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Cost and returns of fodder maize production in Ahmednagar district of Maharashtra

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Abstract

The present study was carried out in Rahuri, Newasa, and Shrirampur tehsils of Ahmednagar district to study cost of cultivation in production of fodder maize. The study was based on the primary data of 45 fodder maize cultivators for the year 2015-16.

The average per hectare cost of cultivation of fodder maize was estimated to 42883.44. Amongst the different items of cost, the major share of cost in the total cost of maize fodder was of the items as-manure charges the major item of cost followed by machine power charges, family human labour for male and female together, interest on fixed capital, the share of rental value of land in the total cost etc., were the major items of cost in the total cost of cultivation of fodder maize. The average production of 280.49 quintal per hectare of main produce was obtained from maize fodder. The gross returns obtained were 47701.44 at the overall level with B: C ratio was 1.11.

Keywords: fodder maize, costs, returns and profitability

Introduction

Green fodder plays major role of feeds to milch animals thereby providing required nutrients for milk production and health of livestock or animals. Hence, green fodder cultivation is a vital aspect in the rearing of animal especially milch cattle. Fodder maize produces rich and nutritious green fodder which is a good source of carbohydrates. The green fodder is particularly suitable for silage making. It contains 8-10 per cent protein and 60 per cent total digestible nutrient. The study taken because the area under fodder cultivation in the district is increasing day by day.

The India's area and production of fodder maize in the year 2012-13 are about 900 thousand ha. and 30-55 tons per ha. respectively. The Ahmednagar, Pune, and Nashik are the major fodder maize producing districts of Maharashtra. This clearly indicates that area has increased at faster rate. The present investigation was attempted to study cost of cultivation of production fodder maize. Ahmednagar district is important district producing fodder maize. Fodder maize is an important crop grown in Ahmednagar district. Therefore, Ahmednagar district was purposively selected for the study.

Objective

To estimate cost and returns in fodder maize production

Methodology

The multistage sampling design was used for selection of region, district, tehsil, villages and fodder maize producers. The study was conducted in Ahmednagar district as whole. From Ahmednagar district Shrirampur, Rahuri and Newasa tahsils having maximum area under fodder maize cultivation were selected. The study was based on primary data for the year 2016-17. Three villages from each tahsil were selected and from each selected villages five fodder maize producer were selected randomly. Thus from total nine villages 45 fodder maize producers were selected. Data collection was done by preparing special interview schedule (Appendix-I) by personal interview of fodder maize producer. The farmers were also asked to prioritize the most important constraints they were facing in production of fodder maize.

Results and Discussion

Cost of cultivation of fodder maize

The per hectare cost of cultivation of fodder maize on the sample farms during 2015-16 has been estimated and the same is represented in Table 1. The cost of cultivation of maize

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(fodder) includes the fixed cost and working cost. The per hectare cost of cultivation of maize (fodder) was worked out

by using standard cost concepts. It can be seen from the table that,

Table 1: Item wise cost of cultivation of summer tomato in Ahmednagar district Maharashtra.

Sr. No.	Cost item	Qty	Value	Per cent
I.1.	Hired Human labour (Mandays)			
	a. Male	9.25	2111.95	4.93
	b. Female	6.28	989.79	2.31
2.	Bullock labour (Pair days)	1.19	728.66	1.70
3.	Machine power (hrs.)	8.63	7938.93	18.51
4.	Seed (Kg)	58.61	1978.28	4.62
5.	Manures (Qtls.)	82.44	8244.27	19.22
6.	Fertilizers (Kg)			
	N	46.54	437.77	1.02
	P	19.10	335.49	0.78
	K	2.48	11.87	0.03
7.	Irrigation Charges (₹.)		824.13	1.92
8.	Plant protection charges (₹.)		0.00	0.00
9.	Incidental charges (₹.)		198.69	0.46
10.	Repairs		262.30	0.61
	Working capital (₹.)		24062.13	56.11
11.	Interest on Working Capital		1443.73	3.37
12.	Depreciation on farm implements		1205.60	2.81
13.	Land revenue and taxes		36.23	0.08
	Cost 'A'		26747.68	62.37
14.	Rental value of land		7914.01	18.45
15.	Interest on fixed capital		3692.48	8.62
	Cost 'B'		38354.18	89.44
16.	Family labour (Man days)			
	a. Male	12.89	2938.93	6.85
	b. Female	10.09	1590.33	3.71
	Cost 'C'		42883.44	100
II.	Output (Qtls.)			
	a. Main produce	280.49	47701.44	
	b. Bi-product	0.00	0.00	
III.	Cost 'C' net of bi-produce		42883.44	
IV.	Per quintal cost		152.89	

