

Table S1. Characteristics of soil samples at Site I.

Sample ID	Sample Date	pH	OM† (%)	M3-P (mgkg ⁻¹)	Est. CEC (meq100g ⁻¹)	NH ₄ ⁺ (mgkg ⁻¹)	NO ₃ ⁻ (mgkg ⁻¹)	Sample ID	Sample Date	pH	OM (%)	M3-P (mgkg ⁻¹)	Est. CEC (meq100g ⁻¹)	NH ₄ ⁺ (mgkg ⁻¹)	NO ₃ ⁻ (mgkg ⁻¹)
1	13-Dec-11	7.1	3.0	346.92	27.80	3.98	18.89	1	11-Jul-12	6.9	1.0	70.61	9.10	2.41	83.40
2	13-Dec-11	7.7	1.3	432.10	18.00	1.63	10.26	2	11-Jul-12	7.6	1.1	238.13	20.62	1.44	93.80
3	13-Dec-11	7.6	1.1	203.28	9.40	1.36	7.53	3	11-Jul-12	7.6	1.9	294.37	18.74	0.71	43.00
4	13-Dec-11	7.5	4.7	818.18	28.60	22.23	12.42	4	11-Jul-12	7.6	1.0	227.33	11.19	3.89	56.40
5	13-Dec-11	7.8	55.1	4740.14	53.00	947.90	2.60	5	11-Jul-12	7.0	52.9	3298.70	48.09	3100.00	839.00
6	13-Dec-11	8.0	1.3	152.79	13.20	10.39	4.04	6	11-Jul-12	6.4	1.6	530.35	12.99	52.53	224.00
7	13-Dec-11	6.8	2.8	108.39	9.00	5.15	9.09	7	11-Jul-12	4.5	7.2	29.11	10.60	28.15	46.80
1	7-Mar-12	7.7	0.8	76.08	12.13	4.23	18.46	8	11-Jul-12	6.9	0.5	86.61	7.44	2.08	25.40
2	7-Mar-12	8.0	1.0	93.51	11.02	3.07	30.70	9	11-Jul-12	6.3	1.6	16.85	4.93	5.67	16.40
3	7-Mar-12	7.8	1.3	276.53	14.34	3.16	16.43	1	16-Aug-12	7.2	1.6	115.36	10.40	5.48	71.40
4	7-Mar-12	7.9	0.8	185.68	11.66	2.79	12.93	2	16-Aug-12	7.6	0.3	97.79	10.00	6.34	22.29
5	7-Mar-12							3	16-Aug-12	7.3	1.3	311.98	16.00	5.43	68.20
6	7-Mar-12	5.8	2.6	89.84	6.82	4.77	32.20	4	16-Aug-12	7.3	1.0	211.84	9.60	4.75	14.24
7	7-Mar-12	5.7	11.0	32.61	14.98	9.39	6.09	5	16-Aug-12	7.0	51.6	3316.14	50.90	820.50	7.52
8	7-Mar-12	7.3	2.7	349.66	18.67	3.97	6.69	6	16-Aug-12	7.1	0.7	121.84	11.20	52.06	487.00
9	7-Mar-12	5.9	5.3	39.75	13.17	3.42	8.60	7	16-Aug-12	4.6	8.0	20.67	10.40	9.40	14.88
1	6-Apr-12	7.6	0.5	46.08	6.94	10.64	47.30	8	16-Aug-12	6.4	0.4	116.75	9.10	4.42	68.20
2	6-Apr-12	7.6	0.3	64.63	8.57	8.38	93.90	9	16-Aug-12	6.4	0.9	9.07	4.10	4.65	12.96
3	6-Apr-12	7.5	0.3	84.31	7.37	12.53	18.69	1	18-Sep-12	7.2	1.4	81.89	10.40	3.32	3.77
4	6-Apr-12	6.9	0.8	256.56	10.12	45.32	48.60	2	18-Sep-12	7.5	1.1	199.88	12.30	3.59	37.00
5	6-Apr-12							3	18-Sep-12	7.6	0.9	269.14	14.30	2.95	39.50
6	6-Apr-12	5.7	0.4	142.44	8.03	40.66	202.10	4	18-Sep-12	7.9	1.0	238.29	14.10	3.84	16.08
7	6-Apr-12	7.0	5.9	22.82	10.61	12.87	21.20	5	18-Sep-12	6.5	42.2	2648.64	193.80	5228.00	2006.00
8	6-Apr-12	5.2	1.6	247.81	13.86	5.81	15.87	6	18-Sep-12	6.8	0.2	46.50	5.30	64.72	18.69
9	6-Apr-12	6.5	4.2	38.26	9.90	5.88	20.27	7	18-Sep-12	5.5	5.9	29.25	9.10	9.69	4.22
1	7-May-12	7.7	0.6	113.78	12.99	5.13	23.18	8	18-Sep-12	7.4	2.0	213.85	22.80	4.51	9.91
2	7-May-12	8.0	0.4	80.47	8.21	3.25	18.47	9	18-Sep-12	5.9	3.0	19.99	5.90	5.31	9.62
3	7-May-12	8.1	0.4	78.85	8.10	3.47	17.55	1	18-Oct-12	7.2	1.8	161.13	16.10	3.66	27.33

