

Dairy Feeding Programs for Lean Economic Times

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With the recent dramatic drop in milk prices coupled with above average prices for feed, fertilizer, and seed, many are questioning or rethinking if they have the most economical feeding program or if there are places where they can cut feed-related costs. Unfortunately, we have visited this topic several times in the last couple of years because of financial crunches in the dairy industry. In this economic climate, we must always remember to adhere to sound feeding practices. Feeding programs need to be designed and implemented which are cost effective and allow cows to milk to their genetic potential and, at the same time, optimize cow health, future performance, and reproductive performance. This article contains a checklist of areas to help you reevaluate your cows' feeding program to see if there are areas that you can tweak to improve the overall management and/or economics of your feeding or forage program.

Forage Strategies

1. Work around the spring weather to ensure that corn is planted and other forage crops (small grains and grass and alfalfa hay/baleage) are harvested in a timely manner. Grasses and small grains (wheat, rye, and triticale) should be harvested at the late boot stage of maturity (just before the seed head emerges from the plant sheath). Alfalfa should be harvested at the early flower stage of maturity. *The higher the quality of forages harvested, the more forage that can be included in a cows' diet which can decrease feed costs!!!!*
2. When purchasing hay, make sure to base this purchase on a forage analysis with relative feed values (RFV) for alfalfa at 170 or above.
3. Improve the digestibility of forages – especially corn silage, the foundation of many of our feeding programs, by planting varieties with higher digestibility. Brown midrib corn silage varieties are higher in digestibility but yields are lower than conventional varieties. With higher digestible brown-midrib varieties, less grain needs to be fed, and production responses can be seen in cows giving over 70 lbs of milk. The one limitation is that weather conditions have a major impact on forage digestibility.
4. Maintain a clean silo face to decrease heating of silage before it is fed. An "unkept" silo face where excess feed is left not only increases feed wastage but this feed heats before being fed which decreases feed intake.
5. "Fork off" spoiled silage and do not feed to any cattle—milking cows, dry cows, and/or heifers.



6. Take time to cover bunkers, trenches, and upright silos to decrease spoilage and reduce storage losses which are usually unseen. Plastic on bunkers should cover not only the top but also sides to minimize storage losses. Tires on top of bunkers and trenches should touch one another to decrease the amount of spoilage.

Feeding Programs for the Milking Herd

1. Remember that all feeding programs should be designed to result in the greatest income over feed cost (Milk income plus cull cow income minus feed cost) such that they do not compromise body condition for a particular stage of lactation, reproductive performance, or health of the herd.
2. Rebalance rations for your herd (or at least reevaluate the nutrient profile of a balanced ration) using current forage analyses. Forage quality may have improved to allow for a cheaper diet to be fed.
3. Maximize the amount of forage fed to the milking herd. Forages are generally the cheapest ingredient in a dairy cow's diet. The question to ask is: Does the quality of the forages on hand allow you to feed more forage and less purchased feed while maintaining production?
4. Are there other feed ingredients (by-products or commodities) that can decrease feed costs, maintain the nutrients needed by your cows, and do not compromise production? These by-products can be fed in a TMR or incorporated into a grain or concentrate mix. Remember when evaluating by-products to look at their nutritive value. FEEDVAL is a simple spreadsheet used to calculate a by-product's nutritive value relative to the prices of corn and soybean meal.
5. Discuss with your nutritionist possible ways to maintain production while decreasing feed costs. Prices for various ingredients change and open lines of communication between both parties are important to keep feed costs in line.
6. Tweak the nutrient specs of the balanced ration. With the help of your nutritionist, reevaluate the ration balancing parameters (i.e. nutrients (crude protein and starch concentrations) or production level) to reflect the production and/or needs of milking cows currently being fed. We need to make sure that the nutrient needs of cows are being met, but, at the same time, we may want to formulate rations with a tweaked nutrient profile.
7. A reasonable amount of weighback should be left in the feedbunk at the next feeding (2-4% of offered feed). Some recent popular press articles have discussed decreasing the amount of feed left in the bunk at the next feeding. This does decrease feed costs, but we need to make sure that all cows get unlimited access and are able to consume feed throughout the day. Fresh cows and first-calf heifers are the cows most often compromised when feed becomes limited or are forced to consume feed that has been excessively sorted. These cows generally are the money makers in the herd—thus it is important that enough quality feed is left when they come up to the feedbunk to eat.
8. Review the various feed additives in your cows' diet to make sure they are effective and return more than their cost.
9. Balance rations for your dry cows. The dry period is the start of the next lactation. Dry

cows should be fed adequate amounts of protein, energy, minerals and vitamins. Without sampling the forages fed and balancing rations for these cows, they easily can be overfed (wasting feed dollars) or underfed (decreases body condition and they do not milk or rebreed as well the next lactation). Dry cows that are too fat at dry off and/or are overfed during the dry period have a higher incidence of fresh cow metabolic disorders such as ketosis or fatty liver in their next lactation. Recently, I have seen well-managed herds where overfeeding late lactation cows (trouble getting cows bred) or dry cows has lead to less production during the next lactation.

10. Test forages and balance rations for heifers. Recently, I also have seen undergrown first-calf heifers which indicate they were underfed before calving. Reevaluating the feeding programs for yearling heifers through calving may not only help get these heifers to the proper size and weight at calving but may save some feed costs through proper nutrition, proper amount of grain and/or the use of by-products and/or urea to cheapen the cost of grain or concentrate mix.

Take Home Message: Dairy cows and heifers need to be fed economically and such that they milk to their genetic potential and with programs that optimize their health and reproductive performance. To accomplish these objectives:

1. Keep your lines of communication open with your nutritionist.
2. Explore with their help opportunities to decrease feed costs.
3. Remember that sometimes saving a dime on feed costs may end up costing you much more in lost milk income or compromised health or reproductive performance if the needs of your cows are not met.