APPENDIX D: GRID-SOIL SAMPLED MEHLICH-3 EXTRACTABLE ELEMENTS

List of Tables

Table 1. Soil analyses of 0 to 4 inch samples collected from Field 1, 2014.

Lab Number	pH	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
						mg/kg						
166760	7.3	30	183	8465	142	14	23	35	230	1	4.7	1.1
166776	7.8	32	104	5672	78	12	11	61	108	0.5	3.9	0.5
166702	6.7	99	571	1821	116	28	15	232	117	0.4	4	0.7
166703	7.8	18	123	7643	92	43	13	44	156	0.9	2.3	0.6
166752	6.5	28	80	2741	110	16	20	76	86	0.5	3	0.4
167144	6.1	83	706	1415	158	22	22	159	266	0.9	5.6	0.6
166704	6.3	98	597	2478	227	10	25	172	251	0.7	8	0.7
166694	6.5	22	144	1298	89	14	13	118	374	0.6	2.6	0.3
166715	7	100	329	2229	144	13	18	134	232	0.9	6.1	0.6
166716	6.6	59	469	2007	150	14	21	101	267	1	9.7	0.7
166698	6.6	82	405	2022	152	12	18	149	360	1.1	7.1	0.7
166699	6.9	50	84	1667	85	12	17	121	346	0.6	4.2	0.3
166714	6.1	57	151	1613	139	14	23	101	532	0.4	3	0.4
166713	6	44	107	1700	158	19	22	94	316	0.8	7.5	0.5
167143	4.4	49	53	456	53	16	17	188	31	0.2	2.2	0.2
166721	6	52	108	1398	96	10	17	70	50	0.2	1.8	0.2
166722	5.3	102	163	1072	122	9	21	107	97	0.3	3.5	0.2

Lab Number	pH	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
166712	5.5	93	187	922	95	12	19	200	148	0.3	3.1	0.4
166710	6.6	50	84	1598	77	17	15	127	106	0.5	2.4	0.4
166711	6.2	67	191	1290	143	20	19	148	214	0.5	4.3	0.4
166708	7	77	245	1310	127	13	16	128	326	0.4	4	0.5
166707	6.3	169	771	2073	216	17	29	128	258	0.6	10.6	0.9
166706	5.5	100	90	1357	131	44	19	141	257	0.7	9.4	0.3
166728	6.6	80	189	1454	110	14	15	117	84	0.4	3.6	0.4
166723	7	48	277	1898	107	12	16	78	129	0.4	2.7	0.4
166724	6.8	56	223	1503	110	20	16	110	174	0.5	3.3	0.5
166727	6.4	41	61	1200	71	12	16	116	289	0.4	2.1	0.3
166725	6.3	109	707	1502	144	16	28	170	318	1	9.1	0.6
166726	6.5	56	420	1442	145	12	20	105	219	0.7	4.8	0.4
166718	6.8	82	366	2051	150	18	24	124	173	0.8	6.9	0.5
166720	6.4	55	93	1730	105	13	17	95	280	0.6	5	0.4
166736	5.4	60	88	889	69	10	17	119	171	0.2	3.3	0.2
166737	6.3	71	314	1638	94	9	17	97	193	0.3	5.3	0.4
166738	6.3	66	143	1247	84	8	17	114	122	0.3	3.3	0.4
166739	7.5	39	148	2056	62	7	13	84	238	0.4	2.1	0.4
166740	5.8	35	269	675	61	10	20	115	388	0.3	2.5	0.3

Lab Number	pH	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
166732	6.5	63	208	1149	128	12	17	118	381	0.8	4.1	0.4
166733	6.7	90	251	1649	139	11	17	111	362	0.9	6.1	0.5
166734	5.9	54	238	1275	131	11	20	153	253	1.1	5.1	0.4
166735	7.3	77	675	4064	161	10	26	52	380	0.8	5.6	0.9
166730	6.6	52	231	1591	120	14	19	109	188	0.6	3.7	0.4
166745	5.5	54	174	955	107	17	18	124	190	0.7	6	0.2
166746	6	30	49	1299	44	12	13	89	244	0.3	2.1	0.2
166764	5.7	81	52	941	69	12	15	110	168	0.4	3.9	0.2
166763	6.7	37	121	3098	176	10	20	64	341	0.8	7.5	0.6
166759	5.2	58	44	641	47	12	16	166	130	0.5	2.5	0.2
166749	5.5	44	67	801	76	10	16	96	316	0.5	2.3	0.3
166750	5.7	53	67	1046	62	11	18	89	360	0.5	2.2	0.2
166747	6.4	33	127	1230	83	8	15	86	444	0.5	2.3	0.4
166748	7	62	172	1767	156	10	19	90	448	0.9	4.2	0.5
166768	7.4	52	473	2717	123	8	22	70	321	0.8	4.3	0.5
166742	6.4	56	373	4822	230	16	19	40	308	0.9	3.8	0.7
166743	6.3	28	66	1665	89	15	15	94	231	0.6	2.7	0.3
166751	6.2	46	51	1510	74	13	18	95	222	0.4	3.6	0.2
166772	6.6	32	88	2359	86	11	19	79	486	0.5	3.3	0.3

Lab Number	pH	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
166691	5.9	65	63	1231	72	25	17	144	137	0.4	2.5	0.3
166692	6.2	55	78	1620	101	11	18	129	235	0.5	2.9	0.5
166775	5.6	36	62	1337	79	10	15	96	164	0.2	2	0.2
166754	6.1	40	161	1284	149	12	20	130	361	0.6	4.1	0.4
166761	7	42	109	2258	95	10	17	80	462	1	6.4	0.4
166762	7	45	224	3777	166	9	17	45	339	0.9	5.5	0.5
166755	6.7	40	136	2241	117	10	19	86	330	0.6	6.2	0.4
166757	6.9	36	248	2385	134	12	23	92	363	0.6	4.7	0.5
166758	5.3	49	48	736	63	11	18	169	309	0.4	3.1	0.2
166771	6.8	30	83	2047	59	10	14	79	269	0.3	3.3	0.3
166766	5.4	66	71	848	107	16	16	115	131	0.4	3.9	0.3
166767	5.4	72	73	605	92	10	20	128	326	0.4	4.1	0.2
166773	5.8	88	101	1181	96	11	21	124	346	0.5	3.2	0.3
166769	6.2	37	86	1835	126	11	19	83	511	0.8	4.3	0.3
166770	7.5	70	83	4550	127	19	18	50	311	0.9	6.1	0.5
166774	6.4	51	72	1430	99	11	17	79	311	0.6	3.3	0.3
Mean	6.35	59	204	1936	113	14	18	109	262	0.59	4.34	0.42
Median	6.40	54	143	1591	107	12	18	109	258	0.50	3.90	0.40
Minimum	4.4	18	44	456	44	7	11	35	31	0.2	1.8	0.2

Lab Number	pH	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
Maximum	7.8	169	771	8465	230	44	29	232	532	1.1	10.6	1.1
Standard deviation	0.66	25	178	1423	40	6	3	38	113	0.24	2.01	0.18
Coefficient of variation, %	10.39	43	88	73	36	46	19	35	43	41	46	44
Count	71											

Table 2. Soil analyses of 4 to 8 inch samples collected from Field 1, 2014.

Lab Number	pH	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
						mg/kg						
166695	6.4	11	71	1002	75	17	10	108	354	0.6	2	0.3
166700	6.6	25	41	1024	62	14	9	104	310	0.4	1.6	0.2
166709	6.6	24	117	861	71	13	9	141	303	0.3	1.6	0.3
166731	6.6	22	112	1226	97	13	9	94	269	0.4	2.9	0.2
166744	6.6	14	51	1440	54	11	10	86	193	0.5	1.5	0.2
166756	6.9	22	68	1853	89	14	15	77	297	0.6	3.3	0.2
Mean	6.62	20	77	1234	75	14	10	102	288	0.5	2.2	0.2
Median	6.60	22	70	1125	73	14	10	99	300	0.45	1.80	0.20
Minimum	6.4	11	41	861	54	11	9	77	193	0.3	1.5	0.2
Maximum	6.9	25	117	1853	97	17	15	141	354	0.6	3.3	0.3
Standard deviation	0.16	6	31	364	16	2	2	22	54	0.12	0.77	0.05
Coefficient of variation, %	2	29	41	29	22	14	23	22	19	26	36	22
Count	6											

Table 3. Soil analyses of 8 to 12 inch samples collected from Field 1, 2014.

Lab Number	pH	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	Bo
	---------- mg/kg ----------											
166696	6.2	7	69	836	67	13	9	129	415	0.4	0.9	0.2
166701	6.5	12	45	936	70	11	6	114	322	0.3	1	0.2
166719	7	12	228	3587	139	25	8	59	102	0.4	0.6	0.3
Mean	6.57	10	114	1786	92	16	8	101	280	0.37	0.83	0.23
Median	6.53	11	92	1361	81	15	8	107	301	0.38	0.87	0.22
Minimum	6.2	7	45	836	67	11	6	59	102	0.3	0.6	0.2
Maximum	7	12	228	3587	139	25	9	129	415	0.4	1	0.3
Standard deviation	0.40	3	99	1560	41	8	2	37	161	0.06	0.21	0.06
Coefficient of variation, %	6.15	28	87	87	44	46	20	37	57	16	25	25
Count	3											

Table 4. Soil analyses of 0 – 4 inch samples collected from Field 5a, 2015.

Lab Number	pH	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
						mg/kg						
58314	6.6	34	98	3168	108	16	16	116	138	2	7.3	0.9
58318	7	36	115	3404	96	15	15	154	214	2.5	6.9	1
58323	6.4	17	71	2413	92	28	10	111	197	2.2	3.5	0.6
58329	5.6	35	56	1692	86	13	11	143	230	2.7	4.2	0.4
58332	5.4	55	49	1028	81	9	12	197	212	0.9	2.9	0.4
58338	5.9	40	40	1299	71	9	10	177	169	1.1	3.8	0.4
58343	6	28	45	1578	83	9	10	178	204	1.3	3.3	0.5
58348	6.3	27	49	2031	85	11	11	147	211	1.4	4	0.6
58354	6	26	44	1762	72	13	11	161	188	1.2	3.6	0.3
58359	5.5	74	55	1040	69	14	11	230	210	1.1	2.9	0.1
58364	5.6	61	61	987	57	10	11	180	198	1.4	1.8	0.1
58369	6.4	29	65	1984	57	16	11	143	268	1.9	3.3	0.3
58375	6.1	23	65	2257	66	11	12	123	186	1.9	3.7	0.3
58380	6.6	32	103	2914	95	17	15	123	227	2.1	5.4	0.6
58383	5.4	50	63	840	93	14	14	192	275	1.4	2.6	0.1
58389	5.5	86	70	877	76	10	14	207	341	2	4.4	0.2
58394	5.3	59	50	922	65	11	13	188	215	0.9	2	0.1

Lab Number	pH	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
58400	6.2	19	42	2055	82	11	12	135	223	1.6	4.7	0.5
58404	6.1	22	46	1776	81	13	12	130	224	1.4	5.1	0.4
58410	5.2	33	44	565	63	13	15	151	247	1.1	1.5	0.1
58415	5	51	57	584	69	13	17	170	232	0.9	1.2	0.1
58420	5.1	55	176	795	70	11	13	176	285	2	3.3	0.2
58426	5.3	69	78	846	83	11	15	161	163	0.8	1.6	0.2
58431	5.1	43	46	574	54	12	15	142	249	1.2	1.2	0.1
58436	4.8	47	48	484	50	13	20	153	254	1.1	0.9	0.1
58441	5.3	51	39	513	61	13	14	148	246	1.1	1.9	0.1
58444	5.3	85	51	829	61	14	15	167	167	0.8	1.8	0.2
58450	4.9	61	60	628	81	12	16	122	143	1	1.7	0
58455	5	54	38	350	62	11	14	118	200	1	1.5	0
58461	4.5	91	25	167	32	6	11	163	110	0.7	1	0
58466	6.4	18	60	2016	57	11	9	96	150	1.6	2.8	0.3
58471	4.6	51	25	359	42	8	14	155	168	0.8	1.2	0
58476	4.8	64	29	315	49	5	12	138	129	0.6	1.1	0
58482	6.4	20	81	2022	53	7	11	104	157	1.5	3.4	0.4
58487	4.8	38	70	682	52	9	7	115	39	0.4	0.3	0
58492	5	23	46	644	53	7	13	118	128	0.4	0.7	0
Mean	5.63	45	59	1315	70	12	13	154	205	1.4	3.0	0.3

Lab Number	pH	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
Median	5.50	47	51	987	69	11	12	153	211	1.2	2.9	0.2
Minimum	4.50	17	21	167	32	5	9	96	110	0.4	0.7	0.0
Maximum	7.00	91	176	3404	108	28	20	230	341	2.7	7.3	1.0
Standard deviation	0.65	21	30	881	17	4	2	32	50	0.6	1.7	0.3
Coefficient of variation, %	12	46	51	67	24	35	19	21	24	42	57	90
Count	33											

Table 5. Soil analyses of 4 – 8 inch samples collected from Field 5a, 2015.

Lab Number	pH	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
						mg/kg						
527386	6.4	42	192	2927	118	54	7	127	77	2.9	6.9	0.3
527400	6.6	45	41	1577	42	50	7	104	100	1.3	2.0	0.1
527407	6.4	33	92	2964	86	12	6	93	64	2.4	4.6	0.1
527414	6.1	36	114	3270	105	16	8	106	38	2.5	4.0	0.2
527421	5.8	49	129	2870	124	13	10	150	34	2.3	4.3	0.2
527442	6.3	22	71	1005	67	7	6	104	148	0.8	16.2	0.2
527456	6.7	41	131	4381	101	17	8	95	91	2.2	6.3	0.2
527463	6.1	30	98	2877	117	16	7	124	39	2.0	4.7	0.2
527470	5.9	33	119	2873	89	12	8	100	58	2.0	3.8	0.2
527477	6.3	49	144	921	48	6	10	113	243	1.0	4.1	0.2
527491	6.0	37	115	2754	126	11	8	143	36	2.3	4.9	0.1
527498	6.2	36	102	3093	109	11	7	111	35	2.6	5.0	0.1
527533	6.3	73	175	861	70	6	11	109	246	1.2	7.0	0.1
527540	6.2	67	176	2139	96	8	13	125	84	2.1	5.6	0.1
527547	6.4	28	143	3379	135	15	7	96	41	2.6	4.5	0.1
527554	5.6	42	111	2661	133	16	10	184	32	2.4	7.9	0.1
527575	6.4	57	80	981	44	27	8	122	233	0.8	2.2	0.1

Lab Number	pH	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
527582	5.9	96	315	589	52	7	12	113	200	0.9	3.2	0.1
527589	6.4	41	169	2823	132	20	7	95	38	2.0	3.9	0.1
527596	6.1	36	127	2754	109	11	12	101	43	2.1	3.9	0.1
527603	6.7	50	151	2927	144	12	9	100	49	1.7	3.8	0.1
527624	6.8	17	59	2361	61	10	7	62	96	1.8	1.8	0.1
527631	6.4	46	55	1819	88	16	8	78	130	1.9	3.3	0.1
527638	6.3	98	67	1267	68	23	7	125	136	1.4	2.4	0.1
527645	6.6	43	82	1800	74	15	7	97	132	1.7	3.3	0.1
527652	6.8	23	63	2477	78	9	7	93	99	2.0	4.2	0.2
527673	6.3	15	104	3322	116	11	9	69	115	2.6	4.6	0.2
527680	6.3	14	116	3031	65	13	8	68	128	2.4	2.5	0.1
527694	6.4	70	94	1972	107	35	9	101	97	1.3	4.3	0.2
527701	6.8	46	82	1922	81	11	9	118	88	1.2	4.4	0.3
527708	6.8	20	38	2056	54	9	10	116	114	1.3	3.6	0.5
527715	7.2	28	46	1640	56	8	6	115	101	0.9	3.0	0.2
527750	6.6	17	73	2889	56	29	9	70	115	2.4	16.7	0.5
527757	6.8	25	80	2168	71	18	8	77	119	1.9	2.9	0.2
527764	6.8	50	79	2347	81	15	10	97	154	2.4	5.3	0.3
527771	7.0	30	50	1981	69	10	9	125	157	1.4	4.1	0.4

Lab Number	pH	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
527778	7.0	21	74	1746	43	42	8	102	136	1.1	2.9	0.5
527785	7.1	21	35	1548	37	8	6	108	116	0.9	2.5	0.2
527820	6.6	17	68	2730	58	18	11	84	154	2.3	12.3	0.4
527827	6.7	11	81	2769	50	29	8	68	149	2.3	1.9	0.3
527834	6.7	14	67	2419	62	11	8	97	178	2.2	3.5	0.3
527841	7.1	33	62	1363	43	24	7	109	110	0.9	4.8	0.3
527848	7.0	34	38	1685	46	10	8	117	164	1.3	4.3	0.4
527855	6.8	21	28	1338	27	8	4	108	112	0.9	7.6	0.2
Mean	6.5	38	99	2256	80	17	8	105	110	1.8	4.9	0.2
Median	6.4	35	82	2354	73	13	8	104	111	2.0	4.2	0.2
Minimum	5.6	11	28	589	27	6	4	62	32	0.8	1.8	0.1
Maximum	7.2	98	315	4381	144	54	13	184	246	2.9	16.7	0.5
Standard deviation	0.4	20	53	817	31	11	2	23	57	0.6	3.2	0.1
Coefficient of variation, %	6	53	54	36	39	67	22	22	52	34	65	58
Count	44											

Table 6. Soil analyses of 8 – 12 inch samples collected from Field 5a, 2015.

Lab Number	pH	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
		mg/kg										
527388	6.1	33	159	3411	124	26	5	99	55	2.6	4.5	0.1
527402	6.7	36	50	1445	34	11	5	93	64	1.0	1.2	0.1
527409	6.5	21	130	4104	95	15	6	95	52	2.9	3.6	0.1
527416	6.1	23	143	3790	104	17	8	98	42	2.4	3.4	0.1
527423	5.4	42	158	3067	125	18	12	129	27	2.3	3.0	0.1
527444	6.6	24	65	1162	100	24	3	113	93	0.8	0.9	0.1
527451	6.6	23	133	4357	110	40	7	116	67	2.1	3.9	0.2
527458	7.1	11	121	4154	57	16	5	74	105	2.3	4.0	0.3
527465	6.2	22	119	3375	95	16	6	96	32	2.3	2.8	0.3
527472	5.7	30	127	3330	93	21	9	94	30	2.1	3.0	0.3
527479	6.6	30	91	824	31	31	6	118	209	0.9	3.6	0.3
527493	5.8	21	119	3024	113	17	6	95	32	2.2	7.7	0.3
527500	6.3	26	122	3266	113	14	7	100	41	2.5	3.4	0.1
527535	6.5	59	144	765	43	5	8	123	236	1.0	0.9	0.1
527542	6.3	36	137	2919	121	16	9	102	83	2.4	4.9	0.2
527549	6.2	28	140	3769	148	14	7	93	36	2.9	3.1	0.2
527556	5.3	42	140	2727	123	20	12	193	25	2.2	4.4	0.2

Lab Number	pH	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
527577	6.5	46	61	910	25	11	4	139	165	0.5	0.7	0.2
527591	6.3	30	123	3392	119	18	4	89	33	1.7	3.9	0.2
527598	5.9	22	93	2971	99	15	10	93	35	1.9	2.8	0.2
527605	6.4	37	152	3089	155	11	7	77	39	2.1	4.0	0.2
527626	6.7	10	69	2474	49	10	7	70	113	2.0	2.9	0.2
527633	6.5	23	61	1979	64	28	7	78	131	2.0	2.8	0.2
527647	6.5	25	68	2073	77	29	5	80	100	1.9	2.8	0.2
527654	6.7	24	92	2946	96	12	6	97	77	2.4	3.8	0.2
527682	6.4	5	86	3016	33	16	5	55	86	1.8	1.2	0.1
527696	6.4	57	123	2771	138	16	7	91	48	1.2	0.9	0.1
527703	6.7	34	102	2023	88	16	8	114	131	1.7	4.2	0.2
527710	6.9	14	55	2327	62	10	8	92	99	1.6	3.0	0.4
527717	7.0	20	42	1539	61	10	6	117	95	0.9	3.1	0.2
527759	6.9	15	114	2659	64	19	6	84	82	1.9	0.8	0.2
527766	6.8	19	93	2896	85	35	9	82	163	2.7	4.7	0.5
527773	7.0	27	56	1615	56	86	6	120	141	1.5	2.9	0.5
527787	7.3	21	36	1418	41	19	5	102	117	0.9	4.1	0.1
527822	6.6	7	104	2964	31	19	7	74	86	2.6	1.0	0.3
527829	6.7	5	103	3189	40	16	6	62	85	1.9	1.4	0.1

Lab Number	pH	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
527836	6.7	10	87	2756	60	14	7	84	174	2.4	6.2	0.3
527843	7.0	30	40	1108	34	11	5	114	107	1.1	2.8	0.1
527850	7.0	48	51	1563	41	11	6	119	156	1.4	2.9	0.2
527857	6.4	22	45	1554	33	10	4	114	112	1.4	2.0	0.2
Mean	6.5	26	99	2568	80	19	7	99	90	1.9	3.1	0.2
Median	6.5	24	103	2834	81	16	6	96	86	2.0	3.0	0.2
Minimum	5.3	5	36	765	25	5	3	55	25	0.5	0.7	0.1
Maximum	7.3	59	159	4357	155	86	12	193	236	2.9	7.7	0.5
Standard deviation	0.4	13	37	973	37	13	2	24	52	0.6	1.5	0.1
Coefficient of variation, %	7	49	37	38	47	69	30	24	58	34	49	51
Count	40											

Table 7. Soil analyses of 12 - 18 inch samples collected from Field 5a, 2015.

