

**Australasian
Soil and Plant
Analysis Council Inc.**



**ASPAC
Soil Proficiency Testing
Program Report**

2004-05

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Foreword

One of the main activities listed in ASPAC's original Membership Information and Objectives Brochure in 1990 was to "conduct regular National Quality Assurance Programs to enhance standards of analysis and assist standardisation of soil and plant analytical methods across laboratories". For the next dozen years, soil and plant Inter-Laboratory Proficiency Programs (ILPPs) of ASPAC operated at around 12 to 18 month intervals with only minor changes. Members of ASPAC's Laboratory Proficiency Committee overviewed these programs and discussed them nationally and internationally.

As part of a continuous improvement process that included a comprehensive written review, the ASPAC Executive agreed in 2002-03 that its ILPPs should be upgraded to increase their frequency and the number of samples assessed annually. As a consequence, ASPAC went to international tender to locate and appoint a service provider able to meet ASPAC's needs at a fair price to participants.

This annual report is the first public exposure of ASPAC's upgraded Inter-Laboratory Proficiency Program (ILPP) for soil chemical tests. It covers three "rounds" each of four homogeneous samples sent to 50 participants in June and September 2004 and in February 2005. A similar program for plants (reported separately), commenced in August 2004 through the same service provider.

Members of ASPAC's Laboratory Proficiency Committee, the membership of which is listed on page iv of this report, oversaw the program. The ASPAC Executive is grateful to all of those who contributed to the report, inclusive of staff of Proficiency Services Limited, New Zealand, our new service provider.

The ASPAC Executive also appreciates the effort and commitment made by participating laboratories. We recognise that laboratories share responsibility for measurement quality.

Vlad Kawaljenko
Chairperson of ASPAC 2004-2006

Acknowledgements

All periods of transition have their challenges and the upgrading of ASPAC's ILPPs was no exception. Participating laboratories across Australasia are commended for their patience and loyal support.

We thank the staff of DPI-Werribee (previously known as the State Chemistry Laboratory), particularly Bruce Shelley, Pat Johnstone and Kathryn Parker, for their assistance in helping with the preparation and transfer of ASPAC test samples from Victoria, Australia, to Hamilton, New Zealand.

In New Zealand we thank Landcare Research and Hill Laboratories for the sample homogeneity testing they undertook for PSL. Within PSL, we extend thanks to Joanne Bedford, other PSL staff and to Dr Philip Poole for their inputs.

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YOUR NOTES

1. Introduction

The Australasian Soil and Plant Analysis Council Inc (ASPAC) commenced its not-for-profit ILPPs in 1990 and issued its first soil program report in 1993. Its ILPPs specifically target soil and plant chemical laboratories in the Australasian region, although there are no restrictions on who can participate. A service provider operates the programs for ASPAC under contract.

ILPPs support ASPAC's overall goals to:

- promote excellence in all aspects of soil and plant analysis
- encourage and promote the adoption of preferred methods and protocols used in soil and plant analysis within Australasia.

More details on ASPAC can be obtained from its public web site at www.aspac-australia.com. The site includes the ASPAC Strategic Plan and the names of its elected and appointed office holders.

Published ASPAC soil ILPP reports are dated 1993, 1995, 1997, 1998, 1999, 2000, 2001/02 and 2002/03. All were conducted and reported through an Australian provider as discrete entities, based on six homogeneous samples of dried and ground soil and subsequent laboratory analysis for a comprehensive range of soil chemical tests, mostly based on empirical procedures.

This is the first annual report from ASPAC's new, upgraded soil ILPP that commenced in 2004 and now operates out of New Zealand through Proficiency Services Limited (PSL). The annual program is a composite of three "rounds", each of four homogeneous samples of dried and ground soils. Laboratory participants (Appendix 1) receive individual progress reports of their results (relative to others) for each of these "rounds". They also receive a consolidated, individual annual summary report on their measurement performance relative to others.

This annual program report consolidates (for ASPAC members and the public record) the three "rounds" that occurred in 2004-05. It also records program methodology, summary statistics, and a full listing of results by test for the three "rounds". In addition, the report includes an outline of how ASPAC periodically 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, ASPAC's public web site now lists the laboratories certified as proficient for specific tests for the most recently completed program year. ASPAC's plan is to update information on certified tests and certifications for participating laboratories soon after completion of each annual program for both plants and soils.

2. Program Details

2.1 Responsibilities

Proficiency Services Ltd, Hamilton, New Zealand (PSL; see Page iv) was contracted by ASPAC as the soil ILPP provider for 2004-05. Accordingly, PSL 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. PSL 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. PSL is a proficiency service provider accredited to *ISO Guide 43-1 Part 1: Development and operation of proficiency testing schemes*.

ASPAC's Laboratory Proficiency Committee (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 PSL and to laboratory participants. The LPC also undertook statistical checks and audits for quality control purposes, participated in a Technical Advisory Group operated by the service provider, and contributed to training workshops. ASPAC, through members of its LPC or via its state representatives, may contact managers of laboratories with poor analytical performance to ensure a measurement improvement program is commenced where necessary. Laboratories are encouraged to seek help from ASPAC if they are 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.

2.2 Soil program participation

Over 50 laboratories expressed interest in participating in the ASPAC soil ILPP in 2004-05 but the numbers that reported results varied by "round" and soil test (see Table 1). Contact details for laboratories that submitted results for any test in one or more of the three "rounds" are provided in Appendix 1. Most results, averaged across the three "rounds", were submitted for method 3A1 (Electrical conductivity, 1:5 soil-water) and method 4A1 (pH, 1:5 soil-water). Participation counts for each test and sample are also summarized in Section 3.

Table 1. Test methods, corresponding method codes and the arithmetic average number of results per round submitted by participating laboratories in the ASPAC 2004-05 soil ILPP

2004-05 Soil Tests	Method Codes ¹	Number of participants		
		June 04	Sept 04	Feb 05
Electrical conductivity 1:5 soil-water	3A1	37	38	37
Soil pH, 1:5 soil-water	4A1	36	38	38
Soil pH, 1:5 0.01 M CaCl ₂ — direct	4B1	12	10	12
Soil pH, 1:5 0.01 M CaCl ₂ — indirect	4B2	20	19	23
Water soluble Cl — potentiometric	5A1	13	13	11
Water soluble Cl — autocolour	5A2	9	10	8
Organic Carbon — Walkley & Black	6A1	17	15	15
Organic Carbon — Other		2	4	2
Total Organic C — Heanes	6B1	4	8	6
Total Organic C — HF Induction, Vol	6B2	2		
Total Organic C — HF Induction, IR	6B3	6	6	6
Total Organic C — Other		6	8	6
Total N — Kjeldahl, steam distillation	7A1	6	7	13
Total N — Kjeldahl, autocolour	7A2	7	12	7
Total N — Dumas		20	21	20
Water Soluble Nitrate N — autocolour	7B1	12	12	10

¹ Unless otherwise indicated, soil method codes are as defined by 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. This reference also includes background information on all of the coded methods.

2004-05 Soil Tests	Method Codes ¹	Number of participants		
		June 04	Sept 04	Feb 05
KCl Extractable Nitrate N — autocolour	7C2	18	17	16
KCl Ext. Ammonium N — autocolour	7C2	21	22	20
Total P – all methods	9A1 and others	17	21	20
Colwell Extractable P — manual	9B1	12	9	10
Colwell Extractable P — autocolour	9B2	8	10	9
Olsen Extractable P — manual	9C1	7	8	11
Olsen Extractable P — autocolour	9C2	6	6	5
Bray-1 Extractable P — manual	9E1	7	10	11
Bray-1 Extractable P — autocolour	9E2	6	7	5
Phosphorus buffer index (Colwell P-vanadate)	9I2c	6	5	5
Phosphorus buffer index (pooled-Colwell)	9I2a + 9I2b + 9I2c ²	10	10	11
Phosphorus buffer index (pooled-Olsen)	9I3a + 9I3b + 9I3c ²	4	2	3
Phosphate Extractable S	10B3	8	5	6
KCl 40 Extractable S	Blair <i>et al</i> ³	8	10	8
DTPA Extractable Fe	12A1	22	26	27
DTPA Extractable Cu	12A1	22	26	28
DTPA Extractable Mn	12A1	22	26	28
DTPA Extractable Zn	12A1	22	26	28
Hot CaCl ₂ Extractable B — manual colour	12C1	3	5	6
Hot CaCl ₂ Extractable B — ICPAES	12C2	14	14	13
Exchangeable Ca — 1M NH ₄ Cl extract	15A1	19	21	17
Exchangeable Mg — 1M NH ₄ Cl extract	15A1	19	20	17
Exchangeable Na — 1M NH ₄ Cl extract	15A1	19	21	17
Exchangeable K — 1M NH ₄ Cl extract	15A1	19	20	17
Exchangeable Ca — 1M NH ₄ OAc extract	15D3	14	17	17
Exchangeable Mg — 1M NH ₄ OAc extract	15D3	14	18	17
Exchangeable Na — 1M NH ₄ OAc extract	15D3	13	18	17
Exchangeable K — 1M NH ₄ OAc extract	15D3	14	19	17
Exchangeable Al — 1M KCl extract	15G1	17	16	18

Notes for Table 1:

- 9I2a Phosphorus buffer index – Colwell – Murphy and Riley finish (9I2C in earlier ASPAC reports)
9I2b Phosphorus buffer index – Colwell – ICPAES finish (9I3C in earlier ASPAC reports)
9I2c Phosphorus buffer index – Colwell – Vanadate finish (9I4C in earlier ASPAC reports)
9I3a Phosphorus buffer index – Olsen – Murphy and Riley finish (9I2O in earlier ASPAC reports)
9I3b Phosphorus buffer index – Olsen – ICPAES finish (9I3O in earlier ASPAC reports)
9I3c Phosphorus buffer index – Olsen – Vanadate finish (9I4O in earlier ASPAC reports)

² These are ASPAC endorsed tests, where capital “O” in the superseded code refers to Olsen extractable P, and capital “C” in the superseded code refers to Colwell extractable P. See the Table Notes for more details.

³ Blair, G.J., Chinoim, N., Lefroy, R.D.B., Anderson, G.C., and Crocker, G.J. (1991). A soil sulfur test for pastures and crops. *Aust. J. Soil Research*. 29, 619-626.

2.3 Tests and methods

The three proficiency “rounds” for soils – each comprising four samples – were offered in June and September 2004 and in February 2005. 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 44 tests, noting that phosphate buffer index (Colwell) and phosphate buffer index (Olsen) were “scored” as one method each, independent of which analytical finish was used. The moisture status of results was considered to be as published by Rayment and Higginson (1992) for the respective methods, noting that routine soil fertility tests in Australia are mostly reported on a weight / weight basis for air-dry (40°C) soil.

2.4 Sample preparation and identification

Victoria’s DPI-Werribee prepared the bulk samples of soil material used in 2004-05. Before distribution to participants, 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)⁴. These sub-samples were then tested in duplicate for a representative parameter or parameters. Test methods included the following:

- Total N and Total C — Leco (combustion) method
- Olsen P (method 9C).

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 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 requirements⁵.

Ultimately, the samples used in the three “rounds” of the 2004-05 program were distributed and coded as follows: round 104 of June 2004 — ASS 61-64; round 304 of September 2004 — ASS 91-94; and round 504 of February 2005 — ASS 21-24. The association between sample code and origin of the various soils are provided in Table 2.

Table 2. Sample identification and the origin of the samples included in the ASPAC 2004-05 soil ILPP

<i>Sample ID</i>	<i>Sample origin (texture)</i>	<i>Sample ID</i>	<i>Sample origin</i>
ASS 61	Australia (sandy clay loam)	ASS 93	Victoria
ASS 62	Tasmania (sandy loam)	ASS 94	Queensland
ASS 63	Western Australia (sandy loam)	ASS 21	Australia
ASS 64	New South Wales	ASS 22	Australia
ASS 91	Tasmania	ASS 23	Australia
ASS 92	New South Wales	ASS 24	Queensland

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

⁵ 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 3. Method “pooling” summary for the ASPAC 2004-05 soil ILPP

2004-05 Soil Tests	Method Codes	Average participants
Soil pH, 1:5 0.01 M CaCl ₂ — pooled	4B1 + 4B2	32
Water soluble Cl — pooled	5A1 + 5A2	21
Organic Carbon — pooled	6A1 + Other	18
Total Organic Carbon — pooled	6B1 + 6B2 + 6B3 + Other	19
Total N — part-pool	7A1 + 7A2	17
Total N — full-pool	7A1 + 7A2 + Dumas	38
Colwell Extractable P — pooled	9B1 + 9B2	19
Olsen Extractable P — pooled	9C1 + 9C2	14
Bray-1 Extractable P — pooled	9E1 + 9E2	15
Phosphorus buffer index (<i>Colwell – all analytical finishes</i>)	9I2a + 9I2b + 9I2c ⁶	10
Phosphorus buffer index (<i>Olsen – all analytical finishes</i>)	9I3a + 9I3b + 9I3c	3
Hot CaCl ₂ Extractable B — pooled	12C1 + 12C2	18

2.5 Data analysis and periodic reporting

Laboratory results, after submission to PSL, were entered into a database and independently checked for any data transfer accuracy prior to data processing. In keeping with past practice⁷, the results from up to 38 laboratories for similar methods were “pooled” (eg. manual and automated “finishes”) to obtain sufficient or larger populations of laboratories for statistical assessment. “Pooling” details for the 2004-05 soil program are summarised in Table 3.

The non-parametric assessment of laboratory performance for each sample and method (and/or “pooled” method) was performed by an iterative statistical procedure similar to that used in WEPAL interlaboratory proficiency programs of Wageningen University. This procedure^{8,9,10,11} 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 4. In addition to medians and MADs, other statistical parameters (also described in Table 4) were calculated before and following the omission of non-

⁶ This test was reported with superseded code 9I4C in “round” reports to laboratories in 2004-05. It is included here for completeness.

⁷ Johnstone, P; Shelley, B; Kitching, M. (2002). *Soil Proficiency Testing Program Report 2001*, Vol 2, No. 1. ASPAC, c/- State Chemistry Laboratory: Victoria, (July 2002).

⁸ 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.

⁹ 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.

¹⁰ 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.

¹¹ 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.)

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 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 a value half way between that value and zero. For high values, dilution was the expected option. In practice, this did not always occur in 2004-05, witnessed by the inclusion of a few zero values in the “raw” data compilations in Appendix 4.

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. Its 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.

Laboratories that participated in the 2004-05 soil ILPP each received from PSL (on behalf of ASPAC) a laboratory specific, confidential, annual summary 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 a 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 four demerit points for the twelve samples in 2004-05.

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.

Table 4. Statistical terms and their meanings in the context of this ASPAC annual report

<i>Statistical term</i>	<i>Meaning and/or derivation</i>
Count or number	Original population size.
Maximum 1	The highest of a range of values, based on the initial data set.
Minimum 1	The lowest of a range of values, based on the initial data set.
Median	The median is the score (value) at the 50 th percentile, also called the 2 nd quartile or 5 th 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 <u>M</u> edian of the <u>A</u> bsolute <u>D</u> eviations, 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 25 th percentile (referred to as the first quartile; Q_1) from the score at the 75 th 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 the 2004-05 program, the algorithm employed was that of SAS Method 4 ¹² . In summary, $IQR = Q_3 - Q_1$.
Normalised IQR	This equates to $IQR \times 0.7413$, where the latter is a normalising factor.
Robust % CV ¹³	The robust coefficient of variation (Robust % CV) = $(100 \times \text{normalised IQR} / \text{median})$. 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 1 and the letter “f” associated with medians, means, MADs, IQR and Robust %CVs in data summaries.	The integer “1” 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.

¹² SAS Procedure Guide.

¹³ “Guide to NATA Proficiency Testing”. 27 pp. (National Association of Testing Authorities, Australia, December 1997).

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.

Year 2004-05 was a special case as it was the inaugural year of ASPAC’s enhanced ILPP and also the inaugural year for application of ASPAC’s new demerit points / certification system. Since there was no “previous year”, the laboratories who failed to report results on all three “rounds” in 2004-05 automatically accrued maximum demerit points (3) for tests in each of the missed “rounds”. Laboratories that missed only one “round” remained eligible for ASPAC Certification, conditional on good performance in their other two completed “rounds”.

Finally, when less than six (6) laboratories submitted results for a particular test and/or sample, proficiency assessments could not be made statistically with an acceptable level of confidence and hence certification for the affected tests could not be granted. Importantly, ASPAC’s *Certificates of Proficiency* are only issued on completion of each annual program of three “rounds”. Nowadays, ASPAC provides details of certified laboratories by test on its public web site. Certifications obtained in the 2004-05 Soils’ Program remained valid until the corresponding 2005-06 Program was complete.

3. Summary Statistics

This section provides summary statistics (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 2004-05. The tabulations include initial and subsequent values for the iterative “median / MAD” procedure plus other robust statistics. Table 4 and Appendix 3 have the meaning or derivation of the terms and statistics used in the tabulated summaries. The assumed moisture status of the results is included with those summaries.

2004-05: Electrical conductivity 1:5 soil-water (3A1) dS/m air dry

Statistical parameters	Soil sample identification and values											
	June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	37	37	37	37	38	38	38	38	37	37	37	37
Minimum	0.003	0.001	0.000	0.001	0.050	0.030	0.060	0.200	0.013	0.016	0.038	0.017
Maximum	0.867	0.572	0.500	0.526	11.0	11.5	13.6	203	0.210	0.325	0.580	0.295
Median i	0.313	0.130	0.028	0.137	0.110	0.116	0.130	2.42	0.132	0.190	0.468	0.203
Mean i	0.325	0.145	0.047	0.140	0.408	0.430	0.503	7.93	0.132	0.187	0.445	0.197
MAD i	0.013	0.01	0.004	0.008	0.008	0.009	0.011	0.12	0.008	0.01	0.027	0.013
IQR i	0.022	0.017	0.006	0.011	0.009	0.015	0.016	0.183	0.011	0.017	0.034	0.022
Robust CV % i	7.10	13.0	21.0	8.10	8.60	12.0	12.0	7.60	8.00	8.80	7.20	11.0
Median f	0.310	0.130	0.028	0.137	0.110	0.115	0.130	2.420	0.131	0.190	0.470	0.204
Mean f	0.313	0.131	0.027	0.136	0.108	0.116	0.130	2.410	0.134	0.192	0.467	0.205
MAD f	0.008	0.010	0.002	0.007	0.005	0.007	0.010	0.100	0.007	0.010	0.020	0.013
IQR f	0.012	0.014	0.004	0.010	0.007	0.011	0.014	0.148	0.009	0.016	0.030	0.020
Robust CV % f	3.80	11.0	15.0	7.00	6.70	9.30	11.00	6.10	6.70	8.40	6.40	9.60
Outliers	5	5	6	3	6	5	6	7	3	4	4	4
Stragglers	3	0	6	1	1	0	0	0	2	0	1	0

2004-05: Soil pH, 1:5 soil-water (4A1) air dry

Statistical parameters	Soil sample identification and values											
	<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	36	36	36	36	38	38	38	38	38	38	38	38
Minimum	5.12	4.24	5.74	4.97	4.52	4.60	6.00	2.20	4.06	5.79	7.96	4.57
Maximum	6.60	5.40	7.10	5.61	5.27	5.43	6.51	3.10	5.75	8.40	9.80	6.46
Median i	6.49	5.05	6.45	5.43	5.19	5.24	6.37	2.96	5.10	8.08	9.30	5.36
Mean i	6.43	5.04	6.39	5.41	5.10	5.22	6.34	2.93	5.07	7.95	9.22	5.37
MAD i	0.07	0.085	0.15	0.075	0.065	0.065	0.07	0.045	0.1	0.12	0.1	0.065
IQR i	0.111	0.154	0.259	0.109	0.145	0.113	0.106	0.074	0.135	0.246	0.219	0.104
Robust CV % i	1.70	3.00	4.00	2.00	2.80	2.20	1.70	2.50	2.70	3.10	2.40	1.90
Median f	6.50	5.05	6.45	5.44	5.20	5.25	6.39	2.97	5.10	8.10	9.31	5.36
Mean f	6.49	5.05	6.39	5.44	5.20	5.26	6.38	2.96	5.11	8.07	9.28	5.35
MAD f	0.055	0.075	0.15	0.065	0.02	0.06	0.06	0.03	0.06	0.1	0.09	0.055
IQR f	0.095	0.120	0.259	0.106	0.030	0.096	0.100	0.058	0.096	0.196	0.180	0.082
Robust CV % f	1.50	2.40	4.00	1.90	0.57	1.80	1.60	1.90	1.90	2.40	1.90	1.50
Outliers	3	2	2	2	5	3	4	3	5	4	6	6
Stragglers	1	0	0	0	8	0	1	3	2	1	0	0

Soil pH, 1:5 soil-0.01 M CaCl₂ — direct (4B1) air dry

Statistical parameters	Soil sample identification and values											
	<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	12	12	12	12	10	10	10	10	12	12	12	12
Minimum	5.80	4.30	5.56	4.60	4.44	4.54	5.64	1.51	3.45	4.57	5.89	3.77
Maximum	6.10	4.90	6.10	5.00	4.82	5.32	5.97	3.10	4.93	7.91	9.06	5.00
Median i	6.00	4.52	5.65	4.84	4.54	4.65	5.71	2.89	4.51	7.43	8.16	4.90
Mean i	5.99	4.54	5.70	4.80	4.57	4.72	5.73	2.75	4.46	7.20	8.01	4.82
MAD i	0.05	0.05	0.06	0.03	0.045	0.04	0.03	0.085	0.095	0.235	0.165	0.05
IQR i	0.072	0.093	0.095	0.078	0.100	0.089	0.063	0.169	0.107	0.352	0.297	0.093
Robust CV % i	1.20	2.10	1.70	1.60	2.20	1.90	1.10	5.80	2.40	4.70	3.60	1.90
Median f	6.00	4.52	5.63	4.84	4.53	4.64	5.70	2.90	4.51	7.44	8.16	4.90
Mean f	5.99	4.53	5.66	4.83	4.52	4.66	5.71	2.89	4.51	7.43	8.11	4.91
MAD f	0.05	0.04	0.07	0.02	0.025	0.04	0.02	0.06	0.075	0.16	0.155	0.04
IQR f	0.072	0.070	0.089	0.048	0.046	0.059	0.048	0.130	0.100	0.348	0.252	0.074
Robust CV % f	1.20	1.60	1.60	1.00	1.00	1.30	0.85	4.50	2.20	4.70	3.10	1.50
Outliers	0	1	1	3	1	1	1	1	1	1	2	1
Stragglers	0	1	0	0	1	0	0	0	1	0	0	0

Soil pH, 1:5 soil-0.01 M CaCl₂ — indirect (4B2) air dry

Statistical parameters	Soil sample identification and values											
	<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	20	20	20	20	19	19	19	19	23	23	23	23
Minimum	5.22	4.40	5.05	4.73	4.40	4.50	5.52	2.80	4.32	6.60	7.45	4.75
Maximum	6.19	4.64	6.09	4.95	4.85	4.85	5.92	3.02	4.75	7.70	8.65	5.20
Median i	6.08	4.53	5.77	4.84	4.56	4.61	5.79	2.94	4.53	7.50	8.42	4.93
Mean i	6.02	4.54	5.73	4.85	4.58	4.63	5.75	2.92	4.54	7.41	8.35	4.94
MAD i	0.04	0.04	0.085	0.045	0.06	0.03	0.04	0.03	0.05	0.12	0.09	0.07
IQR i	0.093	0.074	0.158	0.074	0.096	0.045	0.089	0.037	0.074	0.222	0.148	0.111
Robust CV % i	1.50	1.60	2.70	1.50	2.10	0.96	1.50	1.30	1.60	3.00	1.80	2.30
Median f	6.09	4.53	5.77	4.84	4.56	4.60	5.79	2.94	4.53	7.51	8.49	4.93
Mean f	6.07	4.54	5.77	4.85	4.57	4.61	5.78	2.94	4.54	7.49	8.45	4.94
MAD f	0.035	0.04	0.08	0.045	0.06	0.03	0.03	0.03	0.05	0.11	0.07	0.07
IQR f	0.061	0.074	0.163	0.074	0.091	0.033	0.052	0.037	0.067	0.174	0.126	0.111
Robust CV % f	1.0	1.6	2.8	1.5	2.0	0.7	0.9	1.3	1.5	2.3	1.5	2.3
Outliers	2	0	1	0	1	2	3	2	2	2	2	0
Stragglers	0	0	0	0	0	0	1	0	0	0	2	0

