

(6) Various Types of Damage to Seeds and Seedlings

The various types and levels of damage in the some 10 month period after germination are shown in Fig. II-19, Fig. II-20 and Attached Tables 18 and 19. As in the case of the experiment site (I), the damage at the early stage (from seeding to germination) includes the eating of the seeds by small birds and animals in addition to damage caused by ants. Much damage, ranging from insect damage to damage caused by disease, natural death and suppression, is inflicted on the seedlings and young trees at the growth stage.

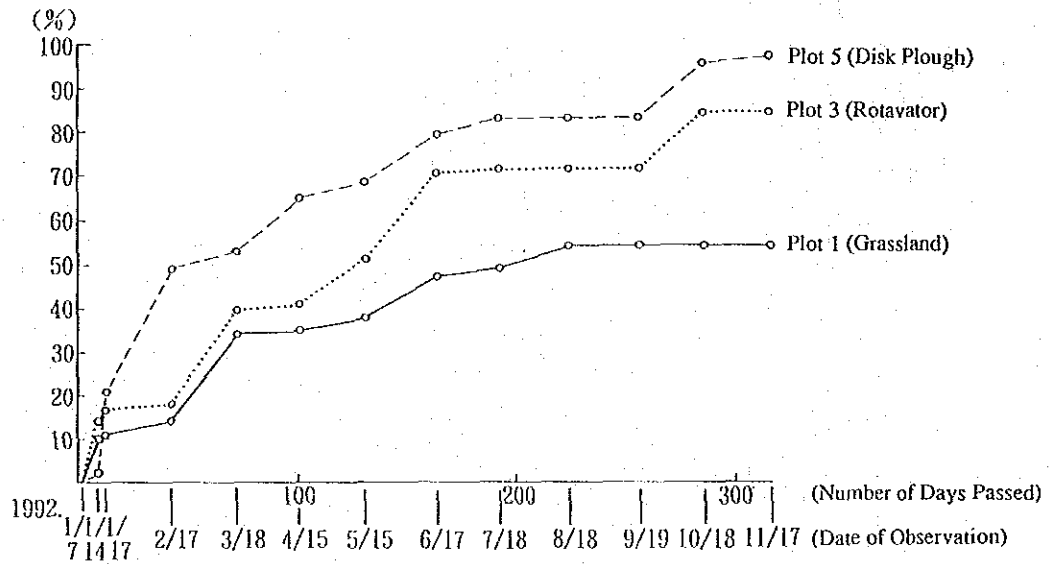


Fig. II-19 Damage to Acacia mangium (%): Experiment Site (II)

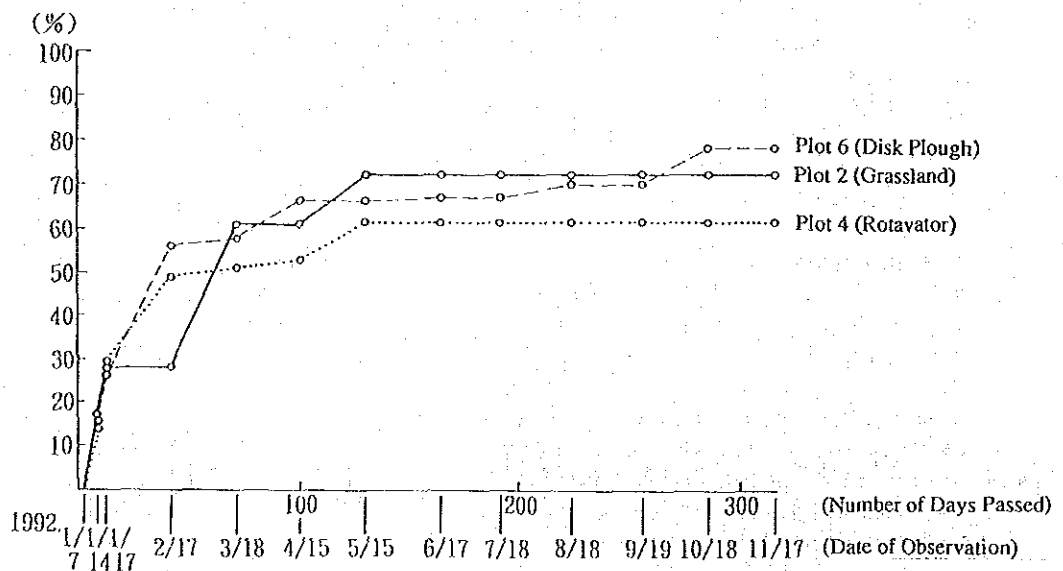


Fig. II-20 Damage to Acacia auriculiformis (%): Experiment Site (II)

3. Supplementary Test on Eucalyptus

(1) Location of and Other Information on Experiment Site

The supplementary experiment site for Eucalyptus was established next to the experiment site (I). Refer to II-1-(1) for the location and the climatic and other conditions of the experiment site.

(2) Method

a) Species Used in the Experiment

The following 2 species were experimented with

- Eucalyptus urophylla
- Eucalyptus alba

b) Pre-Treatment to Stimulate Germination

No specific pre-treatment was conducted.

c) Land Preparation

The site was originally Alang-alang grassland and the following land preparation was conducted (Fig. II-21).

Sub-Plot 1: disk plough (twice), rotavator (once)

Sub-Plot 2: no preparation

Sub-Plot 3: disk plough (twice), rotavator (once)

Sub-Plot 4: no preparation

d) Design of Experiment Site

The compartmentation of the experiment site is shown in Fig. II-21 and the area of each plot, sub-plot and quadrat is as follows.

- Area of Plot: 1,150m² (25m x 46m)
- Area of Sub-Plot: 25m² (5m x 5m)
- Area of Quadrat: 1m² (1m x 1m)

3 quadrats were randomly selected in each sub-plot for data collection purposes.

e) Seeding Quantity

The seeding quantity was 50 seeds/m² and the seed weight was calculated in the following manner.

- 400 seeds/g
- 50 seeds x 25m² ÷ 400 seeds/g ÷ 3.0g (for each sub-plot)

f) Seeding Method

As the seeds of both Eucalyptus urophylla and Eucalyptus alba are very small, they are mixed with sand to achieve the uniform distribution of seeds in the sub-plots.

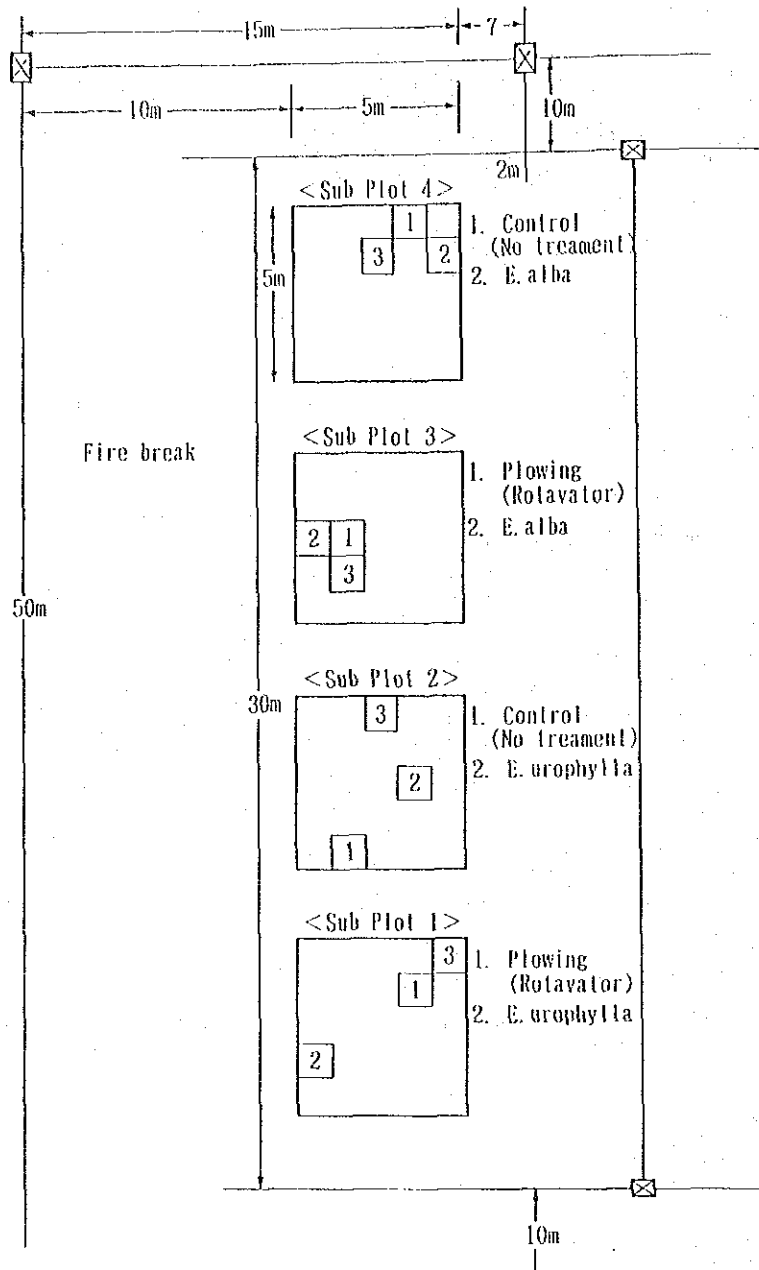


Fig. II-21 Locations of Sub-Plots and Quadrats

g) Survey Items

The survey was conducted on 3 randomly selected quadrats for each sub-plot.

① Germination

- Time of Observation: weekly after initial seeding
- Survey Items: germination rate, growth after germination and number of surviving seedlings using the field note shown in Table II-5.

② Number of Surviving Seedlings and Seedling Height

- Time of Observation: in principle, the 15th of each month
- Survey Items: number of surviving seedlings and seedling height, etc. using the field note shown in Table II-6

(3) Results

While the collection of data in the 3 selected quadrats in each sub-plot was intended, the actual germination was recorded only in those quadrats in Sub-Plot 3 (*Eucalyptus alba*, total of 16 seeds) which was not designated for data collection.

6 seedlings were damaged (Table II-20) in the 8 month period after initial germination, leaving 10 surviving seedlings with an average seedling height of 37cm (Table II-19).

Table II-19 Number of Surviving *Eucalyptus alba* and Average Seedling Height: Supplementary Experiment Site I

Date of Observation	Number of Days Passed	Sub-Plot 3	
		Number of Surviving Seedlings	Average Height (cm)
18/12/1991	1	0	
25/12/1991	8	0	
2/1/1992	16	0	
18/6/1992	23	12	14.0
18/7/1992	214	10	18.0
8/8/1992	245	10	23.0
18/9/1992	276	10	27.0
18/10/1992	306	10	33.0
18/11/1992	337	10	37.0

Table II-20 Damage to *Eucalyptus*: Supplementary Test Site I

Date of Observation	No. of Days Passed	No. of Surviving Seedlings	Sub-Plot 3 (<i>Eucalyptus alba</i>)				Total	Damage Rate (%)
			Damage					
			Insect	Disease	Natural Death	Others		
18/12/1991	1	0						
25/12/1991	8	0						
2/1/1992	16	0						
18/6/1992	23	16						
18/7/1992	214	10	0	0	0	6	6	60.0
8/8/1992	245	10	0	0	0	6	6	60.0
18/9/1992	276	10	0	0	0	6	6	60.0
18/10/1992	306	10	0	0	0	6	6	60.0
18/11/1992	337	10	0	0	0	6	6	60.0

Notes

1. Date of Seeding: Dec. 18, 1991
2. The number of surviving trees is the total of the 3 quadrats established in the sub-plot.

