

Ruminant Production Systems

Goal: Colorado State University will enhance its focus and depth in undergraduate education, graduate education, research, and outreach in cattle/beef production systems and be recognized as the leading university program in cattle/beef production systems in the West. This will include experiential learning in the animal sciences BS degree designed to add practical experience in the science, production, and business aspects of the industry to prepare students for leadership positions in ranch, farm, and agribusiness management. Graduate education and research will focus on fundamental and applied research in breeding, nutrition, physiology, behavior, integrated resource management systems, economics, health, and range/forage management. Outreach will span the breadth of the topics of research to assure that industry participants have the latest practical knowledge in modern beef, dairy, and sheep production systems; biosecurity; economic and risk management; and response to policy and consumer changes. Outreach to youth involved in livestock production and judging events will continue as part of experiential learning in 4-H, FFA, and college judging teams.

Purpose: Animal agriculture is a major component of the United States' economy and the leading agricultural activity in Colorado. In 2007, live meat animal sales in Colorado were valued at \$3.48 billion and the value of dairy production was \$516 million. Livestock and livestock products accounted for 67.8% of crop and livestock sales in Colorado. Remaining competitive requires that the industry produce the most technically sophisticated systems available while considering environmental and animal welfare dimensions to maintain the confidence of the consuming public. Ruminant production agriculture is the one significant agricultural enterprise ubiquitous in Colorado. In addition to novel and economic production practices, today's livestock producers must be knowledgeable of alternative supply chains to select a lucrative market, be aware of animal identification and trace-back requirements, understand the effects of emerging animal public health conditions, and understand the international and domestic trade environment, trends and how to respond with risk management strategies. Colorado State University has many resources devoted to this broad subject, and it is a fertile field to foster multi-department, multi-college, and multi-county interactions. Young people on or near farms and ranches have opportunities to build maturity by taking responsibility for raising and showing ruminant species; Colorado State University supports experiential learning opportunities for youth through 4-H, FFA, and college judging team contests. Colorado State University is in a strong position to provide undergraduate and graduate education to prepare people for ruminant industry positions, research in the basic animal sciences, production management systems, methods to respond to national and international markets and policy, and outreach tools to assure dissemination of research knowledge to livestock industry practitioners.

Strategic Actions:

- Renovate the Animal Sciences Building.
- Reposition the Integrated Resource Management teaching and research program.
- Replace critical faculty positions: Livestock Environmental Systems and 4-H.
- Elevate the Southeastern Colorado Research Center regarding research/outreach mission.

Critical Resource Growth Needs:

- Secure funds to renovate the Animal Sciences Building (\$13 million). Align land and field laboratory facilities with future research and teaching directions.
- Significantly increase grant and contract revenue sources to support all programs.

Personnel:

Administrative Advisor: William Wailes

Steering Committee Chair(s): [Jack Whittier](#), [Terry Engle](#), [Shawn Archibeque](#)

Steering Committee Members: Kraig Peel, Frank Garry, Joe Brummer, Stephen Koontz, Robbie LeValley, Bruce Bosley, George Beck, Roger Ellis, Mark Enns, Hyungchul Han, Steve LeValley