Soil pH, 1:5 soil-0.01 M CaCl₂ — pooled (4B1 + 4B2) air dry

Statistical parameters	Soil sample identification and values											
	<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	32	32	32	32	29	29	29	29	35	35	35	35
Minimum	5.22	4.30	5.05	4.60	4.40	4.50	5.52	1.51	3.45	4.57	5.89	3.77
Maximum	6.19	4.90	6.10	5.00	4.85	5.32	5.97	3.10	4.93	7.91	9.06	5.20
Median i	6.05	4.52	5.74	4.84	4.55	4.63	5.75	2.92	4.52	7.47	8.33	4.93
Mean i	6.01	4.54	5.72	4.83	4.58	4.66	5.74	2.86	4.51	7.34	8.23	4.90
MAD i	0.055	0.04	0.11	0.04	0.05	0.03	0.05	0.03	0.07	0.14	0.17	0.07
IQR i	0.087	0.082	0.143	0.063	0.093	0.063	0.078	0.067	0.089	0.222	0.311	0.096
Robust CV % i	1.40	1.80	2.50	1.30	2.00	1.40	1.40	2.30	2.00	3.00	3.70	2.00
Median f	6.05	4.52	5.75	4.84	4.55	4.63	5.755	2.94	4.52	7.5	8.34	4.92
Mean f	6.05	4.53	5.74	4.84	4.56	4.63	5.75	2.93	4.53	7.49	8.31	4.92
MAD f	0.05	0.04	0.12	0.04	0.05	0.03	0.055	0.03	0.06	0.11	0.16	0.06
IQR f	0.078	0.067	0.141	0.056	0.074	0.045	0.076	0.037	0.089	0.170	0.267	0.091
Robust CV % f	1.30	1.50	2.40	1.10	1.60	0.96	1.30	1.30	2.00	2.30	3.20	1.80
Outliers	3	2	1	3	2	4	3	6	2	4	3	3
Stragglers	0	0	0	0	0	0	0	0	0	0	0	0

2004-05: Water soluble Cl — potentiometric (5A1) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	13	13	13	13	12	13	13	13	11	11	11	11
Minimum	50.5	13	1.7	8.92	0	0	0	62	17	10.3	28.1	12
Maximum	279	60	40	51	122	123	117	1924	108	115	87	63.1
Median i	230	45	10.5	31	21.6	23.4	17	713	46.4	22	47	29
Mean i	211	41.9	14.5	29.1	32.1	35.1	30.2	768	49.1	30.1	49.9	33
MAD i	28	11	3.6	11.5	9.4	12.6	9	74	3.4	6	9	5
IQR i	43.4	20.9	6.67	18.7	22.2	23.9	25.4	176	11.9	12.6	16.3	13.3
Robust CV % i	19	47	64	60	100	100	150	25	26	57	35	46
Median f	234	45	10.1	31	18.9	21.7	12	706	46.2	21.1	47	26
Mean f	225	41.9	9.92	29.1	20.7	27.8	12.6	691	43.3	21.7	49.9	26.4
MAD f	25	11	2.9	11.5	7	11.3	5	58.5	2.8	4.5	9	7
IQR f	38.5	20.9	4.67	18.7	12.2	19.9	7.23	117	9.82	9.08	16.3	11.1
Robust CV % f	16	47	46	60	65	92	60	17	21	43	35	43
Outliers	1	0	2	0	1	1	2	3	3	1	0	2
Stragglers	0	0	0	0	1	0	2	0	0	0	0	0

2004-05: Water soluble Cl — autocolour (5A2) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	9	9	9	9	10	10	9	10	8	8	8	8
Minimum	87	13	0	13	13	16	7	672	29	12	35	14
Maximum	259	49	27	34	62	40	39	884	47	21	316	91
Median i	233	42.7	7.1	23.9	21.5	19.5	20	744	42.5	16.6	43.5	18.6
Mean i	216	38.2	10.9	24.3	24.9	21.6	20	756	40.9	16.5	77.1	27.7
MAD i	14	4.3	3.1	2.9	5	3.25	6	32	2.5	2.95	5.5	2
IQR i	29.7	11.5	12.3	6.67	8.84	5.65	9.27	61.2	4.45	5.19	9.45	3.89
Robust CV % i	13	27	170	28	41	29	46	8.2	10	31	22	21
Median f	235	43.9	4.84	23.9	21	19	20	744	42.5	16.6	43	18.2
Mean f	232	41.3	4.78	24.3	20.8	19.5	20	756	40.9	16.5	43	18.6
MAD f	10	4	1.55	2.9	5	3	6	32	2.5	2.95	5	1.2
IQR f	19.5	9.64	3.19	6.67	7.3	5	9.27	61.2	4.45	5.19	8.15	2.97
Robust CV % f	8.3	22	66	28	35	26	46	8.2	10	31	19	16
Outliers	1	1	1	0	1	1	0	0	0	0	1	1
Stragglers	0	0	2	0	0	0	0	0	0	0	0	0

2004-05: Water soluble CI — pooled (5A1 + 5A2) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	22	22	22	22	22	23	22	23	19	19	19	19
Minimum	50.5	13.0	0	8.92	0	0	0	62	17	10.3	28.1	12
Maximum	279	60	40	51	122	123	117	1924	108	115	316	91
Median i	232	45	9.67	24.9	21.6	20	17.8	740	43	20	44	24
Mean i	213	40.4	13	27.2	28.8	29.2	26	763	45.7	24.4	61.3	30.7
MAD i	23	8.05	4.07	9.25	6.9	4	6.75	47	5	5	7	7
IQR i	35.4	15.1	9.59	11.7	12.9	14.5	13	78.6	7.41	7.41	11.9	11.9
Robust CV % i	15	34	99	47	60	72	73	11	17	37	27	49
Median f	236	45	7.5	24.9	20	18.5	17	742	43	19.5	43	21
Mean f	232	40	8.77	27.2	19.2	19.3	17.5	749	42	19.4	45	22
MAD f	19	8.05	2.85	9.25	5.35	2.5	6	40.5	3.7	4	6	4
IQR f	28.2	15.1	6.04	11.7	7.62	5.13	9.64	61.9	6.19	6.3	10.1	6.67
Robust CV % f	12	34	81	47	38	28	57	8.3	14	32	24	32
Outliers	2	0	3	0	3	6	3	5	3	1	2	3
Stragglers	1	0	1	0	1	1	0	0	0	0	0	1

2004-05: Organic Carbon — Walkley and Black (6A1) % oven dry

Statistical parameters	Soil sample identification and values											
	<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	17	16	17	17	15	15	15	15	15	15	15	15
Minimum	0.80	0.88	0	2.50	2.55	0.18	1.31	2.90	0.86	1.52	0.12	2.06
Maximum	1.40	1.13	0.41	5.20	4.70	1.13	4.28	5.66	1.33	1.97	0.68	2.65
Median i	1.21	1.05	0.13	3.30	2.80	0.55	2.42	3.38	1.09	1.70	0.30	2.23
Mean i	1.20	1.04	0.12	3.37	3.01	0.61	2.47	3.50	1.09	1.71	0.33	2.25
MAD i	0.09	0.05	0.033	0.16	0.19	0.143	0.12	0.1	0.1	0.13	0.065	0.08
IQR i	0.148	0.0723	0.056	0.256	0.378	0.274	0.141	0.141	0.156	0.237	0.111	0.119
Robust CV % i	12	6.9	43	7.7	14	50	5.8	4.2	14	14	37	5.30
Median f	1.23	1.05	0.12	3.30	2.75	0.55	2.41	3.38	1.09	1.70	0.29	2.22
Mean f	1.22	1.04	0.11	3.30	2.75	0.61	2.37	3.38	1.09	1.71	0.29	2.22
MAD f	0.09	0.05	0.03	0.15	0.06	0.143	0.08	0.07	0.1	0.13	0.04	0.08
IQR f	0.141	0.072	0.061	0.237	0.141	0.274	0.137	0.126	0.156	0.237	0.088	0.128
Robust CV % f	11.0	6.9	51	7.2	5.1	50	5.7	3.7	14.0	14.0	30.0	5.8
Outliers	1	0	1	2	2	0	3	2	0	0	1	1
Stragglers	0	0	0	0	2	0	0	0	0	0	1	0

2004-05: Organic Carbon — Other % oven dry

Statistical parameters	Soil sample identification and values											
	<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	2	2	2	2	4	4	4	3	2	2	2	2
Minimum	1.1	0.93	0.111	3.02	2.7	0.47	2	2.41	1.1	1.7	0.31	2.1
Maximum	1.15	0.951	0.15	3.34	3.31	0.884	2.5	3.1	1.5	2.6	1.1	3.2
Median i	1.125	0.9405	0.1305	3.18	2.955	0.5	2.34	3.1	1.3	2.15	0.705	2.65
Mean i	1.13	0.941	0.131	3.18	2.98	0.589	2.3	2.87	1.3	2.15	0.705	2.65
MAD i	0.025	0.0105	0.0195	0.16	0.15	0.015	0.12	0	0.2	0.45	0.395	0.55
IQR i					0.356	0.23	0.308	0.511				
Robust CV % i					12	46	13	16				
Median f	1.125	0.9405	0.1305	3.18	2.955	0.5	2.34	3.1	1.3	2.15	0.705	2.65
Mean f	1.13	0.941	0.131	3.18	2.98	0.49	2.3	3.1	1.3	2.15	0.705	2.65
MAD f	0.025	0.0105	0.0195	0.16	0.15	0	0.12	0	0.2	0.45	0.395	0.55
IQR f					0.356	0.0222	0.308					
Robust CV % f					12	4.4	13					
Outliers												
Stragglers												

2004-05: Organic Carbon — pooled (6A1 + other) % oven dry

Statistical parameters	Soil sample identification and values											
	<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	19	18	19	19	19	19	19	18	17	17	17	17
Minimum	0.80	0.88	0	2.50	2.55	0.18	1.31	2.41	0.86	1.52	0.12	2.06
Maximum	1.40	1.13	0.41	5.20	4.70	1.13	4.28	5.66	1.50	2.60	1.10	3.20
Median i	1.15	1.03	0.13	3.30	2.80	0.50	2.42	3.36	1.10	1.70	0.30	2.23
Mean i	1.19	1.03	0.12	3.35	3.00	0.61	2.43	3.39	1.11	1.76	0.38	2.29
MAD i	0.08	0.06	0.03	0.16	0.19	0.1	0.12	0.1	0.1	0.13	0.067	0.09
IQR i	0.148	0.094	0.045	0.267	0.371	0.27	0.17	0.165	0.156	0.234	0.106	0.145
Robust CV % i	13	9.2	34	8.1	13	54	7.0	4.9	14	14	35	6.5
Median f	1.18	1.03	0.139	3.3	2.78	0.5	2.42	3.37	1.1	1.7	0.294	2.2
Mean f	1.21	1.03	0.127	3.29	2.83	0.52	2.37	3.34	1.11	1.71	0.293	2.21
MAD f	0.09	0.06	0.021	0.15	0.11	0.045	0.08	0.09	0.1	0.12	0.035	0.1
IQR f	0.141	0.094	0.039	0.252	0.211	0.087	0.141	0.126	0.156	0.204	0.070	0.148
Robust CV % f	12	9.2	28	7.6	7.6	17	5.8	3.7	14	12	24	6.7
Outliers	1	0	2	2	2	1	3	3	0	1	2	2
Stragglers	0	0	2	0	1	5	1	0	0	0	1	0

2004-05: Total Organic Carbon — Heanes (6B1) % oven dry

Statistical parameters	Soil sample identification and values											
	<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	4	4	4	4	8	8	8	8	6	6	6	6
Minimum	0.653	1.03	0.113	3.75	2.17	0.02	2.0	2.8	1.07	1.63	0.20	1.92
Maximum	1.37	1.2	0.43	4.05	3.8	0.889	2.9	4.61	1.31	1.9	0.52	2.51
Median i	1.28	1.18	0.16	3.92	3.23	0.59	2.59	3.78	1.16	1.74	0.38	2.38
Mean i	1.15	1.15	0.22	3.91	3.13	0.574	2.5	3.78	1.17	1.75	0.38	2.31
MAD i	0.06	0.015	0.03	0.085	0.295	0.155	0.31	0.21	0.045	0.02	0.091	0.09
IQR i	0.41	0.096	0.181	0.18	0.684	0.273	0.495	0.334	0.095	0.072	0.159	0.209
Robust CV % i	32	8.2	110	4.6	21	46	19	8.8	8.1	4.2	42	8.8
Median f	1.31	1.18	0.16	3.92	3.23	0.59	2.59	3.78	1.16	1.73	0.38	2.38
Mean f	1.31	1.15	0.22	3.91	3.13	0.57	2.5	3.78	1.17	1.72	0.38	2.31
MAD f	0.06	0.015	0.03	0.085	0.295	0.155	0.31	0.21	0.045	0.02	0.091	0.09
IQR f	0.089	0.096	0.181	0.18	0.684	0.273	0.495	0.334	0.095	0.059	0.159	0.209
Robust CV % f	6.8	8.2	110	4.6	21	46	19	8.8	8.1	3.4	42	8.8
Outliers	1	0	0	0	0	0	0	0	0	1	0	0
Stragglers	0	0	0	0	0	0	0	0	0	0	0	0

2004-05: Total Organic Carbon — HF Induction, IR (6B3) % oven dry

Statistical parameters	Soil sample identification and values											
	<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	6	6	6	6	6	6	6	6	6	6	6	6
Minimum	1.09	0.99	0.05	3.70	3.02	0.50	2.57	3.32	1.08	1.62	0.27	2.12
Maximum	1.33	1.17	0.18	4.13	3.42	0.58	2.73	3.66	1.2	1.9	0.49	2.61
Median i	1.24	1.15	0.12	4.02	3.28	0.58	2.63	3.51	1.16	1.83	0.45	2.55
Mean i	1.22	1.12	0.122	3.99	3.25	0.56	2.64	3.51	1.15	1.8	0.426	2.48
MAD i	0.065	0.015	0.037	0.055	0.135	0.002	0.055	0.035	0.04	0.065	0.003	0.055
IQR i	0.128	0.056	0.065	0.141	0.23	0.025	0.091	0.102	0.078	0.124	0.043	0.169
Robust CV % i	10	4.9	56	3.5	7	4.2	3.5	2.9	6.7	6.8	9.6	6.6
Median f	1.24	1.15	0.12	4.02	3.28	0.58	2.63	3.51	1.16	1.83	0.45	2.59
Mean f	1.22	1.14	0.12	3.99	3.25	0.58	2.64	3.51	1.15	1.8	0.43	2.55
MAD f	0.065	0.01	0.037	0.055	0.135	0.001	0.055	0.035	0.04	0.065	0	0.02
IQR f	0.128	0.026	0.065	0.141	0.230	0.001	0.091	0.102	0.078	0.124	0.003	0.089
Robust CV % f	10	2.3	56	3.5	7.0	0.22	3.5	2.9	6.7	6.8	0.62	3.4
Outliers	0	1	0	0	0	2	0	0	0	0	2	1
Stragglers	0	0	0	0	0	0	0	0	0	0	0	0

2004-05: Total Organic Carbon — Other % oven dry

Statistical parameters	Soil sample identification and values											
	June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	6	6	6	6	8	8	8	8	6	6	6	6
Minimum	1.07	1.01	0.09	3.76	2.91	0.5	2.2	2.94	0.9	1.5	0.25	2.08
Maximum	1.36	1.26	0.17	4.29	3.35	0.62	2.88	3.60	4.56	1.99	0.70	2.56
Median i	1.27	1.16	0.15	4.05	3.20	0.55	2.55	3.39	1.12	1.73	0.40	2.33
Mean i	1.25	1.16	0.14	4.06	3.15	0.56	2.52	3.35	1.65	1.73	0.43	2.33
MAD i	0.07	0.065	0.021	0.145	0.131	0.045	0.087	0.12	0.1	0.11	0.138	0.18
IQR i	0.132	0.119	0.049	0.259	0.271	0.072	0.234	0.246	0.789	0.213	0.254	0.289
Robust CV % i	10	10	34	6.4	8.4	13	9.2	7.3	71	12	64	12
Median f	1.27	1.16	0.15	4.05	3.204	0.55	2.55	3.39	1.07	1.73	0.40	2.33
Mean f	1.25	1.16	0.14	4.06	3.15	0.56	2.52	3.35	1.07	1.73	0.43	2.33
MAD f	0.07	0.065	0.021	0.145	0.131	0.045	0.087	0.12	0.09	0.11	0.138	0.18
IQR f	0.132	0.119	0.049	0.259	0.271	0.072	0.234	0.246	0.17	0.213	0.254	0.289
Robust CV % f	10	10	34	6.4	8.4	13	9.2	7.3	16	12	64	12
Outliers	0	0	0	0	0	0	0	0	1	0	0	0
Stragglers	0	0	0	0	0	0	0	0	0	0	0	0

2004-05: Total Organic Carbon — pooled (6B1 + 6B2 + 6B3 + Other) % oven dry

Statistical parameters	Soil sample identification and values											
	June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	18	18	18	18	22	22	22	22	18	18	18	18
Minimum	0.65	0.99	0.05	3.7	2.17	0.02	2.0	2.8	0.9	1.5	0.20	1.92
Maximum	1.37	1.26	0.43	4.32	3.80	0.89	2.90	4.61	4.56	1.99	0.70	2.61
Median i	1.27	1.16	0.14	4.02	3.26	0.58	2.59	3.54	1.16	1.76	0.45	2.43
Mean i	1.23	1.15	0.15	4.00	3.17	0.57	2.54	3.55	1.32	1.76	0.41	2.38
MAD i	0.075	0.025	0.0305	0.09	0.17	0.03	0.095	0.16	0.05	0.095	0.075	0.145
IQR i	0.126	0.0445	0.0491	0.18	0.282	0.0526	0.196	0.258	0.0908	0.154	0.153	0.245
Robust CV % i	10	3.8	35	4.5	8.6	9.1	7.6	7.3	7.9	8.7	34	10
Median f	1.28	1.17	0.14	4.02	3.275	0.579	2.6	3.52	1.155	1.76	0.4475	2.43
Mean f	1.26	1.17	0.13	4.00	3.25	0.57	2.62	3.51	1.15	1.76	0.41	2.38
MAD f	0.05	0.02	0.03	0.09	0.15	0.02	0.05	0.08	0.05	0.10	0.08	0.15
IQR f	0.104	0.0259	0.0463	0.18	0.263	0.0356	0.0741	0.156	0.0852	0.154	0.153	0.245
Robust CV % f	8.1	2.2	33	4.5	8.0	6.1	2.9	4.4	7.4	8.7	34	10
Outliers	1	3	1	0	2	4	3	2	2	0	0	0
Stragglers	0	2	0	0	0	1	4	3	0	0	0	0

2004-05: Total N — Kjeldahl, steam distillation (7A1) % oven dry

Statistical parameters	Soil sample identification and values											
	<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	6	6	6	6	7	7	7	7	13	13	13	13
Minimum	0.001	0.001	0.000	0.001	0.056	0.034	0.041	0.008	0.076	0.052	0.012	0.074
Maximum	0.150	0.130	0.023	0.292	0.320	0.114	0.215	0.239	0.177	0.252	0.069	0.310
Median i	0.103	0.113	0.011	0.272	0.27	0.0676	0.176	0.2184	0.11	0.174	0.052	0.226
Mean i	0.095	0.096	0.012	0.229	0.249	0.0658	0.165	0.185	0.119	0.173	0.0485	0.222
MAD i	0.013	0.010	0.008	0.011	0.03	0.004	0.008	0.016	0.008	0.008	0.007	0.014
IQR i	0.042	0.034	0.013	0.066	0.046	0.027	0.025	0.039	0.023	0.019	0.011	0.021
Robust CV % i	41	30	120	24	17	39	14	18	21	11	22	9.4
Median f	0.104	0.113	0.011	0.273	0.285	0.069	0.178	0.219	0.110	0.173	0.053	0.226
Mean f	0.114	0.115	0.012	0.275	0.281	0.069	0.185	0.215	0.110	0.174	0.052	0.228
MAD f	0.010	0.005	0.008	0.007	0.020	0.002	0.009	0.015	0.006	0.005	0.007	0.013
IQR f	0.027	0.013	0.013	0.016	0.037	0.004	0.027	0.027	0.009	0.010	0.010	0.021
Robust CV % f	26	12	120	5.8	13	5.7	15	12	8.4	5.6	20	9.1
Outliers	1	1	0	1	1	3	1	1	2	2	1	2
Stragglers	0	0	0	0	0	0	0	0	2	1	0	0

2004-05: Total N — Kjeldahl, autocolour (7A2) % oven dry

Statistical parameters	Soil sample identification and values											
	<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	7	7	7	7	12	12	12	12	7	7	7	7
Minimum	0.049	0.067	0.008	0.206	0.198	0.015	0.120	0.154	0.105	0.166	0.045	0.205
Maximum	0.107	0.117	0.020	0.278	0.285	0.075	0.249	0.343	0.205	0.286	0.068	0.331
Median i	0.098	0.108	0.012	0.260	0.256	0.063	0.170	0.213	0.110	0.170	0.050	0.220
Mean i	0.091	0.104	0.014	0.255	0.254	0.061	0.174	0.223	0.123	0.188	0.052	0.237
MAD i	0.0061	0.004	0.004	0.008	0.012	0.005	0.005	0.006	0.002	0.004	0.003	0.011
IQR i	0.010	0.007	0.006	0.014	0.017	0.007	0.009	0.013	0.004	0.006	0.006	0.012
Robust CV % i	9.8	6.2	47	5.4	6.8	11	5.2	6.1	4	3.5	11	5.4
Median f	0.099	0.109	0.012	0.263	0.260	0.063	0.170	0.213	0.110	0.170	0.050	0.220
Mean f	0.098	0.110	0.014	0.263	0.259	0.065	0.172	0.212	0.110	0.172	0.049	0.221
MAD f	0.005	0.004	0.004	0.005	0.010	0.003	0.004	0.003	0.002	0.002	0.002	0.007
IQR f	0.009	0.006	0.006	0.011	0.015	0.007	0.007	0.004	0.003	0.006	0.004	0.013
Robust CV % f	9.0	5.8	47	4.2	5.7	11	4.4	2.1	3.0	3.6	8.2	5.9
Outliers	1	1	0	1	1	1	2	3	1	1	1	1
Stragglers	0	0	0	0	0	0	0	1	0	0	0	0

2004-05: Total N — part-pool (7A1 + 7A2) % oven dry

Statistical parameters	Soil sample identification and values											
	<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	13	13	13	13	19	19	19	19	20	20	20	20
Minimum	0.001	0.001	0.000	0.001	0.056	0.015	0.041	0.008	0.076	0.052	0.012	0.074
Maximum	0.150	0.130	0.023	0.292	0.320	0.114	0.249	0.343	0.205	0.286	0.069	0.331
Median i	0.100	0.110	0.011	0.266	0.261	0.066	0.170	0.213	0.110	0.173	0.050	0.225
Mean i	0.093	0.100	0.013	0.243	0.252	0.063	0.170	0.209	0.120	0.179	0.050	0.227
MAD i	0.007	0.006	0.006	0.008	0.018	0.005	0.006	0.010	0.006	0.006	0.005	0.011
IQR i	0.011	0.010	0.007	0.016	0.030	0.008	0.009	0.019	0.012	0.009	0.007	0.019
Robust CV % i	11	9.1	67	6.1	12	12	5.5	9.0	11	4.9	14	8.2
Median f	0.101	0.113	0.011	0.268	0.261	0.066	0.170	0.215	0.110	0.170	0.050	0.222
Mean f	0.101	0.112	0.013	0.268	0.263	0.066	0.172	0.217	0.110	0.172	0.052	0.223
MAD f	0.005	0.005	0.006	0.010	0.016	0.005	0.004	0.006	0.004	0.004	0.005	0.010
IQR f	0.008	0.008	0.007	0.015	0.028	0.007	0.007	0.009	0.007	0.005	0.007	0.015
Robust CV % f	8.3	7.2	67	5.5	11	11	3.9	4.3	6.1	3.1	14	6.7
Outliers	3	2	0	2	1	4	5	4	5	5	1	3
Stragglers	0	0	0	0	0	0	0	1	0	0	0	1

2004-05: Total N – Dumas % oven dry

Statistical parameters	Soil sample identification and values											
	<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	20	20	20	20	21	21	21	21	20	20	20	20
Minimum	0.083	0.097	0.004	0.263	0.226	0.050	0.152	0.188	0.070	0.130	0.032	0.180
Maximum	0.141	0.170	0.110	0.327	2090	630	1670	2050	0.150	0.210	0.093	0.282
Median i	0.100	0.112	0.012	0.288	0.250	0.061	0.172	0.210	0.111	0.170	0.050	0.230
Mean i	0.105	0.116	0.024	0.290	99.8	30.1	79.7	97.8	0.114	0.172	0.052	0.228
MAD i	0.009	0.010	0.004	0.007	0.015	0.008	0.007	0.010	0.010	0.010	0.005	0.009
IQR i	0.014	0.015	0.018	0.012	0.027	0.016	0.013	0.019	0.019	0.015	0.007	0.015
Robust CV % i	14	13	150	4.0	11	26	7.5	9.0	17	8.8	15	6.5
Median f	0.099	0.111	0.011	0.287	0.250	0.060	0.170	0.210	0.111	0.170	0.050	0.230
Mean f	0.097	0.113	0.011	0.288	0.251	0.060	0.171	0.209	0.114	0.172	0.048	0.227
MAD f	0.004	0.009	0.001	0.005	0.012	0.005	0.005	0.008	0.010	0.010	0.003	0.002
IQR f	0.007	0.015	0.001	0.008	0.023	0.009	0.008	0.013	0.014	0.015	0.005	0.007
Robust CV % f	7.3	13	8.8	2.7	9.2	14	4.5	6.2	13	8.8	11	3.1
Outliers	2	1	6	2	1	4	2	3	2	0	2	2
Stragglers	2	0	4	1	1	0	1	1	0	0	2	4

2004-05: Total N — full-pool (7A1 + 7A2 + Dumas)

