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**Table 1. Soil P sorption saturation and soil properties related to P sorption for 0 to 4 inch grid-soil samples from Field 1 for 2014.**

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation molarity with 0.5	P Saturation with 0.5	P Saturation
			mg/L				%			
Whole field										
126	0-4"	7.3	30	8465	35	511	9.9	5.0	11.0	5.5
142	0-4"	7.8	32	5672	61	563	9.4	4.7	10.3	5.1
143	0-4"	6.7	99	1821	232	640	22.9	11.5	22.7	11.4
144	0-4"	7.8	18	7643	44	471	6.4	3.2	7.0	3.5
145	0-4"	6.5	28	2741	76	582	7.9	3.9	8.5	4.3
162	0-4"	6.1	83	1415	159	601	21.3	10.7	21.8	10.9
163	0-4"	6.3	98	2478	172	764	20.2	10.1	20.9	10.5
180	0-4"	6.5	22	1298	118	566	6.2	3.1	6.4	3.2
181	0-4"	7	100	2229	134	811	19.9	9.9	21.2	10.6
182	0-4"	6.6	59	2007	101	563	16.8	8.4	17.8	8.9
198	0-4"	6.6	82	2022	149	725	17.9	9.0	18.8	9.4
199	0-4"	6.9	50	1667	121	628	12.7	6.3	13.4	6.7
200	0-4"	6.1	57	1613	101	589	15.6	7.8	16.5	8.3
201	0-4"	6	44	1700	94	567	12.5	6.3	13.3	6.7
212	0-4"	4.4	49	456	188	524	13.9	6.9	13.8	6.9
213	0-4"	6	52	1398	70	567	15.1	7.5	16.3	8.2
214	0-4"	5.3	102	1072	107	586	27.9	13.9	29.4	14.7
215	0-4"	5.5	93	922	200	561	24.6	12.3	24.4	12.2
216	0-4"	6.6	50	1598	127	660	12.1	6.0	12.7	6.4
217	0-4"	6.2	67	1290	148	612	17.1	8.5	17.6	8.8
218	0-4"	7	77	1310	128	635	19.3	9.6	20.2	10.1

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation molarity with 0.5	P Saturation with 0.5	P Saturation
219	0-4"	6.3	169	2073	128	597	44.7	22.3	46.6	23.3
221	0-4"	5.5	100	1357	141	617	25.4	12.7	26.4	13.2
231	0-4"	6.6	80	1454	117	603	21.1	10.6	22.2	11.1
232	0-4"	7	48	1898	78	588	13.4	6.7	14.4	7.2
233	0-4"	6.8	56	1503	110	576	15.5	7.8	16.3	8.2
234	0-4"	6.4	41	1200	116	568	11.4	5.7	12.0	6.0
235	0-4"	6.3	109	1502	170	587	28.4	14.2	28.8	14.4
236	0-4"	6.5	56	1442	105	577	15.5	7.8	16.4	8.2
237	0-4"	6.8	82	2051	124	563	22.9	11.5	23.9	11.9
238	0-4"	6.4	55	1730	95	579	15.3	7.7	16.3	8.2
240	0-4"	5.4	60	889	119	589	16.2	8.1	16.9	8.5
241	0-4"	6.3	71	1638	97	591	19.4	9.7	20.6	10.3
249	0-4"	6.3	66	1247	114	621	17.0	8.5	18.0	9.0
250	0-4"	7.5	39	2056	84	603	10.6	5.3	11.4	5.7
251	0-4"	5.8	35	675	115	611	9.1	4.6	9.6	4.8
252	0-4"	6.5	63	1149	118	614	16.4	8.2	17.2	8.6
253	0-4"	6.7	90	1649	111	564	25.4	12.7	26.7	13.3
254	0-4"	5.9	54	1275	153	620	13.6	6.8	14.0	7.0
255	0-4"	7.3	77	4064	52	566	22.7	11.3	24.9	12.5
256	0-4"	6.6	52	1591	109	576	14.4	7.2	15.2	7.6
257	0-4"	5.5	54	955	124	566	15.0	7.5	15.7	7.8
258	0-4"	6	30	1299	89	584	8.3	4.2	8.9	4.5
259	0-4"	5.7	81	941	110	579	22.3	11.2	23.5	11.8
260	0-4"	6.7	37	3098	64	574	10.7	5.3	11.6	5.8
268	0-4"	5.2	58	641	166	596	14.9	7.5	15.2	7.6
269	0-4"	5.5	44	801	96	607	11.7	5.9	12.5	6.3

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation molarity with 0.5	P Saturation with 0.5	P Saturation
270	0-4"	5.7	53	1046	89	613	14.1	7.0	15.1	7.5
271	0-4"	6.4	33	1230	86	600	9.0	4.5	9.6	4.8
272	0-4"	7	62	1767	90	580	17.3	8.7	18.5	9.3
273	0-4"	7.4	52	2717	70	567	15.1	7.5	16.3	8.2
274	0-4"	6.4	56	4822	40	599	15.8	7.9	17.5	8.8
275	0-4"	6.3	28	1665	94	580	7.8	3.9	8.3	4.2
276	0-4"	6.2	46	1510	95	575	12.9	6.5	13.7	6.9
278	0-4"	6.6	32	2359	79	567	9.2	4.6	9.9	5.0
287	0-4"	5.9	65	1231	144	603	16.8	8.4	17.4	8.7
288	0-4"	6.2	55	1620	129	604	14.4	7.2	15.0	7.5
289	0-4"	5.6	36	1337	96	610	9.6	4.8	10.2	5.1
291	0-4"	6.1	40	1284	130	605	10.4	5.2	10.9	5.4
292	0-4"	7	42	2258	80	628	11.0	5.5	11.9	5.9
293	0-4"	7	45	3777	45	600	12.6	6.3	14.0	7.0
294	0-4"	6.7	40	2241	86	597	10.9	5.5	11.7	5.9
295	0-4"	6.9	36	2385	92	589	9.9	5.0	10.6	5.3
296	0-4"	5.3	49	736	169	593	12.7	6.3	12.9	6.4
297	0-4"	6.8	30	2047	79	587	8.4	4.2	9.0	4.5
309	0-4"	5.4	66	848	115	601	17.5	8.8	18.4	9.2
310	0-4"	5.4	72	605	128	665	17.3	8.6	18.2	9.1
311	0-4"	5.8	88	1181	124	638	22.0	11.0	23.1	11.5
312	0-4"	6.2	37	1835	83	673	9.0	4.5	9.8	4.9
313	0-4"	7.5	70	4550	50	687	17.2	8.6	19.0	9.5
314	0-4"	6.4	51	1430	79	614	13.6	6.8	14.7	7.4
Mean, mg/kg		6.4	59	1936	109	600	15.6	7.8	16.4	8.2
Median, mg/kg		6.4	54	1591	109	593	15.0	7.5	15.7	7.8

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation molarity with 0.5	P Saturation with 0.5	P Saturation
Minimum, mg/kg		4.4	18	456	35	471	6.2	3.1	6.4	3.2
Maximum, mg/kg		7.8	169	8465	232	811	44.7	22.3	46.6	23.3
Standard deviation, mg/kg		0.7	25	1423	38	49	6.3	3.1	6.5	3.2
C.V., %		10.4	43	73	35	56	56	58	57	58
Count		71								
<b>Application zone</b>										
126	0-4"	7.3	30	8465	35	511	9.9	5.0	11.0	5.5
142	0-4"	7.8	32	5672	61	563	9.4	4.7	10.3	5.1
143	0-4"	6.7	99	1821	232	640	22.9	11.5	22.7	11.4
144	0-4"	7.8	18	7643	44	471	6.4	3.2	7.0	3.5
145	0-4"	6.5	28	2741	76	582	7.9	3.9	8.5	4.3
162	0-4"	6.1	83	1415	159	601	21.3	10.7	21.8	10.9
163	0-4"	6.3	98	2478	172	764	20.2	10.1	20.9	10.5
180	0-4"	6.5	22	1298	118	566	6.2	3.1	6.4	3.2
181	0-4"	7.0	100	2229	134	811	19.9	9.9	21.2	10.6
182	0-4"	6.6	59	2007	101	563	16.8	8.4	17.8	8.9
198	0-4"	6.6	82	2022	149	725	17.9	9.0	18.8	9.4
199	0-4"	6.9	50	1667	121	628	12.7	6.3	13.4	6.7
200	0-4"	6.1	57	1613	101	589	15.6	7.8	16.5	8.3
201	0-4"	6.0	44	1700	94	567	12.5	6.3	13.3	6.7
215	0-4"	5.5	93	922	200	561	24.6	12.3	24.4	12.2
216	0-4"	6.6	50	1598	127	660	12.1	6.0	12.7	6.4
217	0-4"	6.2	67	1290	148	612	17.1	8.5	17.6	8.8
218	0-4"	7.0	77	1310	128	635	19.3	9.6	20.2	10.1
219	0-4"	6.3	169	2073	128	597	44.7	22.3	46.6	23.3

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation molarity with 0.5	P Saturation with 0.5	P Saturation
221	0-4"	5.5	100	1357	141	617	25.4	12.7	26.4	13.2
231	0-4"	6.6	80	1454	117	603	21.1	10.6	22.2	11.1
232	0-4"	7.0	48	1898	78	588	13.4	6.7	14.4	7.2
233	0-4"	6.8	56	1503	110	576	15.5	7.8	16.3	8.2
234	0-4"	6.4	41	1200	116	568	11.4	5.7	12.0	6.0
235	0-4"	6.3	109	1502	170	587	28.4	14.2	28.8	14.4
236	0-4"	6.5	56	1442	105	577	15.5	7.8	16.4	8.2
237	0-4"	6.8	82	2051	124	563	22.9	11.5	23.9	11.9
240	0-4"	5.4	60	889	119	589	16.2	8.1	16.9	8.5
241	0-4"	6.3	71	1638	97	591	19.4	9.7	20.6	10.3
250	0-4"	7.5	39	2056	84	603	10.6	5.3	11.4	5.7
251	0-4"	5.8	35	675	115	611	9.1	4.6	9.6	4.8
252	0-4"	6.5	63	1149	118	614	16.4	8.2	17.2	8.6
253	0-4"	6.7	90	1649	111	564	25.4	12.7	26.7	13.3
254	0-4"	5.9	54	1275	153	620	13.6	6.8	14.0	7.0
255	0-4"	7.3	77	4064	52	566	22.7	11.3	24.9	12.5
259	0-4"	5.7	81	941	110	579	22.3	11.2	23.5	11.8
269	0-4"	5.5	44	801	96	607	11.7	5.9	12.5	6.3
270	0-4"	5.7	53	1046	89	613	14.1	7.0	15.1	7.5
271	0-4"	6.4	33	1230	86	600	9.0	4.5	9.6	4.8
Mean, mg/kg		6.5	65	2046	116	602	17.0	8.5	17.8	8.9
Median, mg/kg		6.5	59	1598	116	591	16.2	8.1	16.9	8.5
Minimum, mg/kg		5.4	18	675	35	471	6.2	3.1	6.4	3.2
Maximum, mg/kg		7.8	169	8465	232	811	44.7	22.3	46.6	23.3
Standard deviation, mg/kg		0.6	30	1673	40	59	7.3	3.7	7.5	3.8

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation molarity with 0.5	P Saturation with 0.5	P Saturation
C.V., %		9.4	46	82	34	9	10	12	11	13
Count		39								
<b>Buffer Zone</b>										
212	0-4"	4.4	49	456	188	524	13.9	6.9	13.8	6.9
213	0-4"	6.0	52	1398	70	567	15.1	7.5	16.3	8.2
214	0-4"	5.3	102	1072	107	586	27.9	13.9	29.4	14.7
238	0-4"	6.4	55	1730	95	579	15.3	7.7	16.3	8.2
249	0-4"	6.3	66	1247	114	621	17.0	8.5	18.0	9.0
256	0-4"	6.6	52	1591	109	576	14.4	7.2	15.2	7.6
257	0-4"	5.5	54	955	124	566	15.0	7.5	15.7	7.8
258	0-4"	6.0	30	1299	89	584	8.3	4.2	8.9	4.5
260	0-4"	6.7	37	3098	64	574	10.7	5.3	11.6	5.8
268	0-4"	5.2	58	641	166	596	14.9	7.5	15.2	7.6
272	0-4"	7.0	62	1767	90	580	17.3	8.7	18.5	9.3
273	0-4"	7.4	52	2717	70	567	15.1	7.5	16.3	8.2
274	0-4"	6.4	56	4822	40	599	15.8	7.9	17.5	8.8
275	0-4"	6.3	28	1665	94	580	7.8	3.9	8.3	4.2
276	0-4"	6.2	46	1510	95	575	12.9	6.5	13.7	6.9
278	0-4"	6.6	32	2359	79	567	9.2	4.6	9.9	5.0
287	0-4"	5.9	65	1231	144	603	16.8	8.4	17.4	8.7
288	0-4"	6.2	55	1620	129	604	14.4	7.2	15.0	7.5
289	0-4"	5.6	36	1337	96	610	9.6	4.8	10.2	5.1
291	0-4"	6.1	40	1284	130	605	10.4	5.2	10.9	5.4
292	0-4"	7.0	42	2258	80	628	11.0	5.5	11.9	5.9
293	0-4"	7.0	45	3777	45	600	12.6	6.3	14.0	7.0
294	0-4"	6.7	40	2241	86	597	10.9	5.5	11.7	5.9



Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation molarity with 0.5	P Saturation with 0.5	P Saturation
295	0-4"	6.9	36	2385	92	589	9.9	5.0	10.6	5.3
296	0-4"	5.3	49	736	169	593	12.7	6.3	12.9	6.4
297	0-4"	6.8	30	2047	79	587	8.4	4.2	9.0	4.5
309	0-4"	5.4	66	848	115	601	17.5	8.8	18.4	9.2
310	0-4"	5.4	72	605	128	665	17.3	8.6	18.2	9.1
311	0-4"	5.8	88	1181	124	638	22.0	11.0	23.1	11.5
312	0-4"	6.2	37	1835	83	673	9.0	4.5	9.8	4.9
313	0-4"	7.5	70	4550	50	687	17.2	8.6	19.0	9.5
314	0-4"	6.4	51	1430	79	614	13.6	6.8	14.7	7.4
Mean, mg/kg		6.2	52	1803	101	598	13.9	6.9	14.7	7.4
Median, mg/kg		6.3	52	1551	95	595	14.1	7.1	14.9	7.4
Minimum, mg/kg		4.4	28	456	40	524	7.8	3.9	8.3	4.2
Maximum, mg/kg		7.5	102	4822	188	687	27.9	13.9	29.4	14.7
Standard deviation, mg/kg		0.7	17	1052	35	33	4.3	2.1	4.5	2.2
C.V., %		11	32	58	35	9	10	12	11	13
Count			32							

**Table 2. Soil P sorption saturation and soil properties related to P sorption for 4 to 8 inch grid-soil samples from Field 1 for 2014.**

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation molarity with 0.5	P Saturation with 0.5	P Saturation
			mg/L				%			
<b>Whole field</b>										
180	4-8"	6.4	11	1002	108	685	2.6	1.3	2.8	1.4
199	4-8"	6.6	25	1024	104	705	5.8	2.9	6.2	3.1
218	4-8"	6.6	24	861	141	689	5.5	2.8	5.8	2.9
256	4-8"	6.6	22	1226	94	694	5.2	2.6	5.6	2.8
275	4-8"	6.6	14	1440	86	693	3.3	1.7	3.6	1.8
294	4-8"	6.9	22	1853	77	725	5.0	2.5	5.5	2.7
Mean, mg/kg		6.6	20	1234	102	699	4.6	2.3	4.9	2.5
Median, mg/kg		6.6	22	1125	99	694	5.1	2.6	5.5	2.8
Minimum, mg/kg		6.4	11	861	77	685	2.6	1.3	2.8	1.4
Maximum, mg/kg		6.9	25	1853	141	725	5.8	2.9	6.2	3.1
Standard deviation, mg/kg		0.2	6	364	22	15	1.3	0.6	1.4	0.7
C.V., %		2	29	29	22	25	26	28	27	28
Count			6							
<b>Application zone</b>										
180	4-8"	6.4	11	1002	108	685	2.6	1.3	2.8	1.4
199	4-8"	6.6	25	1024	104	705	5.8	2.9	6.2	3.1
218	4-8"	6.6	24	861	141	689	5.5	2.8	5.8	2.9
Mean, mg/kg		6.5	20	962	118	693	4.6	2.3	4.9	2.5
Median, mg/kg		6.6	24	1002	108	689	5.5	2.8	5.8	2.9
Minimum, mg/kg		6.4	11	861	104	685	2.6	1.3	2.8	1.4
Maximum, mg/kg		6.6	25	1024	141	705	5.8	2.9	6.2	3.1

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation molarity with 0.5	P Saturation with 0.5	P Saturation
Standard deviation, mg/kg		0.1	8	88	20	11	1.8	0.9	1.9	0.9
C.V., %		2	39	9	17	2	38	38	38	38
Count			3							
<b>Buffer zone</b>										
256	4-8"	6.6	22	1226	94	694	5.2	2.6	5.6	2.8
275	4-8"	6.6	14	1440	86	693	3.3	1.7	3.6	1.8
294	4-8"	6.9	22	1853	77	725	5.0	2.5	5.5	2.7
Mean, mg/kg		6.7	19	1506	86	704	4.5	2.3	4.9	2.4
Median, mg/kg		6.6	22	1440	86	694	5.0	2.5	5.5	2.7
Minimum, mg/kg		6.6	14	1226	77	693	3.3	1.7	3.6	1.8
Maximum, mg/kg		6.9	22	1853	94	725	5.2	2.6	5.6	2.8
Standard deviation, mg/kg		0.2	5	319	9	18	1.0	0.5	1.1	0.6
C.V., %		3	24	21	10	3	23	23	23	23
Count			3							

**Table 3. Soil P sorption saturation and soil properties related to P sorption for 0 to 4 inch grid-soil samples from Field 1 for 2016.**

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation molarity with 0.5	P Saturation with 0.5	P Saturation
			mg/L				%			
<b>Whole field</b>										
126	0-4"	7.2	17	9104	38	626	4.6	2.3	5.1	2.6
142	0-4"	7.5	29	9064	26	606	8.2	4.1	9.2	4.6
143	0-4"	6.8	123	2895	199	589	31.3	15.6	31.2	15.6
144	0-4"	7.4	32	7008	69	643	8.2	4.1	9.0	4.5
145	0-4"	6.7	65	5045	77	560	19.0	9.5	20.4	10.2
162	0-4"	6.9	77	2813	121	584	20.9	10.4	21.8	10.9
163	0-4"	6.4	121	2031	147	589	31.9	16.0	32.9	16.4
180	0-4"	6.7	44	1552	109	606	11.6	5.8	12.3	6.2
181	0-4"	6.8	89	1988	117	602	23.5	11.8	24.8	12.4
182	0-4"	6.1	74	2028	145	634	18.3	9.2	19.0	9.5
198	0-4"	6.1	63	1602	127	626	16.0	8.0	16.7	8.4
199	0-4"	6.0	45	1360	124	613	11.7	5.8	12.2	6.1
200	0-4"	5.8	54	1334	106	624	13.9	7.0	14.8	7.4
201	0-4"	5.3	72	1311	140	606	18.6	9.3	19.3	9.7
212	0-4"	5.2	43	494	195	600	10.8	5.4	10.8	5.4
213	0-4"	5.7	21	896	117	624	5.4	2.7	5.7	2.8
214	0-4"	5.2	45	776	166	579	11.9	5.9	12.1	6.0
215	0-4"	5.2	59	828	205	589	14.9	7.5	14.9	7.4
216	0-4"	6.0	55	1395	147	597	14.3	7.2	14.8	7.4
217	0-4"	5.6	70	870	149	600	18.1	9.1	18.7	9.3
218	0-4"	6.1	85	1646	152	589	22.4	11.2	22.9	11.5

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation molarity with 0.5	P Saturation with 0.5	P Saturation
219	0-4"	5.8	96	2035	160	576	25.6	12.8	26.1	13.0
221	0-4"	5.5	31	724	108	598	8.3	4.2	8.8	4.4
234	0-4"	6.0	93	1255	137	601	24.3	12.1	25.2	12.6
232	0-4"	5.8	83	1148	143	624	20.9	10.4	21.6	10.8
233	0-4"	5.7	274	1927	250	633	63.3	31.7	62.1	31.0
234	0-4"	6.0	31	715	109	621	8.0	4.0	8.5	4.2
235	0-4"	6.4	77	1037	135	613	19.8	9.9	20.6	10.3
236	0-4"	6.3	130	2061	115	610	34.0	17.0	35.9	17.9
237	0-4"	5.8	87	1736	131	600	22.9	11.4	23.8	11.9
238	0-4"	6.3	56	1769	98	634	14.3	7.2	15.3	7.7
240	0-4"	5.5	109	986	149	657	26.1	13.0	27.0	13.5
241	0-4"	6.2	33	1075	90	662	8.2	4.1	8.8	4.4
249	0-4"	5.1	38	695	103	647	9.5	4.8	10.1	5.1
250	0-4"	6.9	49	1924	104	653	12.1	6.1	12.9	6.5
251	0-4"	5.1	28	748	102	642	7.1	3.5	7.5	3.8
252	0-4"	5.6	115	1064	132	600	30.2	15.1	31.4	15.7
253	0-4"	6.0	126	1904	115	579	34.6	17.3	36.3	18.2
254	0-4"	5.6	90	1461	153	573	24.2	12.1	24.8	12.4
255	0-4"	5.4	66	2463	104	587	18.0	9.0	19.1	9.6
256	0-4"	5.7	103	1799	167	549	28.5	14.3	28.8	14.4
257	0-4"	5.4	67	1293	110	579	18.5	9.2	19.4	9.7
258	0-4"	6.0	16	1960	84	567	4.6	2.3	4.9	2.5
259	0-4"	5.4	51	1140	101	577	14.2	7.1	15.0	7.5
260	0-4"	6.3	19	3467	75	583	5.3	2.7	5.8	2.9
268	0-4"	5.0	44	568	143	572	12.0	6.0	12.3	6.2
269	0-4"	5.3	29	975	115	581	7.9	4.0	8.3	4.2

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation molarity with 0.5	P Saturation with 0.5	P Saturation
270	0-4"	5.4	33	739	121	589	8.9	4.4	9.3	4.6
271	0-4"	5.3	49	1124	105	602	13.1	6.5	13.9	6.9
272	0-4"	5.8	58	1361	120	586	15.7	7.8	16.4	8.2
273	0-4"	6.3	74	2235	103	572	20.7	10.4	21.9	11.0
274	0-4"	6.0	84	3299	80	585	23.5	11.7	25.3	12.6
275	0-4"	6.2	40	1643	128	594	10.6	5.3	11.1	5.5
276	0-4"	5.5	31	1102	155	597	8.0	4.0	8.2	4.1
278	0-4"	5.8	19	1956	87	601	5.1	2.6	5.5	2.8
287	0-4"	4.9	36	656	115	583	9.8	4.9	10.3	5.2
288	0-4"	5.6	27	1005	118	588	7.3	3.6	7.6	3.8
289	0-4"	4.9	20	649	108	594	5.4	2.7	5.7	2.8
291	0-4"	5.8	17	900	104	595	4.6	2.3	4.9	2.4
292	0-4"	5.7	40	1555	106	579	11.1	5.5	11.7	5.8
293	0-4"	6.1	25	2516	69	599	6.9	3.4	7.5	3.7
294	0-4"	5.8	26	1832	77	604	7.1	3.5	7.6	3.8
295	0-4"	5.9	26	1478	103	579	7.2	3.6	7.6	3.8
296	0-4"	5.3	24	950	132	584	6.5	3.2	6.7	3.4
297	0-4"	6.0	22	2273	74	588	6.1	3.1	6.6	3.3
309	0-4"	4.9	25	528	115	598	6.7	3.3	7.0	3.5
310	0-4"	4.9	25	590	115	586	6.8	3.4	7.1	3.6
311	0-4"	5.6	55	1206	109	576	15.2	7.6	16.1	8.0
312	0-4"	5.5	27	1490	86	587	7.5	3.7	8.0	4.0
313	0-4"	6.5	22	4371	49	594	6.2	3.1	6.8	3.4
314	0-4"	5.4	28	1547	90	600	7.6	3.8	8.1	4.1
Mean, mg/kg		5.9	57	1845	118	599	15.0	7.5	15.6	7.8
Median, mg/kg		5.8	45	1461	115	597	12.0	6.0	12.6	6.3

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation molarity with 0.5	P Saturation with 0.5	P Saturation
Minimum, mg/kg		4.9	16	494	26	549	4.6	2.3	4.9	2.4
Maximum, mg/kg		7.5	274	9104	250	662	63.3	31.7	62.1	31.0
Standard deviation, mg/kg		0.6	40	1635	37	23	10.0	5.0	10.0	5.0
C.V., %		10	71	89	31	4	66	66	64	64
Count		71								
<b>Application zone</b>										
126	0-4"	7.2	17	9104	38	626	4.6	2.3	5.1	2.6
142	0-4"	7.5	29	9064	26	606	8.2	4.1	9.2	4.6
143	0-4"	6.8	123	2895	199	589	31.3	15.6	31.2	15.6
144	0-4"	7.4	32	7008	69	643	8.2	4.1	9.0	4.5
145	0-4"	6.7	65	5045	77	560	19.0	9.5	20.4	10.2
162	0-4"	6.9	77	2813	121	584	20.9	10.4	21.8	10.9
163	0-4"	6.4	121	2031	147	589	31.9	16.0	32.9	16.4
180	0-4"	6.7	44	1552	109	606	11.6	5.8	12.3	6.2
181	0-4"	6.8	89	1988	117	602	23.5	11.8	24.8	12.4
182	0-4"	6.1	74	2028	145	634	18.3	9.2	19.0	9.5
198	0-4"	6.1	63	1602	127	626	16.0	8.0	16.7	8.4
199	0-4"	6.0	45	1360	124	613	11.7	5.8	12.2	6.1
200	0-4"	5.8	54	1334	106	624	13.9	7.0	14.8	7.4
201	0-4"	5.3	72	1311	140	606	18.6	9.3	19.3	9.7
215	0-4"	5.2	59	828	205	589	14.9	7.5	14.9	7.4
216	0-4"	6.0	55	1395	147	597	14.3	7.2	14.8	7.4
217	0-4"	5.6	70	870	149	600	18.1	9.1	18.7	9.3
218	0-4"	6.1	85	1646	152	589	22.4	11.2	22.9	11.5
219	0-4"	5.8	96	2035	160	576	25.6	12.8	26.1	13.0

