Welcome to Lewis and Clark County
Thank you for your support of Montana State University Extension. MSU Extension is a partnership between Lewis & Clark County, Montana State University and the United States Department of Agriculture. This three-way partnership provides educational programs in the areas of Agriculture, Natural Resources, 4-H Youth Development, Community Development, Family and Consumer Sciences, and Supplemental Nutrition Assistance Program (SNAP) Education Programs. Enjoy some highlights of the 2016 educational opportunities in Lewis & Clark County.

Family and Consumer Sciences Expands to Jefferson County
This year, the Lewis and Clark County Extension office was fully staffed with an Agriculture Agent, 4-H Youth Development Agent, Office Administrative Assistant, 4-H Military Program Coordinator, and a SNAP-Ed Program Manager/Family and Consumer Sciences Agent joint position. In June, our SNAP-Ed Program Manager was promoted to a one-quarter time Family and Consumer Sciences Extension Agent in partnership with Jefferson County. The partnership helped expand the Family and Consumer Sciences Program to provide education in communities that may be hit with job losses or other economic hardships due to the recent closures of the Golden Sunlight Mine and the Mental Health Development Center in Jefferson County. The focus of the Family and Consumer Sciences Program in both Lewis and Clark and Jefferson Counties includes Food Preservation, Family Economics, and Health Education.

In October, Agent Kim Lloyd partnered with a local community group, Growing Community Naturally, and Jefferson High School to provide a canning class in the community of Boulder. The hands-on class drew six participants from Boulder and neighboring communities who had little previous canning experience and wanted to learn the economical practice of preserving food at home. Participants canned a jar of pickled beets to take home and extra jars were prepared for use in the school cafeteria.

Supported by the Lewis & Clark County Commissioners
Michael Murray
Susan Good Geise
Andy Hunthausen
Lewis & Clark County 4-H

By the Numbers
In 2016, Lewis & Clark County 4-H reached over a thousand youth through short term educational programs. Year-round, 24 active 4-H Clubs engage 138 4-H volunteer leaders and provide educational programming for 411 youth 4-H Club members from ages 5 to 19.

“Learning is an active process. We learn by doing. Only knowledge that is used sticks in your mind.”
- Dale Carnegie

4-H empowers youth to take on leadership roles. Learning by doing in 4-H provides a safe place for kids to speak in front of a group, learn how to run a meeting, engage in service learning, and so much more.

Teaching Generosity through the 4-H Club Program
Each year 4-H clubs complete a community service project. This year the Scratchgravel Wranglers 4-H Club purchased, assembled, and delivered a picnic table for the Little Children's Home, a local foster/group home. After the delivery the 4-H members toured the home to learn about foster care and foster needs in our community.

4-H Camp Teens Learn Independence
The 4-H camp counselors, ages 14-19, manage the 4-H camp for members ages 9-13. Duties include choosing the theme, planning activities and cleanup after meals. The teenage counselors work with younger 4-H members to learn and teach team building and life skills. While fostering youth-adult partnerships in the planning stages is critical, when Lewis and Clark County 4-Her’s get to 4-H Camp, the spotlight is on the teenage counselors to truly manage the camp while creating great experiences for the youth who attend.

4-H In School and After School
Though the 4-H Club Program is well known, the opportunity to work in schools and in after school programs helps reach more youth. Partnerships with Jim Darcy Elementary Ag Day, Four Georgians Elementary, Central Elementary Afterschool, The Afterschool Alliance, and the PEAK (Promoting Enrichment Activities for Kids) Program allows over 700 youth the opportunity to experience learning life skills through 4-H.

The majority of stations at Jim Darcy Ag Day are run by 4-H members, volunteers, and staff.

Through a sponsorship from McDonald’s, 4-H is reaching out to Helena schools. This opportunity offers youth who live in town the chance to raise a 4-H animal. McDonald’s owner Terry Gauthier says, “4-H teaches everything I want my employees to know. Responsibility, critical thinking, and a good work ethic. I want to help more kids have this opportunity.”
4-H Project-based Learning Leads to Showcasing Mastery during the Fair

4-H has a strong history and presence at the Last Chance Stampede and Fair. 4-H members have the opportunity to showcase their projects each July. Projects range from sewing to sheep, leathercraft to beef, and welding to cooking. The market swine project has the most entries. During the year, shooting sports has the most youth participating.

Before the fair starts, 4-H members explain their projects to local community members that serve as judges. Saturday at the fair, buyers pack into the stands for both the Livestock Auction and the Indoor Project Auction. The 2016 4-H Livestock Sale was the highest grossing sale in history at $343,792. The Indoor Project Auction grossed $1,535.

