



Mulberry

as a fodder tree under coconut plantation

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Diary farming is an integral part of rural livelihood. Eventhough it is having high prospects in Kerala, it is highly uneconomical due to major constraints like high cost of feed and scarcity of quality fodder that offset farmers profit to a considerable extent.

Cultivating good quality fodder ensures sustainable and profitable milk production and helps in maintaining the health of animal. Among various fodder sources, fodder trees with nutritive foliage are good sources, especially during lean period as a supplement to roughages & partial substitute to concentrates.

Among various fodder trees mulberry is a promising species by virtue of its nutritive foliage with high CP content (Crude Protein content), higher biomass yield, ability to withstand severe pruning, good coppicing ability that suit well to humid tropics of Kerala and shade tolerance.

Mulberry is commonly used as silkworm feed in Kerala, but its fodder potential is unknown to farmers.

However numerous studies confirm superiority of mulberry fodder for ruminants.

Cultivation of this fodder tree can reduce the fodder deficit in Kerala. Due to acute land scarcity in Kerala the possibility of growing this fodder tree as a sole crop in open land is rather limited. The only alternative is to integrate with the existing cropping system in the state. Coconut is the most dominant plantation crop in Kerala. Due to availability of wider interspace there is good scope for integrating trees under coconut garden. While integrating with coconut, tree should be maintained as hedge rows for reducing intercrop competition and ease of harvesting.

In hedgerows management aspects like plant density and pruning frequency influences biomass yield, quality of fodder, sustainable production and survival of trees.

Lack of information on management aspects of mulberry underneath coconut plantation is a major constraint for optimizing yield and quantity. Hence the study was conducted in College of Forestry,



thickness in polythene bags and is transplanted to main field at three months stage. Seedlings of mulberry can be transplanted to the main field with the onset of premonsoon showers.

Field area (excluding coconut basin of 2m radius) is ploughed twice and pits are taken at a spacing of 45cm x 45cm and seedlings of mulberry can be transplanted into the main field with the onset of premonsoon showers. Manures and fertilizers can be applied. Plants can be weeded and irrigated as and when required.

After attaining a height over 1m, the first harvest need to be done. Subsequent cuttings can be taken after 2-3 months. During this period large quantity of young shoots are formed and it can be harvested and used as feed to cattles.



Table 1: Interaction effects of plant density and pruning frequency on annual dry fodder yield and crude protein (CP) underneath coconut plantation.

Treatments	Dry fodder yield (tones/ha)	Crude protein (CP) (%)
T1 - D1F1	11.05	19.14
T2- D2F1	8.31	16.40
T3 - D3F	6.11	16.72
T4- D1F2	12.28	13.56
T5 - D2F2	11.98	10.33
T6 - D3F2	9.29	10.42
T7-D1 F3	13.85	13.99
T8-D2 F3	8.68	13.45
T9-D3 F3	7.66	14.41

Vellanikkara to assess the influences of plant density and pruning frequency on forage yield and quality. The result gives that the best treatment combination was T₁ involving highest density and shortest pruning interval of eight weeks with dry fodder yields of 11.05 tonnes/ha and crude protein of 19.14% (Table: 1).

In Kerala mulberry variety VI is common. Mulberry is raised from uniform stem cuttings of 6-8 months maturity, 20cm length, having 3 nodes and of pencil

Mulberry is commonly used as a silkworm feed in Kerala, but its fodder potential is unknown to farmers. Mulberry tree with its nutrient rich leaves constitute a potential source of quality green fodder to livestock especially during lean period. By growing this in the farm at cost effective, modest management level, instead of buying costly dairy feed, farmers can save money and can achieve substantial increase in milk production. Cultivation of mulberry also offers numerous ecological services that help to maintain better soil properties and overall productivity of the system. ■