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation molarity with 0.5	P Saturation with 0.5	P Saturation
221	0-4"	5.5	31	724	108	598	8.3	4.2	8.8	4.4
234	0-4"	6.0	93	1255	137	601	24.3	12.1	25.2	12.6
232	0-4"	5.8	83	1148	143	624	20.9	10.4	21.6	10.8
233	0-4"	5.7	274	1927	250	633	63.3	31.7	62.1	31.0
234	0-4"	6.0	31	715	109	621	8.0	4.0	8.5	4.2
235	0-4"	6.4	77	1037	135	613	19.8	9.9	20.6	10.3
236	0-4"	6.3	130	2061	115	610	34.0	17.0	35.9	17.9
237	0-4"	5.8	87	1736	131	600	22.9	11.4	23.8	11.9
240	0-4"	5.5	109	986	149	657	26.1	13.0	27.0	13.5
241	0-4"	6.2	33	1075	90	662	8.2	4.1	8.8	4.4
250	0-4"	6.9	49	1924	104	653	12.1	6.1	12.9	6.5
251	0-4"	5.1	28	748	102	642	7.1	3.5	7.5	3.8
252	0-4"	5.6	115	1064	132	600	30.2	15.1	31.4	15.7
253	0-4"	6.0	126	1904	115	579	34.6	17.3	36.3	18.2
254	0-4"	5.6	90	1461	153	573	24.2	12.1	24.8	12.4
255	0-4"	5.4	66	2463	104	587	18.0	9.0	19.1	9.6
259	0-4"	5.4	51	1140	101	577	14.2	7.1	15.0	7.5
269	0-4"	5.3	29	975	115	581	7.9	4.0	8.3	4.2
270	0-4"	5.4	33	739	121	589	8.9	4.4	9.3	4.6
271	0-4"	5.3	49	1124	105	602	13.1	6.5	13.9	6.9
Mean, mg/kg		6.0	73	2106	125	607	19.0	9.5	19.7	9.8
Median, mg/kg		6.0	66	1461	121	602	18.1	9.1	19.0	9.5
Minimum, mg/kg		5.1	17	715	26	560	4.6	2.3	5.1	2.6
Maximum, mg/kg		7.5	274	9104	250	662	63.3	31.7	62.1	31.0
Standard deviation, mg/kg		0.6	45	2021	40	24	10.9	5.5	10.8	5.4



Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation molarity with 0.5	P Saturation with 0.5	P Saturation
C.V., %		10	62	96	32	4	58	58	55	55
Count			39							
<b>Buffer zone</b>										
212	0-4"	5.2	43	494	195	600	10.8	5.4	10.8	5.4
213	0-4"	5.7	21	896	117	624	5.4	2.7	5.7	2.8
214	0-4"	5.2	45	776	166	579	11.9	5.9	12.1	6.0
238	0-4"	6.3	56	1769	98	634	14.3	7.2	15.3	7.7
249	0-4"	5.1	38	695	103	647	9.5	4.8	10.1	5.1
256	0-4"	5.7	103	1799	167	549	28.5	14.3	28.8	14.4
257	0-4"	5.4	67	1293	110	579	18.5	9.2	19.4	9.7
258	0-4"	6.0	16	1960	84	567	4.6	2.3	4.9	2.5
260	0-4"	6.3	19	3467	75	583	5.3	2.7	5.8	2.9
268	0-4"	5.0	44	568	143	572	12.0	6.0	12.3	6.2
272	0-4"	5.8	58	1361	120	586	15.7	7.8	16.4	8.2
273	0-4"	6.3	74	2235	103	572	20.7	10.4	21.9	11.0
274	0-4"	6.0	84	3299	80	585	23.5	11.7	25.3	12.6
275	0-4"	6.2	40	1643	128	594	10.6	5.3	11.1	5.5
276	0-4"	5.5	31	1102	155	597	8.0	4.0	8.2	4.1
278	0-4"	5.8	19	1956	87	601	5.1	2.6	5.5	2.8
287	0-4"	4.9	36	656	115	583	9.8	4.9	10.3	5.2
288	0-4"	5.6	27	1005	118	588	7.3	3.6	7.6	3.8
289	0-4"	4.9	20	649	108	594	5.4	2.7	5.7	2.8
291	0-4"	5.8	17	900	104	595	4.6	2.3	4.9	2.4
292	0-4"	5.7	40	1555	106	579	11.1	5.5	11.7	5.8
293	0-4"	6.1	25	2516	69	599	6.9	3.4	7.5	3.7
294	0-4"	5.8	26	1832	77	604	7.1	3.5	7.6	3.8

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation molarity with 0.5	P Saturation with 0.5	P Saturation
295	0-4"	5.9	26	1478	103	579	7.2	3.6	7.6	3.8
296	0-4"	5.3	24	950	132	584	6.5	3.2	6.7	3.4
297	0-4"	6.0	22	2273	74	588	6.1	3.1	6.6	3.3
309	0-4"	4.9	25	528	115	598	6.7	3.3	7.0	3.5
310	0-4"	4.9	25	590	115	586	6.8	3.4	7.1	3.6
311	0-4"	5.6	55	1206	109	576	15.2	7.6	16.1	8.0
312	0-4"	5.5	27	1490	86	587	7.5	3.7	8.0	4.0
313	0-4"	6.5	22	4371	49	594	6.2	3.1	6.8	3.4
314	0-4"	5.4	28	1547	90	600	7.6	3.8	8.1	4.1
Mean, mg/kg		5.6	38	1527	109	591	10.2	5.1	10.7	5.4
Median, mg/kg		5.7	28	1420	107	588	7.5	3.8	8.1	4.0
Minimum, mg/kg		4.9	16	494	49	549	4.6	2.3	4.9	2.4
Maximum, mg/kg		6.5	103	4371	195	647	28.5	14.3	28.8	14.4
Standard deviation, mg/kg		0.5	21	917	31	19	5.8	2.9	6.0	3.0
C.V., %		8	56	60	29	3	57	57	56	56
Count			32							

**Table 4. Soil P sorption saturation and soil properties related to P sorption for 4 to 8 inch grid-soil samples from Field 1 for 2016.**

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation molarity with 0.5	P Saturation with 0.5	P Saturation
			mg/L				%			
<b>Whole field</b>										
126	4-8"	7.1	11	8836	40	702	2.7	1.3	3.0	1.5
142	4-8"	7.9	29	9031	22	699	7.1	3.6	8.0	4.0
143	4-8"	6.8	118	1911	165	715	25.9	12.9	26.8	13.4
144	4-8"	7.7	18	7061	58	705	4.3	2.1	4.7	2.4
145	4-8"	7.0	53	5890	69	722	12.2	6.1	13.4	6.7
162	4-8"	7.1	36	2893	86	726	8.2	4.1	8.9	4.4
163	4-8"	6.1	83	1738	115	715	18.8	9.4	20.0	10.0
180	4-8"	6.4	25	1056	114	703	5.7	2.9	6.1	3.1
181	4-8"	6.6	52	1431	122	697	12.0	6.0	12.7	6.3
182	4-8"	6.1	54	1623	126	688	12.6	6.3	13.3	6.6
198	4-8"	6.3	42	1146	112	694	9.8	4.9	10.4	5.2
199	4-8"	6.3	26	1236	111	684	6.1	3.1	6.5	3.3
200	4-8"	6.0	17	1454	86	688	4.1	2.0	4.4	2.2
201	4-8"	5.8	36	1043	111	692	8.4	4.2	9.0	4.5
215	4-8"	6.0	44	1130	114	715	10.0	5.0	10.6	5.3
216	4-8"	6.0	49	907	144	719	10.8	5.4	11.4	5.7
217	4-8"	6.3	28	750	100	725	6.3	3.2	6.8	3.4
218	4-8"	5.7	27	2538	118	706	6.2	3.1	6.6	3.3
219	4-8"	6.0	28	806	102	713	6.4	3.2	6.9	3.4
231	4-8"	6.1	119	1767	172	700	26.5	13.2	27.3	13.6
233	4-8"	6.4	69	1564	95	705	16.0	8.0	17.3	8.6
234	4-8"	6.0	38	1763	95	716	8.7	4.3	9.4	4.7

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation molarity with 0.5	P Saturation with 0.5	P Saturation
235	4-8"	5.6	55	497	107	697	12.8	6.4	13.7	6.8
236	4-8"	6.4	22	1048	99	698	5.1	2.6	5.5	2.8
237	4-8"	6.5	21	1183	99	688	5.0	2.5	5.3	2.7
240	4-8"	6.1	51	819	101	711	11.7	5.8	12.6	6.3
241	4-8"	6.3	40	1056	94	726	9.0	4.5	9.8	4.9
250	4-8"	5.9	4	4646	43	694	1.0	0.5	1.1	0.5
251	4-8"	6.1	18	589	88	711	4.2	2.1	4.5	2.3
252	4-8"	5.8	6	721	94	698	1.4	0.7	1.5	0.8
253	4-8"	4.9	12	648	99	690	2.8	1.4	3.0	1.5
254	4-8"	5.4	10	561	109	702	2.3	1.2	2.5	1.2
255	4-8"	6.5	12	319	182	715	2.6	1.3	2.7	1.3
259	4-8"	5.3	18	412	83	684	4.3	2.2	4.7	2.3
269	4-8"	6.5	4	2430	68	704	0.9	0.5	1.0	0.5
270	4-8"	6.1	4	2689	69	710	0.9	0.5	1.0	0.5
271	4-8"	5.0	24	493	102	700	5.6	2.8	6.0	3.0
212	4-8"	5.0	43	547	193	705	9.4	4.7	9.6	4.8
213	4-8"	6.1	37	1008	123	697	8.5	4.3	9.0	4.5
214	4-8"	5.7	29	640	114	695	6.7	3.4	7.2	3.6
238	4-8"	5.6	8	554	93	702	1.9	0.9	2.0	1.0
249	4-8"	5.7	26	1469	117	705	5.9	3.0	6.3	3.2
256	4-8"	5.1	5	596	60	702	1.2	0.6	1.3	0.7
257	4-8"	5.3	24	510	132	711	5.4	2.7	5.7	2.8
258	4-8"	6.2	24	1053	80	702	5.6	2.8	6.1	3.1
260	4-8"	5.8	50	1746	100	692	11.8	5.9	12.6	6.3
268	4-8"	5.9	41	1083	134	697	9.4	4.7	9.9	4.9
272	4-8"	6.0	14	993	105	711	3.2	1.6	3.4	1.7

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation molarity with 0.5	P Saturation with 0.5	P Saturation
273	4-8"	6.4	16	1340	90	694	3.8	1.9	4.1	2.0
274	4-8"	6.6	22	5404	49	682	5.4	2.7	6.0	3.0
275	4-8"	6.0	13	1047	80	697	3.1	1.5	3.3	1.7
276	4-8"	5.5	10	961	85	703	2.3	1.2	2.5	1.3
278	4-8"	6.3	9	3113	84	684	2.2	1.1	2.3	1.2
287	4-8"	5.4	7	527	75	692	1.7	0.8	1.8	0.9
288	4-8"	5.6	9	851	92	681	2.2	1.1	2.3	1.2
289	4-8"	5.0	6	857	66	697	1.4	0.7	1.6	0.8
291	4-8"	5.4	4	765	107	700	0.9	0.5	1.0	0.5
292	4-8"	5.7	12	1138	102	715	2.7	1.4	2.9	1.5
293	4-8"	5.8	13	2471	70	706	3.1	1.5	3.4	1.7
294	4-8"	5.0	6	2601	53	694	1.5	0.7	1.6	0.8
295	4-8"	5.8	7	1045	85	697	1.7	0.8	1.8	0.9
296	4-8"	5.6	14	999	108	688	3.3	1.6	3.5	1.8
297	4-8"	5.9	8	2627	64	675	2.0	1.0	2.2	1.1
309	4-8"	4.8	6	531	60	725	1.4	0.7	1.5	0.8
310	4-8"	5.1	9	599	104	715	2.0	1.0	2.2	1.1
311	4-8"	5.8	28	846	98	709	6.5	3.2	6.9	3.5
312	4-8"	5.5	13	1391	87	722	3.0	1.5	3.2	1.6
313	4-8"	6.8	7	4178	40	698	1.7	0.9	1.9	0.9
314	4-8"	5.8	17	2181	77	704	4.0	2.0	4.4	2.2
Mean, mg/kg		6.0	27	1759	96	702	6.1	3.1	6.5	3.3
Median, mg/kg		6.0	21	1056	98	702	5.0	2.5	5.3	2.7
Minimum, mg/kg		4.8	4	319	22	675	0.9	0.5	1.0	0.5
Maximum, mg/kg		7.9	119	9031	193	726	26.5	13.2	27.3	13.6

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation molarity with 0.5	P Saturation with 0.5	P Saturation
Standard deviation, mg/kg		0.6	24	1808	32	12	5.3	2.6	5.5	2.8
C.V., %		10	89	103	33	2	86	86	84	84
Count			69							
<b>Application zone</b>										
126	4-8"	7.1	11	8836	40	702	2.7	1.3	3.0	1.5
142	4-8"	7.9	29	9031	22	699	7.1	3.6	8.0	4.0
143	4-8"	6.8	118	1911	165	715	25.9	12.9	26.8	13.4
144	4-8"	7.7	18	7061	58	705	4.3	2.1	4.7	2.4
145	4-8"	7.0	53	5890	69	722	12.2	6.1	13.4	6.7
162	4-8"	7.1	36	2893	86	726	8.2	4.1	8.9	4.4
163	4-8"	6.1	83	1738	115	715	18.8	9.4	20.0	10.0
180	4-8"	6.4	25	1056	114	703	5.7	2.9	6.1	3.1
181	4-8"	6.6	52	1431	122	697	12.0	6.0	12.7	6.3
182	4-8"	6.1	54	1623	126	688	12.6	6.3	13.3	6.6
198	4-8"	6.3	42	1146	112	694	9.8	4.9	10.4	5.2
199	4-8"	6.3	26	1236	111	684	6.1	3.1	6.5	3.3
200	4-8"	6.0	17	1454	86	688	4.1	2.0	4.4	2.2
201	4-8"	5.8	36	1043	111	692	8.4	4.2	9.0	4.5
215	4-8"	6.0	44	1130	114	715	10.0	5.0	10.6	5.3
216	4-8"	6.0	49	907	144	719	10.8	5.4	11.4	5.7
217	4-8"	6.3	28	750	100	725	6.3	3.2	6.8	3.4
218	4-8"	5.7	27	2538	118	706	6.2	3.1	6.6	3.3
219	4-8"	6.0	28	806	102	713	6.4	3.2	6.9	3.4
231	4-8"	6.1	119	1767	172	700	26.5	13.2	27.3	13.6
233	4-8"	6.4	69	1564	95	705	16.0	8.0	17.3	8.6

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation molarity with 0.5	P Saturation with 0.5	P Saturation
234	4-8"	6.0	38	1763	95	716	8.7	4.3	9.4	4.7
235	4-8"	5.6	55	497	107	697	12.8	6.4	13.7	6.8
236	4-8"	6.4	22	1048	99	698	5.1	2.6	5.5	2.8
237	4-8"	6.5	21	1183	99	688	5.0	2.5	5.3	2.7
240	4-8"	6.1	51	819	101	711	11.7	5.8	12.6	6.3
241	4-8"	6.3	40	1056	94	726	9.0	4.5	9.8	4.9
250	4-8"	5.9	4	4646	43	694	1.0	0.5	1.1	0.5
251	4-8"	6.1	18	589	88	711	4.2	2.1	4.5	2.3
252	4-8"	5.8	6	721	94	698	1.4	0.7	1.5	0.8
253	4-8"	4.9	12	648	99	690	2.8	1.4	3.0	1.5
254	4-8"	5.4	10	561	109	702	2.3	1.2	2.5	1.2
255	4-8"	6.5	12	319	182	715	2.6	1.3	2.7	1.3
259	4-8"	5.3	18	412	83	684	4.3	2.2	4.7	2.3
269	4-8"	6.5	4	2430	68	704	0.9	0.5	1.0	0.5
270	4-8"	6.1	4	2689	69	710	0.9	0.5	1.0	0.5
271	4-8"	5.0	24	493	102	700	5.6	2.8	6.0	3.0
Mean, mg/kg		6.2	35	2046	100	704	8.1	4.0	8.6	4.3
Median, mg/kg		6.1	28	1183	100	703	6.3	3.2	6.8	3.4
Minimum, mg/kg		4.9	4	319	22	684	0.9	0.5	1.0	0.5
Maximum, mg/kg		7.9	119	9031	182	726	26.5	13.2	27.3	13.6
Standard deviation, mg/kg		0.6	28	2211	33	12	6.1	3.1	6.4	3.2
C.V., %		10	78	108	33	2	76	76	74	74
Count			37							
<b>Buffer zone</b>										
212	4-8"	5.0	43	547	193	705	9.4	4.7	9.6	4.8

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation molarity with 0.5	P Saturation with 0.5	P Saturation
213	4-8"	6.1	37	1008	123	697	8.5	4.3	9.0	4.5
214	4-8"	5.7	29	640	114	695	6.7	3.4	7.2	3.6
238	4-8"	5.6	8	554	93	702	1.9	0.9	2.0	1.0
249	4-8"	5.7	26	1469	117	705	5.9	3.0	6.3	3.2
256	4-8"	5.1	5	596	60	702	1.2	0.6	1.3	0.7
257	4-8"	5.3	24	510	132	711	5.4	2.7	5.7	2.8
258	4-8"	6.2	24	1053	80	702	5.6	2.8	6.1	3.1
260	4-8"	5.8	50	1746	100	692	11.8	5.9	12.6	6.3
268	4-8"	5.9	41	1083	134	697	9.4	4.7	9.9	4.9
272	4-8"	6.0	14	993	105	711	3.2	1.6	3.4	1.7
273	4-8"	6.4	16	1340	90	694	3.8	1.9	4.1	2.0
274	4-8"	6.6	22	5404	49	682	5.4	2.7	6.0	3.0
275	4-8"	6.0	13	1047	80	697	3.1	1.5	3.3	1.7
276	4-8"	5.5	10	961	85	703	2.3	1.2	2.5	1.3
278	4-8"	6.3	9	3113	84	684	2.2	1.1	2.3	1.2
287	4-8"	5.4	7	527	75	692	1.7	0.8	1.8	0.9
288	4-8"	5.6	9	851	92	681	2.2	1.1	2.3	1.2
289	4-8"	5.0	6	857	66	697	1.4	0.7	1.6	0.8
291	4-8"	5.4	4	765	107	700	0.9	0.5	1.0	0.5
292	4-8"	5.7	12	1138	102	715	2.7	1.4	2.9	1.5
293	4-8"	5.8	13	2471	70	706	3.1	1.5	3.4	1.7
294	4-8"	5.0	6	2601	53	694	1.5	0.7	1.6	0.8
295	4-8"	5.8	7	1045	85	697	1.7	0.8	1.8	0.9
296	4-8"	5.6	14	999	108	688	3.3	1.6	3.5	1.8
297	4-8"	5.9	8	2627	64	675	2.0	1.0	2.2	1.1
309	4-8"	4.8	6	531	60	725	1.4	0.7	1.5	0.8



Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation molarity with 0.5	P Saturation with 0.5	P Saturation
310	4-8"	5.1	9	599	104	715	2.0	1.0	2.2	1.1
311	4-8"	5.8	28	846	98	709	6.5	3.2	6.9	3.5
312	4-8"	5.5	13	1391	87	722	3.0	1.5	3.2	1.6
313	4-8"	6.8	7	4178	40	698	1.7	0.9	1.9	0.9
314	4-8"	5.8	17	2181	77	704	4.0	2.0	4.4	2.2
Mean, mg/kg		5.7	17	1427	91	700	3.9	1.9	4.2	2.1
Median, mg/kg		5.7	13	1027	89	699	3.0	1.5	3.3	1.6
Minimum, mg/kg		4.8	4	510	40	675	0.9	0.5	1.0	0.5
Maximum, mg/kg		6.8	50	5404	193	725	11.8	5.9	12.6	6.3
Standard deviation, mg/kg		0.5	12	1131	30	11	2.8	1.4	2.9	1.5
C.V., %		8	73	79	33	2	72	72	71	71
Count			32							

**Table 5. Soil P sorption saturation and soil properties related to P sorption for 0 to 4 inch grid-soil samples from Field 1 for 2018.**

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation molarity with 0.5	P Saturation with 0.5	P Saturation
			mg/L				%			
<b>Whole field</b>										
126	0-4"	7.7	31	9224	30	624	8.5	4.2	9.5	4.7
142	0-4"	7.8	43	11512	33	587	12.4	6.2	13.9	6.9
143	0-4"	6.8	145	2552	189	611	36.0	18.0	36.3	18.1
144	0-4"	7.6	63	6629	48	593	17.8	8.9	19.7	9.8
145	0-4"	6.6	173	3091	118	578	47.5	23.7	49.7	24.9
162	0-4"	6.6	127	1631	143	604	32.9	16.4	34.0	17.0
163	0-4"	6.8	164	1600	159	605	41.9	21.0	42.9	21.5
180	0-4"	7.3	56	3021	82	589	15.5	7.8	16.7	8.3
181	0-4"	7.6	130	3646	91	589	35.8	17.9	38.2	19.1
182	0-4"	6.4	131	1972	135	608	33.9	17.0	35.3	17.6
198	0-4"	7.8	128	3584	106	589	34.8	17.4	36.8	18.4
199	0-4"	6.6	96	1902	130	574	26.3	13.1	27.3	13.6
200	0-4"	6.6	104	1929	103	578	28.9	14.4	30.5	15.3
201	0-4"	6.2	64	1698	117	588	17.3	8.7	18.2	9.1
212	0-4"	5.3	71	948	154	613	18.0	9.0	18.5	9.3
213	0-4"	6.1	60	1204	91	587	16.6	8.3	17.7	8.8
214	0-4"	6.2	79	1000	126	588	21.2	10.6	22.1	11.1
215	0-4"	6.0	84	822	193	596	21.2	10.6	21.3	10.6
216	0-4"	6.3	128	1499	219	586	32.2	16.1	31.8	15.9
217	0-4"	6.2	104	970	154	597	27.0	13.5	27.7	13.8
218	0-4"	6.3	147	1593	135	612	37.8	18.9	39.4	19.7
219	0-4"	6.6	189	1622	150	610	48.3	24.1	49.7	24.9

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation molarity with 0.5	P Saturation with 0.5	P Saturation
221	0-4"	6.0	247	1521	166	625	61.0	30.5	62.5	31.2
231	0-4"	6.7	135	1599	133	618	34.5	17.2	36.0	18.0
232	0-4"	6.1	92	1147	127	579	25.0	12.5	26.1	13.0
233	0-4"	6.2	76	933	109	599	20.3	10.2	21.5	10.7
234	0-4"	6.5	114	1212	128	587	30.6	15.3	31.9	15.9
235	0-4"	6.5	136	1388	135	598	35.7	17.9	37.1	18.6
236	0-4"	6.5	196	1788	108	579	54.1	27.1	57.1	28.5
237	0-4"	6.3	178	1660	129	599	46.9	23.4	48.9	24.5
238	0-4"	6.2	233	1670	122	596	62.0	31.0	64.9	32.5
240	0-4"	5.8	186	1308	137	612	47.8	23.9	49.7	24.8
241	0-4"	6.4	94	1568	100	603	25.1	12.6	26.7	13.4
249	0-4"	5.9	86	1042	107	579	23.8	11.9	25.1	12.5
250	0-4"	6.3	81	1144	98	615	21.3	10.7	22.7	11.4
251	0-4"	6.4	91	877	89	611	24.2	12.1	26.0	13.0
252	0-4"	6.2	120	851	108	615	31.3	15.7	33.2	16.6
253	0-4"	6.4	152	1169	119	604	40.0	20.0	42.0	21.0
254	0-4"	6.5	128	1237	134	608	33.2	16.6	34.5	17.3
255	0-4"	6.1	141	2259	101	609	37.3	18.7	39.7	19.9
256	0-4"	6.3	120	1462	146	584	31.9	16.0	32.9	16.4
257	0-4"	5.9	121	1141	115	601	32.1	16.1	33.8	16.9
258	0-4"	6.1	52	1310	91	611	13.8	6.9	14.8	7.4
259	0-4"	6.3	87	1429	107	600	23.3	11.6	24.6	12.3
260	0-4"	7.1	40	3487	49	623	10.8	5.4	11.9	6.0
268	0-4"	5.7	57	696	120	618	14.7	7.3	15.4	7.7
269	0-4"	6.1	39	741	83	597	10.7	5.3	11.5	5.7
270	0-4"	5.9	41	522	96	611	10.9	5.4	11.6	5.8

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation molarity with 0.5	P Saturation with 0.5	P Saturation
271	0-4"	6.8	27	1135	68	601	7.4	3.7	8.1	4.0
272	0-4"	6.8	105	1435	97	587	28.9	14.4	30.7	15.4
273	0-4"	6.9	98	1976	80	592	27.1	13.5	29.2	14.6
274	0-4"	6.9	105	4198	62	581	29.9	15.0	32.7	16.3
275	0-4"	6.3	52	1420	98	593	14.1	7.1	15.1	7.5
276	0-4"	6.0	43	904	93	620	11.3	5.6	12.1	6.0
278	0-4"	6.4	42	2182	64	614	11.3	5.7	12.4	6.2
287	0-4"	5.9	55	668	97	603	14.7	7.4	15.7	7.9
288	0-4"	6.2	47	1066	105	599	12.6	6.3	13.4	6.7
289	0-4"	6.4	18	1494	63	602	5.0	2.5	5.4	2.7
291	0-4"	6.4	30	910	92	596	8.2	4.1	8.7	4.4
292	0-4"	6.5	42	1496	78	611	11.3	5.6	12.2	6.1
293	0-4"	6.2	33	2236	63	601	9.1	4.6	9.9	5.0
294	0-4"	6.5	38	1796	76	622	10.1	5.0	10.9	5.4
295	0-4"	6.7	27	1599	77	597	7.4	3.7	8.0	4.0
296	0-4"	5.7	36	640	122	587	9.7	4.9	10.2	5.1
297	0-4"	6.3	29	1941	68	588	8.1	4.1	8.8	4.4
309	0-4"	5.9	58	632	113	600	15.4	7.7	16.3	8.1
310	0-4"	6.0	32	636	97	610	8.5	4.2	9.1	4.5
311	0-4"	6.7	64	1124	101	605	17.1	8.5	18.1	9.1
312	0-4"	6.4	31	1463	60	608	8.5	4.2	9.3	4.6
313	0-4"	7.2	33	4477	35	595	9.4	4.7	10.5	5.2
314	0-4"	6.0	38	1318	77	599	10.4	5.2	11.2	5.6
Mean, mg/kg		6.4	91	1909	106	600	24.1	12.0	25.3	12.7
Median, mg/kg		6.4	84	1463	105	600	21.3	10.7	22.7	11.4
Minimum, mg/kg		5.3	18	522	30	574	5.0	2.5	5.4	2.7