4-H Military Partnership Grant

This year the 4-H Military Partnership Grant in Lewis and Clark County was all about collaboration. For National 4-H Week, with the assistance of numerous volunteers, the 4-H National Youth Day Science Experiment was combined with an open house to promote 4-H to more than 85 youth and families. Youth learned about trajectory, wind speed and initial force while learning about recent global issues. Youth and families learned about different projects and how to join a 4-H club while doing fun activities.

4-H teamed up with the Helena Middle School and the YMCA to offer babysitting and First Aid certification to middle school youth using the 4-H Military Babysitting curriculum. In November, working with Carroll College, the Student Assistance Foundation and the Montana National Guard, help was given finding resources to pay for college. More than 60 people attended and learned how to fill out successful college applications and financial aid applications. Youth interested were able to discuss with National Guard recruiters different options to help pay for their college education.

The college readiness series continued through collaboration with Helena Middle School, Montana National Guard, Montana State 4-H Ambassador Officers, and Broadwater County 4-H. Resiliency training teaches youth to bounce back from tough situations, especially during deployment. Youth also learned ways to prevent bullying. Adults learned more about 4-H and being a leader by attending 4-H Leader’s College. The Montana 4-H Ambassador Officers provided numerous opportunities to the almost 30 youth and 10 adults in attendance.

In the near future, partnerships of this kind will be more vital in making impacts with limited funding available to support military youth in Lewis and Clark County.
The Master Gardener Program has completed its seventh year in Lewis & Clark County. Since the spring of 2010, 299 people have taken the Level I course, 99 people have taken the Level II course, and 18 people have taken the Level III course in Bozeman. The Level I course is taught every spring and the Level II course is taught every fall in Helena. The Level III course is taught in Bozeman in the summer.

An evaluation of the spring Level I course indicated participants were satisfied. The instructor, Brent Sarchet, received an overall rating of 4.83 out of five. Course participants indicated the course exceeded their expectations or met their expectations, 67 percent and 33 percent respectively. The majority, 67 percent, of the spring Level I class, indicated they were familiar with Extension prior to taking the Master Gardener course, but they had not utilized the offices’ services or taken any courses. The data shows with the Master Gardener program we are reaching clientele that may not otherwise utilize Extension’s services. One respondent said, “How anxious I am to put the information to use! I was surprised that after every class I was so energized and looked at everything a bit differently.” They continued, “To be honest, I’m sorry the sessions are over. Every class offered something surprisingly wonderful.” In addition to the knowledge course participants obtained, 67 percent indicated a healthy/well being benefit, 25 percent indicated a social/networking benefit, and 25 percent found a financial benefit from the program. One respondent said, “I am new to the Helena area, so these classes helped me focus on how to get a good start with making peace with the earth here, and it has been years since I’ve taken any course, so to jump into this was huge. I learned so much each time, I couldn’t wait to attend the next week. I also didn’t want to miss any of the extra classes offered on other evenings.” When asked if they would recommend the course to others, 100 percent of the respondents said yes, and 100 percent indicated they plan to attend future MSU Extension programs and courses.

Volunteer Project Highlights

Master Gardeners are putting their gardening knowledge and skills to work in their communities through many projects. Since the spring of 2010, Master Gardeners have logged over 3,803 volunteer hours; These hours valued at $19.89 per hour, are worth $75,642 in volunteer time that has been given to their communities. Following are a few of the volunteer projects in which Master Gardeners have been involved.

Fairgrounds Landscaping Project

Six years ago the Extension office and Master Gardeners built seven raised beds and planted them south of the Exhibit Hall at the Lewis & Clark County fairgrounds. These beds would soon require major maintenance or removal. Extension agent Brent Sarchet approached the fairgrounds board with a plan to install permanent landscaping in the area. The plan was approved, and this spring the raised beds were removed and permanent landscaping installed. This project will be completed over three years. The first stage of the project included: dirt work, installing the irrigation system and planting some trees. The area will eventually have a gazebo and further perennial plantings.

Number of volunteers involved - 15
Volunteer hours on this project - over 180
Value of volunteer hours on this project - $3,580
Value of the work performed - over $5,000
Informational Booth at Farmers’ Market

The past six years, the Extension office and the Master Gardeners have maintained an informational booth at the Helena Farmers’ Market. The last four years, Level III Master Gardener Jim Clark has taken over the organization and coordination of the booth. This year Jim received assistance from the Gold Country Montana Master Gardener Association. This is a group of over 50 Master Gardeners that have formed an association to help organize additional volunteer projects and provide continuing education opportunities. The booth is a great way to get research-based gardening information to the public. People at the booth field horticulture, gardening and food preservation questions.

