Maternal trace minerals

- From page 35

IMPROVED immune function may partially explain the improvements in calf performance observed by Marques et al. (2016) when they replaced inorganic trace minerals with complexed trace minerals in diets fed to beef cows during pregnancy. The cows were managed similarly until the third trimester, when they were fed a forage-based ration containing one of three supplements: (1) a control containing no additional copper, zinc, manganese or cobalt, (2) an inorganic supplement containing copper, zinc, manganese and cobalt sulfates or (3) a complexed supplement containing zinc, copper, manganese amino acid complexes and cobalt glucoheptonate. As cows calved, the cow/calf pairs were returned to the general herd and fed a common diet containing sulfate-based trace minerals.

Although trace mineral sources differed, both the inorganic and complexed supplements provided the same trace mineral concentrations to cows during the last trimester. There were no differences in average birth weight, but 205-day weaning weights averaged 538 lb. for calves from dams fed the control, 556 lb. for calves from dams fed the sulfate-based supplement and 580 lb. for calves from dams fed the complexed trace mineral sources (Figure 2).

Following an on-ranch preconfinement program, the calves were trucked to a commercial grow yard, where they were treated for bovine respiratory disease (BRD), as needed. BRD treatment rates were 42% for the calves from dams fed the control, 59% for the calves from dams fed the sulfate-based supplement and 20% for calves from dams fed the complexed trace minerals (Figure 3). Consequently, improving third-trimester trace mineral nutrition in dams resulted in improved preweaning calf growth and decreased feedlot morbidity.

Summary

While continued research efforts are needed to further determine the impact of generational nutrition has on health and performance throughout domestic animal production, the future is promising.

Research points to opportunities for improving progeny performance by providing highly available complexed trace minerals during gestation, as well as opportunities associated with increasing dietary trace mineral supply to dams — perhaps highlighting the increased trace mineral needs of today’s livestock.

References


Challenges encountered in ABF production

- From page 29

FOR an ABF program, select the best growers that produce the best and most consistent results. The experience level of the individual farmer plays a big role in the success of ABF flocks. Even for the best growers, it may take five or more flocks to learn the essential husbandry practices that are necessary for successful and consistent ABF production.

Excellent feed quality is essential. The broiler company must know the minute details about each feed ingredient to ensure the highest quality.

Comments

These panelists are among the best in the industry. They have experience and knowledge. The consensus is clear: ABF broiler production is difficult, it requires an infinite amount of planning and biosecurity at every step of the way is critical.

In regard to every production decision that is made, choose the best of everything: the best strain of breeders available, the best breeder flocks you have, the best hatchery in your system, the best broiler growers you can identify and the best-quality feed and feeding program you can produce, plan and execute.

Long-term strategic decisions can be marketing driven, but short-term tactical decisions must be driven by considerations of best practices for the bird.

A common fear of companies that are venturing into ABF production is that it is the first giant step into a train wreck. However, as one panelist said, no matter how good you are, there will be some flocks that don’t make it, but if you do it right, it will not be “a big deal.”

There are certainly differences in the philosophical approach to ABF production. At least one major company is taking what I would call the FACTS approach: “This is what we believe to be true, and that is how we are going to produce our broilers.” Other companies are taking what I would label as the MARKETING approach: “As long as it is legal, moral, ethical and consistent with best practices, we will produce whatever product the customer would like and is willing to pay for.” Other companies are suggesting perhaps a middle ground of standards that might satisfy both producers and customers.

It will be interesting to observe which philosophy is successful. Perhaps all companies can be successful, in their own way.

The Bottom Line

The production of ABF broiler meat is a challenge, but if done right, the operation can be successful.