



Beef Tips

September 2011

Department of Animal Sciences & Industry

www.asi.ksu.edu/beeftips

Upcoming Events

2011 KSU Beef Stocker

Field Day

Sept. 22, 2011
Manhattan, KS
www.ksubeef.org

K-State Beef Fall 2011 Calf Conferences

Sept 27 - 28, 2011
Atwood, Oakley and Stockton
See page 5

Range Beef Cow Symposium

Nov. 29-Dec. 1, 2011
Mitchell Event Center,
Mitchell, Neb
www.rangebeefcow.com

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Weaber Joins Animal Science and Industry Faculty as Cow-calf Extension Specialist

Bob Weaber recently joined the ASI faculty at Kansas State University as assistant professor and cow-calf extension specialist. Raised in southern Colorado on his family's ranch, his formal education includes a BS in Animal Science with a minor in Ag. Economics (1993) and M.Agr – Beef Industry Leadership (1995) from Colorado State University. Weaber worked for the American Gelbvieh Association for five years then returned to graduate school at Cornell University where he earned his Ph.D. (2004) in Animal Breeding and Genetics. While at Cornell, Bob served as Interim Director of Performance Programs for the American Simmental Association. Most recently he was a faculty member at the University of Missouri serving as state extension specialist in beef genetics.

Bob's applied genetics research includes novel trait development for feed efficiency, tenderness and docility. He is also interested in management and production system research focused on herd level profitability. Bob aims to develop a broader understanding of the interactions of genetic potential for mature cow size and milk production potential and their effects on nutrient demand and relationships with other production traits.

Weaber hopes to assist seed stock and commercial cow-calf producers develop more knowledge about genetic selection tools, including expected progeny difference, selection indexes and DNA markers, and their appropriate uses. Moreover, he plans to aid producers in evaluation and implementation of value-added breeding systems that produce environmentally adapted cows and market targeted calves.

Weaber can be reached at 227 Weber Hall in Manhattan, by phone at 785-532-1460 or email bweaber@ksu.edu.



Use Fall Processing to Reduce Feed Costs and Target Management

Bob Weaber, cow/calf specialist

High supplemental feed costs, and in some areas persistent drought, should motivate producers to evaluate their feed resources and management plans heading into the fall and winter months. One major priority for many producers is evaluation of ways to minimize supplementation of cows with harvested feedstuffs, either hay, by-product feeds or coarse grains. One certain way to reduce the overall nutrient requirements of the herd is to cull out unproductive animals. As you begin processing cattle to wean calves consider spending a little extra time to identify 'problem' cows by evaluating them for pregnancy status, udder quality, and adequacy of teeth and feet structure.

Open cows should be marketed in a timely fashion to reduce nutrient demand if you are in a drought condition. However, if the open cows are thin and you have grazing pasture or feedstuffs available, consider feeding cows

continued...see Fall Processing on page 3

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

Tally Time – Older replacement heifers have a life-time advantage

Sandy Johnson, livestock specialist

In areas where there is enough forage to consider keeping replacement heifers, a typical question is “which heifers to retain”? Should it be the heaviest heifers, the mid-weight heifers, heifers out of certain sires or any number of other criteria. Regardless of genetic goals or marketing end points, getting heifers bred the first year and rebred early each subsequent year is critical to profitability.

A paper presented by Funston and co-workers at the Western Section meetings of the American Society of Animal Science this summer summarized the influence of calving period on the performance of heifers retained for replacements. Data were taken from a spring calving herd at the University of Nebraska over a 12 year period representing 1,019 heifer calves. Reproductive performance of heifers as yearlings and first calf characteristics are shown in table 1.

When born during the first 21 days of the calving period, replacement heifers were heavier at weaning and breeding and had a higher proportion cycling at the start of the breeding season than those born in the second or third calving periods. Fewer heifers

born in the third calving period were pregnant at the end of the breeding season compared to the first or second calving period. The advantage of being born early continued with the birth of their first calves which were 5 days older than the average of those born to dams from the second calving period.

Looking at data from the herd at the Agricultural Research Center in Hays we can get an idea of how calving period influences retention in the herd. The yearling replacement heifers that were bred in 2002 and 2003 averaged 58 percent born in the first calving period, 31 percent in the second and 11 percent in the third. Of the females that were 8 years or older in 2009 and 2010, 72 percent were born in the first calving period.

