



Great Plains Livestock Consulting, Inc.

500 S. 4th St.
P.O. Box 377
Eagle, NE 68347

The Great Plains News Feed



Great Plains Livestock Consulting, Inc.

Phone: (402) 781-9378

Fax: (402) 781-9379

www.GPLC-Inc.com

November /December
2009

The Latest Across the Plains



Holiday Season

Hopefully the weather has allowed everyone to get in the fields and continue with harvest all while the holiday season comes upon us. It is easy to get caught up in the hustle and bustle of the season but remember to stop every once in awhile and enjoy the important things in life. Have a safe and happy holiday and please find the enclosed calendar as a thank you from the staff at Great Plains Livestock Consulting, Inc.

Welcome Wayne Schiefelbein!



Wayne grew up on a diversified livestock farm in South Dakota. He received his B.S. and M.S. degrees from South Dakota State University. During his tenure in the pork industry, Wayne has managed swine nutrition programs for two feed companies, a swine production management service, and the U.S. division manager of a Canadian swine seedstock supplier. Wayne joins the Great Plains Livestock Consulting team bringing over 30 years of developing and applying technology in the livestock industry.

Something to look at

Just a reminder; all of our past newsletters are located on our website. If there was an article you wanted to read again or just see what you might have missed you can go to the website and find it. Also, did you see the article in Drovers magazine? Our nutritionists provided input for bunk management, managing waterers, rations, identifying strengths and weaknesses, and communication. Classifieds can now be found on our website as well. Check out the cattle for sale, job listings, ads, or have us put one up for you!

Staff



Ki Fanning, Ph.D., PAS

Ruminant Nutritionist
Cell: (402) 890-5505
Ki.Fanning@GPLC-Inc.com

Jeremy Martin, Ph.D.

Ruminant Nutritionist
Cell: (402) 890-5507
Jeremy.Martin@GPLC-Inc.com

Dan Larson, Ph.D.

Ruminant Nutritionist
Cell: (402) 560-4052
Dan.Larson@GPLC-Inc.com

Bill Chapman, M.S., PAS

Dairy Nutritionist
Cell: (402) 416-3277
bill@cmpdairy.com

Stan Smith

Office Manager
Stan.Smith@GPLC-Inc.com

Brent Nelms

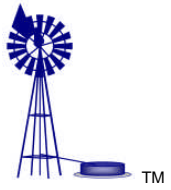
Office/Marketing
Brent.Nelms@GPLC-Inc.com

"Turning Science into Money"

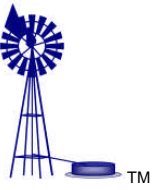
Calendar of Events



- **Nov. 7-20** North American International Livestock Exposition, Louisville, KY.
- **Nov. 16** West Central Cattleman's Day & Trade Show, Lincoln County Fair Grounds, North Platte, NE.
- **Nov. 18** Managing Margins for Optimal Beef Returns, Chicago, IL.
- **Nov. 19** Kansas State University Swine Day, Manhattan, KS
- **Nov. 24** Illinois Commodity Conference, Bloomington, IL
- **Dec. 1-3** Range Beef Symposium, Casper WY
- **Dec. 2-3** SDCA Annual Convention & Trade Show, Sioux Falls, SD.
- **Dec. 4-5** Missouri Livestock Symposium, Kirksville, MO.
- **Dec. 11-13** Kansas Beef Expo, Kansas State Fair Grounds, Hutchinson, KS.
- **Dec. 11-12** Cattle Industry Convention & Trade Show, Springfield, MO.
- **Jan. 4-6** ICA Annual Convention, Ames, IA.



The Great Plains News Feed



Timely Reminders

General

- ✓ Contact us about feeding light weight corn. It still has good feed value or can be put up as high moisture corn, depending on moisture content, and priced better; talk with neighbors to see if they have any.
- ✓ Analyze Winter Feed Supplies.

Beef

- ✓ Wean Calves – Calves and feed are cheaper; contact us about setting up backgrounding diets.
- ✓ Prepare supplies and pen conditions for weaning calves.
- ✓ Keep pens scraped and get manure hauled to pastures.

Swine

- ✓ Check ventilation and heater settings for winter months.

Unused Feed

- ✓ Don't judge people by their relatives.

Winter Cow Management



By Dr. Dan Larson, Ruminant Nutritionist

Managing a dry cow during the winter is often overlooked. Yet, it is a critical period for calf production and to get the cow in condition for a successful breeding season. The goal of a cow management strategy is to limit cost without sacrificing calf production or rebreeding. Often the second trimester is considered the best time to save dollars invested in feed. This is a period of minimal fetal development; however, the growing calf still has a requirement for protein and energy. Between 4 and 5 months before calving, the gestating cow requires 1.7 to 2.0 lb of protein per day. This would mean that a cow grazing dormant grass or cornstalks or consuming low quality hay with an average of 7.0% protein would still require 0.3% protein. Providing about 1 lb per day of dried distiller's grain or 2-3 lb of good quality hay would meet her protein requirements. Provided there is adequate forage, a cow whose protein needs are met will consume enough dry matter to meet her second trimester energy requirements.

That nutrition 101 lesson is a lead-in to a beef cow reproduction 400 discussion. While the afore mentioned level of protein is necessary to maintain cow weight and body condition, it is also imperative to calf development. As I mentioned, the calf, while not growing appreciably, is developing. During the second trimester of pregnancy, the organ systems are developing and acquiring functionality needed later in life. It is tempting to save money by restricting nutrient intake of the cow if she is in good body condition, especially by limiting expensive protein feeds. While this strategy may not cause any appreciable weight loss by the cow, substantial protein restriction may have long-term effects on the calf. Any effect on the calf will likely be magnified in the young cow, who in addition to providing for a calf, is still growing herself. Work with your nutritionist to formulate supplement that will meet the needs of the growing cow and maintain condition on the mature cow.