Lab Number	pH	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
						mg/kg						
527389	6.3	35	159	3619	127	73	5	98	38	2.3	5	0.1
527393	6.4	59	87	1896	83	17	3	92	24	0.7	0.5	0
527398	6.7	16	139	4601	95	18	7	94	74	2.8	4.3	0.4
527402	6.2	19	133	3892	79	30	6	83	43	2.3	3.4	0.1
527407	5.2	48	156	3048	115	19	11	132	40	2.2	2.6	0
527411	6.2	49	100	2014	133	15	2	108	46	0.7	1.2	0
527418	7	9	114	3998	52	42	4	68	106	2.3	7.3	0.3
527423	6.2	21	108	3248	79	20	6	93	33	2.2	2.3	0
527427	5.8	31	128	3272	81	30	8	105	36	2.3	3.3	0
527432	6.3	41	74	1027	50	44	4	143	149	0.6	1.3	0
527437	5.9	26	124	3258	104	23	8	108	32	2.5	2.6	0.1
527442	6	34	128	3110	113	20	8	141	19	2.1	2.9	0.1
527447	6.3	41	117	697	38	6	7	136	208	0.7	2	0
527451	6.4	19	122	3279	112	17	6	86	57	2	3.4	0
527455	6.1	39	137	3336	130	26	7	94	30	2.2	2.6	0
527459	5.2	45	148	2873	121	38	12	243	22	2.3	2.9	0.2
527464	6.6	53	53	707	19	12	2	139	98	0.3	1.1	0

Lab Number	pH	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
527474	6	17	125	3590	114	22	8	95	44	2.5	4.1	0.2
527482	6.8	8	72	2268	32	15	4	79	110	1.9	1.2	0
527493	6.5	26	85	2595	84	15	4	85	98	2.4	3.6	0
527497	6.3	15	117	3586	114	17	6	92	58	2.4	3	0.3
527505	6.5	5	116	3373	26	22	7	79	105	1.8	5.8	0.2
527509	6.6	61	129	3098	121	20	6	110	48	0.9	3.2	0.1
527513	6.7	27	114	2957	112	24	8	92	93	2.4	4	0.4
527519	6.9	13	86	3115	90	15	7	84	100	2.1	2.5	0.4
527525	7	30	64	1769	62	9	6	106	101	1.3	2.8	0.1
527531	6.9	17	121	2889	61	30	5	75	74	1.7	0.7	0.2
527539	6.8	22	102	2950	99	16	6	89	114	1.9	2.3	0.4
527546	7.1	23	46	1505	47	9	5	106	124	1.1	1.8	0.1
527551	6.7	6	121	3263	35	30	6	75	66	2.4	1.1	0.3
527555	6.7	5	107	3158	27	18	5	66	69	1.8	1.5	0.1
527560	6.6	8	109	3303	65	18	8	86	160	2.5	3.1	0.4
527565	6.9	26	68	1853	65	21	6	101	199	1.7	3.3	0.3
527570	6.9	50	74	2094	61	17	5	133	136	1.6	2.1	0.2
527574	6.5	33	72	2250	46	10	5	145	127	2	2.7	0.1
Mean	6.4	28	107	2785	80	22	6	105	82	1.9	2.8	0.1

Lab Number	pH	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
Median	6.5	26	114	3098	81	19	6	94	74	2.1	2.7	0.1
Minimum	5.2	5	46	697	19	6	2	66	19	0.3	0.5	0.0
Maximum	7.1	61	159	4601	133	73	12	243	208	2.8	7.3	0.4
Standard deviation	0.5	16	29	914	34	12	2	33	49	0.7	1.4	0.1
Coefficient of variation, %	7	57	27	33	43	56	35	31	60	36	51	99
Count	35											

Table 8. Soil analyses of 18 - 24 inch samples collected from Field 5a, 2015.

Lab Number	pH	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
						mg/kg						
527389	6.5	42	156	3756	136	78	3	118	37	2.3	3.8	0.2
527394	5.7	59	97	1401	111	21	4	106	15	0.6	0.8	0.2
527403	6.5	20	138	4317	74	25	6	88	51	2.2	10.1	0.2
527412	6.1	45	119	2011	180	20	3	95	27	0.6	1.0	0.2
527419	7.0	8	120	4131	42	40	4	70	99	2.1	4.0	0.5
527428	5.7	35	150	3653	79	23	7	107	47	2.0	5.9	0.1
527433	6.2	51	75	1011	63	24	3	125	93	0.3	2.8	0.1
527438	6.1	19	128	3450	97	25	8	108	43	2.6	5.1	0.1
527443	5.8	34	132	3376	108	24	11	118	26	2.5	3.2	0.2
527460	5.4	33	132	3240	113	36	9	169	32	2.2	3.0	0.2
527470	6.4	16	114	3252	76	22	4	86	62	1.9	3.4	0.2
527475	5.9	25	118	3288	102	23	6	110	47	2.2	3.4	0.1
527483	6.7	14	76	2148	25	20	2	61	62	1.5	0.6	0.1
527498	6.3	20	117	3861	127	21	6	83	43	2.1	3.0	0.2
527514	6.4	32	119	3326	123	22	8	95	60	2.3	3.5	0.3
527520	6.8	14	101	3450	102	13	8	88	90	2.2	6.0	0.4
527532	6.8	20	120	2928	61	28	5	76	58	1.4	0.7	0.1
527540	6.9	19	90	2525	85	32	5	85	82	1.4	1.4	0.3

Lab Number	pH	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
527547	6.5	38	77	2050	55	14	6	115	133	1.8	2.0	0.2
527556	6.8	6	105	2975	20	19	4	72	68	1.6	0.8	0.1
527561	6.6	8	116	3433	64	18	8	79	153	2.7	3.2	0.4
527566	6.8	19	88	2870	88	16	7	97	176	2.3	4.7	0.6
527389	6.5	42	156	3756	136	78	3	118	37	2.3	3.8	0.2
Mean	6.4	26	113	3021	88	26	6	98	68	1.9	3.3	0.2
Median	6.5	20	118	3270	87	23	6	95	59	2.1	3.2	0.2
Minimum	5.4	6	75	1011	20	13	2	61	15	0.3	0.6	0.1
Maximum	7.0	59	156	4317	180	78	11	169	176	2.7	10.1	0.6
Standard deviation	0.4	14	23	850	38	13	2	24	42	0.7	2.2	0.1
Coefficient of variation, %	7	55	20	28	43	52	40	24	61	35	68	61
Count	22											

Table 9. Soil analyses of 24 – 30 inch samples collected from Field 5a, 2015.

Lab Number	pH	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
	---------- mg/kg ----------											
527484	6.5	42	156	3756	136	78	3	118	37	2.3	3.8	0.2
527499	5.7	59	97	1401	111	21	4	106	15	0.6	0.8	0.2
527515	6.5	20	138	4317	74	25	6	88	51	2.2	10.1	0.2
527521	6.1	45	119	2011	180	20	3	95	27	0.6	1.0	0.2
Mean	6.5	24	111	3237	97	22	6	90	62	2.0	3.3	0.2
Median	6.6	22	107	3243	105	22	7	97	52	2.1	3.8	0.2
Minimum	6.2	16	88	2708	32	18	2	61	41	1.7	0.9	0.1
Maximum	6.6	35	140	3755	144	24	9	104	103	2.3	4.7	0.3
Standard deviation	0.2	8	22	529	51	3	3	19	28	0.3	1.8	0.1
Coefficient of variation, %	3	34	20	16	53	12	49	22	45	16	55	58
Count	4											

Table 10. Soil analyses of 0 to 4 inch samples collected from Field 12, 2014.

Lab Number	pH	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
						mg/kg						
24422	5.9	138	115	776	81	10	18	149	186	1.2	3.2	0.2
24427	6.0	143	196	763	79	7	14	138	226	0.9	3.2	0.2
24432	5.6	147	88	681	68	13	17	155	245	1.2	2.4	0.1
24438	6.0	65	70	1621	98	9	13	128	181	1.4	3.7	0.3
24443	5.7	117	117	721	72	10	15	146	187	0.8	2.1	0.1
24449	5.9	147	223	726	93	12	17	145	231	0.8	2.7	0.2
24452	5.7	126	174	608	94	7	14	154	197	0.8	2.6	0.1
24456	5.7	101	96	1169	101	9	17	151	177	1.3	2.7	0.2
24461	5.8	61	61	1367	82	10	14	153	168	1.2	2.4	0.2
24466	5.3	71	56	734	67	9	13	261	157	0.7	2.5	0.1
24472	5.5	60	57	788	62	8	17	107	218	0.8	1.3	0.1
24476	5.6	128	202	690	80	7	17	151	172	1.0	2.6	0.1
24480	5.8	109	69	956	75	10	16	143	159	0.9	2.1	0.3
24486	5.8	45	54	1441	87	12	14	117	170	1.2	1.8	0.2
24491	5.6	39	60	993	73	9	12	151	193	1.0	2.1	0.1
24497	5.6	53	212	873	69	14	12	155	165	0.7	2.6	0.1
24502	5.3	53	29	743	43	9	10	167	131	0.7	2.2	0.0

Lab Number	pH	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
24508	6.1	43	76	1530	83	9	12	134	184	1.4	3.3	0.2
24513	6.0	37	81	1207	90	10	13	102	143	1.0	1.9	0.1
24519	5.8	63	62	1039	65	13	18	118	190	1.6	2.1	0.1
24524	5.8	52	45	828	49	9	15	92	119	0.9	3.0	0.1
24530	5.9	43	50	1318	49	14	15	101	185	1.5	1.4	0.2
24535	6.0	30	70	1781	105	14	15	102	98	1.6	5.7	0.2
24540	6.2	29	67	1767	83	17	14	108	173	1.5	1.5	0.3
24546	5.6	73	88	1048	86	8	15	136	154	1.1	2.2	0.1
24551	5.8	30	47	1143	81	19	11	113	149	1.1	2.8	0.2
24557	5.8	47	212	820	52	10	13	133	121	0.7	2.0	0.2
24562	5.9	42	76	1838	117	11	15	96	96	1.4	2.4	0.3
24563	6.1	24	59	1953	84	12	13	83	64	1.5	1.5	0.3
24569	5.9	19	54	1758	77	19	12	87	84	1.6	1.1	0.2
24574	6.3	17	56	1908	85	17	10	87	96	1.6	1.8	0.2
24580	6.3	30	43	1537	55	12	10	100	109	1.5	1.4	0.1
24585	6.1	33	54	1416	56	13	10	102	110	1.5	1.8	0.1
24591	6.1	32	43	970	57	15	8	115	106	1.2	1.5	0.1
24596	6.0	26	53	1120	38	10	8	108	102	1.7	1.5	0.1
24602	6.0	36	58	1338	63	9	10	101	78	1.3	1.3	0.1

Lab Number	pH	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
24607	5.9	39	40	853	56	9	9	116	103	1.1	1.5	0.1
24612	6.0	52	98	1357	106	12	12	107	88	1.7	1.6	0.2
24617	6.0	34	72	1453	85	11	13	118	122	1.3	1.7	0.2
24622	6.0	97	282	1723	148	12	16	139	69	1.5	2.6	0.3
Mean	5.86	63	92	1184	77	11	13	127	148	1.2	2.2	0.2
Median	5.90	50	68	1132	80	10	14	118	156	1.2	2.1	0.2
Minimum	5.30	17	29	608	38	7	8	83	64	0.7	1.1	0.0
Maximum	6.30	147	282	1953	148	19	18	261	245	1.7	5.7	0.3
Standard deviation	0.23	40	62	405	21	3	3	32	48	0.3	0.8	0.1
Coefficient of variation, %	4	63	67	34	28	27	20	25	32	26	38	47
Count												

Table 11. Soil analyses of 4 to 8 inch samples collected from Field 12, 2014.

Lab Number	pH	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
						mg/kg						
24423	6.4	47	47	650	26	6	11	94	103	0.7	0.8	0
24428	5.8	73	112	663	39	6	11	110	145	0.8	2.2	0.1
24434	5.9	81	47	678	38	9	12	123	177	1.1	2.4	0.1
24439	6	32	56	1447	58	9	11	117	98	1.4	1.7	0.2
24444	5.8	69	64	670	43	8	11	100	119	0.7	0.9	0
24450	5.6	102	106	682	51	16	14	128	154	0.8	1.6	0.1
24453	5.7	62	127	601	49	9	11	108	105	0.7	1.2	0
24458	5.7	36	70	1307	57	10	14	106	72	1.4	1	0.2
24462	5.9	27	62	1489	52	15	11	105	82	1.5	1	0.1
24467	5.3	62	37	488	28	8	8	160	101	0.5	0.9	0
24473	5.8	32	41	713	24	7	12	80	114	0.7	0.4	0
24477	5.7	88	115	723	57	7	14	121	111	0.8	1.2	0.1
24482	5.9	77	45	879	41	8	12	116	118	0.9	1.1	0.1
24487	6.1	13	73	1778	52	12	11	90	64	1.1	0.5	0.2
24492	5.8	17	55	1315	40	13	11	119	147	1.3	1.1	0.2
24498	5.8	26	45	767	33	10	8	105	78	0.5	0.8	0
24503	6	38	27	675	24	6	6	121	81	0.6	1	0

Lab Number	pH	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
24509	6.1	21	54	1670	65	8	9	111	144	1.5	1.7	0.2
24514	6.1	17	65	1297	63	11	10	97	117	1.1	2.8	0
24520	5.9	47	49	1171	48	13	15	98	112	1.7	9.6	0.1
24525	6	23	42	785	29	8	11	73	67	0.6	0.4	0
24531	6.3	32	43	1257	32	13	12	90	132	1.7	3.4	0.1
24536	5.9	18	77	2257	111	16	15	107	75	2	2.2	0.3
24542	6.4	15	59	1681	50	19	11	92	115	1.5	0.8	0.2
24547	5.3	39	82	926	66	9	15	110	106	1.2	1	0
24552	5.9	17	54	1404	70	13	11	103	127	1.4	1	0.2
24558	6	35	116	630	28	9	9	99	77	0.6	0.7	0
24564	6.1	15	67	2386	81	19	14	87	30	1.6	0.8	0.3
24570	5.9	12	51	1844	68	17	11	72	44	1.3	0.7	0.2
24575	6.3	9	79	2453	105	15	10	92	78	1.8	1.4	0.4
24581	6.2	22	49	1419	54	13	9	99	89	1.5	1.1	0.1
24586	6.2	16	66	1631	59	11	10	97	81	1.5	0.9	0.1
24592	6.2	19	60	1552	47	12	8	113	85	1.6	1.3	0.2
24597	6.1	33	63	1375	46	15	9	104	79	1.8	1.8	0.1
24603	6.1	28	64	1360	67	10	9	94	53	1.3	0.8	0.1
24608	6	24	42	848	36	8	7	108	96	1.2	0.9	0

Lab Number	pH	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
24614	6.1	23	92	1432	102	12	12	101	55	1.6	0.6	0.1
24618	6.1	17	60	1440	67	13	11	95	100	1.5	1	0.1
24623	5.9	48	202	1841	116	12	14	100	44	1.6	1.1	0.2
Mean	5.96	36	68	1236	54	11	11	104	97	1.2	1.4	0.1
Median	6.00	28	60	1307	51	11	11	103	98	1.3	1.0	0.1
Minimum	5.30	9	27	488	24	6	6	72	30	0.5	0.4	0.0
Maximum	6.40	102	202	2453	116	19	15	160	177	2.0	9.6	0.4
Standard deviation	0.25	24	32	523	23	4	2	16	33	0.4	1.5	0.1
Coefficient of variation, %	4	65	47	42	43	32	20	15	34	35	104	89
Count												

Table 12. Soil analyses of 8 to 12 inch samples collected from Field 12, 2014.

Lab Number	pH	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
						mg/kg						
24424	6	82	63	713	45	7	14	101	139	1	1.3	0.1
24429	6	42	96	607	29	7	9	95	104	0.6	0.9	0
24435	6.2	44	49	716	24	8	8	107	117	0.8	0.6	0
24440	6.1	22	78	1755	72	20	11	103	73	1.5	1.5	0.2
24446	5.8	50	77	681	40	9	9	107	88	0.4	0.9	0
24451	5.8	53	65	673	34	6	10	101	91	0.6	0.5	0
24454	5.8	45	106	712	39	8	9	99	78	0.6	0.3	0
24459	5.9	21	80	1779	56	11	15	104	53	1.4	0.7	0.2
24463	5.8	32	72	1493	49	12	13	102	48	1.4	0.4	0.1
24468	5.2	39	46	481	23	8	8	126	95	0.6	1.6	0
24474	5.9	22	52	781	23	9	9	90	93	0.5	0.2	0
24478	5.7	46	128	681	42	9	12	94	70	0.7	0.4	0
24483	6.1	34	52	1121	31	8	11	93	72	1.1	0.6	0
24488	6.1	13	86	1787	76	13	11	103	90	0.9	0.5	0.2
24494	6	10	74	1760	48	15	9	104	96	1.4	3	0.2
24499	5.9	11	57	1297	40	13	13	89	49	0.9	0.4	0.1
24504	6.1	30	34	720	25	8	5	124	96	0.7	1.6	0

Lab Number	pH	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
24510	6.1	14	70	2050	78	11	9	105	119	1.8	1.5	0.2
24515	6.3	10	82	1722	75	16	11	93	71	1.3	0.3	0.1
24521	5.9	28	48	1104	44	10	12	88	60	1.4	1.3	0.1
24526	6	19	40	643	22	9	7	69	43	0.2	0.5	0
24532	6.1	26	52	1505	34	13	12	91	93	2	2.8	0.2
24537	5.9	14	79	2443	118	18	15	103	44	1.9	0.9	0.3
24543	6.5	12	75	1849	53	18	10	90	63	1.6	0.5	0.1
24548	5.2	18	104	1219	75	12	19	106	73	1.3	1.5	0.1
24554	6.1	11	74	1752	79	15	11	108	112	1.5	1.3	0.2
24559	6	24	71	936	41	10	10	98	86	1	0.7	0.1
24566	6.1	16	63	2099	66	21	15	90	13	1.6	0.6	0.1
24571	5.9	10	69	2043	78	22	15	86	21	1.3	0.5	0.1
24576	6.3	7	88	2536	104	19	10	98	58	1.7	0.8	0.3
24582	6	20	60	1768	77	17	13	100	60	1.6	1.1	0.2
24587	6.1	18	71	1493	74	17	9	100	53	1.3	0.7	0.1
24593	6.2	13	61	1805	54	11	9	105	55	1.5	1.1	0.2
24598	5.9	39	65	1301	51	14	9	99	54	1.5	0.9	0.1
24604	6.1	31	76	1468	69	12	9	96	41	1.2	0.5	0.1
24609	6.1	25	53	942	42	10	7	120	107	1.3	1.2	0

Lab Number	pH	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
24615	6.2	25	85	1559	108	13	11	105	41	1.3	0.8	0.1
24619	6.1	10	71	1899	90	14	13	87	61	1.3	0.9	0.2
24624	5.9	19	164	1848	109	12	15	88	25	1.4	0.5	0.1
Mean	5.98	26	73	1378	57	12	11	99	72	1.18	0.93	0.11
Median	6.00	22	71	1493	51	12	11	100	71	1.3	0.8	0.1
Minimum	5.20	7	34	481	22	6	5	69	13	0.20	0.20	0.00
Maximum	6.50	82	164	2536	118	22	19	126	139	2.00	3.00	0.30
Standard deviation	0.24	16	24	562	26	4	3	11	29	0.44	0.61	0.09
Coefficient of variation, %	4	61	33	41	46	34	26	11	40	37	66	84
Count												

Table 13. Soil analyses of 12 to 18 inch samples collected from Field 12, 2014.

