

CUTTING MANAGEMENT OF SUBABUL

Subabul (*Leucaena leucocephala* (Lam) De Wit is a versatile tropical legume tree, highly useful to the farmers for its green leaves which is a protein rich fodder containing about 27 per cent crude protein and a nitrogen rich green manure having 5 per cent nitrogen. The climate of Kerala is ideal for the growth of subabul and considering its multi-farious uses, there is a great awareness among dairy farmers to cultivate subabul even in the small farm holdings. The tree can be easily nursed as a cultivated fodder crop like any other perennial leguminous fodder crop (Gill and Patil, 1985). The present experiment was conducted with the object of finding out the optimum height at which subabul can be cut for getting better **regrowth** and maximum fodder yield.

A field experiment was conducted in the red loam soils of the Instructional Farm, College of Agriculture, **Vellayani, Thiruvananthapuram** during the period from 1984 to 1987. This trial with four treatments was laid out in **RBD** with five replications. The treatments included the following four levels of cutting, (i) close cutting like grasses at 25 cm height (ii) cutting at 45 cm height (iii) cutting at 1 m height and (iv) cutting the lower 50 per cent of the branches after one year.

After initial land preparation, N, P_2O_5 and K_2O at the rate of 20, 50 and 30 **kg/ha** respectively were applied as basal dose to all the treatments. Hawaiian giant subabul variety **K8** was used for the trial. **Pretreatment** of seeds with concentrated sulphuric acid for 4 min was done in order to hasten the germination. Then the seeds were

sown after treating with rhizobium culture. Sowing was done at the rate of three seeds per hole at a spacing of 1 m between rows and 50 cm between plants. After germination and initial establishment, excess seedlings were thinned and a proper plant population with one **seedling** per hill was retained.

During the initial period of six months, no harvest was made and the **seedlings** were allowed to establish well, so as to develop a good vegetative growth. The first harvest at six month maturity was taken from treatments 1, 2 and 3 while the plants in the 4th treatment were harvested after one year. The experiment was continued for three years. The data on green fodder yield (t/ha) and dry fodder yield (t/ha) for 3 years are presented in Table 1 and 2.

Results indicated that except in the case of first year, the treatments showed significant difference in green fodder and dry fodder yield. During the first year of this study, though the treatments did not vary **significantly**, the treatment of close cutting like grasses at 25 cm height recorded highest green fodder and dry fodder yield. During second and third years, highest green fodder yield was recorded by the treatment **T₃** i.e., cutting at 1 m height, which was closely followed by treatments **T₂** (cutting at 45 cm height) and **T₁** (close cutting at 25 cm height). But these three treatments were on par and were significantly superior to **T₄** i.e., cutting the lower 50 per cent branches. Same trend was noticed in the case of the pooled data for three years for both green fodder yield and dry fodder yield. This is in agreement with the findings

Table 1. Green fodder yield of subabul at different levels of cutting

Sl No.	Treatments	Green fodder yield, t/ha			
		1984-85	1985-86	1986-87	Total
1	Cutting at 25 cm height	3.81	16.43	9.31	29.55
2	Cutting at 45 cm height	2.97	18.36	7.63	29.01
3	Cutting at 1 m height	1.51	18.47	11.45	31.35
4	Cutting lower 50% branches	—	2.86	3.16	6.01
	CD (0.05)	NS	6.807	3.997	10.298

Table 2. Dry fodder yield of subabul at different levels of cutting

Sl. No.	Treatments	Dry fodder yield, t/ha			
		1984-85	1985-86	1986-87	Total
1	Cutting at 25 cm height	1.39	5.54	4.91	11.85
2	Cutting at 45 cm height	1.03	7.27	3.94	12.17
3.	Cutting at 1 m height	0.49	7.22	5.41	13.21
4	Cutting lower 50% branches	—	0.75	1.36	2.11
	CD (0.05)	NS	2.534	1.915	3.989

of Patil (1986). This indicates that harvesting **subabul** plants at 1 m height from the base is the best cutting manage-

ment for obtaining maximum green fodder and dry fodder yield.

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