2007 North American Proficiency Testing Program
3rd Quarter Report - September 1, 2007

Laboratory ID

Soil			Soil 2007-111			Soil 2007-112			Soil 2007-113			Soil 2007-114			Soil 2007-115		
Analysis	**Units**	***n***	**Median**	***MAD***	**Lab[1,2]**	**Median**	***MAD***	**Lab[1,2]**	**Median**	***MAD***	**Lab[1,2]**	**Median**	***MAD***	**Lab[1,2]**	**Median**	***MAD***	**Lab[1,2]**
Salinity																	
Sat. Paste Moisture	%	26	35.4	*3.01*		42.5	*2.40*		37.2	*2.33*		26.0	*1.00*		29.8	*1.24*	
pH - sp	Unit	32	7.58	*0.17*		7.30	*0.17*		7.90	*0.17*		5.42	*0.19*		4.04	*0.16*	
ECe - sp	dS/m	32	1.32	*0.15*		0.56	*0.08*		0.40	*0.04*		0.91	*0.08*		0.34	*0.04*	
HCO3 - sp	mmolc/L	14	5.14	*1.04*		4.93	*1.01*		3.50	*0.40*		0.86	*0.25*		0.26	*0.24*	
Ca - sp	mmolc/L	30	11.2	*1.41*		3.97	*0.58*		2.69	*0.25*		3.92	*0.55*		0.47	*0.14*	
Mg - sp	mmolc/L	30	3.51	*0.30*		2.05	*0.36*		1.52	*0.17*		2.38	*0.37*		0.53	*0.08*	
Na - sp	mmolc/L	29	0.72	*0.17*		0.40	*0.12*		0.68	*0.16*		1.91	*0.19*		1.57	*0.26*	
SAR - sp	value	25	0.30	*0.05*		0.20	*0.07*		0.50	*0.14*		1.10	*0.10*		2.31	*0.19*	
Cl - sp	mmolc/L	19	3.62	*0.53*		0.61	*0.16*		0.24	*0.07*		2.12	*0.28*		0.71	*0.13*	
SO4 - sp	mmolc/L	20	4.34	*0.52*		0.64	*0.11*		0.47	*0.10*		0.86	*0.17*		0.44	*0.10*	
NO_3 - sp	mmolc/L	16	0.08	*0.07*		0.04	*0.03*		0.05	*0.04*		4.32	*2.09*		1.10	*0.46*	
B - sp	mg/L	15	0.25	*0.07*		0.08	*0.03*		0.19	*0.03*		0.15	*0.04*		0.10	*0.03*	
Soil pH & EC																	
Soil EC (1:1)	(dS/m)	26	0.51	*0.11*		0.23	*0.04*		0.23	*0.04*		0.26	*0.05*		0.11	*0.03*	
Soil EC (1:2)	(dS/m)	44	0.36	*0.05*		0.15	*0.02*		0.16	*0.02*		0.17	*0.02*		0.07	*0.02*	
pH (1:1) Water	Unit	78	7.89	*0.09*		7.60	*0.09*		8.35	*0.08*		5.65	*0.14*		4.34	*0.07*	
pH (1:2) Water	Unit	30	7.89	*0.11*		7.62	*0.14*		8.36	*0.16*		5.76	*0.13*		4.50	*0.12*	
pH (1:1) 0.01M CaCl2	Unit	21	7.58	*0.08*		7.09	*0.09*		7.75	*0.14*		5.15	*0.15*		3.46	*0.08*	
pH (1:2) 0.01M CaCl2	Unit	9	7.55	*0.06*		7.04	*0.06*		7.78	*0.13*		5.20	*0.10*		3.43	*0.06*	
Buffer pH, Lime Req.																	
SMP Buffer pH	Unit	46	7.47	*0.04*		7.30	*0.05*		7.50	*0.04*		6.85	*0.08*		6.54	*0.10*	
Adams-Evans Buf pH	Unit	9	7.84	*0.01*		7.73	*0.04*		7.78	*0.03*		7.60	*0.07*		7.62	*0.03*	
Woodruff Buf. pH	Unit	17	7.15	*0.05*		7.03	*0.04*		7.14	*0.06*		6.66	*0.06*		6.30	*0.06*	
Mehlich Buffer pH	Unit	2	6.96	*0.08*		6.70	*0.04*		6.95	*0.07*		6.12	*0.04*		5.96	*0.13*	
Titratable Acidity	cmol/kg	0															

1 - Values flagged exceed Warning Limits " * " 2.5x MAD (Median Absolute Deviation) and Control Limits " ** " 4 x MAD. "<" and "ND" values not recorded.
2 - Limits not compared to lab data for methods with < 7 labs reporting

