



Beef Tips

September 2014

Department of Animal Sciences & Industry

www.asi.ksu.edu/beeftips

Upcoming Events

Stocker Field Day

September 25, 2014
Manhattan, KS
www.KSUBeef.org
details page 6

Applied Reproductive Strategies in Beef Cattle

October 8-9, 2014
Stillwater, OK
www.appliedreprostrategies.com
details page 4

State of Beef Conference

November 4-5, 2014
North Platte, NE
<http://panhandle.unl.edu/state-of-beef-conference>

Sunflower Supreme Spring-Calving Bred Heifer Sale

November 14, 2014
Parsons, KS
www.sunflowersupreme.org

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When to wean calves? It's not all about calf sale weight.

Bob Weaber, cow/calf specialist

Persistent drought conditions across a wide area of the US have wreaked havoc on the production goals of many seedstock and commercial beef producers over the last several years. Not only does drought prevent adequate pasture growth and hay production, it affects the management and performance of cow-herds. Performance decreases range from lower fertility and conception rates, decreased milk production from cows, decreased calf survival and growth performance to weaning. Recent research also suggests the severely restricted intake and protein in the diet of cows while gestating, reduces muscularity and marbling in the calves which experienced the uterine environment. Drought not only affects this year's production but will have an impact for several years to come on both livestock and range.

Timely or early weaning is one strategy commonly used by commercial producers to help ease the pain of drought conditions. Early weaning (at calf ages as early as 100 days) causes the dam to stop lactating. Cessation of lactation dramatically decreases the cow's nutrient demand for both production and maintenance. In drought conditions this can extend already limited grazing resources. Removal of calves in these situations can help the calves too by moving them to a higher quality diet. Young calves are very feed efficient and make better use of supplemental feed consumed directly rather than first running the nutrients through the digestive system of the calf's dam.

A number of considerations should be evaluated to determine the 'right' time to wean calves. Even when you've set the date on the calendar, continue to evaluate conditions and marketing situations that may influence your

decision to accelerate or delay weaning. Determining the 'right' time to wean should help optimize the revenue generating capacity of the ranch through strategic marketing of value added calves and maintenance of cow body condition which reduces winter supplement feed inputs (costs).

Cow body condition—From a production efficiency perspective, maintenance of body condition score (BCS) during periods of low forage quality/availability can have a positive impact. Preventing cows from getting below a 4 body condition score with early or timely weaning, allows the cow to regain some body condition (target is 5-6 at calving) utilizing low quality grazed forages with a relatively small amount of protein supplementation. Use of ionophores can improve efficiency up to 10% and help stretch resources even further while regaining condition at a cost of pennies per cow per day. K-State research (Olson et al., 2008) suggests that in the Flint Hills, each two week interval of delaying weaning past mid-August cost cows a quarter of a body condition score. So, cows that weaned calves October 1 were 1 body condition score thinner than they were in mid-August. If the cows were already thinner (<5 BCS) than our target, delaying weaning means recovery of 1 or 2 BCS of condition back on cows. Doing so will take additional feed resources. Delaying recovery of condition until after calving equates to higher feed costs over winter due to increased maintenance requirements, longer post-partum intervals, lower conception rates, lighter weaning weights and possibly poorer resistance to disease.

Calf marketing - Pay weight of weaned calves is always a concern. While early weaning often decreases the total pay weight of

continued...see Wean on page 4

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

Tally Time – Measuring body condition

Sandy Johnson, livestock specialist

The typical focus of weaning is on the calf; health, weight and marketing are common points of emphasis. Tradition often determines actual weaning date. However, range condition and cow body condition should also factor into the timing. Weaning is a chance for the cow to have some “Mom time”. Energy requirements drop substantially at weaning. The better the forage quality available at weaning, the more condition the cow can regain without added supplementation. Trying to add body condition when nutrient requirements are climbing due to advancing gestation and cold weather becomes increasingly difficult and expensive.

Because managers see cows regularly, they may feel they have a good handle on cow body condition without writing anything down. However body condition change may be very gradual and hard for the person seeing the cows every day to notice. Intentionally scoring cows and recording those scores does not have to be hard. It does not require cows to go through the chute one at a time.

One easy way to score cows as you move through them in a pasture on a routine check is to simply make a mark on a sheet of paper under the appropriate score (see Figure 1). The average for the group can be calculated as shown. Be sure to record the score and the date in a place that you can easily find and reference when needed.