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation molarity with 0.5	P Saturation with 0.5	P Saturation
Maximum, mg/kg		7.8	247	11512	219	625	62.0	31.0	64.9	32.5
Standard deviation, mg/kg		0.5	54	1781	37	13	13.8	6.9	14.3	7.1
C.V., %		8	59	93	34	2	57	57	56	56
Count			71							
<b>Application zone</b>										
126	0-4"	7.7	31	9224	30	624	8.5	4.2	9.5	4.7
142	0-4"	7.8	43	11512	33	587	12.4	6.2	13.9	6.9
143	0-4"	6.8	145	2552	189	611	36.0	18.0	36.3	18.1
144	0-4"	7.6	63	6629	48	593	17.8	8.9	19.7	9.8
145	0-4"	6.6	173	3091	118	578	47.5	23.7	49.7	24.9
162	0-4"	6.6	127	1631	143	604	32.9	16.4	34.0	17.0
163	0-4"	6.8	164	1600	159	605	41.9	21.0	42.9	21.5
180	0-4"	7.3	56	3021	82	589	15.5	7.8	16.7	8.3
181	0-4"	7.6	130	3646	91	589	35.8	17.9	38.2	19.1
182	0-4"	6.4	131	1972	135	608	33.9	17.0	35.3	17.6
198	0-4"	7.8	128	3584	106	589	34.8	17.4	36.8	18.4
199	0-4"	6.6	96	1902	130	574	26.3	13.1	27.3	13.6
200	0-4"	6.6	104	1929	103	578	28.9	14.4	30.5	15.3
201	0-4"	6.2	64	1698	117	588	17.3	8.7	18.2	9.1
215	0-4"	6.0	84	822	193	596	21.2	10.6	21.3	10.6
216	0-4"	6.3	128	1499	219	586	32.2	16.1	31.8	15.9
217	0-4"	6.2	104	970	154	597	27.0	13.5	27.7	13.8
218	0-4"	6.3	147	1593	135	612	37.8	18.9	39.4	19.7
219	0-4"	6.6	189	1622	150	610	48.3	24.1	49.7	24.9
221	0-4"	6.0	247	1521	166	625	61.0	30.5	62.5	31.2

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation molarity with 0.5	P Saturation with 0.5	P Saturation
231	0-4"	6.7	135	1599	133	618	34.5	17.2	36.0	18.0
232	0-4"	6.1	92	1147	127	579	25.0	12.5	26.1	13.0
233	0-4"	6.2	76	933	109	599	20.3	10.2	21.5	10.7
234	0-4"	6.5	114	1212	128	587	30.6	15.3	31.9	15.9
235	0-4"	6.5	136	1388	135	598	35.7	17.9	37.1	18.6
236	0-4"	6.5	196	1788	108	579	54.1	27.1	57.1	28.5
237	0-4"	6.3	178	1660	129	599	46.9	23.4	48.9	24.5
240	0-4"	5.8	186	1308	137	612	47.8	23.9	49.7	24.8
241	0-4"	6.4	94	1568	100	603	25.1	12.6	26.7	13.4
250	0-4"	6.3	81	1144	98	615	21.3	10.7	22.7	11.4
251	0-4"	6.4	91	877	89	611	24.2	12.1	26.0	13.0
252	0-4"	6.2	120	851	108	615	31.3	15.7	33.2	16.6
253	0-4"	6.4	152	1169	119	604	40.0	20.0	42.0	21.0
254	0-4"	6.5	128	1237	134	608	33.2	16.6	34.5	17.3
255	0-4"	6.1	141	2259	101	609	37.3	18.7	39.7	19.9
259	0-4"	6.3	87	1429	107	600	23.3	11.6	24.6	12.3
269	0-4"	6.1	39	741	83	597	10.7	5.3	11.5	5.7
270	0-4"	5.9	41	522	96	611	10.9	5.4	11.6	5.8
271	0-4"	6.8	27	1135	68	601	7.4	3.7	8.1	4.0
Mean, mg/kg		6.6	115	2205	118	600	30.2	15.1	31.5	15.8
Median, mg/kg		6.4	120	1593	118	600	31.3	15.7	31.9	15.9
Minimum, mg/kg		5.8	27	522	30	574	7.4	3.7	8.1	4.0
Maximum, mg/kg		7.8	247	11512	219	625	61.0	30.5	62.5	31.2
Standard deviation, mg/kg		0.5	50	2220	39	13	12.8	6.4	13.2	6.6
C.V., %		8	44	101	33	2	43	43	42	42

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation molarity with 0.5	P Saturation with 0.5	P Saturation
<b>Count</b>			39							
<b>Buffer zone</b>										
212	0-4"	5.3	71	948	154	613	18.0	9.0	18.5	9.3
213	0-4"	6.1	60	1204	91	587	16.6	8.3	17.7	8.8
214	0-4"	6.2	79	1000	126	588	21.2	10.6	22.1	11.1
238	0-4"	6.2	233	1670	122	596	62.0	31.0	64.9	32.5
249	0-4"	5.9	86	1042	107	579	23.8	11.9	25.1	12.5
256	0-4"	6.3	120	1462	146	584	31.9	16.0	32.9	16.4
257	0-4"	5.9	121	1141	115	601	32.1	16.1	33.8	16.9
258	0-4"	6.1	52	1310	91	611	13.8	6.9	14.8	7.4
260	0-4"	7.1	40	3487	49	623	10.8	5.4	11.9	6.0
268	0-4"	5.7	57	696	120	618	14.7	7.3	15.4	7.7
272	0-4"	6.8	105	1435	97	587	28.9	14.4	30.7	15.4
273	0-4"	6.9	98	1976	80	592	27.1	13.5	29.2	14.6
274	0-4"	6.9	105	4198	62	581	29.9	15.0	32.7	16.3
275	0-4"	6.3	52	1420	98	593	14.1	7.1	15.1	7.5
276	0-4"	6.0	43	904	93	620	11.3	5.6	12.1	6.0
278	0-4"	6.4	42	2182	64	614	11.3	5.7	12.4	6.2
287	0-4"	5.9	55	668	97	603	14.7	7.4	15.7	7.9
288	0-4"	6.2	47	1066	105	599	12.6	6.3	13.4	6.7
289	0-4"	6.4	18	1494	63	602	5.0	2.5	5.4	2.7
291	0-4"	6.4	30	910	92	596	8.2	4.1	8.7	4.4
292	0-4"	6.5	42	1496	78	611	11.3	5.6	12.2	6.1
293	0-4"	6.2	33	2236	63	601	9.1	4.6	9.9	5.0
294	0-4"	6.5	38	1796	76	622	10.1	5.0	10.9	5.4
295	0-4"	6.7	27	1599	77	597	7.4	3.7	8.0	4.0

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation molarity with 0.5	P Saturation with 0.5	P Saturation
296	0-4"	5.7	36	640	122	587	9.7	4.9	10.2	5.1
297	0-4"	6.3	29	1941	68	588	8.1	4.1	8.8	4.4
309	0-4"	5.9	58	632	113	600	15.4	7.7	16.3	8.1
310	0-4"	6.0	32	636	97	610	8.5	4.2	9.1	4.5
311	0-4"	6.7	64	1124	101	605	17.1	8.5	18.1	9.1
312	0-4"	6.4	31	1463	60	608	8.5	4.2	9.3	4.6
313	0-4"	7.2	33	4477	35	595	9.4	4.7	10.5	5.2
314	0-4"	6.0	38	1318	77	599	10.4	5.2	11.2	5.6
Mean, mg/kg		6.3	62	1549	92	600	16.7	8.3	17.7	8.9
Median, mg/kg		6.3	50	1369	93	600	13.2	6.6	14.1	7.0
Minimum, mg/kg		5.3	18	632	35	579	5.0	2.5	5.4	2.7
Maximum, mg/kg		7.2	233	4477	154	623	62.0	31.0	64.9	32.5
Standard deviation, mg/kg		0.4	42	937	27	12	11.3	5.6	11.8	5.9
C.V., %		7	68	61	30	2	68	68	66	66
Count			32							



**Table 6. Soil P sorption saturation and soil properties related to P sorption for 0 to 4 inch grid-soil samples from Field 5a for 2014.**

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation molarity with 0.5	P Saturation with 0.5	P Saturation
			mg/L				%			
<b>Whole field</b>										
21	0-4"	6.4	17	2413	111	857	3.3	1.6	3.5	1.8
22	0-4"	5.6	35	1692	143	799	7.0	3.5	7.4	3.7
23	0-4"	5.4	55	1028	197	853	10.1	5.1	10.5	5.2
24	0-4"	5.9	40	1299	177	844	7.5	3.7	7.8	3.9
25	0-4"	5.2	47	448	196	840	8.7	4.3	9.0	4.5
32	0-4"	5.5	74	1040	230	826	13.8	6.9	14.0	7.0
33	0-4"	5.6	61	987	180	794	12.1	6.0	12.5	6.3
34	0-4"	6.4	29	1984	143	795	5.8	2.9	6.2	3.1
35	0-4"	6.1	23	2257	123	811	4.6	2.3	4.9	2.5
46	0-4"	5.4	50	840	192	790	9.9	4.9	10.2	5.1
47	0-4"	5.5	86	877	207	796	16.7	8.4	17.1	8.6
48	0-4"	5.3	59	922	188	804	11.5	5.7	11.9	5.9
49	0-4"	6.2	19	2055	135	811	3.8	1.9	4.0	2.0
50	0-4"	6.1	22	1776	130	822	4.3	2.2	4.6	2.3
59	0-4"	5.2	33	565	151	796	6.6	3.3	7.0	3.5
60	0-4"	5.0	51	584	170	790	10.2	5.1	10.6	5.3
61	0-4"	5.1	55	795	176	826	10.5	5.3	11.0	5.5
62	0-4"	5.3	69	846	161	834	13.2	6.6	13.9	6.9
73	0-4"	4.8	47	484	153	844	8.9	4.5	9.4	4.7
74	0-4"	5.3	51	513	148	825	9.9	5.0	10.5	5.2
75	0-4"	5.3	85	829	167	816	16.5	8.3	17.3	8.6
85	0-4"	5.0	54	350	118	807	10.9	5.4	11.7	5.8

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation molarity with 0.5	P Saturation with 0.5	P Saturation
86	0-4"	4.5	91	167	163	809	17.9	8.9	18.7	9.4
19	0-4"	6.6	34	3168	116	795	7.0	3.5	7.5	3.7
20	0-4"	7.0	36	3404	154	879	6.6	3.3	7.0	3.5
30	0-4"	6.3	27	2031	147	826	5.2	2.6	5.5	2.8
31	0-4"	6.0	26	1762	161	804	5.1	2.6	5.4	2.7
45	0-4"	6.6	32	2914	123	805	6.4	3.2	6.9	3.4
87	0-4"	6.4	18	2016	96	811	3.7	1.8	4.0	2.0
98	0-4"	4.6	51	359	155	798	10.2	5.1	10.7	5.4
99	0-4"	4.8	64	315	138	835	12.4	6.2	13.2	6.6
100	0-4"	6.4	20	2022	104	815	4.0	2.0	4.4	2.2
111	0-4"	5.0	23	644	118	827	4.5	2.3	4.9	2.4
Mean, mg/kg		5.6	45	1315	154	818	8.8	4.4	9.2	4.6
Median, mg/kg		5.5	47	987	153	811	8.7	4.3	9.0	4.5
Minimum, mg/kg		4.5	17	167	96	790	3.3	1.6	3.5	1.8
Maximum, mg/kg		7.0	91	3404	230	879	17.9	8.9	18.7	9.4
Standard deviation, mg/kg		0.7	21	881	32	22	4.0	2.0	4.1	2.1
C.V., %		12	46	67	21	3	46	46	45	45
Count			33							
<b>Application Zone</b>										
21	0-4"	6.4	17	2413	111	857	3.3	1.6	3.5	1.8
22	0-4"	5.6	35	1692	143	799	7.0	3.5	7.4	3.7
23	0-4"	5.4	55	1028	197	853	10.1	5.1	10.5	5.2
24	0-4"	5.9	40	1299	177	844	7.5	3.7	7.8	3.9
25	0-4"	5.2	47	448	196	840	8.7	4.3	9.0	4.5
32	0-4"	5.5	74	1040	230	826	13.8	6.9	14.0	7.0

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation molarity with 0.5	P Saturation with 0.5	P Saturation
33	0-4"	5.6	61	987	180	794	12.1	6.0	12.5	6.3
34	0-4"	6.4	29	1984	143	795	5.8	2.9	6.2	3.1
35	0-4"	6.1	23	2257	123	811	4.6	2.3	4.9	2.5
46	0-4"	5.4	50	840	192	790	9.9	4.9	10.2	5.1
47	0-4"	5.5	86	877	207	796	16.7	8.4	17.1	8.6
48	0-4"	5.3	59	922	188	804	11.5	5.7	11.9	5.9
49	0-4"	6.2	19	2055	135	811	3.8	1.9	4.0	2.0
50	0-4"	6.1	22	1776	130	822	4.3	2.2	4.6	2.3
59	0-4"	5.2	33	565	151	796	6.6	3.3	7.0	3.5
60	0-4"	5.0	51	584	170	790	10.2	5.1	10.6	5.3
61	0-4"	5.1	55	795	176	826	10.5	5.3	11.0	5.5
62	0-4"	5.3	69	846	161	834	13.2	6.6	13.9	6.9
73	0-4"	4.8	47	484	153	844	8.9	4.5	9.4	4.7
74	0-4"	5.3	51	513	148	825	9.9	5.0	10.5	5.2
75	0-4"	5.3	85	829	167	816	16.5	8.3	17.3	8.6
85	0-4"	5.0	54	350	118	807	10.9	5.4	11.7	5.8
86	0-4"	4.5	91	167	163	809	17.9	8.9	18.7	9.4
Mean, mg/kg		5.5	50	1076	163	817	10	5	10	5
Median, mg/kg		5.4	51	877	163	811	10	5	10	5
Minimum, mg/kg		4.5	17	167	111	790	3	2	4	2
Maximum, mg/kg		6.4	91	2413	230	857	18	9	19	9
Standard deviation, mg/kg		0.5	21	644	30	21	4	2	4	2
C.V., %		9	43	60	19	3	42	42	42	42
Count			23							
Buffer Zone										

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation molarity with 0.5	P Saturation with 0.5	P Saturation
19	0-4"	6.6	34	3168	116	795	7.0	3.5	7.5	3.7
20	0-4"	7.0	36	3404	154	879	6.6	3.3	7.0	3.5
30	0-4"	6.3	27	2031	147	826	5.2	2.6	5.5	2.8
31	0-4"	6.0	26	1762	161	804	5.1	2.6	5.4	2.7
45	0-4"	6.6	32	2914	123	805	6.4	3.2	6.9	3.4
87	0-4"	6.4	18	2016	96	811	3.7	1.8	4.0	2.0
98	0-4"	4.6	51	359	155	798	10.2	5.1	10.7	5.4
99	0-4"	4.8	64	315	138	835	12.4	6.2	13.2	6.6
100	0-4"	6.4	20	2022	104	815	4.0	2.0	4.4	2.2
111	0-4"	5.0	23	644	118	827	4.5	2.3	4.9	2.4
Mean, mg/kg		6.0	33	1864	131	820	6.5	3.3	6.9	3.5
Median, mg/kg		6.4	30	2019	131	813	5.8	2.9	6.2	3.1
Minimum, mg/kg		4.6	18	315	96	795	3.7	1.8	4.0	2.0
Maximum, mg/kg		7.0	64	3404	161	879	12.4	6.2	13.2	6.6
Standard deviation, mg/kg		0.9	14	1126	23	25	2.8	1.4	2.9	1.5
C.V., %		14	44	60	17	3	15	17	16	17
Count			10							

**Table 7. Soil P sorption saturation and soil properties related to P sorption for 4 to 8 inch grid-soil samples from Field 5a for 2014.**

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation molarity with 0.5	P Saturation with 0.5	P Saturation
			mg/L				%			
<b>Whole field</b>										
25	4-8"	6.4	42	2927	127	860	7.9	4.0	8.5	4.3
34	4-8"	6.6	45	1577	104	859	8.6	4.3	9.3	4.7
35	4-8"	6.4	33	2964	93	873	6.3	3.1	6.8	3.4
36	4-8"	6.1	36	3270	106	870	6.8	3.4	7.4	3.7
37	4-8"	5.8	49	2870	150	895	8.8	4.4	9.4	4.7
47	4-8"	6.3	22	1005	104	881	4.1	2.1	4.5	2.2
49	4-8"	6.7	41	4381	95	879	7.7	3.9	8.4	4.2
50	4-8"	6.1	30	2877	124	859	5.7	2.8	6.1	3.1
51	4-8"	5.9	33	2873	100	891	6.1	3.1	6.7	3.3
59	4-8"	6.3	49	921	113	899	9.0	4.5	9.7	4.8
61	4-8"	6	37	2754	143	882	6.8	3.4	7.2	3.6
62	4-8"	6.2	36	3093	111	859	6.9	3.4	7.4	3.7
73	4-8"	6.3	73	861	109	891	13.5	6.7	14.6	7.3
74	4-8"	6.2	67	2139	125	912	12.0	6.0	12.9	6.5
75	4-8"	6.4	28	3379	96	906	5.1	2.6	5.6	2.8
85	4-8"	6.4	57	981	122	897	10.4	5.2	11.2	5.6
86	4-8"	5.9	96	589	113	905	17.4	8.7	18.9	9.4
87	4-8"	6.4	41	2823	95	906	7.5	3.8	8.2	4.1
98	4-8"	6.8	17	2361	62	879	3.3	1.6	3.6	1.8
99	4-8"	6.4	46	1819	78	894	8.6	4.3	9.5	4.7
100	4-8"	6.3	98	1267	125	882	18.1	9.1	19.5	9.7
111	4-8"	6.3	14	3031	68	907	2.6	1.3	2.9	1.4

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation molarity with 0.5	P Saturation with 0.5	P Saturation
Mean, mg/kg		6.3	45	2307	107	886	8.3	4.2	9.0	4.5
Median, mg/kg		6.3	41	2789	108	887	7.6	3.8	8.3	4.2
Minimum, mg/kg		5.8	14	589	62	859	2.6	1.3	2.9	1.4
Maximum, mg/kg		6.8	98	4381	150	912	18.1	9.1	19.5	9.7
Standard deviation, mg/kg		0.3	22	1025	22	17	4.0	2.0	4.3	2.1
C.V., %		3.98	49.0	44.4	20.2	1.9	47.9	47.9	47.6	47.6
Count			22							
<b>Application Zone</b>										
25	4-8"	6.4	42	2927	127	860	7.9	4.0	8.5	4.3
34	4-8"	6.6	45	1577	104	859	8.6	4.3	9.3	4.7
35	4-8"	6.4	33	2964	93	873	6.3	3.1	6.8	3.4
36	4-8"	6.1	36	3270	106	870	6.8	3.4	7.4	3.7
37	4-8"	5.8	49	2870	150	895	8.8	4.4	9.4	4.7
47	4-8"	6.3	22	1005	104	881	4.1	2.1	4.5	2.2
49	4-8"	6.7	41	4381	95	879	7.7	3.9	8.4	4.2
50	4-8"	6.1	30	2877	124	859	5.7	2.8	6.1	3.1
51	4-8"	5.9	33	2873	100	891	6.1	3.1	6.7	3.3
59	4-8"	6.3	49	921	113	899	9.0	4.5	9.7	4.8
61	4-8"	6	37	2754	143	882	6.8	3.4	7.2	3.6
62	4-8"	6.2	36	3093	111	859	6.9	3.4	7.4	3.7
73	4-8"	6.3	73	861	109	891	13.5	6.7	14.6	7.3
74	4-8"	6.2	67	2139	125	912	12.0	6.0	12.9	6.5
75	4-8"	6.4	28	3379	96	906	5.1	2.6	5.6	2.8
85	4-8"	6.4	57	981	122	897	10.4	5.2	11.2	5.6
86	4-8"	5.9	96	589	113	905	17.4	8.7	18.9	9.4

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation molarity with 0.5	P Saturation with 0.5	P Saturation
Mean, mg/kg		6.2	46	2321	114	883	8.4	4.2	9.1	4.5
Median, mg/kg		6.3	41	2870	111	882	7.7	3.9	8.4	4.2
Minimum, mg/kg		5.8	22	589	93	859	4.1	2.1	4.5	2.2
Maximum, mg/kg		6.7	96	4381	150	912	17.4	8.7	18.9	9.4
Standard deviation, mg/kg		0.2	19	1117	16	18	3.3	1.7	3.6	1.8
C.V., %		4	41	48	14	2	40	40	40	40
Count			17							
<b>Buffer Zone</b>										
87	4-8"	6.4	41	2823	95	906	7.5	3.8	8.2	4.1
98	4-8"	6.8	17	2361	62	879	3.3	1.6	3.6	1.8
99	4-8"	6.4	46	1819	78	894	8.6	4.3	9.5	4.7
100	4-8"	6.3	98	1267	125	882	18.1	9.1	19.5	9.7
111	4-8"	6.3	14	3031	68	907	2.6	1.3	2.9	1.4
Mean, mg/kg		6.4	43	2260	86	894	8.0	4.0	8.7	4.4
Median, mg/kg		6.4	41	2361	78	894	7.5	3.8	8.2	4.1
Minimum, mg/kg		6.3	14	1267	62	879	2.6	1.3	2.9	1.4
Maximum, mg/kg		6.8	98	3031	125	907	18.1	9.1	19.5	9.7
Standard deviation, mg/kg		0.2	34	725	25	13	6.2	3.1	6.6	3.3
C.V., %		3	78	32	30	1	78	78	76	76
Count			5							

**Table 8. Soil P sorption saturation and soil properties related to P sorption for 8 to 12 inch grid-soil samples from Field 5a for 2014.**

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation molarity with 0.5	P Saturation with 0.5	P Saturation
			mg/L				%			
<b>Whole field</b>										
25	8-12"	6.1	33	3411	99	956	5.7	2.9	6.3	3.1
34	8-12"	6.7	36	1445	93	943	6.3	3.2	6.9	3.5
35	8-12"	6.5	21	4104	95	920	3.8	1.9	4.1	2.1
36	8-12"	6.1	23	3790	98	928	4.1	2.1	4.5	2.2
37	8-12"	5.4	42	3067	129	948	7.2	3.6	7.8	3.9
47	8-12"	6.6	24	1162	113	963	4.1	2.1	4.5	2.2
48	8-12"	6.6	23	4357	116	924	4.1	2.0	4.4	2.2
49	8-12"	7.1	11	4154	74	908	2.0	1.0	2.2	1.1
50	8-12"	6.2	22	3375	96	923	4.0	2.0	4.3	2.2
51	8-12"	5.7	30	3330	94	907	5.5	2.7	6.0	3.0
59	8-12"	6.6	30	824	118	914	5.4	2.7	5.8	2.9
61	8-12"	5.8	21	3024	95	922	3.8	1.9	4.1	2.1
62	8-12"	6.3	26	3266	100	956	4.5	2.3	4.9	2.5
73	8-12"	6.5	59	765	123	948	10.2	5.1	11.0	5.5
74	8-12"	6.3	36	2919	102	926	6.4	3.2	7.0	3.5
75	8-12"	6.2	28	3769	93	953	4.9	2.4	5.4	2.7
85	8-12"	6.5	46	910	139	915	8.2	4.1	8.7	4.4
87	8-12"	6.3	30	3392	89	928	5.4	2.7	5.9	2.9
98	8-12"	6.7	10	2474	70	951	1.8	0.9	2.0	1.0
99	8-12"	6.5	23	1979	78	920	4.2	2.1	4.6	2.3
111	8-12"	6.4	5	3016	55	935	0.9	0.5	1.0	0.5
<b>Mean, mg/kg</b>		<b>6.3</b>	<b>28</b>	<b>2787</b>	<b>99</b>	<b>933</b>	<b>4.9</b>	<b>2.4</b>	<b>5.3</b>	<b>2.7</b>



Median, mg/kg		6.4	26	3067	96	928	4.5	2.3	4.9	2.5
Minimum, mg/kg		5.4	5	765	55	907	0.9	0.5	1.0	0.5
Maximum, mg/kg		7.1	59	4357	139	963	10.2	5.1	11.0	5.5
Standard deviation, mg/kg		0.4	12	1152	20	17	2.1	1.1	2.3	1.1
C.V., %		6	45	41	20	2	12	14	13	14
Count			21							
<b>Application zone</b>										
25	8-12"	6.1	33	3411	99	956	5.7	2.9	6.3	3.1
34	8-12"	6.7	36	1445	93	943	6.3	3.2	6.9	3.5
35	8-12"	6.5	21	4104	95	920	3.8	1.9	4.1	2.1
36	8-12"	6.1	23	3790	98	928	4.1	2.1	4.5	2.2
37	8-12"	5.4	42	3067	129	948	7.2	3.6	7.8	3.9
47	8-12"	6.6	24	1162	113	963	4.1	2.1	4.5	2.2
48	8-12"	6.6	23	4357	116	924	4.1	2.0	4.4	2.2
49	8-12"	7.1	11	4154	74	908	2.0	1.0	2.2	1.1
50	8-12"	6.2	22	3375	96	923	4.0	2.0	4.3	2.2
51	8-12"	5.7	30	3330	94	907	5.5	2.7	6.0	3.0
59	8-12"	6.6	30	824	118	914	5.4	2.7	5.8	2.9
61	8-12"	5.8	21	3024	95	922	3.8	1.9	4.1	2.1
62	8-12"	6.3	26	3266	100	956	4.5	2.3	4.9	2.5
Mean, mg/kg		6.3	26	3024	102	932	4.7	2.3	5.1	2.5
Median, mg/kg		6.3	24	3330	98	924	4.1	2.1	4.5	2.2
Minimum, mg/kg		5.4	11	824	74	907	2.0	1.0	2.2	1.1
Maximum, mg/kg		7.1	42	4357	129	963	7.2	3.6	7.8	3.9
Standard deviation, mg/kg		0.5	8	1156	14	19	1.3	0.7	1.5	0.7
C.V., %		7	30	38	14	2	29	29	29	29
Count			13							
<b>Buffer zone</b>										

