Weekly Article

3-21-2022

Are your Micro's Sufficient?

Hello, my Name is Richard Purdin with OSU Extension, Ag and Natural Resource Educator and Community Development Educator for Adams County. I hope to better inform local producers and the public of the latest news in the world of agriculture. The first official week of spring is here, and it actually does feel and look like spring across the county. As I make my rounds and farm visits, I can't help but notice many of the fields are turning green and the landscape is beginning to wake from its winter slumber. Looking at the forecast ahead the trend looks like mild and wet for the remainder of the month, this might be disappointing for field work, but it is nice for our cool season forages and pastures. Last week was a productive week for getting out in the field and getting started with spring chores. I was able to make multiple field visits and took note of forage seeding being done, fence building, manure application, brush cleaning, plowing, and some fertilizer being spread (not much). I have talked to a few producers that are very hesitant to apply fertilizer on hay and pasture this season and might even skip the practice all together. Everyone's operation is different, so I believe the best thing to do is what works for you. If you have been steadily applying fertilizer to pastures and hay fields each year you might be able to skip a season. The only true way is to take a soil sample and see what you must work with now and then make fertility adjustments based off the soil analysis rather than a guess! If you do decide to take a soil sample this spring, you might want to consider testing for micronutrients also. Today I want to discuss the importance of micronutrients to plants and animals.

There are 17 essential nutrients needed for plants to grow and thrive. The first set of essential nutrients are very widely known among farmers; they are often called primary or Macronutrients. Macronutrients include Nitrogen, Phosphorus, Potassium, Calcium, magnesium, sulfur, and then we can't forget sunlight, oxygen, and h2o (water). The remaining nutrients are called micronutrients, these nutrients are often overlooked and needed in smaller amounts by plants and livestock. Even though these nutrients are needed in smaller amounts they are very critical for plant and livestock performance. There are 8 micronutrients including Boron, copper, Iron, manganese, Zinc, Molybdenum, nickel, and chlorine. Plants utilize and take up these nutrients in Parts Per Million. Micronutrients are often sufficient in the soil but increasing crop yields, grazing pressure intensifies, and heavy amounts of precipitation can all lead to deficiencies in the soil. Boron, copper, Molybdenum and Zinc are the most likely nutrients to be deficient in Southern Ohio Soils.

- Boron Levels in the soil should range between 20-100ppm

- Copper Levels should range from 5-25ppm.
- Molybdenum levels should range from 0.2-2ppm
- Zinc level should range from 20-80ppm.

Micronutrients are not only critical for plant growth, but livestock also need adequate amounts to stay healthy and strong especially during stressful periods such as harsh weather, weaning, and birthing periods.

- Zinc plays key roles in hoof development, RNA/DNA synthesis, and hair growth.
- Copper is essential for bone formation, blood cell production, and artery strength.
- Boron plays a critical role in bone density, embryo development, wound healing, and metabolism of other nutrients.
- Molybdenum has been shown to help with digestions and nutrient absorption and oxygen transfer in the blood.

In summary, testing your soil should be your starting point and knowing both Macro and Micronutrients are critical to make the right decisions for soil fertility and livestock nutrition. Forages and feed stuff will only be as good as the soil they grow in. Finally if your soil is low in a certain nutrient make sure to supplement your livestock with the proper minerals until you can adjust the soil fertility.Talking to your mineral dealer and understanding the different mineral choices is recommended.

Some other details to go over

- 2022 Tobacco GAP recertification course will be March 31, 2022 at Raines Farm and Greenhouse, 10:00am-12:00pm. This event will be open to both Adams and Brown County producers. Call the Adams County OSU Extension office to RSVP at (937) 544-2339.

- April 9th, 9:00 am to 3:30pm Adult Mental Health First Aid training sponsored by Adams County Farm Bureau. This training is for those who work with or for those in the agriculture production sector or rural adults in general. This training will allow you to understand the warning signs of mental health challenges and how to get the person struggling help. Please contact the Adams County Farm Bureau office at (937) 378-2212 to RSVP by March 28th. Meeting location will be at 325 West State Street Georgetown, Ohio 45121 and lunch is included.

- April 13 6:00-8:00pm Small Ruminant School hosted by W-C Milling LLC, event location will be held at the Seaman Community Center 17806 State Route 247 Seaman, Ohio 45679. Please RSVP by April 6th by calling the Adams County Extension office at (937) 544-2339.

- April 20th 6:00-8:00pm Forages for Horses Pasture walk located at David and Kimberly Baker Quiver Heart Preserve 2655 Steam Furnace Road Peebles, Ohio 45660. Cost is $15, please RSVP by April15th with OSU Extension Adams County at (937) 544-2339.