January 7 Statesville Regional Beef Conference, Iredell County Ag Center.
January 9 Waynesville Performance Bull Test Sale, Haywood County Agricultural Center.
January 20 NC Forage & Grasslands Council Winter Conference. “Efficiently Managing Diverse Grazing Resources,” featuring Dr. Fred Provenza, Utah State University, Union County Extension Center, Monroe, NC, 1 p.m.. Registration information is at the Rowan Cooperative Extension Office.
January 22-23 Judging in January Livestock Judging Contest and Livestock Exhibition Camp, NCSU Beef Unit, Lake Wheeler Road, Raleigh.
February 19-20 NC Cattlemen’s Conference, Hickory Metro Convention Center, Hickory, NC.

STATESVILLE REGIONAL BEEF CONFERENCE
The Statesville Regional Beef Conference will be conducted Thursday, January 7 at the Iredell County Agriculture Center, 444 Bristol Drive, Statesville. Registration will begin at 3:30 p.m. and the program will begin at 3:45 p.m. The program includes: Nutritional Management to Improve Returns to Cow/Calf Operations; Herd Health and Animal Welfare Update; Replacement Heifer Development and Marketing; Trends in Cattle Marketing; and Animal Health Update. The evening will conclude with a sponsored meal at 6:30 p.m.

CATTLE HEALTH: IT IS TIME TO BEGIN THE EARLY EVENING FEEDING
By Glenn Selk, Oklahoma State University Extension Cattle Reproduction Specialist
From the December 3, 2009 CattleNetwork e-newsletter

It is generally accepted that adequate supervision at calving has a significant impact on reducing calf mortality. On most ranching operations, supervision of the first calf heifers will be best accomplished in daylight hours as the poorest observation generally takes place in the middle of the night.

The easiest and most practical method of inhibiting nighttime calving, at present, is by feeding cows at night. The physiological mechanism is unknown, but some hormonal effect may be involved. Intraruminal pressure begins to fall in the last 2 weeks of gestation, with a more rapid decline during calving. It has been suggested that night feeding causes intraruminal pressures to rise at night and decline in the daytime.

In a Canadian study of 104 Hereford cows 38.4% of a group fed at 8:00 am and again at 3:00 pm delivered calves during the day, compared to 79.6% of a group fed at 11:00 am and 9:00 pm calved in daylight. A British study utilizing 162 cattle on 4 farms compared the percentages of calves born from 5:00 am to 10:00 pm to cows fed at different times. When cattle were fed 9:00 am, 57% of the calves were born during the day, versus 79% with feeding at 10:00 pm. In field trials by cattlemen utilizing night feeding when 35 cows and heifers were fed once daily between 5:00 pm and 7:00 pm, 74.5% of the calves were born between 5:00 am and 5:00 pm. In the most convincing study to date, 1331 cows on 15 farms in Iowa were fed once daily at dusk, 85% of the calves were born between 6:00 am and 6:00 pm. Whether cows were started on the night feeding the week before calving started in the herd or 2 to 3 weeks earlier made no apparent difference in calving time.
Many cattle spend part or all of the fall and winter on pastures. The challenge for the stock grower is to manage these cattle to make use of inexpensive forage, yet keep cows in satisfactory body condition for calving and the next breeding season.

Pay attention to grazing behavior - whether they are slow to start in the mornings, whether they are working on the willows and brush in an attempt to generate more heat energy from their diet. Grazing behavior will tell you whether or not feed is adequate for their condition (even before they start to visibly lose weight), or if they need a little help. If you pay close attention to grazing behavior, the animals will give you clues that will help you get them through the winter without any serious weight losses, or serious feed bills.

Here are 5 hints for capitalizing on the beef animal's winter grazing behavior:

1. **Assess the pasture's nutritional health**
   Plant varieties vary in nutritional quality, and this can also vary from season to season. Grasses peak at the height of the growing season and decline as they mature and dry out. Some native grasses don't lose as much nutritional value when they mature as tame pasture species. Just as the early buffalo thrived on native western grasses year-round, the cattle of today can usually manage on it, under normal conditions. Good types of grasses generally provide an adequate maintenance diet for the dry cow, meeting all her nutritional needs except for salt.

2. **Check grazing patterns when assessing forage volumes**
   As days get colder, cattle spend less time in shady areas and may stop using them altogether during the shortest, coldest days of the year. Even if there is a lot of good feed left in those parts of a pasture, the cattle may prefer to stay in the sun and lose weight eating themselves into the ground. Any adverse weather will likely alter this naturally balanced grazing pattern. Drought, for example, lowers grass quality, and in time, will increase the cow's need for Vitamin A and protein. Excess snow cover will bring grazing to a halt as cattle won't paw through deep snow to graze as horses or buffalo do. In other words, you can't assess the carrying capacity of a winter pasture based solely on how much forage is there. You must take into account how much forage the cattle will go after.

