



Beef Tips

November 2007

Department of Animal Sciences & Industry

www.asi.ksu.edu/beeftips

Upcoming Events

See details on page 4

Range Beef Cow Symposium

Dec. 11 - 13, 2007
Fort Collins, CO

By-Products Nutrition Conference

Dec. 12, 2007
Garden City, KS

Beef and Ethanol in 2008

Dec. 18, 2007
Hoxie and Norton
Dec. 19, 2007
Quinter

More Bovine Leukosis Infections found in Kansas Beef Herds

Larry C. Hollis, D.V.M., M.Ag., extension beef veterinarian

Bovine leukosis, caused by the bovine leukosis virus (BLV), occurs rarely in some Kansas herds, but has reached almost epidemic proportions in others. In "normal" herds, BLV will only cause the loss of an occasional animal. However, in one herd leukosis was the cause of death in seven of 120 cows in less than a year's time. In another herd with an unusual number of unexplained death losses annually, 111 of 179 cows were found to be seropositive for BLV.

In yet another recent situation where a producer purchased six older cows at a special cow sale with the intent of getting one to two more calves from each cow before they were ultimately sold for harvest, five of the six cows were found to be seropositive for BLV. None of the five had clinical signs of the disease, but their life expectancy was definitely shortened relative to the purchase price and expectations of their new owner!

Because BLV infects white blood cells and is transmitted via the blood, any time blood is transferred animal-to-animal the potential is there to transmit the disease. The disease can be transmitted via multi-use needles used for vaccination or treatment, ear taggers, dehorners, tattoo pliers, implant guns and any other object that will carry blood from one animal to another. It may also be possible for the larger biting flies to transmit the disease. To a lesser extent the disease may be transmitted *in utero* or via nursing colostrum.

Biocontainment efforts to keep the disease from moving within a herd include testing herds and removing seropositive animals where only a small percentage of animals are infected. In herds where BLV levels are higher, economics

may dictate that the herd be split into two herds: a positive herd where animals will be culled at the first sign of problems and from which no calves will be kept as replacements; and a negative herd which will serve as the only source of home-grown replacement animals.

While testing the cow herd, be sure to test all bulls and replacement animals held back for future use. Use of disinfectants with all equipment that might transfer blood from animal-to-animal should be instituted in the negative herds. The only exception to this is that disinfectants will kill modified live vaccines (MLV; such as Brucellosis vaccine and MLV respiratory BR, BVD, PI3, BRSV products). With MLV vaccines, a new needle should be used for each animal. A good fly control program is also critical to keeping a negative herd free of the disease.

Biosecurity efforts to keep the disease out of a negative herd should be instituted once the herd is determined to be free of the disease. Purchase only test-negative replacement bulls and females, or from seedstock suppliers that maintain negative herds based upon the results of frequent testing. It is never recommended to buy a calf at auction to graft onto a wet cow that has lost her calf because of the potential of the calf to bring BLV or a host of other diseases into the herd.

Producers need to be vigilant in their management and take steps to prevent introduction of the disease into their herds and transmission within herds where the disease already exists. Otherwise, this insidious disease may cause significant financial losses.

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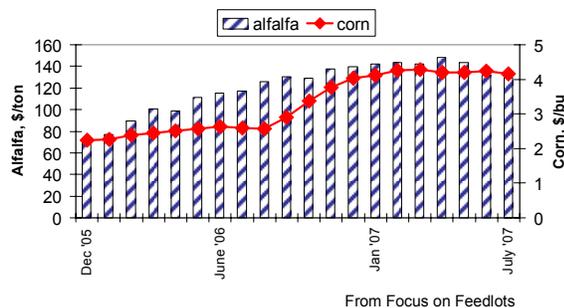
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Access time and hay feeding method influence hay waste

Historically, periods of higher hay prices were generally associated with drought. More recently, higher hay prices may be influenced by acres shifting from forage to grain production in response to demand by the growing ethanol industry. Other factors may include lack of any carry over hay stocks from the hard winter and years of drought in the region. The graph below shows the upward trend in corn and alfalfa prices reported from monthly closeout data from 6 western Kansas feedlots for the past two years. If prices remain at this level different management strategies may become feasible. The following research summaries are timely given the current hay market.

