Australasian Soil and Plant Analysis Council Inc.

ASPAC Soil Proficiency Testing Program Report

2010-11

D.J. Lyons, G.E. Rayment and R.J. Hill

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Foreword

This is the latest of ASPAC's many inter-laboratory proficiency program reports (ILPP) for soils since 1993. It is the sixth annual program report since 2004-05 (see Rayment *et al*. 2007)[1] for common soil chemical tests that incorporate three "rounds" each of four carefully prepared air-dry soils. Similar annual programs for milled plant tissue samples operate concurrently (e.g. Lyons *et al.* 2013)[2].

This ILPP continued ASPAC's Australasian focus and targeted laboratories in the private, government and university sectors that provide soil testing services for a range of purposes. These mostly locate in Australia, New Zealand, the Pacific Region and in parts of South-east Asia.

The Service Provider for ASPAC is now called Global Proficiency Ltd. This company operates mainly out of New Zealand, with key personnel and contact details provided on page iv.

Technical aspects of this ILPP were specified and over-sighted by ASPAC's Laboratory Proficiency Committee (LPC), recent membership of which is listed on page iv. In addition, these LPC members and two key personnel from the Service Provider participate annually in a Technical Advisory Group (TAG), chaired by a senior representative of the Service Provider.

The ASPAC Executive appreciates the efforts and commitments made by participating laboratories and by those already mentioned. By participating, laboratories share a commitment to and responsibility for measurement quality.

An electronic copy of this report and other similar annual reports can be downloaded from ASPAC's public web site at www.aspac-australasia.com.

Dr Roger Hill
ASPAC LPC Convenor

[1] Rayment, G.E., Peverill, K.I., Hill, R.J., Daly, B.K., Ingram, C. and Marsh, J. (2007). ASPAC Soil Proficiency Testing Program Report 2004-05. (73 + vi pp.) ASPAC, Melbourne, Victoria.

2 Lyons, D.J., Rayment, G.E., Daly, B.K., Hill, R.J., Ingram, C. and Marsh, J. (2013). "ASPAC Plant Proficiency Testing Program Report 2008-09". (47 + vi pp.) ASPAC, Melbourne, Victoria.

Acknowledgements

LandCare Research (New Zealand) is thanked for sample preparation and chemical homogeneity testing undertaken for Global Proficiency Ltd (GPL). Hill Laboratories (New Zealand) also assisted with chemical homogeneity testing. In addition, operational staff of GPL are thanked for their inputs.

Memberships

Membership of ASPAC Laboratory Proficiency Committee (LPC) 2010-11

Names	*Locations*	*Current Emails*
R.J. Hill (Convenor)	Hamilton, NZ	roger@hill-labs.co.nz
G.E. Rayment	Queensland	raymeng@optusnet.com.au
B.K. Daly	Palmerston North, NZ	bbdaly@inspire.net.nz
D.J. Lyons	Queensland	daveandtrish8@bigpond.com

Key Service Provider Details[A]

Name, Street and Postal Address	*Key Personnel & Current Emails.*
Global Proficiency Ltd. Ruakura Research Campus, Hamilton 3214, NZ; PO Box 20474, Hamilton 3241, NZ P. +64 7 850 4483	*Business Manager:* Gordana.Aleksic@global-proficiency.com *Technical / Operational:* Dr Julie Marsh jules.marsh@global-proficiency.com Lana Pears lana.pears@global-proficiency.com

[A] ***Note:*** GPL, under its "SoilChek" logo, is accredited by IANZ (the New Zealand accreditation authority) to ISO/IEC 17043:2010 standard, noting that IANZ is a full member of both the International Laboratory Accreditation Cooperation (ILAC), and the Asia Pacific Laboratory Accreditation Cooperation (APLAC). GPL is also recognised by NATA (National Association of Testing Authorities of Australia) as a proficiency provider.

Contents

Page

YOUR NOTES

1. Introduction

This not-for-profit, annual ASPAC Soil Proficiency Testing Program Report for 2010-11 consolidates (for ASPAC members and the public record) program methodology, summary statistics, and a full listing of results by test for three "rounds" of soil chemical testing. For historical details on earlier annual soil ILPP's undertaken by ASPAC, refer to Rayment *et al*. (2007) referenced earlier in this report.

The report includes an outline of how ASPAC now confers performance-based, method-specific certification to laboratories that regularly participate. To respect confidentiality, the cross-reference between laboratory name and laboratory identification number is not included. However, laboratories certified as proficient for specific tests included in this annual program were documented at the time on ASPAC's public web site.

2. Program Details

2.1 Responsibilities

What is now GPL - see page iv - under its "SoilChek" arrangements, was contracted by ASPAC as the soil ILPP provider for 2010-11. Accordingly, GPL had responsibility on a "round-by-round" basis for sourcing and preparation of samples, for ensuring the samples met international and/or within-country quarantine requirements, and for the timely supply of samples to participating laboratories. GPL also undertook data analysis and "round-by-round" reporting for ASPAC, and assembled the summary and "raw" data provided in Section 3 and Appendix 4, respectively, of this report.

ASPAC's LPC - see page iv- had responsibility to implement and resolve matters of policy and to provide guidance on technical matters specific to soil chemical testing both to GPL and to laboratory participants. The LPC also undertook occasional statistical checks and audits for quality control purposes, participated in the earlier mentioned TAG, contributed to training workshops, and assisted (on request) laboratory managers with technical aspects on measurement improvement. As always, laboratory managers were encouraged to seek help from ASPAC when shown to be operating at levels of measurement performance below their peers.

Participants receive a unique, confidential laboratory number, subsequently used to identify the origin of each result presented in program reports and lists of results. Typically, this identification number carries forward from one annual program to the next.

ASPAC's Web-site manager updated the public web site with details on method-specific certifications and lists of laboratories that undertook those soil tests. The information used was supplied by GPL and over-sighted by the Convener of the ASPAC-LPC.

2.2 Soil program participation

Over 50 laboratories expressed interest in participating in the ASPAC soil ILPP in 2010-11, while those that reported results varied by "round" and soil test (see Table 1). Contact details for the 53 laboratories that submitted results for at least one soil test are provided in Appendix 1. There were 36 from Australia (NSW=12; QLD=8; VIC=7; WA=4; SA=2; TAS=2; ACT=1, a gain of 2 participants from VIC, 1 from WA and a loss of 1 from TAS compared to the previous year). Eight were from New Zealand up 2, 3 from Vietnam up 1, and 2 each from Fiji down 1, The Philippines and Papua New Guinea.

Most results, averaged across the three "rounds", were submitted for method 4A1 (pH, 1:5 soil-water), with method 3A1 (Electrical conductivity, 1:5 soil-water) the next most common. Their averages across three "rounds" were 42 and 41 respectively.

Table 1. Test methods, corresponding method codes and the arithmetic average number of results per round submitted by participating laboratories in the ASPAC 2010-11 Soil ILPP

2010-11 Soil Tests	Method Codes[i]	Number of participants		
		Nov 10	Mar 11	May 11
Air-dry moisture	2A1	23	25	29
Electrical conductivity 1:5 soil-water	3A1	43	40	41
Soil pH, 1:5 soil-water	4A1	45	39	43
Soil pH, 1:5 0.01 M $CaCl_2$ — direct	4B1	16	12	13
Soil pH, 1:5 0.01 M $CaCl_2$ — indirect	4B2	26	26	28
Water soluble Cl — potentiometric	5A1	23	21	23
Water soluble Cl — autocolour	5A2	9	10	8
Organic Carbon —W&B	6A1	30	24	28
Total Organic C — Heanes, HF Induction Vol & IR (pooled)	6B1 +6B2 + 6B3	23	25	23
Total N — Kjeldahl, steam distillation†	7A1	23	22	23
Total N — Kjeldahl, autocolour	7A2	4	4	4
Total N – Dumas		15	14	14
Water Soluble Nitrate N — autocolour	7B1	20	21	19
KCl Extractable Nitrate N — autocolour	7C2	20	18	19
KCl Ext. Ammonium N — autocolour	7C2	25	24	24
Total P – all methods	9A1 and others	22	19	19
Colwell Extractable P — manual, autocolour	9B1 + 9B2	29	27	26
Olsen Extractable P — manual, autocolour	9C1 + 9C2	30	25	26
Bray-1 Extractable P — manual, autocolour	9E1 + 9E2	14	13	14
Acid Extractable P — manual, autocolour	9G1 + 9G2	7	6	7
Phosphorus buffer index (with Colwell P)	9I2a + 9I2b + 9I2c[ii]	20	21	21
Phosphorus buffer index (with Olsen P)	9I3a + 9I3b + 9I3c[ii]	4	2	3
Phosphate Extractable S	10B3	6	6	7
KCl_{40} Extractable S	Blair *et al*[iii]	16	15	14
DTPA Extractable Cu	12A1	29	27	33
DTPA Extractable Fe	12A1	29	27	33
DTPA Extractable Mn	12A1	28	26	32
DTPA Extractable Zn	12A1	29	27	32
Hot $CaCl_2$ Extractable B — manual colour	12C1	2	0	2
Hot $CaCl_2$ Extractable B — ICPAES	12C2	18	15	18
Exchangeable Ca — 1M NH_4Cl extract	15A1	16	16	15
Exchangeable K — 1M NH_4Cl extract	15A1	17	16	16
Exchangeable Mg — 1M NH_4Cl extract	15A1	16	16	15
Exchangeable Na — 1M NH_4Cl extract	15A1	16	16	15
Exchangeable Ca — 1M NH_4OAc extract	15D3	26	23	25

2010-11 Soil Tests	Method Codes[i]	Number of participants		
		Nov 10	Mar 11	May 11
Exchangeable K — 1M NH_4OAc extract	15D3	27	23	26
Exchangeable Mg — 1M NH_4OAc extract	15D3	26	23	25
Exchangeable Na — 1M NH_4OAc extract	15D3	26	23	25
Exchangeable Ca — compulsive exchange	15E1	1	1	1
Exchangeable K — compulsive exchange	15E1	1	1	1
Exchangeable Mg — compulsive exchange	15E1	1	1	1
Exchangeable Na — compulsive exchange	15E1	1	1	1
Exchangeable Al — 1M KCl extract	15G1	19	14	17
Bicarbonate Extractable K	18A1	2	2	2
Mehlich3 extractable Al	18F1	11	10	10
Mehlich3 extractable B	18F1	10	11	10
Mehlich3 extractable Ca	18F1	11	11	10
Mehlich3 extractable Cu	18F1	11	11	10
Mehlich3 extractable Fe	18F1	11	11	10
Mehlich3 extractable Mg	18F1	11	11	10
Mehlich3 extractable Mn	18F1	11	11	10
Mehlich3 extractable P - Col	18F2	1	1	1
Mehlich3 extractable P – ICP	18F1	11	10	10
Mehlich3 extractable K	18F1	11	11	10
Mehlich3 extractable Na	18F1	11	11	10
Mehlich3 extractable S	18F1	9	10	9
Mehlich3 extractable Zn	18F1	11	11	10

Notes for Table 1:

† These soil method codes are mostly as defined by Rayment, G.E. and Higginson, F.R. (1992)[3], which is referenced earlier in this report. That text, however, does not cover all tests and/or all soil method codes listed in Table 1. See Rayment and Lyons (2011)[4] for additional and new details on methods, method codes and references. The authors believe participating laboratories may have misinterpreted method codes for 7A1 and 7A2, as dominant use of steam distillation as the analytical finish is unlikely.

The next four most commonly performed soil tests across all "rounds" were DTPA Extractable Fe, Cu, Zn, and Mn (29). Meaningful statistics are only possible when six or more laboratories provide results for a test. Of the majority of tests that met this criteria, there were four for which less than ten laboratories provided results – 10B3 calcium phosphate extractable S (6 labs.); 9G acid extractable P (7); 5A2 water soluble Cl by autocolour (9) and 18F1 Mehlich3 extractable S (9). The median participation rate for all of the listed tests was 15.

[3] Rayment, G.E. and Higginson, F.R. (1992). Australian Laboratory Handbook of Soil and Water Chemical Methods. Reed International Books Australia P/L, trading as Inkata Press, Port Melbourne. 330 pp.

[4] Rayment, G.E. and Lyons, D.J. (2011). "Soil Chemical Methods – Australasia". 495+20 pp. CSIRO Publishing, Melbourne.

2.3 Tests and methods

The three proficiency "rounds" for soils – each comprised of four samples – were offered in November 2010, March 2011 and May 2011. Participants were invited to analyse each sample by the methods listed and/or coded in Table 1. Participants were not required to submit results for all soil tests, noting that selected methods, including phosphate buffer index (Colwell) and phosphate buffer index (Olsen), were "scored" as one method each, irrespective of which analytical finish was used. This "pooling" also occurred for extractable P tests and some others, with details provided mainly in statistical summaries in Section 3.

This was the first program year when the ASPAC LPC requested that participants report test results on the same moisture basis as described in Rayment and Higginson (1992) and later by Rayment and Lyons (2011). As such, most tests were reported on an air dry (40ºC) soil-weight basis, with exceptions, those being – air dry moisture 2A1, all total elemental tests (C, total organic C, N and P), mineral nitrogen (7C2), Walkley and Black organic carbon (6A1), exchangeable Ca, Mg, Na, K using method 15A1 and exchangeable Al using method 15G1. These were reported on an oven dried basis, which involved drying a sub-sample of air dried soil in an oven set at 105ºC to constant weight. The formula used in method 2A1 had to be used by participating laboratories to convert concentration determined in the air dried test soils to an oven dry equivalent. Accordingly, results presented in summary tabulations (Section 3) and "raw data" tabulations (Appendix 4) are designated air dry or oven dry as appropriate.

2.4 Sample preparation and identification

Potential samples were assessed for homogeneity by laboratories accredited to ISO 17025. Specifically, 10 containers of each sample were selected at random and batched according to the principles described by Thompson and Wood (1993)[5].These sub-samples were then tested in duplicate for Total N by Dumas Combustion.

Results from the homogeneity testing were subsequently statistically assessed according to ISO REMCO Protocol N231 "*Harmonised Proficiency Testing Protocol*" of January 1992. Variations between samples were such that all sample batches were deemed to be homogeneous and therefore suitable for use in inter-laboratory proficiency testing. Examples of the homogeneity data and statistical assessments on the data are summarised in Appendix 2. In addition to testing for homogeneity, the soil samples were irradiated or otherwise rendered biologically benign to comply with international and/or national biosecurity regulations or requirements[6].

Ultimately, the samples used in the three "rounds" of the 20010-11 program were distributed and coded as follows: November 2010 (Round 210) — ASS 111-114; March 2011 (Round 410) — ASS 31-34; and May 2011 (Round 610) — ASS 51-54. The association between sample code and origin of the various soils are provided in Table 2.

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[5] Thompson, M and Wood, R. (1993). International harmonized protocol for proficiency testing of (chemical) analytical laboratories. *Journal of AOAC International* ***76*** (4), 926 – 940.

[6] Rayment, G.E (2006). Australian efforts to prevent the accidental movement of pests and diseases in soil and plant samples. *Commun. Soil Sci. Plant Anal*. **37**, 2107-2117.

Table 2. Sample identification and the origin of the samples included in the ASPAC 2010-11 soil ILPP

Sample ID	*Sample origin*	*Sample ID*	*Sample origin*
ASS 111	TAS	ASS 33	TAS
ASS 112	Del Ray, North America	ASS 34	Werribee, VIC
ASS 113	Agridoo, VIC	ASS 51	NSW
ASS 114	Molong, NSW	ASS 52	Clare, QLD
ASS 31	NSW	ASS 53	Maricopa, North America
ASS 32	Alderdale, North America	ASS 54	Launceston, TAS

2.5 Data analysis and periodic reporting

Laboratory results, after submission to the Service Provider, were entered into a database and double-checked for data transfer accuracy prior to data processing.

The non-parametric assessment of laboratory performance for each sample and method (and/or "pooled" methods) was performed by an iterative statistical procedure similar to that used in WEPAL interlaboratory proficiency programs of Wageningen University. This procedure[7,8,9,10] is suited to datasets of as few as six laboratories, although larger laboratory populations are preferred. An outline of the median / MAD statistical procedure is provided in Appendix 3, with terms described in Table 3. In addition to medians and MADs, other statistical parameters (also described in Table 3) were calculated before and following the omission of non-conforming results. The "raw" data submitted by participating laboratories on a test-by-test basis are documented in Appendix 4, sometimes after rounding only for table formatting purposes.

Results submitted by each laboratory were expected to reflect the procedural and reporting guidelines in the chapter on that topic in Rayment and Higginson (1992). Like other programs nationally and internationally, the program did not accept as a numeric value a result reported as less than (<) or greater than (>) a specified number. In cases where the expected value was below the laboratory's lower limit of reporting, the expectation was that the laboratory would report raw data directly from the instrument (eg ICP) in absolute terms, or a value half way between their lower limit and zero. A zero value was not acceptable unless advised by the proficiency provider. For high values, dilution was the expected option.

Interim "round" reports, summarising measurement performance relative to the performance of all laboratories in the program that undertook the same test/s, were routinely and promptly e-mailed to laboratory participants. The main purpose of the interim reports was to provide feedback and to enable laboratories to take prompt action where appropriate. Interim reports also provided an opportunity to correct for data-transfer and data-processing misinterpretations. In addition, a Newsletter from the Service Provider went to all participating laboratories.

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7 Houba, V.J.G., Uittenbogaard, J. and Pellen, P. (1996). Wageningen evaluating programmes for analytical laboratories (WEPAL), organization and purpose. *Commun. Soil Sci. Plant Anal.* **27**, 421-429.

8 Montford, M.A.J. van. (1996). Statistical remarks on laboratory – evaluating programs for comparing laboratories and methods. *Commun. Soil Sci. Plant Anal*. ***27***, 463-478.

9 Rayment, G.E., Miller, R.O. and Sulaeman, E. (2000). Proficiency testing and other interactive measures to enhance analytical quality in soil and plant laboratories. *Commun. Soil Sci. Plant Anal.* ***31***, 1513-1530.

10 Whitehouse, M.W. (1987). Medians and MADs - Statistical methodology used at Wageningen, The Netherlands, for interlaboratory comparisons in the plant exchange program. Ag. Chem. Br. Report, ACU87/36. 10 pp. (Qld Dept. Primary Ind., Brisbane.)

The Newsletter's main purpose was to assist in the interpretation of interim reports. Also included in the Newsletter was information about upcoming events and operational administration of the program.

Table 3. Statistical terms and their meanings in the context of this ASPAC annual report

Statistical term	***Meaning and/or derivation***
Count or number	Original population size.
Maximum i	The highest of a range of values, based on the initial data set.
Minimum i	The lowest of a range of values, based on the initial data set.
Median	The median is the score (value) at the 50th percentile, also called the 2nd quartile or 5th decile. It is the score or potential score in a distribution of scores, above which and below which one-half of the frequencies fall. It is the middle observation of a sequentially sorted array of numbers, except in the case of an even sample size. Here it is the arithmetic mean of the two observations in the middle of the sorted array of observations. The median of a reasonably sized array of numbers is insensitive to extreme scores.
Mean[A]	The arithmetic mean (or average) is the sum of the values of a variable divided by their number. It represents the point in a distribution of measurements about which the summed deviations equals zero. The arithmetic mean is sensitive to extreme measurements.
MAD	The Median of the Absolute Deviations, calculated as the median of the absolute values of the observations minus their median.
Interquartile range (IQR)	This is calculated by subtracting the score at the 25th percentile (referred to as the first quartile; Q_1) from the score at the 75th percentile (the third quartile; Q_3). This value is affected by the assumptions made in the calculation of the first and third quartiles, particularly for low population sizes. Moreover, these differences exist within and across statistical software packages. Prior to the 2004-05 rounds, ASPAC used the algorithm employed by EXCEL and some others. For this program, the algorithm employed was that of SAS Method 4[11]. In summary, IQR = Q_3-Q_1.
Normalised IQR	This equates to IQR x 0.7413, where the latter is a normalising factor.
Robust % CV[12]	The robust coefficient of variation (Robust % CV) = (100 x normalised IQR / median). For simplicity, the Robust %CVs shown are for the initial results, and for the "final" population of results for a test after the removal of any "outliers" or "stragglers", following one or two iterations.
Integer i and the letter "f" associated with medians, means, MADs, IQR and Robust %CVs in data summaries.	The integer "i" relates to the initial data set. The letter "f" relates to the "final" data set, generated after one or two iterations, typically after removal of laboratories with statistical "outliers" (if any), and statistical "stragglers" (if any).

A When the mean is greater than the median, the distribution is positively skewed. When the mean is lower than the median, the distribution is negatively skewed.

11 SAS Procedure Guide.

12 "Guide to NATA Proficiency Testing". 27 pp. (National Association of Testing Authorities, Australia, December 1997).

Laboratories that participated in the 2010-11 soil ILPP each received from the Service Provider (on behalf of ASPAC) a laboratory specific, confidential, Annual Certification Report. Each laboratory's data for the 12 soil samples, the aggregate data from all participants, other relevant statistical data, and whether or not the test/s received ASPAC Certification (if applicable) were provided. The laboratory code number was included.

2.6 ASPAC certification of laboratories for soil tests

Subject to satisfactory measurement performance for twelve samples across three sequential "rounds", typically over the twelve-month period, ASPAC awarded participating laboratories with a printed, signed and dated *Certificate of Proficiency.* The *Certificate of Proficiency* identified performance for each test that met criteria set in advance by ASPAC. Method specific certification applied when a laboratory incurred no more than <u>four</u> demerit points for the twelve samples in the program year.

Demerit points (if any) were allocated through the identification of "outliers" and "stragglers" (see Appendix 3) by the "median / MAD" statistical procedure mentioned earlier in this report. Two demerit points were allocated to each statistical "outlier", while a statistical "straggler" was allocated one demerit point. As no sample result could be both an "outlier" and a "straggler", a maximum of two demerit points is all that could accrue per sample for a specific test. For any single "round" of four samples, three (3) was set as the maximum number of demerit points for a specific test. This was done so that unsatisfactory measurement for a test in one "round" did not in itself result in failure to be certified for that test across the three "rounds" in the designated 12-month period.

The same procedure applied to "pooled" methods but there was a caveat. When both "unpooled" and "pooled" data for a test such as soil C could be assessed statistically and both subsequently qualified for certification, only the "unpooled" method was recorded on the Certificate rather than both.

If a "round" was missed, the maximum number of three demerit points for every test in that "round" was allocated, unless very special circumstances applied and was known or advised expeditiously to ASPAC's LPC through its Convenor. When the explanation was accepted, performance from the three most recently completed "rounds" was used to assess eligibility for certification. No exceptions applied to this annual program.

Finally, when less than six (6) laboratories submitted results for a particular test and/or sample (including for "pooled" tests), proficiency assessments could not be made statistically with an acceptable level of confidence and hence certification for the affected test/s could not be granted. Importantly, ASPAC's *Certificates of Proficiency* are only issued on completion of each annual program of three "rounds". Moreover, ASPAC provided details of certified laboratories by test on its public web site. Those certifications remain / remained valid until superseded by corresponding findings from the next annual soil program. Only financial Corporate Members of ASPAC qualify for ASPAC Certification, although test results received from non-Corporate members were included in statistical assessments.

3. Summary Statistics

This section provides summary data and associated statistics (values sometimes rounded only for table formatting purposes) on all tests (plus key "pooled" combinations) for each of the 12 samples used across three soil "rounds" in 2010-11. The tabulations include initial and subsequent values for the iterative "median / MAD" procedure plus other parametric and robust statistics. Table 3 and Appendix 3 have the meaning or derivation of the terms and statistics used in the tabulated summaries.

2010-11: Air-Dry Moisture Content (2A1) % oven dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	23	23	23	23	25	25	25	25	29	29	29	29
Minimum	4.28	1.7	2.08	2.37	0.64	0.45	0.42	2.17	0.9	0.1	0.4	1.04
Maximum	7.96	3.53	3.92	4.5	2.2	1.9	1.53	7.1	4.4	5.48	2.6	4.4
Median i	6.59	3.02	3.31	3.75	1.37	1.4	1.05	5.09	3.08	4.44	2.02	3.57
Mean i	6.52	2.96	3.24	3.69	1.42	1.37	1.07	5.05	2.99	4.25	1.83	3.25
MAD i	0.59	0.2	0.26	0.28	0.17	0.2	0.16	0.588	0.49	0.56	0.25	0.35
IQR i	1.07	0.363	0.378	0.437	0.259	0.285	0.241	0.874	0.719	0.734	0.534	0.589
Robust CV % i	16	12	11	12	19	20	23	17	23	17	26	17
Median f	6.65	3.06	3.36	3.79	1.32	1.4	1.07	5.09	3.44	4.78	2.13	3.58
Mean f	6.62	3.05	3.29	3.75	1.36	1.41	1.09	5.08	3.26	4.61	2.11	3.54
MAD f	0.52	0.211	0.245	0.278	0.179	0.165	0.16	0.56	0.4	0.44	0.135	0.32
IQR f	0.805	0.363	0.374	0.424	0.208	0.276	0.241	0.851	0.575	0.56	0.204	0.486
Robust CV % f	12	12	11	11	16	20	23	17	17	12	9.6	14
Outliers	1	2	1	1	3	1	1	1	3	3	4	4
Stragglers	0	0	0	0	1	0	0	1	1	0	3	0

2010-11: Electrical conductivity 1:5 soil-water (3A1) dS/m air dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	43	43	43	43	40	40	40	40	41	41	41	41
Minimum	0.08	0.06	0.02	0.02	4.9	0.149	0.165	0.21	0.099	0.096	0.21	0.168
Maximum	197	96.7	259	88.2	6420	158	185	786	0.209	0.37	3.02	2.45
Median i	0.196	0.096	0.158	0.087	5.91	0.166	0.197	0.802	0.112	0.112	0.265	0.212
Mean i	4.77	2.34	6.17	2.14	166	4.11	4.83	20.4	0.121	0.123	0.342	0.271
MAD i	0.007	0.006	0.008	0.005	0.235	0.006	0.007	0.021	0.004	0.005	0.009	0.009
IQR i	0.015	0.009	0.009	0.008	0.363	0.009	0.015	0.036	0.009	0.013	0.013	0.015
Robust CV % i	7.6	9.3	5.6	9.4	6.1	5.1	7.3	4.5	8.3	11	5	6.8
Median f	0.195	0.096	0.158	0.086	5.86	0.163	0.197	0.804	0.11	0.111	0.265	0.21
Mean f	0.195	0.097	0.157	0.085	5.87	0.164	0.199	0.804	0.111	0.111	0.264	0.209
MAD f	0.005	0.005	0.005	0.004	0.2	0.007	0.007	0.013	0.003	0.003	0.005	0.006
IQR f	0.007	0.008	0.009	0.007	0.315	0.010	0.013	0.019	0.003	0.005	0.007	0.009
Robust CV % f	3.4	8.5	5.6	7.8	5.4	5.9	6.8	2.4	2.9	4.9	2.8	4.4
Outliers	10	4	4	5	5	4	5	6	9	8	11	7
Stragglers	3	0	4	3	2	0	0	5	2	3	2	1

2010-11: Soil pH, 1:5 soil-water (4A1) air dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	45	45	45	45	39	39	39	39	43	43	43	43
Minimum	3	4.4	4.34	4.93	6.6	6.38	6.12	6.2	6.05	6.28	7.4	5.92
Maximum	6.4	6.6	5.6	6.1	8.52	8.47	6.91	6.87	7	7.25	8.9	6.9
Median i	5.77	6.35	5.03	5.75	8.07	8.25	6.4	6.58	6.8	7.04	8.7	6.56
Mean i	5.7	6.26	5.03	5.72	7.93	8.14	6.44	6.58	6.74	6.94	8.6	6.53
MAD i	0.09	0.07	0.1	0.08	0.18	0.15	0.1	0.05	0.11	0.13	0.11	0.06
IQR i	0.13	0.141	0.145	0.115	0.304	0.222	0.193	0.074	0.163	0.215	0.178	0.089
Robust CV % i	2.2	2.2	2.9	2	3.8	2.7	3	1.1	2.4	3.1	2	1.4
Median f	5.78	6.38	5.03	5.75	8.13	8.28	6.4	6.58	6.84	7.05	8.72	6.58
Mean f	5.78	6.37	5.03	5.74	8.12	8.28	6.41	6.58	6.81	7.02	8.72	6.56
MAD f	0.06	0.047	0.07	0.08	0.14	0.11	0.095	0.02	0.09	0.09	0.08	0.045
IQR f	0.1	0.059	0.093	0.102	0.219	0.167	0.17	0.030	0.156	0.167	0.111	0.074
Robust CV % f	1.7	0.93	1.8	1.8	2.7	2	2.7	0.45	2.3	2.4	1.3	1.1
Outliers	7	11	4	5	5	4	3	8	5	4	7	8
Stragglers	2	3	4	0	2	2	0	4	1	2	1	1

2010-11: Soil pH, 1:5 0.01 M $CaCl_2$ — direct (4B1) air dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	16	16	16	16	12	12	12	12	13	13	13	13
Minimum	4.73	5.37	4.24	4.83	5.92	6.21	5.35	5.82	5.71	5.74	6.35	5.57
Maximum	5.1	5.8	4.5	5.12	8.2	8.21	6.75	6.6	6.27	6.2	8.08	6.44
Median i	4.965	5.685	4.37	5	7.61	7.53	5.595	5.975	6.16	6.1	7.69	6.02
Mean i	4.96	5.65	4.37	4.99	7.44	7.38	5.68	6.02	6.07	6.07	7.52	6.02
MAD i	0.05	0.09	0.07	0.08	0.29	0.16	0.13	0.11	0.06	0.06	0.27	0.05
IQR i	0.082	0.139	0.117	0.128	0.482	0.374	0.202	0.182	0.215	0.126	0.534	0.089
Robust CV % i	1.6	2.4	2.7	2.6	6.3	5	3.6	3	3.5	2.1	6.9	1.5
Median f	4.97	5.69	4.37	5	7.69	7.56	5.59	5.97	6.2	6.12	7.78	6.02
Mean f	4.97	5.65	4.37	4.99	7.7	7.58	5.58	5.96	6.19	6.11	7.69	6.02
MAD f	0.05	0.09	0.07	0.08	0.215	0.085	0.12	0.09	0.03	0.04	0.18	0.04
IQR f	0.074	0.139	0.117	0.128	0.352	0.158	0.148	0.163	0.070	0.045	0.341	0.067
Robust CV % f	1.5	2.4	2.7	2.6	4.6	2.1	2.7	2.7	1.1	0.73	4.4	1.1
Outliers	1	0	0	0	2	3	1	1	3	1	1	2
Stragglers	0	0	0	0	0	1	0	0	1	1	1	0

2010-11: Soil pH, 1:5 0.01 M $CaCl_2$ — indirect (4B2) air dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	26	26	26	26	26	26	26	26	28	28	28	28
Minimum	4.57	5.37	4.06	4.7	6.17	6.55	5.4	5.53	5.45	5.71	6.18	5.72
Maximum	5.2	5.9	4.7	5.25	8.32	8.06	6.1	6.31	6.34	6.58	8.27	6.36
Median i	5.04	5.75	4.42	5.07	7.83	7.70	5.56	5.95	6.22	6.2	8.03	6.02
Mean i	5.02	5.71	4.42	5.05	7.72	7.59	5.63	5.95	6.16	6.16	7.89	6.04
MAD i	0.06	0.06	0.06	0.05	0.25	0.07	0.13	0.05	0.055	0.04	0.17	0.075
IQR i	0.107	0.109	0.095	0.080	0.378	0.145	0.191	0.078	0.124	0.098	0.285	0.089
Robust CV % i	2.1	1.9	2.1	1.6	4.8	1.9	3.4	1.3	2	1.6	3.6	1.5
Median f	5.04	5.75	4.42	5.08	7.97	7.73	5.53	5.93	6.24	6.21	8.06	6.02
Mean f	5.06	5.75	4.43	5.08	7.9	7.73	5.57	5.94	6.24	6.21	8	6.03
MAD f	0.05	0.05	0.05	0.035	0.16	0.09	0.11	0.05	0.03	0.021	0.155	0.03
IQR f	0.104	0.074	0.067	0.058	0.274	0.089	0.185	0.067	0.052	0.030	0.271	0.070
Robust CV % f	2.1	1.3	1.5	1.1	3.4	1.2	3.4	1.1	0.83	0.48	3.4	1.2
Outliers	3	3	3	3	2	7	2	3	5	7	2	4
Stragglers	0	0	0	1	2	0	1	0	2	3	0	4

