K-STATE Research and Extension

Beef Tips

January 2016 Department of Animal Sciences & Industry www.asi.ksu.edu/beeftips

Upcoming Events

2016 Calving Schools
Jan. 4, 5, 6, 7, 11, 12
Various locations
See details at
www.KSUBeef.org

K-State Winter Ranch Management Series
Jan , 7, 20, 21; Feb 2, 4
Various locations
See details page 5
www.KSUBeef.com

Kansas Cattle Drive
Feb. 20, 2016
Buhler, KS
http://reno.ksu.edu

Cattlemen's Day
March 4, 2016
Manhattan, KS
www.KSUBeef.com

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Mud – A not so hidden cost

Joel DeRouchey, environmental management specialist

In many areas of Kansas, an accumulation of initial winter moisture, both from snow in western and rain in central-eastern Kansas, has left many producers with saturated pen conditions. Since pen drying occurs more slowly during the winter, these conditions may not go away anytime soon. This encompasses producers of all types of production from those with winter calving areas to backgrounding and finishing lots.

From a growth perspective, cattle in muddy conditions have an approximately 30% higher net energy maintenance requirement, thus a higher portion of the feed they consume is not directed to growth and reproduction. Logically this makes sense as the weight of the mud on the feet and legs as well as the chilling that occurs from lying down on a wet surface contributes to a higher maintenance requirement. Research has also shown that feed intake is reduced by 5 to15 percent in 4 to 8 inch mud and can decrease 15 to 30 percent in 12 to 24 inch mud. ***Subsequently, daily gains are reduced 7 percent for dewclaw deep mud and 28 percent when battling hock deep mud.***

In order to minimize mud within confined feeding areas, producers should grade the pens so excess water is allowed to runoff and not pool. Routinely pens are designed for adequate drainage, but overly aggressive manure cleaning creating low spots or a simple lack of manure removal can cause pens not to drain excess water properly. Often "high spots" of manure between or at the end of a pen can cause a ridge, thus blocking the drainage pattern.

The use of mounds is a practical means to provide an area that dries more quickly than the pen surface itself. Mounds should be designed and built where the drainage pattern from other parts of the pen are not blocked. Finally, the use of a solid floor feeding pad (concrete, packed crushed rock or screenings) is essential to encourage cattle to come to the bunk or feeding area during muddy conditions. Pens without a solid feeding pad generally have the deepest mud where cattle stand to consume the feed, thus discouraging feed consumption.

Snowfall accumulation in pens or temporary winter feeding areas can contribute to a significant amount of soil saturation. Producers should take action to prevent future problems with excess mud. There are two main options, first depending on the area size, removal of the snow from pens or the feeding area. More practically, simply pushing the snow away from the bunk and lying areas and downgrade so that when the snow melts, it has less or no effect on the soil conditions where it was cleared from. Also, producers need to consider clearing snow in areas above the pens where runoff water may enter.

Mud can create challenging conditions for livestock, increasing maintenance requirements and reducing energy for growth or fetal development. Pen design, manure and snow removal and mound maintenance can improve animal welfare and performance.

"You can't manage what you don't measure."

Tally Time – Cow herd record keeping systems

Sandy Johnson, livestock specialist

Previous issues of Tally Time have discussed key herd production records for herd level management decisions (see Nov 2012). Records such as pregnancy rate and weaning weight per cow exposed are foundational for making effective decisions relating to the management of the entire herd

Selection goals and management styles often require the use of much more extensive records related to individual animal performance. For example, which heifer calves were born early in the calving season and should be considered for replacements? The form of those records could be handwritten but with today's technology and data management options, computerized records provide numerous options and automated reports. Indeed trying to find the "best" cow/calf management software can be intimidating.

When evaluating or trying to find a new record keeping system it is useful to start by considering the herd goals and the records that are required to achieve those goals. A commercial software program must have features that work for a wide range of clients. This can result in program reports and features that seem overwhelming to someone with relatively simple needs or just starting with computer record keeping. While needs may change over time it is important to identify what you want out of the program in terms of data collected and reported.

Oklahoma State University faculty have surveyed companies providing cow/calf software programs. The most recent report (August 2015) can be found at http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-1926/CR-3279web.pdf . One of the benefits of this particular publication is that it lists numerous data points and summaries that are components of the various software programs. Once you have created your own list of what records you think you need, compare it to this listing. It may help you identify other useful measures not previously considered. Particularly as you are getting started, don't collect more data than you can use effectively.

Computer requirements and a variety of additional considerations are included for each software company completing the report. Most have a trial version available. Support and training for using the program should be part of your product comparison. There is value in working with a company that has been in the industry for a number of years and that can keep pace with the latest technology and data systems. Integrating with software in tools such as smart phones, scales and electronic ID readers are valuable features and will be even more so as the industry as a whole advances in data collection technologies.

Plan on needing some time to learn and set up a new electronic cow/calf record keeping system. The more you use the tool the easier it will be to use. Lean on team members that are more comfortable with the technology. A local 4-H or FFA member might be a good partner for someone looking for extra help with the computing side. The producer's knowledge of the records would still be key but finding where and how to complete the task within the record system might be more easily identified by someone that grew up using computers.