ATTACHED TABLE

Attached Table Number of Surviving Seedlings (Experiment Site D)

(Unit: Number of Seedling)

Date of Observation	Number of Days Passed	Species										Remarks									
		Acacia auriculiformis					Acacia mangium														
		1	2	3	4	5	1	2	3	4	5										
		1-3 Total	Ave.	1-3 Total	Ave.	1-3 Total	Ave.	1-3 Total	Ave.	1-3 Total	Ave.	1-3 Total	Ave.	1-3 Total	Ave.	1-3 Total	Ave.				
18/12/90	1	54	4.5	39	3.3	54	4.5	47	3.9	32	2.7	27	2.3	32	2.7	34	2.8	95	7.9	61	5.1
15/1/91	29	53	4.4	38	3.2	51	4.3	45	3.8	33	2.8	25	2.1	31	2.6	33	2.8	93	7.8	61	5.1
15/2/91	60	53	4.4	38	3.2	49	4.1	45	3.8	31	2.6	25	2.1	30	2.5	34	2.8	93	7.8	61	5.1
15/3/91	88	53	4.4	38	3.2	44	3.7	43	3.6	31	2.6	23	1.9	27	2.3	22	1.8	84	7.0	55	4.6
15/4/91	119	48	4.0	37	3.1	45	3.8	44	3.7	28	2.3	22	1.8	28	2.3	34	2.8	90	7.5	55	4.6
15/5/91	145	42	3.5	37	3.1	34	2.8	44	3.7	27	2.3	20	1.7	27	2.3	18	1.5	80	6.7	54	4.5
15/6/91	176	41	3.4	38	3.2	31	2.6	44	3.7	27	2.3	18	1.5	27	2.3	13	1.1	82	8.8	55	4.6
15/7/91	206	33	2.8	37	3.1	13	1.1	43	3.6	27	2.3	18	1.5	27	2.3	7	0.6	77	6.4	53	4.4
15/8/91	237	30	2.5	37	3.1	7	0.6	43	3.6	26	2.2	18	1.5	25	2.1	4	0.3	78	6.5	59	4.9
15/9/91	268	20	1.7	35	2.9	-	-	42	3.5	23	1.9	14	1.2	24	2.0	0	-	75	6.3	55	4.6
15/10/91	298	19	1.6	34	2.8	1	0.1	42	3.5	23	1.9	13	1.1	28	2.3	0	-	74	6.3	55	4.6
15/11/91	329	21	2.0	35	3.3	6	0.5	43	3.6	26	2.2	13	1.1	28	2.3	0	-	78	6.5	58	4.8
18/12/91	362	29	2.4	43	3.6	5	0.5	45	3.8	31	2.6	13	1.1	27	2.3	0	-	84	7.0	50	4.9
18/1/92	393	32	3.7	44	3.7	17	1.4	47	3.9	29	2.4	14	1.2	30	2.5	6	0.5	83	6.9	60	5.0
18/2/92	424	33	2.8	38	3.2	17	1.4	42	3.5	28	2.3	14	1.2	28	2.3	7	0.6	84	7.0	60	5.0
18/3/92	453	33	2.8	37	3.1	14	1.2	42	3.5	27	2.3	14	1.2	28	2.3	7	0.6	81	6.8	60	5.0
18/4/92	484	33	2.8	37	3.1	14	1.2	42	3.5	28	2.3	14	1.2	28	2.3	7	0.6	80	6.7	60	5.0
18/5/92	514	33	2.8	37	3.1	13	1.1	42	3.5	27	2.3	14	1.2	28	2.3	6	0.6	80	6.7	60	5.0
18/6/92	545	32	2.7	37	3.1	12	1.0	42	3.5	27	2.3	14	1.2	28	2.3	6	0.6	80	6.7	60	5.0
15/7/92	572	32	2.7	36	3.0	12	1.0	42	3.5	27	2.3	14	1.2	28	2.3	6	0.6	81	6.8	60	5.0
18/8/92	606	32	2.7	36	3.0	12	1.0	42	3.5	27	2.3	14	1.2	28	2.3	6	0.6	81	6.8	60	5.0
15/9/92	634	32	2.7	36	3.0	12	1.0	42	3.5	27	2.3	14	1.2	28	2.3	6	0.6	81	6.8	60	5.0
18/10/92	667	32	2.7	36	3.0	12	1.0	42	3.5	27	2.3	14	1.2	28	2.3	6	0.6	81	6.8	60	5.0
18/11/92	698	32	2.7	36	3.0	12	1.0	42	3.5	27	2.3	14	1.2	28	2.3	6	0.6	81	6.8	60	5.0

1. Seeding Date: Nov. 21, 1990
 2. Number of initially germinated seeds on December 18, 1990
 3. Quadrat Size: 1m x 1m
 4. Seeded Quantity: 50 seeds/m²
 5. Plots
 1: Burned Grassland
 2: Harrowed Grassland
 3: Grassland
 4: Harrowed Bare Land
 5: Bare Land

Attached Table 2 Number of Surviving Seedlings at Plot 1 (Burned Grassland Plot)(Experiment Site D)

Sub-plot No.	1 (A.a.) (C)			2 (A.a.) (C)			3 (A.a.) (P)			4 (A.a.) (P)			5 (A.m.) (C)			6 (A.m.) (C)			7 (A.m.) (P)			8 (A.m.) (P)			Remarks								
	1	2	3	Ave.	1	2	3	Ave.	1	2	3	Ave.	1	2	3	Ave.	1	2	3	Ave.	1	2	3	Ave.		1	2	3					
18/12/00	1	(10)	(16)	(6)	(11.7)	(2)	(4)	(2)	(2.7)	(-)	(2)	(3)	(1.7)	(2)	(2)	(2.0)	(1)	(0)	(1)	(2.7)	(1)	(1)	(4)	(2.0)	(1)	(3)	(4)	(2.7)	(2)	(1)	(1.7)	1. Seeding Date: Nov. 2, 1990 2. (Figure): Number of Initially Germinated Seeds 3. (A.a.): <i>Acacia auriculiformis</i> (A.m.): <i>Acacia mangium</i> 4. (C): Coated Seeds (P): Uncoated Seeds (Plain Seeds) 5. Quadrat Size: 1m x 1m 6. Seeding Quantity: 50 seeds/m ²	
15/1/91	29	9	19	6	11.3	2	4	2	2.7	-	2	3	1.7	2	2	2.0	-	6	1	2.3	1	1	4	2.0	1	3	3	2.3	2	2	1.7		
15/2/91	60	9	19	6	11.3	2	4	2	2.7	-	2	3	1.7	2	2	2.0	-	6	1	2.3	1	1	4	2.0	1	3	3	2.3	2	2	1.7		
15/3/91	88	9	19	6	11.3	2	4	2	2.7	-	2	3	1.7	2	2	2.0	-	6	1	2.3	1	1	4	2.0	-	3	3	2.0	2	1	1.3		
15/4/91	119	7	18	4	9.7	2	4	2	2.7	-	2	3	1.7	2	2	2.0	-	6	1	2.3	1	1	4	2.0	-	3	2	1.7	2	1	1.3		
15/5/91	145	2	17	4	7.7	2	4	2	2.7	-	2	3	1.7	2	2	2.0	-	6	1	2.3	-	1	4	1.7	-	3	1	1.3	2	1	1.3		
15/6/91	176	2	17	3	7.3	2	4	2	2.7	-	2	3	1.7	2	2	2.0	-	6	1	2.3	-	1	4	1.7	-	1	1	0.7	2	1	1.3		
15/7/91	206	2	12	2	5.3	2	2	2	2.0	-	2	3	1.7	2	2	2.0	-	6	1	2.3	-	1	4	1.7	-	1	1	0.7	2	1	1.3		
15/8/91	237	3	8	2	4.3	2	2	2	2.0	-	2	3	1.7	2	2	2.0	-	6	1	2.3	-	1	4	1.7	-	1	1	0.7	2	1	1.3		
15/9/91	268	1	4	2	2.3	1	2	2	1.7	-	2	1	1.0	2	2	1.7	-	5	1	2.0	-	1	4	1.7	-	-	-	2	-	1	1.0		
15/10/91	288	-	4	2	2.0	1	2	2	1.7	-	2	-	0.7	2	2	2.0	-	5	-	1.7	-	1	4	1.7	-	-	-	2	-	1	1.0		
15/11/91	323	3	5	3	3.7	1	2	2	1.7	-	1	3	1.3	2	1	1.3	-	4	1	1.7	-	1	4	1.7	-	-	-	2	-	1	1.0		
18/12/91	362	2	8	2	4.0	2	4	2	2.7	-	1	3	1.3	2	1	2	1.7	-	4	1	1.7	-	1	4	1.7	-	-	2	-	1	1.0		
18/1/92	386	4	8	3	5.0	2	4	2	2.7	-	1	3	1.3	2	1	2	1.7	-	4	1	1.7	-	1	4	1.7	-	-	1	0.3	2	-	1	1.0
18/2/92	424	4	9	3	5.3	2	4	2	2.7	-	1	3	1.3	2	1	2	1.7	-	4	1	1.7	-	1	4	1.7	-	-	1	0.3	2	-	1	1.0
18/3/92	453	4	9	3	5.3	2	4	2	2.7	-	1	3	1.3	2	1	2	1.7	-	4	1	1.7	-	1	4	1.7	-	-	1	0.3	2	-	1	1.0
18/4/92	484	4	9	3	5.3	2	4	2	2.7	-	1	3	1.3	2	1	2	1.7	-	4	1	1.7	-	1	4	1.7	-	-	1	0.3	2	-	1	1.0
18/5/92	514	4	9	3	5.3	2	4	2	2.7	-	1	3	1.3	2	1	2	1.7	-	4	1	1.7	-	1	4	1.7	-	-	1	0.3	2	-	1	1.0
18/6/92	545	3	9	3	5.0	2	4	2	2.7	-	1	3	1.3	2	1	2	1.7	-	4	1	1.7	-	1	4	1.7	-	-	1	0.3	2	-	1	1.0
15/7/92	572	3	9	3	5.0	2	4	2	2.7	-	1	3	1.3	2	1	2	1.7	-	4	1	1.7	-	1	4	1.7	-	-	1	0.3	2	-	1	1.0
18/8/92	606	3	9	3	5.0	2	4	2	2.7	-	1	3	1.3	2	1	2	1.7	-	4	1	1.7	-	1	4	1.7	-	-	1	0.3	2	-	1	1.0
15/9/92	634	3	9	3	5.0	2	4	2	2.7	-	1	3	1.3	2	1	2	1.7	-	4	1	1.7	-	1	4	1.7	-	-	1	0.3	2	-	1	1.0
18/10/92	667	3	9	3	5.0	2	4	2	2.7	-	1	3	1.3	2	1	2	1.7	-	4	1	1.7	-	1	4	1.7	-	-	1	0.3	2	-	1	1.0
18/11/92	688	3	9	3	5.0	2	4	2	2.7	-	1	3	1.3	2	1	2	1.7	-	4	1	1.7	-	1	4	1.7	-	-	1	0.3	2	-	1	1.0