2010-11: Water soluble Cl — potentiometric (5A1) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	23	23	23	23	21	21	21	21	23	23	23	23
Minimum	41	6	8.7	0.001	4255	2.6	3.8	534	4.5	8.5	19	3.5
Maximum	300	58	290	60	12000	70	180	1575	76	150	61	51
Median i	70	17	33	9.2	9225	30	39	890	15	47	36	17
Mean i	82	22	49	14	8960	31	46	917	21	50	35	19
MAD i	6.5	3.7	5	4.2	325	8.9	8.7	50	4.6	7.1	5	4.5
IQR i	11	7.9	16	6.8	563	14	14	81	6.4	11	7.9	7.0
Robust CV % i	16	46	50	74	6.1	46	37	9.1	42	23	22	41
Median f	69	15	31	8.5	9230	29	36	890	15	46	36	16
Mean f	68	16	30	9.0	9130	29	37	895	14	45	34	17
MAD f	6.3	2.2	2.5	2.9	242	7.5	5.8	47	2.6	6.4	4.8	3.7
IQR f	10	4.0	3.3	4.1	453	13	9.5	70	4.5	8.8	6.8	6.4
Robust CV % f	15	26	11	48	4.9	44	26	7.8	30	19	19	39
Outliers	5	5	6	4	4	1	4	5	4	3	2	2
Stragglers	0	2	4	0	1	0	0	0	1	0	0	1

2010-11: Water soluble Cl — autocolour (5A2) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	9	9	9	9	10	9	9	10	8	8	8	8
Minimum	57	14	30	7.4	8192	18	19	780	12	36	24	10
Maximum	121	31	50	36	9866	46	58	1630	35	102	39	30
Median i	63	18	34	12	9003	26	42	913	17	47	29	15
Mean i	71	22	36	16	9030	29	39	977	20	56	30	18
MAD i	5.0	1.8	3.2	4.6	416	7	11	70	4.6	9.9	3	4.5
IQR i	9.2	7.7	4.7	12	680	14	17	115	10	26	7.1	11
Robust CV % i	15	42	14	100	7.5	53	42	13	61	55	24	70
Median f	63	18	34	8.7	9000	26	42	911	17	41	29	15
Mean f	64	18	35	10	9030	29	39	904	20	45	30	18
MAD f	4.5	0.1	2.7	0.715	416	7	11	49	4.6	4.1	3	4.5
IQR f	6.4	0.354	4.5	3.7	680	13.7	17.4	109	10.1	12.2	7.1	11
Robust CV % f	10	2	13	43	7.5	53	42	12	61	30	24	70
Outliers	1	3	1	1	0	0	0	1	0	1	0	0
Stragglers	0	2	0	2	0	0	0	0	0	1	0	0

2010-11: Organic Carbon — W&B (6A1) % oven dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	30	30	30	30	24	24	24	25	28	28	28	28
Minimum	0.955	0.48	1.17	0.836	0.44	0.42	1.05	0.991	1.67	0.737	0.196	2.5
Maximum	5.17	7.36	10.7	4.1	0.778	0.711	2.45	1.58	2.89	2.4	0.74	4.14
Median i	2.69	2.39	7.89	3.09	0.57	0.51	1.68	1.15	2.05	1.13	0.375	3.49
Mean i	2.76	2.56	7.34	2.96	0.587	0.534	1.66	1.17	2.11	1.19	0.408	3.52
MAD i	0.135	0.14	0.655	0.205	0.062	0.024	0.105	0.08	0.11	0.085	0.051	0.175
IQR i	0.201	0.259	1.24	0.354	0.107	0.044	0.161	0.122	0.191	0.139	0.089	0.385
Robust CV % i	7.5	11	16	11	19	8.7	9.6	11	9.3	12	24	11
Median f	2.69	2.36	8.04	3.19	0.565	0.507	1.68	1.15	2.04	1.12	0.363	3.5
Mean f	2.7	2.38	8.08	3.13	0.587	0.511	1.65	1.15	2.07	1.12	0.361	3.55
MAD f	0.05	0.095	0.39	0.22	0.062	0.017	0.09	0.075	0.05	0.08	0.033	0.145
IQR f	0.107	0.165	0.6	0.259	0.107	0.026	0.128	0.117	0.15	0.12	0.048	0.306
Robust CV % f	4	7	7.5	8.1	19	5.1	7.6	10	7.4	11	13	8.7
Outliers	7	7	6	5	0	6	4	1	4	4	5	3
Stragglers	3	1	4	0	0	1	0	0	2	0	2	1

2010-11: Total Organic Carbon - Heanes / HF Induction, Vol / HF Induction, IR (6B1 + 6B2 + 6B3) % oven dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	23	23	23	23	25	25	25	25	23	23	23	23
Minimum	2.7	2.28	6.85	3.2	0.106	0.194	0.81	0.45	1.72	0.929	0.242	2.6
Maximum	4.17	3.05	9.82	4.47	1.57	1.37	2.79	3.89	2.4	1.73	1	4.7
Median i	3.46	2.83	8.98	3.78	0.59	0.64	1.98	1.28	2.33	1.29	0.601	4.19
Mean i	3.43	2.79	8.95	3.78	0.65	0.633	1.93	1.31	2.23	1.26	0.556	4.09
MAD i	0.2	0.09	0.34	0.12	0.06	0.039	0.11	0.04	0.05	0.081	0.099	0.13
IQR i	0.311	0.141	0.467	0.148	0.1	0.068	0.174	0.063	0.193	0.141	0.186	0.215
Robust CV % i	9	5	5.2	3.9	17	11	8.8	4.9	8.3	11	31	5.1
Median f	3.47	2.9	9.04	3.78	0.571	0.645	2.01	1.28	2.35	1.29	0.601	4.19
Mean f	3.46	2.87	9.05	3.78	0.594	0.643	2.02	1.29	2.35	1.27	0.55	4.21
MAD f	0.115	0.055	0.28	0.12	0.05	0.025	0.08	0.02	0.021	0.056	0.099	0.09
IQR f	0.211	0.098	0.385	0.148	0.085	0.036	0.135	0.039	0.037	0.119	0.178	0.162
Robust CV % f	6.1	3.4	4.3	3.9	15	5.6	6.7	3	1.6	9.2	30	3.9
Outliers	3	4	1	2	3	3	5	5	6	3	2	4
Stragglers	0	1	0	0	1	3	0	2	2	0	0	2

2010-11: Total N — Kjeldahl, steam distillation (7A1) % oven dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	23	23	23	23	22	22	22	22	23	23	23	23
Minimum	0.11	0.11	0.263	0.07	0.001	0.03	0.117	0.088	0.17	0.036	0.006	0.045
Maximum	0.389	0.4	0.584	0.365	360	661	1737	867	0.28	0.118	0.089	0.48
Median i	0.326	0.23	0.529	0.274	0.040	0.066	0.166	0.105	0.208	0.081	0.047	0.363
Mean i	0.317	0.227	0.493	0.267	16.4	30.1	79.1	39.5	0.21	0.082	0.046	0.34
MAD i	0.034	0.015	0.031	0.017	0.007	0.005	0.015	0.007	0.007	0.009	0.005	0.015
IQR i	0.050	0.026	0.074	0.032	0.010	0.008	0.025	0.011	0.017	0.013	0.0074	0.034
Robust CV % i	15	11	14	12	26	12	15	10	8.2	16	16	9.4
Median f	0.329	0.23	0.54	0.275	0.04	0.065	0.162	0.104	0.208	0.081	0.047	0.368
Mean f	0.327	0.229	0.536	0.276	0.041	0.065	0.166	0.104	0.205	0.082	0.046	0.367
MAD f	0.03	0.013	0.021	0.014	0.005	0.005	0.012	0.007	0.006	0.008	0.003	0.007
IQR f	0.049	0.018	0.037	0.023	0.0074	0.007	0.021	0.010	0.011	0.012	0.007	0.011
Robust CV % f	15	7.8	6.8	8.4	19	11	13	10	5.3	15	14	3
Outliers	1	3	3	4	3	5	1	3	5	2	2	5
Stragglers	0	0	2	1	0	0	2	0	0	0	2	3

2010-11: Total N — part-pool (7A1 + 7A2) % oven dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	27	27	27	27	26	26	26	26	27	27	27	27
Minimum	0.11	0.11	0.263	0.07	0.001	0.03	0.117	0.088	0.17	0.036	0.006	0.045
Maximum	0.389	0.4	0.584	0.365	360	661	1737	867	0.28	0.118	0.089	0.48
Median i	0.326	0.23	0.529	0.274	0.039	0.065	0.162	0.104	0.210	0.08	0.046	0.363
Mean i	0.318	0.228	0.496	0.267	13.9	25.5	67	33.4	0.209	0.081	0.046	0.342
MAD i	0.031	0.013	0.031	0.024	0.006	0.005	0.013	0.007	0.007	0.01	0.005	0.013
IQR i	0.047	0.024	0.067	0.037	0.009	0.007	0.022	0.009	0.017	0.015	0.007	0.033
Robust CV % i	14	10	13	14	23	12	14	8.6	8.1	19	16	9
Median f	0.329	0.23	0.533	0.274	0.039	0.064	0.161	0.103	0.21	0.08	0.045	0.367
Mean f	0.326	0.229	0.529	0.272	0.038	0.064	0.163	0.103	0.21	0.081	0.045	0.366
MAD f	0.028	0.013	0.026	0.015	0.004	0.004	0.012	0.006	0.003	0.009	0.005	0.007
IQR f	0.045	0.017	0.039	0.024	0.004	0.007	0.016	0.010	0.005	0.013	0.006	0.011
Robust CV % f	14	7.4	7.4	8.7	11	11	10	9.4	2.5	17	14	3.1
Outliers	1	3	3	3	3	5	3	3	6	2	3	7
Stragglers	0	0	1	1	4	0	0	0	4	0	0	2

2010-11: Total N – Dumas % oven dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	15	15	15	15	14	14	14	14	14	14	14	14
Minimum	0.3	0.181	0.508	0.25	0.017	0.043	0.144	0.084	0.186	0.068	0.035	0.348
Maximum	0.38	0.27	0.7	0.296	0.098	0.7	0.247	0.144	0.25	0.115	0.08	0.423
Median i	0.348	0.23	0.545	0.271	0.036	0.064	0.168	0.11	0.215	0.078	0.049	0.374
Mean i	0.344	0.222	0.551	0.272	0.043	0.111	0.172	0.111	0.214	0.084	0.051	0.377
MAD i	0.018	0.014	0.013	0.013	0.008	0.008	0.008	0.009	0.013	0.01	0.01	0.023
IQR i	0.023	0.030	0.02	0.021	0.014	0.018	0.017	0.019	0.020	0.016	0.016	0.037
Robust CV % i	6.6	13	3.7	7.7	39	27	10	17	9.5	20	34	9.8
Median f	0.348	0.23	0.543	0.271	0.036	0.062	0.167	0.11	0.215	0.078	0.049	0.374
Mean f	0.344	0.222	0.541	0.272	0.035	0.064	0.164	0.111	0.214	0.084	0.051	0.377
MAD f	0.018	0.014	0.010	0.013	0.006	0.007	0.006	0.009	0.013	0.01	0.01	0.023
IQR f	0.023	0.030	0.015	0.021	0.009	0.011	0.016	0.019	0.020	0.016	0.016	0.037
Robust CV % f	6.6	13	2.8	7.7	24	17	9.8	17	9.5	20	34	9.8
Outliers	0	0	1	0	2	2	1	0	0	0	0	0
Stragglers	0	0	0	0	0	0	1	0	0	0	0	0

2010-11: Water Soluble Nitrate N— autocolour (7B1) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	20	20	20	20	21	21	21	21	19	19	19	19
Minimum	21	0.01	0.3	0.01	10	7.8	1.1	16	4.4	0.01	6.5	27
Maximum	42	2.2	4.6	2.7	43	36	12	56	9.9	3.2	15	58
Median i	38	0.497	3.1	0.801	20	27	9	40	6.7	0.875	9.2	40
Mean i	36	0.747	2.9	0.926	21	27	9.1	39	6.9	1.2	9.5	40
MAD i	1.6	0.297	0.42	0.2	0.8	0.8	1	1	0.65	0.411	0.48	2.1
IQR i	3.4	0.568	0.921	0.34	1.6	1.3	1.8	1.6	0.971	0.949	0.741	3.0
Robust CV % i	8.9	110	29	42	8.4	4.7	20	4	15	110	8	7.4
Median f	38	0.37	3.2	0.75	19	27	9.1	40	6.5	0.801	9.2	40
Mean f	38	0.44	3.24	0.721	19	27	9.5	40	6.5	0.961	9.2	40
MAD f	1	0.15	0.2	0.142	0.8	0.2	0.955	0.8	0.5	0.353	0.355	1.4
IQR f	1.6	0.25	0.445	0.216	1.1	0.519	1.9	1.3	0.764	0.482	0.606	2.2
Robust CV % f	4.3	67	14	29	5.5	1.9	20	3.3	12	60	6.6	5.5
Outliers	4	3	2	4	5	5	1	6	3	2	5	5
Stragglers	1	1	3	2	0	3	0	0	1	1	0	0

2010-11: KCl Extractable Nitrate N — autocolour (7C2) mg/kg oven dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	20	20	20	20	18	18	18	18	19	19	19	19
Minimum	15.6	0.01	1.5	0.279	18	24	7.1	35	5.7	0.06	6	37
Maximum	42	3.7	13	8.4	22	29	10	45	46	7.0	10.2	158
Median i	37	0.24	3.5	0.765	20	27	9.0	39	6.5	0.65	8.9	41
Mean i	36	0.807	4.2	1.7	20	27	9.0	39	8.6	1.0	8.8	47
MAD i	1	0.167	0.505	0.22	1.4	0.8	0.56	1.8	0.4	0.19	0.54	2.0
IQR i	1.4	0.577	0.938	0.336	2.2	1.7	0.977	3.0	0.615	0.302	0.912	3.0
Robust CV % i	3.8	240	27	44	11	6.4	11	7.8	9.5	47	10	7.2
Median f	37	0.2	3.3	0.67	20	27	9.0	39	6.5	0.596	9	41
Mean f	37	0.176	3.4	0.665	20	27	9.02	39	6.5	0.586	9.1	40
MAD f	0.4	0.121	0.29	0.155	1.4	0.8	0.56	1.8	0.35	0.14	0.4	1.9
IQR f	0.778	0.165	0.615	0.234	2.2	1.7	0.977	3.0	0.573	0.253	0.815	3.0
Robust CV % f	2.1	83	19	35	11	6.4	11	7.8	8.8	43	9.1	7.2
Outliers	5	5	4	4	0	0	0	0	1	2	2	1
Stragglers	2	0	1	0	0	0	0	0	0	1	0	1

2010-11: KCl Ext. Ammonium N — autocolour (7C2) mg/kg oven dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	25	25	25	25	24	23	24	24	24	24	24	24
Minimum	6.1	3.6	16	6	2.0	2.0	27	1.1	6.8	1.1	3.8	38
Maximum	1100	281	665	494	10	11	77	23	51	12	11	170
Median i	101	27	63	46	4.3	6.7	63	13	44	6.9	6.5	152
Mean i	131	37	81	60	4.9	7.0	61	13	42	7	6.7	140
MAD i	6	3.3	3.8	1.7	0.48	0.7	2.5	0.8	2	0.54	0.615	8
IQR i	11	4	9.7	4.5	1.3	1.1	4.7	1.5	3.2	0.78	0.919	16
Robust CV % i	11	15	15	9.7	31	17	7.5	12	7.2	11	14	10
Median f	104	27	63	46	4.1	6.7	64	12	44	6.8	6.4	153
Mean f	103	27	63	46	4.2	6.8	64	13	44	6.7	6.4	152
MAD f	3	0.9	3	1	0.265	0.6	2	0.9	2	0.38	0.525	7
IQR f	5.2	2.2	4.3	1.4	0.441	0.964	3.0	1.0	2.9	0.497	0.852	11
Robust CV % f	5	8.2	6.8	3.1	11	14	4.6	8.4	6.7	7.3	13	7
Outliers	5	4	7	7	6	4	5	4	3	6	4	4
Stragglers	2	4	1	2	2	0	0	0	0	1	0	0

2010-11: Total P – pooled % oven dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	22	22	22	22	19	19	19	19	19	19	19	19
Minimum	0.041	0.04	0.033	0.021	0.012	0.066	0.054	0.016	0.019	0.017	0.042	0.099
Maximum	0.18	0.077	0.062	0.058	164	898	821	179	0.065	0.045	0.075	0.2
Median i	0.130	0.061	0.043	0.042	0.016	0.082	0.067	0.022	0.039	0.023	0.055	0.146
Mean i	0.128	0.061	0.045	0.042	8.65	47.3	43.3	9.44	0.038	0.024	0.055	0.145
MAD i	0.012	0.003	0.003	0.004	0.002	0.006	0.005	0.002	0.002	0.002	0.005	0.009
IQR i	0.017	0.005	0.006	0.007	0.002	0.014	0.007	0.004	0.005	0.004	0.008	0.013
Robust CV % i	13	8.6	13	17	15	16	11	17	12	16	15	9.1
Median f	0.13	0.061	0.042	0.042	0.015	0.082	0.066	0.021	0.039	0.023	0.055	0.146
Mean f	0.131	0.062	0.043	0.042	0.015	0.083	0.066	0.021	0.039	0.023	0.053	0.145
MAD f	0.008	0.003	0.004	0.003	0.001	0.006	0.005	0.002	0.002	0.002	0.005	0.008
IQR f	0.015	0.003	0.005	0.005	0.002	0.010	0.008	0.004	0.004	0.004	0.007	0.013
Robust CV % f	11	5.2	12	11	12	12	12	18	11	16	12	8.6
Outliers	3	4	2	2	3	1	1	2	3	1	1	2
Stragglers	1	1	0	1	1	0	0	0	0	0	0	0

2010-11: Colwell Extractable P — pooled (9B1 + 9B2) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	29	29	29	29	27	27	27	27	26	26	26	26
Minimum	24	35	20	27	23	65	92	3.0	16	18	15	36
Maximum	288	148	194	120	44	99	179	69	231	86	75	88
Median i	66	87	91	42	31	80	134	6.8	21	26	25	59
Mean i	74	87	92	49	32	81	133	9.4	30	29	27	59
MAD i	4.2	4.9	5.9	5.5	2.9	3.3	12	1.2	2.3	2	2.8	4.5
IQR i	6.8	8.8	8.9	9.3	4.2	5.1	19	1.7	4.5	3.9	4.5	8.1
Robust CV % i	10	10	9.8	22	14	6.4	14	25	22	15	18	14
Median f	66	85	91	42	31	79	134	6.4	20	26	24	59
Mean f	66	85	92	43	31	79	133	6.4	20	26	24	58
MAD f	3.4	3.9	4.4	3.5	2	1.7	12	0.825	1	1.2	2.2	3.7
IQR f	4.6	5.0	5.8	6.5	3.7	2.7	17	1.4	1.3	2.5	3.3	4.9
Robust CV % f	7	5.9	6.3	16	12	3.4	13	22	6.7	9.9	14	8.2
Outliers	6	6	5	5	1	3	2	3	2	6	2	3
Stragglers	1	0	1	1	1	2	0	2	5	2	2	1

2010-11: Olsen Extractable P — pooled (9C1 + 9C2) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	30	30	30	30	25	25	25	25	26	26	26	26
Minimum	13	30	26	13	0.766	2.3	2	0.023	5.2	6.6	5	3
Maximum	69	74	66	55	23	56	57	39	114	61	90	77
Median i	18	40	42	17	14	50	41	1.9	9.0	8.3	7.2	14.8
Mean i	21	43	44	20	14	45	39	3.5	13	11	11	17
MAD i	2.2	2.3	3.9	1.9	1	2.6	5.4	0.67	1.4	1.1	1.1	1.5
IQR i	3.4	3.8	4.1	4.7	1.6	6.4	7.4	1	2.1	1.9	2.0	2.4
Robust CV % i	19	9.5	9.8	28	11	13	18	53	23	23	28	16
Median f	18	40	42	16	15	51	44	1.9	8.9	8.3	7.1	14
Mean f	18	40	43	16	15	51	44	1.9	9.2	8.5	7.1	14
MAD f	2	1	2	1	0.85	1.8	4.2	0.6	1.1	1.1	0.9	1.2
IQR f	3.3	1.4	3.6	1.5	1.3	3.3	6.3	0.953	2.0	1.8	1.5	2.0
Robust CV % f	19	3.4	8.5	9.4	8.4	6.4	14	50	23	22	21	14
Outliers	3	7	4	5	4	5	3	2	1	1	3	3
Stragglers	0	6	3	3	1	1	0	1	1	0	0	1

2010-11: Bray-1 Extractable P — pooled (9E1 + 9E2) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	14	14	14	14	13	13	13	13	14	14	14	14
Minimum	4.7	27	23	10	11	46	1.3	0.39	4.2	1.5	1.5	3.2
Maximum	29	127	117	32	229	632	953	118	52	47	168	99
Median i	15	50	42	17	23	64	89	1.0	6.7	5.2	11	12
Mean i	16	54	46	17	39	111	150	10	9.6	8	24	17
MAD i	2	8.9	12	2	1.7	4.9	16	0.394	0.6	0.8	6.55	3
IQR i	4.7	14	18	3.9	3.4	15	23	0.671	1.1	1.4	13	4.7
Robust CV % i	32	27	44	23	15	23	26	66	16	27	120	39
Median f	14	47	42	16	22	62	89	0.899	6.69	5.1	10	12
Mean f	15	49	41	16	22	61	91	0.839	6.5	5.1	13	11
MAD f	0.5	9.6	12	1.9	0.7	4.8	14	0.401	0.54	0.32	5.5	3
IQR f	1.2	13	16	3.3	1.4	8.7	19	0.593	0.845	0.604	12	4.2
Robust CV % f	8.7	27	39	20	6.1	14	21	66	13	12	120	35
Outliers	2	1	1	1	3	3	2	2	2	3	1	1
Stragglers	3	0	0	0	1	0	0	0	0	2	0	0

2010-11: Acid Extractable P — pooled (9G1 + 9G2) mg/kg air dry

Statistical parameters	Soil sample identification and vale											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	7	7	7	7	7	6	6	7	7	7	7	7
Minimum	43	176	96	34	38	529	181	0.1	26	2	150	50
Maximum	58	230	146	48	98	1042	894	9.3	291	1320	521	133
Median i	49	208	124	44	42	624	220	7	46	21	455	59
Mean i	50	204	124	43	51	688	327	5.8	78	206	421	70
MAD i	3.5	13	8	4	3	66	24	1.3	11	3	46	5.2
IQR i	9.6	31	16	7.3	13	170	159	4.9	18	15	71	8.2
Robust CV % i	20	15	13	17	31	27	72	70	39	71	16	14
Median f	49	208	124	44	39	605	205	7.5	41	20	461	59
Mean f	50	204	124	43	40	618	213	6.7	42	20	467	59
MAD f	3.5	13	8	4	1	38	24	1.2	6.6	1	31	4.6
IQR f	9.6	31	16	7.3	3.0	92	37	2.7	14	2.0	55	8.1
Robust CV % f	20	15	13	17	7.6	15	18	36	33	10	12	14
Outliers	0	0	0	0	1	1	1	1	1	3	1	1
Stragglers	0	0	0	0	1	0	0	0	0	0	0	0

2010-11: Phosphorus buffer index - Colwell (9I2a + 9I2b + 9I2c) L/kg air dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	ASS 112	ASS 113	ASS 114	ASS 31	ASS 32	ASS 33	ASS 34	ASS 51	ASS 52	ASS 53	ASS 54
No of results	20	20	20	20	21	21	21	21	21	21	21	21
Minimum	124	37	57.4	51.4	51.1	1.02	23.6	42.9	49.5	31.8	23.4	67
Maximum	281	79	144	125	171	92.7	203	1060	113	197	56.4	557
Median i	252	64.5	126	108	74	39.2	86	463	68.3	169	42	425
Mean i	241	63.3	122	104	76.7	40.2	88.4	469	70.2	162	41.6	406
MAD i	14.1	2.11	5.36	6	10	3.2	6	37	5.13	13	4	60
IQR i	21.3	3.92	10	10.2	14.9	6.23	9.16	56	7.6	18.5	6.26	92.7
Robust CV % i	8.5	6.1	7.9	9.5	20	16	11	12	11	11	15	22
Median f	253	64.5	128	109	71.5	38	86.4	463	68	170	42	430
Mean f	254	64.7	129	109	72	38.1	86.9	461	68.1	169	41.8	423
MAD f	12	1.3	6.5	6.5	7.95	3.2	4	36	3.7	11.5	4	50.5
IQR f	20.1	2.08	12.1	10.2	14.2	5.11	6.52	51.1	6.02	16.7	5.93	83.2
Robust CV % f	7.9	3.2	9.5	9.4	20	13	7.6	11	8.9	9.8	14	19
Outliers	2	3	2	2	1	3	2	2	3	1	2	1
Stragglers	0	2	0	0	0	1	1	0	0	0	0	0

2010-11: Phosphorus buffer index - Olsen (9I3a + 9I3b + 9I3c) L/kg air dry

Statistical parameters	NOT ASSESSABLE				Soil sample identification and values							NOT ASSESSABLE
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	ASS 112	ASS 113	ASS 114	ASS 31	ASS 32	ASS 33	ASS 34	ASS 51	ASS 52	ASS 53	ASS 54
No of results	4	4	4	4	2	2	2	2	3	3	3	3
Minimum	222	70.4	128	108	90.1	68.2	99.6	534	67.8	162	40	255
Maximum	265	87.8	153	116	95.2	68.6	99.8	535	75.1	180.9	46.5	295
Median i	265	81.2	144	112	92.7	68.4	99.7	535	74.3	177	45.7	295
Mean i	254	80.2	142	112	92.7	68.4	99.7	535	72.4	173	44.1	282
MAD i	0.5	3.3	9	4	2.55	0.2	0.1	0.5	0.84	4.31	0.86	0.71
IQR i	24.1	9.67	17.2	5.93					5.41	14	4.83	30
Robust CV % i	9.1	12	12	5.3					7.3	7.9	11	10
Median f	265	81.2	144	112	92.7	68.4	99.7	535	74.3	177	45.7	295
Mean f	265	80.2	142	112	92.7	68.4	99.7	535	72.4	173	44.1	295
MAD f		3.3	9	4	2.55	0.2	0.1	0.5	0.84	4.31	0.86	0.355
IQR f	0.741	9.67	17.2	5.93					5.41	14	4.83	
Robust CV % f	0.28	12	12	5.3					7.3	7.9	11	
Outliers	1	0	0	0	0	0	0	0	0	0	0	1
Stragglers	0	0	0	0	0	0	0	0	0	0	0	0

2010-11: Phosphate Extractable S (10B3) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	6	6	6	6	6	6	6	6	7	7	7	7
Minimum	40	19	19	22	404	13	36	58	19	8	70	47
Maximum	52	26	42	29	1487	75	140	392	28	23	86	77
Median i	46	23	33	25	463	16	51	145	20	15	80	68
Mean i	46	23	30	26	620	30	67	176	21	15	80	63
MAD i	2.2	1.1	5.3	1	20	1.6	12	27	1.3	1	0.8	7.1
IQR i	4.7	2.5	13	2.3	223	29	45	92	2.8	1.7	2.7	13
Robust CV % i	10	11	39	9.2	48	180	89	63	14	11	3.4	18
Median f	46	23	33	25	456	15	49	137	20	15	80	68
Mean f	46	23	30	26	447	15	53	133	20	15	80	63
MAD f	2.2	1.1	5.3	1	16	0.75	8.5	15	0.795	0.95	0.8	7.1
IQR f	4.7	2.5	13	2.3	39	1.8	23	55	2.0	1.2	1.9	13
Robust CV % f	10	11	39	9.2	8.5	12	47	40	10	8	2.4	18
Outliers	0	0	0	0	1	2	1	1	1	2	2	0
Stragglers	0	0	0	0	0	0	0	0	0	0	0	0

2010-11: KCl_{40} Extractable S (Blair *et al.*) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	16	16	16	16	15	15	15	15	14	14	14	14
Minimum	16	0.978	1.5	0.1	197	9.4	26	52	8.5	5.8	55	23
Maximum	34	24	45	27	538	15	49	149	18	13	95	41
Median i	23	16	26	14	491	13	39	67	14	8.9	82	32
Mean i	24	16	25	15	467	13	38	72	14	8.6	80	33
MAD i	2.6	1.3	3.7	1.5	18	0.7	3	4.9	1.3	0.895	7.3	4.8
IQR i	4.3	2.5	7.4	2.7	29	0.741	4.6	6.9	2.2	1.6	11	7.3
Robust CV % i	18	16	29	19	5.9	5.7	12	10	16	18	14	22
Median f	23	16	27	14	500	13	39	66	14	8.9	82	32
Mean f	23	16	26	14	499	13	38	64	14	8.5	80	33
MAD f	2.5	1.3	2.6	1	18	0.55	2.2	4.1	1.1	0.695	7.3	4.8
IQR f	4	2.1	4.4	1.8	26	0.741	4.1	7.1	2.0	1.1	11	7.3
Robust CV % f	17	13	16	13	5.1	5.7	11	11	14	12	14	22
Outliers	1	2	2	3	2	1	1	2	1	1	0	0
Stragglers	0	0	1	0	0	0	1	0	1	1	0	0

2010-11: DTPA Extractable Cu (12A1) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	29	29	29	29	27	27	27	27	33	33	33	33
Minimum	1.1	0.98	0.44	1.6	0.501	0.6	0.6	0.313	2	1.4	0.763	1.7
Maximum	3.5	2.8	2.8	3.4	2.0	2.3	2.4	1.9	4.1	3.9	4.4	5.1
Median i	1.6	1.5	1.0	1.9	0.65	1.0	0.992	0.432	3.1	2.3	1.4	3.2
Mean i	1.7	1.6	1.1	2.0	0.705	1.1	1.0	0.53	3.1	2.3	1.5	3.2
MAD i	0.1	0.09	0.21	0.07	0.06	0.067	0.052	0.062	0.3	0.19	0.11	0.37
IQR i	0.174	0.215	0.328	0.178	0.089	0.109	0.142	0.089	0.43	0.322	0.182	0.615
Robust CV % i	11	14	32	9.6	14	11	14	21	14	14	13	19
Median f	1.6	1.5	1.0	1.8	0.645	1.0	1	0.4	3.1	2.3	1.4	3.2
Mean f	1.6	1.5	0.998	1.8	0.639	1.0	1.0	0.406	3.1	2.3	1.4	3.2
MAD f	0.085	0.06	0.195	0.065	0.055	0.06	0.039	0.036	0.245	0.155	0.1	0.25
IQR f	0.146	0.085	0.325	0.093	0.104	0.090	0.059	0.057	0.361	0.261	0.141	0.456
Robust CV % f	9.2	5.8	32	5	16	8.9	5.9	14	12	11	10	14
Outliers	5	7	1	7	2	4	6	4	2	5	6	3
Stragglers	0	2	0	0	0	0	3	2	3	0	0	2

2010-11: DTPA Extractable Fe (12A1) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	29	29	29	29	27	27	27	27	33	33	33	33
Minimum	119	58	69	80	5.3	1.4	47	9.1	16	9	0.01	25
Maximum	372	131	736	195	39	20	371	60	85	90	100	118
Median i	181	70	488	107	9.1	6.8	197	13	54	43	2.1	62
Mean i	186	75	465	114	11	7.2	192	15	54	44	5.1	68
MAD i	20	5.3	41	9.8	1.1	0.84	53	1.5	5.9	4.8	0.32	18
IQR i	32	10	68	18	1.7	1.1	89	2.3	9.2	8.4	0.638	29
Robust CV % i	18	15	14	17	19	16	45	18	17	20	30	46
Median f	176	69	490	105	9.1	6.7	197	13	53	43	2.0	62
Mean f	177	70	487	105	8.9	6.7	192	13	52	43	2.1	68
MAD f	23	4.4	34	8.1	0.9	0.68	53	1.6	5.1	3.9	0.26	18
IQR f	33	8.1	53	13	1.5	1.0	89	2.5	6.9	5.7	0.352	29
Robust CV % f	19	12	11	12	16	15	45	20	13	13	17	46
Outliers	2	4	6	3	4	3	0	3	6	5	6	0
Stragglers	0	0	0	1	0	0	0	0	0	0	2	0

