

# SOIL ANALYSIS

## NUTRIENTS AVAILABLE TO PLANTS

(Determined by Carbon Dioxide (CO<sub>2</sub>) Natural Extraction Method)

Name: Next Step Produce / Heinz Thomet

Field: Newburg, MD

Crop: Upland Rice

Date: 5/4/15 Lab #: 26401-02

Low
Marginal
Adequate
High

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SOIL - PLANT - WATER - COMPOST - FERTILIZER - HEAVY METALS  
ANALYTICAL AND CONSULTING AGRONOMIC LABORATORY.

SEE REVERSE SIDE FOR RATING GUIDE

Field		Text	% OM	pH	Salts E.C.	Nitrate NO <sub>3</sub>	Phosphate P <sub>2</sub> O <sub>5</sub>	Potassium K				Sodium Na		Calcium Ca		Magnesium Mg		Ratios		Plant Removal Rates		Total Nutrient Plant Uptake (Lbs/Ac)					FERTILIZER GUIDELINES IN Lbs/Ac Recommendation - For MEY <sup>§</sup>								
Section	Field		Humus	CO <sub>3</sub>	Std Unit	mmhos/cm	lbs/ac	H <sub>2</sub> O	CO <sub>2</sub>	H <sub>2</sub> O	CO <sub>2</sub>	H <sub>2</sub> O	CO <sub>2</sub>	H <sub>2</sub> O	CO <sub>2</sub>	Na:Ca	Na:Mg	Plant/Crop	Yield	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	Mg	Gypsum	Lime	Sulfur	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	Mg					
1	Section II	1	1.20	L	6.9	0.36	50	7	45	55	3	20	21	235	4	22	1	5	Rice	7000 lbs	112	60	148	14	500-1000			47	59	45	5				
2	M.F. North	1	1.27	L	6.7	0.26	11	1	19	24	2	16	19	163	3	16	1	5	Rice	7000 lbs	112	60	148	14	500-1000			83	68	120	6				
Optimal-General			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	1-4	5-9																	

**SALT CATIONS:** H<sub>2</sub>O = Immediately Available (Water Soluble Extract) ; CQ= Available Reserve (Carbonic Acid Extract). [Plants' roots give off CQ.] - CO<sub>2</sub> Natural Extraction calibrates well to plant uptake (availability). These values are the nutrients available in the sample analyzed in our lab. **THIS A COMPOSITE SAMPLE, representative of your plants' major root zone?** Availability ratings (see reverse) have been calibrated by multiple plant analysis (crop logging) during a growing season. Calibrated by numerous crops on hundreds of fields covering thousands of acres both domestic and foreign. By comparison, stronger extraction methods did not calibrate, especially on the major nutrients (P-K-Ca-Mg). TPSSLs guided by **ASK THE PLANT**® with precision sampling and lab methods. TPSSL leads the field in applying sound scientific research principals on an applied practical & profitable basis. R2011-09

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 § **MEY = Maximum Economic Yields**

These fertilizer guidelines are ANNUAL RATES to be applied in multiple split applications over the entire growing season.

## MICRONUTRIENTS

DTPA Extraction

\* or Equivalent

FIELD		ZINC Zn	IRON Fe	MANGANESE Mn	COPPER Cu	SULFATE S-SO <sub>4</sub>	CHLORIDE Cl	BORON B	SOLVITA C-CO <sub>2</sub>	FERTILIZER GUIDELINES IN Lbs/Ac Recommendation - For MEY				
Section	Field									ZnSO <sub>4</sub>	FeSO <sub>4</sub>	MnSO <sub>4</sub>	CuSO <sub>4</sub>	B
1	Section II	2.09 M	27.77 VH	2.65 L	0.66 L			0.68 M		5-10		10-15	10-15	1.00
2	M.F. North	1.02 L	18.33 VH	1.19 VL	0.41 L			0.72 M		10-15		15-20	10-15	1.00
Optimal		3.00-6.00	11.00-21.00	10.00-20.00	1.20-2.40	25-55	20-200	1.00-2.00	> 60					

VL - Very Low; L - Low; M - Medium; H - High; VH - Very High; EH - Extremely High

TPSSL® uses standard DTPA strong extraction chemical as used by most labs. This method is not calibrated by plant uptake as are TPSSL® natural extraction methods used for major nutrients.

♣ Recommended rate is for sulfate sources. Other sources may be more effective (Chelated). Consult manufacturers for equivalent amounts of more effective products. **ASK THE PLANT**® can determine actual plant uptake of these nutrients.