



## Using Soil Tests to Make Fertility Decisions

12/15/17

With harvest wrapping up and winter not fully set in, **now is a great time to pull soil samples**. If you don't already have a favorite soil testing lab, we recommend Midwest Laboratories in Omaha, Nebraska. Your AgriEnergy rep or consultant can set you up with everything you need: instructions, bags, submittal forms, pricing, etc. Or, you can download the [information from our website](#).


Once you get your test results back, your AgriEnergy rep will help you analyze the numbers and make the right fertility decisions for your farm. We will want to know last year's crop, next year's crop, and whether any manure or fertilizer was applied this fall.

REPORT NUMBER  
**07-284-0270**

REPORT DATE  
**Nov 2, 2007**

RECEIVED DATE  
**Oct 11, 2007**

IDENTIFICATION  
**TOP GROWER**



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ANALYTICAL LABORATORY FINDINGS						APPLICATION GUIDELINES		
SAMPLE IDENTIFICATION		LABORATORY NUMBER				INTENDED CROP	YIELD GOAL	PREVIOUS CROP
N-1		7828966						
ANALYTE	UNITS	RESULTS	LOW	MEDIUM	OPTIMUM	V. HIGH	SUGGESTED FERTILITY GUIDELINES (lbs/Acre)	
Organic Matter	%	2.6					<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><b>SUGGESTED AMENDMENT GUIDELINES</b> AgriEnergy SUGGESTS</p> <p>LIME POUNDS</p> <p>LIME TON</p> <p>ELEMENTAL SULFUR</p> <p>GYPSPUM TONS</p> </div> <div style="width: 45%; border: 1px solid black; height: 100px;"></div> </div>	
Nitrate-N	lb/ft <sup>3</sup>	18						
P <sub>i</sub> /Phosphorus	lb/ft <sup>3</sup>	18						
Water Sol P	lb/ft <sup>3</sup>	4						
P <sub>i</sub> /Phosphorus	lb/ft <sup>3</sup>	122						
Bicarb-P	lb/ft <sup>3</sup>							
Potassium	lb/ft <sup>3</sup>	351						
Water Sol K	lb/ft <sup>3</sup>	61						
Calcium	lb/ft <sup>3</sup>	4405						
Water Sol Ca	lb/ft <sup>3</sup>	178						
Magnesium	lb/ft <sup>3</sup>	1132						
Water Sol Mg	lb/ft <sup>3</sup>	85						
Sulfur	lb/ft <sup>3</sup>	15						
Water Sol S	lb/ft <sup>3</sup>	14						
Zinc	ppm	1.0						
Manganese	ppm	2						
Iron	ppm	35						
Copper	ppm	2.3						
Boron	ppm	0.6						
Sodium	lb/ft <sup>3</sup>	34						
Water Sol Na	lb/ft <sup>3</sup>	27						
Soluble Salts	lb/ft <sup>3</sup>	0.3						
Excess Lime R <sub>t</sub>	lb/ft <sup>3</sup>	1						
pH		6.9						
Buffer Index								
C.E.C.	meq/100g	18.2						
Base Saturation	Percent							
Percent K	2-5%	2.7						
Percent Mg	12-18%	28.8						
Percent Ca	60-75%	68.0						
Percent H	0-12%	0.0						
Percent Na	< 1.5%	0.5						

Surface Nitrate Depth: 0-6

The above analytical results apply only to the sample(s) submitted.

Samples are retained a maximum of 30 days.

Analytical work performed by Midwest Laboratories, Inc.

**Here are the numbers we'll look at, and the order in which we'll help you address limiting factors:**

- **Organic Matter** - Is it a limiting factor? Every 1% of organic matter can hold more than a ton of nutrients not to mention water holding capacity and soil tilth benefits.
- **Nitrogen**
- **Potassium** - Can bands & foliars do the job or is dry needed for deficient soils?
- **Phosphorus** - Can I use liquid starter to feed the crop or do I need to build low soil levels?
- **Calcium, magnesium, pH** - Note tests where calcium is low in relation to magnesium. Then look at pH. If above neutral then gypsum is recommended instead of lime.
- **Sulfur** - This one is often overlooked, but plays a key role. We like to see it at least in the optimum range, so note any soils that are below that.
- **Micronutrients** - Which ones are low or medium? Which ones are adequate? Micronutrients can be effectively addressed in liquid starter and foliar applications. If certified organic, keep in mind that you **MUST** show a deficiency in order to apply micronutrients.

**We'll also have you look at things that could stretch your dollar:**

- **Products that allow you to address more than one deficiency** at the same time. For example: High quality compost builds stable carbon in the soil while also providing many nutrients. Gypsum provides both calcium and sulfur while also mellowing the soil.
- **Microbial products** such as **Residue®** and **SP-1™**. Enhancing soil biological activity enhances nutrient cycling – taking what nutrients are in the soil residue and organic matter and turning them into forms the plant can use. The resulting tilth can make nutrients that are bound to the clay become more available.
- **Band applying nutrients** is another technique to make fertilizer dollars go farther. Research by several universities has shown rates of phosphorus and potassium can be cut significantly if band applied compared to broadcast! (More on banding in the December 29 Ground Work.)

**The bottom line** ... there is no one-size-fits-all formula for making fertility decisions. YOUR formula starts with a properly interpreted soil test, and a decision-making partner who can help you prioritize and stretch your fertilizer dollars.

Contact your **AgriEnergy Resources** representative to get started today! Call the company headquarters at **815.872.1190** for the name of the rep or consultant nearest you.