



Corona Range and Livestock Research Center

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“The mission of the CRLRC is to enhance the understanding of woody brush invasion, hydrology, livestock production, wildlife management and discover innovative solutions to improve economic development in rangeland bound communities.”

CRLRC is a collaborative effort between animal, range and wildlife scientists, economists, land and wildlife agency personnel and ranchers.

The CRLRC is a 27,886 acre working ranch laboratory

- Geographical center of the state
- Rolling hills alternating with undulating to flat areas
- 5,720 to 6700 feet elevation
- 15 ½” annual precipitation
- Transitional area length of the ranch
- Southern half: pinon juniper woodland
- Northern half: short grass prairie

Similarities to much of NM, the Western U.S. and World

Research and Graduate Student Programs

Incorporated Into a Working Ranch System

- Operated on Commercial Scale
- Enterprise Oriented
- Minimally Staffed
- Utilize Scientists and Graduate Students
 - Provides Insight
 - Experiential Learning Opportunities
 - Develops Camaraderie
 - with Added Research Support

- Minimal Operations Funding
- Self-Sustaining Operationally
 - Precipitation, Markets, Input Costs all Highly Variable
 - Maintain 2 Years Operations Contingency
- Excellent Industry Support
 - Research Projects
 - Student Recruitment
 - Outreach Sponsorship
 - Client Interaction and Referrals
- Advisory Committee
 - Highly Supportive
 - Highly Critical
 - Lend Expertise

Range Management and Ecology

Wildlife Management and Ecology

Brush/Invasive Plant Management

Economics of Production and Management

Livestock Management

Reproduction

Nutrition

Current Major Grant Submissions

Federal Funding Request (one of four ASC and the rangeland research site)
Establishing National Center on Carbon Management and Soil Health in Arid and Semi-Arid Environments

NIH-COBRE Grant Submitted with NDSU and Baylor University:
Influence of Timing and Level: Impact of Maternal Supplementation on Female Progeny Fertility

NIH-COBRE Grant Submitted with NDSU and USDA-ARS MARC:
Influence of BCS and Maternal Arginine Supplementation on Progeny Outcome

Public/Private Partnership Off-Site Utilizing CRLRC Resources:
The Effects of Electro-Magnetic Fields on Range Livestock Production

Current Infrastructure Initiatives

Ranch (Farm) of the Future Initiatives

- **Remote Sensing**
 - Live GPS Monitoring of Livestock
 - Remote Water/Supplement Monitoring
 - Drone Monitoring of Infrastructure and Livestock
- **Digital Agriculture**
 - Digital Record on Individual Livestock
 - Daily/Periodic Weight Monitoring
 - Supplement/Water/Mineral Intake
- **Precision Agriculture**
 - Automated Precise Daily Water/Mineral/Supplementation
 - Automated Individual Livestock Greenhouse Gas Emission Data
 - Climate/Weather Data Collection
 - Carbon Management Data Collection

Clean Energy Initiatives

Wind

- **Public/Private Partnership**
- **39 Turbine Commercial Wind Farm**
 - **110 MW of 700+MW Contiguous Project**
 - **39 on Deeded land - 5 State Trust Land**

Clean Energy Initiatives

Solar

- **Public/Private Partnership**
- **Proposed Commercial Solar Array**
 - **2 MW Project**
 - **30 Acres Deeded Land**

Southwest Center for Rangeland Sustainability

- **Conceptualized by Scientists and Advisory**
- **Initialized by Advisory**
- **Legislative Funding in 2007, 2008, 2013 and 2018**
- **SWCRS Main Building completed late 2011**
- **Cabin 1 completed 2015**
- **Cabin 2 completed 2019**

SWCRS

Since 2012

- **98 Events**
- **3044 Attendees**
- **5741 Meals Served**

SWCRS Outreach Initiatives

Current and Past Programming

Ranchers Roundtable

Beyond the Roundtable

Let's Talk! Breakfast

United States Beef Academy

Venue for Other Programs

**Grasshopper Education, Behavioral Research, CES In-Service Trainings
Ranching Occupational Health and Safety Program**



SWCRS Outreach Initiatives

Future Programming

International School for Rangeland Livestock Management

National/Regional Center for Range and Livestock Management Techniques

Support Outreach and Training in Carbon Management and Healthy Soils

Develop Multi-day Academies that address ACES four pillars: Food and Fiber Production and Marketing, Water Use and Conservation, Environmental Stewardship, Family Development and Health of NM

Provide Venue for Youth Outreach in a Unique and Safe Environment

**Support the mission of the
Center of Excellence in Sustainable Food and Agricultural Systems**

Support NM in other Outreach and Training



SWCRS

Infrastructure Needs

- **Two Additional Cabins** (minimum, complete at 12)
- **Water Treatment** (domestic use and research)
- **Laboratory** (wet and dry with sample storage)
- **Utility** (Laundry and Storage)