Don't Skimp on Pre-Calving Minerals

If a cow is to calve every 365 days, she must be pregnant again within 83 days after calving. That can only happen if she comes through calving in optimal health and body condition. From calving until the uterus is in condition for pregnancy is about 40 days. That leaves only two heat cycles for cows to rebreed on time. Under-fed cows are slower to return to normal heat cycles, and have lower conception rates when bred.

John Hall, Extension Animal Scientist with the Virginia Cooperative Extension service, says that, while the effects on the reproductive system that occur in the pre-calving period are not fully understood, the nutrition of late-gestation cows impacts reproductive hormone production from the brain, as well as follicular (egg and associated structures) development on the ovary. Researchers estimate that eggs begin maturing 100 days or more before they are actually released, so the process of achieving the next pregnancy starts even before the current pregnancy ends. It appears that these reproductive effects are a result of both nutritional reserves and types of nutrients available during the pre-calving period.

Hall adds that, at one time, cattle producers were led to believe that restricting nutrition in the close-up period would lower calf birth weights, and thus reduce calving difficulty, particularly for first-calf heifers. To the contrary, "research at several universities has demonstrated that pregnant heifers that are deprived of nutrition do not have less calving difficulty," says Hall. "However, the same research indicated that poorly fed heifers had more stillborn calves, weaker calves, lower calf survival, and poor-quality colostrum."

Late-gestation nutrition of the cow has important implications on the resistance of the calf to stress and disease. In late pregnancy, cows' feed requirements actually increase significantly, because the fetus makes 70 percent of its growth in the last three months of gestation. Hall says cow energy requirements increase by 25 percent compared to the immediate post-weaning period, and protein needs increase by 10 percent. First-calf heifers need to gain 2.0 to 2.5 pounds per day to continue to grow while the fetus also is growing.

Demands for calcium and phosphorus increase because of fetal growth. In addition, high levels of copper, selenium, zinc and vitamins A and D are needed for proper fetal body and immune system development. Therefore, Hall recommends a high-quality mineral and vitamin supplement for all late-gestation animals.

A mineral supplement containing phosphorus, salt, trace minerals and vitamins should be provided to late-gestation cows at all times. Specific minerals such as magnesium – to prevent grass tetany – or selenium should be added as needed, especially if mature or weathered hay is a major part of the diet.

Rangeland™ Weather-Resistant Minerals and ProPhos Minerals are tailored to fit your operation's seasonal needs.

Mammary system development, milk production and subsequent calf weaning weights are three more reasons to make sure adequate nutrition, including trace minerals and vitamins, is supplied in the pre-calving period. The result will be healthier, more profitable calves, from dams that milk heavier and breed back more quickly.