73	8-12"	6.5	59	765	123	948	10.2	5.1	11.0	5.5
74	8-12"	6.3	36	2919	102	926	6.4	3.2	7.0	3.5
75	8-12"	6.2	28	3769	93	953	4.9	2.4	5.4	2.7
85	8-12"	6.5	46	910	139	915	8.2	4.1	8.7	4.4
87	8-12"	6.3	30	3392	89	928	5.4	2.7	5.9	2.9
98	8-12"	6.7	10	2474	70	951	1.8	0.9	2.0	1.0
99	8-12"	6.5	23	1979	78	920	4.2	2.1	4.6	2.3
111	8-12"	6.4	5	3016	55	935	0.9	0.5	1.0	0.5
Mean, mg/kg		6.4	30	2403	94	935	5.2	2.6	5.7	2.8
Median, mg/kg		6.5	29	2697	91	932	5.1	2.6	5.6	2.8
Minimum, mg/kg		6.2	5	765	55	915	0.9	0.5	1.0	0.5
Maximum, mg/kg		6.7	59	3769	139	953	10.2	5.1	11.0	5.5
Standard deviation, mg/kg		0.2	18	1107	28	15	3.1	1.5	3.3	1.7
C.V., %		2	60	46	29	2	59	59	58	58
Count			8							

**Table 9. Soil P sorption saturation and soil properties related to P sorption for 12 to 18 inch grid-soil samples from Field 5a for 2014.**

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation molarity with 0.5	P Saturation with 0.5	P Saturation
			mg/L				%			
<b>Whole field</b>										
25	12-18"	6.3	35	3619	98	1025	5.7	2.8	6.2	3.1
34	12-18"	6.4	59	1896	92	1010	9.7	4.9	10.7	5.4
35	12-18"	6.7	16	4601	94	1058	2.5	1.3	2.8	1.4
36	12-18"	6.2	19	3892	83	1098	2.9	1.5	3.2	1.6
37	12-18"	5.2	48	3048	132	1125	7.0	3.5	7.6	3.8
47	12-18"	6.2	49	2014	108	1056	7.7	3.9	8.4	4.2
49	12-18"	7	9	3998	68	1068	1.4	0.7	1.6	0.8
50	12-18"	6.2	21	3248	93	1046	3.4	1.7	3.7	1.8
51	12-18"	5.8	31	3272	105	1058	4.9	2.4	5.3	2.7
59	12-18"	6.3	41	1027	143	1068	6.3	3.1	6.8	3.4
61	12-18"	5.9	26	3258	108	1025	4.2	2.1	4.6	2.3
62	12-18"	6	34	3110	141	1022	5.4	2.7	5.8	2.9
73	12-18"	6.3	41	697	136	1055	6.4	3.2	6.9	3.4
74	12-18"	6.4	19	3279	86	1024	3.1	1.6	3.4	1.7
75	12-18"	6.1	39	3336	94	1087	6.0	3.0	6.6	3.3
85	12-18"	6.6	53	707	139	1025	8.5	4.2	9.1	4.6
88	12-18"	6	17	3590	95	1067	2.7	1.3	2.9	1.5
98	12-18"	6.8	8	2268	79	1087	1.2	0.6	1.4	0.7
111	12-18"	6.5	5	3373	79	1098	0.8	0.4	0.8	0.4
Mean, mg/kg		6.3	30	2854	104	1058	4.7	2.4	5.2	2.6
Median, mg/kg		6.3	31	3258	95	1058	4.9	2.4	5.3	2.7
Minimum, mg/kg		5.2	5	697	68	1010	0.8	0.4	0.8	0.4

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation molarity with 0.5	P Saturation with 0.5	P Saturation
Maximum, mg/kg		7.0	59	4601	143	1125	9.7	4.9	10.7	5.4
Standard deviation, mg/kg		0.4	16	1116	23	31	2.6	1.3	2.8	1.4
C.V., %		6	54	39	23	3	29	31	30	31
Count			19							
<b>Application zone</b>										
25	12-18"	6.3	35	3619	98	1025	5.7	2.8	6.2	3.1
34	12-18"	6.4	59	1896	92	1010	9.7	4.9	10.7	5.4
35	12-18"	6.7	16	4601	94	1058	2.5	1.3	2.8	1.4
36	12-18"	6.2	19	3892	83	1098	2.9	1.5	3.2	1.6
37	12-18"	5.2	48	3048	132	1125	7.0	3.5	7.6	3.8
47	12-18"	6.2	49	2014	108	1056	7.7	3.9	8.4	4.2
49	12-18"	7	9	3998	68	1068	1.4	0.7	1.6	0.8
50	12-18"	6.2	21	3248	93	1046	3.4	1.7	3.7	1.8
51	12-18"	5.8	31	3272	105	1058	4.9	2.4	5.3	2.7
59	12-18"	6.3	41	1027	143	1068	6.3	3.1	6.8	3.4
61	12-18"	5.9	26	3258	108	1025	4.2	2.1	4.6	2.3
62	12-18"	6	34	3110	141	1022	5.4	2.7	5.8	2.9
73	12-18"	6.3	41	697	136	1055	6.4	3.2	6.9	3.4
74	12-18"	6.4	19	3279	86	1024	3.1	1.6	3.4	1.7
75	12-18"	6.1	39	3336	94	1087	6.0	3.0	6.6	3.3
85	12-18"	6.6	53	707	139	1025	8.5	4.2	9.1	4.6
Mean, mg/kg		6.2	34	2813	108	1053	5.3	2.7	5.8	2.9
Median, mg/kg		6.3	35	3253	102	1056	5.6	2.8	6.0	3.0
Minimum, mg/kg		5.2	9	697	68	1010	1.4	0.7	1.6	0.8
Maximum, mg/kg		7.0	59	4601	143	1125	9.7	4.9	10.7	5.4

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation molarity with 0.5	P Saturation with 0.5	P Saturation
Standard deviation, mg/kg		0.4	15	1190	24	32	2.3	1.2	2.5	1.2
C.V., %		6	43	42	22	3	29	31	30	31
Count			16							
<b>Buffer zone</b>										
88	12-18"	6	17	3590	95	1067	2.7	1.3	2.9	1.5
98	12-18"	6.8	8	2268	79	1087	1.2	0.6	1.4	0.7
111	12-18"	6.5	5	3373	79	1098	0.8	0.4	0.8	0.4
Mean, mg/kg		6.4	10	3077	84	1084	1.6	0.8	1.7	0.9
Median, mg/kg		6.5	8	3373	79	1087	1.2	0.6	1.4	0.7
Minimum, mg/kg		6.0	5	2268	79	1067	0.8	0.4	0.8	0.4
Maximum, mg/kg		6.8	17	3590	95	1098	2.7	1.3	2.9	1.5
Standard deviation, mg/kg		0.4	6	709	9	16	1.0	0.5	1.1	0.5
C.V., %		6	62	23	11	1	63	63	63	63
Count			3							

**Table 10. Soil P sorption saturation and soil properties related to P sorption for 18 to 24 inch grid-soil samples from Field 5a for 2014.**

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation molarity with 0.5	P Saturation with 0.5	P Saturation
			mg/L				%			
<b>Whole field</b>										
25	18-24"	6.5	42	3756	118	1258	5.6	2.8	6.1	3.1
34	18-24"	5.7	59	1401	106	1210	8.2	4.1	9.0	4.5
36	18-24"	6.5	20	4317	88	1120	3.0	1.5	3.3	1.7
47	18-24"	6.1	45	2011	95	1240	6.1	3.0	6.7	3.4
49	18-24"	7	8	4131	70	1226	1.1	0.6	1.2	0.6
51	18-24"	5.7	35	3653	107	1220	4.8	2.4	5.3	2.6
59	18-24"	6.2	51	1011	125	1258	6.7	3.4	7.4	3.7
61	18-24"	6.1	19	3450	108	1268	2.5	1.3	2.8	1.4
62	18-24"	5.8	34	3376	118	1197	4.7	2.4	5.2	2.6
88	18-24"	5.9	25	3288	110	1206	3.5	1.7	3.8	1.9
87	18-24"	6.4	16	3252	86	1246	2.2	1.1	2.4	1.2
98	18-24"	6.7	14	2148	61	1189	2.0	1.0	2.2	1.1
<b>Mean, mg/kg</b>		<b>6.2</b>	<b>31</b>	<b>2983</b>	<b>99</b>	<b>1220</b>	<b>4.2</b>	<b>2.1</b>	<b>4.6</b>	<b>2.3</b>
<b>Median, mg/kg</b>		<b>6.2</b>	<b>30</b>	<b>3332</b>	<b>107</b>	<b>1223</b>	<b>4.1</b>	<b>2.0</b>	<b>4.5</b>	<b>2.2</b>
<b>Minimum, mg/kg</b>		<b>5.7</b>	<b>8</b>	<b>1011</b>	<b>61</b>	<b>1120</b>	<b>1.1</b>	<b>0.6</b>	<b>1.2</b>	<b>0.6</b>
<b>Maximum, mg/kg</b>		<b>7.0</b>	<b>59</b>	<b>4317</b>	<b>125</b>	<b>1268</b>	<b>8.2</b>	<b>4.1</b>	<b>9.0</b>	<b>4.5</b>
<b>Standard deviation, mg/kg</b>		<b>0.4</b>	<b>16</b>	<b>1075</b>	<b>20</b>	<b>41</b>	<b>2.2</b>	<b>1.1</b>	<b>2.4</b>	<b>1.2</b>
<b>C.V., %</b>		<b>7</b>	<b>53</b>	<b>36</b>	<b>20</b>	<b>3</b>	<b>16</b>	<b>18</b>	<b>17</b>	<b>18</b>
<b>Count</b>			<b>12</b>							
<b>Application zone</b>										
25	18-24"	6.5	42	3756	118	1258	5.6	2.8	6.1	3.1

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation molarity with 0.5	P Saturation with 0.5	P Saturation
34	18-24"	5.7	59	1401	106	1210	8.2	4.1	9.0	4.5
36	18-24"	6.5	20	4317	88	1120	3.0	1.5	3.3	1.7
47	18-24"	6.1	45	2011	95	1240	6.1	3.0	6.7	3.4
49	18-24"	7	8	4131	70	1226	1.1	0.6	1.2	0.6
51	18-24"	5.7	35	3653	107	1220	4.8	2.4	5.3	2.6
59	18-24"	6.2	51	1011	125	1258	6.7	3.4	7.4	3.7
61	18-24"	6.1	19	3450	108	1268	2.5	1.3	2.8	1.4
62	18-24"	5.8	34	3376	118	1197	4.7	2.4	5.2	2.6
88	18-24"	5.9	25	3288	110	1206	3.5	1.7	3.8	1.9
Mean, mg/kg		6.2	34	3039	105	1220	4.6	2.3	5.1	2.5
Median, mg/kg		6.1	35	3413	108	1223	4.8	2.4	5.2	2.6
Minimum, mg/kg		5.7	8	1011	70	1120	1.1	0.6	1.2	0.6
Maximum, mg/kg		7.0	59	4317	125	1268	8.2	4.1	9.0	4.5
Standard deviation, mg/kg		0.4	16	1151	16	43	2.1	1.1	2.3	1.2
C.V., %		7	47	38	16	4	46	46	46	46
Count			10							
<b>Buffer zone</b>										
87	18-24"	6.4	16	3252	86	1246	2.2	1.1	2.4	1.2
98	18-24"	6.7	14	2148	61	1189	2.0	1.0	2.2	1.1
Mean, mg/kg		6.6	15	2700	74	1218	2.1	1.0	2.3	1.2
Median, mg/kg		6.6	15	2700	74	1218	2.1	1.0	2.3	1.2
Minimum, mg/kg		6.4	14	2148	61	1189	2.0	1.0	2.2	1.1
Maximum, mg/kg		6.7	16	3252	86	1246	2.2	1.1	2.4	1.2
Standard deviation, mg/kg		0.2	1	781	18	40	0.1	0.1	0.1	0.1

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation molarity with 0.5	P Saturation with 0.5	P Saturation
C.V., %		3	9	29	24	3	6	6	5	5
Count			2							



**Table 11. Soil P sorption saturation and soil properties related to P sorption for 24 to 30 inch grid-soil samples from Field 5a for 2014.**

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
			mg/L				%			
<b>Whole field</b>										
98	24-30"	6.5	21	2708	61	1280	2.8	3.1	1.4	1.6
102	24-30"	6.2	23	3624	94	1328	2.9	3.2	1.5	1.6
114	24-30"	6.6	35	3755	99	1458	4.0	4.5	2.0	2.2
115	24-30"	6.6	16	2861	104	1359	2.0	2.2	1.0	1.1
Mean, mg/kg		6.5	24	3237	90	1356	2.9	3.3	1.5	1.6
Median, mg/kg		6.6	22	3243	97	1344	2.9	3.2	1.4	1.6
Minimum, mg/kg		6.2	16	2708	61	1280	2.0	2.2	1.0	1.1
Maximum, mg/kg		6.6	35	3755	104	1458	4.0	4.5	2.0	2.2
Standard deviation, mg/kg		0.2	8	529	19	75	0.9	0.9	0.4	0.5
C.V., %		2.92	33.9	16.3	21.7	5.5	39	40	41	41
Count			4							
<b>Application zone</b>										
114	24-30"	6.6	35	3755	99	1458	4.0	4.5	2.0	2.2
115	24-30"	6.6	16	2861	104	1359	2.0	2.2	1.0	1.1
Mean, mg/kg		6.6	26	3308	102	1409	3.0	3.3	1.5	1.7
Median, mg/kg		6.6	26	3308	102	1409	3.0	3.3	1.5	1.7
Minimum, mg/kg		6.6	16	2861	99	1359	2.0	2.2	1.0	1.1
Maximum, mg/kg		6.6	35	3755	104	1458	4.0	4.5	2.0	2.2
Standard deviation, mg/kg		0.0	13	632	4	70	1.5	1.6	0.7	0.8
C.V., %		0	53	19	3	5	39	40	41	41
Count			2							

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
<b>Buffer zone</b>										
98	24-30"	6.5	21	2708	61	1280	2.8	3.1	1.4	1.6
102	24-30"	6.2	23	3624	94	1328	2.9	3.2	1.5	1.6
Mean, mg/kg		6.4	22	3166	78	1304	2.9	3.2	1.4	1.6
Median, mg/kg		6.4	22	3166	78	1304	2.9	3.2	1.4	1.6
Minimum, mg/kg		6.2	21	2708	61	1280	2.8	3.1	1.4	1.6
Maximum, mg/kg		6.5	23	3624	94	1328	2.9	3.2	1.5	1.6
Standard deviation, mg/kg		0.2	1	648	23	34	0.1	0.1	0.0	0.0
C.V., %		3	6	20	30	3	39	40	41	41
Count			2							

**Table 12. Soil P sorption saturation and soil properties related to P sorption for 0 to 4 inch grid-soil samples from Field 5a for 2016.**

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
			mg/L				%			
<b>Whole field</b>										
16	0-4"	4.6	49	260	114	820	9.8	10.5	4.9	5.2
17	0-4"	4.4	12	905	55	846	2.4	2.7	1.2	1.3
19	0-4"	5.9	10	2810	104	842	2.0	2.1	1.0	1.1
20	0-4"	6.7	20	3068	135	804	4.0	4.3	2.0	2.1
21	0-4"	5.9	16	2090	115	835	3.1	3.4	1.6	1.7
22	0-4"	5.4	24	1570	132	845	4.6	4.9	2.3	2.5
23	0-4"	5.5	37	1147	184	815	7.1	7.4	3.6	3.7
24	0-4"	5.2	33	987	164	820	6.4	6.7	3.2	3.4
25	0-4"	5.7	26	1212	159	849	4.9	5.2	2.4	2.6
30	0-4"	5.0	50	830	86	862	9.6	10.5	4.8	5.3
31	0-4"	4.6	84	441	107	843	16.4	17.7	8.2	8.8
32	0-4"	4.7	75	525	112	824	14.9	16.0	7.4	8.0
33	0-4"	5.9	29	2492	105	830	5.7	6.2	2.9	3.1
34	0-4"	5.2	30	980	147	844	5.7	6.1	2.9	3.0
35	0-4"	5.3	65	1161	187	825	12.4	12.8	6.2	6.4
36	0-4"	5.2	51	1130	196	837	9.5	9.9	4.8	4.9
37	0-4"	5.7	28	1287	143	841	5.4	5.7	2.7	2.8
38	0-4"	6.3	25	2198	142	820	4.9	5.2	2.5	2.6
45	0-4"	4.5	61	377	112	811	12.3	13.2	6.1	6.6
46	0-4"	6.3	34	3177	117	836	6.6	7.1	3.3	3.6
47	0-4"	5.1	47	778	174	859	8.7	9.1	4.3	4.5
48	0-4"	5.1	79	945	186	815	15.2	15.8	7.6	7.9

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
49	0-4"	5.4	43	874	183	861	7.9	8.2	3.9	4.1
50	0-4"	5.8	21	1834	143	827	4.1	4.3	2.0	2.2
57	0-4"	5.7	23	1953	138	840	4.4	4.7	2.2	2.4
58	0-4"	5.7	21	3059	146	843	4.0	4.2	2.0	2.1
59	0-4"	5.1	33	506	165	855	6.2	6.5	3.1	3.2
60	0-4"	5.2	49	756	178	873	8.9	9.3	4.5	4.7
61	0-4"	5.5	46	854	172	852	8.6	9.0	4.3	4.5
62	0-4"	5.0	58	841	165	862	10.7	11.3	5.4	5.6
71	0-4"	6.0	24	1785	142	825	4.7	5.0	2.3	2.5
72	0-4"	5.1	45	468	171	801	8.9	9.3	4.4	4.6
73	0-4"	5.0	47	622	171	843	8.8	9.3	4.4	4.6
74	0-4"	4.9	41	626	170	823	7.9	8.3	3.9	4.1
75	0-4"	5.2	39	905	136	815	7.7	8.2	3.9	4.1
84	0-4"	6.7	19	3128	121	824	3.8	4.0	1.9	2.0
85	0-4"	4.7	77	341	207	834	14.4	14.8	7.2	7.4
86	0-4"	5.9	46	1288	140	862	8.6	9.2	4.3	4.6
87	0-4"	5.2	44	609	138	833	8.5	9.1	4.3	4.5
98	0-4"	4.7	40	358	173	815	7.8	8.1	3.9	4.0
99	0-4"	4.9	39	457	165	822	7.5	7.9	3.8	4.0
100	0-4"	5.1	35	987	202	846	6.5	6.7	3.2	3.3
111	0-4"	6.1	12	1719	131	824	2.4	2.5	1.2	1.3
112	0-4"	4.9	30	1027	187	836	5.6	5.9	2.8	2.9
Mean, mg/kg		5.4	39	1258	148	835	7.49	7.9	3.7	4.0
Median, mg/kg		5.2	38	984	145	836	7.33	7.7	3.7	3.8
Minimum, mg/kg		4.4	10	260	55	801	1.95	2.1	1.0	1.1
Maximum, mg/kg		6.7	84	3177	207	873	16.36	17.7	8.2	8.8

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
Standard deviation, mg/kg		0.6	18	837	33	17	3.52	3.7	1.8	1.9
C.V., %		11	47	66	22	2	47	47	47	47
Count		44								
<b>Application zone</b>										
21	0-4"	5.9	16	2090	115	835	3.1	3.4	1.6	1.7
22	0-4"	5.4	24	1570	132	845	4.6	4.9	2.3	2.5
23	0-4"	5.5	37	1147	184	815	7.1	7.4	3.6	3.7
24	0-4"	5.2	33	987	164	820	6.4	6.7	3.2	3.4
25	0-4"	5.7	26	1212	159	849	4.9	5.2	2.4	2.6
32	0-4"	4.7	75	525	112	824	14.9	16.0	7.4	8.0
33	0-4"	5.9	29	2492	105	830	5.7	6.2	2.9	3.1
34	0-4"	5.2	30	980	147	844	5.7	6.1	2.9	3.0
35	0-4"	5.3	65	1161	187	825	12.4	12.8	6.2	6.4
36	0-4"	5.2	51	1130	196	837	9.5	9.9	4.8	4.9
37	0-4"	5.7	28	1287	143	841	5.4	5.7	2.7	2.8
38	0-4"	6.3	25	2198	142	820	4.9	5.2	2.5	2.6
46	0-4"	6.3	34	3177	117	836	6.6	7.1	3.3	3.6
47	0-4"	5.1	47	778	174	859	8.7	9.1	4.3	4.5
49	0-4"	5.4	43	874	183	861	7.9	8.2	3.9	4.1
48	0-4"	5.1	79	945	186	815	15.2	15.8	7.6	7.9
50	0-4"	5.8	21	1834	143	827	4.1	4.3	2.0	2.2
57	0-4"	5.7	23	1953	138	840	4.4	4.7	2.2	2.4
61	0-4"	5.5	46	854	172	852	8.6	9.0	4.3	4.5
62	0-4"	5.0	58	841	165	862	10.7	11.3	5.4	5.6
59	0-4"	5.1	33	506	165	855	6.2	6.5	3.1	3.2

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
58	0-4"	5.7	21	3059	146	843	4.0	4.2	2.0	2.1
60	0-4"	5.2	49	756	178	873	8.9	9.3	4.5	4.7
72	0-4"	5.1	45	468	171	801	8.9	9.3	4.4	4.6
73	0-4"	5.0	47	622	171	843	8.8	9.3	4.4	4.6
74	0-4"	4.9	41	626	170	823	7.9	8.3	3.9	4.1
75	0-4"	5.2	39	905	136	815	7.7	8.2	3.9	4.1
86	0-4"	5.9	46	1288	140	862	8.6	9.2	4.3	4.6
Mean, mg/kg		5.4	40	1295	155	838	7.6	8.0	3.8	4.0
Median, mg/kg		5.4	38	1059	162	839	7.4	7.8	3.7	3.9
Minimum, mg/kg		4.7	16	468	105	801	3.1	3.4	1.6	1.7
Maximum, mg/kg		6.3	79	3177	196	873	15.2	16.0	7.6	8.0
Standard deviation, mg/kg		0.4	16	741	25	18	3.1	3.2	1.5	1.6
C.V., %		8	40	57	16	2	40	40	40	40
Count		28								
<b>Buffer zone</b>										
16	0-4"	4.6	49	260	114	820	9.8	10.5	4.9	5.2
17	0-4"	4.4	12	905	55	846	2.4	2.7	1.2	1.3
19	0-4"	5.9	10	2810	104	842	2.0	2.1	1.0	1.1
20	0-4"	6.7	20	3068	135	804	4.0	4.3	2.0	2.1
30	0-4"	5.0	50	830	86	862	9.6	10.5	4.8	5.3
31	0-4"	4.6	84	441	107	843	16.4	17.7	8.2	8.8
45	0-4"	4.5	61	377	112	811	12.3	13.2	6.1	6.6
71	0-4"	6.0	24	1785	142	825	4.7	5.0	2.3	2.5
84	0-4"	6.7	19	3128	121	824	3.8	4.0	1.9	2.0
85	0-4"	4.7	77	341	207	834	14.4	14.8	7.2	7.4

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
87	0-4"	5.2	44	609	138	833	8.5	9.1	4.3	4.5
98	0-4"	4.7	40	358	173	815	7.8	8.1	3.9	4.0
99	0-4"	4.9	39	457	165	822	7.5	7.9	3.8	4.0
100	0-4"	5.1	35	987	202	846	6.5	6.7	3.2	3.3
111	0-4"	6.1	12	1719	131	824	2.4	2.5	1.2	1.3
112	0-4"	4.9	30	1027	187	836	5.6	5.9	2.8	2.9
Mean, mg/kg		5.3	38	1194	136	830	7.3	7.8	3.7	3.9
Median, mg/kg		5.0	37	868	133	829	7.0	7.3	3.5	3.6
Minimum, mg/kg		4.4	10	260	55	804	2.0	2.1	1.0	1.1
Maximum, mg/kg		6.7	84	3128	207	862	16.4	17.7	8.2	8.8
Standard deviation, mg/kg		0.8	22	1006	42	15	4.3	4.6	2.2	2.3
C.V., %		15	59	84	31	2	59	59	59	59
Count		16								

**Table 13. Soil P sorption saturation and soil properties related to P sorption for 4 to 8 inch grid-soil samples from Field 5a for 2016.**

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
			mg/L				%			
<b>Whole field</b>										
21	4-8"	6.1	8	2088	110	915	1.4	1.6	0.7	0.8
22	4-8"	5.5	15	2096	139	925	2.6	2.8	1.3	1.4
23	4-8"	5.6	32	1198	152	914	5.6	6.0	2.8	3.0
24	4-8"	5.5	34	918	184	903	6.0	6.3	3.0	3.1
25	4-8"	5.9	19	1176	137	915	3.4	3.6	1.7	1.8
32	4-8"	4.9	26	466	100	944	4.6	5.0	2.3	2.5
33	4-8"	5.8	13	2016	98	950	2.3	2.5	1.1	1.2
34	4-8"	5.2	18	1075	138	925	3.2	3.4	1.6	1.7
35	4-8"	5.3	50	1376	154	934	8.6	9.2	4.3	4.6
36	4-8"	5.5	43	1218	173	961	7.2	7.6	3.6	3.8
37	4-8"	5.8	21	1005	149	915	3.7	3.9	1.9	2.0
38	4-8"	6.5	18	1675	127	924	3.2	3.4	1.6	1.7
46	4-8"	6.6	12	3024	103	935	2.1	2.3	1.1	1.2
47	4-8"	5.1	30	802	156	928	5.2	5.5	2.6	2.8
49	4-8"	5.7	44	895	171	924	7.6	8.0	3.8	4.0
48	4-8"	5.4	65	1059	178	935	11.1	11.7	5.5	5.8
50	4-8"	6.0	12	2010	129	967	2.0	2.2	1.0	1.1
57	4-8"	6.0	17	1220	123	928	3.0	3.2	1.5	1.6
61	4-8"	5.5	33	936	148	922	5.8	6.2	2.9	3.1
62	4-8"	5.0	65	858	144	947	11.1	11.9	5.6	6.0
59	4-8"	4.9	22	498	155	935	3.8	4.0	1.9	2.0
58	4-8"	6.2	11	2596	123	925	1.9	2.1	1.0	1.0



Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
60	4-8"	5.1	19	579	133	941	3.3	3.5	1.6	1.8
72	4-8"	5.2	26	480	150	925	4.5	4.8	2.3	2.4
73	4-8"	5.3	22	664	153	937	3.8	4.0	1.9	2.0
74	4-8"	5.3	24	814	165	968	4.0	4.2	2.0	2.1
75	4-8"	4.8	37	827	127	955	6.3	6.8	3.2	3.4
86	4-8"	6.0	26	1167	130	934	4.5	4.9	2.3	2.4
16	4-8"	4.7	22	212	108	930	3.9	4.2	2.0	2.1
17	4-8"	4.2	36	656	93	925	6.5	7.1	3.2	3.5
19	4-8"	5.9	19	2859	115	973	3.2	3.5	1.6	1.7
20	4-8"	6.3	10	2760	106	950	1.7	1.9	0.9	0.9
30	4-8"	4.9	32	477	97	935	5.7	6.2	2.8	3.1
31	4-8"	4.9	35	358	98	914	6.3	6.9	3.2	3.5
45	4-8"	4.5	37	381	104	944	6.5	7.1	3.2	3.5
71	4-8"	6.0	18	1694	138	933	3.1	3.4	1.6	1.7
84	4-8"	6.4	12	2310	120	948	2.1	2.2	1.0	1.1
85	4-8"	4.7	66	307	176	924	11.4	12.0	5.7	6.0
87	4-8"	5.0	36	645	143	933	6.3	6.7	3.1	3.3
98	4-8"	4.9	26	471	159	928	4.5	4.8	2.3	2.4
99	4-8"	4.9	21	564	137	946	3.6	3.9	1.8	1.9
100	4-8"	5.1	32	907	158	968	5.3	5.7	2.7	2.8
111	4-8"	6.0	22	1902	141	946	3.8	4.0	1.9	2.0
112	4-8"	4.8	14	805	150	955	2.4	2.5	1.2	1.3
Mean, mg/kg		5.4	27	1183	136	936	4.7	5.1	2.4	2.5
Median, mg/kg		5.4	23	927	138	934	3.9	4.2	2.0	2.1
Minimum, mg/kg		4.2	8	212	93	903	1.4	1.6	0.7	0.8
Maximum, mg/kg		6.6	66	3024	184	973	11.4	12.0	5.7	6.0

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
Standard deviation, mg/kg		0.6	14	749	25	16	2.5	2.6	1.2	1.3
C.V., %		11	53	63	18	2	52	51	52	51
Count		44								
<b>Application zone</b>										
21	4-8"	6.1	8	2088	110	915	1.4	1.6	0.7	0.8
22	4-8"	5.5	15	2096	139	925	2.6	2.8	1.3	1.4
23	4-8"	5.6	32	1198	152	914	5.6	6.0	2.8	3.0
24	4-8"	5.5	34	918	184	903	6.0	6.3	3.0	3.1
25	4-8"	5.9	19	1176	137	915	3.4	3.6	1.7	1.8
32	4-8"	4.9	26	466	100	944	4.6	5.0	2.3	2.5
33	4-8"	5.8	13	2016	98	950	2.3	2.5	1.1	1.2
34	4-8"	5.2	18	1075	138	925	3.2	3.4	1.6	1.7
35	4-8"	5.3	50	1376	154	934	8.6	9.2	4.3	4.6
36	4-8"	5.5	43	1218	173	961	7.2	7.6	3.6	3.8
37	4-8"	5.8	21	1005	149	915	3.7	3.9	1.9	2.0
38	4-8"	6.5	18	1675	127	924	3.2	3.4	1.6	1.7
46	4-8"	6.6	12	3024	103	935	2.1	2.3	1.1	1.2
47	4-8"	5.1	30	802	156	928	5.2	5.5	2.6	2.8
49	4-8"	5.7	44	895	171	924	7.6	8.0	3.8	4.0
48	4-8"	5.4	65	1059	178	935	11.1	11.7	5.5	5.8
50	4-8"	6.0	12	2010	129	967	2.0	2.2	1.0	1.1
57	4-8"	6.0	17	1220	123	928	3.0	3.2	1.5	1.6
61	4-8"	5.5	33	936	148	922	5.8	6.2	2.9	3.1
62	4-8"	5.0	65	858	144	947	11.1	11.9	5.6	6.0
59	4-8"	4.9	22	498	155	935	3.8	4.0	1.9	2.0

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
58	4-8"	6.2	11	2596	123	925	1.9	2.1	1.0	1.0
60	4-8"	5.1	19	579	133	941	3.3	3.5	1.6	1.8
72	4-8"	5.2	26	480	150	925	4.5	4.8	2.3	2.4
73	4-8"	5.3	22	664	153	937	3.8	4.0	1.9	2.0
74	4-8"	5.3	24	814	165	968	4.0	4.2	2.0	2.1
75	4-8"	4.8	37	827	127	955	6.3	6.8	3.2	3.4
86	4-8"	6.0	26	1167	130	934	4.5	4.9	2.3	2.4
Mean, mg/kg		5.6	27	1241	141	933	4.7	5.0	2.4	2.5
Median, mg/kg		5.5	23	1067	142	931	3.9	4.1	1.9	2.1
Minimum, mg/kg		4.8	8	466	98	903	1.4	1.6	0.7	0.8
Maximum, mg/kg		6.6	65	3024	184	968	11.1	11.9	5.6	6.0
Standard deviation, mg/kg		0.5	15	653	23	16	2.6	2.7	1.3	1.3
C.V., %		9	55	53	16	2	54	54	54	54
Count		28								
<b>Buffer zone</b>										
16	4-8"	4.7	22	212	108	930	3.9	4.2	2.0	2.1
17	4-8"	4.2	36	656	93	925	6.5	7.1	3.2	3.5
19	4-8"	5.9	19	2859	115	973	3.2	3.5	1.6	1.7
20	4-8"	6.3	10	2760	106	950	1.7	1.9	0.9	0.9
30	4-8"	4.9	32	477	97	935	5.7	6.2	2.8	3.1
31	4-8"	4.9	35	358	98	914	6.3	6.9	3.2	3.5
45	4-8"	4.5	37	381	104	944	6.5	7.1	3.2	3.5
71	4-8"	6.0	18	1694	138	933	3.1	3.4	1.6	1.7
84	4-8"	6.4	12	2310	120	948	2.1	2.2	1.0	1.1
85	4-8"	4.7	66	307	176	924	11.4	12.0	5.7	6.0

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
87	4-8"	5.0	36	645	143	933	6.3	6.7	3.1	3.3
98	4-8"	4.9	26	471	159	928	4.5	4.8	2.3	2.4
99	4-8"	4.9	21	564	137	946	3.6	3.9	1.8	1.9
100	4-8"	5.1	32	907	158	968	5.3	5.7	2.7	2.8
111	4-8"	6.0	22	1902	141	946	3.8	4.0	1.9	2.0
112	4-8"	4.8	14	805	150	955	2.4	2.5	1.2	1.3
Mean, mg/kg		5.9	29	1125	131	893	6.1	6.4	3.7	3.8
Median, mg/kg		4.9	24	651	129	940	4.2	4.5	2.1	2.3
Minimum, mg/kg		4.2	10	212	93	914	1.7	1.9	0.9	0.9
Maximum, mg/kg		6.4	66	2859	176	973	11.4	12.0	5.7	6.0
Standard deviation, mg/kg		0.7	14	909	26	16	2.4	2.5	1.2	1.3
C.V., %		12	48	81	20	2	39	40	32	33
Count		16								

**Table 14. Soil P sorption saturation and soil properties related to P sorption for 0 to 4 inch grid-soil samples from Field 5a for 2018.**

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
			mg/L				%			
<b>Whole field</b>										
21	0-4"	6.9	25	2630	105	826	5.0	5.4	2.5	2.7
22	0-4"	5.9	44	1628	121	835	8.6	9.2	4.3	4.6
23	0-4"	5.6	35	1071	148	825	6.8	7.2	3.4	3.6
24	0-4"	6.0	31	1119	139	830	6.0	6.4	3.0	3.2
25	0-4"	6.0	31	1250	141	860	5.8	6.2	2.9	3.1
32	0-4"	6.6	26	2395	95	814	5.3	5.7	2.6	2.9
33	0-4"	5.5	78	737	94	835	15.4	16.8	7.7	8.4
34	0-4"	6.6	31	1664	111	840	6.0	6.5	3.0	3.3
35	0-4"	5.6	59	919	153	830	11.4	12.0	5.7	6.0
36	0-4"	5.6	55	898	162	840	10.4	11.0	5.2	5.5
37	0-4"	6.0	24	1409	125	835	4.7	5.0	2.3	2.5
38	0-4"	6.3	27	1789	124	815	5.4	5.8	2.7	2.9
46	0-4"	6.9	44	3041	107	846	8.5	9.2	4.3	4.6
47	0-4"	5.6	50	724	156	855	9.4	9.9	4.7	4.9
48	0-4"	5.7	64	907	157	869	11.8	12.5	5.9	6.2
49	0-4"	5.8	77	1216	176	820	14.8	15.5	7.4	7.7
50	0-4"	6.1	20	1980	124	824	3.9	4.2	2.0	2.1
51	0-4"	6.2	25	1505	121	835	4.9	5.2	2.4	2.6
59	0-4"	5.3	34	619	144	861	6.4	6.8	3.2	3.4
60	0-4"	5.3	38	628	137	846	7.3	7.7	3.6	3.9
61	0-4"	5.8	51	919	147	856	9.6	10.2	4.8	5.1
62	0-4"	5.4	56	859	142	847	10.7	11.3	5.3	5.7

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
72	0-4"	5.4	55	524	148	811	10.9	11.5	5.4	5.7
73	0-4"	5.5	65	697	131	834	12.6	13.5	6.3	6.7
74	0-4"	5.5	43	621	128	813	8.6	9.1	4.3	4.6
75	0-4"	5.3	49	904	128	805	9.8	10.5	4.9	5.3
85	0-4"	5.2	62	421	165	824	12.0	12.5	6.0	6.3
86	0-4"	5.5	58	531	128	852	11.1	11.8	5.5	5.9
16	0-4"	4.9	66	408	87	812	13.5	14.7	6.7	7.3
17	0-4"	5.0	65	640	95	836	12.8	14.0	6.4	7.0
19	0-4"	6.8	29	3096	81	832	5.8	6.4	2.9	3.2
20	0-4"	6.9	28	3307	113	824	5.6	6.0	2.8	3.0
30	0-4"	5.2	150	587	127	856	28.5	30.5	14.2	15.3
31	0-4"	6.3	46	1376	78	846	9.1	10.0	4.5	5.0
45	0-4"	5.2	101	572	111	821	20.1	21.7	10.1	10.8
58	0-4"	6.5	35	2854	96	849	6.8	7.4	3.4	3.7
71	0-4"	7.0	31	2903	104	835	6.1	6.6	3.1	3.3
84	0-4"	7.2	20	4139	96	804	4.1	4.4	2.0	2.2
87	0-4"	5.3	40	595	129	837	7.7	8.3	3.9	4.1
98	0-4"	5.2	33	468	146	819	6.5	6.8	3.2	3.4
99	0-4"	5.3	78	432	148	816	15.3	16.2	7.7	8.1
100	0-4"	5.6	39	1030	168	827	7.5	7.8	3.7	3.9
111	0-4"	6.6	26	1906	113	819	5.2	5.6	2.6	2.8
112	0-4"	5.3	28	1099	166	833	5.3	5.6	2.7	2.8
Mean, mg/kg		5.9	47	1341	128	833	9.2	9.8	4.6	4.9
Median, mg/kg		5.6	42	975	128	834	8.1	8.7	4.1	4.4
Minimum, mg/kg		4.9	20	408	78	804	3.9	4.2	2.0	2.1
Maximum, mg/kg		7.2	150	4139	176	869	28.5	30.5	14.2	15.3

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
Standard deviation, mg/kg		0.6	24	932	25	16	4.7	5.0	2.3	2.5
C.V., %		11	52	69	20	2	51	51	51	51
Count		44								
<b>Application zone</b>										
21	0-4"	6.9	25	2630	105	826	5.0	5.4	2.5	2.7
22	0-4"	5.9	44	1628	121	835	8.6	9.2	4.3	4.6
23	0-4"	5.6	35	1071	148	825	6.8	7.2	3.4	3.6
24	0-4"	6.0	31	1119	139	830	6.0	6.4	3.0	3.2
25	0-4"	6.0	31	1250	141	860	5.8	6.2	2.9	3.1
32	0-4"	6.6	26	2395	95	814	5.3	5.7	2.6	2.9
33	0-4"	5.5	78	737	94	835	15.4	16.8	7.7	8.4
34	0-4"	6.6	31	1664	111	840	6.0	6.5	3.0	3.3
35	0-4"	5.6	59	919	153	830	11.4	12.0	5.7	6.0
36	0-4"	5.6	55	898	162	840	10.4	11.0	5.2	5.5
37	0-4"	6.0	24	1409	125	835	4.7	5.0	2.3	2.5
38	0-4"	6.3	27	1789	124	815	5.4	5.8	2.7	2.9
46	0-4"	6.9	44	3041	107	846	8.5	9.2	4.3	4.6
47	0-4"	5.6	50	724	156	855	9.4	9.9	4.7	4.9
48	0-4"	5.7	64	907	157	869	11.8	12.5	5.9	6.2
49	0-4"	5.8	77	1216	176	820	14.8	15.5	7.4	7.7
50	0-4"	6.1	20	1980	124	824	3.9	4.2	2.0	2.1
51	0-4"	6.2	25	1505	121	835	4.9	5.2	2.4	2.6
59	0-4"	5.3	34	619	144	861	6.4	6.8	3.2	3.4
60	0-4"	5.3	38	628	137	846	7.3	7.7	3.6	3.9
61	0-4"	5.8	51	919	147	856	9.6	10.2	4.8	5.1

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
62	0-4"	5.4	56	859	142	847	10.7	11.3	5.3	5.7
72	0-4"	5.4	55	524	148	811	10.9	11.5	5.4	5.7
73	0-4"	5.5	65	697	131	834	12.6	13.5	6.3	6.7
74	0-4"	5.5	43	621	128	813	8.6	9.1	4.3	4.6
75	0-4"	5.3	49	904	128	805	9.8	10.5	4.9	5.3
85	0-4"	5.2	62	421	165	824	12.0	12.5	6.0	6.3
86	0-4"	5.5	58	531	128	852	11.1	11.8	5.5	5.9
Mean, mg/kg		5.8	45	1200	134	835	8.7	9.2	4.3	4.6
Median, mg/kg		5.7	44	919	134	835	8.6	9.2	4.3	4.6
Minimum, mg/kg		5.2	20	421	94	805	3.9	4.2	2.0	2.1
Maximum, mg/kg		6.9	78	3041	176	869	15.4	16.8	7.7	8.4
Standard deviation, mg/kg		0.5	16	670	21	17	3.2	3.3	1.6	1.7
C.V., %		8	37	56	15	2	36	36	36	36
Count		28								
<b>Buffer zone</b>										
16	0-4"	4.9	66	408	87	812	13.5	14.7	6.7	7.3
17	0-4"	5.0	65	640	95	836	12.8	14.0	6.4	7.0
19	0-4"	6.8	29	3096	81	832	5.8	6.4	2.9	3.2
20	0-4"	6.9	28	3307	113	824	5.6	6.0	2.8	3.0
30	0-4"	5.2	150	587	127	856	28.5	30.5	14.2	15.3
31	0-4"	6.3	46	1376	78	846	9.1	10.0	4.5	5.0
45	0-4"	5.2	101	572	111	821	20.1	21.7	10.1	10.8
58	0-4"	6.5	35	2854	96	849	6.8	7.4	3.4	3.7
71	0-4"	7.0	31	2903	104	835	6.1	6.6	3.1	3.3
84	0-4"	7.2	20	4139	96	804	4.1	4.4	2.0	2.2



Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
87	0-4"	5.3	40	595	129	837	7.7	8.3	3.9	4.1
98	0-4"	5.2	33	468	146	819	6.5	6.8	3.2	3.4
99	0-4"	5.3	78	432	148	816	15.3	16.2	7.7	8.1
100	0-4"	5.6	39	1030	168	827	7.5	7.8	3.7	3.9
111	0-4"	6.6	26	1906	113	819	5.2	5.6	2.6	2.8
112	0-4"	5.3	28	1099	166	833	5.3	5.6	2.7	2.8
Mean, mg/kg		5.9	51	1588	116	829	10.0	10.7	5.0	5.4
Median, mg/kg		5.5	37	1065	112	830	7.1	7.6	3.6	3.8
Minimum, mg/kg		4.9	20	408	78	804	4.1	4.4	2.0	2.2
Maximum, mg/kg		7.2	150	4139	168	856	28.5	30.5	14.2	15.3
Standard deviation, mg/kg		0.8	34	1256	29	14	6.6	7.1	3.3	3.6
C.V., %		14	68	79	25	2	66	66	66	66
Count		16								

**Table 15. Soil P sorption saturation and soil properties related to P sorption for 4 to 8 inch grid-soil samples from Field 5a for 2018.**

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
			mg/L				%			
<b>Whole field</b>										
21	4-8"	6.5	20	3004	115	925	3.6	3.8	1.8	1.9
22	4-8"	5.6	34	1490	142	936	5.9	6.3	2.9	3.2
23	4-8"	5.8	34	1122	149	915	6.0	6.4	3.0	3.2
24	4-8"	5.9	31	1002	170	928	5.3	5.6	2.7	2.8
25	4-8"	5.9	28	1037	167	948	4.7	5.0	2.4	2.5
32	4-8"	5.3	55	589	117	925	9.8	10.6	4.9	5.3
33	4-8"	6.6	17	3075	125	903	3.1	3.3	1.5	1.7
34	4-8"	6.6	19	1785	119	924	3.4	3.6	1.7	1.8
35	4-8"	5.6	53	1199	158	926	9.2	9.8	4.6	4.9
36	4-8"	5.8	60	938	178	935	10.2	10.8	5.1	5.4
37	4-8"	6.1	21	1213	145	941	3.6	3.9	1.8	1.9
38	4-8"	6.3	21	1972	144	925	3.7	3.9	1.8	2.0
46	4-8"	6.4	14	3281	103	935	2.5	2.7	1.2	1.3
47	4-8"	5.7	35	924	167	920	6.1	6.4	3.0	3.2
48	4-8"	5.6	80	1018	175	965	13.3	14.0	6.6	7.0
49	4-8"	5.7	40	1070	155	943	6.8	7.3	3.4	3.6
50	4-8"	6.2	13	2044	117	940	2.3	2.5	1.1	1.2
59	4-8"	5.3	24	373	133	941	4.2	4.5	2.1	2.2
60	4-8"	5.5	20	625	127	951	3.4	3.7	1.7	1.9
61	4-8"	5.7	40	895	146	935	6.9	7.4	3.5	3.7
62	4-8"	5.3	65	870	144	935	11.3	12.0	5.6	6.0
72	4-8"	5.3	31	476	137	929	5.4	5.8	2.7	2.9

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
73	4-8"	5.5	26	665	132	922	4.6	4.9	2.3	2.5
74	4-8"	5.5	27	668	147	923	4.7	5.0	2.4	2.5
75	4-8"	5.0	49	716	135	935	8.5	9.2	4.3	4.6
85	4-8"	5.2	38	354	152	928	6.6	7.0	3.3	3.5
86	4-8"	5.4	29	380	126	930	5.1	5.5	2.5	2.7
16	4-8"	4.9	42	211	105	912	7.6	8.3	3.8	4.1
17	4-8"	5.1	22	1015	90	948	3.9	4.2	1.9	2.1
19	4-8"	5.8	28	2405	122	953	4.8	5.2	2.4	2.6
20	4-8"	7.0	22	3648	138	943	3.8	4.1	1.9	2.0
30	4-8"	5.8	64	588	111	964	11.0	11.9	5.5	6.0
31	4-8"	5.1	76	500	125	910	13.6	14.7	6.8	7.3
45	4-8"	5.0	40	463	106	917	7.2	7.8	3.6	3.9
58	4-8"	6.3	13	2868	107	933	2.3	2.5	1.2	1.3
71	4-8"	5.1	38	551	131	944	6.6	7.1	3.3	3.5
84	4-8"	6.5	11	2168	117	941	1.9	2.1	1.0	1.0
87	4-8"	5.2	31	687	126	952	5.3	5.8	2.7	2.9
98	4-8"	5.0	28	415	144	921	4.9	5.3	2.5	2.6
99	4-8"	5.2	21	576	121	943	3.7	3.9	1.8	2.0
100	4-8"	5.5	23	935	149	915	4.1	4.3	2.0	2.2
111	4-8"	6.1	16	1425	115	922	2.9	3.1	1.4	1.5
112	4-8"	5.1	28	803	129	932	4.9	5.3	2.5	2.6
Mean, mg/kg		5.7	33	1210	134	933	5.8	6.2	2.9	3.1
Median, mg/kg		5.6	28	935	132	933	4.9	5.3	2.5	2.6
Minimum, mg/kg		4.9	11	211	90	903	1.9	2.1	1.0	1.0
Maximum, mg/kg		7.0	80	3648	178	965	13.6	14.7	6.8	7.3

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
Standard deviation, mg/kg		0.5	17	886	21	14	2.9	3.1	1.5	1.6
C.V., %		9	51	73	15	1	50	50	50	50
Count		43								
<b>Application zone</b>										
21	4-8"	6.5	20	3004	115	925	3.6	3.8	1.8	1.9
22	4-8"	5.6	34	1490	142	936	5.9	6.3	2.9	3.2
23	4-8"	5.8	34	1122	149	915	6.0	6.4	3.0	3.2
24	4-8"	5.9	31	1002	170	928	5.3	5.6	2.7	2.8
25	4-8"	5.9	28	1037	167	948	4.7	5.0	2.4	2.5
32	4-8"	5.3	55	589	117	925	9.8	10.6	4.9	5.3
33	4-8"	6.6	17	3075	125	903	3.1	3.3	1.5	1.7
34	4-8"	6.6	19	1785	119	924	3.4	3.6	1.7	1.8
35	4-8"	5.6	53	1199	158	926	9.2	9.8	4.6	4.9
36	4-8"	5.8	60	938	178	935	10.2	10.8	5.1	5.4
37	4-8"	6.1	21	1213	145	941	3.6	3.9	1.8	1.9
38	4-8"	6.3	21	1972	144	925	3.7	3.9	1.8	2.0
46	4-8"	6.4	14	3281	103	935	2.5	2.7	1.2	1.3
47	4-8"	5.7	35	924	167	920	6.1	6.4	3.0	3.2
48	4-8"	5.6	80	1018	175	965	13.3	14.0	6.6	7.0
49	4-8"	5.7	40	1070	155	943	6.8	7.3	3.4	3.6
50	4-8"	6.2	13	2044	117	940	2.3	2.5	1.1	1.2
59	4-8"	5.3	24	373	133	941	4.2	4.5	2.1	2.2
60	4-8"	5.5	20	625	127	951	3.4	3.7	1.7	1.9
61	4-8"	5.7	40	895	146	935	6.9	7.4	3.5	3.7
62	4-8"	5.3	65	870	144	935	11.3	12.0	5.6	6.0

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
72	4-8"	5.3	31	476	137	929	5.4	5.8	2.7	2.9
73	4-8"	5.5	26	665	132	922	4.6	4.9	2.3	2.5
74	4-8"	5.5	27	668	147	923	4.7	5.0	2.4	2.5
75	4-8"	5.0	49	716	135	935	8.5	9.2	4.3	4.6
85	4-8"	5.2	38	354	152	928	6.6	7.0	3.3	3.5
86	4-8"	5.4	29	380	126	930	5.1	5.5	2.5	2.7
Mean, mg/kg		5.8	34	1214	142	932	5.9	6.3	3.0	3.2
Median, mg/kg		5.7	31	1002	144	930	5.3	5.6	2.7	2.8
Minimum, mg/kg		5.0	13	354	103	903	2.3	2.5	1.1	1.2
Maximum, mg/kg		6.6	80	3281	178	965	13.3	14.0	6.6	7.0
Standard deviation, mg/kg		0.4	17	818	20	12	2.8	3.0	1.4	1.5
C.V., %		8	49	67	14	1	48	47	48	47
Count		27								
<b>Buffer zone</b>										
16	4-8"	4.9	42	211	105	912	7.6	8.3	3.8	4.1
17	4-8"	5.1	22	1015	90	948	3.9	4.2	1.9	2.1
19	4-8"	5.8	28	2405	122	953	4.8	5.2	2.4	2.6
20	4-8"	7.0	22	3648	138	943	3.8	4.1	1.9	2.0
30	4-8"	5.8	64	588	111	964	11.0	11.9	5.5	6.0
31	4-8"	5.1	76	500	125	910	13.6	14.7	6.8	7.3
45	4-8"	5.0	40	463	106	917	7.2	7.8	3.6	3.9
58	4-8"	6.3	13	2868	107	933	2.3	2.5	1.2	1.3
71	4-8"	5.1	38	551	131	944	6.6	7.1	3.3	3.5
84	4-8"	6.5	11	2168	117	941	1.9	2.1	1.0	1.0
87	4-8"	5.2	31	687	126	952	5.3	5.8	2.7	2.9

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
98	4-8"	5.0	28	415	144	921	4.9	5.3	2.5	2.6
99	4-8"	5.2	21	576	121	943	3.7	3.9	1.8	2.0
100	4-8"	5.5	23	935	149	915	4.1	4.3	2.0	2.2
111	4-8"	6.1	16	1425	115	922	2.9	3.1	1.4	1.5
112	4-8"	5.1	28	803	129	932	4.9	5.3	2.5	2.6
Mean, mg/kg		5.5	31	1204	121	934	5.5	6.0	2.8	3.0
Median, mg/kg		5.2	28	745	122	937	4.9	5.2	2.4	2.6
Minimum, mg/kg		4.9	11	211	90	910	1.9	2.1	1.0	1.0
Maximum, mg/kg		7.0	76	3648	149	964	13.6	14.7	6.8	7.3
Standard deviation, mg/kg		0.6	18	1018	15	17	3.1	3.4	1.6	1.7
C.V., %		11	56	85	13	2	57	57	57	57
Count		16								

**Table 16. Soil P sorption saturation and soil properties related to P sorption for 0 to 4 inch grid-soil samples from Field 12 for 2014.**