Statistical parameters	Soil sample identification and values											
	<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	33	33	33	33	41	41	41	41	40	40	40	40
Minimum	0.001	0.001	0.000	0.001	0.056	0.015	0.041	0.008	0.070	0.052	0.012	0.074
Maximum	0.150	0.170	0.110	0.327	2090	630	1670	2050	0.205	0.286	0.093	0.331
Median i	0.100	0.111	0.011	0.280	0.254	0.063	0.172	0.213	0.110	0.171	0.050	0.230
Mean i	0.100	0.110	0.020	0.271	51.2	15.4	40.9	50.2	0.117	0.175	0.051	0.228
MAD i	0.008	0.007	0.005	0.011	0.016	0.007	0.007	0.011	0.008	0.009	0.005	0.010
IQR i	0.013	0.013	0.007	0.017	0.028	0.010	0.013	0.020	0.013	0.012	0.006	0.016
Robust CV % i	13	12	67	6.1	11	16	7.5	9.4	12	6.8	12	6.9
Median f	0.100	0.111	0.011	0.281	0.251	0.063	0.170	0.212	0.110	0.170	0.050	0.230
Mean f	0.098	0.111	0.012	0.281	0.255	0.063	0.171	0.213	0.111	0.170	0.049	0.227
MAD f	0.005	0.006	0.001	0.011	0.014	0.005	0.005	0.008	0.005	0.006	0.003	0.010
IQR f	0.008	0.012	0.003	0.016	0.019	0.006	0.007	0.013	0.008	0.009	0.006	0.012
Robust CV % f	7.7	11	31	5.6	7.5	10	3.9	5.9	7.4	5.2	11	5.2
Outliers	5	5	5	3	4	8	8	8	8	6	5	5
Stragglers	2	0	3	0	1	0	2	2	1	3	2	0

2004-05: Water Soluble Nitrate N— autocolour (7B1) mg/kg dry wt

Statistical parameters	Soil sample identification and values											
	<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	12	12	12	12	12	13	13	11	10	10	10	10
Minimum	3.70	5.00	1.10	0	0.50	24.00	0.50	0	18.00	0	12.00	0
Maximum	24.4	32.0	6.00	10.9	54.0	83.0	102	59.0	31.0	15.0	43.0	18.6
Median i	18.5	25.0	3.95	3.99	1.35	29.9	7.41	0.89	24.5	10.7	16.9	7.50
Mean i	16.8	23.1	3.75	4.42	8.27	34.6	15.0	8.99	24.4	9.90	17.8	8.16
MAD i	3.00	4.30	0.96	0.70	0.68	2.90	1.59	0.89	0.50	0.70	2.50	0.85
IQR i	4.61	7.80	1.28	1.13	5.94	5.93	3.71	8.32	2.04	0.98	3.89	1.85
Robust CV % i	25	31	32	28	440	20	50	940	8.3	9.2	23	25
Median f	18.8	25.0	3.95	3.99	0.92	29.8	7.31	0.60	24.5	10.7	16.8	7.50
Mean f	19.3	23.1	3.75	4.2	0.99	30.5	7.82	0.946	24.5	10.5	15	7.88
MAD f	1.75	4.30	0.96	0.15	0.16	2.80	0.95	0.56	0.50	0.50	1.20	0.65
IQR f	3.52	7.80	1.28	0.61	0.19	5.56	2.19	1.48	0.74	0.80	3.71	1.37
Robust CV % f	19	31	32	15	20	19	30	250	3.0	7.5	22	18
Outliers	1	0	0	2	4	1	1	3	4	2	1	2
Stragglers	1	0	0	2	1	0	2	0	0	0	0	0

2004-05: KCI Extractable Nitrate N — autocolour (7C2) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	18	18	18	18	17	17	16	16	16	15	16	16
Minimum	1.40	1.90	0.40	0.40	0.14	22.0	3.80	0.00	2.80	6.45	5.60	2.80
Maximum	21.6	28.2	4.60	4.90	5.30	33.0	11.0	26.0	29.0	15.0	18.0	12.0
Median i	19.0	25.0	3.45	3.65	0.90	28.0	6.45	1.20	24.0	10.6	12.9	7.10
Mean i	17.4	23.6	3.16	3.36	1.21	27.3	6.62	3.33	22.7	10.7	12.8	7.06
MAD i	1.00	2.00	0.25	0.55	0.40	1.00	0.33	0.60	1.45	0.60	1.02	0.34
IQR i	2.98	3.21	0.46	0.98	0.62	2.59	0.49	1.44	2.13	1.23	2.06	0.60
Robust CV % i	16	13	13	27	69	9.3	7.6	120	8.9	12	16	8.5
Median f	19.0	25.0	3.50	3.75	0.90	28.0	6.45	0.80	24.0	10.6	13.0	7.10
Mean f	18.6	24.9	3.52	3.81	0.86	27.5	6.53	0.95	24.0	10.7	13.4	7.11
MAD f	1.00	2.00	0.22	0.55	0.27	1.00	0.18	0.50	1.40	0.60	1.00	0.30
IQR f	2.04	3.04	0.35	0.93	0.45	1.22	0.36	0.79	1.85	0.99	1.78	0.43
Robust CV % f	11	12	10	25	49	4.4	5.6	98	7.7	9.3	14	6
Outliers	2	1	4	1	1	3	2	2	1	2	3	4
Stragglers	0	0	0	2	1	0	2	1	0	0	0	0

2004-05: KCI Ext. Ammonium N — autocolour (7C2) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	21	21	21	21	22	21	21	22	20	20	20	20
Minimum	1.60	1.40	1.80	3.20	10.1	8.59	10.0	17.0	11.0	18.4	5.60	42.0
Maximum	140	110	87.0	1900	75.0	32.0	30.0	232	50.0	40.0	22.0	103
Median i	11.0	13.3	9.80	26.1	30.7	18.5	16.0	198	15.0	24.0	8.15	54.6
Mean i	16.2	17.2	13.0	114	33.2	18.4	17.0	182	17.6	24.9	9.67	57.1
MAD i	1.00	1.70	1.40	2.10	2.40	1.50	2.00	16.0	2.00	2.00	0.60	3.40
IQR i	1.85	2.71	2.41	3.71	3.89	2.41	2.89	24.8	2.78	2.78	1.50	5.19
Robust CV % i	17	20	25	14	13	13	18	13	19	12	18	9.5
Median f	11.0	13.5	9.8	26.4	30.3	18.5	16.0	201	14.4	23.5	8.0	54.1
Mean f	10.7	13.5	9.7	26.5	31.3	18.3	15.8	204	14.5	23.0	8.0	53.7
MAD f	0.95	1.50	1.00	2.05	0.95	1.00	2.00	11.0	1.40	1.50	0.20	3.40
IQR f	1.50	2.28	1.63	3.35	2.30	1.67	2.97	15.6	2.41	2.85	0.42	5.34
Robust CV % f	14	17	17	13	7.6	9.0	19	7.8	17	12	5.2	9.9
Outliers	3	3	3	5	3	3	2	3	3	3	5	2
Stragglers	0	0	1	0	3	1	0	1	0	0	2	0

2004-05: Total P – all methods including 9A1 (% oven dry)

Statistical parameters	Soil sample identification and values											
	<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	17	17	17	17	21	21	21	21	20	20	20	20
Minimum	0.000	0.001	0.000	0.0001	0.002	0.001	0.004	0.002	0.014	0.010	0.001	0.004
Maximum	0.038	0.057	0.013	0.085	584	205	280	432	0.046	0.064	0.022	0.078
Median i	0.024	0.038	0.006	0.057	0.058	0.019	0.026	0.040	0.040	0.053	0.020	0.064
Mean i	0.023	0.038	0.006	0.054	54.1	18.7	25.5	36.3	0.038	0.051	0.018	0.062
MAD i	0.002	0.003	0.001	0.007	0.009	0.002	0.003	0.005	0.002	0.003	0.002	0.007
IQR i	0.003	0.004	0.001	0.010	0.014	0.004	0.003	0.009	0.003	0.004	0.003	0.010
Robust CV % i	14	12	25	18	24	21	13	23	7	8.1	14	15
Median f	0.024	0.038	0.006	0.057	0.057	0.019	0.026	0.040	0.040	0.053	0.020	0.064
Mean f	0.024	0.038	0.006	0.058	0.057	0.019	0.027	0.039	0.041	0.053	0.020	0.066
MAD f	0.002	0.002	0.001	0.007	0.005	0.002	0.001	0.003	0.002	0.003	0.001	0.006
IQR f	0.003	0.003	0.001	0.010	0.009	0.003	0.003	0.006	0.003	0.004	0.002	0.008
Robust CV % f	13	8.8	25	17	15	14	10	14	7.6	7	8.2	13
Outliers	2	3	2	1	4	4	4	5	3	1	2	1
Stragglers	0	0	0	0	1	1	4	0	0	0	2	0

2004-05: Colwell Extractable P – manual (9B1) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	12	12	12	12	9	9	9	9	10	10	10	10
Minimum	1.10	1.30	0.35	0.40	11.4	5.20	12.9	44.8	2.00	45.0	4.00	2.00
Maximum	601	677	109	71.0	75.0	22.0	34.2	119	116	90.0	12.0	112
Median i	51.6	62.7	10.3	11.8	19.0	8.00	19.0	57.0	66.8	64.5	8.95	48.9
Mean i	95.8	113	16.9	22.0	27.5	11.2	20.4	68.9	64.4	67.1	8.60	50.2
MAD i	10.1	4.85	2.68	6.00	6.10	2.80	5.00	9.16	5.35	5.60	1.45	5.60
IQR i	18.5	19.4	6.17	23.3	19.5	8.05	8.98	29.7	8.17	12.3	2.02	10.4
Robust CV % i	36	31	60	200	100	100	47	52	12	19	23	21
Median f	50.0	62.1	9.6	9.7	15	8.0	19	56	66.8	64.5	8.95	48.9
Mean f	51.3	62.7	8.5	9.12	17.5	11.2	20.4	56.4	65.7	67.1	8.6	48.5
MAD f	4.80	2.90	2.00	3.70	3.63	2.80	5.0	8.16	4.75	5.60	1.45	4.6
IQR f	9.93	5.78	6.21	8.07	4.56	8.05	8.98	12.7	6.99	12.3	2.02	7.71
Robust CV % f	20	9.3	65	83	30	100	47	23	10	19	23	16
Outliers	2	5	1	3	1	0	0	2	2	0	0	2
Stragglers	1	0	0	0	1	0	0	0	0	0	0	0

2004-05: Colwell Extractable P – autocolour (9B2) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	8	8	8	8	10	10	10	10	9	9	9	9
Minimum	19.6	23.9	5.40	2.60	12.0	5.40	12.9	49.0	55.0	54.7	7.70	41.0
Maximum	65.0	69.0	14.0	16.0	235	12.0	124	188	84.0	90.0	18.0	52.0
Median i	54.2	63.0	12.0	9.25	15.0	7.15	15.0	57.0	61.2	57.0	9.53	46.0
Mean i	51.0	57.8	10.9	9.48	37.2	7.88	25.9	72.8	63.4	62.9	10.9	46.4
MAD i	3.30	4.70	1.50	0.58	1.25	0.95	1.45	4.00	3.00	2.30	1.53	3.83
IQR i	7.39	10.2	2.85	1.40	3.34	2.17	2.54	16.5	4.89	9.45	4.19	5.90
Robust CV % i	14	16	24	15	22	30	17	29	8	17	44	13
Median f	54.2	63.0	12.0	9.25	15.0	6.90	15.0	54.0	60.5	55.0	8.70	46.0
Mean f	53.9	62.6	10.9	9.54	15.3	7.10	15.0	54.6	60.8	55.4	9.26	46.4
MAD f	1.50	4.40	1.50	0.38	1.0	0.5	1.0	2.0	2.5	0.3	0.83	3.83
IQR f	3.95	6.97	2.85	1.01	2.41	1.24	2.19	3.71	4.19	0.96	1.48	5.9
Robust CV % f	7.3	11	24	11	16	18	15	6.9	6.9	1.8	17	13
Outliers	1	1	0	2	1	1	1	2	1	1	1	0
Stragglers	1	0	0	0	0	1	0	1	0	3	1	0

2004-05: Colwell Extractable P – pooled (9B1 + 9B2) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	20	20	20	20	19	19	19	19	19	19	19	19
Minimum	1.1	1.3	0.4	0.4	11.4	5.2	12.9	44.8	2.0	45.0	4.0	2.0
Maximum	601	677	109	71.0	235	22.0	124	188	116	90.0	18.0	112
Median i	53.6	63.0	11.1	9.85	15.0	7.40	16.0	57.0	63.0	63.0	9.00	48.0
Mean i	77.8	91.2	14.5	17.0	32.6	9.45	23.3	70.9	63.9	65.1	9.68	48.4
MAD i	6.15	4.7	2	3.65	3	1.7	2.57	8	5	6	1.3	4.2
IQR i	11.7	6.89	3.61	7.22	4.08	4.15	3.71	14.8	7.41	10.2	2.22	6.60
Robust CV % i	22	11	33	73	27	56	23	26	12	16	25	14
Median f	53.6	63.0	11.1	9.4	15.0	6.65	15.0	56.0	62.2	60.1	8.95	48.0
Mean f	53.7	62.7	10.5	9.29	15.3	6.97	15.8	56.5	63.2	60.5	9.18	47.4
MAD f	3.55	3.9	1.9	2.5	1.5	1.0	1.95	3.0	3.5	5.1	1.0	4.0
IQR f	5.36	6.00	2.75	4.11	3.34	1.65	3.28	5.93	6.42	8.38	1.63	5.97
Robust CV % f	10	9.5	25	44	22	25	22	11	10	14	18	12
Outliers	5	6	3	3	4	4	3	3	3	3	2	2
Stragglers	1	0	0	0	0	1	0	1	0	0	1	0

2004-05: Olsen Extractable P — manual (9C1) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	7	7	7	7	8	8	8	8	10	11	11	10
Minimum	1.40	1.00	0.10	3.10	3.30	1.70	5.60	11.0	24.0	23.0	2.90	12.0
Maximum	67.6	92.5	13.0	22.0	10.1	4.88	13.3	29.3	49.2	44.3	9.20	27.0
Median i	20.0	29.0	4.95	6.60	4.35	2.65	6.60	17.5	31.1	32.4	4.20	16.5
Mean i	25.3	35.4	4.78	9.24	5.23	3.04	8.46	18.8	32.1	33.4	4.87	18.2
MAD i	2.00	2.00	1.75	3.50	0.85	0.60	0.90	2.15	2.50	3.60	1.20	3.03
IQR i	5.93	8.45	2.82	4.37	1.91	1.11	4.60	6.69	5.36	8.15	2.37	4.61
Robust CV % i	30	29	57	66	44	42	70	38	17	25	56	28
Median f	20.0	29.0	4.95	6.60	4.20	2.65	6.50	17.5	31.0	32.4	4.20	16.5
Mean f	21.6	30.9	4.78	9.24	4.53	3.04	6.22	18.8	30.3	33.4	4.87	18.2
MAD f	1	2	1.75	3.5	0.5	0.6	0.1	2.15	2	3.6	1.2	3.03
IQR f	3.71	4.97	2.82	4.37	1.33	1.11	0.67	6.69	4.8	8.15	2.37	4.61
Robust CV % f	19	17	57	66	32	42	10	38	15	25	56	28
Outliers	2	2	0	0	1	0	2	0	1	0	0	0
Stragglers	0	0	0	0	0	0	1	0	0	0	0	0

2004-05: Olsen Extractable P — autocolour (9C2) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	6	6	6	6	5	6	6	6	5	5	5	5
Minimum	17.0	24.0	3.60	2.91	3.63	1.76	5.19	14.4	24.9	29.0	2.90	14.4
Maximum	24.0	32.0	7.40	5.30	6.30	3.50	29.0	52.0	29.0	32.8	5.50	17.3
Median i	20.0	27.5	5.10	4.50	4.40	2.50	7.40	18.6	26.0	30.2	3.76	15.9
Mean i	20.3	27.7	5.33	4.35	4.61	2.49	10.60	23.4	26.4	30.5	3.85	15.9
MAD i	2.50	2.50	1.00	0.55	0.10	0.35	0.25	2.50	0.10	0.80	0.76	1.10
IQR i	4.08	4.26	1.82	1.05	1.03	0.71	4.69	9.75	1.56	1.93	1.37	1.82
Robust CV % i	20	15	36	23	23	28	63	53	6	6.4	36	11
Median f	20.0	27.5	5.10	4.50	4.40	2.50	7.40	18.2	26.0	30.2	3.76	15.9
Mean f	20.3	27.7	5.33	4.35	4.37	2.49	7.43	17.7	26.0	30.5	3.85	15.9
MAD f	2.50	2.50	1.00	0.55	0.0	0.35	0.15	2.20	0.0	0.8	0.76	1.10
IQR f	4.08	4.26	1.82	1.05	0.074	0.712	0.315	3.52	0.074	1.93	1.37	1.82
Robust CV % f	20	15	36	23	1.7	28	4.3	19	0.29	6.4	36	11
Outliers	0	0	0	0		0	2	1				
Stragglers	0	0	0	0		0	0	0				

2004-05: Olsen Extractable P — Pooled (9C1 + 9C2) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	13	13	13	13	13	14	14	14	15	16	16	15
Minimum	1.40	1.00	0.10	2.91	3.30	1.70	5.19	11.0	24.0	23.0	2.90	12.0
Maximum	67.6	92.5	13.0	22.0	10.1	4.88	29.0	52.0	49.2	44.3	9.20	27.0
Median i	20.0	29.0	5.00	5.20	4.40	2.60	7.25	18.1	29.0	31.0	3.93	16.4
Mean i	23.0	31.8	5.03	6.98	4.99	2.80	9.40	20.8	30.2	32.5	4.55	17.4
MAD i	2.00	3.00	1.40	1.30	0.70	0.40	1.10	2.50	3.00	2.00	0.93	1.40
IQR i	4.08	4.45	1.85	3.37	1.56	0.91	3.56	4.86	4.52	4.82	1.97	2.97
Robust CV % i	20	15	37	65	35	35	49	27	16	16	50	18
Median f	20.0	29.0	5.00	4.80	4.35	2.40	6.60	17.5	29.0	30.2	3.63	16.0
Mean f	20.9	29.1	4.76	4.69	4.56	2.43	6.60	17.5	28.9	30.6	4.00	16.0
MAD f	2.00	2.00	0.60	0.70	0.55	0.30	0.75	1.45	3.00	1.20	0.63	1.00
IQR f	3.71	3.71	1.33	1.30	1.11	0.52	1.19	2.93	4.26	2.52	1.46	1.82
Robust CV % f	19	13	27	27	26	22	18	17	15	8.3	40	11
Outliers	2	2	1	1	1	1	3	1	1	3	1	2
Stragglers	0	0	1	2	0	2	1	1	0	2	1	0

2004-05: Bray-1 Extractable P — manual (9E1) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	7	7	7	7	10	10	10	10	11	10	10	11
Minimum	23.0	32.0	3.30	3.93	1.00	1.40	7.52	6.00	35.0	11.0	1.20	13.0
Maximum	39.8	89.0	9.00	14.0	5.70	4.00	16.0	26.9	68.0	228	10.0	41.0
Median i	33.0	44.0	7.53	5.40	2.15	1.94	9.95	16.6	49.0	39.5	3.75	24.0
Mean i	31.9	49.6	7.20	6.79	2.59	2.26	10.7	16.5	48.5	89.3	4.93	24.9
MAD i	5.0	4.0	0.96	0.60	0.85	0.35	1.10	3.10	6.00	22.5	1.92	3.50
IQR i	8.15	10.2	1.43	2.52	1.78	0.89	2.59	5.26	11.3	141	5.49	5.56
Robust CV % i	25	23	19	47	83	46	26	32	23	360	150	23
Median f	33.0	44.0	7.53	5.19	2.15	1.88	9.9	16.6	49.0	34.0	3.75	23.9
Mean f	31.9	43.1	7.2	5.59	2.59	2.06	10.1	16.5	48.5	32.8	4.93	23.3
MAD f	5.00	2.35	0.96	0.55	0.85	0.28	1.00	3.10	6.00	9.00	1.92	3.15
IQR f	8.15	6.65	1.43	1.42	1.78	0.67	1.93	5.26	11.3	21.5	5.49	5.47
Robust CV % f	25	15	19	27	83	35	19	32	23	63	150	23
Outliers	0	1	0	1	0	1	1	0	0	3	0	1
Stragglers	0	0	0	0	0	0	0	0	0	0	0	0

2004-05: Bray-1 Extractable P — autocolour (9E2) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	6	6	6	6	7	7	7	7	5	5	5	5
Minimum	25.9	41.0	4.70	2.66	1.54	0.97	7.50	11.4	37.4	1.70	0.37	6.30
Maximum	36.1	53.8	8.20	4.80	3.70	4.30	11.00	26.0	49.0	41.0	3.20	23.0
Median i	33.9	44.2	7.36	4.41	2.66	2.00	8.89	16.0	44.0	32.4	2.89	21.0
Mean i	32.6	45.2	6.90	4.01	2.69	2.16	9.15	16.4	43.7	28.2	2.39	18.7
MAD i	2.15	1.75	0.80	0.24	0.64	0.40	0.71	3.00	0.30	2.60	0.31	2.00
IQR i	5.23	4.32	1.98	1.06	0.96	0.64	0.91	4.08	4.41	16.0	1.38	7.15
Robust CV % i	15	9.8	27	24	36	32	10	25	10	50	48	34
Median f	33.9	44.2	7.36	4.50	2.66	2.00	8.89	16.0	44.0	33.7	3.05	21.0
Mean f	32.6	45.2	6.90	4.28	2.69	2.16	9.15	16.4	44.1	34.9	2.90	18.7
MAD f	2.15	1.75	0.80	0.18	0.64	0.4	0.71	3.0	0	2.0	0.16	2.0
IQR f	5.23	4.32	1.98	0.62	0.96	0.64	0.91	4.08	0.22	6.04	0.56	7.15
Robust CV % f	15	9.8	27	14	36	32	10	25	0.51	18	18	34
Outliers	0	0	0	1	0	0	0	0	2	1	1	0
Stragglers	0	0	0	0	0	0	0	0	0	0	0	0

2004-05: Bray-1 Extractable P — pooled (9E1 + 9E2) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	13	13	13	13	17	17	17	17	16	15	15	16
Minimum	23.0	32.0	3.30	2.66	1.00	0.97	7.50	6.00	35.0	1.70	0.37	6.30
Maximum	39.8	89.0	9.00	14.0	5.70	4.30	16.0	26.9	68.0	228	10.0	41.0
Median i	33.5	44.0	7.53	4.80	2.60	2.00	9.76	16	44.5	35.0	2.89	23.0
Mean i	32.3	47.6	7.06	5.51	2.63	2.22	10.1	16.5	47.0	69.0	4.09	23.0
MAD i	3.50	1.80	0.70	0.60	0.78	0.40	1.06	3.00	6.40	8.00	1.39	2.55
IQR i	6.19	6.04	1.53	1.17	1.35	0.70	1.63	4.19	10.2	20.8	2.11	3.76
Robust CV % i	18	14	20	24	52	35	17	26	23	59	73	16
Median f	33.5	43.9	7.71	4.50	2.60	1.88	9.68	16.0	44.5	33.2	2.85	23.0
Mean f	32.3	43.3	7.38	4.48	2.63	1.96	9.71	16.5	47.0	31.0	2.68	22.5
MAD f	3.50	1.10	0.65	0.48	0.78	0.28	0.93	3.00	6.4	2.45	0.62	2.00
IQR f	6.19	2.37	1.16	0.78	1.35	0.52	1.45	4.19	10.2	7.73	1.14	2.5
Robust CV % f	18	5.4	15	17	52	28	15	26	23	23	40	11
Outliers	0	4	1	2	0	2	1	0	0	3	3	3
Stragglers	0	0	0	0	0	0	0	0	0	2	0	1

2004-05: Phosphorus buffer index (*Colwell-vanadate finish*) (9I2c) L/kg dry wt

Statistical parameters	Soil sample identification and values											
	<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	6	6	6	6	5	5	5	5	5	5	5	5
Minimum	36.8	14.8	17.2	116	300	136	29.0	393	27.9	88.5	105	185
Maximum	66.3	41.2	26.7	275	407	179	47.0	482	41.0	105	114	205
Median i	57.3	35.25	21.6	241	341	158	34.0	410	36.6	90.4	107	197
Mean i	54.3	32.6	21.9	224	348	158	36.8	424	35.5	94.8	109	196
MAD i	5.90	3.80	3.90	21.5	41.0	11.0	5.00	17.0	4.40	1.90	2.00	6.00
IQR i	12.2	9.12	6.21	53.3	67.5	23	10.4	49.7	7.82	9.82	5.93	11.9
Robust CV % i	21	26	29	22	20	15	31	12	21	11	5.5	6.0
Median f	57.3	35.3	21.6	241	341	158	34.0	410	36.6	90.0	107	197
Mean f	54.3	32.6	21.9	224	348	158	36.8	424	35.5	89.6	109	196
MAD f	5.90	3.80	3.90	21.5	41.0	11.0	5.0	17.0	4.40	0.40	2.00	6.00
IQR f	12.2	9.12	6.21	53.3	67.5	23.0	10.4	49.7	7.82	1.41	5.93	11.9
Robust CV % f	21	26	29	22	20	15	31	12	21	1.6	5.5	6.0
Outliers	0	0	0	0								
Stragglers	0	0	0	0								

