Adaptability in responding to local needs is an everyday part of MSU Extension. Efforts in virtual delivery and adjustments for COVID-19 began immediately and revealed hidden benefits over time. Extension provided technical training to our clients, helping improve their lives with increased skills to navigate changes during COVID. The connection and consistent interaction also supported mental health for participants, who were reassured that education, support, and relationships would continue despite delivery changes. In the early days of the stay-at-home order, MSU Extension offered more than 9 straight weeks of noon learning webinars on a variety of topics.

**Agriculture & Natural Resources**

**Increased Information Access**

MSU Extension Agriculture & Natural Resource faculty adapted to the pandemic to meet critical needs of agricultural clientele, from webinars to deliver pesticide education credits to individuals at home, to significantly increasing information access. Virtual resources (see Quick Facts) and our faculty are critical to serving the agriculture and natural resource industry during the pandemic and demonstrate resourcefulness.

**Shared Technology and Skills Training**

In Blaine, Deer Lodge and other counties, MSU Extension worked closely with commissioners and IT departments to improve technical equipment and meeting rooms to benefit public meetings and work sessions for local elected officials, 4-H members and community members. These changes will continue to support communities in the future.

**Pesticide Education Program (PEP)**

The MSU Extension PEP, working with the Montana Department of Agriculture, developed and approved the ability for pesticide applicators to obtain pesticide credits from home due to COVID-19. **Earning credits virtually has proven successful as one-third of all private credits awarded were from this platform in 2020.** This has resulted in hundreds of individuals preserving their farm applicator pesticide license and continuing to protect Montana's agricultural industry.
Virtual and Hands-on Gardening and Youth Development

MSU Extension found ways to continue effective interactive, hands-on programs. In Big Horn County, the Gardening 100 series about basic gardening delivered a weekly short video on Facebook to more than 400 people ready to replicate the videos and try growing their own food. Carbon County offered interactive youth science classes, where at-home students built model digestive systems of ruminant animals, and built jumping machines after learning about biomechanics and mechanical engineering.

Ag Economics

MSU’s Extension’s Ag Economics group responded rapidly to questions about COVID-19’s effect on Montana’s economy by creating programs to help Montana’s farming and ranching sectors. This included “The Economic Impacts of Coronavirus in Montana,” a free webinar series during April and May. Together with Fort Peck Community College, they also held webinars to answer COVID-19 and other questions raised by Montana’s American Indian communities. Most recently, they held a virtual, annual Ag Outlook Conference with 169 attendees, a near-record for the event.

Livestock Environment and Sustainability

COVID-19 has caused meat supply chain problems at locations across the U.S. The MSU Extension Livestock Sustainability Specialist, with the assistance of the Montana Department of Livestock and other groups, have developed educational programs and contingency plans to address potential food chain disruptions. This includes a plan for euthanasia, compost disposal of healthy livestock, processing needs, and supply chain bottlenecks due to potential COVID-19 caused disruptions/failures of livestock markets. To assist the public, Thomas Bass (Livestock Sustainability Specialist), with partners, is offering an online Western Meat School and certification program for small- and medium-size meat processors.

Water Quality

Over 600 participants tested their water quality through the “Well-Educated Program” in 2020. Test results have identified health risks related to water quality issues and potential treatment options. In 2020 the MSU Extension Water Quality Program created a map indicating water quality health risks by county. This map will make it possible for people to know what to test for to ensure safe water. With more new wells drilled each year in Montana, the need for water testing guidance is critical to help people avoid negative health outcomes.

Modified County Fairs

Increased communication with fair boards and health officials led to creative solutions for holding county fairs, which are a positive learning experience for 4-H youth. Social distancing measures were added, schedules modified to limit daily barn attendance, and almost all livestock sales featured an online component. Despite major adjustments, parents, youth, buyers and community members shared positive feedback and success stories.