2	1	1 x 2 = 2
3	III	3 x 3 = 9
4	IIII II	21 x 4 = 84
5	IIII III	15 x 5 = 75
6	IIII	4 x 6 = 24
7	II	2 x 7 = 14
		208 ÷ 50 = 4.2

Figure 1. Tally of body condition scores

A simple guide to body condition scoring is shown in the chart below. A body score 5 cow will still have one rib visible when her rumen is not very full from grazing or drinking, her topline is smooth and there is no evidence of excess fat around the tail head. The spinous processes or individual vertebrae are visible in a body condition 4 cow so the topline no longer has a smooth appearance and she has more than the last two ribs visible. She can be differentiated from a body score 3 cow who is starting to lose muscle mass as a result of using muscle for energy. A body score 3 cow has a flat loin (no muscle shape) and vertebrae can be easily observed.

Use these simple steps to track body condition during the year. Key times to score cows to make ration changes would be at weaning, 90 days prior to calving and at calving. Score at breeding to evaluate your prebreeding and precalving nutritional programs. Monitor monthly during the summer to advise pasture use and weaning decisions.

Guide to Body Condition Scoring Cattle*

	Physical Attribute						
	BCS	Spine	Ribs	Hook/Pins	Tailhead	Brisket	Muscling
Thin	1	visible	visible	visible	no fat	no fat	atrophy
	2	visible	visible	visible	no fat	no fat	atrophy
Borderline	3	visible	visible	visible	no fat	no fat	slight atrophy
	4	slightly visible	foreribs visible	visible	no fat	no fat	full
Optimum Condition	5	not visible	not visible	visible	no fat	no fat	full
	6	not visible	not visible	visible	some fat	some fat	full
Over-Conditioned	7	not visible	not visible	slightly visible	some fat	fat	full
	8	not visible	not visible	not visible	abundant fat	abundant fat	full
	9	not visible	not visible	not visible	extremely fat	extremely fat	full

*Adapted from Herd & Spratt, 1986, BCS=Body Condition Score

Weaning considerations: Reduce Stress to Minimize Shrink

Justin Waggoner, *beef systems specialist*

With record high calf prices this fall, many cattle producers are anxiously awaiting sale day. Cattle producers all have one thing in common; selling as many pounds of calf as possible. One of the factors often overlooked in our conversations about marketing a calf crop is shrink. On many operations, the opportunity to weigh calves prior to shipment is limited and thus the amount of weight change between the operation and the sale is unknown. Shrink is essentially the loss of bodyweight associated with gathering, transporting, limiting access to feed and water, and marketing cattle.

The loss of bodyweight associated with these events is inevitable and affects both buyers and the sellers. Shrink is primarily composed of losses in gastrointestinal fill (rumen contents, feces and urine) and tissue shrink (cellular fluid loss). Losses associated with gastrointestinal fill can be recovered in a few hours. However, tissue losses may require several days to recover. A number of factors ultimately influence shrink including diet, ambient temperature, length of transport, hauling conditions, and handling method.

Today, there are many different weaning methods used by producers to reduce the stressors associated with weaning. However, regardless of the weaning method used, maternal separation, acclimation to a new environment, feedstuffs, and transportation are all stressors that newly weaned calves have to overcome as they move on to the next production phase. Shrink of newly weaned calves is highly variable and will typically range from 2% to 8% of initial bodyweight. In some situations, shrink of newly weaned calves may be even greater as high stress calves may exhibit limited interest in both feed and water.

An Oklahoma State study evaluated shrink of calves weaned 22 days prior to a simulated sale event, weaned and overnighed at the sale facility, and weaned the day of the simulated sale. Calves weaned 22 days prior to the simulated sale shrank 2.3%, calves weaned and overnighed prior shrank 4.9% and those weaned and delivered on the day of the simulated sale shrank 3.4%. The results of this study indicate that weaning calves for a period of days prior to sale delivery is better than weaning on the day of the sale, and weaning on day of delivery is preferred to weaning and standing calves overnight prior to a sale. Although the calves back-grounded for 22 days exhibited the lowest shrink, research suggests that preconditioning programs in general have a limited impact on calf shrink.

Preconditioning or back-grounding calves prior to sale may not impact shrink, but could potentially result in a premium and a potentially greater sale weight. It is important to remember that a preconditioning or back-grounding phase must be long enough to gain back any weight lost during the weaning phase and gain enough additional weight to offset the cost of the program.

Shrink is essentially unavoidable, but can be managed by limiting the amount of stress placed on newly weaned calves prior to sale delivery. Reducing shrink losses is beneficial for both the seller and buyer. The seller ultimately markets more pounds of calf resulting in greater calf revenue and the buyer purchases calves that will regain fill losses quickly, are more likely to remain healthy, and ultimately be more successful in the next production phase.