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
			mg/L				%			
<b>Whole field</b>										
9	0-4"	5.9	138	776	149	860	25.8	27.4	12.9	13.7
10	0-4"	6.0	143	763	138	857	27.0	28.7	13.5	14.4
11	0-4"	5.6	147	681	155	869	27.1	28.7	13.6	14.4
13	0-4"	6.0	65	1621	128	847	12.5	13.3	6.2	6.7
17	0-4"	5.7	117	721	146	826	22.7	24.1	11.4	12.0
18	0-4"	5.9	147	726	145	857	27.6	29.3	13.8	14.7
19	0-4"	5.7	126	608	154	869	23.3	24.6	11.6	12.3
20	0-4"	5.7	101	1169	151	893	18.2	19.3	9.1	9.7
21	0-4"	5.8	61	1367	153	855	11.4	12.1	5.7	6.1
22	0-4"	5.3	71	734	261	860	12.5	12.7	6.3	6.3
25	0-4"	5.5	60	788	107	815	12.1	13.0	6.0	6.5
26	0-4"	5.6	128	690	151	847	24.2	25.7	12.1	12.8
27	0-4"	5.8	109	956	143	825	21.2	22.5	10.6	11.3
28	0-4"	5.8	45	1441	117	889	8.3	8.9	4.1	4.5
29	0-4"	5.6	39	993	151	856	7.3	7.7	3.7	3.9
30	0-4"	5.6	53	873	155	814	10.4	10.9	5.2	5.5
33	0-4"	5.3	53	743	167	836	10.1	10.6	5.0	5.3
34	0-4"	6.1	43	1530	134	880	7.9	8.5	4.0	4.2
35	0-4"	6.0	37	1207	102	867	7.0	7.6	3.5	3.8
37	0-4"	5.8	63	1039	118	896	11.5	12.4	5.8	6.2
38	0-4"	5.8	52	828	92	847	10.2	11.1	5.1	5.5
41	0-4"	5.9	43	1318	101	869	8.2	8.9	4.1	4.4

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
42	0-4"	6.0	30	1781	102	834	5.9	6.4	3.0	3.2
43	0-4"	6.2	29	1767	108	875	5.4	5.9	2.7	3.0
44	0-4"	5.6	73	1048	136	826	14.3	15.2	7.1	7.6
45	0-4"	5.8	30	1143	113	867	5.7	6.1	2.8	3.1
46	0-4"	5.8	47	820	133	849	9.0	9.6	4.5	4.8
47	0-4"	5.9	42	1838	96	867	8.0	8.7	4.0	4.4
49	0-4"	6.1	24	1953	83	860	4.6	5.1	2.3	2.5
50	0-4"	5.9	19	1758	87	864	3.7	4.0	1.8	2.0
51	0-4"	6.3	17	1908	87	856	3.3	3.6	1.6	1.8
52	0-4"	6.3	30	1537	100	867	5.7	6.2	2.9	3.1
53	0-4"	6.1	33	1416	102	859	6.3	6.9	3.2	3.4
54	0-4"	6.1	32	970	115	863	6.1	6.5	3.0	3.3
57	0-4"	6.0	26	1120	108	896	4.8	5.2	2.4	2.6
58	0-4"	6.0	36	1338	101	878	6.8	7.4	3.4	3.7
59	0-4"	5.9	39	853	116	884	7.2	7.8	3.6	3.9
60	0-4"	6.0	52	1357	107	896	9.6	10.4	4.8	5.2
61	0-4"	6.0	34	1453	118	869	6.4	6.9	3.2	3.4
62	0-4"	6.0	97	1723	139	873	18.0	19.2	9.0	9.6
Mean, mg/kg		5.9	63	1184	127	860	11.9	12.7	6.0	6.4
Median, mg/kg		5.9	50	1132	118	862	9.3	10.0	4.6	5.0
Minimum, mg/kg		5.3	17	608	83	814	3.3	3.6	1.6	1.8
Maximum, mg/kg		6.3	147	1953	261	896	27.6	29.3	13.8	14.7
Standard deviation, mg/kg		0.2	40	405	32	21	7.4	7.8	3.7	3.9
C.V., %		4	63	34	25	2	62	61	62	61
Count		40								



Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
<b>Application zone</b>										
17	0-4"	5.7	117	721	146	826	22.7	24.1	11.4	12.0
18	0-4"	5.9	147	726	145	857	27.6	29.3	13.8	14.7
19	0-4"	5.7	126	608	154	869	23.3	24.6	11.6	12.3
20	0-4"	5.7	101	1169	151	893	18.2	19.3	9.1	9.7
21	0-4"	5.8	61	1367	153	855	11.4	12.1	5.7	6.1
25	0-4"	5.5	60	788	107	815	12.1	13.0	6.0	6.5
26	0-4"	5.6	128	690	151	847	24.2	25.7	12.1	12.8
27	0-4"	5.8	109	956	143	825	21.2	22.5	10.6	11.3
28	0-4"	5.8	45	1441	117	889	8.3	8.9	4.1	4.5
29	0-4"	5.6	39	993	151	856	7.3	7.7	3.7	3.9
33	0-4"	5.3	53	743	167	836	10.1	10.6	5.0	5.3
34	0-4"	6.1	43	1530	134	880	7.9	8.5	4.0	4.2
35	0-4"	6.0	37	1207	102	867	7.0	7.6	3.5	3.8
37	0-4"	5.8	63	1039	118	896	11.5	12.4	5.8	6.2
41	0-4"	5.9	43	1318	101	869	8.2	8.9	4.1	4.4
42	0-4"	6.0	30	1781	102	834	5.9	6.4	3.0	3.2
43	0-4"	6.2	29	1767	108	875	5.4	5.9	2.7	3.0
44	0-4"	5.6	73	1048	136	826	14.3	15.2	7.1	7.6
45	0-4"	5.8	30	1143	113	867	5.7	6.1	2.8	3.1
46	0-4"	5.8	47	820	133	849	9.0	9.6	4.5	4.8
49	0-4"	6.1	24	1953	83	860	4.6	5.1	2.3	2.5
50	0-4"	5.9	19	1758	87	864	3.7	4.0	1.8	2.0
51	0-4"	6.3	17	1908	87	856	3.3	3.6	1.6	1.8
52	0-4"	6.3	30	1537	100	867	5.7	6.2	2.9	3.1
53	0-4"	6.1	33	1416	102	859	6.3	6.9	3.2	3.4

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
54	0-4"	6.1	32	970	115	863	6.1	6.5	3.0	3.3
57	0-4"	6.0	26	1120	108	896	4.8	5.2	2.4	2.6
58	0-4"	6.0	36	1338	101	878	6.8	7.4	3.4	3.7
59	0-4"	5.9	39	853	116	884	7.2	7.8	3.6	3.9
60	0-4"	6.0	52	1357	107	896	9.6	10.4	4.8	5.2
61	0-4"	6.0	34	1453	118	869	6.4	6.9	3.2	3.4
Mean, mg/kg		5.9	56	1210	121	862	10.5	11.2	5.3	5.6
Median, mg/kg		5.9	43	1169	116	864	7.9	8.5	4.0	4.2
Minimum, mg/kg		5.3	17	608	83	815	3.3	3.6	1.6	1.8
Maximum, mg/kg		6.3	147	1953	167	896	27.6	29.3	13.8	14.7
Standard deviation, mg/kg		0.2	36	384	23	22	6.8	7.1	3.4	3.6
C.V., %		4	64	32	19	3	64	63	64	63
Count		31								
<b>Buffer zone</b>										
9	0-4"	5.90	138	776	149	860	25.8	27.4	12.9	13.7
10	0-4"	6.00	143	763	138	857	27.0	28.7	13.5	14.4
11	0-4"	5.60	147	681	155	869	27.1	28.7	13.6	14.4
13	0-4"	6.00	65	1621	128	847	12.5	13.3	6.2	6.7
22	0-4"	5.30	71	734	261	860	12.5	12.7	6.3	6.3
30	0-4"	5.60	53	873	155	814	10.4	10.9	5.2	5.5
38	0-4"	5.80	52	828	92	847	10.2	11.1	5.1	5.5
47	0-4"	5.90	42	1838	96	867	8.0	8.7	4.0	4.4
62	0-4"	6.00	97	1723	139	873	18.0	19.2	9.0	9.6
Mean, mg/kg		5.8	90	1093	146	855	16.8	17.9	8.4	8.9
Median, mg/kg		5.9	71	828	139	860	12.5	13.3	6.3	6.7

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
Minimum, mg/kg		5.3	42	681	92	814	8.0	8.7	4.0	4.4
Maximum, mg/kg		6.0	147	1838	261	873	27.1	28.7	13.6	14.4
Standard deviation, mg/kg		0.2	43	482	49	18	7.8	8.3	3.9	4.2
C.V., %		4	47	44	34	2	47	47	47	47
Count		9								

**Table 17. Soil P sorption saturation and soil properties related to P sorption for 4 to 8 inch grid-soil samples from Field 12 for 2014.**

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
			mg/L				%			
<b>Whole field</b>										
9	4-8"	6.4	47	650	94	910	8.6	9.4	4.3	4.7
10	4-8"	5.8	73	663	110	958	12.6	13.7	6.3	6.8
11	4-8"	5.9	81	678	123	926	14.3	15.4	7.2	7.7
13	4-8"	6.0	32	1447	117	946	5.6	6.0	2.8	3.0
17	4-8"	5.8	69	670	100	910	12.5	13.7	6.3	6.8
18	4-8"	5.6	102	682	128	928	18.0	19.3	9.0	9.7
19	4-8"	5.7	62	601	108	900	11.3	12.3	5.7	6.2
20	4-8"	5.7	36	1307	106	927	6.4	7.0	3.2	3.5
21	4-8"	5.9	27	1489	105	948	4.7	5.1	2.4	2.6
22	4-8"	5.3	62	488	160	915	10.9	11.5	5.4	5.8
25	4-8"	5.8	32	713	80	936	5.7	6.3	2.9	3.1
26	4-8"	5.7	88	723	121	924	15.6	16.8	7.8	8.4
27	4-8"	5.9	77	879	116	905	14.0	15.1	7.0	7.5
28	4-8"	6.1	13	1778	90	910	2.4	2.6	1.2	1.3
29	4-8"	5.8	17	1315	119	927	3.0	3.3	1.5	1.6
30	4-8"	5.8	26	767	105	933	4.6	5.0	2.3	2.5
33	4-8"	6.0	38	675	121	948	6.6	7.1	3.3	3.6
34	4-8"	6.1	21	1670	111	935	3.7	4.0	1.9	2.0
35	4-8"	6.1	17	1297	97	922	3.1	3.3	1.5	1.7
37	4-8"	5.9	47	1171	98	918	8.5	9.3	4.2	4.6
38	4-8"	6.0	23	785	73	956	4.0	4.5	2.0	2.2
41	4-8"	6.3	32	1257	90	948	5.6	6.2	2.8	3.1

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
42	4-8"	5.9	18	2257	107	943	3.2	3.4	1.6	1.7
43	4-8"	6.4	15	1681	92	944	2.6	2.9	1.3	1.4
44	4-8"	5.3	39	926	110	940	6.8	7.4	3.4	3.7
45	4-8"	5.9	17	1404	103	937	3.0	3.3	1.5	1.6
46	4-8"	6.0	35	630	99	947	6.1	6.7	3.1	3.3
49	4-8"	6.1	15	2386	87	952	2.6	2.9	1.3	1.4
50	4-8"	5.9	12	1844	72	953	2.1	2.3	1.1	1.2
51	4-8"	6.3	9	2453	92	927	1.6	1.8	0.8	0.9
52	4-8"	6.2	22	1419	99	934	3.9	4.3	2.0	2.1
53	4-8"	6.2	16	1631	97	918	2.9	3.2	1.4	1.6
54	4-8"	6.2	19	1552	113	926	3.4	3.7	1.7	1.8
57	4-8"	6.1	33	1375	104	904	6.0	6.5	3.0	3.3
58	4-8"	6.1	28	1360	94	920	5.1	5.5	2.5	2.8
59	4-8"	6.0	24	848	108	943	4.2	4.6	2.1	2.3
60	4-8"	6.1	23	1432	101	911	4.2	4.5	2.1	2.3
61	4-8"	6.1	17	1440	95	920	3.1	3.3	1.5	1.7
62	4-8"	5.9	48	1841	100	948	8.4	9.2	4.2	4.6
Mean, mg/kg		6.0	36	1235	104	931	6.4	7.0	3.2	3.5
Median, mg/kg		6.0	28	1307	103	928	5.1	5.5	2.5	2.8
Minimum, mg/kg		5.3	9	488	72	900	1.6	1.8	0.8	0.9
Maximum, mg/kg		6.4	102	2453	160	958	18.0	19.3	9.0	9.7
Standard deviation, mg/kg		0.2	24	523	16	16	4.2	4.5	2.1	2.3
C.V., %		4	65	42	15	2	65	65	65	65
Count			39							
Application zone										

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
17	4-8"	5.80	69	670	100	910	12.5	13.7	6.3	6.8
18	4-8"	5.60	102	682	128	928	18.0	19.3	9.0	9.7
19	4-8"	5.70	62	601	108	900	11.3	12.3	5.7	6.2
20	4-8"	5.70	36	1307	106	927	6.4	7.0	3.2	3.5
21	4-8"	5.90	27	1489	105	948	4.7	5.1	2.4	2.6
25	4-8"	5.80	32	713	80	936	5.7	6.3	2.9	3.1
26	4-8"	5.70	88	723	121	924	15.6	16.8	7.8	8.4
27	4-8"	5.90	77	879	116	905	14.0	15.1	7.0	7.5
28	4-8"	6.10	13	1778	90	910	2.4	2.6	1.2	1.3
29	4-8"	5.80	17	1315	119	927	3.0	3.3	1.5	1.6
33	4-8"	6.00	38	675	121	948	6.6	7.1	3.3	3.6
34	4-8"	6.10	21	1670	111	935	3.7	4.0	1.9	2.0
35	4-8"	6.10	17	1297	97	922	3.1	3.3	1.5	1.7
37	4-8"	5.90	47	1171	98	918	8.5	9.3	4.2	4.6
41	4-8"	6.30	32	1257	90	948	5.6	6.2	2.8	3.1
42	4-8"	5.90	18	2257	107	943	3.2	3.4	1.6	1.7
43	4-8"	6.40	15	1681	92	944	2.6	2.9	1.3	1.4
44	4-8"	5.30	39	926	110	940	6.8	7.4	3.4	3.7
45	4-8"	5.90	17	1404	103	937	3.0	3.3	1.5	1.6
46	4-8"	6.00	35	630	99	947	6.1	6.7	3.1	3.3
49	4-8"	6.10	15	2386	87	952	2.6	2.9	1.3	1.4
50	4-8"	5.90	12	1844	72	953	2.1	2.3	1.1	1.2
51	4-8"	6.30	9	2453	92	927	1.6	1.8	0.8	0.9
52	4-8"	6.20	22	1419	99	934	3.9	4.3	2.0	2.1
53	4-8"	6.20	16	1631	97	918	2.9	3.2	1.4	1.6
54	4-8"	6.20	19	1552	113	926	3.4	3.7	1.7	1.8

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
57	4-8"	6.10	33	1375	104	904	6.0	6.5	3.0	3.3
58	4-8"	6.10	28	1360	94	920	5.1	5.5	2.5	2.8
59	4-8"	6.00	24	848	108	943	4.2	4.6	2.1	2.3
60	4-8"	6.10	23	1432	101	911	4.2	4.5	2.1	2.3
61	4-8"	6.10	17	1440	95	920	3.1	3.3	1.5	1.7
Mean, mg/kg		6.0	33	1318	102	929	5.9	6.4	2.9	3.2
Median, mg/kg		6.0	24	1360	101	927	4.2	4.6	2.1	2.3
Minimum, mg/kg		5.3	9	601	72	900	1.6	1.8	0.8	0.9
Maximum, mg/kg		6.4	102	2453	128	953	18.0	19.3	9.0	9.7
Standard deviation, mg/kg		0.2	23	511	12	15	4.2	4.5	2.1	2.3
C.V., %		4	71	39	12	2	71	71	71	71
Count			31							
<b>Buffer zone</b>										
9	4-8"	6.40	47	650	94	910	8.6	9.4	4.3	4.7
10	4-8"	5.80	73	663	110	958	12.6	13.7	6.3	6.8
11	4-8"	5.90	81	678	123	926	14.3	15.4	7.2	7.7
13	4-8"	6.00	32	1447	117	946	5.6	6.0	2.8	3.0
22	4-8"	5.30	62	488	160	915	10.9	11.5	5.4	5.8
30	4-8"	5.80	26	767	105	933	4.6	5.0	2.3	2.5
38	4-8"	6.00	23	785	73	956	4.0	4.5	2.0	2.2
62	4-8"	5.90	48	1841	100	948	8.4	9.2	4.2	4.6
Mean, mg/kg		5.9	49	915	110	937	8.6	9.3	4.3	4.7
Median, mg/kg		5.9	48	723	108	940	8.5	9.3	4.2	4.6
Minimum, mg/kg		5.3	23	488	73	910	4.0	4.5	2.0	2.2
Maximum, mg/kg		6.4	81	1841	160	958	14.3	15.4	7.2	7.7

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
Standard deviation, mg/kg		0.3	22	471	25	18	3.8	4.0	1.9	2.0
C.V., %		5	45	26	25	2	45	44	45	44
Count			8							



**Table 18. Soil P sorption saturation and soil properties related to P sorption for 8 to 12 inch grid-soil samples from Field 12 for 2014.**

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
			mg/L				%			
<b>Whole field</b>										
9	8-12"	6.0	82	713	101	938	14.5	15.8	7.2	7.9
10	8-12"	6.0	42	607	95	976	7.2	7.8	3.6	3.9
11	8-12"	6.2	44	716	107	983	7.4	8.1	3.7	4.0
13	8-12"	6.1	22	1755	103	982	3.7	4.1	1.9	2.0
17	8-12"	5.8	50	681	107	980	8.4	9.2	4.2	4.6
18	8-12"	5.8	53	673	101	983	8.9	9.8	4.5	4.9
19	8-12"	5.8	45	712	99	987	7.6	8.3	3.8	4.1
20	8-12"	5.9	21	1779	104	968	3.6	3.9	1.8	2.0
21	8-12"	5.8	32	1493	102	981	5.4	5.9	2.7	3.0
22	8-12"	5.2	39	481	126	982	6.5	7.0	3.3	3.5
25	8-12"	5.9	22	781	90	971	3.8	4.1	1.9	2.1
26	8-12"	5.7	46	681	94	955	8.0	8.8	4.0	4.4
27	8-12"	6.1	34	1121	93	967	5.9	6.4	2.9	3.2
28	8-12"	6.1	13	1787	103	938	2.3	2.5	1.1	1.2
29	8-12"	6.0	10	1760	104	980	1.7	1.8	0.8	0.9
30	8-12"	5.9	11	1297	89	933	2.0	2.2	1.0	1.1
33	8-12"	6.1	30	720	124	971	5.1	5.5	2.5	2.7
34	8-12"	6.1	14	2050	105	987	2.4	2.6	1.2	1.3
35	8-12"	6.3	10	1722	93	959	1.7	1.9	0.9	1.0
37	8-12"	5.9	28	1104	88	967	4.8	5.3	2.4	2.7
38	8-12"	6.0	19	643	69	983	3.3	3.6	1.6	1.8
41	8-12"	6.1	26	1505	91	972	4.5	4.9	2.2	2.4

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
42	8-12"	5.9	14	2443	103	970	2.4	2.6	1.2	1.3
43	8-12"	6.5	12	1849	90	968	2.1	2.3	1.0	1.1
44	8-12"	5.2	18	1219	106	965	3.1	3.4	1.5	1.7
45	8-12"	6.1	11	1752	108	948	1.9	2.1	1.0	1.0
46	8-12"	6.0	24	936	98	981	4.1	4.4	2.0	2.2
49	8-12"	6.1	16	2099	90	973	2.7	3.0	1.4	1.5
50	8-12"	5.9	10	2043	86	977	1.7	1.9	0.9	0.9
51	8-12"	6.3	7	2536	98	985	1.2	1.3	0.6	0.6
52	8-12"	6.0	20	1768	100	957	3.5	3.8	1.7	1.9
53	8-12"	6.1	18	1493	100	967	3.1	3.4	1.5	1.7
54	8-12"	6.2	13	1805	105	964	2.2	2.4	1.1	1.2
57	8-12"	5.9	39	1301	99	958	6.8	7.4	3.4	3.7
58	8-12"	6.1	31	1468	96	957	5.4	5.9	2.7	2.9
59	8-12"	6.1	25	942	120	950	4.3	4.7	2.2	2.3
60	8-12"	6.2	25	1559	105	933	4.4	4.8	2.2	2.4
61	8-12"	6.1	10	1899	87	975	1.7	1.9	0.9	0.9
62	8-12"	5.9	19	1848	88	952	3.3	3.7	1.7	1.8
Mean, mg/kg		6.0	26	1378	99	967	4.4	4.8	2.2	2.4
Median, mg/kg		6.0	22	1493	100	970	3.7	4.1	1.9	2.0
Minimum, mg/kg		5.2	7	481	69	933	1.2	1.3	0.6	0.6
Maximum, mg/kg		6.5	82	2536	126	987	14.5	15.8	7.2	7.9
Standard deviation, mg/kg		0.2	16	562	11	15	2.7	3.0	1.4	1.5
C.V., %		4	61	41	11	2	61	61	61	61
Count			39							
Application zone										

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
17	8-12"	5.8	50	681	107	980	8.4	9.2	4.2	4.6
18	8-12"	5.8	53	673	101	983	8.9	9.8	4.5	4.9
19	8-12"	5.8	45	712	99	987	7.6	8.3	3.8	4.1
20	8-12"	5.9	21	1779	104	968	3.6	3.9	1.8	2.0
21	8-12"	5.8	32	1493	102	981	5.4	5.9	2.7	3.0
25	8-12"	5.9	22	781	90	971	3.8	4.1	1.9	2.1
26	8-12"	5.7	46	681	94	955	8.0	8.8	4.0	4.4
27	8-12"	6.1	34	1121	93	967	5.9	6.4	2.9	3.2
28	8-12"	6.1	13	1787	103	938	2.3	2.5	1.1	1.2
29	8-12"	6.0	10	1760	104	980	1.7	1.8	0.8	0.9
33	8-12"	6.1	30	720	124	971	5.1	5.5	2.5	2.7
34	8-12"	6.1	14	2050	105	987	2.4	2.6	1.2	1.3
35	8-12"	6.3	10	1722	93	959	1.7	1.9	0.9	1.0
37	8-12"	5.9	28	1104	88	967	4.8	5.3	2.4	2.7
41	8-12"	6.1	26	1505	91	972	4.5	4.9	2.2	2.4
42	8-12"	5.9	14	2443	103	970	2.4	2.6	1.2	1.3
43	8-12"	6.5	12	1849	90	968	2.1	2.3	1.0	1.1
44	8-12"	5.2	18	1219	106	965	3.1	3.4	1.5	1.7
45	8-12"	6.1	11	1752	108	948	1.9	2.1	1.0	1.0
46	8-12"	6.0	24	936	98	981	4.1	4.4	2.0	2.2
49	8-12"	6.1	16	2099	90	973	2.7	3.0	1.4	1.5
50	8-12"	5.9	10	2043	86	977	1.7	1.9	0.9	0.9
51	8-12"	6.3	7	2536	98	985	1.2	1.3	0.6	0.6
52	8-12"	6.0	20	1768	100	957	3.5	3.8	1.7	1.9
53	8-12"	6.1	18	1493	100	967	3.1	3.4	1.5	1.7
54	8-12"	6.2	13	1805	105	964	2.2	2.4	1.1	1.2

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
57	8-12"	5.9	39	1301	99	958	6.8	7.4	3.4	3.7
58	8-12"	6.1	31	1468	96	957	5.4	5.9	2.7	2.9
59	8-12"	6.1	25	942	120	950	4.3	4.7	2.2	2.3
60	8-12"	6.2	25	1559	105	933	4.4	4.8	2.2	2.4
61	8-12"	6.1	10	1899	87	975	1.7	1.9	0.9	0.9
Mean, mg/kg		6.0	23	1474	100	968	4.0	4.4	2.0	2.2
Median, mg/kg		6.1	21	1505	100	968	3.6	3.9	1.8	2.0
Minimum, mg/kg		5.2	7	673	86	933	1.2	1.3	0.6	0.6
Maximum, mg/kg		6.5	53	2536	124	987	8.9	9.8	4.5	4.9
Standard deviation, mg/kg		0.2	13	533	9	14	2.2	2.4	1.1	1.2
C.V., %		4	55	36	9	1	54	54	54	54
Count			31							
<b>Buffer zone</b>										
9	8-12"	6.0	82	713	101	938	14.5	15.8	7.2	7.9
10	8-12"	6.0	42	607	95	976	7.2	7.8	3.6	3.9
11	8-12"	6.2	44	716	107	983	7.4	8.1	3.7	4.0
13	8-12"	6.1	22	1755	103	982	3.7	4.1	1.9	2.0
22	8-12"	5.2	39	481	126	982	6.5	7.0	3.3	3.5
30	8-12"	5.9	11	1297	89	933	2.0	2.2	1.0	1.1
38	8-12"	6.0	19	643	69	983	3.3	3.6	1.6	1.8
62	8-12"	5.9	19	1848	88	952	3.3	3.7	1.7	1.8
Mean, mg/kg		5.9	35	1008	97	966	6.0	6.5	3.0	3.3
Median, mg/kg		6.0	31	715	98	979	5.1	5.5	2.6	2.8
Minimum, mg/kg		5.2	11	481	69	933	2.0	2.2	1.0	1.1
Maximum, mg/kg		6.2	82	1848	126	983	14.5	15.8	7.2	7.9

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
Standard deviation, mg/kg		0.3	23	547	17	22	4.0	4.3	2.0	2.2
C.V., %		5	65	54	17	2	67	67	67	67
Count			8							

**Table 19. Soil P sorption saturation and soil properties related to P sorption for 12 to 18 inch grid-soil samples from Field 12 for 2014.**

