K-STATE Kansas State University Research and Extension

Beef Tips

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Upcoming Events

Beef ID Crash Course
June 21-22
July 19-20
Manhattan, KS
See details on page 3

Winter Feeding Sites Impact Water Quality and Provide Stable Fly Habitat

Joel DeRouchey, livestock specialist

The use of temporary feeding sites during winter and early spring months is a common practice among beef producers to supply supplemental forage and offer protection from harsh weather. Although often small in size, these sites can impact the surrounding environment, specifically surface water quality and stable fly production. To reduce those impacts feeding sites must be cleaned in a timely manner.

Producers need to recognize that in areas of winter feeding substantial levels of fecal bacteria and nutrients have accumulated. In fact, there are approximately 4.5 million fecal coliform bacteria per pound of material at a typical winter feeding site. If we assume 50 square feet for a single round bale hay feeder and a total of 10 tons of wasted hay and manure mixture from this site, this equals approximately 90 billion fecal bacteria. Cattle should consume water that contains less then 2,000 bacteria per gallon of water so performance and/or health are not jeopardized. When runoff occurs in spring from these sites and is in close proximity to surface water, water quality can decrease.

Another important area of concern from these sites is that they serve as an ideal breeding ground for stable flies. Researchers at KSU have trapped flies emerging from winter feeding sites and estimate more then 1 million stable flies can emerge from a single hay ring feeding site.

Why is this important? The economic threshold for a reduction in weight gain for cattle is five stable flies per leg. Obviously, if winter feedings sites are not properly managed and cleaned in the spring, flies may be a nuisance for the summer grazing period resulting in reduced profitability.

Winter Feeding Site Management Recommendations:

First, producers should prevent large accumulations of residue and moisture at the feeding site. Although research data is lacking, practical recommendations may include the following:

- Periodic movement of feeder location.
- Rolling hay out in different locations throughout the pasture.
- Avoid rolling out poor quality or rotted hay that will not be eaten.
- Grinding hay helps prevent sorting by the animal, which decreases waste.
- Avoid overfeeding regardless of feeding method to prevent trampling of hay, which becomes stable fly habitat once mixed with manure.
- Feeding locations should have adequate drainage to prevent moisture accumulation surrounding the feeder. However, runoff from these sites should not enter open surface water.

Secondly, if residue levels can not be minimized, thorough cleanup and removal of residue is necessary. Fecal bacteria can live in the wasted hay and manure mixture for the remainder of the summer. Since the majority of runoff and fly production occurs in April, May and early June, the site must be cleaned and waste disposed of before or early during this time period.

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Dried Distillers Grains Supplemented to Beef Cattle Intensively Grazing Early Summer Bluestem Pasture

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The increasing availability of distillers grains, a feed grain byproduct which results from the process of converting feed grains into ethanol has many producers asking where this byproduct fits in a variety of cattle production environments.

Three hundred forty-six steers weighing approximately 572 pounds were used to evaluate performance of Dried Distillers Grains (**DDG**) in an early intensive grazing system. The DDG was made from sorghum grain (*Sorghum bicolor* (L.) Moench) and was pelleted to facilitate delivery and minimize wastage to the supplemented pastures.

All steers were preconditioned at a commercial yard located off campus between 30 to 45 days before arrival to the Beef Stocker Unit (BSU), Kansas State University, Manhattan, KS. At the preconditioning yard all steers received a respiratory vaccine, an ivermectin treatment, castration if needed, the same diet and hospital treatment according to yard standard operating practice. Steers treated for Bovine Respiratory Disease and bulling were not included in the study. Upon arrival to the BSU all steers were dewormed with an ivermectin treatment, individually weighed, and assigned to pastures by weight.

