



Feeding Straw to Calves

In a recent Akey trial, calves initially 8 weeks old, 166 lb of body weight, and 2.5 body condition score were fed 0, 3, 6, or 9% chopped wheat straw blended into an 18% textured grower feed for 8 weeks on-trial. The straw diluted the nutrients in the final total mixed ration. The treatment with 9% straw was 16.5% CP, more than adequate for this size and age calf. As straw increased, average daily gain decreased from 2.79 lb/day to 1.95 lb/day and intake decreased from 8.64 lb/day to 6.93 lb/day. Similarly, as straw increased, change in hip width (2.7 inches down to 2.1 inches) and body condition (0.5 down to 0.25 units) decreased. Straw is very bulky and indigestible. Based on these data, straw should be chopped and included at less than 3% of the diet (or less than 0.25 lb chopped straw per calf daily) of calves under 4 months old.

Dealing with Low Milk Prices

During 2007 and 2008, milk prices were not the biggest concern. With the start of 2009 this has changed significantly. February Class III milk price was \$9.31 per cwt. This is 34% and 45% lower compared to 2007 and 2008. Futures are indicating that the Class III milk price will improve during 2009, but still an average of \$9.70 per cwt of milk is predicted by USDA for 2009. As an individual producer, you are not able to change the milk price, but there are things you can do to reduce your cost or improve your efficiency. We will discuss a couple of options in this article.

Feed cost is a large expense in dairy production. Accurate feed prices are needed for purchased feeds to calculate feed costs. Make sure to give a value to corn silage, corn and haylage. The easiest way is to use the estimate of market value. With cost and inclusion of each ingredient in the diet, an overview can be generated of the contribution of individual ingredients to the feed costs. With this overview, it might be useful to review the additives in the diet. Be aware that there is often a benefit to including an additive in a diet. For example, if eliminating an additive saves \$0.05 per head per day, but will reduce milk yield with 1lb per head per day, it is more economical to keep the additive in the diet. Also, look at the inclusion rate of minerals and vitamins. We often tend to oversupply them for safety. This is a good time to look if you are feeding close to requirement levels. If you are supplying well above

requirement, there is an opportunity to reduce feed costs slightly.

To improve cash flow, maximize use of feeds in inventory like corn silage. Another thing to look for is the reuse of diets. This is a way to reduce shrink. Refusals are often thrown away and there is a cost to do this. Including refusals in the TMR for cows or young stock is a way to reduce the costs of shrink. This is a better option than trying to feed for an empty feed bunk which could reduce milk yield, especially for the lower producing, less dominant animals in the herd.

Milk yield declines faster during lactation than dry matter intake. This means that cows in late lactation are consuming relatively more feed to produce a pound of milk. Therefore, it might be profitable to take a close look at the later lactation cows, which are often the lower producing cows, especially in herds that are overcrowded. Culling or drying off these cows might improve productivity of the other milking cows. Another option is to start using different diets for the lower producing cows. Akey developed a spreadsheet in which you can put milk production, feed cost and milk price. This spreadsheet can be used as a lookup table to see what the break even is for income over feed cost and can help identify the most inefficient cows in a herd.

In all decisions you make, do not only consider the short term, but also the long term. Things will change in the future and be careful that changes you make today do not affect your profitability in the long term, when milk prices are increasing. An example could be selling heifers. In the short term, this will improve your cash flow, but in the long term you might not be able to increase milk production due to a shortage of good close-up heifers.

Quality Control Programs for Dairy Farms

Businesses are constantly promoting different programs and certifications for quality control. Dairy farms should be no different. Some of the more popular terms you will see are ISO certified, Safe Food/Safe Feed, and HACCP. Of these, the HACCP programs offer the easiest implementation and probably the best results for individual dairy farms.

A HACCP or Hazard Analysis of Critical Control Points analysis is 'a systematic preventive approach to food safety and pharmaceutical safety that addresses

physical, chemical, and biological hazards as a means of prevention rather than finished product inspection.' For a dairy farm, this implies that procedures to accomplish specific tasks are designed and evaluated for potential spots that can disrupt the overall finished product. Examples are things like milking procedures, new born calf processing, and ration mixing and delivery.

A HACCP program is guided by seven principals that include: 1) conduct a hazard analysis, 2) identify critical control points, 3) establish limits for each control point, 4) establish monitoring requirements, 5) establish corrective actions, 6) establish record keeping systems, and 7) establish procedures to insure the system is working properly. You can think of a successful HACCP program as preventing problems rather than having to solve them.