So while many things may factor into your selection of replacement females there is good evidence that heifers born early in the calving season maintain an advantage that helps them to get bred early their first breeding season and remain in the herd longer. If birth dates are not known, using heifer size as a proxy for birth date can result in unplanned selection for mature size.

Table 1. Effect of calving period on ADG, reproduction and first calf characteristics of heifer progeny

Item	Calving Period		
	1	2	3
Number	651	304	64
Birth date	Mar 18 ^a	April 3 ^b	April 23 ^c
Calf birth weight	79 ^a	81 ^b	84 ^b
Calf weaning weight	482 ^a	469 ^b	433 ^c
Prewaning average daily gain	1.83	1.83	1.89
Prebreeding average daily gain	0.86	0.90	0.90
Prebreeding weight	651 ^a	642 ^b	607 ^c
Cycling beginning of breeding, %	70 ^a	58 ^b	39 ^c
Pregnancy rate	90 ^a	86 ^a	78 ^b
Breeding average daily gain	1.58 ^a	1.63 ^{ab}	1.69 ^b
First calf birth date	Mar. 9 ^a	Mar. 14 ^b	Mar. 16 ^b
First calf weaning weight	425	416	409
Cow weaning body weight	922	928	928
Pregnancy rate after first calf, %	93	90	84

^{abc} Means without a common superscript differ ($P \leq 0.05$)

Fall Processing continued from page 1

to regain some condition before marketing as this will generally increase sale weight of cows and the price received for them. Cull cows with poor udder quality or dry quarters, cows with no or worn teeth and cows with damaged hooves or poor foot structure. If you find that you need to further reduce your cow inventory due to drought do it in a strategic way.

Strategic culling plans should be developed to first cull cows that are least productive and conserve as many 'good' cows entering their prime producing years as possible. Conserving cows that are expected to be most productive will set up future marketing opportunities of calf crops on markets that are expected to be short on supply and strong on demand resulting in high calf prices. The 'problem' cows mentioned above should be followed by old cows that are at or near the end of their productive life. Next, consider selling open and bred replacement heifers. Culling these females, although they represent the newest genetics in your herd, will reduce overall herd nutrient demands as they require additional energy for growth. Due to short supplies of breeding females in the marketplace, these heifers, so long as they are in good body condition, should generate significant sale proceeds.

Fall processing also presents a great opportunity to evaluate the mature weights and body condition scores of your cows. This can be a key piece of management information for successful supplementation of cows through the winter to maintain body condition prior to calving. Cow body condition scoring is easy to do and requires little time. If you find many cows are thin, begin making plans for supplemental nutrition. If only a few cows are thin, usually first or second parity cows or older cows, consider separating the herd into two groups forming one group with adequate condition and another group with low body condition. Partition your supplementation to favor the thin cows and thereby limit overfeeding of cows in adequate condition. At the end of the day, you may use just as much feed as if feeding the whole herd together, but the cows that need some extra groceries are sure to get it when fed separately.

The large size of many cows is becoming a bigger concern for many producers. To properly evaluate the size of your cows, you should adjust their weights for both age and body condition. The Beef Improvement Federation provides guidelines on adjustments of these records to a constant body condition score of five. As a general rule, each full score is equivalent to approximately 80 pounds of

live weight. For example a 1,200 pound cow in condition score 4 would adjust to a 1,280 pound cow at condition score 5.

Mature weights should be used in computing nutrient or forage requirements for the coming months to assure you'll have adequate feed on hand. Additionally, these cow weights can be used to gauge the direction you need to take in selecting replacement females. If your cows are bigger than you would like to fit your environment, consider selecting replacement heifers from the middle part of the weight distribution. Keeping the biggest, fleshiest heifers from your herd over time contributes to increases in mature cow weights and increased nutrient demand. You should use age of dam adjusted 205 day 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. Contact me for a handy spreadsheet to compute adjusted weaning weights.

Use of these tips should help manage limited forage resources, reduce supplement feed costs and in the long run decrease your herds nutrient requirements. Please contact your extension faculty for more assistance or information on these topics.

