

# Using Cattle Mineral as Your Ounce of Prevention

Mineral bolsters herd health.

by Kent Tjardes, Ph.D.

Providing mineral can be more than just a way of efficiently delivering nutrition to your herd — it can also be a cost-effective health management tool. Your cattle mineral package can deliver critical trace minerals, vitamins and even additives that work to proactively address costly health issues.

Managing health through mineral is important to any herd's overall return on investment. Cattle mineral ensures performance is maintained. In extreme cases where nutrition is imbalanced, death can be a side effect, meaning potential lost income. For instance, when phosphorus levels are not adequate, weaning rates suffer. Studies have shown a 25% reduction in calves weaned when no phosphorus is present.<sup>1</sup>

Several cents per head per week invested in mineral can help combat challenges that can cost thousands of dollars. It's a smart investment.

**Help herd health with mineral**  
Mineral can be used as an added tool to fight the following.

## 1. Foot rot —

Foot rot is an infectious disease leading to swelling between the hoof claws. It is common during wet, muddy periods and can lead to lameness in cattle. When foot rot is prevented it can result in 20% more weight gained during a grazing season.<sup>2</sup>

The dairy industry has seen how dialing in nutrition can help improve hoof health and limit issues like foot rot. Feeding trace minerals like zinc, iodine, copper and manganese can positively impact hoof health.

Organic iodine, scientifically called ethylenediamine dihydroiodide (EDDI), is a more bioavailable – or readily digestible – form of the mineral. Feeding iodine at or above the National Research Council (NRC) recommended level helps limit foot rot.

Zinc is also beneficial because it aids with skin integrity, which can make it harder for pathogens to breach the skin.

## 2. Grass tetany —

Cool-season grasses risk being low in available magnesium during spring and fall, causing grass tetany. Symptoms of grass tetany include loss of muscle control, irritability and ultimately coma and death in cattle.

When cool-season grasses are in their key growth periods, potassium can also be higher than normal, which makes it more difficult for cattle to absorb



magnesium. Compounding the problem of grass tetany is that cows' magnesium requirements double when they are lactating, which tends to coincide with calving for both spring and fall calving herds.

The addition of a mineral higher in magnesium is a simple way to help prevent grass tetany and meet the needs of lactating females grazing cool-season forages. Provide high magnesium mineral two to three weeks before cattle are first exposed to lush grass to achieve consistent intake before the time of highest risk. Continue feeding for 60 days after the first sign of grass growth.

**3. White muscle disease —**  
When selenium or vitamin E is low in a cow's diet during gestation, young calves can acquire nutritional myodegeneration (NMD), commonly referred to as white muscle disease. Calves born with low selenium or vitamin E levels suffering from white muscle disease can have two types: a congenital version and a delayed response version.

The congenital version of NMD impacts the heart and is fatal in most cases, with calves dying in a few days. The delayed response version results in weak calves that can't stand but can be

## 4. Urinary calculi —

Male cattle can develop kidney stones or urinary calculi when there is an inverted calcium-to-phosphorus ratio in the diet. Urinary calculi can happen when feeding higher levels of distillers' grains or grazing forages that are high in phosphates.

A balanced cattle mineral program helps reduce the risk of urinary calculi by providing the correct calcium-to-phosphorus ratio.

### Get extra benefits from additives

Minerals can also be a convenient way to deliver additives that support the health of your herd.

## 1. Fly control —

Controlling flies means that those flies are less able to bite and stress your cattle. Reducing flies benefits the immune system; cattle don't devote nutrients to fighting and avoiding flies.

An insect growth regulator (IGR) in mineral can help to limit horn flies by inhibiting the horn fly life cycle in the manure by stopping pupae from developing into biting adult flies.

## 2. Bloat —

The risk of bloat is common when grazing lush grasses during the early part of the grazing season. Ionophores added to mineral can help relieve bloat.

Mineral intake is also key to increasing ionophore intake and limiting bloat when forage is lush. If the mineral isn't palatable, cattle won't consume the needed ionophore.

### Mineral matters

There's no one-size-fits-all approach for addressing the issues that arise with herd management. Visit with your nutritionist or local feed dealer to determine the appropriate mineral formulation to meet your needs. **HW**

**Editor's Note:** This article was provided by Purina Animal Nutrition. Kent Tjardes, Ph.D., is a Purina field cattle consultant.

#### Sources:

<sup>1</sup>Black WH, Tash LH, Jones JM, Kleberg RJ. Effects of phosphorus supplements on cattle grazing on range deficient in this mineral. 1943. USDA.

<sup>2</sup>Brazzle FK. Cattleman's Day Report of Progress 704. 1993. Agriculture Experiment Station. Kansas State University.