lb/A

38734-15

BROOKSIDE LABORATORIES, INC.

SOIL AUDIT AND INVENTORY REPORT

Name Ringler Feedlots City Marengo State OH

Independent Consultant Brookside Consultants of Ohio, Inc. Date 06/12/2014

MOQ-01-06

Sample Location	WEST FIELD	DEL	DEL	DEL	DEL	DEL
Sample Identification		1	2	3	4	5
Lab Number		0737-1	0738-1	0739-1	0740-1	0741-1
Total Exchange Capacity (ME/100 g)		18.08	22.71	23.75	29.67	15.05
pH (H_2O 1:1)		5.3	5.0	5.3	5.1	5.9
Organic Matter (humus) %		1.69	1.99	2.50	2.94	1.98
Estimated Nitrogen Release	lb/A	54	60	70	79	60
ANIONS	SOLUBLE SULFUR* ppm	19	14	11	13	10
PHOSPHORUS	MEHLICH III lb/A P as P_2O_5	18	23	37	73	< 5
	ppm of P	4	5	8	16	< 1
	BRAY II lb/A P as P_2O_5	41	137	128	183	14
	ppm of P	9	30	28	40	3
	OLSEN lb/A P as P_2O_5					
	ppm of P					
EXCHANGEABLE CATIONS	CALCIUM* lb/A	3120	3024	4148	4796	3266
	ppm	1560	1512	2074	2398	1633
	MAGNESIUM* lb/A	530	702	684	658	732
	ppm	265	351	342	329	366
	POTASSIUM* lb/A	168	174	218	212	154
	ppm	84	87	109	106	77
	SODIUM* lb/A	54	46	40	32	38
	ppm	27	23	20	16	19
BASE SATURATION PERCENT						
Calcium	%	43.14	33.29	43.66	40.41	54.25
Magnesium	%	12.21	12.88	12.00	9.24	20.27
Potassium	%	1.19	0.98	1.18	0.92	1.31
Sodium	%	0.65	0.44	0.37	0.23	0.55
Other Bases	%	6.80	7.40	6.80	7.20	5.60
Hydrogen	%	36.00	45.00	36.00	42.00	18.00
EXTRACTABLE MINORS						
Boron* (ppm)		0.25	0.20	0.42	0.44	0.35
Iron* (ppm)		122	140	183	170	129
Manganese* (ppm)		58	20	18	19	35
Copper* (ppm)		1.89	1.96	2.86	3.49	1.64
Zinc* (ppm)		1.16	1.05	1.40	1.31	0.93
Aluminum* (ppm)		1020	959	949	1010	856
OTHER TESTS	Soluble Salts (mmhos/cm)					
	Chlorides (ppm)					

* Mehlich III Extractable

lb/A

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Name Ringler Feedlots City Marengo State OH

