



CLAYTON LIVESTOCK RESEARCH CENTER

Mission: To provide science-based research to improve the health and performance of newly received cattle, and to support the Department of Animal and Range Science's mission of providing premier programs to those we serve by focusing on education, research, and outreach.

Vision: To be the premier feedlot research center in the United States.

OBJECTIVES

- Evaluate production and management of newly received feedlot cattle.
- Develop a neonatal research program to address the needs of both the beef and dairy industries.
- Evaluate production and management of stocker/grazing cattle and water utilization of grazed irrigated wheat pasture and cover crops.
- Maintain strong collaborations with faculty on the NMSU main campus.

Faculty at the Clayton Livestock Research Center (CLRC) have focused research efforts on the health and performance of newly received beef cattle. The center was established in the mid-1970s with the focus on receiving cattle management. We are proud that several management decisions in the feedlot industry and recommendations in the *Nutrient Requirements of Beef Cattle* (8th rev. ed.) are the result of research conducted at the CLRC. In addition to feedlot calf receiving work, we have continued research projects looking at management factors to improve performance of cattle during the finishing period and to improve carcass characteristics. We have a 120-acre center pivot for grazing research. The current superintendent also is initiating a research program to look at nutrition and management factors to improve neonatal calf performance.

SELECTED PARTNERSHIPS

- Elanco
- Cargill
- Cactus Feeders
- Diamond V
- Merck
- Ritchie Industries
- USDA–NIFA grant-funded LEADERS program
- Westway Feed Products
- Zoetis

SELECTED ACCOMPLISHMENTS AND IMPACTS

Facility Development

Although several years old, the CLRC simulates real-world production at a commercial feedlot. Our feedmill has the capability to mix diets that meet the needs of commercial production. We recently remodeled the roughage boxes and added an external mixer to use high-moisture commodities that are common in the commercial industry. A new overhead mixer was installed approximately three years ago. The working facilities include a bud box system installed approximately five years ago. This system definitely promotes low-stress cattle handling. New headed waterers were also installed in the past five years.

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ACES Pillars for Economic and Community Development



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. New Mexico State University is an affirmative action/equal opportunity employer and educator. NMSU and the U.S. Department of Agriculture cooperating.

Research

Feeding hay does not compensate for diluted energy concentrations from the hay, and overall hay supplementation does not affect calf health or performance during the feedlot receiving period. There are correlations between calf health and blood gas parameters. We believe there is a possible application of blood gas analysis as a diagnostic tool for the early detection of bovine respiratory disease, a disease that causes approximately \$2 to 3 billion in losses annually.

Use of growth-promoting technologies, such as beta-adrenergic agonists and anabolic implants, in the cattle feeding industry as a means to increase production efficiency results in economic returns of approximately \$200 million annually. Research at the CLRC continues to evaluate dietary nutrient requirements and animal welfare concerns when growth-promoting technologies are used in feedlot finishing cattle diets.