Postmortem Examination Provides Valuable Information

*John G. Kirkpatrick, DVM, DABVP,
Emetrius Associate Professor, Oklahoma
State University*

Too many times the following statement is made when a production animal dies or aborts: "Well that's just one of those things and you can't lose them if you don't have them". You can't lose them if you don't have them is a true statement, but considering abortion or death as "just one of those things" is loaded with potential economic loss. The better way is to ask the questions; 1) what happened, 2) what caused it to happen, 3) will it happen again and 4) how can it be prevented from happening again? Most often the answers to these questions are found in the aborted fetus (premature animal) and dam or the dead animal and their environment - where they live, what they eat, what they drink, to what they are exposed - toxins, infectious agents, stress, weather extremes, etc.

continued...see Valuable Information on page 4

Valuable Information....continued from page 3

Definition:
postmortem examination / autopsy / necropsy – examination of a body after death to determine the actual cause of death

Many are familiar with the Crime Scene Investigation (CSI) television programs – CSI Las Vegas, CSI New York, CSI Miami and NCIS. It is very apparent in these programs that no one is to move the body or interfere with the scene until the pathologist (physician that has special training in pathology) arrives and examines the environment and performs a preliminary examination of the body. Following the on-site examination the body is moved to the morgue where a postmortem examination and necessary laboratory test are performed to arrive at the cause of death. There are at least two reasons we do not want to move the animal: 1) containment of a potential highly contagious disease such as Anthrax and 2) there is often very valuable information in the area where the animal dies. An example is lead poisoning. Lead causes brain swelling resulting in convulsions and death. Therefore, if the area around the animal appeared that the animal had been convulsing, lead and other neurologic diseases would be considered as possible causes of death.

Your veterinarian is also trained in pathology. It is one of their most valuable diagnostic tools. As owners or caretakers, you provide the veterinarian with an accurate history as well as any environmental factors that are not readily apparent. The sooner after death a postmortem exam is performed, especially in hot weather, better are the chances of finding the cause of death. Many times the cause of death can be diagnosed with the information provided by the owner/caretaker; environmental factors identified on-site and postmortem findings. However, there are times in which tissue, body fluids, stomach and intestine content, feed, water and suspected toxic material samples must be sent to a diagnostic laboratory for testing to gain additional information necessary for a diagnosis. Also important is that the remainder of at-risk animals in the herd or flock are inspected in the environment, pasture or pen, where they are normally kept.

Diagnosing the cause of abortions can be somewhat frustrating. However, to insure the best chance of identifying causation, the following are extremely necessary. First is the fresh fetus that is kept cool, not frozen, and presented to the veterinarian or diagnostic laboratory as soon as possible for a complete post mortem exam and sample collection for laboratory testing. Second is the placenta in total or at least some of the placental attachment locations, which also must be kept cool. Third is the first of two blood samples must be collected from the dam, the second sample should be collected two weeks after the first.

The most common argument for not establishing a diagnosis when the first animal dies or the first

fetus is aborted is; why incur the cost when this may be the only one that dies or aborts? If either is the first and only death or abortion you eliminate that cost, but you may have denied yourself information that could have proved valuable in the future. More importantly, many times the abortions and death losses don't stop at one.

The second most common argument (often first place) for not establishing a diagnosis is: "why spend all that money on a dead animal". The cost of a postmortem examination can range from \$50.00 to \$150.00 depending on animal size and complexity of the case. This does not include mileage or laboratory fees. The question, "why spend all that money on a dead animal" is a valid question if the information gained goes unused. However, if used correctly, the information on death causation is valuable information for the remaining at-risk animals in the herd. The information gained should stimulate one or more of the following actions; initiate a vaccination program, initiate a treatment protocol, search out the source of and eliminate a toxin, evaluate feedstuffs and rations, add disease preventative products to water, feed or mineral, etc. Also the cost of the information gained must be parceled out or assessed to those remaining at-risk animals.

