K-STATE Research and Extension

Beef Tips

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Upcoming Events

5-State Beef Conference
September 5, 2012
Coldwater, KS
http://aces.nmsu.edu/ces/fivestatesbeef/

Beef Stocker Field Day
Sept. 27, 2012
KSU Beef Stocker Unit
Manhattan, KS
www.KSUBeef.org

Applied Reproductive Strategies in Beef Cattle
Sioux Falls, SD
December 3-4, 2012
www.beefrepro.info

KSU Cattlemen's Day
March 1, 2013
Manhattan, KS
www.KSUBeef.com

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Small grain options for fall forage

Doug Shoup, John Holman and Justin Waggoner

Forage supplies are very tight in many areas of Kansas this year due to the ongoing drought. Tests are showing that hay from failed corn and sorghum is often high in nitrates, as are drought-stressed pigweeds, kochia, lambsquarters, and other forbs and broadleaf weeds that could otherwise be grazed.

Those who anticipate needing additional sources of forage this fall, above and beyond what they would normally use during this season, might consider planting either a small grain or a brassica species this fall.

There are five common small grain options for forage: spring oats, winter wheat, winter barley, winter cereal rye, and winter triticale. Each has its strengths and weaknesses.

Spring oats. Spring oats are usually planted in late February or March in Kansas. But spring oats can also be planted in August -- and if done so, they will produce much more fall forage than any of the other small grain forages in the fall before a killing freeze. They will almost never produce grain if planted in August. Spring oats do not need to vernalize before heading. They will develop rapidly in the fall if they have enough moisture and nutrients. Oats may even head out before being killed by the first hard freeze in the mid 20's, but in most years will not have time to produce viable grain. The very mild winter last year, however, resulted in much of the spring oats planted in the fall surviving the winter in southern Kansas.

Spring oats can be utilized in the fall for either hay or grazing. Spring oats can be ready to graze 6 to 8 weeks after planting with adequate moisture. Under good conditions, spring oats can produce up to 1 to 2 tons of forage per acre, but as planting is delayed past early August expect less tonnage. Spring oats are not very drought-tolerant, and will not establish well or produce much forage if soils are very dry. Rye and barley are more drought-tolerant than spring oats.

Spring oats should be seeded at the rate of 2 to 3 bushels (or 64 to 96 pounds) per acre. About 30 to 50 pounds of nitrogen per acre will be adequate depending on yield potential and if no excess nitrogen is available in the soil. If planted after poor-yielding corn this year, there is likely some nitrogen carryover from the spring.

Oat pasture can generally carry 500 pounds of beef per acre. Average daily gains range from 1.5 to 2.5 pounds per head per day. Forage quality on actively growing oats is high, with protein content in the range of 20 to 25 percent.

Oats are fairly susceptible to atrazine so if producers plan on planting oats this fall after corn or milo, risk of herbicide carryover that can kill seedling plants does exist.

Winter wheat. Wheat is often used for grazing and grain in so-called "dual-purpose" systems. These kinds of systems are usually balanced between getting good forage and good grain yields without maximizing yields on either side. Dual-purpose wheat is typically planted one to two weeks earlier than wheat planted for grain only. Also, producers wanting both grazing and grain should use a higher-than-normal seeding rate and increase the nitrogen rate by 30 to 50 pounds per acre.

continued...see ***Small grain forages*** *on page 3*

"You can't manage what you don't measure."

Tally Time – Measuring Change

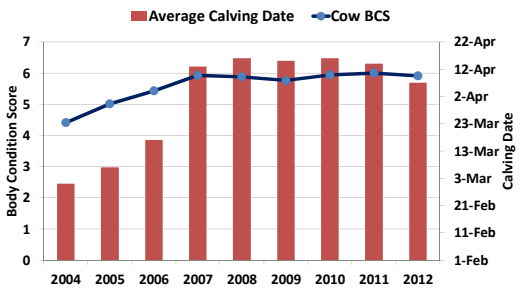
Sandy Johnson, livestock specialist

Measuring rain hasn't required a big time commitment this year, so that leaves us time to focus on other measurements that can help us reach our goals. The cost of feed has reached a new plateau in the past 5 years and short supply has put an even greater upward pressure on prices this year. To help address producer challenges such as high feed costs, university herds might take one of two general approaches to overall management. One approach is to mimic a common production model and ask questions within that general model. The second is to attempt to develop the best production system for the environment they are in and work within that model. A strong argument can probably be made that at least at one time, the common production model was considered the best for the production environment.

