

Dealing with the Drought - Considerations for Extending Forage Supplies for the Dairy Herd

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High feed costs, lack of rain, high summer temperatures, and lower forage yields this spring sure put a negative taste in our mouths as we make decisions regarding feeding programs. Couple this with lower than optimum milk prices and cash flowing becomes very difficult. To deal with mother nature, it is more important than ever to sit down and devise a feeding program for not only the milking herd but also dry cows and heifers. Planning now will help prevent a dire emergency when you run out of feed later this year.

Start by culling less productive cows and extra heifers

Available feed resources need to be allocated to the most productive cows in the herd. Less productive cows should be considered as candidates for culling. These cows could include those which have been open a long time and are not pregnant, cows with high cell counts and/or the lowest producers. Available forage resources and dollars to purchase feed need to be allocated to those cows which make the most money per dollar invested. I realize that additional pounds of milk in the bulk tank translate into a higher milk check. However, culling less productive cows from the herd may actually increase the total amount of milk produced especially if feed bunk space or amount of feed fed was limiting productivity prior to culling.

At the same time, you need to evaluate the number of heifers you are feeding. Are there *extra* heifers that you can sell to help pay the extra purchased feed costs? It is important not to sell heifers needed as herd replacements, but extra heifers are a great source of added income.

Compare forage needs vs. inventory

Once less productive cows have been culled and extra heifers sold, the forage supply should be evaluated in relation to your herd's forage needs. By planning now, the costs associated with purchasing feed can be spread over several months and/or you can find forages/feeds at a more economical price if purchased early in the feeding season. For a direct substitution, one pound of hay will replace the dry matter found in 3 lbs of corn or alfalfa silage or 2 lbs of baleage. When calculating the amount of forages needed remember to account for storage and feeding losses. For corn silage and hay fed as small square bales, feeding losses are generally 5%. With large round bales feeding and storage losses are much higher depending on how they are fed and stored. Seldom do large round bales actually weigh the amount specified by the baler manufacturer.

These calculations are explained in the factsheet entitled “Planning Yearly Forage and Commodity Needs for a Dairy Herd” available on the UK Dairy Extension website or from your county extension office.

Test forages to determine best time to feed

Once forages are harvested, it is important to test these forages to determine their nutrient content and determine their best and most profitable use. With this information, the best plan and the best supplementation strategy to maintain a *profitable* milk production and healthy cows can be developed. The best quality forages should be fed to the early lactation cows or when the highest percentage of cows will be in early lactation. Maintaining profitable milk production is going to take a good working relationship between yourself and your nutritionist. It is extremely important that both parties are realistic and creative when putting a Band-Aid on the cards mother nature has dealt.

Some options to extend forage supply

Supplemental forage sources:

- **Purchase hay:** Hay can be purchased locally or from “out west”, however, hay can be a scarce commodity if other regions of the country experienced weather problems. If you do purchase hay, remember to buy after evaluating a forage analysis. The lower the ADF and NDF or higher the relative feed value (RFV), the higher the quality of the hay. As a result, cows will consume the hay better and may give more milk. Decreasing the NDF of alfalfa hay from 48 to 40, only an 8 unit difference, can result in 7 lbs more milk when only 5 lbs of hay is fed. Therefore, testing hay for its quality can pay dividends in the bulk tank.
- **Purchase standing forage:** You may want to explore the possibility of purchased standing corn from their neighbors which was originally planted for ear or shell corn especially if yields are lower than expected. Soybeans can be harvested as hay or silage and fed to cattle.
- **Wheat or rye as spring pasture or silage (baleage, green chop, hay):** Rye is harvested earlier than wheat but has a very narrow harvest window when harvested as a stored crop (must be harvested at the late boot stage of maturity). Wheat as a stored forage is a little more forgiving than rye, is harvested later than rye and can be harvested at the late boot or early dough stage of maturity.
- **Brassicas**, i.e. turnips, can be planted in late March/early April and grazed 45 days later. They can be interseeded with wheat or rye. Remember that they need to be fed with hay or other long stem forage for heifers as well as milking cows.

- **Limit wasting hay** especially when feeding and storing large round bales.

Milking Cows:

- **Feed more grain:** Depending on the amount and type of forages and grain fed currently, feeding more of a reformulated grain mix may offset some of the forage shortfalls. However, adequate amounts of long forage particles must be supplied for proper rumen function and to maintain cud chewing, butterfat tests, and overall health of the cow. Often times, highly-digestible fiber byproducts, such as soyhulls, wheat midds, and/or corn gluten feed, are used since they are lower in starches than shell corn and may cause less rumen upsets. Work closely with your nutritionist to balance rations so that you can avoid any potential health problems. Rations need to contain adequate effective fiber or chew factor (usually from forages) to maintain rumen health and butterfat test. Sometimes rations with adequate NDF on paper do not provide adequate chew factor especially when large amounts of by-products are added.
- **Wet distillers grains, brewers grains or corn gluten feed:** Research on these wet byproducts show that they can be bagged and then fed over an extended time period. They work best incorporated into a TMR. Again, rations need to be balanced to ensure that your cattle receive the nutrients needed. Also, remember to account for the moisture content when comparing prices to dry ingredients.
- **Commercially available forage extenders:** Most of the commercial feed companies sell a blend of “high-fiber byproducts” and grains they call forage extenders. Two types of forage extenders are sold in Kentucky. One type of these forage extenders is a combination of various byproducts, such as cottonseed hulls which provide a fiber source for the cow, and some additional protein sources. These forage extenders are meant to extend the available forages and should be fed with a grain or concentrate mixture. The second type of forage extenders are known as complete forage extenders and they are meant to be fed as the sole feed with an additional 6 -8 lbs of long stem hay. Grain or concentrate mixes are not fed in addition.
- **Use of Rumensin** in milking cow diets: Feeding Rumensin, the only ionophore approved by the FDA for feeding to lactating cows, results in more propionate being produced in the rumen which in turn supplies more energy to the cow. Mike Hutjens has calculated that feeding 300 mg of Rumensin can replace the energy found in 1.2 to 1.5 lbs of corn grain. To prevent problems with lower butterfat test, it is important to provide adequate amounts of fiber.

Food for thought... Nutrition research with heifers and dry cows:

- **Research with diets for dry cows:** Researchers at the University of Illinois have used wheat straw in combination with corn silage and other forages and fed as a TMR throughout the dry period. The wheat straw was chopped to 2 inches in length to prevent sorting and was fed at 30% of the total diet. These diets provided adequate but not excessive amounts of energy to dry cows to prevent health problems after calving. These diets need to be balanced to account for the nutrient content of the wheat straw or other high NDF, more mature forage.
- **Research with diets for heifers:** Researchers at the University of Wisconsin have successfully *limit fed* (restricted total intake) higher energy diets to older heifers. (This does not mean using a creep feeder or limit feeding grain diets with salt!!!). It is important to monitor growth and body condition and have adequate bunk space for all heifers to eat at once. Extra bunk space is needed to ensure timid heifers get their share and heifers may vocalize more.
- **Diets for older heifers:** Researchers at South Dakota State University have compared chopped (less than 2 inches to prevent sorting) corn stalks ensiled with wet distillers grains (70% corn stalks:30% wet distillers) to conventional diets for older heifers. The ensiled corn stalk:wet distillers grain diet performed as well as the conventional diet. Diets need to be balanced to make sure adequate nutrients are supplied for growth.