2007 North American Proficiency Testing Program
3rd Quarter Report - September 1, 2007

Laboratory ID

Soil			Soil 2007-111			Soil 2007-112			Soil 2007-113			Soil 2007-114			Soil 2007-115		
Analysis	**Units**	***n***	**Median**	***MAD***	**Lab[1,2]**	**Median**	***MAD***	**Lab[1,2]**	**Median**	***MAD***	**Lab[1,2]**	**Median**	***MAD***	**Lab[1,2]**	**Median**	***MAD***	**Lab[1,2]**
Inorganic Nitrogen (NO3-N & NH4-N)																	
NO3-N Cd. Rd.	mg/kg	55	16.2	*1.15*		4.76	*0.76*		3.67	*0.67*		24.5	*2.09*		6.00	*0.70*	
NO3-N ISE	mg/kg	21	19.2	*4.47*		5.00	*1.00*		6.90	*2.90*		24.2	*2.25*		6.30	*1.30*	
NO3-N CTA	mg/kg	5	16.0	*0.64*		6.00	*1.02*		4.80	*0.60*		23.8	*2.10*		6.21	*1.29*	
NO3-N Ion Chr.	mg/kg	2	14.7	*0.59*		5.28	*0.69*		4.06	*0.45*		22.2	*0.88*		5.33	*0.22*	
NO3-N Other _____	mg/kg	6	15.0	*1.00*		4.33	*0.31*		3.76	*1.37*		22.3	*0.89*		5.13	*0.39*	
NH4 - N (KCl Extr.)	mg/kg	45	3.80	*0.80*		5.50	*0.92*		4.45	*0.85*		11.2	*1.03*		3.82	*0.75*	
Phosphorus and Sulfur																	
PO4-P Bray P (1:10)	mg/kg	44	22.5	*4.08*		90.5	*7.20*		26.9	*2.42*		81.5	*6.28*		5.91	*1.86*	
PO4-P Bray P1 (1:7)	mg/kg	7	13.8	*1.85*		79.0	*5.00*		18.6	*1.35*		57.3	*8.01*		5.00	*1.00*	
PO4-P Olsen/Bicarb	mg/kg	51	13.8	*1.60*		57.7	*5.64*		11.0	*1.40*		38.6	*3.45*		6.20	*1.50*	
PO4-P AB-DTPA	mg/kg	2	9.80	*2.60*		28.4	*13.7*		5.76	*1.75*		24.8	*14.2*		5.30	*0.43*	
PO4-P Modified Morgan	mg/kg	5	18.1	*0.72*		22.3	*5.30*		26.5	*1.30*		8.61	*1.21*		4.25	*0.55*	
PO4-P True Morgan	mg/kg	4	16.9	*1.18*		26.4	*2.05*		21.0	*2.60*		9.55	*2.05*		3.30	*0.45*	
PO4-P Mod. Kewlona	mg/kg	4	19.4	*1.73*		81.5	*3.21*		24.1	*1.75*		46.3	*1.85*		5.25	*0.65*	
PO4-P Stong Bray (1:10)	mg/kg	10	92.0	*12.2*		226	*25.9*		294	*44.4*		288	*45.0*		6.50	*1.85*	
PO4-P Water Soluble	mg/kg	5	2.58	*1.22*		11.8	*5.22*		3.32	*2.22*		5.03	*1.69*		4.40	*0.34*	
SO4 - S (PO4 Extr.)	mg/kg	33	29.0	*4.43*		5.40	*1.40*		4.16	*1.58*		4.53	*1.47*		2.93	*1.29*	
Bases																	
K Ammonium Acetate	mg/kg	78	160	*13.5*		477	*35.0*		261	*15.0*		184	*16.5*		17	*3.2*	
Ca Ammonium Acetate	mg/kg	73	4120	*370*		2426	*197*		4152	*412*		977	*94.0*		151	*35.0*	
Mg Ammonium Acetate	mg/kg	74	318	*24.8*		445	*33.6*		619	*37.7*		228	*23.7*		45	*8.8*	
Na Ammonium Acetate	mg/kg	55	22.0	*5.60*		15.6	*5.06*		27.7	*5.33*		39.0	*6.41*		26	*4.7*	
Bray Extractable K	mg/kg	3	136	*5.4*		346	*36.0*		199	*12.0*		165	*11.0*		20.0	*0.0*	
K- Olsen/Bicarb.	mg/kg	7	153	*10*		370	*25.0*		150	*6.0*		135	*5.4*		17.6	*4.8*	
K Modified Morgan	mg/kg	3	138	*6.0*		301	*12.0*		126	*13.0*		124	*10.0*		17.0	*1.6*	
K True Morgan	mg/kg	3	141	*6.0*		304	*20.0*		122	*4.9*		124	*8.0*		9.0	*1.7*	
Ca Modified Morgan	mg/kg	2	6446	*267*		2437	*97.5*		10684	*797*		769	*30.8*		131	*5.2*	
Aluminum KCL Extr.	mg/kg	4	0.025	*0.025*		0.110	*0.110*		0.570	*0.485*		1.243	*1.033*		4.897	*2.397*	