2004-05: Phosphorus buffer index (*Colwell*) (9I2a + 9I2b + 9I2c) L/kg dry wt

Statistical parameters	Soil sample identification and values											
	<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	10	10	10	10	10	10	10	10	11	11	11	11
Minimum	36.8	14.8	17.2	73	198	98.1	21.6	356	23.8	82.4	96.8	164
Maximum	69.2	47.0	49.0	293	414	179	47	488	43.8	121	134	220
Median i	59.0	37.5	25.6	236	320	151	37.3	403	37.0	91.0	110	196
Mean i	57.6	36.0	28.0	215	328	151	36.3	418	35.6	95.5	111	195
MAD i	3.05	3.65	3.95	30.5	23.5	11.0	5.0	21.1	4.00	4.90	4.00	9.00
IQR i	6.30	5.93	8.69	66.1	67.1	20.2	8.52	42.4	5.93	8.52	6.67	14.8
Robust CV % i	11	16	34	28	21	13	23	11	16	9.4	6.1	7.6
Median f	60.1	38.4	23.6	248	332	151	37.3	403	37	90.7	109	196
Mean f	59.9	38.3	22.8	231	342	151	36.3	418	35.6	92.9	108	195
MAD f	3.10	2.80	2.60	27.0	32.0	11.0	5.00	21.1	4.00	4.45	4.50	9.00
IQR f	5.37	4.97	5.39	46.7	70.1	20.2	8.52	42.4	5.93	8.25	6.49	14.8
Robust CV % f	8.9	13	23	19	21	13	23	11	16	9.1	6.0	7.6
Outliers	1	1	2	1	1	0	0	0	0	1	1	0
Stragglers	0	0	0	0	0	0	0	0	0	0	0	0

2004-05: Phosphorus buffer index (*Olsen*) (9I3a + 9I3b + 9I3c) L/kg dry wt

Statistical parameters	Soil sample identification and values											
	<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	4	4	4	4	2	2	2	2	3	3	3	3
Minimum	57.3	44.1	20.6	193	409	173	48.0	487	52.4	104	107	204
Maximum	77.5	61.0	50.0	295	415	179	50.0	493	53.3	138	135	222
Median i	71.7	53.85	27.25	255	412	176	49.0	490	52.8	115	116	218
Mean i	69.6	53.2	31.3	250	412	176	49.0	490	52.8	119	119	215
MAD i	4.25	3.60	3.35	31	3.00	3.00	1.00	3.00	0.40	11.0	9.00	4.00
IQR i	12.2	9.41	16.4	64.9					0.667	25.2	20.8	13.3
Robust CV % i	17.0	17.0	60.0	25.0					1.3	22.0	18.0	6.10
Median f	71.7	53.9	27.3	255	412	176	49	490	52.8	115	116	218
Mean f	69.6	53.2	31.3	250	412	176	49	490	52.8	119	119	215
MAD f	4.25	3.60	3.35	31.0	3.00	3.00	1.00	3.00	0.40	11.0	9.00	4.00
IQR f	12.2	9.41	16.4	64.9					0.67	25.2	20.8	13.3
Robust CV % f	17	17	60	25					1.3	22	18	6.1
Outliers												
Stragglers												

2004-05: Phosphate Extractable S (10B3) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	8	8	8	8	5	5	5	5	6	6	6	6
Minimum	13.4	5.50	2.00	3.00	12.4	24.0	8.00	2193	11.0	24.0	24.0	50.0
Maximum	57.0	16.9	14.5	48.0	40.0	48.0	19.0	2779	17.0	28.5	41.0	87.8
Median i	55.0	15.5	3.15	24.3	36.0	43.0	17.0	2604	14.5	25.5	29.0	74.5
Mean i	48.4	14.4	4.81	27.8	32.2	39.8	15.6	2560	14.3	25.8	30.2	71.1
MAD i	1.45	0.70	0.91	14.6	1.82	1.99	1.13	5.10	1.25	1.50	2.95	11.4
IQR i	9.58	1.37	2.60	22.9	11.3	9.64	4.87	221	2.50	2.50	6.43	22.6
Robust CV % i	17	8.8	83	94	31	22	29	8.5	17	9.8	22	30
Median f	55.7	16.0	2.90	24.3	36.9	43.0	17.57	2604	14.5	25.5	29.0	74.5
Mean f	55.7	15.6	3.42	27.8	37.2	43.7	17.5	2600	14.3	25.8	30.2	71.1
MAD f	0.75	0.90	0.69	14.6	1.41	1.00	1.00	3.90	1.25	1.50	2.95	11.4
IQR f	1.35	1.04	1.35	22.9	3.12	3.89	1.88	6.67	2.50	2.50	6.43	22.6
Robust CV % f	2.4	6.5	47	94	8.4	9.1	11	0.26	17	9.8	22	30
Outliers	2	1	1	0	1	1	1	2	0	0	0	0
Stragglers	0	0	0	0	0	0	0	0	0	0	0	0

2004-05: KCl₄₀ Extractable S (Blair *et al.*) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	8	8	8	8	10	10	10	10	8	8	8	8
Minimum	37.2	11.3	1.10	16.9	6.55	11.2	7.31	1303	13.1	9.70	13.1	21.0
Maximum	60.3	17.6	4.60	27.7	41.6	21.2	54.8	2712	65.6	167	104	232
Median i	55.3	14.7	2.21	23.5	15.0	16.5	14.9	2155	16.5	23.5	22.0	51.0
Mean i	53.4	14.9	2.29	23.2	18.5	16.3	18.6	2120	22.3	39.7	31.5	71.4
MAD i	3.55	1.00	0.77	2.35	2.85	1.40	2.00	176	1.75	2.80	2.50	5.30
IQR i	6.06	1.98	1.03	3.95	8.78	2.34	4.24	304	3.48	4.65	5.47	10.3
Robust CV % i	11	13	47	17	59	14	28	14	21	20	25	20
Median f	55.3	14.7	2.21	23.5	15	16.5	14.0	2155	16.0	22.0	21.0	51.0
Mean f	53.4	14.9	2.29	23.2	14.3	16.3	14.5	2120	16.1	21.5	21.1	53.0
MAD f	3.55	1.00	0.77	2.35	1.16	1.40	1.97	176	1.00	3.00	2.00	3.30
IQR f	6.06	1.98	1.03	3.95	2.61	2.34	3.19	304	1.85	4.15	3.71	8.38
Robust CV % f	11	13	47	17	17	14	23	14	12	19	18	16
Outliers	0	0	0	0	1	0	1	0	1	1	1	2
Stragglers	0	0	0	0	1	0	0	0	0	0	0	0

2004-05: DTPA Extractable Fe (12A1) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	22	22	22	22	26	26	26	26	27	27	27	27
Minimum	43.9	43.8	2.90	45.5	64.2	38.7	27.0	131	72.0	2.80	1.80	0.00
Maximum	4904	5787	180	4313	390	233	296	2447	19000	23000	36000	90.6
Median i	107	106	6.55	90.0	87.0	50.5	45.3	383	99.8	6.40	4.69	20.0
Mean i	334	377	14.8	296	107	64.4	61.4	500	837	859	1340	26.0
MAD i	16.7	24.7	2.31	19.1	15.3	7.00	12.2	36.0	12.8	0.84	0.89	5.00
IQR i	29.8	43.4	3.79	31.8	20.6	14.8	23.6	52.6	41.5	1.63	1.60	8.15
Robust CV % i	28	41	58	35	24	29	52	14	42	25	34	41
Median f	104	94.5	6.50	88.0	83.0	50.0	44.3	379	98.0	6.05	4.45	20.0
Mean f	105	95.5	6.93	90.6	87.6	52.2	48.2	382	95.5	6.29	4.75	21.4
MAD f	9.00	17.0	2.30	15.0	11.5	6.00	10.6	31.0	8.82	0.47	0.55	4.00
IQR f	16.7	26.2	3.45	26.7	19.3	11.5	18.5	44.1	12.2	0.85	1.20	6.67
Robust CV % f	16	28	53	30	23	23	42	12	12	14	27	33
Outliers	3	4	1	2	3	3	2	4	6	6	3	4
Stragglers	2	0	0	1	0	0	0	1	1	1	2	0

2004-05: DTPA Extractable Cu (12A1) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	22	22	22	22	26	26	26	26	28	28	28	28
Minimum	0.26	0.04	0	8.00	0.23	0.69	0.66	0.05	0.05	0.27	0.38	0.24
Maximum	8.10	66.5	157	347	3.30	5.60	5.60	0.65	11.0	20.0	20.0	38.0
Median i	0.80	0.42	0.12	9.85	0.54	0.95	0.83	0.15	0.45	2.18	2.39	2.75
Mean i	1.11	3.42	7.27	25.2	0.67	1.14	1.05	0.19	0.97	3.20	3.55	4.51
MAD i	0.09	0.07	0.03	1.21	0.07	0.11	0.06	0.06	0.05	0.21	0.22	0.59
IQR i	0.14	0.12	0.06	1.95	0.10	0.17	0.12	0.09	0.25	0.47	0.44	0.85
Robust CV % i	18	29	52	20	19	18	14	59	56	22	18	31
Median f	0.80	0.40	0.12	9.70	0.52	0.93	0.80	0.14	0.43	2.18	2.39	2.70
Mean f	0.80	0.40	0.12	9.92	0.54	0.93	0.80	0.16	0.44	2.26	2.47	2.87
MAD f	0.08	0.05	0.01	1.20	0.06	0.07	0.05	0.05	0.03	0.18	0.16	0.50
IQR f	0.13	0.08	0.02	1.82	0.09	0.13	0.08	0.08	0.05	0.38	0.35	0.77
Robust CV % f	16	21	19	19	18	14	9.6	60	12	17	15	29
Outliers	2	3	5	1	4	2	5	2	9	6	4	3
Stragglers	0	1	3	0	0	0	0	0	2	0	0	0

2004-05: DTPA Extractable Mn (12A1) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	22	22	22	22	26	26	26	26	28	28	28	28
Minimum	3.92	33.3	0.20	33.2	80.0	24.0	76.0	13.6	7.00	1.40	0.86	2.90
Maximum	200	6793	33.4	6774	2137	480	1222	160	801	416	240	825
Median i	5.20	159	0.70	161	499	40.4	279	17.3	167	88	28.5	175
Mean i	14.2	451	2.27	449	556	62.4	302	25.0	183	103	37.8	200
MAD i	0.45	10.5	0.17	10.0	56.9	3.10	13.5	0.75	9.50	3.50	3.50	11.8
IQR i	0.72	15.2	0.26	17.6	78.6	4.73	23.2	1.02	16.1	11.6	5.19	19.6
Robust CV % i	14	9.6	36	11	16	12	8.3	5.9	9.7	13	18	11
Median f	5.10	162	0.68	162	501	39.4	282	17.0	169	87.2	28.6	178
Mean f	5.10	164	0.64	159	503	40.3	282	17.3	169	87.6	29	179
MAD f	0.40	9.00	0.12	5.50	35.0	2.35	11.0	1.0	6.0	2.18	2.40	8.27
IQR f	0.62	14.1	0.16	12.6	63.7	4.21	16.5	0.78	9.64	3.4	3.71	12.5
Robust CV % f	12	8.7	24	7.8	13	11	5.9	4.6	5.7	3.9	13	7.1
Outliers	3	4	3	5	4	4	6	5	9	12	5	8
Stragglers	0	1	0	1	1	0	0	0	0	0	0	0

2004-05: DTPA Extractable Zn (12A1) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	22	22	22	22	26	25	26	26	28	28	28	28
Minimum	0.37	4.05	0.12	1.24	0.12	0.10	1.50	7.50	5.10	0.81	0.28	1.80
Maximum	41.9	444	7.90	140	5.90	1.10	9.80	63.9	137	62.0	20.0	158
Median i	0.77	8.91	0.20	2.73	1.20	0.20	1.95	12.0	9.40	1.60	0.47	3.30
Mean i	2.64	28.5	0.58	8.97	1.48	0.32	2.58	14.0	15.8	4.63	1.91	10.0
MAD i	0.11	0.80	0.05	0.30	0.12	0.05	0.19	1.00	0.75	0.20	0.11	0.36
IQR i	0.19	1.07	0.06	0.56	0.40	0.18	0.43	1.48	1.19	0.46	0.21	0.62
Robust CV % i	25	12	33	20	33	89	22	12	13	29	45	19
Median f	0.77	9.02	0.19	2.73	1.20	0.18	1.84	12.0	9.20	1.60	0.43	3.30
Mean f	0.774	9.12	0.20	2.81	1.22	0.18	1.88	11.8	9.14	1.65	0.46	3.38
MAD f	0.11	0.62	0.03	0.28	0.10	0.02	0.14	1.00	0.50	0.18	0.08	0.30
IQR f	0.17	0.86	0.05	0.48	0.15	0.03	0.19	1.48	0.78	0.35	0.14	0.49
Robust CV % f	22	9.5	25	18	12	17	10	12	8.5	22	34	15
Outliers	1	2	4	2	7	6	5	3	4	4	5	4
Stragglers	0	1	0	0	0	3	1	0	2	0	1	0

2004-05: Hot CaCl₂ Extractable B — manual colour (12C1) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	3	3	3	3	5	5	5	5	6	6	6	6
Minimum	0.65	0.38	0.16	0.01	0.72	0.42	1.93	4.56	0	0.66	9.00	1.10
Maximum	0.67	0.57	0.30	1.39	1.59	1.65	4.80	12.0	2.00	2.05	94.0	10.0
Median i	0.65	0.57	0.26	0.72	1.20	0.90	2.23	4.61	0.71	1.23	44.5	1.85
Mean i	0.66	0.51	0.24	0.71	1.16	0.94	2.73	6.80	0.92	1.29	45.9	3.06
MAD i	0.001	0.001	0.04	0.67	0.14	0.29	0.30	0.05	0.50	0.41	15.8	0.19
IQR i	0.013	0.142	0.106	1.02	0.388	0.638	1.23	4.1	1.08	0.714	33.3	1.86
Robust CV % i	1.9	25	41	140	32	71	55	89	150	58	75	100
Median f	0.65	0.57	0.26	0.72	1.20	0.90	2.18	4.59	0.71	1.23	44.5	1.80
Mean f	0.66	0.57	0.24	0.71	1.16	0.94	2.21	4.59	0.92	1.29	45.9	1.68
MAD f	0	0	0.04	0.67	0.14	0.29	0.15	0.02	0.50	0.41	15.8	0.18
IQR f	0.01		0.11	1.02	0.39	0.64	0.38	0.04	1.08	0.71	33.3	0.44
Robust CV % f	1.9		41	140	32	71	17	0.81	150	58	75	24
Outliers					0	0	1	2	0	0	0	1
Stragglers					0	0	0	0	0	0	0	0

2004-05: Hot CaCl₂ Extractable B — ICPAES (12C2) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	14	14	14	14	14	14	14	14	13	13	13	13
Minimum	0.30	0.14	0.07	0.49	0.28	0.28	0.80	0	0.10	1.00	27.0	1.04
Maximum	1.00	0.66	0.73	1.90	1.80	1.60	2.20	10.2	1.00	2.58	70.0	3.20
Median i	0.56	0.25	0.16	0.93	0.85	0.81	1.45	5.08	0.3	1.6	52	2.20
Mean i	0.57	0.29	0.20	0.94	0.84	0.78	1.45	5.61	0.363	1.73	50.6	2.20
MAD i	0.09	0.07	0.06	0.09	0.08	0.18	0.15	1.55	0.1	0.56	11	0.70
IQR i	0.15	0.13	0.10	0.20	0.15	0.24	0.26	3.05	0.20	0.91	16.8	1.00
Robust CV % i	27	50	64	21	18	29	18	60	65	57	32	45
Median f	0.53	0.24	0.16	0.93	0.86	0.81	1.42	5.08	0.29	1.60	52.0	2.20
Mean f	0.54	0.26	0.16	0.86	0.85	0.78	1.40	5.61	0.31	1.73	50.6	2.20
MAD f	0.08	0.06	0.05	0.06	0.03	0.18	0.18	1.55	0.10	0.56	11.0	0.70
IQR f	0.14	0.12	0.09	0.16	0.06	0.24	0.26	3.05	0.16	0.91	16.8	1.00
Robust CV % f	25	51	56	17	6.9	29	18	60	54	57	32	45
Outliers	1	1	1	2	2	0	1	0	1	0	0	0
Stragglers	0	0	0	1	2	0	0	0	0	0	0	0

2004-05: Hot CaCl₂ Extractable B — pooled (12C1 + 12C2) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	17	17	17	17	19	19	19	19	19	19	19	19
Minimum	0.30	0.14	0.07	0.01	0.28	0.28	0.80	0	0	0.66	9.00	1.04
Maximum	1.00	0.66	0.73	1.90	1.80	1.65	4.80	12.0	2.00	2.58	94.0	10.0
Median i	0.60	0.30	0.16	0.93	0.87	0.82	1.60	4.61	0.37	1.35	52.0	1.98
Mean i	0.59	0.33	0.21	0.90	0.92	0.82	1.79	5.92	0.54	1.59	49.1	2.48
MAD i	0.08	0.08	0.07	0.19	0.15	0.21	0.30	1.58	0.21	0.35	12.0	0.52
IQR i	0.13	0.14	0.10	0.23	0.26	0.27	0.59	2.91	0.30	0.85	17.4	0.96
Robust CV % i	21	45	64	24	29	33	37	63	82	63	34	49
Median f	0.60	0.29	0.16	0.93	0.86	0.82	1.55	4.60	0.30	1.35	52.0	1.94
Mean f	0.56	0.31	0.18	0.89	0.86	0.82	1.62	5.58	0.35	1.59	49.1	2.06
MAD f	0.08	0.09	0.06	0.11	0.11	0.21	0.30	1.40	0.13	0.35	12.0	0.45
IQR f	0.13	0.14	0.10	0.19	0.16	0.27	0.49	2.57	0.24	0.85	17.4	0.80
Robust CV % f	21	48	63	20	19	33	31	56	79	63	34	41
Outliers	1	1	1	2	2	0	1	1	2	0	0	1
Stragglers	0	0	0	0	1	0	0	0	1	0	0	0

2004-05: Exchangeable Ca — 1M NH₄Cl extract (15A1) cmol+/kg oven dry

Statistical parameters	Soil sample identification and values											
	<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	19	19	19	19	21	21	21	20	17	16	16	17
Minimum	0.55	0.19	0.07	0.61	3.36	2.59	4.70	0.08	1.60	22.0	8.23	6.10
Maximum	6.39	2.59	1.20	8.63	1223	852	1622	474	2.61	42.4	29.7	10.2
Median i	5.25	2.02	0.60	6.48	5.04	3.18	6.36	1.92	2.00	25.9	20.9	7.26
Mean i	5.04	1.97	0.63	6.29	62.8	43.7	88.4	25.5	2.05	26.5	20.5	7.38
MAD i	0.21	0.14	0.08	0.59	0.36	0.15	0.61	0.21	0.07	1.20	1.00	0.38
IQR i	0.30	0.22	0.12	0.94	0.41	0.26	1.08	0.34	0.15	2.00	1.82	0.60
Robust CV % i	5.6	11	20	15	8.2	8	17	18	7.2	7.7	8.7	8.3
Median f	5.25	2.03	0.60	6.49	5.06	3.12	6.31	1.92	2.00	25.7	20.9	7.19
Mean f	5.22	2.07	0.63	6.61	4.99	3.12	6.30	1.93	2.00	25.5	20.8	7.21
MAD f	0.16	0.14	0.07	0.54	0.11	0.09	0.50	0.14	0.02	1.10	0.85	0.37
IQR f	0.27	0.23	0.11	0.91	0.35	0.14	0.53	0.22	0.04	2.08	1.45	0.56
Robust CV % f	5.2	12	19	14	6.9	4.6	8.3	11	1.9	8.1	6.9	7.8
Outliers	2	1	2	1	2	4	2	6	4	1	2	1
Stragglers	0	0	0	0	4	1	0	0	3	0	0	0

2004-05: Exchangeable Mg — 1M NH₄Cl extract (15A1) cmol+/kg oven dry

Statistical parameters	Soil sample identification and values											
	<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	19	19	19	19	20	20	20	19	17	16	16	17
Minimum	0.12	0.11	0.01	0.43	1.50	2.37	1.30	0.65	0.45	1.70	9.13	1.77
Maximum	1.58	0.71	0.30	5.90	257	452	224	526	0.72	3.08	16.1	3.01
Median i	1.33	0.60	0.15	4.76	1.86	3.23	1.64	3.86	0.59	1.99	11.7	2.13
Mean i	1.26	0.58	0.16	4.6	14.7	25.6	12.8	31.0	0.58	2.06	11.9	2.21
MAD i	0.06	0.04	0.04	0.33	0.14	0.21	0.10	0.20	0.03	0.09	0.53	0.15
IQR i	0.10	0.06	0.06	0.51	0.21	0.24	0.14	0.38	0.06	0.15	0.94	0.24
Robust CV % i	7.2	9.5	39	11	11	7.5	8.3	9.8	9.5	7.3	8	11
Median f	1.34	0.60	0.15	4.82	1.82	3.23	1.61	3.86	0.59	1.97	11.6	2.12
Mean f	1.32	0.61	0.16	4.83	1.82	3.23	1.60	3.84	0.58	1.94	11.3	2.16
MAD f	0.05	0.03	0.04	0.31	0.15	0.16	0.09	0.19	0.03	0.06	0.33	0.13
IQR f	0.08	0.04	0.06	0.50	0.21	0.23	0.14	0.32	0.04	0.09	0.60	0.19
Robust CV % f	5.7	7.2	39	10	11	7.2	8.5	8.4	7.4	4.7	5.2	8.8
Outliers	2	1	0	1	2	2	3	3	2	2	3	1
Stragglers	1	0	0	0	0	0	0	0	0	1	1	0

2004-05: Exchangeable Na — 1M NH₄Cl extract (15A1) cmol+/kg oven dry

Statistical parameters	Soil sample identification and values											
	<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	19	19	19	19	21	21	20	20	17	17	17	16
Minimum	0.06	0.02	0	0.03	0.04	0.30	0	0.30	0.12	0.10	0.10	0.08
Maximum	3.90	1.80	1.60	1.80	31.2	70.5	18.2	530	0.64	0.58	8.72	5.50
Median i	0.68	0.20	0.02	0.37	0.13	0.37	0.06	2.66	0.20	0.17	5.86	0.12
Mean i	0.89	0.30	0.12	0.50	1.75	3.83	1.16	28.7	0.22	0.21	5.58	0.49
MAD i	0.05	0.02	0.02	0.03	0.03	0.02	0.04	0.22	0.03	0.04	0.26	0.03
IQR i	0.08	0.03	0.03	0.05	0.06	0.05	0.09	0.30	0.04	0.05	0.43	0.09
Robust CV % i	11	14	160	15	47	15	160	11.0	21.0	27.0	7.40	76.0
Median f	0.68	0.20	0.02	0.36	0.12	0.35	0.06	2.72	0.2	0.17	5.88	0.11
Mean f	0.67	0.20	0.02	0.37	0.13	0.36	0.06	2.66	0.20	0.17	5.88	0.11
MAD f	0.04	0.01	0.01	0.02	0.01	0.02	0.04	0.20	0.03	0.04	0.23	0.02
IQR f	0.07	0.02	0.02	0.04	0.02	0.03	0.04	0.26	0.04	0.05	0.37	0.03
Robust CV % f	9.8	10	130	11	16	8.8	78	9.5	19	27	6.2	27
Outliers	3	5	3	3	4	4	3	4	1	2	3	3
Stragglers	0	0	1	1	2	0	0	0	0	0	0	1

2004-05: Exchangeable K — 1M NH₄Cl extract (15A1) cmol+/kg oven dry

Statistical parameters	Soil sample identification and values											
	<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	19	19	19	19	20	20	20	18	17	17	17	18
Minimum	0.02	0.02	0	0.08	0.24	0.23	0.64	0.10	0.15	0.25	0.21	1.00
Maximum	0.30	0.37	0.15	1.19	137	83.6	337	53.7	0.4	3	2.87	2.3
Median i	0.20	0.27	0.10	0.85	0.46	0.28	1.09	0.19	0.27	2.57	2.32	1.25
Mean i	0.19	0.25	0.09	0.837	7.29	4.47	17.8	3.2	0.27	2.23	2.19	1.31
MAD i	0.02	0.03	0.02	0.05	0.04	0.02	0.03	0.02	0.01	0.14	0.18	0.09
IQR i	0.02	0.07	0.02	0.07	0.06	0.03	0.12	0.03	0.02	0.35	0.32	0.13
Robust CV % i	11	26	23	8.7	14	9.4	11	16	8.4	14	14	11
Median f	0.20	0.27	0.10	0.84	0.45	0.28	1.09	0.18	0.26	2.64	2.33	1.22
Mean f	0.21	0.27	0.10	0.85	0.44	0.28	1.09	0.18	0.26	2.60	2.31	1.25
MAD f	0.01	0.03	0.02	0.04	0.03	0.01	0.01	0.01	0.00	0.07	0.17	0.08
IQR f	0.02	0.05	0.03	0.07	0.05	0.02	0.02	0.02	0.01	0.17	0.29	0.13
Robust CV % f	8.5	19	26	7.8	10	8.9	2.0	10	2.8	6.5	13	10
Outliers	3	1	2	3	3	2	7	4	5	3	1	1
Stragglers	1	0	0	0	2	1	1	0	2	3	0	0

