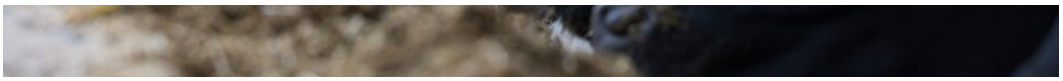


Why Cows Don't Get Pregnant

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Research has been able to shed light on the interrelationships between nutrition and reproduction, helping dairy owners manage their herds to improve reproductive efficiency.

ENERGY

Negative energy balance (NEB) can be defined as the net energy of the feed consumed by the dairy cow, minus the energy required to maintain her bodily functions minus the energy required for milk production.

Decreasing the length and severity of this period of NEB in just-fresh cows has a tremendous effect on the reproductive efficiency of the early lactation dairy cow. Management procedures instituted prior to freshening can decrease the period of NEB postcalving. Increase the energy density of the close-up ration to meet the requirements of the cow and growing fetus.

One way of monitoring the energy status of early lactation cows is by body condition scoring. Most researchers have recommended cows go dry at a body condition score (BCS) of 3.5 to 3.75. The dry cow should not lose any condition during the dry period, and early lactation cows should not lose more than 0.5 BCS during the first 60 days of lactation.

A study also shows a significant effect of body condition loss in early lactation on first service conception rates. At 70 day pregnancy diagnosis, the first service conception rate was 22.8% for cows that lost BCS during the first two weeks postcalving, 36% for those that maintained their BCS, and 78.3% for those that gained BCS. These results also emphasize the importance of good management and nutrition of the precalving and early fresh cow and its effect on overall reproductive efficiency in the next lactation.

PROTEIN

Research from the University of Pennsylvania suggests the close-up dry cow needs around 1,200 grams of metabolizable protein per day to meet her requirements.

Another nutritional problem that affects reproduction is the amount of degradable protein fed to the lactating cow. High levels of blood urea nitrogen and milk urea nitrogen have a direct correlation on the fertility of cows during the breeding period. The more ammonia produced in the rumen, the more energy is consumed by the cow to eliminate it from her body.

This energy is taken away from the early lactation cow that is already in a negative energy status. In cases where extremely high levels of degradable protein is being fed, the energy consumed to eliminate the excess ammonia could amount to as much as 7% to 10% of the energy required by the early lactation cow for maintenance and milk production.

Rations that consist of mostly fermented forages will contain higher levels of degradable protein than those with dry hay. All forages should be tested for levels of soluble and degradable protein when formulating the ration so the level of degradable protein can be set at a point where excessive amounts of ammonia will not be produced in the rumen.

If reproductive efficiency is a problem, testing should be done to check for blood urea nitrogen and milk urea nitrogen. If these levels are above normal, decreasing the amount of degradable protein and adding a bypass protein source should improve conception rates.

