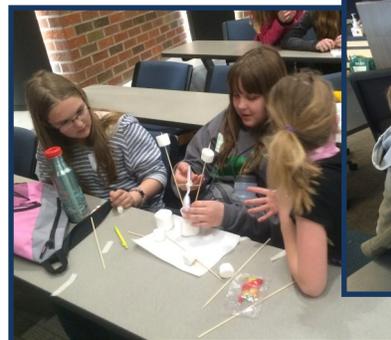
**Reaching inside the cannulated cow!**

At this camp, 4-H members developed knowledge, interest, and life skills in

STEM and natural resource fields while learning about MSU research in those areas. On-campus workshops included topics of animal science, soil science, ruminant nutrition, physics, and chemical reactions. During off-campus workshops held at the Bozeman Agriculture Research and Teaching Farm, 4-H members had the opportunity to interact with a cannulated cow, soil monoliths, and the Grow/Safe

feeding technologies. The 4-H youth got to put their hand inside a cow's rumen, blow up bottle rockets, texture soil, and much more.

Carbon County 4-H members experienced a college campus, explored agriculture and science research, and learned through interactive workshops. A pre/post camp survey showed that 4-H youth in attendance increased their knowledge, interest, and career aspirations in STEM and natural resource science-related fields. The success of this collaborative project was also observed in the months following the camp. Carbon County 4-H attendees demonstrated a retention of information learned at the camp in future classwork and 4-H projects.



**Using physics to build marshmallow launchers**



**Learning about ruminant digestion**

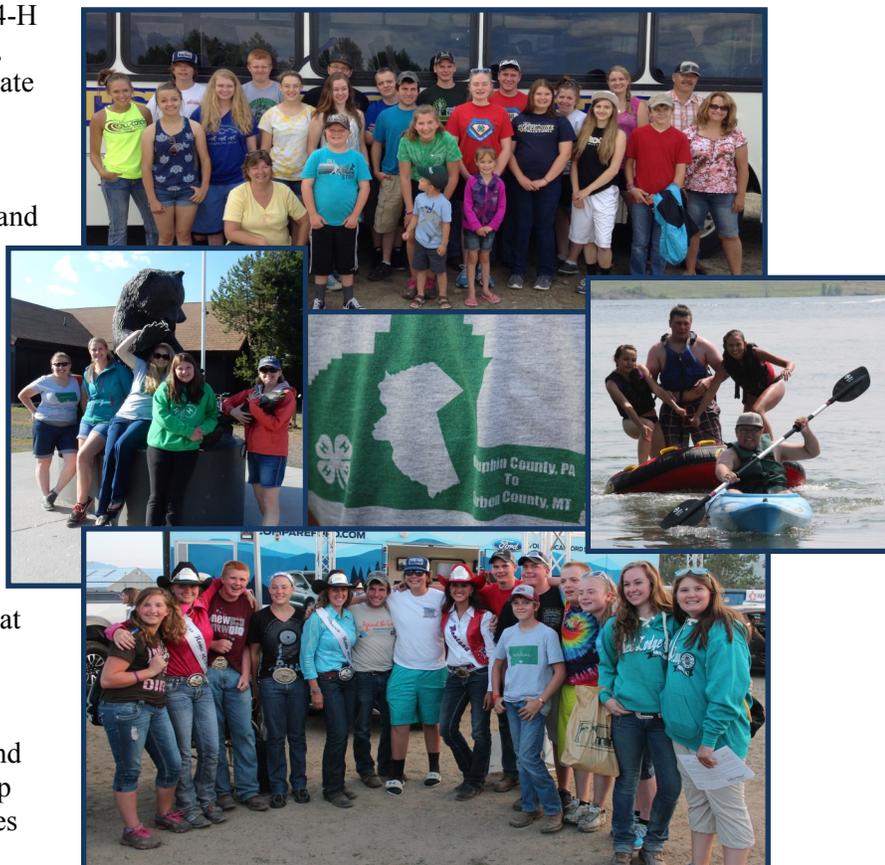
# 4-H & Youth Development

## Creation of 4-H Interstate Exchange in Carbon County

For nearly 20 years Carbon County has been without a 4-H Interstate Exchange program, until now. This past year, Carbon County 4-H teens had an opportunity to participate in the newly revived Carbon County 4-H Interstate Exchange program.

This group of teens gained leadership, communication, and teamwork skills while hosting 4-H members from Pennsylvania for one week in July. 4-H Interstate Exchange provides teens in rural Montana communities an opportunity to expand their horizons and experience other cultures around the country. During the first year of this two-year program, the teens worked with Extension professionals and 4-H leaders to plan and host 4-H members from Dauphin County, PA. As a part of their hosting experience, the teens planned numerous learning and adventure opportunities including a trip through Yellowstone National Park, white water rafting, kayaking, and a day at the rodeo.

Through this experience Carbon County 4-H members established new friendships, experienced their county and state through new eyes, and gained invaluable leadership experience. To complete the project, the group continues to work tirelessly to raise money for their trip to Pennsylvania this summer.