Number of volunteers involved in 2016 - 10
Volunteer hours in 2015 - over 300
Value of volunteer hours in 2015 - $5,967
Contacts made in 2015 - over 360

Vole, Pocket Gopher and Ground Squirrel Management Workshop held in Helena

Twenty-two people attended a course this summer on vole, pocket gopher and ground squirrel management. The course was taught by Brent Sarchet, MSU/Lewis and Clark County Extension Agent and Stephen Vantassel, Montana Department of Agriculture Vertebrate Pest Specialist. Participants learned to identify pests and different ways of managing them. The course had participation from a diverse group of gardeners, farmers and ranchers. Participants were asked to identify their skill or comfort level in identification and management of the three species prior to the course. The largest group, 47 percent, indicated they were not comfortable, followed by 32 percent who indicated they were somewhat comfortable. After taking the course, the highest rating was very comfortable, 43 percent followed by comfortable at 38 percent. These three pests can cause significant damage to gardens, crops and pastures. The course received an overall rating of 4.48 out of 5.

Course participants commented, “Good presentation, very informative, well done!”

Fruit Tree Research Project Concludes the Fourth Year

Fruit is largely lacking in most local food systems in Montana. Montana has 33 of 56 counties that have food deserts. Brent Sarchet, MSU Extension Agent in Lewis & Clark County and Toby Day, MSU Extension Horticulture Specialist, along with statewide partners, are leading the effort on fruit tree research in the state. The work started with a Montana Department of Agriculture (MDA) Specialty Crop Block grant in 2013, followed by a MDA Growth Through Agriculture grant in 2014. Together these grants funded the establishment of 10 fruit tree cultivar research sites. An additional Specialty Crop Block grant was received in 2014 to conduct research on historic orchards. In the fall of 2016, another Specialty Crop Block grant was received to partner with Montana PBS to develop a series of “how to” videos on growing fruit trees and small fruit. The video series will feature fruit tree research projects and other fruit research from colleagues that is being conducted across the state. Sarchet and Day released a publication “Growing Fruit Trees in Montana” in the winter of 2015. The publication has been very well received by the public with over 1,125 copies distributed to date. The publication will be updated every three years as data is collected about growing fruit trees in Montana. The fruit tree research and education efforts will encourage and support future fruit development. Fruit production is an enterprise that farmers and ranchers can adopt to assist them in diversifying operations.

Goodland apples, one of the best performing apple cultivars so far in the cultivar research.
Food Preservation

Hands-on food preservation classes provide an opportunity for participants to practice canning in a group setting before trying at home. This year, four hands-on food preservation classes were held at the Lewis and Clark County Extension office throughout September. Water bath and pressure canning safety and best practices were topics covered. Twenty-two community members attended. The classes were a mix of experienced and new home canners. Experienced canners shared tips with each other and discussed current methods. Participants made ginger pear preserves in a water-bath canner as well as beets or green beans in the pressure canner.

Canning classes are a popular and important program in Lewis and Clark County. Both water-bath and pressure canning are an economical alternative to preserve food and save money. A number of participants asked questions about practices that are no longer recommended for safety such as using paraffin wax to seal, open kettle canning, and water bath canning tomatoes with no additional acid. All three of these practices can result in an extremely unsafe product that could grow mold, bacteria, or even the botulinum toxin in low-acid foods, which in some cases can be fatal if consumed.

To increase outreach of food preservation resources from MSU Extension Lewis and Clark County, a new partnership was created this year with RockHand Ace Hardware in Helena. Ace Hardware sells a number of canning supplies including jars, canners, and new pressure gauges. Every Saturday in September, an Extension Volunteer was present to answer canning questions and share information, which included MontGuides and resources from The National Center for Home Food Preservation. Kim Lloyd, Family and Consumer Science Agent, was even featured in one of Ace Hardware’s commercials as an opportunity to promote the resources and classes Extension provides.

SNAP-Education

The partnership between Lewis and Clark County Extension and MSU Extension’s Supplemental Nutrition Assistance Program Education (SNAP-Ed) Program continued providing Cooking and Nutrition Education Programming for families eligible to receive SNAP Food Stamp benefits. Class partnerships included the YWCA, the YMCA, WIC, Florence Crittenton, the Salvation Army, the Friendship Center, Helena Food Share, Bryant Elementary School, Helena Housing Authority, Helena Industries, Career Training Institute, and the Lewis and Clark Library.

A series of eight adult classes are taught in SNAP-Ed on meal planning, reading Nutrition Facts labels, physical activity, and the nutrition messages of MyPlate. Adults enrolled in the program receive small kitchen gifts such as measuring cups and meat thermometers, and graduates receive a certificate and cookbook once they have attended seven or more classes. There were a total of 49 adult participants this year with 21 graduates. A new youth curriculum was also introduced and will be taught this coming year in first, third, and fifth grade classrooms in Title I Schools.