Lab Number	pH	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
						mg/kg						
24425	6.1	50	54	674	29	11	7	107	77	0.5	0.8	0
24430	6.1	40	101	656	33	8	7	103	85	0.4	1	0
24436	6.3	59	60	817	28	12	6	121	86	0.6	0.3	0
24441	6.1	19	88	1909	75	15	12	99	61	1.2	0.8	0.3
24447	5.9	57	79	746	39	12	8	113	64	0.2	0.3	0
24455	6	61	80	942	43	13	7	103	45	0.3	0.3	0
24460	6.1	14	75	1699	57	14	14	93	28	1.2	0.6	0.1
24464	5.3	38	80	1308	55	14	16	110	40	1.2	0.4	0
24470	5.2	20	87	1151	45	9	16	118	73	1.3	0.6	0.1
24475	5.9	28	48	616	26	11	6	89	61	0.1	0.5	0
24479	5.8	33	185	646	35	8	11	90	53	0.5	0.3	0
24484	6.2	24	62	1349	39	13	10	94	58	1.3	0.7	0.1
24489	6.1	23	57	1630	51	11	12	100	89	1.3	1	0.2
24495	6.3	12	82	1821	66	16	9	104	76	1.2	0.9	0.1
24500	5.7	11	78	1674	55	13	15	93	36	0.8	0.6	0
24506	6.1	29	59	1385	42	9	8	144	108	1.3	1.1	0.1
24511	6.4	11	78	1934	85	13	10	107	86	1.6	2.6	0.2

Lab Number	pH	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
24516	6.1	11	80	1765	86	24	12	87	41	1.1	0.2	0.1
24522	5.8	27	57	1622	61	12	16	87	47	1.5	0.4	0.2
24527	5.6	40	56	644	27	13	10	94	33	0.2	2.5	0
24533	6	20	50	1832	46	16	12	92	50	1.9	3.9	0.2
24538	5.9	11	80	2372	116	19	17	100	25	1.6	0.6	0.2
24544	6.6	18	77	1703	57	14	9	89	41	1.3	3.7	0.1
24549	5.4	11	85	1457	81	14	17	97	41	1	0.5	0.1
24555	6	9	79	1640	79	16	10	99	67	1.3	1	0.1
24560	5.7	16	80	1440	64	13	11	103	81	1.3	0.7	0.1
24567	5.8	11	63	1630	46	20	16	91	14	1.1	0.4	0
24572	5.9	8	70	1711	70	24	13	87	28	1	0.4	0.1
24578	6.2	9	89	2387	100	22	10	98	59	1.7	0.9	0.3
24583	5.4	19	63	1671	78	20	17	111	49	1.7	0.9	0.1
24588	5.6	18	80	1380	86	25	11	100	45	1.1	0.6	0
24594	6.1	12	67	2121	74	15	10	105	35	1.4	0.7	0.2
24599	5.9	44	68	1202	61	16	8	101	43	1.2	0.5	0
24605	6.3	29	66	1186	54	12	7	85	24	0.6	0.5	0
24610	5.9	14	60	1730	72	16	9	119	54	1.5	1.1	0.2
24616	5.7	33	84	1334	94	16	12	106	33	1	0.5	0

Lab Number	pH	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
24620	6.1	8	76	1908	97	17	12	87	51	1.1	0.4	0.1
24625	6	13	128	1740	104	22	14	84	25	1.3	0.8	0.1
Mean	5.94	24	77	1459	62	15	11	100	53	1.08	0.89	0.09
Median	6.00	19	78	1626	59	14	11	100	50	1.2	0.6	0.1
Minimum	5.20	8	48	616	26	8	6	84	14	0.10	0.20	0.00
Maximum	6.60	61	185	2387	116	25	17	144	108	1.90	3.90	0.30
Standard deviation	0.30	15	24	478	24	4	3	12	22	0.46	0.85	0.09
Coefficient of variation, %	5	63	31	33	38	29	30	12	41	42	95	100
Count												

Table 14. Soil analyses of 18 to 24 inch samples collected from Field 12, 2014.

Lab Number	Point	pH	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
						mg/kg							
24426	9	6.1	63	55	641	33	12	6	117	57	0.3	0.6	0
24431	10	6.3	58	83	761	51	15	6	103	48	0.3	0.5	0
24437	11	6.1	90	71	847	49	16	6	119	44	0.4	1	0
24442	13	6.2	16	83	1586	75	11	11	88	32	0.8	0.4	0.1
24448	17	5.9	62	71	763	41	14	7	104	34	0.1	0.4	0
24465	21	5.2	38	79	1153	56	17	14	112	37	1	0.4	0
24471	22	5.5	13	82	1419	80	11	13	100	40	0.8	0.4	0.1
24485	27	6.3	28	70	1337	43	13	10	94	39	1.1	0.3	0
24490	28	6.1	12	93	1877	89	19	10	95	114	0.7	0.4	0.1
24496	29	6.3	14	86	1857	74	26	8	101	57	1.2	0.9	0.1
24501	30	5.7	17	95	1781	61	19	13	93	22	0.5	0.3	0
24507	33	6.2	20	66	1646	53	10	9	130	104	1.1	0.6	0.2
24512	34	6.1	12	74	1697	81	14	9	92	45	1.1	2.2	0.1
24518	35	5.9	16	86	1608	90	27	14	95	42	1.1	0.5	0.1
24523	37	6	19	62	1479	59	13	19	92	31	1.3	0.7	0.1
24528	38	4.9	46	60	443	30	13	18	102	28	0.2	0.6	0
24534	41	5.9	21	48	1837	50	17	14	90	26	1.6	0.5	0.2

Lab Number	Point	pH	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
24539	42	6.1	9	79	2005	102	17	17	95	21	1.3	7	0.1
24545	43	6.5	29	85	1659	77	23	7	84	27	1.1	0.3	0.1
24550	44	5.3	13	81	1342	66	17	16	98	28	0.8	2	0
24556	45	6	10	85	1622	82	18	10	95	45	0.9	0.4	0.1
24561	46	5.7	11	99	1700	67	16	9	107	53	1	0.4	0.1
24568	49	5.7	36	100	1682	118	18	15	105	129	1.7	2.2	0.2
24573	50	6	44	62	1867	104	13	14	101	157	1.6	2.9	0.3
24579	51	6.2	54	50	1643	87	13	14	117	158	1.5	2.6	0.3
24584	52	5.8	83	71	1329	97	11	14	136	151	1.4	3.4	0.2
24590	53	5.7	54	43	968	91	9	11	154	143	1.3	3	0.2
24595	54	6	35	53	1351	68	10	11	121	142	1.5	2.7	0.2
24600	57	5.9	55	54	1143	78	11	11	114	114	1	2	0.2
24606	58	5.7	70	46	1064	94	9	12	140	138	1.1	3	0.1
24611	59	6.1	101	125	1408	134	9	13	134	131	1.5	3.9	0.3
24621	61	5.8	8	72	1569	66	15	12	91	47	0.7	0.3	0.1
24626	62	5.8	11	98	1558	76	11	14	84	31	0.7	0.3	0
Mean		5.91	35	75	1413	73	15	12	106	70	0.99	1.43	0.11
Median		6.00	28	74	1558	75	14	12	101	45	1.10	0.60	0.10
Minimum		4.90	8	43	443	30	9	6	84	21	0.10	0.30	0.00

Lab Number	Point	pH	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
Maximum		6.50	101	125	2005	134	27	19	154	158	1.70	7.00	0.30
Standard deviation		0.34	26	18	397	24	5	3	17	48	0.43	1.50	0.09
Coefficient of variation, %		6	74	25	28	32	31	29	16	69	43	105	87
Count													

Table 15. Soil analyses of 0 to 4 inch samples collected from Field 1, collected February 2016.

Lab Number	pH	CEC	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
			mg/kg										
77294	7.2	49	17	189	9104	111	15	12	38	180	1.8	3.6	1
77296	7.5	49	29	117	9064	107	17	6	26	31	1.7	5.4	0.3
77298	6.8	18	123	176	2895	105	12	12	199	105	1.7	4.8	0.6
77300	7.4	39	32	163	7008	118	15	13	69	178	2	5.1	0.7
77302	6.7	31	65	241	5045	205	16	17	77	224	2.4	9.9	1
77304	6.9	18	77	202	2813	141	14	15	121	182	1.8	6.1	0.5
77307	6.4	16	121	274	2031	183	12	15	147	137	1.6	9.8	0.6
77309	6.7	12	44	241	1552	99	15	12	109	254	1.6	3.9	0.4
77311	6.8	14	89	350	1988	129	14	14	117	172	1.5	6.7	0.5
77313	6.1	15	74	238	2028	129	16	19	145	184	1.6	7.7	0.6
77315	6.1	13	63	245	1602	115	11	17	127	259	1.4	5.3	0.6
77318	6.0	12	45	192	1360	101	14	17	124	277	1.4	4.4	0.4
77320	5.8	13	54	185	1334	142	17	17	106	356	1.4	6.7	0.4
77322	5.3	15	72	590	1311	151	16	21	140	285	1.5	9	0.5
77324	5.2	9	43	77	494	53	7	11	195	66	1	2	0.2
77326	5.7	9	21	60	896	60	10	8	117	25	0.8	1.4	0.2
77328	5.2	10	45	106	776	72	13	12	166	58	1	2.5	0.3

Lab Number	pH	CEC	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
77331	5.2	11	59	151	828	81	13	14	205	90	0.9	3.3	0.4
77333	6.0	12	55	207	1395	93	12	14	147	80	1	4.2	0.6
77335	5.6	10	70	212	870	105	14	13	149	138	1.1	5.2	0.5
77337	6.1	14	85	279	1646	157	12	15	152	169	1.3	7.4	0.6
77339	5.8	18	96	351	2035	178	14	22	160	146	1.3	9.3	0.7
77342	5.5	9	31	176	724	77	11	10	108	148	1.2	2.5	0.4
77343	6.0	12	93	224	1255	148	11	16	137	269	1.7	7	0.5
77345	5.8	12	83	223	1148	96	12	10	143	190	1.5	4.5	0.5
77346	5.7	16	274	165	1927	146	16	20	250	101	12.3	28.6	0.7
77348	6.0	8	31	173	715	76	11	10	109	147	1.2	2.6	0.4
77350	6.4	9	77	206	1037	88	11	8	135	186	1.4	3.9	0.4
77355	6.3	16	130	413	2061	176	10	16	115	273	1.9	9.7	0.6
77357	5.8	16	87	418	1736	202	12	18	131	170	1.6	8.2	0.6
77359	6.3	14	56	154	1769	108	12	13	98	198	1.4	6.2	0.5
77361	5.5	11	109	177	986	177	12	14	149	155	1.5	10.2	0.5
77363	6.2	9	33	104	1075	91	9	8	90	226	1.1	5	0.5
77366	5.1	10	38	123	695	91	8	12	103	65	0.9	3.1	0.3
77368	6.9	13	49	161	1924	81	12	14	104	234	1.4	4.1	0.7
77370	5.1	10	28	98	748	77	16	14	102	390	1.1	2.8	0.4

Lab Number	pH	CEC	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
77372	5.6	12	115	348	1064	181	11	23	132	297	1.5	7	0.6
77374	6.0	15	126	334	1904	155	17	22	115	340	1.6	9.6	0.7
77376	5.6	14	90	283	1461	159	18	23	153	304	1.6	8.3	0.6
77379	5.4	21	66	378	2463	228	21	24	104	136	1.5	8.1	0.6
77381	5.7	17	103	382	1799	183	19	19	167	113	1.7	8.2	0.7
77383	5.4	14	67	124	1293	178	14	17	110	228	1.5	7.8	0.6
77385	6.0	14	16	85	1960	68	12	13	84	247	1.2	2.5	0.6
77387	5.4	12	51	110	1140	67	11	14	101	168	0.9	3.1	0.4
77390	6.3	22	19	65	3467	59	12	12	75	164	0.9	2.7	0.4
77392	5.0	9	44	69	568	40	14	16	143	75	0.8	2	0.3
77394	5.3	10	29	69	975	82	17	17	115	372	1.2	2.8	0.5
77396	5.4	9	33	60	739	56	13	17	121	374	1.2	3.2	0.4
77398	5.3	12	49	173	1124	78	16	19	105	383	1.2	2.7	0.5
77400	5.8	13	58	318	1361	133	23	19	120	442	1.5	5.8	0.7
77403	6.3	16	74	224	2235	126	16	18	103	295	1.5	6.5	0.7
77405	6.0	24	84	409	3299	226	19	18	80	215	1.4	6	0.7
77407	6.2	13	40	239	1643	108	15	16	128	201	1.1	4.1	0.6
77409	5.5	12	31	119	1102	86	18	14	155	193	0.9	3.2	0.4
77411	5.8	16	19	101	1956	83	17	15	87	364	1	3.3	0.5

Lab Number	pH	CEC	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
77414	4.9	10	36	43	656	34	12	11	115	70	0.5	1.4	0.3
77416	5.6	9	27	40	1005	37	14	14	118	215	0.8	2.1	0.4
77418	4.9	10	20	54	649	65	14	14	108	131	0.6	1.5	0.3
77420	5.8	10	17	148	900	90	16	12	104	283	0.8	1.8	0.4
77422	5.7	13	40	120	1555	93	14	18	106	290	1.2	3.6	0.4
77424	6.1	18	25	146	2516	123	17	16	69	280	1.8	4.5	0.6
77427	5.8	15	26	113	1832	97	13	18	77	222	0.9	2.2	0.3
77429	5.9	12	26	69	1478	65	15	17	103	232	1	3.3	0.3
77431	5.3	10	24	38	950	47	18	17	132	277	0.8	2.5	0.2
77433	6.0	16	22	93	2273	54	14	17	74	234	0.9	2.6	0.4
77435	4.9	9	25	43	528	47	12	13	115	94	0.6	1.5	0.2
77438	4.9	10	25	42	590	56	11	15	115	225	0.8	2	0.3
77440	5.6	12	55	142	1206	123	11	20	109	191	1	3.3	0.4
77442	5.5	14	27	71	1490	85	12	19	86	349	1.5	3.1	0.3
77444	6.5	26	22	181	4371	115	11	18	49	224	1.3	2.6	0.5
77446	5.4	14	28	81	1547	98	10	19	90	291	1.2	4.2	0.3
Mean	5.86	15	57	183	1845	110	14	15	118	209	1.4	5.1	0.5
Median	5.80	13	47	164	1428	99	14	16	115	208	1.3	4.1	0.5
Minimum	4.80	8	16	38	494	34	7	6	26	25	0.5	1.4	0.2

Lab Number	pH	CEC	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
Maximum	7.50	49	274	590	9104	228	23	24	250	442	12.3	28.6	1.0
Standard deviation	0.59	8	40	113	1635	47	3	4	37	95	1.4	3.8	0.2
Coefficient of variation, %	10	53	71	62	89	43	22	25	31	45	95	74	34
Count	71												

Table 16. Soil analyses of 4 to 8 inch samples collected from Field 1, collected February 2016.

Lab Number	pH	CEC	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
			mg/kg										
77295	7.1	47	11	151	8836	94	27	12	40	130	1.8	4.9	0.7
77297	7.9	48	29	77	9031	84	13	5	22	26	1.4	4.5	0.2
77299	6.8	13	118	136	1911	88	13	11	165	108	1.6	3.8	0.4
77301	7.7	38	18	126	7061	84	20	10	58	216	1.9	4.2	0.6
77303	7.0	34	53	174	5890	192	18	15	69	273	2.4	8.7	1.0
77306	7.1	18	36	133	2893	97	14	11	86	153	1.3	2.9	0.4
77308	6.1	14	83	220	1738	124	24	15	115	120	1.9	5.5	0.4
77310	6.4	9	25	243	1056	84	14	10	114	312	1.3	2.4	0.3
77312	6.6	11	52	278	1431	108	17	13	122	225	1.3	3.7	0.4
77314	6.1	13	54	143	1623	93	12	12	126	166	1.3	5.2	0.5
77316	6.3	10	42	187	1146	78	15	11	112	247	1.2	3.4	0.4
77319	6.3	10	26	115	1236	82	14	11	111	272	1.2	2.7	0.3
77321	6.0	12	17	83	1454	67	18	10	86	364	1.1	3.4	0.3
77323	5.8	11	36	324	1043	88	15	12	111	226	1.2	5.2	0.4
77325	6.5	5	12	51	319	31	10	8	182	37	1.0	1.2	0.2
77327	5.1	9	5	43	596	36	10	8	60	6	0.7	0.6	0.1
77330	5.3	8	24	75	510	45	9	11	132	41	0.9	1.5	0.3

Lab Number	pH	CEC	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
77332	5.0	9	43	112	547	54	11	12	193	80	0.9	2.5	0.4
77334	6.1	9	37	163	1008	70	11	10	123	60	0.9	2.5	0.4
77336	5.7	8	29	128	640	57	12	9	114	118	0.9	2.1	0.3
77338	6.0	10	44	158	1130	103	14	11	114	171	1.1	4.1	0.4
77340	6.0	9	49	193	907	89	9	9	144	107	0.9	3.4	0.5
77344	6.3	7	28	162	750	72	12	8	100	250	1.3	2.5	0.4
77347	5.7	19	27	113	2538	116	10	13	118	298	1.6	3.7	0.7
77349	6.0	8	28	178	806	75	10	8	102	261	1.3	2.6	0.4
77354	6.1	14	119	251	1767	136	12	16	172	207	1.7	8.3	0.6
77356	6.4	13	69	291	1564	128	11	11	95	323	1.6	4.5	0.5
77358	6.0	14	38	279	1763	151	14	15	95	196	1.4	4.5	0.5
77360	6.2	9	24	66	1053	67	15	9	80	163	1.5	3.3	0.3
77362	5.6	7	55	129	497	72	10	8	107	86	1.0	2.9	0.3
77364	6.4	8	22	79	1048	60	11	7	99	221	1.0	3.6	0.5
77367	5.3	7	18	92	412	39	9	7	83	25	0.8	1.0	0.3
77369	6.5	9	21	96	1183	49	12	9	99	228	1.1	2.0	0.4
77371	5.6	7	8	35	554	46	14	8	93	360	1.0	1.4	0.3
77373	6.1	9	51	245	819	123	12	10	101	300	1.2	2.6	0.5
77375	6.3	9	40	147	1056	70	10	8	94	344	1.2	2.7	0.5

