



Location	Grower	Farm	Field	Area	Centroid
Gary & Sharon Seedorf			Seedorf Manchester	165.59 acres	43.701128,-93.469793



	Min	Max	Avg
P	6.8	121	53.2
Bray P1	2.5	96.4	33.3
P Olsen	0.00	78.4	6.1
K	84.0	419	193
Mg	197	680	393
Ca	1276	29405	4275
Na	3.3	10.1	5.7
S	5.9	61.0	18.5
Zn	0.90	16.6	4.7
Cal	1123	7724	3429
Znl	0.30	7.1	2.0
pH	4.5	8.0	6.5
bpH	5.0	7.4	6.8
OM	1.8	39.9	9.3
CEC	10.5	46.5	24.8
%K	0.70	4.7	2.2
%Mg	3.9	24.0	15.1
%Ca	37.0	91.4	67.8
%Na	0.00	0.20	0.12

Sample Date: 2013-10-23      Soil Lab: Solum Technology

ID	P ppm	Bray P1 ppm	P Olsen ppm	K ppm	Mg ppm	Ca ppm	Na ppm	S ppm	Zn ppm	Cal	Znl	pH	bpH	OM %	CEC meq	%K %	%Mg %	%Ca %	%Na %
1	88.5	63.7	0.00	272	432	2533	6.1	11.2	6.8	2229	3.2	5.9	6.6	4.0	20.3	3.4	17.8	55.0	0.10
2	59.5	42.3	0.00	133	416	2434	5.0	6.4	4.1	2141	1.5	7.3	7.3	2.6	14.5	2.4	23.8	73.7	0.10
3	46.0	31.9	0.00	190	482	2681	5.0	10.0	3.0	2359	1.3	6.5	6.9	3.6	17.5	2.8	22.9	67.3	0.10
4	65.7	38.1	0.00	175	272	1499	4.6	10.7	1.7	1319	0.80	6.3	6.9	2.0	10.5	4.3	21.6	62.6	0.20
5	45.9	26.9	0.00	142	288	1549	6.3	7.9	1.6	1363	0.80	5.9	6.8	2.2	12.0	3.0	20.0	56.8	0.20
6	52.6	41.0	0.00	165	257	1304	5.4	8.1	1.9	1147	0.90	5.8	6.8	1.8	10.7	3.9	20.0	53.5	0.20
7	39.5	17.7	0.00	116	317	1962	5.7	10.3	2.0	1726	0.80	6.4	7.0	2.7	11.6	2.6	22.8	74.4	0.20
8	45.2	30.7	0.00	143	547	3608	8.9	20.6	11.6	3175	5.0	6.4	6.7	5.6	24.4	1.5	18.7	64.9	0.20
9	66.2	55.3	0.00	287	449	3335	4.7	16.0	5.5	2935	2.7	5.6	6.1	7.2	30.0	2.5	12.5	49.0	0.10
10	49.0	24.6	0.00	170	323	1730	4.8	9.9	2.1	1522	0.90	6.4	6.9	2.2	12.0	3.6	22.5	63.6	0.20
11	60.2	39.2	0.00	182	680	4232	5.3	12.2	4.9	3724	2.1	6.4	6.7	6.7	28.4	1.6	20.0	65.6	0.10
12	60.6	48.5	0.00	325	623	4663	5.2	12.8	5.9	4103	2.3	6.9	6.9	5.9	27.8	3.0	18.7	73.9	0.10
13	51.8	20.1	0.00	154	268	1635	4.6	12.8	1.3	1439	0.60	5.9	6.7	2.7	13.4	2.9	16.6	53.5	0.10
14	73.3	28.0	0.00	194	205	1276	5.0	20.6	1.0	1123	0.50	5.3	6.4	2.5	15.0	3.3	11.4	37.3	0.10