Producers with fairly simple record requirements and/or good computer skills may find that use of simple Excel spreadsheets or a database type program (i.e. Access) may work as effectively as commercial programs. You can download an Excel spreadsheet template to calculate adjusted 205 day and yearling weights at this site: http://www.asi.k-state.edu/species/beef/research-and-extension/breeding-and-genetics.html. If you develop your own system consider using the Beef Improvement Federation's Guidelines that outline scoring systems to record data points such as calving difficulty, udder scores, death loss or reasons for disposal. You may still want to record more details related to an event, but including a score is extremely valuable when you go to summarize the data. Look for the 9th Edition of the guidelines at beefimprovement.org under the resource center (http://beefimprovement.org/content/uploads/2015/08/REVISED-MasterEd-BIF-GuidelinesFinal-08-2015.pdf).

The more you know about key characteristics of your cows and herd collectively, the better you will be able to manage it and achieve production goals. Technology is not the answer to every problem but it does an excellent job of storing and reporting data. Look for ways that data can inform your decisions and improve the management of your herd.

Provide cold cows more energy

Justin Waggoner, beef systems specialist

The New Year historically brings with it some of the coldest and most extreme conditions of the year. Weather can be one of the greatest challenges of managing cows during the winter, especially for spring-calving herds on the verge of calving. Most cattle producers appreciate that cold weather increases nutrient requirements. However, the more common questions are "When or under what conditions should we respond to a cold weather event?" and "How should we respond?"

Cattle are most comfortable within the thermonuetral zone when temperatures are neither too warm nor too cold. During the winter months cattle experience cold stress anytime the effective ambient temperature, which takes into account wind chill, humidity, etc., drops below the lower critical temperature. The lower critical temperature is influenced by both environmental and animal factors including hair coat and tissue insulation (body condition).

Table 1 lists the estimated lower critical temperatures of cattle in good body condition with different hair coats. In wet conditions cattle can begin experiencing cold stress at 59°F, which would be a relatively mild winter day. However, if cattle have time to develop a sufficient winter coat the estimated lower critical temperature under dry conditions is 18°F.

Table 1. Estimated lower critical temperatures for beef cattle

Coat Condition	Critical Temperature (°F)
Wet or summer coat	59°
Dry, fall coat	45°
Dry, winter coat	32°
Dry, heavy winter coat	18°

Cold stress increases maintenance energy requirements but does not impact protein, mineral or vitamin requirements. The general rule of thumb (for a cow in good body condition, BCS = 5 or greater) is to increase the energy density of the ration by 1% for each degree (Fahrenheit) below the lower critical temperature. The classic response to cold stress in confinement situations is an increase in voluntary intake. However, it has been documented that grazing beef cows may spend less time grazing as temperatures decline below freezing, which reduces forage intake (Adams et al., 1986) and makes the challenge of meeting the cow's nutrient requirements even greater.

The traditional response to a cold weather event on many operations is to feed more of the current supplement being used or offer a greater amount of low-quality hay. Although the additional supplement and hay may provide some additional energy it may not be sufficient to meet the energy requirements of a third trimester cow, experiencing cold stress. In many situations (depending on the supplement being used), the additional supplement offered supplies more protein and not necessarily energy; and the additional hay offered simply replaces grazed forage. In this situation energy is likely limiting. An alternative response would be to offer a relatively higher-quality hay than the current forage being grazed or a small amount of grain combination with the normal amount of (protein) supplement being used. Circumstances, supplements and forages will vary.

In a cold weather event, cold stress increases energy requirements and not protein. More information on cold stress and nutrition may be found in "Beef Cow Nutrition Guide", Publication #C-735 which may be accessed online at http://www.ksre.ksu.edu/bookstore/pubs/C735.pdf.

"Cold stress increases maintenance energy requirements but does not impact protein, mineral or vitamin requirements."

Management Minder

Management Minder, a new calendar tool now available

Sandy Johnson, livestock specialist

The Management Minder is a new web-based tool to help develop a yearly production calendar for your cow/calf, replacement heifer or growing calf operation. The timing of many management tasks for a cow/calf operation are dependent on the timing of the start of key activities such as the breeding season(s), spring grazing, and weaning. For example, based on the start of the breeding season, the Minder can remind you when the beginning of the third trimester of pregnancy begins so you can adjust the ration for increased energy needs. Or it may remind you to make arrangements to obtain vaccines in time for processing calves. The Minder contains a list of activities you may want to add to your calendar and a suggested date based on a default interval from the appropriate date category (breeding, weaning, grass turnout, and receiving cattle). The user can then adjust the date to fit their situation.

Users register on the website with a unique farm/ranch name. All other functions in the application are linked to the farm name allowing the program to identify different producers. Once set up, the items from one calendar year can be automatically sent to the next calendar year (thus the need for registration) minimizing the time needed for set up in subsequent years. While the user can only see the activities for their own farm/ranch, the application provides an option to register multiple usernames under the same farm/ranch name. Other family/team members, consultants or veterinarians can be given permission to add items to the same farm/ranch calendar.

