



# Dairy Directions

FALL 2009 NEWSLETTER

TENNESSEE FARMERS COOPERATIVE  
180 OLD NASHVILLE HWY. LAVERGNE, TN 37086

## Beating bloat

Abomasal bloat in calves is a condition that is seen primarily in dairy calves that are still young enough to be nonruminant digesters. Left untreated, it can lead to death.

Several factors can lead to this condition. Abomasal bloat in young dairy calves has been linked with inconsistent feeding of large volumes of feed, sudden dietary changes, foreign bodies, copper deficiency and certain bacteria.

**Symptoms:** The signs of abomasal bloat in calves include acute abdominal distension that is predominately on the lower right side of the animal. This distension is soon followed by signs of colic, restlessness, and depression. Physical examination usually reveals

*Story continues on back*

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**Dairy Directions** is published by Tennessee Farmers Cooperative to further the goal of helping you maintain a successful operation. Information is compiled by the Co-op's nutritionists, staff veterinarian, and feed and animal health specialists. This newsletter is just one component of our comprehensive Dairy Directions program, which offers all the products, services, and advice dairy producers need to improve milk quantity and quality as well as profitability.

## Taming transition

### Optimize cow potential with better management

The transition period is a very high-risk time in a dairy cow's life. Good management practices during this period can reduce the loss of cows and help them get off to a better start.

The transition period extends from approximately three weeks prior to calving until approximately three weeks post-calving. There is a well-documented depression in immune function during this six-week period. Dry matter intake (DMI) may drop by 30 percent or more and the presence of various environmental, social or feed-related stressors may further compound the compromised DMI and immunity. Early lactation milk production, risk of contracting infectious diseases and subsequent antibiotic treatment, return to positive energy balance and reproductive efficiency are all related to the success of the transition period.

### Housing

Reduce social, environmental and metabolic stressors by minimizing the number of pen changes a cow is forced to make. When moves are necessary, try to move animals once weekly and move in groups of 10 or more if possible to reduce stress. Also, avoid moving cows into new pens during the last 10 days prior to calving. Cows should spend at least 14 days in the close-up pen. If possible, separate heifers and older cows. Heifers have been shown to have longer resting times and higher DMI when separated from mature cows.

In addition, maintain stocking density at less than 100 percent, based on feed bunk space. Provide 30 inches of bunk space per animal or, in pens with lock-ups spaced at 24 inches, populate the pen at 80-85 percent of the number of lock-ups. Also, it is important to maintain a clean, dry environment for the cows.

### Nutrition

The goal during the prepartum period is to minimize the inevitable drop in DMI that occurs prior to calving. Feed intake, energy balance and the magnitude of change in both are associated with changes in immune function, risk of developing retained placenta and metritis, and with postpartum feed intake.

Monitor feed intake during the transition period, to ensure adequate levels of fiber intake and ration consumption. If using DCAD diets for close-up cows, select forages that are low in potassium to minimize the amount of anionic salts needed. Feeding DCAD diets to springing heifers is not required since they are not as susceptible to clinical hypocalcemia and are less affected by subclinical hypocalcemia than mature cows. After calving, the energy and protein requirements change dramatically as milk production increases. By monitoring feed intake and working with your nutritionist, you can formulate diets to ensure a good start for the cow.

Complete cooperation from all members of your management team, including your veterinarian, nutritionist and other dairy consultants, is necessary to minimize transition problems and ensure the financial success of your operation. Work with your Co-op Pro-Ag Feed/Animal Health Specialist to put a program in place that gives your cows the best opportunity to perform to their genetic potential.



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# Feeding replacement heifers: birth to weaning

Replacement heifer feeding programs should allow the calf to fully develop her lactation potential within 24 months of age. However, the need to transition the young calf from a milk-fed, pre-ruminant to a functioning ruminant should be the focal point in designing a feeding program that meets nutrient requirements.

**Dry cow feeding.** Sound feeding and management practices for the young calf should start with the dam during the dry period. Sufficiently fortified dry cow diets result in higher quality colostrum and greater overall health of the dam. It is important to remember that properly feeding the dry cow does not predispose the cow to dystocia due to increased fetal growth. The fetus will grow at virtually the same rate, sacrificing only the dam's body reserves.

**Colostrum and first feeding.** Feeding calves high-quality colostrum is probably the single most important practice in calf nutrition. True colostrum is obtained from the first milking with subsequent milkings representing only transition milk. Colostrum contains approximately twice as much dry matter and solids, two to three times as many minerals, five times as much protein and lower lactose as whole milk. Additionally, colostrum contains various hormones, growth factors and antibodies that are essential requirements of the calf. Colostrum should be offered within one hour after birth at the approximate rate of 15 percent of the calf's bodyweight (representing approximately 4 quarts for a large, 90-pound calf).

**Milk replacer.** Since the pre-weaned calf does not have a functioning rumen, providing high-quality milk replacer is essential. Milk replacers range from 20–26 percent crude protein and are offered at the rate of 1.25–2 pounds of powder per head per day. Goals for growth rate should be set to determine the best milk replacer program.

**Calf starter.** Ideally, calf starter and water should be introduced to

calves within three to four days of birth. Offering dry feed stimulates earlier rumen function and development, reduces scours, aids for earlier weaning and supplements the nutrition provided by milk replacer. Further, dry feed provides lower cost nutrient versus milk replacer. Encourage calves to consume feed by offering only a handful initially. Calves typically consume starter by five to seven days of age, and by the second week, can be eating about a half pound.

Remember: Clean, fresh water should be available at all times. Milk replacer does not qualify as a water source since it will bypass the developing rumen. Calves will consume as much as 10 quarts of water by weaning age. Calf starter should be balanced with highly digestible feedstuffs including digestible fiber sources, fortified with vitamins and minerals and contain a coccidiostat.

**Forages.** Providing forage to the young, pre-weaned calf is not necessary due to lack of rumen function. The suggestion that hay is required for rumen development is a myth. If desired, forage can be offered when calves are consuming approximately 5 pounds of calf starter. After weaning, forage offerings should be of good quality, however, avoid feeding hay silages with proteins above 22 percent as the young calf is inefficient in protein digestion of this magnitude.



## Beating bloat *Continued from page 1*

loud “pings” over the abomasal area and a stomach tube does not relieve the distention. Calves can deteriorate rapidly and even die as a result of the bloat situation.

**Treatment:** Treatment of abomasal bloat in dairy calves often requires the services of a veterinarian.

**Prevention:** Sound calf management is the best prevention of abomasal bloat.

- Feed consistent amounts of feed/milk replacers at consistent times. This is extremely important.
- Make gradual changes in amounts and types of food rather than quick, sudden changes.
- Avoid having any foreign bodies, such as hairballs, that the calf can swallow. Some calves lick either themselves or other calves

excessively creating a hairball that acts a foreign body.

If all of these management techniques are implemented and abomasal bloat is still a problem, bacteria could be the cause. Bacteria such as *Clostridium perfringens* type A has been identified in the abomasum of affected calves. These bacteria can cause hemorrhagic bowel syndrome in adult dairy cattle, abomasitis in young calves and enterotoxemia in older calves. Treatment for this infection in young calves should be oral antibiotics. If clostridial *perfringens* Type A is diagnosed, a vaccine is also available to help prevent bloat associated with this infection.

Contact your local Co-op Pro-Ag Feed and Animal Health Specialist with any questions about preventing or managing abomasal bloat in dairy calves.

**Have a question? Need a solution? Contact your local TFC Pro-Ag Feed/Animal Health Specialist**

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