ID	P ppm	Bray P1 ppm	P Olsen ppm	K ppm	Mg ppm	Ca ppm	Na ppm	S ppm	Zn ppm	Cal	Znl	pH	bpH	OM %	CEC meq	%K %	%Mg %	%Ca %	%Na %
15	56.1	25.0	0.00	175	314	2162	6.0	14.6	1.8	1903	0.90	5.4	6.2	4.0	22.2	2.0	11.8	42.8	0.10
16	36.8	19.4	0.00	110	305	1672	5.1	9.6	3.5	1471	1.6	6.2	6.9	2.4	11.4	2.5	22.3	64.5	0.20
17	32.4	20.0	0.00	111	392	2491	4.8	7.7	2.0	2192	0.80	7.1	7.2	2.7	14.5	2.0	22.5	75.4	0.10
18	29.0	17.9	0.00	109	611	3988	6.1	11.6	2.6	3509	1.0	7.1	7.2	4.4	23.0	1.2	22.2	76.5	0.10
19	40.8	19.6	16.0	146	445	6828	7.5	14.2	2.8	6009	0.90	7.9	7.4	4.8	34.2	1.1	10.9	87.9	0.10
20	26.9	15.2	9.6	111	341	4793	4.9	9.5	2.0	4218	0.70	7.5	7.3	4.2	24.2	1.2	11.7	87.0	0.10
21	59.4	26.6	0.00	135	235	1424	5.5	14.8	1.3	1253	0.60	5.8	6.6	2.4	13.4	2.6	14.6	46.8	0.20
22	47.6	36.1	0.00	117	540	4225	6.6	10.3	6.4	3718	2.3	7.3	7.3	5.3	23.4	1.3	19.2	79.4	0.10
23	36.1	17.7	0.00	114	331	2378	6.1	12.2	1.1	2092	0.50	5.7	6.6	3.1	18.3	1.6	15.1	57.0	0.10
24	44.1	33.0	0.00	139	534	3634	10.1	17.2	2.3	3198	1.0	6.2	6.7	4.8	24.4	1.5	18.2	65.4	0.20
25	35.0	22.9	0.00	108	326	2017	5.5	8.7	1.9	1775	0.80	6.3	7.0	2.5	11.9	2.3	22.9	74.6	0.20
34	121	96.4	0.00	382	473	3583	6.7	9.8	13.8	3153	5.2	7.1	7.2	3.3	20.7	4.7	19.1	76.1	0.10
35	96.4	68.7	0.00	290	372	2331	6.7	9.3	3.2	2052	1.5	5.9	6.6	3.8	18.9	3.9	16.4	54.2	0.20
36	53.2	35.0	0.00	167	437	2493	7.5	11.1	2.7	2194	1.2	5.9	6.7	3.4	18.7	2.3	19.5	58.7	0.20
37	70.7	45.5	0.00	117	348	2099	6.1	10.9	2.1	1847	0.90	6.5	6.9	2.6	13.7	2.2	21.2	67.6	0.20
38	121	75.3	0.00	190	216	1643	5.3	14.9	2.2	1446	1.1	5.3	6.4	3.2	16.7	2.9	10.8	43.2	0.10
39	83.0	57.7	0.00	137	347	2265	4.7	9.2	3.1	1993	1.4	6.2	6.8	3.1	15.6	2.3	18.5	63.7	0.10
40	90.2	68.4	0.00	181	432	4287	4.7	12.8	5.1	3773	2.3	6.1	6.7	6.4	26.6	1.8	13.6	71.0	0.10
41	47.8	11.7	28.0	187	400	8704	5.1	18.4	4.8	6896	1.7	7.4	7.2	12.5	38.3	1.3	8.7	90.0	0.10
42	38.9	24.7	0.00	308	628	6835	5.4	48.3	6.5	6015	2.6	6.7	6.8	20.2	38.5	2.1	13.6	78.1	0.10
43	37.2	17.0	67.2	250	623	10026	6.6	56.1	7.4	6949	2.6	7.5	7.2	39.9	40.6	1.6	12.8	85.6	0.10
44	6.8	6.6	78.4	148	574	29405	8.6	18.7	2.7	7724	0.90	7.8	7.3	20.8	43.8	0.90	10.9	88.1	0.10
45	39.3	27.2	17.8	104	287	5017	6.2	6.9	6.4	4415	2.0	8.0	7.4	3.3	24.8	1.1	9.7	89.2	0.10
46	22.9	2.5	13.3	86.2	372	6895	5.6	9.9	2.5	6068	0.80	7.8	7.4	6.4	33.7	0.70	9.2	90.1	0.10
47	26.5	14.5	0.00	127	607	5813	5.5	18.6	8.9	5115	3.3	7.1	7.0	14.5	31.0	1.1	16.3	82.5	0.10
48	28.7	14.4	21.6	143	447	6416	6.8	20.6	10.2	5646	3.5	7.5	7.2	13.6	32.4	1.1	11.5	87.2	0.10
49	45.1	32.9	0.00	264	379	4425	4.1	24.3	2.9	3894	1.4	5.6	6.1	14.2	34.1	2.0	9.3	57.0	0.10
50	45.2	30.7	0.00	149	286	1830	6.4	8.2	1.6	1610	0.70	6.1	6.9	2.2	12.1	3.2	19.8	66.8	0.20
51	28.8	17.7	0.00	120	349	2194	5.8	7.2	10.5	1931	4.5	6.4	7.0	3.1	12.9	2.4	22.6	74.9	0.20
52	54.8	15.7	40.0	178	538	8929	5.1	14.5	6.9	6905	2.3	7.7	7.2	15.8	39.5	1.2	11.4	87.4	0.10
53	22.2	13.3	0.00	84.0	390	3732	5.2	8.1	2.1	3284	0.80	7.3	7.2	3.9	19.9	1.1	16.3	82.5	0.10
54	25.5	15.1	10.2	103	415	2421	6.7	6.4	1.4	2131	0.50	7.5	7.4	2.1	14.4	1.8	24.0	73.9	0.20
55	22.7	14.0	11.9	93.5	430	2818	8.9	5.9	0.90	2480	0.30	7.7	7.2	1.9	16.3	1.5	22.0	76.2	0.20
56	31.8	20.6	0.00	129	246	1359	6.0	10.7	1.0	1196	0.50	5.6	6.7	2.0	12.0	2.8	17.1	49.9	0.20
57	35.1	22.6	0.00	124	303	2457	5.9	8.9	1.7	2162	0.70	6.4	6.9	2.9	14.9	2.1	17.0	72.6	0.20
58	53.1	36.0	0.00	404	492	5532	3.5	29.9	6.0	4868	2.8	5.8	6.1	23.3	40.3	2.6	10.2	60.4	0.00
59	32.7	13.3	19.2	182	377	6359	6.3	21.2	4.1	5596	1.4	7.5	7.3	10.0	31.6	1.5	9.9	88.5	0.10
60	35.6	22.0	0.00	227	452	5342	4.6	18.0	5.3	4701	1.9	7.3	7.1	9.6	27.9	2.1	13.5	84.3	0.10
61	31.8	17.5	14.4	232	618	4507	4.5	14.9	6.6	3967	2.3	7.4	7.2	8.2	25.6	2.3	20.1	77.5	0.10
62	65.1	23.9	43.6	320	288	8449	3.3	34.5	16.6	6886	5.7	7.5	7.1	25.4	37.7	2.2	6.4	91.4	0.00
63	67.7	27.2	0.00	326	248	7365	5.2	50.2	11.9	6481	4.5	7.0	6.6	26.0	40.1	2.1	5.2	80.7	0.10
64	115	89.4	0.00	374	197	3556	4.9	61.0	5.1	3129	2.9	4.5	5.0	29.6	42.3	2.3	3.9	37.0	0.10
65	92.1	68.1	0.00	419	310	5365	4.1	47.9	3.9	4722	2.1	5.0	5.4	33.7	46.5	2.3	5.6	50.8	0.00



