lb/A

BROOKSIDE LABORATORIES, INC.

58251-1

SOIL AUDIT AND INVENTORY REPORT

Name Ringler Energy City Cardington State OH

Independent Consultant Brookside Consultants of Ohio, Inc. Date 10/13/2015

Sample Location		PTGEN/FOUST	B				
Sample Identification			d 8 in				
Lab Number			1494-1				
Total Exchange Capacity (ME/100 g)			7.55				
pH (H_2O 1:1)			4.5				
Organic Matter (humus) %			2.35				
Estimated Nitrogen Release		lb/A	89				
ANIONS	SOLUBLE SULFUR*	ppm	15				
PHOSPHORUS	MEHLICH III	lb/A P as P_2O_5	232				
		ppm of P	38				
	BRAY II	lb/A P as P_2O_5	165				
		ppm of P	27				
	OLSEN	lb/A P as P_2O_5					
		ppm of P					
EXCHANGEABLE CATIONS	CALCIUM*	lb/A	1053				
		ppm	395				
	MAGNESIUM*	lb/A	165				
		ppm	62				
	POTASSIUM*	lb/A	192				
		ppm	72				
	SODIUM*	lb/A	53				
		ppm	20				
BASE SATURATION PERCENT							
Calcium		%	26.16				
Magnesium		%	6.84				
Potassium		%	2.45				
Sodium		%	1.15				
Other Bases		%	8.40				
Hydrogen		%	55.00				
EXTRACTABLE MINORS							
Boron* (ppm)			< 0.20				
Iron* (ppm)			185				
Manganese* (ppm)			56				
Copper* (ppm)			1.65				
Zinc* (ppm)			1.71				
Aluminum* (ppm)			1007				
OTHER TESTS	Soluble Salts (mmhos/cm)						
	Chlorides (ppm)						

d - specific depth

* Mehlich III Extractable