

Large Animal Newsletter

Inside this Newsletter

- 1. Testing Forages for Quality Can Save Dollars and Makes Cents When Designing Feeding Programs for the Herd**
- 2. Twin Fork's Cow/Calf Strategic Planning Service**
- 3. Tips for Marketing Cows and Bulls**
- 4. USDA Electronic ID's Available for Bangs Vaccination**



Testing Forages for Quality Can Save Dollars and Makes Cents When Designing Feeding Programs for the Herd

As producers strive to reduce feed costs by investigating avenues to increase grazing days, many still have to use harvested forages in their year-round feeding program. Sampling and testing forages for quality can make designing a feeding program easy and economical. Nutrient concentration can vary considerably in feeds, especially forages. Protein in alfalfa hay can range from 10 to 25 percent of the dry

matter and grass hay will contain between four and 18 percent protein. Beef cattle are most productive when fed or consuming a diet balanced according to their nutrient needs. When designing diets using harvested feeds, many rations are balanced using average values for each feedstuff and these "book values" often result in over- or under-feeding certain nutrients. More economical and better-balanced rations can be formulated using nutrient concentrations determined from feed analysis

From a forage standpoint, as plants mature, fiber concentration increases. Fiber is less digestible than other plant parts and fiber digestibility declines as plants mature. Both these factors cause the concentration of energy in plants to decline as maturity advances. In addition, as plants mature, the increase in fiber and bulkiness reduces the amount of the forage an animal can consume. For an example, cows don't quit eating straw because they don't like it, they quit because they can't stuff anymore into their rumen because of straw's low digestibility due to the high fiber content. Protein concentration also declines as plants mature. The three factors that impact forage quality are 1. maturity at harvest; 2. maturity at harvest; 3. maturity at harvest.

Getting a representative sample, packaging it properly for transport, knowing what to test for and understanding the number in the analysis are critical. These are the items that I plan to address. In the final segment of this article there will a discussion on nitrates in forages.

Sampling and Packaging

It is important that samples closely resemble the entire "lot" of forage. Each sample must represent only one "lot" of forage. A "lot" of forage consists of forage harvested from one field at the same cutting and maturity. All forage from the same "lot" should be similar for: type of plant(s), field (soil type), cutting date, maturity, and

variety. Variation in any of these characteristics can cause substantial differences in the nutrient value of the forage.

Sample baled hay after curing (usually 17 to 21 days after baling), using a core sampler or probe. Such an instrument is essential for collecting a representative sample and most commercial labs will not accept a "grab sample" of hay. For large round and square bales, the probe should penetrate at least 18 inches into the bale and have an internal diameter of at least 3/8-inch. If the probe is 18 inches long or longer, 15 large round bales should be adequate if the "lot" size is 30 to 40 bales. Collect one sample from each bale by coring straight in from the center of the end of square bales and from the wrapped circumference of round bales. Place the entire sample into a plastic bag and seal tightly. For loose or compressed hay stacks, use a hay probe at least 24 inches long to collect 15 or more samples from each "lot". Sample loose hay stacks from the top and from the side. Compressed loaf stacks require six sampling locations: 1) top front, 2) top middle, 3) top rear, 4) lower front side, 5) lower middle side, and 6) lower rear side. For chopped or ground hay collect about 10 small samples during grinding process and place all the samples into one plastic bag and seal tightly. If you are sampling previously ground or chopped hay, collect about one-fourth of the samples from the top half of the pile and the rest from the lower half. Avoid allowing fines to sift between fingers.

Label the bag with your name, address, lot ID, and type of material. Most testing labs provide a description sheet to report this information and to request the desired tests. Place samples in polyethylene freezer bags, squeeze the air out of the bag, and seal tightly. If you are sending a sample of silage, double bag silage samples for extra protection. Use extra caution if subdividing a large hay sample

because sub-sampling dry hay can result in loss of fines and leaves. Freeze samples containing over 15 percent moisture until shipping; store dry samples in a cool location.

