

Soil Sample Survey

Onondaga Co.

Samples analyzed by CNAL in 1995-2001



Farming in Onondaga County

Summary compiled by

Quirine M. Ketterings, Hettie Krol, W. Shaw Reid & A. Edward Staehr



Nutrient Management Spear Program: <http://nmsp.css.cornell.edu/>

Ketterings, Q.M., H. Krol, W.S. Reid and A.E. Staehr (2003). Onondaga County Soil Sample Survey 1995-2001. CSS Extension Bulletin E03-20. 39 pages.

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Quirine Ketterings and Hettie Krol

Nutrient Management Spear Program

Department of Crop and Soil Sciences

817 Bradfield Hall, Cornell University

Ithaca NY 14853

W. Shaw Reid

Professor Emeritus

Department of Crop and Soil Sciences

A. Edward Staehr

Extension Team Coordinator - Agriculture

Cornell Cooperative Extension of Onondaga County

July 21, 2003

Correct Citation:

Ketterings, Q.M., H. Krol, W.S. Reid, and A.E. Staehr (2003). Soil samples survey of Onondaga County. Samples analyzed by the Cornell Nutrient Analysis Laboratory in 1995-2001. CSS Extension Bulletin E03-20. 39 pages.

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1. General Survey Summary

Onondaga County is located in the center of New York State, and covers 507,840 acres or 793.5 square miles. There are two physiographic regions in Onondaga County – the Erie-Onondaga Plain in the north, and the Allegheny Plateau in the south. The majority of all drainage in the county goes towards the north into Lake Ontario.

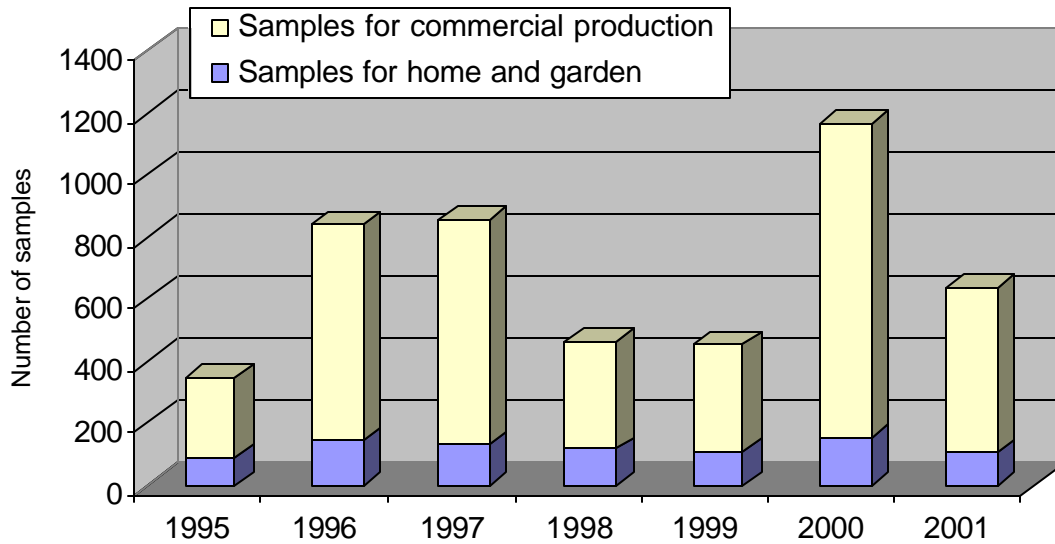
Agriculture accounts for 160,400 acres of land in the county, or approximately 32 percent of land use. Dairy farming is the predominant form of agriculture, and much of the acreage in production is used to support the dairy industry. Corn and hay crops comprise a significant share of all agricultural acreage in the county. However, productive soils in the north are also conducive to vegetable farming. Apple farming is a noteworthy component of Onondaga County agriculture, and the southern part of the county is home to well-known apple farms.

Skaneateles Lake, located partially in the county is known as the “Gateway to the Finger Lakes”, and supplies the City of Syracuse with municipal drinking water. Since Skaneateles Lake water is not filtered by Syracuse, a watershed protection program is in place. A voluntary Whole Farm Planning program, the Skaneateles Watershed Agricultural Program, helps develop environmental plans for participating farmers. Comprehensive Nutrient Management Plans (CNMPs) are a key component in all Whole Farm Plans, and soil test analysis is a foundation on which CNMPs are constructed.

This survey summarizes the soil test results from Onondaga County soil samples submitted for analyses to the Cornell Nutrient Analysis Laboratory (CNAL) during 1995-2001. The total number of samples analyzed in these years amounted to 4470. Of these, 3908 samples (82%) were submitted to obtain fertilizer recommendations for commercial production while 862 samples (18%) were submitted as home and garden samples.

Of the home and garden samples, 26% were lawn samples, 19% were vegetable garden samples, and 24% were samples from greens and fairways. People submitting samples for commercial production requested fertilizer recommendations for corn grain or silage (35%), and alfalfa, alfalfa/grass or alfalfa/trefoil mixtures (27%), while a few producers

were planning on growing other crops including grass for hay production, pasture, oats, soybeans, wheat, sweet corn and vegetables.



Homeowners		Commercial		Total
1995	89	1995	258	347
1996	146	1996	692	838
1997	133	1997	726	859
1998	118	1998	347	465
1999	111	1999	343	454
2000	157	2000	1010	1167
<u>2001</u>	<u>108</u>	<u>2001</u>	<u>532</u>	<u>640</u>
Total	862	Total	3908	4470

Thirty five percent of the home and garden samples in Onondaga County were sandy loam soils belonging to soil management group 4. Twenty two percent belonged to soil management group 2. Group 3 was represented by 27% of all samples and 16% were classified as sandy (soil management group 5). The table on page 6 gives descriptions of each of the soil management groups.

Soil Management Groups for New York

1	Fine-textured soils developed from clayey lake sediments and medium- to fine-textured soils developed from lake sediments.
2	Medium- to fine-textured soils developed from calcareous glacial till and medium-textured to moderately fine-textured soils developed from slightly calcareous glacial till mixed with shale and medium-textured soils developed in recent alluvium.
3	Moderately coarse textured soil developed from glacial outwash and recent alluvium and medium-textured acid soil developed on glacial till.
4	Coarse- to medium-textured soils formed from glacial till or glacial outwash.
5	Coarse- to very coarse-textured soils formed from gravelly or sandy glacial outwash or glacial lake beach ridges or deltas.
6	Organic or muck soils with more than 80% organic matter.

