Georgia Dairyfax

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A New Year's Wish

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Every year most of us make New Year's wishes for the coming years. These are often goals for us to accomplish. Usually by January 2, we have already forgotten them or have already broken the promise.

The end of one year and the beginning of the new year is a good time to review the past and to make goals for the next year.

Some New Year wishes for 2002:

Stable milk prices. Most of us have trouble adjusting to changes. Milk prices have become a changing target over the year. There have been large rapid swings in prices. A stable price is much easier to live with and one less thing to be concerned about. Remember high prices and low prices do not last forever.

Normal rain. Most of the southeast has been below normal in rainfall the last three years. This has resulted in lower quality forage, less forage produced and pastures that have disappeared. What would life be like if we got 1 inch of rain per week all year long. It would be a very extraordinary average year.

Quality milk. High quality milk and beef should be our norm not a goal. Consumer confidence in our food supply would increase.

Peace and happiness. After the last year, all of us wish for peace and happiness personally, nationally and globally.

I hope we all have a good year.

Getting Calves Off to a Good Start

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One of the most important aspects of raising replacement dairy heifers is to get them off to a good start. Surveys of dairy farms throughout the United States indicate that the death loss of calves born alive is greater (>8%) from birth until weaning than from weaning until calving (~2%). In many cases, the cause of death is directly related to the environment the calf is born into and housed in and level of acquired immunity. Limiting exposure to organisms and using a good colostrum management program are two key steps to get calves off to a good start.

Everyone recognizes the need for cows to calve in a clean environment. This reduces exposure of the calf to disease causing organisms that may be found in feces, soiled bedding, and contaminated soil. Well managed pastures are generally considered one of the most desirable places for calving, but a clean stall in a barn can work just as well. The key is to make sure the environment is clean. At birth the calf does not have any natural immunity so it is susceptible to organisms that are in the environment. In most cases the calving pasture is clean, but the other cows in the pasture expose the calf to any diseases they are carrying. Many stalls used for calving are also used for housing sick cows or adjacent sick cow pens so the calf is exposed to organisms that are causing diseases in the herd. When stalls are used for calving, the stall should be cleaned after each cow and should only be used for calving. Ideally these stalls should be separated from any stalls used to house sick cows. In either system, the calf should be removed from the cow immediately and placed in a clean environment. This will reduce exposure to disease transmitted by the cow or ingested from contaminated soil or manure. This type of management practice is essential to minimize the spread of Johne's and other similar diseases.

One of the most important components of a good replacement heifer program is a sound colostrum management program. The calf acquires its initial immunity from the immuno-globulins (Ig) provided by colostrum during the first 24 hours of life by passive transfer. After 24 hours, Ig from colostrum is not absorbed and the Ig concentration in the blood of the calf cannot be increased. Surveys of dairy herds indicate that more than 40% of all calves do not have adequate Ig concentrations (10 g/L or higher). Calves that do not receive adequate immunity are more susceptible to disease, have higher mortality rates, and do not achieve optimum growth rates. To insure that the calf receives adequate Ig, at least one gallon of high quality colostrum should be fed as soon as possible after birth. Although many producers prefer to let the calf nurse the cow, only 40% of the calves consume adequate colostrum to achieve the adequate protection. If the environment is not clean and the cow's teats are dirty, the calf will be exposed to a higher level of pathogens.

The quality of colostrum can be checked using a clostrometer. Typically colostrum from older cows has higher concentrations of Ig than first calf heifers. Excellent quality colostrum from cows tested free of Johne's can be frozen in gallon freezer bags and used to fed calves when good colostrum is not available. Research has also shown that calves fed colostrum for the first three days of life have lower concentrations of pathogens in their gut. The colostrum apparently

prevents these organisms from attaching to the gut wall and colonizing. When good colostrum is not available, a colostrum supplement can be added to the colostrum to provide greater passive immunity to the calf. Colostrum supplements or replacers have not been effective in replacing colostrum, but can boost the Ig status of the calf when lower quality colostrum is available.