3. **Monitor feed intake**
   Ultimately, feed intake determines whether cows on winter range will hold condition or lose weight. And we know intake will vary with texture of the feed, weather, and amount of daylight. Poor-quality bulky feeds fill the rumen, limiting the amount a cow can eat, but probably won't provide enough needed nutrients. Even though cattle need more food energy in cold weather to keep warm, they often eat less on range pasture when temperatures dip. This is partly because the days are short, and partly because of the way the rumen functions. After a cold night, it takes longer for temperatures to warm up in the mornings, and cattle on pasture will stand around trying to conserve energy and body heat, waiting for the sunshine. Then they often stand awhile in the sun trying to warm up, before they start grazing. They may only graze a few hours during the warmest part of the day, stopping again when temperatures drop sharply at sundown. One study at Miles City, Montana, found that cattle grazed only about half as long at -40 degrees C (-40 degrees F) as they did at -18 degrees C (0 degrees F). During extreme cold, some cows grazed only half an hour each day. Cattle don't like to move around much when it is extremely cold. Nor do they like to eat grass with frost on it, or nose through the snow at cold temperatures (they won't do it if snow is crusted). Cows will eagerly eat hay or straw, even at night in cold weather, but they usually won't graze under those conditions.

4. **Look to protein supplements for winter pastures**
   Some types of supplements can be used to advantage on these cold range pastures, but others are actually detrimental. Wyoming and Montana studies found energy-rich grain supplements counter-productive because they reduced a cow's intake of range plants, whereas protein-rich supplements had the opposite effect. At one site, 2.1 pounds of cracked corn fed on alternate days reduced forage intake by eight percent, on average, but cows eating 3.3 pounds of soybean meal every other day consumed 18 percent more forage than unsupplemented cows, and 27 percent more than cows supplemented with corn. Cold tends to decrease digestibility by increasing the rate at which food passes through the gut and by changing the rumen bacteria. Also, during extremely cold weather, cattle tend to eat more browse and woody plants (and will readily eat straw, if provided) since the digestion and breakdown of cellulose and fibrous parts of plants creates more heat energy in the body for keeping warm. In very cold weather, cattle need more roughage in order to generate enough body heat, and if cows are confined without access to pasture roughage or browse, you should give them straw in addition to the regular hay ration, or increase the amount of grass hay being fed. This is when the added protein is needed to balance the diet and stimulate appetites.

5. **Remember the rumen**
   In cold weather, cattle eating feeds barely meeting minimum requirements of the rumen bacteria have a hard time digesting forages because the cold slows down microbial activity in the gut. This is another reason why a little protein at these times can make a big difference to a cow's intake. Protein increases the ammonia-nitrogen concentration in the rumen to improve forage digestion.
CATTLE UPDATE: ADDING VALUE TO YOUR CALVES
By Clay Wright, Noble Foundation
From the December 3, 2009 CattleNetwork e-newsletter

Pick up any livestock-related publication these days and you'll probably find an article on adding value to your calf crop. Subjects might include selecting bulls to optimize desirable characteristics in your calves, preconditioning for 30-45 days, implementing age and source verification, managing shrink, presentation at marketing, targeting niche markets, etc. These and many other management practices have the potential to add to your bottom line. Consider spending some time evaluating changes you might make to your operation in the coming year.

Not all enhancements involve cutting edge technology or new market development. Sometimes just "taking care of business" can be an enhancement all by itself. For instance, one of the simplest, low-tech and often overlooked practices is getting more calves born earlier in the calving season. During the suckling phase, a calf typically gains about 2 pounds per day; so, for each additional day of age, a calf will weigh about 2 pounds more at weaning. How significant can this be?

For ease of figuring, assume an 84-day calving season, with 100 calves equally distributed in four 21-day periods. What if you were able to move your calving distribution from 25 percent in each period to 40-20-20-10? You are actually shifting 45 calves into an earlier period, making them an average of 21 days older at weaning. This means an additional 1,890 pounds of calf in the weaning pen. Most people would agree an increased saleable weight of nearly a ton is very significant!

Of course, the reality of change in your operation depends on how your calving distribution looks now. Assuming that there is room for improvement, how do you begin to shift? This is where the "taking care of business" factor comes in. You must focus on the primary aspects of management that most affect the timing of conception in your herd.

Nutrition
- To minimize the time to first estrus, the cows should have a body condition score of at least 5.5 at calving.
- Maintain a BCS 5 or better through the breeding season to minimize the number of services required for conception.
- Make sure the bulls are in at least a BCS 6 at turn-out.