2010-11: DTPA Extractable Mn (12A1) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	28	28	28	28	26	26	26	26	32	32	32	32
Minimum	84	43	0.061	1.7	1.3	15	21	15	37	49	11	89
Maximum	234	75	5.5	240	4.8	30	205	48	135	137	165	307
Median i	166	60	1	160	2.9	17	149	28	87	92	20	155
Mean i	170	60	1.6	159	2.9	18	149	29	87	93	24	159
MAD i	145	3.4	0.601	15	0.38	1	14	3.2	8.1	7.4	1.3	14
IQR i	19	4.4	1.6	22	0.645	1.8	21	4.6	12	13	2.8	24
Robust CV % i	11	7.3	160	13	22	11	14	16	14	14	14	16
Median f	164	61	0.69	160	2.9	17	146	28	87	92	20	156
Mean f	166	60	0.909	165	2.9	17	150	29	87	94	20	159
MAD f	6	2.1	0.31	11	0.365	0.9	8	2.9	6.4	4.7	0.9	13
IQR f	13	4.2	0.512	19	0.608	1.2	16	4.4	10	9.5	1.5	21
Robust CV % f	8	7	74	12	21	7.3	11	15	12	10	7.2	13
Outliers	6	4	4	5	2	2	4	2	5	4	7	3
Stragglers	3	1	4	0	0	0	2	0	1	3	4	0

2010-11: DTPA Extractable Zn (12A1) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	29	29	29	29	27	27	27	27	32	32	32	32
Minimum	1.6	2.6	0.11	1	0.094	1.4	1.5	0.1	0.29	0.177	0.365	1.4
Maximum	3.9	5.8	2.0	1.9	0.44	3.3	2.7	0.938	1.9	1.5	1.4	3.1
Median i	2.0	4.4	1.0	1.4	0.28	1.9	1.9	0.214	0.78	0.502	0.567	2.1
Mean i	2.2	448	1.0	1.4	0.28	2.0	2.0	0.244	0.802	0.546	0.583	2.1
MAD i	0.22	0.2	0.178	0.09	0.05	0.2	0.12	0.049	0.073	0.077	0.063	0.172
IQR i	0.322	0.385	0.267	0.185	0.079	0.304	0.215	0.080	0.116	0.115	0.090	0.232
Robust CV % i	16	8.7	26	13	28	16	11	37	15	23	16	11
Median f	2	4.4	1.0	1.4	0.283	1.9	1.9	0.2	0.78	0.498	0.559	2.1
Mean f	2.1	4.4	0.994	1.4	0.287	1.9	1.9	0.21	0.771	0.493	0.546	2.2
MAD f	0.2	0.08	0.159	0.075	0.051	0.165	0.105	0.045	0.07	0.072	0.059	0.12
IQR f	0.319	0.102	0.259	0.135	0.078	0.263	0.2	0.069	0.104	0.105	0.085	0.198
Robust CV % f	16	2.3	26	9.8	28	14	11	35	13	21	15	9.4
Outliers	2	9	2	4	1	1	2	2	3	4	2	4
Stragglers	0	4	1	1	0	0	1	0	0	0	0	2

2010-11: Hot $CaCl_2$ Extractable B — ICPAES (12C2) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	18	18	18	18	15	15	15	16	18	18	18	18
Minimum	0.414	0.228	0.362	0.134	0.133	0.138	0.225	1.5	0.221	0.01	1.01	1.18
Maximum	2.3	2.0	4.8	1.5	1.4	1.9	3.4	8.8	1.1	0.81	2.1	2.4
Median i	1.3	1.1	1.5	0.516	0.195	0.6	0.884	6.2	0.347	0.563	1.7	1.7
Mean i	1.4	1.1	1.6	0.546	0.294	0.681	1	6.1	0.412	0.533	1.6	1.7
MAD i	0.27	0.121	0.42	0.093	0.01	0.058	0.154	0.73	0.069	0.078	0.27	0.285
IQR i	0.514	0.195	0.606	0.172	0.026	0.085	0.245	1.1	0.101	0.172	0.424	0.445
Robust CV % i	39	18	42	33	13	14	28	18	29	31	25	26
Median f	1.3	1.1	1.4	0.526	0.194	0.6	0.884	6.4	0.337	0.58	1.7	1.7
Mean f	1.4	1.1	1.4	0.52	0.196	0.604	0.877	6.4	0.337	0.564	1.6	1.7
MAD f	0.27	0.08	0.41	0.034	0.008	0.035	0.146	0.59	0.061	0.079	0.27	0.285
IQR f	0.514	0.133	0.618	0.049	0.013	0.062	0.222	0.875	0.099	0.139	0.424	0.445
Robust CV % f	39	12	43	9.3	6.5	10	25	14	29	24	25	26
Outliers	0	4	1	2	5	3	2	1	2	1	0	0
Stragglers	0	1	0	5	0	0	0	2	0	0	0	0

2010-11: Hot $CaCl_2$ Extractable B — pooled (12C1 + 12C2) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	20	20	20	20	15	15	15	16	20	20	20	20
Minimum	0.414	0.228	0.362	0.134	0.133	0.138	0.225	1.5	0.221	0.01	1.01	1.18
Maximum	2.3	2.0	4.8	1.5	1.4	1.9	3.4	8.8	1.1	0.81	2.1	2.4
Median i	1.3	1.1	1.5	0.528	0.195	0.6	0.884	6.2	0.351	0.533	1.7	1.7
Mean i	1.4	1.2	1.8	0.581	0.294	0.681	1	6.1	0.434	0.523	1.6	1.7
MAD i	0.265	0.121	0.43	0.145	0.01	0.058	0.154	0.73	0.07	0.108	0.27	0.255
IQR i	0.397	0.213	0.623	0.203	0.026	0.085	0.245	1.1	0.11	0.169	0.398	0.421
Robust CV % i	30	19	40	39	13	14	28	18	31	32	24	25
Median f	1.3	1.1	1.5	0.526	0.194	0.6	0.884	6.4	0.343	0.545	1.7	1.7
Mean f	1.4	1.1	1.46	0.523	0.196	0.604	0.877	6.37	0.349	0.549	1.6	1.7
MAD f	0.245	0.07	0.42	0.047	0.008	0.035	0.146	0.59	0.067	0.093	0.27	0.255
IQR f	0.389	0.115	0.606	0.14	0.013	0.062	0.222	0.875	0.10	0.169	0.398	0.421
Robust CV % f	29	10	42	27	6.5	10	25	14	29	31	24	25
Outliers	1	5	2	2	5	3	2	1	3	1	0	0
Stragglers	1	1	0	1	0	0	0	2	0	0	0	0

2010-11: Exchangeable Ca — 1M NH_4Cl extract (15A1) cmol+/kg oven dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	16	16	16	16	16	16	16	16	15	15	15	15
Minimum	5.95	7.77	5.81	7.14	0.781	12	2.98	4.29	7.79	6.86	10.8	5.38
Maximum	15.4	18.4	13.2	15.3	11	246	47	49	21.6	16.2	30.5	12.9
Median i	13.4	15.2	12.2	13	0.976	20.3	3.64	4.72	16.5	14.8	24.5	11.2
Mean i	13	15	11.4	12.8	1.64	33.8	6.29	7.49	16.3	14.1	22.1	10.8
MAD i	0.8	0.6	0.45	0.6	0.057	1.19	0.215	0.12	0.57	0.5	1.8	0.4
IQR i	1.19	0.871	0.649	0.89	0.143	1.91	0.319	0.256	0.89	1.11	9.12	0.519
Robust CV % i	8.9	5.7	5.3	6.8	15	9.4	8.8	5.4	5.4	7.5	37	4.6
Median f	13.4	15.2	12.2	13	0.943	20.3	3.6	4.7	16.5	14.8	24.8	11.3
Mean f	13.5	15.1	12.3	13	0.957	20.2	3.57	4.71	16.5	14.6	25.2	11.4
MAD f	0.8	0.5	0.4	0.5	0.035	1.05	0.2	0.08	0.5	0.5	1.1	0.25
IQR f	1.04	0.593	0.593	0.741	0.06	1.72	0.297	0.133	0.841	0.945	1.76	0.445
Robust CV % f	7.7	3.9	4.9	5.7	6.4	8.5	8.2	2.8	5.1	6.4	7.1	4
Outliers	1	3	3	2	3	2	1	2	2	1	4	3
Stragglers	0	0	0	0	2	0	0	1	0	0	1	1

2010-11: Exchangeable K — 1M NH_4Cl extract (15A1) cmol+/kg oven dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	17	17	17	17	16	16	16	16	16	16	16	16
Minimum	0.5	0.5	0.194	0.56	0.139	0.65	1.4	1.17	0.38	0.44	0.257	0.45
Maximum	1.7	1.87	0.99	1.74	2.8	9	14.6	14	1.1	1.2	2.3	1.5
Median i	0.601	0.562	0.259	0.638	0.194	0.737	1.51	1.30	0.441	0.516	0.992	0.538
Mean i	0.652	0.645	0.299	0.699	0.377	1.37	2.71	2.17	0.492	0.557	1.02	0.61
MAD i	0.034	0.032	0.027	0.028	0.014	0.042	0.025	0.105	0.011	0.032	0.023	0.035
IQR i	0.072	0.058	0.046	0.05	0.039	0.075	0.063	0.202	0.047	0.065	0.043	0.066
Robust CV % i	12	10	18	7.8	20	10	4.2	16	11	13	4.3	12
Median f	0.596	0.56	0.245	0.634	0.185	0.715	1.51	1.29	0.439	0.515	0.997	0.534
Mean f	0.587	0.56	0.246	0.626	0.19	0.711	1.51	1.29	0.439	0.514	1	0.531
MAD f	0.037	0.03	0.016	0.024	0.006	0.026	0.01	0.09	0.002	0.025	0.015	0.027
IQR f	0.071	0.045	0.027	0.037	0.015	0.043	0.015	0.117	0.004	0.033	0.030	0.036
Robust CV % f	12	8.1	11	5.8	8	6	0.98	9.1	0.89	6.3	3	6.7
Outliers	1	2	1	2	4	3	4	2	5	1	4	3
Stragglers	0	0	2	0	1	1	3	0	3	0	0	0

2010-11: Exchangeable Mg — 1M NH_4Cl extract (15A1) cmol+/kg oven dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	16	16	16	16	16	16	16	16	15	15	15	15
Minimum	5.21	3.54	2.04	4.3	11.9	1.15	0.461	8.55	2.43	4.87	0.983	0.794
Maximum	19.1	5.11	2.97	6.22	145	15	6.1	104	6.89	12	3.3	3.1
Median i	16.6	4.46	2.73	5.55	13.6	1.28	0.6	10.4	5.58	11.1	2.19	1.92
Mean i	15.5	4.46	2.67	5.53	22.3	2.15	0.931	16.2	5.36	10.3	2.16	1.9
MAD i	0.95	0.18	0.12	0.215	0.75	0.075	0.051	0.65	0.25	0.6	0.06	0.08
IQR i	1.3	0.3	0.237	0.35	1.5	0.132	0.078	1.09	0.482	0.897	0.059	0.104
Robust CV % i	7.8	6.7	8.7	6.3	11	10	13	10	8.6	8.1	2.7	5.4
Median f	17.3	4.46	2.75	5.59	13	1.24	0.6	10.1	5.6	11.1	2.19	1.95
Mean f	17.1	4.47	2.74	5.61	13.4	1.28	0.586	10.1	5.62	11.1	2.18	1.96
MAD f	0.8	0.135	0.105	0.19	0.6	0.06	0.05	0.605	0.2	0.11	0.01	0.05
IQR f	1.07	0.219	0.158	0.319	0.927	0.106	0.074	0.977	0.319	0.259	0.037	0.080
Robust CV % f	6.2	4.9	5.7	5.7	7.1	8.6	12	9.6	5.7	2.3	1.7	4.1
Outliers	3	1	2	1	3	1	1	2	3	3	3	3
Stragglers	0	1	0	0	0	1	0	0	1	2	3	0

2010-11: Exchangeable Na — 1M NH_4Cl extract (15A1) cmol+/kg oven dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	16	16	16	16	16	16	16	16	15	15	15	15
Minimum	0.074	0.007	0.028	0.014	5.75	0.039	0.086	5.97	0.03	0.979	1.05	0.161
Maximum	16.7	3.18	2.82	4.53	293	3	2.7	79	0.256	2	2.4	0.5
Median i	1.7	0.096	0.455	0.191	24.1	0.117	0.129	7.74	0.087	1.12	1.18	0.188
Mean i	2.68	0.292	0.668	0.467	41.7	0.346	0.311	12.9	0.113	1.21	1.28	0.222
MAD i	0.18	0.024	0.073	0.033	2.25	0.037	0.026	0.805	0.017	0.04	0.08	0.019
IQR i	0.317	0.035	0.203	0.091	3.47	0.142	0.085	1.23	0.056	0.163	0.165	0.038
Robust CV % i	19	36	45	48	14	120	66	16	65	15	14	20
Median f	1.65	0.092	0.43	0.19	24.1	0.1	0.118	7.48	0.083	1.09	1.17	0.182
Mean f	1.68	0.091	0.443	0.174	24.2	0.101	0.119	7.55	0.087	1.08	1.2	0.184
MAD f	0.15	0.02	0.03	0.015	1.4	0.016	0.015	0.54	0.006	0.03	0.065	0.015
IQR f	0.237	0.029	0.052	0.033	2.56	0.031	0.025	0.958	0.018	0.089	0.147	0.023
Robust CV % f	14	31	12	18	11	31	21	13	22	8.2	13	13
Outliers	3	2	4	4	3	5	4	2	4	4	1	3
Stragglers	0	1	1	1	1	0	0	0	1	0	0	0

2010-11: Exchangeable Ca — 1M NH_4OAc extract (15D3) cmol+/kg air dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	26	26	26	26	23	23	23	23	25	25	25	25
Minimum	7.66	4.32	7.45	7.7	0.8	12.9	2.72	3.77	8.24	7.02	10.4	5.25
Maximum	17.9	22.0	16.5	14.8	1.65	26.5	6.5	7.35	20.3	21.6	52.7	17.2
Median i	12.4	15.1	10.5	12.4	0.956	17.7	3.55	4.54	16.4	13.9	21.5	11
Mean i	12.7	14.6	10.8	12.5	1.03	18.1	3.73	4.62	16.3	14.1	24	11.1
MAD i	0.45	0.692	0.665	0.525	0.107	1.5	0.26	0.3	1.1	0.6	1.5	0.5
IQR i	0.906	1.1	1.22	0.851	0.222	1.78	0.334	0.385	1.63	1.02	3.56	0.726
Robust CV % i	7.3	7.3	12	6.9	23	10	9.4	8.5	9.9	7.3	17	6.6
Median f	12.4	15.2	10.5	12.4	0.953	17.7	3.5	4.52	16.4	13.9	21.3	11
Mean f	12.5	15.2	10.6	12.4	0.997	17.5	3.51	4.4	16.5	13.9	21.8	11
MAD f	0.35	0.55	0.58	0.315	0.104	0.75	0.15	0.215	1.1	0.38	1.2	0.3
IQR f	0.506	0.806	1.11	0.545	0.183	1.57	0.252	0.33	1.56	0.704	2.24	0.519
Robust CV % f	4.1	5.3	11	4.4	19	8.9	7.2	7.3	9.5	5.1	11	4.7
Outliers	5	5	3	4	1	2	2	1	2	3	7	3
Stragglers	1	1	0	2	0	3	3	2	0	1	0	3

2010-11: Exchangeable K — 1M NH_4OAc extract (15D3) cmol+/kg air dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	27	27	27	27	23	23	23	23	26	26	26	26
Minimum	0.448	0.16	0.17	0.24	0.16	0.146	0.9	0.9	0.353	0.146	0.85	0.44
Maximum	6.4	1.73	0.75	0.698	0.359	0.715	1.56	1.3	0.576	0.617	1.23	0.712
Median i	0.522	0.51	0.248	0.574	0.219	0.66	1.41	1.2	0.442	0.493	0.963	0.525
Mean i	0.809	0.536	0.285	0.555	0.224	0.625	1.35	1.17	0.45	0.495	0.975	0.539
MAD i	0.033	0.051	0.027	0.035	0.039	0.03	0.07	0.05	0.03	0.033	0.043	0.028
IQR i	0.077	0.079	0.050	0.062	0.056	0.047	0.133	0.074	0.047	0.053	0.056	0.043
Robust CV % i	15	15	20	11	25	7.2	9.5	6.2	11	11	5.8	8.2
Median f	0.5	0.511	0.243	0.576	0.215	0.661	1.43	1.2	0.427	0.491	0.961	0.52
Mean f	0.51	0.513	0.244	0.572	0.218	0.659	1.39	1.18	0.43	0.495	0.956	0.525
MAD f	0.03	0.023	0.021	0.016	0.030	0.024	0.07	0.04	0.026	0.025	0.030	0.030
IQR f	0.040	0.044	0.035	0.023	0.055	0.038	0.107	0.067	0.039	0.046	0.047	0.043
Robust CV % f	8.1	8.6	15	4	25	5.7	7.5	5.6	9.2	9.3	4.9	8.3
Outliers	6	4	4	5	1	3	2	1	3	3	3	2
Stragglers	0	1	1	2	0	0	0	1	1	1	1	0

2010-11: Exchangeable Mg — 1M NH_4OAc extract (15D3) cmol+/kg air dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	26	26	26	26	23	23	23	23	25	25	25	25
Minimum	10.8	2.1	1.86	1.42	5.7	0.99	0.396	3.24	2.42	4.67	0.831	0.72
Maximum	61.3	14.6	6	5.81	17.2	1.95	1.45	16.2	6.71	12.2	2.97	2.69
Median i	15.8	4.2	2.50	5.19	13	1.26	0.551	9.47	5.48	10.67	2.17	1.81
Mean i	17.2	4.6	2.64	4.95	12.8	1.33	0.623	9.59	5.28	10.3	2.18	1.82
MAD i	0.8	0.23	0.115	0.26	0.9	0.14	0.048	0.63	0.26	0.43	0.19	0.08
IQR i	1.28	0.387	0.2	0.43	1.26	0.304	0.125	0.793	0.308	0.945	0.274	0.122
Robust CV % i	8.1	9.2	8	8.3	9.7	24	23	8.4	5.6	8.9	13	6.8
Median f	16	4.19	2.47	5.29	13.1	1.2	0.543	9.47	5.49	10.9	2.11	1.81
Mean f	15.9	4.24	2.51	5.28	13.2	1.26	0.552	9.51	5.43	10.8	2.11	1.82
MAD f	0.5	0.131	0.08	0.2	0.6	0.08	0.024	0.43	0.19	0.3	0.145	0.05
IQR f	0.667	0.259	0.156	0.319	0.982	0.182	0.053	0.741	0.256	0.397	0.226	0.1
Robust CV % f	4.2	6.2	6.3	6	7.5	15	9.8	7.8	4.7	3.6	11	5.5
Outliers	6	5	4	4	3	1	3	3	3	4	4	3
Stragglers	1	2	1	0	2	2	4	1	1	4	1	1

2010-11: Exchangeable Na — 1M NH_4OAc extract (15D3) cmol+/kg air dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	26	26	26	26	23	23	23	23	25	25	25	25
Minimum	0.67	0.016	0.15	0.05	0.05	0.035	0.050	1.7	0.07	0.519	0.61	0.1
Maximum	2.05	0.67	0.781	0.76	25.5	0.47	0.323	8.06	0.25	1.43	1.85	0.32
Median i	1.525	0.081	0.399	0.16	22.2	0.114	0.11	6.6	0.104	1.09	1.19	0.19
Mean i	1.45	0.123	0.397	0.188	20.8	0.142	0.131	6.11	0.121	1.08	1.18	0.206
MAD i	0.065	0.021	0.039	0.037	2.21	0.023	0.01	0.88	0.024	0.07	0.072	0.02
IQR i	0.122	0.039	0.054	0.066	3.56	0.035	0.025	1.55	0.054	0.121	0.128	0.056
Robust CV % i	8	48	13	41	16	31	23	23	52	11	11	30
Median f	1.54	0.081	0.399	0.151	22.2	0.113	0.11	6.88	0.09	1.09	1.2	0.184
Mean f	1.53	0.078	0.39	0.148	21.7	0.113	0.11	6.6	0.097	1.1	1.2	0.181
MAD f	0.05	0.016	0.021	0.03	2.16	0.008	0.004	0.715	0.011	0.06	0.071	0.007
IQR f	0.089	0.025	0.040	0.046	3.41	0.019	0.005	1.2	0.023	0.095	0.11	0.012
Robust CV % f	5.8	30	10	31	15	17	4.7	17	26	8.7	9.2	6.6
Outliers	4	4	7	3	1	4	7	2	3	3	3	6
Stragglers	1	1	1	1	0	2	3	1	3	1	0	5

2010-11: Exchangeable Al — 1M KCl (15G1) cmol+/kg oven dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	19	18	19	18	14	14	14	14	17	17	17	17
Minimum	0.01	0.0001	0.01	0.002	0.001	0.00001	0.003	0.0002	0.0001	0.0001	0.0004	0.002
Maximum	0.25	0.05	0.57	0.18	0.036	0.03	0.106	0.046	0.038	0.03	0.02	0.077
Median i	0.049	0.010	0.268	0.020	0.007	0.003	0.028	0.011	0.009	0.015	0.006	0.009
Mean i	0.060	0.013	0.257	0.032	0.008	0.006	0.033	0.017	0.012	0.014	0.008	0.018
MAD i	0.017	0.005	0.085	0.006	0.003	0.003	0.010	0.008	0.004	0.009	0.004	0.004
IQR i	0.027	0.008	0.128	0.019	0.005	0.005	0.018	0.016	0.010	0.011	0.005	0.009
Robust CV % i	55	76	48	96	72	160	62	150	110	73	91	96
Median f	0.041	0.01	0.268	0.019	0.006	0.002	0.022	0.011	0.007	0.015	0.006	0.009
Mean f	0.040	0.011	0.257	0.018	0.006	0.003	0.021	0.012	0.010	0.014	0.008	0.010
MAD f	0.018	0.005	0.085	0.001	0.003	0.002	0.008	0.006	0.003	0.009	0.004	0.001
IQR f	0.030	0.007	0.128	0.004	0.005	0.005	0.014	0.011	0.007	0.011	0.005	0.002
Robust CV % f	73	72	48	20	82	230	64	99	100	73	91	21
Outliers	3	1	0	4	1	1	1	2	1	0	0	3
Stragglers	0	0	0	3	0	2	2	0	1	0	0	3

2010-11: Al— Mehlich3 (18F1) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	11	11	11	11	10	10	10	10	10	10	10	10
Minimum	614	487	647	534	306	106	617	939	293	601	9.8	805
Maximum	1334	1536	1228	1094	582	432	1158	1469	566	1084	209	1287
Median i	877	664	751	762	394	326	827	1095	361	796	155	986
Mean i	911	732	811	780	396	295	865	1120	382	785	130	977
MAD i	71	62	15	42	30	39	52	96	16	49	52	45
IQR i	133	106	96	92	68	76	167	148	43	139	110	145
Robust CV % i	15	16	13	12	17	23	20	13	12	17	71	15
Median f	877	664	749	762	388	332	782	1090	360	777	155	983
Mean f	861	647	745	755	375	323	780	1120	361	751	130	943
MAD f	31	16	13	21	34	9.5	24	96	2	56	52	47
IQR f	92	58	21	47	64	25	57	148	5.3	140	110	143
Robust CV % f	11	8.7	2.8	6.1	16	7.5	7.3	13	1.5	18	71	15
Outliers	2	2	4	3	1	1	2	0	2	1	0	1
Stragglers	1	2	0	1	0	3	1	0	3	0	0	0

2010-11: B — Mehlich3 (18F1) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	10	10	10	9	11	11	11	11	10	10	10	10
Minimum	0.12	0.34	0.12	0.05	0.07	0.557	0.32	4.36	0.11	0.12	1.82	0.936
Maximum	1	1.2	1.4	0.6	4	4.9	1.3	12	0.585	0.705	2.6	1.6
Median i	0.918	0.907	0.844	0.345	0.248	0.765	0.595	6.9	0.31	0.434	2.2	1.3
Mean i	0.7	0.839	0.747	0.295	0.653	1.2	0.659	6.7	0.334	0.415	2.2	1.3
MAD i	0.0765	0.223	0.3	0.065	0.117	0.055	0.141	0.6	0.112	0.135	0.225	0.13
IQR i	0.477	0.426	0.552	0.2	0.305	0.156	0.241	1.4	0.157	0.241	0.373	0.259
Robust CV % i	52	47	65	58	120	20	40	20	51	55	17	20
Median f	0.989	0.907	0.844	0.345	0.229	0.728	0.593	6.9	0.31	0.434	2.2	1.3
Mean f	0.991	0.839	0.747	0.358	0.209	0.708	0.595	6.7	0.334	0.415	2.2	1.3
MAD f	0.001	0.223	0.3	0.005	0.036	0.091	0.133	0.45	0.112	0.135	0.225	0.13
IQR f	0.007	0.426	0.552	0.028	0.097	0.139	0.223	1.2	0.157	0.241	0.373	0.259
Robust CV % f	0.73	47	65	8.2	42	19	38	17	51	55	17	20
Outliers	4	0	0	1	2	2	1	2	0	0	0	0
Stragglers	2	0	0	3	1	0	0	1	0	0	0	0

2010-11: Ca — Mehlich3 (18F1) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	11	11	11	11	11	11	11	11	10	10	10	10
Minimum	1868	2396	1878	1941	172	3166	693	739	2752	1897	578	1921
Maximum	2780	3378	3663	2824	248	5062	981	1083	3481	3033	6117	2557
Median i	2365	3184	2320	2507	215	4581	766	879	3262	2621	5230	2169
Mean i	2350	2980	2340	2470	221	4310	807	881	3190	2540	4770	2190
MAD i	135	166	150	167	21	252	44	46	188	173	465	163
IQR i	224	564	213	284	24.5	494	134	91.9	337	364	895	261
Robust CV % i	9.5	18	9.2	11	11	11	18	10	10	14	17	12
Median f	2370	3200	2250	2510	215	4590	741	863	3260	2620	5440	2170
Mean f	2350	3180	2210	2470	221	4530	756	860	3190	2540	5230	2190
MAD f	135	105	130	167	21	213	22	62	188	173	419	163
IQR f	224	166	214	284	25	415	45	93	337	364	629	261
Robust CV % f	9.5	5.2	9.5	11	11	9	6	11	10	14	12	12
Outliers	0	2	1	0	0	2	1	1	0	0	1	0
Stragglers	0	1	0	0	0	0	2	0	0	0	0	0

2010-11: Cu — Mehlich3 (18F1) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	11	11	11	11	11	11	11	11	10	10	10	10
Minimum	0.737	1.9	0.3	1.5	0.95	1.6	1.2	0.59	3.1	2.3	1.6	3.0
Maximum	1.9	5.1	2.8	5.1	2.2	157	2.3	1.6	6	4.2	3	5.4
Median i	1.2	2.2	0.75	1.9	1.3	1.9	1.7	0.74	4.2	2.7	2.5	4.2
Mean i	1.3	2.6	0.976	2.2	1.4	16	1.7	0.828	4.3	3	2.3	4.0
MAD i	0.242	0.24	0.415	0.2	0.16	0.1	0.4	0.087	0.775	0.35	0.3	0.625
IQR i	0.483	0.423	0.749	0.222	0.245	0.363	0.63	0.228	1.3	0.827	0.495	1.0
Robust CV % i	40	19	100	12	18	19	37	31	31	30	20	25
Median f	1.2	2.2	0.68	1.9	1.3	1.9	1.7	0.707	4.2	2.5	2.5	4.2
Mean f	1.3	2.3	0.794	1.8	1.3	1.8	1.7	0.751	4.3	2.8	2.3	4.0
MAD f	0.242	0.17	0.288	0.1	0.155	0.055	0.4	0.083	0.775	0.15	0.3	0.625
IQR f	0.483	0.308	0.625	0.245	0.267	0.195	0.63	0.145	1.3	0.578	0.495	1.0
Robust CV % f	40	14	92	13	20	10	37	21	31	23	20	25
Outliers	0	2	1	1	1	2	0	1	0	1	0	0
Stragglers	0	0	0	1	0	1	0	0	0	1	0	0

2010-11: Fe — Mehlich3 (18F1) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	11	11	11	11	11	11	11	11	10	10	10	10
Minimum	205	128	330	123	100	45	154	35	144	125	14	73
Maximum	489	288	643	304	258	151	406	81	353	601	209	964
Median i	293	155	431	158	140	77	217	47	193	159	26	105
Mean i	297	169	456	177	149	80	233	50	216	213	44	196
MAD i	45	19	86	18	21	8	30	4.8	22	29	6.6	16
IQR i	83	27	156	30	33	14	56	6	56	56	12	40
Robust CV % i	28	18	36	19	23	18	26	13	29	35	47	38
Median f	284	151	431	151	132	78	208	42	182	149	24	100
Mean f	278	157	456	155	138	80	216	43	184	155	25	101
MAD f	43	18	86	11	18	4.8	27	6.3	18	20	5.5	10
IQR f	70	28	156	22	28	9.5	47	7.9	25	36	9.0	21
Robust CV % f	25	18	36	14	21	12	23	19	14	24	38	21
Outliers	1	1	0	2	1	1	1	2	2	2	1	2
Stragglers	0	0	0	0	0	2	0	0	0	0	0	0

2010-11: Mg — Mehlich3 (18F1) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	11	11	11	11	11	11	11	11	10	10	10	10
Minimum	1475	396	252	509	1541	145	59	1043	588	859	256	206
Maximum	1910	569	351	674	2620	208	94	1649	739	1364	388	251
Median i	1700	523	312	644	2234	198	75	1121	668	1218	342	226
Mean i	1700	495	305	624	2160	186	77	1180	666	1200	339	228
MAD i	126	38	16	18	173	10	8	21	51	101	22	8.0
IQR i	199	56	32	27	200	22	10	56	84	150	37	16
Robust CV % i	12	11	10	4.2	9	11	14	5	13	12	11	7.3
Median f	1700	523	312	644	2230	199	75	1120	668	1220	342	226
Mean f	1700	495	305	645	2160	194	77	1120	666	1200	339	228
MAD f	126	38	16	10.2	173	6	8	3	51	101	22	8.0
IQR f	199	56	32	22	200	18	10	13	84	150	37	16
Robust CV % f	12	11	10	3.4	9	9.1	14	1.1	13	12	11	7.3
Outliers	0	0	0	2	0	2	0	2	0	0	0	0
Stragglers	0	0	0	0	0	0	0	2	0	0	0	0

2010-11: Mn — Mehlich3 (18F1) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	11	11	11	11	11	11	11	11	10	10	10	10
Minimum	200	55	2	147	11	49	207	52	124	145	70	286
Maximum	330	85	33	259	16	90	428	88	228	304	112	602
Median i	277	68	2.5	195	12	65	314	61	150	195	85	365
Mean i	279	68	5.2	202	13	67	316	64	154	197	87	378
MAD i	41	5.5	0.38	29	1.1	7.2	41	6	12	19	8.0	18
IQR i	57	8.6	0.356	45	2.1	8.5	73	11	22	30	14	39
Robust CV % i	21	13	14	23	18	13	23	18	15	16	17	11
Median f	277	68	2.5	195	12	65	314	60	148	194	85	366
Mean f	279	68	2.4	202	13	67	316	62	146	185	87	370
MAD f	41	5.5	0.24	29	1.1	7.2	41	4.3	12	17	8.0	11
IQR f	57	8.6	0.36	45	2.1	8.5	73	11	21	29	14	13
Robust CV % f	21	13	14	23	18	13	23	19	14	15	17	3.6
Outliers	0	0	1	0	0	0	0	1	1	1	0	2
Stragglers	0	0	0	0	0	0	0	0	0	0	0	1