Of the samples submitted for commercial production, 76.4% belonged to soil management group 2. Less than one percent belonged to either group 1 or group 6. Group 3, 4 and 5 were represented by 10.9, 6.7, and 3.7% of all samples, respectively. The five most common soil series, all belonging to soil management group 2, were Honeoye (28.5%), Lansing (11.6%), Lima (9.9%), Aurora (7.4%), and Conesus (5.0%). These soils represent 16.9% (Honeoye), 3.6% (Lansing), 2.9% (Lima), 3.9% (Aurora), and 1.4% (Conesus) of the total 507,840 acres in the county.

Organic matter levels, as measured by loss on ignition, ranged from less than 1% to over 55% with median values ranging from 3.6 to 4.1% organic matter for home and garden samples and values ranging from 2.8 to 3.5% for samples submitted for commercial production. Sixty seven percent of the home and garden samples had between 2 and 5% organic matter with 18% testing between 2 and 2.9% organic matter, 29% between 3.0 and 3.9% organic matter and 20% between 4.0 and 4.9% organic matter. Twenty seven percent of the soils submitted for home and garden tested >4.9% in organic matter while 6% had less than 2% organic matter. Of the samples submitted for commercial

production, 41% contained between 3 and 4% organic matter, 19% tested between 4.0 and 4.9% while 4% had organic matter concentrations of 5.0-5.9%. In total, 24% of the samples had organic matter levels between 4.0 and 6.9%.

Soil pH in water (1:1 extraction ratio) varied from pH 3.9 to 9.6 with the median for home and garden samples ranging from pH 6.8 to pH 7.6 and for samples submitted for commercial production ranging from pH 6.3 to pH 6.7. Of the home and garden samples, 59% tested between pH 6.0 and 7.4. For the samples submitted for commercial production, 79% fell in the pH 6-7.4 range while 13% tested between pH 5.0 and 5.9.

Extractable nutrients such as phosphorus (P), potassium (K), magnesium (Mg), calcium (Ca), iron (Fe), manganese (Mn), and zinc (Zn) were measured using the Morgan solution and extraction method (Morgan, 1941). This solution contains sodium acetate buffered at a pH of 4.8.

Soil test P levels of <1 lbs P/acre are classified as very low. Between 1-3 lbs P/acre is low. Medium is between 4-8 lbs P/acre. High testing soils have P levels between 9 and 39 lbs P/acre and soils with >39 lbs P/acre are classified as very high. Of the home and garden samples, 9% tested low, 13% tested medium, 44% tested high and 34% tested very high. This meant that 78% tested high or very high in P.

Phosphorus levels for samples for commercial production in Onondaga County were lower than the state average (50% tests high or very high in P). Seven percent of the samples tested very high in P. Twenty four percent was low in P, 31% tested medium for P while 38% of the submitted samples were classified as high in soil test P. This means that 45% tested high or very high in P and. There were no clear trends in P levels over the 6 years.

Classifications for potassium depend on soil management group. The fine-textured soils of soil management group 1 have a greater K supplying capacity than the coarse textured sandy soils (soil management group 5). Classification for each of the management groups in the above table represent very low, low, medium, high and very high. So for example for soil management group 5 and 6, a soil test K level of <60 lbs K/acre means the soil is very low in K, between 60 and 114 lbs K/acre is low, 115-164 lbs K/acre is medium, 165-269 lbs K/acre is high and >269 lbs K/acre is classified as very high (see table below).

Potassium classifications depend on soil test K levels and soil management group.

Soil Management Group	Potassium Soil Test Value (Morgan extraction in lbs K/acre)				
	Very low	Low	Medium	High	Very High
1	<35	35-64	65-94	95-149	>149
2	<40	40-69	70-99	100-164	>164
3	<45	45-79	80-119	120-199	>199
4	<55	55-99	100-149	150-239	>239
5 and 6	<60	60-114	115-164	165-269	>269

Of the home and garden samples, 14% were classified as very low or low in potassium. Twenty five percent tested medium, 26% high and 36% were very high. For samples submitted for commercial production, 1% tested very low in K, 8% tested low, 20% tested medium, 36% tested high and 33% tested very high in potassium. As with phosphorus, there were no trends over the 6 years of soil sampling.

Soils test very low for magnesium if Morgan extractable Mg is less than 20 lbs Mg/acre. Low testing soils have 20-65 lbs Morgan Mg per acre. Soils with 66-100 lbs Mg/acre test medium for magnesium. High testing soils have 101-199 lbs Mg/acre while soils with more than 200 lbs Mg/acre in the Morgan extraction are classified as very high in Mg. Magnesium levels ranged from less than 10 to almost 5000 lbs Mg/acre (Morgan extraction). There were only three samples that tested very low in Mg. Most soils tested high or very high for Mg (99% of the homeowner soils and 97% of the soils of the commercial growers). No more than 9 of the homeowner soils and 3% of the commercial growers' soil tested low or medium in Mg. Thus, magnesium deficiency is not likely to occur in Onondaga County provided the soil pH is maintained in the desirable range.

Soils with more than 50 lbs Morgan extractable Fe per acre test excessive for Fe. Anything lower than 50 lbs Fe/acre is considered normal. Iron levels fell for 97-99% in the normal range with 3% of the home and garden samples and 1% of the samples for commercial production testing excessive for Fe. Similarly, most soils (85-100%) for both groups tested normal for manganese. Soils with more than 100 lbs Morgan extractable

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Mn per acre are classified as excessive in Mn. Anything less than 100 lbs Mn per acre is classified as normal. Soils with less than 0.5 lb zinc per acre in the Morgan extraction are classified as low in Zn. Medium testing soils have between 0.5 and 1 lb of Morgan extractable Zn per acre. If more than 1 lb of Zn/acre is extracted with the Morgan solution, the soil tests high in Zn. For the home and garden samples, 89% tested high for zinc while 9% tested medium and 2% were low in zinc. Of the samples for commercial production, 6% tested low in zinc, 45% tested medium while 50% was high in zinc.

In the following sections, the summary tables for each of the soil fertility indicators described above are given. The appendix contains the crop codes used in section 2.

Reference

- Morgan, M.F. 1941. Chemical soil diagnosis by the universal soil testing system. Connecticut Agricultural Experimental Station. Bulletin 450.