2004-05: Exchangeable Ca — 1M NH₄OAc extract (15D3) cmol+/kg oven dry

Statistical parameters	Soil sample identification and values											
	June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	14	14	14	14	17	17	17	18	17	17	17	17
Minimum	4.44	1.66	0.42	4.61	2.24	1.51	2.86	1.01	1.47	16.8	13.8	3.84
Maximum	83.2	35.0	10.2	89.2	7.80	5.50	11.0	5.20	3.10	31.0	27.9	8.95
Median i	5.34	2.03	0.65	5.96	4.48	2.98	6.05	1.90	2.00	26.0	19.8	7.11
Mean i	12	4.81	1.51	13.2	4.54	3.03	6.18	2.17	2.06	25.8	20.8	6.98
MAD i	0.29	0.23	0.09	0.60	0.20	0.22	0.27	0.12	0.10	1.10	1.70	0.30
IQR i	0.78	0.44	0.15	1.15	0.49	0.29	0.75	0.17	0.17	2.00	4.00	0.52
Robust CV % i	15	22	23	19	11	9.6	12	9.0	8.5	7.7	20	7.4
Median f	5.30	1.96	0.62	5.70	4.53	3.02	6.07	1.90	1.97	26.0	19.6	7.15
Mean f	5.18	2.00	0.62	5.81	4.62	3.07	6.30	1.88	1.97	26.1	19.9	7.13
MAD f	0.22	0.19	0.07	0.29	0.24	0.14	0.26	0.06	0.10	1.10	1.50	0.25
IQR f	0.30	0.28	0.12	0.54	0.44	0.26	0.68	0.13	0.15	1.70	2.45	0.38
Robust CV % f	5.6	14	19	9.5	9.7	8.6	11	6.6	7.5	6.6	12	5.3
Outliers	3	2	2	2	3	3	3	5	3	2	1	2
Stragglers	0	0	0	1	0	0	0	0	0	0	1	1

2004-05: Exchangeable Mg — 1M NH₄OAc extract (15D3) cmol+/kg oven dry

Statistical parameters	Soil sample identification and values											
	June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	14	14	14	14	18	18	18	19	17	17	17	17
Minimum	1.15	0.51	0.10	3.83	0.88	1.35	0.75	1.84	0.42	1.19	6.77	1.09
Maximum	16.9	8.01	1.87	57.8	2.90	3.51	2.70	4.63	1.00	3.10	13.2	2.7
Median i	1.40	0.66	0.17	4.80	1.83	3.04	1.56	3.59	0.58	1.96	11.6	2.09
Mean i	2.88	1.32	0.33	9.64	1.8	2.93	1.58	3.57	0.61	2.03	11.4	2.11
MAD i	0.16	0.11	0.06	0.42	0.10	0.17	0.04	0.18	0.03	0.06	0.57	0.08
IQR i	0.70	0.29	0.13	1.25	0.14	0.24	0.08	0.31	0.04	0.17	0.84	0.13
Robust CV % i	50	45	77	26	7.5	7.9	5.2	8.7	7.6	8.9	7.3	6.2
Median f	1.35	0.64	0.13	4.71	1.83	3.07	1.55	3.60	0.57	1.95	11.7	2.07
Mean f	1.32	0.63	0.15	4.74	1.85	3.12	1.56	3.67	0.58	1.95	11.9	2.08
MAD f	0.10	0.07	0.03	0.32	0.08	0.14	0.01	0.16	0.02	0.05	0.47	0.06
IQR f	0.14	0.09	0.07	0.54	0.12	0.22	0.01	0.28	0.03	0.07	0.59	0.09
Robust CV % f	10	14	50	11	6.5	7.0	0.84	7.9	6.0	3.6	5.1	4.5
Outliers	3	2	2	3	3	2	6	3	4	4	1	4
Stragglers	1	1	1	0	0	0	2	0	0	1	1	0

2004-05: Exchangeable Na — 1M NH₄OAc extract (15D3) cmol+/kg oven dry

Statistical parameters	Soil sample identification and values											
	<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	13	13	13	13	18	18	18	19	17	17	17	17
Minimum	0.64	0.05	0	0.24	0.04	0.18	0	0.80	0.13	0.04	3.47	0.05
Maximum	2.82	0.84	0.10	5.40	0.70	1.00	0.90	3.00	0.65	0.60	7.70	4.20
Median i	0.69	0.19	0.02	0.37	0.12	0.37	0.04	2.62	0.19	0.16	5.60	0.13
Mean i	0.85	0.23	0.03	0.86	0.16	0.40	0.11	2.44	0.23	0.22	5.61	0.42
MAD i	0.04	0.02	0.02	0.03	0.02	0.05	0.02	0.18	0.03	0.05	0.31	0.05
IQR i	0.06	0.05	0.03	0.15	0.03	0.08	0.04	0.39	0.05	0.08	0.75	0.12
Robust CV % i	8.3	24	150	40	22	21	100	15	26	52	13	98
Median f	0.68	0.19	0.02	0.37	0.11	0.36	0.04	2.65	0.19	0.15	5.65	0.10
Mean f	0.69	0.19	0.03	0.38	0.12	0.36	0.04	2.66	0.19	0.16	5.72	0.12
MAD f	0.03	0.01	0.02	0.02	0.02	0.05	0.02	0.16	0.02	0.03	0.20	0.03
IQR f	0.04	0.01	0.03	0.03	0.03	0.07	0.03	0.30	0.03	0.05	0.31	0.05
Robust CV % f	6.0	5.5	150	8.8	23	21	95	11	18	34	5.5	50
Outliers	1	4	0	4	2	1	3	3	2	2	5	3
Stragglers	0	2	0	0	0	0	0	0	1	1	0	1

2004-05: Exchangeable K — 1M NH₄OAc extract (15D3) cmol+/kg oven dry

Statistical parameters	Soil sample identification and values											
	<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	14	14	14	14	19	19	19	20	17	17	17	17
Minimum	0.16	0.21	0.03	0.76	0.22	0.13	0.19	0.03	0.18	1.60	1.34	0.68
Maximum	2.24	2.89	1.07	8.99	1.30	0.70	1.25	0.60	0.61	3.90	4.70	8.70
Median i	0.19	0.25	0.10	0.82	0.42	0.28	1.06	0.18	0.27	2.68	2.30	1.30
Mean i	0.39	0.48	0.18	1.59	0.45	0.28	0.94	0.19	0.28	2.62	2.43	1.77
MAD i	0.01	0.03	0.02	0.06	0.04	0.02	0.09	0.02	0.02	0.21	0.22	0.09
IQR i	0.02	0.05	0.02	0.09	0.07	0.04	0.19	0.05	0.03	0.33	0.28	0.15
Robust CV % i	10	19	24	11	17	14	18	29	12	12	12	11
Median f	0.19	0.24	0.10	0.81	0.42	0.29	1.11	0.18	0.27	2.68	2.30	1.30
Mean f	0.19	0.24	0.09	0.82	0.42	0.28	1.09	0.18	0.27	2.60	2.35	1.30
MAD f	0.01	0.02	0.01	0.04	0.03	0.01	0.05	0.02	0.00	0.20	0.15	0.07
IQR f	0.02	0.03	0.02	0.08	0.05	0.02	0.08	0.03	0.01	0.31	0.27	0.11
Robust CV % f	8.4	14	21	9.9	12	6.3	7.0	19	2.5	12	12	8.3
Outliers	2	2	3	2	3	5	4	3	2	2	2	3
Stragglers	0	0	0	0	0	1	1	0	4	0	0	0

2004-05: Exchangeable Al — 1M KCl (15G1) cmol+/kg oven dry

Statistical parameters	Soil sample identification and values											
	<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
	ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
No of results	17	17	17	17	16	16	16	16	18	17	17	18
Minimum	0	0.02	0	0.01	0.22	0.06	0	2.47	0.04	0	0	0.01
Maximum	0.17	0.36	0.12	0.43	149	23.6	5.65	1637	0.80	0.60	0.60	1.00
Median i	0.02	0.20	0.01	0.15	1.15	0.21	0.02	18.6	0.22	0.02	0.03	0.08
Mean i	0.04	0.21	0.03	0.17	10.3	1.67	0.42	118	0.24	0.07	0.08	0.17
MAD i	0.02	0.06	0.01	0.03	0.34	0.04	0.02	3.10	0.03	0.02	0.03	0.05
IQR i	0.04	0.07	0.04	0.07	0.53	0.07	0.03	7.54	0.05	0.06	0.07	0.09
Robust CV % i	180	34	350	44	46	33	130	41	22	290	230	100
Median f	0.02	0.20	0.01	0.14	1.08	0.20	0.02	19.6	0.22	0.00	0.01	0.07
Mean f	0.02	0.21	0.01	0.13	1.11	0.20	0.02	19.2	0.22	0.01	0.03	0.09
MAD f	0.02	0.06	0.01	0.02	0.29	0.03	0.01	1.30	0.02	0.00	0.01	0.03
IQR f	0.03	0.07	0.01	0.04	0.53	0.06	0.02	2.26	0.03	0.02	0.04	0.07
Robust CV % f	160	34	130	28	49	28	160	12	16	450	330	100
Outliers	2	0	4	3	1	2	3	2	4	3	1	2
Stragglers	0	0	1	1	0	0	0	4	0	2	2	1

4. Comments on Measurement Performance

A detailed evaluation of measurement performance is beyond the scope of this report. Such evaluations are typically made at ASPAC Workshops, in other national and international meetings, and in the scientific literature. However, it is appropriate to make a few brief observations.

Firstly, the grand median robust % CVs across the 12 samples, after the removal of “outliers” and “stragglers”, ranged from 1.5 to 74.5%. This covered 40 tests reported by a minimum of six laboratories. Table 5 provides the identity of the six best performed and six worst performed tests, with their corresponding (final) grand median robust % CVs, noting that for Colwell (9B), Olsen (9C) and Bray-1 extractable P (9E) tests, only combined data (manual + autocolour finishes) rather than individual analytical finishes were considered for tabulation. The best-performed extractable P test was the autocolour finish of Colwell (9B2), followed by Olsen and Bray-1 (both with autocolour finish), which is in keeping with findings from previous ILPPs. Water-soluble Cl by potentiometric titration (5A1) was less well performed than its autocolour counterpart (5A2). Both water-soluble Cl methods are in the “worst-six” category in Table 5.

Secondly, the grand median final robust CV across the 40+ tests was 11.3%, ranging across the 12 soils from a minimum of 8.3% for test soil ASS21 to a maximum of 33.2% for test soil ASS63. While test soil ASS63 had low values for most soil fertility parameters apart from pH (the soil was just slightly acidic and soil pH tests on this soil were well performed), laboratories clearly experienced difficulty in chemically testing this sample.

Thirdly, while manual colour “finishes” for the three extractable soil P tests in the program had slightly higher median %CVs than their autocolour counterparts, after transforming median values to remove any high or low concentration bias, the manual and automated grand median values for individual extractants were all within 2% of each other.

Fourthly, the data summaries in Section 3 show many examples of skewed data; i.e. there were quite large differences at times between the median and mean values for individual tests. This emphasised the importance of using medians and MADs, which are less influenced by ‘rogue’ results in small data sets.

Table 5. The six best performed and worst performed soil chemical tests, based on percent robust coefficients of variation (grand medians) after the removal of “outliers” and “stragglers”.

<i>Best (Lowest Robust %CVs)</i>		<i>Worst (Highest Robust %CVs)</i>	
<i>Soil Method</i>	<i>%CV</i>	<i>Soil Method</i>	<i>%CV</i>
Soil pH, 1:5 0.01 M CaCl ₂ (4B2)	1.50	Bray 1 Extractable P (9E1 + 9E2)	20.5
Soil pH, 1:5 0.01 M CaCl ₂ (4B1)	1.55	Water soluble Cl - autocolour (5A2)	24.0
Soil pH, 1:5 water (4A1)	1.90	DTPA Extractable Fe (12A1)	25.0
Total Organic Carbon (6B3)	3.50	Hot CaCl ₂ Extractable B (12C2)	38.5
Total N (7A2)	5.75	Water soluble Cl - potentiometric (5A1)	44.5
Exchangeable Mg (15D3)	6.75	Exchangeable Al (15G1)	74.5

Finally a comment on the measurement performance of exchangeable Al by method 15G1 (1M KCl extraction). Here the final robust CVs ranged from a minimum of 11.6% to a maximum of 453%, with the grand median shown in Table 5. These results highlight the difficulties experienced by participating laboratories when a test designed for acidic soils is used on neutral to strongly alkaline soils because of rules imposed by the program. Figure 1 clearly shows the exponential increase in robust %CVs at soil pH values > 6.0. When only the seven soil samples with median soil pH values (4A1) <6.0 were considered, the grand median robust CV for exchangeable Al method 15G1 fell to 28.2%, which is a considerable improvement.

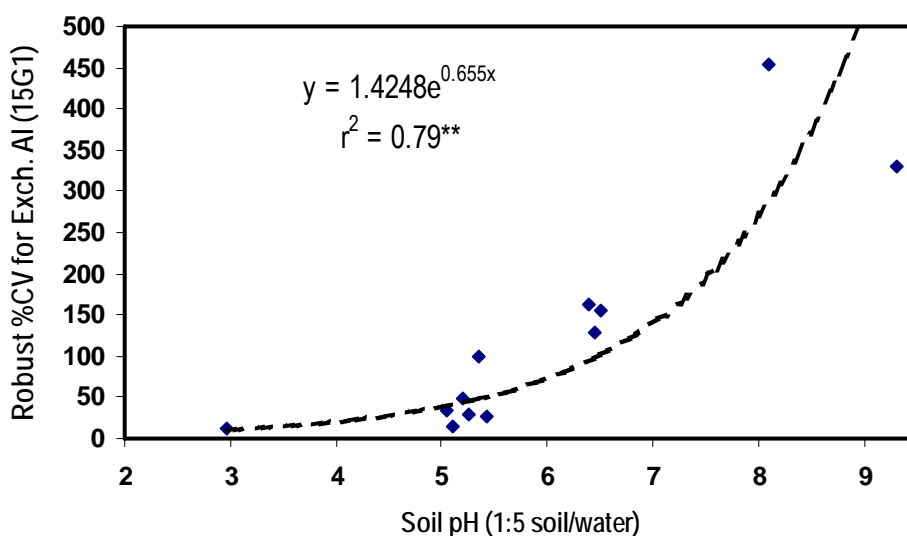


Figure 1. The relationship between 1:5 soil/water pH and robust %CVs for exchangeable Al (method 15G1) for the 12 soils used in the ASPAC ILPP for soils in 2004-05. The robust %CV values were those applicable after the removal of “outliers” and the identification of “stragglers”.

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Appendix 2: Summary examples of homogeneity data and statistical assessments for soil samples used in the ASPAC Soil ILPP in 2004-05

Sample name		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
Test Method		Olsen P mg/kg	Dumas %N	Olsen P mg/kg	Olsen P mg/kg	Olsen P mg/kg	Olsen P mg/kg	Olsen P mg/kg	Dumas %N	Dumas %N	Dumas %N	Dumas %N	Dumas %N
Sample													
1	Rep 1	23	0.105	9	5	5	3	7	0.214	0.104	0.162	0.074	0.240
	Rep 2	23	0.096	11	5	5	3	10	0.220	0.11	0.166	0.049	0.229
2	Rep 1	24	0.101	11	4	5	3	10	0.210	0.11	0.165	0.068	0.231
	Rep 2	22	0.088	10	5	4	4	8	0.211	0.112	0.164	0.055	0.234
3	Rep 1	22	0.095	9	5	5	3	10	0.213	0.113	0.172	0.064	0.239
	Rep 2	23	0.09	10	4	5	3	9	0.217	0.116	0.169	0.058	0.225
4	Rep 1	23	0.095	11	5	6	3	7	0.213	0.11	0.160	0.061	0.233
	Rep 2	23	0.101	7	4	6	3	8	0.215	0.113	0.175	0.049	0.236
5	Rep 1	22	0.097	9	5	5	3	8	0.217	0.112	0.162	0.068	0.238
	Rep 2	22	0.09	10	4	5	3	10	0.220	0.111	0.161	0.055	0.227
6	Rep 1	23	0.094	9	5	5	4	7	0.206	0.105	0.175	0.063	0.229
	Rep 2	23	0.093	9	4	5	3	8	0.221	0.117	0.174	0.047	0.222
7	Rep 1	24	0.099	9	5	5	4	8	0.218	0.113	0.166	0.073	0.240
	Rep 2	23	0.101	10	5	5	4	8	0.206	0.109	0.175	0.050	0.224
8	Rep 1	22	0.092	9	5	5	3	7	0.224	0.11	0.167	0.060	0.233
	Rep 2	22	0.091	9	5	5	3	7	0.214	0.111	0.166	0.052	0.223
9	Rep 1	23	0.096	10	5	5	3	8	0.208	0.112	0.166	0.063	0.240
	Rep 2	23	0.09	11	4	5	3	9	0.211	0.116	0.169	0.055	0.237
10	Rep 1	23	0.094	11	5	5	3	7	0.213	0.115	0.165	0.058	0.232
	Rep 2	23	0.095	9	5	4	3	8	0.211	0.112	0.166	0.056	0.226
11	Rep 1									0.109			
	Rep 2									0.109			
12	Rep 1									0.11			
	Rep 2									0.113			
13	Rep 1									0.11			
	Rep 2									0.112			
14	Rep 1									0.111			
	Rep 2									0.114			
15	Rep 1									0.11			
	Rep 2									0.115			
Mean		22.8	0.095	9.7	4.7	5.0	3.2	8.2	0.214	0.111	0.167	0.059	0.232
Analytical SD		0.55	0.005	1.20	0.55	0.32	0.31	1.05	0.005	0.003	0.004	0.003	0.007
Sampling SD		0.29	0.0003	0.62	0.29	0.34	0.27	0.36	0.002	0.001	0.002	<0.002	<0.004
SD of prof. data		3.0	0.015	2.1	1.9	1.8	0.89	1.19	0.012	0.014	0.014	0.006	0.010
Homogeneity index		0.10	0.02	0.30	0.15	0.19	0.30	0.30	0.15	0.08	0.15	-	-
Status		H	H	H	H	H	H	H	H	H	H		
F-statistic		1.56	1.01	0.46	0.44	3.33	2.44	1.23	0.78	0.73	1.66	0.16	0.60
F critical		3.02	3.02	3.02	3.02	3.02	3.02	3.02	3.02	2.48	3.02	3.02	3.02
F<F critical		Y	Y	Y	Y	N ^s	Y	Y	Y	Y	Y	Y	Y

§ For sample ASS91, there were statistically significant differences between samples, but not at a level where proficiency assessments were thought likely to be unduly influenced.

Appendix 3: Statistical procedures used by ASPAC for its upgraded Soil ILPP

Refer to Table 4 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 $[(X - \mu)/f@]$ (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 (if any), 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” (†).

Further iterations can be undertaken if the sample is targeted for upgrading to the status of a reference, only to converge the mean and the median, thereby providing a more likely “correct” reference result.

The other statistics summarised in Table 4 were calculated on the same populations of data. However, only the first (1) and second (final; f) values appear in the data summaries in Section 3.

Appendix 4: “Raw” program data for the 12 samples across three “rounds”.

These tabulations 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 Electrical conductivity 1:5 soil-water (3A1) dS/m air dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L001	3A1	0.316	0.122	0.021	0.122	0.098	0.099	0.116	2.36				
L005	3A1	0.308	0.124	0.028	0.126	11 ††	11.5 †	13.6 ††	203 ††	0.12	0.17	0.42	0.18
L006	3A1	0.293	0.121	0.023	0.122	0.109	0.11	0.135	2.31	0.126	0.184	0.433	0.197
L008	3A1	0.305	0.13	0.03	0.14	0.13	0.13	0.15	1.77 ††	0.11	0.185	0.385 †	0.165
L009	3A1	0.319	0.128	0.028	0.128	0.103	0.119	0.13	2.35	0.142	0.207	0.477	0.212
L010	3A1					0.098	0.106	0.123	2.52	0.12	0.2	0.45	0.2
L011	3A1	0.29	0.11	0.02 †	0.12	0.11	0.1	0.09 ††	1.81 ††	0.13	0.182	0.45	0.194
L013	3A1	0.3	0.12	0.02 †	0.12	0.11	0.11	0.13	2.47	0.12	0.18	0.45	0.2
L014	3A1					0.12	0.13	0.13	0.2 ††	0.161 †	0.21	0.51	0.228
L018	3A1	0.313	0.145	0.032	0.137	0.11	0.114	0.126	2.53	0.13	0.11 ††	0.47	0.21
L019	3A1	0.371 †	0.129	0.024	0.137	0.106	0.193 †	0.188 ††	3.42 ††	0.15	0.194	0.488	0.219
L022	3A1	0.316	0.135	0.03	0.131	0.073 ††	0.091	0.11	2.48	0.139	0.187	0.436	0.185
L023	3A1	0.34	0.14	0.03	0.15	0.11	0.12	0.13	2.6	0.14	0.22	0.52	0.23
L026	3A1	0.307	0.13	0.022	0.138	0.111	0.117	0.133	2.5	0.137	0.193	0.485	0.204
L028	3A1	0.31	0.13	0.021	0.13	0.1	0.11	0.11	2.35	0.13	0.18	0.36 ††	0.09 ††
L030	3A1	0.309	0.142	0.096 ††	0.139	0.102	0.115	0.126	2.21	0.156	0.182	0.459	0.2
L032	3A1	0.346 †	0.132	0.035	0.139	0.104	0.112	0.127	2.5	0.13	0.19	0.468	0.205
L035	3A1	0.319	0.133	0.028	0.137								
L036	3A1	0.303	0.109	0.026	0.137	0.107	0.137	0.157	2.42	0.136	0.208	0.52	0.224
L039	3A1									0.128	0.179	0.439	0.191
L040	3A1	0.328	0.144	0.028	0.14	0.1	0.11	0.121	2.26	0.16 †	0.203	0.475	0.219
L041	3A1	0.316	0.138	0.029	0.146	0.094	0.104	0.118	2.54	0.145	0.198	0.502	0.213
L042	3A1	0.37 †	0.15	0.04 †	0.15	0.11	0.12	0.14	2.61	0.13	0.19	0.46	0.19
L044	3A1	0.312	0.127	0.026	0.13					0.136	0.202	0.471	0.209
L045	3A1	0.33	0.14	0.03	0.14	0.11	0.11	0.13	2.38	0.13	0.18	0.44	0.2
L046	3A1	0.299	0.125	0.023	0.128								
L048	3A1	0.275 †	0.12	0.03	0.12	0.1	0.1	0.115	2.17	0.14	0.2	0.48	0.22
L050	3A1	0.38 †	0.34 ††	0.16 ††	0.03 †								
L053	3A1	0.3	0.12	0.02 †	0.13	0.11	0.12	0.14	2.29	0.13	0.19	0.47	0.2
L055	3A1	0.326	0.144	0.026	0.14	0.115	0.125	0.142	2.48	0.137	0.218	0.481	0.226
L056	3A1	0.34	0.15	0.05 ††	0.15	0.14 ††	0.14	0.15	2.6	0.12	0.18	0.46	0.19
L059	3A1	0.867 †	0.572 ††	0.5 ††	0.526 †	0.11	0.12	0.141	2.44				

Lab. Code #	Method Codes	Soil sample identification and values for Electrical conductivity 1:5 soil-water (3A1) dS/m air dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L063	3A1	0.32	0.14	0.03	0.15	0.11	0.12	0.13	2.49	0.13	0.19	0.47	0.21
L064	3A1	0.337	0.139	0.038 †	0.144	0.117	0.122	0.137	2.49	0.151	0.165	0.441	0.189
L080	3A1	0.348 †	0.174 ††	0.082 ††	0.163	0.677 ††	0.722 †	0.848 ††	15.12 ††				
L084	3A1	0.302	0.11	0.028	0.11 †	0.093	0.107	0.111	2.08	0.132	0.185	0.43	0.205
L092	3A1									0.21 ††	0.325 ††	0.58 ††	0.295 ††
L100	3A1					0.099	0.103	0.122	2.3	0.123	0.167	0.406	0.183
L123	3A1	0.003 †	0.001 ††	0.000 ††	0.001 †	0.14 ††	0.14	0.17 ††	2.6	0.15	0.21	0.47	0.24
L126	3A1	0.305	0.085 ††	0.025	0.14	0.112	0.124	0.142	2.42				
L132	3A1	0.304	0.144	0.027	0.145	0.105	0.11	0.129	2.28	0.135	0.186	0.498	0.203
L133	3A1	0.31	0.12	0.02 †	0.13	0.12	0.13	0.14	2.4	0.14	0.21	0.51	0.23
L137	3A1					0.086 †	0.08 †	0.109	2.13	0.013 ††	0.016 ††	0.038 ††	0.017 ††
L140	3A1					0.05 ††	0.03 †	0.06 ††	1.6 ††	0.08 ††	0.14 ††	0.15 ††	0.1 ††

