



Beef Tips

January 2013

Department of Animal Sciences & Industry

www.asi.ksu.edu/beeftips

Upcoming Events

K-State Winter Ranch Management Seminar

Jan 8, 2013
Multiple locations
Details page 4

Tri-State Cow-Calf Symp.

Jan. 8, 2013
McCook, NE
www.KSUBeef.org

KS Graziers Assoc. Winter Conference

Jan. 19, 2013
Details page 4

4-State Beef Conference

Jan. 29, 2013
Multiple locations
www.KSUBeef.org

Cattlemen's Day

March 1, 2013
Manhattan, KS
www.KSUBeef.org

Contributors

Dale Blasi

Stocker, Forages Nutrition & Mgt.
785-532-5427
dblasi@ksu.edu

Joel DeRouchey

Environmental Management
785-532-2280
jderouch@ksu.edu

Jaymelynn Farney

Beef Systems
620-421-4826
jkf@ksu.edu

Larry Hollis

Beef Veterinarian
785-532-1246
lhollis@ksu.edu

Sandy Johnson, Editor

Livestock Production
785-462-6281
sandyj@ksu.edu

Chris Reinhardt

Feedlot
785-532-1672
cdr3@ksu.edu

Justin Waggoner

Beef Systems
620-275-9164
hwaggon@ksu.edu

Bob Weaber

Cow-calf
785-532-1460
bweaber@ksu.edu

Use Calving Ease scores to monitor and reduce dystocia

Bob Weaber, cow-calf specialist

The old management adage “If you don’t measure it, you can’t improve it!” holds true for many beef production traits. It is especially true for dystocia or calving difficulty. With the Spring bull buying season just around the corner, it’s important for producers to review their current data collection scheme and the data they use in selection of bulls to remedy problems in their herd. Many producers still collect birth weights of calves as part of their performance record collection system.

Producers are encouraged to transition to collection of calving ease scores instead of, or in addition to, birth weights. Birth weight only accounts for 55 to 60 percent of the genetic variation in calving ease. So, selection for reduced birth weight alone won’t improve calving ease as much as selecting directly on calving ease. And since birth weight is strongly correlated with other growth traits, reduction in birth weight is usually associated with decreased growth performance at weaning and yearling.

For cow-calf producers, calving ease is the economically relevant trait associated with dystocia. Economically relevant traits (ERTs) are those that directly generate revenue or incur costs in beef production systems. In the case of a commercial cow-calf producer, dystocia (or lack of ‘calving ease’) is what generates costs in a cow herd through direct losses of calves and their dams, increased labor costs, and certainly lower reproductive rates among cows that have experienced dystocia.

Birth weight is an indicator trait. In this case, birth weight provides some information on calving ease. Birth weight alone doesn’t directly generate revenue or

incur costs independent of calving ease. It’s important to recognize that there is an optimal range of birth weights in beef cattle. Certainly, too heavy of a calf is a problem during delivery of the calf hence our selection, at least historically, for lower birth weights. However, too small of a calf at birth is problematic as well. This is especially true for winter/spring calving herds. During severe cold stress, low body weight calves are more susceptible to hypothermia and subsequent death or disease issues. Indeed, very low birth weight calves in northern latitudes can dramatically reduce survivability for calves born in winter months.

Recording calving ease scores is easy and should be done at or shortly after birth. The Beef Improvement Federation (BIF) recommended calving ease scores are listed below (Table 1) and in the front of the NCBA IRM red books. Monitoring calving ease in heifers and cows will allow producers to select sires with optimal calving ease and moderate levels of birth weight, helping to minimize dystocia. The calving ease records may also allow identification of sires that are causing problems. Sire selection for improved calving ease should focus on Calving Ease EPD, and for sires of replacement females, Maternal Calving Ease EPD should be considered.

Table 1. BIF Recommended Calving Ease Scores

Score	Description
1	No difficulty, no assistance
2	Minor difficulty, some assistance
3	Major difficulty, usually mechanical assistance
4	Caesarian section or other surgery
5	Abnormal presentation

“You can’t manage what you don’t measure.”

Tally Time – Performance records resolutions for the New Year

Bob Weaber, cow-calf specialist

As we begin 2013, it is a good time to reflect on the successes of the year just past. It is also a great time to commit to plans for the New Year. If you’re a seedstock producer, those plans should include performance record collection. If you are a commercial cow-calf producer you should also collect some key performance records to use in management and bull battery evaluation. All too often in our busy schedules, performance record collection is viewed as a ‘chore’ and not a mission critical activity.

Complete documentation of your cattle’s performance should be your objective as a seedstock producer. Some early planning and scheduling will help to focus effort and commitment on the performance testing of your cattle. Listed below (Table 1) are the some of the traits you should collect.