2010-11: P - ICP — Mehlich3 (18F1) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	11	11	11	11	10	10	10	10	10	10	10	10
Minimum	14	0.112	64	17	24	77	103	0.001	6.7	7.6	38	13
Maximum	35	120	123	36	44	121	178	11	22	19	71	19
Median i	25	86	72	27	33	103	140	1.8	13	10	61	16
Mean i	25	79	79	27	34	101	145	3.6	13	11	60	16
MAD i	2.6	4.9	3.3	2	6.8	13	11	1.3	1.5	1.7	5.9	1.9
IQR i	3.9	17	8.2	3.5	11	22	33	3.7	2.1	2.8	7.8	2.9
Robust CV % i	16	20	11	13	32	21	24	210	16	28	13	18
Median f	25	87	71	27	33	103	140	1.0	13	9.4	61	16
Mean f	26	88	70	26	34	101	145	1.1	12	10	60	16
MAD f	2.6	3	1.5	1.9	6.8	13	11	0.24	1.4	1.38	5.9	1.9
IQR f	5.2	5.4	3.9	3.1	11	22	33	0.674	2	2.5	7.8	3.0
Robust CV % f	21	6.2	5.5	12	32	21	24	65	16	26	13	18
Outliers	1	2	2	2	0	0	0	2	1	1	0	0
Stragglers	0	2	1	1	0	0	0	2	0	0	0	0

2010-11: K — Mehlich3 (18F1) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	11	11	11	11	11	11	11	11	10	10	10	10
Minimum	155	163	77	176	61	220	398	386	139	116	319	182
Maximum	225	229	299	250	116	305	672	492	182	210	491	232
Median i	194	207	95	227	82	273	547	445	160	176	394	192
Mean i	195	202	116	226	87	268	550	439	160	172	406	198
MAD i	10	13	5.5	10	14	14	102	25	6	14	25	7
IQR i	16	19	14	17	26	34	156	53	13	24	47	17
Robust CV % i	8.4	9.3	15	7.5	32	12	29	12	8.2	14	12	8.9
Median f	194	207	95	229	82	273	547	445	160	176	394	190
Mean f	195	202	95.7	231	87.2	268	550	439	160	172	406	190
MAD f	10	13	1	9.2	14	14	102	25	6	15	25	5
IQR f	16	19	3.0	15	26	34	156	53	13	24	47	8.0
Robust CV % f	8.4	9.3	3.1	6.6	32	12	29	12	8.2	14	12	4.2
Outliers	0	0	1	1	0	0	0	0	0	0	0	2
Stragglers	0	0	3	0	0	0	0	0	0	0	0	0

2010-11: Na — Mehlich3 (18F1) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	11	11	11	11	11	11	11	11	10	10	10	10
Minimum	293	11	80	30	1349	19	20	1002	5.0	83	214	33
Maximum	400	46	142	68	5760	75	99	1772	72	267	352	96
Median i	351	23	97	40	5225	26.6	29	1625	23	248	274	39
Mean i	356	22.8	101	42	4820	37	37	1550	25	231	271	45
MAD i	24	8	9	6.3	157	3.7	3.2	105	4.8	15	20	3.7
IQR i	36	11	16	11	422	23	3.4	159	67	29	37	5.5
Robust CV % i	10	46	17	28	8.1	87	12	9.8	29	12	13	14
Median f	351	23	97	39	5230	25	27	1630	23	257	274	39
Mean f	356	23	97	39	5240	25	27	1600	22	247	271	39
MAD f	24	8	8.5	5.3	52	2.6	2	95	3.1	10	20	3.5
IQR f	36	11	16	8.9	88	4.6	3.1	151	5.2	25	37	5.0
Robust CV % f	10	46	16	23	1.7	18	12	9.3	22	9.7	13	13
Outliers	0	0	1	1	2	3	2	1	1	1	0	1
Stragglers	0	0	0	0	2	0	0	0	1	0	0	0

2010-11: S — Mehlich3 (18F1) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	9	9	9	9	10	10	10	10	9	9	9	9
Minimum	26	21	29	16	253	17	32	46	14	9.3	80	25
Maximum	51	56	60	45	592	169	71	154	38	28	156	58
Median i	30	28	35	21	474	23	53	83	22	17	102	37
Mean i	33	30	38	23	473	38	53	88	23	16	107	39
MAD i	1	1.7	1.8	1.2	11	2.6	8.6	11	6.0	7.5	7.5	8
IQR i	4.4	5.0	3.8	3.3	35	5.0	16	18	9.7	8.7	16	14
Robust CV % i	15	18	11	16	7.4	22	29	22	44	50	16	38
Median f	30	27	35	21	471	23	53	81	22	18	101	37
Mean f	29	26	35	20	472	23	53	81	23	16	101	39
MAD f	0.9	0.85	1.6	0.4	5	0.8	8.6	10	6.0	7.5	6.8	8
IQR f	1.4	2.1	2.4	1.3	5.2	1.5	16	16	9.7	8.7	11	14
Robust CV % f	4.7	7.9	6.7	6.5	1.1	6.5	29	19	44	50	11	38
Outliers	2	1	1	1	3	1	0	1	0	0	1	0
Stragglers	0	2	0	1	0	2	0	0	0	0	0	0

2010-11: Zn — Mehlich3 (18F1) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	November 2010 (Round 210)				*March 2011 (Round 410)*				*May 2011 (Round 610)*			
	ASS 111	**ASS 112**	**ASS 113**	**ASS 114**	**ASS 31**	**ASS 32**	**ASS 33**	**ASS 34**	**ASS 51**	**ASS 52**	**ASS 53**	**ASS 54**
No of results	11	11	11	11	11	11	11	11	10	10	10	10
Minimum	1.8	4.9	0.567	0.707	0.209	2.5	2.4	0.02	0.845	0.532	0.865	2.7
Maximum	3.9	6.9	8.2	2.8	2.4	6.6	4.2	0.72	1.3	0.96	2.1	4.8
Median i	3.1	5.7	0.879	1.7	0.6	5.2	3.4	0.25	1.2	0.697	1.5	3.2
Mean i	2.9	5.8	1.6	1.6	0.724	4.9	3.3	0.273	1.2	0.701	1.5	3.4
MAD i	0.4	0.48	0.149	0.18	0.163	1.1	0.7	0.086	0.092	0.084	0.35	0.495
IQR i	0.474	0.897	0.282	0.378	0.261	1.7	1.1	0.125	0.2	0.131	0.615	0.924
Robust CV % i	16	16	32	23	43	33	33	50	16	19	41	29
Median f	3.0	5.7	0.8	1.7	0.545	5.2	3.4	0.215	1.3	0.697	1.5	3.2
Mean f	2.9	5.8	0.824	1.6	0.557	4.9	3.3	0.229	1.2	0.701	1.5	3.4
MAD f	0.4	0.48	0.079	0.13	0.163	1.1	0.7	0.065	0.064	0.084	0.35	0.495
IQR f	0.474	0.897	0.139	0.289	0.288	1.7	1.1	0.108	0.189	0.131	0.615	0.924
Robust CV % f	16	16	17	17	53	33	33	50	15	19	41	29
Outliers	0	0	1	2	1	0	0	1	1	0	0	0
Stragglers	0	0	1	0	0	0	0	0	0	0	0	0

4. Comments on Measurement Performance

Detailed evaluation of measurement performance is beyond the scope of this report. Such evaluations mostly occur at ASPAC Workshops, at other national and international meetings, and in the scientific literature. It is appropriate, however, to make a few observations.

From a sample suitability perspective, median robust CV's for each of the 12 soils, assessed across 49 tests, ranged from 8.6 to 13% with a grand median final robust CV for the program year of 11%. Both the range and grand median CVs were lower than those in 2009-10. In addition, data summaries in Section 3 show generally very good agreement between final median and final mean values, with occasional differences between the two when the submitted results were skewed. This again emphasizes the importance of using medians and MADs, which are less influenced by 'rogue' results in sometimes small data sets.

On a method-by-method basis (i.e., each method examined separately), grand median robust CVs across the 12 samples, after the removal of "outliers" and "stragglers", ranged from 1.3% to 73%. These covered 49 tests, including some pooled data and excluded tests submitted from less than six participants per round. Table 4 documents the 10 best performed and 10 worst performed methods, with their corresponding (final) median robust % CVs. For those comparisons, only pooled data (manual + autocolour finishes) rather than individual analytical finishes were considered for Colwell (9B), Olsen (9C) and Bray-1 (9E) extractable P tests.

Table 4. The 10 best performed and 10 worst performed soil chemical tests in 2010-11, based on percent robust coefficients of variation (grand medians) calculated after removal of "outliers" and "stragglers".

Soil tests (with codes) arranged into best and worst-performed groupings as indicated by grand-median robust % CVs	Grand median robust % CV's for 2010-11 and for two prior years		
BEST 10 of 49 tests	2010-11	2009-10	2006-07
pH 4B2	1.3	1.8	1.2
pH 4A1	1.8	2.2	1.9
pH 4B1	2.5	1.8	1.8
Total Organic Carbon pooled 6B1, 6B2, 6B3	5.0	5.4	6.5
EC 3A1	5.2	4.2	8.3
Exch Mg 15A1	5.7	6.0	8.7
Exch Ca 15A1	6.1	3.7	14
Exch Mg 15D3	6.3	7.6	9.7
Exch K 15A1	6.5	6.5	14
NH_4-N 7C2	7.2	8.6	16
WORST 10 of 49 tests			
Bray P pooled 9E1, 9E2	20.5	25	30.5
Mehlich3 Fe 18 F1	21	21.5	na^
Mehlich3 Cu 18F1	22	29	na^
Water extr. Cl 5A1	22.5	35.5	26.5
Mehlich3 Zn 18F1	24	22	na^
Extr. B 12C2	24.5	21	36.5
Extr B pooled 12C1, 12C2	25	29	na^
Water extr. Cl 5A2	27	22.5	17.5
Mehlich3 B 18F1	29	81.5	na^
Exch Al 15G1	73	79.5	71.5

Water soluble Cl methods, considered separately (5A1 and 5A2), were in the worst performing category, this attributed mainly to very low levels of Cl in the test soils. Indeed, eight of the 12 soils had median values <50 mg/kg Cl, while five of the eight contained <25 mg/kg of Cl. This is approaching the lower limit of quantitation for soil Cl and could present problems for many Australian laboratories providing diagnostic soil testing, as they who would be geared to cover much higher soil Cl levels.

The plot of median robust %CVs from three program years 2008-09, 2009-10 and 2010-11 (excluding sample ASS 31) against corresponding soil Cl values shown in Figure 1, confirm the need for inclusion of soils with higher levels of salinity in future ASPAC inter-laboratory proficiency programs for soils.. The power function for the 36 soils shown, although not strong, did trend as expected and showed that more acceptable precisions of <20% robust CVs cannot be expected, unless soil Cl exceeds 40-50 mg/kg Cl.

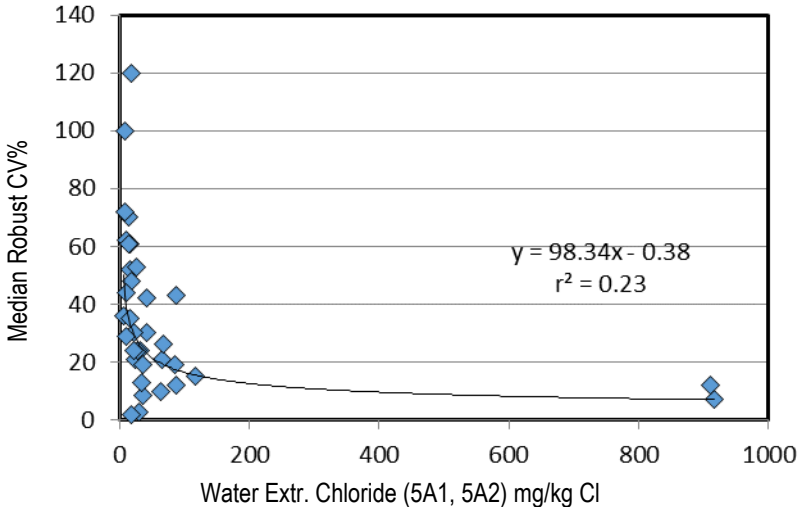

Figure 1. Plot of median robust CV% (Y) vs water extr. Cl mg/kg (X) over three program years 2008-09 to 20010-11.

Exchangeable Al by method 15G1 was again the worst performing test, but this is confidently attributed to use of inappropriate test soils for the measurement of soil Al. Indeed, all in 2010-11 had sample median soil pHw (4A1) levels, with one exception, of from 5.8 to 8.1. Even the exception had a median pHw (4A1) of 5.0 and a reported median value of 0.27 cmol+/kg Al across 19 laboratories, with a range of from 0.01-0.57 cmol+/kg Al. Experience from ASPAC's 2006-07 soils' program indicates that measurement precisions of <20% robust CVs are only achievable when expected soil Al levels exceed 1 cmol+/kg Al.

It is noteworthy that 5 of the 10 worst performing tests had relatively short extraction times and included four Mehlich-3 tests (5-minute shake time) plus Bray-1 P (1-minute shake time). For both Mehlich-3 and Bray-1 soil extractions, it is important to minimize the time the soil remains in contact with the extractants after the completion of shaking. Also all four of the Mehlich-3 tests were for relatively low levels of trace elements (Cu, Zn, Fe and B).

All up, seven assessable soil P tests were included in the 2010-11 program. Measurement performance for five of these, as indicated by median robust % CVs plotted against corresponding reported median soil P values for each diagnostic test are shown in Figure 2, together with power-function trend lines and coefficients of determination for each. Table 5 summarizes examples derived from corresponding power functions in Figure 2 that were used to predict robust %CVs for ascending values for each of the five soil P tests in 2010-11.

Table 5. Predictions of robust %CVs by soil P values to 120 mg/kg for each of 5 diagnostic soil P tests included in the ASPAC soil proficiency program in 2010-11.

Soil P (mg/kg)	*Colwell P*	*Olsen P*	*Bray-1 P*	*Acid P*	*Mehlich P*
5	19.4	26.8	27.2	21.5	30.3
10	15.2	17.5	24.0	19.9	24.4
20	12.0	11.4	21.2	18.5	19.6
30	10.4	8.9	19.7	17.7	17.2
40	9.4	7.4	18.8	17.2	15.8
50	8.7	6.5	18.0	16.7	14.7
100	6.8	4.2	15.9	15.5	11.8
120	6.4	3.8	15.4	15.2	11.1

From the data in Table 5, Olsen P demonstrated best measurement performance for soil P values of around 15 mg/kg and above, followed by Colwell P, which was the best performer at lower levels of soil P. The next best performer across the concentration range to 300 mg P/kg was Mehlich-P, with little to separate the weak measurement performances of Acid P and Bray-1 P across the range

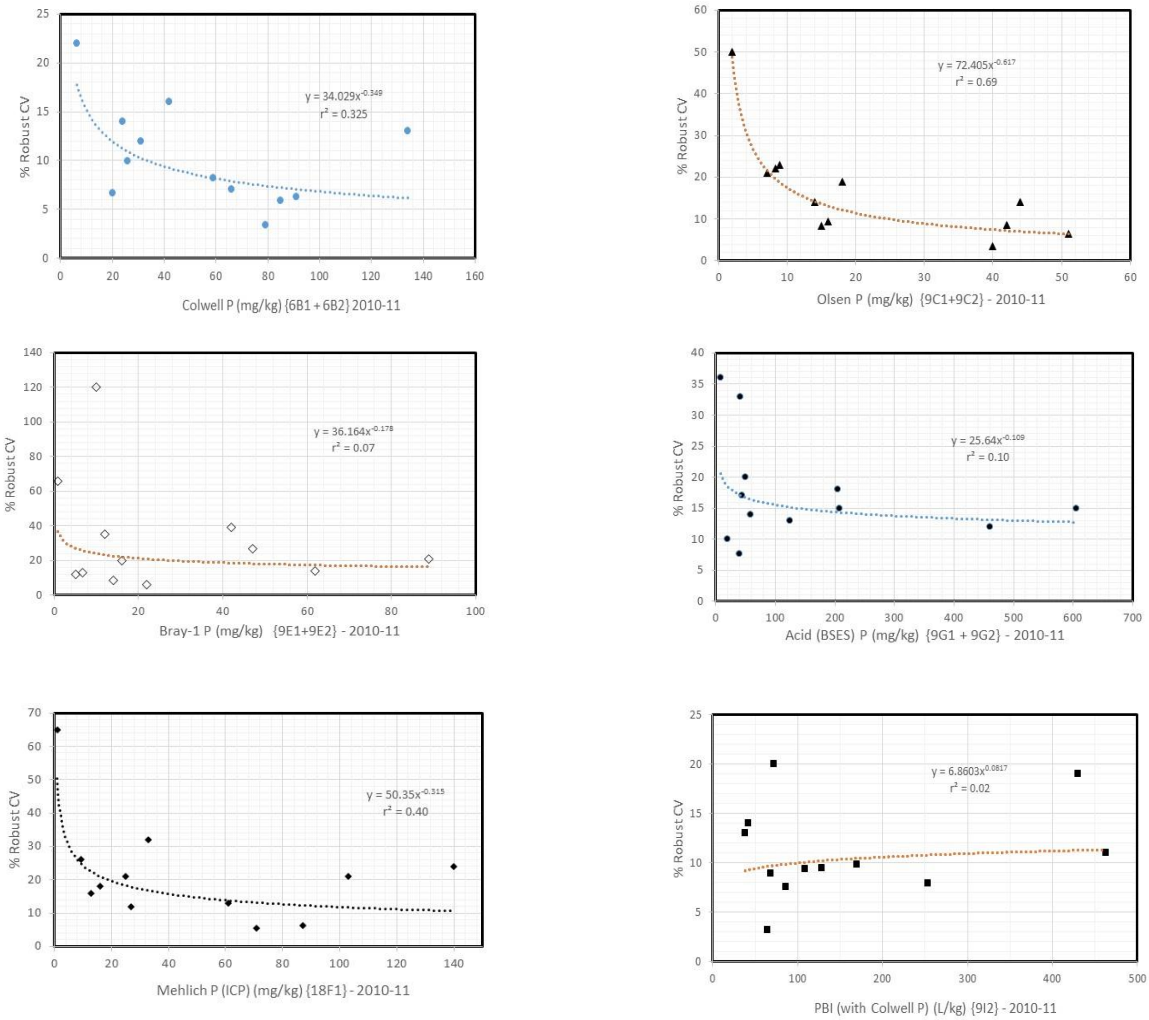

Figure 2. Plots of trends in median robust CV% (Y) vs five extractable soil P tests, plus P buffer index (PBI – with Colwell P), for the 2010-11 ASPAC program year.

The challenge for participating laboratories is to continually improve their measurement performances on a method-by-method basis. There will be on-going efforts by ASPAC, through its LPC, to continue to examine measurement performance into the future. Laboratories can assist, by ensuring they pay close attention to units required for data submissions. It is clear from inspections of data summaries in Section 3 and from close examination of the “raw data” in Appendix 4, that results from participants are being presented with incorrect units and this is an area that must be addressed by laboratory managers.

Appendix 1: List of laboratories (including contact details) who participated in ASPAC's Soil ILPP in 2010-11, arranged by country

Name (position)	*Facility*	*Street and/or Postal Address*	*Country*	*Email*
Luzmila Abercrombie (Laboratory Manager)	Sydney Environmental & Soil Laboratory	PO Box 357, Pennant Hills,NSW 1715	AUSTRALIA	luzmila@sesl.com.au
Ms Rabeya Akter (Senior Technical Officer)	Mark Wainwright Analytical Centre, The University of New South Wales	ICP - Elemental Analysis Lab, SSEAU, Mark Wainwright Analytical Centre, The University of NSW, Sydney, NSW 2052	AUSTRALIA	r.akter@unsw.edu.au
Mr Phil Barnett (Manager)	Australian Perry Agricultural Laboratory	PO Box 327, Magill, SA 5072	AUSTRALIA	phil@apal.com.au
Mr Steve Byrne (Lab Manager)	Vintessential Laboratories	PO Box 2244, Dromana, VIC 3936	AUSTRALIA	steve@vintessential.com.au
Mrs Stephanie Cameron (Laboratory Operations Manager)	East West EnviroAg	82 Plain Street, Tamworth, NSW 2340	AUSTRALIA	admin@ewenviroag.com.au
Mr Rob Cirocco (Manager)	Phosyn Analytical	P.O.Box 2594, Burleigh MDC, QLD 4220	AUSTRALIA	rcirocco@phosyn.com
Ms Kristen Clancy (Manager, Natural Resources Laboratory)	Department of Environment and Climate Change	DPI PMB, Yanco, NSW 2703	AUSTRALIA	kristen.clancy@environment.nsw.gov.au
Miss Tania Collins (Lab Technician)	Tweed Laboratory Centre, Tweed Shire Council	46 Enterprise Avenue, Tweed Heads South, NSW 2486	AUSTRALIA	taniac@tweedlab.com.au
Mr Mark Conyers (Soil Chemist)	Industry & Investment NSW, Wagga Wagga Agricultural Institute	Pine Gully Road, Wagga Wagga, NSW 2650	AUSTRALIA	mark.conyers@industry.nsw.gov.au
Mr Rob DeHayr	Department of Environment & Resource Management – Chemistry Centre	Block A - Level 3, 41 Boggo Road, Joe Baker Street, Loading Dock 3, Dutton Park, QLD 4068	AUSTRALIA	rob.dehayr@derm.qld.gov.au
Mr Ian Grant (Director)	Agricultural Chemistry P/Ltd	72 Cothill Road, Silkstone, QLD 4304	AUSTRALIA	igrant51@optusnet.com.au
Ms Sarah Houston	Nutri-Lab Pty Ltd	PO Box 782, Goondiwindi, QLD 4390	AUSTRALIA	nutrilab@bigpond.net.au
Dr Janet Hussein (Chief Chemist)	Simmonds & Bristow	40 Reginald Street, Rocklea, QLD 4104	AUSTRALIA	janet@simmondsbristow.com.au
Mr Graham Lancaster (Laboratory Manager)	Environmental Analysis Laboratory (EAL), Southern Cross University	PO Box 5125, East Lismore, NSW 2480	AUSTRALIA	glancast@scu.edu.au
Mr Robert Lascelles (Chief Chemist)	SGS Australia	PO Box 549, Toowoomba, QLD 4350	AUSTRALIA	robert.lascelles@sgs.com
Mr Matthew Lee (Laboratory Manager)	Melbourne School of Land and Environment, University of Melbourne	Water Street, Creswick, VIC 3363	AUSTRALIA	mattlee@unimelb.edu.au

Name (position)	Facility	Street and/or Postal Address	Country	Email
Mr Stephen Ludvig (Advisor)	Agrilab	35 Wattlepark Avenue, Moolap, Victoria 3220	AUSTRALIA	aglab@agmin.com.au
Ms Ros Ma	SGS Australia (WA), Environmental Services	10 Reid Road, Newburn, WA 6105	AUSTRALIA	ros.ma@sgs.com
Mr Peter McCafferty (Chief Chemist)	Chemistry Centre, Curtin University	PO Box 1250, Bentley Delivery Centre, WA 6983	AUSTRALIA	pmccafferty@chemcentre.wa.gov.au
Mr Ted Mikhail (Managing Director)	SWEP Pty Ltd Analytical Laboratories	PO Box 583, Noble Park, VIC 3174	AUSTRALIA	services@swep.com.au
Jack Milbank (General Manager)	Hortus Technical Services Pty Ltd	410 Langbeckers Road, Bundaberg, QLD 4670	AUSTRALIA	jack@hortus.net.au
Mr Craig Newman (Laboratory Operations Manager)	AgVita Analytical	PO Box 188, Devonport, TAS 7310	AUSTRALIA	cnewman@agvita.com.au
Giang Nguyen (Quality Assurance Manager)	Sydney Water Corporation Analytical Services, Monitoring Services Division	51 Hermitage Road, West Ryde, NSW 2114	AUSTRALIA	giang.nguyen@sydneywater.com.au
Ms Jane Pappin (Chemist)	Aglab Services	32 Wattlepark Avenue, MoolapVictoria 3220	AUSTRALIA	aglab@agmin.com.au
Dr Robert Patterson (Director)	Lanfax Laboratories	PO Box 4690, Armidale, NSW 2350	AUSTRALIA	lanfaxlabs@bigpond.com.au
Dr Geof Proudfoot (Laboratory Manager)	CSBP	2 Altona Street, Bibra LakeWA 6163	AUSTRALIA	geof.proudfoot@csbp.com.au
Mr Glen Rangott (Chemist)	Industry & Investment NSW - Wollongbar	1243 Brunxner Highway, Wollongbar, NSW 2477	AUSTRALIA	glen.rangott@industry.nsw.gov.au
Kim Rodgers	Analytical Reference Laboratory (WA)	46-48 Banksia Road, Welshpool, WA 6106	AUSTRALIA	kimrodgers@arlwa.com.au
Ms Julie Smith (Manager, Analytical Services)	CSIRO Land and Water Adelaide	Private Bag 2, Glen Osmond, SA 5064	AUSTRALIA	julie.smith@csiro.au
Kerri Taylor (QC Co-ordinator)	Australian Laboratory Services, Brisbane Laboratory	32 Shand Street, Stafford, QLD 4053	AUSTRALIA	kerri.taylor@alsenviro.com
Kellie Taylor (Lab Manager)	EP Analysis	PO Box 400, Cummins, SA 5631	AUSTRALIA	ep.analysis@yahoo.com.au
Mr David Wade	The Environmental and Analytical Laboratories, Charles Sturt University Boorooma Campus	Locked Bag 677, Wagga Wagga, NSW 2678	AUSTRALIA	dwade@csu.edu.au
Ms Patricia Wallace (Laboratory Manager)	CSIRO Division of Plant Industry	GPO Box 1600, Canberra, ACT 2601	AUSTRALIA	patricia.wallace@csiro.au
Mr Philip Williams (Laboratory Manager)	Nutrient Advantage Laboratory Services	8 South Road, Werribee, VIC 3030	AUSTRALIA	philip.williams@incitecpivot.com.au

Name (position)	Facility	Street and/or Postal Address	Country	Email
Mr George Croatto	Department of Primary Industries, Werribee Centre	621 Sneydes Road, Werribee, VIC 3030	AUSTRALIA	george.croatto@dpi.vic.gov.au
Mr Stephen Young (Laboratory Manager)	Soil Conservation Service, Land and Property Management Authority	PO Box 283, Scone, NSW 2337	AUSTRALIA	stephen.young@lands.nsw.gov.au
Muni SangeetaGoundar (Laboratory Technician)	Sugar Research Institute of Fiji, Analytical Lab	PO Box 3560, Lautoka	FIJI	sangeetag@SRIF.ORG.FJ
Ami Sharma (Senior Research Officer)	Fiji Agricultural Chemistry Laboratory, MASLR	PO Box 77, Nausori	FIJI	ami.sharma@govnet.gov.fj
Ms Gordana Aleksic (Business Manager)	NZ Labs Hamilton, Ruakura Research Centre	East Street, Hamilton	NEW ZEALAND	gordana.aleksic@nzlabs.co.nz
Mrs Maxie Christison (Laboratory Manager)	City Water & Waste Laboratory, ChristChurch City Council	POBox 73041, Christchurch 8154	NEW ZEALAND	maxie.christison@ccc.govt.nz
Mr Gary Glenn (Quality Manager)	Analytical Research Laboratories Ltd	PO Box 989, Napier	NEW ZEALAND	gary.glenn@ravensdown.co.nz
Ms Linda Hill (Laboratory Manager)	Landcare Research NZ Ltd	Private Bag 11052, Palmerston North,	NEW ZEALAND	hilll@landcareresearch.co.nz
Wendy Homewood (QA Officer Ag Division)	Hill Laboratories	Private Bag 3205, Hamilton 3240	NEW ZEALAND	wendy.homewood@hill-labs.co.nz
Mr Peter Lester (Managing Director)	Quantum Labs Ltd	Waipawa, Hawkes Bay 4210	NEW ZEALAND	dr.dirt@ihug.co.nz
Kathryn Stillwell (Analytical Specialist)	Plant And Food Research, Canterbury Agricultural & Science Centre	Private Bag 4704, Christchurch 8140	NEW ZEALAND	kathryn.stillwell@plantandfood.co.nz
Morkel Zaayman (Laboratory Analyst)	Veritec	Private Bag 3020, Rotorua	NEW ZEALAND	morkel.zaayman@veritec.co.nz
Mr Peter Corbett	National Agricultural Chemistry Laboratory, NARI	PO Box 8277, Boroko 111, National Capital District	PAPUA NEW GUINEA	peter.corbett@nari.org.pg
Mr Vincent Koddy (Chief Chemist)	National Analysis Laboratory, PNG University of Technology	PO Box 79, Lae 414	PAPUA NEW GUINEA	vkoddy@nal.unitech.ac.pg
Mark Anthony Balahay	Soil Science Department, College of Agriculture, Central Mindanao University	Musuan 8710, Bukidnon, Mindanao	PHILIPPINES	cmduque_46@lycos.com
Dr Gina Nilo (Chief Soil and Water Management)	Bureau of Soils and Water Management, Research Division	Elliptical Road, Quezon City	PHILIPPINES	ginapnilo@yahoo.com
Dr Phung Vo Cam Hong	Chemical & Biological Analysis & Experimental Centre, Nong Lam	Thu Duc, Ho Chi Minh City	VIETNAM	hongpvc@yahoo.com

Name (position)	Facility	Street and/or Postal Address	Country	Email
	University, Linh Trung			
Ms Pham Thi Doan (Soil Scientist)	Institute for Agricultural Sciences of South Vietnam, Ministry of Agriculture and Rural Development	Institute for Agricultural Science & Technology, District 1, Hochiminh City	VIETNAM	phamthidoan8@gmail.com
Dr Pham Quang Ha (Vice Director)	Institute for Agricultural Environment (IAE/VAAS)	Chem Tu Liem, Hanoi	VIETNAM	pqha-nisf@hn.vnn.vn

Appendix 2: Homogeneity data and statistical assessments* for Total Soil N% (Dumas N) on the 12 soils in ASPAC's 2010-11 ILPP

Sample name		ASS 111	ASS 112	ASS 113	ASS 114	ASS 31	ASS 32	ASS 33	ASS 34	ASS 51	ASS 52	ASS 53	ASS 54
Test Method		Dumas N	Dumas N	Dumas N	Dumas N	Dumas N	Dumas N	Dumas N	Dumas N	Dumas N	Dumas N	Dumas N	Dumas N
Sample 1	replicate 1	0.34	0.21	0.56	0.25	0.0407	0.0612	0.1381	0.1108	0.2028	0.0775	0.03543	0.3567
	replicate 2	0.35	0.21	0.55	0.26	0.0354	0.0592	0.1383	0.1126	0.1943	0.0745	0.03518	0.3414
Sample 2	replicate 1	0.32	0.21	0.51	0.26	0.0357	0.0583	0.1451	0.1062	0.2049	0.0797	0.03518	0.3776
	replicate 2	0.32	0.21	0.57	0.26	0.0355	0.0595	0.1511	0.1142	0.1933	0.0745	0.0319	0.3771
Sample 3	replicate 1	0.32	0.20	0.52	0.24	0.0392	0.0580	0.1340	0.1067	0.2008	0.0775	0.03479	0.3685
	replicate 2	0.34	0.21	0.53	0.25	0.0348	0.0586	0.1544	0.1041	0.1946	0.0756	0.03468	0.3643
Sample 4	replicate 1	0.32	0.20	0.56	0.25	0.0350	0.0591	0.1457	0.1096	0.2	0.0740	0.03486	0.3547
	replicate 2	0.32	0.21	0.57	0.25	0.0356	0.0583	0.1497	0.0985	0.1946	0.0729	0.03261	0.3567
Sample 5	replicate 1	0.32	0.21	0.55	0.26	0.0366	0.0612	0.1476	0.1125	0.2016	0.0773	0.03781	0.3670
	replicate 2	0.34	0.21	0.55	0.25	0.0361	0.0605	0.1599	0.1149	0.194	0.0743	0.03348	0.3612
Sample 6	replicate 1	0.32	0.20	0.54	0.26	0.0354	0.0592	0.1549	0.1058	0.1974	0.0779	0.03655	0.3684
	replicate 2	0.33	0.20	0.53	0.25	0.0381	0.0601	0.1479	0.1095	0.1937	0.0759	0.03563	0.3571
Sample 7	replicate 1	0.33	0.21	0.54	0.25	0.0396	0.0581	0.1700	0.1135	0.2004	0.0796	0.03536	0.3550
	replicate 2	0.35	0.20	0.53	0.25	0.0377	0.0585	0.1540	0.1109	0.2001	0.0784	0.03375	0.3497
Sample 8	replicate 1	0.32	0.20	0.58	0.25	0.0354	0.0590	0.1363	0.1080	0.1964	0.0766	0.03807	0.3562
	replicate 2	0.33	0.20	0.56	0.25	0.0379	0.0602	0.1438	0.1035	0.1942	0.0781	0.03499	0.3549
Sample 9	replicate 1	0.32	0.21	0.53	0.25	0.0360	0.0597	0.1544	0.1089	0.2017	0.0735	0.03474	0.3637
	replicate 2	0.33	0.20	0.54	0.25	0.0348	0.0585	0.1378	0.1085	0.1988	0.0707	0.03607	0.3640
Sample 10	replicate 1	0.33	0.20	0.54	0.25	0.0390	0.0595	0.1431	0.1142	0.1992	0.0732	0.03645	0.3510
	replicate 2	0.34	0.21	0.53	0.25	0.0359	0.0602	0.1462	0.1126	0.1948	0.0738	0.03563	0.3479
Mean		0.33	0.21	0.54	0.25	0.0367	0.0593	0.1476	0.1093	0.1979	0.0758	0.0352	0.3597
Analytical Variance		0.00007	0.00002	0.00019	0.000012	0.000004	0.0000006	0.00006	0.00001	0.00002	0.000003	0.000003	0.00002
Sampling Variance		0.00003	0	0.00012	0.000006	0	0.0000004	0.00002	0.000006	0	0.000003	0	0.00007
SD of proficiency data		0.02669	0.2076	0.01408	0.01927	0.00815	0.00964	0.0089	0.01334	0.01853	0.01475	0.01483	0.03343
Homogeneity index		0.20426	0	0.766212	0.128163	0	0.06583	0.44776	0.18390	0	0.11494	0	0.24530
Status		**H**	**H**	****H**	**H**	**H**	**H**	****H**	**H**	**H**	**H**	**H**	**H**

* Homogeneity statistics calculated according to *Thompson, M., Ellison, S.L.R. and Wood, R. (2006). "The International Harmonised Protocol For the Proficiency Testing of Analytical Chemistry Laboratories." Pure Appl. Chem. Vol. 78, No. 1, pp. 145-196. IUPAC Technical Report*

** Although the homogeneity Index is >0.3, the critical value for test (c) is less than the sampling variance

Appendix 3: Statistical procedures used by ASPAC for its contemporary soil ILPP

Refer to Table 3 for a description of most statistical terms and their meaning. Of most significance is the "median /MAD" non-parametric, iterative procedure for identifying "outliers" (††) and "stragglers" (†) within datasets for particular tests and samples from multiple (typically 6 or greater) laboratories. See references in the body of the report for more details. Also, the median (μ) is regarded as a good estimate of the true mean, while the MAD; ie. the median of the absolute deviations from the median, @), is regarded as a good estimate of the standard deviation.

