

Ex.No.5 Cost of cultivation and cost of production perennial crops / horticultural Crops

The term **Cost of production** refers to cost incurred in **production one unit of output** and is normally associated with variable and fixed costs. The variable costs relate to the cost of variable inputs and fixed costs to fixed inputs. The components of variable costs in crop production are the value of seeds, manure, fertilizers, plant protection chemicals, wages for labor, hires charges for bullocks, machinery and the value of other miscellaneous inputs used in crop production. The interest on variable capital should also be worked out and included under variable cost. Fixed cost includes the value of services provided by the fixed inputs such as land, buildings and machinery. Rental value of land, interest on other fixed capital excluding land, depreciation, taxes etc., constitute the fixed cost.

Procedure for estimating the cost of production / cost of cultivation of perennial crops

1. Estimate the initial investment or establishment cost for an orchard which includes expenditure on land preparation, irrigation structure development, pit digging, Cost of manures and manuring the pits, purchase of seedling, planting etc. Apportion the establishment cost over the life period or initial periods (upto five to ten years time period) based on its productivity nature or its nature of returns to investment i.e economic viability of the project.
2. Work out the total fixed cost for the farm based on area and duration of the crop
3. Estimate the total variable cost of producing the crop in given area for each year
4. The sum of the total variable and fixed cost (item 1 and 2) gives the annual maintenance cost for the crop in each year.
5. Divide the total cost (item 3) by the total output (in kg/ctl./tonne) to estimate the average cost of production/unit quantity.
6. If a by- product is also produced along with the main product, to work out the cost of production, deduct the value of by product from the total cost to get the net cost. The net cost is divided by the total quantity of the main product to get cost of production/unit.
7. In perennial crops, the total cost of production / cultivation includes establishment cost for the initial year along with the maintenance cost for the entire life period of the crop. The share of establishment cost (20 per cent) to be added along with the annual maintenance cost in each year in the estimation of cost of production / cultivation.

SI.No.	Particulars	Physical units	Value (Rs.)
/	Establishment Cost		
1.	Tractor ploughing @ Rs.160/hr	15 hr	2400
2.	FYM @ Rs. 300/ t	20 t	6000
3.	Land leveling, ridges and furrows @ Rs 120/ pairs	10 pairs	1200
4.	Spreading FYM @ Rs. 80/M & Rs. 40/ W	10M & 10W	1200
5.	Forming irrigation channel &ridges rectification	10 M	800
6.	Nursery preparation		1200
7.	Transplanting	30 W	1200
8.	Hoeing & Weeding 3-4 times	25 W/ time	4000

		Total	18000
II	I year Maintenance		
1	Cost of Fertilizers		8500
2.	Fertilizer application cost		800
3.	Irrigation	60 M	4800
4.	Leaf Harvest	30 W	1200
5.	Land revenue		100
		Total	13400
III	II year Maintenance		
1	FYM	20 t	6000
2.	Cost of Fertilizers		6500
3.	Fertilizer application cost		800
4.	Irrigation	60 M	4800
5.	Hoeing & Weeding , 3-4 times	25 W/ time	4000
6.	Leaf Harvest	500 W	20000
7.	Land revenue		100
		Total	43000
IV	Fixed Cost		
1.	Rental value of owned land		3500
2.	Depreciation		600
3.	Interest on Fixed capital		4400
		Total	8500

Economics of Perennial crop – Mulberry

Cost of production

I year

Fixed cost	- 8500
Share of Establishment cost	- 3600
Variable cost	- 13400
Total	- 25500

I year production (leaves in Kg) - 15000

Cost of production / Kg of leaf = 25500/15000
= Rs. 1.7 / Kg

II year

Fixed cost	- 8500
Share of Establishment cost	- 3600
Variable cost	- 43000
Total	- 55100

II year production (leaves in Kg) - 30000

Cost of production / Kg of leaf = 55100/30000

= Rs. 1.84 / Kg