COOPERATIVE EXTENSION SERVICE
UNIVERSITY OF KENTUCKY
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Kentucky Dairy Notes

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Cheaper Grain Bill Even With Higher Commodity Prices

by Donna M. Amaral-Phillips

With corn and bean prices higher than recent years, ways to control feed costs are on everyone's mind. The first question often asked is, how can I decrease the price of my grain mix? Reviewing your ration, the specifications used to balance the ration (i.e level of milk production used in balancing the ration), and the ingredients used are important and can save you money on your feed bill. However, any changes considered must not compromise daily milk production or the health of your cows.

The most cost effective means to control feed costs is often times overlooked. Diets for the milking herd, dry cows and heifers are based on forages. The higher the quality of forages fed to any of these groups of dairy cattle, the less grain that needs to be fed, performance is generally higher and total feed costs are lower. For example, if you had 100 cows and 100 heifers, feeding just one pound less grain to these cattle could end up saving you $7500 in your feed bill this next crop year. Generally, grain costs 8 to 12 cents per pound whereas home-grown forages cost 2 to 6 cents per pound. Whenever quality forages are fed, profits and production are generally higher.

Harvesting quality forages will be critical this year to help control feed costs. Generally, we harvest high-quality corn silage. Hay-crop silages, baleage or hay is the arena that we often have the greatest problem when it comes to harvesting quality forages. Timely harvest (just before the hay crop heads out- known as late boot stage of maturity) despite rainy spring weather is critical. Starting to harvest these crops earlier than the optimum stage of maturity for yield is one management decision that could make you money. Thus, sacrificing yield for quality and a potentially lower feed bill this next crop year.

Now Is the Time for Spring Planning

by Jack McAllister

The appearance of March flowers tells us that spring is near. With the arrival of spring comes thought of all the work we need to be thinking about doing as another cropping season associated with our dairy farm business begins. In fact, we need to be thinking about all of the activities of our dairy farm operation which become a little different when we have all the daily chores of the dairy as well as cropping and forage production activities.

Do we have goals with which our chores and activities are associated? Will our activities help us accomplish those goals?

Our forage production system should be a focus with spring's arrival and higher feed costs because of higher corn, soybean and fertilizer prices. Maximizing forage quality to feed our cattle will be a key element in dealing with those higher feed costs. If we pasture our cattle, we need to look at pasture over-seeding with legumes or complete renovation as an alternative or complementary part of our forage system. Seeding time is critical – before Apri1 15 for red or white clover or perennial lespedeza and before May 1 for alfalfa. It may be that adding acreage devoted to summer annuals is an option for this year's forage program. If we have small grain forage growing, it can be grazed as soon as spring vegetation growth starts or harvested at the optimum time as baleage or silage for storing and feeding later. For rye, harvesting at the boot stage or for wheat at boot just after heading are recommended. Trying to optimize the nutrient quality of this forage whether harvested by the cows or machinery and yield of nutrients per acre should be our focus.

If most of our cows and heifers calved in the fall and early winter they should be pregnant now. Do we have a goal for the average days open we want in the herd? Do our DHI records and veterinary herd check records tell us how good a job we are doing? Are we breeding our cows and heifers to AI sires that will produce offspring that are better genetically for milk production and other economically important traits than their dams?

How are our heifers growing? They should be adequately developed for their age and breeding so they can calve at 23-24 months of age? If we have done a good job and had high calf and heifer survival then we may have extra heifers to sell or to replace cows in the herd that are marginally productive.

Spring is a busy time, but also a good time to take stock and re-focus on the aspects of the dairy farm business that can make it profitable and rewarding.

Maturity of Plants at Harvest Dictates Profitability

by Donna M. Amaral-Phillips

The stage of maturity forages are harvested determines the profitability of your operation. As grasses and legumes mature past their ideal stage of maturity for harvest, the amount of energy and how well cattle eat them decreases. This results in your forages producing less product - meat or milk - that you can sell.

Stage of Maturity For Harvest in Spring	
Grasses	Late Boot*
Alfalfa	Early Flower
Oats/Rye	Late Boot*
Wheat	Late Boot* and then soft dough**

* Late Boot- Just before the seed head emerges from the stem

** Soft dough- wheat kernel is filled out and is soft when pinched with your thumb nail

Ways to Measure Dairy Reproductive Performance

by George Heersche, Jr.