The most obvious period of increased nutrient requirements is during the third trimester. Nearly 75% of fetal growth

occurs during the last 60 days of gestation. It is obvious that a cow's nutrient requirements are going to increase concurrently. A cow's protein needs jumps to 2.5 lb per day during the third trimester. Not only is this increase necessary to maintain cow weight and condition, but added protein during the last 100 days of gestation might alter calf development. Steer calves from dams provided added protein during late gestation may be heavier at weaning, healthier in the feedlot and have higher quality grades. Heifers from protein supplemented dams may also have enhanced reproduction later in life. More noticeably, calves from cows that are adequately nourished are healthier at birth, likely due to improved colostrum quality. Clearly, nutrition plays a huge role in reproduction.

Beyond calf production, proper cow nutrition is also essential for rebreeding. This is most evident in the growing female, the bred heifer. Body condition scoring is an integral tool for cow management. As a rule of thumb, target an average condition score of at least 5.5 for mature cows and a score of 6 for heifers entering the calving season. A cow calving at a body condition score of 4 will start cycling up to 40 days later than the same cow that calves at a condition score of 5.5. In order to maintain a 365 day calving season, the post-partum interval has to be less than 85 days, which a cow in a condition score of 5.5 can achieve. However, the condition 4 cow will require 135 days to rebreed and eventually fall out of the herd. The transition from a late gestation diet to an early lactation diet is also extremely important for rebreeding. A cow's protein and energy requirements increase by approximately 25% following calving as she enters early lactation. The 25% increase is necessary to maintain body condition. It is more efficient to maintain a cow at a condition of 5.5 pre-calving than to play catch up after calving.

The take home message is to create a nutritional plan that makes use of cheap feed sources when cow requirements are lowest. Save the higher quality feedstuffs for the late gestation and post-calving periods. In addition to rebreeding, nutrition of the cow affects the calf and can alter lifelong productive ability. In addition to protein and energy, a diet that meets trace mineral and vitamin needs will improve newborn calf health and viability. Contact your nutritionist to develop a cow management plan to minimize cost and maximize production.

Molds and Toxins



By Dr. Ki Fanning, Ruminant Nutritionist

The 2009 harvest season has proven to be one of the most difficult in recent memory and we will have to deal with the results for the next twelve months. The wet corn left in the fields would seem to be a good feed source. However; much of the corn that has been harvested and that has yet to be harvested as earlage or high moisture corn has had mold growth. These molds produce toxins that may have detrimental effects on performance. Insect damage and other stresses on the plant increase potential for mold growth.

Distillers grains will not destroy the toxins; in fact the process will triple the

concentration of toxins just as it does the protein. Gluten feed on the other hand is a product that comes from a food grade plant; therefore, the corn is carefully screened prior to entry into the system. This ensures that the products manufactured for human consumption are not contaminated; consequently neither is the gluten feed.

Aflatoxin is the most well known and researched toxin. Aflatoxin is considered a carcinogen and therefore, is regulated by the FDA. If over 20 ppb in corn, the corn is considered contaminated for dairy cattle; milk must contain less than 0.5 ppb. Symptoms of aflatoxin poisoning are: reduced growth, abnormal blood clotting, hemorrhaging, jaundice, reduced immune function, and death.

Zearalenone is as an estrogenic compound that may either cause animals to display a constant heat or may inhibit cyclic activity. Therefore, if developing breeding stock, grains contaminated with zearalenone should not be fed. Zearalenone contamination is a strong possibility this year because of the lower temperatures and the wet weather we have had. Symptoms of this toxin are: reduced conception rates, poor feed efficiency, swelling of female reproductive organs, reduced milk production, reduced growth rate, and increased morbidity or mortality.

Vomitoxin is produced by the pink mold that grows in warm rainy weather. Lower temperatures may increase toxin production once the corn or small grain is infected. This toxin's symptoms include diarrhea, reduced reproduction, vomiting, reduced growth, milk production or egg production, poor feed efficiency, neurological problems, and increased morbidity or mortality.

Fumonisin is more prevalent during periods of high humidity when preceded by hot and dry weather. Fumonisin cause leucoencephalomalacia in horses and pulmonary edema and liver damage in swine. Cattle and sheep are not affected to as great of an extent, however liver damage may still occur. Poultry are even more resistant than cattle and sheep.

The T-2 Toxin causes digestive upsets, hemorrhage of the intestine, poor growth and feed efficiency, bloody diarrhea, and an increase in morbidity and mortality.

Table 1. Mycotoxin toxic level

	Beef	Dairy	Swine	Equine
Aflatoxin, ppb	20	5	20	50
Zearalenone, ppb	1000	300	200	100
Vomitoxin, ppb	1000	2000	1000	2000
Fumonisin, ppb	1900	2000	2000	1000
T-2 Toxin, ppb	150	100	100	500
http://www.dairylandlabs.com/				

If the corn must be used for feed, please consider these suggestions. If it is going to be ensiled use an inoculant, pack well, and cover the pile (do everything possible to promote fermentation). **Feed a toxin binder or flow agent or conditioner (call for more information on this).** Monitor dry matter intake as many of these toxins will reduce intake slightly and can be detected if intakes are monitored. The incidence of bullers may increase either due to estrogenic compounds or a reduced intake of MGA. It is very important to test for the mycotoxins. Blend the feed with other unaffected feeds to lower dietary levels of mycotoxins. For additional information, testing supplies, or diet formulation please give us a call at (402) 781-9378.