2. Cropping Systems

2.1 Samples for Home and Garden

Crops for which recommendations are requested by homeowners:

	1995	1996	1997	1998	1999	2000	2001	Total	%
ALG	1	0	1	2	0	4	1	9	1
ATF	5	12	1	4	3	4	12	41	5
BLU	1	0	2	0	3	0	0	6	1
CEM	0	0	1	0	0	0	0	1	0
FAR	0	22	7	24	25	0	22	100	12
FLA	4	2	0	1	1	6	0	14	2
GPA	0	0	0	1	0	0	0	1	0
GRA	0	0	3	0	2	2	0	7	1
GEN	20	18	20	21	8	0	18	105	12
HRB	0	0	1	0	0	1	1	3	0
LAW	24	34	43	14	33	67	13	228	26
MVG	18	35	32	26	16	20	19	166	19
OTH	0	2	0	1	3	6	4	16	2
PER	7	11	5	8	10	14	6	61	7
PRK	0	2	0	3	0	0	0	5	1
ROD	0	0	0	0	0	1	0	1	0
ROS	4	2	5	6	2	8	2	29	3
RSP	0	0	1	0	2	0	0	3	0
SAG	3	6	8	5	2	20	9	53	6
SOD	0	0	1	0	0	0	0	1	0
STR	0	0	1	0	0	0	0	1	0
TOM	0	0	1	0	0	0	0	1	0
TRF	2	0	0	0	0	0	1	3	0
Unknown	0	0	0	2	1	4	0	7	1
Total	89	146	133	118	111	157	108	862	100

Notes:

See Appendix for Cornell crop codes.

2.2 Samples for Commercial Production

Crops for which recommendations are requested for commercial production:

Current year crop	1995	1996	1997	1998	1999	2000	2001	Total	%
ABE/ABT	0	12	0	1	5	2	0	20	1
AGE/AGT	27	131	135	36	42	292	105	768	20
ALE/ALT	30	61	72	5	0	45	40	253	6
APP	2	4	0	2	2	0	1	11	0
ASP	3	1	3	1	0	1	0	9	0
BCE/BCT	0	0	0	3	1	0	0	4	0
BGE/BGT	1	2	1	0	1	0	0	5	0
BLB	0	4	0	0	4	0	0	8	0
BND/BDR	0	3	0	0	0	1	0	4	0
BNS	0	1	0	1	0	0	0	2	0
BRP	0	0	0	0	0	0	1	1	0
BSP	0	1	0	0	0	0	8	9	0
BSS	1	0	3	4	0	2	0	10	0
BUK	0	0	2	0	0	0	0	2	0
CBP	3	0	0	1	3	0	0	7	0
CBS	0	2	0	0	0	0	0	2	0
CGE/CGT	1	3	1	3	2	3	5	18	0
CKP	0	0	0	0	1	0	0	1	0
CKS	0	0	1	2	0	1	2	6	0
CLE/CLT	0	3	3	2	0	3	4	15	0
COG/COS	89	214	242	142	72	400	220	1379	35
EGG	1	0	0	0	1	0	0	2	0
END	0	1	0	0	0	0	0	1	0
GIE/GIT	2	4	0	0	0	0	0	6	0
GPF	0	0	0	0	4	0	0	4	0
GPV	0	0	0	4	0	0	0	4	0
GRE/GRT	5	6	26	11	8	39	9	101	3
IDL	0	8	1	0	0	18	2	29	1
LET	0	0	0	1	0	0	0	1	0
MIX	12	2	0	4	13	5	1	37	1
MML	0	0	0	1	1	0	0	2	0
NUR	0	8	1	0	0	0	0	9	0
OAS	6	15	8	1	7	13	2	52	1
OAT	7	43	48	10	25	39	28	200	5
ONS	1	1	0	0	0	0	0	2	0

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Current year crop	1995	1996	1997	1998	1999	2000	2001	Total	%
OTH	2	0	3	0	1	9	2	17	0
PEA	0	1	1	0	0	0	0	2	0
PCH	0	0	0	0	0	2	0	2	0
PEP	6	4	0	0	8	2	0	20	1
PGE/PGT	0	5	11	6	11	0	5	38	1
PIE/PIT	0	7	1	33	7	18	7	73	2
PLE/PLT	0	5	6	1	0	4	1	17	0
PNE/PNT	2	13	13	2	28	12	9	79	2
POT	4	1	3	2	3	0	2	15	0
PUM	1	6	1	0	4	1	1	14	0
RSF	0	1	0	0	0	0	0	1	0
RSS	0	2	0	0	1	0	0	3	0
RYC	6	0	1	2	7	1	0	17	0
RYS	3	1	0	1	2	2	3	12	0
SOG	0	0	0	1	0	0	0	1	0
SOY	10	24	44	25	15	19	17	154	4
SQS	0	1	0	1	1	1	0	4	0
SQW	5	1	0	1	10	1	1	19	0
SSH	0	0	0	0	0	0	1	1	0
STR	1	0	0	0	0	0	0	1	0
STS	6	3	0	0	6	0	5	20	1
SUD	0	2	0	0	0	0	0	2	0
SUN	0	0	0	0	0	1	0	1	0
SWC	7	34	12	5	19	17	3	97	2
TME	3	3	0	1	0	0	1	8	0
TOM	4	3	3	0	6	3	0	19	0
TRE/TRT	0	3	1	2	0	0	5	11	0
TRP	0	0	8	0	0	0	0	8	0
WHS	1	0	6	1	7	1	0	16	0
WHT	5	40	44	25	14	36	29	193	5
Unknown	1	2	21	3	1	16	12	56	1
Total	258	692	726	347	343	1010	532	3908	100

Notes:

See Appendix for Cornell crop codes.

3. Soil Types

3.1 Samples for Home and Garden

Soil types (soil management groups) for home and garden samples:

	1995	1996	1997	1998	1999	2000	2001	Total
SMG 1 (clayey)	0	0	0	0	0	0	0	0
SMG 2 (silty)	19	43	35	21	26	35	16	195
SMG 3 (silt loam)	21	29	37	31	20	66	27	231
SMG 4 (sandy loam)	44	29	52	13	58	45	58	299
SMG 5 (sandy)	5	45	9	53	7	11	7	137
SMG 6 (mucky)	0	0	0	0	0	0	0	0
Total	89	146	133	118	111	157	108	862

3.2 Samples for Commercial Production

Soil series for samples submitted for commercial production:

Name	SMG	1995	1996	1997	1998	1999	2000	2001	Total
Alton	5	30	26	0	6	30	20	4	116
Angola	2	0	14	11	2	0	11	23	61
Appleton	2	0	0	4	4	2	12	4	26
Arkport	4	5	10	0	2	4	3	5	29
Aurora	2	4	56	81	13	16	45	73	288
Benson	4	0	4	0	0	1	0	0	5
Bombay	4	0	1	3	9	3	0	0	16
Camillus	3	4	5	8	0	3	0	0	20
Carlisle	6	0	0	0	5	0	0	0	5
Cazenovia	2	8	15	13	2	1	30	1	70
Collamer	3	8	14	1	3	9	1	6	42
Colonie	5	2	1	0	3	10	3	3	22
Conesus	2	1	19	53	4	8	75	34	194
Croghan	5	1	0	0	0	0	0	0	1
Dunkirk	3	0	2	0	0	1	3	1	7
Edwards	6	0	1	0	0	0	0	0	1
Farmington	3	0	1	1	0	3	1	3	9
Fonda	2	0	2	0	1	0	0	0	3
Fredon	4	0	1	1	1	0	0	1	4
Galen	4	2	2	0	0	0	0	2	6
Halsey	4	0	0	0	0	0	0	1	1
Hamlin	2	0	1	0	1	1	1	0	4
Herkimer	3	0	5	0	2	0	0	0	7
Hilton	2	5	1	0	7	2	0	1	16
Honeoye	2	42	193	198	81	69	385	144	1112
Howard	3	3	11	14	10	1	8	10	57
Kendaia	2	1	24	14	5	4	23	8	79
Lairdsville	2	0	0	0	0	4	1	0	5
Lakemont	1	0	0	0	0	0	0	1	1
Lamson	4	2	2	0	0	2	0	1	7
Lansing	2	29	58	121	15	42	94	96	455
Lima	2	9	81	55	27	23	156	34	385
Lordstown	3	0	0	2	3	0	0	1	6
Lyons	2	0	0	1	0	0	3	2	6
Madrid	4	19	12	13	20	14	0	9	87
Manheim	2	1	0	9	3	4	0	1	18

