

SOIL ANALYSIS

NUTRIENTS AVAILABLE TO PLANTS

(Determined by Daubeny *Plant Natural*™ Extraction Method)



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Client: Farmer John
John Doe
Field: Robert's - Macon County, Illinois
Crop: Corn-Grain
Date: 5-19-2016 **Lab #:** 32678

Low	Marginal
Optimal	High

Your Crop's Dieticians®

Sample Identification	Text.	Parts Per Million (ppm)														Water Soluble		Ratios		
		Percent - (%) Organic Matter		Free Lime CO ₃	pH Std Unit	Salts E.C. mmhos/cm	Nitrate NO ₃ -N lbs/ac	Phosphate P ₂ O ₅ lbs/ac	Potassium		Sodium		Calcium		Magnesium		Bicarbonates HCO ₃	Sulfates SO ₄ - S	Na:Ca	Na:Mg
		Total	Active						H ₂ O	CO ₂ *	H ₂ O	CO ₂ *	H ₂ O	CO ₂ *	H ₂ O	CO ₂ *				
1 Robert	4		2.53	L	6.36	0.53	121	112	12	23	17	20	53	333	9	38			0	2
Optimal-General		2.8-4.8	2.8-4.8		6.3-6.8	0.18-1.00	35-90	50-100	75-100	80-125	< 100	< 175	60-120	300-800	13-20	60-100	< 150	25-55	2 - 6	5 - 8

*SALT CATIONS: H₂O = **Immediately Available** (water soluble extract); CO₂ [Plants' roots give off CO₂] = **Available Reserve** (carbonic acid extract). CO₂ Natural Extraction calibrates well to plant uptake (availability). These values are the nutrients available in the sample provided to our lab. Availability ratings have been calibrated by multiple plant analyses (crop logging) during a growing season by numerous crops on hundreds of fields both domestic and foreign. TPSL is guided by **ASK THE PLANT**® with precision sampling and lab methods. Was a **COMPOSITE SAMPLE**, representative of your plants' major root zone provided? Rev041316

Sample Identification	MICRONUTRIENTS - Parts Per Million (ppm)											Hot Water Boron B	Calcium Chloride		Water Soluble Chlorides Cl	Solvita C-CO ₂
	Zinc Zn	Iron Fe	Manganese Mn	DTPA Extraction		Cobalt Co	Molybdenum Mo	Selenium Se	Silicon Si	Aluminum Al						
				Copper Cu												
1 Robert	8.05	133.45	19.26	3.19							0.76					
Optimal	3.10 - 6.10	11.10 - 18.10	10.10 - 15.10	2.60 - 3.60		15.00 - 40.00	1.50 - 2.00	1.50 - 2.00	1.30 - 2.00	60 - 100	< 6	20 - 200	> 60			

FERTILIZATION RECOMMENDATIONS

Sample Identification	Plant Removal Rates		Total Nutrient Plant Uptake lbs/acre				Fertilizer Guidelines For Maximum Economic Yields Recommendations lbs/acre											Ounces per Acre			
	Plant/Crop	Yield	N	P ₂ O ₅	K ₂ O	Mg	Gypsum	Lime	Sulfur	N	P ₂ O ₅	K ₂ O*	Mg	Zn*	Fe*	Mn*	Cu*	B*	Co	Mo	Se
1 Robert	Corn-Grain	325 bu	433.3	186	433	108			20	103		134	5					1			

Most of the crop nutrient removal rates are from International Plant Nutrition Institute. These fertilizer guidelines are ANNUAL RATES to be applied in multiple split applications over the entire growing season.

Fertilizer Recommendations (N-P-K) are adjusted to reflect efficiency of recovery by plant and Estimated Nitrogen Release from Organic Matter. ENR estimates a 60% mineralization with optimum microbial activity, moisture and temperature.

◆ Micronutrient recommendations may have to be adjusted according to method of application and chleation of products. Ask The Plant ® can determine actual plant uptake of these nutrients during the growing season.

* Potassium recommendations are for a rebuilding program and should be applied in split applications over a few years. We do recommend at least a 1:1 ratio of N:K₂O each year during the rebuilding phase.

Subsoils: While most plant roots feed in the 4 to 12 inch depth, the next 12-24 inches may also be a major contributor. For the most accurate soil test recommendations, sample topsoil and subsoil separately in 12 inch increments.