Lab Number	pH	CEC	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
77378	5.7	13	26	148	1469	132	21	13	117	362	1.6	6.5	0.5
77380	5.9	29	4	248	4646	115	36	13	43	35	0.8	1.4	0.4
77382	5.8	16	50	214	1746	142	23	13	100	128	1.3	3.2	0.5
77384	5.9	10	41	90	1083	113	17	12	134	249	1.3	4.6	0.5
77386	6.5	16	4	70	2430	29	14	6	68	263	1.0	1.3	0.5
77388	6.1	6	18	32	589	26	11	7	88	84	0.7	1.3	0.4
77391	6.1	17	4	65	2689	20	16	6	69	118	0.8	1.3	0.4
77393	5.0	8	24	32	493	23	12	10	102	46	0.7	1.1	0.3
77395	5.8	8	6	33	721	31	12	7	94	303	1.0	1.2	0.4
77397	4.9	10	12	44	648	36	13	11	99	309	1.0	1.9	0.4
77399	5.4	8	10	149	561	33	12	14	109	330	1.0	1.0	0.3
77402	6.0	9	14	153	993	82	14	8	105	391	1.0	2.3	0.4
77404	6.4	11	16	84	1340	70	20	9	90	310	0.9	2.1	0.4
77406	6.6	32	22	236	5404	141	25	11	49	142	0.9	2.2	0.5
77408	6.0	9	13	124	1047	74	12	9	80	138	0.7	1.5	0.4
77410	5.5	10	10	50	961	55	13	8	85	145	0.7	1.2	0.3
77412	6.3	20	9	110	3113	45	19	12	84	333	1.0	1.9	0.5
77415	5.4	7	7	26	527	21	12	6	75	38	0.4	0.9	0.2
77417	5.6	8	9	26	851	16	9	7	92	186	0.6	1.1	0.3

Lab Number	pH	CEC	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
77419	5.0	11	6	42	857	68	12	8	66	65	0.5	0.8	0.3
77421	5.4	9	4	73	765	62	14	7	107	256	0.6	1.2	0.3
77423	5.7	11	12	65	1138	52	16	9	102	266	0.9	1.6	0.3
77426	5.8	18	13	94	2471	74	17	15	70	293	1.5	2.1	0.4
77428	5.0	20	6	109	2601	54	17	16	53	106	0.6	1.2	0.2
77430	5.8	10	7	37	1045	29	13	10	85	216	0.6	1.1	0.2
77432	5.6	9	14	34	999	31	18	13	108	230	0.8	1.7	0.2
77434	5.9	17	8	76	2627	25	16	12	64	193	0.7	1.6	0.3
77436	4.8	9	6	35	531	36	15	8	60	36	0.4	1.0	0.2
77439	5.1	9	9	35	599	40	12	11	104	211	0.7	1.3	0.2
77441	5.8	9	28	73	846	80	12	14	98	151	0.8	1.7	0.3
77443	5.5	13	13	56	1391	59	14	15	87	351	1.4	1.7	0.2
77445	6.8	24	7	135	4178	53	15	11	40	189	1.0	1.3	0.5
77447	5.8	15	17	69	2181	57	12	17	77	336	1.4	3.0	0.4
Mean	5.98	13	27	121	1759	72	14	10	96	196	1.1	2.7	0.4
Median	6.00	10	21	110	1056	70	13	10	98	207	1.0	2.2	0.4
Minimum	4.80	5	4	26	319	16	9	5	22	6	0.4	0.6	0.1
Maximum	7.90	48	119	324	9031	192	36	17	193	391	2.4	8.7	1.0
Standard deviation	0.62	8.8	24	75	1808	37	5	3	32	105	0.4	1.7	0.1

Lab Number	pH	CEC	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
Coefficient of variation, %	10.34	66	89	62	103	52	32	27	33	53	36	64	37
Count	69												

Table 17. Soil analyses of 0 to 4 inch samples collected from Field 5a, collected February 2016.

Lab Number	pH	CEC	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
			mg/kg										
77198	4.6	8	49	38	260	28	7	26	114	237	0.5	1.3	0.2
77200	4.4	14	12	77	905	150	12	12	55	37	0.3	0.4	0.1
77202	5.9	19	10	95	2810	42	11	9	104	114	2.1	3.6	0.6
77204	6.7	19	20	94	3068	66	15	12	135	174	2.5	4.9	0.8
77206	5.9	15	16	73	2090	82	10	9	115	179	2.1	3.4	0.4
77208	5.4	14	24	67	1570	87	9	11	132	151	2.2	3.0	0.3
77211	5.5	12	37	58	1147	72	9	10	184	184	1.5	2.9	0.3
77213	5.2	11	33	40	987	55	7	8	164	120	1.0	2.7	0.3
77215	5.7	11	26	39	1212	74	10	8	159	154	1.1	2.8	0.3
77217	5.0	11	50	95	830	99	8	14	86	181	0.6	2.9	0.3
77219	4.6	9	84	36	441	30	11	23	107	264	0.6	1.6	0.2
77222	4.7	9	75	58	525	58	10	20	112	220	0.7	2.1	0.2
77224	5.9	17	29	88	2492	78	14	14	105	123	1.9	4.4	0.6
77226	5.2	11	30	67	980	87	9	13	147	149	1.3	1.7	0.3
77228	5.3	12	65	79	1161	83	11	12	187	189	1.9	2.8	0.3
77230	5.2	13	51	75	1130	85	19	11	196	140	1.3	2.4	0.3
77232	5.7	12	28	39	1287	73	11	9	143	145	1.2	3.4	0.4

Lab Number	pH	CEC	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
77235	6.3	15	25	52	2198	81	10	11	142	172	1.5	4.1	0.7
77237	4.5	9	61	50	377	37	11	23	112	259	0.7	1.7	0.2
77239	6.3	21	34	150	3177	95	23	14	117	141	2.2	5.7	0.8
77241	5.1	10	47	76	778	85	8	12	174	202	1.5	2.6	0.3
77243	5.4	10	43	57	874	62	8	9	183	173	1.0	2.5	0.3
77246	5.1	11	79	96	945	80	7	11	186	236	2.4	4.2	0.3
77248	5.8	15	21	55	1834	79	7	10	143	158	1.5	4.1	0.5
77250	5.7	16	23	51	1953	91	8	9	138	182	1.5	4.0	0.6
77252	5.5	10	46	62	854	74	8	11	172	240	2.0	3.6	0.3
77254	5.0	11	58	80	841	89	10	12	165	113	0.7	1.7	0.2
77256	5.1	9	33	45	506	71	9	14	165	210	1.1	2.3	0.2
77259	5.7	22	21	103	3059	70	19	18	146	158	2.5	5.2	0.8
77261	5.2	10	49	78	756	93	12	18	178	270	1.7	2.2	0.3
77263	6.0	13	24	73	1785	50	16	11	142	142	1.5	2.4	0.5
77265	5.1	9	45	47	468	67	15	14	171	212	1.4	2.8	0.2
77267	5.0	10	47	84	622	88	8	16	171	209	1.7	2.6	0.3
77270	4.9	10	41	64	626	67	8	15	170	240	2.3	2.5	0.3
77272	5.2	11	39	73	905	83	10	13	136	82	1.5	1.8	0.4
77274	6.7	19	19	87	3128	56	11	12	121	145	2.0	3.5	0.7

Lab Number	pH	CEC	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
77276	4.7	8	77	40	341	48	7	16	207	134	1.3	2.1	0.3
77278	5.9	11	46	61	1288	110	10	15	140	181	1.9	3.0	0.4
77280	5.2	10	44	84	609	86	7	14	138	110	1.2	2.4	0.3
77283	4.7	8	40	38	358	34	10	15	173	152	1.6	1.6	0.3
77285	4.9	9	39	48	457	57	11	14	165	189	1.8	1.9	0.3
77287	5.1	12	35	100	987	93	10	12	202	134	1.6	2.0	0.3
77289	6.1	13	12	67	1719	27	14	7	131	177	2.4	2.3	0.4
77291	4.9	13	30	73	1027	87	10	16	187	128	1.6	2.1	0.3
Mean	5.36	12	39	68	1258	73	11	13	148	171	1.5	2.8	0.4
Median	5.20	11	38	67	984	76	10	12	145	173	1.5	2.6	0.3
Minimum	4.40	8	10	36	260	27	7	7	55	37	0.3	0.4	0.1
Maximum	6.70	22	84	150	3177	150	23	26	207	270	2.5	5.7	0.8
Standard deviation	0.57	3.5	18	23	837	24	4	4	33	49	0.6	1.1	0.2
Coefficient of variation, %	11	29	47	34	66	32	33	31	22	29	38	39	47
Count	44												

Table 18. Soil analyses of 4 to 8 inch samples collected from Field 5a, collected February 2016.

Lab Number	pH	CEC	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
			mg/kg										
77199	4.7	7	22	24	212	16	9	19	108	281	0.5	0.9	0.1
77201	4.2	12	36	60	656	105	10	20	93	151	0.3	0.8	0.2
77203	5.9	19	19	96	2859	72	13	12	115	114	2.1	5.0	0.6
77205	6.3	18	10	83	2760	50	14	8	106	211	2.5	3.4	0.6
77207	6.1	15	8	71	2088	47	10	6	110	185	2.3	2.4	0.4
77210	5.5	17	15	81	2096	65	11	10	139	155	3	2.4	0.4
77212	5.6	11	32	56	1198	42	9	6	152	143	1.8	2.0	0.2
77214	5.5	9	34	37	918	30	7	6	184	111	1.0	2.1	0.2
77216	5.9	10	19	40	1176	42	9	5	137	123	1.2	1.9	0.3
77218	4.9	9	32	50	477	47	8	12	97	246	0.6	1.6	0.2
77220	4.9	8	35	23	358	22	18	13	98	236	0.8	1.2	0.2
77223	4.9	9	26	29	466	24	15	13	100	230	0.8	1.2	0.2
77225	5.8	16	13	68	2016	40	14	9	98	161	1.7	2.9	0.5
77227	5.2	12	18	66	1075	64	8	11	138	114	1.4	1.1	0.3
77229	5.3	13	50	75	1376	50	9	7	154	148	2.0	1.7	0.3
77231	5.5	12	43	72	1218	45	9	7	173	116	1.1	1.3	0.3
77234	5.8	9	21	30	1005	29	8	5	149	119	1.1	2.2	0.3

Lab Number	pH	CEC	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
77236	6.5	12	18	41	1675	38	10	7	127	128	1.4	3	0.5
77238	4.5	9	37	33	381	21	11	21	104	253	0.8	1.3	0.2
77240	6.6	19	12	116	3024	76	19	8	103	163	2.3	4.1	0.6
77242	5.1	10	30	58	802	56	10	8	156	159	1.6	1.7	0.2
77244	5.7	9	44	53	895	38	8	7	171	134	1.1	1.6	0.2
77247	5.4	10	65	81	1059	45	8	8	178	204	2.9	3.2	0.3
77249	6.0	14	12	58	2010	51	10	7	129	131	1.5	2.4	0.5
77251	6.0	10	17	35	1220	39	7	5	123	134	1.1	2.5	0.4
77253	5.5	10	33	50	936	43	9	7	148	171	2.3	2.4	0.3
77255	5.0	10	65	74	858	57	9	8	144	58	0.8	0.9	0.2
77258	4.9	9	22	42	498	51	9	13	155	174	1.5	1.6	0.2
77260	6.2	17	11	85	2596	40	15	10	123	177	2.5	3.5	0.6
77262	5.1	9	19	50	579	44	17	12	133	138	1.2	1.0	0.2
77264	6.0	13	18	73	1694	34	15	7	138	125	1.3	1.3	0.3
77266	5.2	8	26	38	480	43	9	9	150	222	1.6	2.0	0.2
77268	5.3	8	22	61	664	49	12	12	153	179	2.0	1.3	0.3
77271	5.3	9	24	55	814	44	9	10	165	226	2.6	1.8	0.3
77273	4.8	11	37	73	827	63	12	12	127	64	1.4	1.0	0.5
77275	6.4	16	12	71	2310	29	9	8	120	165	1.9	2.9	0.5

Lab Number	pH	CEC	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
77277	4.7	8	66	32	307	34	6	11	176	143	1.3	1.9	0.2
77279	6.0	10	26	51	1167	88	9	11	130	161	1.6	2.1	0.4
77282	5.0	10	36	72	645	64	16	11	143	90	1.7	1.3	0.3
77284	4.9	9	26	33	471	23	10	10	159	163	1.6	1.3	0.3
77286	4.9	9	21	45	564	31	10	8	137	133	1.6	1.1	0.2
77288	5.1	11	32	99	907	90	13	10	158	102	1.4	1.2	0.3
77290	6.0	14	22	62	1902	50	27	14	141	190	2.3	3.6	0.6
77292	4.8	11	14	72	805	57	12	14	150	96	1.2	1.1	0.3
Mean	5.43	11	27	59	1183	47	11	10	136	157	1.6	2.0	0.3
Median	5.35	10	23	58	927	45	10	10	138	153	1.5	1.8	0.3
Minimum	4.20	7	8	23	212	16	6	5	93	58	0.3	0.8	0.1
Maximum	6.60	19	66	116	3024	105	27	21	184	281	3.0	5.0	0.6
Standard deviation	0.58	3	14	21	749	19	4	4	25	50	0.6	1.0	0.1
Coefficient of variation, %	11	28	53	37	63	40	35	38	18	32	41	48	43
Count	44												

Table 19. Soil analyses of 0 to 4 inch samples collected from Field 12, collected February 2016.

Lab Number	pH	CEC	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
			mg/kg										
77102	5.4	11	148	353	961	129	14	15	214	254	1.5	7.4	0.7
77104	5.5	11	190	183	981	112	16	18	211	244	1.6	5.3	0.5
77106	5.3	10	160	183	912	96	18	16	175	238	1.6	4.8	0.4
77108	5.4	10	178	146	795	92	12	15	196	256	1.7	4.1	0.4
77110	5.2	10	172	119	766	78	11	13	206	216	1.4	3.5	0.4
77112	5.8	16	97	129	1830	134	14	15	215	140	2.4	5.3	0.6
77115	5.2	11	193	189	864	113	22	17	215	251	1.6	6.3	0.4
77117	5.1	11	167	185	751	108	16	16	192	247	1.4	4.8	0.3
77119	5.2	11	168	159	883	117	27	16	206	222	1.6	5.9	0.4
77121	5.5	12	73	82	1176	86	15	13	162	156	1.7	3.2	0.4
77123	5.6	12	49	70	1307	104	16	11	157	156	1.5	3.0	0.4
77126	5.4	10	40	63	991	65	9	8	143	123	1.1	2.2	0.2
77128	5.3	9	115	115	661	88	18	15	149	193	1.3	4.1	0.3
77130	4.9	12	186	276	739	103	24	19	185	215	1.5	5.2	0.4
77132	5.7	12	112	101	1297	115	25	16	172	200	1.9	4.7	0.4
77134	5.3	14	123	75	1316	154	26	16	227	216	2.0	7.2	0.5
77136	5.6	14	101	95	1568	162	27	17	204	175	1.8	5.8	0.5

Lab Number	pH	CEC	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
77139	5.3	10	64	48	976	80	9	15	241	174	1.3	3.6	0.3
77141	5.1	11	138	147	772	99	24	22	147	174	1.2	5.3	0.3
77143	5.2	15	103	98	1408	128	27	23	175	169	2.1	4.5	0.5
77145	6.0	13	76	121	1575	135	23	19	163	159	1.4	4.2	0.5
77147	5.5	14	97	107	1333	126	21	18	197	232	1.7	6.5	0.5
77150	5.5	10	81	60	962	80	12	16	255	219	1.4	4.0	0.4
77152	5.5	14	57	109	1479	115	30	19	161	195	1.6	3.9	0.5
77154	5.1	17	123	117	1752	165	24	23	195	138	2.1	6.7	0.5
77156	5.5	13	91	102	1225	109	24	22	153	227	1.8	5.2	0.4
77158	5.3	17	59	91	1848	139	29	20	170	109	2.0	4.3	0.5
77160	5.7	13	79	122	1393	122	23	22	187	201	1.8	5.1	0.5
77163	5.6	12	65	164	1135	111	19	15	183	187	1.4	4.0	0.4
77165	5.9	9	77	94	930	108	21	14	181	161	1.2	4.3	0.4
77167	6.1	11	27	59	1378	107	6	9	163	164	1.3	3.8	0.5
77169	5.8	12	55	59	1386	98	9	12	177	174	1.7	3.9	0.4
77171	5.8	17	65	95	2178	139	31	15	133	90	2.1	5.3	0.7
77174	5.4	16	72	85	1697	141	31	15	143	110	2.3	5.1	0.6
77176	5.9	16	65	109	2099	151	40	14	157	137	2.5	5.2	0.6
77178	5.4	14	76	94	1389	101	27	15	187	162	2.2	4.3	0.5

Lab Number	pH	CEC	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
77180	5.3	14	77	110	1493	121	19	16	192	178	2.4	5.0	0.6
77182	5.5	11	117	79	941	124	23	13	234	202	1.8	7.5	0.6
77184	6.0	17	63	107	2593	75	28	18	136	141	2.3	6.0	1.0
77187	5.3	17	146	245	1791	178	27	19	178	88	2.3	7.0	0.4
77189	5.4	17	117	207	1737	162	20	15	166	94	1.8	5.1	0.5
77191	5.6	15	65	123	1632	142	27	14	161	113	1.8	3.8	0.4
77193	5.3	15	151	315	1326	185	24	18	165	144	1.6	6.9	0.5
77195	5.6	13	82	110	1464	128	22	13	159	143	1.6	5.0	0.4
77470	5.4	10	104	84	845	106	12	16	220	162	1.6	4.2	0.3
Mean	5.48	13	104	129	1301	118	21	16	182	177	1.7	4.9	0.5
Median	5.40	12	97	109	1316	115	22	16	178	174	1.7	5.0	0.4
Minimum	4.90	9	27	48	661	65	6	8	133	88	1.1	2.2	0.2
Maximum	6.10	17	193	353	2593	185	40	23	255	256	2.5	7.5	1.0
Standard deviation	0.27	2	45	66	433	28	7	3	29	47	0.4	1.2	0.1
Coefficient of variation, %	5	19	43	52	33	23	35	21	16	26	21	25	29
Count	45												

Table 20. Soil analyses of 4 to 8 inch samples collected from Field 12, collected February 2016.