Seasonal Effects on Milk Components

We have discussed the effect of season on milk composition in past issues of the Dairy Newsletter. It is again the time of year to be reminded that there is a trend for both lower milk fat and milk protein, beginning around March (in the northern half of the U.S.) and reaching a low in the summer months of June, July, and August. Figure 1 shows the average trends for components for the two years, 2007 and 2008 for milk marketed in Federal Orders 1 (Northeast), 30 (Midwest), and 33 (Upper Midwest).

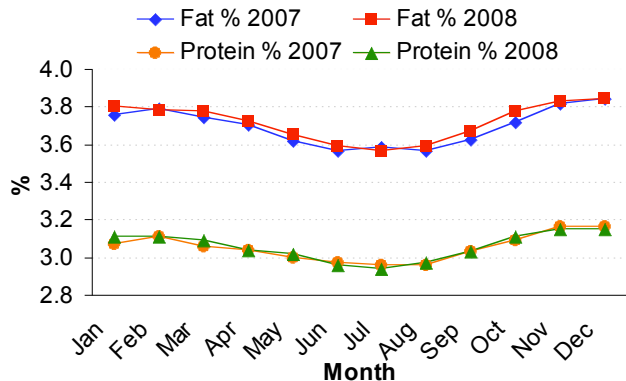


Figure 1. Milk Fat % and Protein % of 2007 and 2008 for Federal Orders 1, 30, and 33

Milk fat declined linearly from March to June in both 2007 and 2008 (Figure 2). The slope of the decline (about -0.061 percentage units/month) was similar between the two years. In other words, on average milk fat declines 0.061 percentage units per month from March to June. For example, if average milk fat is 3.75 in March, then milk fat will be $3.75 - (0.061 \times 3 \text{ months}) = 3.57$ in June.

Milk protein declines in a linear manner from February through July at a rate of about 0.03 percentage units per month (Figure 3). If milk protein is 3.10% in February, expect milk protein to be $3.10 - (0.03 \times 5 \text{ months}) = 2.95\%$ in July.

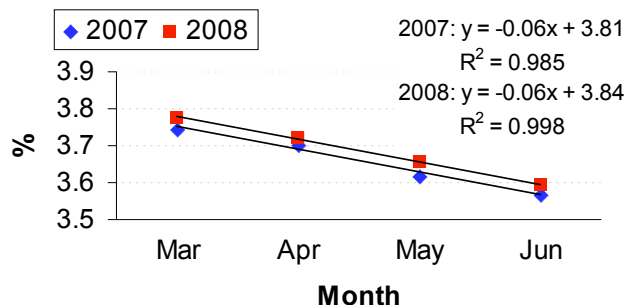


Figure 2. Milk Fat % Mar-Jun 2007 and 2008 for Federal Orders 1, 30, and 33

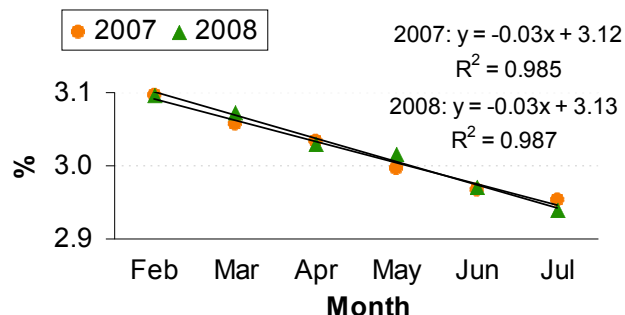


Figure 3. Milk Protein % Feb-Jul 2007 and 2008 for Federal Orders 1, 30, and 33

Producers and nutritionists can use these average changes (assuming the rate of decline in milk components is relatively consistent from year to year) to adjust their analysis of milk components for an individual herd. For example, a ration change is implemented in April is expected to increase milk protein by at least half a percentage unit. However, after a month, milk protein only increases a marginal +0.02 percentage units (assuming this small change can be measured precisely, given normal herd variation in components). One might assume that the ration change is not as effective as expected. However, keeping in mind that that the average seasonal decline in milk protein over one month during this period is -0.03 percentage units, we might argue that this herd effectively achieved the goal of a half percentage unit increase in milk protein. This type of analysis will not pass the scientific validity test, but we have to do these types of assessments on dairies all the time, and seasonal effects on milk components need to be considered.

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