There are some data to suggest that colostrum absorption is not as high for calves born during periods of heat stress as those born during cooler periods. Colostrum quality does not appear to differ. Research data in this area are limited on this subject. The Ig absorption is lower for calves that have a difficult or prolonged birth.

Providing a good environment for calving and getting adequate colostrum into the calf immediately after birth allows the replacement dairy heifer to get off to a good start. If death losses from birth through weaning are greater than 5%, producers should critically evaluate their facilities and all aspect of their colostrum management and retrain all employees.

This is No Bull!

W. M. Graves and A. K. McLean

Many think AI and DHIA procedures cost more than they can afford. However, maximizing genetic selection and measuring animal production is essential to good management. Developing a high producing herd is possible, as proven by a long-term experiment conducted at the Dairy Experiment Station at Lewisburg, Tennessee. The experimental group was bred to the top bulls available through AI at any given time, while the controls were bred only to those AI sires available at the start of the study.

After 13 years, the experimental group's rolling herd average was 2,816 pounds of milk and 105 pounds of fat ahead of the controls. The income over feed cost (IOFC) favored the test group by $336 per year. So it has long been proven it is possible to improve the genetic ability of the herd through AI.

In a Virginia study, the loss of lifetime income from using herd bulls is shown in Table 1.

Table 1. Loss in Lifetime Income*

Replacement Sires From Non AI Bulls	Herd Size 50	100	500
10%	$ 439	$ 877	$ 4,385
30%	$1,316	$2,631	$13,156
50%	$2,193	$4,385	$21,927

*From one year's replacements at 30 percent culling rate and $135 PTA MFP$ (Predicted Transmitting Ability Milk Fat Protein Dollars) advantage AI.

Source: B. Cassel, Virginia Tech

To complicate matters, when money gets tight, usually AI and DHIA are the first things to go. The following table shows the percent of cash expenses for a dairy herd. DHIA and AI account for only about 2 percent of the total cash expenses.

Table 2. Percent Cash Expenses For A Dairy Herd

Purchased feed		20.6
Machinery		16.3
Crop		14.9
Livestock		13.7
Labor*	11.6	
Land		11.0
Improvements	4.9	
Other		4.9
Semen and breeding		1.2
DHIA		0.9

*Does not include operator & family labor
Source: T.R. Spann, Univ. Tennessee

AI bulls produce daughters that produce more milk. The current advantage of AI bulls versus non AI bulls is over 1200 pounds more milk per lactation per daughter. Herd bulls are dangerous, genetically inferior, carriers of diseases, possibly subfertile (especially in Georgia during the summer) and don't always produce calves that deliver easily.

Remember your objectives.

1. Settle the cow. Use proper AI technique and semen handling.
2. Obtain calves from best bulls. Select top PTA$ sires.
3. Use disease free semen for healthy reproductive tracts of cycling cows.
4. Accomplish the above at reasonable cost.

Managing Purchased Corn Silage

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Many dairy producers purchase corn silage rather than grow it themselves or need additional silage to supplement what they grow. Anytime silage is removed from the silo and exposed to air, secondary fermentation occurs, resulting in dry matter and nutrient losses. During secondary fermentation, aerobic organisms oxidize or digest carbohydrates and some proteins, generating heat. As the temperature increases, more nutrients are destroyed or converted into an indigestible form. The losses are minimal if the load is used in one day, but if the load of silage lasts for several days the losses may be greater than 15% of the dry matter. In addition to the loss of digestible nutrients, dry matter intake and milk production will decline because the cows will not eat the hot silage as readily. To minimize secondary fermentation, producers should take the following steps.

5. Place silage on a concrete or asphalt pad with at least one retaining wall.

6. Include a mold inhibitor to reduce spoilage, especially during hot weather.

7. Pack the silage to remove air.

8. Cover the silage with plastic or a tarp to reduce exposure to air and keep rain from washing soluble nutrients away.

These simple steps will reduce the amount of secondary fermentation and spoilage that occurs with purchased silage. Improved management of purchased silage also maintains dry matter intake and milk yield providing a greater economic return.