

Adams Advanced Nutrition, Inc.

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Feeding Dry Cows...

Making the next lactation count!

On many dairy farms nutrition of the dry cow receives less attention than it deserves. This is a critical time for high producing cows, since performance throughout the subsequent lactation can be dramatically influenced by the diet and management during the later stages of the previous lactation and dry period. Incidence of several metabolic diseases can be influenced or reduced by careful dry cow nutritional management.

Regaining body tissue energy and protein stores should occur prior to the dry period, and can sometimes be a challenge to control on a whole-herd basis (Fronk *et al.*, 1980). All herds have cows going dry at a range of body condition scores, but field experience shows that metabolic problems during the next lactation tend to be lowest in those herds that minimize the variation in body condition of cows going dry. A common recommendation is to dry cows off at the desired body condition and maintain this condition score during the dry period. Other recommendations include further modification of body condition during the dry period. Often this occurs when a group of cows has gained excessive condition in late lactation due to a reproductive or nutritional problem. A study performed at the University of Guelph, Ontario, with Holstein cows, demonstrated the positive effects of a transition ration and hinted at negative effects on lactation performance when cows are forced to lose weight during the dry period. This data should lead us to question the advisability of recommending drastic weight loss of dry cows during the dry period.

In recent years a lot of attention has been directed towards the positive response many producers have experienced from instituting a dry cow transition ration containing more concentrate. Available data do not clearly support a single approach for carbohydrate nutrition. Overall however, research supports feeding diets during the close-up period that contain moderately high concentrations (34-35%) of NFC composed of both starch-based and nonforage fiber based concentrates.

Research at the University of Wisconsin and at Michigan State University has demonstrated that liver accumulation of fat (fatty liver) can occur before calving. However, research from various sources has shown beneficial effects of several compounds to improve energy status and lower fatty liver problems. New products based on rumen-protected choline, monensin, calcium propionate, and propylene glycol are being used effectively to improve transition diets. While niacin has had some success, some research has not shown a reduction in fatty liver by adding niacin and did not support earlier work which suggested a dramatic improvement in prevention of ketosis by niacin supplementation (Illinois data).

Another area of research, which has provided more consistent and exciting results in dry cows, is the reduction of



milk fever incidence achieved by addition of mineral salts changing the cation/anion balance of the dry cow ration. Some of the earliest work with prevention of milk fever by hormone treatment and more recently by modification of the dry cow ration cation/anion balance was performed by Horst and Goff at the USDA's National Animal Disease Center in Ames, Iowa. Some of these studies were done with

Jersey cows fed a diet with a high calcium:phosphorus ratio (4:1), which should promote milk fever problems. It is important to remember that anions are acidogenic and promote release of calcium stored in the bone, or intestinal calcium absorption, while cations are alkalogenic and may reduce release of calcium from the bone or intestinal absorption (Gaynor *et al.*, 1989). Ammonium chloride and ammonium sulfate are two anionic salts which are often used to adjust the anion/cation balance. It's important to monitor dry matter intake and not lower it with added anions. There are several sources that are relatively more palatable based on byproducts, or combinations with grains or molasses. Currently, debate exists whether lowering cations alone prepartum can sufficiently alleviate hypocalcemia without adding anions. The level of calcium to supplement prepartum also continues to be debated, especially in relation to cation/anion balance. Research indicates magnesium should be increased and phosphorus controlled in the prepartum diet. More information will be presented in future issues on the active area of research with dry and transitions cows

(Edited from an article by Dr. T.R. Johnson, Purdue Dairy Specialist; and a recent review by Overton, Waldron and Smith, Cornell University)

INVEST IN SILAGE...

INVEST IN QUALITY!

It's time to start chopping corn and making silage! This is a critical process, when quality rations are the goal. Regardless of the quality of silage, treating silage with a quality, research-tested preservative or inoculant can make a difference in your ration program. Invest in your silage today! Get the facts and order your preservative or inoculant before you start shipping!

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PRESERVATIVES & INOCULANTS
FOR A QUALITY DIFFERENCE – ORDER TODAY**

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*Interested in discussing topics in this newsletter, or want to do a better job feeding and managing your cows? Looking for research-tested corn hybrids for the coming year? Call me! My goal is to help you.
That's Renaissance's commitment to you!*

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**RENAISSANCE... IMPROVING YOUR
PRODUCTIVITY & PROFITABILITY!
THE TEAM FOR RESULTS**

Looking ahead...

The harvest is underway and it is time to consider late summer/fall planting and buying seed for 2007. Renaissance offers quality, research-tested seed that can make a difference in your feeding program. From grasses, small grains, and alfalfa to BMR Sorghum-Sudangrass and corn hybrids for silage or grain... I can provide what you need and help to ensure the seed you select is a "fit" with your soil, climate, acreage and nutritional program. This includes excellent, carefully evaluated products from **WOLF RIVER VALLEY, MYCOGEN, GARST, KING'S AGRISEED** and others! Check it out and invest today in quality forage for 2007. Selecting the best seed can impact productivity in the future. That's what we can provide! Call today!

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PLANNING FOR FALL AND WINTER FEEDING ~ It is that time of year again, when you begin to take stock in your forage inventories for the coming fall and winter months. Calculating what you will have and how much you might need to purchase can help with planning and budgeting, as well as ensuring your cows have what they need to maintain productivity and profitability. The vast differences in weather conditions this past growing season have created an abundance of available forage in some areas and dire conditions in others. Managing your forage inventories is a critical exercise. There are many ways to determine how much silage you have. Among available tools is a computer-based **SILAGE CAPACITY CALCULATOR**, which can be located at <http://www.uwex.edu/ces/crops/uwforage/storage.htm>. This is one way to obtain information about your forage stores. Ask me about other ways to determine forage inventories this fall. Working together we can help to keep your cows eating and producing to their optimum potential!

A POINT TO PONDER... September is here and with it comes the start of school and fall-related activities. Once again the school bus will pass the farm, taking young people to and from school each day. There are the night activities like football games, church functions, and many more opportunities. The hustle and bustle of fall traffic and activities often catches us by surprise. As things start to "wind up" this fall, take time for reflection and a few "quiet" moments. This can help to keep things in perspective and to maintain a healthy outlook on life and the happenings all around us. Enjoy the last of summer and the start of fall!



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September...

*summer fades & moving toward fall!
preparing for winter,
making rations count... and more.*

Check it out.