

April 10, 2018
FOR IMMEDIATE RELEASE
David Dugan

OSU Extension Educator, Agriculture and Natural Resources

Adams and Brown Counties

Ohio Valley Extension Education Research Area

Mineral Deficiency Issues

Grass Tetany season is here. Cool conditions and grass growing rapidly with cows out picking where ever you let them or wherever they decide to go. Kind of hard to keep them in with that green grass just over the fence. A good mineral program is key to preventing Grass Tetany, but there are other key issues when it comes to minerals. The following is part of an article that was in Progressive Farmer and recently in the Beef Blog from Victoria Meyers, Senior Editor with Progressive Farmer.

Jeff Hall believes most cow/calf operations have animals that are mineral deficient—especially when it comes to copper. It's a conclusion he's reached after thousands of blood and liver biopsy tests in herds across the country. And, it's convinced him there's a big potential upside in herd productivity that can be tied to better supplement management.

Hall, professor of veterinary services and toxicology at Utah State University, calls mineral deficiency at commercial cattle operations "very common," adding in some parts of the country, it's not uncommon to see 70% or more of animals tested deficient in copper. Selenium deficiency is also widespread, he adds.

There are a lot of ways to waste mineral. No. 1 is not having a good supply of clean water for the herd. Tjardes stresses without this, cattle won't eat mineral. And, uneaten mineral is, well, a waste. A good average for loose mineral consumption in a beef cow herd is 2 to 4 ounces daily, but desired intake is dependent on concentration of minerals in a given formulation. Mineral tub consumption averages are 4 to 8 ounces. Tjardes recommends one tub per 25 to 30 head. Kent Tjardes is a cattle consultant with Purina Animal Nutrition.

After water availability, lack of palatability in a mineral is probably the next biggest reason for waste. Sometimes, it takes trial and error to see which products are best consumed, as it can vary by herd and location. Tjardes notes minerals can have a metallic, bitter taste. Depending on soil profile and forage nutrition, what's tasty to cattle in one region won't be somewhere else.

"Cattle really only crave phosphorus and salt, but in cases where soils are high in salt, cows won't go after those high-sodium products. And, in some areas low in phosphorus, cattle will eat a lot of mineral—to the point of overconsumption. So, it's key to work with a nutritionist who knows the region to get the best mix," he says.

Placement and feeder type has an impact on consumption in a considerable way. Mineral should be placed where cattle tend to congregate—unless they are overeating it, in which case, he recommends moving it further from loafing areas. More than feeder type, formulation has a lot to do with limiting waste.



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Weatherized minerals, he stresses, are often the best choice. This type of mineral can be put out in recycled protein tubs or even old tires without creating waste. Don't overfill them, he notes, if you are located in an area prone to windy conditions.

The right mineral program for cow/calf operations can benefit a herd in four key areas:

1. **REPRODUCTION.** Providing cattle with a source of organic trace minerals equals better breedback, higher conception rates and improved reproductive performance early season.
2. **CALF PERFORMANCE.** Dams with a mineral source produce calves with better daily gains and reduced disease.
3. **FLY CONTROL.** Mineral containing a feedthrough insect growth regulator is a growing part of producers' approach to fly control. These products have to be started prior to fly season, because they break the life cycle of the pests early.
4. **IMMUNE FUNCTION.** A good micromineral status aids in the function of animals' overall immune systems, allowing them to respond better to vaccines and naturally fight disease.

Any program must hit certain basic needs. Beef cattle require the macronutrients calcium, magnesium, phosphorus, potassium, sodium, chlorine and sulfur. In addition, seven microminerals have established requirements for beef cattle: cobalt, copper, iodine, iron, manganese, selenium and zinc.

Vitamins important to mineral metabolism and absorption include Vitamins A, D and E. When choosing a mineral, consider not only stage of life but whether the diet is grain- or forage-based. And, remember region, soil profile and forage nutrient levels will dictate the best supplement.

Several factors can interplay with efficacy of mineral supplementation programs, including concentrations and chemical forms of individual minerals, rate of consumption and higher sulfur in the diet or water, which limits usability.

Tobacco Museum Fundraiser

The reverse raffle to benefit the Ohio Tobacco Museum is Saturday, April 14 at Ripley Elementary School. The meal begins at 6:30 p.m. and the drawing will begin at 7:30 p.m.

Remember the drawing will have several winners. The first of the tickets drawn will win \$100. The tenth ticket drawn and every tenth ticket after that will win \$100 until we get to the last 5 tickets. The last five will win in order, \$250, \$500, \$750, \$1000 and the final ticket drawn will win \$8000.

We still have very few tickets remaining. You can call 937-371-5622 or 937-515-2881 if you would like more information or to purchase a ticket. You can also call Ripley Builders Supply at 392-1371 or stop by to purchase a ticket at 116 Main Street in Ripley.

Master Gardener Event

Mark your calendars for Thursday, April 19, 2018 at 7:00 p.m. to be at the Mt. Orab campus of Southern State Community College. The class will be in Room 107 with Denise Ballinger, president of the Mason County Master Gardeners Association. Denise will share her knowledge of the Monarch Butterfly and her experiences with raising and releasing hundreds of Monarchs each year. As always, these events are free and open to the public. Plan to attend.

Dates to Remember

Apr. 14 Ohio Tobacco Museum Raffle, Ripley Elem. School, meal at 6:30, draw 7:30