

The Ranch Hand



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Subscribers

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We Need Your Help!

Please send questions,
comments or ideas for future
newsletter topics to
Carl.Dahlen@ndsu.edu or
call (701) 231-5588.

Cover photo by Radu Carcoana, NDSU

NDSU
Extension Service
North Dakota State University

Dear Ranch Hand Subscribers,

Although cool, wet conditions continue and the state still faces record late-spring flooding, some areas have made progress in getting seeds in the ground. Many producers are concerned with feed prices for the coming winter because grain futures are at near-record levels, and delayed planting has some questioning what our supply of locally grown feed grains will be.

In this issue, I've highlighted an option producers may want to consider: long-term storage of wet coproducts. Be on the lookout for favorably priced coproduct feeds through the summer and know your options for handling and storing these products.

I've also included articles about NDSU's exciting new Beef Cattle Research Complex and the 2011 NDSU BBQ Boot Camp program. The Research Corner explains a project being conducted at two NDSU Research Extension Centers to evaluate artificial insemination in commercial beef herds.

For additional questions on the material covered in this newsletter or any other concerns on your operation, contact your county, area or state Extension personnel. We look forward to serving you!

Sincerely,



Carl Dahlen, Ph.D., Editor
NDSU Extension Beef Cattle Specialist



Beef Cattle Research Complex Completed

Carl Dahlen, NDSU Extension Beef Cattle Specialist
Greg Lardy, NDSU Animal Sciences Department Head

The public is invited to attend the ribbon-cutting ceremony for the new NDSU Beef Cattle Research Complex at 11 a.m. on June 29. The center is on the southwest corner of 19th Avenue West and Interstate 29 in Fargo.

The facility was constructed using a combination of state and federal dollars, which totaled more than \$3 million. The faculty and staff of the Animal Sciences Department are extremely grateful for the funding support for the project.

The complex is a state-of-the-art facility designed to meet the needs of beef cattle research at NDSU well into the future. The complex will allow NDSU to accomplish the vast array of research needed to meet the challenges of 21st century beef cattle production. It complements intensive campus-based facilities such as the Animal Nutrition and Physiology Center and the extensive research capabilities at the Research Extension Centers in Carrington, Streeter, Hettinger and Dickinson.

The complex consists of two main structures: a 25- by 50-foot office and laboratory and a feed storage facility. The cattle complex also includes a 41- by 300-foot feeding area and a 50- by 83-foot handling area with nine calving pens.

The feeding area is equipped with Insentec feeders capable of measuring and controlling individual feed intake data of 192 head of growing/finishing calves, cows or bulls. The feed storage facility is designed to store, mix and deliver ingredients, including hays, grains, silages, wet and dry coproducts, and dry and liquid supplements.

During the summer, 32 replacement heifers will rotate through each of the pens in the cattle complex to ensure the electronic feed monitoring system is working properly. Starting in October, the pens will be filled to capacity and research will be initiated on growing steers and pregnant cows.

For more information on the complex, contact Trent Gilbery, the facility manager, at (701) 356-3284 or email him at trent.gilbery@ndsu.edu.



Photos by Carl Dahlen, NDSU



NDSU BBQ Boot Camp 2011

David Newman, NDSU Extension Swine Specialist

The NDSU BBQ Boot Camp is back in 2011.

The NDSU BBQ Boot Camp was organized to focus on bringing information to consumers in a fun and informative way to decrease the large gap of knowledge and information between those involved in food production and consumers. The team based in the NDSU Animal Sciences Department partners with NDSU Extension offices throughout North Dakota to deliver the program.

Attendees receive a broad amount of information about the meat and livestock industry, food safety and preparing food in breakout “stations.” This includes various facts and statistics about current livestock and meat production, animal welfare, NDSU and other important information about agriculture.

The number of people directly involved in agriculture has decreased significantly in the past 50 years. With the vast majority of the U.S. population being generations removed from the farm and living in metropolitan areas, making sure consumers receive accurate information about the sources of our food supply is critical.

Attendance totaled 1,057 participants in seven locations in 2010. Based on surveys taken before and after the program, participants increased their knowledge of the meat and livestock industry and indicated they will change their behavior as a result of participating in the program. Survey results showed the following:

- 96 percent of participants will use a food thermometer more when cooking.
- 98.6 percent stated their knowledge of meat and livestock topics and barbecuing skills improved through attending.
- On a 5-point scale, participants ranked the program and its contents at 4.65.

The dates and locations for upcoming BBQ Boot Camps are (these will run from 5 to 8 p.m.):

- July 13 – Devils Lake
- July 14 – Grand Forks
- July 19 – Fessenden
- July 21 – Towner

The registration fee is \$30 for individuals and \$50 for couples. The fee includes a book with information and recipes, and a meat thermometer.