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Name	SMG	1995	1996	1997	1998	1999	2000	2001	Total
Manlius	3	0	1	2	4	0	0	0	7
Mardin	3	0	10	9	0	1	19	0	39
Martisco	6	0	2	0	0	0	0	0	2
Minoa	4	3	1	0	3	4	0	2	13
Mohawk	2	3	10	25	7	4	5	0	54
Naumburg	5	0	0	0	1	0	0	0	1
Niagara	3	2	4	1	2	5	0	2	16
Odessa	2	0	0	0	1	0	0	0	1
Ontario	2	40	14	9	23	25	0	8	119
Otisville	4	0	0	0	0	2	0	0	2
Ovid	2	0	5	12	1	1	0	2	21
Palatine	2	1	2	7	0	0	0	1	11
Palmyra	3	11	10	9	31	19	28	24	132
Phelps	3	0	9	1	3	5	40	0	58
Rhinebeck	2	0	10	1	2	0	8	1	22
Schoharie	1	0	2	0	0	2	2	13	19
Teel	2	0	8	1	2	2	1	0	14
Volusia	3	0	1	0	0	0	1	0	2
Wampsville	3	3	4	2	3	2	1	3	18
Wareham	5	0	0	0	0	2	0	1	3
Wassaic	4	1	3	6	0	1	2	0	13
Wayland	2	1	5	0	3	0	10	2	21
Weaver	3	0	3	2	1	0	1	0	7
Williamson	4	14	24	12	15	11	0	2	78
Unknown	-	3	2	24	16	0	17	2	64
total	-	258	692	726	347	343	1010	532	3908

4. Organic Matter

4.1 Samples for Home and Garden

Number of home and garden samples within each % organic matter range:

	<1%	1.0-1.9	2.0-2.9	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	>6.9	Total
1995	0	4	14	22	27	7	5	10	89
1996	3	6	18	42	35	16	11	15	146
1997	3	5	27	36	20	12	14	16	133
1998	1	4	26	37	17	11	6	16	118
1999	0	6	27	26	26	12	7	7	111
2000	1	13	19	57	24	17	7	19	157
2001	1	4	21	27	27	11	5	12	108
Total	9	42	152	247	176	86	55	95	862

	1995	1996	1997	1998	1999	2000	2001	
Lowest:	1.2	0.1	0.4	0.9	1.4	0.5	0.5	
Highest:	44.2	20.8	33.2	18.6	25.3	33.7	28.1	
Mean:	5.1	4.5	4.9	4.5	4.3	4.7	4.8	
Median:	4.1	4.1	3.7	3.7	3.7	3.6	4.0	

Percent of home and garden samples within each % organic matter range:

	<1%	1.0-1.9	2.0-2.9	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	>6.9	Total
1995	0	4	16	25	30	8	6	11	100
1996	2	4	12	29	24	11	8	10	100
1997	2	4	20	27	15	9	11	12	100
1998	1	3	22	31	14	9	5	14	100
1999	0	5	24	23	23	11	6	6	100
2000	1	8	12	36	15	11	4	12	100
2001	1	4	19	25	25	10	5	11	100
Total	1	5	18	29	20	10	6	11	100

4.2 Samples for Commercial Production

Number of samples for commercial production within each % organic matter range:

	<1%	1.0-1.9	2.0-2.9	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	>6.9	Total
1995	4	41	100	49	49	12	1	2	258
1996	12	32	147	314	148	24	6	9	692
1997	0	15	180	325	166	30	8	2	726
1998	4	28	105	118	66	15	2	9	347
1999	8	45	130	86	45	22	5	2	343
2000	8	31	303	460	170	27	5	6	1010
2001	4	17	165	242	82	13	6	3	532
Total	40	209	1130	1594	726	143	33	33	3908

	1995	1996	1997	1998	1999	2000	2001	
Lowest:	0.1	0.3	1.6	0.6	0.6	0.6	0.3	
Highest:	48.7	19.8	11.7	55.7	10.4	17.3	8.7	
Mean:	3.2	3.5	3.5	4.0	3.1	3.3	3.3	
Median:	2.8	3.4	3.5	3.2	2.8	3.3	3.3	

Percent of samples for commercial production within each % organic matter range:

	<1%	1.0-1.9	2.0-2.9	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	>6.9	Total
1995	2	16	39	19	19	5	0	1	100
1996	2	5	21	45	21	3	1	1	100
1997	0	2	25	45	23	4	1	0	100
1998	1	8	30	34	19	4	1	3	100
1999	2	13	38	25	13	6	1	1	100
2000	1	3	30	46	17	3	0	1	100
2001	1	3	31	45	15	2	1	1	100
Total	1	5	29	41	19	4	1	1	100

5. pH

5.1 Samples for Home and Garden

Number of home and garden samples within each pH range:

	<4.5	4.5-4.9	5.0-5.4	5.5-5.9	6.0-6.4	6.5-6.9	7.0-7.4	7.5-7.9	8.0-8.4	>8.4	Total
1995	0	0	0	0	6	9	42	31	1	0	89
1996	0	0	5	7	10	25	60	39	0	0	146
1997	0	3	5	10	18	31	45	21	0	0	133
1998	0	0	3	3	19	41	20	29	3	0	118
1999	0	1	3	10	6	23	37	29	2	0	111
2000	0	0	3	10	10	13	22	63	34	2	157
2001	0	0	2	2	8	33	32	28	3	0	108
Total	0	4	21	42	77	175	258	240	43	2	862

	1995	1996	1997	1998	1999	2000	2001	
Lowest:	6.1	5.0	4.6	5.3	4.6	5.0	5.4	
Highest:	8.0	7.9	7.9	8.1	8.0	9.6	8.3	
Mean:	-	-	-	-	-	-	-	
Median:	7.3	7.2	6.9	6.8	7.1	7.6	7.1	

