



# Beef Tips

July 2013

Department of Animal Sciences & Industry

[www.asi.ksu.edu/beeftips](http://www.asi.ksu.edu/beeftips)

## Upcoming Events

### K-State Beef Conference

August 6, 2013  
Multiple locations, see  
[www.KSUBeef.org](http://www.KSUBeef.org)

### Mid/Shortgrass Range School

August 6-8, 2013  
Camp Lakeside, Lake Scott  
[www.kglc.org](http://www.kglc.org)

### Tallgrass Range School

August 20-22, 2013  
Camp Wood YMCA, Elmdale  
[www.kglc.org](http://www.kglc.org)

### KSU/KLA Ranch Management Field Days

August 2013  
watch [KSUbeef.org](http://KSUbeef.org) for details

## Contributors

### Dale Blasi

Stocker, Forages Nutrition & Mgt.  
785-532-5427  
[dblasi@ksu.edu](mailto:dblasi@ksu.edu)

### Joel DeRouchey

Environmental Management  
785-532-2280  
[jderouch@ksu.edu](mailto:jderouch@ksu.edu)

### Jaymelynn Farney

Beef Systems Specialist  
620-421-4826  
[jkj@ksu.edu](mailto:jkj@ksu.edu)

### Larry Hollis

Extension Beef Veterinarian  
785-532-1246  
[lhollis@ksu.edu](mailto:lhollis@ksu.edu)

### Sandy Johnson, Editor

Livestock Production  
785-462-6281  
[sandyj@ksu.edu](mailto:sandyj@ksu.edu)

### Chris Reinhardt

Extension Feedlot Specialist  
785-532-1672  
[cdr3@ksu.edu](mailto:cdr3@ksu.edu)

### Justin Waggoner

Beef Systems Specialist  
620-275-9164  
[jwaggon@ksu.edu](mailto:jwaggon@ksu.edu)

### Bob Weaber

Cow/Calf Specialist  
785-532-1460  
[bweaber@ksu.edu](mailto:bweaber@ksu.edu)

## Options for management of cows during drought

*Jaymelynn Farney, beef cattle specialist, Chris Reinhardt, feedlot specialist and Sandy Johnson, livestock production specialist*

The following questions are designed to assist cow-calf producers in determining next steps and best management practices when considering how best to manage their cowherd in the event of extended drought. Possible outcomes from this decision tree may include:

- Leaving cows on pasture with supplementation
- Confinement feeding of cows on-farm by producer
- Feeding cows in a commercial feedlot
- Early-weaning calves
- Selling all or a portion of the cowherd

Several critical questions you need to ask to get the cowherd through the drought are:

1. Do you have feedstuffs? Is the supply adequate to provide for all or a large portion of your current herd throughout the remainder of the grazing season, as well as throughout the winter and pre-calving season?
2. How difficult would it be to replace the genetics of your herd? Do you receive premiums for the genetic merit of your herd?
3. What is the stage of production of your cowherd? Cows with higher requirements will require more feed and increase costs.
4. Are you going to early-wean calves? Because lactating cows are expensive to feed, a management option to reduce feeding costs might include early weaning. Additional advantages of early weaning include improving cow body condition, calf performance, conception rates and forage availability for the cow (or decrease

amount needed to feed cows for maintenance). Some disadvantages include more attention to management of the calves and increased cash costs.

5. Are you keeping your pairs together? Placing cows with young calves in a confinement setting requires additional considerations.

6. What type of facilities do you have? Do you have access to adequate facilities to provide comfortable housing for the cowherd on-farm?

### Recommendations for cows:

- Pen space = 200-800 square feet/cow, depending on the stage of production, surface type, drainage and weather conditions
- Bunk space = 24 to 30 inches/cow
- Shade for cows is important in a dry-lot during the summer
- Free-choice access to abundant, fresh water is essential, as water needs greatly increase in summer months

### Recommendations for calves:

- Pen space = 125 square feet/calf during summer and 250 square feet/calf during winter
- Bunk space = 12 inches/calf
- Free-choice access to abundant, fresh water is essential, as water needs greatly increase in summer months. Water should be in a container calves can access easily.

*continued...see Options on page 3*

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

## ***Tally Time – Measurements to cull by*** *Sandy Johnson, livestock specialist*

During drought, our focus is generally on what we don’t have and can’t do. Culling a portion of the cow herd is often needed during extended drought. And while parting with those cows can be painful for a number of reasons, it also provides an opportunity to reshape the herd. The standard recommendation to begin the process is to cull the four **O**’s: open, old, ornery and odd balls.