Lab Number	pH	CEC	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
			mg/kg										
77103	5.7	9	107	315	701	96	17	13	158	249	1.3	4.5	0.4
77105	5.6	9	142	97	814	67	16	12	154	170	1.3	2.4	0.3
77107	5.5	10	88	93	847	59	20	12	141	202	1.5	2.1	0.3
77109	5.6	9	118	68	883	65	20	12	163	210	1.7	2.1	0.3
77111	5.7	9	116	77	827	45	14	11	164	149	1.4	1.7	0.4
77114	5.7	15	49	92	1766	104	17	11	153	115	2.4	2.9	0.7
77116	5.6	9	106	107	799	71	17	13	165	203	1.3	2.4	0.4
77118	5.2	10	104	103	723	71	16	13	160	195	1.4	2.3	0.3
77120	5.8	8	73	77	763	47	16	8	131	137	1.2	1.5	0.2
77122	5.7	12	41	66	1356	59	17	10	133	111	1.9	2.0	0.3
77124	6.1	12	25	63	1491	69	15	9	119	115	1.6	1.6	0.4
77127	5.7	10	24	56	1009	48	11	7	106	81	1.1	1.2	0.2
77129	5.4	9	45	66	691	41	18	10	106	127	1.5	1.4	0.2
77131	5.2	10	120	106	756	57	19	14	149	149	1.4	2.4	0.3
77133	5.8	13	60	62	1483	66	25	12	140	143	2.0	2.1	0.4
77135	5.7	13	38	57	1575	73	19	10	146	160	2.0	2.2	0.4

Lab Number	pH	CEC	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
77138	5.7	14	28	64	1639	81	21	14	133	142	1.6	1.8	0.4
77140	5.8	8	35	32	675	28	9	9	134	94	0.9	1.4	0.2
77142	5.1	9	33	56	653	28	14	16	95	99	0.8	0.9	0.2
77144	5.7	11	47	44	1108	54	20	15	106	92	1.8	1.4	0.3
77146	5.8	13	27	67	1547	83	17	14	115	116	1.4	1.4	0.4
77148	6.0	12	23	54	1472	72	18	12	134	162	1.9	2.1	0.4
77151	5.7	9	45	42	859	43	15	12	157	145	1.2	2.0	0.3
77153	6.2	12	19	57	1567	60	28	14	115	123	1.7	1.2	0.4
77155	5.6	16	50	68	1904	96	23	16	145	121	2.2	2.9	0.5
77157	5.9	10	34	57	1154	44	17	15	103	144	1.5	1.5	0.4
77159	5.6	17	23	65	2111	104	24	18	124	97	2.1	1.9	0.4
77162	5.6	12	26	73	1350	82	20	15	117	114	1.8	1.9	0.3
77164	5.8	12	32	96	1314	81	20	12	132	142	1.8	1.8	0.4
77166	5.5	11	21	67	1072	65	13	11	106	78	1.0	1.2	0.2
77168	6.1	11	27	61	1288	77	7	7	151	125	1.8	3.0	0.4
77170	5.8	12	35	56	1291	46	7	8	133	131	1.8	2.1	0.3
77172	5.9	15	22	65	2202	83	26	11	108	75	1.9	1.9	0.7
77175	5.8	17	19	68	2190	95	28	11	118	86	2.5	1.9	0.5
77177	6.1	17	20	85	2477	97	24	11	132	101	2.6	2.3	0.6

Lab Number	pH	CEC	P	K	Ca	Mg	Na	S	Fe	Mn	Cu	Zn	B
77179	5.7	13	37	72	1516	72	27	11	148	132	2.3	2.6	0.5
77181	5.8	15	28	86	1714	81	16	12	147	141	2.7	2.5	0.6
77183	5.6	10	36	50	962	64	16	9	142	143	1.7	2.6	0.6
77186	6.2	17	17	81	2600	35	29	11	108	113	1.7	2.0	0.6
77188	5.7	16	55	140	1864	117	21	12	145	62	2.1	2.5	0.4
77190	5.7	15	50	122	1810	126	17	11	135	66	1.9	2.2	0.4
77192	5.7	14	30	75	1592	104	16	11	124	88	1.7	1.9	0.4
77194	5.4	13	61	181	1272	131	15	13	137	86	1.5	2.3	0.4
77196	6.0	11	37	68	1381	86	17	8	131	123	1.6	2.3	0.3
77471	5.4	10	64	76	885	60	14	13	156	105	1.7	1.9	0.3
Mean	5.71	12	50	81	1332	72	18	12	134	128	1.7	2.0	0.4
Median	5.70	12	37	68	1314	71	17	12	134	123	1.7	2.0	0.4
Minimum	5.10	8	17	32	653	28	7	7	95	62	0.8	0.9	0.2
Maximum	6.20	17	142	315	2600	131	29	18	165	249	2.7	4.5	0.7
Standard deviation	0.24	3	33	44	509	25	5	2	19	40	0.4	0.6	0.1
Coefficient of variation, %	4	22	66	55	38	34	28	21	14	31	25	30	33
Count	45												

Table 21. Soil analyses of 0 to 4 inch samples collected from Field 1, collected March 2018.

Lab number	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
	cmolc/kg	mg/kg										
54582	7.7	49.7	31	220	9224	112	14	30	165	1.3	4.1	1.0
54581	7.8	60.7	43	104	11512	97	10	33	48	1.1	7.9	0.4
54580	6.8	17.0	145	291	2552	111	21	189	117	1.3	6.4	0.6
54579	7.6	36.5	63	144	6629	113	17	48	170	1.6	6.5	0.7
54578	6.6	21.3	173	295	3091	240	23	118	175	2.1	17.4	1.1
54576	6.6	13.5	127	252	1631	188	22	143	222	1.3	10.4	0.5
54575	6.8	13.0	164	325	1600	200	27	159	191	1.2	13.1	0.5
54574	7.3	18.6	56	233	3021	104	19	82	270	0.9	3.5	0.4
54573	7.6	22.2	130	260	3646	154	19	91	196	1.2	8.2	0.5
54572	6.4	15.6	131	277	1972	178	25	135	228	1.3	12.2	0.7
54571	7.8	22.3	128	486	3584	128	25	106	296	1.1	6.2	0.8
54570	6.6	14.8	96	396	1902	140	26	130	314	0.9	6.0	0.5
54569	6.6	14.9	104	247	1929	191	17	103	343	1.2	10.5	0.5
54568	6.2	13.7	64	243	1698	117	18	117	209	1.1	6.7	0.5
54567	5.3	10.3	71	141	948	70	16	154	91	0.5	2.3	0.3
54566	6.1	10.9	60	199	1204	88	14	91	54	0.5	2.1	0.2

Lab number	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
54564	6.2	9.0	79	196	1000	108	15	126	112	0.6	3.7	0.3
54563	6.0	8.6	84	232	822	100	18	193	140	0.5	3.2	0.4
54562	6.3	13.2	128	418	1499	189	27	219	125	0.9	7.0	0.6
54561	6.2	9.8	104	396	970	162	23	154	225	0.9	7.2	0.5
54560	6.3	14.4	147	528	1593	236	24	135	205	1.3	11.8	0.6
54559	6.6	14.5	189	557	1622	232	30	150	199	1.1	11.7	0.7
54558	6.0	14.1	247	325	1521	258	23	166	137	1.5	27.7	0.6
54557	6.7	13.0	135	330	1599	187	21	133	83	0.9	7.7	0.6
54556	6.1	11.3	92	313	1147	147	19	127	160	0.8	5.7	0.5
54555	6.2	8.8	76	258	933	107	16	109	153	0.7	3.9	0.4
54554	6.5	11.0	114	398	1212	157	19	128	194	0.9	6.5	0.6
54552	6.5	11.8	136	338	1388	170	17	135	228	1.8	10.0	0.5
54551	6.5	16.0	196	660	1788	272	31	108	355	1.9	15.7	0.6
54550	6.3	15.0	178	451	1660	242	27	129	179	1.9	15.0	0.5
54549	6.2	15.0	233	289	1670	275	21	122	171	2.4	23.2	0.4
54548	5.8	14.3	186	402	1308	256	29	137	192	1.7	14.9	0.5
54547	6.4	12.9	94	235	1568	161	20	100	201	1.2	5.7	0.5
54546	5.9	9.7	86	123	1042	131	18	107	117	1.1	4.6	0.2
54545	6.3	10.3	81	214	1144	113	17	98	216	1.5	6.1	0.4

Lab number	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
54544	6.4	8.5	91	179	877	128	20	89	340	1.6	6.2	0.3
54543	6.2	9.5	120	447	851	176	24	108	310	1.6	8.1	0.4
54542	6.4	11.5	152	392	1169	194	21	119	318	1.8	10.4	0.5
54540	6.5	11.9	128	556	1237	208	25	134	261	1.6	10.3	0.5
54539	6.1	18.3	141	442	2259	270	26	101	163	1.7	15.0	0.5
54538	6.3	13.1	120	457	1462	184	24	146	134	1.4	10.7	0.4
54537	5.9	11.7	121	315	1141	198	23	115	266	1.5	15.4	0.3
54536	6.1	11.3	52	154	1310	87	15	91	196	0.9	3.5	0.3
54535	6.3	12.0	87	218	1429	149	17	107	200	0.9	6.2	0.3
54534	7.1	20.9	40	135	3487	128	20	49	309	1.3	6.6	0.7
54533	5.7	8.4	57	89	696	79	16	120	170	1.1	3.2	0.2
54532	6.1	7.8	39	123	741	83	17	83	304	0.9	3.1	0.2
54531	5.9	6.5	41	105	522	62	15	96	225	0.7	1.7	0.2
54530	6.8	9.0	27	102	1135	59	10	68	232	1.0	2.0	0.2
54528	6.8	12.1	105	297	1435	192	18	97	322	1.4	8.7	0.5
54527	6.9	14.3	98	211	1976	156	17	80	280	1.5	8.3	0.5
54526	6.9	27.3	105	557	4198	271	27	62	206	1.3	8.7	0.6
54525	6.3	12.2	52	330	1420	134	19	98	221	0.9	5.0	0.4
54524	6.0	8.7	43	133	904	87	15	93	228	0.9	3.1	0.2

Lab number	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
54523	6.4	16.0	42	187	2182	126	20	64	355	1.1	4.9	0.4
54522	5.9	6.9	55	52	668	41	13	97	94	0.5	1.3	0.1
54521	6.2	8.7	47	53	1066	80	13	105	133	0.9	3.5	0.2
54520	6.4	11.3	18	66	1494	68	11	63	150	0.7	1.5	0.2
54519	6.4	8.2	30	160	910	85	15	92	332	1.0	2.2	0.2
54518	6.5	11.4	42	242	1496	93	16	78	284	1.1	3.8	0.3
54516	6.2	16.5	33	249	2236	136	19	63	281	2.0	4.4	0.4
54515	6.5	13.4	38	169	1796	109	14	76	211	1.7	4.1	0.3
54514	6.7	11.3	27	86	1599	61	14	77	218	1.5	2.3	0.2
54513	5.7	7.9	36	72	640	53	15	122	253	1.6	2.5	0.1
54512	6.3	14.1	29	112	1941	62	17	68	274	1.7	3.4	0.4
54511	5.9	7.0	58	82	632	71	14	113	133	1.4	2.8	0.2
54510	6.0	7.0	32	64	636	74	12	97	204	1.3	2.2	0.2
54509	6.7	10.3	64	287	1124	169	17	101	174	1.5	4.1	0.4
54508	6.4	11.7	31	179	1463	101	15	60	373	1.8	3.4	0.2
54507	7.2	25.8	33	135	4477	116	12	35	209	1.8	3.4	0.4
54506	6.0	11.2	38	112	1318	95	17	77	298	1.6	3.6	0.3
Mean	6.44	14.4	91	258	1909	143	19	106	213	1.3	7.1	0.4
Median	6.40	12.1	84	242	1463	128	18	105	206	1.3	6.1	0.4

Lab number	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
Minimum	5.3	6.5	18	52	522	41	10	30	48	0.5	1.3	0.1
Maximum	7.8	60.7	247	660	11512	275	31	219	373	2.4	27.7	1.1
Standard deviation	0.5	8.7	54	143	1781	62	5	37	76	0.4	5.1	0.2
Coefficient of variation, %	8	61	59	55	93	44	26	34	36	33	72	46
Count	71											

Table 22. Soil analyses of 0 to 4 inch samples collected from Field 5a, collected March 2018.

Lab number	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
		cmolc/kg	mg/kg									
54504	4.9	8.6	66	48	408	52	21	87	187	1.1	1.7	0.1
54503	5.0	9.6	65	62	640	88	22	95	197	0.9	1.6	0.1
54502	6.8	18.9	29	79	3096	74	14	81	107	2.4	5.9	0.7
54501	6.9	19.9	28	89	3307	68	14	113	153	3.0	5.9	0.8
54500	6.9	16.5	25	92	2630	70	13	105	206	2.8	4.0	0.5
54499	5.9	12.6	44	58	1628	91	12	121	230	3.1	4.8	0.2
54498	5.6	10.1	35	47	1071	69	10	148	157	1.9	4.2	0.2
54497	6.0	9.8	31	37	1119	67	7	139	143	1.7	3.5	0.2
54496	6.0	10.6	31	41	1250	84	8	141	163	1.8	3.8	0.3
54495	5.2	9.1	150	64	587	54	28	127	286	2.0	3.0	0.1
54494	6.3	11.3	46	92	1376	138	16	78	231	1.4	3.0	0.4
54492	6.6	15.8	26	70	2395	68	11	95	143	3.0	4.8	0.5
54491	5.5	8.9	78	53	737	61	18	94	182	2.2	2.8	0.1
54490	6.6	12.0	31	62	1664	60	10	111	197	2.7	3.6	0.3
54489	5.6	9.5	59	69	919	77	10	153	192	2.6	2.8	0.2
54488	5.6	9.2	55	46	898	62	9	162	156	2.1	3.4	0.2
54487	6.0	11.2	24	35	1409	65	8	125	153	2.2	3.7	0.3

Lab number	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
54486	6.3	13.2	27	43	1789	71	10	124	167	2.3	4.4	0.4
54485	5.2	9.1	101	75	572	64	24	111	276	2.2	3.2	0.1
54484	6.9	18.8	44	125	3041	81	13	107	120	3.3	5.9	0.7
54483	5.6	8.6	50	84	724	82	12	156	186	2.6	3.2	0.2
54482	5.7	9.4	64	66	907	74	11	157	206	3.2	4.6	0.2
54480	5.8	11.4	77	68	1216	70	10	176	132	2.4	3.7	0.2
54479	6.1	14.3	20	51	1980	87	10	124	193	2.1	4.0	0.4
54478	6.2	11.3	25	41	1505	72	8	121	169	1.9	4.1	0.3
54477	6.5	18.1	35	77	2854	69	17	96	130	2.7	5.6	0.7
54476	5.3	8.4	34	52	619	77	13	144	178	1.7	2.5	0.1
54475	5.3	8.5	38	62	628	81	13	137	170	1.6	2.0	0.1
54474	5.8	9.5	51	60	919	80	11	147	193	2.6	3.9	0.2
54473	5.4	9.8	56	79	859	87	14	142	128	1.5	2.6	0.1
54472	7.0	17.3	31	85	2903	63	13	104	120	2.1	3.1	0.5
54471	5.4	7.9	55	42	524	70	13	148	192	1.7	2.9	0.1
54470	5.5	9.0	65	70	697	87	17	131	219	1.9	3.0	0.1
54468	5.5	8.5	43	55	621	74	13	128	210	2.4	2.9	0.2
54467	5.3	10.0	49	92	904	85	12	128	72	1.5	1.9	0.1
54466	7.2	23.3	20	63	4139	49	11	96	103	2.5	3.9	0.5

Lab number	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
54465	5.2	8.2	62	33	421	52	12	165	96	1.8	2.4	0.1
54464	5.5	7.9	58	46	531	67	14	128	179	2.1	2.7	0.1
54463	5.3	8.3	40	60	595	77	13	129	131	1.7	1.9	0.1
54462	5.2	8.3	33	31	468	37	13	146	137	1.6	1.5	0.1
54461	5.3	7.2	78	32	432	55	13	148	118	2.1	2.9	0.1
54460	5.6	10.2	39	96	1030	87	13	168	122	1.8	2.4	0.1
54459	6.6	13.2	26	62	1906	48	11	113	145	2.6	3.1	0.4
54458	5.3	10.9	28	79	1099	83	16	166	141	1.7	2.3	0.2
Mean	5.85	11.5	47	63	1341	72	13	128	166	2.1	3.4	0.3
Median	5.60	9.9	42	62	975	71	13	128	165	2.1	3.2	0.2
Minimum	4.90	7.2	20	31	408	37	7	78	72	0.9	1.5	0.1
Maximum	7.20	23.3	150	125	4139	138	28	176	286	3.3	5.9	0.8
Standard deviation	0.62	3.8	24	20	932	16	4	25	45	0.6	1.1	0.2
Coefficient of variation, %	11	34	**52**	**32**	**69**	**22**	**32**	**20**	**27**	**26**	**34**	**75**
Count	44											

Table 23. Soil analyses of 4 to 8 inch samples collected from Field 5a, collected March 2018.

Lab number	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
		cmolc/kg	mg/kg									
76427	4.9	7	42	31	211	21	30	105	256	0.6	0.8	0.6
76426	5.1	12	22	74	1015	98	17	90	107	0.4	0.4	0.7
76425	5.8	18	28	76	2405	52	17	122	102	2.3	3.0	0.8
76424	7.0	21	22	104	3648	61	16	138	189	3.1	5.6	1.2
76423	6.5	19	20	96	3004	74	13	115	179	2.7	4.1	1.1
76420	5.6	13	34	78	1490	55	12	142	179	2.9	3.2	0.6
76422	5.8	11	34	49	1122	43	9	149	157	1.4	2.2	0.2
76421	5.9	8	31	34	1002	32	7	170	133	1.1	2.1	0.2
76419	5.9	9	28	33	1037	45	8	167	141	1.1	2.1	0.3
76418	5.8	7	64	31	588	30	19	111	300	1.1	1.8	0.2
76416	5.1	8	76	32	500	22	26	125	273	1.1	1.9	0.6
76415	5.3	8	55	40	589	25	27	117	279	1.2	1.7	0.6
76414	6.6	19	17	84	3075	53	11	125	204	3.0	4.4	1.0
76413	6.6	12	19	57	1785	39	8	119	223	2.4	2.5	0.7
76412	5.6	11	53	67	1199	45	8	158	151	2.0	1.2	0.6
76411	5.8	9	60	52	938	38	7	178	153	1.5	2.0	0.7
76410	6.1	10	21	32	1213	34	8	145	129	1.2	2.1	0.3

Lab number	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
76409	6.3	14	21	43	1972	42	10	144	165	1.9	3.1	0.5
76408	5.0	8	40	31	463	21	25	106	264	1.2	1.1	0.2
76407	6.4	21	14	105	3281	63	10	103	194	2.7	3.9	0.9
76406	5.7	10	35	80	924	59	10	167	203	2.2	2.1	0.7
76404	5.6	10	80	58	1018	43	9	175	225	2.8	3.2	0.6
76403	5.7	10	40	54	1070	36	6	155	143	0.9	1.1	0.6
76402	6.2	14	13	46	2044	42	8	117	168	1.6	2.4	0.8
76401	6.3	18	13	73	2868	31	11	107	181	2.3	3.2	1.0
76400	5.3	7	24	36	373	42	11	133	165	1.0	1.1	0.5
76399	5.5	8	20	42	625	39	12	127	187	1.3	0.8	0.6
76398	5.7	9	40	53	895	36	9	146	193	2.1	2.1	0.6
76397	5.3	9	65	77	870	48	8	144	87	0.8	0.5	0.5
76396	5.1	9	38	44	551	52	13	131	120	1.0	1.0	0.3
76395	5.3	7	31	35	476	39	13	137	199	1.4	1.7	0.3
76394	5.5	8	26	59	665	49	14	132	190	1.4	1.1	0.2
76392	5.5	8	27	53	668	39	10	147	188	2.0	1.1	0.7
76391	5.0	10	49	83	716	52	12	135	71	0.9	0.5	0.7
76390	6.5	14	11	50	2168	21	6	117	154	1.4	1.5	0.8
76389	5.2	8	38	29	354	35	12	152	140	0.9	1.4	0.6

Lab number	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
76388	5.4	7	29	31	380	29	11	126	167	1.1	1.0	0.5
76387	5.2	10	31	73	687	62	13	126	105	0.8	0.7	0.6
76386	5.0	8	28	31	415	23	13	144	150	0.8	0.8	0.6
76385	5.2	9	21	49	576	33	9	121	116	1.0	0.7	0.6
76384	5.5	10	23	75	935	72	10	149	135	0.8	0.8	0.2
76383	6.1	11	16	46	1425	29	10	115	178	1.4	1.4	0.4
76382	5.1	10	28	68	803	66	16	129	107	0.9	0.9	0.2
Mean	5.67	11	33	56	1210	43	12	134	171	1.5	1.9	0.6
Median	5.60	10	28	52	935	42	11	132	167	1.3	1.7	0.6
Minimum	4.90	7	11	29	211	21	6	90	71	0.4	0.4	0.2
Maximum	7.00	21	80	105	3648	98	30	178	300	3.1	5.6	1.2
Standard deviation	0.53	4	17	21	886	16	6	21	52	0.7	1.2	0.3
Coefficient of variation, %	9	36	51	38	73	37	45	15	31	48	63	45
Count	43											

Table 24. Soil analyses of 0 to 4 inch samples collected from Field 12, collected March 2016.