Once activities are added to the calendar, a calendar file is sent to the email address associated with the farm/ranch. The program generates an ".ics" file that can be read by Outlook, Google and Yahoo calendars. Depending on the user calendar system, the entire calendar can be shared or the ".ics" files forwarded to other team members. The calendar can be printed and/or be available on mobile devices.

The Minder is a joint effort between Iowa State University and K-State Research and Extension. The development of the technical side of this tool was led by Garland Dahlke at the Iowa Beef Center and his student, Dinesh Poddaturi, a computer programmer working on a masters degree in information systems. We expect that the early users of the program will have suggestions for improvement and may identify issues that still need to be resolved. We welcome and encourage this feedback.

The tool can be found at http://cowweb.exnet.iastate.edu/CowWeb/faces/ . Send questions and comments regarding the tool to sandyj@ksu.edu.

January 2016

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	**2** Check Wt, Replacement Hfrs
3	**4** Shop for new bulls	**5**	**6**	**7**	**8**	**9**
10	**11** Check calving supplies	**12**	**13**	**14**	**15**	**16**
17	**18**	**19**	**20**	**21**	**22** Begin evening feeding 1st calf hfrs	**23**
24	**25**	**26**	**27**	**28**	**29**	**30**
31						

K-State's Winter Ranch Management Series set for January and February

MANHATTAN, Kan. – Volatility in cattle prices and the regulatory environment has motivated many producers to seek information on ways to improve their operations profit potential through better management and selection. With that in mind, the 2016 K-State Winter Ranch Management Seminar Series will focus on best management practices for beef producers. The series, which includes five meetings throughout Kansas, will take place in January and early February.

"The series has a history of being a successful stretch of meetings," said Bob Weaber, cow-calf specialist for K-State Research and Extension and one of the series presenters.

Weaber, along with other state, district and local extension staff, will take part in the series to help answer producers' questions about the Food and Drug Administration's new Veterinary Feed Directive and antimicrobial stewardship, tools for beef sire selection, the effect of branding on beef product consumer satisfaction, and vitamin and mineral supplementation for the beef herd.

"Over the past few months, we've received quite a few questions from producers regarding the implementation of the new Veterinary Feed Directive regulations and selection of beef sires using genomically-enhanced selection tools," Weaber said. "The Winter Ranch Management series provides a great opportunity for us as state specialists to take our expertise out in the country and do a series of face-to-face meetings."

The specialists will be prepared to answer a wide array of questions on beef cattle issues surrounding animal health, nutrition, management, genetics and reproduction, Weaber said, so producers should come to the meetings with their questions.

Some of the other hot topics Weaber foresees discussing include winter feeding and cow management, preparation for calving and breeding season, as well as vaccination and animal health issues.

"Early in the year is always a great time for producers, when the weather is bad and after they get chores done, to sit back, think and plan for the coming year, the calves that will be born in the spring and how they might manage those," he said. "Certainly it is a good time of year to think about business strategy opportunities moving forward in terms of expansion."

2016 locations and contacts:

Emporia
Date: Thursday, Jan. 7, 5:00-8:30 p.m.
Location: Anderson Building, Lyon County Fairgrounds, 2650 W. U.S. Highway 50
RSVP by Dec. 31 to Brian Rees, Lyon County agriculture and natural resources agent, 620-341-3220 or brees@ksu.edu.

Concordia
Date: Wednesday, Jan. 20, 5:00-8:30 p.m.
Location: Cloud County Community College, 2221 Campus Drive
RSVP by Jan. 13 to one of the following: Katelyn Brockus, River Valley Extension District livestock production agent, 785-325-2121 or kbrockus@ksu.edu; Anthony Ruiz, Central Kansas Extension District livestock production agent, 785-392-2147 or anruiz@ksu.edu; or Neil Cates, Post Rock Extension District livestock production agent, 785-738-3597 or ncates@ksu.edu.

Lawrence
Date: Thursday, Jan. 21, 5:00-8:30 p.m.
Location: Building 21, Douglas County Fairgrounds, 2110 Harper St.
RSVP by Jan. 14 to Roberta Wyckoff, Douglas County agriculture and natural resources agent, 785-843-7058 or rwyckoff@ksu.edu.

Alta Vista
Date: Tuesday, Feb. 2, 5:00-8:30 p.m.
Location: Alta Vista Baptist Church, 402 Main St.
RSVP by Jan. 26 to Kara Mayer, Wabaunsee County agriculture and natural resources agent, 785-765-3821 or kamayer@ksu.edu.

Greensburg
Date: Thursday, Feb. 4, 5:30-9 p.m.
Location: Greensburg Community Center, Kiowa County Fairgrounds, 720 N. Bay St.
RSVP by Jan. 28 to Barrett Smith, Kiowa County agriculture agent, 620-723-2156, 620-546-3918 or basmith@ksu.edu.

Meeting times and registration fees vary by location. All meetings will include a dinner meal. Participants are asked to RSVP for a selected location by the close of business one week prior to the event. Interested participants should reach out to their local host contact for registration and RSVP details. More information about the K-State Winter Ranch Management Seminar Series is available at www.ksubeef.org.