Today, culling the **open** cows can really go far beyond just pregnant and open. Pregnancies as early as 30 days can be identified with ultrasound and fetal size can be measured to stage pregnancies. This would be most accurate when done from 30 to 120 days of gestation. Use of ultrasound can also allow gender to be determined. The earliest gender can be differentiated is day 55 to 60 of conception. An optimum time period to target fetal sexing is 60 to 85 days of gestation and no later than 110 days as the pregnant uterus drops out of reach. Sexing fetuses does take a high degree of skill with an ultrasound machine. Fortunately, more and more veterinarians have incorporated ultrasound equipment into their practice.

Staging pregnancies allows for the retention of cows that would calve in a relatively short period of time. A tightened calving season can have tremendous advantages. The range in subsequent calf weaning weights should be decreased and result in a more uniform group to manage or market. When the nutritional requirements of the first cow to calve and the last cow to calve are more similar, more timely changes can be made in ration quality and quantity. Thus minimizing the days of under and over-feeding that occurs with long calving seasons. When it comes to rebreeding the following year, more cows would be “early calvers” that should rebreed promptly given adequate condition at calving. Cows with a tight calving season would respond well to synchronization of estrus and AI, perhaps using gender sorted semen to get the calves desired. In addition, information on stage of pregnancy could be used to retain cows that fit a targeted calving season.

**Older** cows that can no longer retain body condition or have feet or leg issues would be easy culls. When deeper culling is needed, mousing to look at teeth can be used to age cows but some type of record on actual age would be valuable if one was forced to make cuts into the middle aged cows.

Culling the **ornery** or mean cows should be routine. When deeper cuts are needed, notes or other information on any handling issues or excess nervousness during handling would be useful to include

in decisions. Several scoring methods are available to evaluate the disposition of your cows.

**“Odd ball”** cows may mean different things to different people. It could relate to coat color, calving season, size, body condition, horns etc.; anything that adds unwelcome variation for management or marketing. Culling may allow you to optimize the mature weight of your cows: what do your cows actually weigh and what size seems best for your production system? Cows that are thin or thinner than the majority of cows and have no history of rebreeding in thin body condition are not likely to be a good match for your production system.

Producers fortunate enough to expect a normal grazing season this year can ask if they currently have the records and information needed to strategically cull cows in an extended drought. For producers that may still need to make additional cuts to their herds, consider culling strategies that will make management easier now and better match targeted production parameters when rebuilding occurs.

### ***Participate for a chance to win!***

Your help is requested in learning about practices beef producers use in conjunction with AI and synchronization of estrus. Responses are sought from those that use AI for their own operation as well as those that provide AI services to others. A majority of the survey questions are simple to answer (have you used gender sorted semen? y/n). A few questions allow you to share what you have learned using AI. Most people should be able to complete the survey in 10 to 20 minutes.

As an added incentive to complete the survey, one lucky respondent will receive 50 Estrotect Heat Detection Patches. Results of the survey will be available at [www.beefrepro.info](http://www.beefrepro.info).

Follow this link to the survey:  
<https://surveys.ksu.edu/TS?offeringid=208705>

## Options ... continued from page 1

7. Do you have proper feeding equipment to deliver a mixed diet to cows in confinement if necessary?
8. Are you housing pairs on-farm?
9. Do you have a drylot for cows and/or calves on-farm?
10. Can you find a commercial feedlot to feed your cows and calves? Have you worked out the specifics with the feedyard in regards to yardage, diet, biosecurity and other fees? Are you sending either dry cows or weaned calves to the feedlot?
11. Do you have a whole-herd health vaccination program in place for the cows? Two important viruses to protect against from a reproductive standpoint are bovine viral diarrhea and infectious bovine rhinotracheitis. Placing cows in confinement also raises the instances of respiratory diseases, so vaccinating against PI3 and bovine respiratory syncytial virus is strongly recommended. Have the cows been vaccinated?
12. Has your herd been tested for BVD-PI?
13. Did you retain early-weaned calves? Is there a vaccination program in place?
14. How have the calves been processed and are you prepared to feed them?
15. Do you have an accountant to help understand tax implications?
16. Do you have documentation to show drought is the reason for dispersal?
17. Do you have a plan for rebuilding your herd once the drought breaks?

This is just a partial list of the considerations to take into account before moving to the next step in a herd retention program during drought. Work with your extension specialist on developing solutions to these and other issues involved with feeding through drought.

Three reference papers are available on [www.KSBeef.org](http://www.KSBeef.org) under "Hot Topics" on confinement feeding- Decision tree: Options for management of cows and calves during drought; Managing cows in a confinement situation; Animal health considerations for cows fed in confinement.