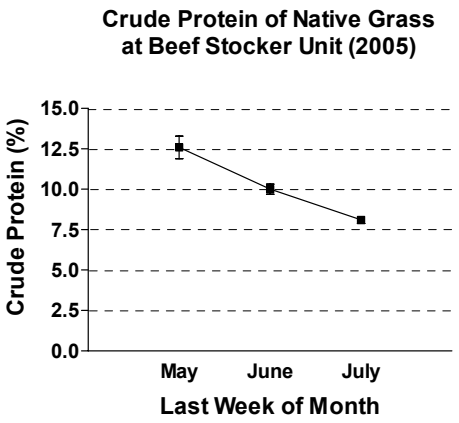
A single grazing period was used starting May 1 and ending August 3, 2005. Pastures contained warm-season perennial grasses with dominant forage species that consisted of Big Bluestem (*Andropogon gerardii*) and Indiangrass (*Sorghastrum nutans*), and subdominant forage species of Little Bluestem (*A. scoparius*) and Sideoats Grama (*Bouteloua curtipendual*). Base stocking rate for all pastures was 250 pounds body weight per acre.

Four treatments randomized over sixteen pastures were used in a randomized complete block design and comprised of no supplementation (**CON**), a supplemental rate of 0.3 percent of body weight of DDG (**LOW**), a supplemental rate of 0.6 percent of body weight of DDG (**MED**), and a supplemental rate of 0.9 percent of body weight of DDG (**HIGH**); as-fed basis.

Supplement treatments were fed from June 15 through August 3 once daily in feed bunks located in each respective pasture. Cattle weights were estimated based on a projected average daily gain of 1.8 pounds per day from May 1 through June 14 (45 days). Supplements were adjusted every two weeks based on a projected average daily gain of 2.0 pounds per day during the supplement period (June 15 through August 3).

Salt in block form was provided throughout the entire grazing period and until mid-June, a free-choice mineral with a sub-therapeutic dose of oxytetracycline for control of foot-rot and pinkeye was provided to all steers. On August 4, the steers were shipped to a commercial feedyard where final weights were taken.

Forage quality of the entire grazing period was measured using four ruminally cannulated steers via rumen evacuation procedure. The steers' rumens were evacuated, rinsed three times, allowed to graze for 20 minutes and consumed forage collected, then original rumen contents put back. Four pastures, one from each DDG treatment, were sampled. The sampling periods were as follows: May 24, June 28 to 29, and July 28 to 29. The same pastures were sampled each sampling period.



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Dispose of the waste by:

- **Spread**. By cleaning up and spreading the material over a larger land area, the material will dry and be exposed to sunlight, thus killing the fecal bacteria.

- **Pile and compost**. Composting generates heat and kills fecal bacteria and prevents their use as a larvae food source. This may be a practical alternative to complete removal of material. The pile must be turned after a couple weeks of initial composting to incorporate the outside material.

- **Burn**. Because the majority of the residue can be from wasted hay, producers may be able to dispose of the material by burning. However, moisture content of the residue may limit the effectiveness of this option in certain years. Dry environmental conditions also may limit burning opportunities.

The most economical way to decrease environmental impacts is simply to place the temporary sites at least 100 feet away from surface water. In most situations, this allows a vegetative buffer to be maintained between the feeding location and the water source. Vegetative buffers are extremely effective in reducing the nutrient and bacteria levels in runoff before entering surface water. Producers should evaluate their traditional feeding sites and determine how to reduce negative environmental impacts.

Proper management will reduce the impact feeding sites have on the environment and production of stable flies which in turn will improve the performance of livestock in pastures and grasslands.

Animal ID Education

If you're wondering how and when to get your arms wrapped around animal ID of the electronic kind, Kansas State University (KSU) may have the solution for you. The university will host two Electronic Beef ID Crash Courses this summer.

The programs will be held at the KSU Beef Stocker Unit outside of Manhattan and will include live-animal demonstrations, hands-on use of animal ID equipment, a review of available technologies, and how to budget a system.

KSU Extension beef specialist Dale Blasi, says this summer's programs, each aimed at different audiences, are a follow-up to the KSU Beef ID Academy programs of summer 2004.

The June 21-22 program is aimed at operators of feedyards, sale barns and stocker-grower operations. The July 19-20 program is aimed specifically at cow-calf producers and veterinarians. Space is limited to 100 attendees in each session.

For more info, contact Lois Schreiner at 785-532-1267 or lschrein@ksu.edu .