Percent of home and garden samples within each pH range:

	<4.5	4.5-4.9	5.0-5.4	5.5-5.9	6.0-6.4	6.5-6.9	7.0-7.4	7.5-7.9	8.0-8.4	>8.4	Total
1995	0	0	0	0	7	10	47	35	1	0	100
1996	0	0	3	5	7	17	41	27	0	0	100
1997	0	2	4	8	14	23	34	16	0	0	100
1998	0	0	3	3	16	35	17	25	3	0	100
1999	0	1	3	9	5	21	33	26	2	0	100
2000	0	0	2	6	6	8	14	40	22	0	100
2001	0	0	2	2	7	31	30	26	3	0	100
Total	0	0	2	5	9	20	30	28	5	0	100

5.2 Samples for Commercial Production

Number of samples for commercial production within each pH range:

	<4.5	4.5-4.9	5.0-5.4	5.5-5.9	6.0-6.4	6.5-6.9	7.0-7.4	7.5-7.9	8.0-8.4	>8.4	Total
1995	0	1	2	25	65	105	53	7	0	0	258
1996	3	0	26	101	199	219	130	13	1	0	692
1997*	1	6	29	128	237	195	105	12	0	0	713
1998*	0	2	10	34	104	109	63	19	1	0	342
1999	1	2	10	24	77	120	88	21	0	0	343
2000	0	3	23	98	275	335	191	77	8	0	1010
2001	1	2	34	84	104	145	131	30	0	1	532
Total	6	16	134	494	1061	1228	761	179	10	1	3890

* Thirteen and five samples were not analyzed for pH in 1997 and in 1998, respectively.

	1995	1996	1997	1998	1999	2000	2001	
Lowest:	4.9	3.9	4.0	4.5	4.4	4.8	4.4	
Highest:	7.7	8.2	7.9	8.0	7.9	8.1	9.0	
Mean:	-	-	-	-	-	-	-	
Median:	6.7	6.5	6.3	6.5	6.6	6.6	6.6	

Percent of samples for commercial production within each pH range:

	<4.5	4.5-4.9	5.0-5.4	5.5-5.9	6.0-6.4	6.5-6.9	7.0-7.4	7.5-7.9	8.0-8.4	>8.4	Total
1995	0	0	1	10	25	41	21	3	0	0	100
1996	0	0	4	15	29	32	19	2	0	0	100
1997	0	1	4	18	33	27	15	2	0	0	100
1998	0	1	3	10	30	32	18	6	0	0	100
1999	0	1	3	7	22	35	26	6	0	0	100
2000	0	0	2	10	27	33	19	8	1	0	100
2001	0	0	6	16	20	27	25	6	0	0	100
Total	0	0	3	13	27	32	20	5	0	0	100

6. Phosphorus

6.1 Samples for Home and Garden

Number of home and garden samples within each range Morgan extractable P range (lbs/acre Morgan P):

	<1	1-3	4-8	9-39	40-60	61-80	81-100	101-150	151-200	>200	Total
	VL	L	M	H	VH	VH	VH	VH	VH	VH	
1995	0	4	10	42	8	4	6	4	3	8	89
1996	0	8	18	64	17	6	6	8	5	14	146
1997	0	18	17	49	13	9	4	7	1	15	133
1998	0	4	9	57	13	6	3	10	3	13	118
1999	0	13	12	51	8	11	2	7	1	6	111
2000	0	21	31	63	12	5	4	7	6	8	157
2001	0	9	15	53	5	3	2	6	4	11	108
Total	0	77	112	379	76	44	27	49	23	75	862

VL = very low, L = low, M = medium, H = high, VH = very high.

	1995	1996	1997	1998	1999	2000	2001	
Lowest:	1	1	1	1	1	1	1	
Highest:	1111	559	1013	517	531	1226	579	
Mean:	81	70	75	72	52	51	62	
Median:	27	32	18	27	20	17	23	

Percent of home and garden samples within each Morgan extractable phosphorus range:

	<1	1-3	4-8	9-39	40-60	61-80	81-100	101-150	151-200	>200	Total
	VL	L	M	H	VH	VH	VH	VH	VH	VH	
1995	0	4	11	47	9	4	7	4	3	9	100
1996	0	11	12	44	12	4	4	5	3	10	100
1997	0	5	13	37	10	7	3	5	1	11	100
1998	0	14	8	48	11	5	3	8	3	11	100
1999	0	3	11	46	7	10	2	6	1	5	100
2000	0	12	20	40	8	3	3	4	4	5	100
2001	0	13	14	49	5	3	2	6	4	10	100
Total	0	9	13	44	9	5	3	6	3	9	100

VL = very low, L = low, M = medium, H = high, VH = very high.

6.2 Samples for Commercial Production

Number of samples submitted for commercial production within each Morgan extractable phosphorus (lbs P/acre) range:

	<1	1-3	4-8	9-39	40-60	61-80	81-100	101-150	151-200	>200	Total
	VL	L	M	H	VH	VH	VH	VH	VH	VH	
1995	0	38	54	134	16	7	1	4	4	0	258
1996	0	167	193	272	47	6	1	2	0	4	692
1997	0	205	279	218	19	2	2	0	0	1	726
1998	0	57	89	123	10	11	12	20	11	14	347
1999	0	55	88	180	16	2	0	1	0	1	343
2000	1	311	350	308	22	4	3	4	5	2	1010
2001	0	120	156	231	13	3	3	3	2	1	532
Total	1	953	1209	1466	143	35	22	34	22	23	3908

VL = very low, L = low, M = medium, H = high, VH = very high.

	1995	1996	1997	1998	1999	2000	2001	
Lowest:	1	1	1	1	1	0.2	1	
Highest:	197	423	403	371	363	291	228	
Mean:	21	16	10	40	16	11	14	
Median:	12	8	6	11	10	6	8	

Percent of samples submitted for commercial production within each Morgan P range:

	<1	1-3	4-8	9-39	40-60	61-80	81-100	101-150	151-200	>200	Total
1995	0	15	21	52	6	3	0	20	2	0	100
1996	0	24	28	39	7	1	0	0	0	1	100
1997	0	28	38	30	3	0	0	0	0	0	100
1998	0	16	26	35	3	3	3	6	3	4	100
1999	0	16	26	52	5	1	0	0	0	0	100
2000	0	31	35	30	2	0	0	0	0	0	100
2001	0	23	29	43	2	1	1	1	0	0	100
Total	0	24	31	38	4	1	1	1	1	1	100

VL = very low, L = low, M = medium, H = high, VH = very high.