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Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: Soil pH, 1:5 soil-water (4A1) air dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L001	4A1	6.49	5.15	6.64	5.52	5.05 †	5.17	6.34	2.83 †				
L005	4A1	6.6	5.2	6.3	5.4	5.2	5.4	6.4	3	5.2	8.1	9.5	5.5
L006	4A1	6.37	4.86	6.09	5.2	4.82 ††	4.88 †	6 ††	2.99				
L008	4A1	5.12 †	4.24 ††	7.1 ††	4.97 †	4.65 ††	5.2	6.25	2.2 ††	5.75 ††	7.25 ††	8.84 ††	6.46 ††
L009	4A1	6.47	5.14	6.25	5.55	4.98 †	5.15	6.31	2.93	4.66 ††	7.64 †	8.98	5.16
L010	4A1					5.02 †	5.17	6.35	2.89	4.93	8.19	9.73 ††	5.22
L011	4A1	6.4	4.9	6.3	5.2	4.52 ††	4.6 †	6.01 ††	2.81 †	4.98	7.98	9.09	5.2
L013	4A1	6.4	5.3	6.8	5.5	5.2	5.2	6.3	3	5	7.8	8.7 ††	5.4
L014	4A1					5.21	5.26	6.34	2.92	5.37	7.89	9.13	5.65 ††
L018	4A1	6.57	5.12	6.61	5.54	5.27	5.36	6.51	3.01	5.14	8.18	9.36	5.41
L019	4A1	6.37	5.05	6.38	5.39	5.2	5.25	6.31	2.94	4.94	8.07	9.28	5.35
L022	4A1	6.54	5.05	6.58	5.5	5.26	5.43	6.39	3.01	5.14	8.21	9.45	5.41
L023	4A1	6.49	5	6.48	5.43	5.2	5.3	6.5	3	5.1	8.1	9.4	5.4
L026	4A1	6.51	5.07	6.47	5.46	5.08 †	5.14	6.36	2.95	5.08	8.16	9.31	5.37
L028	4A1	6.5	4.9	6.3	5.4	5 †	5.2	6.3	2.9	5	7.9	9.1	5.2
L029	4A1					4.93 ††	5.13	6.05 ††	2.78 ††	5.2	7.6 ††	9	5.3
L030	4A1	6.47	4.91	6.04	5.38	5.23	5.3	6.42	3	5.2	8.1	9.3	5.3
L032	4A1	6.51	5.07	6.53	5.44	5.21	5.33	6.47	2.99	5.12	8.22	9.39	5.41

Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: Soil pH, 1:5 soil-water (4A1) air dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L035	4A1	6.55	5.1	6.59	5.53								
L036	4A1	6.56	5.2	6.72	5.61	5.17	5.22	6.35	2.95	5.04	8.07	9.22	5.3
L039	4A1									5.24	8	9.4	5.49
L040	4A1	6.54	5.05	6.6	5.44	5.22	5.24	6.38	3.01	5.05	8.12	9.33	5.32
L041	4A1	6.55	4.99	6.34	5.41	5.12	5.19	6.26	2.98	5.08	8.09	9.37	5.36
L042	4A1	6.58	5.17	6.53	5.58	5.17	5.34	6.45	3	5.13	8.22	9.35	5.43
L044	4A1	6.54	5.13	6.46	5.55					5.02	7.79	9.29	5.31
L045	4A1	6.2 †	5	6.2	5.4	5.2	5.3	6.5	2.9	5.1	8.2	9.3	5.4
L046	4A1	6.45	5.06	6.55	5.44								
L047	4A1	6.4	5.4 ††	6.1	5.6					4.7 ††	7.8	9.2	5 ††
L048	4A1	6.4	4.9	6.2	5.3	5.11	5.23	6.38	2.95	4.98	7.97	9.12	5.26
L050	4A1	6.43	5.26	6.14	5.38								
L053	4A1	6.47	5.14	6.44	5.53	5.2	5.3	6.2	3.1 †	5.1	8.2	9.4	5.4
L055	4A1	6.42	5.12	6.51	5.46	5.08 †	5.2	6.18	3.04	5.12	7.88	9.27	5.52
L056	4A1	6.57	5.11	6.49	5.54	5.14	5.24	6.44	2.96	5.08	8.17	9.33	5.33
L059	4A1	6.56	5.04	6.49	5.35	5.27	5.33	6.46	2.97				
L063	4A1	6.55	5.01	6.55	5.43	5.22	5.29	6.42	2.97	5.1	8.2	9.44	5.47
L080	4A1	6.23 †	5.02	6.25	5.12 †	5.21	5.33	6.4	3.04				
L091	4A1									4.06 ††	5.79 ††	7.96 ††	4.57 ††
L092	4A1									5.25	7.35 ††	8.55 ††	5.35
L100	4A1					5.2	5.4	6.3	2.9	5.3	7.8	9.4	5.5
L108	4A1					5.2	5.38	6.46	2.98	5.17	8.2	9.38	5.41
L123	4A1	6.4	4.9	6.2	5.4	4.7 ††	4.9 †	6.1 ††	2.9	5.5 ††	8.4	9.8 ††	6.1 ††
L126	4A1	6.6	5	6.2	5.4	5.23	5.2	6.11 †	2.97				
L132	4A1	6.05 †	4.89	5.74 ††	5.27	5.25	5.35	6.43	2.95	5.07	8.19	9.39	5.34
L133	4A1	6.5	4.9	6	5.3	5 †	5.1	6.4	2.9	4.8 †	7.9	9	5.1 ††
L137	4A1					5.1	5.18	6.41	2.68 ††	5.15	8.02	9.09	5.28
L140	4A1					5 †	5.3	6.5	2.9	4.8 †	8.3	9.3	5.2
L001	4A1	6.49	5.15	6.64	5.52	5.05 †	5.17	6.34	2.83 †				

Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: Soil pH, soil-0.01 M CaCl ₂ — direct (4B1) air dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L005	4B1	6.1	4.6	5.9	5 †	4.6	4.7	5.7	3	4.6	7.5	8.3	5
L006	4B1									4.93 †	7.91	9.06 ††	5
L009	4B1	6	4.51	5.56	4.84	4.44	4.54	5.71	2.84	4.29	7.13	7.88	4.74
L011	4B1	5.9	4.3 †	5.6	4.6 †					4.47	7.44	7.99	4.84
L019	4B1	5.94	4.46	5.6	4.77								
L028	4B1									4.6	7.6	8.2	4.9
L029	4B1					4.55	4.62	5.72	2.75	4.6	7.1	8	4.9
L032	4B1	5.8	4.9 ††	6.1 ††	4.6 †	4.82 ††	5.32 †	5.76	1.51 ††				
L035	4B1	5.99	4.48	5.67	4.83								
L036	4B1	6.09	4.56	5.63	4.87	4.53	4.64	5.69	2.87	4.45	7.35	8.31	4.89
L042	4B1	6.05	4.52	5.72	4.86	4.54	4.64	5.79	2.93	4.48	7.53	8.12	4.89
L044	4B1	6	4.45	5.56	4.84								
L050	4B1	6.01	4.62	5.63	4.86								
L053	4B1					4.5	4.6	5.7	2.9				
L055	4B1	5.95	4.52	5.73	4.75	4.48	4.68	5.64	2.94	4.52	6.92	7.73	4.94
L064	4B1	6.01	4.53	5.7	4.82	4.72 †	4.84	5.97 ††	3.1	4.49	7.41	8.33	4.93
L091	4B1									3.45 ††	4.57 ††	5.89 ††	3.77 ††
L137	4B1					4.53	4.66	5.66	2.66	4.64	7.89	8.28	4.99

Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: Soil pH, 1:5 soil-0.01 M CaCl ₂ — indirect (4B2) air dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L006	4B2	6.11	4.57	5.82	4.91	4.55	4.6	5.79	2.94	4.32 ††	7.4	8.08 †	4.84
L011	4B2					4.54	4.58	5.75	2.91				
L014	4B2					4.85 ††	4.85 †	5.8	2.85	4.75 ††	7.31	8.35	5.2
L018	4B2	6.12	4.56	5.77	4.88					4.48	7.55	8.42	5.02
L019	4B2									4.58	7.51	8.56	5.02
L022	4B2	6.06	4.54	5.85	4.78	4.54	4.6	5.78	2.95	4.52	7.61	8.46	4.87
L023	4B2	6.04	4.52	5.76	4.82	4.6	4.6	5.8	3	4.5	7.6	8.5	4.9
L026	4B2	6.1	4.55	5.8	4.9	4.62	4.64	5.81	2.91	4.56	7.65	8.53	4.94

Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: Soil pH, 1:5 soil-0.01 M CaCl ₂ — indirect (4B2) air dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L030	4B2	6.08	4.49	5.76	4.83					4.7	7.7	8.6	5
L032	4B2	6.07	4.52	5.79	4.82	4.6	4.64	5.84	2.94	4.53	7.64	8.51	4.93
L035	4B2	6.05	4.5	5.75	4.84								
L036	4B2	6.18	4.54	5.88	4.84	4.5	4.61	5.7	2.9	4.41	7.38	8.2	4.81
L040	4B2	6.09	4.5	5.85	4.9	4.63	4.63	5.79	2.95	4.45	7.47	8.37	4.81
L044	4B2									4.41	7.19	8.07 †	5.08
L045	4B2	5.8 †	4.4	5.5	4.8	4.5	4.5	5.7	2.8 ††	4.5	7.6	8.4	4.8
L046	4B2	5.98	4.46	5.62	4.79								
L048	4B2	6	4.6	5.6	4.8	4.56	4.59	5.54 ††	2.95	4.51	7.43	8.33	4.91
L053	4B2	5.98	4.64	5.63	4.94					4.6	7.3	8.5	5.2
L055	4B2	5.94	4.52	5.76	4.83	4.47	4.57	5.52 ††	2.99	4.55	7.08	8.31	4.93
L056	4B2	6.15	4.62	5.77	4.95	4.58	4.66	5.82	2.92	4.55	7.65	8.53	4.93
L059	4B2	6.19	4.6	6.09	4.87	4.65	4.69	5.82	2.95				
L063	4B2	6.11	4.47	5.63	4.73	4.69	4.7	5.82	2.96	4.64	7.66	8.65	5.04
L084	4B2	6.09	4.63	5.99	4.92	4.72	4.74 †	5.92 †	3.02	4.58	7.42	8.36	4.93
L092	4B2									4.7	6.65 ††	7.45 ††	4.75
L100	4B2					4.5	4.6	5.6 ††	2.9	4.6	6.6 ††	7.9 ††	5
L132	4B2	5.22 †	4.48	5.05 ††	4.77	4.56	4.63	5.75	2.89	4.51	7.57	8.49	4.91
L140	4B2					4.4	4.6	5.7	2.8 ††	4.5	7.5	8.5	4.9

Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: Water soluble Cl — potentiometric (5A1) mg/kg air dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L008	5A1	202	28	6.4	15	28	36	17	713	49	22	38	12
L009	5A1	51 †	24	19	25	57 †	67	51 †	1095 ††	108 ††	115 ††	50	63 ††
L011	5A1	241	47	40 ††	36	21	23	18	508	43	25	54	34
L013	5A1	279	40	40 ††	31	9	31	4	62 ††	69 ††	25	40	42
L018	5A1					15	16	12	699	49	34	60	29
L030	5A1	230	25	10	9	17	17	14	787	48	20	47	24
L040	5A1	202	13	6.9	13	14	17	12	851	17 ††	16	36	26
L044	5A1									32	10	28	13
L046	5A1	248	54	9	34								
L055	5A1	238	45	1.7	35		8.4	11	743				
L063	5A1	260	60	13	51	22	20	26	773	46	11	87	25
L064	5A1	256	53	11	43	33	45	71 ††	656	46	20	41	62 ††
L080	5A1	147	56	13	13	122 ††	123 †	117 ††	1924 ††				
L084	5A1	185	56	13	51	48	52	40 †	480				
L123	5A1	210	45	6.7	23								
L137	5A1					0	0	0	696	33	33	67	33

Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: Water soluble Cl — autocolour (5A2) mg/kg air dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L001	5A2	192	32	20 †	21	26	24	24	735	38	12	37	14
L022	5A2	247	46	5	25	14	17	11	672	42	16	42	18
L023	5A2	242	43	5	24	16	16	21	740	40	17	52	17
L026	5A2	236	39	7	23	19	18	14	884	43	21	48	21
L028	5A2	227	47	4	26	13	16	7	681	43	15	44	18
L032	5A2	233	49	8	34	22	19	18	828	45	19	43	19
L044	5A2	217	30	0	13								
L045	5A2	87 †	13 ††	22 †	20	62 ††	22	26	747	29	12	316 ††	91 ††
L123	5A2					32	24		780				
L126	5A2					24	40 †	39	771				
L132	5A2	259	45	27 ††	33	21	20	20	719	47	20	35	23

Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: Organic Carbon — Walkley and Black (6A1) % oven dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L006	6A1	1.1	1.01	0.09	3.08	2.56	0.46	2.42	3.4	1.16	1.59	0.298	2.09
L011	6A1			0	2.91					0.91	1.73	0.27	2.14
L013	6A1	1.3	1.1	0.15	3.3	2.85	0.75	2.55	3.45	1.2	1.9	0.4	2.2
L014	6A1					3.25 †	0.18	1.31 ††	3.25	1.3	1.97	0.4	2.43
L018	6A1	1.14	1.05	0.14	3.44	2.74	0.5	2.3	3.26	1.02	1.57	0.27	2.18
L022	6A1	1.29	1.12	0.15	3.45	2.8	0.55	2.47	3.38	1.1	1.71	0.3	2.23
L023	6A1	1.32	1.04	0.15	3.51	3.2 †	0.6	2.4	3.5	1.1	1.7	0.32	2.3
L026	6A1	1.08	0.95	0.10	3.12	2.55	0.46	2.14	2.9 ††	1	1.57	0.23	2.06
L028	6A1	1.34	1.1	0.41 ††	3.27	2.8	0.69	2.49	3.28	1.21	1.65	0.55 †	2.3
L035	6A1	1.07	1	0.09	3.31								
L039	6A1	1.15	1.02	0.03	2.98	2.69	0.46	2.34	3.35				
L040	6A1	1.24	1.06	0.17	3.14	2.75	0.82	2.49	3.43	1.33	1.96	0.68 ††	2.29
L045	6A1	1.21	1.06	0.14	3.43	2.76	0.88	2.07	3.43	0.97	1.52	0.12	2.15
L047	6A1	1.4	1.01	0.06	5.2 †					0.86	1.72	0.23	2.65 ††
L050	6A1	0.8 †	0.88	0.16	2.5 †								
L064	6A1	1.29	1.13	0.11	3.86	3.15	0.37	2.47	3.53	1.08	1.89	0.29	2.33
L080	6A1	1.15	1.12	0.01	3.44	3.69 ††	1.13	2.95 ††	3.37				
L084	6A1	1.12	0.98	0.13	3.27	2.61	0.45	2.3	3.26	0.99	1.55	0.25	2.07
L123	6A1	1.39											
L137	6A1					4.7 ††	0.87	4.28 ††	5.66 ††	1.09	1.64	0.406	2.28

Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: Organic Carbon — Other % oven dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L032	Other					3.31 †	0.88 †	2.42	2.41 ††				
L046	Other	1.15	0.95	0.11	3.02								
L056	Other	1.1	0.93	0.15	3.34	2.91	0.5	2.26					
L100	Other					3	0.47	2.5	3.1	1.1	1.7	0.31	2.1
L123	Other									1.5	2.6 ††	1.1 ††	3.2 ††

Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: Total Organic Carbon — 6B1 + 6B2 + 6B3 + Other % oven dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L001	Other	1.32	1.15	0.16	4.05	3.25	0.59	2.63	3.47				
L009	6B1	0.653 †	1.18	0.113	3.75	3.38	0.592	2.63	4.02 †	1.07	1.63	0.204	1.92
L010	6B3					3.02	0.496	2.58	3.32	1.1	1.76	0.445	2.46
L014	6B1					2.17 ††	0.02 †	2 ††	4.61 ††				
L018	6B3									1.15	1.9	0.45	2.6
L019	Other	1.13	0.99 ††	0.17	3.7	3.16	0.5	2.2 ††	3.16	1.08	1.62	0.45	2.12
L022	6B1	1.37	1.17	0.15	3.88	3.08	0.59	2.55	3.75	1.18	1.72	0.37	2.25
L023	6B2	1.37	1.25	0.141	3.79	3.6	0.69 †	2.9 †	3.6	1.2	1.9	0.38	2.4
L028	Other	1.31	1.13	0.14	3.96	3.35	0.61	2.6	3.6	1.16	1.7	0.29	2.43
L029	Other									4.56 ††	1.99	0.573	2.17
L030	6B3	1.24	1.17	0.097	4.03	3.28	0.564	2.59	3.49				
L032	6B3	1.33	1.15	0.127	4.09	3.4	0.578	2.67	3.52	1.17	1.76	0.273	2.51
L036	Other	1.36	1.26 †	0.172	4.29	2.94	0.55	2.88	2.94 †				
L040	6B3	1.24	1.11	0.181	4.01	3.12	0.579	2.57	3.5	1.14	1.76	0.48	2.43
L041	Other	1.07	1.01 ††	0.089	4.04	3.32	0.62	2.46	3.55	1.21	1.81	0.5	2.53
L042	Other	1.23	1.17	0.15	4.25	3.27	0.58	2.69	3.66	1.2	1.89	0.45	2.59
L046	6B3	1.28	1.15	0.106	4.13								
L048	6B1	1.25	1.2	0.43 ††	3.95	3.8	0.837 †	2.9 †	3.8	1.31	1.75	0.52	2.51
L053	6B1					2.51 ††	0.38 †	2.15 ††	2.8 ††				
L055	Other	1.18	1.26 †	0.099	3.76	2.96	0.534	2.5	3.34	1.07	1.76	0.265	2.22
L056	Other					2.91	0.5	2.26 †	3.31	0.9 ††	1.5	0.25	2.08
L059	Other	1.37	1.18	0.131	4.32	3.28	0.55	2.59	3.44				
L063	6B3	1.09	1.14	0.05	3.98	3.42	0.58	2.73	3.56	1.2	1.89	0.49	2.61
L097	Other	1.31	1.03 ††	0.173	4.05	3.45	0.889 †	2.23 †	3.6	1.01	1.59	0.698	2.56
L108	6B1					3.03	0.59	2.65	4.06 †	1.11	1.73	0.299	2.36

Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: Total N — Kjeldahl, steam distillation (7A1) % oven dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L005	7A1									0.15 ††	0.2	0.06	0.31 ††
L006	7A1	0.104	0.113	0.01	0.273	0.27	0.072	0.176	0.231	0.116	0.174	0.053	0.234
L014	7A1					0.32	0.036 †	0.215	0.179				
L023	7A1									0.11	0.17	0.04	0.22

Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: Total N — Kjeldahl, steam distillation (7A1) % oven dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L029	7A1									0.177 ††	0.252 ††	0.053	0.239
L036	7A1									0.105	0.159	0.047	0.224
L044	7A1	0.102	0.113	0.005	0.271					0.102	0.17	0.052	0.211
L047	7A1	0.12	0.13	0.02	0.28					0.11	0.18	0.04	0.24
L055	7A1	0.15	0.118	0.023	0.292								
L064	7A1	0.094	0.099	0.011	0.258	0.3	0.114 †	0.202	0.239	0.109	0.172	0.059	0.208
L091	7A1									0.145 †	0.208 †	0.069	0.265
L108	7A1					0.261	0.068	0.180	0.2184	0.102	0.16	0.044	0.21
L123	7A1	0.001 †	0.001 ††	0.000	0.001 †	0.056 ††	0.034 †	0.041 ††	0.008 ††	0.076 †	0.052 ††	0.012 ††	0.074 ††
L137	7A1					0.238	0.066	0.168	0.202	0.116	0.176	0.055	0.226
L140	7A1					0.3	0.071	0.17	0.22	0.124	0.182	0.046	0.231

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Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: Total N — Kjeldahl, autocolour (7A2) % oven dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L009	7A2	0.049 †	0.067 ††	0.018	0.206 †	0.198 ††	0.015 †	0.12 ††	0.154 ††	0.205 ††	0.286 ††	0.068 ††	0.331 ††
L018	7A2	0.089	0.106	0.008	0.249	0.251	0.068	0.172	0.216	0.108	0.17	0.05	0.217
L023	7A2					0.25	0.062	0.17	0.21				
L026	7A2					0.243	0.053	0.17	0.213	0.111	0.177	0.045	0.233
L028	7A2	0.1	0.11	0.02	0.26	0.26	0.07	0.17	0.22	0.11	0.17	0.05	0.22
L032	7A2					0.284	0.066	0.249 ††	0.343 ††				
L036	7A2	0.107	0.117	0.017	0.278	0.262	0.063	0.167	0.213				
L039	7A2	0.092	0.104	0.010	0.258	0.248	0.06	0.166	0.209	0.105	0.166	0.045	0.205
L048	7A2	0.098	0.108	0.011	0.266	0.268	0.075	0.179	0.212				
L055	7A2					0.236	0.061	0.163	0.203	0.11	0.17	0.05	0.22
L084	7A2	0.102	0.113	0.012	0.268	0.267	0.061	0.176	0.229 †	0.114	0.178	0.053	0.231
L126	7A2					0.285	0.075	0.185	0.257 ††				

Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: Total N – Dumas % oven dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L001	Dumas	0.084	0.099	0.011	0.263 †	0.249	0.05	0.172	0.196	0.13	0.199	0.064	0.23
L010	Dumas					0.245	0.059	0.185	0.217	0.111	0.178	0.045	0.232
L011	Dumas	0.14 †	0.17 ††	0.06 ††	0.31	2090 ††	630 †	1670 ††	2050 ††	0.11	0.16	0.034	0.22
L013	Dumas	0.13 †	0.14	0.04 ††	0.32 †	0.255	0.055	0.175	0.21	0.14	0.21	0.07 †	0.26 †
L019	Dumas	0.11	0.12	0.03 ††	0.29	0.25	0.06	0.17	0.23	0.1	0.15	0.05	0.2 †
L022	Dumas	0.1	0.111	0.012	0.297	0.265	0.068	0.175	0.225	0.12	0.175	0.045	0.23
L023	Dumas	0.091	0.097	0.013	0.282	0.25	0.052	0.16	0.21	0.07 ††	0.13	0.04	0.18 ††
L028	Dumas	0.1	0.11	0.02 †	0.29	0.23	0.053	0.152	0.202	0.093	0.144	0.032 †	0.204
L030	Dumas	0.099	0.116	0.01	0.284	0.251	0.063	0.174	0.218	0.111	0.165	0.049	0.231
L032	Dumas	0.101	0.11	0.01	0.283	0.262	0.064	0.185	0.209	0.118	0.181	0.049	0.236
L035	Dumas	0.13 †	0.14	0.05 ††	0.31								
L036	Dumas	0.101	0.117	0.011	0.293	0.245	0.06	0.165	0.188	0.13	0.165	0.053	0.244
L040	Dumas	0.091	0.1	0.008	0.269	0.242	0.061	0.176	0.225	0.12	0.18	0.05	0.23
L041	Dumas	0.083	0.099	0.011	0.289	0.28	0.08	0.19	0.25 †	0.101	0.162	0.042	0.222
L042	Dumas	0.09	0.1	0.01	0.27	0.23	0.06	0.17	0.21	0.11	0.17	0.05	0.23
L045	Dumas	0.1	0.12	0.01	0.29	0.31 †	0.11 †	0.21 ††	0.26 ††	0.15 ††	0.2	0.08 ††	0.26 †
L046	Dumas	0.099	0.115	0.016 †	0.287								
L055	Dumas					0.254	0.064	0.17	0.219	0.104	0.176	0.052	0.23
L059	Dumas	0.094	0.1	0.006 †	0.28	0.231	0.05	0.17	0.202				
L063	Dumas	0.11	0.112	0.11 ††	0.287	0.28	0.55 †	0.17	0.21	0.11	0.17	0.05	0.23
L097	Dumas	0.141 †	0.133	0.035 ††	0.327 †	0.298	0.107 †	0.193 †	0.258 ††	0.143	0.193	0.093 ††	0.282 ††
L100	Dumas					0.23	0.07	0.16	0.2	0.1	0.16	0.05	0.2 †
L132	Dumas	0.097	0.111	0.004 †	0.278	0.226	0.051	0.165	0.19	0.107	0.168	0.037	0.213

Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: Water Soluble Nitrate N— autocolour (7B1) mg/kg dry wt											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L008	7B1	3.7 †	5	1.1	1.5 †	4.5 †	24	9	3	24	11	18	9.1
L011	7B1	4.9 †	11	4.8	3.5	1.1	29.7	0.5 †	2.4	20 ††	9.4	17	6.5
L014	7B1					54 ††	83 †	102 ††	59 ††				
L023	7B1	19.3	27.5	2.99	3.93	0.92	28	6.6					
L026	7B1	22	32	4.2	4.9	0.85	27	6.8	0.89	25	11	13	7.4
L028	7B1	18.5	24	3	3.9	0.5	27	7.2	0.5	25	11	17	7.5

Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: Water Soluble Nitrate N— autocolour (7B1) mg/kg dry wt											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L040	7B1	16	22	4.2	5.2								
L044	7B1									24	9.9	12	6.9
L045	7B1	23	31	6	7 †		36	11		28 ††	15 ††	43 ††	9.9
L055	7B1	19	26	4	3.9	1.08	30	7.41	0.08	24	10	17	8.2
L064	7B1	24.4	30.6	5.64	10.9 †	5.68 ††	29.9	12	11.3 ††	31 ††	11.4	16.8	18.6 ††
L080	7B1	14.8	18.4	2.9	0 †	18.1 ††	36.8	8.3	0				
L100	7B1					10 ††	35	14 †	21 ††				
L132	7B1	18	24	3.9	4.2	0.91	29	6.4	0.7	25	10.3	12	7.5
L133	7B1	18.4	26.1	2.3	4.05								
L140	7B1					1.6	34	3.5	0	18 ††	0 ††	12	0 ††

Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: KCl Extractable Nitrate N — autocolour (7C2) mg/kg air dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L001	7C2	19	25	3.4	3.9	1	26	6.4	1.2	22	10	15	6.6
L010	7C2					0.6	29	6.4	0.48				
L013	7C2	19	25	3.6	3.8	1.6			1.55	23	10	12	6.8
L018	7C2	19	27	3.7	4.9	2.4 †	28	6.3	2.8	23	10	17	6.8
L019	7C2	21	28	3.2	3.2	1.1	24	5.2 †	1.3				
L022	7C2	20	27	4.4	4.7	0.9	22 †	6.5	3.5 †	28	12	17	8.2
L023	7C2	19	27	3.3	3.75	0.5	27	5.8		25	10	11	7
L028	7C2									29	15 ††	18 ††	12 ††
L030	7C2	19	27	3.7	4.5	0.7	28.2	7	0.715	24	12	14	7.3
L032	7C2	20	26	4	4.3	0.7	28	6.3	0.8	24	11	13	6.9
L036	7C2	18	25	2.8	3.6	1.3	28	7.5 †	1.2	23	11	13	7.2
L042	7C2	16	23	3.2	3.4	1.1	27.2	6.9	0.03	26	11	13	7.5
L044	7C2	15	19	3.5	3.2								
L046	7C2	22	27	3.8	2.46								
L048	7C2					5.3 ††	32	11 ††	26 ††	21	12	12	8.8 ††
L055	7C2	19	25	3.5	3.7	0.9	29	7.1	0	24	10	13	7.4
L059	7C2	13 †	22	1.0 ††	1.4 †	1.5	24	6.7	1.4				
L084	7C2	15	20	1.5 ††	1.5 †	0.4	23 †	3.8 ††	11.5 ††	19	6 ††	7 ††	4.1 ††
L097	7C2	20	27	4.6 ††	4.6	0.1	27	6.7	0.71	25	11	13	7.2

Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: KCI Extractable Nitrate N — autocolour (7C2) mg/kg air dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L123	7C2						33 †						
L126	7C2	1.4 †	1.9 ††	0.4 ††	0.4 †								
L132	7C2	17	23	3.3	3.2	0.4	28	6.4	0.1	25	9.8	12	6.4
L137	7C2									2.8 ††		6 ††	2.8 ††

Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: KCI Ext. Ammonium N — autocolour (7C2) mg/kg air dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L001	7C2	8.8	12	8.8	24	27	16	14	198	15	23	7	49
L010	7C2					32	17	17	228				
L011	7C2					42.71 ††	8.59 †	10.5	223.14				
L013	7C2	12	15	12	26	30			189	12.2	20.3	8.8	52.8
L014	7C2					30	14	14	74 ††				
L018	7C2	11.9	15.3	10.6	29.6	34	19	18	197	15	24	8.5	55
L019	7C2	9.3	10.1	9.5	14.2 †	10.1 ††	9.9 †	10	94.3 ††				
L022	7C2	10	12	9.8	25	33.1	18.2	16.5	139 †	14.1	23.5	7.9	51.4
L023	7C2	10.3	8.86	9.38	25.2	30	18	15	214	11	24	7.5	60
L026	7C2	9.6	12	7.2	23	24 †	15	14	176	13	19	7.6	42
L028	7C2									17	26	12 ††	58
L030	7C2	10.8	13.7	10.4	26.1	30.5	18.5	15.7	198	14	22	8	54
L032	7C2	12	16	12	31	30	19	16	214	15	22	8.2	53
L036	7C2	11	16	8.4	37 †	40 †	21	20	209	14.4	27.1	8.2	56.9
L042	7C2	11.5	14.1	9.4	28.1	38.4 †	19.5	18.8	203	26.7 ††	32.8 ††	15 ††	66.9
L044	7C2	8.1	11	7.1	24					13	19	5.7 †	42
L045	7C2	11	19	7.6	24	75 ††	32 †	30 ††	232	29 ††	34 ††	19 ††	74 ††
L048	7C2					29	17	15	182	12.24	18.4	7.88	42.76
L055	7C2	12	13	11	29	30	20	17	219	16	24	8.4	58
L059	7C2	11.1	14.1	10.2	26.9	33.1	18.3	18	195				
L084	7C2	10.3	13.3	11.5	26.7	30.9	18.8	15.6	198	16.5	25	8	54.2
L097	7C2	12	13	15 †	29	30	19	16	211	14	23	10 †	57
L123	7C2	140 †	110 ††	87 ††	1900 †								
L126	7C2	1.6 †	1.4 ††	1.8 ††	3.2 †								
L132	7C2	11	15	10	27	36	23	20	192	17	25	8.1	54

Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: KCl Ext. Ammonium N — autocolour (7C2) mg/kg air dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L133	7C2	5.35 †	5.55 ††	3.4 ††	4.7 †								
L137	7C2									17	25	5.6 ††	59
L140	7C2					35	24 †	25 ††	17 ††	50 ††	40 ††	22 ††	103 ††

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Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: Total P – all methods including 9A1 (% oven dry)											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L003	Other					0.053	0.017	0.025	0.039				
L006	Other	0.024	0.035	0.005	0.057	0.038	0.01 †	0.019 †	0.030	0.046	0.064	0.014 †	0.055
L009	Other	0.038 †	0.057 ††	0.013 ††	0.079	0.074	0.02	0.029	0.029				
L010	Other									0.039	0.053	0.020	0.061
L011	Other	0.02	0.04	0.005	0.06	551 ††	205 †	280 ††	330 ††	0.030 ††	0.050	0.010 ††	0.060
L013	Other									0.044	0.062	0.022	0.076
L014	Other					0.22 ††	0.02	0.03	0.040				
L018	Other	0.0226	0.039	0.006	0.059	0.048	0.018	0.025	0.035	0.037	0.045	0.017	0.057
L019	Other	0.021	0.034	0.007	0.04	584 ††	188 †	255 ††	432 ††	0.045	0.055	0.022	0.073
L022	Other	0.026	0.038	0.006	0.063	0.057	0.018	0.027	0.039	0.039	0.054	0.019	0.064
L023	Other	0.022	0.036	0.005	0.046	0.053	0.014	0.021 †	0.040	0.040	0.050	0.020	0.070
L026	Other					0.057	0.016	0.02 †	0.036	0.038	0.048	0.018	0.071
L028	Other					0.065	0.026	0.038 †	0.054	0.040	0.061	0.020	0.078
L030	Other	0.019	0.034	0.004	0.055	0.055	0.021	0.025	0.032				
L036	Other	0.025	0.041	0.007	0.06	0.058	0.02	0.027	0.041	0.042	0.054	0.021	0.057
L039	Other	0.0245	0.037	0.005	0.057	0.063	0.021	0.028	0.044	0.039	0.052	0.019	0.064
L040	Other	0.0219	0.037	0.006	0.045	0.057	0.019	0.025	0.040	0.040	0.050	0.020	0.070
L044	Other	0.024	0.037	0.004	0.049					0.032 ††	0.044	0.015 †	0.053
L046	Other	0.0307	0.052 ††	0.006	0.085								
L055	Other	0.026	0.042	0.006	0.05	0.059	0.019	0.025	0.043	0.038	0.053	0.017	0.063
L064	Other	0.024	0.038	0.008	0.05	0.045	0.017	0.026	0.010 ††	0.040	0.053	0.019	0.062
L084	Other	0.0263	0.042	0.007	0.068					0.038	0.049	0.021	0.069
L108	Other					0.067	0.0193	0.0259	0.041	0.041	0.059	0.020	0.066
L123	Other	0.0002 †	0.001 ††	8.3E- ††	8E-05 †	0.002 ††	0.001 †	0.004 ††	0.002 ††	0.014 ††	0.010 ††	0.001 ††	0.004 ††
L126	Other					0.069	0.024	0.029	0.048				
L140	Other					0.087 †	0.037 †	0.048 ††	0.068 ††	0.043	0.055	0.022	0.074

Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: Colwell Extractable P — manual (9B1) mg/kg air dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L003	9B1	601 †	677 ††	109 ††	67 †	19	8	19	65				
L005	9B1	50	68	9	6	15	6	14	56	69	69	4	55
L006	9B1					51 †	16	34	106 ††	61	59	10	44
L011	9B1	72	91 ††	15	17								
L019	9B1									2 ††	90	12	2 ††
L023	9B1	64	62	7.7	18	30	15	19	73	65	66	9	48
L035	9B1	48	61	9.6	11.6								
L040	9B1	50	59	13	9.7					69	70	7	50
L044	9B1	44	67	2	44 †					61	45	8	58
L059	9B1	26	35 ††	3.2	1.1								
L080	9B1	55	63	11.1	6.4	19	17	33	48				
L084	9B1	53	59	11.6	11.9	13	5	13	51	71	61	9	53
L100	9B1					15	5.2	14	57	72	63	9	45
L108	9B1					11	6	19	45	58	57	7	36
L123	9B1	1.1 †	1.3 ††	0.35	0.4								
L133	9B1	85 †	118 ††	11	71 †	75.01 ††	22	19.61	119 ††	116 ††	90	11	112 ††

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Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: Colwell Extractable P — autocolour (9B2) mg/kg air dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L011	9B2					20	9.1	17	72 †				
L018	9B2	54	59	12	9	12	6.9	14	49	55	55	8	41
L019	9B2	20 †	24 ††	5	3 †								
L022	9B2	54	63	12	10	14	8.3	15	53	61	55	8	43
L026	9B2	53	65	10	9	14	6.4	15	58	63	57	8	48
L028	9B2	59	69	13	16 †	18	7.4	16	59	66	64 †	15 †	51
L030	9B2	47	52	9	9	14	5.4	12.9	53	58	55	9	46
L032	9B2	56	63	12	9	15	6.9	13	56	59	69 †	10	44
L036	9B2	65 †	68	14	11	16	10.0 †	18	86 ††	64	67 †	13	50
L048	9B2					15	6.4	15	54	60	55	10	42
L123	9B2									84 ††	90 ††	18 ††	52
L126	9B2					235 ††	12 †	124 ††	188 ††				

Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: Olsen Extractable P — manual (9C1) mg/kg air dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L003	9C1	68 †	93 ††	13	11	3.3	1.7	6.5	14				
L009	9C1	27	38	5	11	10 ††	5	13 ††	26	49 ††	44	6	26
L014	9C1					7	4	13 ††	29		40	9	
L022	9C1					4	2	7	18	29	29	3	16
L039	9C1									24	29	3	13
L040	9C1	20	31	5	3					31	32	4	17
L044	9C1	19	29	3	22					31	23	3	27
L045	9C1	22	29	2	7	4	3	7	17	34	36	8	20
L047	9C1	1 †	1 ††	0	5					38	31	6	19
L063	9C1	20	27	5	6	4	2	6	11	24	29	3	12
L097	9C1					5	3	6	18	32	40	5	16
L137	9C1					6	4	11 †	17	29	34	4	16

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Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: Olsen Extractable P — autocolour (9C2) mg/kg air dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L013	9C2	17	26	5	5.3	6.3 ††	3.5	7.3	18.2	26	30	5.5	17.3
L022	9C2	23	29	5.2	5								
L026	9C2	22	30	6.4	4.6	4.4	2.4	7.2	16	29 ††	31	4.1	17
L030	9C2	18	24	3.6	2.9	3.6 ††	1.8	5.2 ††	14.4	26	29	3	15
L036	9C2	24	32	4.4	3.9	4.3	2.7	7.7	21	25.9	33	3.8	15.9
L042	9C2					4.4	2.6	7.5	18.9	24.9 ††	30	2.9	14.4
L097	9C2	18	25	7.4	4.4								
L126	9C2						2	29 ††	52 ††				

Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: Bray-1 Extractable P — pooled (9E1 + 9E2) mg/kg air dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L006	9E1	40	54 ††	6.6	5.0	1.8	1.4	7.5	13	39	32	2.9	24
L008	9E1	38	89 ††	8.2	14.0 †	5.7	4.0 †	16 ††	14	35	11	1.2	15
L011	9E1					3.7	3.1	8.9	19	60	43	4.6	28
L014	9E1					2.0	1.8	13.5	27	54			41 ††
L019	9E2	26	42	5.7	3.3	3.0	2.0	7.5	19	43	59 †	5	24
L023	9E2	34	46	8.1	4.5	2.0	1.8	9.8	13	44	41	3.2	23
L026	9E2	36	41	4.7	4.5	2.6	1.0	8.7	26	44	31	2.3	21
L029	9E1					1.4	1.6	10.9	12	49	14	1.5	13 †
L030	9E2	34	43	6.8	4.3	2.7	2.1	8.9	16	49	35	3.2	23
L036	9E2	30	45	8.2	4.8	3.3	4.3 †	11.0	13	37.4	1.7 †	0.37	6.3 ††
L050	9E1	28	44	3.3 ††	8.3 †								
L053	9E1	23	32 ††	8.5	6.0	1.0	2.0	10.0	6	52	228 ††	10 ††	21
L055	9E2	36	54 ††	7.9	2.7	1.5	1.5	8.6	11	44	32	2.9	20
L056	9E1	27	40	7.3	4.9	2.3	2.3	8.8	18	54	218 ††	10 ††	26
L063	9E1	33	44	9.0	5.4	3.9	2.8	9.9	16	35	34	2.8	24
L064	9E1	34	45	7.5	3.9	2.9	1.9	9.8	17	45	36	2.15	21
L126	9E2					3.7	2.4	9.6	17				
L137	9E1					1.2	1.7	12.0	23	68	218 ††	9.2 ††	38 ††

Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: Phosphorus buffer index (Colwell) (9I2a + 9I2b + 9I2c) L/kg dry wt											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L006	9I4C	36.8 †	14.8 ††	17.2	116	300	136	29	394	39	95.9	113	190
L011	9I2C					198 ††	98	22	433	24	82	97	164
L018	9I4C	56.8	34	22.2	224	332	151	37	395	33	87	103	184
L022	9I3C	57	35	25	248	301	147	37.5	356	37	91	110	196
L023	9I4C	60.1	38.4	26.7	258	383	169	42	439	40	105	113	205
L026	9I4C	57.8	36.5	21	257	308	150	34	393	32	90	105	191
L028	9I3C									37	99	115	220
L030	9I2C					294	145	37.9	391				
L032	9I4C	62	41	49 ††	73 †	341	158	32	410	27.9	88.5	106	185

Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: KCl ₄₀ Extractable S (Blair <i>et al.</i>) mg/kg air dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L006	KCl40	60	18	1.5	26	23	21	22	2260	20	26	28	63
L011	KCl40	50	15	1.4	20	15	15	14	1845	17	22	20	50
L018	KCl40					15	17	16	1980	16	27	24	52
L022	KCl40	54	14	2.2	22	11	14	11.4	2035	15	21.5	21	47
L023	KCl40	59	17	3.0	28	29 †	17	17	2430	17	25	23	58
L026	KCl40	58	16	2.3	26	15	16	14	2712	15	20	19	48
L030	KCl40	57	15	2.2	23	15	17	16	2280				
L032	KCl40	52	14	4.6	24	13	15	13	2050				
L050	KCl40	37	11	1.1	17								
L064	KCl40					6.6	11	7.3	1303	13.1	9.7	13	21 ††
L133	KCl40					42 ††	20	55 ††	2331	66 ††	167 ††	104 ††	232 ††

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Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: DTPA Extractable Fe (12A1) mg/kg air dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L005	12A1	4904 †	5787 ††	180 ††	4313 †	390 ††	233 †	296 ††	2447 ††	685 ††	26 ††	24 ††	73 ††
L006	12A1	71	67	3.2	67	93	53	74	378	100	5.56	4.0	19
L008	12A1	113	102	3	103	76	50	44	285	98	6.8	4.8	27
L009	12A1	244 †	250 ††	7.02	320 †	195 ††	145 †	145 ††	1655 ††	275 ††	11.6 ††	7.7 †	91 ††
L011	12A1	140	207 ††	8.92	142	103	65	80	451	103	2.8 ††	1.8 †	11
L013	12A1	104	109	6.5	82	72	47	44	288	74	5.8	4.4	20
L014	12A1					102	72	72	353	110	7.4	5	25
L018	12A1	103	96	2.9	90	96	51	39	422	88	5.9	4.1	18
L019	12A1	109	83	4.1	80	78	40	54	346	158 ††	6.1	3.9	17
L022	12A1	126	118	6.5	111	67	43	48	222 ††	113	6	6.2	33
L023	12A1	121	81	7.1	90	110	63	33	393	75	9.3 †	6	16
L026	12A1	110	110	4.9	92	79	44	54	356	126	5.8	5.6	28
L028	12A1					93	56	43	410	98	5.4	3.8	20
L030	12A1					80	46	60	332				
L032	12A1	100	113	4.3	81	70	46	46	372	89	5.5	3.8	16
L036	12A1	96	71	7.8	75	104	68	30	379	94	8	6.2	20
L040	12A1	105	93	11	88	83	60	36	357	87	6.8	4.2	19
L044	12A1	134	134	5.2	127					93	6.5	4.5	33

Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: DTPA Extractable Fe (12A1) mg/kg air dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L045	12A1	93	60	6.6	119	88	52	29	423	72	6.4	5.4	20
L047	12A1	68	156	5.6	50					145 †	11 ††	5.7	28
L048	12A1					86	50	27	390				
L050	12A1	214 †	339 ††	15.6	157 †								
L055	12A1	101	81	12	86	120	73	33	418	215 ††	6.86	4.2	26
L063	12A1					80	48	54	410	81	6.3	4.2	17
L080	12A1	44 †	44	8.8	46	64	39	66	131.2 ††				
L084	12A1	88	86	3.9	73	67	45	33	387	99	5.6	3.9	16
L091	12A1									107	5.9	4.7	45 ††
L100	12A1					80	47	75	374	104	5.4	3.6	15
L123	12A1									19000 ††	23000 ††	36000 ††	0 ††
L133	12A1	171 †	115	10.7	120	183 ††	97 †	45	492	211 ††	15.4 ††	12.3 ††	24
L137	12A1					125	43	38	517 †	99	7.9	6.2	25

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Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: DTPA Extractable Cu (12A1) mg/kg air dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L003	12A1									0.05 ††	0.27 ††	0.4 ††	0.2 ††
L005	12A1	8.10 †	67 ††	157 ††	347 †	3.3 ††	5.6 †	5.6 ††	0.30	2.7 ††	14.4 ††	19 ††	16.4 ††
L006	12A1	0.63	0.35	0.11	8.59	0.63	1.10	0.84	0.22	0.40	1.99	2.2	1.9
L008	12A1	0.88	0.31	0.26 ††	11	0.49	0.98	0.72	0.09	0.50	2.6	2.7	3.5
L009	12A1	0.98	0.69 †	0.70 ††	9.47	1.15 ††	1.7 †	1.23 ††	0.65 ††	1.27 ††	2.71	2.9	4.4
L011	12A1	0.87	0.52	0.13	11.8	0.67	0.99	0.89	0.21	0.24 †	1 ††	1.1 ††	1.3
L013	12A1	0.53	0.19	0.12	8	0.46	0.76	0.66	0.06	0.46	1.66	1.9	2.0
L014	12A1					0.6	1.1	1.1 ††	0.2	0.7 ††	2.7	2.8	3.9
L018	12A1	0.74	0.4	0.12	9.7	0.54	0.96	0.86	0.11	0.43	2.1	2.3	2.7
L019	12A1	0.70	0.3	0.10	8.13	0.5	0.8	0.7	0.1	0.45	2	2.3	2.4
L022	12A1	0.83	0.45	0.15	10	0.46	1.08	0.85	0.09	0.42	2.1	2.3	3.4
L023	12A1	0.94	0.46	0.14	11.8	0.61	0.97	0.85	0.11	0.4	2.4	2.6	2.7
L026	12A1	0.79	0.45	0.11	8.9	0.55	0.92	0.79	0.17	0.41	2	2.3	2.6
L028	12A1					0.53	1.1	0.86	0.25	0.44	2.2	2.4	3.1
L030	12A1					0.513	0.93	0.76	0.14				
L032	12A1	0.80	0.43	0.21 †	10.1	0.23 ††	0.69	0.82	0.05	0.42	2.1	2.3	2.3
L036	12A1	0.71	0.35	0.12	8.5	0.58	0.87	0.77	0.12	0.393	2.1	2.3	2.7

Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: DTPA Extractable Cu (12A1) mg/kg air dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L040	12A1	0.82	0.49	0.18	10.4	0.48	0.87	0.76	0.19	0.5	2.3	2.4	2.8
L044	12A1	0.26 †	0.04 ††	0 ††	9.4					0.24 †	1.2 ††	2.2	1.7
L045	12A1	1	0.8 ††	0 ††	11	0.40	0.9	0.8	0.30	0.95 ††	2.5	2.9	3.4
L047	12A1	0.8	0.3	0.1	10					1 ††	3 ††	2.9	3.6
L048	12A1					0.51	0.93	0.82	0.13				
L050	12A1	0.77	0.39	0.08	8.01								
L055	12A1	0.82	0.45	0.10	8.69	0.61	0.72	0.86	0.14	0.45	2.24	2.4	2.8
L063	12A1					0.6	1	1	0.30	0.5	2.3	2.5	2.6
L080	12A1	0.69	0.40	0.03 †	13.8	0.45	0.81	0.80	0.10				
L084	12A1	0.70	0.36	0.11	8.41	0.42	0.8	0.70	0.18	0.42	2.02	2.3	2.5
L091	12A1									0.75 ††	2.16	2.5	4.6
L100	12A1					0.49	0.88	0.74	0.14	0.39	2	2.1	2.3
L123	12A1									11 ††	20 ††	20 ††	38 ††
L133	12A1	1.01	0.57	0.20 †	12.6	0.75	0.98	1.12 ††	0.22	0.48	2.65	2.9	3.2
L137	12A1					1 ††	1.2	1.30 ††	0.38 ††	0.77 ††	2.9	2.9	3.3

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Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: DTPA Extractable Mn (12A1) mg/kg air dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L003	12A1									7 ††	1.4 ††	0.86 ††	2.9 ††
L005	12A1	200 †	6793 ††	33 ††	6774 †	2137 ††	159 †	1222 ††	75 ††	801 ††	416 ††	134 ††	825 ††
L006	12A1	4.57	172	0.36	167	503	43.6	288	18	187	93.4	32	198
L008	12A1	4.6	116 †	0.68	120 †	388	41	266	17	153	88	25	165
L009	12A1	4.93	192	0.36	197 †	1166 ††	72.9 †	435 ††	23 ††	229 ††	106 ††	36	272 ††
L011	12A1	5.9	157	0.72	156	553	45.2	305	18	97 ††	44 ††	14 ††	92 ††
L013	12A1	4.2	152	1.0	145	470	37.1	272	14 ††	128 ††	61 ††	20	122 ††
L014	12A1					80 ††	24 †	76 ††	19	18 ††	15 ††	4 ††	23 ††
L018	12A1	4.7	163	0.56	170	470	41	274	18	175	91	32	180
L019	12A1	5.53	156.4	2.27 ††	140	417	38.7	237.9	18	163	84	25	170
L022	12A1	5.7	160	0.7	163	402	37.5	284	14 ††	158	90	28	202
L023	12A1	6.19	171	0.71	162	536	43	284	18	159	85	24	171
L026	12A1	5	153	0.50	160	562	37	279	16	170	86	27	177
L028	12A1					570	43	290	18	170	86	31	180
L030	12A1					559	36.8	313	15				
L032	12A1	4.8	153	0.65	148	466	36	265	15	163	74 ††	24	165

Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: DTPA Extractable Mn (12A1) mg/kg air dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L036	12A1	5.1	150	0.5	157	485	44	270	17	157	85	28	166
L040	12A1	5.5	172	0.20	172	501	43	279	17	176	90	29	173
L044	12A1	5.1	152	0.76	164					162	108 ††	38	198
L045	12A1	5.3	164	0.8	169	518	39	290	17	169	86	28	178
L047	12A1	8.8 †	108 ††	2.2 ††	148					112 ††	116 ††	33	128 ††
L048	12A1					479	38	142 ††	17				
L050	12A1	3.92	96.6 ††	0.71	91.4 †								
L055	12A1	5.59	177	0.51	102 †	525	39.7	269	17	169	86	29	160
L063	12A1					480	480 †	260	160 ††	181	88	28	182
L080	12A1	5.41	33.27 ††	1.18	33.15 †	222 ††	46.8	197.2 ††	18				
L084	12A1	4.95	162	0.57	162	286 †	37.4	147 ††	17	165	85	28.4	170
L091	12A1									170	89	30	187
L100	12A1					497	38	292	17	170	89	31	171
L123	12A1									420 ††	320 ††	240 ††	550 ††
L133	12A1	7.09 †	177	0.71	167	605	43	304	19	106 ††	118 ††	29	193
L137	12A1					570	37	323	18	186	103 ††	32	187

