

GOOD TIME TO SOIL SAMPLE FIELDS THIS FALL



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Fall is an excellent time to soil sample fields for nutrients following harvest. With the very dry conditions for most of the region, crop yields may be impacted as well as nutrients used by the crop. With the high fertilizer prices, you may be able to save money on your fertilizer bill. In previous years there have been a number of fields in southeast Nebraska that showed signs of nitrogen deficiencies, with potential for other nutrient deficiencies or imbalances. With all the rain in 2019, some nitrogen was lost either from leaching through the soil profile, runoff from the soil surface or into the air. In 2020 growing conditions were much better and there should have been less problems with nutrient deficiencies in corn and soybeans. In 2021 rainfall was extremely variable as were dryland yields. In 2022 corn yields in southeast Nebraska are also extremely variable, with lack of rainfall and hail causing farmers to replant on some areas of southeast Nebraska.

As you plan for 2023, with the continued high fertilizer prices, it is important to use fertilizer wisely and being efficient as possible with the fertilizer that is applied. With the erratic weather patterns and some torrential rains we sometimes have received, there is potential for nutrients to be lost through erosion, leaching or denitrification.

If you aren't already, you may want to consider soil sampling fields or grid samplings for nutrients, such as phosphorus, potassium, sulfur and nitrogen. Variable rate application of fertilizers may save you a significant amount of money with these high fertilizer prices. Depending upon soybean yields this year, you may be able to apply a significant nitrogen credit (at least 40 lbs. of N) for 2022 corn following soybeans. Nutrient deficiencies in soil can also have a significant impact on yields of both corn and soybeans. Soil pH can have a real impact on nutrient availability and consequently reduce yields, particularly in soybeans. Liming could help improve the availability of nutrients in your fields and help improve yields. This is why soil sampling is important. If you have fields that have not been sampled for several years, it may be a good time to sample these fields.

Under irrigation where yields are usually less variable than dryland crops, there is heavy removal of nutrients in the grain that may need to be replaced for next year's crops. Soil sampling in the fall or winter also allows for more time in planning limestone and fertilizer programs for the coming year. The UNL publication EC117 "Fertilizer Suggestions for Corn" provides excellent advice for sound fertilizer management and gives you the tools to make sound decisions on fertilizer needs for corn. This publication can be accessed on the web at: <http://agronomy.unl.edu/faculty/ferguson/ec117.pdf>.

The University of Nebraska-Lincoln Extension also has a nitrogen calculator available on the web you can use to calculate nitrogen needs for your corn crop. If you go to this link: <http://cropwatch.unl.edu/soils> and then click on Corn Nitrogen Recommendations Calculator, you will be able to access this tool. There are also a number of other valuable resources related to fertilizer application and crop needs at this web site as well. If you have questions on soil sampling, soil test labs in Nebraska or other questions, feel free to contact me at University of Nebraska Extension-Lincoln in Nemaha County at (402) 274-4755 or your local county Extension office.

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