

Appendix I: Temperature, rainfall and relative humidity

Department of Meteorology

Monthly Temperature Maximum (°C)

SIEMREAP

Longitude:103°51' , Latitude:13°22', Altitude: 15m

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average
Year	1	2	3	4	5	6	7	8	9	10	11	12	13
2007	31.6	32.9	34.8	35.7	33.5	33.9	32.9	32.1	32.4	31.3	30.9	31.6	32.8
2008	31.8	31.9	33.9	35.5	33.1	32.9	32.9	32.9	31.4	32.2	30.1	29.7	32.4
2009	31.8	31.9	34.2	34.9	33.2	33.0	33.2	32.9	31.4	31.9	30.3	29.4	32.3
2010	34.0	36.8	40.2	41.5	40.5	38.1	36.0	34.1	34.8	34.3	34.0	34.0	36.5
2011	34.0	35.0	35.2	35.5	36.1	35.2	35.8	34.6	33.2	34.3	34.5	32.5	34.7
Monthly Total	163.3	168.5	178.3	183.1	176.4	173.1	170.8	166.6	163.2	164.0	159.8	157.3	168.7

Department of Meteorology

Monthly Temperature Minimum (°C)

SIEMREAP

Longitude:103°51' , Latitude:13°22', Altitude: 15m

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average
Year	1	2	3	4	5	6	7	8	9	10	11	12	13
2007	19.7	21.3	24.7	25.1	24.7	25.8	24.7	24.9	24.9	23.7	20.0	21.0	23.4
2008	18.5	19.6	21.8	24.0	24.2	24.4	24.3	24.5	24.0	24.3	22.2	20.1	22.7
2009	21.0	21.4	23.5	25.5	25.2	25.4	25.2	25.0	24.7	25.2	22.6	20.1	23.7
2010	18.0	23.0	20.5	22.4	24.5	24.5	24.0	23.5	24.0	24.0	19.5	17.5	22.1
2011	15.5	18.0	17.6	20.0	24.0	21.5	22.5	23.2	22.8	23.0	20.5	15.8	20.4
Monthly Total	92.6	103.3	108.1	117.0	122.6	121.6	120.6	121.1	120.4	120.2	104.8	94.5	112.2

Appendix I: Temperature, rainfall and relative humidity (Continue)

Department of Meteorology

Monthly Rainfall

SIEMREAP

Longitude:103°51' , Latitude:13°22', Altitude: 15m

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Year	1	2	3	4	5	6	7	8	9	10	11	12	13
2007	0.0	0.0	16.1	40.1	187.9	155.6	230.1	133.7	186.1	118.2	28.7	0.3	1096.8
2008	10.0	15.3	39.9	84.5	353.3	204.5	141.0	148.4	288.9	374.0	92.6	4.7	1757.1
2009	0.0	15.3	39.9	86.6	352.4	207.5	141.0	125.3	289.4	375.7	68.0	4.7	1705.8
2010	15.4	0.0	0.1	12.6	80.8	204.4	271.0	264.1	273.0	357.1	52.9	18.1	1549.5
2011	0.0	0.0	86.0	127.1	111.7	190.6	194.5	226.9	445.3	294.6	5.0	4.6	1686.3
Monthly Total	10.0	15.3	56.0	124.6	541.2	360.1	371.1	282.1	475.0	492.2	121.3	5.0	2853.9

Department of Meteorology

Monthly Relative HUMIDITY (%)

SIEMREAP

Longitude:103°51' , Latitude:13°22', Altitude: 15m

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YearlyMean
Year	1	2	3	4	5	6	7	8	9	10	11	12	13
2007	64	65	67	64	76	74	75	81	83	81	74	75	73
2008	69	66	64	66	77	77	74	78	80	82	75	71	73
2009	66	67	67	69	77	75	77	78	82	81	74	73	74
2010	69	68	57	64	66	76	77	82	82	80	74	73	72
2011	62	63	59	71	71	74	74	75	79	80	71	68	70
Monthly Total	132.4	130.4	130.1	130.6	153.6	150.6	148.7	159.3	162.7	162.8	148.9	145.8	146.3