Example: Herd of 50 head

1st dead animal = \$1000.00 or \$20.41 / at-risk animal
Veterinary costs (post mortem + mileage) = \$200.00 or **\$4.08**/at-risk animal
Veterinary costs + 1 dead animal = \$1200.00 or \$24.48/at-risk animal

2nd dead animal = \$1000.00 or \$20.83 / at-risk animal
Total Veterinary costs = \$400.00 or **\$8.33** / at-risk animal
Total Veterinary costs + two dead animals = \$2400.00 or \$50.00 / at-risk animal

These same calculations can be used when dealing with abortions (use \$600 as the value of a weaned calf). The at-risk group is often thought to be the fetus only. However, many times infectious agents, as well as toxins, put the dam at-risk as well as the fetus.

In summary, **never waste a dead animal**. They have the potential of being a source of very valuable information. It could be argued that this is not a valid statement if the dead animal was the only one in the herd. However, if the cause of death was not determined, the next cow purchased may be at risk. Especially if she finds the same broken car battery and eats the remaining lead containing plates that caused death by lead intoxication in the first cow.

Beef Stocker Field Day Set

MANHATTAN, Kan. -- Kansas State University will host its annual Beef Stocker Field Day on September 22 at the KSU Beef Stocker Unit located on West Marlatt Avenue.

The field day will focus on optimizing stocker profitability by offering management tips and providing the latest information to help stockers adjust to changes in the beef industry. The sessions, offered by K-State faculty and beef industry professionals will cover current issues for stockers such as land cost, stocker cattle health, byproduct utilization, vaccineology and others.

Registration will begin at 9:30 a.m., followed by a complementary barbeque brisket lunch with posters and demonstrations for viewing. The afternoon will feature two more sessions and one breakout session. A complimentary Prairie Oyster fry will follow the last session.

The cost of attendance is \$25 per person by September 15. For more information, contact Lois Schreiner at lschrein@k-state.edu or 785-532-1267 or see www.ksubeef.org.

Range Beef Cow Symposium XXII

SCOTTSBLUFF, Neb. -- The 2011 Range Beef Cow Symposium hosted by University of Nebraska will be held at the Mitchell Event Center, Mitchell, NE November 29, 30 and December 1. The event is a bi-annual educational event designed as in-service training for cow-calf ranchers. It will feature well-known speakers who will provide updates on production topics in the areas of beef industry issues, genetics, reproduction, range and forage management, cattle health, beef nutrition and more.

This year's event marks the 42nd year for the Range Beef Cow Symposium. The event regularly attracts up to 900 ranchers and industry-affiliated people and includes a two-and-a-half day educational program, bull-pen sessions with the speakers each evening and a trade show with displays from the beef industry.

The symposium is a joint effort of the Extension Services from Colorado State University, University of Wyoming, University of Nebraska and South Dakota State University. Mark your calendars and watch for further information.

For more information see www.rangebeefcow.com or contact: Karla Jenkins, 308-632-1245.

K-State Beef Fall 2011 Calf Conferences Planned in Three Locations

COLBY, Kan. – Kansas State University will host the K-State Beef Fall 2011 Calf Conference in three locations – Atwood, Oakley, and Stockton, in late September.

Keynote presentations and speakers at all three conferences are the “Beef Cattle Market Outlook,” by Glynn Tonsor, livestock marketing specialist with K-State Research and Extension, and “Calf and Stocker Research Highlights: Updates in Management, Nutrition and Health,” by Dale Blasi, stocker and forage specialist with K-State Research and Extension.

Each conference will include a meal and location-specific speakers, as well. Dates, times and site-specific presentation topics include:

Sept. 27 – Atwood, Kan. - 6:30 p.m. – 4-H Building – RSVP by Sept. 22 to 785-626-3192, or cdixon@ksu.edu

- Beef Quality Assurance;

Sept. 28 – Oakley, Kan. - 10:00 a.m. – Northwest Kansas Educational Service Center – RSVP by Sept. 22 to 785-743-6361 or rsbarrow@ksu.edu

- Keeping Pastures Productive; and

Sept. 28 – Stockton, Kan. - 5:00 p.m. – Rooks Co. Fairgrounds, Harding Hall 4-H Building – RSVP by Sept. 26 to 785-425-6851 or rboyle@ksu.edu

- Local Forage Analysis, Feed Costs and Ration Balancing
- Lowering Winter Feed Costs

Knowledge
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