



The prairie meets the mountains in western Pondera County, by Wendy Wedum.

Pondera County is in the heart of the Golden Triangle, famous for quality wheat and barley production. This rural county covers 1,625 square miles and has approximately 6400 residents in Conrad, Valier, Dupuyer, Brady, and Heart Butte communities. The elevation varies from 3300' on the eastern plains to 8500' at the Continental Divide. Major watersheds include the Marias and Teton River drainages. Lake Frances near Valier is fed from Swift Reservoir and is a major supplier of irrigation and household water. The Tiber water system on the Marias River serves 270 households, using water impounded at Lake Elwell.

There are approximately 950,000 acres of farmland, including pasture, irrigated and dry land. Crops include wheat, barley, pulses, oilseeds, and hay. Cattle and sheep are important agricultural products along with hogs, poultry, eggs and produce from five Hutterite Colonies. Health facilities and retirement homes are important economic contributors in Pondera County. The Logan Health - Conrad Medical Center is a modern facility and serves a multi-county area with an economic impact of over \$12 million.

Workforce and Culinary Education

Over the last two years, the Conrad High School Family and Consumer Science teacher, Stacy Aaberg, helped her students be workforce ready through Food Handlers education and certification. Food Handler training is a basic course that teaches knowledge and skills to safely handle food for human consumption. Food handlers must be aware of foodborne illnesses, principles about time and temperature for food safety, proper personal hygiene practices, ways to prevent food contamination, cleaning and sanitizing among other principles. The certification is valid for three years and may give these students a hiring advantage.

Other culinary classes included fermenting cabbage to make sauerkraut and how to butcher a chicken. Classes are hands-on, first demonstrating what to do, and then the students complete the action. Additional information included proper methods of cooking, safe food handling, the importance of sharp knives, equipment safety, cleaning and sanitizing before and after food preparation.

Agriculture and Horticulture

While the growing season of north central Montana is short, there are any number of insect, plant and environmental issues affecting home gardens and farmland with interesting problems. Aphids, weevils, potato scab, tomato end blossom rot, sunscald and winter dieback in trees were common issues.

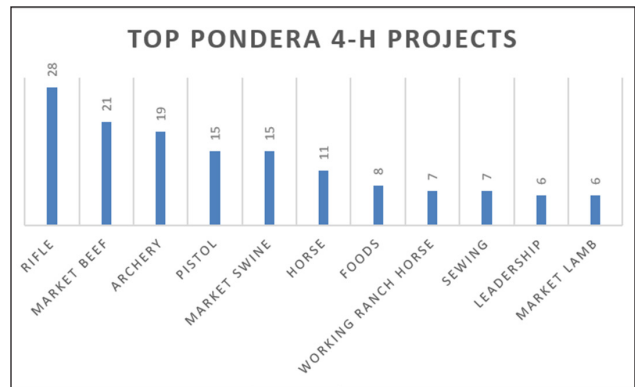
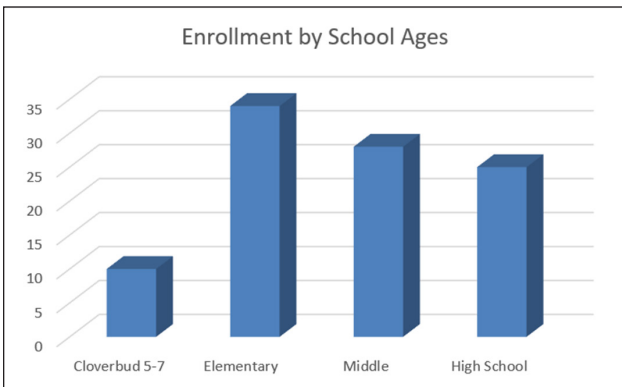
One unique sample that arrived at the office was a sowthistle plant with purple spots on the leaves. Sowthistle blossoms look similar to dandelions but are smaller. It is an annual and perennial herb that can grow to a foot or taller. A local family was foraging for the plant and discovered plants with purple spots. MSU Extension's Schutter Diagnostic Lab confirmed the purple spots are made by a gall-making midge, a type of fly. The midge is a beneficial insect released as a biological control agent in Canada (Alberta and Saskatchewan) to control perennial sowthistle, which can reduce crop yield and push out native plants. The gall-making midge only infests sowthistle in the *Sonchus* genus. The Pondera sample was not the first identified in Montana but is one of a few sites where it has been confirmed in Montana.

The Pondera office completed more than 50 nitrate tests on forage during a historic drought in Pondera County. The impacts of nitrate toxicity in cattle range from reduced appetite, lower milk production and fetal loss to rapid pulse, weakness and death in cases of acute toxicity. Identifying high nitrates with the quick nitrate test and sending a sample to a lab for accurate levels is important to make the correct recommendations to producers. Due to the extreme drought conditions experienced in Pondera County, one-third of the samples were sent to a lab for more accurate results. Lab tests range from \$15 to \$20 per sample but are an investment in protecting the producer's investment to prevent loss in their cattle herds.

Growing Partnerships

The partnership between MSU Extension and the Valier Library continued in 2022. A request for a class on making artisan bread led to a second class at the library. Attendees were interested in traditional artisan and gluten-free artisan bread. Techniques to make both types of bread are similar using flour or gluten-free flour, water and yeast or sourdough starter, combined with a long fermentation time (from a few hours to overnight). There are three differences between artisan and traditional loaves. First, the longer time frame to culture dough results in a deeper flavor and aroma. Second, enzymes break down more gluten during fermentation, making the bread more digestible. Third, the loaves have a crispy outside with larger air pockets and a more hydrated, chewy crumb. Participants learned two methods of making artisan bread and were enthusiastic to share what they learned with friends and family. The class also introduced three new people to MSU Extension in Pondera County.





Previous Page: (top) This beneficial midge was released in Canada to control the common weed, sowthistle. It was identified in Pondera County in July 2022. Photo by Wendy Wedum; **(bottom)** Pondera Extension Agent Wendy Wedum demonstrates kneading techniques when making artisan bread at a Valier workshop. Photo by Cathy Brandvold; **Top:** Culinary 2 students at Conrad High School learn how to butcher a chicken, photo by Stacy Aaberg, CHS FCS teacher; **Bottom Row: (left)** 4-H members represent all ages in the schools; **(right)** Projects with the highest enrollment in Pondera County

4-H members in Service

Pondera County 4-H members complete many service projects in ways both small and large. Members in the four 4-H clubs have given to the mitten and hat tree, made turkey meal boxes for local families, delivered holiday treats to shut-ins and held an annual shopping spree that benefits the Pondera Food Pantry. In addition to these efforts, in 2022 the Conrad 4-H sewing members helped make quilt blocks for quilts given to residents at the Logan Health – Conrad extended care.

One of the Pondera 4-H Ambassadors, Breana Erickson, began a leadership project to build sidewalks at the Marias Fairgrounds to help people of all ages with mobility issues. In the first year, she fundraised more than \$50,000. The sidewalk project will be completed in the next 2-3 years and will link the major venues between the show barns, exhibit building, food concessions and grandstands.

Top 4-H Projects

There were 97 4-H members enrolled in Pondera County in 2021-2022. Several youth took five to eight 4-H projects and the remainder completed one to three projects over the course of the 4-H year. The graph shows the 4-H projects with the highest enrollment; shooting sports and livestock projects are the most popular. Pondera 4-H members may enroll in 40 different project areas offered in the 4-H program. The range of interests offered to youth is broad and 4-H provides an opportunity for youth to safely explore and learn about different topics and projects, many of which allow them to learn skills that will help them in future careers.

Pondera County Staff



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