Another component of the SNAP-Ed Program is Policy, System, and Environment Programming. The SNAP-Ed Program Manager works with community partners to help develop policies, systems, and environment changes that can help make the healthy choice the easy choice for the populations we work with and the communities where they live, work, and play. A few examples of projects in the past year include the installation of a new school garden at Bryant Elementary School, helping to organize a free community dinner with partner agencies, and developing nutrition education resources for a local grocery store with the Kid’s Hunger Coalition—Lewis and Clark County.
Bryant Elementary School Garden

Over the past year, SNAP-Ed Program Manager Kim Lloyd has been working with the Bryant Elementary School Principal to provide nutrition education in the Title I School. One need the principal identified was that the school would like a garden to use in programming to provide space for students to learn where their food comes from. The principal was concerned about students’ access to fresh food and wanted to see a space where students and maybe even the community could grow food.

In February 2016, a $1,000 grant from the Montana Partnership to End Childhood Hunger (MT-PECH) was awarded to MSU Extension Lewis and Clark County to help Bryant Elementary install a school garden. Master Gardener volunteers were recruited to manage the design and building of six raised beds on the school property in partnership with the school principal and the YMCA 21st Century Learning Program over the summer. Students planted the garden and the SNAP-Ed Program Manager visited the garden once a week to provide nutrition education to the first and second graders.

The YMCA Summer 21st Century Learning Program had 14 students enrolled June-August 2016 and there were 225 students enrolled for the 2015-2016 school year at Bryant Elementary School. The SNAP-Ed Program will be at Bryant Elementary in the Spring of 2017 and plans to incorporate the garden in the SNAP-Ed Nutrition Education Programming. There will also be efforts to recruit local community members to help with the garden.

StrongWomen—Healthy Hearts

StrongWomen—Healthy Hearts is a cardiovascular disease prevention program that aims to help midlife women reduce their risk of heart disease through fitness and nutrition education. This program was provided this year at the Helena Indian Alliance. The program was free of charge and open to the public. This program is designed for women who get very little to no exercise and are interested in increasing heart health. Half of the class includes leader-directed discussion around eating for heart health and hands-on cooking activities. During the other half of the class, participants engage in aerobic activity by walking outside or dancing to music. According to pre-and post-surveys taken by the group, after the program there was a 45% increase in the number of women who felt they now have more self-control when eating and more motivation for physical activity. There was also a 75% increase in those who reported they now record their physical activity. There were twelve women who participated in the program. After the series of classes finished a core group of women decided to keep on meeting at the Indian Alliance to continue with a walking group.

Additional FCS Programming

- **Diabetes Empowerment Education Program** is a program provided by Mountain Pacific Quality Health (MPQH) for diabetes patients on Medicare to receive diabetes management education. The agent is now a certified Peer Educator and is partnering with the local MPQH office to co-teach community classes.

- **Solid Finances** is a financial education program which provides financial education through a series of webinars covering topics such as budgeting, student loans, identity theft, and retirement planning. A series of three webinars was hosted at the Public Library this year.

- **eParenting** is a program shared with MSU Extension from the University of Wisconsin Extension. This curriculum provides parents and caregivers with weekly emails on using digital media as a powerful parenting tool. This program was shared with Helena Middle School and distributed to their email list of 680 parents and caregivers weekly from February through May.
Lewis & Clark and Jefferson-Madison County Partner in Offering Cover Crop Education to Producers

A cover crop seminar was hosted in Sheridan and Helena in February. The group of presenters were Clain Jones, MSU Extension Soil Fertility Specialist; Fabian Menalled, MSU Extension Cropland Weed Specialist; Zach Miller, Superintendent Western Research Station/Assistant Professor; and a panel of producers who are currently using cover crops. Cover crops are becoming popular among producers, but there is misleading information. The goal of this seminar was to provide examples of applications of cover crops and to discuss the benefits. When asking attendees if they would incorporate cover crops into their operation after attending the seminar, 39 percent responded that they plan on incorporating them, and 26 percent said they plan to use them on a trial basis the next growing season. Eighty-three percent of attendees indicated they would attend a similar future seminar.

4-H Youth/Adult Partnerships

Through developing youth/adult partnerships, 4-H members have an opportunity to learn valuable life skills directly from business and community leaders. Leadership trainings offered this year included Leadership 101, Leader’s College, Indoor Judge’s Training, and 4-H Club Leader Update. Several sponsors have stepped up to provide pro-bono services, such as welding and graphic design, as well as offering two new scholarship and grant opportunities directly for youth projects.

The opportunity for 4-H youth to participate in activities such as Demonstration Day and Fair Interview Judging provides them a platform for developing public speaking skills and critical thinking skills. Many volunteers enjoy seeing youth in action. This year 4-H volunteer Luke Duran said, “This is the most valuable training I’ve been to.” Through focusing on the experiential learning model and the growth mindset, adult volunteers completed several “Learn By Doing” activities to apply skills and share ideas on how to reach kids that may learn in a different style than what works for them personally.

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