

Central Grasslands Forum



NDSU Central Grasslands Research Extension Center
Streeter, ND 58483 701-424-3606

NDSU NORTH DAKOTA
STATE UNIVERSITY

Summer 2017

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A Walk Through the Pasture: News from CGREC

Kevin Sedivec, Interim Director, Central Grasslands Research Extension Center

The spring and early summer have been challenging and fun, to say the least. All the new range research studies needed new infrastructure, and the center needed housing for graduate students and summer technicians.

Because we had a great spring, almost all the new infrastructure was completed before the cows went to pasture. The new housing units arrived by late May, so students and technicians had housing for the summer. We had a few issues with plumbing, but everyone seems happy with the living quarters.

We had a very good calving season with the nice weather. Although we had around 60 inches of snow, most of the moisture soaked into the ground and grass growth was excellent. Although May was dry (26 percent of normal), we received enough moisture to keep the grass growing.

Unlike much of North Dakota, which is in a prolonged drought, the Grassland Center was extremely fortunate and received 4.34 inches in June, or 152 percent of normal for the month. All the annual forage crops were seeded, and the alfalfa and most grass hay cut on time; we're just waiting for it to dry enough to bale.

I want to use this summer's newsletter to introduce you to the graduate students working at the center and their projects, and invite you to the July 10 field day to view new and ongoing projects.

Range Ph.D. students:

Scott Veum – The interaction of prescribed burns and livestock grazing on plant community composition and small-mammal populations; major adviser: Ryan Limb

Cameron Duquette – The interaction of prescribed burns and livestock grazing on bird nesting recruitment and success, and pollinator communities; major adviser: Torre Hovick

Animal Sciences Ph.D. student:

Kacie McCarthy – Precision agriculture related to mineral intake and animal performance; major adviser: Carl Dahlen

Range M.S. students:

Micayla Lakey – Effects of Kentucky bluegrass on fire behavior in mixed-grass prairie; major adviser: Devan M. McGranahan

(continued on page 2)



Photos by: Rick Bohn and Sandi Dewald

IN THIS ISSUE

A WALK THROUGH THE PASTURE	1
CGREC FIELD DAY AGENDA	2
COUNTY CORNER: WATER QUALITY FOR LIVESTOCK	3
SUMMER STAFF	3

A Walk Through the Pasture *(continued from page 1)*

Megan Endreson – Impacts of early intensive grazing and patch burn on Kentucky bluegrass invaded rangelands; major adviser: Ryan Limb

Haley Johnson – Effects of spring fire, livestock grazing, and interaction of fire and grazing on western snowberry (buckbrush) nutritional quality and growth; major advisers: Ryan Limb and Kevin Sedivec

Jessalyn Bachler (also CGREC livestock technician) – Impacts of bale grazing poor-quality grass hay with and without supplementation on livestock performance, hay production, and soil chemical and physical properties; major advisers: Michael Undi and Kevin Sedivec

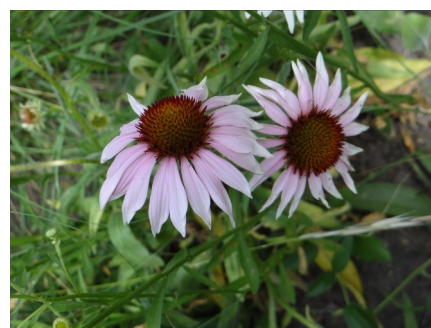
Stephanie Becker (also CGREC livestock technician) – Use of alkane markers to track digestibility and performance on grazing heifers in mixed grass prairie; major advisers: Michael Undi and Kevin Sedivec

Animal Sciences M.S. student:

Felipe Silve – Injectable trace mineral in embryo-transfer programs – impacts on embryo number, quality and pregnancy success; major adviser: Carl Dahlen

If interested in learning more about these studies, as well as our other on-going projects, you are invited to the Central Grasslands Research Extension Center's annual field day July 10 at the center. See the flier below for the tentative presentations that will be highlighted on the tour. We will have a free beef supper following the tour. Trent Loos also will be at the center broadcasting his radio show, "Loos Tales."

Until our next walk through the pasture, may the summer rains replenish your pastures, hay land and crops. Take time to enjoy your family, and take a walk (or ride a horse) through North Dakota's beautiful prairies.