## Health management of early-weaned calves

*Larry Hollis, extension beef veterinarian*

With the continued drought affecting many parts of Kansas, early weaning is one option that may help producers use limited forage resources more efficiently and keep all, or part, of their cowherd together for another year. As soon as a calf is weaned, the nutrient requirements of the lactating adult animal drop tremendously. Early weaning is most commonly done between 90 and 180 days of age. However, because the functional capability of the calf's rumen begins developing within a few weeks after birth as they begin consuming available forages alongside their mothers, weaning as early as 45 days of age is possible. In any case, start planning ahead to prepare the calf for the early-weaning event.

Preparations should be based upon what the producer plans to do with the calf following weaning. Are the calves going to be weaned in the back of the truck on the way to the sale barn? Is a portion of the heifer or bull calves going to be developed as replacements? Are feeder calves going to be pre-conditioned to fit a value-added market? What high-quality feedstuffs are available to feed the calves before, during and after weaning? Answers to these questions need to be determined first to make the most physically attainable and economically sensible decisions.

If the calves are going to leave the farm or ranch at weaning, there normally is a greater demand and price for calves that have been castrated and dehorned. These procedures should be completed well ahead of weaning. Also, calves that have been exposed to feedstuffs like distillers' grains or creep feeds prior to weaning adapt more quickly to life without Mother. Vaccination to prevent respiratory diseases calves may encounter during, or shortly after, weaning have the best chance to work if the first dose is given prior to weaning and the second dose given at weaning. Recovering the price of deworming is best done if the product is given 30 days prior to weaning. Use of a soft-weaning method, like fence line or nose-clip weaning, helps reduce health problems. If feedstuffs are available, holding the calves on dry feed for an additional 45 days post-weaning also helps add value. Other items like the availability of clean water and the use of waterers and feedbunks small calves can reach are critical.

With adequate planning, early weaning can be accomplished easily and effectively.

***“early weaning is one option that may help producers use limited forage resources more efficiently”***

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*“The process of ammoniation is temperature-dependent and less time is required in warmer temperatures.”*

## Ammoniation of low-quality forages

*Justin Waggoner, beef systems specialist*

As wheat harvest approaches, straw may be a valuable commodity to cattle producers in regions of the state that are continuing to bear the burden of an unrelenting drought. Treatment of wheat straw with anhydrous ammonia is a relatively simple process that enhances the digestibility of low-quality forages by 8% to 15% and increases forage intake by 15% to 20%. If you are not familiar with the process and would like more information, K-State has a video that outlines the process at <http://www.youtube.com/watch?v=-JtjB-umpk>.

Following are a few things that should be taken into consideration when baling straw:

- Wheat straw should be collected as soon as possible following harvest. Straw and most crop residues in general, deteriorate when left in the field.
- Wheat straw that will be ammoniated needs to be clean and mostly weed-free.
- The response to ammoniation is greater in straw that has some moisture content. Straw typically tests 90% to 95% dry matter and 5% to 10% moisture. Therefore, baling under conditions where moisture content could be increased would be beneficial. For example, baling in the morning with heavy dew.
- Consider bale size and density. In the process of ammoniation, round bales are stacked in a 3-2 or 3-2-1 configuration and covered with a sheet of 6 mil black plastic. A 40' x 100' sheet of plastic typically will cover 65 to 70 5' round bales.
- Stack bales in the location in which they will be ammoniated. About 2" to 3" of space should be left between bales within each row to facilitate movement of anhydrous ammonia through the stack.
- The stack should be placed in a relatively flat location, as anhydrous ammonia will settle to the lowest area. Anhydrous ammonia will penetrate the ground on which the stack is located, effectively sterilizing the site. A light tillage of the stack site is recommended prior to stacking to minimize the long-term effects.

- The process of ammoniation is temperature-dependent and less time is required in warmer temperatures. Forages may be successfully ammoniated in two weeks when the average daytime temperature is in excess of 80°F. The greatest challenge is keeping the stack covered, thus ammoniating during the summer months has a greater likelihood of success.

## K-State's 2013 Beef Conference is Aug. 6

MANHATTAN, KS. – Kansas State University's 2013 Beef Conference –Strategic Cow Herd Management: Surviving and Rebuilding after Persistent Drought, will be held Aug. 6 in Frick Auditorium of K-State's College of Veterinary Medicine in Manhattan.

For the convenience of those who are not able to travel to Manhattan in person, the conference will be broadcast remotely to several sites around Kansas; Oakley, Pratt and Parsons.

Dr. Dave Lalman, Oklahoma State University will provide the keynote address entitled "Addressing Cow Herd Efficiency in a World of Mixed Messages for Producers: Matching Production Levels to Environmental Conditions."

Other topics will include techniques to enhance the value of low quality roughage, confinement feeding of cows, management and feeding of early weaned calves, pasture, rangeland, forage and livestock risk protection, income tax implications following livestock liquidation, control of trichomoniasis in beef herds, impending regulations of livestock antibiotics, and capturing strategic opportunities when culling/rebuilding the cow herd.

