Montana life has many benefits, but it is not for the faint of heart, as evidenced by Valley County residents who are coping with a challenging economic environment. In the past seven years, agriculture producers have found themselves recovering from one of the worst droughts in history after overcoming one of the worst floods in history. Depressed markets and increased inputs have added stress to an already apprehensive existence. The slow agricultural economy affects businesses, potentially leading to a community-wide feeling of hopelessness. MSU Extension in Valley County offers a glimmer of light as we meet the needs of our many-faceted community. Producers learn new management techniques and marketing options, horticulturists become more self-sufficient, families build strength through education and youth are empowered to see themselves in their own futures.
**Valley County Horticulture Update**

Valley County MSU Extension supported the advancement of gardening and horticulture knowledge by offering its seventh Master Gardener program in eight years. This program has fostered community beautification, stronger self-sufficiency, better gardening knowledge, and greater crop yields. It has spawned a junior master gardener program that has fostered inter-generational ties as students learn to garden and share their produce and the beauty of flowering gardens at Prairie Ridge Assisted Living Facility.

Valley County Free Tree Day 2018 gave away 1,600 trees and shrubs to improve the biodiversity of the ecosystem, improve home property values, and to support conservation practices. Since its inception in 2009, the program has given away over 20,000 trees.

Valley County MSU Extension offers beekeeping courses for commercial beekeepers, hobbyists, or anyone concerned about honeybees. Interest and support of this program has spurred the agent to use a Western Sustainable Agriculture Research and Education (WSARE) professional development grant to complete the Master Beekeeper course to become a better resource for beekeepers and pollinator conservationists. Ninety-four percent of the beekeeping participants rate the workshops as excellent and 100% learned something they didn't know before.

Valley County MSU Extension can identify and provide management strategies for insects, plants and diseases brought into the office. This quick response helps clients address problems in a timely manner and with the safest approaches available.

**Valley County Agriculture Update**

Valley County MSU Extension created a learning environment for local producers by identifying gaps in knowledge and providing workshops to help producers maintain or improve their economic viability, support ecologically-sound farming practices, improve yields, and become more efficient.

Weed management workshops offered growers the opportunity to learn techniques and strategies for mitigating impacts from noxious and problematic weed species in cropland as well as range and pasture. Educational outreach on narrowleaf hawksbeard has saved producers potentially-lost revenue of over $6 million without the management practices taught by Extension. Raising awareness of the threat of the aggressive pigweed species Palmer amaranth is MSU Extension’s priority for 2019 due to its challenging control and proximity to Montana.

During and following the driest year since 1889, nitrate testing of forage crops has become critically important in Valley County. The new strip test for nitrates has expedited the use, sale and shipment of feedstuffs for our constituents. Fifty nitrate samples were tested in 2018, representing more than 10,000 acres of forage and approximately 8,000 cattle. Education and outreach on potential problems from concentrated sulfates and nitrates in livestock water supplies has allowed producers to be proactive and discerning in water resource management.

**Field peas are one pulse crop that has changed the face of Valley County. Photo by Shelley Mills.**

Learning to split honeybee colonies at a summer workshop. Photo by Shelley Mills.

Narrowleaf hawksbeard
MSU Extension has worked closely with growers to improve their knowledge, skills and abilities to successfully raise pulse crops in rotation with small grains through an annual Northeastern Montana Pulse Plot tour. These plots have proved to be an invaluable resource for pulse producers, industry representatives and pulse researchers. Wheat stem sawfly, once a prolific pest, is no longer a problem in Valley County since producers have moved to rotational cropping.

Positive Youth Development Grows Here

Dr. Richard M. Lerner, Director of Institute for Applied Research in Youth Development at Tufts University found that “structured out-of-school time learning, leadership experiences, and adult mentoring that young people receive through their participation in 4-H plays a vital role in helping them achieve success.” Instilling leadership skills and a sense of community in our youth has become the focus of Valley County 4-H. Through youth/adult partnerships, youth are given the support necessary to fully reach their potential. Outreach in the high schools, at 4-H camp, in 4-H afterschool programs and with emphasis on community service gives youth opportunities to learn and make good choices.

Community service has always been an important part of 4-H. Youth service learning goes beyond just volunteering and moves into an expanded experience resulting in learning as well as genuinely helping the community. Valley County youth take on leadership roles in their clubs, serve on community boards, and learn citizenship through travel to Boston, New York City and Washington D.C. They hone their public speaking skills, develop confidence and build character.

Teen 4-H members apply leadership skills while serving as camp counselors to ensure a positive learning experience for all campers. They share the knowledge gained through their own learning experiences with younger 4-H members while remaining dedicated to their own projects. 4-H members face the future from an informed experience. They have won, they have failed, they have shared and they have served.

Escape the School: Escape room-themed Teacher Workshop

Continuing education is an ongoing requirement of our state’s educators. Valley County MSU Extension aims to bring professional development to local teachers, offering 16 renewal units or one undergrad or graduate credit to participants.

In this year’s workshop, teachers applied their inquisitive minds to solve a historical murder mystery. Following an escape room theme, all disciplines were incorporated into the process. Forensic science, historical data, literature, and technology lessons at all grade levels were included.

Because incorporating science, technology, engineering and math (STEM) in the classroom is important, teachers were introduced to STEM boxes which were distributed to every elementary, middle and high school in Valley County. Designed and created through a grant from the Valley County Community Foundation and MSU Extension, these boxes included lesson plans and supplies to teach a multitude of STEM topics. The teacher workshop also included art in the form of barn quilts, transforming STEM to STEAM.

Participants reported the following impacts from the workshop:

- created a learning environment to explore innovative teaching methods
- savings of between $75 - $300 per teacher
- making teachers think outside the box in our teaching strategies
Living and Caring with Dementia

Over 20,000 people in Montana have been diagnosed with Dementia/Alzheimer’s disease. This disease knows no boundaries and all communities face the challenges of caring for families needing support and guidance. The gradual slipping away of mind and memory is frightening and frustrating, both for the person with the disease and for family and friends.

Perhaps one of the greatest costs of Alzheimer’s disease is the physical and emotional toll on family, caregivers and friends. The changes in a loved one’s personality and mental abilities; the need to provide constant, loving attention for years; and the physical demands of caregiving duties can be hard to bear. As the number of people suffering from or caring for someone with Dementia/Alzheimer’s grows, the need for information on caregiving increases.

Valley County MSU Extension partnered with the Frances Mahon Deaconess Hospital, Prairie Ridge Village, Valley View Nursing Home, and Valley County Respite to form Glasgow Neighborhood Health Partners, which recognized a need for dementia training for both home and professional caregivers. Combining resources made it possible to invite Heather McKay, an award-winning occupational therapist and dementia care specialist, consultant, and international trainer/speaker, as well as MSU Extension’s family economics specialist Marsha Goetting, who provided insight for those making estate planning and financial decisions.

McKay provided training for professional and family caregivers on topics related to dementia and Alzheimer’s care. She has worked in the hospital, home health, and community settings, and with personal and professional experience with dementia caregiving, she addressed caregiving from both perspectives. Over 200 participants from six counties attended one of three full-day workshops, which led to greater understanding of dementia, awareness of caregiving—including self-care, and appreciation for both those with the disease and those in caregiving roles.

Marsha Goetting, top left, and Heather McKay, left, lead training sessions for caregivers.