For more information or to register, go to www.ndsu.edu/bbqbootcamp. Preregistration is required.





Photos by Carl Dahlen, NDSU

Storage and Feeding of Wet Coproducts

Carl Dahlen, NDSU Extension Beef Cattle Specialist

In an era of record feed prices, cattle producers may be able to purchase coproduct feeds at favorable energy and/or protein costs compared with corn or other common feeds.

Cattle are able to consume coproducts of several processing industries, such as distillers grains, sugar beet pulp and potato waste, that otherwise would create disposal problems for the manufacturers. Many of these products have high moisture content when the processing is complete and either need to be fed as a wet product or dried at an additional cost to the manufacturer prior to storage and subsequent sale.

Managing wet feeds is largely a function of product shelf life and cattle volume at the purchaser's operation. However, several options do exist for producers to preserve and store wet coproducts successfully on their operations. Some wet feeds may be stored alone, while the best options for other wet feeds is to mix and ensile them with some type of dry product (hay, straw or corn stalks).

The NDSU Extension Service and Animal Sciences Department will be hosting two coproduct storage meetings on June 27 in Fargo and June 28 in Washburn. The purpose of the upcoming meetings is twofold: 1) increase the awareness of cattle producers about the availability and proper use of wet coproducts in cattle diets, and 2) offer producers options for managing and storing wet coproducts that result in high-quality, consistent feeds for their cattle.

Topics to be covered include:

- Introduction to ethanol production and available coproducts; how ethanol is produced and how the production process influences nutrient profiles of feeds; and appropriate dietary inclusion levels for cow/calf, backgrounding and feedlot operations
- Other area coproducts that are available and considerations for their use in cattle diets
- How distance from processing plants and nutrient profile of coproducts influences producers' ability to procure coproduct feeds in a fiscally responsible manner
- Storage techniques for ethanol coproducts
- Storage techniques for other area coproducts

Guest speakers include Galen Erickson from the University of Nebraska and Greg Lardy from NDSU. Erickson has conducted extensive research on feeding and storing ethanol industry coproducts, whereas Lardy has conducted extensive research on coproducts of the local sugar beet and potato manufacturing industries.

A producer panel will be invited to the meeting to share their experiences with byproduct feeding and storage, and NDSU personnel will create small-scale samples of proper and improper storage methods for wet coproducts. This will allow attendees to see, feel and smell combinations of feeds that could be made on their operations and fed to their cattle.

To register for the meeting, go to www.ndsu.edu/cattledocs.

For more information on feeding coproducts, visit:

- "Feeding Sugar Beet Byproducts to Cattle" at www.ag.ndsu.edu/pubs/ansci/livestoc/as1365.pdf
- "Feeding Coproducts of the Ethanol Industry to Beef Cattle" at www.ag.ndsu.edu/pubs/ansci/beef/as1242.pdf
- "Storage of Wet Corn Co-Products" at http://beef.unl.edu/byprodfeeds/corn_coproduct_storage_manual_may_2008.pdf

Estrous Synchronization in Commercial Beef Herds: A Systems Comparison Research in Progress

Phil Steichen and Sharnae Klein, Graduate Students; Carl Dahlen, NDSU Extension Beef Cattle Specialist; Bryan Neville, Animal Scientist, Central Grasslands Research Extension Center, Streeter, N.D.; Chris Schauer, Director, Hettinger Research Extension Center, Hettinger, N.D.

Progress in the area of estrous synchronization protocols has been tremendous. Refinement of protocols has led to systems that require cattle be handled only three times, synchronize cows that are cycling and noncycling when the breeding season begins, and eliminate the need for heat detection by incorporating fixed-time artificial insemination (TAI).

However, a great majority of current research is designed to compare one type of estrous synchronization protocol with another type of synchronization protocol, and the study is completed upon collection of final pregnancy data.

For commercial cattlemen, these types of studies offer little insight into the potential effects of incorporating estrous synchronization and TAI into their operations. The control group best suited for commercial cattlemen without experience with AI is their default breeding management system: natural service (bull breeding). In addition, effects of a breeding strategy are present long after a final pregnancy examination. Changes in calving season, calf characteristics at birth and weaning, and backgrounding performance all contribute to a producer's decision of whether to incorporate a given strategy.

The objective of this study is to compare a system of natural-service breeding with a system that incorporates a single fixed-time AI followed by natural-service breeding. Factors to be compared are pregnancy rates, days to conception, calving distribution, birth and weaning weights, frame score, carcass ultrasound characteristics and backgrounding performance.