After tabulating the data with a separate column for each sample result and a separate row for each laboratory, calculations were applied iteratively. Each iteration operated at an action level of [(X- μ)/f@] (called the "ASPAC Score" for convenience)> 2, where "X" is the value reported by the laboratory (one replicate assumed), "μ" is the median of the population of values, and "f@" is a code for the Gaussian distribution of the sample size "n", approximated by [0.7722 + 1.604/n * t, with t = the Student's "t" for 2.5% (two-tailed) with n-1 degrees of freedom]. Excluding any case when a laboratory reported no result (or a non-numeric value) [these were automatically excluded], the laboratories at first iteration with an "ASPAC score" > 2 were rated as "outliers" (††). Following their removal, the remaining population of laboratory data were subject to a second iteration involving a recalculation of the "ASPAC score". Where this was again >2, the relevant laboratories were rated as "stragglers" (†).

The other statistics summarised in Table 3 were calculated on the same populations of data. Only the first (i) and second (final; f) values appear in the data summaries in Section 3.

Appendix 4: "Raw" 2010-11 soil data reported by laboratories for 12 samples across three "rounds"

The tabulations that follow list the "raw" data provided by participating laboratories for each method, with unnecessary precision removed after completion of statistical tests to assist data presentation. Statistical "outliers" and "stragglers" are indicated by †† and †, respectively.

Lab. Code #	Method Codes	Soil sample identification and values for Air-Dry Moisture Content (2A1) % oven dry																							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L006	2A1	7.96		3.38		3.68		4.31		1.37		1.31		1.05		5.9		1.31	††	2.25	††	0.68	††	2.12	††
L008	2A1	5.41		2.32	††	2.71		2.87		1.32		1.11		1		4		3.44		4.34		2.14		3.65	
L009	2A1	6.33		2.89		3.22		3.9		1.51		1.52		1.16		5.86		3.52		4.96		2.28		3.99	
L011	2A1	7.15		3.22		3.53		4.08		1.79		1.67		1.21		5.34		3.57		5.01		2.29		3.58	
L013	2A1									0.64	††	0.45	††	0.42	††	2.17	††	3.08		4.43		1.86		3.34	
L018	2A1	6.86		3.06		3.25		3.83		1.32		1.16		0.85		4.50		3.02		4.28		1.82		3.17	
L019	2A1	4.28	††	1.7	††	2.08	††	2.37	††	1.94	†	1.67		1.42		5.7		3.55		4.94		2.17		3.76	
L022	2A1	5.45		2.93		3.41		3.35		0.95		1.4		1.49		5.01		2	†	3.5		0.6	††	1.5	††
L023	2A1	6.36		2.85		3.02		3.47		1.26		1.27		0.95		4.91		2.51		3.79		1.39	†	3.22	
L028	2A1	6.7		3.5		3.6		4.5		1.5		1.8		1.3		5.3		4.4		5.3		2.6		4.4	
L029	2A1																	1.04	††	1.06	††	1.03	††	1.04	††
L030	2A1																	2.71		4.24		1.65		3.07	
L032	2A1	7.43		3.19		3.5		3.98		1.51		1.53		1.24		5.8		3.59		5.1		2.24		3.86	
L040	2A1	5.73		2.36		2.66		3.03		1.07		1.19		0.91		4.42		2.31		3.37		1.36	†	2.56	
L042	2A1	7.61		3.53		3.92		4.31		1.77		1.74		1.53		5.4		3.47		4.91		2.2		3.86	
L045	2A1	7.3		3.4		3.4		4.2		1.2		1.3		0.8		4.3		2.92		4.38		2.01		3.06	
L046	2A1	6.59		2.82		3.11		3.56		2.11	††	1.1		0.79		4.49									
L056	2A1																	3.53		5.22		2.27		3.89	
L063	2A1	6.91		3.09		3.31		3.98		1.28		1.35		1.09		5.14		3.33		4.9		2.12		3.57	
L133	2A1																	0.9	††	0.1	††	0.4	††	1.1	††
L137	2A1	6.22		2.77		3.6		3.65										2.83		4.3		2.06		3.47	
L139	2A1	5.73		2.86		3.05		3.54		1.31		1.43		1.09		5.09		3.04		4.44		1.99		3.23	
L140	2A1																	4		5		2		4	
L143	2A1	6.4		3		3.2		3.5																	
L156	2A1	6.53		3.02		3.02		3.74																	
L158	2A1	6.92		3.16		3.44		3.75		1.55		1.6		1.22		5.63		3.58		5.28		2.25		3.95	
L160	2A1									2.2	††	1.9		1.5		7.1	†	3.6		5		2.1		3.9	
L161	2A1	7.18		3.31		3.63		4.06		1.61		1.41		1.09		5.82		3.89		5.48		2.3		3.84	
L163	2A1	7.2		3.4		3.4		3.9		1.42		1.4		0.97		4.59		3.74		5.28		2.32		3.75	
L164	2A1									1.43		1.48		1.04		5.65		2.79		4.65		2.02		3.58	
L166	2A1									1.31		1.28		0.9		4.9									
L178	2A1	5.73		2.36		2.66		3.03		1.09		1.17		0.91		4.45		2.32		3.38		1.4	†	2.6	
L179	2A1									0.10		1.1		0.75		4.67		2.7		4.27		1.65		3.22	

Lab. Code #	Method Codes	Soil sample identification and values for 20010-11Electrical conductivity 1:5 soil-water (3A1) dS/m air dry																							
		November 2010 (Round 210)								*March 2011Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L003	3A1	0.155	†	0.06	†	0.12	†	0.077										0.099	†	0.096	†	0.234	†	0.193	
L006	3A1	0.187		0.09		0.14		0.084		4.97	†	0.159		0.194		0.81		0.109		0.112		0.257		0.198	
L007	3A1	0.23	†	0.11		0.18	†	0.11	†	5.72		0.18		0.21		0.87	†	0.132	†	0.14	†	3.02	†	2.45	†
L008	3A1	197	†	96.7	†	259	†	88.2	†	5.34		0.152		0.194		0.725	†	0.112		0.115		0.267		0.206	
L009	3A1	0.208		0.10		0.15		0.095		5.53		0.184		0.21		0.825		0.115		0.124		0.294	†	0.225	
L011	3A1	0.17	†	0.08		0.13	†	0.08		5.96		0.163		0.195		0.788		0.113		0.108		0.23	†	0.199	
L012	3A1	0.21		0.11		0.17		0.1	†	5.80		0.16		0.21		0.817		0.12		0.12		0.27		0.21	
L013	3A1	0.22	†	0.11		0.15		0.09		4.9	†	0.15		0.17	†	0.71	†	0.113		0.109		0.248	†	0.194	
L014	3A1	0.23	†	0.11		0.18	†	0.22	†									0.17	†	0.37	†	0.21	†	0.26	†
L018	3A1	0.195		0.09		0.16		0.086		6.35		0.167		0.192		0.797		0.109		0.108		0.269		0.214	
L019	3A1	0.196		0.09		0.16		0.088		5.96		0.196	†	0.198		0.81		0.107		0.112		0.271		0.212	
L022	3A1	0.192		0.09		0.15		0.082		6.01		0.16		0.192		0.792		0.11		0.112		0.279		0.212	
L023	3A1	0.196		0.09		0.15		0.086		5.76		0.165		0.197		0.8		0.116		0.116		0.275		0.215	
L026	3A1	0.216	†	0.10		0.16		0.103	†	5.54		0.155		0.18		0.769		0.123	†	0.128	†	0.249		0.204	
L027	3A1	0.202		0.10		0.17		0.094		6.26		0.169		0.201		0.822		0.142	†	0.144	†	0.319	†	0.262	†
L028	3A1	0.19		0.09		0.15		0.08		5.78		0.17		0.19		0.79		0.12		0.13	†	0.31	†	0.23	
L030	3A1	0.236	†	0.12	†	0.15		0.11	†	5.4		0.177		0.202		0.834		0.136	†	0.135	†	0.265		0.221	
L032	3A1	0.195		0.09		0.16		0.089		5.15	†	0.172		0.215		0.832		0.108		0.111		0.263		0.205	
L036	3A1	0.215	†	0.10		0.18	†	0.101	†	6.07		0.168		0.198		0.83		0.113		0.112		0.261		0.215	
L040	3A1	0.196		0.08		0.15		0.083		5.58		0.152		0.192		0.738	†	0.107		0.103		0.26		0.213	
L042	3A1	0.19		0.09		0.15		0.08		5.81		0.15		0.19		0.77		0.109		0.112		0.268		0.205	
L044	3A1	0.196		0.09		0.14		0.087		5.81		0.17		0.21		0.83		0.111		0.11		0.268		0.21	
L045	3A1	0.19		0.09		0.15		0.08		5.6		0.16		0.19		0.725	†	0.11		0.11		0.25		0.2	
L046	3A1	0.199		0.09		0.16		0.088		6.25		0.168		0.212		0.817									
L055	3A1	0.21		0.09		0.16		0.093		6.22		0.187	†	0.208		0.853	†	0.117		0.115		0.312	†	0.223	
L056	3A1	0.194		0.09		0.15		0.084		6.1		0.169		0.83	†	0.21	†	0.107		0.108		0.263		0.204	
L063	3A1	0.22	†	0.1		0.15		0.08		6.13		0.16		0.19		0.8		0.11		0.11		0.27		0.21	
L064	3A1	0.209		0.10		0.16		0.09		5.97		0.171		0.194		0.811		0.126	†	0.126	†	0.274		0.226	
L080	3A1	0.188		0.08		0.14		0.083		6		0.16		0.18		0.752	†	0.109		0.107		0.264		0.207	
L133	3A1	0.19		0.09		0.17		0.087										0.209	†	0.174	†	0.302	†	0.401	†
L135	3A1	0.194		0.09		0.13	†	0.088		7.12	†	0.156		0.165	†	0.803		0.11		0.1		0.21	†	0.176	†
L137	3A1	0.188		0.09		0.15		0.089										0.113		0.105		0.253		0.197	
L139	3A1	0.203		0.10		0.16		0.081		8	†	0.149		0.197		0.807		0.127	†	0.138	†	0.268		0.217	
L140	3A1	0.08	†	0.06	†	0.02	†	0.02	†	6.6	†	0.19	†	0.21		0.88	†	0.19	†	0.14	†	0.26		0.26	
L143	3A1	0.19		0.09		0.16		0.08		6		0.18		0.21		0.78		0.16	†	0.12		0.69	†	0.24	
L156	3A1	0.184		0.08		0.14		0.08		5.86		0.17		0.206		0.797									
L158	3A1	0.199		0.09		0.15		0.088		5.86		0.162		0.189		0.814		0.108		0.11		0.27		0.214	

Lab. Code #	Method Codes	Soil sample identification and values for 20010-11Electrical conductivity 1:5 soil-water (3A1) dS/m air dry																							
		November 2010 (Round 210)								*March 2011Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L160	3A1	0.198		0.09		0.16		0.09		6.08		0.162		0.196		0.8		0.112		0.113		0.265		0.204	
L161	3A1	0.213	†	0.10		0.15		0.092		5.51		0.169		0.203		0.812		0.111		0.116		0.271		0.214	
L163	3A1	0.17	†	0.08		0.14		0.077		5.66		0.15		0.217		0.79		0.105		0.117		0.23	†	0.168	
L164	3A1									6.06		0.16		0.197		0.804		0.105		0.106		0.256		0.201	
L166	3A1	0.19		0.09		0.16		0.086		6420	†	158	†	185	†	786	†	0.116		0.106		0.25		0.2	
L172	3A1	0.19		0.09		0.15		0.085		5.98		0.169		0.222	†	0.769									
L178	3A1	0.195		0.09		0.15		0.085		5.62		0.153		0.19		0.742	†	0.11		0.105		0.263		0.215	

ode #	Method Codes	Soil sample identification and values for 2010-11: Soil pH, 1:5 soil-water (4A1) air dry																							
		November 2010 (Round 210)								*March 2011Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L003	4A1	6.1	†	6	†	5.3	†	5.6										6.5	†	6.7	†	7.4	†	6.6	
L006	4A1	5.8		6.29		4.9		5.66		8.13		8.37		6.42		6.58		6.67		6.88		8.82		6.5	
L007	4A1	5.67		6.18	†	4.88		5.6		8.05		8.15		6.36		6.47	†	6.62		6.76		8.85		6.44	
L008	4A1	5.05	†	5.45	†	4.34	†	4.93	†	8.13		8.45		6.34		6.57		6.7		6.94		8.77		6.49	
L009	4A1	5.94		6.39		5.18		5.83		6.7	†	7.08	†	6.81	†	6.6		6.83		6.95		7.85	†	6.9	†
L011	4A1	5.72		6.36		4.85		5.72		8.52		8.47		6.37		6.6		6.75		6.87		8.69		6.44	
L012	4A1	5.75		6.33		5.04		5.77		7.873		8.257		6.56		6.643		6.87		7.05		8.72		6.64	
L013	4A1	5.7		6.6	†	5.3	†	5.9		7.64		7.65	†	6.36		6.58		6.9		7.1		8.54		6.58	
L014	4A1	5.16	†	5.81	†	4.58	†	5.2	†									6.2	†	6.4	†	8.2	†	6.2	†
L018	4A1	5.72		6.42		5.06		5.77		8.12		8.25		6.4		6.63		6.91		7.12		8.83		6.58	
L019	4A1	5.75		6.37		5		5.67		7.58	†	8.35		6.91	†	6.76	†	6.76		7.06		8.64		6.6	
L022	4A1	5.75		6.45		5.05		5.76		8.06		8.21		6.4		6.6		6.88		7.02		8.74		6.55	
L023	4A1	5.65		6.31		4.96		5.66		7.96		8.1		6.58		6.52		6.85		7.04		8.71		6.56	
L024	4A1	6.4	†	6.1	†	5.4	†	6																	
L026	4A1	5.8		6.47		5.04		5.83		8.26		8.4		6.45		6.64		6.96		7.14		8.89		6.58	
L027	4A1	5.8		6.5		5.1		5.8		7.9		7.6	†	6.3		6.5		6.7		6.7	†	8.6		6.6	
L028	4A1	5.5	†	6.2	†	4.8	†	5.5		8.4		8.3		6.2		6.5		6.7		6.9		8.7		6.5	
L029	4A1	5.47	†	6.15	†	4.77	†	5.46	†									6.27	†	6.37	†	8.06	†	6.13	†
L030	4A1	5.84		6.4		5		5.72		8.16		8.17		6.27		6.57		6.84		7.05		8.82		6.45	
L032	4A1	5.85		6.58	†	5.2		5.95		8.28		8.44		6.42		6.62		6.91		7.08		8.77		6.53	
L036	4A1	5.57		6.28		4.92		5.61		8.49		8.45		6.31		6.58		6.75		6.89		8.7		6.51	
L040	4A1	5.78		6.24		5.02		5.76		8.47		8.36		6.12		6.57		6.94		7.17		8.73		6.57	
L042	4A1	5.99		6.39		5.16		5.87		7.97		8.17		6.64		6.71	†	6.93		7.17		8.59		6.81	†
L044	4A1	6		6.6	†	5.2		5.8		7.91		8.18		6.39		6.62		6.56		7.12		8.69		6.48	

ode #	Method Codes	Soil sample identification and values for 2010-11: Soil pH, 1:5 soil-water (4A1) air dry																							
		November 2010 (Round 210)								*March 2011Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L045	4A1	5.98		6.38		5.14		5.8		7.81		8.27		6.69		6.61		6.74		7.04		8.69		6.84	†
L046	4A1	5.87		6.51		5.09		5.88		8.15		8.3		6.34		6.57									
L055	4A1	5.84		6.38		5		5.75		7.94		8.02		6.65		6.76	†	6.85		7.13		8.42	†	6.62	
L056	4A1	5.78		6.38		5.06		5.72		8.22		8.4		6.62		6.38	†	6.94		7.13		8.9		6.6	
L063	4A1	5.8		6.4		5		5.8		8.2		8.4		6.4		6.65		6.9		7.1		8.8		6.6	
L080	4A1	5.8		6.1	†	5		5.58		8		8		6.7		6.7	†	7		7.1		8.2	†	6.6	
L133	4A1	5.5	†	6.3		4.9		5.6										6.05	†	6.28	†	8.33	†	5.92	†
L135	4A1	5.62		6.09	†	4.99		5.68		8.09		7.95		6.33		6.39	†	6.68		6.78		8.53		6.51	
L137	4A1	5.65		6.32		4.84		5.66										6.8		7.08		8.78		6.51	
L139	4A1	5.75		6.35		5.01		5.67		8.07		8.11		6.46		6.58		6.74		6.96		8.65		6.44	
L140	4A1	6.2	†	6.4		5.6	†	6.1	†	7.8		8.2		6.5		6.5		6.9		7.2		8.8		6.7	
L142	4A1	3	†	4.4	†	4.9		5.6		7.1	†	7.8	†	6.2		6.2	†	6.3	†	6.3	†	8.1	†	6.2	†
L143	4A1	5.86		6.49		5.15		5.86		7.15	†	8.44		6.68		6.78	†	6.89		7.25		8.59		6.69	
L156	4A1	5.67		6.28		5.1		5.69		7.48	†	8.28		6.23		6.54		6.39	†	6.75		8.54		6.38	†
L158	4A1	5.82		6.48		5.1		5.83		8.25		8.46		6.45		6.7	†	6.98		7.2		8.89		6.61	
L160	4A1	5.7		6.4		5		5.7		8.3		8.4		6.4		6.6		6.7		6.9		8.7		6.5	
L161	4A1	5.68		6.33		4.93		5.7		8.19		8.25		6.34		6.57		6.82		6.97		8.75		6.62	
L163	4A1	5.66		5.9	†	5.24		6.04	†	6.62	†	6.38	†	6.59		6.87	†	6.56		6.74		8.57		6.5	
L164	4A1									8.14		8.18		6.2		6.41	†	6.69		6.83		8.66		6.34	†
L166	4A1	5.8		6.4		5.1		5.8										6.91		7.11		8.83		6.59	
L172	4A1	5.81		6.35		5.09		5.75		6.6	†	7.87	†	6.74	†	6.57									
L178	4A1	5.77		6.22		5.03		5.75		8.4		8.34		6.12		6.55		6.97		7.18		8.75		6.6	

Lab. Code #	Method Codes	Soil sample identification and values for Soil pH, 1:5 soil-water (4B1) air dry																							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L006	4B1	4.95		5.71		4.29		4.99		7.99		7.47		5.35		5.83		6.2		6.12		7.84		5.94	
L009	4B1	4.95		5.53		4.47		4.9		5.92	††	6.21	††	5.93		5.88		6.1		6.13		6.35	††	6.03	
L013	4B1	4.9		5.6		4.4		5.1		7.53		7.12	†	5.56		6.1		6.16		6.1		7.78		5.98	
L014	4B1	4.73	††	5.37		4.28		4.83										6	†	6		7.5		5.9	
L019	4B1	4.92		5.55		4.3		4.93		6.33	††	6.44	††	5.76		6.19		5.71	††	5.89	†	6.73	†	6.44	††
L023	4B1									7.38		7.64		5.59		5.82		6.23		6.16		8.08		6.07	
L028	4B1	4.9		5.7		4.3		5		8.2		7.8		5.6		6		6.2		6.1		7.8		6.1	
L029	4B1	4.82		5.56		4.24		4.91										5.71	††	5.74	††	7.42		5.57	††
L041	4B1	4.96		5.67		4.35		5.01		7.67		7.51		5.6		5.97									
L044	4B1	5.1		5.8		4.5		5.1		7.82		7.39		5.42		5.83		6.22		6.16		7.96		6.02	
L046	4B1	5.07		5.8		4.47		5.12																	
L055	4B1	5.02		5.76		4.32		5.02		7.7		7.56		5.66		6.05		6.21		6.19		7.62		6.02	
L064	4B1	4.97		5.7		4.41		5		7.24		7.55		5.46		5.93		6.1		6.1		7.69		6.02	
L137	4B1	5.05		5.56		4.36		4.94										5.85	††	5.98		6.94		6.09	
L158	4B1	5		5.78		4.42		5.05		7.96		7.71		5.47		5.98		6.27		6.2		8		6.05	
L166	4B1	5		5.7		4.5		5.1		7.55		8.21	††	6.75	††	6.6	††								
L172	4B1	4.99		5.65		4.38		4.85																	

Lab. Code #	Method Codes	Soil sample identification and values for Soil pH, 1:5 soil-0.01 M $CaCl_2$ - indirect (4B2) air dry																							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L009	4B2	5.02		5.59		4.52		4.97		6.17	††	6.55	††	6.02	††	6.02		5.45	††	5.71	††	6.18	††	6.1	
L011	4B2	4.93		5.68		4.34		5.07		8.17		7.69		5.7		5.97		6.08	†	5.98	††	8.08		5.83	†
L013	4B2	4.9		5.6		4.4		5.1		7.53		7.12	††	5.56		6.1		6.16		6.1	†	7.78		5.98	
L014	4B2	4.57	††	5.37	††	4.06	††	4.7	††									5.9	††	5.9	††	7.7		5.8	†
L018	4B2	5.01		5.75		4.46		5.06		8.06		7.82		5.5		5.99		6.26		6.2		8.17		6.02	
L019	4B2	5.17		5.5	††	4.41		4.99		7.06	†	7.19	††	5.78		5.9		5.99	††	6.12	†	6.85	††	6.36	††
L022	4B2	5		5.76		4.42		5.05		8.03		7.61		5.49		5.92		6.24		6.2		8.02		5.95	
L023	4B2	5.04		5.79		4.42		5.08																	
L026	4B2	5.04		5.82		4.41		5.11		8.1		7.86		5.49		5.99		6.27		6.25		8.23		5.98	
L027	4B2									6.7	††	6.9	††	6	†	6.2	††	6.2		6.2		7.8		6	
L029	4B2	4.78	††	5.47	††	4.19	††	4.8	††									5.91	††	5.88	††	7.74		5.72	††
L030	4B2	5.17		5.86		4.47		5.13		8.02		7.73		5.52		6		6.26		6.23		8.27		5.86	†
L032	4B2	5.01		5.78		4.45		5.06		8.09		7.76		5.42		5.92		6.22		6.14		8.08		6	
L036	4B2	5.07		5.86		4.48		5.16		8.32		7.93		5.43		5.98		6.29		6.23		8.26		6.02	
L040	4B2	5.06		5.74		4.45		5.16		8.13		7.75		5.4		5.88		6.26		6.21		8.11		6.02	
L042	4B2	5.14		5.73		4.49		5.11		7.83		7.64		5.57		5.99		6.24		6.24		7.88		6.16	†
L044	4B2									7.82		7.62		5.56		5.93		6.26		6.24		8.18		6.04	
L045	4B2	5.19		5.76		4.5		5.09		7.78		7.73		5.69		5.9		6.13		6.2		7.91		6.32	††
L046	4B2									8.12		8.06	††	5.94		6.31	††								
L055	4B2	4.99		5.75		4.34		5.04		7.76		7.64		5.68		6.01		6.21		6.19		7.72		6.05	
L056	4B2	5.13		5.72		4.51		5.1		7.94		7.73		6.1	††	5.53	††	6.29		6.27		8.17		6.15	
L063	4B2	5		5.7		4.3		5		7.6		7.7		5.5		5.9		6.2		6.3	†	7.9		6.1	
L133	4B2	4.8	††	5.6		4.4		4.9	†									5.97	††	6	††	8.1		5.92	
L135	4B2	4.98		5.73		4.36		5.03		7.99		7.64		5.53		5.9		6.18		6.16		7.81		6.02	
L139	4B2	5.1		5.66		4.39		5.06		7.66		7.71		5.72		5.98		6.34		6.58	††	8.21		6.05	
L140	4B2	5.2		5.9		4.7	††	5.2		7.6		7.4	††	5.4		5.8		6.2		6	††	7.6		6.1	
L143	4B2	5.14		5.88		4.57		5.25	††	7.38		7.91		5.8		6.08		6.3		6.2		8.2		6.1	
L161	4B2	5.03		5.8		4.33		5.01		7.03	†	7.4	††	5.64		5.89		6.05	†	6.21		7.86		6.31	††
L164	4B2									7.76		7.63		5.44		5.81		6.22		6.24		8.03		5.99	
L178	4B2	5.05		5.78		4.44		5.15		8.12		7.73		5.4		5.86		6.27		6.23		8.09		6.04	

Lab. Code #	Method Codes	Soil sample identification and values for Water soluble Cl - potentiometric (5A1) mg/kg air dry																							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L006	5A1	58		20		31		15		6330	††	30		180	††	684	††	28	†	60		47		22	
L008	5A1	70		15		30		7.2		9188		21		30		955		13		46		31		13	
L009	5A1	126	††	58	††	107	††	33	††	8613		70	††	75	††	880		40	††	81	††	61	††	51	††
L011	5A1	68		15		33		7.1		9459		41		32		873		22		59		39		17	
L013	5A1	52		6	†	18	†	3		9240		21		25		835		4.5		29		19	††	3.5	†
L018	5A1	41	††	11		22		0.001		9367		5.9		24		830									
L022	5A1	66		17		33		9.2		8710		22		36		890		16		41		31		15	
L023	5A1	78		16		33		9.4		8920		28		39		938		14		49		31		13	
L027	5A1	300	††	50	††	80	††	60	††	9930		30		50		970		20		50		40		20	
L030	5A1	64		14		28		6.8										15		40		28		14	
L032	5A1	62		20		45	†	15		8115	†	48		40		845		14		38		27		12	
L044	5A1	72		15		33		6.5		12000	††	33		25		845		11		37		26		16	
L055	5A1	70		14		31		7.9		9370		22		33		918		17		48		31		14	
L064	5A1	60		17		28		11		9322		24		34		939		18		40		37		17	
L080	5A1	75		13		29		8.5		11500	††	47		42		1575	††	15		33		36		22	
L133	5A1	75		21		34		16										15		47		33		15	
L135	5A1	45	††	18		18	†	9		4255	††	45		45		534	††	54	††	54		36		36	††
L137	5A1	52		35	††	8.7	††	3.5										6.8		8.5	††	20		9.1	
L140	5A1	68		25	†	50	†	18		8900		36		74	††	840		15		47		38		22	
L143	5A1																	32	††	58		44		23	
L160	5A1	75		12		30		5		9225		20		31		892		10		40		26		10	
L161	5A1	153	††	46	††	58	††	31	††	9307		39		50		1521	††	21		40		37		25	
L164	5A1									8697		2.6		3.8	††	614	††	11		52		38		19	
L166	5A1	76		22		53	††	12		9490		26		52		980		76	††	150	††	41		18	
L172	5A1	72		32	††	290	††	33	††	8300		30		39		890									

Lab. Code #	Method Codes	Soil sample identification and values for Water soluble Cl - autocolour (5A2) mg/kg air dry																							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 11		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L019	5A2	57		18		33		12		8745		26		50		1630	††	17		78	†	25		14	
L026	5A2	63		18		31		8.6		8192		33		42		780		16		38		29		16	
L028	5A2	59		28	††	37		24	†	9260		46		42		911		27		52		39		27	
L030	5A2									8703		22		32		806									
L036	5A2	60		14	†	30		7.4		9318		33		58		1007		12		36		24		10	
L040	5A2	68		18		34		8.5		9866		20		25		915		13		40		29		11	
L045	5A2	121	††	28	††	50	††	36	††	8482						1006		35		102	††	37		30	
L139	5A2	62		20	†	39		17		8619		19		31		866		24		59		31		21	
L143	5A2	76		31	††	38		26	†	9450		43		53		960									
L178	5A2	68		18		34		8.7		9656		18		19		885		13		42		30		11	

ab. Code #	Method Codes	Soil sample identification and values for Organic Carbon - W&B (6A1) % oven dry																							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L003	6A1	3.09	†	2.65		5.02	††	2.94										2.36	†	1.98	††	0.603	††	3.32	
L006	6A1	2.64		2.09		7.7		2.8		0.723		0.709	††	1.64		1.14		1.67	††	0.737	††	0.196	††	2.61	††
L007	6A1	2.16	††	2.84	†	9.43		3.21		0.77		0.49		1.71		1.08		2.25		1.05		0.74	††	3.91	
L009	6A1	2.85		2.5		8.64		3.25		0.58		0.51		1.57		1.04		1.99		1.05		0.279		3.62	
L011	6A1	2.23	††	2.29		6.29	†	2.79		0.611		0.518		1.48		1.12		2.27		1.13		0.374		4.05	
L012	6A1	2.97		3.43	††	10.7	††	2.1	††	0.66		0.527		1.42		1.21		2.24		1.23		0.421		4.14	††
L013	6A1	2.7		2.4		7.9		3.2		0.5		0.5		1.56		1.07		2.06		1.1		0.31		3.57	
L014	6A1	2.8		1.7	††	2.9	††	1.6	††									2.5	††	2.4	††	0.6	††	2.5	††
L018	6A1	2.82		2.35		8.15		3.17		0.572		0.497		1.7		1.02		2.01		1.03		0.314		3.41	
L019	6A1	3.12	†	2.6		8.53		3.5		0.778		0.604	††	1.66		1.22		2.05		1.14		0.45		3.41	
L022	6A1	2.69		2.4		7.38		3.19		0.54		0.51		1.74		1.09		1.98		1.02		0.37		3.32	
L023	6A1	2.68		2.46		8.2		3.25		0.501		0.504		1.63		1.07		2.06		1.02		0.351		3.5	
L024	6A1	2.7		2.2		5.2	††	3.3																	
L026	6A1	2.66		2.32		7.73		2.89		0.527		0.483		1.77		0.99		2		1.11		0.32		3.57	
L028	6A1	2.65		2.24		8.02		2.97								1.24		2.02		1.19		0.44		3.29	
L029	6A1	2.84		2.69		8.56		3.58										2.29		1.32		0.388		4.07	†
L030	6A1	3.19	††	2.89	††	8.41		3.33		0.76		0.534		1.92		1.20		2.13		1.19		0.527	†	4	
L032	6A1	3.63	††	3.8	††	10	†	4.1	††	0.506		0.486		1.21	††	1.3		2.23		1.46	††	0.547	†	3.86	
L056	6A1	2.64		2.27		7.88		2.96		0.558		0.485		1.05	††	1.58	††	2.05		1.16		0.345		3.34	
L064	6A1	2.61		2.5		9.66	†	3.3		0.49		0.507		1.86		1.08		2.43	††	1.28		0.36		3.95	
L080	6A1	2.1	††	1.87	††	6	†	2.6										1.7	†	0.84		0.386		3.17	
L135	6A1	2.7		2.31		7.51		2.97		0.668		0.711	††	1.7		1.23		2.01		1.05		0.289		3.4	
L137	6A1	0.955	††	0.48	††	1.17	††	0.836	††									1.94		0.992		0.376		3.4	
L139	6A1	2.68		2.52		8.06		3.45		0.461		0.552		1.72		1.18		2.18		1.35		0.363		3.6	
L142	6A1	5.17	††	7.36	††	7.05		3.46		0.53		0.55		1.7		1.4									
L143	6A1	2.74		2.28		7.63		3.24		0.56		0.53		2.07	††	1.15		2		1.2		0.4		3.8	
L158	6A1	2.6		2.37		8.66		3.02		0.57		0.5		1.78		1.16		1.94		1.12		0.33		3.49	
L160	6A1	2.52		2.22		7.7		2.83		0.56		0.44	†	1.59		1.01		1.99		1.01		0.327		3.24	
L161	6A1	2.5		2.29		8.45		2.97		0.44		0.42	††	1.37		1.02		1.81		1.06		0.39		3.36	
L164	6A1									0.578		0.599	††	1.54		1.24		2.89	††	1.2		0.622	††	3.63	
L172	6A1	3.1	†	2.4		1.7	††	2	††	0.64		0.65	††	2.45	††	1.32									