The fee to attend is \$60 per person or \$100 for two or more from the same operation. Early registration deadline is July 30. More information, including how to register for the webcasts or in-person attendance, is available at [KSUBeef.org](http://KSUBeef.org) or by phone (785-532-1280).

## Plan now to minimize hay storage losses

*Sandy Johnson, livestock specialist*

Cattle producers in a wide area will be looking to replenish hay supplies this year. Drought, as well as other market pressures, has resulted in record high prices for forages. Rains in some areas will help with the supply but prices are likely to remain relatively high. Given the value of hay, producers may want to evaluate the harvest and storage process to minimize losses that can occur.

When it comes to large round bales, a few inches of surface layer spoilage can represent a greater loss than expected. In a 6 foot diameter bale, the outer 4 foot layer contains 21% of the dry matter of the bale and this value increases to 30% in a 5 foot bale. And even if this outer spoiled layer is ground and fed to cattle, the reduced nutrient value robs animal performance.

A dense outer layer is one of the first steps to reducing hay storage losses. If you can depress the surface of your round bale with the palm of your hand by more than a half-inch, the bales could suffer significant storage loss if stored outside. Make sure the baler is adjusted properly to form high density, well-formed bales. Net wrapped bales have similar storage losses to plastic or twine wrapped bales if they have similar density in the outer layers. Twine wraps should be between 6 and no more than 8 inches apart on the bale.

If bales are stored on damp soil, the bottoms can easily wick up moisture and deteriorate. A well-drained site is preferred. To protect the bottoms of bales, elevate on old pallets, tires, railroad ties or a 3-4" layer of crushed rock. Weeds or tall grass at the storage site will increase deterioration. Select an area that allows good air circulation and sunlight (not under trees) to help dry the outer layer after precipitation.

Outside storage loss is minimized when bales are placed tightly end to end. Align the bales north-south, or with prevailing winds, with 3 feet or more between bales. This allows air to circulate and sunlight to reach the bales. If bale handling equipment requires access to both ends of the bales, place bales no less than 18" apart.

Volume of hay may demand that bales be stacked. A mushroom stack with one bale placed on end and a second bale placed with its round side on the flat surface of the bottom bale has less storage loss than pyramid stacks. In pyramid stacks, moisture running off the top bales can run down between bales to the middle layer where there is little to no air movement to allow drying.

As hay prices rise, more producers are likely to find savings in some type of cover or storage struc-

ture. Even though losses from storing hay outside might be less in lower rainfall areas, the increased value of that loss might be high enough to consider action to reduce loss from weathering.

The value of hay has increased considerably and the cost is even higher when dry matter and quality losses are considered. Making dense, tightly packed bales that are covered or stored in such a way that wind and sunshine can reduce effects of moisture will help producers retain the most value from harvested forages.

### Range Schools Illustrate Soil and Grass Health in Relation to Profitability

(Hutchinson, KS) "Improving the ability to harvest increased forage using their livestock should interest every producer in Kansas," said Tim Christian with the Kansas Grazing Lands Coalition (KGLC). "The benefit comes as soil water intake increases, higher levels of nutrient cycling occur, microbial activity is elevated, and other cyclic functions begin to achieve balance."

"This balancing process is the focus for the 2013 KGLC Range Schools," Christian continued. "Our instructors and rancher-presenters will key in on this concept simply known as soil health." The Mid-/Shortgrass Range School runs from August 6-8 at Camp Lakeside, Lake Scott, and the Tallgrass Range School is set for August 20-22 at Camp Wood YMCA, Elmdale with the theme Creating Range Wealth Through Soil Health.

The Schools cost \$300 per person and covers materials, on-site lodging and meals, and other related costs. Scholarships are available to eligible participants including ranchers, students, and agency staffs. Ranchers, landowners, and students may qualify for a \$150 scholarship if they meet eligibility and request one using KGLC's scholarship form. Agency staffs may qualify for \$100 in scholarships. The form and more information on the Schools is available at [www.kglc.org](http://www.kglc.org) under 2013 Range Schools. Scholarship applications must be submitted by July 23 for the Mid-/Shortgrass School and August 6 for the Tallgrass School.

For more information on the 2013 KGLC Range Schools, contact Tim Christian, state coordinator, at 620-241-3636, 620-242-6440, email to [tdchristian@cox.net](mailto:tdchristian@cox.net), or Ken Sherraden assistant coordinator, 785-922-7061, email to [kennethsherraden@sbcglobal.net](mailto:kennethsherraden@sbcglobal.net). You may also go to the web at [www.kglc.org](http://www.kglc.org).

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