The study is being conducted at two locations: Central Grasslands Research Extension Center, Streeter, N.D., and Hettinger Research Extension



Carl Dahlen, NDSU

Center, Hettinger, N.D. Central Grasslands maintains a cow herd of 460 with an additional 100 heifers, whereas Hettinger maintains approximately 100 cows.

Cows will be stratified by parity, calving date and body condition score, then assigned to one of two treatments:

1. Control: 330 cows only exposed to natural-service bulls
2. TAI: 330 cows exposed to estrous synchronization and TAI followed by natural-service bulls

Two blood samples will be collected (at CIDR insert and 11 days prior) and analyzed for concentrations of progesterone. Progesterone is present after cows have started cycling, so these samples allow us to see if our treatments benefit cows that are cycling or noncycling when the breeding season begins. Pregnancy status and fetal age will be determined with ultrasound on days 60 to 65 after AI and again when cows are removed from pasture. This data will be used to determine whether the system of AI and estrous synchronization increases the number of pregnant cows or moves up expected calving dates.

The Research Corner (continued on page 6)

The Research Corner (continued from page 5)

Data to be collected on the subsequent calf crop include birth dates, birth weights, calving ease, calf vigor and weaning weight. In addition, frame scores will be determined, and ultrasound will be used at weaning to evaluate carcass characteristics of ribeye size, backfat and percent of intramuscular fat, which is highly related to marbling.

A sales price simulation also will be held that involves placing calves in pens according to treatment and having representatives of local cattle auctions assign prices to pens according to the current market dynamics. This information will allow

us to determine if calves from the AI system were worth more at weaning compared with calves from the bull-breeding system.

After weaning, calves will be sorted into pens according to treatment and managed during an 84-day backgrounding phase. All calves will be fed a similar diet once daily and interim weights will be collected at 28-day intervals. Data on feed intake, weight gain and feed efficiency will be collected. This will allow us to determine any performance benefit of AI for producers who decide to background their calf crop.

Upcoming Events: June–July 2011

Event	Location	Date	Contact Number
NDSA Spring Roundup	Linton	June 6	(701) 223-2522
NDSA Spring Roundup	Washburn	June 7	(701) 223-2522
NDSA Spring Roundup	Lisbon	June 8	(701) 223-2522
NDSA Spring Roundup	New Rockford	June 9	(701) 223-2522
NDSA Spring Roundup	Killdeer	June 10	(701) 223-2522
NDSA Spring Roundup	Almont	June 13	(701) 223-2522
NDSA Feedlot Tour	Jamestown	June 21	(701) 223-2522
North Dakota Junior Beef Expo	Williston	June 25-26	(701) 223-2522
Coproduct Storage and Feeding Workshop	Fargo	June 27	(701) 241-5700
Coproduct Storage and Feeding Workshop	Washburn	June 28	(701) 857-7682
Central Grasslands Research Extension Center Field Day	Streeter	June 29	(701) 424-3606
NDSU Beef Cattle Research Complex Open House	Fargo	June 29	(701) 256-3284
Hettinger Research Extension Center Field Day	Hettinger	July 12	(701) 567-4323
Dickinson Research Extension Center Field Day	Dickinson	July 13	(701) 483-2348
NDSU BBQ Boot Camp	Devils Lake	July 13	(701) 662-7027
NDSU BBQ Boot Camp	Grand Forks	July 14	(701) 780-8229
Carrington Research Extension Center Field Day	Carrington	July 19	(701) 652-2951
NDSU BBQ Boot Camp	Fessenden	July 19	(701) 652-2581
USDA ARS Friends and Neighbors Day	Mandan	July 21	(701) 663-6445
NDSU BBQ Boot Camp	Towner	July 21	(701) 537-5405

To get your events included on the Ranch Hand upcoming events list, email event name, location, date and contact number to Carl.Dahlen@ndsu.edu.

The Ranch Hand

TOP 10

Management strategies to consider in the coming month:

1. Monitor bulls for breeding activity
2. Search for favorably priced coproduct feeds for fall/winter feeding and be aware of long-term storage methods
3. Include magnesium in mineral for grass tetany control
4. Keep records of death loss and submit claims to the Livestock Indemnity Program
5. Monitor forage growth and target a high-quality harvest
6. Be aware of anthrax dangers; contact veterinarian about any sudden deaths
7. Seed cover crops for late-season grazing
8. Consider planting annual forages in unplanted crop ground
9. Spray pastures for control of noxious weeds
10. Schedule fall ultrasound pregnancy detection and/or fetal sexing

More Information

NDSU Extension Service agents or specialists:

www.ag.ndsu.nodak.edu/directory/extdir.htm

NDSU Department of Animal Sciences:

www.ag.ndsu.edu/ansc/

CattleDocs: www.ag.ndsu.edu/cattledocs

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