Yetter FARM EQUIPMENT

Leading Edge

NOVEMBER 2012

Save Money on Fertilizer This Year

Soil testing may show you need to fertilize less

2012 has been a hard, dry year for many farmers. The U.S. Department of Agriculture has reported U.S. farmers are harvesting the smallest amount of corn since 2006.[1] The low levels of rain led to drought in many areas of the United States, but they may also have left fertilizer behind in fields. This would mean that less fertilizer would need to be applied for next season, leading to significant cost savings.

Nitrogen applied earlier in the year has most likely turned into nitrate, and due to less rain it may be nearer to the soil surface than in years past.[2] Phosphorus and potassium may also have remained in the soil, as they are typically lost through crop removal or erosion.[3] Look to the October 2012 edition of the *Leading Edge* to read more about nitrogen carryover and learn how to save more of these valuable nutrients through the use of cover crops.

The importance of soil testing

Soil testing can be an accurate way to assess the amount of fertilizer that needs to be added to a field.

A reliable way to learn how much nitrogen remains in your soil, and therefore how much more you need to add, is soil testing. Marion Shier, an agronomist with United Soils, Inc., says the depth of your soil sample depends on your school of thought. When it is a drier year such as this one, take samples a foot deep. It is difficult for a probe to penetrate dry, hard soil at a depth of greater than a foot, because many fertilizers, such as nitrate, have not filtered down very deep due to the lack of rain.

Shier says it is hard to know how much residue will be left in the soil; when it comes to residue in fields, "some are higher and some are quite low. With the variability of crop yields, it would be valuable to get soil sampled."

The bottom line for Shier is, "We can control a lot of things, but the rain is not one of them." Even though you may have an irrigation system, Mother Nature is unpredictable and the amount of sunlight or humidity could still end up causing problems for many producers. For a soil sampling company, years like this can be valuable from an information-gathering perspective, adding to what is known about drought years and soil.

Anhydrous is a popular choice for fall application, due to delayed nitrification in soils below 50 degrees.

Thankfully, Shier says years like this don't occur too often. Above all, he says, don't make major changes to your system based upon this year's weather. "You should consider making some adjustments, but this is one in a long series of abnormal years. The old saying 'Mother Nature plays the trump card' is true." We can never be entirely sure what will happen from year to year.[4]

Soil sampling recommendations

If you take samples on your own rather than contacting a soil sampling company, remember that it can be difficult to take deep samples during a dry year. According to United Soils, Inc.'s soil fertility report, "It is often difficult to push the soil probe to a uniform depth into the soil, and cracks in the soil need to be avoided. If you can't sample to the correct depth, don't take the samples. Shallow sampling will result in incorrect results and recommendations." United Soils has several suggestions:

- Be careful with sampling depth control and make sure you get the complete soil core in the sample bag.
- The soil pH result may be a bit more acidic (as much as 0.5 pH lower) than in normal conditions.
- Soil K results may be lower (as much as 75-150 pounds) than they would be under normal conditions.
- Soil P test results probably will be affected less than K levels, but could still vary (as much as 30 pounds) and may be partially pH driven.
- Expect more variation between individual P and K sample points as opposed to uniform field reductions.[5]

Save fertilizer and save cash

Save money by applying only the fertilizer you need—you can even apply some nutrients in the fall and then wait to see if you need to side-dress in-season.

There may not be savings in everyone's soil, but Shier says in some cases farmers have been able to forego additional fertilizer completely after a drought. On the other hand, some producers have needed to add the same amount as in a year with normal precipitation. With fertilizer prices around $840 per ton for anhydrous ammonia, $630 for diammonium phosphate, and $560 for urea in the Midwest, any savings can be beneficial for your operation.[6]

Endnotes

1 "USDA: Corn production down 13% from 2011," Drover's Cattle Network, November 9, 2012. <http://www.cattlenetwork.com/cattle-news/latest/USDA-Crop-production-down-13-from-2011-178083441.html>.

2 University of Illinois Extension, <http://web.extension.illinois.edu/state/index.html>.

3 C. B. Lara, "In midst of drought, fertilizer carryover evidenced," Southwest Farm Press, August 18, 2006, <http://southwestfarmpress.com/midst-drought-fertilizer-carryover-evidenced>.

4 Agronomist Marion Sheir with United Soils, Inc. out of Fairbury, IL, personal interview, October 16, 2012.

5 F. G. Fernández, "Pointers on Soil Testing This Fall," The Bulletin, University of Illinois, 2012, p. 21.

6 D. Grant, "Pressure to remain on fertilizer prices," Farm Week, November 15, 2012.

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