Nitrates

High nitrates could be a problem for cattle producers planning to feed or graze annual forages such as corn, cane, grain sorghum, millet and Sudangrass. When plants are growing normally, they absorb nitrates from the soil, but stress factors, such as drought or hail, interrupt plant growth, reducing photosynthesis and conversion of nitrates to plant proteins. High nitrate levels in forages can cause nitrate toxicity in cattle, which can kill the animal or cause abortions in pregnant cows. Weeds such as pigweed, lambsquarter, ragweed and to a lesser extent, Russian thistle, have the potential to be high in nitrates. When reading a nitrate analysis report, producers should look at how the nitrate levels are expressed. The method used in expressing nitrates will determine what level is toxic to an animal.

With proper management, high nitrate forages can be fed safely. Dilute high nitrate feeds with safe (low nitrate) feeds. Also adapt cattle to diets that contain nitrates. Most losses from nitrates occur when hungry cattle are exposed to feeds that are high in nitrate. Some producers may feed drought stricken corn as "green chop". If you do this management practice, set the chopper head up to avoid the bottom 6 to 8 inches of the corn stalk. Most of the nitrates reside in the lower portion of the stalk. Assume that there are nitrates present, so adapt slowly. Chop only what will be fed in one feeding and do not let green chop sit in the wagon over night to feed the next day. Green chop that contains nitrates and sits overnight, the nitrate will be converted to nitrites and nitrites are more toxic to the animal than are nitrates.

Dr. Rick Rasby, Professor of Animal Science
Animal Science, University of Nebraska - Lincoln, Lincoln, NE

Twin Forks' Cow/Calf Strategic Planning Services

Twin Forks Clinic is proud to announce our new Cow/Calf Strategic Planning Services. At Twin Forks, we believe it is important to plan your strategy for the future instead of simply reacting to the present. That is why we are offering our new Cow/Calf Strategic Planning Services.

The Cow/Calf Strategic Planning Service (CCSPS for short), is a three pronged approach to help cow/calf producers plan for the future. Our goal is to help producers analyze their current situation and plan ahead in these three areas.. Health, Nutrition, and Reproduction.

Health

As a veterinary clinic, we pride ourselves on our practice management. Disease **prevention** through vaccination, proper management and low stress handling are paramount in making our recommendations. One tool that we have in our toolbox is a software package called the Integrated Herd Health Planner (IHHP). This tool was provided by Pfizer Animal Health.

We start out by filling out a questionnaire, by doing this we are able to take into consideration your personal management practices and individual herd challenges when developing your plan. With the use of IHHP we can develop a customized animal health event calendar specifically for your herd. IHHP will also produce a shopping list, which allow you to better plan for your animal health product purchases, it will also help us plan our inventory. With the use of IHHP, we are better able to coordinate services such as pregnancy, pelvic, and breeding soundness exams.

Nutrition

With feed costs ranking second only to the cost of the cow, proper

management of harvested and purchased feeds is more important than ever. Part of the CCSPS includes planning the analysis of your feedstuffs at the appropriate times. We can help make sense of the analysis that you receive and even fine-tune your rations if necessary. In some cases we may be able to reduce or eliminate some of your supplemental feeding altogether.

Reproduction

Reproduction is extremely important to the income to the cow/calf operation. While we are planning your health and nutrition programs, the next logical step is to take a look at your current reproductive plan and see if any adjustments need to be made.

We can help with selection and management of your replacements by planning ahead and making sure that they get evaluated based on their reproductive tract at the appropriate time. We can also help you setup any synchronization programs that you may wish to use. Planning for the management of your bull battery is very important also. More strategic planning of breeding soundness exams, nutrition and vaccination programs to the bulls can make the difference between a good year and a bad one. We can also help you with bull selection if need be.

It's sometimes easy to get wrapped up in the day-to-day events in your operation, that we forget to stop and strategically plan ahead. We can't do much about the markets or the state of the economy, but planning your strategy with someone like your veterinarian, can pay huge dividends towards the things you can control. For more information on how we can help with and work your plan, feel free to talk to one of vets or you can call Kevin at Twin Forks-Benkelman at 308.423.2895.