Appendix II: Soil analysis

SOIL ANALYSIS RESULT

Soil Chemical Sample		Nitrogen	Total P	(Exc. Bases)	pH	
				1mol Ammonium Acetate pH= 7	pH H ₂ O	pH KCL
Lab Code: 47 / 10		Kjeldalh , Sulfuric Methode	Hot Nitric Digest, Spectrophotometric Methode	Flame photometric Methode	1:25	1:25
Field ID: Siem Reap	Lab.№	(N) %	(P) %	K %	S : Water	S : KCL
Siem Reap , I	1	0.070	0.0208	0.002	5.02	3.83
Siem Reap , II	2	0.070	0.016	0.002	4.98	4.3
Siem Reap , III	3	0.035	0.0218	0.002	4.96	4.2
Siem Reap , IV	4	0.070	0.0194	0.005	4.60	4.26
Siem Reap , V	5	0.035	0.0187	0.003	5.32	4.53
Siem Reap , VI	6	0.035	0.0328	0.003	5.36	4.61
Siem Reap , VII	7	0.035	0.0357	0.005	4.82	4.23
Siem Reap , VIII	8	0.105	0.0278	0.007	5.25	4.93
Siem Reap , IX	9	0.1.05	0.0292	0.005	4.89	4.35
Siem Reap , X	10	0.070	0.0251	0.003	5.58	5.00
Siem Reap , XI	11	0.070	0.0286	0.002	4.46	4.22
Siem Reap , XII	12	0.035	0.0179	0.002	5.05	4.26

Appendix III: Vegetation survey in experimental plots

Rapid Site Assessment in Experimental Plots 2010

Circle	Weeds	Cows	Fire	Soil	No. Trees>1m tall	No. Live Tree Stumps	Total Source of regeneration
1	Yes	Yes	No	Good quality	6	14	20
2	Yes	Yes	No	Good quality	10	18	28
3	Yes	Yes	Yes	Good quality	13	12	25
4	Yes	Yes	Yes	Good quality	4	3	7
5	Yes	Yes	Yes	Good quality	16	15	31
6	Yes	Yes	Yes	Good quality	8	13	21
7	Yes	Yes	Yes	Good quality	11	15	26
8	Yes	Yes	Yes	Good quality	11	12	23
9	Yes	Yes	Yes	Good quality	10	5	15
10	Yes	Yes	Yes	Good quality	6	10	16
						Total	212
						Mean	21.2

(=Mean x 10000/78)

Average/Ha 2717.95

(=3000-Average/ha)

No. of trees to plant per ha **282.05**

Appendix IV: Vegetation survey in experimental plots (Continue)

Rapid Site Assessment in Experimental Plots 2011

Circle	Weeds-% cover and mean height, +/-tree seedlings?	Live-Stock Signs	Fire Signs	Soil - % exposed, condition, erosion	No. trees>1m tall (<30cm gbh)	No. live tree stumps	No. trees >30cm gbd	Total Source of regeneration
1	50	No	No	Good quality	17	9	0	26
2	40	No	No	Good quality	10	4	0	14
3	60	No	Yes	Good quality	38	2	0	40
4	Yes	No	Yes	Good quality	24	2	0	26
5	Yes	No	Yes	Good quality	20	0	0	20
6	Yes	No	Yes	Good quality	18	0	0	18
7	Yes	No	Yes	Good quality	18	0	0	18
8	Yes	No	Yes	Good quality	17	0	0	17
9	Yes	No	Yes	Good quality	14	0	0	14
10	Yes	No	Yes	Good quality	0	0	0	0
Total								193
Mean								19.3
(=Mean x 10000/78)								Average/Ha 2474.36
(=3000-Average/ha)								No. of trees to plant per ha 525.64

Appendix V: Tree label number in each plot

Experimental Plots 2010

Sub-Plot IV

S.N	4.1	4.2	4.3	4.4
S1	1 – 15	16 – 30	31 – 45	46 – 60
S7	181 – 195	196 – 210	211 – 225	226 – 240
S8	361 – 375	376 – 390	391 – 405	406 – 420
S12	541 – 555	556 – 570	571 – 585	586 – 600
S13	721 – 725	726 – 740	741 – 755	756 – 770
S15	901 – 915	916 – 930	931 – 945	946 – 960