Once you collect the data make sure you transcribe it to appropriate forms or software and report the information to your breed association(s). After all, data stored away in a file never becomes useful information. Some of the measures (i.e. body condition score) also serve useful management purposes in addition to use in computation of genetic predictors.

If you are a commercial cow-calf producer, align your data collection with your marketing endpoint to aid in evaluation of previous sire selection decisions. Additionally, focus data collection efforts on areas that are high impact and low cost. Traits like mature weight and body condition score not only provide important information about your cow’s genetics, these measures are also very helpful in monitoring current and future feed allocation.

It’s important to recognize and seize opportunities for data collection. For instance, individual calf weaning weights could easily be replaced by draft weights if you only need to compute total calf production for herd level data analysis. If you have a large number of cattle, draft weights will be much easier and less expensive to collect. If you happen to have a small herd, collection of individual weights may be very easy. So, go ahead and pull out that brand new 2013 calendar and schedule dates for performance data collection.

More information on standardized performance record collection procedures is available at: <http://www.beefimprovement.org/PDFs/guidelines/Guidelines-9th-Edition.pdf>.

Table 1. Recommended data collection points for seedstock and commercial cow-calf producers*		
Trait	Class	Timing
Calving Ease*	Calves	at birth
Birth Weight	Calves	at birth
Vigor	Calves	at birth
Weaning Weight*	Calves	160-250 days of age**
Yearling Weight	Calves	320-410 days of age**
Yearling Hip Height	Calves	320-410 days of age**
Ultrasound Composition Data	Calves	320-410 days of age**
Yearling Scrotal Circumference	Calves	bulls 320-41- days of age**
Reproductive Tract Score*	Calves	heifers approximately 12 months of age
Heifer Pregnancy	Calves	heifer pregnancy diagnosis 16-20 months
Chute Score (disposition)	Calves	with weaning and yearling processing
Mature Weight*	Cows	semi-annually, pre-calving and post weaning
Body Condition Score*	Cows	semi-annually, pre-calving and post weaning
Mature Height	Cows	semi-annually, pre-calving and post weaning
Udder/Teat Score	Cows	annually, at calving
**Some breeds allow wider/different age windows for data reporting, contact your breed association for specific requirements.		

Lower anhydrous ammonia application rate provides proportionately greater improvement in forage quality

Justin Waggoner, beef systems specialist

This summer the K-State Beef Extension Team conducted six wheat straw ammoniation demonstrations across Kansas. The objectives of these demonstrations were to 1) demonstrate the process of using anhydrous ammonia to treat low quality roughages, and 2) evaluate the effects of two anhydrous ammonia application rates (1.5 and 3.0 percent of the dry matter weight of the stack or alternatively 30 or 60 pounds of anhydrous ammonia per ton of dry forage) on subsequent forage quality and digestibility.

Approximately 130 to 140 round bales of wheat straw were arranged in two separate stacks (3-2 configuration) at each location. Stacks were covered with 6 mil black plastic and sealed with soil along the bottom edge of the stack. Anhydrous ammonia was released into the stacks via 3 ½ inch braided-polyvinyl anhydrous hose. Forage samples were obtained prior to and 14 days after anhydrous application. Forage samples were submitted to SDK Laboratories (Hutchinson, KS) for basic nutrient analysis of Crude Protein (CP) and Acid Detergent Fiber (ADF) and to the New Mexico State University

Nutrition Lab for in-vitro dry matter digestibility (IVDMD) analysis. The effects of 1.5 or 3.0 percent anhydrous ammonia application are summarized in Table 1 below.

Crude protein and in-vitro dry matter digestibility were improved with anhydrous ammonia application. However, the improvement in both crude protein and in-vitro dry matter digestibility were greatest at the 1.5 percent application rate when compared to the pre-ammoniation values. Crude protein content was increased by 5.1 units at the 1.5 percent application rate with additional gain of 2.2 CP units by application of 3.0 percent anhydrous ammonia. In-vitro dry matter digestibility was increased from 31.0 percent to 42 and 46.2 percent at the 1.5 and 3.0 percent anhydrous rates respectively.

Low-quality forages may be improved by anhydrous ammonia application rates as low as 1.5 percent of the dry matter weight of the stack (30 pounds of anhydrous ammonia per dry ton of forage).

Table 1. Mean acid detergent fiber (ADF), crude protein (CP), and in-vitro dry matter digestibility (IVDMD) of wheat straw prior to (Pre-treatment) and following application of 1.5 or 3.0 percent anhydrous ammonia on a dry basis.