Lab. Code #	Method Codes	Soil sample identification and values for Total Organic C – Heanes, HF Induction, Vol / HF Induction, IR (6B1 + 6B2 + 6B3) % oven dry																							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L003	6B3	4.17	††	3.05		8.17		4.47	††																
L006	6B3									1.57	††	1.37	††	1.91		3.89	††	1.72	††	1.73	††	0.62		2.6	††
L007	6B3									1.31	††	0.72		0.81	††	0.45	††								
L008	6B3	3.41		2.81		8.93		3.7		0.627		0.667		1.59	††	1.28		2.16	†	1.11		0.622		4.24	
L009	6B3	3.37		2.51	††	8.69		3.59		0.106	††	0.194	††	1.55	††	0.862	††	1.9	††	0.929	††	0.242	††	4.1	
L013	6B2	3.5		2.8		9.3		3.9		0.53		0.57		2.06		1.19	†	2.36		1.3		0.5		4.1	
L019	6B3	3.17		2.63	†	8.53		3.65		0.521		0.651		2.25		1.26		2.07	††	1.24		0.319		3.55	††
L022	6B3	3.24		2.78		8.61		3.78		0.65		0.64		1.93		1.23		2.38		1.35		0.48		3.89	
L023	6B1	3.35		2.9		8.98		3.64		0.784	†	0.679		1.95		1.28		2.2	†	1.17		0.425		4.03	
L027	6B3	2.75	††	2.28	††	6.85	††	3.2	††	0.53		0.43	††	1.15	††	0.87	††	1.96	††	0.98	††	0.36		3.35	††
L028	6B2	3.7		2.94		9.31		3.94		0.63		0.66		2.03		1.26		2.37		1.34		0.68		4.14	
L030	6B3	3.48		2.9		8.87		3.79		0.59		0.618		2		1.23		2.31		1.14		0.613		4.19	
L032	6B3	3.67		2.9		8.84		3.79		0.571		0.531	†	2.05		1.33		2.34		1.32		0.365		4.22	
L036	6B3	3.17		2.75		9.33		3.7		0.591		0.645		2.09		1.3		2.36		1.34		0.676		4.19	
L040	6B3	3.66		2.95		9.32		3.9		0.648		0.544	†	2.01		1.26		2.35		1.29		0.59		4.317	
L042	6B3	3.66		2.8		8.98		3.74		0.506		0.615		1.93		1.32		2.33		1.15		0.43		4.34	
L045	6B3	3.43		2.92		8.46		3.93		0.54		0.66		1.81		1.35		2.1	††	1.37		0.7		4.15	
L046	6B3	3.46		2.88		9.56		3.77		0.71		0.692		2.12		1.41	†								
L063	6B3	3.58		2.73		9.1		3.76		0.57		0.54	†	1.98		1.27		2.34		1.28		0.48		4.61	†
L140	6B3	2.7	††	2.5	††	9.1		3.4		0.7		0.7		1.9		1.3		2.4		1.2		1	††	3.8	†
L143	6B3	3.1		2.48	††	9.33		4.03		0.56		0.62		2.12		0.98	††	1.9	††	1.2		0.7		4.7	††
L156	6B3	3.56		2.83		8.87		3.71		0.569		0.631		1.94		1.29		2.31		1.14		0.61		4.1	
L158	6B3	3.58		2.93		9.82		3.9		0.68		0.65		2.24		1.28		2.4		1.33		0.66		4.51	
L163	6B3	3.45		2.89		9.62		3.85		0.514		0.641		2.79	††	1.35		2.39		1.46		0.694		4.39	
L178	6B3	3.66		2.95		9.32		3.9		0.661		0.574		2.15		1.31		2.35		1.29		0.601		4.32	

Lab. Code #	Method Codes	Soil sample identification and values for Total N - Kjeldahl, steam distillation (7A1) % oven dry																							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L003	7A1	0.319		0.226		0.539		0.345	††									0.19		0.074		0.048		0.308	††
L006	7A1	0.11	††	0.254		0.263	††	0.365	††	0.036		0.066		0.162		0.102		0.201		0.078		0.048		0.317	†
L007	7A1	0.36		0.25		0.54		0.3		0.05		0.09	††	0.17		0.14	††	0.253	††	0.118	††	0.089	††	0.126	††
L008	7A1	0.248		0.132	††	0.429	†	0.167	††	0.002	††	0.034	††	0.155		0.104		0.186		0.068		0.006	††	0.359	
L011	7A1	0.376		0.224		0.512		0.319		0.058		0.082	††	0.191		0.141	††	0.248	††	0.109		0.064	†	0.393	
L012	7A1	0.289		0.21		0.481		0.238		0.033		0.057		0.14		0.093		0.191		0.073		0.04		0.328	†
L013	7A1	0.35		0.23		0.56		0.28		0.04		0.06		0.18		0.11		0.22		0.09		0.05		0.37	
L014	7A1	0.29		0.11	††	0.28	††	0.07	††																
L019	7A1	0.335		0.234		0.553		0.282		0.058		0.062		0.193		0.111		0.213		0.093		0.0525		0.368	
L022	7A1	0.331		0.232		0.554		0.275		0.044		0.063		0.162		0.105		0.215		0.069		0.041		0.372	
L023	7A1	0.34		0.245		0.56		0.289		0.041		0.068		0.174		0.104		0.212		0.079		0.043		0.372	
L024	7A1	0.31		0.23		0.52		0.27																	
L026	7A1									0.027		0.059		0.117	†	0.092		0.214		0.083		0.048		0.352	
L027	7A1	0.292		0.186		0.448	†	0.261		0.038		0.061		0.143		0.088		0.203		0.082		0.044		0.361	
L029	7A1	0.305		0.219		0.507		0.264										0.203		0.069		0.044		0.348	
L032	7A1	0.357		0.229		0.533		0.274		0.039		0.070		0.174		0.118		0.207		0.075		0.035		0.366	
L044	7A1									0.046		0.07		0.161		0.097		0.208		0.067		0.047		0.363	
L046	7A1	0.32		0.23		0.529		0.26		0.039		0.069		0.185		0.122									
L064	7A1	0.355		0.205		0.505		0.257		0.057		0.07		0.161		0.103		0.17	††	0.103		0.039		0.045	††
L137	7A1	0.326		0.243		0.584		0.274										0.207		0.083		0.052		0.35	
L139	7A1	0.389		0.259		0.568		0.301		0.023		0.051		0.152		0.095		0.182	††	0.036	††	0.037		0.38	
L140	7A1	0.37		0.25		0.56		0.32		0.045		0.072		0.147		0.111		0.28	††	0.095		0.058		0.41	†
L142	7A1	0.29		0.4	††	0.27	††	0.22	†	0.04		0.07		0.15		0.1									
L143	7A1									0.001	††	0.03	††	0.21	†	0.1		0.21		0.09		0.03	†	0.48	††
L158	7A1	0.361		0.243		0.582		0.277		0.037		0.065		0.187		0.112		0.214		0.087		0.047		0.381	
L160	7A1									0.033		0.065		0.173		0.107		0.210		0.081		0.046		0.374	
L166	7A1	0.27		0.19		0.46		0.23		360	††	661	††	1737	††	867	††	0.19		0.08		0.05		0.3	††

Lab. Code #	Method Codes	Soil sample identification and values for Total N – Kjeldahl, Autocolour (7A2) % oven dry																							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L018	7A2	0.343		0.243		0.529		0.276		0.036		0.064		0.157		0.105		0.217		0.083	††	0.048		0.363	
L026	7A2	0.295		0.223		0.541		0.243																	
L028	7A2	0.34		0.24		0.53		0.3		0.04		0.06		0.16		0.1		0.21		0.07		0.04		0.37	
L055	7A2	0.302		0.211		0.464	††	0.25		0.035		0.061		0.152		0.1		0.188		0.071		0.043		0.325	
L179	7A2									0.03		0.06		0.12	††	0.09		0.21		0.07		0.04		0.35	

Lab. Code #	Method Codes	Soil sample identification and values for Total N (Dumas) % oven dry																							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L009	Dumas	0.38		0.245		0.559		0.296		0.017		0.043		0.144		0.102		0.243		0.115		0.070		0.423	
L023	Dumas	0.324		0.23		0.532		0.269		0.057		0.081		0.168		0.086		0.209		0.090		0.061		0.394	
L028	Dumas	0.34		0.21		0.54		0.25		0.03		0.7	††	0.17		0.1		0.21		0.08		0.08		0.4	
L030	Dumas	0.326		0.222		0.508		0.259		0.024		0.048		0.146		0.084		0.194		0.076		0.04		0.357	
L036	Dumas	0.313		0.23		0.548		0.261		0.037		0.071		0.172		0.107		0.22		0.088		0.048		0.384	
L040	Dumas	0.357		0.181		0.546		0.287		0.04		0.061		0.167		0.111		0.187		0.068		0.054		0.351	
L042	Dumas	0.34		0.2		0.51		0.25		0.03		0.06		0.16		0.11		0.196		0.071		0.035		0.371	
L045	Dumas	0.3		0.19		0.55		0.28		0.045		0.065		0.145		0.13		0.22		0.1		0.05		0.35	
L063	Dumas	0.37		0.24		0.535		0.25		0.035		0.055		0.175		0.11		0.22		0.07		0.04		0.42	
L097	Dumas	0.351		0.244		0.561		0.287		0.098	††	0.097	††	0.195	†	0.128		0.22		0.088		0.064		0.376	
L135	Dumas	0.33		0.223		0.534		0.271		0.088	††	0.087		0.194		0.144		0.25		0.076		0.035		0.348	
L143	Dumas	0.37		0.27		0.7	††	0.29																	
L156	Dumas	0.353		0.235		0.532		0.27		0.036		0.063		0.167		0.115		0.207		0.075		0.038		0.357	
L163	Dumas	0.348		0.234		0.571		0.271		0.027		0.068		0.247	††	0.127		0.232		0.104		0.045		0.402	
L178	Dumas	0.356		0.181		0.545		0.284		0.036		0.061		0.163		0.106		0.186		0.068		0.054		0.351	

Lab. Code #	Method Codes	Soil sample identification and values for Water Soluble Nitrate N - autocolour (7B1) mg/kg air dry																							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L006	7B1	41		0.493		3.2		0.934		21		29	†	6.2		43		7.0		1.2		9.1		40	
L008	7B1	40		0.2		2.8		0.48		20		26		7.6		45	††	6.7		0.464		8.6		43	
L009	7B1	24	††	1.0		3.2		0.884		18		19	††	8.2		31	††	8.1		2.0		9.3		35	
L011	7B1	42		2.2	††	4.1		2.7	††	19		27		9		40		6.5		1.2		11	††	38	
L013	7B1	41		1		3.1		0.8		19		27		10		40		7.3		0.7		9.8		40	
L026	7B1	36		0.44		4.6	†	0.86		20		28		9.8		41		5.8		0.39		8.9		40	
L027	7B1	21	††	0.1		3.6		0.6		13	††	27		7.6		40		9.7	††	3.2	††	12	††	52	††
L028	7B1	38		0.5		3		0.5		17		27		8		41		6		2		8		41	
L040	7B1	38		0.251		3.2		0.808		20		27		8.8		41		4.8		0.758		6.5	††	28	††
L045	7B1	39		0.01		1.9	†	0.01	††	27	††	36	††	12		56	††	6.4		0.01		9.2		41	
L055	7B1	36		0.2		3.2		0.7		19		27		8.5		40		6.3		0.8		9		38	
L064	7B1	37		0.9		2.1		1		31	††	27		11		39		9.0	††	2.9	†	9.2		38	
L080	7B1	39		0.271		3.2		0.601		10	††	20	††	10		22	††	7.3		0.875		10		42	
L139	7B1	38		0.566		1.8	†	0.632		19		27		10		38		6.2		1.6		9.7		37	
L140	7B1	34	†	2	††	4		2	††	18		29	†	12		39		4.4	†	1.3		8.8		41	
L143	7B1									19		30	†	12		40									
L160	7B1	39		1.5	†	1	††	1.5	†	20		28		9		39		6.9		0.6		9.5		41	
L161	7B1	32	††	2.2	††	3.8		2.1	††	43	††	36	††	11		48	††	9.9	††	2.5	††	15	††	58	††
L166	7B1	37		0.5		3		0.5		20		28		9.2		41		6.7		0.72		9.7		31	††
L172	7B1	27	††	0.3		0.3	††	0.1	†	21		7.8	††	1.1	††	16	††								
L178	7B1	38		0.275		3.1		0.801		20		28		8.8		40		5.5		0.801		7.21	††	27	††

Lab. Code #	Method Codes	Soil sample identification and values for KCl Extractable Nitrate N - autocolour (7C2) mg/kg oven dry																							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L008	7C2	41	††	0.01		3.0		0.524		18		24		8.2		35		6.7		0.482		9.3		38	
L011	7C2	42	††	2.9	††	5.9	††	5.5	††	21		24		9.4		43		6.9		2.2	††	6	††	40	
L013	7C2	37		0.2		3		0.6		21		27		9.1		42		7.3		0.84		9.6		41	
L018	7C2	40	†	0.3		3.8		0.75		19		27		8.9		37		6.8		0.688		10		42	
L019	7C2	37		0.394		3.1		0.834		21		28		10		41		6		0.591		8.8		38	
L022	7C2	37		0.28		2.5		0.78		20		26		9.8		39		6.8		0.65		10		42	
L023	7C2	37		0.067		4.3		0.506		20		27		7.1		38		6.1		0.45		8.9		43	
L028	7C2	34	†	1	††	4		1		18		27		8		38		6.3		1.2	†	9.2		44	
L030	7C2	38		0.067		3.6		0.327		19		27		9.2		37		7.4		0.462		10		41	
L032	7C2	36		0.363		3.2		0.802		18		26		8.9		38		6.5		0.241		9		42	
L036	7C2	38		0.29		3.3		0.944		20		27		10		39		46	††	7.02	††	6.6	††	158	††
L042	7C2	36		0.2		3.6		0.9		20		25		8.6		35		6.4		0.656		8.7		39	
L044	7C2	41	††	3.7	††	13	††	6.4	††	21		28		9.2		40		5.9		0.4		8		37	
L046	7C2	38		0.079		3.4		0.492		22		28		10		45									
L055	7C2	37		0.2		3.1		0.65		18		25		8.3		39		5.9		0.6		8.7		38	
L097	7C2	36		0.026		4.3		0.561		18		25		8.8		36		6.2		0.549		9.4		42	
L135	7C2	37		3.1	††	4.7	†	3.2	††																
L137	7C2	31	††	2.8	††	8.4	††	8.4	††									6.8		0.87		7.9		42	
L143	7C2	16	††	0.016		1.5	††	0.279																	
L163	7C2	37		0.15		2.5		0.69		19		27		8.9		40		5.7		0.06		8.4		38	
L164	7C2																	6.5		1		8.7		38	
L179	7C2									21		29		10		44		7.5		0.83		10		48	†

Lab. Code #	Method Codes	Soil sample identification and values for KCL Extractable Ammonium N - autocolour (7C2) mg/kg oven dry																					
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*					
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L008	7C2	1100	††	281	††	665	††	494	††	7.4	††	9.8	††	71		16	††	43		6.7		6.1		144	
L009	7C2	50	††	26		68		40	†	10	††	11	††	44	††	10		24	††	6.9		7.1		73	††
L011	7C2	78	††	22	†	50	†	37	††	3.8		6.1		54	††	14		48		8.4	†	7.3		136	
L013	7C2	102		34	†	67		46		5		7.6		66		14		48		7.4		7.3		140	
L018	7C2	101		27		67		47		4.0		7.0		62		12		44		6.4		6.4		154	
L019	7C2	104		30		63		47		4.1		6.9		61		12		44		3.5	††	3.8	††	159	
L022	7C2	101		26		60		44		3.1		6.1		59		11		44		6.3		6.1		131	
L023	7C2	105		26		63		46		4.1		6.6		66		12		44		6.2		5.9		152	
L026	7C2	90	†	31		62		45		5		7.4		64		13		41		5.5		5.9		152	
L028	7C2	96		21	†	56		39	††	4		8		61		12		46		6.3		7.2		156	
L030	7C2	107		26		66		46		3.9		5.8		62		12		46		7.0		6.3		99	††
L032	7C2	107		35	†	65		49		3.8		7.5		66		13		51	††	7.2		6.4		160	
L036	7C2	108		28		64		47		4.2		6.8		65		12		6.8	††	1.1	††	9.0	††	38	††
L042	7C2	110		27		63		48		4.5		6.6		63		13		44		6.9		7.1		158	
L044	7C2	90	†	25		59		46		4.7				77	††	15		42		6		5.1		146	
L046	7C2	105		27		66		46		3.9		6.2		68		12									
L055	7C2	104		28		65		46		4.1		6.7		63		12		46		6.8		6.5		160	
L064	7C2	100		27		47	††	45		7.3	††	5.4		52	††	11		40		11	††	5.4		140	
L097	7C2	109		49	††	59		44		4.4		6.7		64		12		44		7.2		6.9		153	
L137	7C2	92		31		48	††	36	††									47		12	††	11	††	158	
L140	7C2	105		31		80	††	55	††									46		9	††	10	††	170	
L143	7C2	12	††	4.9	††	18	††	8.6	††																
L156	7C2									7.1	††	5.9		64		23	††								
L161	7C2	99		27		61		45		5.8	†	6.7		57		13		42		9.6	††	6.6		145	
L163	7C2	100		23		30	††	42	†	5.5	†	8.4		65		14		41		6.8		5.3		115	††
L164	7C2																	42		7		6		153	
L166	7C2	6.1	††	3.6	††	16	††	6	††	2.0	††	2.0	††	27	††	1.1	††								
L179	7C2									6.1	††	10	††	68		17	††	45		6.7		7		166	

Lab. Code #	Method Codes	Soil sample identification and values for Total P – Pooled % oven dry																							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L006	Pooled	0.121		0.067		0.05		0.041		0.013		0.094		0.07		0.018		0.034		0.019		0.061		0.126	
L009	Pooled	0.118		0.059		0.041		0.038		0.015		0.076		0.071		0.017		0.035		0.020		0.047		0.147	
L011	Pooled	0.143		0.061		0.041		0.043		0.015		0.077		0.058		0.022		0.041		0.026		0.057		0.154	
L013	Pooled	0.13		0.061		0.043		0.043		0.017		0.082		0.067		0.022		0.043		0.026		0.06		0.149	
L018	Pooled	0.143		0.064		0.046		0.041		0.018		0.081		0.074		0.024		0.039		0.022		0.046		0.153	
L019	Pooled	0.112		0.056		0.041		0.036		164	††	898	††	821	††	179	††	0.038		0.025		0.061		0.121	
L022	Pooled	0.122		0.061		0.049		0.042		0.016		0.087		0.071		0.021		0.037		0.021		0.051		0.146	
L023	Pooled	0.129		0.060		0.037		0.038		0.013		0.087		0.068		0.017		0.019	††	0.019		0.054		0.156	
L026	Pooled	0.148		0.071		0.051		0.041		0.015		0.086		0.063		0.020		0.041		0.023		0.056		0.173	
L027	Pooled	0.126		0.055		0.039		0.044		0.017		0.073		0.059		0.016		0.041		0.023		0.049		0.135	
L028	Pooled	0.166	†	0.077	††	0.062	††	0.058	††	0.03	††	0.1		0.07		0.04	††								
L030	Pooled									0.014		0.072		0.061		0.022									
L032	Pooled	0.129		0.061		0.041		0.040		0.014		0.076		0.076		0.022		0.035		0.019		0.048		0.137	
L040	Pooled	0.135		0.064		0.046		0.048		0.016		0.079		0.062		0.02		0.040		0.025		0.057		0.142	
L044	Pooled	0.078	††	0.04	††	0.033		0.032		0.012		0.066		0.054		0.017		0.029	††	0.017		0.042		0.099	††
L046	Pooled	0.141		0.061		0.042		0.045																	
L055	Pooled	0.129		0.062		0.042		0.043		0.016		0.094		0.077		0.023		0.034		0.024		0.06		0.149	
L064	Pooled	0.131		0.065		0.048		0.049		0.021	†	0.081		0.064		0.023		0.037		0.022		0.053		0.143	
L137	Pooled	0.16		0.069		0.048		0.051										0.044		0.028		0.055		0.16	
L140	Pooled	0.18	††	0.074	††	0.061	††	0.055	†	0.024	††	0.094		0.063		0.028		0.065	††	0.045	††	0.075	††	0.2	††
L156	Pooled	0.098		0.051	†	0.036		0.034																	
L160	Pooled																	0.039		0.023		0.05		0.136	
L172	Pooled	0.041	††	0.044	††	0.042		0.021	††																
L178	Pooled	0.135		0.064		0.046		0.048		0.015		0.087		0.058		0.018		0.039		0.024		0.055		0.138	

Lab. Code #	Method Codes	Soil sample identification and values for Colwell Extractable P – manual / autocolour (9B1 + 9B2) mg/kg air dry																							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L006	9B1	53	†	73		88		37		32		79		137		8.1		20		25		22		47	
L009	9B1	95	††	105	††	115	††	62	††	40	†	92	††	152		17	††	34	††	35	††	32	†	78	††
L011	9B1	67		95		83		40		34		85		135		5.7		18		28		25		56	
L013	9B2	66		88		96		51		30		89	†	115		7		16		22		20		36	††
L014	9B1	24	††	35	††	44	††	27	†																
L018	9B2	65		88		90		41		31		78		120		6.2		19		25		24		47	
L019	9B2	63		85		86		42		26		78		153		5.7		20		26		24		60	
L022	9B1	63		83		90		42		31		80		125		6.8		20		25		24		57	
L023	9B1	72		95		105		48		29		80		135		8.1		23		25		22		50	
L024	9B1	80	††	42	††	20	††	93	††																
L026	9B2	59		79		84		39		29		74		129		5.6		19		24		23		56	
L027	9B1	105	††	124	††	98		61	††	36		84		125		4		231	††	86	††	75	††	88	††
L028	9B2	74		90		98		51		30		78		120		8		26	†	34	††	31		60	
L030	9B2	67		83		93		42		26		75		122		7.6		19		25		16		56	
L032	9B1	65		84		96		42		31		81		118		5.9		20		26		27		60	
L036	9B2	66		89		91		40		34		85		131		9.8	†	27	†	32	†	31		64	
L040	9B2	70		89		92		37		28		77		139		3.2		24		25		26		59	
L044	9B1	69		87		107	†	53		23		65	††	107		5.4		26	†	33	††	22		72	
L045	9B1	59		72		91		43		32		81		146		7.2		20		18	††	15	†	47	
L064	9B1	65		82		84		39		30		78		124		7.7		25		29		25		59	
L080	9B1	41	††	74		70	††	76	††	30		74		92	††	5.2		20		20	†	19		46	†
L133	9B1	288	††	148	††	194	††	120	††																
L135	9B1	69		87		88		46		37		80		158		69	††	27	†	29		28		64	
L139	9B2	60		85		91		41		44	††	81		137		8		20		28		25		62	
L158	9B1	61		78		85		36		27		74		116		6.3		21		28		20		55	
L160	9B1	73		95		93		46		31		86		149		6.5		20		26		22		52	
L161	9B1	64		84		97		53		35		81		134		14	††	21		27		28		60	
L164	9B1									35		88	†	179	††	6.1		28	†	36	††	37	††	68	
L172	9B2	69		110	††	99		49		38		99	††	150		7									
L178	9B2	70		89		92		37		29		79		142		3.0	†	24		25		26		61	

Lab. Code #	Method Codes	Soil sample identification and values for Olsen Extractable P - manual / autocolour (9C1 + 9C2) mg/kg air dry																							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L003	9C1	20		43		42		17										114	††	61	††	90	††	77	††
L006	9C1	14		30	††	35	†	13		13		49		40		1.3		7.4		6.6		5.4		11	
L007	9C1	19		40		51	†	17		10	††	39	††	39		1.6		11		11		8.9		16	
L008	9C1	45	††	55	††	66	††	32	††																
L009	9C1	24		45	†	46		25	††	17		54		57		3.6		12		9.3		7.7		24	††
L011	9C1	18		40		49		16		15		52		49		1.9		9.9		9.5		7.4		17	
L012	9C1	20		47	†	44		22	†									8.8		8.3		6.8		14	
L013	9C2	13		36	†	42		15		12	†	42	†	36		1.2		8.1		6.8		5.8		12	
L014	9C1	29	††	54	††	44		22	†									5.2		9.9		13	††	3	††
L019	9C2	18		42		48		16		13		53		51		1.9		8.9		7.8		7.1		14	
L022	9C1	17		39		40		16		15		48		44		1.9		8.3		7.3		7.1		15	
L024	9C1	69	††	69	††	57	††	55	††																
L026	9C2	13		35	†	36		14		14		50		41		1.6		8.3		7.1		6.7		13	
L027	9C1	19		40		37		18		23	††	2.3	††	2	††	4	†	7.4		7.4		8		10	
L030	9C2	15		35	†	41		14		12		45		36		1.8		8.4		7.5		6.3		15	
L036	9C2	16		42		38		15		15		56		40		2.2		11		8.9		8.2		16	
L040	9C2	16		40		46		16		16		53		46		2.6		8.8		8.3		7.2		13	
L042	9C2	17		40		42		17		15		51		47		2.7		12		11		9.2		19	
L044	9C1	17		40		42		18		14		51		45		2		9.8		7.7		5.7		15	
L045	9C1	13		31	††	41		17		15		50		48		2.8		13	†	11		13	††	15	
L046	9C1	21		74	††	65	††	23	†																
L056	9C1	18		41		41		19		16		48		2	††	39	††								
L063	9C1	20		39		44		16		15		52		41		1.5		7		7		5		13	
L135	9C1	19		41		42		19		15		48		41		3.1		11		11		9.5		19	†
L137	9C1	22		55	††	50	†	25	††									11		9.7		9		15	
L139	9C2	15		34	†	46		15		13		37	††	39		4.3	††	7.8		7.4		6.8		17	
L142	9C1	23		42		26	††	48	††	8.9	††	31	††	36		1.3		12		10		7.4		16	
L156	9C2	18		37		41		16		14		51		54		2									
L160	9C1	17		39		42		16		14		53		49		1		8.4		7.2		6		13	
L166	9C1									0.766	††	7.4	††	4.0	††	0.023									
L178	9C2	16.2		40.4		46		16		15		51		45		2.6		9.2		8.4		6.9		13	
L179	9C2									13		47		47		0.8		9.3		7.9		5.9		14	

ab. Code #	Method Codes	Soil sample identification and values for Bray-1 Extractable P - manual, autocolour (9E1, 9E2) mg/kg air dry																							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L006	9E1	14		27		22		14		20		64		85		0.4		5.0		4.3		16		8.9	
L009	9E1	22	†	57		36		16		34	††	117	††	104		0.899		52	††	47	††	168	††	99	††
L014	9E1																	7.3		8.7	††	12		15	
L019	9E2	12		39		30		12		23		60		68		1.3		4.2	††	4.5		10		8.1	
L023	9E2	16		57		42		18		23		59		94		0.626		6.4		5.3		25		12	
L024	9E1	14		32		25		15																	
L026	9E2	14		47		29		15		21		46		89		0.49		6.2		5.1		1.5		12	
L027	9E1	21	†	63		56		22		24		68		106		0.4		7.4		5.5		22		13	
L029	9E1	29	††	127	††	117	††	32	††									5.1		1.5	††	27		3.2	
L044	9E1									229	††	632	††	953	††	5.1	††	7.3		6.8	†	6		15	
L045	9E1	4.7	††	46		41		10		11	††	61		84		1.1		6.1		2.3	†	10		5.3	
L055	9E1	15		45		42		17		22		68		102		0.39		6.3		4.8		7.6		12	
L056	9E1	15		61		56		17		22		73		1.3	††	118	††	7		5		2.9		12	
L063	9E1	19		53		49		20		21		50		58		1.4		7.1		6.2		26		15	
L064	9E1	14		44		44		16		23		63		78		1.0		7.2		5.4		8.9		9.8	
L156	9E2	20	†	64		54		20		27	†	86	††	129		1.2									

Lab. Code #	Method Codes	Soil sample identification and values for Acid Extractable P - manual, autocolour (9G1, 9G2) mg/kg air dry																							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L013	9G2	45		209		137		43		39		605		199		7		35		19		444		55	
L023	9G2	58		206		122		46																	
L028	9G2	52		208		124		44		38		643		234		8		291	††	1320	††	466		133	††
L032	9G2	49		221		125		38		39		723		247		0.1	††	26		2	††	521		59	
L064	9G1	43		179		96		34		57	†	529		181		8.3		59		38	††	505		64	
L080	9G1									42						1.7		48		18		150	††	59	
L139	9G2	47		176		116		48		43		588		205		9.3		35		21		409		50	
L143	9G2	58		230		146		48		98	††	1042	††	894	††	6									
L160	9G2																	46		21		455		66	

Lab. Code #	Method Codes	Soil sample identification and values for Phosphorus buffer index – Colwell (9I2a, 9I2b, 9I2c) L/kg air dry																							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L006	9I2a	229		63.2		121		103		171	††	92.7	††	203	††	1060	††	64.6		156		33.9		385	
L009	9I2a	124	††	37.2	††	57.4	††	51.4	††	51.1		1.02	††	23.6	††	417		49.5	††	144		23.4	††	339	
L011	9I2a	260		64		118		102		75.9		37.6		78.5		465		74.8		177		46.2		425	
L013	9I2b	273		68		142		118		74		48		92		426		70		169		44.5		436	
L018	9I2a	236		62.3		121		101		64.8		36.3		80.8		424		65.2		166		40.3		436	
L019	9I2b	273		70.4	†	142		125		76		33		97		506		87.3	††	197		56.4	††	498	
L022	9I2a	259		65.6		124		118		67.7		40.1		87.5		476		73.5		194		43.5		466	
L023	9I2a	250		64		129		108		63.1		37.3		84.3		455		63.2		166		35.7		405	
L026	9I2a	251		62.5		126		107		83.3		39.2		86		507		74.8		179		48.1		467	
L028	9I2b	253		65		127		110		64		36		86		463		61		150		38		384	
L032	9I2a	253		67.8		136		112		69		38		84		451		72		175		42		460	
L036	9I2c	281		66		128		116		65.5		41.8		87.5		449		67.7		171		37.3		518	
L040	9I2a	264		64.5		130		112		85.1		41.6		84.8		525		68.3		174		40.4		295	
L044	9I2a	232		72	†	122		95		85		54	††	88		494		70		163		39		485	
L064	9I2a									82.9		41.2		99.3		495		68.7		193		44.4		525	
L080	9I2a	127	††	37	††	72	††	63	††	55		28.7		65	†	495		113	††	31.8	††	46		67	††
L135	9I2b	242		61.3		121		105		61.5		31.2		77.3		42.9	††	62.8		150		36.2		363	
L139	9I2a	235		79	††	144		107		89		49	†	95		427		67		156		49		412	
L161	9I2a	240		64		113		100		64		33		78		348		56.6		142		43.8		303	
L164	9I2a									75		40		92		401		78		184		47		557	
L178	9I2a	264		64.5		130		110		88		44		86.8		530		66.9		170		39.1		296	

