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KNOXVILLE, TENN. The postpartum interval is the time from when a cow calves until she begins to have normal heat cycles. The length of this period plays a large role in determining whether a cow will rebreed in time to have another calf within a 12-month pe-

riod. Even if a controlled breeding season is not in place, cows that do not calve at least once per year are less profitable. So, managing cows for a short postpartum interval directly impacts profitability. Late winter is an important time to

consider these issues in spring calving (January – April) cow herds.

Nutrition during the last two months of gestation has a tremendous effect on how quickly a cow begins cycling following calving. Body condition score (BCS) at calving is directly related to the postpartum interval. Dr. Rick Funston, Extension beef cattle specialist with Montana State University, illustrated this relationship in the following table:

Limiting nutrition to below a cow's requirements during this important time will extend the postpartum interval

even if that cow does not fall below a body condition score 5. In fact, a cow in marginal body condition but increasing plane of nutrition will usually have a shorter postpartum interval than a "fleshy" cow that loses weight just prior to calving. Remember that a cow's nutritional requirements increase in the third trimester of gestation and continue to increase through peak lactation (about 60 days after calving). Adding body condition to dry cows is less costly than trying to add it while lactation demand on nutrition peaks. This peak occurs at about the time a cow needs to rebreed.

Fortunately, this critical period in late gestation usually comes after the previous calf has been weaned. But, for most spring calving herds in Tennessee, it also comes at a time in the year when forage is limited and hay quality requires supplementation. Make sure that hay has been tested for quality and, if needed, appropriate supplementation is provided even for dry cows in late gestation. Other strategies to improve dry cow nutrition include improving stockpiled forages with legumes, planting winter annuals and including an ionophore (such as Bovatec or Rumensin) in the supplement.

It takes diligence to maintain cattle in the proper condition throughout the year. Get cows to a BCS of 5+ earlier in the non-lactating period, which provides an insurance policy for things like the dry or cold weather experienced this year. Late gestation also has a lot of impact on the future of that calf. Cattle have to be given the ability to express their genetics and "fetal programming" throughout gestation can be affected by the dam's nutrition. In other words, poor cow nutrition can lead to an unthrifty calf that otherwise has the genetic potential to perform well.

Body Condition of Cowe at Calving	Postpartum Interval (days)
Thin	89
Moderate (-)	70
Moderate	59
Moderate (+)	52
Fat	31

Relationship of Body Condition of Brood Cows at Calving on Postpartum Interval

> Another issue to consider in reducing the postpartum interval is calving difficulties. Research has established that cows having difficulties during calving take longer to re-breed. Genetic selection for calving ease bulls and cows can help avoid difficulties, but some cows and heifer will still require assistance. Identifying and assisting the animals that need it will help them re-breed sooner. Calving in a pasture near the house, or where the cows are seen several times a day, will make it easier to provide calving assistance as soon as it is needed.

> Providing adequate nutrition in late gestation and limiting calving difficulties are major management issues that will help cows re-breed as soon as possible after calving. And having cows bred to calve early will result in heavier calves at weaning and higher pregnancy rates down the road. Δ

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