For more information:

Review: Basic principles and economics of transportation shrink in beef cattle. Prof. Anim. Sci. 17:247-255. <http://pas.fass.org/content/17/4/247.full.pdf+html?sid=99236d45-0d83-4a92-b4b1-e6575964e9ce>

Managing Shrink and weighing conditions in beef cattle. Oklahoma State University #ANSI-3257. <http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-1986/ANSI-3257web.pdf>

“Shrink is essentially unavoidable, but can be managed by limiting the amount of stress placed on newly weaned calves prior to sale delivery”.

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the calf crop that doesn't necessarily mean the calves were less profitable. Calves nursing thin cows don't gain as rapidly as calves on cows grazing good quality/quantity range especially late in the season. Early weaning these drought stricken calves that are only gaining 1 lb a day means they are only 30 lbs lighter if weaned a month early, 60 lb. lighter if weaned 60 days early. The lighter calves may have considerably higher value (\$/cwt) in the market which recovers some of the value of foregone weight. Moving marketing away from the October/November calf price seasonal lows is also advantageous filling a portion (if not all) of the decreased revenue due to lighter weights. If weight and/or marketing window is a big concern, consider early weaning then back-grounding the calves. It won't take many days on feed to achieve a substantial reduction in shrink and capitalize on very efficient feed conversion by these calves. Don't overlook the cost savings in cow feed realized by early weaning. K-State Research suggests an additional 2 days of fall/winter grazing availability for a dry cow for each day calves are early weaned. Increased grazing days means fewer tons of harvested forage provided to cows.

Range conditions - Drought stricken range benefits from early weaning by reducing the grazing pressure on an already stressed and limited resource.

Calf health - Appropriate vaccination and animal health strategies are as important when early weaning as typical weaning times. Strategies to reduce stress such as fence line weaning aid in reducing calf morbidity. If you are going to early wean, you must accelerate the timing of all your animal health protocols as appropriate to assure an adequate immune response and protection. Consult with your herd veterinarian to build a flexible and robust pre-weaning vaccination program.

Calf nutrition - Early weaned calves have excellent feed efficiency when their nutritional needs are met. Light weight calves require a higher energy density and protein level than larger calves or mature cows. "All the prairie grass hay they can eat," won't cut it! Weaned calves will have better efficiencies than un-weaned calves on creep feed. If you are going to early wean, critically assess facilities and feed availability to assure success. Placing feed bunks and water trough adjoining a fence line and perpendicular to the fence (create an obstacle) rather than in middle of pen may help get calves on feed quicker preventing dehydration and reducing stress. Initial feed stuff should be something they are familiar with (grass hay) and

then transitioned to higher quality feeds. Consult your Extension specialist for ration development and feeding strategies.

With proper planning and management, early weaning of calves can be a successful tool for managing cow body condition and preserving range resources, even in years of adequate precipitation. For some producers, early weaning is becoming their 'status quo' because of the many benefits it offers. Use body condition scores collected monthly to monitor this important resource. When summertime body condition scores of cows start trending lower and a percentage of cows are in the 4 category, it is time to wean, presuming you've done your homework and the calves are vaccinated and ready to go. Delaying weaning until traditional weaning times and driving a majority of cows into BCS of 3 or 4 creates a feeding challenge that is expensive to achieve. Wise use of body condition score to trigger management decisions points like weaning can positively impact resource use, cow performance and profitability!

Applied Reproductive Strategies in Beef Cattle

Oklahoma State University and the Beef Reproduction Task Force will host the 2014 Applied Reproductive Strategies in Beef Cattle (ARSBC) Symposium Oct. 8-9 in Stillwater, Okla. Sessions will be convened in the Student Union and Click Hall in the Alumni Center.

This meeting is for anyone interested in beef cattle reproduction, including producers, veterinarians, AI technicians and other industry partners. The symposium is designed to improve the understanding of the physiological processes of the estrous cycle, currently available procedures to synchronize estrus and ovulation and the proper application of these systems. They will also focus on improving participants' understanding of methods to assess male fertility and how it affects the success of AI programs. Complete program details can be found at www.appliedreprostrategies.com

Full-conference registration is \$200 per person prior to Sept. 10 and \$250 thereafter. Single-day registrations are \$125 for a single day prior to Sept. 10 and \$150 thereafter. For more information about the conference, contact Megan Rolf, assistant professor and state extension beef specialist, 201 H Animal Science, Stillwater, OK 74078; 405-744-6060; or mrolf@okstate.edu.

History, Known Management Available in Sunflower Supreme Replacement Heifer Program

The program will host its inaugural sale Friday, Nov. 14 in Parson, Kansas

CHANUTE, Kan. – Money – it’s a word commonly being thrown out in the cattle industry today. Depending on what area of cattle production, you might be complaining about the money you’re spending or cashing in.