4	7-May-12	7.5	0.9	232.96	9.35	4.38	17.83	2	18-Oct-12	8.0	0.8	217.32	21.60	2.06	84.91
5	7-May-12	6.9	42.9	3416.35	49.69	2607.00	0.00	3	18-Oct-12	8.1	0.9	270.58	15.80	2.95	28.46
6	7-May-12	7.5	1.0	191.36	14.83	42.49	458.70	4	18-Oct-12	8.0	1.1	249.40	14.50	4.22	11.82
7	7-May-12	5.4	9.7	35.55	9.46	11.53	6.76	5	18-Oct-12	6.6	41.1	3317.03	41.40	4360.00	105.80
8	7-May-12	7.9	1.6	170.11	18.57	4.71	13.73	6	18-Oct-12	7.0	0.5	133.49	7.90	35.00	296.00
9	7-May-12	5.8	3.4	24.35	7.70	8.09	4.50	7	18-Oct-12	5.0	9.9	48.85	11.70	12.09	67.47
1	4-Jun-12	7.8	0.6	25.46	4.15	3.55	20.47	8	18-Oct-12	7.2	1.7	245.70	13.80	5.15	26.92
2	4-Jun-12	7.9	1.2	175.92	15.13	4.74	18.80	9	18-Oct-12	4.8	3.8	35.45	8.80	9.60	16.94
3	4-Jun-12	7.8	0.6	158.14	8.80	4.08	30.81	1	1-Nov-12	7.1	1.9	139.61	15.00	7.06	8.58
4	4-Jun-12	7.9	0.6	116.95	6.23	4.16	10.94	2	1-Nov-12	7.6	1.0	138.08	13.90	4.60	41.14
5	4-Jun-12	6.4	35.6	2610.82	40.56	5409.00	0.00	3	1-Nov-12	7.7	1.8	273.15	14.00	4.56	6.17
6	4-Jun-12	6.8	1.3	253.17	9.98	17.77	177.20	4	1-Nov-12	8.1	1.4	340.03	17.10	6.16	3.92
7	4-Jun-12	5.3	8.8	46.30	10.21	11.56	11.20	5	1-Nov-12	7.0	37.4	3893.87	57.60	3722.00	195.80
8	4-Jun-12	6.8	0.4	65.11	6.30	4.19	18.13	6	1-Nov-12	7.2	0.9	67.63	5.00	51.20	51.42
9	4-Jun-12	5.9	3.8	27.28	9.28	6.12	16.77	7	1-Nov-12	5.4	4.1	72.09	8.00	8.96	66.30
1	20-Jun-12	6.9	1.2	62.68	8.37	4.02	70.62	8	1-Nov-12	6.7	1.3	171.35	13.40	4.73	32.79
2	20-Jun-12	7.6	1.3	220.20	18.15	5.07	6.47	9	1-Nov-12	5.3	3.7	90.85	8.50	5.36	5.40
3	20-Jun-12	7.3	0.4	164.30	8.66	6.54	19.62	1	6-Dec-12	7.9	0.3	44.86	7.00	9.56	9.69
4	20-Jun-12	7.2	0.5	284.46	10.55	11.81	20.50	2	6-Dec-12	8.3	0.9	288.50	21.20	9.21	15.17
5	20-Jun-12	7.1	64.2	5161.11	77.27	799.30	28.60	3	6-Dec-12	8.1	1.1	203.69	13.50	6.09	9.80
6	20-Jun-12	7.1	0.4	315.90	15.01	22.75	186.10	4	6-Dec-12	8.1	1.1	219.02	12.30	7.02	12.28
7	20-Jun-12	4.9	8.9	35.90	10.86	21.56	24.26	5	6-Dec-12	7.0	45.6	5447.16	74.90	3302.20	21.09
8	20-Jun-12	7.0	0.9	206.93	15.61	9.32	12.09	6	6-Dec-12	6.8	0.6	131.44	5.40	48.08	68.76
9	20-Jun-12	5.9	1.4	18.35	5.31	6.36	12.44	7	6-Dec-12	5.5	7.3	90.33	10.80	8.11	5.93
								8	6-Dec-12	6.7	1.0	208.78	13.80	4.26	39.64
								9	6-Dec-12	5.8	3.3	34.99	8.80	7.25	4.93