Item	Pre-treatment	Application Rate	
		1.5 percent	3.0 percent
ADF, %	51.4	52.3	52.1
CP, %	3.5	8.6	10.8
IVDMD, %	31.0	42.0	46.2

100th Anniversary Cattlemen’s Day Program Planned

Attendees will celebrate the 100th Anniversary of the KSU Cattlemen's Day (previously known as Livestock Feeder's Day) on Friday March 1, 2013 in Manhattan, KS. Make plans now to join in on all of the KSU Cattlemen’s Day activities and help us celebrate 100 years along with the dedication of the new Stanley Stout Center and the Legacy Sale. The complete program and registration information will be coming soon to www.asi.ksu.edu/cattlemensday. For more information, contact Lois Schreiner, 785-532-1267 or lschrein@ksu.edu.

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“Knowledge for Life”

K-State’s Winter Ranch Management Seminar Set for Jan. 8

Kansas State University will host its Winter Ranch Management Seminar on Tuesday, Jan. 8 in Manhattan, as well as at eight other sites around the state. The conference begins with registration at 4 p.m. at all sites, and the program starts at 4:30 p.m. Dinner is included at all locations.

Each seminar features local onsite speakers, plus presentations via webinar, including:

- *Protection and Restoration of Forage and Range Resources* – onsite speaker at each location.
- *R.A. Brown Ranch: Management Innovations for a Changing Beef Industry* – Donnell Brown, R.A. Brown Ranch, Throckmorton, Texas (webinar).
- *Fetal Programming: Implications for Beef Cattle Production* – Rick Funston, University of Nebraska-Lincoln (webinar).
- *Tips and Tools to Reach Your Management Goals* – onsite speaker at each location.

Locations and contact information for each site:

- **Kansas State University**, 111 Weber Hall, Manhattan – Eve Clark – 785-532-1280 or evvec@ksu.edu.

- **K-State Olathe**, 22201 W. Innovation Drive, Olathe – Rick Miller – 913-715-7000 or rick.miller@jocogov.org.

- **Astra Bank**, 1205 18th St., Belleville – Robin Slattery – 785-325-2121 or rslat@ksu.edu.

- **Ellsworth Golf Course**, 900 E. Second St., Ellsworth – Debbie Jacobs – 785-472-4442 or djacobs@ksu.edu.

- **Bowyer Community Building**, Lyon Co. Fairgrounds, 2710 W. Highway 50, Emporia – Brian Rees, 620-341-3220 or brees@k-state.edu.

- **Neosho Co. Courthouse** basement, 100 S. Main, Erie – Delta George, 620-223-3720 or delta@ksu.edu.

- **Shears Technology Theater**, Hutchinson Community College, 1300 N. Plum, Hutchinson – Cody Barilla, 620-662-2371 or cbarilla@ksu.edu.

- **Northwest Kansas Educational Service Center**, 703 W. Second St., Oakley – Scott Barrows – 785-743-6361 or rsbarrow@ksu.edu.

- **Rooks County Golf Club**, 1925 U.S. Highway 183, Plainville – Rachael Boyle – 785-425-6851 or rboyle@k-state.edu.

More information, including registration, is available through the contacts listed at each site or at www.KSUBeef.org.

Kansas Graziers Association Winter Conference Set for January 19, 2013 in Salina, KS

The Kansas Graziers Association (KGA) Winter Conference will be held Saturday, January 19, 2013, 8:30 a.m. to 4 p.m. at the Courtyard Marriott Hotel in Salina, Ks. “Back to the Basics of Grazing Management” is the theme for this year’s conference.

Speakers will include David Kraft, and Dwayne Rice, Kansas based USDA NRCS Rangeland Management Specialists. Kraft will address drought management, and Rice will compare conventional grazing to MIG (management intensive grazing) and mob grazing. Gary Kilgore, retired KSU grass and forages specialist, will discuss soil health and fertility in grazing systems, and Dale Strickler, rancher educator, will cover plant physiology, forage options, and extending the grazing season. Rancher Ted Alexander will also lead a rancher/farmer panel on drought planning and general questions on grazing.

Registration fees are \$50 for the first person per ranch, and \$35 for a second person. Student registration is \$25. Check the KRC website at www.kansasruralcenter.org for registration forms and information, or contact Mary Howell at marshallcofair@gmail.com or 785-562-8726 .

Tri-State Cow-Calf Symposium in McCook, NE on Jan. 8

Successfully Managing the Cow Herd in the Course of Drought will be the focus for the 2013 Tri-State Cow/Calf Symposium and Trade Show January 8. Registration will begin at 8:30 a.m. Central Time with opening remarks beginning at 9 a.m. and the program concluding around 4:30 p.m. at the Red Willow County Fairgrounds Community Building in McCook. The symposium is held in conjunction with a trade show featuring regional vendors. Attendees will have time throughout the day to visit displays.

Registration is required by Jan. 2 to ensure sufficient meals and materials. For more details or to register for the symposium, contact the UNL Extension office in McCook at 877-674-6947 or email red-willow-county@unl.edu or contact Strauch at brian.strauch@unl.edu.

The program brochure is available at www.KSUBeef.org .