Attached Table 3 Number of Surviving Seedlings at Plot 2 (Harrowed Grassland Plot)(Experiment Site D

Sub-plot No.	1 (A.a.) (C)			2 (A.a.) (C)			3 (A.a.) (P)			4 (A.a.) (P)			5 (A.m.) (C)			6 (A.m.) (C)			7 (A.m.) (P)			8 (A.m.) (P)			Remarks								
	1	2	3	Ave	1	2	3	Ave	1	2	3	Ave	1	2	3	Ave	1	2	3	Ave	1	2	3	Ave		1	2	3					
18/12/90	1	(6)	(2)	(3)	(3.7)	(1)	(1)	(2)	(1.3)	(4)	(6)	(2)	(4.0)	(5)	(3)	(4)	(4.0)	(-)	(6)	(1)	(2.3)	(1)	(-)	(0.3)	(11)	(5)	(-)	(5.3)	(4)	(1)	(3)	(2.7)	1. Seeding Date: Nov. 2, 1990 2 (Figure): Number of Initially Germinated Seeds 3 (A.a): Acacia auriculiformis (A.m): Acacia mangium 4 (C): Coated Seeds (P): Uncoated Seeds (Plain Seeds) 5. Quadrat Size: 1m x 1m 6. Seeding Quantity: 50 seeds/m ²
15/1/91	29	6	2	3	3.7	1	1	2	1.3	4	6	1	3.7	5	3	4	4.0	-	5	1	2.0	1	-	0.3	11	6	-	5.7	4	-	3	2.3	
15/2/91	60	6	2	3	3.7	1	1	2	1.3	4	6	1	3.7	5	3	4	4.0	-	5	1	2.0	1	-	0.3	11	5	-	5.3	4	-	3	2.3	
15/3/91	88	6	2	3	3.7	1	1	2	1.3	4	6	1	3.7	5	3	4	4.0	-	5	1	2.0	1	-	0.3	11	5	-	5.3	2	-	2	1.3	
15/4/91	119	6	2	3	3.7	1	1	2	1.3	4	6	1	3.7	5	2	4	3.7	-	5	1	2.0	1	-	0.3	11	5	-	5.3	3	-	2	1.7	
15/5/91	145	6	2	3	3.7	1	1	2	1.3	4	6	1	3.7	5	2	4	3.7	-	5	1	2.0	1	-	0.3	11	4	-	5.0	3	-	2	1.7	
15/6/91	176	6	2	3	3.7	1	1	2	1.3	4	6	1	3.7	5	3	4	4.0	-	5	1	2.0	1	-	0.3	11	4	-	5.0	3	-	2	1.7	
15/7/91	206	6	2	3	3.7	1	1	2	1.3	4	6	1	3.7	5	2	4	3.7	-	4	1	1.7	1	-	0.3	11	5	-	5.0	3	-	2	1.7	
15/8/91	237	6	2	3	3.7	1	1	2	1.3	4	6	1	3.7	5	3	3	3.7	-	4	1	1.7	1	-	0.3	11	4	-	5.0	2	-	2	1.3	
15/9/91	268	5	2	3	3.3	1	1	2	1.3	4	6	1	3.7	5	2	3	3.3	-	4	1	1.7	1	-	0.3	10	4	-	4.7	2	-	2	1.3	
15/10/91	298	5	2	3	3.3	1	1	2	1.3	4	5	1	3.3	5	2	3	3.3	-	4	1	1.7	1	-	0.3	11	4	-	5.0	4	-	3	2.3	
15/11/91	329	6	2	3	3.7	1	1	2	1.3	4	6	1	3.7	5	4	4	4.3	-	4	1	1.7	1	-	0.3	11	5	-	5.3	4	-	2	2.0	
18/12/91	362	7	2	4	4.3	1	1	2	1.3	5	7	2	4.7	5	2	5	4.0	-	4	1	1.7	1	-	0.3	11	5	-	5.3	2	1	2	1.7	
18/1/92	393	6	3	5	4.7	1	1	2	1.3	5	7	2	4.7	5	2	5	4.0	-	5	1	2.0	1	-	0.3	13	5	-	6.0	2	1	2	1.7	
18/2/92	424	6	2	3	3.7	1	1	2	1.3	4	6	2	4.0	5	2	4	3.7	-	5	1	2.0	1	-	0.3	11	5	-	5.3	2	1	2	1.7	
18/3/92	453	6	1	3	3.3	1	1	2	1.3	4	6	2	4.0	5	2	4	3.7	-	5	1	2.0	1	-	0.3	11	5	-	5.3	2	1	2	1.7	
18/4/92	484	6	1	3	3.3	1	1	2	1.3	4	6	2	4.0	5	2	4	3.7	-	5	1	2.0	1	-	0.3	11	5	-	5.3	2	1	2	1.7	
18/5/92	514	6	1	3	3.3	1	1	2	1.3	4	6	2	4.0	5	2	4	3.7	-	5	1	2.0	1	-	0.3	11	5	-	5.3	2	1	2	1.7	
18/6/92	545	6	1	3	3.3	1	1	2	1.3	4	6	2	4.0	5	2	4	3.7	-	5	1	2.0	1	-	0.3	11	5	-	5.3	2	1	2	1.7	
15/7/92	572	5	1	3	3.0	1	1	2	1.3	4	6	2	4.0	5	2	4	3.7	-	5	1	2.0	1	-	0.3	11	5	-	5.3	2	1	2	1.7	
18/8/92	606	5	1	3	3.0	1	1	2	1.3	4	6	2	4.0	5	2	4	3.7	-	5	1	2.0	1	-	0.3	11	5	-	5.3	2	1	2	1.7	
15/9/92	634	5	1	3	3.0	1	1	2	1.3	4	6	2	4.0	5	2	4	3.7	-	5	1	2.0	1	-	0.3	11	5	-	5.3	2	1	2	1.7	
18/10/92	667	5	1	3	3.0	1	1	2	1.3	4	6	2	4.0	5	2	4	3.7	-	5	1	2.0	1	-	0.3	11	5	-	5.3	2	1	2	1.7	
18/11/92	688	5	1	3	3.0	1	1	2	1.3	4	6	2	4.0	5	2	4	3.7	-	5	1	2.0	1	-	0.3	11	5	-	5.3	2	1	2	1.7	

Attached Table 4 Number of Surviving Seedlings at Plots 3 (Grassland Plot)(Experiment Site I)

Sub-plot No	1 (A.a.) (C)			2 (A.a.) (C)			3 (A.a.) (P)			4 (A.a.) (P)			5 (A.m.) (C)			6 (A.m.) (C)			7 (A.m.) (P)			8 (A.m.) (P)			Remarks								
	1	2	Ave.	1	2	Ave.	1	2	Ave.	1	2	Ave.	1	2	Ave.	1	2	Ave.	1	2	Ave.	1	2	Ave.									
Date of Observation																																	
Quadrat No																																	
Number of Days Passed																																	
18/12/90	(5)	(9)	(-)	(4.7)	(6)	(1)	(3)	(3.3)	(9)	(10)	(6)	(8.3)	(3)	(1)	(1.1)	(1.7)	(3)	(2)	(2)	(2.3)	(3)	(-)	(-)	(1.0)	(2)	(-)	(5)	(2.3)	(6)	(2)	(9)	(5.7)	1. Seeding Rate: Nov. 2, 1990 2 (Figure): Number of Initially Germinated Seeds 3 (A.a): <i>Acacia auriculiformis</i> (A.m): <i>Acacia mangium</i> 4. (C): Coated Seeds (P): Uncoated Seeds (Plain Seeds) 5. Quadrat Size: 1m x 1m 6. Seeding Quantity: 50 seeds/m ²
15/1/91	29	5	8	-	4.3	6	1	3	3.3	9	8	6	7.7	3	1	1	1.7	2	2	2.0	3	-	1	1.3	2	-	5	2.3	6	2	8	5.3	
15/2/91	60	5	8	-	4.3	6	1	3	3.3	9	8	6	7.7	2	-	1	1.0	3	2	2.3	3	-	1	1.3	2	-	5	2.3	6	2	8	5.3	
15/3/91	88	4	7	-	3.7	3	-	3	2.0	9	7	6	7.3	3	1	1	1.7	1	1	0.7	3	-	-	1.0	1	-	5	2.0	3	2	6	3.7	
15/4/91	119	5	6	-	3.7	5	1	3	3.0	9	8	6	7.7	-	1	1	0.7	3	2	2.3	3	-	-	1.0	2	-	5	2.3	6	2	9	5.7	
15/5/91	145	1	4	-	1.7	5	1	3	3.0	9	6	5	6.7	-	-	-	-	1	1	1.0	1	-	-	0.3	-	-	3	1.0	3	1	7	3.7	
15/6/91	176	1	4	-	1.7	4	1	2	2.3	7	6	6	6.3	-	-	-	-	1	-	0.3	1	-	-	0.3	-	-	3	1.0	3	1	4	2.7	
15/7/91	206	-	2	-	0.7	1	1	1	1.0	5	1	2	2.7	-	-	-	-	1	-	0.3	-	-	-	-	-	-	2	0.7	1	1	2	1.3	
15/8/91	237	-	2	-	0.7	-	1	-	0.3	2	1	1	1.3	-	-	-	-	1	-	0.3	-	-	-	-	-	-	-	-	-	1	2	1.0	
15/9/91	268	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
15/10/91	298	-	-	-	-	-	-	-	-	-	-	1	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
15/11/91	329	1	1	-	0.7	1	1	-	0.7	-	1	1	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
18/12/91	362	-	1	-	0.7	1	1	-	0.7	-	2	-	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
18/1/92	393	1	4	-	1.7	3	1	-	1.3	5	3	-	2.7	-	-	-	-	-	-	-	1	-	-	0.3	-	-	1	0.3	-	4	1.3		
18/2/92	424	1	4	-	1.7	3	1	-	1.3	4	3	1	2.7	-	-	-	-	1	-	0.3	1	-	-	0.3	-	-	1	0.3	-	4	1.3		
18/3/92	453	1	2	-	1.0	3	1	-	1.3	3	3	1	2.3	-	-	-	-	1	-	0.3	1	-	-	0.3	-	-	1	0.3	-	4	1.3		
18/4/92	484	1	2	-	1.0	3	1	-	1.3	3	3	1	2.3	-	-	-	-	1	-	0.3	1	-	-	0.3	-	-	1	0.3	-	4	1.3		
18/5/92	514	1	2	-	1.0	2	1	-	1.0	3	3	1	2.3	-	-	-	-	-	-	-	1	-	-	0.3	-	-	1	0.3	-	4	1.3		
18/6/92	545	1	1	-	0.7	2	1	-	1.0	3	3	1	2.3	-	-	-	-	-	-	-	1	-	-	0.3	-	-	1	0.3	-	4	1.3		
15/7/92	572	1	1	-	0.7	2	1	-	1.0	3	3	1	2.3	-	-	-	-	-	-	-	1	-	-	0.3	-	-	1	0.3	-	4	1.3		
18/8/92	606	1	1	-	0.7	2	1	-	1.0	3	3	1	2.3	-	-	-	-	-	-	-	1	-	-	0.3	-	-	1	0.3	-	4	1.3		
15/9/92	634	1	1	-	0.7	2	1	-	1.0	3	3	1	2.3	-	-	-	-	-	-	-	1	-	-	0.3	-	-	1	0.3	-	4	1.3		
18/10/92	667	1	1	-	0.7	2	1	-	1.0	3	3	1	2.3	-	-	-	-	-	-	-	1	-	-	0.3	-	-	1	0.3	-	4	1.3		
18/11/92	698	1	1	-	0.7	2	1	-	1.0	3	3	1	2.3	-	-	-	-	-	-	-	1	-	-	0.3	-	-	1	0.3	-	4	1.3		