OM†=organic matter; M3-P=Mehlich III extractable phosphorus; CEC=cation exchange capacity; NH₄⁺=ammonium nitrogen; NO₃⁻=nitrate nitrogen.

Soil sampling points in the farm-Site I: 1- 2nd poultry house facing from back right side surface | 2- 2nd poultry house side edge deep (10cm) | 3- 2nd poultry house front edge deep (10cm) | 4- 2nd poultry house front edge (Surface 5 cm) | 5- Litter inside manure storage shed | 6- 2nd poultry house side edge surface (5 cm) | 7- Drainage swale between house 3+5 | 8- Before Grass | 9- After grass.

Table S2. Characteristics of soil samples at Site II.

Sample	Sample		OM†	M3-P	Est. CEC	NH ₄ ⁺	NO ₃ ⁻	Sample	Sample		OM	M3-P	Est. CEC	NH ₄ ⁺	NO ₃ ⁻
ID	Date	pH	(%)	(mgkg ⁻¹)	(meq100g ⁻¹)	(mgkg ⁻¹)	(mgkg ⁻¹)	ID	Date	pH	(%)	(mgkg ⁻¹)	(meq100g ⁻¹)	(mgkg ⁻¹)	(mgkg ⁻¹)
11	4-Jun-12	6.9	5.7	321.84	11.19	5.86	9.54	11	18-Sep-12	6.8	4.8	304.41	10.50	6.62	12.60
12	4-Jun-12	6.9	4.6	1140.98	20.50	4.46	4.35	12	18-Sep-12	7.2	4.1	1043.97	21.60	17.41	48.60
13	4-Jun-12	6.8	4.2	765.76	16.97	5.12	3.07	13	18-Sep-12	7.1	5.3	799.49	13.60	5.86	52.00
14	4-Jun-12	6.9	5.8	743.51	16.58	3.24	7.80	14	18-Sep-12	6.8	5.2	612.32	13.70	21.19	62.80
15	4-Jun-12	6.8	4.5	390.27	14.23	5.97	8.66	15	18-Sep-12	7.5	5.7	833.40	15.40	11.24	45.10
16	4-Jun-12	6.7	4.5	473.39	15.03	4.47	5.44	16	18-Sep-12	6.8	4.9	592.92	13.00	9.53	61.60
17	4-Jun-12	6.0	3.4	353.37	9.56	7.54	78.50	17	18-Sep-12	6.8	3.7	392.94	14.50	76.01	18.21
11	20-Jun-12	7.1	6.0	330.44	13.29	14.82	13.18	11	18-Oct-12	6.2	3.9	294.21	8.70	5.89	22.90
12	20-Jun-12	7.1	4.4	1198.83	24.15	10.86	118.40	12	18-Oct-12	8.0	5.0	1517.45	24.00	45.23	24.17
13	20-Jun-12	7.1	3.8	436.01	9.27	5.07	7.41	13	18-Oct-12	7.4	3.3	1026.17	18.10	4.34	68.33
14	20-Jun-12	6.8	5.9	836.78	14.84	11.47	14.28	14	18-Oct-12	7.5	2.8	933.61	14.60	4.64	10.99
15	20-Jun-12	6.8	4.1	392.74	14.30	9.69	18.92	15	18-Oct-12	7.2	4.6	747.69	16.50	5.19	14.74