Sub-Plot I-III

S.N	1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4	3.1	3.2	3.3	3.4
S1	61 – 70	71 – 80	81 – 90	91 – 100	101 – 110	111 – 120	121 – 130	131 – 140	141 – 150	151 – 160	161 – 170	171 – 180
S7	241 – 250	251 – 260	261 – 270	271 – 280	281 – 290	291 – 300	301 – 310	311 – 320	321 – 330	331 – 340	341 – 350	351 – 360
S8	421 – 430	431 – 440	441 – 450	451 – 460	461 – 470	471 – 480	481 – 490	491 – 500	501 – 510	511 – 520	521 – 530	531 – 540
S12	601 – 610	611 – 620	621 – 630	631 – 640	641 – 650	651 – 660	661 – 670	671 – 680	681 – 690	691 – 700	701 – 710	711 – 720
S13	781 – 790	791 – 800	801 – 810	811 – 820	821 – 830	831 – 840	841 – 850	851 – 860	861 – 870	871 – 880	881 – 890	891 – 900
S15	961 – 970	971 – 980	981 – 990	991 – 1000	1001 – 1010	1011 – 1020	1021 – 1030	1031 – 1040	1041 – 1050	1051 – 1060	1061 – 1070	1071 – 1080
S16	1 – 10	11 – 20	21 – 30	31 – 40	41 – 50	51 – 60	61 – 70	71 – 80	81 – 90	91 – 100	101 – 110	111 – 120
S34	1 – 10	11 – 20	21 – 30	31 – 40	41 – 50	51 – 60	61 – 70	71 – 80	81 – 90	91 – 100	101 – 110	111 – 120
S35	1 – 10	11 – 20	21 – 30	31 – 40	41 – 50	51 – 60	61 – 70	71 – 80	81 – 90	91 – 100	101 – 110	111 – 120

Experimental Plots 2011

Sub-Plot I-III

S.N	1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4	3.1	3.2	3.3	3.4
S6.B1	1 – 15	16 – 30	31 – 45	46 – 60	61 – 75	76 – 90	91 – 105	106 – 120	121 – 135	136 – 150	151 – 165	166 – 180
S10.B1	1 – 15	16 – 30	31 – 45	46 – 60	61 – 75	76 – 90	91 – 105	106 – 120	121 – 135	136 – 150	151 – 165	166 – 180
S14.B1	1 – 15	16 – 30	31 – 45	46 – 60	61 – 75	76 – 90	91 – 105	106 – 120	121 – 135	136 – 150	151 – 165	166 – 180
S17.B1	1 – 15	16 – 30	31 – 45	46 – 60	61 – 75	76 – 90	91 – 105	106 – 120	121 – 135	136 – 150	151 – 165	166 – 180
S22.B1	1 – 15	16 – 30	31 – 45	46 – 60	61 – 75	76 – 90	91 – 105	106 – 120	121 – 135	136 – 150	151 – 165	166 – 180
S28.B1	1 – 15	16 – 30	31 – 45	46 – 60	61 – 75	76 – 90	91 – 105	106 – 120	121 – 135	136 – 150	151 – 165	166 – 180
S32.B1	1 – 15	16 – 30	31 – 45	46 – 60	61 – 75	76 – 90	91 – 105	106 – 120	121 – 135	136 – 150	151 – 165	166 – 180
S33.B1	1 – 15	16 – 30	31 – 45	46 – 60	61 – 75	76 – 90	91 – 105	106 – 120	121 – 135	136 – 150	151 – 165	166 – 180
S39.B1	1 – 15	16 – 30	31 – 45	46 – 60	61 – 75	76 – 90	91 – 105	106 – 120	121 – 135	136 – 150	151 – 165	166 – 180
S49.B1	1 – 15	16 – 30	31 – 45	46 – 60	61 – 75	76 – 90	91 – 105	106 – 120	121 – 135	136 – 150	151 – 165	166 – 180

Appendix VI:

**Activity plan for seedling maintenance, applying fertilizer
and data monitoring**

Date	Activity plan	
	Experimental Plot 2010	Experimental Plot 2011
25/6/2010	Planting Plot 4	
26/6/2010	1 st baseline monitoring	
15/7/2010	Planting plots 1-3	
16/7/2010	Baseline monitoring plots 1-3	
15/8/2010	1 st weeding + fertilizer	
30/9/2010	2 nd weeding + fertilizer	
15/11/2010	3 rd weeding + fertilizer	
15/12/2010	2 nd monitoring	
15/6/2011	4th W+F	
25/6/2011		Planting Plot 1-3
26/6/2011		1 st baseline monitoring
30/7/2011	4W+F	
15/8/2011		1 st weeding + fertilizer
15-30/9/2011	5 th W+F	2 nd weeding + fertilizer
15/11/2011		3 rd weeding + fertilizer
15/12/2011	3 rd Monitoring	2 nd monitoring
15/6/2012		4th W+F
16/06/2012		3 rd monitoring
30/7/2012		4W+F
15/9/2012		5 th W+F
15/12/2012		4 th Monitoring