

Subclinical hypocalcemia : Field experience of cause and control

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Introduction: Subclinical metabolic diseases, such as subclinical hypocalcemia (SCH), are of current concern because they are linked to an increased risk of periparturient issues, which can have long-term consequences for production, reproduction, and survival of a dairy cow. Subclinical hypocalcemia is common in Europe, according to a new study from Germany (Venjakob et al., 2017). Subclinical hypocalcemia and clinical milk fever were seen in 47.6% and 8.6% of multiparous cows, respectively.

Objective: According to a meta-analysis that included 42 randomized trials (Santosh et al., 2019), cows fed cationic diets are more likely to develop milk fever or hypocalcemia. The purpose was to see if the European diets were associated to the prevalence of subclinical hypocalcemia.

Material and methods: Various diets were studied to determine the status of dietary cation anion balance (DCAB) in the regions as part of Kemin's formulating ruminant health program for pre-calving cows. Also, diets were made acidogenic with the help of NutriCAB which is a source of coated form of calcium chloride to mask the bitterness of anionic salt during intake, controlling hygroscopicity during application & storage, ensuring skin safety while handling and improving metabolic health for improved cow performance.

Result and conclusion : The majority of diets in the EMENA region are cationic in nature, as the components used in the diet are mostly cationic. Subclinical hypocalcemia is a major problem in the health of pre-calving cows, and cationic diets are one of the major causes. Increased prevalence of retained foetal membranes in dairy cows has been linked to weakened immunity and lower muscle tone caused by hypocalcemia. When diets were made acidogenic with NutriCAB under Kemin's formulating ruminant health program for pre-calving cows, field experience from different farms clearly showed that the incidence of retained foetal membranes was reduced by 81 percent, metritis was reduced by 82.1 percent, mastitis was reduced by 53.3 percent, and displaced abomasum was reduced by 80 percent. The reduction of subclinical metabolic disorders improves peak milk production and lactation persistence. When pre-calving diets were turned acidogenic with NutriCAB, there was a 5.9% increase in peak milk production. After calving, achieving optimal peak milk yield is critical because it sets the tone for improved milk production throughout the lactation cycle.

Summary : In dairy herds, subclinical hypocalcemia is common and should not be overlooked. According to studies, pre-calving cow diets should be acidogenic to counteract hypocalcemia. Acidogenic diets not only minimize subclinical metabolic problems but also increase lactation performance.