

**February 16, 2021 - Advisory Board Meeting
NDSU-Hettinger Research Extension Center**

Animal Science Report

Graduate Students:

- Graduate students and undergrad technicians:
 - Paige Anderson – M.S. – Animal Science (Travis Hoffman, Dr. Stokka) – graduated in December
 - Rika Baumgaertner – Ph.D. – Animal Science (Carl Dahlen)
 - Robin Malik – M.S./Ph.D. – Animal Science (Scott Kronberg)
 - Looking for another grad student to tie into Rika's project

Strategic Plan - Progress towards goals: *Evaluate alternative livestock production systems that increase profitability while maintaining environmental stability*

- Outreach efforts:
 - Fall Ram Test - Field Day March 13, 2021
 - 82 rams from 22 producers: Rambouillet, Columbia, Dorset
 - Shearing and Wool Classing School: November 21-23, 2020
 - Shearing School – 19 students from ND, MN, SD, NY, WA, MT, and KS
 - Wool School – 9 students from SD, MT, KS, and OR
 - Sheep Schools with Extension Service
 - Beginning sheep school with NDLWPA and starter flock recipients (September)
 - OFDA: Newel Ram Sale, Rapid City Stock show
- Sheep Research:
 - *Impacts of flax on female and male reproductive traits when supplemented prior to breeding in sheep* (Amanda Long M.S. program)
 - Published 2 papers in Sheep & Goat Research Journal
 - *Impacts of banamine injection on pain responses of either rubber ring castrated and tail docked or surgically castrated and burdizzo docked lambs* (Paige Anderson, M.S. program)
 - Submitting to J. of Animal Science this winter
 - *Effects of loin eye muscle depth on accuracy and variation of loin eye area prediction and carcass yield via ultrasound in Rambouillet sheep*
 - \$5,340 for travel funds
 - Have collected some carcass data, still need to get more ultrasound data
 - *Genetic marker for “blown legs” in Rambouillet rams*
 - Collaborated with the U of Idaho to determine if there is a genetic marker for “blown legs” in Rambouillet rams.
 - Have a potential “region” of the DNA we are targeting. We collected more data this year.
 - *Effect of dried distiller's grains and particle size on feedlot lamb growth, carcass traits, nutrient digestibility, and ruminal fermentation* (Rika Baumgaertner Ph.D. program)
 - \$9,907 for research trials
 - Feedlot trial done, digestibility trial this summer

- *Effect of paternal divergent nutrition before breeding on semen characteristics, pregnancy rate, ram lamb growth and reproductive performance and carcass traits.* (Rika Baumgaertner Ph.D. program)
 - \$16,081 for research trials
 - Collaboration with US Sheep Experiment Station and USMARC on genetics – potentially Polypay and Rambouillet
- Cattle Research:
 - Grazing studies with Range and Wildlife program (Integrated project – Strategic Plan #5)
 - Publications:
 - Brennan, J.R., K. Olson, P. Johnson, J. Block, and **C.S. Schauer**. 2021. Grazing behavior, forage quality, and intake rates of livestock grazing pastures occupied by prairie dogs. *Rangeland Ecology & Manage.* (**IN PRESS**).
 - Yellajosula, G., L. Cihacek, T. Faller, and **C.S. Schauer**. 2020. Soil carbon change due to land conversion to grassland in a semi-arid environment. *Soil Syst.*4:43. Doi: 10.3390/soilsystems4030043.
 - Refereed – 4 in review
 - Extension Specialist: Dr. Janna Kincheloe