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
			mg/L				%			
<b>Whole field</b>										
9	12-18"	6.1	50	674	107	1140	7.3	8.0	3.7	4.0
10	12-18"	6.1	40	656	103	1158	5.8	6.3	2.9	3.2
11	12-18"	6.3	59	817	121	1168	8.4	9.2	4.2	4.6
13	12-18"	6.1	19	1909	99	1147	2.8	3.0	1.4	1.5
17	12-18"	5.9	57	746	113	1169	8.1	8.9	4.1	4.4
19	12-18"	6.0	61	942	103	1178	8.7	9.5	4.3	4.8
20	12-18"	6.1	14	1699	93	1135	2.1	2.3	1.0	1.1
21	12-18"	5.3	38	1308	110	1148	5.5	6.0	2.8	3.0
22	12-18"	5.2	20	1151	118	1130	2.9	3.2	1.5	1.6
25	12-18"	5.9	28	616	89	1146	4.1	4.5	2.1	2.3
26	12-18"	5.8	33	646	90	1186	4.7	5.2	2.3	2.6
27	12-18"	6.2	24	1349	94	1128	3.6	3.9	1.8	2.0
28	12-18"	6.1	23	1630	100	1186	3.2	3.6	1.6	1.8
29	12-18"	6.3	12	1821	104	1170	1.7	1.9	0.9	0.9
30	12-18"	5.7	11	1674	93	1105	1.7	1.8	0.8	0.9
33	12-18"	6.1	29	1385	144	1130	4.2	4.6	2.1	2.3
34	12-18"	6.4	11	1934	107	1172	1.6	1.7	0.8	0.9
35	12-18"	6.1	11	1765	87	1135	1.6	1.8	0.8	0.9
37	12-18"	5.8	27	1622	87	1128	4.0	4.4	2.0	2.2
38	12-18"	5.6	40	644	94	1187	5.7	6.2	2.8	3.1
41	12-18"	6.0	20	1832	92	1158	2.9	3.2	1.4	1.6
42	12-18"	5.9	11	2372	100	1167	1.6	1.7	0.8	0.9

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
43	12-18"	6.6	18	1703	89	1174	2.6	2.9	1.3	1.4
44	12-18"	5.4	11	1457	97	1135	1.6	1.8	0.8	0.9
45	12-18"	6.0	9	1640	99	1140	1.3	1.5	0.7	0.7
46	12-18"	5.7	16	1440	103	1165	2.3	2.5	1.1	1.3
49	12-18"	5.8	11	1630	91	1128	1.6	1.8	0.8	0.9
50	12-18"	5.9	8	1711	87	1121	1.2	1.3	0.6	0.7
51	12-18"	6.2	9	2387	98	1111	1.4	1.5	0.7	0.7
52	12-18"	5.4	19	1671	111	1105	2.9	3.1	1.4	1.6
53	12-18"	5.6	18	1380	100	1187	2.5	2.8	1.3	1.4
54	12-18"	6.1	12	2121	105	1135	1.8	1.9	0.9	1.0
57	12-18"	5.9	44	1202	101	1168	6.3	6.9	3.2	3.5
58	12-18"	6.3	29	1186	85	1150	4.2	4.7	2.1	2.3
59	12-18"	5.9	14	1730	119	1157	2.0	2.2	1.0	1.1
60	12-18"	5.7	33	1334	106	1169	4.7	5.2	2.4	2.6
61	12-18"	6.1	8	1908	87	1135	1.2	1.3	0.6	0.7
62	12-18"	6.0	13	1740	84	1147	1.9	2.1	1.0	1.1
Mean, mg/kg		5.9	24	1459	100	1150	3.5	3.8	1.7	1.9
Median, mg/kg		6.0	19	1626	100	1148	2.8	3.1	1.4	1.5
Minimum, mg/kg		5.2	8	616	84	1105	1.2	1.3	0.6	0.7
Maximum, mg/kg		6.6	61	2387	144	1187	8.7	9.5	4.3	4.8
Standard deviation, mg/kg		0.3	15	478	12	23	2.2	2.4	1.1	1.2
C.V., %		5	63	33	12	2	62	62	62	62
Count			38							
<b>Application zone</b>										
17	12-18"	5.9	57	746	113	1169	8.1	8.9	4.1	4.4

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
19	12-18"	6.0	61	942	103	1178	8.7	9.5	4.3	4.8
20	12-18"	6.1	14	1699	93	1135	2.1	2.3	1.0	1.1
21	12-18"	5.3	38	1308	110	1148	5.5	6.0	2.8	3.0
25	12-18"	5.9	28	616	89	1146	4.1	4.5	2.1	2.3
26	12-18"	5.8	33	646	90	1186	4.7	5.2	2.3	2.6
27	12-18"	6.2	24	1349	94	1128	3.6	3.9	1.8	2.0
28	12-18"	6.1	23	1630	100	1186	3.2	3.6	1.6	1.8
29	12-18"	6.3	12	1821	104	1170	1.7	1.9	0.9	0.9
33	12-18"	6.1	29	1385	144	1130	4.2	4.6	2.1	2.3
34	12-18"	6.4	11	1934	107	1172	1.6	1.7	0.8	0.9
35	12-18"	6.1	11	1765	87	1135	1.6	1.8	0.8	0.9
37	12-18"	5.8	27	1622	87	1128	4.0	4.4	2.0	2.2
41	12-18"	6.0	20	1832	92	1158	2.9	3.2	1.4	1.6
42	12-18"	5.9	11	2372	100	1167	1.6	1.7	0.8	0.9
43	12-18"	6.6	18	1703	89	1174	2.6	2.9	1.3	1.4
44	12-18"	5.4	11	1457	97	1135	1.6	1.8	0.8	0.9
45	12-18"	6.0	9	1640	99	1140	1.3	1.5	0.7	0.7
46	12-18"	5.7	16	1440	103	1165	2.3	2.5	1.1	1.3
49	12-18"	5.8	11	1630	91	1128	1.6	1.8	0.8	0.9
50	12-18"	5.9	8	1711	87	1121	1.2	1.3	0.6	0.7
51	12-18"	6.2	9	2387	98	1111	1.4	1.5	0.7	0.7
52	12-18"	5.4	19	1671	111	1105	2.9	3.1	1.4	1.6
53	12-18"	5.6	18	1380	100	1187	2.5	2.8	1.3	1.4
54	12-18"	6.1	12	2121	105	1135	1.8	1.9	0.9	1.0
57	12-18"	5.9	44	1202	101	1168	6.3	6.9	3.2	3.5
58	12-18"	6.3	29	1186	85	1150	4.2	4.7	2.1	2.3



Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
59	12-18"	5.9	14	1730	119	1157	2.0	2.2	1.0	1.1
60	12-18"	5.7	33	1334	106	1169	4.7	5.2	2.4	2.6
61	12-18"	6.1	8	1908	87	1135	1.2	1.3	0.6	0.7
Mean, mg/kg		6.0	22	1539	100	1151	3.2	3.5	1.6	1.7
Median, mg/kg		6.0	18	1630	100	1149	2.6	2.8	1.3	1.4
Minimum, mg/kg		5.3	8	616	85	1105	1.2	1.3	0.6	0.7
Maximum, mg/kg		6.6	61	2387	144	1187	8.7	9.5	4.3	4.8
Standard deviation, mg/kg		0.3	14	435	12	23	2.0	2.2	1.0	1.1
C.V., %		5	64	28	12	2	62	62	62	62
Count			30							
<b>Buffer zone</b>										
9	12-18"	6.1	50	674	107	1140	7.3	8.0	3.7	4.0
10	12-18"	6.1	40	656	103	1158	5.8	6.3	2.9	3.2
11	12-18"	6.3	59	817	121	1168	8.4	9.2	4.2	4.6
13	12-18"	6.1	19	1909	99	1147	2.8	3.0	1.4	1.5
22	12-18"	5.2	20	1151	118	1130	2.9	3.2	1.5	1.6
30	12-18"	5.7	11	1674	93	1105	1.7	1.8	0.8	0.9
38	12-18"	5.6	40	644	94	1187	5.7	6.2	2.8	3.1
62	12-18"	6.0	13	1740	84	1147	1.9	2.1	1.0	1.1
Mean, mg/kg		5.9	32	1158	102	1148	4.5	5.0	2.3	2.5
Median, mg/kg		6.0	30	984	101	1147	4.3	4.7	2.1	2.4
Minimum, mg/kg		5.2	11	644	84	1105	1.7	1.8	0.8	0.9
Maximum, mg/kg		6.3	59	1909	121	1187	8.4	9.2	4.2	4.6
Standard deviation, mg/kg		0.4	18	539	13	25	2.6	2.8	1.3	1.4

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
C.V., %		6	57	47	12	2	56	56	56	56
Count			8							

**Table 20. Soil P sorption saturation and soil properties related to P sorption for 18 to 24 inch grid-soil samples from Field 12 for 2014.**

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
			mg/L				%			
<b>Whole field</b>										
9	18-24"	6.1	63	641	117	1298	8.1	8.9	4.1	4.5
10	18-24"	6.3	58	761	103	1276	7.6	8.4	3.8	4.2
11	18-24"	6.1	90	847	119	1350	11.1	12.3	5.6	6.1
13	18-24"	6.2	16	1586	88	1321	2.0	2.3	1.0	1.1
17	18-24"	5.9	62	763	104	1315	7.9	8.7	4.0	4.4
21	18-24"	5.2	38	1153	112	1294	4.9	5.4	2.5	2.7
22	18-24"	5.5	13	1419	100	1311	1.7	1.8	0.8	0.9
27	18-24"	6.3	28	1337	94	1298	3.6	4.0	1.8	2.0
28	18-24"	6.1	12	1877	95	1257	1.6	1.8	0.8	0.9
29	18-24"	6.3	14	1857	101	1245	1.9	2.1	0.9	1.0
30	18-24"	5.7	17	1781	93	1236	2.3	2.6	1.2	1.3
33	18-24"	6.2	20	1646	130	1205	2.7	3.0	1.4	1.5
34	18-24"	6.1	12	1697	92	1274	1.6	1.8	0.8	0.9
35	18-24"	5.9	16	1608	95	1258	2.1	2.4	1.1	1.2
37	18-24"	6.0	19	1479	92	1269	2.5	2.8	1.3	1.4
38	18-24"	4.9	46	443	102	1287	6.0	6.6	3.0	3.3
41	18-24"	5.9	21	1837	90	1299	2.7	3.0	1.4	1.5
42	18-24"	6.1	9	2005	95	1287	1.2	1.3	0.6	0.7
43	18-24"	6.5	29	1659	84	1312	3.7	4.2	1.9	2.1
44	18-24"	5.3	13	1342	98	1306	1.7	1.9	0.8	0.9
45	18-24"	6.0	10	1622	95	1311	1.3	1.4	0.6	0.7
46	18-24"	5.7	11	1700	107	1297	1.4	1.6	0.7	0.8

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
49	18-24"	5.7	36	1682	105	1284	4.7	5.2	2.3	2.6
50	18-24"	6.0	44	1867	101	1287	5.7	6.3	2.9	3.2
51	18-24"	6.2	54	1643	117	1280	7.0	7.7	3.5	3.9
52	18-24"	5.8	83	1329	136	1238	11.1	12.1	5.5	6.0
53	18-24"	5.7	54	968	154	1289	6.9	7.5	3.5	3.7
54	18-24"	6.0	35	1351	121	1258	4.6	5.1	2.3	2.5
57	18-24"	5.9	55	1143	114	1261	7.3	8.0	3.6	4.0
58	18-24"	5.7	70	1064	140	1238	9.3	10.2	4.7	5.1
59	18-24"	6.1	101	1408	134	1291	13.0	14.2	6.5	7.1
61	18-24"	5.8	8	1569	91	1288	1.0	1.2	0.5	0.6
62	18-24"	5.8	11	1558	84	1250	1.5	1.6	0.7	0.8
Mean, mg/kg		5.9	35	1413	106	1281	4.6	5.1	2.3	2.5
Median, mg/kg		6.0	28	1558	101	1287	3.6	4.0	1.8	2.0
Minimum, mg/kg		4.9	8	443	84	1205	1.0	1.2	0.5	0.6
Maximum, mg/kg		6.5	101	2005	154	1350	13.0	14.2	6.5	7.1
Standard deviation, mg/kg		0.3	26	397	17	30	3.4	3.7	1.7	1.8
C.V., %		6	74	28	16	2	73	72	73	72
Count			33							
<b>Application zone</b>										
17	18-24"	5.9	62	763	104	1315	7.9	8.7	4.0	4.4
21	18-24"	5.2	38	1153	112	1294	4.9	5.4	2.5	2.7
22	18-24"	5.5	13	1419	100	1311	1.7	1.8	0.8	0.9
27	18-24"	6.3	28	1337	94	1298	3.6	4.0	1.8	2.0
28	18-24"	6.1	12	1877	95	1257	1.6	1.8	0.8	0.9
29	18-24"	6.3	14	1857	101	1245	1.9	2.1	0.9	1.0

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
33	18-24"	6.2	20	1646	130	1205	2.7	3.0	1.4	1.5
34	18-24"	6.1	12	1697	92	1274	1.6	1.8	0.8	0.9
35	18-24"	5.9	16	1608	95	1258	2.1	2.4	1.1	1.2
37	18-24"	6.0	19	1479	92	1269	2.5	2.8	1.3	1.4
41	18-24"	5.9	21	1837	90	1299	2.7	3.0	1.4	1.5
42	18-24"	6.1	9	2005	95	1287	1.2	1.3	0.6	0.7
43	18-24"	6.5	29	1659	84	1312	3.7	4.2	1.9	2.1
44	18-24"	5.3	13	1342	98	1306	1.7	1.9	0.8	0.9
45	18-24"	6.0	10	1622	95	1311	1.3	1.4	0.6	0.7
46	18-24"	5.7	11	1700	107	1297	1.4	1.6	0.7	0.8
49	18-24"	5.7	36	1682	105	1284	4.7	5.2	2.3	2.6
50	18-24"	6.0	44	1867	101	1287	5.7	6.3	2.9	3.2
51	18-24"	6.2	54	1643	117	1280	7.0	7.7	3.5	3.9
52	18-24"	5.8	83	1329	136	1238	11.1	12.1	5.5	6.0
53	18-24"	5.7	54	968	154	1289	6.9	7.5	3.5	3.7
54	18-24"	6.0	35	1351	121	1258	4.6	5.1	2.3	2.5
57	18-24"	5.9	55	1143	114	1261	7.3	8.0	3.6	4.0
58	18-24"	5.7	70	1064	140	1238	9.3	10.2	4.7	5.1
59	18-24"	6.1	101	1408	134	1291	13.0	14.2	6.5	7.1
61	18-24"	5.8	8	1569	91	1288	1.0	1.2	0.5	0.6
Mean, mg/kg		5.9	33	1501	108	1279	4.4	4.8	2.2	2.4
Median, mg/kg		6.0	25	1589	101	1287	3.2	3.5	1.6	1.8
Minimum, mg/kg		5.2	8	763	84	1205	1.0	1.2	0.5	0.6
Maximum, mg/kg		6.5	101	2005	154	1315	13.0	14.2	6.5	7.1
Standard deviation, mg/kg		0.3	25	308	18	27	3.3	3.6	1.6	1.8

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
C.V., %		5	76	20	17	2	76	75	76	75
Count			26							
<b>Buffer zone</b>										
9	18-24"	6.1	63	641	117	1298	8.1	8.9	4.1	4.5
10	18-24"	6.3	58	761	103	1276	7.6	8.4	3.8	4.2
11	18-24"	6.1	90	847	119	1350	11.1	12.3	5.6	6.1
13	18-24"	6.2	16	1586	88	1321	2.0	2.3	1.0	1.1
17	18-24"	5.7	17	1781	93	1236	2.3	2.6	1.2	1.3
21	18-24"	4.9	46	443	102	1287	6.0	6.6	3.0	3.3
22	18-24"	5.8	11	1558	84	1250	1.5	1.6	0.7	0.8
Mean, mg/kg		5.9	43	1088	101	1288	5.5	6.1	2.8	3.0
Median, mg/kg		6.1	46	847	102	1287	6.0	6.6	3.0	3.3
Minimum, mg/kg		4.9	11	443	84	1236	1.5	1.6	0.7	0.8
Maximum, mg/kg		6.3	90	1781	119	1350	11.1	12.3	5.6	6.1
Standard deviation, mg/kg		0.5	30	537	14	39	3.7	4.0	1.8	2.0
C.V., %		8	69	49	13	3	67	66	67	66
Count			7							

**Table 21. Soil P sorption saturation and soil properties related to P sorption for 0 to 4 inch grid-soil samples from Field 12 for 2016.**

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
			mg/L				%			
<b>Whole field</b>										
8	0-4"	5.4	148	961	214	890	26.0	26.8	13.0	13.4
9	0-4"	5.5	190	981	211	897	33.1	34.3	16.6	17.1
10	0-4"	5.3	160	912	175	886	28.7	30.2	14.4	15.1
11	0-4"	5.4	178	795	196	884	31.7	33.0	15.8	16.5
12	0-4"	5.2	172	766	206	887	30.4	31.5	15.2	15.7
13	0-4"	5.8	97	1830	215	896	16.9	17.5	8.5	8.7
17	0-4"	5.2	193	864	215	915	33.0	34.2	16.5	17.1
18	0-4"	5.1	167	751	192	878	30.0	31.2	15.0	15.6
19	0-4"	5.2	168	883	206	853	30.7	31.7	15.4	15.9
20	0-4"	5.5	73	1176	162	897	13.0	13.8	6.5	6.9
21	0-4"	5.6	49	1307	157	901	8.7	9.3	4.4	4.6
22	0-4"	5.4	40	991	143	879	7.4	7.8	3.7	3.9
25	0-4"	5.3	115	661	149	899	20.6	21.9	10.3	11.0
26	0-4"	4.9	186	739	185	925	31.9	33.5	16.0	16.8
27	0-4"	5.7	112	1297	172	915	19.6	20.6	9.8	10.3
28	0-4"	5.6	101	1568	204	911	17.4	18.1	8.7	9.1
29	0-4"	5.3	123	1316	227	902	21.2	21.8	10.6	10.9
30	0-4"	5.3	64	976	241	906	10.9	11.2	5.5	5.6
33	0-4"	5.1	138	772	147	896	24.9	26.5	12.4	13.2
34	0-4"	5.2	103	1408	175	857	19.1	20.0	9.5	10.0
35	0-4"	5.1	123	1752	195	873	22.2	23.0	11.1	11.5
36	0-4"	6.0	76	1575	163	924	13.2	14.0	6.6	7.0

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
37	0-4"	5.5	97	1333	197	836	18.1	18.8	9.1	9.4
38	0-4"	5.5	81	962	255	983	12.8	13.1	6.4	6.5
41	0-4"	5.5	91	1225	153	882	16.6	17.6	8.3	8.8
42	0-4"	5.3	59	1848	170	876	10.7	11.3	5.4	5.6
43	0-4"	5.5	57	1479	161	942	9.7	10.3	4.9	5.2
44	0-4"	5.7	79	1393	187	887	14.1	14.7	7.0	7.4
45	0-4"	5.6	65	1135	183	891	11.6	12.1	5.8	6.1
46	0-4"	5.9	77	930	181	890	13.7	14.4	6.9	7.2
47	0-4"	6.1	27	1378	163	894	4.8	5.1	2.4	2.6
49	0-4"	5.8	65	2178	133	911	11.6	12.5	5.8	6.2
50	0-4"	5.4	72	1697	143	924	12.6	13.5	6.3	6.7
51	0-4"	5.9	65	2099	157	925	11.3	12.0	5.7	6.0
52	0-4"	5.4	76	1389	187	916	13.2	13.8	6.6	6.9
53	0-4"	5.3	77	1493	192	897	13.6	14.1	6.8	7.1
54	0-4"	5.5	117	941	234	901	20.1	20.6	10.1	10.3
55	0-4"	5.8	55	1386	177	905	9.7	10.2	4.8	5.1
57	0-4"	6.0	63	2593	136	906	11.3	12.1	5.6	6.0
58	0-4"	5.3	146	1791	178	882	26.3	27.5	13.1	13.8
59	0-4"	5.4	117	1737	166	876	21.3	22.5	10.7	11.2
60	0-4"	5.6	65	1632	161	894	11.7	12.3	5.8	6.2
61	0-4"	5.3	151	1326	165	889	27.2	28.7	13.6	14.3
62	0-4"	5.6	82	1464	159	885	14.9	15.7	7.4	7.9
63	0-4"	5.4	104	845	220	887	18.2	18.8	9.1	9.4
Mean, mg/kg		5.5	104	1301	182	897	18.3	19.2	9.2	9.6
Median, mg/kg		5.4	97	1316	178	896	16.9	17.6	8.5	8.8
Minimum, mg/kg		4.9	27	661	133	836	4.8	5.1	2.4	2.6



Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
Maximum, mg/kg		6.1	193	2593	255	983	33.1	34.3	16.6	17.1
Standard deviation, mg/kg		0.3	45	433	29	24	7.9	8.2	3.9	4.1
C.V., %		5	43	33	16	3	43	43	43	43
Count				45						
<b>Application zone</b>										
11	0-4"	5.4	178	795	196	884	31.7	33.0	15.8	16.5
12	0-4"	5.2	172	766	206	887	30.4	31.5	15.2	15.7
17	0-4"	5.2	193	864	215	915	33.0	34.2	16.5	17.1
18	0-4"	5.1	167	751	192	878	30.0	31.2	15.0	15.6
19	0-4"	5.2	168	883	206	853	30.7	31.7	15.4	15.9
20	0-4"	5.5	73	1176	162	897	13.0	13.8	6.5	6.9
21	0-4"	5.6	49	1307	157	901	8.7	9.3	4.4	4.6
25	0-4"	5.3	115	661	149	899	20.6	21.9	10.3	11.0
26	0-4"	4.9	186	739	185	925	31.9	33.5	16.0	16.8
27	0-4"	5.7	112	1297	172	915	19.6	20.6	9.8	10.3
29	0-4"	5.3	123	1316	227	902	21.2	21.8	10.6	10.9
28	0-4"	5.6	101	1568	204	911	17.4	18.1	8.7	9.1
33	0-4"	5.1	138	772	147	896	24.9	26.5	12.4	13.2
34	0-4"	5.2	103	1408	175	857	19.1	20.0	9.5	10.0
36	0-4"	6.0	76	1575	163	924	13.2	14.0	6.6	7.0
37	0-4"	5.5	97	1333	197	836	18.1	18.8	9.1	9.4
43	0-4"	5.5	57	1479	161	942	9.7	10.3	4.9	5.2
35	0-4"	5.1	123	1752	195	873	22.2	23.0	11.1	11.5
41	0-4"	5.5	91	1225	153	882	16.6	17.6	8.3	8.8
42	0-4"	5.3	59	1848	170	876	10.7	11.3	5.4	5.6

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
44	0-4"	5.7	79	1393	187	887	14.1	14.7	7.0	7.4
45	0-4"	5.6	65	1135	183	891	11.6	12.1	5.8	6.1
49	0-4"	5.8	65	2178	133	911	11.6	12.5	5.8	6.2
50	0-4"	5.4	72	1697	143	924	12.6	13.5	6.3	6.7
51	0-4"	5.9	65	2099	157	925	11.3	12.0	5.7	6.0
52	0-4"	5.4	76	1389	187	916	13.2	13.8	6.6	6.9
53	0-4"	5.3	77	1493	192	897	13.6	14.1	6.8	7.1
54	0-4"	5.5	117	941	234	901	20.1	20.6	10.1	10.3
57	0-4"	6.0	63	2593	136	906	11.3	12.1	5.6	6.0
58	0-4"	5.3	146	1791	178	882	26.3	27.5	13.1	13.8
59	0-4"	5.4	117	1737	166	876	21.3	22.5	10.7	11.2
60	0-4"	5.6	65	1632	161	894	11.7	12.3	5.8	6.2
61	0-4"	5.3	151	1326	165	889	27.2	28.7	13.6	14.3
62	0-4"	5.6	82	1464	159	885	14.9	15.7	7.4	7.9
Mean, mg/kg		5.4	107	1364	177	895	18.9	19.8	9.5	9.9
Median, mg/kg		5.4	99	1361	174	897	17.8	18.4	8.9	9.2
Minimum, mg/kg		4.9	49	661	133	836	8.7	9.3	4.4	4.6
Maximum, mg/kg		6.0	193	2593	234	942	33.0	34.2	16.5	17.1
Standard deviation, mg/kg		0.3	43	454	25	22	7.5	7.7	3.7	3.9
C.V., %		5	40	33	14	3	40	39	40	39
Count				34						
<b>Buffer zone</b>										
8	0-4"	5.4	148	961	214	890	26.0	26.8	13.0	13.4
9	0-4"	5.5	190	981	211	897	33.1	34.3	16.6	17.1
10	0-4"	5.3	160	912	175	886	28.7	30.2	14.4	15.1

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
13	0-4"	5.8	97	1830	215	896	16.9	17.5	8.5	8.7
22	0-4"	5.4	40	991	143	879	7.4	7.8	3.7	3.9
30	0-4"	5.3	64	976	241	906	10.9	11.2	5.5	5.6
38	0-4"	5.5	81	962	255	983	12.8	13.1	6.4	6.5
46	0-4"	5.9	77	930	181	890	13.7	14.4	6.9	7.2
47	0-4"	6.1	27	1378	163	894	4.8	5.1	2.4	2.6
55	0-4"	5.8	55	1386	177	905	9.7	10.2	4.8	5.1
63	0-4"	5.4	104	845	220	887	18.2	18.8	9.1	9.4
Mean, mg/kg		5.6	95	1105	200	901	16.6	17.2	8.3	8.6
Median, mg/kg		5.5	81	976	211	894	13.7	14.4	6.9	7.2
Minimum, mg/kg		5.3	27	845	143	879	4.8	5.1	2.4	2.6
Maximum, mg/kg		6.1	190	1830	255	983	33.1	34.3	16.6	17.1
Standard deviation, mg/kg		0.3	52	300	34	28	9.2	9.5	4.6	4.7
C.V., %		5	55	27	17	3	55	55	55	55
Count				11						

**Table 22. Soil P sorption saturation and soil properties related to P sorption for 4 to 8 inch grid-soil samples from Field 12 for 2016.**

