

Adams Advanced Nutrition, Inc.

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Winter... and Dairy Heifers!

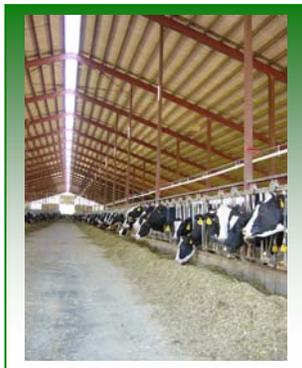
There are numerous known advantages to having dairy heifers calve at 24 months of age. In order to achieve this goal, nutrition, environment and management are all important aspects of the equation. With the onset of winter come colder temperatures, wind, rain, snow and mud ~ all of which can have a detrimental impact on reaching the desired goal. Let's consider the importance of each part of this equation.

◆ **Nutrition:** Nutritional recommendations are based on certain assumptions: replacement heifers are clean and dry, fed ad lib, free of disease and parasites, unbred, and raised at moderate temperatures. Heifers have a base energy requirement and dietary energy density level in order to maintain targeted growth and development. This is calculated at a thermal neutral temperature of 68°F. As cold winter weather sets in, these energy-related requirements increase. If bodily requirements are not met, the heifer will begin to suffer the effects of cold stress, which is most typically seen as a decrease in daily weight gain. Rations fed to dairy heifers throughout winter months need to reflect this need for additional energy. Furthermore, sufficient feed and forage must be provided to meet a naturally-occurring increase in dry matter intake.

◆ **Environment:** While we cannot regulate climatic conditions, it is possible to provide an environment that will reduce the impact of cold stress on dairy heifers. Exposure to wind increases heat loss and increases the potential for cold stress, as does exposure to snow, rain, mud and manure. Heifers that are maintained in clean, dry quarters, and out of direct exposure to wind and the elements can withstand relatively cold temperatures. Good ventilation is, however, necessary. Heifers that are weighted down with mud and manure will not be able to maintain maintenance requirements, let alone achieve optimum growth. While a ration may provide ideal levels of energy, housing and environmental conditions must also be carefully considered, with appropriate changes and adjustments implemented. Together, these factors will help to influence the growth and development of quality replacement dairy heifers that calve at or before 24 months of age.

◆ **Management:** Properly managing your heifers is critical to the future of your lactating herd. The impact of winter weather, along with proactive attention to nutrition and environmental conditions can make a difference in how these heifers will perform in the future. Be sure to consider such management aspects as available bunk space, overcrowding, age/size of heifers and how they are grouped, the availability of clean water, bedding, a good vaccination program and many more factors. Paying attention to these things will help you raise healthy, productive heifers and impact your future herd.

(edited from an article by Patrick Hoffman, University of WI-Madison)



Planning Next Year's Crops?

In the November issue, we considered some of the reasons for crop rotation and how this can benefit your dairy farm. In addition to the initial six items listed, there are a couple of other reasons to practice crop rotation. These include the following, as you plan ahead for 2006.

- ◆ Feed shortages ~ if you have a shortage of one feed and a surplus of another, paying attention to acreage and yields needs to be considered, along with long-term changes in feed rations to meet soil production capabilities. This requires careful evaluation.
- ◆ Efficient use of nitrogen ~ you may need to rely on substantial off-farm nitrogen sources in the third (or later) year of corn grown on the same acreage. It might be an economic advantage to rotate crops in shorter than 3-year periods. The use of hay crops or soybeans can help to reduce the need for external nitrogen needs, while avoiding pest buildups as well.
- ◆ Corn rootworm pressure ~ when corn rootworm pressure develops into a serious, ongoing problem requiring the continual application of an insecticide, crop rotation should be considered to limit the buildup of these pests. Shorter rotations can help reduce the need for insecticides, therefore helping to reduce corn rootworm populations.
- ◆ Inconsistent corn performance caused by drought stress ~ In areas where drought stress has limited yields and profitability, rotating corn with more drought-tolerant crops can provide a more stable and diverse crop mix. Rotated corn is more drought-tolerant than corn planted after corn.
- ◆ Poor performance of no-till corn ~ low performance of no-till corn may be caused by a number of factors. No-till planting can become more difficult in later years of long corn rotations (3-years or longer) due to heavier amounts of residue, increased weed problems and compacted soils. Using no-till on first-year fields can help to avoid many of these problems.

As you plan for 2006, consider your forage goals and needs, along with appropriate crop rotation. I'll be happy to review your needs and concerns, as we move toward spring.

(edited from an article by Penn State Department of Crop & Soil Sciences)

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HAPPY HOLIDAYS... from RENAISSANCE



Holiday Greetings ~

*W*ishing you and your family the best this Holiday Season and throughout the coming New Year!

Thank you for your business and support this past year. It is my pleasure to work with you... part of your team!



Doug



WHAT'S IT LIKE AROUND THE FARM?

In an "ideal world" dairy heifers grow best when maintained at a thermal neutral temperature ($\pm 68^{\circ}\text{F}$). However, with this past [hot] summer... and a cold winter on the way we all know that "ideal" is rarely possible. Both heat stress and cold stress impact a heifer's ability to grow and develop toward a goal of calving at 24 months of age. Growing heifers are negatively impacted by cold stress when their ration does not provide sufficient energy, resulting in decreased average daily gain (ADG). This decrease can be from 0.2 to 0.4 lb/day (Hoffman et al 1994). In addition to cold temperatures, exposure to wind and the effects of snow, rain, mud and manure on coat integrity increase heat loss and the potential for cold stress. Nutrition, environment and management are important considerations this winter for your dairy heifers. How are your heifers going to do this winter?

A POINT TO PONDER... There is something idyllic about winter and the Holidays. These are times when family and friends join together, sharing the warmth and love of valued relationships. This is set against the backdrop of a gentle winter landscape with snow-covered fields, ice-tipped trees and a sparkling brilliance outdoors ~ while we enjoy the blessings of friendship, fellowship and good food. As you plan for this year's Holiday Season take time to reflect on the many individuals who do not have enjoyment of "hearth and home," people who will not celebrate the festive joys of this season. Maybe an outstretched hand in friendship will become one of the greatest gifts you can offer today and throughout the coming year. Happy Holidays from all of us... to you and yours!



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Happy Holidays...

*from
Renaissance Nutrition!
Helpful information inside.*