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Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: DTPA Extractable Zn (12A1) mg/kg air dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L003	12A1									137 ††	62 ††	17 ††	158 ††
L005	12A1	41.9 †	444 ††	7.9 ††	140 †	5.9 ††	0.70 †	9.8 ††	64 ††	54 ††	7.1 ††	2.9 ††	14.6 ††
L006	12A1	0.67	9.0	0.18	2.73	1.32	0.20	2.09	12.7	12.2 †	1.96	0.50	3.93
L008	12A1	0.78	7.6	0.13	2.60	1.42	0.27	2.00	11.0	8.4	1.6	0.42	3.3
L009	12A1	0.37	4.1 ††	0.18	1.24 †	2.01 ††	0.73 †	2.83 ††	11.0	10.3	1.5	0.51	3.61
L011	12A1	0.88	10.2	0.41 ††	3.30	1.81 ††	0.55 †	2.58 †	14.0	5.1 ††	0.81 ††	0.28	1.8 ††
L013	12A1	0.63	5.7 †	0.12	2.40	1.18	0.18	1.81	9.8	7.1	1.06	0.32	2.21
L014	12A1					1.20	0.20	7.90 ††	7.5 ††	7.8	1.7	0.57	3.6
L018	12A1	0.66	8.6	0.18	2.60	1.20	0.22	1.90	12.0	9.8	1.6	0.68	3.7
L019	12A1	0.67	9.3	0.17	2.33	1.10	0.10	1.70	10.1	8.7	1.5	0.43	2.8
L022	12A1	0.77	9.3	0.26	2.72	1.18	0.19	1.78	9.3	8.9	1.6	0.44	3.3
L023	12A1	0.89	10.9	0.19	3.41	1.80 ††	0.70 †	2.20	13.0	10.0	2.1	1.00 ††	3.5
L026	12A1	0.73	8.7	0.19	2.60	1.20	0.18	1.90	12.0	9.4	1.4	0.41	3
L028	12A1					1.20	0.18	1.80	13.0	9.2	1.4	0.37	3.1

Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: DTPA Extractable Zn (12A1) mg/kg air dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L030	12A1					1.09	0.16	1.70	10.3				
L032	12A1	0.65	8.1	0.23	2.50	1.20	0.16	1.80	11.0	7.9	1.3	0.44	2.7
L036	12A1	1.00	8.6	0.20	2.50	1.50	0.16	2.00	12.0	8.6	1.6	0.38	3.3
L040	12A1	0.77	9.8	0.20	2.80	1.10	0.28 †	1.70	13.0	9.4	1.7	0.40	3.1
L044	12A1	0.86	8.4	0.41 ††	2.90					9.2	2	0.60	4.3
L045	12A1	0.80	8.6	0.30	3.00	1.00		1.80	12.0	9.0	1.4	0.30	3.1
L047	12A1	1.00	9.4	0.40 ††	3.00					9.7	2.2	1.90 ††	4
L048	12A1					1.20	0.18	2.00	12.0				
L050	12A1	1.02	11.3	0.25	3.41								
L055	12A1	0.81	9.8	0.24	2.37	1.61	0.29 †	1.86	12.1	9.5	1.46	0.42	3.09
L063	12A1					1.10	0.10	2.00	11.0	9.7	1.8	0.65	3.2
L080	12A1	0.60	7.2	0.13	3.20	0.12 ††	1.10 †	3.60 ††	11.3				
L084	12A1	0.69	8.8	0.20	2.34	1.04	0.15	1.74	11.3	8.7	1.45	0.35	3.05
L091	12A1									12.2 †	1.54	0.59	4.42
L100	12A1					1.30	0.49 †	1.50	21.0 ††	9.1	1.5	0.38	3.1
L123	12A1									22.0 ††	20 ††	20 ††	25 ††
L133	12A1	1.02	9.7	0.25	3.48	1.87 ††	0.20	2.30	13.2	10.3	2.21	0.57	3.77
L137	12A1					1.70 ††	0.33 †	2.90 ††	14	10.3	2.1	0.78 †	3.9

Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: Hot CaCl ₂ Extractable B — manual colour (12C1) mg/kg air dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L011	12C1					1.59	1.65	2.23	4.56				
L014	12C1					1.2	0.9	4.8 ††	12 ††	1.7	1.7	9	1.8
L019	12C1									0	0.66	36	1.1
L047	12C1									0.76	0.88	26	1.9
L064	12C1	0.67	0.57	0.26	1.39	1.24	1.1	1.93	4.61	0.65	1.35	58	1.6
L080	12C1	0.65	0.57	0.30	0.01	1.064	0.61	2.57	4.59				
L084	12C1	0.65	0.38 ††	0.16	0.718	0.72	0.42	2.12	8.22 ††	0.42	2.05	53	1.98
L123	12C1									2	1.1	94	10 ††

Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: Hot CaCl ₂ Extractable B — ICPAES (12C2) mg/kg air dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L008	12C2	0.62	0.19	0.27	0.97	0.85	0.94	1.3	10.2	0.27	1.2	40	1.9
L009	12C2	0.30	0.14	0.09	0.64	0.58 †	0.64	0.99	4.32	0.164	1.05	39	1.04
L011	12C2	1 †	0.66 ††	0.73 ††	1.9 †					0.64	2.5	65	3.2
L018	12C2	0.39	0.18	0.09	0.49 †	0.53 †	0.5	1.2	4.4	0.24	1	27	1.3
L019	12C2	0.72	0.35	0.2	0.93	0.72	0.54	1.48	0				
L022	12C2	0.47	0.21	0.16	0.74	0.75	0.61	1.33	4.3	0.24	1.29	41	1.27
L023	12C2	0.65	0.37	0.24	0.82					0.1	1.6	57	2.2
L026	12C2	0.52	0.24	0.16	0.95	0.96	0.85	1.6	6.5	0.303	2.2	63	2.2
L028	12C2	0.6	0.3	0.20	1	0.9	0.80	1.5	4	0.3	2.1	52	2.5
L030	12C2	0.52	0.23	0.16	0.93	0.87	0.82	1.42	6.19				
L032	12C2	0.70	0.34	0.25	1.3 †	0.89	1.00	1.9	9.9	0.4	2.3	62	3
L036	12C2	0.59	0.27	0.13	0.87	0.28 ††	0.28	0.803	2.7	0.16	1.04	40	1.9
L040	12C2	0.53	0.18	0.11	0.63	0.86	0.86	1.7	3.4	0.37	1.27	53	2.26
L050	12C2	0.43	0.38	0.07	0.93								
L055	12C2					0.87	0.58	1.33	5.76				
L100	12C2					1.8 ††	1.60	2.2 ††	9.3	1 ††	2.4	49	2.9
L133	12C2					0.83	0.87	1.61	7.517	0.53	2.58	70	2.99

Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: Exchangeable Ca — 1M NH ₄ Cl extract (15A1) cmol+/kg oven dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L001	15A1	5.8	2.4	1.2 ††	7.7	5.2	3.2	6.4	1.9	2			7.7
L008	15A1					4.58	3.06	115 ††	2.03				
L010	15A1					5.08	3.33	6.41	2.22	2.22 †	25.7	20.9	7.83
L011	15A1					1223 ††	852 †	1622 ††	474 ††				
L013	15A1	4.9	1.8	0.45	5.5								
L014	15A1					5.5	4.3 †	4.7	3.5 ††				
L018	15A1	5.36	1.94	0.57	6.22	5.18	3.11	6.46		1.97	29.1	22	7.12
L019	15A1	5.51	2.18	0.68	6.6	5.06	3.39	7.9	1.73	2.02	22.92	8.23 ††	8
L022	15A1	5.25	2.02	0.56	6.12	5.08	3.27	6.31	2.01	2	24.4	20.7	7.3
L023	15A1	5.38	1.9	0.56	7.33	5.1	3.2	6.2	2.1	1.6 ††	23	18	6.1
L028	15A1	5.29	2.03	0.78	6.39	4.95	3.18	6.42	2.08	2.07	26.8	22.6	7.64
L032	15A1					4.64	3.1	5.81	1.81	2.05	26.2	21.4	7.26

Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: Exchangeable Ca — 1M NH ₄ Cl extract (15A1) cmol+/kg oven dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L036	15A1	5.09	1.9	0.60	6.67	5.04	3.12	6.36	1.94	1.9	26.8	22.3	7.02
L039	15A1									1.99	25.58	20.8	7.07
L040	15A1	4.64	1.84	0.54	5.28								
L042	15A1	4.77	1.88	0.67	5.47								
L044	15A1	5.23	2.26	0.79	7.16					2.16 †	27.7	21.7	7.84
L045	15A1	5.12	2.04	0.72	6.48	4.68	2.92	5.52	1.84	1.98	24	19.3	6.9
L047	15A1	5.4	2.2	0.70	6					2	26	20	7
L048	15A1					5	3.2	7.4	0.98 ††				
L050	15A1	6.39 †	2.59	0.54	8.46								
L055	15A1	5.73	2.36	0.56	8.63	5.15	3.03	7.07	1.63				
L063	15A1					4.65	3	5.75	1.9	1.6 ††	22	19	6.4
L064	15A1	5.04	2.08	0.69	5.89	4.23 †	2.93	5.94	0.08 ††	2.18 †	25.7	21.5	6.67
L080	15A1					3.36 ††	4.66 †	6.11	4.4 ††				
L100	15A1					4.2 †	2.8	5.4	0.3 ††				
L123	15A1	5	1.9	0.60	6.5								
L132	15A1	5.26	1.93	0.71	6.49	6.04 †	4.05 †	7.86	2.19	2.44 ††	26	20.4	7.48
L133	15A1	0.55 †	0.19 ††	0.07 ††	0.61 †	4.01 †	2.59 †	5.75	1.7	2.61 ††	42.4 ††	29.7 ††	10.2 ††

Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: Exchangeable Mg — 1M NH ₄ Cl extract (15A1) cmol+/kg oven dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L001	15A1	1.3	0.5	0.3	5.9	2.1	3.5	1.7	4.2	0.53			2.2
L010	15A1					2	3.3	1.68	3.86	0.656	2.31 †	11.6	2.59
L011	15A1					257 ††	452 †	224 ††	526 ††				
L013	15A1	1.2	0.59	0.21	4.3								
L014	15A1					1.8	3	2.3 ††	3.9				
L018	15A1	1.34	0.53	0.11	4.43	1.96	3.16	1.65		0.6	2.12	11.7	2.08
L019	15A1	1.33	0.61	0.15	4.62	1.82	3.31	1.78	3.99	0.59	1.99	10.8	2.29
L022	15A1	1.38	0.63	0.14	4.87	1.91	3.27	1.58	3.86	0.61	1.93	11.3	2.19
L023	15A1	1.3	0.56	0.12	5.32	1.8	3.1	1.5	3.8	0.47	1.7	9.8	1.8
L028	15A1	1.39	0.62	0.16	5.04	1.96	3.28	1.75	3.99	0.62	2.05	12.2	2.44
L032	15A1					1.89	3.33	1.61	3.68	0.62	1.99	12	2.28
L036	15A1	1.25	0.54	0.13	4.45	1.81	3.04	1.58	3.52	0.56	1.89	11.5	2.05
L039	15A1									0.6	1.94	11.15	2.13

Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: Exchangeable Na — 1M NH ₄ Cl extract (15A1) cmol+/kg oven dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L044	15A1	0.57	0.17	0.00	0.33					0.21	0.16	6.12	0.08
L045	15A1	0.74	0.28 ††	0.14 ††	0.48 †	0.13	0.30	0.06	2.93	0.17	0.21	3.72 ††	0.22 †
L047	15A1	0.60	0.20	0.10 †	0.30					0.20	0.10	0.10 ††	5.50 ††
L048	15A1					0.15	0.35	0.08	0.30 ††				
L050	15A1	0.68	0.19	0.02	0.38								
L055	15A1	0.62	0.21	0.02	0.34	0.13	0.38	0.05	2.76				
L063	15A1					0.04 †	0.30	0.00	2.45	0.15	0.30	6.10	0.10
L064	15A1	0.70	0.25	0.11 ††	0.35	0.13	0.35	0.07	2.45	0.23	0.21	5.63	0.16
L080	15A1					2.21 ††	2.61 †	2.85 ††	2.63				
L100	15A1					0.20 †	0.30	0.13	0.98 ††				
L108	15A1					0.26 ††	0.44	0.15	2.35	0.20	0.22	5.50	0.11
L123	15A1	2.20 †	1.80 ††	1.60 ††	1.70 †								
L132	15A1	0.71	0.19	0.02	0.38	0.10	0.40	0.02	2.78	0.64 ††	0.58 ††	6.38	0.52 ††
L133	15A1	0.06 †	0.02 ††	0.00	0.03 †	0.10	0.34	0.02	2.39	0.19	0.17	8.72 ††	0.12

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Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: Exchangeable K — 1M NH ₄ Cl extract (15A1) cmol+/kg oven dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L001	15A1	0.10 †	0.20	0.00 ††	1.00	0.47	0.25	1.10	0.15	0.26			1.40
L010	15A1					0.46	0.28	1.10	0.19	0.32 ††	2.71	2.43	1.46
L011	15A1					137 ††	84 †	337 ††	54 ††				
L013	15A1	0.22	0.28	0.11	0.82								
L014	15A1					0.90 ††	0.70 †	0.90 ††	1.00 ††				
L018	15A1	0.15 †	0.20	0.05	0.72	0.48	0.29	1.13		0.27	2.71	2.41	1.22
L019	15A1	0.21	0.28	0.12	0.81	0.48	0.34 †	1.39 ††	0.27 ††	0.26	2.39	2.05	1.21
L022	15A1	0.19	0.26	0.09	0.82	0.45	0.29	1.07	0.18	0.26	2.47	2.32	1.30
L023	15A1	0.17	0.19	0.07	0.89	0.42	0.27	1.10			2.20 †	1.90	1.10
L028	15A1	0.22	0.29	0.12	0.90	0.46	0.29	1.14 †	0.17	0.27	2.57	2.33	1.39
L032	15A1					0.45	0.26	1.05	0.20	0.28 †	2.68	2.48	1.36
L036	15A1	0.21	0.24	0.10	0.89	0.37	0.29	1.09	0.18	0.26	2.69	2.39	1.28
L039	15A1									0.26	2.63	2.22	1.29
L040	15A1	0.20	0.21	0.08	0.73								
L042	15A1	0.19	0.25	0.10	0.85								
L044	15A1	0.22	0.30	0.12	0.92					0.27	2.70	2.32	1.36

Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: Exchangeable Ca — 1M NH ₄ OAc extract (15D3) cmol+/kg oven dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L084	15D3	5.36	1.95	0.68	5.7	4.58	2.98	6.03	1.8	1.93	27.1	19.8	6.81
L097	15D3	21.2 †	8.29 ††	3.43 ††	23.4 †	2.41 ††	1.57 †	2.99 ††	1.01 ††	1.47 ††	16.8 ††	13.8	3.84 ††
L123	15D3					4.6	2.9	7.1	1.9	1.8	30	27 †	7.6
L132	15D3					5.22	3.28	7.1	2.48 ††				
L137	15D3					4.48	3.2	5.8	1.9	2.17	26.1	19.4	7.3

Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: Exchangeable Mg — 1M NH ₄ OAc extract (15D3) cmol+/kg oven dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L003	15D3	1.19	0.51	0.11	4.39								
L005	15D3	16.88 †	8.01 ††	1.87 ††	57.82 †	1.72	3.09	1.55	3.43	0.58	2.00	11.6	2.07
L006	15D3	1.44	0.66	0.16	5.22	2.11	3.51	1.78 ††	4.27	0.72 ††	2.32 ††	13.1	2.49 ††
L008	15D3	1.24	0.66	0.10	4.36	1.87	2.98	1.54	3.86	0.60	1.80	9.3 †	2.18
L009	15D3	1.39	0.64	0.22	4.80	1.75	2.92	1.58	3.19	0.57	1.95	12.3	2.05
L011	15D3	1.84 †	0.90	0.41 †	5.91					0.74 ††	2.26 ††	12.2	2.49 ††
L013	15D3					1.73	3.04	1.64 †	3.57	0.55	1.88	12.4	2.09
L014	15D3					2.90 ††	3.50	2.70 ††	3.90	1.00 ††	3.10 ††	12.0	2.70 ††
L018	15D3								3.49				
L026	15D3	1.46	0.69	0.17	5.12	1.86	3.10	1.56	3.77	0.62	1.92	10.9	2.14
L030	15D3	1.15	0.53	0.10	3.83	2.07	3.50	1.78 ††	4.03	0.57	2.20 †	11.0	2.20
L036	15D3	1.24	0.54	0.13	4.45	1.72	2.95	1.55	3.44	0.53	1.94	11.2	1.99
L040	15D3					1.88	3.26	1.56	3.82	0.56	2.00	13.2	2.02
L042	15D3					1.83	3.03	1.55	3.54	0.59	2.09	11.5	2.01
L045	15D3	1.40	0.66	0.20	4.80	0.88 ††	1.35 †	0.75 ††	2.72 ††				
L055	15D3	1.32	0.58	0.11	4.71	1.82	2.83	1.53	3.46	0.57	1.96	11.7	2.04
L080	15D3	3.21 †	1.08 †	0.24	6.76 †								
L084	15D3	1.38	0.55	0.13	4.56	1.80	3.02	1.55	3.59	0.55	1.93	11.6	2.00
L097	15D3	5.16 †	2.45 ††	0.70 ††	18.2 †	0.91 ††	1.52 †	0.79 ††	1.84 ††	0.42 ††	1.19 ††	6.8 ††	1.09 ††
L123	15D3					1.70	2.80	1.60	3.60	0.60	1.90	12.0	2.10
L132	15D3					1.95	3.21	1.71 ††	4.63 ††				
L137	15D3					1.89	3.19	1.64 †	3.72	0.61	2.01	11.5	2.14

Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: Exchangeable Na — 1M NH ₄ OAc extract (15D3) cmol+/kg oven dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L003	15D3	0.79	0.30 ††	0.04	0.67 †								
L005	15D3					0.11	0.31	0.06	1.74 ††	0.14	0.12	4.17 ††	0.07
L006	15D3	0.75	0.24 †	0.06	0.43	0.04	0.29	0.00	2.67	0.26	0.22	6.36	0.14
L008	15D3	0.66	0.09 ††	0.00	0.37	0.15	0.35	0.05	2.63	0.34 ††	0.04	4.26 ††	0.38 ††
L009	15D3	0.70	0.20	0.04	0.35	0.14	0.41	0.08	2.69	0.32 †	0.25	6.48	0.19
L011	15D3	0.70	0.19	0.02	5.40 †					0.16	0.30 †	5.82	0.80 ††
L013	15D3					0.11	0.36	0.07	2.95	0.19	0.17	7.14 ††	0.16
L014	15D3					0.70 ††	1.00 †	0.90 ††	0.80 ††	0.65 ††	0.60 ††	7.70 ††	4.20 ††
L018	15D3								3.00				
L026	15D3	0.69	0.19	0.01	0.37	0.11	0.38	0.03	2.94	0.19	0.15	5.60	0.09
L030	15D3	0.64	0.19	0.04	0.37	0.15	0.42	0.04	2.49	0.21	0.18	5.70	0.13
L036	15D3	0.66	0.18	0.01	0.39	0.13	0.40	0.07	2.55	0.17	0.15	4.89	0.09
L040	15D3					0.13	0.43	0.02	2.27	0.23	0.25	5.86	0.21
L042	15D3					0.11	0.36	0.02	2.75	0.18	0.15	5.91	0.08
L045	15D3	0.70	0.23 †	0.07	0.40	0.11	0.26	0.09	2.28				
L055	15D3	0.64	0.17	0.01	0.35	0.10	0.33	0.02	2.53	0.18	0.15	5.36	0.09
L080	15D3	0.65	0.05 ††	0.00	0.24 †								
L084	15D3	0.66	0.18	0.02	0.35	0.11	0.33	0.03	2.44	0.19	0.16	5.46	0.10
L097	15D3	2.82 †	0.84 ††	0.10	1.54 †	0.06	0.18	0.02	1.37 ††	0.13	0.10	3.47 ††	0.05
L123	15D3					0.30 ††	0.50	0.20 ††	2.80	0.20	0.10	5.60	0.10
L132	15D3					0.15	0.47	0.04	2.93				
L137	15D3					0.19	0.42	0.19 ††	2.62	0.23	0.57 ††	5.54	0.30 †

Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: Exchangeable K — 1M NH ₄ OAc extract (15D3) cmol+/kg oven dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L003	15D3	0.16	0.23	0.08	0.76								
L005	15D3	2.24 †	2.89 ††	1.07 ††	8.99 †	0.39	0.29	0.97	0.16	0.27	3.06	2.86	1.48
L006	15D3	0.23	0.29	0.11	0.90	0.36	0.14 †	0.87 †	0.03 ††	0.30	2.70	2.54	1.35
L008	15D3	0.19	0.23	0.10	0.90	0.43	0.27	1.08	0.19	0.27	2.33	2.15	1.29
L009	15D3	0.19	0.26	0.10	0.82	0.46	0.30	1.14	0.20	0.35 †	2.79	2.45	1.39
L011	15D3	0.17	0.21	0.06	0.76					0.18 ††	2.38	2.19	8.70 ††
L013	15D3					0.42	0.28	1.19	0.24	0.27	2.78	2.65	1.43

Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: Exchangeable K — 1M NH ₄ OAc extract (15D3) cmol+/kg oven dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L014	15D3					1.30 ††	0.70 †	0.60 ††	0.60 ††	0.61 ††	3.90 ††	4.70 ††	2.50 ††
L018	15D3								0.15				
L026	15D3	0.21	0.29	0.11	0.89	0.45	0.29	1.12	0.18	0.28	2.47	2.16	1.28
L029	15D3					0.48	0.13 †	0.19 ††	0.08 ††				
L030	15D3	0.19	0.25	0.08	0.80	0.53	0.35 †	1.25	0.19	0.27	2.50	2.20	1.20
L036	15D3	0.20	0.23	0.10	0.81	0.36	0.27	1.06	0.16	0.25	2.30	2.05	1.28
L040	15D3					0.42	0.30	0.96	0.23	0.22 †	2.36	2.22	1.18
L042	15D3					0.42	0.29	1.15	0.20	0.27	2.88	2.52	1.30
L045	15D3	0.19	0.25	0.11	0.76	0.22 ††	0.15 †	0.40 ††	0.11				
L055	15D3	0.20	0.21	0.07	0.81	0.39	0.25	1.00	0.17	0.24	2.29	2.01	1.20
L080	15D3	0.19	0.21	0.03 ††	0.79								
L084	15D3	0.21	0.27	0.11	0.84	0.45	0.29	1.12	0.18	0.27	2.68	2.40	1.30
L097	15D3	0.87 †	0.97 ††	0.45 ††	3.44 †	0.22 ††	0.15 †	0.53 ††	0.11	0.20 †	1.60 ††	1.34 ††	0.68 ††
L123	15D3					0.30	0.30	1.10	0.20	0.20 †	2.70	2.30	1.30
L132	15D3					0.41	0.28	1.05	0.12				
L137	15D3					0.46	0.28	1.13	0.20	0.26	2.74	2.52	1.22

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Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: Exchangeable Al — 1M KCl (15G1) cmol+/kg oven dry											
		June 2004 (Round 104)				September 2004 (Round 304)				February 2005 (Round 504)			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L003	15G1	0.13 †	0.35	0.11 ††	0.37 †	1.63	0.43 †	0.43 ††	28.5 †				
L009	15G1	0.00	0.06	0.00	0.04	0.41	0.06	0.01	2.47 ††	0.04 ††	0.00	0.00	0.01
L011	15G1	0.04	0.20	0.04 †	0.17	149 ††	23.6 †	5.65 ††	1637 ††	0.24	0.17 ††	0.13 †	0.15
L019	15G1	0.07	0.36	0.06 ††	0.43 †	1.55	0.22	0.04	20.4	0.33 ††	0.02	0.06	0.22
L022	15G1	0.02	0.20	0.01	0.13	1.34	0.20	0.04	14.6	0.21	0.03	0.03	0.11
L023	15G1	0.01	0.02	0.00	0.01 †	0.22	0.11	0.02	9.2 †	0.23			0.09
L026	15G1	0.07	0.26	0.08 ††	0.18	1.40	0.30	0.05	20.5	0.22	0.05	0.09	0.24 †
L029	15G1					0.79	0.27	0.29 ††	19.0				
L030	15G1	0.04	0.19	0.01	0.16	1.22	0.19	0.05	17.0	0.16	0.16 ††	0.06	0.08
L032	15G1	0.02	0.20	0.01	0.16	1.57	0.24	0.02	20.8	0.20	0.00	0.01	0.06
L036	15G1					0.88	0.18	0.00	17.7	0.27	0.01	0.01	0.07
L039	15G1									0.31	0.01	0.11	0.14
L040	15G1	0.00	0.22	0.00	0.12	1.08	0.18	0.01	18.2	0.23	0.04	0.04	0.15
L042	15G1									0.24	0.10 †	0.15 †	0.58 ††

Lab. Code #	Method Codes	Soil sample identification and values for 2004-05: Exchangeable AI — 1M KCl (15G1) cmol+/kg oven dry											
		<i>June 2004 (Round 104)</i>				<i>September 2004 (Round 304)</i>				<i>February 2005 (Round 504)</i>			
		ASS 61	ASS 62	ASS 63	ASS 64	ASS 91	ASS 92	ASS 93	ASS 94	ASS 21	ASS 22	ASS 23	ASS 24
L044	15G1	0.03	0.27	0.01	0.27 †								
L048	15G1	0.17 †	0.31	0.12 ††	0.23								
L050	15G1	0.04	0.09	0.01	0.10								
L055	15G1	0.01	0.27	0.00	0.15	0.84	0.16	0.02	23.4				
L064	15G1	0.00	0.18	0.00	0.04	1.68	0.23	0.01	6.73 †	0.20	0.00	0.00	0.04
L092	15G1									0.80 ††	0.60 ††	0.60 ††	1.00 ††
L123	15G1	0.01	0.21	0.01	0.14					0.10 ††	0.00	0.01	0.03
L132	15G1									0.20	0.06 †	0.01	0.05
L133	15G1	0.00	0.17	0.00	0.12	0.97	0.27	0.01	20.13	0.15	0.00	0.00	0.05
L137	15G1					1.00	0.20	0.00	9.20 †	0.19	0.00	0.00	0.04

END