ID	P ppm	Bray P1 ppm	P Olsen ppm	K ppm	Mg ppm	Ca ppm	Na ppm	S ppm	Zn ppm	Cal	Znl	pH	bpH	OM %	CEC meq	%K %	%Mg %	%Ca %	%Na %
66	34.2	17.1	19.1	154	478	6057	6.3	15.8	4.1	5330	1.5	7.4	7.2	7.6	31.1	1.3	12.8	85.8	0.10
67	70.3	47.7	0.00	285	368	5116	4.4	40.4	8.4	4502	4.3	5.3	5.7	26.4	41.9	1.7	7.3	53.7	0.00
68	49.3	25.0	0.00	250	341	6288	4.1	40.6	12.9	5533	5.1	6.8	6.7	28.5	34.8	1.8	8.2	79.6	0.10
69	54.5	31.1	0.00	296	265	5809	3.4	38.4	15.7	5112	7.1	6.1	6.2	27.1	38.1	2.0	5.8	67.0	0.00
70	94.2	79.1	0.00	366	319	3186	6.0	38.2	5.5	2804	3.0	4.8	5.4	18.2	36.8	2.5	7.2	38.0	0.10
71	69.2	50.3	0.00	303	388	4763	6.0	46.6	6.4	4191	3.2	5.4	5.8	24.4	39.4	2.0	8.2	53.2	0.10
72	52.9	33.2	0.00	155	429	4257	5.4	20.8	5.0	3746	2.4	5.7	6.3	10.9	31.1	1.3	11.5	60.2	0.10
73	68.8	40.5	0.00	160	275	1652	5.5	11.7	3.1	1454	1.5	5.8	6.7	2.4	13.6	3.0	16.9	53.4	0.20
74	55.7	39.8	0.00	156	374	1985	6.0	7.5	2.3	1747	1.0	6.0	6.9	2.4	13.5	3.0	23.1	64.8	0.20
75	76.4	60.0	0.00	265	275	2814	5.3	31.7	3.2	2476	1.7	4.9	5.6	11.7	32.2	2.1	7.1	38.5	0.10