Checklist for the Top 5 Priorities for Fall/Winter Dairy Feeding Programs

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1. Develop a Plan

Develop a plan for using homegrown forages and determine whether you need to purchase other forages.

To devise this plan, sample all forages and submit representative samples to a forage testing laboratory to determine their nutrient content. Forage samples taken at the beginning of the feeding season can serve as a starting place for balancing rations. Throughout the feeding season, take numerous samples (three to four samples) and combine their results to better describe the nutrient content of forages being fed. Single samples often do not accurately represent the nutrient content of feeds sampled.

Concurrently, take an inventory of each forage and commodity in storage. With this information, you can allocate forages stored separately to the various groups of animals and determine shortfalls so that forages can be purchased or other feedstuffs can be added to rations being fed. For example, if you have corn silage from three different hybrids but the hybrids are stored in a single bunker silo, you need to know you have 900 tons of corn silage instead of 300 tons of each hybrid. If each hybrid is stored in a separate bag, they can be considered separate feeds with 300 tons of each. Reserve the highest-quality forages (usually hay) for heifers less than 4 months of age and fresh, early-lactation, or high-production groups of cows. This information then can be used to balance rations for the milking herd, dry cows, and heifers raised on the dairy operation.

2. Balance Rations

Balance rations for all groups of cattle on the dairy operation using the inventory and forage analyses.

Dairy cattle need nutrients, not ingredients, to support body maintenance, milk production, and growth. Rations also are balanced to provide these nutrients not only at the least cost, but to optimize performance. Various combinations of forages and other commodities can meet nutrient needs and may result in a cost savings. In the current economic climate, small savings for not only the dairy milking herd but also dry cows and replacement heifers can definitely affect cash flow. For example, substituting other forages and/or commodities for dry cows and/or heifers may decrease feed costs.

Because of increased volatility in commodity prices, dairy farmers should follow ingredient prices and reevaluate feeding programs frequently. In addition, changes in the amount of starch and protein provided in rations have been reevaluated, and some nutritionists have revised their nutrient parameters when balancing rations. These changes, if incorporated correctly, may decrease feed costs and could have a positive impact on the environment.

Diets for lactating dairy cows, heifers, and dry cows are balanced to provide a certain amount of each nutrient delivered through a certain amount of dry matter of each feedstuff. The dry matter (or moisture) content of each feed should be used to determine the amount of each ingredient to be added to the TMR mixer or fed to an individual cow. For wet feeds, such as silages and wet commodities, dry matter contents can vary tremendously within storage structures, loads, and storage time of various feeds.

To account for this variation, dry matter contents of these feeds should be measured at least weekly, if not more often, and changes made when necessary (2% to 5% change in dry matter or 1 percentage unit) to the amount added to the TMR mixer.

3. Review Feeding Practices

Review feeding practices with the person feeding the dairy's lactating cows, heifers, and dry cows.

Practices to review for the lactating herd include but are not limited to:

- Lactating cows should have access to the feed bunk at least 20 hrs daily, but preferably 22 hrs daily (i.e., in holding pen for no more than 2 hrs daily). Minimizing the time away from feed allows cows to eat multiple meals for optimum intake and allows for adequate time for rest. This is especially important for fresh, early-lactation, and high-producing dairy cows.
- Cows should be fed a consistent ration at a consistent time each day.
- Feed should not be heating in the feed bunk.
- Uneaten feed should be routinely removed (usually daily) from the feed bunk. Milking cows should be fed for 1% to 2% of their daily intake left after a 24-hr feeding period. If a farmer is feeding for a slick bunk at the time of feeding, the bunks have to be monitored throughout the day and feeding time adjusted rather than feeding at the same time every day. Fresh cow groups should be fed such that 5% remains.
- Feed should be provided throughout the entire feed bunk at each feeding for the lactating herd.
- Waterers should be cleaned out multiple times weekly and scrubbed once weekly with a brush and weak chlorinated solution (1 cup of household bleach to 5 gallons of water). Rinse the chlorinated solution out after cleaning.
- Adequate bunk and freestall (or resting) space should be provided such that groups are not overcrowded. Ideally, 24 inches of bunk space should be provided to the milking herd (six-row barns may provide 18 inches per cow, less than ideal). For fresh and close-up dry cow groups, the recommendation is 36 inches per cow and one freestall or at least 100 ft^2 of resting area per cow.
- Fans should be turned on when temperatures are above 65° to 68°F depending on humidity. High-producing cows should be in an environment with a temperature-humidity index below 68.
- TMR mixers need to be serviced and adjusted for the feeds being added. Check to make sure the TMR mixer is not overfilled, TMR mixtures are not over- or under-mixed, and ingredients are being added at the correct amounts, location, and order for the mixer. The mixing quality of the TMR should be evaluated occasionally. Does the mix look the same over the length of the feed bunk? Has the mixer decreased the particle size too much? The use of the Penn State Particle Size box can be a useful on-farm tool to evaluate mixes.
- Clean faces on bunkers and maintain other silage storage structures to prevent heating and ensure that a high-quality feed is being fed.
- Dairy cows should be consuming a similar amount of feed as suggested in balanced rations. If not, discuss this observation with the nutritionist, who may wish to make adjustments in the diet, if large differences are detected. Daily or weekly refusals will need to be weighed to assess the consumption by the group of cows.

4. Work Closely with Consultants

Work closely with your nutritionist and other consultants to develop and modify the feeding and overall management program throughout the feeding season. Constantly work on developing an ongoing relationship that results in dialog among all parties. It can help to improve your bottom line to discuss different ways to group, feed, and/or manage your herd. Sometimes, producers incorrectly believe that they do not need to oversee and/or understand feeding and nutritional concepts. Understanding these concepts is critical for dialog and to understand when and how to make minor adjustments or temporary changes before they become disasters.

5. Start Making Plans

Start making plans for the next cropping season. Now is the time to evaluate whether to make changes to your cropping system or forage purchasing plans for next year. In the United States, various universities and agronomic companies conduct variety trials to see how new varieties of alfalfa, corn for silage, and other crops yield in different environments and growing conditions. These results can be used to help select varieties that incorporate new genetic material into crops that best fit your dairy operation.

Using your forage analyses, review whether your harvesting (or forage harvesters) techniques have resulted in the highest-quality forages needed to feed high-producing dairy cows and whether you need to make changes. Then, complete a plan to incorporate these changes into next year's cropping season.

Areas to evaluate include, but are not limited to: varieties planted, timeliness of harvest (i.e., whether the crop was harvested at the proper stage of maturity and at the proper moisture concentration), methods used to harvest (i.e., for corn silage, kernel processor was adjusted for adequate kernel and cob breakage or whether the tedder was used properly and at the proper time of day to retain leaves), and whether fertility was inappropriate for the planted crop.