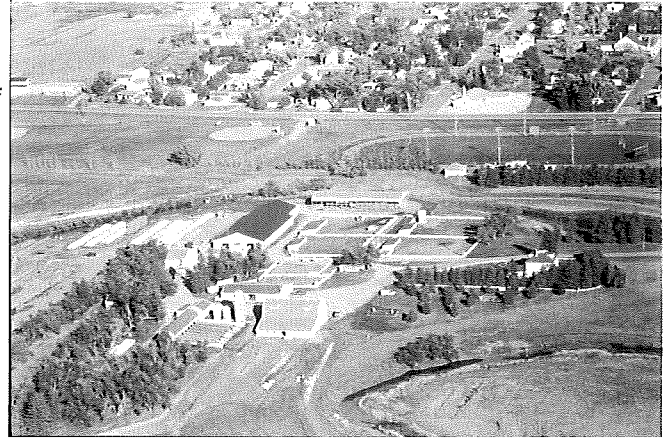


Hettinger Research Extension Center

Hettinger REC Research in Brief

- Integrated crops, livestock, and range research and extension
- Variety, herbicide, and crop production research
- Lamb and beef feedlot nutrition and management
- Reproductive management of fall, winter, and spring lambing ewes
- Multiple-land use management including cropping systems, livestock, and wildlife as potential outputs
- Livestock Extension and applied calf backgrounding

The Hettinger Research Extension Center (HREC) was established from a gift of 160 acres by the residents of Adams County and the city of Hettinger in 1909. Currently, the HREC owns or rents nearly 5,000 acres of land, primarily in Adams County, ND, for the purpose of research in weed science, agronomy, range and wildlife science, and animal science. The HREC also lambs over 1,000 sheep and calves close to 100 cows. Currently, we have 13 full-time employees including 4 PhD and 1 M.S. level scientists and extension specialists, 3 research technicians, and 5 support staff.



Research at HREC involves the disciplines of animal science, range and wildlife science agronomy, and weed science. Collaboration is with Main Station scientists, Branch Station scientists, U.S. Forest Service, grazing associations, university scientists from WY, SD, and MT, and USDA research entities in these research disciplines to improve the productivity of livestock and cropping systems and economic development of the region. Through these efforts, the center's research program has gained a national reputation for its involvement with sheep production systems as well as a strong regional and state reputation for its research in agronomy, multiple-land use, and calf backgrounding.

The HREC annual publishes at least 5 refereed journal articles as well as extension articles and lay reports while bringing in over \$300,000 in grants and contracts. In the past year, staff have given over 60 invited presentations, and have former graduate students across the nation in multiple universities.

AGRONOMY

- Conducted crop variety and hybrid yield trials for 21 different crops at Hettinger along with off-station small grains trials at 4 locations.
- 12 preliminary yield trials/nurseries for wheat, pulse and canola breeding programs.
- Evaluation of carinata, an oilseed mustard like canola, for adaptation to western ND for use biofuel production. This crop looks promising with yields of carinata being competitive with hybrid canola and having fewer problems with seed shatter.
- 10 agronomic studies, including seed treatments, soybean & durum planting dates, spring wheat nitrogen timing, and spring wheat seeding rate.

WEED SCIENCE

- Evaluation of pre-emergence and post-emergence herbicides for weed control and crop tolerance for SW ND.
- Evaluation of fall-applied herbicides for weed control and crop tolerance.
- Options for post-harvest weed control.
- Management of noxious and troublesome weeds in pasture and range-lands.
- Cover crop tolerance to carryover of herbicides applied to spring wheat.
- Contributed to NDSU Weed Control Guide.
- Publish Crops Day report.

Director: Christopher Schauer

Email:
NDSU.Hettinger.REC@ndsu.edu

Web address:
<http://www.ag.ndsu.edu/HettingerREC/>

PO Box 1377
102 Hwy 12 W
Hettinger, ND 58639

Tel: 701-567-4323
Fax: 701-567-4327

HREC Crops, Weeds, Livestock, and Range

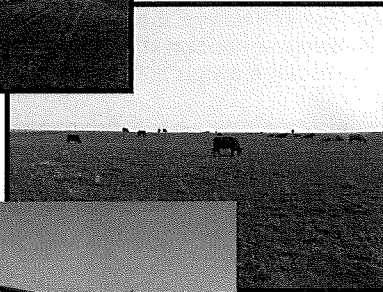
RANGE and LIVESTOCK SCIENCE

- Using annual forages to provide forage for grazers and resources for pollinators and a state-wide assessment of pollinator populations.
- Evaluate the ecological effects of integrating livestock herbivory and annual forages into a winter wheat cropping system.
- Patch-burn and sheep/cattle grazing on post Conservation Reserve Program land.



OUTREACH and EXTENSION

- Conduct annually the HREC Beef Day, Sheep School, Shearing School, Wool Classing School, Carcass Ultrasound School, Crops Tours, Crops Day, and Soil Health and Wildlife Workshops.
- Analyze wool samples for fiber diameter using an OFDA Fiber Analyzer
- Bi-weekly radio updates during the growing season.
- Implemented Nitrate QuikTest certification program in 41 ND County Extension Offices.
- Annual deliveries over 30 presentations to 800 livestock producers.



- Evaluated supplementation strategies during pregnancy and their effect on embryonic death loss, fetal development, and potential feedlot and reproductive performance of offspring.
- Continued research in "Value Added Animal Production"; evaluated mineral injection during receiving of freshly weaned calves.
- Evaluation of feeding and supplementation strategies that impact ram fertility.
- Conduct the Dakota Fall Performance Ram Test; a 140 day Rambouillet Certificate of Merit program, one of three Rambouillet Ram Tests in the nation.

HREC Research Faculty

Dr. Christopher Schauer, Director & Animal Scientist
christopher.schauer@ndsu.edu

Mr. John Rickertsen, Agronomist
john.rickertsen@ndsu.edu

Dr. Benjamin Geaumont, Wildlife and Range Scientist
benjamin.geaumont@ndsu.edu

Dr. Caleb Dalley, Research Weed Scientist
caleb.dalley@ndsu.edu

Dr. Janna Kincheloe, Area Livestock Extension Specialist
janna.kincheloe@ndsu.edu

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