Average price delivered to SW
Kansas feedlots for corn and alfalfa



Restricting time of access to large round bales of hay affects hay waste and cow performance. University of Illinois, Miller et al., 2007; Prof. Ani. Sci. 23: 366-372.

Two trials were conducted with Simmental cows in the last third of gestation to determine the effects of restricting access time to large round bales of hay on cow performance and hay disappearance. Trial one used high quality alfalfa hay (127 relative feed value) that was offered free choice or access was limited to three, six or nine hours per day. Trial two fed average quality hay (96 relative feed value) either free choice or restricted to six or nine hours per day. In each trial, 3 to 4 pens per treatment with six cows per pen were employed. Pens provided adequate bunk space for seven head. In trial 1, all treatments gained body weight with increased access time resulting in increased gain. Hay disappearance increased with increasing access time as did manure production and hay waste. In trial 2, body weight gains did not differ with treatment. Hay disappearance and manure production increased with increasing time of access. For both trials, N, P, and K output increased with increasing time of access, following manure production. As little as three hours per day of access time to a large round bale of high quality hay allowed acceptable cow performance. Limiting access time reduced hay use by limiting intake and reducing waste. In addition to savings in hay expense, costs to remove manure and hay waste would be reduced by limiting access time to round bales. Access time should not be limited if there is limited feeder space.

	Access time to hay			
	3 hours	6 hours	9 hours	Free choice
Weight change, lbs ^a	119	161	191	207
Body condition change ^a	0.1	0.5	0.7	0.8
Hay disappearance, lbs DM/d ^a	17.6	24.4	29.3	34.1
Hay waste, lbs DM/d ^b	5.9	5.7	9.2	13.4
Manure production, lbs DM/d ^b	11.7	15.0	19.6	22.7

^a linear and quadratic effects (P<0.01) ^b linear effect (P<0.01)

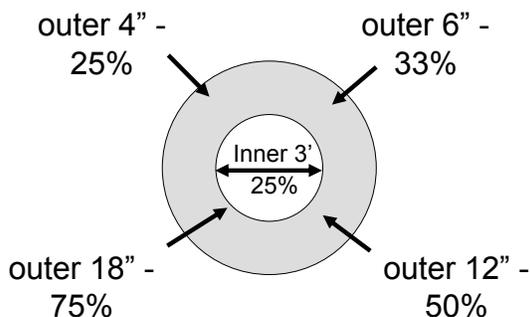
Effect of hay feeding methods on cow performance, hay waste, and wintering cost. North Dakota State University, Landblom et al., 2007, Prof. Anim . Sci. 23:246-252.

A three year study was conducted to examine the effect of hay feeding method on cow wintering cost. Three feeding methods were compared: unrolling on the ground, shredded with bale processor and fed on the ground and fed in a tapered-cone feeder. Cows in the last one third of gestation were fed for 59 days. Compared to rolling bales out on the ground or using a bale processor, bales fed in the cone feeder resulted in increased cow weight gain, increased rib fat depth, and reduced hay consumption. The cone feeder also reduced hay waste when an alfalfa-grass hay mix was fed but not for oat hay. The tapered-cone bale feeder reduced waste, decreased the amount of hay required per cow and decreased wintering cost per cow while maintaining body condition. Wintering cost per cow for the 100 head reference herd was \$109, \$127, and \$100 for rolling out bales, shredding with a bale processor and feeding bales in a tapered-cone round bale feeder, respectively. Dense bales with strings left in place for feeding seemed to work best in the tapered-cone feeder.