Attached Table 5 Number of Surviving Seedlings at Plot 4 (Harroved Bare Land Plot)(Experiment Site I)

Sub-plot No.	1 (A.a) (C)			2 (A.a) (C)			3 (A.a) (P)			4 (A.a) (P)			5 (A.m) (C)			6 (A.m) (C)			7 (A.m) (P)			8 (A.m) (P)			Remarks															
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3		Ave														
Quadrat No.	Date of Observation																																							
Number of Days Passed																																								
18/12/90	1	(1)	(3)	(2)	(2)	(0)	(2)	(3)	(5)	(3)	(5)	(5)	(9)	(6)	(3)	(5)	(4)	(3)	(4)	(7)	(6)	(4)	(5)	(7)	(12)	(15)	(11)	(3)	(4)	(2)	(12)	(10)	(9)	(7)	(8)	(7)	1. Seeding Date: Nov. 2, 1992 2. (Figure): Number of Initially Germinated Seeds 3. (A.a): Acacia auriculiformis (A.m): Acacia mangium 4. (C): Coated Seeds (P): Uncoated Seeds (Plain Seeds) 5. Quadrat Size: 1m x 1m 6. Seeding Quantity: 50 seeds/m ²			
15/1/91	29	-	3	1	1	3	2	3	5	3	3	5	9	6	3	4	3	4	6	6	4	5	6	12	15	11	0	4	2	12	6	10	9	7	8	7				
15/2/91	60	-	3	1	1	3	2	3	5	3	3	5	9	6	3	4	3	4	6	6	4	5	6	12	15	11	0	4	2	12	6	10	9	7	8	7				
15/3/91	88	-	3	1	1	3	2	3	5	3	3	4	9	5	7	5	4	3	4	4	4	4	5	11	12	9	3	4	2	11	5	9	9	7	8	3				
15/4/91	119	-	3	1	1	3	2	3	5	3	3	5	4	9	6	0	5	4	3	4	4	4	5	11	15	10	3	4	2	12	6	10	9	7	8	7				
15/5/91	145	-	3	1	1	3	2	3	5	3	3	5	4	9	6	0	5	4	3	4	4	4	5	4	4	7	5	9	11	8	3	9	9	7	8	3				
15/6/91	176	-	3	1	1	3	2	3	5	3	3	5	4	9	6	0	5	4	3	4	4	4	5	9	12	8	7	4	2	12	6	10	9	7	8	3				
15/7/91	206	-	3	1	1	3	2	3	5	3	3	5	3	9	5	7	5	4	3	4	4	4	5	4	4	3	4	9	12	8	3	8	8	7	7	7				
15/8/91	237	-	3	1	1	3	2	3	5	3	3	5	3	9	5	7	5	4	3	4	4	4	5	4	4	3	4	12	11	9	0	4	2	10	5	3	8	6	7	
15/9/91	268	-	3	1	1	3	2	3	5	3	3	5	3	8	5	3	5	4	3	4	4	4	4	8	11	7	7	4	2	10	5	3	10	8	6	8	0			
15/10/91	298	-	3	1	1	3	2	3	5	3	3	5	3	9	5	7	5	4	3	4	4	4	5	4	4	3	4	9	12	8	3	4	2	10	5	3	8	2	6	7
15/11/91	329	-	3	1	1	3	2	3	5	3	3	5	3	9	5	7	5	4	3	4	4	4	5	4	4	3	4	9	12	8	3	4	2	10	5	3	9	6	8	0
18/12/91	362	-	3	1	1	7	2	3	4	3	0	5	3	9	5	7	5	7	3	5	4	4	5	4	4	3	4	9	12	8	3	4	2	10	5	3	9	11	8	3
18/1/92	393	-	3	1	1	3	2	3	4	3	0	5	3	10	6	0	5	4	3	4	4	4	5	4	4	3	4	9	13	8	7	4	2	10	5	3	9	11	8	3
18/2/92	421	-	3	1	1	3	2	3	4	3	0	5	3	9	5	7	5	4	3	4	4	4	5	4	4	3	4	10	12	8	7	4	2	12	6	0	9	9	7	8
18/3/92	453	-	3	2	1	7	2	3	4	3	0	5	2	9	5	3	5	4	3	4	4	4	5	4	4	3	4	10	12	8	7	4	2	10	5	3	9	9	7	8
18/4/92	491	-	3	2	1	7	2	3	4	3	0	5	2	9	5	3	4	5	3	4	4	4	5	4	4	3	4	10	12	8	7	4	2	10	5	3	9	9	6	8
18/5/92	514	-	3	2	1	7	2	3	4	3	0	5	2	9	5	3	5	4	3	4	4	4	5	4	4	3	4	10	12	8	7	4	2	10	5	3	9	9	6	8
18/6/92	545	-	3	2	1	7	2	3	4	3	0	5	2	9	5	3	5	4	3	4	4	4	5	4	4	3	4	10	12	8	7	4	2	10	5	3	9	9	6	8
15/7/92	572	-	3	2	1	7	2	3	4	3	0	5	2	9	5	3	5	4	3	4	4	4	5	4	4	3	4	10	12	8	7	4	2	10	5	3	9	9	7	8
18/8/92	606	-	3	2	1	7	2	3	4	3	0	5	2	9	5	3	5	4	3	4	4	4	5	4	4	3	4	10	12	8	7	4	2	10	5	3	9	9	7	8
15/9/92	634	-	3	2	1	7	2	3	4	3	0	5	2	9	5	3	5	4	3	4	4	4	5	4	4	3	4	10	12	8	7	4	2	10	5	3	9	9	7	8
18/10/92	667	-	3	2	1	7	2	3	4	3	0	5	2	9	5	3	5	4	3	4	4	4	5	4	4	3	4	10	12	8	7	4	2	10	5	3	9	9	7	8
18/11/92	698	-	3	2	1	7	2	3	4	3	0	5	2	9	5	3	5	4	3	4	4	4	5	4	4	3	4	10	12	8	7	4	2	10	5	3	9	9	7	8

Attached Table 6 Number of Surviving Seedlings at Plot 5 (Bare land)(Experiment Site I)

Sub-plot No.	1 (A.a.) (C)			2 (A.a.) (C)			3 (A.a.) (P)			4 (A.a.) (P)			5 (A.m.) (C)			6 (A.m.) (C)			7 (A.m.) (P)			8 (A.m.) (P)			Remarks									
	1	2	3	Ave	1	2	3	Ave	1	2	3	Ave	1	2	3	Ave	1	2	3	Ave	1	2	3	Ave		1	2	3						
Date of Observation	Number of Days Passed																																	
18/12/00	1	(3)	(2)	(-)	(1.7)	(1)	(1)	(1)	(1.0)	(3)	(1)	(1)	(1.7)	(18)	(1)	(-)	(6.3)	(7)	(1)	(3)	(3.7)	(1)	(9)	(2)	(4.0)	(-)	(18)	(1)	(6.3)	(12)	(2)	(5)	(6.3)	1. Seeding Date: Nov. 2. 1990
15/1/01	29	3	2	-	1.7	1	1	1	1.0	3	1	2	2.0	18	1	-	6.3	7	1	3	3.7	1	9	2	4.0	-	18	1	6.3	12	2	5	6.3	2. (Figure): Number of Initially Germinated Seeds
15/2/01	60	3	2	-	1.7	1	1	1	1.0	1	1	2	1.3	18	1	-	6.3	7	1	3	3.7	1	9	2	4.0	-	18	1	6.3	12	2	5	6.3	3 (A.a.): Acacia auriculiformis (A.m.): Acacia mangium
15/3/01	88	3	2	-	1.7	1	1	1	1.0	1	1	2	1.3	18	1	-	6.3	7	1	3	3.7	-	9	-	3.0	-	18	1	6.3	10	2	4	5.3	4 (C): Coated Seeds (P): Uncoated Seeds (Plain Seeds)
15/4/01	119	3	2	-	1.7	1	1	1	0.7	1	1	2	1.3	16	1	-	5.7	7	1	3	3.7	-	9	-	3.0	-	18	1	6.3	10	2	4	5.3	5. Quadrat Size: 1m x 1m
15/5/01	145	3	2	-	1.7	1	1	1	0.7	1	1	2	1.3	15	1	-	5.3	7	1	3	3.7	-	9	-	3.0	-	17	1	6.0	10	2	4	5.3	6. Seeding Quantity: 50 seeds/m ²
15/6/01	176	3	2	-	1.7	1	1	1	0.7	1	1	2	1.3	15	1	-	5.3	7	1	3	3.7	-	9	-	3.0	-	18	1	6.3	10	2	4	5.3	
15/7/01	206	3	2	-	1.7	1	1	1	0.7	1	1	2	1.3	15	1	-	5.3	7	1	3	3.7	-	9	-	3.0	-	17	1	6.0	9	2	4	5.0	
15/8/01	237	3	2	-	1.7	1	1	1	0.7	-	1	2	1.0	15	1	-	5.3	7	1	3	3.7	-	9	2	3.7	-	18	1	6.3	12	2	4	6.0	
15/9/01	268	3	2	-	1.7	1	1	1	0.7	-	1	2	1.0	12	1	-	4.8	7	1	3	3.7	-	9	2	3.7	-	17	1	6.0	11	-	4	5.0	
15/10/01	298	3	2	-	1.7	1	1	1	0.7	-	1	2	1.0	16	1	-	5.7	7	1	3	3.7	-	9	2	3.7	-	16	1	5.7	10	2	4	5.3	
15/11/01	329	3	2	-	1.7	1	1	1	0.7	-	1	2	1.0	15	1	-	5.3	7	1	3	3.7	-	9	2	3.7	-	18	1	6.3	11	2	4	5.7	
18/12/01	362	3	2	-	1.7	1	1	1	0.7	-	1	4	1.7	18	1	-	6.3	8	1	3	4.0	-	9	2	3.7	-	18	1	6.3	11	2	4	5.7	
18/1/02	393	3	2	-	1.7	1	1	1	0.7	-	1	4	1.7	16	1	-	5.7	8	1	3	4.0	-	9	2	3.7	-	18	1	6.3	12	2	4	6.0	
18/2/02	424	3	2	-	1.7	1	1	1	0.7	-	1	1	0.7	18	1	-	6.3	7	1	3	3.7	1	9	2	4.0	-	18	1	6.3	12	2	4	6.0	
18/3/02	453	3	2	-	1.7	1	1	1	0.7	-	1	1	0.7	17	1	-	6.0	7	1	3	3.7	1	9	2	4.0	-	18	1	6.3	12	2	4	6.0	
18/4/02	484	3	2	-	1.7	1	1	1	0.7	-	1	1	0.7	18	1	-	6.3	7	1	3	3.7	1	9	2	4.0	-	18	1	6.3	12	2	4	6.0	
18/5/02	514	3	2	-	1.7	1	1	1	0.7	-	1	1	0.7	17	1	-	6.0	7	1	3	3.7	1	9	2	4.0	-	18	1	6.3	12	2	4	6.0	
18/6/02	545	3	2	-	1.7	1	1	1	0.7	-	1	1	0.7	17	1	-	6.0	7	1	3	3.7	1	9	2	4.0	-	18	1	6.3	12	2	4	6.0	
15/7/02	572	3	2	-	1.7	1	1	1	0.7	-	1	1	0.7	17	1	-	6.0	7	1	3	3.7	1	9	2	4.0	-	18	1	6.3	12	2	4	6.0	
18/8/02	606	3	2	-	1.7	1	1	1	0.7	-	1	1	0.7	17	1	-	6.0	7	1	3	3.7	1	9	2	4.0	-	18	1	6.3	12	2	4	6.0	
15/9/02	634	3	2	-	1.7	1	1	1	0.7	-	1	1	0.7	17	1	-	6.0	7	1	3	3.7	1	9	2	4.0	-	18	1	6.3	12	2	4	6.0	
18/10/02	667	3	2	-	1.7	1	1	1	0.7	-	1	1	0.7	17	1	-	6.0	7	1	3	3.7	1	9	2	4.0	-	18	1	6.3	12	2	4	6.0	
18/11/02	698	3	2	-	1.7	1	1	1	0.7	-	1	1	0.7	17	1	-	6.0	7	1	3	3.7	1	9	2	4.0	-	18	1	6.3	12	2	4	6.0	