We have used days open, calving interval, conception rate and services per conception for years to measure and monitor dairy cow and dairy herd reproductive performance. Days open is the interval from calving to pregnancy and is still a good measure of our ability to get cows pregnant. Calving interval is the interval from the birth of one calf to the birth of the next calf. It is a more historic measure of performance and is useful to monitor our ability to get cows pregnant from year to year. Conception rate is the percentage of animals

serviced which become pregnant. Services per conception measures the number of services required to achieve a pregnancy.

Another measure of reproductive performance, pregnancy rate, is calculated and printed on the DHI herd summary sheet and is a common term in popular press articles. Pregnancy rate simply is the percentage of animals which get pregnant out of all the animals which are eligible to get pregnant during a specific time interval. For example, if a dairy herd had 40 open cows in the "breeding herd", over a 21-day period 20 were caught in heat and inseminated, and 10 of the 20 inseminated became pregnant to that insemination the pregnancy rate for that 21-day period is 10÷40 or 25%. Pregnancy rate can also be calculated by multiplying the percentage of cows detected in heat times the conception rate. In the previous example, the percentage of cows detected in heat is (20÷40) x 100 = 50%, and the conception rate is (10÷20) x 100 = 50%. Therefore, the pregnancy rate is 50% x 50% = 25%.

The bottom line is pregnancy rate is a more timely way to measure our ability to get cows pregnant. One other point. As advisors to dairy farmers we need to make sure we know what term a dairy client is talking about when they are talking about the reproductive performance of their herd. If they are using pregnancy rate as the measure, 25% sounds low because we are used to hearing a conception rate quoted. In fact, a 25% pregnancy rate is quite good.

Common Pitfalls in Heifer Raising Programs

by Donna M. Amaral-Phillips

Dairy replacement heifers represent the future of your dairy operation. As such, care must be taken to insure that they are raised properly and economically.

For a dairy operation, 15 to 20% of the costs are associate with raising replacement heifers. Studies have calculated that it cost almost $2.00 per day to raise heifers. The sooner heifers enter the milking herd and become money makers, the sooner the owner can start recouping the costs associated with raising this heifer. Thus, the recommendation that heifers calve around 24 months of age. To be productive once they calve, heifers need to be of proper skeletal size and weight. We realize that heifers grow during their first lactation but they still need to calve at 85% of their mature weight. For example, Holsteins should weigh around 1150 to 1200 lbs after calving. To accomplish these goals, it is important that we do not encounter any bottlenecks in a heifer raising program. Take a few minutes and review these common pitfalls I have seen in heifer raising programs.

Baby Calves Pitfalls

First and foremost, baby calves need to get off to a good start. This starts by feeding colostrum within the first couple hours of life. Calves are born devoid of antibodies that help them fight off diseases. These antibodies are supplied in colostrum and must be absorbed early in the first day of life. At 4 days of age, calves should be fed a small amount of calf starter and water. Both water and calf starter are needed to convert the calf from a simple stomached animal into one that can digest forages.

Weaning Time Pitfalls

Weaning time and the few weeks after weaning are critical to getting these heifers off to a good start and a time frame we often abuse. It is important to minimize stresses on these calves by making changes slowly and changing one management practice at a time. For example, we do not want to move heifers into groups and change their grain mix within a couple of days after weaning. Just weaned heifers should be kept in very small groups of less than 6 heifers. Bull calves should be housed separately from heifers.

Pre-breeding Heifer Pitfalls

Holstein heifers need to gain 1.7 lbs daily in order to calve at the proper size and weight. To achieve this goal, we need to feed these heifers the appropriate amount of grain and quality forages. The better the quality of forages fed, the less grain that needs to be fed. With the recent increases in grain costs, putting up quality forages for heifers will be critical on your bottom line. These forages need to be tested and a grain mix formulated for these heifers. This management practice can save you dollars by feeding

the appropriate amount of grain, a grain mix that is least cost and a ration that allows these heifers to grow and milk well after calving.

Breeding Age Heifer Pitfalls

Heifers should be bred when they are 55% of their mature size. For Holsteins, this means that they should be bred when they weigh 750 to 800 lbs. It is important that we breed heifers within this weight range. I have seen heifers bred when they were a lot heavier than these guidelines resulting in increased feed costs associated with the heifer rearing program. We need to remember that these heifers will grow in the 9 months that they are carrying their calf.

By taking some time to review some of the common bottlenecks in your heifer raising program, you can improve your bottomline.