The effect of tillage practice and corn stalk grazing on crop yields. University of Nebraska, Griffin et al., J. Anim. Sci. 2007 85(Suppl. 1):631-632

Data was collected for nine years to evaluate the influence of four tillage methods and spring grazing of corn stalk residue on crop yields in a corn and soybean rotation in east central Nebraska. Soil types were fine sandy loam and silty clay loam. The following four tillage practices were used: 1) fall tillage of soybean residue prior to the planting of corn, 2) ridge till; 3) no till; and 4) spring tillage of corn residue prior to planting of soybeans. Steers were allowed to graze corn stalks for 60 days at 2.5 times the normal stocking rate (normal rate of 0.8 acres per steer). Corn yields were similar for no till, ridge till and spring till but fall tillage reduced corn yield. Soybean yields for no till, ridge till and spring till were not different however fall tillage improved soybean yields. Spring grazing corn stalks did not have any effect on corn yields (11,802 lbs/acre vs 11823 lbs/acre; P=0.72) or soybean yields (3635 lbs/acre vs 3551 lbs/acre; p=.12) for grazed and ungrazed plots respectively. In this nine-year study, muddy conditions in the field that arise from spring grazing corn stalks had no effect on corn yield.

Round Bale Trivia –
How much volume of a a six foot diameter bale is in the outer 4 inches?



Up Coming Educational Opportunities

Range Beef Cow Symposium

Fort Collins is pleased to be hosting the Range Beef Cow Symposium XX from Dec. 11-13, 2007, at "The Ranch," the Larimer County Fairgrounds and Events Complex, Fort Collins, Colorado. The Ranch is located adjacent to I-25, just north of Highway 34 in Loveland, Colo.

The event is sponsored by the Cooperative Extension Service and animal science departments of South Dakota State University, Colorado State University, the University of Wyoming and the University of Nebraska. The biennial symposium has a reputation of being an excellent educational program, offering practical production management information since the first symposium in Chadron, Neb., in 1969.

The Bull Pen Sessions are said to be the most valuable part of the symposium. This is a time for attendees to have considerable discussion with the speakers and an opportunity to ask specific questions.

Commercial displays representing many segments of the industry are an integral part of the symposium. Exhibitors will be present to discuss their products, plus information on newly-released products will be available.

For more information contact Nancy Weiss at 970-491-7604 or nancy.weiss@colostate.edu, or Jack Whittier at 970-491-6233 or jack.whittier@colostate.edu or see <http://www.rangebeefcow.com/>.

By-Products Nutrition Conference to Be Held in Garden City December 12, 2007

Kansas State University Beef Research and Extension will be hosting a conference to highlight feedlot research on the use of by-products from the production of biofuels, both ethanol and biodiesel. Researchers from Kansas State, Oklahoma State, Texas Tech, and Texas A&M Universities will be presenting results of feeding by-products in feedlot finishing diets. Also, Colorado State and Iowa State University researchers will be presenting information regarding potential toxicity issues associated with by-product feeding.

The conference is scheduled for December 12, 2007; 8:30 a.m. to 3:00 p.m.; at the Plaza Hotel, Garden City, Kansas. Registration is \$40 before December 5; \$55 after December 5. For more information, contact Chris Reinhardt at cdr3@ksu.edu or 785-532-1672.

Beef and Ethanol Meetings in NW Kansas December 18 and 19, 2007

Hoxie, Norton and Quinter will each serve as host locations for a program on Beef and Ethanol on Dec. 18th and 19th sponsored by K-State Research and Extension. Speakers and topics for the program include feeding management and storage issues of distillers grains, Twig Martson, cow/calf management specialist; pros and cons of value-added programs, Sandy Johnson, livestock specialist; and impacts of ethanol and distillers grains on the economics of the cattle industry, Jim Mintert, livestock marketing specialist. The first meeting will be held on Dec. 18th at 9 am at the Midwest Energy Building in Hoxie followed by a 2 pm start time at the 4-H Building in Norton that same day. The Q-Inn, Quinter, will be the site of the meeting on Dec. 19th with the program to begin at 9 am. Advance registration is necessary by Dec. 14th. To register call the respective county office: Sheridan (785-675-3268), Norton (785-877-5755) or Gove (785-938-4480). There is no charge to attend.