16	20-Jun-12	6.7	4.6	436.46	13.85	9.70	21.60	16	18-Oct-12	7.1	6.5	1447.14	19.20	21.53	161.89
17	20-Jun-12	6.1	3.0	239.61	9.03	21.03	135.20	17	18-Oct-12	6.6	3.8	1076.90	18.20	16.19	201.40
11	11-Jul-12	7.0	3.4	252.49	12.81	3.13	30.00	11	1-Nov-12	7.4	7.1	823.52	17.70	5.42	12.22
12	11-Jul-12	7.1	4.5	885.64	17.61	3.60	48.80	12	1-Nov-12	7.9	5.1	1157.00	21.10	23.71	5.81
13	11-Jul-12	6.9	4.9	589.98	14.18	5.70	29.40	13	1-Nov-12	7.5	3.0	1422.22	20.20	5.35	18.07
14	11-Jul-12	7.1	6.0	1154.33	19.40	4.90	18.31	14	1-Nov-12	7.5	3.4	1579.75	22.40	4.43	11.25
15	11-Jul-12	7.0	4.1	266.17	11.60	3.37	18.35	15	1-Nov-12	7.5	4.8	1199.72	20.70	4.54	16.14
16	11-Jul-12	6.5	4.5	440.46	12.79	7.65	30.65	16	1-Nov-12	7.1	5.4	779.82	14.30	3.96	10.32
17	11-Jul-12	6.2	3.0	199.15	7.79	11.20	33.41	17	1-Nov-12	7.1	3.9	1295.84	18.70	24.23	61.06
11	16-Aug-12	7.2	4.8	479.00	16.90	7.88	15.24	11	6-Dec-12	7.4	5.4	627.98	18.40	6.53	50.79
12	16-Aug-12	6.9	3.5	559.90	12.70	7.46	68.40	12	6-Dec-12	7.7	4.7	1479.18	26.60	37.00	36.45
13	16-Aug-12	7.3	4.3	596.66	12.30	7.77	22.83	13	6-Dec-12	7.0	4.1	906.91	19.50	13.30	57.34
14	16-Aug-12	7.1	6.6	958.53	16.4	5.73	6.46	14	6-Dec-12	7.4	5.4	1276.26	24.9	11.46	47.63
15	16-Aug-12	6.8	5.3	273.80	11.0	5.23	8.66	15	6-Dec-12	7.5	3.7	414.75	15.2	13.38	20.90
16	16-Aug-12	6.3	4.6	363.03	10.2	7.19	9.93	16	6-Dec-12	7.0	4.7	548.86	18.1	13.09	46.76
17	16-Aug-12	7.0	2.4	158.06	8.1	7.11	74.10	17	6-Dec-12	6.5	3.7	853.78	17.8	9.63	74.72

OM†=organic matter; M3-P=Mehlich III extractable phosphorus; CEC=cation exchange capacity; NH_4^+ =ammonium nitrogen; NO_3^- =nitrate nitrogen.

Soil sampling points in the farm-Site II: 11- Right edge near (5 cm) | 12- Right edge far (5 cm) | 13- Front edge right (10 cm) | 14- Front edge middle (10 cm) | 15- Front edge left (10 cm) | 16- Left edge far (10 cm) | 17- Left edge near (10 cm).