Lab. Code #	Method Codes	Soil sample identification and values for																							
		NOT ASSESSABLE								Phosphorus buffer index – Olsen (913a, 913b, 913c) L/kg air dry								NOT ASSESSABLE							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L040	9I3a	265		81.2		153		116		95.2		68.6		99.6		535		74.3		181		45.7		295	
L064	9I3c	264		70.4		128		108																	
L137	9I3a	222	††	87.8		135		108										67.8		162		40		255	††
L178	9I3a	265		81.2		153		116		90.1		68.2		99.8		534		75.1		177		46.5		295	

Lab. Code #	Method Codes	Soil sample identification and values for																							
		Phosphate Extractable S (10B3) mg/kg air dry																							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 11		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L009	10B3	47		24		20		27		469		47	††	87		186		28	††	23	††	80		77	
L013	10B3	40		22		32		22		472		13		41		133		19		14		83		52	
L024	10B3	52		26		42		29																	
L026	10B3	45		23		35		26		456		17		52		152		20		15		81		69	
L028	10B3	47		24		35		25		432		15		49		137		20		15		79		68	
L135	10B3									1487	††	75	††	140	††	393	††	21		16		79		69	
L139	10B3	43		19		19		25		404		15		36		58		23		8	††	86	††	47	
L143	10B3																	19		14		70	††	61	

ab. Code #	Method Codes	Soil sample identification and values for KCl 40 Extractable S (KCl40) mg/kg air dry																							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L006	KCl40	25		17		30		16		500		13		40		71		16		9.2		93		41	
L009	KCl40	20		14		19		11		332	††	9.4	††	26	††	56		8.5	††	6.2		55		25	
L011	KCl40	20		13		25		13		480		13		31		56		9.1	†	5.8	†	65		27	
L013	KCl40	29		20		35		18		450		13		41		68		15		9		95		37	
L018	KCl40	22		17		27		15		518		14		44		66		14		8.8		85		34	
L019	KCl40	27		18		24		17		482		15		42		99	††	13		10		89		41	
L022	KCl40	23		15		14	†	13		538		14		41		68		14		8.1		83		31	
L023	KCl40	19		14		25		12		534		13		40		52		11		6.5		82		23	
L026	KCl40	22		14		23		14		484		13		39		65		14		8.9		89		36	
L030	KCl40	24		19		29		15		474		13		39		67		13		8.3		80		30	
L036	KCl40	26		17		30		20	††	491		12		35		62		13		7.9		79		30	
L040	KCl40	25		15		29		15		508		12		36		69		17		9.5		72		38	
L044	KCl40									509		11		49	†	149	††								
L064	KCl40	21		16		17		14		197	††	13		35		62		15		13	††	82		28	
L133	KCl40	34	††	24	††	45	††	27	††																
L135	KCl40	16		0.978	††	1.5	††	0.1	††																
L178	KCl40	25		15		28		14		513		12		37		72		18		10		75		38	

Lab. Code #	Method Codes	Soil sample identification and values for DTPA Extractable Cu (12A1) mg/kg air dry																							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L003	12A1	1.6		1.8	†	0.505		2.4	††									2.6		1.8		0.763	††	1.7	††
L005	12A1									0.726		1.2		1.1		0.825	††	2	††	1.5	††	1	††	2.2	
L006	12A1	1.6		1.3		1.2		1.8		0.716		1.0		1.0		0.358		2.9		2.0		1.3		3	
L007	12A1	1.5		1.8	††	0.7		2.5	††	0.7		1.0		1.0		0.4		3.8		2.5		1.7		4.1	
L008	12A1	1.5		1.4		1.3		1.7		0.54		0.929		0.764	††	0.38		3.4		2.6		1.6		3.6	
L009	12A1	3.5	††	2.5	††	2.8	††	3.1	††	2.0	††	2.32	††	2.4	††	1.9	††	3.6		3.0	††	1.8	††	3.9	
L011	12A1	1.7		1.4		1.1		1.9		0.53		0.943		0.836	†	0.341		2.8		2.1		1.3		2.9	
L013	12A1	1.6		0.98	††	1.6		1.7		0.53		0.89		1		0.38		3.2		2.3		1.5		3.2	
L014	12A1	1.7		1.9	††	0.78		2.4	††									4.1	†	3.9	††	4.4	††	5.1	††
L018	12A1	1.6		1.5		0.961		1.9		0.64		1.1		0.848	†	0.398		3.4		2.4		1.5		3.3	
L019	12A1	1.6		1.5		1.1		1.8		0.681		1.1		0.968		0.37		2.8		2.1		1.3		2.9	
L022	12A1	1.6		1.5		1.2		1.8		0.65		1.0		0.93		0.38		3.0		2.3		1.4		2.8	
L023	12A1	1.8		1.5		1.3		1.9		0.524		0.914		0.992		0.433		3.1		2.4		1.4		3.2	
L024	12A1	2.4	††	2.8	††	0.765		3.4	††																
L026	12A1	1.5		1.4		0.905		1.8		0.501		0.878		0.841	†	0.313		3.1		2.2		1.4		2.8	
L027	12A1	2.4	††	2.2	††	1		2.4	††	1.1	††	2.0	††	1.5	††	1.3	††	4.1	†	3.1	††	2.3	††	4.3	†
L028	12A1	1.8		1.6		1.2		2		0.7		1.1		1		0.5		3.1		2.5		1.4		3.2	
L030	12A1																	2.7		1.9		1.2		2.6	
L036	12A1	1.7		1.7	†	1.0		2.1		0.526		0.983		0.811	††	0.364		3.0		2.3		1.4		3.1	
L040	12A1	1.5		1.5		0.71		1.9		0.621		1.1		0.957		0.448		3.1		2.3		1.4		3.3	
L041	12A1	1.9	††	1.4		1.3		1.7		0.7		1.1		1.0		0.56	†	2.7		2.1		1.3		2.9	
L044	12A1									0.8		0.6	††	0.6	††	0.5		2.6		1.9		1.2		2.6	
L064	12A1	1.6		1.6		1.0		1.8		0.59		1.1		1.1		0.42		3.2		2.3		1.5		3.2	
L080	12A1	1.6		1.4		1.1		1.8		0.655		0.95		1		0.34		3.3		2.4		1.5		3.1	
L133	12A1	1.8		1.4		0.98		1.9										3.8		2.6		1.7		3.8	
L135	12A1	1.7		1.4		1.1		1.9		0.83		0.63	††	0.94		0.67	††	2.5		2.1		1.2		2.4	
L137	12A1	1.1	††	1.1	††	0.44		1.6	††									4	†	2.8		1.9	††	4.4	†
L139	12A1	1.7		1.4		1.4		1.9		0.645		1		0.783	††	0.41		2	††	1.4	††	1.3		1.7	††
L142	12A1																	3.6		2.8		1.7		4.3	
L158	12A1	1.5		1.5		1.1		1.8		0.69		1.1		1.1		0.6	†	3.2		2.6		1.4		4.1	
L160	12A1	1.5		1.5		0.726		1.8		0.664		1.1		1.0		0.432		3.1		2.2		1.4		3.1	
L161	12A1	1.5		1.4		0.83		1.8		0.62		1		1.1		0.44		2.8		2.1		1.4		2.9	
L164	12A1									0.58		0.949		0.962		0.452		3.2		2.4		1.5		3.6	
L178	12A1	1.5		1.5		0.71		1.9		0.615		0.999		0.955		0.458		3.1		2.3		1.3		3.3	

b. Code #	Method Codes	Soil sample identification and values for DTPA Extractable Fe (12A1) mg/kg air dry																							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L003	12A1	204		97	††	427		146	††									39		31		0.671	††	25	
L005	12A1									15	††	14	††	172		28	††	44		39		2.3		90	
L006	12A1	163		64		525		97		5.3	††	6.0		278		11		43		34		1.5		60	
L007	12A1	227		94	††	554		129		7.4		5.6		180		14		59		52		2.9		93	
L008	12A1	144		66		490		101		7.0		5.3		66		13		48		38		2.4		61	
L009	12A1	249	††	69		477		115		9.4		7.4		208		16		54		47		2.3		86	
L011	12A1	176		71		335	††	114		6.8		5.5		270		10		57		40		2		67	
L013	12A1	153		65		508		100		7.3		5.2		73		9.3		55		43		1.9		44	
L014	12A1	206		83		608		130										85	††	90	††	100	††	118	
L018	12A1	168		68		471		100		8.7		6.4		147		10		56		44		1.8		54	
L019	12A1	153		65		395		90		10		7.2		177		13		48		39		2.7		74	
L022	12A1	162		65		510		101		9.3		6.8		144		12		48		43		2		46	
L023	12A1	143		70		504		106		8.4		6.0		317		12		49		39		1.9		60	
L024	12A1	372	††	117	††	662	††	195	††																
L026	12A1	139		60		447		92		8.0		6.3		235		12		60		44		2.3		57	
L027	12A1	184		131	††	69	††	192	††	23	††	20	††	215		60	††	85	††	74	††	3.4	††	109	
L028	12A1	191		73		541		111		10.3		6.8		269		14		52		42		1.8		61	
L036	12A1	167		77		456		104		8.2		8.5		201		9.4		46		36		2.1		41	
L040	12A1	181		74.8		495		112		9.2		8.4		191		14		53		43		1.8		63	
L041	12A1	221		69		488		105		11		7.7		95		23	††	65		51		4.6	††	74	
L044	12A1									10		7.2		300		14		74	††	52		3.1	†	114	
L064	12A1	163		66		419		93		8.6		7.2		199		13		66		50		2.0		71	
L080	12A1	200		78		736	††	107		11		7.4		371		15		55		43		2.5		87	
L133	12A1	171		67		433		94										60		49		1.6		62	
L135	12A1	187		80		524		130		8.3		1.4	††	47		9.1		51		41		2.8		41	
L137	12A1	200		80		470		139	†									81	††	74	††	3	†	82	
L139	12A1	206		59		163	††	107		39	††	6.9		57		14		24	††	21	††	0.702	††	32	
L142	12A1																	55		45		2.3		95	
L158	12A1	156		58		444		84		6		4.5		85		11		16	††	9	††	0.01	††	98	
L160	12A1	201		77		518		117		9.5		6.6		245		12		46		39		2.6		46	
L161	12A1	119		59		310	††	80		11		6.2		264		17		48		37		1.9		53	
L164	12A1									9.1		6.4		169		12		58		52		2.0		90	
L178	12A1	182		75		498		111		9.1		8.2		197		14		55		44		2.1		62	

Lab. Code #	Method Codes	Soil sample identification and values for DTPA Extractable Mn (12A1) mg/kg air dry																							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L003	12A1	159		75	††	0.654		227	††									83		87		14	††	96	††
L005	12A1									1.3	††	17		122		33		53	††	67	†	15	††	124	
L006	12A1	214	††	64		2.7	†	184		2.8		17		187	†	30		90		92		19		157	
L007	12A1	156		61		0.51		240	††	4.1		19		152		32		122	††	116	†	24	†	195	
L008	12A1	161		56		2.2		148		2.9		16		155		28		97		111		20		163	
L009	12A1	196	†	53		3.8	††	140		3.2		18		138		37		78		90		20		150	
L011	12A1	174		57		2.6	†	158		2.1		15		140		23		69		70	†	16	†	124	
L013	12A1	159		52	†	5.5	††	161		1.8		15		146		21		87		90		19		149	
L014	12A1	84	††	60		1		88	††									135	††	137	††	165	††	169	
L018	12A1	181		63		0.637		179		2.9		18		162		27		93		101		21		197	
L019	12A1	185		60		3.3	††	174		2.8		16		145		26		79		83		17		139	
L022	12A1	180		57		2.8	†	149		2.4		18		142		25		84		90		21		143	
L023	12A1	170		57		1.5		153		3.3		17		183		29		90		94		21		156	
L024	12A1	124	†	75	††	1.8		177																	
L026	12A1	162		56		0.379		158		2.4		16		153		23		91		94		20		158	
L027	12A1	234	††	63		1		185		4.8	††	30	††	181		48	††	95		99		25	††	178	
L028	12A1	212	††	64		1		174		2.7		16		145		26		86		92		18		152	
L030	12A1																	73		79		16	†	143	
L036	12A1	168		65		0.42		197		2.8		17		154		25		88		95		20		154	
L040	12A1	143		61		0.517		155		2.6		19		134		29		79		88		19		164	
L041	12A1	225	††	66		3.3	††	159		3.7		22	††	195	†	36		93		106		18		148	
L044	12A1									3.1		15		139		27		75		86		17		139	
L064	12A1	164		59		0.7		150		3.0		18		205	††	32		103		107		24	†	183	
L080	12A1	206	†	60		1.3		179		3.3		18		163		26		60	†	63	††	13	††	129	
L133	12A1	164		62		0.68		171										82		84		20		161	
L135	12A1	177		60		2.3		1.7	††	3.5		16		144		32		87		92		21		149	
L137	12A1	120	††	47	††	0.32		150										130	††	137	††	31	††	307	††
L139	12A1	160		43	††	0.82		105	††	1.9		17		70	††	15	††	37	††	49	††	11	††	89	††
L142	12A1																	103		107		21		189	
L160	12A1	179		61		0.061		182		3.3		19		197	††	30		101		96		20		179	
L161	12A1	162		62		2.7	†	160		3.9		17		21	††	31		77		86		20		151	
L164	12A1									3.1		17		163		33		93		104		21		190	
L178	12A1	143		61		0.517		155		2.4		19		135		28		80		87		21		168	

ab. Code #	Method Codes	Soil sample identification and values for DTPA Extractable Zn (12A1) mg/kg air dry																							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L003	12A1	2.6		5.2	††	0.919		1.9	††									0.686		0.428		0.365		1.4	††
L005	12A1									0.094	††	3.3	††	2.1		0.938	††	0.824		0.877	††	0.499		1.5	††
L006	12A1	2.7		5.2	††	2.0	††	1.8	††	0.387		2.2		2.5	††	0.275		0.981		1.1	††	0.629		2.5	
L007	12A1	2.5		5.8	††	0.9		1.6		0.24		2.0		1.9		0.19									
L008	12A1	2.0		4.0	†	1.2		1.2		0.2		1.6		1.7		0.17		0.66		0.407		0.622		2.7	†
L009	12A1	3.9	††	4.6		1.6	†	1.6		0.408		2.1		2.1		0.396	††	0.682		0.426		0.503		2.3	
L011	12A1	2.2		4	†	1.2		1.3		0.285		1.8		1.9		0.16		0.669		0.425		0.469		2.1	
L013	12A1	1.6		3.7	††	1.4		1.2		0.23		1.6		1.8		0.25		0.69		0.36		0.51		2.0	
L014	12A1	2.3		2.6	††	1.0		1.4										1.9	††	1.5	††	1.4	††	1.6	†
L018	12A1	1.9		4.4		0.9		1.4		0.24		1.9		1.8		0.165		0.851		0.494		0.573		2.3	
L019	12A1	2.1		4.4		1.1		1.3		0.188		1.8		1.9		0.115		0.721		0.51		0.601		2.1	
L022	12A1	2.0		4.4		1.2		1.4		0.26		2.0		2.0		0.22		0.78		0.53		0.59		2	
L023	12A1	2.2		4.4		1.2		1.3		0.297		1.7		2.1		0.224		0.706		0.364		0.542		2.1	
L024	12A1	2.3		4.6		0.624		1.5																	
L026	12A1	1.7		4.2		0.842		1.3		0.238		1.7		1.8		0.187		0.757		0.449		0.529		2.1	
L027	12A1	3.5	††	5.1	††	1		1.6		0.12		2.2		2.0		0.12		0.88		0.51		0.65		2.5	
L028	12A1	2.3		4.4		1.1		1.4		0.3		2		1.8		0.3		0.8		0.5		0.5		2	
L030	12A1																	0.631		0.381		0.4		1.8	
L036	12A1	1.9		5.1	††	0.81		1.7	†	0.239		2.0		1.8		0.167		0.741		0.487		0.546		2.2	
L040	12A1	1.8		4.5		0.735		1.4		0.233		1.9		1.8		0.183		0.765		0.504		0.565		2.3	
L041	12A1	2.2		4.0	†	1.1		1.2		0.41		2.0		2.2		0.31		0.82		0.57		0.64		2.2	
L044	12A1									0.2		1.4		1.6		0.2		0.69		0.4		0.47		2	
L064	12A1	1.9		4.4		0.81		1.4		0.35		1.9		2.0		0.25		0.85		0.58		0.62		2.0	
L080	12A1	2.0		4.7		1.2		1.4		0.36		1.7		1.9		0.269		0.975		0.579		0.668		2.5	
L133	12A1	2.0		3.3	††	1.5		1.0	††									0.582		0.313		0.406		1.9	
L135	12A1	2.3		4.3		1.2		1.4		0.44		1.6		2.0		0.32		0.869		0.58		0.639		2.2	
L137	12A1	1.8		4.8	†	0.11	††	1	††									1.1	††	0.73		0.88	††	3.1	††
L139	12A1	1.7		3.4	††	0.535		1.6		0.338		2.3		1.5	†	0.155		0.29	††	0.177	††	0.411		1.4	††
L142	12A1																	0.81		0.58		0.6		2.1	
L158	12A1	1.9		4.4		1.1		1.3		0.32		1.9		2.0		0.28		0.78		0.56		0.5		2.5	
L160	12A1	2.1		4.5		0.795		1.5		0.34		2.2		2.1		0.214		0.837		0.481		0.612		2.12	
L161	12A1	2		4.3		0.88		1.3		0.28		2		2.2		0.1		0.8		0.53		0.59		2.08	
L164	12A1									0.321		2.2		2.7	††	0.247		0.78		0.62		0.57		2.32	

Lab. Code #	Method Codes	Soil sample identification and values for Hot $CaCl_2$ Extractable B - ICPAES (12C2) mg/kg air dry																							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 11 4		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L008	12C2	2.1		1.7	††	2.1		0.8	†																
L009	12C2	0.878		1.1		0.872		0.285	†	0.205		0.479		0.65		3.8	†	0.298		0.398		1.7		1.4	
L011	12C2	0.41		0.228	††	0.362		0.134	††	0.133	††	0.138	††	0.225	††	1.5	††	0.955	††	0.766		1.1		2	
L013	12C2	1.5		1.2		1.9		0.55		0.2		0.6		0.95		6.8		0.35		0.6		1.9		1.8	
L019	12C2	1.2		1.1		1.4		0.537		0.192		0.658		1.1		5.3		0.271		0.501		1.3		1.6	
L022	12C2	1.3		1.1		1.5		0.53		0.22		0.64		1		7.0		0.28		0.52		1.8		1.6	
L023	12C2	1.6		0.989		1.6		0.492		0.185		0.52		0.904		8.8	†	0.351		0.642		1.7		2.0	
L026	12C2	1.6		1.3		1.8		0.567		0.134	††	0.684		1.1		8.5		0.343		0.638		2.0		1.9	
L028	12C2	0.6		0.7	†	0.6		0.3	†							6.4		0.3		0.6		1.3		1.4	
L030	12C2																	0.427		0.783		2.1		2.4	
L036	12C2	1.4		1.2		1.6		0.506		0.203		0.608		0.884		6.6		0.288		0.495		1.9		2	
L040	12C2	1.3		1.1		1.3		0.484		0.187		0.572		0.864		5.6		0.221		0.339		1.6		1.3	
L041	12C2	2.3		2.0	††	4.8	††	1.5	††	1.4	††	1.9	††	3.4	††	7.3		0.42		0.01	††	1.0		1.9	
L064	12C2	1.3		1.2		2.0		0.67		0.39	††	0.73		1.0		5.1		1.1	††	0.81		1.8		2.3	
L133	12C2	2.1		1.6	††	2.2		0.8	†									0.417		0.58		1.5		1.8	
L135	12C2	1.0		0.811		1.2		0.381		0.18		0.57		0.7		5.9		0.33		0.41		1.3		1.2	
L139	12C2	0.715		1		0.492		0.298	†	0.195		0.9	††	0.73		5.9		0.443		0.545		2.1		1.4	
L143	12C2	2.1		1.2		1.2		0.526		0.4	††	0.6		0.6		6.6		0.41		0.61		1.4		1.6	
L178	12C2	1.3		1.1		1.4		0.479		0.19		0.589		0.884		5.8		0.235		0.347		1.7		1.4	

Lab. Code #	Method Codes	Soil sample identification and values for Exchangeable Ca - 1M NH_4Cl extract (15A1) cmol+/kg oven dry																							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L007	15A1									1.5	††	21.5		3.99		4.69									
L008	15A1	13.1		15		11.7		12.9		0.943		20.1		3.46		4.74		17.7		15.1		26.3		11.7	
L009	15A1	11.2		14.6		8.08	††	12		1.24	††	22.4		2.98		4.29	†	16.5		14.3		10.8	††	8.1	††
L011	15A1	15.4		18.4	††	12.3		14.6		0.781	†	21.2		3.75		4.78									
L014	15A1	5.95	††	7.77	††	5.81	††	7.14	††									15		13		14	††	9.8	†
L018	15A1	13.2		14.6		12.2		12.6		1.03		21		3.47		4.75		17.8		15.1		25		12	
L022	15A1	13.6		15.2		12.9		13.3		1		19.8		3.84		4.7		15.9		13.4		25.9		11.3	
L023	15A1	14.3		15.2		12.2		13.1		0.982		18.4		3.7		4.69		16.3		14.3		22.9		11.2	
L024	15A1	12.6		14		12.1		12.4																	
L027	15A1	12.9		14.5		11.7		12.3		0.9		18.4		3.4		4.4		15.8		13.6		27.2		11.1	
L028	15A1	14.2		15.9		11.8		13.6		0.97		19.6		3.86		4.66		17		15.1		24.5		11.1	
L036	15A1	13.7		15.4		12.5		13.1		0.919		18.7		3.34		4.43		15.7		13.9		23.7		11	
L044	15A1	11.1		14.7		8.6	††	11.4		1.02		21.4		3.8		5.2	††	17		16		28		12	
L045	15A1	15.4		16.3		13.2		14.6		0.908		12	††	3.6		5		16		15		12	††	11	
L046	15A1	14.7		18.4	††	13		15.3	††																
L064	15A1	13.4		15.3		12.6		13.2		1.14	†	19		3.67		4.6		16.7		14.8		24.3		11.6	
L143	15A1									11	††	246	††	47	††	49	††								
L160	15A1	13.4		15.4		12.2		12.9		0.92		20.6		3.4		5		17		14.8		24.5		11.6	
L164	15A1									0.931		20.4		3.35		4.84		21.6	††	16.2		30.5	†	12.9	††
L166	15A1																	7.79	††	6.86	††	11.9	††	5.38	††

Lab. Code #	Method Codes	Soil sample identification and values for Exchangeable K - 1M NH_4Cl extract (15A1) cmol+/kg oven dry																							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L007	15A1									0.18		0.68		1.51		1.19									
L008	15A1	0.635		0.557		0.245		0.648		0.212		0.735		1.5		1.19		0.457	†	0.516		0.994		0.534	
L009	15A1	0.657		0.629		0.321	†	0.69		0.239	†	1.04	††	1.75	††	1.55		0.531	††	0.609		1.05		0.61	
L011	15A1	0.607		0.598		0.194		0.577		0.267	††	0.809	†	1.42	†	1.49									
L014	15A1	0.601		0.619		0.208		0.65										0.52	††	0.59		1		0.67	††
L018	15A1	0.59		0.562		0.259		0.638		0.185		0.75		1.54		1.29		0.438		0.522		1.03		0.539	
L022	15A1	0.53		0.52		0.26		0.57		0.183		0.72		1.52		1.21		0.44		0.52		0.99		0.54	
L023	15A1	0.626		0.577		0.264		0.681		0.191		0.741		1.53		1.3		0.435		0.509		0.978		0.537	
L024	15A1	0.569		0.521		0.286		0.614																	
L027	15A1	0.5		0.5		0.2		0.6		0.2		0.7		1.6	†	1.3		0.4	†	0.5		1		0.5	
L028	15A1	0.63		0.56		0.26		0.64		0.18		0.69		1.51		1.22		0.44		0.49		0.96		0.53	
L029	15A1	0.583		0.537		0.307		0.634										0.512	††	0.585		1.04		0.577	
L036	15A1	0.614		0.591		0.244		0.664		0.179		0.65		1.4	††	1.19		0.444		0.522		0.983		0.563	
L044	15A1	0.528		0.564		0.24		0.616		0.196		0.739		1.51		1.29		0.38	††	0.44		0.85	††	0.45	
L045	15A1	1.7	††	1.87	††	0.99	††	1.74	††	0.497	††	2.6	††	7.6	††	2.6	††	1.1	††	1.2	††	2.3	††	1.5	††
L046	15A1	0.65		0.698	††	0.338	†	0.747	††																
L064	15A1	0.531		0.531		0.23		0.56		0.204		0.67		1.43	†	1.17		0.441		0.478		0.889	††	0.507	
L143	15A1									2.8	††	9	††	14.6	††	14	††								
L160	15A1	0.54		0.53		0.24		0.61		0.18		0.71		1.5		1.4		0.435		0.515		1		0.53	
L164	15A1									0.139	††	0.742		1.51		1.33		0.457	†	0.44		0.257	††	0.686	††
L166	15A1																	0.437		0.478		0.982		0.486	

b. Code #	Method Codes	Soil sample identification and values for Exchangeable Mg - 1M NH_4Cl extract (15A1) cmol+/kg oven dry																							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L007	15A1									11.9		1.23		0.54		8.55									
L008	15A1	17.3		4.51		2.75		5.78		14.4		1.34		0.584		10.6		5.58		10.5		2.18		1.87	
L009	15A1	10.2	††	3.54	††	2.04	††	4.3	††	12.9		1.15		0.505		9.25		4.58	††	8.16	††	1.87	††	1.04	††
L011	15A1	19.1		5.11	†	2.72		6.22		12.8		1.21		0.461		10.7									
L014	15A1	5.21	††	4.36		2.75		5.27										4.7	†	5.5	††	3.3	††	3.1	††
L018	15A1	17.6		4.44		2.85		5.69		15.1		1.39		0.58		10.5		5.87		11.7		2.3	†	2.11	
L022	15A1	16.5		4.24		2.85		5.35		13.7		1.31		0.68		9.91		5.6		11.1		2.21		1.98	
L023	15A1	18		4.47		2.71		5.8		13.6		1.35		0.678		10.3		5.4		11.2		2.13		1.9	
L024	15A1	18.2		4.7		2.92		6.05																	
L027	15A1	16.2		4.1		2.5		5.2		13		1.2		0.6		9.4		5.4		11.1		2.2		1.9	
L028	15A1	17.5		4.58		2.62		5.74		13.0		1.31		0.64		9.99		5.9		12	†	2.19		1.87	
L036	15A1	16.6		4.38		2.66		5.46		12.9		1.24		0.548		9.7		5.54		11		2.17		1.9	
L044	15A1	15.9		4.79		2.26	††	5.47		14.1		1.51	†	0.65		10.8		5.7		12	†	2.2		2	
L045	15A1	17.5		4.43		2.74		5.59		20	††	1.2		0.635		11		5.8		11		2	†	2	
L046	15A1	10.6	††	4.81		2.97		5.51																	
L064	15A1	15.8		4.23		2.4		5.28		12.7		1.23		0.6		9.41		5.18		10.9		2.19		1.92	
L143	15A1									145	††	15	††	6.1	††	104	††								
L160	15A1	16.5		4.6		2.9		5.7		14.1		1.5		0.62		11.7		5.83		11.7		2.31	†	2.06	
L164	15A1									17	††	1.19		0.473		12.9	††	6.89	††	11.2		2.13		2.01	
L166	15A1																	2.43	††	4.86	††	0.983	††	0.794	††

b. Code #	Method Codes	Soil sample identification and values for Exchangeable Na - 1M NH_4Cl extract (15A1) cmol+/kg oven dry																							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L007	15A1									5.75	††	0.29	††	0.11		6.16									
L008	15A1	2.05		0.105		2.82	††	0.205		25.6		0.13		0.136		7.87		0.108		1.08		1.15		0.167	
L009	15A1	1.97		0.311	††	0.717	†	0.389	††	22		0.353	††	0.364	††	8.7		0.256	††	1.73	††	1.39		0.35	††
L011	15A1	1.17		0.092		0.401		0.112		18.8		0.518	††	0.243	††	8.14									
L014	15A1	0.074	††	0.007	†	0.028	††	0.014	††									0.1		1.3	††	1.4		0.28	††
L018	15A1	1.86		0.118		0.47		0.303	†	16.2	†	0.126		0.106		7.68		0.153	††	1.31	††	1.29		0.199	
L022	15A1	1.56		0.07		0.45		0.16		23.9		0.091		0.122		7.27		0.085		1.09		1.18		0.181	
L023	15A1	1.76		0.052		0.43		0.149		27		0.106		0.127		8.62		0.069		1.08		1.14		0.162	
L024	15A1	16.7	††	3.18	††	1.39	††	4.53	††																
L027	15A1	1.5		0.1		0.4		0.2		24		0.1		0.1		7.8		0.08		1.1		1.1		0.2	
L028	15A1	1.84		0.04		0.43		0.19		24.1		0.108		0.13		7.21		0.08		1.12		1.15		0.18	
L036	15A1	1.65		0.07		0.394		0.155		22.8		0.084		0.1		7.06		0.076		1.12		1.2		0.169	
L044	15A1	1.61		0.112		0.546		0.191		25.3		0.039		0.137		6.87		0.03	†	1		1.1		0.22	
L045	15A1	4.33	††	0.14		0.87	††	0.33	††	61	††	0.262	††	0.245	††	22	††	0.17	††	2	††	2.4	††	0.5	††
L046	15A1	1.75		0.088		0.54		0.201																	
L064	15A1	1.5		0.09		0.348		0.16		26.5		0.094		0.113		7		0.213	††	0.979		1.05		0.188	
L143	15A1									293	††	3	††	2.7	††	79	††								
L160	15A1	1.6		0.1		0.46		0.19		27.6		0.16		0.16		9.4		0.104		1.14		1.19		0.197	
L164	15A1									22.9		0.075		0.086		5.97		0.077		0.992		1.09		0.183	
L166	15A1																	0.087		1.13		1.32		0.161	