Lab number	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
		cmolc/kg	mg/kg									
54583	7.1	12.0	161	770	1332	158	24	165	283	1.6	10.7	0.6
54456	6.2	8.7	192	194	950	107	14	164	190	1.5	6.1	0.4
54455	6.2	9.4	256	238	986	151	15	172	204	1.8	9.2	0.4
54454	6.1	8.9	230	124	893	118	13	180	193	1.8	6.6	0.4
54453	6.2	8.5	198	304	850	105	13	175	140	1.7	5.3	0.4
54452	6.3	14.7	125	126	1900	151	14	171	150	2.1	6.3	0.5
54451	6.2	8.2	180	204	836	105	13	160	187	1.5	6.0	0.4
54450	6.0	8.3	198	249	713	116	15	164	187	1.5	6.5	0.4
54449	5.9	8.2	149	243	716	95	14	167	177	1.5	5.0	0.4
54448	6.0	11.2	144	135	1212	146	13	165	131	2.1	6.4	0.4
54447	6.2	10.9	91	96	1297	126	11	161	165	1.7	5.1	0.4
54446	5.8	8.3	59	99	674	73	11	204	114	1.1	2.4	0.3
54444	5.8	8.7	119	182	678	83	14	141	199	1.3	4.3	0.3
54443	6.1	8.7	201	370	731	114	15	164	149	1.5	6.9	0.4
54442	5.9	8.4	176	156	766	126	13	176	144	1.6	7.0	0.4
54441	6.0	11.3	101	110	1226	148	13	163	165	1.5	5.4	0.4
54440	6.1	10.9	108	122	1162	134	12	154	194	1.8	6.8	0.4

Lab number	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
54439	6.2	8.4	97	53	986	89	12	194	140	1.5	5.3	0.3
54438	5.9	8.1	143	125	767	99	14	122	133	1.4	5.1	0.3
54437	5.7	11.8	137	166	1130	132	17	144	166	2.0	6.5	0.4
54436	5.8	13.8	150	165	1454	167	19	153	201	2.2	9.0	0.5
54435	6.2	11.3	99	111	1344	141	14	162	195	1.7	5.6	0.5
54434	6.1	11.6	100	111	1294	143	13	171	211	1.9	7.3	0.4
54432	5.9	8.7	91	74	912	98	11	173	166	1.4	4.9	0.3
54431	6.0	9.5	118	137	1027	114	14	126	194	2.0	7.1	0.4
54430	5.6	14.3	77	164	1593	151	16	135	128	2.0	5.0	0.4
54429	5.8	12.3	78	116	1268	126	14	133	170	1.8	4.4	0.4
54428	6.1	11.6	76	117	1303	133	13	146	183	1.8	5.4	0.4
54427	6.1	9.9	77	133	1073	122	13	149	179	1.5	5.3	0.4
54426	6.1	8.7	96	77	894	105	10	179	140	1.5	5.9	0.4
54425	5.9	11.0	31	42	1351	72	10	134	198	1.9	3.5	0.4
54424	5.9	15.1	90	94	1968	162	15	113	116	2.2	6.3	0.5
54423	6.0	13.7	74	95	1723	147	14	121	143	2.1	5.2	0.4
54422	5.8	15.2	78	113	1710	151	14	131	178	2.2	6.1	0.5
54420	6.2	10.2	81	95	1195	104	12	136	159	2.6	5.0	0.4
54419	5.9	11.3	120	100	1227	149	12	151	163	2.6	7.3	0.4

Lab number	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
54418	5.9	8.9	93	72	944	103	11	161	130	2.2	5.0	0.3
54417	5.9	11.5	52	50	1417	85	11	140	181	2.5	3.7	0.4
54416	6.4	17.9	91	86	2674	82	15	97	140	2.8	7.8	0.7
54415	5.9	13.9	124	231	1660	169	15	154	123	2.9	8.7	0.4
54414	6.0	13.6	159	257	1585	172	15	142	110	2.4	6.1	0.4
54413	6.1	13.0	119	162	1501	170	15	155	162	2.5	7.5	0.5
54412	5.9	12.5	170	199	1369	186	15	141	126	2.4	8.2	0.4
54411	6.1	11.0	119	73	1231	128	11	149	154	2.4	6.9	0.4
54410	5.8	8.4	72	50	700	91	9	153	132	1.8	3.1	0.2
Mean	6.03	10.9	122	155	1205	125	14	154	164	1.9	6.1	0.4
Median	6.00	11.0	118	124	1212	126	14	154	165	1.8	6.1	0.4
Minimum	5.60	8.1	31	42	674	72	9	97	110	1.1	2.4	0.2
Maximum	7.10	17.9	256	770	2674	186	24	204	283	2.9	10.7	0.7
Standard deviation	0.24	2.4	50	117	407	29	2	21	33	0.4	1.6	0.1
Coefficient of variation, %	4	22	41	76	34	23	18	14	20	23	27	20
Count	45											

Table 25. Soil analyses of 4 to 8 inch samples collected from Field 12, collected March 2018.

Lab number	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
		cmolc/kg	mg/kg									
86530	7.1	7.3	95	59	804	60	8	155	178	1.1	1.7	0.7
76470	6.2	9.3	24	51	1153	43	12	111	87	0.9	0.8	0.2
76380	6.2	7.9	52	64	840	50	11	109	126	1.0	1.2	0.3
76379	6.1	8.2	137	132	668	58	13	154	111	1.0	2.2	0.3
76378	6.2	9.3	79	73	914	58	11	138	122	1.2	2.4	0.3
76377	6.3	12.3	24	65	1560	82	10	118	107	1.3	1.6	0.3
76376	6.2	11.2	31	55	1363	78	8	125	133	1.5	2.0	0.3
76375	6.0	7.3	46	52	740	44	6	142	102	0.9	1.6	0.2
76374	5.9	8.6	50	50	809	39	14	101	82	1.0	1.2	0.7
76373	6.0	12.4	80	82	1187	76	18	141	112	2.0	2.6	0.8
76372	6.2	15.2	53	72	1830	89	13	133	108	2.1	3.0	0.8
86484	5.8	10.0	67	81	1113	79	13	186	236	1.8	3.5	0.6
76370	5.8	12.2	30	68	1540	83	8	130	155	1.8	2.4	0.9
76368	6.1	7.0	36	35	719	31	5	134	99	0.9	1.3	0.2
76367	5.9	9.8	45	56	1229	53	12	107	163	1.5	2.2	0.3
86529	6.0	14.1	30	52	1903	104	10	141	152	1.8	3.6	1.0
86528	6.1	9.6	43	62	1123	86	8	151	146	1.5	2.8	0.8

Lab number	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
76364	6.2	11.3	26	55	1381	73	9	114	111	1.4	1.7	0.3
76363	5.9	10.3	31	79	1173	70	8	124	141	1.4	1.5	0.3
76362	5.7	7.7	32	54	802	50	7	126	97	0.8	1.4	0.5
76361	5.8	9.9	25	47	1171	48	7	129	110	1.6	2.0	0.6
86527	6.2	11.3	84	152	1267	116	13	175	143	1.9	5.9	0.7
76359	6.1	14.8	27	65	2038	95	12	106	82	1.9	2.2	0.8
76358	5.9	15.8	25	70	2238	89	11	117	114	2.2	3.0	0.8
76356	6.0	11.3	32	57	1497	62	10	130	102	2.1	1.8	0.7
76355	5.6	13.1	54	95	1687	96	12	141	128	2.3	3.1	0.7
76354	5.8	8.3	57	52	901	71	9	150	115	1.6	3.4	0.6
76353	6.1	10.3	28	49	1249	43	8	129	116	2.0	1.6	0.6
76352	6.1	16.3	44	87	2508	51	12	108	134	1.9	4.3	1.0
76351	6.1	14.6	76	165	1895	130	15	163	78	2.3	4.3	0.8
86526	5.9	10.9	51	45	1371	103	11	133	143	1.6	3.1	0.8
76349	5.9	12.5	39	88	1563	105	12	123	107	1.9	2.1	0.6
76348	6.0	11.0	139	147	1192	136	13	171	134	1.9	6.3	0.7
76347	5.8	9.0	52	49	1126	72	8	133	124	1.7	2.9	0.6
76346	6.2	7.6	60	48	801	54	9	146	120	1.4	1.5	0.5
Mean	6.05	10.9	52	72	1296	74	10	134	123	1.6	2.5	0.6

Lab number	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
Median	6.00	11.0	45	62	1192	72	11	133	116	1.6	2.2	0.6
Minimum	5.50	8.1	24	35	668	31	5	101	78	0.8	0.8	0.2
Maximum	6.50	17.9	139	165	2508	136	18	186	236	2.3	6.3	1.0
Standard deviation	0.23	2.4	29	32	454	26	3	20	30	0.4	1.2	0.2
Coefficient of variation, %	4	22	56	44	35	35	26	15	25	28	50	41
Count	35											

Table 26. Soil analyses of 0 to 4 inch samples collected from the slurry application zone of Field 1, collected 2014.

Field point	pH	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
		mg/kg									
126	7.3	30	183	8465	142	23	35	230	1	4.7	1.1
142	7.8	32	104	5672	78	11	61	108	0.5	3.9	0.5
143	6.7	99	571	1821	116	15	232	117	0.4	4	0.7
144	7.8	18	123	7643	92	13	44	156	0.9	2.3	0.6
145	6.5	28	80	2741	110	20	76	86	0.5	3	0.4
162	6.1	83	706	1415	158	22	159	266	0.9	5.6	0.6
163	6.3	98	597	2478	227	25	172	251	0.7	8	0.7
180	6.5	22	144	1298	89	13	118	374	0.6	2.6	0.3
181	7.0	100	329	2229	144	18	134	232	0.9	6.1	0.6
182	6.6	59	469	2007	150	21	101	267	1	9.7	0.7
198	6.6	82	405	2022	152	18	149	360	1.1	7.1	0.7
199	6.9	50	84	1667	85	17	121	346	0.6	4.2	0.3
200	6.1	57	151	1613	139	23	101	532	0.4	3	0.4
201	6.0	44	107	1700	158	22	94	316	0.8	7.5	0.5
215	5.5	93	187	922	95	19	200	148	0.3	3.1	0.4
216	6.6	50	84	1598	77	15	127	106	0.5	2.4	0.4
217	6.2	67	191	1290	143	19	148	214	0.5	4.3	0.4

Field point	pH	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
218	7.0	77	245	1310	127	16	128	326	0.4	4	0.5
219	6.3	169	771	2073	216	29	128	258	0.6	10.6	0.9
221	5.5	100	90	1357	131	19	141	257	0.7	9.4	0.3
231	6.6	80	189	1454	110	15	117	84	0.4	3.6	0.4
232	7.0	48	277	1898	107	16	78	129	0.4	2.7	0.4
233	6.8	56	223	1503	110	16	110	174	0.5	3.3	0.5
234	6.4	41	61	1200	71	16	116	289	0.4	2.1	0.3
235	6.3	109	707	1502	144	28	170	318	1	9.1	0.6
236	6.5	56	420	1442	145	20	105	219	0.7	4.8	0.4
237	6.8	82	366	2051	150	24	124	173	0.8	6.9	0.5
240	5.4	60	88	889	69	17	119	171	0.2	3.3	0.2
241	6.3	71	314	1638	94	17	97	193	0.3	5.3	0.4
250	7.5	39	148	2056	62	13	84	238	0.4	2.1	0.4
251	5.8	35	269	675	61	20	115	388	0.3	2.5	0.3
252	6.5	63	208	1149	128	17	118	381	0.8	4.1	0.4
253	6.7	90	251	1649	139	17	111	362	0.9	6.1	0.5
254	5.9	54	238	1275	131	20	153	253	1.1	5.1	0.4
255	7.3	77	675	4064	161	26	52	380	0.8	5.6	0.9
259	5.7	81	52	941	69	15	110	168	0.4	3.9	0.2

Field point	pH	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
269	5.5	44	67	801	76	16	96	316	0.5	2.3	0.3
270	5.7	53	67	1046	62	18	89	360	0.5	2.2	0.2
271	6.4	33	127	1230	83	15	86	444	0.5	2.3	0.4
Mean	6.47	65	266	2046	118	19	116	256	0.6	4.7	0.5
Median	6.50	59	191	1598	116	18	116	253	0.5	4.0	0.4
Minimum	5.4	18	52	675	61	11	35	84	0.2	2.1	0.2
Maximum	7.8	169	771	8465	227	29	232	532	1.1	10.6	1.1
Standard deviation	0.61	30	206	1673	40	4	40	106	0.2	2.3	0.2
Coefficient of variation, %	9	46	77	82	34	22	34	41	40	50	41
Count	39										

Table 27. Soil analyses of 0 to 4 inch samples collected from the slurry application zone of Field 1, collected February 2016.

Field point	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
		cmolc/kg	mg/kg									
126	7.2	49	17	189	9104	111	12	38	180	1.8	3.6	1
142	7.5	49	29	117	9064	107	6	26	31	1.7	5.4	0.3
143	6.8	18	123	176	2895	105	12	199	105	1.7	4.8	0.6
144	7.4	39	32	163	7008	118	13	69	178	2	5.1	0.7
145	6.7	31	65	241	5045	205	17	77	224	2.4	9.9	1
162	6.9	18	77	202	2813	141	15	121	182	1.8	6.1	0.5
163	6.4	16	121	274	2031	183	15	147	137	1.6	9.8	0.6
180	6.7	12	44	241	1552	99	12	109	254	1.6	3.9	0.4
181	6.8	14	89	350	1988	129	14	117	172	1.5	6.7	0.5
182	6.1	15	74	238	2028	129	19	145	184	1.6	7.7	0.6
198	6.1	13	63	245	1602	115	17	127	259	1.4	5.3	0.6
199	6.0	12	45	192	1360	101	17	124	277	1.4	4.4	0.4
200	5.8	13	54	185	1334	142	17	106	356	1.4	6.7	0.4
201	5.3	15	72	590	1311	151	21	140	285	1.5	9	0.5
215	5.2	11	59	151	828	81	14	205	90	0.9	3.3	0.4
216	6.0	12	55	207	1395	93	14	147	80	1	4.2	0.6
217	5.6	10	70	212	870	105	13	149	138	1.1	5.2	0.5

Field point	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
218	6.1	14	85	279	1646	157	15	152	169	1.3	7.4	0.6
219	5.8	18	96	351	2035	178	22	160	146	1.3	9.3	0.7
221	5.5	9	31	176	724	77	10	108	148	1.2	2.5	0.4
231	6.0	12	93	224	1255	148	16	137	269	1.7	7	0.5
232	5.8	12	83	223	1148	96	10	143	190	1.5	4.5	0.5
233	5.7	16	274	165	1927	146	20	250	101	12.3	28.6	0.7
234	6.0	8	31	173	715	76	10	109	147	1.2	2.6	0.4
235	6.4	9	77	206	1037	88	8	135	186	1.4	3.9	0.4
236	6.3	16	130	413	2061	176	16	115	273	1.9	9.7	0.6
237	5.8	16	87	418	1736	202	18	131	170	1.6	8.2	0.6
240	5.5	11	109	177	986	177	14	149	155	1.5	10.2	0.5
241	6.2	9	33	104	1075	91	8	90	226	1.1	5	0.5
250	6.9	13	49	161	1924	81	14	104	234	1.4	4.1	0.7
251	5.1	10	28	98	748	77	14	102	390	1.1	2.8	0.4
252	5.6	12	115	348	1064	181	23	132	297	1.5	7	0.6
253	6.0	15	126	334	1904	155	22	115	340	1.6	9.6	0.7
254	5.6	14	90	283	1461	159	23	153	304	1.6	8.3	0.6
255	5.4	21	66	378	2463	228	24	104	136	1.5	8.1	0.6
259	5.4	12	51	110	1140	67	14	101	168	0.9	3.1	0.4

Field point	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
269	5.3	10	29	69	975	82	17	115	372	1.2	2.8	0.5
270	5.4	9	33	60	739	56	17	121	374	1.2	3.2	0.4
271	5.3	12	49	173	1124	78	19	105	383	1.2	2.7	0.5
Mean	6.04	16	228	2106	125	73	21	118	213	1	8.8	0.5
Median	6.00	13	206	1461	115	66	21	118	201	1	7.2	0.5
Minimum	5.10	8	60	715	56	17	10	30	48	1	1.7	0.2
Maximum	7.50	49	590	9104	228	274	31	219	355	2	27.7	1.1
Standard deviation	0.63	10	108	2021	44	45	5	39	72	0	5.1	0.2
Coefficient of variation, %	8	60	47	96	35	62	24	33	34	31	58	35
Count	39											

Table 28. Soil analyses of 0 to 4 inch samples collected from the slurry application zone of Field 1, collected March 2018.

Field point	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
		cmolc/kg	mg/kg									
126	7.7	50	31	220	9224	112	14	30	165	1.3	4.1	1.0
142	7.8	61	43	104	11512	97	10	33	48	1.1	7.9	0.4
143	6.8	17	145	291	2552	111	21	189	117	1.3	6.4	0.6
144	7.6	37	63	144	6629	113	17	48	170	1.6	6.5	0.7
145	6.6	21	173	295	3091	240	23	118	175	2.1	17.4	1.1
162	6.6	13	127	252	1631	188	22	143	222	1.3	10.4	0.5
163	6.8	13	164	325	1600	200	27	159	191	1.2	13.1	0.5
180	7.3	19	56	233	3021	104	19	82	270	0.9	3.5	0.4
181	7.6	22	130	260	3646	154	19	91	196	1.2	8.2	0.5
182	6.4	16	131	277	1972	178	25	135	228	1.3	12.2	0.7
198	7.8	22	128	486	3584	128	25	106	296	1.1	6.2	0.8
199	6.6	15	96	396	1902	140	26	130	314	0.9	6.0	0.5
200	6.6	15	104	247	1929	191	17	103	343	1.2	10.5	0.5
201	6.2	14	64	243	1698	117	18	117	209	1.1	6.7	0.5
215	6.0	9	84	232	822	100	18	193	140	0.5	3.2	0.4
216	6.3	13	128	418	1499	189	27	219	125	0.9	7.0	0.6
217	6.2	10	104	396	970	162	23	154	225	0.9	7.2	0.5

Field point	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
218	6.3	14	147	528	1593	236	24	135	205	1.3	11.8	0.6
219	6.6	15	189	557	1622	232	30	150	199	1.1	11.7	0.7
221	6.0	14	247	325	1521	258	23	166	137	1.5	27.7	0.6
231	6.7	13	135	330	1599	187	21	133	83	0.9	7.7	0.6
232	6.1	11	92	313	1147	147	19	127	160	0.8	5.7	0.5
233	6.2	9	76	258	933	107	16	109	153	0.7	3.9	0.4
234	6.5	11	114	398	1212	157	19	128	194	0.9	6.5	0.6
235	6.5	12	136	338	1388	170	17	135	228	1.8	10.0	0.5
236	6.5	16	196	660	1788	272	31	108	355	1.9	15.7	0.6
237	6.3	15	178	451	1660	242	27	129	179	1.9	15.0	0.5
240	5.8	14	186	402	1308	256	29	137	192	1.7	14.9	0.5
241	6.4	13	94	235	1568	161	20	100	201	1.2	5.7	0.5
250	6.3	10	81	214	1144	113	17	98	216	1.5	6.1	0.4
251	6.4	8	91	179	877	128	20	89	340	1.6	6.2	0.3
252	6.2	9	120	447	851	176	24	108	310	1.6	8.1	0.4
253	6.4	12	152	392	1169	194	21	119	318	1.8	10.4	0.5
254	6.5	12	128	556	1237	208	25	134	261	1.6	10.3	0.5
255	6.1	18	141	442	2259	270	26	101	163	1.7	15.0	0.5
259	6.3	12	87	218	1429	149	17	107	200	0.9	6.2	0.3

Field point	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
269	6.1	8	39	123	741	83	17	83	304	0.9	3.1	0.2
270	5.9	6	41	105	522	62	15	96	225	0.7	1.7	0.2
271	6.8	9	27	102	1135	59	10	68	232	1.0	2.0	0.2
Mean	6.56	16.1	115	318	2205	164	21	118	213	1	8.8	0.5
Median	6.40	13.5	120	295	1593	161	21	118	201	1	7.2	0.5
Minimum	5.80	6.5	27	102	522	59	10	30	48	1	1.7	0.2
Maximum	7.80	60.7	247	660	11512	272	31	219	355	2	27.7	1.1
Standard deviation	0.53	10.7	50	135	2220	58	5	39	72	0	5.1	0.2
Coefficient of variation, %	8	66	44	43	101	36	24	33	34	31	58	35
Count	39											

Table 29. Soil analyses of 0 to 4 inch samples collected from the buffer zone of Field 1, collected 2014.