Kevin L. Cawthra, Animal Scientist, Twin Forks Clinic

BeefTalk: Tips for Marketing Cows and Bulls

Every year, beef operators need to make decisions on how many cows and bulls will remain on the production inventory sheet and how many will shift to the market column. In preparation for that shift, as well as management during the marketing process, beef producers need to recap the year's production and review their marketing strategies.

The "Executive Summary of the 2007 National Market Cow and Bull Beef Quality Audit" published by the National Cattlemen's Beef Association and funded by the beef check off is an excellent document to review and ponder. The publication recognizes and highlights the need for producers to "recognize and optimize cattle value, monitor health, market cattle in a timely and appropriate manner, prevent quality defects and be proactive to ensure beef safety and integrity."

The beef cattle industry monitors and provides opportunities for producers to continue improvement within their own herds and improve the industry. An industry only can be as good as its weakest point.

When producers band together, industry weak points can be identified and eliminated. Education can encourage the implementation of managerial improvements that can benefit individual producers and the industry.

The publication highlights points that could streamline the process of marketing cows and bulls. The new process could increase the value of market cows and bulls.

The publication lists nine main improvement points:

- Reduce the use of electric prods and other aggressive driving aids when moving cattle.

- Improve footing so cattle don't slip and injure themselves.
- Follow the guidelines for animal care and handling.
- Market your cattle before they become too thin or too lame for transport.
- Maintain record keeping systems to verify your "best" management practices and reduce or eliminate the potential for liability surrounding issues of food safety.
- Recognize and optimize the value of your market cows and bulls. Cows and bulls comprise a significant portion of your farm or ranch income, so they need to be managed and marketed in ways that add value, not subtract from it.
- Ensure the safety of your product. Cows and bulls must be free of chemical, pathogenic and physical hazards when you ship them for harvest.
- Continuously monitor herd health. It's in your best interest to observe the health of your cowherd and to ensure your cows and bulls are marketed in a timely and appropriate manner.
- Prevent quality defects. Things like bruises, injection-site lesions, improperly placed brands, dark cutters, or cattle that are too thin or fat, have inadequate muscling caused by emaciation, are preventable.

The cattle business exists to produce beef and other byproducts for human consumption. Ultimately, the value of beef determines the long-term stability of the operation.

As with any business, the first dollar spent and the first dollar earned are noteworthy events. However, the last dollar earned has to be greater than the last dollar spent.

The value of beef in the calves and young cattle that are advertised and sold is significant. Likewise, those dollars that are brought in by those cattle leaving the production inventory are critical.

Astute managers routinely monitor income from steer calves, nonreplacement heifer calves, heifers sold as replacements, heiferettes and market cows and bulls. Every dollar taken in through effective management and marketing of market cows and bulls is added income, which needs to be greater than expenses.

In summary, cattle producers need to recognize the value of market bulls and cows and strive to increase their value through proper management, recordkeeping, handling and timely marketing.

By Kris Ringwall, Beef Specialist NDSU Extension Service

USDA EIDs available for Brucellosis Vaccination in Nebraska

The state of Nebraska has made electronic tags available for identifying cattle that have been vaccinated for Brucellosis (bangs). Producers in Nebraska can elect to use electronic tags in lieu of the orange clip tag to identify those cattle that have been bangs vaccinated at no additional cost.

Many producers have been using electronic tags in their cattle already to help facilitate record keeping. The tags that we will be using will be orange and have the USDA logo printed on them. This should help marketing these cattle in the future under Country of Origin Labeling.

In order to be able to use these tags, the producer must have a premise number. If you do not have a

premise number, we will simply use the orange clip tags as always. If you do not have a premise ID, but would like to use the electronic tags, getting a premise ID is fast and easy. Just simply log into the website at www.locatein48.com. You can register online or print off a form to mail in. We have helped several clients register their premise.

We have yet to receive the tags from the state, but they are supposed to be packaged in numerical order so that we can apply them without having to scan them with a tag reader, making them just as easy to keep track of as the clip tags.

If you are interested in using electronic ID tags at bangs vaccination time be sure to ask about them at the time you make your appointment to bangs vaccinate. Also, if you have any questions, or need help registering your premise, feel free to give Kevin at Twin Forks-Benkelman a call at 308.423.2895.

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