



Beef Tips

November 2015

Department of Animal Sciences & Industry

www.asi.ksu.edu/beeftips

Upcoming Events

Range Beef Cow Symposium

Nov. 17 -19, 2015
Loveland, CO
www.rangebeefcow.com

Calving Schools

December 2015
January 2016
Various locations see page 5
www.KSUBeef.org

Cattlemen's Day

March 4, 2016
Manhattan, KS

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Anaplasmosis cases in more areas of Kansas this year

Gregg Hanzlicek, DVM, production animal field investigations director

There has been a lot of Anaplasmosis reported in Kansas cow-calf herds this year. This disease has been recognized in eastern Kansas herds for many years, but only recently has it been observed in the rest of the state. To see the positive counties please go to www.ksvdl.org and select the "Disease Trend" button on the right hand side of the page.

What is Anaplasmosis? This is a blood disease caused by a bacterium called *Anaplasma marginale*. Once inside the animal, the bacterium reproduce and enter the red blood cells. These red blood cells are then recognized as abnormal and are removed from the blood by the spleen. The clinical signs of Anaplasmosis are primarily due to the anemia that results from the red blood cells being removed from the animal's system.

Animals of all ages can become infected, but typically only those over the age of 3 show signs of being ill. These signs include: open mouth breathing, staggering, aggression, yellow membranes around the eyes or vulva, abortion, and commonly death. Finding one or more adult cows dead in a pasture is a very common sign associated with Anaplasmosis. There are several other diseases that can be mistaken for Anaplasmosis; therefore requesting a veterinarian's necropsy of all dead animals is important for an accurate diagnosis.

Infection can occur from anything that moves infected blood to a non-infected animal. A very common way animals become infected is through the bite of a male dog tick (also called the wood tick). Male ticks become infected when they feed on an Anaplasma positive animal and then subsequently feed on a non-infected animal. The bacterium is passed

to the non-infected animal through the tick's saliva.

Horse flies, deer flies, stable flies, and mosquitoes also pass infected blood from one animal to another. Probably one of the most common ways infected blood is passed between animals is through multiple-use needles. Injecting an infected animal, for example during vaccination, then vaccinating the next animal without changing needles, can pass enough blood to infect the second animal. In addition, tattoo pliers, and dehorers can also move blood between animals.

Most infected cattle can and do recover from this disease on their own, regardless if they are treated or not. However, treatment with injectable antibiotics is very effective at reducing or eliminating the clinical signs of this disease. Your veterinarian will know which antibiotics are labeled for Anaplasmosis treatment. If animals are to be treated, they must be handled very gently because the stress of movement can result in death. Additionally, producers should be aware that many times, even the most docile bovine, will become very aggressive during the course of infection; they can become very dangerous!

Once cattle are infected, regardless if treated or not, they will become life-long carriers. These animals will be the blood source of infection for the rest of the non-infected herd. The good news is that these carriers, even if re-infected later in life will not exhibit the clinical signs.

Prevention of Anaplasmosis starts with testing and quarantining all new herd additions.

continued...see Anaplasmosis on page 4

Tally Time – Use herd records to drive decisions

Sandy Johnson, livestock specialist

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

Few people really “enjoy” keeping records but having the records when you need them can be a great help. Cow/calf operations require considerable capital investment and must manage in the face of rising prices, regulatory uncertainty and price volatility. A good set of records can inform decisions and be a great asset in troubleshooting. In the case of disasters they can provide the ready documentation needed for assistance programs. Legislation aimed at reducing the development of antibiotic resistance will now require producers to retain copies of veterinary feed directives for a period of two years. The silver lining to any required records could be getting producers to collect and analyze more data about their operation than they have in the past.