## Carbon County Horse Program & Education Efforts Continue to Grow

This year in addition to the annual Carbon County Horse Camp and Under the Beartooths Schooling Show, the Carbon County 4-H horse program added a Spring Tune-up Clinic. This clinic was designed with the success and safety of the 4-H horse members in Carbon County in mind.

For many 4-H'ers getting on their horse for the first time in the spring can be frightening; this camp worked to decrease that fear and make that first ride of the year a positive experience. The 4-H youth started on the ground, worked up their confidence around the horses and progressed to a trail ride by the end of the day. The youth also learned about the importance of vaccinations and brand inspections from local experts. The clinic was great way to kick off a summer of riding for the 4-H members.

In June, the 4-H horse members once again gathered to attend the annual Carbon County 4-H Horse Camp. During this camp, first-year members to teens experienced the hands-on learning environment only found at horse camp. Working each day with clinicians, 4-H youth not only improved their horsemanship and equitation skills by working each day, they also became more confident with trail obstacles, roping, and round pen work. Perhaps the most notable effort of this year's camp was the emphasis put on leadership skills and horse science education. Older members partnered with younger members and served as mentors throughout camp. The mentorship program not only gave the older 4-Hers leadership experience, it also provided role models and relationship-building experience for the younger campers.



# Agriculture & Natural Resources

## Expanding Audiences with Weed Education

A large focus this past year by the MSU Extension Office in Carbon County has been reaching out to audiences not previously reached by Extension in the county with a focus on noxious weed education. One such effort was hosting an educational nature walk at the Climb to Cure Cancer event. During the nature walk, the group scoured the mountainside identifying and discussing numerous wild flowers and weeds. Among the weeds identified that were not previously known by the group were purple loosestrife, oxeye daisy, tall buttercup, and spotted knapweed. Along with identification, control strategies were discussed. Each participant received tools and techniques for prevention and control of noxious weeds that they could use in their daily lives.



Weed management, hay field restoration, and grazing recommendations were all discussed at various events throughout the year.

The Extension Office also provided educational information at several tradeshows and festivals including the meeting of the garden clubs in south central Montana. This booth was requested by the Joliet Garden Club and was presented at their annual meeting of the district. It contained information on noxious weed identification and control measures. The booth educated gardeners and landowners alike about the importance of noxious weed management and increased awareness about preventing the transplanting of weeds from the wild into landscapes.

Presentations were also made to groups like the Red Lodge Rotary on the importance of weed control, the services Extension provides, grazing recommendations, and hay field management. These presentations reached audiences that included a demographic mix between small landowners, agricultural producers and home gardeners. Presentations with the Rotary Club and other groups

facilitated a relationship between unreached citizens and the Extension Office. At least 20 new contacts were made at each presentation and follow-up information was provided to these constituents on many topics from weed management to pasture rotation.

## Master Gardener Classes Continue



This past year both a Level 1 and Level 2 Master Gardener Class series were taught. Ten individuals attended and graduated the Level 1 Master Gardener Class and eight attended and graduated with their Level 2 Master Gardener certification. In these classes, the participants learned about

cultivar selection, pest management, tree pruning, watering practices, and much more. The classes require a volunteer commitment to graduate, and between the two classes over 165 hours of community service added value and knowledge back into our community.

## StrongWomen Classes

One clearly identified need in the rural communities of Montana and in particular the Carbon County community of Joliet is the lack of physical exercise facilities.

StrongWomen was a 10-week course designed to meet this need within the community. Twenty women registered for the strength training exercise class. During this series, the women learned and practiced exercises research has proven to strengthen muscles, prevent osteoporosis, and improve overall health. By the end of the

LIFTING WOMEN TO BETTER HEALTH



STRONGWOMEN

series, women who regularly attended class reported they felt more agile and stronger, did not get as sore from doing ranch activities and gardening, felt more toned, were more flexible, and had a higher confidence level than before they started the class.

## Looking into 2016 with Carbon County Extension

Here at MSU Extension in Carbon County we have been diligently planning for this new year and we are very excited. To seek direction for programming in 2016, we are conducting an informal needs assessment and including key stakeholders from around the county in the discussion. Based on data gathered at this point, in 2016 look for educational programs related to animal nutrition, vaccination efficacy, estate planning, animal handling, seeding recommendations, land leasing and contracts, young and beginning farmer programs, and small acreage programs.

In the world of Carbon County 4-H, 2016 will bring the traveling experience for the Interstate Exchange group, leadership opportunities for teens, 4-H camp, and much more. In April 2016 the statewide event Rec Lab will be held in Carbon County. Rec Lab is a leadership opportunity for teens in 4-H and it is exciting to host it in Carbon County! In 2016, the focus of 4-H programming will continue expanding educational opportunities for youth in the form of events, classes, tours, demonstrations, and leadership opportunities.



From Novice Goat Showmanship to Old Goat Showmanship there were many success stories at the 2015 Carbon County Fair.



### Contact Us



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