ab. Code #	Method Codes	Soil sample identification and values for Exchangeable Ca - 1M NH_4OAc extract (15D3) cmol+/kg air dry																							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L003	15D3	17.9	††	22.0	††	16.5	††	11.8																	
L005	15D3									0.95		17.9		3.43		4.36		15.3		13.5		20.9		10.5	
L006	15D3	12.4		15.1		10.6		12.6		0.82		17.7		3.05		4.06		17.5		14.9		22.8		11.4	
L007	15D3	11.5		14.1		10.0		12.1										17.6		15.2		52.7	††	11.9	
L009	15D3	12.8		15.9		11.7		13.2		1.65	††	26.5	††	6.5	††	7.35	††	17.8		15		28.8	††	11.6	
L011	15D3	13.6		17.8	††	12.1		14.7	††	0.908		19.8		3.83		4.59		16.1		13.6		20.1		10.9	
L012	15D3	13.7		15.8		10.7		13.3										16.6		14.2		21.5		11	
L013	15D3	12.7		15.7		11.1		12.2		1.1		15.8		3.6		3.9		15		13.2		32.3	††	11	
L019	15D3	12.8		15.2		10.4		12.6		1.03		17.5		3.55		4.63		17		13.9		21.3		11.2	
L024	15D3	7.66	††	7.56	††	7.45	††	7.7	††																
L026	15D3	12.4		15.2		10.6		12.7		0.849		19.8		3.29		4.29		17.5		14.5		24.8		11.8	
L030	15D3	12		14.4		9.8		12		0.887		15.8		3.12		4.2		15.7		13.5		20		10.1	
L040	15D3	12.2		14.9		10.4		12.4		0.88		18.5		3.46		4.54		16.2		14.0		20.5		11.1	
L041	15D3	11.6		12.8	†	8.84		10.5	††	0.94		16.0		4.3	†	3.78		18.9		17.0	††	20.8		9.82	
L042	15D3	13.2		15.4		10.5		12.9		0.82		16.2		3.47		4.72		16		13.7		20.1		10.7	
L046	15D3									0.956		17.1		3.49		4.59									
L055	15D3	12.9		15.3		10		11.8		1.23		18.2		3.85		4.87		15.4		13.6		34.5	††	10.7	
L080	15D3	12.2		4.32	††	10.5		12.4		1.19		17.6		3.58		4.24		16.8		13.9		22.2		10.7	
L133	15D3	10.9	†	13.2		9.6		11.2										18		14		25		14	††
L135	15D3	13.3		16.3		11.7		14.0	†	1.02		12.9	†	3.24		3.77		14.6		12.7		20.1		9.73	†
L137	15D3	12.2		14.6		9.65		12.1										16.4		14.4		24.1		11	
L139	15D3	12.1		14.4		11.7		13.1		0.986		16.9		3.85		4.15		14.6		12.4		21.3		10.9	
L142	15D3	12.4		10.2	††	11.5		13.2		1.1		18		3.7		5		20.3	††	21.6	††	33.6	††	17.2	††
L156	15D3	14.7	††	16.9		13.8	††	14.8	††	1.19		26.4	††	4.71	††	5.53	†								
L158	15D3	12.2		15.1		10.6		12.3		0.94		18.3		3.75		4.53		17.1		14.8		22.0		11.6	
L161	15D3	14.0	††	16.7		11.6		14.1	†	1.3		21	†	4.4	†	5.5	†	17.9		15.6	†	24.6		12.3	†
L166	15D3									0.8		16.1		3.4		4.6		8.24	††	7.02	††	10.4	††	5.25	††
L172	15D3	15.7	††	15.0		9.9		12.4																	
L178	15D3	12.3		14.9		10.4		12.4		0.85		18.4		3.51		4.5		16.3		13.7		19.9		10.9	
L179	15D3									1.18		14.1	†	2.72	†	4.61		14.9		12.6		15.8	††	9.73	†

ab. Code #	Method Codes	Soil sample identification and values for Exchangeable K - 1M NH_4OAc extract (15D3) cmol+/kg air dry																							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L003	15D3	0.664	††	0.686	††	0.358	††	0.51																	
L005	15D3									0.288		0.146	††	1.25		1.12		0.51		0.146	††	1.13	††	0.611	
L006	15D3	0.548		0.528		0.248		0.609		0.23		0.674		1.38		1.18		0.441		0.501		0.971		0.512	
L007	15D3	0.46		0.43		0.19		0.51										0.47		0.51		0.96		0.55	
L009	15D3	0.53		0.527		0.257		0.604		0.21		0.712		1.43		1.21		0.434		0.493		0.896		0.489	
L011	15D3	0.726	††	0.524		0.222		0.592		0.265		0.662		1.34		1.03	†	0.401		0.501		0.939		0.467	
L012	15D3	0.586		0.565		0.296		0.698	††									0.562	††	0.617	††	1.05		0.712	††
L013	15D3	0.5		0.52		0.27		0.56		0.18		0.59		1.3		1.2		0.4		0.47		0.92		0.53	
L019	15D3	0.517		0.528		0.254		0.583		0.204		0.715		1.46		1.15		0.443		0.479		1.03		0.545	
L024	15D3	0.601		0.572		0.258		0.616																	
L026	15D3	0.499		0.511		0.232		0.574		0.221		0.661		1.32		1.22		0.444		0.49		0.99		0.553	
L029	15D3	0.552		0.506		0.245		0.583										0.46		0.537		1.01		0.552	
L030	15D3	0.489		0.482		0.209		0.558		0.162		0.612		1.36		1.12		0.408		0.462		0.914		0.483	
L040	15D3	0.668	††	0.607		0.289		0.676	†	0.273		0.649		1.21		1.25		0.47		0.538		0.961		0.504	
L041	15D3	1.99	††	0.16	††	0.56	††	0.24	††	0.19		0.66		1.51		1.14		0.4		0.47		0.92		0.5	
L042	15D3	0.53		0.5		0.23		0.57		0.16		0.64		1.46		1.08		0.402		0.459		0.871		0.501	
L046	15D3									0.238		0.704		1.41		1.22									
L055	15D3	0.48		0.45		0.21		0.52		0.22		0.66		1.43		1.11		0.42		0.49		0.97		0.52	
L080	15D3	0.448		0.448		0.269		0.578		0.202		0.616		1.43		1.07		0.565	††	0.6	†	0.965		0.614	
L133	15D3	0.46		0.39	†	0.17	†	0.42	††									0.576	††	0.617	††	1.23	††	0.712	††
L135	15D3	0.497		0.463		0.187		0.53		0.16		0.53	††	1.27		0.9	††	0.54	†	0.57		0.99		0.6	
L137	15D3	0.5		0.497		0.221		0.574										0.418		0.492		0.982		0.536	
L139	15D3	0.55		0.561		0.285		0.632		0.359	††	0.635		1.44		1.24		0.449		0.553		1.13	††	0.563	
L142	15D3	0.45		0.21	††	0.49	††	0.43	††	0.26		0.71		1.43		1.22		0.39		0.44		0.85	†	0.46	
L156	15D3	0.522		0.455		0.227		0.571		0.271		0.677		1.45		1.2									
L158	15D3	0.5		0.51		0.24		0.58		0.17		0.69		1.56		1.16		0.42		0.49		0.96		0.54	
L161	15D3	0.5		0.5		0.24		0.58		0.19		0.67		1.5		1.3		0.41		0.46		0.94		0.52	
L166	15D3									0.2		0.5	††	0.9	††	1.2		0.453		0.527		0.921		0.491	
L172	15D3	6.4	††	1.73	††	0.75	††	0.42	††																
L178	15D3	0.668	††	0.607		0.289		0.676	†	0.275		0.638		1.19		1.28		0.47		0.543		0.97		0.512	
L179	15D3									0.219		0.613		1.1	††	1.2		0.353		0.425		0.89		0.44	

Soil sample identification and values for

Exchangeable Mg - 1M NH_4OAc extract (15D3) cmol+/kg air dry

Lab. Code #	Method Codes	November 2010 (Round 210)								March 2011 (Round 410)								May 2011 (Round 610)							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L003	15D3	16.2		4.30		2.44		3.77	††																
L005	15D3									17.2	††	1.58		0.69	†	16.2	††	5.48		12.2	††	2.37		1.96	
L006	15D3	16.3		4.21		2.37		5.41		12.7		1.15		0.54		9.47		5.82		11.5		2.08		1.86	
L007	15D3	61.3	††	3.65	†	2.02	††	4.72										5.74		10.8		2.88	††	1.94	
L009	15D3	10.8	††	3.87		2.69		4.71		13.6		1.52		0.75	††	10.7		5.09		8.81	††	2.29		1.92	
L011	15D3	16.4		4.69	†	2.55		5.8		12.1		1.12		0.396	†	9.48		5.5		10.9		1.91		1.74	
L012	15D3	14.7		4.32		2.45		5.41										5.49		10.6		2.06		1.81	
L013	15D3	15.4		5.03	††	2.52		5.3		12.7		1.2		0.53		8.6		5.3		10.7		2.27		1.76	
L019	15D3	16.5		4.52		2.54		5.46		13.7		1.27		0.518		9.9		5.53		10.2		2.1		1.85	
L024	15D3	16.1		4.42		2.79		5.48																	
L026	15D3	15.9		4.19		2.39		5.22		13.1		1.2		0.521		9.56		5.83		11.4		2.17		1.96	
L030	15D3	14.9		4.05		2.34		5.08		12.1		1.12		0.522		9.1		5.21		10.3		1.94		1.7	
L040	15D3	15.5		3.97		2.4		5.05		13.4		1.19		0.548		10.1		5.53		11.1		1.88		1.8	
L041	15D3	12.2	††	4.19		2.64		4.96		8.38	††	1.65	†	0.8	††	8.06		5.32		9.27	†	2.08		1.78	
L042	15D3	17.1		4.67		2.66		5.48		12.5		1.26		0.62		9.21		5.54		10.9		2.21		1.86	
L046	15D3									12.8		1.16		0.546		9.33									
L055	15D3	16		4.16		2.41		5.36		13.8		1.56		0.61		9.36		5.14		10.5		2.21		1.79	
L080	15D3	14.3	†	14.6	††	3.14	††	5.17		11.8		1.95	††	1.45	††	3.24	††	4.62	†	9.4	†	2.85	††	1.56	†
L133	15D3	12.1	††	3.03	††	1.86	††	3.95	††									6.71	††	11		2.97	††	2.69	††
L135	15D3	17.0		4.65		2.82		5.66		10.1	†	0.99		0.57		7.37	†	4.94		9.38	†	1.98		1.66	
L137	15D3	15.7		4.12		2.29		5.16										5.56		11.1		2.27		1.86	
L139	15D3	16.1		4.15		2.58		5.6		16	†	1.29		0.599		9.33		5.14		10.4		2.38		1.89	
L142	15D3	12.6	††	2.1	††	6	††	3.5	††	15		1.6		0.7	†	13	††	4.13	††	6.54	††	2.76	†	2.29	††
L156	15D3	16.9		4.43		2.86	†	5.81		15.2		1.69	†	0.717	†	10.8									
L158	15D3	15.8		4.22		2.57		5.27		14.2		1.28		0.63		10.5		5.71		11.9	†	2.11		1.91	
L161	15D3	14.6		4.07		2.41		4.94		13		1.4		0.52		9.8		5.21		10.6		2.18		1.77	
L166	15D3									5.7	††	1		0.5		8.3		2.42	††	4.67	††	0.831	††	0.72	††
L172	15D3	21.6	††	5.87	††	2.47		1.42	††																
L178	15D3	15.5		3.97		2.4		5.05		13.6		1.2		0.551		10.1		5.46		10.9		1.84		1.81	
L179	15D3									12.1		1.11		0.504		9.03		5.55		11.5		1.79		1.65	

Lab. Code #	Method Codes	Soil sample identification and values for Exchangeable Na - 1M NH_4OAc extract (15D3) cmol+/kg air dry																							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L003	15D3	1.55		0.091		0.395		0.117																	
L005	15D3									21.1		0.106		0.105		6.6		0.079		1.09		1.2		0.178	
L006	15D3	1.68		0.095		0.455		0.192		23.3		0.117		0.127	†	7.48		0.098		1.16		1.22		0.186	
L007	15D3	1.41		0.13		0.35		0.21										0.17	†	1.27		1.33		0.31	††
L009	15D3	1.5		0.417	††	0.781	††	0.313	††	19.2		0.268	††	0.323	††	7.09		0.166	†	1.08		1.12		0.24	†
L011	15D3	1.46		0.042		0.337		0.057		23.5		0.108		0.106		7.03		0.106		0.519	††	0.61	††	0.1	††
L012	15D3	1.56		0.122		0.326		0.269	†									0.205	††	1.32	†	1.36		0.293	††
L013	15D3	1.51		0.07		0.39		0.16		19.6		0.12		0.14	†	6.1		0.09		1.21		1.35		0.19	
L019	15D3	1.6		0.073		0.412		0.152		25.4		0.144		0.108		7.58		0.088		1.1		1.25		0.177	
L024	15D3	1.66		0.081		0.401		0.161																	
L026	15D3	1.54		0.060		0.397		0.148		23.3		0.094		0.1		7.22		0.083		1.15		1.23		0.185	
L030	15D3	1.55		0.087		0.419		0.171		25		0.09		0.11		7.93		0.097		1.08		1.13		0.182	
L040	15D3	1.47		0.081		0.419		0.184		22.2		0.114		0.115		5.21		0.104		1.02		1.13		0.19	
L041	15D3	0.67	††	0.67	††	0.31	†	0.76	††	24.4		0.28	††	0.23	††	6.72		0.17	†	1.13		1.22		0.25	†
L042	15D3	1.54		0.06		0.4		0.15		20.9		0.08		0.11		6.15		0.071		0.999		1.1		0.175	
L046	15D3									20.1		0.105		0.108		5.8									
L055	15D3	1.43		0.063		0.36		0.14		25.5		0.12		0.12		8.06		0.08		1.09		1.2		0.17	
L080	15D3	0.826	††	0.065		0.222	††	0.122		15		0.091		0.087	†	3.99	†	0.111		0.624	††	0.676	††	0.144	†
L133	15D3	0.76	††	0.038		0.2	††	0.08										0.133		1.43	††	1.85	††	0.274	††
L135	15D3	1.4		0.054		0.372		0.124		16.9		0.24	††	0.23	††	5.45		0.25	††	1.1		1.14		0.32	††
L137	15D3	1.59		0.191	††	0.535	††	0.3	††									0.222	††	1.26		1.39		0.3	††
L139	15D3	1.6		0.096		0.535	††	0.225		18.4		0.141		0.145	††	4.9		0.121		1.22		1.32		0.247	†
L142	15D3	1.5		0.27	††	0.15	††	0.05		25		0.13		0.11		1.7	††	0.08		1.03		1.14		0.17	
L156	15D3	1.59		0.016	†	0.405		0.125		22.2		0.035	†	0.050	††	7.15									
L158	15D3	1.34	†	0.05		0.36		0.12		23.6		0.11		0.11		7.35		0.07		1.04		1.11		0.15	
L161	15D3	1.55		0.11		0.41		0.16		24		0.47	††	0.21	††	7.3		0.083		1.02		1.19		0.19	
L166	15D3									0.05	††	0.05	†	0.05	††	2.8	††	0.083		1.09		1.09		0.144	†
L172	15D3	2.05	††	0.09		0.55	††	0.22																	
L178	15D3	1.47		0.081		0.419		0.184		21.5		0.113		0.114		5.15		0.114		1.02		1.12		0.197	
L179	15D3									17.6		0.138		0.114		5.69		0.146		1.02		1.09		0.191	

Lab. Code #	Method Codes	Soil sample identification and values for Exchangeable Al - 1M NH_4OAc extract (15G1) cmol+/kg oven dry																							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L009	15G1	0.011		0.001		0.043		0.002	†	0.001		0.0003		0.003		0.001		0.001		0.001		0.0004		0.002	†
L011	15G1	0.049		0.019		0.353		0.037	†	0.008		0.008		0.020		0.015		0.007		0.004		0.002		0.009	
L013	15G1	0.01		0.01		0.2		0.01		0.01		0.03	††	0.06	†	0.03		0.021	†	0.019		0.011		0.016	
L019	15G1	0.030		0.011		0.158		0.020		0.036	††	0.012	†	0.106	††	0.046	††	0.020		0.019		0.013		0.045	††
L022	15G1	0.065		0.005		0.258		0.02		0.002		0.002		0.017		0.007		0.005		0.005		0.005		0.009	
L026	15G1	0.066		0.02		0.366		0.05	††	0.006		0.001		0.027		0.028		0.012		0.030		0.008		0.016	
L028	15G1	0.25	††	0.01		0.57		0.18	††	0.01		0.01	†	0.01		0.02		0.02		0.02		0.02		0.02	†
L029	15G1	0.122	††			0.245																			
L030	15G1	0.046		0.0001		0.353		0.005	†	0.001		0.00001		0.011		0.0002		0.0001		0.0001		0.002		0.006	
L036	15G1	0.059		0.008		0.292		0.020		0.009		0.0045		0.022		0.004		0.006		0.006		0.004		0.007	
L040	15G1	0.035		0.015		0.268		0.019		0.005		0.0076		0.033		0.011		0.007		0.006		0.006		0.009	
L042	15G1	0.015		0.015		0.32		0.015																	
L044	15G1																	0.02		0.03		0.02		0.02	†
L055	15G1	0.07		0.01		0.01		0.02		0.009		0.002		0.03		0.009		0.016		0.019		0.01		0.008	
L064	15G1	0.058		0.011		0.313		0.023		0.003		0.002		0.029		0.011		0.006		0.006		0.003		0.007	
L133	15G1	0.035		0.004		0.23		0.013																	
L137	15G1	0.011		0.006		0.052		0.019										0.038	††	0.02		0.011		0.077	††
L161	15G1	0.13	††	0.02		0.4		0.05	††	0.008		0.002		0.057	†	0.046	††	0.009		0.015		0.011		0.036	††
L164	15G1																	0.01		0.03		0.005		0.01	
L172	15G1	0.05		0.05	††	0.18		0.05	††																
L178	15G1	0.035		0.015		0.268		0.019		0.005		0.007		0.032		0.011		0.007		0.007		0.006		0.009	

Lab. Code #	Method Codes	Soil sample identification and values for Aluminium – Mehlich 3 (18F1) mg/kg air dry																							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L008	M3-Al	768		602		751		676		400		340		989	†	1177		336	†	601		209		964	
L013	M3-Al	932		678		865	††	800		336		106	††	617		987		367		828		190		1030	
L019	M3-Al	739		548		647	††	618	†	314		269		771		939		413	†	832		9.8		983	
L026	M3-Al	948		691		749		762		400		225	†	806		1180		362		816		24.4		988	
L028	M3-Al	876		680		748		760		425		321		848		1200		409	†	858		157		1020	
L040	M3-Al	877		664		764		783		388		330		780		1091		360		777		206		837	
L045	M3-Al	1184	††	964	††	962	††	1047	††	582	††	432	†	1158	††	1469		566	††	1084	††	93		1287	††
L097	M3-Al	870		534	†	704		720		306		244	†	855		982		293	††	662		59		805	
L143	M3-Al	614	†	487	†	736		534	††	422		346		1046	††	1098		358		620		153		1030	
L156	M3-Al	1334	††	1536	††	1228	††	1094	††																
L178	M3-Al	877		664		764		783		387		333		782		1089		357		769		196		828	

Lab. Code #	Method Codes	Soil sample identification and values for Boron – Mehlich 3 (18F1) mg/kg air dry																							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L008	M3-B	0.987		0.932		1.4		0.339		0.591	†	0.819		0.795		5.4		0.423		0.383		2.1		1.3	
L013	M3-B	0.45	††	0.69		0.37		0.1	†	0.18		0.71		0.39		6.3		0.2		0.3		2.2		1.3	
L019	M3-B	0.377	††	0.56		0.2		0.05	††	0.07		0.61		0.32		6.9		0.11		0.13		2.5		1.4	
L026	M3-B	0.952	†	0.988		1.1		0.41		0.237		0.557		0.558		4.4	††	0.585		0.705		2.2		1.4	
L028	M3-B	0.12	††	0.54		0.12		0.12	†	0.22		0.82		0.47		6.9		0.43		0.57		2.6		1.4	
L040	M3-B	0.989		1.1		1.1		0.345		0.248		0.767		0.595		7.3		0.25		0.484		1.8		0.936	
L045	M3-B	1		1.2		0.9		0.6	†	0.917	††	1.5	††	1.3	††	7.4		0.29		0.35		2.2		1.3	
L097	M3-B	0.884	†	0.882		0.787		0.35		0.365		0.728		0.736		5.5		0.484		0.618		1.9		1.1	
L143	M3-B	0.25	††	0.34		0.48				0.1		0.6		0.7		4.7	†	0.33		0.12		2.2		1.6	
L156	M3-B									4	††	4.9	††	0.796		12	††								
L178	M3-B	0.989		1.1		1.1		0.345		0.251		0.765		0.591		7.3		0.242		0.49		1.8		0.943	

Lab. Code #	Method Codes	Soil sample identification and values for Calcium – Mehlich 3 (18F1) mg/kg air dry																							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L008	M3-Ca	1905		2539	†	2049		2035		243		4696		927	†	924		3018		1982		5773		2221	
L013	M3-Ca	2471		3216		2367		2613		200		3166	††	693		801		3233		2686		5742		2178	
L019	M3-Ca	2500		3300		2380		2600		236		4607		914	†	960		3481		3033		5439		2557	
L026	M3-Ca	2350		3090		2120		2380		215		4050		722		893		2950		2540		5020		2160	
L028	M3-Ca	2430		3350		2170		2740		238		4030		766		925		3290		2830		5450		2160	
L040	M3-Ca	2365		3184		2320		2507		215		4589		739		847		3408		2603		4811		1921	
L045	M3-Ca	2634		3378		2417		2723		248		4802		733		879		3417		2758		6117		2399	
L097	M3-Ca	2198		2720		1878		2340		172		3464	††	791		739		2752		2386		3734		2011	
L143	M3-Ca	1868		2396	††	2093		1941		209		4329		981	††	794		2958		1897		578	††	2337	
L156	M3-Ca	2780		2470	††	3663	††	2824		242		5062		865		1083	††								
L178	M3-Ca	2365		3184		2320		2507		213		4581		742		842		3372		2639		5006		1966	

Lab. Code #	Method Codes	Soil sample identification and values for Copper – Mehlich 3 (18F1) mg/kg air dry																							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L008	M3-Cu	1.2		2.1		0.335		1.6		1.3		1.9		1.9		0.653		4.4		2.4		2.5		4.2	
L013	M3-Cu	1.7		2.4		1.5		2.0		1.2		1.6		1.2		0.74		4.1		2.9		2.1		3.8	
L019	M3-Cu	1.2		2.2		0.53		1.7		0.95		1.6		1.5		0.59		5.6		3.8	†	2.7		5	
L026	M3-Cu	1.6		2.7		1.6		2.0		1.2		1.9		1.4		0.805		4.4		3.3		2.4		4.3	
L028	M3-Cu	1.5		2.5		0.61		2		1.4		1.9		1.7		0.96		4.9		3.5		2.6		4.3	
L040	M3-Cu	0.958		2.2		0.75		1.9		1.5		1.8		1.2		0.666		3.1		2.5		2.0		3.1	
L045	M3-Cu	1.9		3.3	††	0.3		2.6	†	1.7		2.3	†	2.1		0.99		6		4.2	††	3		5.4	
L097	M3-Cu	1.4		2		1.2		1.7		1		157	††	1.7		0.634		3.3		2.5		1.6		3.1	
L143	M3-Cu	1.1		1.9		0.45		1.5		1.3		2		2.2		0.8		4		2.3		2.5		4.2	
L156	M3-Cu	0.737		5.1	††	2.8	††	5.1	††	2.2	††	2.7	††	2.3		1.6	††								
L178	M3-Cu	0.958		2.2		0.75		1.9		1.5		1.9		1.3		0.673		3.1		2.5		1.9		3.0	

Lab. Code #	Method Codes	Soil sample identification and values for Iron – Mehlich 3 (18F1) mg/kg air dry																							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L008	M3-Fe	252		147		431		140		140		73		217		47		336	††	601	††	209	††	964	††
L013	M3-Fe	338		174		643		187		117		50	†	154		36		202		184		24		122	
L019	M3-Fe	315		177		472		177		153		77		247		49		200		167		28		108	
L026	M3-Fe	275		155		466		158		123		69		195		42		164		147		20		102	
L028	M3-Fe	293		164		430		168		152		74		227		49		220		192		30		129	
L040	M3-Fe	226		140		345		146		119		79		198		41		179		145		17		91	
L045	M3-Fe	489	††	288	††	624		304	††	258	††	151	††	406	††	79	††	353	††	288	††	46		189	††
L097	M3-Fe	295		129		556		151		100		45	†	173		35		144		125		14		73	
L143	M3-Fe	205		128		378		123		163		87		270		49		177		127		29		98	
L156	M3-Fe	354		212		330		243	††	191		98		284		81	††								
L178	M3-Fe	226		140		345		146		123		81		195		42		186		151		18		89	

Lab. Code #	Method Codes	Soil sample identification and values for Magnesium – Mehlich 3 (18F1) mg/kg air dry																							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L008	M3-Mg	1501		452		301		542	††	2129		199		89		1145		650		994		369		239	
L013	M3-Mg	1682		540		326		654		1541		153	††	59		1106		665		1246		324		228	
L019	M3-Mg	1910		569		335		674		2234		208		85		1272	††	713		1364		388		251	
L026	M3-Mg	1720		525		283		618		1890		181		66		1120		608		1190		316		219	
L028	M3-Mg	1700		485		271		637		2620		174		73		1100		671		1340		353		224	
L040	M3-Mg	1574		528		312		644		2248		201		72		1121		739		1187		325		224	
L045	M3-Mg	1842		523		312		644		2468		205		71		1182	†	711		1329		377		245	
L097	M3-Mg	1822		471		252		626		2061		145	††	79		1123		589		1308		256		206	
L143	M3-Mg	1475		424		296		509	††	2046		179		94		1043	†	588		859		357		229	
L156	M3-Mg	1903		396		351		668		2316		204		83		1649	††								
L178	M3-Mg	1574		528		312		644		2251		198		75		1119		725		1174		330		216	

Lab. Code #	Method Codes	Soil sample identification and values for Manganese – Mehlich 3 (18F1) mg/kg air dry																							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L008	M3-Mn	227		57		2.5		161		13		65		314		55		151		163		103		382	
L013	M3-Mn	296		70		2.6		207		11		51		207		57		148		203		87		364	
L019	M3-Mn	272		67		2.5		195		11		64		302		61		148		194		82		377	
L026	M3-Mn	245		68		2.6		183		11		61		230		59		127		177		83		295	†
L028	M3-Mn	255		63		2		183		14		62		283		61		163		214		92		394	
L040	M3-Mn	322		74		2.1		243		11		72		352		74		157		205		77		366	
L045	M3-Mn	330		85		2.9		259		14		90		399		71		228	††	304	††	112		602	††
L097	M3-Mn	277		62		2.1		182		14		49		256		56		124		168		70		286	††
L143	M3-Mn	200		55		2.5		147		12		69		345		52		133		145		93		364	
L156	M3-Mn	318		69		33	††	224		16		85		428		88	††								
L178	M3-Mn	322		74		2.1		243		11		72		355		71		160		195		75		346	

Lab. Code #	Method Codes	Soil sample identification and values for Phosphorus ICP – Mehlich 3 (18F1) mg/kg air dry																							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L008	M3	20		0.112	††	64		21		43		109		176		4.5	†	13		8.7		67		19	
L013	M3	25		82		81	†	28		26		80		103		0.82		12		12		54		18	
L019	M3	25		87		73		25		40		89		148		4.5	†	15		13		67		17	
L026	M3	27		86		75		27		27		95		134		1.0		6.7		7.6		57		14	
L028	M3	26		84		72		27		32		99		145		1.1		14		12		61		18	
L040	M3	22		91		71		29		35		115		128		11	††	12		9.4		60		13	
L045	M3	35		120	††	99	††	36	††	44		121		178		2.2		22	††	19	††	71		15	
L097	M3	23		68	†	70		24		24		77		132		0.001		11		8.6		38		13	
L143	M3	14	††	67	†	67		17	††	32		106		173		1.3		13		8.2		66.2		18	
L156	M3	35		90		123	††	35	†																
L178	M3	22		91		71		29		36		118		130		10	††	14		11		59		15	

Lab. Code #	Method Codes	Soil sample identification and values for																							
		NOT ASSESSABLE								Phosphorus Col – Mehlich 3 (18F2) mg/kg air dry								NOT ASSESSABLE							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L019	M3	20		72		63		19		29		108		135		1.7		12		13		78		14	

Lab. Code #	Method Codes	Soil sample identification and values for																							
		Potassium – Mehlich 3 (M3-K) mg/kg air dry																							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L008	M3-K	184		187		94		208		116		305		627		492		160		148		422		195	
L013	M3-K	190		207		95		235		68		233		398		398		155		163		371		183	
L019	M3-K	194		213		98		230		74		295		672		474		160		176		396		190	
L026	M3-K	191		208		90		227		90		287		537		445		154		175		376		187	
L028	M3-K	197		204		94		225		79		260		547		426		164		183		391		189	
L040	M3-K	225		229		113	†	250		108		279		438		467		179		204		488		228	††
L045	M3-K	197		209		104		224		61		220		535		421		166		184		389		194	
L097	M3-K	181		179		77	†	217		82		241		649		386		139		159		319		182	
L143	M3-K	155		163		95		176	††	99		282		665		397		144		116		421		203	
L156	M3-K	206		194		299	††	240		73		273		553		450									
L178	M3-K	225		229		113	†	250		109		271		432		470		182		210		491		232	††

Lab. Code #	Method Codes	Soil sample identification and values for Sodium – Mehlich 3 (M3-Na) mg/kg air dry																							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L008	M3-Na	349		34		142	††	44		5225		75	††	65	††	1510		4.9	†	83	††	262		37	
L013	M3-Na	293		14		80		34		1349	††	19		20		1002	††	22		224		227		33	
L019	M3-Na	378		11		96		30		5068		54	††	30		1772		25		262		281		43	
L026	M3-Na	399		16		105		38		5420		23		24		1730		18		261		278		39	
L028	M3-Na	327		15		88		36		5760	†	24		29		1700		29		263		270		39	
L040	M3-Na	375		25		103		49		5283		27		25		1630		25		267		302		47	
L045	M3-Na	351		23		97		41		4551	††	30		29		1541		19		239		243		37	
L097	M3-Na	341		12		81		33		5233		21		29		1486		15		220		214		35	
L143	M3-Na	329		46		130		68	††	4716	†	75	††	99	††	1364		72	††	234		352		96	††
L156	M3-Na	400		29		83		40		5167		28		27		1649									
L178	M3-Na	375		25		103		49		5285		27		26		1625		25		257		285		42	

Lab. Code #	Method Codes	Soil sample identification and values for Sulphur – Mehlich 3 (M3-S) mg/kg air dry																							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L008	M3-S	51	††	56	††	61	††	45	††	253	††	31	†	32		46		38		28		156	††	51	
L019	M3-S	31		26		35		20		470		22		53		85		16		10		94		37	
L026	M3-S	31		29		35		20		490		19		46		92		15		9.7		94		34	
L028	M3-S	30		26		34		22		476		23		53		94		22		18		106		42	
L040	M3-S	29		28		37		21		471		23		45		72		23		17		102		25	
L045	M3-S	39	††	33	†	41		26	†	592	††	27		64		104		34		25		122		58	
L097	M3-S	30		22		29		19		476		17	†	56		79		14		9.3		80		32	
L143	M3-S	26		21	†	34		16		455		24		71		81		20		12		109		45	
L156	M3-S									582	††	169	††	70		154	††								
L178	M3-S	29		28		37		21		469		23		44		71		22		18		100		25	

Lab. Code #	Method Codes	Soil sample identification and values for Zinc – Mehlich 3 (M3-Zn) mg/kg air dry																							
		November 2010 (Round 210)								*March 2011 (Round 410)*								*May 2011 (Round 610)*							
		ASS 111		ASS 112		ASS 113		ASS 114		ASS 31		ASS 32		ASS 33		ASS 34		ASS 51		ASS 52		ASS 53		ASS 54	
L008	M3-Zn	2.6		4.9		0.724		1.3		0.624		5.2		3.6		0.25		1.0		0.532		1.6		3.1	
L013	M3-Zn	3.2		6.2		0.73		1.5		0.49		4.5		2.4		0.18		1.1		0.61		1.4		3.1	
L019	M3-Zn	2.1		5.7		0.567		0.707	††	2.4	††	6.3		4.2		0.02		1.2		0.581		1.8		2.7	
L026	M3-Zn	3.0		6.0		1.1		1.5		0.438		4.8		2.7		0.162		0.845	††	0.612		1.2		2.7	
L028	M3-Zn	3.4		6.1		0.95		1.8		0.79		5.5		3.3		0.43		1.3		0.78		1.6		3.3	
L040	M3-Zn	3.0		5.7		0.879		1.7		0.209		2.5		2.4		0.164		1.3		0.756		0.881		4.1	
L045	M3-Zn	3.9		6.9		0.78		1.8		0.992		6.4		3.5		0.33		1.3		0.96		2.1		4.8	
L097	M3-Zn	3.1		5		1.4	†	1.8		0.45		4		3.4		0.289		1		0.65		1.1		2.7	
L143	M3-Zn	2.6		4.9		0.8		1.2		0.6		5.4		4.1		0.3		1.3		0.78		2.1		3.6	
L156	M3-Zn	1.8		6.3		8.2	††	2.8	††	0.763		6.6		3.9		0.72	††								
L178	M3-Zn	3.0		5.7		0.879		1.7		0.21		2.5		2.4		0.16		1.3		0.744		0.865		3.9	

iii