With prices at historic highs, one area of importance is the purchase of replacement females to capture today’s strong calf market. Potential longevity and the ability to improve genetic progress make replacement heifers especially important to include in producers’ planning, according to Jaymelynn Farney, livestock extension specialist with K-State Research and Extension.

“Since prices for replacement heifers are pretty steep, buying females that have some history and are developed with similar health and breeding decisions is something that might mitigate any issues with bringing in new females to your operation. Heifers with a known, transparent development history are available for producers to purchase at the inaugural Sunflower Supreme Replacement Heifer Sale to be hosted at the Parsons Livestock Market in Parsons, Kansas on Friday, Nov. 14 at 6:00 pm.

The Sunflower Supreme Replacement Heifer program from Kansas State University provides bred replacement heifers that have met program requirements regarding health, reproductive management, and sire selection. It was started in 2013 in southeast Kansas. In the first year, 33 cattle operations signed up with over 800 heifers being bred in 2014 within the guidelines outlined by the program.

Details of the guidelines, based on best management practices recommended for any cattle operation, can be found at www.sunflowersupreme.org. Key points from those guidelines are as follows.

Health: All Sunflower Supreme (**SunSup**) qualified heifers will be tested negative for persistent Bovine Viral Diarrhea infection (BVD-PI negative) and undergo a vaccination regimen against abortion-causing pathogens.

Breeding: A 60-day breeding season is the maximum length for Sunflower Supreme heifers. SunSup producers may choose artificial insemination only, natural service only, or a combination of the two, and may choose their own synchronization program. Heifers will be early pregnancy checked so veterinarians can estimate expected calving date. The estimate can help producers (whether buying SunSup heifers or raising their own replacements) by allowing for sorting based on calving date. In that way they can better watch “close-up” heifers and mitigate some of the labor associated with calving.

Sire selection: SunSup certified heifers can only be bred to bulls that meet minimum calving ease expected progeny differences based on breed.

Once heifers have met all program requirements, they are tagged with an official Sunflower Supreme ear tag. The tag indicates that these heifers have met the program guidelines which have been proven to improve longevity.

The Sunflower Supreme inaugural sale will include more than 250 bred heifers with quality F1 and straight-bred females including Angus, Balancer, Black Hereford, Charolais, Hereford, Gelbvieh, LimFlex, Salers, and Simmental breeds. Quality cross-bred females in black, white, and red will make a great addition to any herd, Farney said, and research indicates F1 females have a higher success at breeding, wean heavier calves, and have a greater longevity within a herd.

For more information about the sale and/or to be placed on a mailing list for the sale catalog, contact Farney at 620-421-4826 ext. 17 or email sunflowersupreme@gmail.com. You can also apply to receive the catalog by going to the website www.sunflowersupreme.org and clicking on the Mailing List tab.

*Sunflower
Supreme
Bred Heifer
Sale
Nov. 14, 2014
Parsons, KS*

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Stocker Role in Beef Cattle Herd Rebuilding is a Topic at Sept. 25 K-State Field Day

MANHATTAN, Kan. – The role of stocker cattle in beef herd rebuilding, as well as production considerations and water use, are among topics planned for the 2014 Kansas State University Beef Stocker Field Day on Thursday, Sept. 25.

The day is designed to provide the latest practical information for producers to aid decision-making in the current dynamic beef industry environment.

The event starts with registration and coffee at 9:30 a.m. and the program at 10:15 a.m. A barbecue lunch is provided, and the day ends with an evening social, the “Cutting Bull’s Lament 2014” at 5:30 p.m. A panel of producers talking about nutrition issues and several other presentations are on the agenda.

- Forward Planning Implications for Herd Rebuilding: Where Does the Stocker Segment Fit?
- Producer Panel: Receiving and Growing Nutrition Philosophies
- Stocker Parasite Control: A New Frontier
- Management Strategy Response to the FDA Phase Out of Antibiotics
- Breakout sessions include: Livestock Watering Options; Evaluating Environmental Impacts of Small Receiving/Growing Facilities; and Coccidiosis: The Robber Baron.

Posters that reflect K-State beef cattle research projects will be on display.

The fee to attend the Beef Stocker Field Day is \$25 if paid by Sept. 15. More information and online registration is available at www.KSUSBeef.org. After Sept. 15, attendees must pay at the event. Further information is available by contacting Lois Schreiner at 785-532-1267 or lschrein@ksu.edu.

Watering options and environmental impacts are also among presentations planned.