When a change in management occurred at the KSU commercial cow/calf unit a shift was made in the production model with goals of reducing mature cow size and more closely matching the timing of the calving season and nutrient demand to the available forage resources. This change was made by initially using a higher replacement rate and marketing of bred cows that didn't fit the target and continued over time with less emphasis on milk production and yearling weight in sire selection.

Records shared by Dr. KC Olson, herd manager, show the average calving date, pre-breeding body condition score (Figure 1) and calving distribution (Figure 2). Average calving date shifted from March 1 in 2004 to April 16 in 2010. As this change in calving date occurred, body condition precalving shifted upward which corresponded to more calves born in the first 20 days of the calving season.

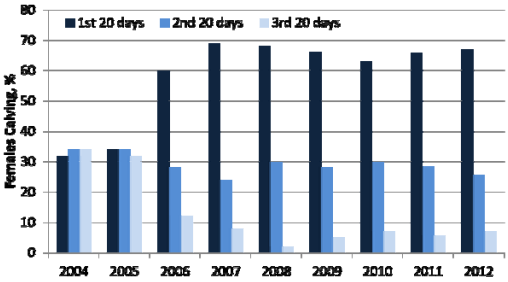
Figure 1. Change in calving date and body condition score in the KSU commercial cow herd.



During that same time period (2004 to 2011) the average adjusted 205 day calf weaning weight ranged from a high of 570 pounds in 2004 to a low of 544 pounds in 2006. Because in some years calves were part of early weaning studies, the actual pounds weaning cannot be compared over time, however with twice as many calves born the first 21 days, total pounds weaned is likely to have increased when age is allowed back into the assessment.

Good records have helped measure the response to change in this herd. In the future we will look at addition information to more fully explore the impacts of the management change. The production cycle for a cow/calf herd is relatively long. With patience and persistence in record keeping longer term trends can help bring new insights.

Figure 2. Calving distribution of the KSU commercial cow herd.



Small grain forages *…. continued from page 1*

Producers who need more pasture than normal can plant even earlier, at the likely expense of lower grain yields. Planting very early opens wheat to many risks, such as wheat streak mosaic, barley yellow dwarf, Hessian fly, and common root rot. Wheat can also be grazed out, foregoing grain yield altogether. Wheat usually produces most of its forage in late fall and early winter, and again in the spring. There are differences among varieties in how much fall forage is produced.

Winter barley. There are now new, improved varieties of winter barley available with better winter hardiness, especially under grazing. Many of the newer varieties also produce more forage than older varieties. Barley produces palatable growth rapidly in the fall under favorable conditions. It is considered superior to other cereals for fall and early winter pasture, but wheat, triticale, and rye provide better late winter and spring grazing. Barley has excellent drought and heat tolerance. Winter barley forage is typically the most palatable of the small grain cereals. And feed quality is the highest, as well.

Winter rye. Rye establishes fall pasture quickly. It also regrows rapidly in late winter and early spring. However, rye becomes stemmy and unpalatable earlier in the spring than other cereals. Since rye is less palatable and higher in fiber than wheat or barley, cattle gains during grazing are normally greater on oat, wheat, triticale, and barley pasture than on rye pasture. Rye is the hardiest of the small grain cereals for overall tolerance to drought, heat, winterkill, and poor soil conditions.

Winter triticale. Triticale, a cross between wheat and rye, possesses the toughness of rye along with the quality of wheat. It can be grazed much harder than wheat and still recover to produce grain. Triticale has longer effective spring grazing than rye, but not as long as wheat.

As planting dates get later in the fall, producers will get more fall forage production from triticale and rye. The later it gets, the more rye becomes the best option if fall forage is needed.

When planting a small grain cereal primarily for forage, use a seeding rate about 50 percent higher than if the crop were grown for grain. In western Kansas and under dry soils conditions a seeding rate of 1.5 bu/acre is recommended. In eastern Kansas or under irrigation a seeding rate near 2 bu/acre is recommended. Also, when planting a small grain cereal for grazing purposes, nitrogen (N) rates should be increased by about 30 to 50 lbs/acre. To determine the actual amount of additional N needed, the following formula can be used:

Additional lbs N/acre = (No. animals/acre) x (lbs of weight gain/animal) x 0.4

In a graze-out program, all the N may be applied in the fall. But split applications will reduce the chances of having a problem with nitrate toxicity. In addition, there may be excess nitrogen this fall from failed summer crops, so producers should use caution when putting on nitrogen this fall without a profile nitrogen soil test.