Field point	pH	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
		mg/kg									
274	6.4	56	373	4822	230	19	40	308	0.9	3.8	0.7
275	6.3	28	66	1665	89	15	94	231	0.6	2.7	0.3
276	6.2	46	51	1510	74	18	95	222	0.4	3.6	0.2
278	6.6	32	88	2359	86	19	79	486	0.5	3.3	0.3
287	5.9	65	63	1231	72	17	144	137	0.4	2.5	0.3
288	6.2	55	78	1620	101	18	129	235	0.5	2.9	0.5
289	5.6	36	62	1337	79	15	96	164	0.2	2	0.2
291	6.1	40	161	1284	149	20	130	361	0.6	4.1	0.4
292	7.0	42	109	2258	95	17	80	462	1	6.4	0.4
293	7.0	45	224	3777	166	17	45	339	0.9	5.5	0.5
294	6.7	40	136	2241	117	19	86	330	0.6	6.2	0.4
295	6.9	36	248	2385	134	23	92	363	0.6	4.7	0.5
296	5.3	49	48	736	63	18	169	309	0.4	3.1	0.2
297	6.8	30	83	2047	59	14	79	269	0.3	3.3	0.3
309	5.4	66	71	848	107	16	115	131	0.4	3.9	0.3
310	5.4	72	73	605	92	20	128	326	0.4	4.1	0.2
311	5.8	88	101	1181	96	21	124	346	0.5	3.2	0.3

Field point	pH	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
312	6.2	37	86	1835	126	19	83	511	0.8	4.3	0.3
313	7.5	70	83	4550	127	18	50	311	0.9	6.1	0.5
314	6.4	51	72	1430	99	17	79	311	0.6	3.3	0.3
Mean	6.20	52	128	1803	106	18	101	269	0.6	3.9	0.3
Median	6.25	52	91	1551	100	18	95	294	0.6	3.7	0.3
Minimum	4.4	28	44	456	44	13	40	31	0.2	1.8	0.2
Maximum	7.5	102	473	4822	230	23	188	511	1.0	7.5	0.7
Standard deviation	0.70	17	96	1052	40	2	35	123	0.2	1.4	0.1
Coefficient of variation, %	11	32	75	58	38	12	35	46	42	36	39
Count	32										

Table 30. Soil analyses of 0 to 4 inch samples collected from the buffer zone of Field 1, collected February 2016.

Lab number	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
		cmolc/kg	mg/kg									
212	5.2	9	43	77	494	53	11	195	66	1	2	0.2
213	5.7	9	21	60	896	60	8	117	25	0.8	1.4	0.2
214	5.2	10	45	106	776	72	12	166	58	1	2.5	0.3
238	6.3	14	56	154	1769	108	13	98	198	1.4	6.2	0.5
249	5.1	10	38	123	695	91	12	103	65	0.9	3.1	0.3
256	5.7	17	103	382	1799	183	19	167	113	1.7	8.2	0.7
257	5.4	14	67	124	1293	178	17	110	228	1.5	7.8	0.6
258	6.0	14	16	85	1960	68	13	84	247	1.2	2.5	0.6
260	6.3	22	19	65	3467	59	12	75	164	0.9	2.7	0.4
268	5.0	9	44	69	568	40	16	143	75	0.8	2	0.3
272	5.8	13	58	318	1361	133	19	120	442	1.5	5.8	0.7
273	6.3	16	74	224	2235	126	18	103	295	1.5	6.5	0.7
274	6.0	24	84	409	3299	226	18	80	215	1.4	6	0.7
275	6.2	13	40	239	1643	108	16	128	201	1.1	4.1	0.6
276	5.5	12	31	119	1102	86	14	155	193	0.9	3.2	0.4
278	5.8	16	19	101	1956	83	15	87	364	1	3.3	0.5
287	4.9	10	36	43	656	34	11	115	70	0.5	1.4	0.3

Lab number	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
288	5.6	9	27	40	1005	37	14	118	215	0.8	2.1	0.4
289	4.9	10	20	54	649	65	14	108	131	0.6	1.5	0.3
291	5.8	10	17	148	900	90	12	104	283	0.8	1.8	0.4
292	5.7	13	40	120	1555	93	18	106	290	1.2	3.6	0.4
293	6.1	18	25	146	2516	123	16	69	280	1.8	4.5	0.6
294	5.8	15	26	113	1832	97	18	77	222	0.9	2.2	0.3
295	5.9	12	26	69	1478	65	17	103	232	1	3.3	0.3
296	5.3	10	24	38	950	47	17	132	277	0.8	2.5	0.2
297	6.0	16	22	93	2273	54	17	74	234	0.9	2.6	0.4
309	4.9	9	25	43	528	47	13	115	94	0.6	1.5	0.2
310	4.9	10	25	42	590	56	15	115	225	0.8	2	0.3
311	5.6	12	55	142	1206	123	20	109	191	1	3.3	0.4
312	5.5	14	27	71	1490	85	19	86	349	1.5	3.1	0.3
313	6.5	26	22	181	4371	115	18	49	224	1.3	2.6	0.5
314	5.4	14	28	81	1547	98	19	90	291	1.2	4.2	0.3
Mean	5.63	13	38	127	1527	91	15	109	205	1.1	3.4	0.4
Median	5.70	13	28	104	1420	86	16	107	219	1.0	2.9	0.4
Minimum	4.90	9	16	38	494	34	8	49	25	0.5	1.4	0.2
Maximum	6.50	26	103	409	4371	226	20	195	442	1.8	8.2	0.7

Lab number	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
Standard deviation	0.46	4	21	95	917	45	3	31	99	0.3	1.8	0.2
Coefficient of variation, %	8	32	56	74	60	49	20	29	48	30.7	54.0	38.7
Count	32											

Table 31. Soil analyses of 0 to 4 inch samples collected from the buffer zone of Field 1, collected March 2018.

Field point	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
		cmolc/kg	mg/kg									
212	5.3	10	71	141	948	70	16	154	91	0.5	2.3	0.3
213	6.1	11	60	199	1204	88	14	91	54	0.5	2.1	0.2
214	6.2	9	79	196	1000	108	15	126	112	0.6	3.7	0.3
238	6.2	15	233	289	1670	275	21	122	171	2.4	23.2	0.4
249	5.9	10	86	123	1042	131	18	107	117	1.1	4.6	0.2
256	6.3	13	120	457	1462	184	24	146	134	1.4	10.7	0.4
257	5.9	12	121	315	1141	198	23	115	266	1.5	15.4	0.3
258	6.1	11	52	154	1310	87	15	91	196	0.9	3.5	0.3
260	7.1	21	40	135	3487	128	20	49	309	1.3	6.6	0.7
268	5.7	8	57	89	696	79	16	120	170	1.1	3.2	0.2
272	6.8	12	105	297	1435	192	18	97	322	1.4	8.7	0.5
273	6.9	14	98	211	1976	156	17	80	280	1.5	8.3	0.5
274	6.9	27	105	557	4198	271	27	62	206	1.3	8.7	0.6
275	6.3	12	52	330	1420	134	19	98	221	0.9	5.0	0.4
276	6.0	9	43	133	904	87	15	93	228	0.9	3.1	0.2
278	6.4	16	42	187	2182	126	20	64	355	1.1	4.9	0.4
287	5.9	7	55	52	668	41	13	97	94	0.5	1.3	0.1

Field point	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
288	6.2	9	47	53	1066	80	13	105	133	0.9	3.5	0.2
289	6.4	11	18	66	1494	68	11	63	150	0.7	1.5	0.2
291	6.4	8	30	160	910	85	15	92	332	1.0	2.2	0.2
292	6.5	11	42	242	1496	93	16	78	284	1.1	3.8	0.3
293	6.2	17	33	249	2236	136	19	63	281	2.0	4.4	0.4
294	6.5	13	38	169	1796	109	14	76	211	1.7	4.1	0.3
295	6.7	11	27	86	1599	61	14	77	218	1.5	2.3	0.2
296	5.7	8	36	72	640	53	15	122	253	1.6	2.5	0.1
297	6.3	14	29	112	1941	62	17	68	274	1.7	3.4	0.4
309	5.9	7	58	82	632	71	14	113	133	1.4	2.8	0.2
310	6.0	7	32	64	636	74	12	97	204	1.3	2.2	0.2
311	6.7	10	64	287	1124	169	17	101	174	1.5	4.1	0.4
312	6.4	12	31	179	1463	101	15	60	373	1.8	3.4	0.2
313	7.2	26	33	135	4477	116	12	35	209	1.8	3.4	0.4
314	6.0	11	38	112	1318	95	17	77	298	1.6	3.6	0.3
Mean	6.28	12	62	185	1549	117	17	92	214	1.3	5.1	0.3
Median	6.25	11	50	157	1369	98	16	93	210	1.3	3.6	0.3
Minimum	5.3	7	18	52	632	41	11	35	54	0.5	1.3	0.1
Maximum	7.2	27	233	557	4477	275	27	154	373	2.4	23.2	0.7

Field point	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
Standard deviation	0.43	5	42	117	937	58	4	27	83	0.5	4.5	0.1
Coefficient of variation, %	7	39	68	63	61	50	22	30	39	36.2	87.7	44.3
Count	32											

Table 32. Soil analyses of 0 to 4 inch samples collected from the slurry application zone of Field 5a, collected 2014.

Field point	pH	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
		mg/kg									
21	6.4	17	71	2413	92	10	111	197	2.2	3.5	0.6
22	5.6	35	56	1692	86	11	143	230	2.7	4.2	0.4
23	5.4	55	49	1028	81	12	197	212	0.9	2.9	0.4
24	5.9	40	40	1299	71	10	177	169	1.1	3.8	0.4
25	5.2	47	21.2	448	65.4	9	196	212	1.0	1.9	0.2
32	5.5	74	55	1040	69	11	230	210	1.1	2.9	0.1
33	5.6	61	61	987	57	11	180	198	1.4	1.8	0.1
34	6.4	29	65	1984	57	11	143	268	1.9	3.3	0.3
35	6.1	23	65	2257	66	12	123	186	1.9	3.7	0.3
46	5.4	50	63	840	93	14	192	275	1.4	2.6	0.1
47	5.5	86	70	877	76	14	207	341	2.0	4.4	0.2
48	5.3	59	50	922	65	13	188	215	0.9	2.0	0.1
49	6.2	19	42	2055	82	12	135	223	1.6	4.7	0.5
50	6.1	22	46	1776	81	12	130	224	1.4	5.1	0.4
59	5.2	33	44	565	63	15	151	247	1.1	1.5	0.1
60	5.0	51	57	584	69	17	170	232	0.9	1.2	0.1
61	5.1	55	176	795	70	13	176	285	2.0	3.3	0.2

Field point	pH	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
62	5.3	69	78	846	83	15	161	163	0.8	1.6	0.2
73	4.8	47	48	484	50	20	153	254	1.1	0.9	0.1
74	5.3	51	39	513	61	14	148	246	1.1	1.9	0.1
75	5.3	85	51	829	61	15	167	167	0.8	1.8	0.2
85	5.0	54	38	350	62	14	118	200	1.0	1.5	0.0
86	4.5	91	25	167	32	11	163	110	0.7	1.0	0.0
Mean	5.5	50	57	1076	69	13	163	220	1.3	2.7	0.2
Median	5.4	51	51	877	69	12	163	215	1.1	2.6	0.2
Minimum	4.5	17	21	167	32	9	111	110	0.7	0.9	0.0
Maximum	6.4	91	176	2413	93	20	230	341	2.7	5.1	0.6
Standard deviation	0.5	21	30	644	14	3	30	48	0.5	1.3	0.2
Coefficient of variation, %	9	43	52	60	20	20	19	22	40	47	74
Count	23										

Table 33. Soil analyses of 0 to 4 inch samples collected from the slurry application zone of Field 5a, collected February 2016.

Field point	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
		cmolc/kg	mg/kg									
21	5.9	15	16	73	2090	82	9	115	179	2.1	3.4	0.4
22	5.4	14	24	67	1570	87	11	132	151	2.2	3	0.3
23	5.5	12	37	58	1147	72	10	184	184	1.5	2.9	0.3
24	5.2	11	33	40	987	55	8	164	120	1	2.7	0.3
25	5.7	11	26	39	1212	74	8	159	154	1.1	2.8	0.3
32	4.7	9	75	58	525	58	20	112	220	0.7	2.1	0.2
33	5.9	17	29	88	2492	78	14	105	123	1.9	4.4	0.6
34	5.2	11	30	67	980	87	13	147	149	1.3	1.7	0.3
35	5.3	12	65	79	1161	83	12	187	189	1.9	2.8	0.3
36	5.2	13	51	75	1130	85	11	196	140	1.3	2.4	0.3
37	5.7	12	28	39	1287	73	9	143	145	1.2	3.4	0.4
38	6.3	15	25	52	2198	81	11	142	172	1.5	4.1	0.7
46	6.3	21	34	150	3177	95	14	117	141	2.2	5.7	0.8
47	5.1	10	47	76	778	85	12	174	202	1.5	2.6	0.3
48	5.4	10	43	57	874	62	9	183	173	1	2.5	0.3
49	5.1	11	79	96	945	80	11	186	236	2.4	4.2	0.3
50	5.8	15	21	55	1834	79	10	143	158	1.5	4.1	0.5

Field point	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
51	5.7	16	23	51	1953	91	9	138	182	1.5	4	0.6
59	5.5	10	46	62	854	74	11	172	240	2	3.6	0.3
60	5.0	11	58	80	841	89	12	165	113	0.7	1.7	0.2
61	5.1	9	33	45	506	71	14	165	210	1.1	2.3	0.2
62	5.2	10	49	78	756	93	18	178	270	1.7	2.2	0.3
72	5.1	9	45	47	468	67	14	171	212	1.4	2.8	0.2
73	5.0	10	47	84	622	88	16	171	209	1.7	2.6	0.3
74	4.9	10	41	64	626	67	15	170	240	2.3	2.5	0.3
75	5.2	11	39	73	905	83	13	136	82	1.5	1.8	0.4
85	4.7	8	77	40	341	48	16	207	134	1.3	2.1	0.3
86	5.9	11	46	61	1288	110	15	140	181	1.9	3	0.4
Mean	5.4	12	42	66	1198	78	12	157	175	1.6	3.0	0.4
Median	5.3	11	40	63	984	81	12	165	176	1.5	2.8	0.3
Minimum	4.7	8	16	39	341	48	8	105	82	0.7	1.7	0.2
Maximum	6.3	21	79	150	3177	110	20	207	270	2.4	5.7	0.8
Standard deviation	0.4	2.9	17	23	676	13	3	27	44	0.5	0.9	0.1
Coefficient of variation, %	8	24	41	34	56	17	25	17	25	30	31	42
Count	28											

Table 34. Soil analyses of 0 to 4 inch samples collected from the slurry application zone of Field 5a, collected March 2018.

Field point	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
		cmolc/kg	---------- mg/kg ----------									
21	6.9	17	25	92	2630	70	13	105	206	2.8	4.0	0.5
22	5.9	13	44	58	1628	91	12	121	230	3.1	4.8	0.2
23	5.6	10	35	47	1071	69	10	148	157	1.9	4.2	0.2
24	6.0	10	31	37	1119	67	7	139	143	1.7	3.5	0.2
25	6.0	11	31	41	1250	84	8	141	163	1.8	3.8	0.3
32	6.6	16	26	70	2395	68	11	95	143	3.0	4.8	0.5
33	5.5	9	78	53	737	61	18	94	182	2.2	2.8	0.1
34	6.6	12	31	62	1664	60	10	111	197	2.7	3.6	0.3
35	5.6	9	59	69	919	77	10	153	192	2.6	2.8	0.2
36	5.6	9	55	46	898	62	9	162	156	2.1	3.4	0.2
37	6.0	11	24	35	1409	65	8	125	153	2.2	3.7	0.3
38	6.3	13	27	43	1789	71	10	124	167	2.3	4.4	0.4
46	6.9	19	44	125	3041	81	13	107	120	3.3	5.9	0.7
47	5.6	9	50	84	724	82	12	156	186	2.6	3.2	0.2
48	5.7	9	64	66	907	74	11	157	206	3.2	4.6	0.2
49	5.8	11	77	68	1216	70	10	176	132	2.4	3.7	0.2
50	6.1	14	20	51	1980	87	10	124	193	2.1	4.0	0.4

Field point	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
51	6.2	11	25	41	1505	72	8	121	169	1.9	4.1	0.3
59	5.3	8	34	52	619	77	13	144	178	1.7	2.5	0.1
60	5.3	9	38	62	628	81	13	137	170	1.6	2.0	0.1
61	5.8	9	51	60	919	80	11	147	193	2.6	3.9	0.2
62	5.4	10	56	79	859	87	14	142	128	1.5	2.6	0.1
72	5.4	8	55	42	524	70	13	148	192	1.7	2.9	0.1
73	5.5	9	65	70	697	87	17	131	219	1.9	3.0	0.1
74	5.5	8	43	55	621	74	13	128	210	2.4	2.9	0.2
75	5.3	10	49	92	904	85	12	128	72	1.5	1.9	0.1
85	5.2	8	62	33	421	52	12	165	96	1.8	2.4	0.1
86	5.5	8	58	46	531	67	14	128	179	2.1	2.7	0.1
Mean	5.83	11	45	60	1200	74	12	134	169	2.2	3.5	0.2
Median	5.65	10	44	57	919	73	12	134	174	2.2	3.6	0.2
Minimum	5.20	8	20	33	421	52	7	94	72	1.5	1.9	0.1
Maximum	6.90	19	78	125	3041	91	18	176	230	3.3	5.9	0.7
Standard deviation	0.48	2.8	16	21	670	10	3	21	37	0.5	0.9	0.1
Coefficient of variation, %	8	26	37	35	56	13	22	15	22	24	27	63
Count	28											

Table 35. Soil analyses of 0 to 4 inch samples collected from the buffer zone of Field 5a, collected 2014.

Field point	pH	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
		mg/kg									
19	6.6	34	98	3168	108	16	116	138	2.0	7.3	0.9
20	7.0	36	115	3404	96	15	154	214	2.5	6.9	1.0
30	6.3	27	49	2031	85	11	147	211	1.4	4.0	0.6
31	6.0	26	44	1762	72	11	161	188	1.2	3.6	0.3
45	6.6	32	103	2914	95	15	123	227	2.1	5.4	0.6
87	6.4	18	60	2016	57	9	96	150	1.6	2.8	0.3
98	4.6	51	25	359	42	14	155	168	0.8	1.2	0.0
99	4.8	64	29	315	49	12	138	129	0.6	1.1	0.0
100	6.4	20	81	2022	53	11	104	157	1.5	3.4	0.4
111	5.0	23	46	644	53	13	118	128	0.4	0.7	0.0
Mean	6.0	33	65	1864	71	13	131	171	1.4	3.6	0.4
Median	6.4	30	55	2019	65	13	131	163	1.4	3.5	0.4
Minimum	4.6	18	25	315	42	9	96	128	0.4	0.7	0.0
Maximum	7.0	64	115	3404	108	16	161	227	2.5	7.3	1.0
Standard deviation	0.9	14	32	1126	23	2	23	37	0.7	2.3	0.4
Coefficient of variation, %	14	44	49	60	33	18	17	22	48	64	89

Field point	pH	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
Count	10										

Table 36. Soil analyses of 0 to 4 inch samples collected from the buffer zone of Field 5a, collected February 2016.