Attached Table 7 Average Height Growth (Experiment Site I)

(Unit: cm)

Date of Observation	Number of Days Passed	Acacia auriculiformis					Acacia mangium					Remarks				
		1	2	3	4	5	1	2	3	4	5					
18/12/90	1															
15/1/91	29	4.4	4.1	3.0	3.6	4.6	4.3	4.0	3.2	2.6	3.4					
15/2/91	60	10.9	6.5	5.3	5.1	4.6	9.3	6.4	5.5	3.7	4.5					
15/3/91	88	15.5	7.6	5.6	5.2	6.6	15.3	10.1	6.6	4.6	6.5					
15/4/91	119	21.4	17.8	8.2	13.2	13.4	24.8	19.6	6.9	9.5	14.2					
15/5/91	145	25.0	22.3	6.1	17.2	15.8	27.6	26.0	7.6	11.5	17.7					
15/6/91	176	32.1	29.3	6.3	27.0	19.0	41.0	31.6	7.7	16.0	23.5					
15/7/91	206	32.7	33.0	4.1	34.6	21.6	41.8	33.6	14.6	18.0	25.9					
15/8/91	237	28.6	35.8	3.8	37.9	25.7	43.0	35.3	5.3	23.6	27.9					
15/9/91	268	29.7	25.2	-	48.9	20.1	43.2	35.6	-	26.1	35.2					
15/10/91	298	29.7	36.6	-	51.3	28.2	43.2	37.4	-	26.8	35.9					
15/11/91	329	27	40	3	60	27	38	43	-	31	31					
18/12/91	362	43	54	25	69	39	52	46	-	45	33					
18/1/92	393	43	56	22	74	47	51	47	20	52	42					
18/2/92	424	46	69	26	85	55	55	58	24	63	60					
18/3/92	453	50	80	33	94	63	60	66	27	73	71					
18/4/92	484	56	94	34	108	72	68	80	32	85	89					
18/5/92	514	60	102	35	118	78	76	89	38	113	105					
18/6/92	545	64	113	41	130	87	86	101	43	143	127					
15/7/92	572	66	119	43	139	91	92	108	49	163	132					
18/8/92	606	69	125	44	148	109	96	118	50	184	160					
15/9/92	634	63	138	46	158	111	103	127	51	202	172					
18/10/92	667	77	148	46	166	113	112	140	53	227	191					
18/11/92	698	84	153	47	176	119	124	151	55	240	205					

1. Seeding Date: Nov. 21, 1990
 2. Quadrat Size: 1m x 1m
 3. Plots
 1: Burned Grassland
 2: Harrowed Grassland
 3: Grassland
 4: Harrowed Bare Land
 5: Bare Land

Attached Table 8 Average Height Growth at Plot 1 (Burned Grassland Plot) (Experiment Site 1)

(Unit: cm)

Sub-plot No	1 (A.a) (C)			2 (A.a) (C)			3 (A.a) (P)			4 (A.a) (P)			5 (A.m) (C)			6 (A.m) (C)			7 (A.m) (P)			8 (A.m) (P)			Remarks										
	1	2	Ave	1	2	Ave	1	2	Ave	1	2	Ave	1	2	Ave	1	2	Ave	1	2	Ave	1	2	Ave											
Date of Observation																																			
Number of Days Passed																																			
18/12/80	1	2	3	Ave	1	2	3	Ave	1	2	3	Ave	1	2	3	Ave	1	2	3	Ave	1	2	3	Ave	1	2	3	Ave							
15/1/81	29	25	4.2	3.3	3.6	3.5	4.2	5.5	4.4	-	4.0	5.0	4.6	6.0	6.0	6.0	6.0	6.0	-	5.0	6.0	5.1	3.0	4.0	4.7	4.3	3.0	3.0	3.0	3.0	2.5	2.5	4.0	2.8	
15/2/81	60	55	8.1	5.0	6.9	8.5	10.5	14.0	10.9	-	9.5	9.5	9.5	10.5	9.0	8.7	-	14.6	17.0	14.9	3.0	8.0	11.2	9.3	3.5	3.5	5.0	4.1	3.0	2.5	4.0	3.0	3.0	3.0	
15/3/81	88	7.2	12.1	9.6	10.4	13.5	14.0	20.5	15.5	-	10.0	11.3	10.8	8.0	14.0	10.0	10.7	-	19.0	22.0	19.4	3.0	12.0	19.2	15.3	-	4.6	5.0	4.8	7.5	3.5	16.0	8.6		
15/4/81	119	7.0	14.7	9.8	12.2	16.5	21.5	25.0	21.4	-	16.5	18.0	17.4	13.0	21.0	14.5	16.2	-	33.5	39.0	34.3	5.0	24.0	30.0	24.8	-	7.0	9.3	7.9	15.7	7.5	27.0	16.5		
15/5/81	145	6.8	16.4	10.6	14.6	19.5	26.2	28.0	25.0	-	19.5	20.0	19.8	15.0	22.5	17.5	18.3	-	40.5	48.0	41.6	-	30.0	37.0	27.6	-	9.0	10.6	9.4	17.5	9.5	34.0	19.6		
15/6/81	176	3.5	18.3	12.1	16.1	22.0	33.2	40.0	32.1	-	23.0	23.3	24.4	16.5	24.5	20.5	20.5	-	51.8	53.0	52.0	-	38.0	41.7	41.0	-	6.3	13.3	9.8	21.5	11.0	42.0	24.0		
15/7/81	206	4.1	14.1	9.3	12.3	22.0	33.0	43.0	32.7	-	27.0	24.6	25.6	16.5	25.0	16.5	19.3	-	55.0	54.0	54.9	-	40.0	42.2	41.8	-	6.0	14.6	10.3	20.5	11.0	44.0	24.0		
15/8/81	237	3.0	12.8	9.1	10.0	23.5	17.2	45.0	28.6	-	34.5	25.3	23.0	16.0	30.5	16.0	21.8	-	55.0	56.0	55.1	-	40.0	43.7	43.0	-	7.0	15.0	11.0	22.5	12.0	45.0	25.5		
15/9/81	268	17.0	6.8	9.6	9.1	23.0	17.2	45.5	29.7	-	36.0	17.0	23.7	16.5	26.5	12.5	19.7	-	52.3	56.0	52.9	-	42.0	43.5	43.2	-	-	-	-	22.0	-	42.0	28.7		
15/10/81	298	-	6.8	9.6	7.7	23.0	17.2	45.5	29.7	-	27.0	-	27.0	16.5	26.5	12.5	18.5	-	52.0	-	52.0	-	41.0	43.7	43.2	-	-	-	-	22.0	-	44.0	29.3		
15/11/81	329	9	8	12	9	11	17	45	27	-	29	27	28	10	12	14	12	-	60	60	60	-	36	38	38	-	-	-	-	17	-	36	23		
18/12/81	362	43	30	27	37	25	44	52	43	-	71	30	41	12	35	23	21	-	77	71	76	-	46	53	52	-	-	-	-	30	-	52	37		
18/1/82	366	31	37	32	34	25	45	58	43	-	72	31	32	15	36	22	22	-	78	70	75	-	48	52	51	-	-	-	-	41	41	23	-	51	36
18/2/82	424	34	41	36	38	25	49	63	46	-	76	37	47	22	39	23	26	-	87	74	84	-	53	56	55	-	-	-	-	47	47	29	-	56	37
18/3/82	453	35	46	42	42	26	53	68	50	-	82	44	54	28	41	26	30	-	95	80	92	-	58	60	60	-	-	-	-	50	50	30	-	59	40
18/4/82	484	30	52	50	58	30	59	77	56	-	88	53	55	36	50	30	36	-	110	90	106	-	66	68	68	-	-	-	-	58	58	34	-	65	44
18/5/82	514	46	57	58	54	32	63	84	60	-	100	60	70	45	52	33	41	-	124	100	119	-	77	76	76	-	-	-	-	60	60	37	-	72	49
18/6/82	545	55	63	63	63	35	66	91	64	-	110	63	75	58	54	34	47	-	137	112	132	-	90	85	86	-	-	-	-	62	62	42	-	84	56
15/7/82	572	57	67	76	67	36	66	95	66	-	112	67	73	64	55	36	51	-	148	120	142	-	100	90	92	-	-	-	-	67	67	45	-	82	60
18/8/82	606	59	70	84	70	37	60	101	69	-	112	69	80	67	55	33	51	-	159	130	153	-	110	98	96	-	-	-	-	68	68	50	-	100	66
15/9/82	634	61	76	91	75	40	72	71	63	-	110	72	82	78	56	36	57	-	174	137	166	-	120	99	103	-	-	-	-	73	73	59	-	110	76
18/10/82	667	63	81	107	83	41	75	117	77	-	112	75	84	83	56	38	63	-	192	145	182	-	143	104	112	-	-	-	-	80	80	71	-	120	87
18/11/82	698	70	87	117	88	44	86	123	84	-	113	82	90	89	60	43	69	-	216	160	205	-	160	115	124	-	-	-	-	88	88	83	-	132	89

1. Seeding Date: Nov. 21, 1980
 2. Germination stage completed on December 18, 1980
 3. (A.a): *Acacia auriculiformis*
 (A.m): *Acacia mangium*
 4. (C): Coated Seeds
 (P): Uncoated Seeds (Plain Seeds)
 5. Quadrat: 1m x 1m
 6. The figure for each quadrat is the average for that quadrat

