



Agricultural Experiment Station Corona Range and Livestock Research Center

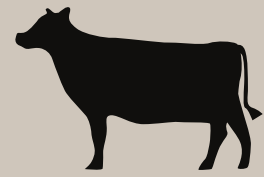
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MISSION

The primary mission of the Corona Range and Livestock Research Center (CRLRC) is to enhance the understanding of woody brush invasion, hydrology, cow-calf production, and big game management and to discover innovative solutions to improve economic development in rangeland-bound communities. The addition of 39 wind turbines provides an opportunity to study the intersection of renewable energy and agriculture in rangeland environments.

The pure-bred Angus cattle raised at the CRLRC are in the top 0.5% of the Angus breed for calving ease bulls and dollars savings on feed.



Research conducted at CRLRC is among the first to study the impact of cow vaccinations on subsequent offspring health, growth and productivity in extensive rangelands.

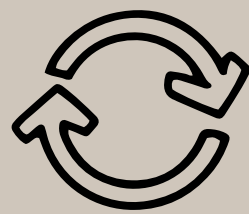


CRLRC is developing collaborative projects with faculty, departments and colleges within the University, that will include Carbon, Water and Energy on large rangeland landscapes.



Value Added to New Mexico

- Sustainability Initiatives, including wind and solar energy
- Cattle and Sheep Production
- Rangeland Research
- Wildlife Preservation



Established in 1980, the CRLRC is a 27,886-acre working ranch laboratory located near the center of the state of New Mexico, just east of the village of Corona. Land within the research center is characterized by rolling hills alternating with undulating to flat areas with elevation ranging from 5,720 to 6,700 feet. A transitional area runs the length of the ranch with the southern half predominately pinon-juniper woodland and the northern half described as short grass prairie. Research programs, as well as graduate student studies, are a major part of the CRLRC and are incorporated into the normal production cycle of the cattle and sheep commercial operations.

Ongoing Research

The CRLRC cow herd is part of an ongoing, long-term study evaluating the use of different vaccination protocols on cattle performance over time in the herd. Researchers have evaluated herd health, herd retention, reproductive and nutritional efficiency, and calf growth and development pre- and postweaning. This work provides best practice recommendations for animal health programs for beef producers developing animals in extensive rangeland in NM. This project represents a multi-year, multi-disciplinary research program with local, federal, and industry funding to support graduate students and research efforts.

New research has been initiated at the CRLRC that focuses on the Pinyon Jay. This is a bird of strong conservation concern across the west, including New Mexico due to declining populations. Typically, they forage in large flocks (sometimes 100-200 individuals), on the Corona ranch the largest flock observed has been 85 individuals. Pinyon jays feed pinyon nuts and arthropods. Preliminary data suggest that arthropod abundance has a positive influence on pinyon jay foraging site selection (ie the jays cue in on areas with higher arthropod abundance) and they select foraging areas at lower elevations within suitable habitats compared to random locations.

Beef cows that naturally maintain a lower body condition score year after year as compared to their contemporaries will continually raise lighter calves throughout their lifetime. Therefore, monitoring body condition score at weaning should be considered when making culling decisions.

ACES Pillars for Economic and Community Development

Food and Fiber Production and Marketing

Water Use and Conservation

Family Development and Health of New Mexicans

Environmental Stewardship

Foundational Education and Training

The College of Agricultural, Consumer, and Environmental Sciences is an engine for economic and community development in New Mexico, improving the lives of New Mexicans through academic, research and Extension programs.

Wind Turbines and commercial-scale 2MW Solar Array with battery storage: In January 2022, 39 wind turbines were moved into full operation at the CRLRC as part of Pattern Energy's Western Spirit Transmission area project, which consists of 377 turbines, or a total of 1,050 megawatts. Additionally, we are investigating opportunities for a public/private partnership to develop a solar array that benefits central NM renewable energy needs within proximity to the wind farm at Corona, complementing outreach programming in renewable energy at the Southwest Center for Rangeland Sustainability.



Recent Impacts

- Application of a mild growth-promoting implant at branding or weaning to beef heifers does not negatively impact the development of the ovary and therefore, does not alter reproductive rates. However, implants administered at branding can increase heifer weaning weight by up to 20 lbs. Today, the cost of an implant is less than \$1.50 and would easily increase the value of the heifer if sold at weaning.
- Culling cows that consistently maintain a lower body condition score year after year can yield an increase in calf weaning weight of 14 pounds.
- The Pinyon Jay forages on cache pinon nuts and as a result are an important driver of the pinon juniper woodlands as they are linked with regeneration of pinon pines.

