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News Column
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SOIL SAMPLING ENHANCES PROFIT

Fall is the best time to take soil samples, for several reasons: After corn and soybeans have been harvested it's easy to walk between the rows of stubble; the press of spring planting and crop harvest is over; and soil analyses are more reliable than analyses from samples taken in early spring. The results can really help in planning for the next year's fertilization program.

Here are some considerations for your soil sampling program.

I recommend taking grid samples on 12.5 acres blocks of the field. A soil sample is sound for at least 4-5 years so do some fields each year on a rotating basis. The 12.5 grid gives you a great opportunity for variable rate application of lime, phosphorus and manure. It also blends well with soils maps, yield maps and other data needed for prescription farming management on your fields. Be sure to take plenty of subsamples to composite into the sample you'll send to the testing lab. At least 7-8 subsamples per grid block. If your hiring the sampling done take time to observe both the live sampling and the data. I looked at some maps for a farmer and asked him how a 12.5 acre grid could be 8.9 pH? In this case the most logical answer was poor sampling technique. A brush pile burned on a quarter acre of ground or less was the reason for the high pH. The presence of that kind of data reduces the confidence of using any of the data for variable rate applications.

Past land use history is very likely to impact grid sample maps. Farmsteads with livestock history will likely leave areas of higher organic matter and higher phosphorus levels. Pastures which were not converted to farmland for many years are likely to show up clearly. There is very likely to be considerable difference between upland, side-slope, and lower areas of fields influenced by erosion. On irrigated fields the most common variance is caused by leveling for furrow applications done some time in the past. Old channels of streams are also quite apparent.

Pick a reliable soil testing lab and then stick with it year after year. All soil test labs have the ability to accurately analyze soil samples, but the various analytical labs use one of several different soil extractants, thereby adding confusion to an already complex subject. The potential problem isn't in the analysis, it's the fertilizer recommendations made by the lab. I have seen some absolutely wild and crazy fertilizer recommendations made by soil test labs. If your recommendations seem unreasonable seek a third-party opinion from your Extension educator or private crops consultant.

The new age technology where your management needs to go includes detailed mapping of soils, yields, weeds, soil health and nutrients blended with application timing and methods. You can take your nitrogen application from a good management level of 1.0 pounds per bushel to a 0.7 to 0.8 pounds per bushel range. A \$40-50 saving on nitrogen costs alone. Prescription management is the direction you should head if you are going to compete in the future.

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