Under good growing conditions, a well-fertilized small grain dryland pasture can carry about 500 pounds of cattle per acre. Under poor growing conditions, stocking rates should be reduced considerably. Cattle gains of 1.5 to 2.5 or more pounds per acre per day are possible during periods of good pasture production. Under irrigation, with intensive management, much higher stocking rates are attained.

Fall grazing management is critical to the success of small grain pastures. Begin grazing when the plants are well rooted and tillered, usually about 6 to 8 weeks after planting. If the foliage is too tall when the animals are introduced, or if the crop is over-grazed, the plants will be more susceptible to winterkill. Make sure some green leaves remain below the grazing level. The minimum stubble height should be about 3 to 4 inches. Rye has a more upright growth pattern than most wheat varieties, so it should not be grazed as low. Winter barley is more susceptible to winterkill than rye or wheat. However, newer varieties of barley are exhibiting increased winter hardiness.

In terms of overall forage quality of hay, barley is highest, followed by oats, wheat, triticale, and rye. During the fall and early spring periods of peak production, the crude protein content of small grain pasture is normally about 20 to 25 percent. Growing cattle require about 12 percent crude protein, thus no protein supplements are necessary.

Small grain pastures can cause bloat. Daily supplementation with poloxalene (Bloat Guard) is highly effective in reducing bloat. Feeding high-quality grass hay, silage, and/or an ionophore such as Rumensin or Bovatec can also provide some protection against bloat. Rumensin and Bovatec have also been shown to increase stocker cattle weight gains on wheat pasture. Mineral supplements containing magnesium are necessary when grazing cattle on small grain pasture to minimize the occurrence of grass tetany.

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"As planting dates get later in the fall, producers will get more fall forage production from triticale and rye. "

Ionophores help stretch limited feed supplies

Dale Blasi, extension beef specialist, stocker, forages, nutrition and management

The dry summer growing conditions experienced this year has many cow-calf producers nervously eyeing their precious supply of forage available for this upcoming winter feeding season. This concern is definitely justified given the unpredictable degree and extent of future inclement weather conditions that may occur.

One management tool cow-calf producers may implement to stretch their existing forage supplies is the use of Rumensin™ (Monensin sodium). Earlier research has shown that monensin and lasalocid (Bovatec™) improves the feed utilization of growing cattle by altering rumen fermentation patterns, thereby, altering (improving) the metabolizable energy content of feeds. While both of these ionophores have been extensively used with great success in the feedlot industry for almost 40 years, Rumensin™ is the only ionophore that is approved for mature, reproducing beef cows.

Previous research has shown that Rumensin™ can reduce hay intake by approximately 5 to 10% while still producing about the same amount of weight gain (Turner et al., 1980; Clanton et al., 1981). More recent research conducted at Oklahoma State University with cows fed 200 mg/head/day resulted in an additional 0.5 lb/day gain that resulted in nearly an increase in one half a body condition score over a 58 – day feeding period.

The estimated cost for including this feed additive into a mineral supplement is approximately 2 to 3 cents/cow/day. Contact your respective feed/mineral supplier regarding cost and availability.

There is one word of caution! Rumensin™ is EXTREMELY toxic to horses. For this very reason, cattle producers who consider its use should ensure that EVERYBODY on their operation is knowledgeable regarding where a product containing this feed additive is stored and used. Bovatec™ is less toxic than Rumensin™ however it still should not be fed to horses.

K-State's Beef Stocker Field Day Planned Sept. 27

MANHATTAN, Kan. – Management tips to help producers optimize their stocker operations are the focus of Kansas State University's 2012 Beef Stocker Field Day, planned for Thursday, Sept. 27 in Manhattan.

The day begins at 9:30 a.m. with registration and coffee, and the program starting at 10:15 a.m. The event, to be held at the KSU Beef Stocker Unit on West Marlatt Ave. includes posters, a barbeque brisket lunch, and prairie oysters and Dutch oven dessert after the program.

Several presentations are planned.

- Cattle and Corn Market Outlook.
- Producer Panel – Managing Around Fewer Cattle.
- Bayer Research and Development Update for Stocker Cattle.
- Antibiotic Classes and Uses for Stocker Operations.
- Byproduct Utilization and Growing Cattle.
- Breakout Sessions
    - Pasture weed control
    - Purchasing Commodity Feeds
    - Why is he Dead? What a Necropsy Can Tell Us

The cost to attend Beef Stocker Field Day is $25 if paid by Sept. 15, or $35 at the door. Printable registration forms and online registration is available at www.KSUBeef.org. More information is available by calling 785-532-1267.