Attached Table 9 Average Height Growth at Plot 2 (Harrowed Grassland Plot)(Experiment Site I)

(Unit: cm)

Sub-plot No	1 (A.a) (C)			2 (A.a) (C)			3 (A.a) (P)			4 (A.a) (P)			5 (A.m) (C)			6 (A.m) (C)			7 (A.m) (P)			8 (A.m) (P)			Remarks									
	1	2	3	Ave	1	2	3	Ave	1	2	3	Ave	1	2	3	Ave	1	2	3	Ave	1	2	3	Ave										
Date of Observation																									Remarks									
Number of Days Passed																									Remarks									
18/12/90																									1. Seeding Date: Nov. 21, 1990									
15/1/91	35	55	42	41	40	40	40	32	30	50	33	35	30	30	30	65	-	-	-	40	40	40	-	40	35	-	35	35	2. Germination stage completed on December 18, 1990					
15/2/91	65	55	70	65	90	40	65	65	60	60	65	60	60	65	65	-	-	-	-	65	70	52	-	64	35	-	35	35	3 (A.a): Acacia auriculiformis (A.m): Acacia mangium					
15/3/91	73	60	93	76	100	60	125	103	97	83	95	89	70	46	90	71	-	-	-	88	90	88	70	-	101	45	-	33	39	4 (C): Coated Seeds (P): Uncoated Seeds(Plain Seed s)				
15/4/91	16.6	13.5	23.0	17.8	24.0	11.0	23.0	20.3	20.2	18.1	16.0	18.7	12.6	11.6	10.5	13.8	-	-	-	17.6	18.0	17.7	13.0	-	13.0	22.1	14.0	-	6.6	10.0	5. Quadrat: 1m x 1m			
15/5/91	20.3	19.0	28.6	22.3	28.0	16.0	28.5	25.3	25.5	21.6	22.0	23.4	14.8	14.6	10.7	16.5	-	-	-	20.2	23.0	20.7	16.0	-	16.0	27.7	21.2	-	25.0	15.7	-	9.6	13.3	6. The figure for each quadrat is the average for that quadrat.
15/6/91	27.1	19.0	40.5	29.3	41.0	21.0	37.5	34.3	35.5	29.5	29.0	31.4	18.0	19.6	27.2	21.5	-	-	-	25.4	23.0	25.0	21.0	-	21.0	34.3	24.2	-	31.6	21.2	-	9.6	16.6	
15/7/91	30.0	17.5	49.3	33.0	48.0	24.0	39.5	37.8	38.5	32.3	34.0	34.7	21.4	21.0	23.5	24.3	-	-	-	24.6	34.0	26.5	24.0	-	24.0	36.4	27.4	-	33.6	22.5	-	15.6	19.7	
15/8/91	31.3	18.5	56.3	35.8	50.0	28.0	46.0	42.5	40.2	35.0	34.0	38.6	22.6	21.0	31.7	24.6	-	-	-	24.2	34.0	26.2	25.0	-	25.0	37.2	30.2	-	35.3	37.0	-	24.0	30.5	
15/9/91	28.0	16.0	30.0	23.2	32.0	28.0	48.5	44.3	42.7	38.6	60.0	28.5	24.4	23.3	34.5	27.2	-	-	-	26.8	38.0	28.0	25.0	-	25.0	37.0	32.2	-	35.6	21.2	-	17.6	19.4	
15/10/91	28.6	17.5	68.0	36.6	53.0	30.0	48.5	45.0	46.2	27.5	60.0	38.2	24.2	23.6	35.2	27.4	-	-	-	25.8	38.0	27.8	25.0	-	25.0	38.3	32.2	-	37.4	22.2	-	16.0	19.5	
15/11/91	33	20	68	40	57	27	52	47	52	41	68	48	25	24	42	30	-	-	-	29	36	30	25	-	25	45	38	-	43	23	-	16	21	
18/12/91	382	49	22	81	54	70	50	60	60	61	48	55	33	31	43	44	39	-	-	40	40	40	25	-	26	48	42	-	46	50	35	27	37	
18/1/92	333	51	22	80	56	84	50	57	62	67	55	65	57	38	50	51	46	-	-	38	42	38	30	-	30	49	41	-	47	53	37	28	40	
18/2/92	424	67	22	103	69	100	65	65	74	76	67	74	71	48	61	65	56	-	-	46	50	47	39	-	39	61	51	-	58	61	46	28	45	
18/3/92	453	76	18	108	80	113	73	72	82	84	76	77	78	59	73	74	67	-	-	53	63	55	48	-	48	69	60	-	66	72	52	41	55	
18/4/92	484	84	18	122	94	135	102	90	99	92	88	82	80	76	86	83	80	-	-	65	78	67	60	-	60	83	74	-	80	72	52	41	55	
18/5/92	514	101	18	152	102	147	120	90	112	101	96	85	98	86	92	88	88	-	-	74	90	77	66	-	69	91	85	-	89	105	70	64	81	
18/6/92	545	111	25	148	113	147	142	107	126	105	105	94	103	89	105	90	96	-	-	81	105	85	75	-	75	102	97	-	101	119	79	72	92	
18/7/92	572	113	26	159	119	147	161	113	134	110	107	99	107	110	110	94	104	-	-	88	115	91	85	-	85	109	107	-	108	130	88	78	101	
18/8/92	605	116	28	172	125	145	188	132	149	115	116	104	114	120	118	100	112	-	-	94	136	100	92	-	92	118	118	-	118	143	98	85	111	
18/9/92	634	125	30	194	138	150	200	148	161	119	126	108	121	130	129	101	119	-	-	102	142	109	103	-	103	126	131	-	127	158	109	94	122	
18/10/92	667	134	35	208	148	180	223	155	178	125	134	109	127	143	150	112	133	-	-	115	162	122	113	-	113	140	141	-	140	177	120	109	138	
18/11/92	698	134	45	222	153	204	245	170	196	123	135	113	123	151	157	110	137	-	-	122	170	130	131	-	131	150	155	-	151	200	140	120	156	

Attached Table 10 Average Height Growth at Plot 3 (Grassland Plot)(Experiment Site 1)

(Unit: cm)

Sub-plot No.	1 (A.a.) (C)			2 (A.a.) (C)			3 (A.a.) (P)			4 (A.a.) (P)			5 (A.m.) (C)			6 (A.m.) (C)			7 (A.m.) (P)			8 (A.m.) (P)			Remarks				
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3		Ave			
18/12/80																												1. Seeding Date: Nov. 21, 1980	
15/1/81	29	30	30	30	40	50	44	40	40	40	50	43	40	35	40	39	35	40	40	38	30	30	30	35	36	36	30	3.2	2. Germination stage completed on December 18, 1980
15/2/81	60	42	60	53	61	60	66	71	81	68	98	81	36	60	44	35	70	40	41	50	40	4.8	60	7.2	69	61	50	5.5	3. (A.a): Acacia auriculiformis (A.m): Acacia mangium
15/3/81	88	46	82	56	31	56	64	114	72	100	97	43	40	90	52	30	45	38	66	38	66	66	35	11.0	98	46	55	8.0	4. (C): Control Seeds (P): Uncoated Seeds (Plain Seed s)
15/4/81	119	80	84	82	86	160	173	123	150	112	165	141	50	110	80	46	35	80	53	56	56	56	35	7.6	64	56	81	6.9	5. Quadra.: 1m x 1m
15/5/81	145	36	67	61	88	180	183	130	156	96	146	136	66	66	66	35	45	47	50	50	50	50	35	8.6	7.1	55	81	7.6	6. The figure for each quadrat is the average for that quadrat.
15/6/81	176	44	68	63	86	130	113	134	96	156	129	66	60	66	66	60	66	66	60	66	60	60	60	9.4	9.4	7.1	80	8.1	
15/7/81	206	41	41	120	190	83	131	96	200	73	103	220	220	220	220	220	220	220	220	220	220	220	220	7.8	7.8	35.0	16.0	3.6	
15/8/81	337	38	38	38	180	180	180	42	25	46	39	66	66	66	66	66	66	66	66	66	66	66	66	8.5	8.5	3.7	5.3	5.3	
15/9/81	388																												
15/10/81	388																												
15/11/81	323	4	2	3	2	20	11	2	11	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7		
18/12/81	382	25	25	25	19	21	20	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24		
18/1/82	303	28	20	22	14	18	15	19	27	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22		
18/2/82	424	28	25	26	15	26	18	23	32	14	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24		
18/3/82	463	30	35	33	19	28	21	32	38	23	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33		
18/4/82	481	32	36	34	35	37	37	37	40	25	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37		
18/5/82	514	33	37	35	27	40	31	49	57	27	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40		
18/6/82	545	33	48	41	25	45	31	54	63	30	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55		
18/7/82	572	34	52	43	29	46	34	57	69	30	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58		
18/8/82	605	32	55	44	30	48	36	60	75	30	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62		
18/9/82	634	34	58	46	33	52	39	63	80	31	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66		
18/10/82	667	34	58	46	34	56	41	67	88	31	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71		
18/11/82	688	35	58	47	35	58	42	70	95	35	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75		

Attached Table II Average Height Growth at Plot 4 (Harrowed Bare Land Plot)(Experiment Site I)

(Unit: cm)