7. Potassium

7.1 Samples for Home and Garden

Number of home and garden samples within each K range (lbs K/acre Morgan extraction):

Soil Management Group 1						
	<35	35-64	65-94	95-149	>149	Total
	Very Low	Low	Medium	High	Very High	
1995	0	0	0	0	0	0
1996	0	0	0	0	0	0
1997	0	0	0	0	0	0
1998	0	0	0	0	0	0
1999	0	0	0	0	0	0
2000	0	0	0	0	0	0
2001	0	0	0	0	0	0
Total (#)	0	0	0	0	0	0
Total (%)	-	-	-	-	-	-
Soil Management Group 2						
	<40	40-69	70-99	100-164	>164	Total
	Very Low	Low	Medium	High	Very High	
1995	0	2	2	4	11	19
1996	0	4	0	7	32	43
1997	0	2	1	12	20	35
1998	0	0	0	7	14	21
1999	0	2	3	8	13	26
2000	0	0	2	16	17	35
2001	0	2	0	5	9	16
Total (#)	0	12	8	59	116	195
Total (%)	0	6	4	30	59	100
Soil Management Group 3						
	<45	45-79	80-119	120-199	>199	Total
	Very Low	Low	Medium	High	Very High	
1995	0	2	10	5	4	21
1996	1	2	4	7	15	29
1997	0	3	5	12	17	37
1998	0	1	4	7	19	31
1999	0	1	4	7	8	20
2000	2	4	7	30	23	66
2001	1	1	7	7	11	27
Total (#)	4	14	41	75	97	231
Total (%)	2	6	18	32	42	100

Soil Management Group 4						
	<55	55-99	100-149	150-239	>239	Total
	Very Low	Low	Medium	High	Very High	
1995	0	0	19	15	10	44
1996	0	2	6	10	11	29
1997	5	21	13	4	9	52
1998	0	1	2	6	4	13
1999	2	9	23	14	10	58
2000	0	6	9	9	21	45
2001	0	6	25	12	15	58
Total (#)	7	45	97	70	80	299
Total (%)	2	15	32	23	27	100
Soil Management Group 5						
	<60	60-114	115-164	165-269	>269	Total
	Very Low	Low	Medium	High	Very High	
1995	1	2	0	0	2	5
1996	2	7	30	5	1	45
1997	2	2	1	2	2	9
1998	1	15	29	5	3	53
1999	0	3	3	1	0	7
2000	1	2	4	2	2	11
2001	0	0	1	2	4	7
Total (#)	7	31	68	17	14	137
Total (%)	5	23	50	12	10	100
Soil Management Group 6						
	<60	60-114	115-164	165-269	>269	Total
	Very Low	Low	Medium	High	Very High	
1995	0	0	0	0	0	0
1996	0	0	0	0	0	0
1997	0	0	0	0	0	0
1998	0	0	0	0	0	0
1999	0	0	0	0	0	0
2000	0	0	0	0	0	0
2001	0	0	0	0	0	0
Total (#)	0	0	0	0	0	0
Total (%)	-	-	-	-	-	-

Number of home and garden samples within each potassium classification:

Summary (#)	Very Low	Low	Medium	High	Very High	Total
1995	1	6	31	24	27	89
1996	3	15	40	29	59	146
1997	7	28	20	30	48	133
1998	1	17	35	25	40	118
1999	2	15	33	30	31	111
2000	3	12	22	57	63	157
2001	1	9	33	26	39	108
Total #	18	102	214	221	307	862

	1995	1996	1997	1998	1999	2000	2001	
Lowest:	42	40	26	49	16	34	17	
Highest:	3556	842	8962	2029	1147	3691	1543	
Mean:	239	210	281	254	216	258	253	
Median:	153	166	140	154	149	170	153	

Percent of samples submitted for home and garden within each potassium classification.

Summary (%)	Very Low	Low	Medium	High	Very High	Total
1995	1	7	35	27	30	100
1996	2	10	27	20	40	100
1997	5	21	15	23	36	100
1998	1	14	30	21	34	100
1999	2	14	30	27	28	100
2000	2	8	14	36	40	100
2001	1	8	31	24	36	100
Grand Total	2	12	25	26	36	100

7.2 Samples for Commercial Production

Number of samples submitted for commercial production within each potassium (lbs K/acre Morgan extraction) range:

Soil Management Group 1						
	<35	35-64	65-94	95-149	>149	Total
	Very Low	Low	Medium	High	Very High	
1995	0	0	0	0	0	0
1996	0	0	0	1	1	2
1997	0	0	0	0	0	0
1998	0	0	0	0	0	0
1999	0	0	0	1	1	2
2000	0	0	0	1	1	2
2001	0	0	4	4	6	14
Total (#)	0	0	4	7	9	20
Total (%)	0	0	20	35	45	100
Soil Management Group 2						
	<40	40-69	70-99	100-164	>164	Total
	Very Low	Low	Medium	High	Very High	
1995	0	1	19	43	82	145
1996	1	51	99	207	160	518
1997	0	48	151	267	149	615
1998	0	7	24	70	103	204
1999	4	13	31	69	91	208
2000	8	69	183	323	277	860
2001	0	32	111	142	150	435
Total (#)	13	221	618	1121	1012	2985
Total (%)	0	7	21	38	34	100
Soil Management Group 3						
	<45	45-79	80-119	120-199	>199	Total
	Very Low	Low	Medium	High	Very High	
1995	0	1	2	8	20	31
1996	0	2	14	24	40	80
1997	0	1	8	26	17	52
1998	0	5	12	20	25	62
1999	1	7	8	16	17	49
2000	2	16	14	33	38	103
2001	0	2	10	21	17	50
Total (#)	3	34	68	148	174	427
Total (%)	1	8	16	35	41	100

Soil Management Group 4						
	<55	55-99	100-149	150-239	>239	Total
	Very Low	Low	Medium	High	Very High	
1995	0	3	13	14	16	46
1996	5	8	7	26	14	60
1997	0	0	9	16	10	35
1998	0	0	7	22	21	50
1999	1	0	3	23	15	42
2000	0	2	3	0	0	5
2001	0	4	11	8	0	23
Total (#)	6	17	53	109	76	261
Total (%)	2	7	20	42	29	100
Soil Management Group 5						
	<60	60-114	115-164	165-269	>269	Total
	Very Low	Low	Medium	High	Very High	
1995	0	10	15	6	2	33
1996	0	11	7	7	2	27
1997	0	0	0	0	0	0
1998	0	3	2	5	0	10
1999	1	9	11	10	11	42
2000	0	4	11	7	1	23
2001	0	2	2	4	0	8
Total (#)	1	39	48	39	16	143
Total (%)	1	27	34	27	11	100
Soil Management Group 6						
	<60	60-114	115-164	165-269	>269	Total
	Very Low	Low	Medium	High	Very High	
1995	0	0	0	0	0	0
1996	0	0	0	1	2	3
1997	0	0	0	0	0	0
1998	0	0	0	0	5	5
1999	0	0	0	0	0	0
2000	0	0	0	0	0	0
2001	0	0	0	0	0	0
Total (#)	0	0	0	1	7	8
Total (%)	0	0	0	13	88	100

Number of samples submitted for commercial production within each potassium classification.