(Figure in parentheses are the percentage to the total cost c)

the per hectare cost of cultivation of maize fodder was estimated to ₹. 42883.44 (i.e. cost 'C'). In the total cost share of cost 'B' and cost 'A' was 89.44 and 62.37 per cent, respectively. It was noticed that, the major share of cost in the total cost of maize fodder was of the items as- manure charges (19.22 per cent), machine power (18.51 per cent), family human labour (10.56 per cent for male and female together), interest on fixed capital (8.62 per cent). The share of rental value of land in the total cost noticed to 18.45 per cent. It is revealed from the table, that the cost 'A' for maize (fodder) was ₹. 26747.68. The cost 'B' was worked out to ₹. 38354.18, and cost 'C' was worked out to ₹. 42883.44. The cost of cultivation is the basis on which marketing decisions are taken. Farmer may be large or small prefer to sale his produce in the market, only when the market price covers the cost of cultivation

Cost, returns, gross income and B:C ratio of summer toma

It is noted from above Table 2, at the overall level, gross income was 47,701.44 with per hectare production of 280.49 quintals of fodder maize. The costs 'A', 'B' and 'C' were ₹. 26727.68, ₹. 38354.18 and ₹. 42,883.44, respectively for the cultivation of maize fodder (KHARIF season) was estimated to 280.49 quintal and income realized was ₹. 47,701.44. The profits at these costs accrued, thus, were ₹. 20,953.76, ₹. 9347.26 and ₹. 4818, respectively. The B:C ratios at costs 'A', 'B' and 'C' were worked out for the maize fodder and

magnitudes of these ratios were 1.78, 1.24, and 1.11, in order. These magnitudes of B:C ratios clearly implied that the cultivation of maize as fodder is quit profit making activity for the sample cultivators.

Table 2: Costs and return structure of fodder maize

Sr. No.	Particulars	Unit	Maize (N=45) per ha.
1.	Total cost		
	Cost 'A'	₹	26747.68
	Cost 'B'	₹.	38354.18
	Cost 'C'	₹.	42883.44
2.	Profit at		
	Cost 'A'	₹	20953.76
	Cost 'B'	₹	9347.26
	Cost 'C'	₹.	4818.00
3.	Production	Qtl	280.49
4.	Gross Income	₹.	47701.44
5.	B:C ratios		
	Cost 'A'		1.78
	Cost 'B'		1.24
	Cost 'C'		1.11

Profitability of fodder maize

There are three different measures of farm business income, which show profitability of an enterprise at three different types of costs. Profitability at cost A is the farm business income, profitability at cost B is the family labour income and profitability at cost C is the net income or net profit. These

three different profitability levels were worked out on per hectare basis in fodder maize production and are presented in Table 2.

It is observed from Table 2 that, per hectare gross return obtained were 47701.44. With regards to various farm business measures, it is revealed that farm business income in fodder maize production was 20953.76 where as family labour income was 9347.26 and net income was 4818.00 with benefit cost ratio of 1.11 which interprets little profit in fodder maize production activity.

Hence, hypothesis made i.e. These magnitudes of B:C ratios clearly implied that the cultivation of maize as fodder is quit profit making activity for the sample cultivators is proved after profitability analysis.

Conclusion

The present investigation was intended to depict the picture of summer tomato growing enterprise in Ahmednagar district. The foregoing discussion on various aspects of study led to draw the following conclusions.

Per hectare cost of fodder maize production, and it is observed from table that per hectare cost (cost C) of fodder maize was 42883.44. In which share of cost 'A' was 26747.68 and of cost 'B' was 38354.18 and per hectare gross return obtained from fodder maize production were 47701.44

Hence, hypothesis made i.e. the cultivation of maize as fodder is quit profit making activity for the sample cultivators is proved after profitability analysis.

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