The “RedBook” was created to help producers have a place to record, on the go, all the day to day happenings that can be useful for management decisions in a cow/calf operation. The calf information and calendar pages take up the bulk of the Redbook but there are a number of other pages that are extremely useful. Often times we might use a few features of such a tool and overlook all the other useful pieces. Whether in this format or another, producers should strive to collect and use all the data represented by these forms. Which of the following do you collect ?

- Cowherd inventory, beginning of fiscal year, start of breeding season
- Bull inventory and breeding soundness exams
- Pasture usage
- SPA Performance Measures
- Body Condition Score Record – weaning, pre-calving, calving, pre-breeding
- Calving Activity – tracks calving distribution for various age or management groups
- Calf health record
- Weaning data
- Cow Health record
- Treatment record
- Cattle movement worksheet
- Cattle Sales
- Death losses
- Supplement Record
- Precipitation Record

The health/vaccination record sheet includes detailed information about the specific product, serial number, lot number, expiration date, withdrawal date, site of administration. All key information to have if there was some reaction to a vaccine or if needed as part of documenting the vaccination history of a group of animals to aid marketing.

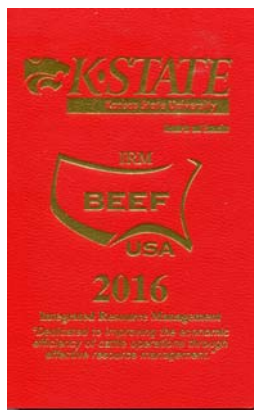
The treatment record includes similar information as the vaccination record and helps ensure that appropriate withdrawal times have passed before an animal is sold. We all want a high quality, safe food supply for our families and other consumers. This type of documentation, if shared with consumers, could build consumer confidence in our product.

The Redbook is also available as an Excel file with all the same record sheets. The Excel version could serve as a backup to the paper copy since Redbooks have been known to meet with tragic fates in washing machines and mud puddles.

Those that are more tech savvy may want to set up some of their own record sheets using features such as Google docs. In an area with good smartphone coverage, one producer uses this method for a number of items including tracking hay inventory as it is fed, animal treatments records and group procedures.

There is no one right way, however, relying strictly on memory is subject to sudden and unexpected failure. The process of recording information can actually be beneficial and draw attention toward the ways that information can help the operation.

Outside demands may be the only reason some producers keep any records, but increasingly many businesses are finding power in data to drive decisions. Look for opportunities to inform your decisions with data.



Redbooks are available from a number of sources including some county extension offices. You can find the spreadsheet version or order Redbooks directly at this site <http://www.beefusa.org/redbook.aspx>.

The original IRM Redbook was developed in 1985 by University of Idaho extension specialists.

Making great cows-Strategic replacement female selection

Bob Weaber, cow-calf specialist

Although the recent slip in calf prices may require cow-calf producers to sell more heifer calves than planned and forgo herd expansion, many producers will still keep a significant percentage of replacement females in order to maintain herd inventory. Producers retaining heifers this fall should consider several key strategies to select the best replacement candidates from their weaning pens.

The first step in any selection decision is knowing what it is that you desire. In animal breeding terms, that's your breeding objective. In the case of replacement heifers, your breeding objective should include a listing of the traits and attributes that you believe make a heifer a good candidate for selection as a replacement female for your herd. The traits included in this list should be focused on maternal traits that will aid a cow in being reproductively successful for a long period of time under your management. Traits often include fertility, longevity, calving ease, milk, docility, mature weight, growth to weaning or yearling endpoints. Other attributes may include coat color, polledness, breed or breed combinations to generate maternal heterosis. Recognize that many commercial heifers won't have EPDs for any of these traits, so they will largely be influenced by the sire selection that occurs in a herd over time.

In many cases, limiting environmental conditions will dictate that moderate or optimal levels of growth and milk or lactation potential be targeted rather than maximization of these traits. American Angus Association provides an effective tool for evaluating nutrient availability and selecting optimal ranges of Milk EPDs for sires of replacement heifers. <http://www.angus.org/Performance/OptimalMilkMain.aspx>. Cows with high growth and mature weights and lactation potential may outstrip nutrient availability on native range and require substantial supplementation. Use of selection indexes that heavily weight terminal traits are strongly discouraged for use as selection tools for sires of replacement heifers.