1 - Values flagged exceed Warning Limits " * " 2.5x MAD (Median Absolute Deviation) and Control Limits " ** " 4 x MAD. "<" and "ND" values not recorded.
2 - Limits not compared to lab data for methods with < 7 labs reporting

2007 North American Proficiency Testing Program
3rd Quarter Report - September 1, 2007

Laboratory ID

Soil			Soil 2007-111			Soil 2007-112			Soil 2007-113			Soil 2007-114			Soil 2007-115		
Analysis	**Units**	***n***	**Median**	***MAD***	**Lab[1,2]**	**Median**	***MAD***	**Lab[1,2]**	**Median**	***MAD***	**Lab[1,2]**	**Median**	***MAD***	**Lab[1,2]**	**Median**	***MAD***	**Lab[1,2]**
Mehlich-1 Multi Element (scoop)																	
Scoop Soil Mass	g	8	5.00	*0.00*		5.00	*0.00*		5.00	*0.00*		5.00	*0.00*		5.00	*0.00*	
P	mg/kg	8	21.9	*4.61*		146	*16.5*		38.7	*6.12*		200	*44.0*		4.44	*0.28*	
K	mg/kg	8	114	*14.2*		290	*14.6*		65.4	*9.86*		116	*7.6*		13.6	*1.57*	
Ca	mg/kg	8	5078	*346*		2651	*137*		4792	*207*		1226	*78*		157	*24*	
Mg	mg/kg	8	345	*26.8*		433	*24.6*		638	*76.3*		205	*8.2*		46.2	*5.50*	
Mn	mg/kg	7	9.11	*1.11*		42.9	*2.11*		3.45	*0.28*		28.0	*1.96*		0.25	*0.25*	
Zn	mg/kg	7	0.42	*0.20*		4.48	*0.42*		0.10	*0.09*		4.87	*0.30*		0.42	*0.23*	
Mehlich-3 Mult-Element (scoop)																	
Scoop Soil Mass	g	28	2.31	*0.31*		2.00	*0.20*		2.00	*0.18*		2.50	*0.39*		2.49	*0.32*	
Assumed Density	g/cm3	13	1.18	*0.00*		1.18	*0.00*		1.18	*0.00*		1.18	*0.00*		1.18	*0.00*	
Volume of Scoop	cm3	26	2.00	*0.30*		2.00	*0.30*		2.00	*0.30*		2.00	*0.30*		2.00	*0.30*	
Extractrant Volume mL	mL	26	20.0	*0.0*		20.0	*0.0*		20.0	*0.0*		20.0	*0.0*		20.0	*0.0*	
P Colorimetric	mg/kg	21	34.2	*3.2*		103	*9.0*		39.0	*3.0*		81.0	*10.7*		5.00	*1.00*	
P ICP-AES	mg/kg	36	49.3	*3.9*		112	*6.0*		41.2	*2.5*		95.0	*6.5*		6.62	*1.00*	
K	mg/kg	44	168	*15.2*		509	*28.3*		287	*14.6*		188	*17.8*		15.7	*2.50*	
Ca	mg/kg	41	4552	*368*		2693	*180*		5670	*430*		1106	*128*		193	*35*	
Mg	mg/kg	41	378	*28.3*		531	*36.30*		856	*64.00*		251	*27.67*		54.7	*6.3*	
Na	mg/kg	29	21.7	*5.2*		15.2	*5.5*		28.1	*4.7*		42.2	*5.9*		28.0	*5.9*	
S	mg/kg	29	49.1	*4.3*		13.0	*3.9*		14.6	*3.8*		12.0	*3.3*		5.50	*2.7*	
Al	mg/kg	24	307	*96.5*		690	*57.8*		420	*44.0*		459	*65.1*		55.5	*8.25*	
Zn	mg/kg	36	4.19	*0.5*		7.36	*0.54*		5.17	*0.45*		6.20	*0.61*		0.50	*0.16*	
Mn	mg/kg	35	40.0	*4.3*		189	*11.2*		250	*18.6*		33.1	*3.05*		0.48	*0.38*	
Fe	mg/kg	33	142	*16.0*		162	*12.0*		85.0	*10.3*		288	*36.5*		38.6	*6.01*	
Cu	mg/kg	36	3.50	*0.34*		4.60	*0.36*		4.60	*0.38*		1.00	*0.15*		0.30	*0.14*	
B	mg/kg	30	4.50	*0.49*		0.90	*0.20*		3.05	*0.36*		0.46	*0.21*		0.18	*0.12*	

