Dairy Newsletter

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Are Feed Costs Eating Your Lunch?

Corn prices have risen and most energy feedstuffs are following the price increase of corn. The following are ideas, many already implemented, and that may provide a handle on controlling feed costs.

TMR mixing:

Prepare an on-farm mix of those feeds fed in small quantities. These feeds are generally the most expensive so a mixing error is more costly. Pre-mixing simplifies the daily mixing chore and better ensures distribution of these feeds. With a feed that costs $1,500 per ton, with a feeding rate of 100 lbs in a 10,000 lbs TMR batch, accidentally adding 125 lbs adds $18.75 to the cost of the batch or about 19 cents per cow per day.

Weighbacks/refusals:

It is important that feed is available when milking cows want to eat. Targeting a 5 -10% weighback may ensure that feed is always available but also means feed costs are 5 - 10% higher unless weighbacks are utilized in low producing groups, heifers or steers. A reasonable target could be <3% weighbacks, but attention to bunk management is required.

Internal parasites/worms:

Dairy cows exposed to moderate or high levels of parasites, grazing pastures or running on contaminated exercise lots have a high risk of a parasite load. These worms "steal" nutrients, lower milk production and affect cow health. Removing these worms in November-December (after a hard frost) keeps the herd relatively worm free until spring. Fenbendazole (Safe-Guard) provides an effective and convenient dewormer program.

Low Producers:

Keeping the barn full is an economic dogma. Higher feed costs mean that a higher minimum milk production is required for break-even. Cull that lower (non-pregnant) producer, which is not making money. Also a ration for the lower producing cows could save 25-50 cents in feed costs per cow per day. Switching a cow to that lower production ration will usually cause a drop in production especially if there is a big change in energy density. This production drop may be useful for high producing cows near the time to dry-off.

Forage preservation:

It is too late to add preservative to this year's crop(s) but dry matter losses in harvesting, storing and feeding forages can easily exceed 10%. Forages are also worth more today. Now is the time to "book" your inoculants and HM hay treatments. Vigorsile III for haylages, EBL for grain silages, buchneri for HM grains and long bunk life for corn silage and Hay Defender for HM hay.

Rumensin & CinnaGar:

These rumen modifiers alter the rumen microbial population leading to more energy available to the cow and better feed efficiency. Improving feed efficiency (lbs milk/lbs DMI) from 1.4 to 1.5 saves about 25-30 cents per cow per day.

AAlphatek

AAlphatek reduces protein degradability in the rumen and allows reduced use of high cost RUP sources with replacement of more economical sources to RDP. From our experience, you can save 5 to 15 cents per day by using AAlphatek and AAMPS.

Composition of Corn Silage Harvested in 2010

With the limited amount of rainfall, and to some extent the wide swings in temperature, the dry down of corn was very rapid this year. Yields of corn silage have been quite variable across the state and even within a farm and field, from moderate to quite good based on rainfall and ridges versus valleys in fields. There were a lot of problems with molds and mycotoxins in the 2009 crop, but there is much less of a problem with mold this year. Based on the data from the Dairy One Forage Laboratory (http://www.dairyone.com) in Ithaca, NY, the corn silage harvested this year

has higher starch and lower NDF concentrations compared to the 2009 crop (Table 1). This likely reflects a higher ear to stalk ratio in the corn for last year. At first glance, one would think that this means a higher energy value for the 2010 corn silage. However because of the rapid dry down, some farmers may have harvested the silage at higher DM than desired (harder kernels) and if a silage processor was not used, digestibility of the starch may be low. Digestibility should improve with advancing storage time. On the other hand, with proper stage of harvest and the higher starch (lower NDF) concentrations, rations need to be formulated with careful attention to physically effective fiber, particle size of the dry corn grain, and source of grain (dry versus high moisture versus steam flaked) that can affect ruminal pH and rate and extent of starch fermentation. The new crop corn silage should be analyzed, be allowed to stay in storage as long as possible based on forage inventory, rations reformulated, and then observe cow performance (yield and composition of milk).

Table 1. Composition of corn silage harvested in PA & NY 2010 versus 2009.[1]

Item	2010 (n = 539)		2009 (n = 17,838)	
	Average	CV	Average	CV
DM, %	33.3	13.7	32.8	19.2
CP, %	8.00	9.63	8.10	12.4
ADF, %	23.8	12.8	25.3	15.4
NDF, %	40.4	11.1	42.7	13.4
Starch, %	36.0	16.5	33.4	22.2
Ash, %	3.87	22.9	4.23	28.6

[1]CV = Coefficient of variation, DM = dry matter, CP = crude protein, ADF = acid detergent fiber, and NDF = neutral detergent fiber.

Dr. Maurice Eastridge, Extension Dairy Specialist, The Ohio State University

Rethinking BCS at Calving

The traditional paradigm for body condition at calving is that cows need to carry extra fat stores to use for energy after calving since DMI is low. At the Discover Conference on Transition Cow: Biology and Management held in September, a radical and new alternative way of thinking was introduced. Phil Garnsworthy from the University of Nottingham proposed that perhaps fresh cows DMI was low because they carried too much excess body condition at calving. Cows that calved at BCS 3.75 or cows that calved at 1.75 were both at BCS 2.5 by 15 weeks of lactation. Dr. Garnsworthy suggested that fat cows reduced their DMI in early lactation and may exaggerate negative energy balance. When BCS at calving was evaluated over many different studies, it appeared that optimal BCS as calving for different productive functions was different.

Oxidative Stress – New Thinking for Old Concerns

At the recent Discover conference on transition cow biology and management, Umberto Bernabucci from the University of Tuscany, Italy described the role of oxidative stress in transition cow management. Oxidative stress occurs when tissues are active and metabolizing nutrients. Oxidation of the nutrients to supply fuel to the tissues generates molecules that contain oxygen that can be harmful to tissues. The body uses this in fighting pathogens but if it becomes excessive it can get out of control and lead to harm.

Cows with high BCS at calving that mobilize excess body fat are at a greater risk for oxidative stress than cows that do not mobilize excess body fat. Oxidative stress may interfere with proper liver function in these cows. By enhancing the body's normal stores of antioxidants (vitamins A and E) or supplementing antioxidants (Agrado Plus or Proviox) during the dry and transition period, you may be able to reduce the severity of the oxidative stress and lessen the impact of liver disorders on your fresh cows.

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