Below are some additional factors that help identify replacement females that have a leg up:

Crossbred - Heifers that represent optimal combinations of breeds known for superior maternal performance generally are a better alternative to straightbred heifers of equal quality. Maternal heterosis, or the heterosis the heifer will exhibit as a cow, has been shown in numerous studies to be very beneficial to commercial cow-calf production. About two-thirds of the economic benefit of crossbreeding

comes from having crossbred cows; one-third from having crossbred calves. A bulk of the maternal heterosis benefit is driven by the improved maternal calving ease, fertility and longevity of crossbred females. First cross (F1) crossbred cows typically last about 1.5 years longer in herd and have 23-30% improvement in weaning weight per cow exposed thus improving production efficiency dramatically.

Produced by proven sire - Replacement female selection should start with selection of sires. Sires should be selected to produce heifers that meet the replacement female breeding objective outlined above. Use of fixed time AI to proven sires with high accuracy EPDs for maternal traits makes for an effective breeding/selection system. Select sires that optimize traits of cows so they fit your production environment.

Calved by a proven dam - Replacement heifers that are born to cows that have been reproductively successful under your management for a long period of time are natural candidates as replacement. It's likely these cows are among the more fertile cows in your herd and are of appropriate mature size and lactation potential for your environment. Although selecting replacements from older cows increases your generation interval, it also buffers rapid changes in the genetic trend in your herd for other traits under selection that may be antagonistic to longevity and fertility. Note: if you desire rapid change in traits, selection of replacements from younger cows will speed up change by shortening generation interval.

Born early in calving season - Heifers born early in the calving season will be older at the initiation of their first breeding season than calves born later in calving season. They have a better chance of having reached puberty by start of breeding season and have a higher likelihood of breeding early in the season. These heifers are also likely from dams that conceived early in the breeding season and "fit" in your management system and environment.

From middle group of Adj 205 day weaning weights - If your cows are bigger than you would like to fit your environment, consider selecting replacement heifers from the middle part of the weaning weight distribution. Keeping the biggest, fleshiest heifers from your herd over time contributes to increases in mature cow weights and increased nutrient demand as cows. You should use age-of-dam

continued...see Great Cows on page 4

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Anaplasmosis continued from page 1

Those herds who did not previously have this disease and subsequently become infected are the herds that recently brought in one or more positive animals. These are the herds who typically experience the most severe clinical signs. Fly and tick control are also important components of a prevention program as are changing needles and disinfecting tattoo pliers and dehorners between every animal.

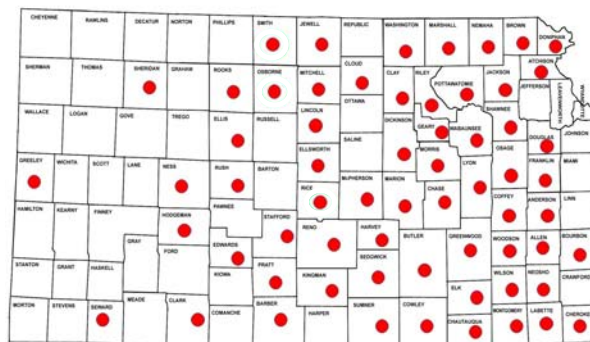
Feeding a mineral containing an antibiotic labeled for Anaplasmosis during the pasture season can also help control this disease. Remember, using antibiotics in feed, including mineral, can only be completed legally when following the exact product -label directions. Please use your veterinarian’s advice when feeding antibiotics.

There is also an Anaplasmosis vaccine available. Its use requires your veterinarian’s involvement to acquire the vaccine, and because it only reduces the clinical signs and does NOT prevent infection, it should only be used in herds that are already positive.