1 - Values flagged exceed Warning Limits " * " 2.5x MAD (Median Absolute Deviation) and Control Limits " ** " 4 x MAD. "<" and "ND" values not recorded.
2 - Limits not compared to lab data for methods with < 7 labs reporting

2007 North American Proficiency Testing Program
3rd Quarter Report - September 1, 2007

Laboratory ID

Soil			Soil 2007-111			Soil 2007-112			Soil 2007-113			Soil 2007-114			Soil 2007-115		
Analysis	**Units**	***n***	**Median**	***MAD***	**Lab[1,2]**	**Median**	***MAD***	**Lab[1,2]**	**Median**	***MAD***	**Lab[1,2]**	**Median**	***MAD***	**Lab[1,2]**	**Median**	***MAD***	**Lab[1,2]**
Micronutrients																	
Zn - DTPA	mg/kg	66	1.83	*0.13*		3.43	*0.37*		1.70	*0.14*		3.37	*0.24*		0.32	*0.05*	
Mn - DTPA	mg/kg	54	7.31	*0.73*		20.0	*4.00*		11.9	*2.08*		20.3	*2.15*		0.38	*0.17*	
Fe - DTPA	mg/kg	55	32.6	*2.80*		28.9	*3.24*		8.28	*0.82*		88.9	*12.9*		27.3	*2.9*	
Cu - DTPA	mg/kg	55	1.17	*0.09*		1.66	*0.15*		1.68	*0.16*		0.71	*0.05*		0.11	*0.04*	
Zn - HCl	mg/kg	5	4.40	*0.49*		7.07	*0.28*		0.40	*0.20*		7.35	*0.71*		0.41	*0.14*	
Mn-H3PO4	mg/kg	7	8.84	*1.16*		28.4	*4.60*		6.40	*1.65*		20.7	*1.15*		0.49	*0.19*	
Cl - Ca(NO3)2 Extr.	mg/kg	16	44.5	*5.55*		8.46	*2.66*		4.00	*1.00*		19.5	*4.99*		7.00	*2.65*	
B - Hot Wat.	mg/kg	42	1.27	*0.35*		0.49	*0.12*		1.00	*0.24*		0.24	*0.07*		0.18	*0.08*	
B-DTPA/Sorbitol	mg/kg	8	1.78	*0.21*		0.40	*0.04*		1.47	*0.06*		0.16	*0.06*		0.09	*0.03*	
Soil Organic Matter																	
Soil Kjeldahl N	%	17	0.23	*0.02*		0.14	*0.01*		0.14	*0.01*		0.08	*0.01*		0.04	*0.00*	
Soil TN (combustion)	%	29	0.23	*0.01*		0.15	*0.01*		0.14	*0.01*		0.08	*0.01*		0.04	*0.01*	
Soil TOC (Combustion)	%	12	2.51	*0.16*		1.75	*0.07*		5.27	*0.25*		0.72	*0.06*		1.07	*0.07*	
Soil Total C (Combustion)	%	13	2.69	*0.11*		1.81	*0.07*		5.31	*0.21*		0.75	*0.03*		1.01	*0.05*	
SOM - Walkley-Black	%	35	4.06	*0.36*		2.90	*0.20*		2.10	*0.20*		1.44	*0.14*		2.01	*0.21*	
SOM - LOI (% Wt loss)	%	67	3.97	*0.28*		3.20	*0.20*		2.60	*0.20*		1.68	*0.12*		1.67	*0.13*	
CaCO3 Content	%	13	2.50	*0.27*		0.77	*0.37*		33.3	*3.21*		0.64	*0.20*		0.10	*0.10*	
CEC - Cation Displacement	cmol/kg	19	16.0	*1.30*		20.6	*2.00*		18.8	*1.60*		8.70	*1.2*		3.10	*0.77*	
CEC - Estimation	cmol/kg	10	26.7	*1.41*		17.8	*0.90*		29.2	*1.35*		11.0	*2.0*		6.70	*2.83*	
Soil Density (Scoop)	g/cc	11	1.35	*0.05*		1.01	*0.05*		1.07	*0.05*		1.50	*0.06*		1.46	*0.06*	
Particle Size Analysis																	
Sand 2000 - 50 um	%	36	71.9	*2.87*		19.7	*3.30*		19.0	*2.45*		79.0	*3.16*		95.9	*1.35*	
Silt 50 - 2 um	%	36	17.7	*3.42*		56.5	*4.82*		57.0	*6.90*		14.0	*1.72*		2.2	*1.27*	
Clay 2 - 0 um	%	36	11.3	*2.65*		23.4	*3.40*		23.6	*3.29*		6.8	*1.88*		2.0	*1.48*	

1 - Values flagged exceed Warning Limits " * " 2.5x MAD (Median Absolute Deviation) and Control Limits " ** " 4 x MAD. "<" and "ND" values not recorded.
2 - Limits not compared to lab data for methods with < 7 labs reporting