

Weekly Article

Crop Fertility 101

2-2-2021

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. February is a very important month in realm of weather. February can be considered a month of change; this could be good or bad. Groundhog Day is recognized as a day that will forecast the remainder of the winter and the days start to get considerably longer as we approach March. As the old saying goes, it thaws every day in February mainly due to the longer days. On the other hand, history tells use that this old saying does not always hold true. 1921, 1935, 1948, 1977, 1978, and 1979 are years that the Ohio River Valley saw little or no thawing for the entire month of February.

As we wait for the longer and warmer days to come, producers should be thinking about the 2021 crop year. Last week I discussed the Macro Nutrients in the soil. Just as a refresher, macro nutrients are nutrients or plant food need in a larger amount by the plant. No matter if you are raising 1000 acres of corn or patch of potatoes in the garden knowing the macro nutrient level in your soil is critical. N, P, and K are the big three that we look at. As I mentioned last week many farmers spend thousands of dollars every year on fertilizers that contain these nutrients. Today I want to talk about how to determine if you are meeting the plants needs during the growing season. For livestock producers, maintaining good healthy crops will equal healthier livestock.

First and foremost, you need to know how much macro nutrients are required to produce your crop of choice.

- Corn is estimated to remove .74lbs of Nitrogen for every bushel yield, .35lb of phosphorus, and .20lbs of potassium so if your 2020 corn crop averaged 150bu/ac then 111lbs of N, 52.5lbs of P, and 30lbs of K was removed by the corn crop.
- Soybeans are estimated to remove 3.55lbs of N/bushel yield (fortunately much of this nitrogen was fixed naturally by the soybean), .79lb of P, and 1.14lb of k removed per bushel yield. So, if you 2020 crop averaged 55bu/ac 195lbs of N, 43.45lbs of p, and 62.7lbs of K was removed/used.
- Grass/ Legume hay will remove an estimated 40lbs of N per 1, 13lbs of p, and 50lbs of K per 1 ton of yield will be removed.

A question that needs to be asked is – am I replacing those nutrients with my current fertilizer application program? To answer this question, you must first know how

much nutrients are available in the soil currently. Taking soil test 6 inches deep and throughout the whole field is a good start. Then look at your current fertilizer program. If you are a hay producer in the typical habit of 200lb of 19-19-19 per acre on an annual basis then you are applying 38lbs of N, 38lbs of P and 38lbs of K. If your yield is only 1 ton/ac this program is fine but if your yield is 2 tons you will have a 42lb N deficit, 12lb build up in P, and 62lbs of K will be mined from the soil reserve. The main point is to know your numbers and feed your crop appropriately.

Some other details to go over:

- The OSU Extension Office is open by appointment only. If you need assistance you can contact us at (937) 544-2339.
- 2021 Tobacco GAP Training will be offered in person February 23rd 10:00 am-12:00pm located at Raines Farm and Greenhouse 2667 Nichols Ridge Road Seaman Ohio 45679. Please call the office to pre-register (937) 544 -2339 (Seats will be limited to 20).
- 2021 Fertilizer/Pesticide Private Applicators in person course is planned for March 9th at the Cherry Fork Community Center (gym) 5:00pm – 9:00pm. If you need recertified, you should get an invitation in the mail. (due to covid19 date is tentative and susceptible to change)
- OSU Extension Department of Agricultural, Environmental, and Development Economics will be presenting the 2021 Climate and Grain Market Outlook February 19th 10:00am-11:30am. Go to https://osu.zoom.us/webinar/register/WN_Wli8sVbSR5i3yqTqtBrj6A to register for the virtual event.
- February 15th, 22nd, and March 1st OSU will be hosting a three-part workshop on Farm Succession Planning. This workshop will be offered virtually 6:30pm to 8:30pm. The course fee is \$40 per farm family. The deadline to register is February 10th go to go.osu.edu/farmsuccession to register.
- For producer who still have not yet elected a 2021 crop safety net program, there will be an in-person meeting at the Ohio valley Career and technical center February 24th, 2021 at 6:30 pm. The meeting will discuss ARC/PLC options. To register go to <https://go.osu.edu/2021farmbill> or Call the office at (937) 544 2339.
- February 12th General CRP signup deadline, and CRP Grasslands signup will begin March 15th, 2021 and conclude April 23rd, 2021 contact the farm service agency for assistance in signing up for these programs.
- OSU Extension Beef Team will have their next Cow -Calf School via Zoom will be held February 15th at 6:00 pm, topics include seaman handling and pregnancy checking .Go to https://osu.zoom.us/webinar/register/WN_N_CtcKYwQB2l60Afug10aA to register.