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
			mg/L				%			
<b>Whole field</b>										
8	4-8"	5.7	107	701	158	967	17.9	19.0	8.9	9.5
9	4-8"	5.6	142	814	154	930	24.6	26.2	12.3	13.1
10	4-8"	5.5	88	847	141	935	15.3	16.4	7.6	8.2
11	4-8"	5.6	118	883	163	946	20.1	21.3	10.0	10.6
12	4-8"	5.7	116	827	164	983	19.0	20.2	9.5	10.1
13	4-8"	5.7	49	1766	153	925	8.5	9.1	4.3	4.5
17	4-8"	5.6	106	799	165	921	18.5	19.5	9.2	9.8
18	4-8"	5.2	104	723	160	922	18.1	19.2	9.1	9.6
19	4-8"	5.8	73	763	131	928	12.8	13.8	6.4	6.9
20	4-8"	5.7	41	1356	133	935	7.1	7.7	3.6	3.8
21	4-8"	6.1	25	1491	119	947	4.3	4.7	2.2	2.3
22	4-8"	5.7	24	1009	106	935	4.2	4.6	2.1	2.3
25	4-8"	5.4	45	691	106	961	7.7	8.4	3.9	4.2
26	4-8"	5.2	120	756	149	944	20.6	22.0	10.3	11.0
27	4-8"	5.8	60	1483	140	945	10.3	11.1	5.2	5.5
28	4-8"	5.7	38	1575	146	946	6.5	7.0	3.3	3.5
29	4-8"	5.7	28	1639	133	947	4.8	5.2	2.4	2.6
30	4-8"	5.8	35	675	134	948	6.0	6.5	3.0	3.2
33	4-8"	5.1	33	653	95	949	5.8	6.3	2.9	3.2
34	4-8"	5.7	47	1108	106	950	8.2	8.9	4.1	4.5
35	4-8"	5.8	27	1547	115	951	4.7	5.1	2.3	2.5
36	4-8"	6.0	23	1472	134	952	3.9	4.2	2.0	2.1

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
37	4-8"	5.7	45	859	157	953	7.6	8.1	3.8	4.1
38	4-8"	6.2	19	1567	115	954	3.3	3.6	1.6	1.8
41	4-8"	5.6	50	1904	145	953	8.5	9.1	4.3	4.6
42	4-8"	5.9	34	1154	103	924	6.1	6.6	3.0	3.3
43	4-8"	5.6	23	2111	124	924	4.1	4.4	2.0	2.2
44	4-8"	5.6	26	1350	117	930	4.6	5.0	2.3	2.5
45	4-8"	5.8	32	1314	132	907	5.7	6.2	2.9	3.1
46	4-8"	5.5	21	1072	106	967	3.6	3.9	1.8	2.0
47	4-8"	6.1	27	1288	151	958	4.6	4.9	2.3	2.4
49	4-8"	5.8	35	1291	133	957	6.0	6.4	3.0	3.2
50	4-8"	5.9	22	2202	108	965	3.8	4.1	1.9	2.1
51	4-8"	5.8	19	2190	118	912	3.4	3.7	1.7	1.8
52	4-8"	6.1	20	2477	132	905	3.6	3.9	1.8	1.9
53	4-8"	5.7	37	1516	148	931	6.4	6.9	3.2	3.4
54	4-8"	5.8	28	1714	147	953	4.8	5.1	2.4	2.5
55	4-8"	5.6	36	962	142	946	6.2	6.6	3.1	3.3
57	4-8"	6.2	17	2600	108	968	2.9	3.2	1.5	1.6
58	4-8"	5.7	55	1864	145	926	9.6	10.3	4.8	5.1
59	4-8"	5.7	50	1810	135	976	8.4	9.0	4.2	4.5
60	4-8"	5.7	30	1592	124	944	5.2	5.6	2.6	2.8
61	4-8"	5.4	61	1272	137	957	10.4	11.2	5.2	5.6
62	4-8"	6.0	37	1381	131	987	6.1	6.6	3.1	3.3
63	4-8"	5.4	64	885	156	957	10.8	11.5	5.4	5.8
Mean, mg/kg		5.7	50	1332	134	945	8.6	9.2	4.3	4.6
Median, mg/kg		5.7	37	1314	134	947	6.2	6.6	3.1	3.3
Minimum, mg/kg		5.1	17	653	95	905	2.9	3.2	1.5	1.6

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
Maximum, mg/kg		6.2	142	2600	165	987	24.6	26.2	12.3	13.1
Standard deviation, mg/kg		0.2	33	509	19	19	5.6	5.9	2.8	3.0
C.V., %		4	66	38	14	2	65	65	65	65
Count			45							
<b>Application zone</b>										
11	4-8"	5.6	118	883	163	946	20.1	21.3	10.0	10.6
12	4-8"	5.7	116	827	164	983	19.0	20.2	9.5	10.1
17	4-8"	5.6	106	799	165	921	18.5	19.5	9.2	9.8
18	4-8"	5.2	104	723	160	922	18.1	19.2	9.1	9.6
19	4-8"	5.8	73	763	131	928	12.8	13.8	6.4	6.9
20	4-8"	5.7	41	1356	133	935	7.1	7.7	3.6	3.8
21	4-8"	6.1	25	1491	119	947	4.3	4.7	2.2	2.3
25	4-8"	5.4	45	691	106	961	7.7	8.4	3.9	4.2
26	4-8"	5.2	120	756	149	944	20.6	22.0	10.3	11.0
27	4-8"	5.8	60	1483	140	945	10.3	11.1	5.2	5.5
28	4-8"	5.7	38	1575	146	946	6.5	7.0	3.3	3.5
29	4-8"	5.7	28	1639	133	947	4.8	5.2	2.4	2.6
33	4-8"	5.1	33	653	95	949	5.8	6.3	2.9	3.2
34	4-8"	5.7	47	1108	106	950	8.2	8.9	4.1	4.5
35	4-8"	5.8	27	1547	115	951	4.7	5.1	2.3	2.5
36	4-8"	6.0	23	1472	134	952	3.9	4.2	2.0	2.1
37	4-8"	5.7	45	859	157	953	7.6	8.1	3.8	4.1
41	4-8"	5.6	50	1904	145	953	8.5	9.1	4.3	4.6
42	4-8"	5.9	34	1154	103	924	6.1	6.6	3.0	3.3
43	4-8"	5.6	23	2111	124	924	4.1	4.4	2.0	2.2

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
44	4-8"	5.6	26	1350	117	930	4.6	5.0	2.3	2.5
45	4-8"	5.8	32	1314	132	907	5.7	6.2	2.9	3.1
49	4-8"	5.8	35	1291	133	957	6.0	6.4	3.0	3.2
50	4-8"	5.9	22	2202	108	965	3.8	4.1	1.9	2.1
51	4-8"	5.8	19	2190	118	912	3.4	3.7	1.7	1.8
52	4-8"	6.1	20	2477	132	905	3.6	3.9	1.8	1.9
53	4-8"	5.7	37	1516	148	931	6.4	6.9	3.2	3.4
54	4-8"	5.8	28	1714	147	953	4.8	5.1	2.4	2.5
57	4-8"	6.2	17	2600	108	968	2.9	3.2	1.5	1.6
58	4-8"	5.7	55	1864	145	926	9.6	10.3	4.8	5.1
59	4-8"	5.7	50	1810	135	976	8.4	9.0	4.2	4.5
60	4-8"	5.7	30	1592	124	944	5.2	5.6	2.6	2.8
61	4-8"	5.4	61	1272	137	957	10.4	11.2	5.2	5.6
62	4-8"	6.0	37	1381	131	987	6.1	6.6	3.1	3.3
Mean, mg/kg		5.7	48	1423	132	944	8.2	8.8	4.1	4.4
Median, mg/kg		5.7	37	1427	133	947	6.3	6.7	3.1	3.4
Minimum, mg/kg		5.1	17	653	95	905	2.9	3.2	1.5	1.6
Maximum, mg/kg		6.2	120	2600	165	987	20.6	22.0	10.3	11.0
Standard deviation, mg/kg		0.2	30	524	19	20	5.2	5.5	2.6	2.7
C.V., %		4	64	37	14	2	63	62	63	62
Count			34							
<b>Buffer zone</b>										
8	4-8"	5.7	107	701	158	967	17.9	19.0	8.9	9.5
9	4-8"	5.6	142	814	154	930	24.6	26.2	12.3	13.1
10	4-8"	5.5	88	847	141	935	15.3	16.4	7.6	8.2

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
13	4-8"	5.7	49	1766	153	925	8.5	9.1	4.3	4.5
22	4-8"	5.7	24	1009	106	935	4.2	4.6	2.1	2.3
30	4-8"	5.8	35	675	134	948	6.0	6.5	3.0	3.2
38	4-8"	6.2	19	1567	115	954	3.3	3.6	1.6	1.8
46	4-8"	5.5	21	1072	106	967	3.6	3.9	1.8	2.0
47	4-8"	6.1	27	1288	151	958	4.6	4.9	2.3	2.4
55	4-8"	5.6	36	962	142	946	6.2	6.6	3.1	3.3
63	4-8"	5.4	64	885	156	957	10.8	11.5	5.4	5.8
Mean, mg/kg		5.7	56	1053	138	947	9.5	10.2	4.8	5.1
Median, mg/kg		5.7	36	962	142	948	6.2	6.6	3.1	3.3
Minimum, mg/kg		5.4	19	675	106	925	3.3	3.6	1.6	1.8
Maximum, mg/kg		6.2	142	1766	158	967	24.6	26.2	12.3	13.1
Standard deviation, mg/kg		0.2	41	351	20	15	7.0	7.4	3.5	3.7
C.V., %		4	73	33	14	2	73	72	73	72
Count			11							



**Table 23. Soil P sorption saturation and soil properties related to P sorption for 0 to 4 inch grid-soil samples from Field 12 for 2018.**

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
			mg/L				%			
<b>Whole field</b>										
8	0-4"	7.1	161	1332	165	895	28.8	30.4	14.4	15.2
9	0-4"	6.2	192	950	164	887	34.6	36.5	17.3	18.3
10	0-4"	6.2	256	986	172	876	46.5	48.9	23.3	24.4
11	0-4"	6.1	230	893	180	876	41.6	43.6	20.8	21.8
12	0-4"	6.2	198	850	175	897	35.1	36.9	17.6	18.5
13	0-4"	6.3	125	1900	171	901	22.1	23.3	11.1	11.7
17	0-4"	6.2	180	836	160	914	31.6	33.5	15.8	16.8
18	0-4"	6.0	198	713	164	888	35.7	37.6	17.8	18.8
19	0-4"	5.9	149	716	167	856	27.7	29.1	13.9	14.6
20	0-4"	6.0	144	1212	165	900	25.6	27.0	12.8	13.5
21	0-4"	6.2	91	1297	161	897	16.3	17.2	8.1	8.6
22	0-4"	5.8	59	674	204	886	10.4	10.8	5.2	5.4
25	0-4"	5.8	119	678	141	891	21.6	23.1	10.8	11.5
26	0-4"	6.1	201	731	164	934	34.6	36.6	17.3	18.3
27	0-4"	5.9	176	766	176	924	30.4	32.0	15.2	16.0
28	0-4"	6.0	101	1226	163	906	17.9	18.9	8.9	9.4
29	0-4"	6.1	108	1162	154	901	19.3	20.5	9.6	10.2
30	0-4"	6.2	97	986	194	897	17.1	17.8	8.5	8.9
33	0-4"	5.9	143	767	122	885	26.4	28.4	13.2	14.2
34	0-4"	5.7	137	1130	144	886	25.0	26.6	12.5	13.3
35	0-4"	5.8	150	1454	153	920	26.3	28.0	13.1	14.0
36	0-4"	6.2	99	1344	162	856	18.5	19.4	9.2	9.7

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
37	0-4"	6.1	100	1294	171	968	16.6	17.6	8.3	8.8
38	0-4"	5.9	91	912	173	932	15.6	16.5	7.8	8.2
41	0-4"	6.0	118	1027	126	887	21.7	23.3	10.8	11.6
42	0-4"	5.6	77	1593	135	892	14.0	15.0	7.0	7.5
43	0-4"	5.8	78	1268	133	867	14.6	15.6	7.3	7.8
44	0-4"	6.1	76	1303	146	879	13.9	14.8	7.0	7.4
45	0-4"	6.1	77	1073	149	883	14.0	14.9	7.0	7.5
46	0-4"	6.1	96	894	179	895	17.0	17.9	8.5	8.9
47	0-4"	5.9	31	1351	134	893	5.6	6.0	2.8	3.0
49	0-4"	5.9	90	1968	113	904	16.4	17.7	8.2	8.8
50	0-4"	6.0	74	1723	121	906	13.4	14.4	6.7	7.2
51	0-4"	5.8	78	1710	131	928	13.7	14.7	6.9	7.4
52	0-4"	6.2	81	1195	136	916	14.4	15.4	7.2	7.7
53	0-4"	5.9	120	1227	151	924	21.0	22.3	10.5	11.2
54	0-4"	5.9	93	944	161	908	16.4	17.4	8.2	8.7
55	0-4"	5.9	52	1417	140	896	9.4	10.0	4.7	5.0
57	0-4"	6.4	91	2674	97	905	16.7	18.2	8.3	9.1
58	0-4"	5.9	124	1660	154	876	22.7	24.1	11.4	12.0
59	0-4"	6.0	159	1585	142	883	29.1	31.0	14.6	15.5
60	0-4"	6.1	119	1501	155	879	21.7	23.0	10.9	11.5
61	0-4"	5.9	170	1369	141	876	31.4	33.4	15.7	16.7
62	0-4"	6.1	119	1231	149	874	21.9	23.3	11.0	11.6
63	0-4"	5.8	72	700	153	896	12.9	13.7	6.5	6.9
Mean, mg/kg		6.0	122	1205	154	896	21.9	23.3	11.0	11.6
Median, mg/kg		6.0	118	1212	154	895	21.0	22.3	10.5	11.2
Minimum, mg/kg		5.6	31	674	97	856	5.6	6.0	2.8	3.0

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
Maximum, mg/kg		7.1	256	2674	204	968	46.5	48.9	23.3	24.4
Standard deviation, mg/kg		0.2	50	407	21	21	8.9	9.3	4.4	4.7
C.V., %		4	41	34	14	2	41	40	41	40
Count				45						
<b>Application zone</b>										
11	0-4"	6.1	230	893	180	876	41.6	43.6	20.8	21.8
12	0-4"	6.2	198	850	175	897	35.1	36.9	17.6	18.5
17	0-4"	6.2	180	836	160	914	31.6	33.5	15.8	16.8
18	0-4"	6.0	198	713	164	888	35.7	37.6	17.8	18.8
19	0-4"	5.9	149	716	167	856	27.7	29.1	13.9	14.6
20	0-4"	6.0	144	1212	165	900	25.6	27.0	12.8	13.5
21	0-4"	6.2	91	1297	161	897	16.3	17.2	8.1	8.6
25	0-4"	5.8	119	678	141	891	21.6	23.1	10.8	11.5
26	0-4"	6.1	201	731	164	934	34.6	36.6	17.3	18.3
27	0-4"	5.9	176	766	176	924	30.4	32.0	15.2	16.0
28	0-4"	6.0	101	1226	163	906	17.9	18.9	8.9	9.4
29	0-4"	6.1	108	1162	154	901	19.3	20.5	9.6	10.2
33	0-4"	5.9	143	767	122	885	26.4	28.4	13.2	14.2
34	0-4"	5.7	137	1130	144	886	25.0	26.6	12.5	13.3
35	0-4"	5.8	150	1454	153	920	26.3	28.0	13.1	14.0
36	0-4"	6.2	99	1344	162	856	18.5	19.4	9.2	9.7
37	0-4"	6.1	100	1294	171	968	16.6	17.6	8.3	8.8
41	0-4"	6.0	118	1027	126	887	21.7	23.3	10.8	11.6
42	0-4"	5.6	77	1593	135	892	14.0	15.0	7.0	7.5
43	0-4"	5.8	78	1268	133	867	14.6	15.6	7.3	7.8

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
44	0-4"	6.1	76	1303	146	879	13.9	14.8	7.0	7.4
45	0-4"	6.1	77	1073	149	883	14.0	14.9	7.0	7.5
49	0-4"	5.9	90	1968	113	904	16.4	17.7	8.2	8.8
50	0-4"	6.0	74	1723	121	906	13.4	14.4	6.7	7.2
51	0-4"	5.8	78	1710	131	928	13.7	14.7	6.9	7.4
52	0-4"	6.2	81	1195	136	916	14.4	15.4	7.2	7.7
53	0-4"	5.9	120	1227	151	924	21.0	22.3	10.5	11.2
54	0-4"	5.9	93	944	161	908	16.4	17.4	8.2	8.7
57	0-4"	6.4	91	2674	97	905	16.7	18.2	8.3	9.1
58	0-4"	5.9	124	1660	154	876	22.7	24.1	11.4	12.0
59	0-4"	6.0	159	1585	142	883	29.1	31.0	14.6	15.5
60	0-4"	6.1	119	1501	155	879	21.7	23.0	10.9	11.5
61	0-4"	5.9	170	1369	141	876	31.4	33.4	15.7	16.7
62	0-4"	6.1	119	1231	149	874	21.9	23.3	11.0	11.6
Mean, mg/kg		6.0	126	1239	149	897	22.6	24.0	11.3	12.0
Median, mg/kg		6.0	119	1227	152	895	21.7	23.0	10.8	11.5
Minimum, mg/kg		5.6	74	678	97	856	13.4	14.4	6.7	7.2
Maximum, mg/kg		6.4	230	2674	180	968	41.6	43.6	20.8	21.8
Standard deviation, mg/kg		0.2	43	419	19	23	7.6	8.0	3.8	4.0
C.V., %		3	34	34	13	3	34	33	34	33
Count				34						
<b>Buffer zone</b>										
8	0-4"	7.1	161	1332	165	895	28.8	30.4	14.4	15.2
9	0-4"	6.2	192	950	164	887	34.6	36.5	17.3	18.3
10	0-4"	6.2	256	986	172	876	46.5	48.9	23.3	24.4

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
13	0-4"	6.3	125	1900	171	901	22.1	23.3	11.1	11.7
22	0-4"	5.8	59	674	204	886	10.4	10.8	5.2	5.4
30	0-4"	6.2	97	986	194	897	17.1	17.8	8.5	8.9
38	0-4"	5.9	91	912	173	932	15.6	16.5	7.8	8.2
46	0-4"	6.1	96	894	179	895	17.0	17.9	8.5	8.9
47	0-4"	5.9	31	1351	134	893	5.6	6.0	2.8	3.0
55	0-4"	5.9	52	1417	140	896	9.4	10.0	4.7	5.0
63	0-4"	5.8	72	700	153	896	12.9	13.7	6.5	6.9
Mean, mg/kg		6.1	112	1100	168	896	20.0	21.1	10.0	10.5
Median, mg/kg		6.1	96	986	171	895	17.0	17.8	8.5	8.9
Minimum, mg/kg		5.8	31	674	134	876	5.6	6.0	2.8	3.0
Maximum, mg/kg		7.1	256	1900	204	932	46.5	48.9	23.3	24.4
Standard deviation, mg/kg		0.4	67	364	21	14	12.2	12.9	6.1	6.4
C.V., %		6	60	33	12	2	61	61	61	61
Count				11						

**Table 24. Soil P sorption saturation and soil properties related to P sorption for 4 to 8 inch grid-soil samples from Field 12 for 2018.**

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
			mg/L				%			
<b>Whole field</b>										
21	4-8"	6.4	95	804	155	945	16.2	17.3	8.1	8.6
22	4-8"	6.3	24	1153	111	946	4.2	4.5	2.1	2.3
25	4-8"	5.9	52	840	109	966	8.9	9.7	4.4	4.8
26	4-8"	5.6	137	668	154	946	23.4	24.9	11.7	12.5
27	4-8"	5.8	79	914	138	928	13.8	14.8	6.9	7.4
28	4-8"	6.0	24	1560	118	933	4.2	4.6	2.1	2.3
29	4-8"	6.0	31	1363	125	946	5.4	5.8	2.7	2.9
30	4-8"	5.9	46	740	142	953	7.8	8.4	3.9	4.2
33	4-8"	5.7	50	809	101	963	8.6	9.4	4.3	4.7
34	4-8"	5.5	80	1187	141	962	13.5	14.5	6.8	7.3
35	4-8"	5.8	53	1830	133	935	9.2	9.9	4.6	5.0
36	4-8"	6.1	67	1113	186	966	11.1	11.6	5.5	5.8
37	4-8"	6.1	30	1540	130	948	5.2	5.6	2.6	2.8
38	4-8"	6.0	36	719	134	961	6.1	6.6	3.1	3.3
41	4-8"	6.2	45	1229	107	920	8.1	8.8	4.0	4.4
42	4-8"	6.3	30	1903	141	928	5.2	5.6	2.6	2.8
43	4-8"	6.2	43	1123	151	933	7.4	7.9	3.7	4.0
44	4-8"	6.0	26	1381	114	950	4.5	4.9	2.3	2.4
45	4-8"	6.0	31	1173	124	957	5.3	5.7	2.7	2.9
46	4-8"	6.0	32	802	126	954	5.5	5.9	2.7	3.0
47	4-8"	6.0	25	1171	129	943	4.3	4.7	2.2	2.3
49	4-8"	5.9	84	1267	175	962	14.0	14.8	7.0	7.4

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
50	4-8"	6.2	27	2038	106	936	4.8	5.2	2.4	2.6
51	4-8"	6.2	25	2238	117	958	4.3	4.7	2.1	2.3
52	4-8"	6.3	32	1497	130	962	5.4	5.9	2.7	2.9
53	4-8"	6.1	54	1687	141	940	9.3	10.0	4.7	5.0
54	4-8"	6.0	57	901	150	961	9.6	10.3	4.8	5.1
55	4-8"	6.1	28	1249	129	936	4.9	5.3	2.4	2.6
57	4-8"	6.5	44	2508	108	925	7.8	8.5	3.9	4.3
58	4-8"	5.9	76	1895	163	942	13.0	13.8	6.5	6.9
59	4-8"	6.2	51	1371	133	949	8.8	9.4	4.4	4.7
60	4-8"	6.0	39	1563	123	955	6.7	7.2	3.3	3.6
61	4-8"	6.0	139	1192	171	931	23.9	25.2	11.9	12.6
62	4-8"	6.5	52	1126	133	956	8.9	9.6	4.4	4.8
63	4-8"	5.9	60	801	146	931	10.4	11.1	5.2	5.6
Mean, mg/kg		6.0	52	1296	134	946	8.9	9.5	4.4	4.7
Median, mg/kg		6.0	45	1192	133	946	7.8	8.5	3.9	4.3
Minimum, mg/kg		5.5	24	668	101	920	4.2	4.5	2.1	2.3
Maximum, mg/kg		6.5	139	2508	186	966	23.9	25.2	11.9	12.6
Standard deviation, mg/kg		0.2	29	454	20	13	4.9	5.2	2.5	2.6
C.V., %		4	56	35	15	1	55	55	55	55
Count		36	35							
<b>Application zone</b>										
21	4-8"	6.4	95	804	155	945	16.2	17.3	8.1	8.6
25	4-8"	5.9	52	840	109	966	8.9	9.7	4.4	4.8
26	4-8"	5.6	137	668	154	946	23.4	24.9	11.7	12.5
27	4-8"	5.8	79	914	138	928	13.8	14.8	6.9	7.4

Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
28	4-8"	6.0	24	1560	118	933	4.2	4.6	2.1	2.3
29	4-8"	6.0	31	1363	125	946	5.4	5.8	2.7	2.9
33	4-8"	5.7	50	809	101	963	8.6	9.4	4.3	4.7
34	4-8"	5.5	80	1187	141	962	13.5	14.5	6.8	7.3
35	4-8"	5.8	53	1830	133	935	9.2	9.9	4.6	5.0
36	4-8"	6.1	67	1113	186	966	11.1	11.6	5.5	5.8
37	4-8"	6.1	30	1540	130	948	5.2	5.6	2.6	2.8
41	4-8"	6.2	45	1229	107	920	8.1	8.8	4.0	4.4
42	4-8"	6.3	30	1903	141	928	5.2	5.6	2.6	2.8
43	4-8"	6.2	43	1123	151	933	7.4	7.9	3.7	4.0
44	4-8"	6.0	26	1381	114	950	4.5	4.9	2.3	2.4
45	4-8"	6.0	31	1173	124	957	5.3	5.7	2.7	2.9
49	4-8"	5.9	84	1267	175	962	14.0	14.8	7.0	7.4
50	4-8"	6.2	27	2038	106	936	4.8	5.2	2.4	2.6
51	4-8"	6.2	25	2238	117	958	4.3	4.7	2.1	2.3
52	4-8"	6.3	32	1497	130	962	5.4	5.9	2.7	2.9
53	4-8"	6.1	54	1687	141	940	9.3	10.0	4.7	5.0
54	4-8"	6.0	57	901	150	961	9.6	10.3	4.8	5.1
57	4-8"	6.5	44	2508	108	925	7.8	8.5	3.9	4.3
58	4-8"	5.9	76	1895	163	942	13.0	13.8	6.5	6.9
59	4-8"	6.2	51	1371	133	949	8.8	9.4	4.4	4.7
60	4-8"	6.0	39	1563	123	955	6.7	7.2	3.3	3.6
61	4-8"	6.0	139	1192	171	931	23.9	25.2	11.9	12.6
62	4-8"	6.5	52	1126	133	956	8.9	9.6	4.4	4.8
Mean, mg/kg		6.1	55	1383	135	947	9.5	10.2	4.8	5.1
Median, mg/kg		6.0	51	1315	133	947	8.7	9.4	4.3	4.7



Point	Depth	pH	P	Ca	Fe	Al	P Saturation molarity	P Saturation with 0.5	P Saturation molarity	P Saturation
Minimum, mg/kg		5.5	24	668	101	920	4.2	4.6	2.1	2.3
Maximum, mg/kg		6.5	139	2508	186	966	23.9	25.2	11.9	12.6
Standard deviation, mg/kg		0.2	30	457	22	14	5.2	5.5	2.6	2.7
C.V., %		4	55	33	16	1	54	54	54	54
Count		28								
<b>Buffer zone</b>										
22	4-8"	6.3	24	1153	111	946	4.2	4.5	2.1	2.3
30	4-8"	5.9	46	740	142	953	7.8	8.4	3.9	4.2
38	4-8"	6.0	36	719	134	961	6.1	6.6	3.1	3.3
46	4-8"	6.0	32	802	126	954	5.5	5.9	2.7	3.0
47	4-8"	6.0	25	1171	129	943	4.3	4.7	2.2	2.3
55	4-8"	6.1	28	1249	129	936	4.9	5.3	2.4	2.6
63	4-8"	5.9	60	801	146	931	10.4	11.1	5.2	5.6
Mean, mg/kg		6.0	36	948	131	946	6.2	6.6	3.1	3.3
Median, mg/kg		6.0	32	802	129	946	5.5	5.9	2.7	3.0
Minimum, mg/kg		5.9	24	719	111	931	4.2	4.5	2.1	2.3
Maximum, mg/kg		6.3	60	1249	146	961	10.4	11.1	5.2	5.6
Standard deviation, mg/kg		0.1	13	231	11	11	2.3	2.4	1.1	1.2
C.V., %		2	36	24	9	1	36	36	36	36
Count		7								