

Annex 6

Income and Expenditure statement – Existing agroforestry systems

1. Farmer Wood lot programme

Background

The farmer wood lot programme was established in early 80s aimed at increasing timber and fuel wood supply. Lands were owned by the Government and farmers were given planting material, technical advice and food aid during the initial years of cultivation. During the early years farmers cultivated food crops in their land parcels and obtained an additional income. Farmers have not harvested their timber and fuel wood harvest yet. An opinion survey was conducted interviewing 20 farmers to obtain inputs, outputs and their perceptions on fuel wood production. Senior officials of the Forest Department and the State Timber Corporation were also discussed to examine the technical validity of their responses.

Assumptions

- The average size of the land size was 0.96 acres and lands were given for timber and fuel wood production
- The recommended number of fuel wood trees per acre was 100 and each plot had around 90-100 trees . Eucalyptus camel. was the main species. The number of trees in each plot was less than the initial number due to fires, theft problem, drought etc.
- The project period ranging from 1982 to date. Therefore compounding at 10 % was used to calculate the costs and revenues into the present value. 10 % is the standard rate used by the Department of national Planning of Sri Lanka.
- Timber prices given by the farmers were based on the prices given by the private timber buyers and not deviated from the prices of the State Timber Corporation.

Result

Labour for land clearing, tree planting, value of planting materials, weeding and other silvo agricultural operations were the costs incurred in timber and fuel wood production. The average cost per unit during the cultivation period was Rs. 19715.33.

The average annual revenue per farm by selling timber, fuel wood and food crops was Rs. 55097.00

According to the opinion survey 70 % of the harvest is timber while 30 % is fuel wood.

The profit of cultivation timber is Rs.18853.00 = (38568 -19715.33)

The profit of cultivation fuel wood is - Rs. (3186.23) =(16529.1-19715.33)

This shows that cultivation of fuel wood alone is not profitable. Production of timber is the main output and fuel wood provides a supplementary income to the farmers.

Income and Expenditure statement – Proposed Agroforestry models

1. Gliricidia in Coconut plantations

Data and information were obtained from the Coconut Research Institute , Lunuwila Sri Lanka.

Assumptions

The average size of the coconut farm size is one hectare.

The age of the coconut palm was about 30 years and 3750 Gliricidia sticks were planted in between rows of coconut palms.

The price of a Gliricidia stick was Rs. 3.00.

The cost of labour day was Rs. 1000 per day.

20 labour days were used for land preparation , 10 labour days for planting,3 labour days for vacancy filling, 10 labour days per year on maintenance and 3-8 labour days per year on harvesting.

The price of one kilogram of Glyricidai was assumed as Rs.3.50 and Gliricidia yield increases gradually.

10 discount rate was used to bring future revenue and costs into present.

Cost of inputs		Value(Rs)
Planting material		Rs.11250
Cost of equipment		Rs.1500
Cost of labour	labour days	
Land preparation	20	Rs.20,000
Planting	10	Rs.10,000
Vacancy filling	12	Rs.12,000
Maintenance	90	Rs.90,000
Harvesting	58	Rs.58,0000
Total Expenditure		Rs.142,910
Revenue		
Revenue form Gly sticks		Rs. 160,707

Cultivation of Glyricidia in coconut plantations provide an additional income .

2. Dedicated Gliricidia cultivation

The average size of the Glyricidia farm size is one hectare.

The price of a Gliricidia stick was Rs. 3.00.

The cost of labour day was Rs. 1000 per day.

50 labour days were used for land preparation , 10 labour days for nursery activities 40 labour days for planting, one labour days for weeding and slashing and 30 labour days per year for harvesting.

The price of one kilogram of Glyricidai was assumed as Rs.3.50 and Gliricidia yield increases gradually.

10 discount rate was used to bring future revenue and costs into present.

Cost of inputs		Value(Rs)
Planting material		Rs.42,000
Cost of labour	labour days	
Land Clr & preparation	50	Rs.50,000
Nursery activities	10	Rs10,000
Planting	40	Rs.40,000
Maintenance	90	
Weeding &slashing	13	Rs.13,000
Harvesting	58	Rs.58,0000
Total Discounted		
Expenditure		Rs.338549
Revenue from sticks		Rs.383645
Profit (NPV)		Rs.45116.0

Dedicated Glyricidia cultivation is profitable.