Lab number	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
		cmolc/kg	---------- mg/kg ----------									
16	4.6	8	49	38	260	28	26	114	237	0.5	1.3	0.2
17	4.4	14	12	77	905	150	12	55	37	0.3	0.4	0.1
19	5.9	19	10	95	2810	42	9	104	114	2.1	3.6	0.6
20	6.7	19	20	94	3068	66	12	135	174	2.5	4.9	0.8
30	5.0	11	50	95	830	99	14	86	181	0.6	2.9	0.3
31	4.6	9	84	36	441	30	23	107	264	0.6	1.6	0.2
45	4.5	9	61	50	377	37	23	112	259	0.7	1.7	0.2
58	5.7	22	21	103	3059	70	18	146	158	2.5	5.2	0.8
71	6.0	13	24	73	1785	50	11	142	142	1.5	2.4	0.5
84	6.7	19	19	87	3128	56	12	121	145	2	3.5	0.7
87	5.2	10	44	84	609	86	14	138	110	1.2	2.4	0.3
98	4.7	8	40	38	358	34	15	173	152	1.6	1.6	0.3
99	4.9	9	39	48	457	57	14	165	189	1.8	1.9	0.3
100	5.1	12	35	100	987	93	12	202	134	1.6	2	0.3
111	6.1	13	12	67	1719	27	7	131	177	2.4	2.3	0.4
112	4.9	13	30	73	1027	87	16	187	128	1.6	2.1	0.3
Mean	5.3	13	34	72	1364	63	15	132	163	1.5	2.5	0.4

Lab number	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
Median	5.1	13	33	75	946	57	14	133	155	1.6	2.2	0.3
Minimum	4.4	8	10	36	260	27	7	55	37	0.3	0.4	0.1
Maximum	6.7	22	84	103	3128	150	26	202	264	2.5	5.2	0.8
Standard deviation	0.8	4	20	24	1080	33	5	38	58	0.7	1.3	0.2
Coefficient of variation, %	14	35	59	33	79	53	35	28	36	51	51	56
Count	16											

Table 37. Soil analyses of 0 to 4 inch samples collected from the buffer zone of Field 5a, collected March 2018.

Field point	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
		cmolc/kg	mg/kg									
16	4.9	9	66	48	408	52	21	87	187	1.1	1.7	0.1
17	5.0	10	65	62	640	88	22	95	197	0.9	1.6	0.1
19	6.8	19	29	79	3096	74	14	81	107	2.4	5.9	0.7
20	6.9	20	28	89	3307	68	14	113	153	3.0	5.9	0.8
30	5.2	9	150	64	587	54	28	127	286	2.0	3.0	0.1
31	6.3	11	46	92	1376	138	16	78	231	1.4	3.0	0.4
45	5.2	9	101	75	572	64	24	111	276	2.2	3.2	0.1
58	6.5	18	35	77	2854	69	17	96	130	2.7	5.6	0.7
71	7.0	17	31	85	2903	63	13	104	120	2.1	3.1	0.5
84	7.2	23	20	63	4139	49	11	96	103	2.5	3.9	0.5
87	5.3	8	40	60	595	77	13	129	131	1.7	1.9	0.1
98	5.2	8	33	31	468	37	13	146	137	1.6	1.5	0.1
99	5.3	7	78	32	432	55	13	148	118	2.1	2.9	0.1
100	5.6	10	39	96	1030	87	13	168	122	1.8	2.4	0.1
111	6.6	13	26	62	1906	48	11	113	145	2.6	3.1	0.4
112	5.3	11	28	79	1099	83	16	166	141	1.7	2.3	0.2
Mean	5.9	13	51	68	1588	69	16	116	162	2.0	3.2	0.3

Field point	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
Median	5.5	11	37	70	1065	66	16	116	162	2.0	3.2	0.3
Minimum	4.9	7	20	31	408	37	14	112	139	2.1	3.0	0.2
Maximum	7.2	23	150	96	4139	138	11	78	103	0.9	1.5	0.1
Standard deviation	0.8	5	34	19	1256	24	28	168	286	3.0	5.9	0.8
Coefficient of variation, %	14	40	68	29	79	34	5	29	58	0.6	1.5	0.3
Count												

Table 38. Soil analyses of 0 to 4 inch samples collected from the slurry application zone of Field 12, collected 2014.

Field point	pH	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
		mg/kg									
17	5.7	117	117	721	72	15	146	187	0.8	2.1	0.1
18	5.9	147	223	726	93	17	145	231	0.8	2.7	0.2
19	5.7	126	174	608	94	14	154	197	0.8	2.6	0.1
20	5.7	101	96	1169	101	17	151	177	1.3	2.7	0.2
21	5.8	61	61	1367	82	14	153	168	1.2	2.4	0.2
25	5.5	60	57	788	62	17	107	218	0.8	1.3	0.1
26	5.6	128	202	690	80	17	151	172	1.0	2.6	0.1
27	5.8	109	69	956	75	16	143	159	0.9	2.1	0.3
28	5.8	45	54	1441	87	14	117	170	1.2	1.8	0.2
29	5.6	39	60	993	73	12	151	193	1.0	2.1	0.1
33	5.3	53	29	743	43	10	167	131	0.7	2.2	0.0
34	6.1	43	76	1530	83	12	134	184	1.4	3.3	0.2
35	6.0	37	81	1207	90	13	102	143	1.0	1.9	0.1
37	5.8	63	62	1039	65	18	118	190	1.6	2.1	0.1
41	5.9	43	50	1318	49	15	101	185	1.5	1.4	0.2
42	6.0	30	70	1781	105	15	102	98	1.6	5.7	0.2
43	6.2	29	67	1767	83	14	108	173	1.5	1.5	0.3

Field point	pH	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
44	5.6	73	88	1048	86	15	136	154	1.1	2.2	0.1
45	5.8	30	47	1143	81	11	113	149	1.1	2.8	0.2
46	5.8	47	212	820	52	13	133	121	0.7	2.0	0.2
49	6.1	24	59	1953	84	13	83	64	1.5	1.5	0.3
50	5.9	19	54	1758	77	12	87	84	1.6	1.1	0.2
51	6.3	17	56	1908	85	10	87	96	1.6	1.8	0.2
52	6.3	30	43	1537	55	10	100	109	1.5	1.4	0.1
53	6.1	33	54	1416	56	10	102	110	1.5	1.8	0.1
54	6.1	32	43	970	57	8	115	106	1.2	1.5	0.1
57	6.0	26	53	1120	38	8	108	102	1.7	1.5	0.1
58	6.0	36	58	1338	63	10	101	78	1.3	1.3	0.1
59	5.9	39	40	853	56	9	116	103	1.1	1.5	0.1
60	6.0	52	98	1357	106	12	107	88	1.7	1.6	0.2
61	6.0	34	72	1453	85	13	118	122	1.3	1.7	0.2
Mean	5.9	56	81	1210	75	13	121	144	1.2	2.1	0.2
Median	5.9	43	61	1169	80	13	116	149	1.2	1.9	0.2
Minimum	5.3	17	29	608	38	8	83	64	0.7	1.1	0.0
Maximum	6.3	147	223	1953	106	18	167	231	1.7	5.7	0.3
Standard deviation	0.2	36	51	384	18	3	23	45	0.3	0.9	0.1

Field point	pH	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
Coefficient of variation, %	4	64	63	32	24	22	19	31	26	41	46
Count	31										

Table 39. Soil analyses of 0 to 4 inch samples collected from the slurry application zone of Field 12, collected February 2016.

Field point	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
		cmolc/kg	---------- mg/kg ----------									
11	5.4	10	178	146	795	92	15	196	256	1.7	4.1	0.4
12	5.2	10	172	119	766	78	13	206	216	1.4	3.5	0.4
17	5.2	11	193	189	864	113	17	215	251	1.6	6.3	0.4
18	5.1	11	167	185	751	108	16	192	247	1.4	4.8	0.3
19	5.2	11	168	159	883	117	16	206	222	1.6	5.9	0.4
20	5.5	12	73	82	1176	86	13	162	156	1.7	3.2	0.4
21	5.6	12	49	70	1307	104	11	157	156	1.5	3.0	0.4
25	5.3	9	115	115	661	88	15	149	193	1.3	4.1	0.3
26	4.9	12	186	276	739	103	19	185	215	1.5	5.2	0.4
27	5.7	12	112	101	1297	115	16	172	200	1.9	4.7	0.4
28	5.3	14	123	75	1316	154	16	227	216	2.0	7.2	0.5
29	5.6	14	101	95	1568	162	17	204	175	1.8	5.8	0.5
33	5.1	11	138	147	772	99	22	147	174	1.2	5.3	0.3
34	5.2	15	103	98	1408	128	23	175	169	2.1	4.5	0.5
35	6.0	13	76	121	1575	135	19	163	159	1.4	4.2	0.5
36	5.5	14	97	107	1333	126	18	197	232	1.7	6.5	0.5
37	5.5	14	57	109	1479	115	19	161	195	1.6	3.9	0.5

Field point	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
41	5.1	17	123	117	1752	165	23	195	138	2.1	6.7	0.5
42	5.5	13	91	102	1225	109	22	153	227	1.8	5.2	0.4
43	5.3	17	59	91	1848	139	20	170	109	2.0	4.3	0.5
44	5.7	13	79	122	1393	122	22	187	201	1.8	5.1	0.5
45	5.6	12	65	164	1135	111	15	183	187	1.4	4.0	0.4
49	5.8	17	65	95	2178	139	15	133	90	2.1	5.3	0.7
50	5.4	16	72	85	1697	141	15	143	110	2.3	5.1	0.6
51	5.9	16	65	109	2099	151	14	157	137	2.5	5.2	0.6
52	5.4	14	76	94	1389	101	15	187	162	2.2	4.3	0.5
53	5.3	14	77	110	1493	121	16	192	178	2.4	5.0	0.6
54	5.5	11	117	79	941	124	13	234	202	1.8	7.5	0.6
57	6.0	17	63	107	2593	75	18	136	141	2.3	6.0	1.0
58	5.3	17	146	245	1791	178	19	178	88	2.3	7.0	0.4
59	5.4	17	117	207	1737	162	15	166	94	1.8	5.1	0.5
60	5.6	15	65	123	1632	142	14	161	113	1.8	3.8	0.4
61	5.3	15	151	315	1326	185	18	165	144	1.6	6.9	0.5
62	5.6	13	82	110	1464	128	13	159	143	1.6	5.0	0.4
Mean	5.4	14	107	131	1364	124	17	177	173	1.8	5.1	0.5
Median	5.4	14	99	110	1361	122	16	174	175	1.8	5.1	0.5

Field point	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
Minimum	4.9	9	49	70	661	75	11	133	88	1.2	3.0	0.3
Maximum	6.0	17	193	315	2593	185	23	234	256	2.5	7.5	1.0
Standard deviation	0.3	2	43	57	454	28	3	25	47	0.3	1.2	0.1
Coefficient of variation, %	5	17	40	44	33	22	19	14	27	19	23	27
Count	34											

Table 40. Soil analyses of 0 to 4 inch samples collected from the slurry application zone of Field 12, collected March 2018.

Field point	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
		cmolc/kg	---------- mg/kg ----------									
11	6.1	9	230	124	893	118	13	180	193	1.8	6.6	0.4
12	6.2	8	198	304	850	105	13	175	140	1.7	5.3	0.4
17	6.2	8	180	204	836	105	13	160	187	1.5	6.0	0.4
18	6.0	8	198	249	713	116	15	164	187	1.5	6.5	0.4
19	5.9	8	149	243	716	95	14	167	177	1.5	5.0	0.4
20	6.0	11	144	135	1212	146	13	165	131	2.1	6.4	0.4
21	6.2	11	91	96	1297	126	11	161	165	1.7	5.1	0.4
25	5.8	9	119	182	678	83	14	141	199	1.3	4.3	0.3
26	6.1	9	201	370	731	114	15	164	149	1.5	6.9	0.4
27	5.9	8	176	156	766	126	13	176	144	1.6	7.0	0.4
28	6.0	11	101	110	1226	148	13	163	165	1.5	5.4	0.4
29	6.1	11	108	122	1162	134	12	154	194	1.8	6.8	0.4
33	5.9	8	143	125	767	99	14	122	133	1.4	5.1	0.3
34	5.7	12	137	166	1130	132	17	144	166	2.0	6.5	0.4
35	5.8	14	150	165	1454	167	19	153	201	2.2	9.0	0.5
36	6.2	11	99	111	1344	141	14	162	195	1.7	5.6	0.5
37	6.1	12	100	111	1294	143	13	171	211	1.9	7.3	0.4

Field point	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
41	6.0	10	118	137	1027	114	14	126	194	2.0	7.1	0.4
42	5.6	14	77	164	1593	151	16	135	128	2.0	5.0	0.4
43	5.8	12	78	116	1268	126	14	133	170	1.8	4.4	0.4
44	6.1	12	76	117	1303	133	13	146	183	1.8	5.4	0.4
45	6.1	10	77	133	1073	122	13	149	179	1.5	5.3	0.4
49	5.9	15	90	94	1968	162	15	113	116	2.2	6.3	0.5
50	6.0	14	74	95	1723	147	14	121	143	2.1	5.2	0.4
51	5.8	15	78	113	1710	151	14	131	178	2.2	6.1	0.5
52	6.2	10	81	95	1195	104	12	136	159	2.6	5.0	0.4
53	5.9	11	120	100	1227	149	12	151	163	2.6	7.3	0.4
54	5.9	9	93	72	944	103	11	161	130	2.2	5.0	0.3
57	6.4	18	91	86	2674	82	15	97	140	2.8	7.8	0.7
58	5.9	14	124	231	1660	169	15	154	123	2.9	8.7	0.4
59	6.0	14	159	257	1585	172	15	142	110	2.4	6.1	0.4
60	6.1	13	119	162	1501	170	15	155	162	2.5	7.5	0.5
61	5.9	13	170	199	1369	186	15	141	126	2.4	8.2	0.4
62	6.1	11	119	73	1231	128	11	149	154	2.4	6.9	0.4
Mean	**6.0**	11	126	153	1239	131	14	149	162	2.0	6.2	0.4
Median	**6.0**	11	119	129	1227	130	14	152	164	2.0	6.2	0.4

Field point	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
Minimum	**5.6**	8	74	72	678	82	11	97	110	1.3	4.3	0.3
Maximum	**6.4**	18	230	370	2674	186	19	180	211	2.9	9.0	0.7
Standard deviation	**0.2**	2	43	69	419	26	2	19	28	0.4	1.2	0.1
Coefficient of variation, %	**3**	22	34	45	34	20	12	13	17	22	19	17
Count	34											

Table 41. Soil analyses of 0 to 4 inch samples collected from the buffer zone of Field 12, collected 2014.

Field point	pH	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
		mg/kg									
9	5.9	138	115	776	81	18	149	186	1.2	3.2	0.2
10	6.0	143	196	763	79	14	138	226	0.9	3.2	0.2
11	5.6	147	88	681	68	17	155	245	1.2	2.4	0.1
13	6.0	65	70	1621	98	13	128	181	1.4	3.7	0.3
22	5.3	71	56	734	67	13	261	157	0.7	2.5	0.1
30	5.6	53	212	873	69	12	155	165	0.7	2.6	0.1
38	5.8	52	45	828	49	15	92	119	0.9	3.0	0.1
47	5.9	42	76	1838	117	15	96	96	1.4	2.4	0.3
63	6.0	97	282	1723	148	16	139	69	1.5	2.6	0.3
Mean	5.8	90	127	1093	86	15	146	160	1.1	2.8	0.2
Median	5.9	71	88	828	79	15	139	165	1.2	2.6	0.2
Minimum	5.3	42	45	681	49	12	92	69	0.7	2.4	0.1
Maximum	6.0	147	282	1838	148	18	261	245	1.5	3.7	0.3
Standard deviation	0.2	43	83	482	30	2	49	58	0.3	0.5	0.1
Coefficient of variation, %	4	47	66	44	35	13	34	36	28	16	49
Count	9										

Table 42. Soil analyses of 0 to 4 inch samples collected from the buffer zone of Field 12, collected February 2016.

Lab number	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
		cmolc/kg	mg/kg									
8	5.4	11	148	353	961	129	15	214	254	1.5	7.4	0.7
9	5.5	11	190	183	981	112	18	211	244	1.6	5.3	0.5
10	5.3	10	160	183	912	96	16	175	238	1.6	4.8	0.4
13	5.8	16	97	129	1830	134	15	215	140	2.4	5.3	0.6
22	5.4	10	40	63	991	65	8	143	123	1.1	2.2	0.2
30	5.3	10	64	48	976	80	15	241	174	1.3	3.6	0.3
38	5.5	10	81	60	962	80	16	255	219	1.4	4.0	0.4
46	5.9	9	77	94	930	108	14	181	161	1.2	4.3	0.4
47	6.1	11	27	59	1378	107	9	163	164	1.3	3.8	0.5
55	5.8	12	55	59	1386	98	12	177	174	1.7	3.9	0.4
63	5.4	10	104	84	845	106	16	220	162	1.6	4.2	0.3
Mean	5.6	10.9	95	120	1105	101	14	200	187	1.5	4.4	0.4
Median	5.5	10.0	81	84	976	106	15	211	174	1.5	4.2	0.4
Minimum	5.3	9.0	27	48	845	65	8	143	123	1.1	2.2	0.2
Maximum	6.1	16.0	190	353	1830	134	18	255	254	2.4	7.4	0.7
Standard deviation	0.3	1.9	52	92	300	21	3	34	45	0.3	1.3	0.1

Lab number	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
Coefficient of variation, %	5	5	55	77	27	20	35	22	17	24	23	29
Count	11											

Table 43. Soil analyses of 0 to 4 inch samples collected from the buffer zone of Field 12, collected March 2018.

Field point	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
		cmolc/kg	---------- mg/kg ----------									
8	7.1	12.0	161	770	1332	158	24	165	283	1.6	10.7	0.6
9	6.2	8.7	192	194	950	107	14	164	190	1.5	6.1	0.4
10	6.2	9.4	256	238	986	151	15	172	204	1.8	9.2	0.4
13	6.3	14.7	125	126	1900	151	14	171	150	2.1	6.3	0.5
22	5.8	8.3	59	99	674	73	11	204	114	1.1	2.4	0.3
30	6.2	8.4	97	53	986	89	12	194	140	1.5	5.3	0.3
38	5.9	8.7	91	74	912	98	11	173	166	1.4	4.9	0.3
46	6.1	8.7	96	77	894	105	10	179	140	1.5	5.9	0.4
47	5.9	11.0	31	42	1351	72	10	134	198	1.9	3.5	0.4
55	5.9	11.5	52	50	1417	85	11	140	181	2.5	3.7	0.4
63	5.8	8.4	72	50	700	91	9	153	132	1.8	3.1	0.2
Mean	6.1	10.0	112	161	1100	107	13	168	173	1.7	5.6	0.4
Median	6.1	8.7	96	77	986	98	11	171	166	1.6	5.3	0.4
Minimum	5.8	8.3	31	42	674	72	9	134	114	1.1	2.4	0.2
Maximum	7.1	14.7	256	770	1900	158	24	204	283	2.5	10.7	0.6
Standard deviation	0.4	2.1	67	212	364	32	4	21	47	0.4	2.5	0.1

Field point	pH	CEC	P	K	Ca	Mg	S	Fe	Mn	Cu	Zn	B
Coefficient of variation, %	6	6	60	131	33	29		33	12	27	22	46
Count	11											