Sub-plot No.	1 (A.a.) (C)			2 (A.a.) (C)			3 (A.a.) (P)			4 (A.a.) (P)			5 (A.m.) (C)			6 (A.m.) (C)			7 (A.m.) (P)			8 (A.m.) (P)			Remarks								
	1	2	Ave.	1	2	Ave.	1	2	Ave.	1	2	Ave.	1	2	Ave.	1	2	Ave.	1	2	Ave.	1	2	Ave.									
18/12/50																												1. Seeding Date: Nov. 21, 1950					
15/1/51	29	4.5	3.0	4.1	3.0	2.5	3.8	3.3	3.5	2.5	4.2	3.6	4.0	4.0	3.0	3.8	2.5	2.5	2.5	2.5	2.6	2.7	3.5	2.7	2.8	2.7	3.0	2.8	2. Germination stage completed on December 18, 1950				
15/2/51	60	6.3	7.0	6.5	5.5	5.3	6.2	5.8	5.5	5.4	4.8	5.1	5.2	5.0	3.5	4.7	3.5	3.5	3.7	3.6	3.0	3.4	4.2	3.7	4.0	4.2	4.6	4.2	4.4	3. (A.a.): Acacia auriculiformis (A.m.): Acacia mangium			
15/3/51	88	9.6	7.0	9.0	9.0	7.3	7.0	7.5	6.2	4.0	8.1	5.2	6.4	6.5	5.3	6.2	4.0	4.1	4.5	4.2	3.4	4.9	4.8	4.6	5.0	10.0	5.3	5.8	4.8	5.6	5.2	4. (C): Coated Seeds (P): Uncoated Seeds (Plain Seed S)	
15/4/51	119	22.6	16.0	21.0	17.0	12.6	21.0	17.7	15.2	7.2	14.7	13.2	11.4	12.7	12.3	12.1	10.0	9.0	9.7	9.5	6.4	10.0	10.2	9.5	13.0	21.5	10.7	12.4	9.9	12.7	12.0	11.4	5. Quadrat: 1m x 1m
15/5/51	145	26.3	18.0	24.2	21.5	16.6	23.2	23.9	22.0	8.8	18.3	17.2	15.2	14.0	17.6	15.4	13.8	11.6	14.2	13.1	8.2	12.0	12.6	11.5	16.7	23.0	13.6	16.3	14.3	15.5	14.3	6. The figure for each quadrat is the average for that quadrat.	
15/6/51	176	34.3	25.0	32.0	28.0	24.3	43.2	34.1	32.6	13.8	23.7	27.0	20.8	18.0	23.6	20.6	15.0	16.3	21.7	16.9	11.4	16.6	17.4	16.0	28.2	35.0	22.4	17.1	18.2	21.7	18.5		
15/7/51	206	40.6	32.0	38.5	33.0	31.0	48.6	38.7	43.2	15.4	36.3	34.6	23.6	20.0	26.6	23.2	17.1	18.5	24.5	19.9	12.2	16.5	21.0	18.0	31.7	51.0	23.4	28.9	17.9	19.6	23.2	20.1	
15/8/51	237	53.6	40.0	50.2	39.0	46.3	64.0	53.7	57.0	19.4	37.9	31.4	24.0	26.3	30.2	20.5	19.8	23.0	21.0	13.8	25.2	25.4	23.6	42.0	63.0	27.4	35.5	18.7	23.5	27.0	22.7		
15/9/51	268	67.6	45.0	62.0	42.5	46.0	71.4	58.0	68.6	22.8	46.4	48.9	34.8	25.5	44.3	34.1	20.8	22.6	35.7	26.4	16.0	27.2	23.0	26.1	54.2	72.5	31.3	42.2	19.8	26.2	26.7	23.7	
15/10/51	298	68.3	47.0	63.7	47.5	49.0	73.0	60.7	73.0	23.6	48.2	51.3	38.8	27.0	44.3	35.4	20.8	23.8	36.7	26.8	16.2	28.2	23.6	28.8	51.2	78.0	33.4	43.4	20.5	26.7	28.0	25.1	
15/11/51	329	75	49	60	55	54	70	62	78	25	61	60	38	23	44	37	22	26	41	23	18	32	35	31	78	84	35	52	24	34	31	30	
18/12/51	362	82	57	76	58	57	90	73	84	49	68	69	41	27	52	37	41	33	44	33	33	47	47	45	77	69	44	56	28	35	34	32	
18/1/52	393	91	72	86	63	64	105	82	85	52	74	74	42	31	63	43	59	37	32	49	38	53	55	52	87	105	53	68	31	33	42	37	
18/2/52	424	104	87	97	74	76	117	94	97	59	84	85	49	47	72	54	69	46	55	60	47	66	67	63	111	119	66	84	38	49	55	47	
18/3/52	453	118	95	109	82	82	127	102	100	70	93	94	53	55	81	61	79	57	77	70	55	78	74	73	130	137	79	99	45	64	64	57	
18/4/52	484	128	113	122	94	91	137	112	120	87	106	108	63	67	99	73	95	77	102	91	72	103	76	85	188	165	107	130	62	86	83	75	
18/5/52	514	140	126	134	101	96	149	121	132	98	114	118	68	76	110	81	105	92	121	105	87	124	113	113	226	175	128	153	75	105	99	92	
18/6/52	545	150	141	147	121	104	163	134	148	110	125	130	76	80	125	97	130	117	159	134	116	156	141	143	240	219	162	189	93	133	124	118	
15/7/52	572	159	152	156	134	112	170	142	161	117	133	139	86	88	96	96	146	135	184	133	139	176	161	163	255	248	180	210	110	155	144	136	
18/8/52	606	170	172	171	143	115	179	140	171	123	141	148	103	105	153	116	166	155	210	175	161	195	181	184	286	275	174	217	115	182	140	146	
15/9/52	634	179	180	179	153	123	189	159	183	130	151	158	110	112	163	124	184	175	232	194	183	214	198	202	318	333	217	253	146	206	187	180	
18/10/52	667	197	188	193	165	131	195	167	194	135	158	166	120	118	173	133	204	233	232	217	210	227	224	227	345	315	233	271	170	231	219	226	
18/11/52	698	206	195	203	174	148	207	180	207	137	168	176	131	130	190	145	223	220	280	238	213	253	241	240	400	360	254	304	168	233	224	224	

Attached Table 12 Average Height Growth at Plot 5 (Bare Land Plot)(Experiment Site I)

(Unit: cm)

Sub-plot No	1 (A.a.) (C)			2 (A.a.) (C)			3 (A.a.) (P)			4 (A.a.) (P)			5 (A.m.) (C)			6 (A.m.) (C)			7 (A.m.) (P)			8 (A.m.) (P)			Remarks								
	1	2	Ave	1	2	Ave	1	2	Ave	1	2	Ave	1	2	Ave	1	2	Ave	1	2	Ave	1	2	Ave									
Date of Observation																																	
18/12/90																																	
15/1/91	29	55	35	-	4.7	5.0	7.0	3.0	5.0	5.3	4.0	6.0	5.9	4.5	6.0	-	4.6	4.0	3.5	2.0	3.4	2.0	3.0	2.5	2.8	-	3.2	3.0	3.2	4.1	2.5	4.0	3.9
15/2/91	60	83	5.0	-	7.0	5.0	7.0	4.0	5.3	2.0	5.0	6.0	4.8	4.5	6.0	-	4.6	4.8	3.5	4.0	4.5	2.0	4.1	3.5	3.8	-	5.1	5.0	5.1	5.5	3.0	4.6	5.0
15/3/91	88	116	7.5	-	10.0	7.0	12.0	13.0	10.7	2.6	6.0	8.0	6.2	6.5	8.0	-	6.6	6.7	5.0	6.6	6.5	-	5.3	-	5.3	-	7.1	6.0	7.0	5.7	4.5	4.6	5.3
15/4/91	119	20.6	17.0	-	19.2	13.0	19.0	-	16.0	4.0	15.0	13.5	11.5	13.0	20.0	-	13.4	15.0	11.0	13.3	14.2	-	12.3	-	12.3	-	13.7	13.0	13.7	11.3	12.5	13.8	12.1
15/5/91	145	23.6	18.5	-	21.6	16.0	20.0	-	18.0	4.0	17.0	13.5	12.0	15.2	25.0	-	15.8	18.7	15.0	16.3	17.7	-	13.8	-	13.8	-	15.9	18.0	16.0	14.6	14.5	17.6	15.3
15/6/91	176	32.3	25.0	-	23.4	19.0	23.0	-	21.0	3.6	19.0	15.5	13.4	18.3	30.0	-	19.0	25.2	16.0	22.0	23.5	-	17.4	-	17.4	-	20.7	22.0	20.8	21.6	17.5	24.6	21.8
15/7/91	206	34.3	23.5	-	32.4	21.0	23.0	-	22.0	12.0	20.0	15.0	15.5	20.1	44.0	-	21.6	27.5	19.0	24.3	25.9	-	18.5	-	18.5	-	23.2	24.0	23.2	22.8	19.5	27.6	23.6
15/8/91	237	33.3	37.0	-	33.4	25.0	25.0	-	25.0	-	20.0	16.0	17.3	23.7	53.0	-	25.7	30.1	19.0	25.6	27.9	-	20.7	25.0	21.5	-	25.7	25.0	25.7	25.0	20.0	31.6	25.6
15/9/91	268	41.6	38.0	-	40.2	23.0	25.0	-	26.5	-	21.0	15.5	17.3	16.4	65.0	-	20.1	41.7	19.0	25.3	35.2	-	21.4	28.0	22.6	-	24.1	22.0	24.0	23.8	-	34.2	30.2
15/10/91	288	41.3	40.5	-	41.0	28.0	25.0	-	28.5	-	21.0	18.0	17.7	25.7	68.0	-	28.2	42.5	19.0	28.0	35.9	-	22.2	28.5	23.3	-	23.2	28.5	23.4	23.3	20.5	35.2	28.7
15/11/91	329	44	44	-	44	35	31	-	33	-	21	16	16	24	75	-	27	34	23	28	31	-	22	31	24	-	25	23	25	23	23	41	35
18/12/91	362	47	48	-	48	40	40	-	40	-	21	15	16	33	78	-	30	33	36	30	33	-	23	32	24	-	29	26	29	42	28	54	49
18/1/92	383	62	57	-	60	55	64	-	60	-	25	15	17	44	85	-	47	47	25	37	42	6	30	34	29	-	37	35	37	52	28	69	53
18/2/92	424	77	69	-	74	66	68	-	77	-	31	21	26	53	81	-	55	63	41	62	60	8	38	47	37	-	51	42	50	69	36	88	70
18/3/92	463	90	78	-	85	69	103	-	86	-	37	26	32	61	89	-	63	79	41	62	71	15	49	61	48	-	62	38	61	85	47	104	85
18/4/92	484	105	94	-	100	78	120	-	99	-	50	33	42	70	100	-	72	97	60	79	89	15	64	81	63	-	75	75	75	101	67	127	106
18/5/92	514	113	99	-	108	88	135	-	112	-	57	36	47	76	112	-	78	111	75	99	105	18	77	98	75	-	85	86	85	115	83	146	118
18/6/92	545	122	103	-	114	95	155	-	126	-	66	41	54	84	130	-	87	133	61	124	127	23	94	123	93	-	99	99	108	103	171	142	
18/7/92	572	130	112	-	123	102	165	-	134	-	71	49	60	88	150	-	91	144	106	114	132	27	107	139	105	-	109	108	109	152	117	191	157
18/8/92	606	151	127	-	141	115	181	-	148	-	77	52	65	106	165	-	109	163	116	157	160	28	118	158	118	-	120	111	120	166	132	213	172
18/9/92	634	149	132	-	142	115	185	-	151	-	83	59	71	108	188	-	111	172	125	185	172	31	128	174	127	-	129	118	128	178	145	222	186
18/10/92	667	157	150	-	154	115	188	-	152	-	93	62	78	110	170	-	113	191	140	210	191	40	143	195	143	-	143	130	142	193	163	255	203
18/11/92	688	167	160	-	164	122	188	-	155	-	105	70	88	115	185	-	119	202	160	228	205	40	153	215	154	-	152	150	152	211	178	281	223

1. Seeding Date: Nov. 21, 1990
 2. Germination stage completed on December 18, 1990
 3. (A.a.): *Acacia auriculiformis*
 (A.m): *Acacia mangium*
 4. (C): Coated Seeds
 (P): Uncoated Seeds(Plain Seed)
 5. Quadrate: 1m x 1m
 6. The figure for each quadrat is the average for that quadrat.