Summary (#)	Very Low	Low	Medium	High	Very High	Un-known	Total
1995	0	15	49	71	120	3	258
1996	6	72	127	266	219	2	692
1997	0	49	168	309	176	24	726
1998	0	15	45	117	154	16	347
1999	7	29	53	119	135	0	343
2000	10	91	211	364	317	17	1010
2001	0	40	138	179	173	2	532
Grand Total	23	311	791	1425	1294	64	3908

	1995	1996	1997	1998	1999	2000	2001	
Lowest:	62	34	43	47	30	5	42	
Highest:	642	966	967	723	779	1478	1137	
Mean:	207	164	149	211	189	165	166	
Median:	184	135	126	178	164	130	137	

Percent of samples submitted for commercial production within each potassium classification.

% summary	Very Low	Low	Medium	High	Very High	Un-known	Total
1995	0	6	19	28	47	1	100
1996	1	10	18	38	32	0	100
1997	0	7	23	43	24	3	100
1998	0	4	13	34	44	5	100
1999	2	8	15	35	39	0	100
2000	1	9	21	36	31	2	100
2001	0	8	26	34	33	0	100
Grand Total	1	8	20	36	33	2	100

8. Magnesium

8.1 Samples for Home and Garden

Number of home and garden samples within each Mg range (lbs Morgan Mg/acre):

	<20	20-65	66-100	101-199	>199	Total
	Very Low	Low	Medium	High	Very High	
1995	0	0	0	3	86	89
1996	0	0	1	8	137	146
1997	0	1	1	5	126	133
1998	0	1	0	3	114	118
1999	0	2	1	6	102	111
2000	0	1	1	8	147	157
2001	0	0	0	4	104	108
Total	0	5	4	37	816	862

	1995	1996	1997	1998	1999	2000	2001	
Lowest:	104	85	56	39	30	51	111	
Highest:	4991	2664	3460	2401	3312	2983	2062	
Mean:	644	588	641	563	596	635	519	
Median:	462	460	461	457	462	591	415	

Percent of home and garden samples within each Mg range (lbs Morgan Mg/acre):

	<20	20-65	66-100	101-199	>199	Total
	Very Low	Low	Medium	High	Very High	
1995	0	0	0	3	97	100
1996	0	0	1	5	94	100
1997	0	1	1	4	95	100
1998	0	1	0	3	97	100
1999	0	2	1	5	92	100
2000	0	1	1	5	94	100
2001	0	0	0	4	96	100
Total	0	1	0	4	95	100

8.2 Samples for Commercial Production

Number of samples submitted for commercial production within each Mg range (lbs Mg/acre Morgan extraction):

	<20	20-65	66-100	101-199	>199	Total
	Very Low	Low	Medium	High	Very High	
1995	0	6	17	49	186	258
1996	1	5	9	83	594	692
1997	0	1	7	74	644	726
1998	0	2	5	42	298	347
1999	1	11	19	45	267	343
2000	1	1	7	145	856	1010
2001	0	1	6	63	462	532
Total	3	27	70	501	3307	3908

	1995	1996	1997	1998	1999	2000	2001	
Lowest:	40	8	62	56	16	9	31	
Highest:	2216	2259	1464	5449	1159	1033	3807	
Mean:	326	367	379	454	357	360	355	
Median:	302	357	356	377	354	336	336	

Percent of samples submitted for commercial production within each magnesium range (lbs Mg/acre Morgan extraction):

	<20	20-65	66-100	101-199	>199	Total
	Very Low	Low	Medium	High	Very High	
1995	0	2	7	19	72	100
1996	0	1	1	12	86	100
1997	0	0	1	10	89	100
1998	0	1	1	12	86	100
1999	0	3	6	13	78	100
2000	0	0	1	14	85	100
2001	0	0	1	12	87	100
Total	0	1	2	13	85	100

9. Iron

9.1 Samples for Home and Garden

Iron (lbs Fe/acre Morgan extraction) in samples for home and garden:

Total number of samples:

	0-49	>49	Total
	Normal	Excessive	
1995	87	2	89
1996	146	0	146
1997	130	3	133
1998	116	2	118
1999	104	7	111
2000	150	7	157
2001	105	3	108
Total	838	24	862

Percentages:

	0-49	>49	Total
	Normal	Excessive	
	98	2	100
	100	0	100
	98	2	100
	98	2	100
	94	6	100
	96	4	100
	97	3	100
	97	3	100

	1995	1996	1997	1998	1999	2000	2001	
Lowest:	1	1	1	1	1	1	1	
Highest:	83	49	363	149	152	102	109	
Mean:	7	8	11	7	13	10	10	
Median:	5	4	5	4	5	5	5	

9.2 Samples for Commercial Production

Iron (lbs Fe/acre Morgan extraction) in samples submitted for commercial production:

Total number of samples:

	0-49	>49	Total
	Normal	Excessive	
1995	258	0	258
1996	688	4	692
1997	722	4	726
1998	343	4	347
1999	341	2	343
2000	1007	3	1010
2001	525	7	532
Total	3884	24	3908

Percentages:

	0-49	>49	Total
	Normal	Excessive	
	100	0	100
	99	1	100
	99	1	100
	99	1	100
	99	1	100
	100	0	100
	99	1	100
	99	1	100

	1995	1996	1997	1998	1999	2000	2001	
Lowest:	1	1	1	1	1	0.1	1	
Highest:	39	159	59	77	118	241	185	
Mean:	5	8	7	7	7	5	6	
Median:	4	4	5	4	4	3	3	

10. Manganese

10.1 Samples for Home and Garden

Manganese (lbs Mn/acre Morgan extraction) in samples for home and garden:

Total number of samples:

	0-99	>99	Total
	Normal	Excessive	
1995	85	4	89
1996	145	1	146
1997	127	6	133
1998	116	2	118
1999	111	0	111
2000	135	22	157
2001	103	5	108
Total	822	40	862

Percentages:

0-99	>99	Total
Normal	Excessive	
96	4	100
99	1	100
95	5	100
98	2	100
100	0	100
86	14	100
95	5	100
95	5	100

	1995	1996	1997	1998	1999	2000	2001	
Lowest:	8	8	9	4	5	9	8	
Highest:	137	119	183	138	95	572	150	
Mean:	36	34	45	33	36	62	37	
Median:	33	31	38	28	36	36	30	

10.2 Samples for Commercial Production

Manganese (lbs Mn/acre Morgan extraction) in samples for commercial production:

Total number of samples:

	0-99	>99	Total
	Normal	Excessive	
1995	257	1	258
1996	692	0	692
1997	719	7	726
1998	344	3	347
1999	343	0	343
2000	1010	0	1010
2001	529	3	532
Total	3894	14	3908

Percentages:

	0-99	>99	Total
	Normal	Excessive	
	100	0	100
	100	0	100
	99	1	100
	99	1	100
	100	0	100
	100	0	100
	99	1	100
	100	0	100

	1995	1996	1997	1998	1999	2000	2001	
Lowest:	3	3	4	5	2	0.4	5	
Highest:	265	98	126	118	89	83	180	
Mean:	28	34	42	38	28	28	30	
Median:	26	34	38	35	26	24	28	

11. Zinc

11.1 Samples for Home and Garden

Zinc (lbs Zn/acre Morgan extraction) in samples for home and garden:

Total number of samples:					Percentages:				
	<0.5	0.5-1.0	>1	Total	<0.5	0.5-1.0	>1	Total	
	Low	Medium	High		Low	Medium	High		
1995	2	10	77	89	2	11	87	100	
1996	1	14	131	146	1	10	90	100	
1997	0	14	119	133	0	11	89	100	
1998	2	6	110	118	2	5	93	100	
1999	1	11	99	111	1	10	89	100	
2000	3	19	135	157	2	12	86	100	
2001	4	7	97	108	4	6	90	100	
Total	13	81	768	862	2	9	89	100	

	1995	1996	1997	1998	1999	2000	2001	
Lowest:	0.4	0.1	0.5	0.4	0.2	0.3	0.3	
Highest:	84.7	735.3	89.8	470.9	67.5	97.8	70.7	
Mean:	8.8	17.1	8.3	13.8	7.7	7.9	8.8	
Median:	4.9	6.2	5.3	8.8	6.5	3.3	6.2	

11.2 Samples for Commercial Production

Zinc (lbs Zn/acre Morgan extraction) in samples for commercial production:

Total number of samples:

	<0.5	0.5-1.0	>1	Total
	Low	Medium	High	
1995	10	92	156	258
1996	33	368	291	692
1997	52	431	243	726
1998	17	125	205	347
1999	28	159	156	343
2000	74	376	560	1010
2001	12	189	331	532
Total	226	1740	1942	3908

Percentages:

<0.5	0.5-1.0	>1	Total
Low	Medium	High	
4	36	60	100
5	53	42	100
7	59	33	100
5	36	59	100
8	46	45	100
7	37	55	100
2	36	62	100
6	45	50	100

	1995	1996	1997	1998	1999	2000	2001	
Lowest:	0.2	0.2	0.1	0.1	0.1	0.01	0.3	
Highest:	28.5	58.9	15.1	16.6	8.5	17.4	13.5	
Mean:	1.8	1.5	1.1	2.5	1.2	1.4	1.5	
Median:	1.4	0.9	0.9	1.3	1.0	1.1	1.2	

Appendix: Cornell Crop Codes

Crop codes are used in the Cornell Nutrient Analyses Laboratory.

Crop Code	Crop Description
Alfalfa	
ABE	Alfalfa trefoil grass, Establishment
ABT	Alfalfa trefoil grass, Established
AGE	Alfalfa grass, Establishment
AGT	Alfalfa grass, Established
ALE	Alfalfa, Establishment
ALT	Alfalfa, Established
Birdsfoot	
BCE	Birdsfoot trefoil clover, Establishment
BCT	Birdsfoot trefoil clover, Established
BGE	Birdsfoot trefoil grass, Establishment
BGT	Birdsfoot trefoil grass, Established
BSE	Birdsfoot trefoil seed, Establishment
BST	Birdsfoot trefoil seed, Established
BTE	Birdsfoot trefoil, Establishment
BTT	Birdsfoot trefoil, Established
Barley	
BSP	Spring barley
BSS	Spring barley with legumes
BUK	Buckwheat
BWI	Winter barley
BWS	Winter barley with legumes
Clover	
CGE	Clover grass, Establishment
CGT	Clover grass, Established
CLE	Clover, Establishment
CLT	Clover, Established
CSE	Clover seed production, Establishment
CST	Clover seed production, Established

Crop Code	Crop Description
Corn	
COG	Corn grain
COS	Corn silage
Grasses, pastures, covercrops	
GIE	Grasses intensively managed, Establishment
GIT	Grasses intensively managed, Established
GRE	Grasses, Establishment
GRT	Grasses, Established
PGE	Pasture, Establishment
PGT	Pasture improved grasses, Established
PIE	Pasture intensively grazed, Establishment
PIT	Pasture intensively grazed, Established
PLE	Pasture with legumes, Establishment
PLT	Pasture with legumes, Established
PNT	Pasture native grasses
PNE	Pasture native grasses, Established
RYC	Rye cover crop
RYS	Rye seed production
TRP	Triticale peas
Small grains	
MIL	Millet
OAS	Oats with legume
OAT	Oats
SOF	Sorghum forage
SOG	Sorghum grain
SOY	Soybeans
SSH	Sorghum sudan hybrid
SUD	Sudangrass
WHS	Wheat with legume
WHT	Wheat
Others	
ALG	Azalea
APP	Apples
ATF	Athletic field

Crop Code	Crop Description
ASP	Asparagus
BDR/BND	Beans, Dry
BLU/BLB	Blueberries
BNS	Beans, Snap
BRP	Broccoli, Transplanted
CEM	Cemetery
CKP	Cucumber, Transplanted
CKS	Cucumber, Seeded
EGG	Eggplant
END	Endives
FAR	Fairway
FLA	Flowering annuals
GPF	Grapes, French-American
GPV	Grapes, Vinifera
GRA	Grapes, American
GEN	Green
HRB	Herbs
IDL	Idle land
LAW	Lawn
LET	Lettuce
MIX/MVG	Mixed vegetables
MML	Muskmelon
NUR	Nursery stock
ONS	Onion, Seeded
OTH	Other
PAR	Pears
PCH	Peaches
PEA	Peas
PEP	Peppers
PER	Perennials
POP	Popcorn
PRK	Park
POT/PTO	Potatoes
PUM	Pumpkins
ROD	Roadside
ROS	Roses
ROU	Rough
RSF	Raspberries, Fall
RSP	Raspberries (homeowners)

Crop Code	Crop Description
RSS	Raspberries, Summer
SAG	Ornamentals adapted to pH 6.0 to 7.5
SOD	Sod production
SQS	Squash, Summer
SQW	Squash, Winter
STE	Strawberries, Ever
STR	Strawberries (homeowners)
STS	Strawberries, Spring
SUN	Sunflowers
SWC	Sweet corn
TME	Tomato, Early
TOM	Tomatoes
TRE	Christmas trees, Established
TRF	Tree fruits
TRT	Christmas trees, Topdressing