The Next Lactation Starts at the End of the Previous Lactation

Cooperative Extension Service

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In the dairy industry, we understand all too well that dry cow and pre-freshening feeding and management programs directly impact post-calving health, production, reproduction, and profitability. We are even learning that these feeding and management programs can affect the fetus and the fetus's future performance. Thus, gone are the days when we just put the dry cows out on the back forty and let them fend for themselves until after they calve. Today, feeding programs for dry dairy cows and cows transitioning back into the milking herd are as high of a priority as those for the milking herd. These programs are built around the following key practices.

Don't have fat dry cows

Cows need to go dry at the proper body condition (3.0 to 3.25, but no greater than 3.5 for individual cows) and maintain this body condition and not gain body condition during the dry period. After calving they should not lose more than 0.5 body condition score. This loss in body condition score is less than we previously recommended. Cows which lose little to no body condition after calving rebreed quicker and result in an embryo with an improved survivability this next lactation. Minimizing mobilization of protein stores (i.e. muscle) before and after calving also may help improve dry matter intakes after calving.

Don't overfeed energy, but feed enough protein

Feeding adequate, but not excessive, amounts of energy throughout the dry period is important to keep cows on-feed as they transition back into the milking herd. Thus, rations should be balanced to 0.60 to 0.62 Mcal NEl/lb dry matter in the far-off dry period. To achieve this energy density, watch the amount of corn silage and/or grain being fed. For close-up cows that will not be fed a special fresh cow diet after calving, energy density can increase up to approximately 0.66 to 0.68 Mcal NEL/lb dry matter. Close-up diets should provide adequate amounts of metabolizable protein (protein reaching intestines) (1200-1400 g MP/day) and not just adequate amounts of crude protein. Thus, what occurs in the rumen is important when determining protein needs.

Feed Proper Minerals and Vitamins

Minerals and vitamins are important for both the far-off and close-up dry cow and, as such, an appropriate mineral and vitamin mix should be force-fed through the grain to ensure adequate intakes. For close-up dry cows, low potassium forages should be fed. Generally, diets for close-up dry cows should contain anionic salts to minimize not only clinical milk fever where we see the classic disease symptoms, but as importantly subclinical milk fever or hypocalcemia, where no symptoms are detected. To determine if adequate amounts of anionic salts are consumed, pH should be measured in urine collected mid-stream

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for a number of cows after they have been fed anionic salts for at least 1 week, but no longer than 2 to 3 weeks. The amount of calcium supplemented will be determined by whether or not anionic salts are included (higher concentrations and amounts of calcium with anionic salts). Concentrations of magnesium and other minerals are also important in these cows and should be balanced appropriately. Trace minerals and vitamins are important to improve immunity and fight off infections after calving.

Limit stress

Social, environmental, and metabolic stresses can negatively impact not only feed intake, but also overall productivity and health of cows before and after calving. Providing shade and sprinklers for all dry cows, both far-off and close-up, can minimize environmental stress and improve health and milk production the next lactation. Close-up dry cows should be provided with 36 inches of bunk space, adequate resting space (at least 1 stall per cow in freestalls or 100 sq. feet of bedded pack space), and cows should not be added to this group more often than once weekly. If possible, springing heifers should be housed separately from older cows.

Taking time to review management programs for dry and fresh cows can pay financial dividends in heathier and more productive “foster mothers of the human race”.