Central Grasslands
Research Extension
Center

Annual Field Day

**Monday,
July 10, 2017**
4-7 p.m.
followed by beef supper

*If you have questions
or need directions,
contact Sandi Dewald,
701-424-3606.*

*Requests for accommodations
related to disability should be
made to Sandi by July 5.*

Field Day Topics

- Impacts of cattle grazing and prescribed fire on:
 - Plant community dynamics
 - Forage nutrition and livestock performance
 - Bird nest site selection and success, pollinator habitat
 - Plant growth
 - Small mammal use
- Bale grazing poor-quality grass hay with and without supplementation in late fall-early winter
- Performance of beef cattle managed in two overwintering environments
- Land management strategies to control Kentucky bluegrass invasion
- Embryo transfer study in cattle
- Assessing cattle mineral consumption on pasture
- Comparison of low-lignin and conventional alfalfa varieties
- Comparison of different management strategies on western snowberry (buckbrush) populations and nutritional quality

Water test
station for
free analysis
of dugouts,
wells,
herbicide
water, etc.

Special guest:
Trent Loos,
radio host of
Dakota Tales
and Trails

County Corner: Water Quality for the Livestock Herd

Penny Nester, NDSU Extension Agent, Agriculture and Natural Resources Agent, Kidder County

One of the essential nutrients that all living things need is water. However, water quality is one of the least monitored nutrients that our livestock consume.

Water quality and quantity never should be taken for granted. A mature lactating cow consumes, on average, approximately 18 gallons of water per day when temperatures are at 80 degrees.

Water quality can affect the total water consumption of an animal and the health of that animal. Objectionable taste or odor may discourage animals from consuming adequate water levels, causing reduced feed intake, decreased weight gain and possibly rebreeding issues.

Even if the water source has no noticeable taste or odor issues, this does not mean the water is safe for consumption. It may have limiting chemical factors that can affect your livestock detrimentally.

To test wells, stock ponds, lakes and other water sources to help determine water quality for livestock, the Central Grasslands REC is working with Extension agents in the area to provide water testing tools for area producers. This summer, the staff in Extension offices in Kidder, Logan, McIntosh, Dickey, Stutsman and Emmons counties will perform free water sample testing to help determine if any water quality issues need to be addressed.

The staff can perform basic water total dissolved solids (TDS)/conductivity testing. Measuring electrical conductivity provides an indication of the total salts in the water. If the TDS concentration is greater than 3,000 parts per million, a sample should be sent to a laboratory for further testing.

The higher concentration of salts, the more your livestock are at risk for associated health problems and reduced productivity. Saline water toxicity upsets the electrolyte balance in animals and will result in symptoms similar to dehydration.

If levels of TDS are high or you've noticed other potential water quality issues, sending a sample to a local lab for further testing is highly recommended so you can understand exactly what issues you are facing.

Water should be analyzed for livestock suitability, which normally includes testing for alkalinity, electrical conductivity,

hardness, nitrates, and sodium and sulfate levels. A list of commercial laboratories in the state can be obtained from your local Extension office or veterinary clinic.

You need to submit 1 quart of water to the lab in a clean, sealed container. The cost of a livestock suitability package is approximately \$25 plus tax and lab fees. More information on livestock water quality is available in the following Extension publications:

* "Livestock Water Requirements" (AS1763) - <http://tinyurl.com/LivestockWaterRequirements>

* "Livestock Water Quality" (AS1764) - <http://tinyurl.com/LivestockWater>

* "Nitrate Poisoning of Livestock" (V839) - <http://tinyurl.com/LivestockNitratePoisoning>

* "Cyanobacteria Poisoning (Blue-green Algae)" (V1136) - <http://tinyurl.com/NDSUBlue-greenAlgae>

For additional information on water quality in your livestock herd, contact your local Extension agent or Penny Nester at 701-475-2672 or penny.nester@ndsu.edu.

Summer Staff

Livestock Technicians

Cheyenne Klein—Mandan, ND
Callie Loftsgard—Beach, ND

Farm Technician

Erik Laber—Jamestown, ND

Research Technicians

Elisabeth Gnitka—Ramsey, MN
Megan Gross—Napoleon, ND

Research Assistants

Maureen Puffer—Minnesota
Brooke Karasch—Michigan
Kali Klath—Mayville, ND
Kathryn Schmidt—Alaska



NDSU Central Grasslands Research Extension Center*
Department 7070
P.O. Box 6050
Fargo ND 58108-6050

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Fargo ND



*Street address:
4824 48th Ave. S.E., Streeter, ND 58483
www.ag.ndsu.edu/CentralGrasslandsREC
Editors: Kevin Sedivec/Sandi Dewald

In this Issue:

Introduction of Central Grasslands graduate students and their studies
County Corner: Water quality for the livestock herd
Annual Field Day Agenda—July 10, 4-7 pm
Summer Staff



Upcoming Events

July 10: 1:00 pm

CGREC Advisory Board Meeting

July 10: CGREC Annual Field Day

4 to 7 pm *Special Guest: Trent Loos*

Followed by a roast beef supper

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