Health
- Work with your veterinarian to plan and implement a preventative health program for cows and bulls, especially against reproductive diseases.
- Have a veterinarian conduct a breeding soundness examination of your bulls before the breeding season.

Management
- Observe bulls during the breeding season to ensure that they remain willing and able to service the cows.
- Rotate in fresh bulls as needed and address physical problems that may arise.

THE IMPACT OF REDUCING THE LENGTH OF THE CALVING SEASON
Source: Troxel and Barham, 2009, University of Arkansas
From the December 3, 2009 CattleNetwork e-newsletter

Reducing the length of the calving season can be the first step toward improved beef production efficiency. The objectives of this demonstration were to reduce the length of the calving season and to document the production and economic impact when converting a long calving season (greater than 200 days) to a short calving season (less than 90 days). A three-part plan was developed for six cow-calf herds to reduce the length of their calving season.

The average number of years to reach the cooperator’s desired cowherd calving season was 3.8 ± 0.75 years.

* The percentage of cows calving during the desired calving season was higher for the final year compared to the first year (92.0 ± 11.66% vs. 46.3 ± 14.01%, respectively).

* The mature cow calving percentage did not change from the first year to the final year (89.2 ± 6.05% and 87.2 ± 9.47%, respectively).

* The average length of the calving season decreased from 273.3 ± 84.88 days in the first year to 85.2 ± 4.75 days in the final year.

Due to the limited number of farms and large variability, there were no differences for herd breakeven, specified costs/animal unit and income over specified cost/animal unit from the first year to the final year; however, herd breakeven decreased 30%, specified costs/animal unit decreased 40% and income over specified cost/animal unit increased 100%. Thus, shortening the calving season is perhaps one of the most important and cost-effective practices that can be implemented by a producer.
10 KEYS TO A PROFITABLE FORAGE PROGRAM
From the December 4, 2009 BEEF e-newsletter

With forage typically accounting for more than half the production costs – and most of the nutrition – of forage-consuming animals, it thus has a major impact on both expenses and income. Writing in the Ohio Beef Cattle Letter, Auburn’s Don Ball, Georgia’s Carl Hoveland, and Kentucky’s Garry Lacefield offer these 10 keys to a profitable forage program.

1. **Know forage options and animal nutritional needs.** Forages vary as to adaptation, growth, distribution, quality, yield, persistence and potential uses. Also, various types and classes of animals have different nutritional needs. Good planting decisions require knowing forage options for the land resources and nutritional needs of the animals.

2. **Establishment is critical.** Good forage production requires an adequate stand of plants. Mistakes during establishment often have long-term consequences. Use of high-quality seed of proven varieties, timely planting and attention to detail lead to establishment success.

3. **Soil test, then lime and fertilize as needed.** This practice, more than any other, affects the level and economic efficiency of forage production. Fertilizing and liming as needed help ensure good yields, improve forage quality, lengthen stand life and reduce weed problems.

4. **Use legumes when feasible.** Legumes offer important advantages including improved forage quality and biological nitrogen fixation, whether grown alone or with grasses. Every producer should regularly consider on a field-by-field basis whether the introduction or enhancement of legumes would be beneficial and feasible. Once legumes have been established, proper management optimizes benefits.

5. **Emphasize forage quality.** High animal gains, milk production, and reproductive efficiency require adequate nutrition. Producing high-quality forage requires knowing the factors that affect forage quality and managing accordingly. Matching forage quality to animal nutritional needs greatly increases efficiency.

6. **Prevent or minimize pests and plant-related disorders.** Diseases, insects, nematodes and weeds lower yields, reduce forage quality and stand persistence, and/or steal water, nutrients, light and space from forage plants. Variety selection, cultural practices, scouting, use of pesticides and other management techniques can minimize pest problems. Knowledge of potential animal disorders caused by plants can reduce or avoid losses.

7. **Strive to improve pasture utilization.** The quantity and quality of pasture growth vary over time. Periodic adjustments in stocking rate or use of cross fencing to vary the type or amount of available forage can greatly affect animal performance and pasture species composition.

8. **Minimize stored feed requirements.** Stored feed is one of animal production’s biggest expenses, so lowering requirements reduces costs. Extending the grazing season with use of both cool-season and-warm season forages, stockpiling forage and grazing crop residues can reduce stored-feed needs.

9. **Reduce storage and feeding losses.** Wasting hay, silage or other stored feed is costly. On many farms the average storage loss for round bales of hay stored outside exceeds 30%, and feeding losses can easily be as high or higher. Minimizing waste with good management, forage testing and ration formulation enhances feeding efficiency, animal performance and profits.

10. **Results require investments.** Results are usually highly correlated with investments in terms of planning, effort and dollars. In particular, the best and most profitable forage programs have had the most thought put into them.

Brad Johnson
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