

Livestock Use Plan

Mission: The science mission of the North Dakota Agricultural Experiment Station's livestock research is twofold: 1. Conduct livestock research pertinent to support the livelihood of producers in regions where the research is applicable. 2. Conduct livestock research that supports priority needs of the North Dakota agriculture industry. Both are equally important.

All NDSU animals are involved in teaching and research projects. NDSU has scientific interests in production, feeding and final harvest research. Final approval of a project lies with the project review process and the Director of the Agricultural Experiment Station. In support of the research mission and when appropriate to respective experiments, NDSU and producer-owned livestock may be utilized in experiments at sites other than that of original ownership in two primary ways:

Collaborative projects - In this type of project, the NDSU feeding entity has all responsibility for the calf once it arrives at the feeding site. An agreed-upon commercial value is established for the cattle prior to shipment. The feeding entity will reap any profit, absorb any loss and be credited with scientific reward associated with this particular animal feeding research. (The mechanics of collaborative projects are listed on page two.)

Cooperative projects - These are projects developed by scientists at multiple sites, sharing the vision of need or a problem to solve by cooperative protocol development, grant writing and execution of research trial(s), with ultimate cooperative writing and sharing credit for the final products, including a financial plan that includes feed costs and harvest criteria. (The mechanics of cooperative projects are listed on page two.)

Scientific Integrity

While NDSU scientists strive to foster a strong collaborative/cooperative relationship to help retrieve the maximum return for stakeholders, one must be mindful to not confound study results by imposing too many treatments on an individual animal and decrease the reliability of the research.

In many cases, animals are used in multiple trials from the time they are born until they are harvested. This is particularly true of studies with beef cows, ewes or other females, who may be involved in multiple studies each year of their lifetime. Calves and lambs also are used in multiple studies from the time they are born until the time they are harvested. For example, the calves may be used in a grazing study while on pasture with their dams, and then used for a backgrounding study and finally a finishing study. This system works extremely well for situations with little carryover effect from the previous treatment, and in situations where the potential impacts on either subsequent performance variables or carcass parameters are not an objective of the research. In situations where these variables are an outcome of the research, alternative approaches must be taken to ensure the results are not confounded by the implementation of additional treatments. Using animals in this manner allows for a very efficient system for conducting research and helps ensure that the multiple needs of various research scientists are met at a relatively low cost.

Mechanics of Collaborative Projects

- Cost of transportation from one NDSU entity to another would be mutually agreed on. The last owner would be responsible for transportation to final harvest.
- Payment would be made immediately to the NDSU producing entity after the final harvest.
- All grant funds would be retained by the feeding entities, or as determined by the principal investigator(s).
- The weight of animals available for transition is determined by the NDSU unit with current ownership.

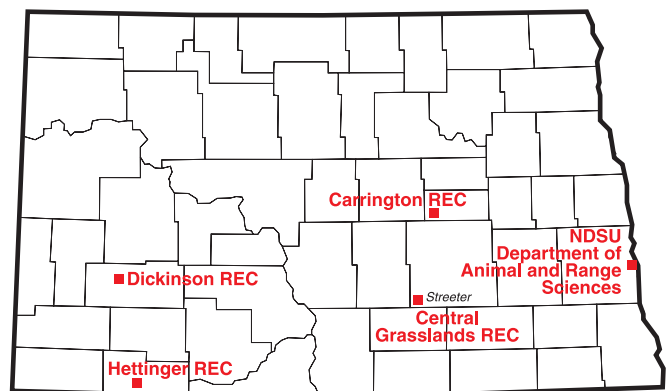
Mechanics of Cooperative Projects

- The NDSU units involved establish an agreed-upon commercial value of the animal prior to physical transfer to the NDSU feeding unit, and shares in the profit and loss associated with backgrounding and finishing studies based on a percent of the final harvest weight.
- The producer, backgrounder and finisher share all transportation and shrinkage costs based on percent involved of harvest weight.

- No production costs are accessed by the producer and no yardage charges are assessed during the feeding phase(s).
- The weight and weighing conditions of animals assigned to studies will be mutually agreed upon between the cooperating units.
- Weight will be established after a 12-hour shrink period off feed and water.
- Sharing of grant proceeds will be determined in the project writing/review process.
- Settlement will be made immediately after the final harvest as a responsibility of the principal investigator.

Example: A 500-pound calf (with a commercial value of 90 cents/pound = \$450) goes to a background study, where 200 pounds is added, and then on to a finishing study, where an additional 500 pounds is added. The animal finally is harvested with a value of 70 cents per pound, or a total of \$840. Feed costs were established to be 50 cents per pound of gain for both backgrounding and feeding phases. The per-head trucking cost was \$20 (\$840 minus \$20 minus \$450 minus \$100 minus \$250 = a \$20 margin), of which the producer would get \$8.40, the backgrounder \$3.20 and the finisher \$8.40. Similarly, the formula for sharing of animal losses would be mutually agreed upon prior to any animal transfer.

Under either of the above scenarios, one can envision the following example: A calf born at Central Grasslands REC could be backgrounded at Hettinger REC, finished at Carrington REC and, with final harvest, contributing to meat science research at the NDSU Department of Animal and Range Sciences (while maintaining the integrity of multiple independent budgets and programs of discovery).



North Dakota Agricultural Experiment Station partners in livestock research