Should you feed free choice minerals?

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COLLEGE PARK, Md. — Although minerals are a small part of the ration, they are essential for optimum health and production of dairy cows. At least 15 mineral elements are required by dairy cattle.

How should these minerals be fed?

There are differences of opinion among dairymen, nutritionists, veterinarians and feed salesmen as to the ability of dairy cows to select minerals according to their needs when offered free choice. But more and more evidence indicates there is little correlation between the amount an animal eats and its requirements.

Comments, often made by dairymen to justify feeding minerals free choice are "The cows are eating a lot of the mix, so they must need them," and "I just feel a whole lot better when I know they are available to my cattle." Granted, certain individual cows may consume large quantities of the mix.

Several universities have evaluated free choice or cafeteria style feeding of minerals. In a South Dakota study cows are fed either corn silage or alfalfa hay. The same concentrate mix was offered to both groups (with no added minerals), and minerals were offered cafeteria style. There were individual compartments for calcium, phosphorus, potassium, sulfur, trace minerals, bicarbonate, bentonite, salt and an iodine mix. Also vitamins A, D and E were available.

Calcium consumption was not different between groups even though alfalfa fed cows were getting three times their requirement, and the corn silage fed cows were calcium deficient. Cows fed corn silage did consume more potassium than those fed hay, but not enough to fulfill their requirements. If cows are able to select for mineral needs, there should be a difference in mineral consumption. Obviously, this was not the case.

In a second trial all cows were fed the same roughages (free choice corn silage and 5.5 lbs. of alfalfa hay) and the same concentrate mix. Half of the cows were force fed recommended levels of minerals, and half were not. Both groups had access to the free choice mineral and vitamin feeders.

The analysis showed that cows force fed the recommended amount of minerals consumed more than those offered free choice minerals. Calcium and potassium, the two minerals which differed most between rations, were consumed in larger amounts by the force fed group even though levels were adequate in their basic diet. These results indicate that voluntary intake had little to do with actual need.

Results similar to the study cited above have been reported by researchers in Minnesota, Cornell and England.

Research clearly indicates that dairy cattle are not capable of deciding which minerals, or the amount, they need for production and health. Mix the minerals with the concentrate portion of your ration or blend them into a complete ration to insure all cows consume enough to meet their needs.