Attached Table 13 Height of Along-along (Experiment Site I)

(Unit: cm)

PLUJ No.	1 Burned Grassland Average								2 Harrowed Grassland								3 Grassland								4 Harrowed Bare Land								5 Bare Land								Remarks							
	1	2	3	4	5	6	7	8	Ave	1	2	3	4	5	6	7	8	Ave	1	2	3	4	5	6	7	8	Ave	1	2	3	4	5	6	7	8	Ave												
Quadrat No.	18	20	24	17	23	21	14	16	20	5	15	4	0	7	4	0	0	0	7	60	36	63	50	57	52	56	52	53	0	0	0	0	0	0	0	0	7	30	23	35	10	24	7	27	22			
Date of Observation	1/12/90																																															Land Preparation Date: Nov. 19, 1990
	89	57	62	67	54	74	64	51	52	60	23	45	29	16	12	20	20	18	21	64	50	63	61	68	60	67	67	61	11	5	13	7	4	4	4	9	7	30	23	35	10	24	7	27	22			
	270	63	76	76	68	71	81	62	77	72	60	75	65	41	51	46	56	70	58	92	49	66	65	64	70	61	78	68	0	0	0	0	0	0	0	0	0	0	49	48	37	42	0	33	44			
	362	45	40	61	55	72	52	61	50	57	44	54	72	26	46	33	57	56	49	79	44	55	65	66	70	67	75	66	0	48	0	0	0	0	0	0	40	48	54	49	0	34	0	35	31			
	457	51	65	57	39	84	90	56	70	65	64	82	65	37	59	43	50	49	56	95	50	59	56	71	61	65	77	67	55	37	39	46	62	42	55	44	48	49	37	55	32	25	20	66	43			
	547	88	92	72	57	116	121	105	114	101	104	93	117	79	89	64	81	85	89	115	76	101	102	88	93	81	82	94	59	33	38	37	23	115	91	55	81	103	72	46	93	61	64	84	76			
	633	74	86	67	77	93	93	79	86	82	81	73	81	64	84	84	78	76	75	100	63	87	84	71	82	68	82	80	51	62	71	56	68	83	99	75	71	70	74	65	51	72	53	90	85			
	730	94	97	87	101	100	117	100	104	100	87	76	97	83	86	77	82	72	83	99	78	85	81	78	88	81	71	83	67	73	78	64	73	61	72	88	72	79	93	80	83	88	73	87	83			

Attached Table 14 Number of Surviving Seedlings (Experiment Site II)

(Unit: Number of Trees)

PLOT No	1 Grassland(A.m)			2 Grassland(A.a)			3 Rotavator Plot(A.m)			4 Rotavator Plot(A.a)			5 Disk Plough Plot(A.m)			6 Disk Plough Plot(A.a)			Remarks						
	1	2	Ave.	1	2	Ave.	1	2	Ave.	1	2	Ave.	1	2	Ave.	1	2	Ave.							
Quadrat No.																									
Date of Observation																									
Number of Days Passed																									
1	132	90	130	117	6	8	4	6	221	230	300	250	26	15	10	17	125	100	120	115	35	22	16	24	
3	99	89	125	104	4	6	3	4	209	222	287	243	22	8	5	12	59	97	115	90	27	18	8	18	
34	95	83	125	101	4	6	3	4	167	211	285	204	16	7	3	9	43	64	68	58	19	10	3	11	
64	53	55	125	78	2	4	1	2	132	154	163	150	15	7	3	8	43	64	55	54	18	10	3	10	
92	53	55	120	76	2	4	1	2	132	153	160	148	14	7	3	8	31	45	46	41	12	10	3	8	
122	44	55	120	73	-	4	1	2	107	126	135	123	10	7	3	7	24	42	44	37	12	10	3	8	
155	37	55	94	62	-	4	1	2	73	44	107	75	10	7	3	7	16	26	30	24	12	9	3	8	
186	37	49	94	60	-	4	1	2	66	44	107	72	10	7	3	7	14	20	26	20	12	9	3	8	
217	37	49	75	54	-	4	1	2	66	44	107	72	10	7	3	7	14	20	25	20	10	9	3	7	
249	37	49	75	54	-	4	1	2	66	44	107	72	10	7	3	7	14	20	25	20	10	9	3	7	
278	37	49	75	54	-	4	1	2	42	40	41	41	10	7	3	7	3	6	0	6	4	0	3	5	
308	37	49	75	54	-	4	1	2	42	40	41	41	10	7	3	7	2	1	9	4	4	0	3	5	
342	37	49	75	54	-	4	1	2	42	40	41	41	10	7	3	7	2	1	9	4	4	0	3	5	
Per/m ²	1.5	2.0	3.0	2.1	-	0.2	0.0	0.1	1.7	1.6	1.6	1.6	0.4	0.3	0.1	0.3	0.1	0.0	0.4	0.2	0.2	0.4	0.1	0.2	

A.m. : *Acacia mangium*
A.a. : *Acacia auriculiformis*

Notes

1. Seeding Date: Dec. 17, 1991
2. Quadrat No.: 3 quadrats were randomly selected from the 15 quadrats established for each plot.
3. Quadrat Size: 5m x 5m

Attached Table 15 Number of Surviving Seedlings (Experiment Site II)

(Unit: %)

Date of Observation	1 Grassland(A.m)			2 Grassland(A.a)			3 Rotavator Plot(A.m)			4 Rotavator Plot(A.a)			5 Disk Plough Plot(A.m)			6 Disk Plough Plot(A.a)			Remarks					
	1	2	Ave.	1	2	Ave.	1	2	Ave.	1	2	Ave.	1	2	Ave.	1	2	Ave.						
14/1/92	(182) 100	(90) 100	(130) 100	(6) 100	(8) 100	(4) 100	(6) 100	(221) 100	(280) 100	(300) 100	(250) 100	(26) 100	(15) 100	(10) 100	(17) 100	(125) 100	(100) 100	(120) 100	(115) 100	(35) 100	(22) 100	(16) 100	(24) 100	A. m. : Acacia mangium A. a. : Acacia auriculiformis
17/1/92	75	99	96	89	67	75	67	95	97	99	97	85	53	50	71	47	97	96	78	77	82	50	75	
17/2/92	72	92	96	86	67	75	67	76	92	78	82	62	47	30	53	34	64	57	50	54	45	19	46	
18/3/92	40	61	96	67	33	50	25	60	67	54	60	58	47	30	47	34	64	46	47	51	45	19	42	
15/4/92	40	61	92	65	33	50	25	60	67	53	59	54	47	30	47	25	45	38	36	34	45	19	33	
15/5/92	33	61	92	62	-	50	25	48	55	45	49	38	47	30	41	19	42	37	32	34	45	19	33	
17/6/92	28	61	72	53	-	50	25	33	33	36	30	38	47	30	41	13	26	25	21	34	41	19	33	
18/7/92	28	54	72	51	-	50	25	30	30	36	29	38	47	30	41	11	20	22	17	34	41	19	33	
18/8/92	28	54	58	46	-	50	25	30	30	36	28	38	47	30	41	11	20	21	17	29	41	19	29	
19/9/92	28	54	58	46	-	50	25	30	30	36	29	38	47	30	41	11	20	21	17	29	41	19	29	
18/10/92	28	54	58	46	-	50	25	19	17	14	16	38	47	30	41	2	6	8	5	11	41	19	21	
17/11/92	28	54	58	46	-	50	25	19	17	14	16	38	47	30	41	2	1	8	3	11	41	19	21	
21/12/92	(37) 28	(49) 54	(75) 46	(54) 46	-	(4) 25	(1) 25	(42) 19	(40) 17	(41) 14	(41) 16	(10) 38	(7) 47	(3) 30	(7) 41	(2) 2	(1) 1	(9) 8	(4) 3	(4) 11	(9) 41	(3) 19	(5) 21	

Notes

1. Seeding Date: Dec. 17, 1991
2. Quadrat No. : 3 quadrats were randomly selected from the 15 quadrats established for each plot.
3. Quadrat Size: 5m x 5m
4. The figures in brackets are the number of surviving seedlings

Attached Table 16 Average Height Growth (Experiment Site II)

(Unit: cm)

PLOT No.	1 Grassland(A.m)			2 Grassland(A.a)			3 Rotavator Plot(A.m)			4 Rotavator Plot(A.a)			5 Disk Plough Plot(A.m)			6 Disk Plough Plot(A.a)			Remarks			
	1	2	Ave.	1	2	Ave.	1	2	Ave.	1	2	Ave.	1	2	Ave.	1	2	Ave.				
Quadrat No.																						
Date of Observation																						
Number of Days Passed																						
14/1/92	2.0	2.5	2.5	2.3	3.0	3.0	3.0	3.0	2.5	2.8	3.0	3.0	3.0	2.7	2.5	3.0	2.7	3.0	2.8	2.8		
17/1/92	2.0	2.5	2.5	2.3	3.0	3.0	3.0	3.0	2.5	2.8	3.0	3.0	3.0	2.7	2.5	3.0	2.7	3.0	3.0	2.5	2.8	
17/2/92	5.9	5.1	6.0	5.7	6.3	6.3	6.3	5.0	4.8	5.1	5.0	5.0	5.0	4.3	4.8	4.1	4.4	5.7	6.4	5.0	5.7	
18/3/92	7.0	7.0	7.0	7.0	7.0	7.0	7.0	6.0	5.0	5.7	6.0	6.0	6.0	5.0	5.0	5.0	5.0	6.0	7.0	6.0	6.3	
15/4/92	7.5	8.0	8.0	7.8	10.0	9.0	9.0	8.0	8.0	8.3	8.0	10.0	10.0	9.3	8.0	8.0	8.0	7.0	10.0	8.0	8.3	
15/5/92	9.0	13.0	13.0	11.7	-	10.0	10.0	9.0	10.0	9.7	10.0	11.0	11.0	10.7	9.0	10.0	6.0	8.3	10.0	11.0	9.0	10.0
17/6/92	15.0	15.0	17.0	15.7	-	11.0	19.0	15.0	12.0	11.7	13.0	12.0	12.0	12.3	10.0	11.0	7.0	9.3	13.0	12.0	10.0	11.7
18/7/92	16.0	16.0	18.0	16.7	-	12.0	13.0	12.5	13.0	13.7	14.0	13.0	13.0	13.3	11.0	14.0	8.0	11.0	16.0	12.0	12.0	13.3
18/8/92	16.0	17.0	18.0	17.0	-	12.0	15.0	13.5	15.0	14.7	14.5	14.0	13.0	13.8	12.0	14.0	9.0	11.7	20.0	13.0	12.0	15.0
19/9/92	17.0	18.0	18.0	17.7	-	13.0	15.0	14.0	15.0	16.0	16.0	16.0	14.0	15.3	13.0	16.0	12.0	13.7	23.0	15.0	13.0	17.0
18/10/92	17.0	21.0	19.0	19.0	-	14.0	27.0	20.5	14.0	14.7	22.0	27.0	22.0	23.7	28.0	11.0	18.0	19.0	42.0	16.0	14.0	24.0
17/11/92	19.0	22.0	19.0	22.0	-	16.0	27.0	21.5	20.0	17.3	25.0	30.0	28.0	27.3	43.0	14.0	19.0	25.3	42.0	17.0	25.0	28.0
21/12/92	20.0	26.0	23.0	23.0	-	20.0	38.0	29.0	24.0	20.3	29.0	33.0	30.0	30.7	65.0	16.0	25.0	35.3	52.0	20.0	32.0	34.7

Notes

1. Seeding Date: Dec. 17, 1991
2. Quadrat No.: 3 quadrats were randomly selected from the 15 quadrats established for each plot.
3. Quadrat Size: 5m x 5m
4. The figure for each quadrat is the average for that quadrat.

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