The important facts for Kansas cow-calf producers to know are that Anaplasmosis is no longer found just in the eastern part of the state. Strict biosecurity including testing and quarantining every herd addition, including breeding bulls, is the key to keeping a herd Anaplasmosis free. Fly control will also help keep the herd negative and will help, along with changing needles between each animal, prevent the spread of this disease within a herd.

Great Cows.... continued from page 3

adjusted 205 d. weaning weights to classify your heifers’ potential for growth. The adjustment procedures remove bias due to age of calf and age of dam at weaning. Heifers of similar genetic potential born at the beginning or the middle of a 90 calving season can have a difference in weaning weights of more than 100 lb so correcting for age is very important. Selection of heifers born early in calving season (see above) and selection for moderation of mature size/growth need not be independent events. For instance, one could compute adj. 205 weaning weights for all calves, select the middle half of the heifers as candidates, then chose the oldest heifers among these as replacements. This approach would optimize selection for moderate size and calved early.



Kansas counties with confirmed *Anaplasma marginale*, 2014 to present as of Oct. 30, 2015.

A handy K-State Beef worksheet to compute adjusted performance measure for beef cattle is available here: <http://goo.gl/Leq5Jc>.

More information of beef cattle selection can be found in the NBCEC Beef Sire Selection Manual here (from KSUbeef.org): <http://goo.gl/Zrc9pL>.

December 2015 and January 2016 Calving Schools

DECEMBER

Pratt, KS

December 7, 2015 at 5:30 p.m.
Pratt County Fairgrounds
Tim Marshall, tmarshall@ksu.edu
620-886-3971

Oakley, KS

December 8, 2015 at 5:30 p.m.
Buffalo Bill Cultural Center
Scott (Bronc) Barrows, rsbarrows@ksu.edu
785-671-3245

Russell, KS

December 9, 2015 at 5:30 p.m.
Dole-Specter Center
Dusti Betts, dusti@ksu.edu
785-483-3157

Blue Rapids, KS

December 10, 2015 at 5:30 p.m.
Marshall County Fairgrounds
Anastasia Johnson, anastasia@ksu.edu
785-562-3531

Winfield, KS

December 17, 2015 at 5:30 p.m.
Baden Square, 700 Gary Street
Jill Zimmerman, jazimmer@ksu.edu
620-221-5450

JANUARY

McLouth, KS

January 4, 2016 at 6:00 p.m.
McLouth Community Center
Jody Holthaus, jholthau@ksu.edu
785-364-4125

Smith Center, KS

January 5, 2016 at 5:30 p.m.
Fire Station, 216 S Washington St.
Neil Cates, ncates@ksu.edu
785-738-3597

Lakin, KS

January 6, 2016 at 5:30 p.m.
Kearny County Fairgrounds
Bill Haney, haney@ksu.edu
620-355-6551

Ransom, KS

January 7, 2016 at 5:30 p.m.
Senior Center
Jared Petersilie, jaredp11@ksu.edu
785-626-3192

Independence, KS

January 11, 2016 at 6:00 p.m.
Civic Center, 410 North Pennsylvania
Keith Martin, rkmartin@ksu.edu
620-331-2690

Olathe, KS

January 12, 2016 at 6:00 p.m.
K-State Olathe
Megan Westerhold, mwesterhold@ksu.edu
913-294-4306

Featured at each school will be Dr. Dave Rethorst, DVM, with the Beef Cattle Institute. Dr. Rethorst will cover the normal calving process, when to intervene and how to manage difficult births. This discussion will be interspersed with examples of the effect of nutrition during pregnancy on calving management as well as the lifetime health and performance of the calf. A location specific speaker will focus on cow winter nutrition.

Please RSVP to the local extension office for the above schools by **December 2nd**, for December schools and **January 2**, for January schools, to ensure a meal. Charges (nominal) vary by location.

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