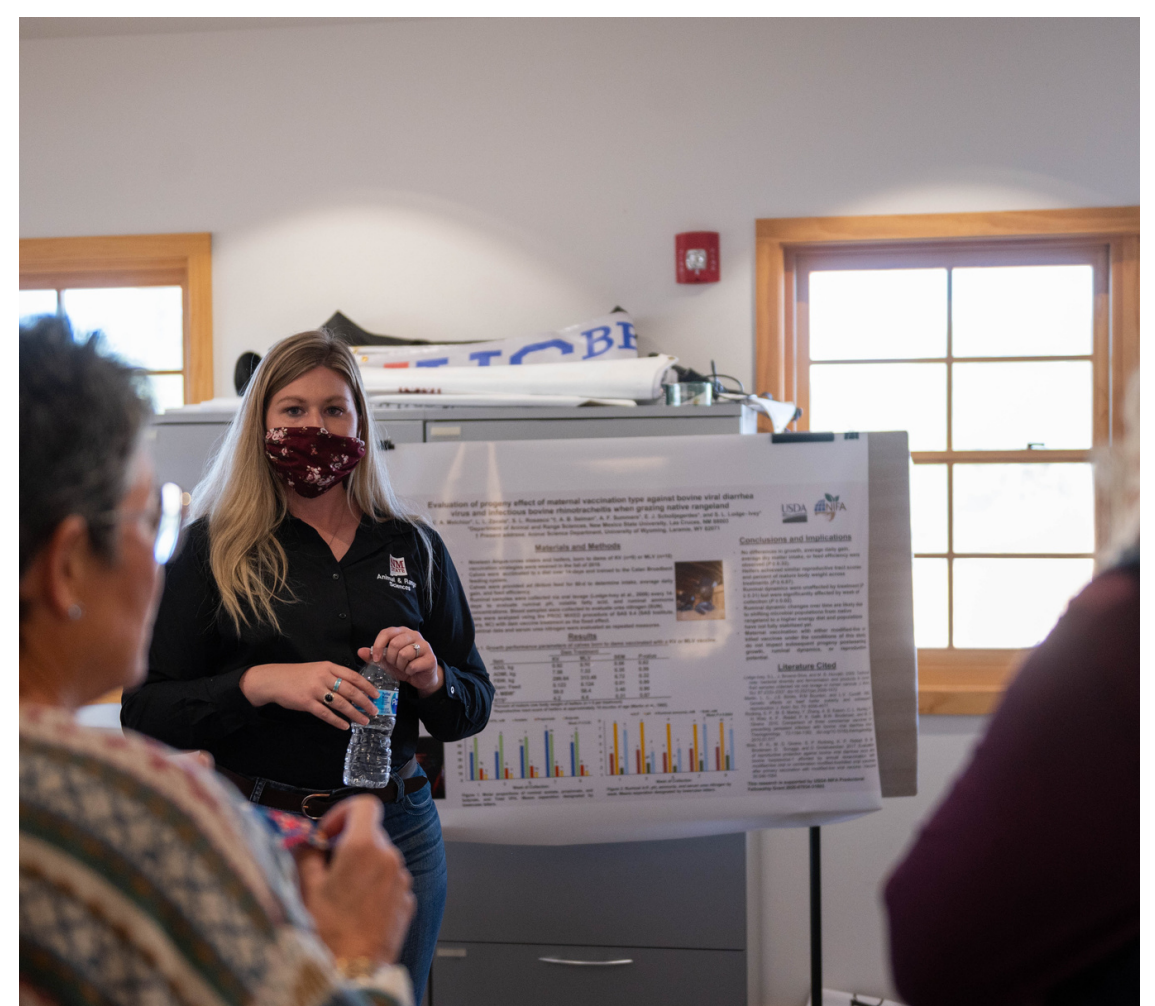


Community Outreach

The CRLRC hosts a week-long program for senior undergraduate and graduate students in Animal Sciences and Veterinary students from throughout the United States. This program is called the US Beef Academy (USBA) and it is an opportunity to expose students to leaders in the beef industry. The USBA provides daily instruction and hands-on learning in the areas of marketing, nutrition, health, reproduction, and meats. The USBA provides exposure to the robust beef production system of New Mexico all while making lasting relationships between students and professionals.

The CRLRC has hosted a number of community engagement programs that focus on drought and renewable energy. The Legislative Interim Water and Natural Resources Committee met at the CRLRC to discuss the impact of drought on animals and the economic resiliency of ranching in New Mexico. This provided a great opportunity for legislators to learn how drought can be dealt with and how CRLRC staff and faculty work to address these challenges. The CRLRC and SWCRS also hosted the Dedication ceremony for the Corona Area Wind Project, which included guests from all over the United States.

CRLRC Field Day: This event brings together producers and research to share recent research findings and discuss possible opportunities for enhancing research capacity at the center.



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