Focus on Feedlots

Focus on Feedlots is a monthly summary of Kansas feedlot performance and feed cost. At one time the summary was included as part of each Beef Tips newsletter, but that was discontinued when both publications went to electronic only formats, allowing more timely release of each. You can find it online at: http://www.asi.ksu.edu/DesktopDefault.aspx?tabid=302 . If you would like to be added to the e-mail list for notification of the latest release contact Linda Siebold, lsiebold@oznet.ksu.edu or 785-532-1281.

Still Need to Register your Premises?

You can register your premises online at: http://nais.aphis.usda.gov/NAIS/index.jsp?state=ks . If you have questions contact Teresa Stephens, 785-296-2326, tstephens@kahd.ks.gov

"More than 1 million stable flies can emerge from a single hay ring feeding site."

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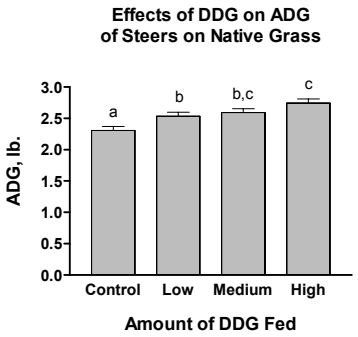
The results from this grazing trial suggest that providing DDG at a supplementation level of 0.3 percent of body weight results in approximately 0.2 pound per day increase in daily gain relative to non-supplemented cattle. Feeding at higher levels increases daily gain and may allow for higher stocking density rates to be achieved as a result of substituting grass consumption for higher intake of DDG. A partial budget analysis of DDG and delivery costs must be determined to ascertain whether this management strategy is financially feasible.



Differing superscripts between DDG levels vary ($P < 0.05$).
Control vs. DDG ($P < 0.001$).
Linear effect of DDG ($P < 0.05$).
Quadratic effect of DDG ($P < 0.005$).
Cubic effect of DDG ($P < 0.005$).

Updated Goals for National Animal Identification System

USDA Goals by Jan. 2008 - 70% of premises registered, 40% of animals individually identified.

The NAIS goals have been more clearly stated in an April 2006 report released by USDA. For premises, the goal is to have 25% registered by January 2007, 70% by January 2008, and 100% by January 2009. The goal is to have 40% of animals individually- or group-identified by January 2008, and 100% of "new" animals identified by January 2009. The goal is to have 60% of all animals less than one year of age to have complete movement data reported by January 2009. According to USDA Director, Mike Johanns, if these NAIS goals are not met voluntarily, USDA will push to have the NAIS become mandatory in 2009 following the appropriate rulemaking process and public comment period. For more information see: http://www.usda.gov/nais/ .

What if the Weather Conditions Remain Dry?

Conditions continue to be dry across the state which is particularly troublesome for producers anxious to get animals out to grass. Drought forces management changes, some of which are not very palatable to producers. Consider these general strategies now to help cope with current and future low precipitation issues.

Develop a drought management plan so that if conditions decline to certain levels the plan already outlines the course of action. Consider impacts on pastures, harvested forages and water supplies. The plan can reduce stress for family members and facilitate timely action.

Early wean – It is much more efficient to feed the calf directly than to feed the cow to increase milk production. Calves over 90 days of age and (or) greater than 200 pounds can be weaned with minimal consequences. Protein and energy requirements of the cow are decreased 30 percent or more depending on stage of lactation at weaning. Water requirements of the cow also drop 60 percent with weaning. Young cows particularly benefit from early weaning since they are still growing.

Hauling water is more expensive with today's gas prices. Make sure that it is an economically viable option.

Shorten the breeding season, use early pregnancy diagnosis and remove opens and bulls from the pasture. Develop a culling list starting with dry, ornery, old or other problem cows.

Feeding cows on pasture is very hard on the pasture. If this approach is used, carefully consider which pasture to sacrifice. Fencing off a portion of the pasture for feeding may reduce pasture-wide damage.

Drought resources can be found on the web at: www.oznet.ksu.edu/drought/ . See "Other Contacts" towards the bottom of the page for links to other drought resources.