Independent Consultant Brookside Consultants of Ohio, Inc. Date 06/12/2014

MOQ-01-06 MOQ-01-08

Sample Location	WEST FIELD	DEL	DEL	DEL	DEL	STRICKLA
Sample Identification		6	7	8	9	1
Lab Number		0742-1	0743-1	0744-1	0745-1	0746-1
Total Exchange Capacity (ME/100 g)		21.45	16.94	19.27	19.15	21.19
pH (H_2O 1:1)		5.7	5.8	5.1	5.8	4.9
Organic Matter (humus) %		2.62	1.92	1.83	1.99	1.89
Estimated Nitrogen Release	lb/A	72	58	57	60	58
ANIONS: SOLUBLE SULFUR*	ppm	9	9	17	9	23
PHOSPHORUS: MEHLICH III	lb/A P as P_2O_5	27	9	5	5	96
	ppm of P	6	2	1	1	21
BRAY II	lb/A P as P_2O_5	96	32	27	78	179
	ppm of P	21	7	6	17	39
OLSEN	lb/A P as P_2O_5					
	ppm of P					
EXCHANGEABLE CATIONS: CALCIUM*	lb/A	4750	3836	2872	4204	2810
	ppm	2375	1918	1436	2102	1405
MAGNESIUM*	lb/A	674	608	560	766	516
	ppm	337	304	280	383	258
POTASSIUM*	lb/A	186	144	142	176	262
	ppm	93	72	71	88	131
SODIUM*	lb/A	42	42	44	40	50
	ppm	21	21	22	20	25
BASE SATURATION PERCENT						
Calcium	%	55.36	56.61	37.26	54.88	33.15
Magnesium	%	13.09	14.95	12.11	16.67	10.15
Potassium	%	1.11	1.09	0.94	1.18	1.59
Sodium	%	0.43	0.54	0.50	0.45	0.51
Other Bases	%	6.00	5.80	7.20	5.80	7.60
Hydrogen	%	24.00	21.00	42.00	21.00	47.00
EXTRACTABLE MINORS						
Boron* (ppm)		0.53	0.36	0.22	0.45	0.31
Iron* (ppm)		186	132	127	135	176
Manganese* (ppm)		22	49	36	37	51
Copper* (ppm)		3.12	1.87	1.62	2.43	2.03
Zinc* (ppm)		1.58	1.09	0.83	1.20	1.99
Aluminum* (ppm)		802	799	1003	831	1077
OTHER TESTS: Soluble Salts (mmhos/cm)						
Chlorides (ppm)						

* Mehlich III Extractable

lb/A

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SOIL AUDIT AND INVENTORY REPORT

Name Ringler Feedlots City Marengo State OH

Independent Consultant Brookside Consultants of Ohio, Inc. Date 06/12/2014

MOQ-01-03

Sample Location	WEST FIELD	STRICKLA	STRICKLA	STRICKLA	STRICKLA	
Sample Identification		2	3	4	5	
Lab Number		0747-1	0748-1	0749-1	0750-1	
Total Exchange Capacity (ME/100 g)		17.60	17.18	20.59	19.49	
pH (H_2O 1:1)		5.3	5.8	5.5	5.3	
Organic Matter (humus) %		2.33	2.38	2.25	2.55	
Estimated Nitrogen Release	lb/A	67	68	65	71	
ANIONS	SOLUBLE SULFUR* ppm	17	13	19	13	
PHOSPHORUS	MEHLICH III lb/A P as P_2O_5	252	270	183	160	
	ppm of P	55	59	40	35	
	BRAY II lb/A P as P_2O_5	472	458	348	266	
	ppm of P	103	100	76	58	
	OLSEN lb/A P as P_2O_5					
	ppm of P					
EXCHANGEABLE CATIONS	CALCIUM* lb/A	3016	3746	3882	3380	
	ppm	1508	1873	1941	1690	
	MAGNESIUM* lb/A	480	636	652	526	
	ppm	240	318	326	263	
	POTASSIUM* lb/A	302	324	358	306	
	ppm	151	162	179	153	
	SODIUM* lb/A	64	66	100	52	
	ppm	32	33	50	26	
BASE SATURATION PERCENT						
Calcium	%	42.84	54.51	47.13	43.36	
Magnesium	%	11.36	15.42	13.19	11.25	
Potassium	%	2.20	2.42	2.23	2.01	
Sodium	%	0.79	0.84	1.06	0.58	
Other Bases	%	6.80	5.80	6.40	6.80	
Hydrogen	%	36.00	21.00	30.00	36.00	
EXTRACTABLE MINORS						
Boron* (ppm)		0.37	0.44	0.44	0.43	
Iron* (ppm)		230	214	231	249	
Manganese* (ppm)		51	37	49	36	
Copper* (ppm)		2.48	2.57	2.67	5.02	
Zinc* (ppm)		3.40	3.90	3.55	2.74	
Aluminum* (ppm)		873	777	917	852	
OTHER TESTS	Soluble Salts (mmhos/cm)					
	Chlorides (ppm)					

* Mehlich III Extractable