

Adams Advanced Nutrition, Inc.

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Feeding Dry Cows for Results...

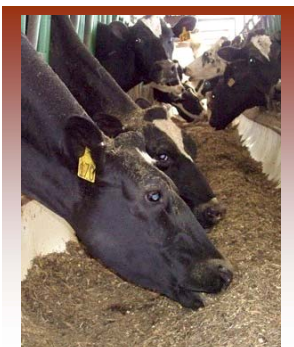
The management and feeding of dry cows is often a "neglected" aspect of dairy farming. However, it is essentially the first step in reaching for profitable peak milk production. An increased emphasis on proper nutrition and condition of dry cows will yield big dividends at calving and into early lactation. Producers who blend cow-sense with attention to dry cow needs recognize the benefits. Good dry cow care starts in late lactation. If cows are thin going into late lactation, they should be fed accordingly prior to drying off. The tendency to wait until dry-off to "condition" cows often leads to over feeding; late lactating cows use energy more efficiently for body gain than dry cows. Cows that are thin or in poor condition at the start of the dry period tempt dairy producers to feed "a little more" at the wrong time. Feeding excess energy at the start of the typical dry period can lead to accumulation of fat in the liver. It is becoming more apparent that highly productive cows have more of a tendency to develop fatty livers. Continued over-feeding during the dry period will accelerate liver fat levels. This, in turn, can lead to severe problems at calving and during the first few weeks after calving.

During early lactation cows do not consume enough energy to meet production needs, creating a negative energy balance. This is normal up to a point. Cows pull fat in the form of fatty acids from fat storage for eventual transfer to the udder. Mammary tissue converts the fatty acids to milk fat. Fatty livers interfere with this process and become inefficient at converting fatty acids into a form that the udder can use. Research has shown that the fatty (faulty) liver problem leads to a build up of triglycerides in the blood, which lowers appetite and reduces feed intakes even further. This condition can then lead to ketosis, a more familiar term and problem to dairy producers. The highest incidence of ketosis coincides with the period of the most severe negative energy balance. Typically there is further weight loss. Cows with ketosis may first refuse grain and later even refuse silage and hay. Other conditions associated with fatty liver are retained placentas, uterine infections, digestive disorders and impaired reproduction. This illustrates the critical relationship between dry cow nutrition and fresh cow health.

The best approach to reduce the risk of fresh cow problems is to have cows enter the dry period with adequate body condition. It is generally considered best not to alter body condition during the dry cow period, and to avoid extremes in either too little or too much feed energy. On a scale of 1 (thin) to 5 (fat), cows should score about 3.0-3.5 in body condition during the dry period.

A well-managed dry cow program may be one of the best investments a dairy herd can make, impacting health, along with productivity and profitability.

(edited from an article by Paul Johnson, DVM)



The Benefits of Crop Rotation...

Crop rotation can benefit dairy farms in many ways. An effective crop rotation meets the feed needs of the operation, improves crop yields, reduces pest problems, and effectively uses on-farm nutrients. Because the resources and needs of dairy farms differ, the best crop rotations can also vary. As farms expand, and forage and nutrient management requirements change, crop rotations can be refined and improved. Many factors influence crop rotations, making planning both necessary and complex. A

well-functioning crop rotation should do the following:

- ◆ Meet the feed needs of the operation
- ◆ Grow crops adapted to the soils and climate
- ◆ Match the labor availability of the operation
- ◆ Minimize the use of pesticides through IPM* practices
- ◆ Effectively use nutrients from manure
- ◆ Minimize soil erosion

In most cases, a single rotation will not accomplish all these objectives. You must set priorities and use a rotation system that addresses the most important issues first and does at least an acceptable job on the others.

When developing or modifying a crop rotation to meet some of the goals and resource limitations on a particular operation, consider the following steps:

1. Estimate feed requirements ~ look ahead several years, especially if you plan on expanding herd size
2. Estimate production ~ use realistic yield estimates, tracking actual versus expected
3. Adjust the ration if necessary ~ consider what you can grow and use this as a starting point
4. Match crops to soils ~ your soil will determine what is best to plant... what will grow under your conditions
5. Credits for rotation ~ determine what rotations work best and compliment future crop growth
6. Flexibility ~ assess this annually, since there is short-term variation in crop production/feed requirements
7. Consider no-till ~ this can help meet conservation requirements, while aiding other rotation-related needs

More information on this topic in future issues!

*Integrated Pest Management

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

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Winter...

In cold weather, it is necessary to feed more energy to calves, in order to meet their higher energy needs for maintenance. Once the environmental temperature drops below 59°F, the calf has to increase its metabolism in order to maintain its body temperature. A calf housed at an environmental temperature of 25°F requires roughly 30% more energy for maintenance than one housed at 50°F. In extremely cold weather (<0°F), sick calves are at great risk due to potentially reduced feed and energy intake, coupled with limited body reserves of energy.

To maximize the growth rate of young calves, it is important to supplement nutrient intake during cold weather, thereby increasing the animal's ability to generate and maintain its body heat. To ensure your calves are getting enough milk replacer on cold winter days and to review your entire calf program, call me today! Together we can make a difference in your future herd.



WHAT'S IT LIKE AROUND THE FARM?

Ventilation and air exchange serve an important function in livestock housing, maintaining a comfortable environment for your animals. Typically, a mature dairy cow will breathe out 4-5 gallons of water per day as water vapor, and produce 2000-2400 BTU/hr (600-700 Watts) of heat. Good ventilation will remove heat, moisture and odors created by livestock. It replaces this with drier, cooler outside air. Adequate air

exchange also removes gases such as ammonia, hydrogen sulfide and methane, which can be harmful to the health of both "man and beast!" Ventilation needs will vary with seasons and climatic conditions. During winter months this can become a real challenge. Keep facilities adequately ventilated and watch your cows perform. It can make a positive difference!

A POINT TO PONDER... The leaves have fallen and trees sit bare on the landscape, while temperatures edge slowly downward. Soon, we will be sitting with family and friends to celebrate our annual Thanksgiving Day. The first Thanksgiving proclamation was in 1676 in Massachusetts, followed by one in 1777 for all 13 colonies. George Washington proclaimed a National Day of Thanksgiving in 1789, and Abraham Lincoln made it a national day of annual celebration in 1863 and every year thereafter. This tradition was established in order to remind us of our need to be thankful ~ a sincere desire to step away from daily activities to reflect on the many blessings we enjoy throughout the year. Take time to give thanks. We are abundantly blessed. And then share the blessings with others who are less fortunate.



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*Fall has arrived!
The harvest is done.
Prepare for winter!
Check it out.*



Happy Thanksgiving!