AN ECONOMIC ANALYSIS OF PRODUCTION OF PEARL MILLET IN JAIPUR DISTRICT OF RAJASTHAN

ABSTRACT

The present study entitled 'AN ECONOMIC ANALYSIS OF PRODUCTION OF PEARL MILLET IN JAIPUR DISTRICT OF RAJASTHAN'

was carried out in 2022–2023 with a sample of 120 participants. The findings showed that Medium-sized farms had the highest percentage of respondents with a graduate degree, followed by Small(62.31%) and Marginal(42.75%) farms, and that Medium-sized(54.23%) farms had the highest percentage of illiterate people. In marginal size farms, the average area per hectare holding was 0.66 ha, in small size farms, it was 1.59 ha, and in medium size farms, it was 4.32 ha. The total cost of Pearl millet cultivation for marginal, small, and medium-sized farms was (Rs. 36010/ha),(Rs.35007/ha), and (Rs. 34223/ha), respectively. Medium-sized and small-sized farms saw excellent gross earnings per hectare (Rs51750/ha). The net returns per hectare obtained by small size farms were high (Rs. 50625/ha) as compared to marginal size farms (Rs. 49500/ha) and medium size farms (Rs. 13490/ha and Rs. 17525/ha), respectively. Compared to small and medium size farms (1:1.44 and 1:1.51), marginal size farms had the highest input-output ratio per hectare, and the marketable surplus for farmers in these three sizes was (6.73%, 21.73%, and 35.33%), correspondingly.

Key words: Economic Analysis, Production Of Pearl, Pearl millet cultivation

INTRODUCTION

India is a nation with 1.21 billion inhabitants. More than 60% of Indians reside in rural areas where agriculture is the primary industry. Small holdings in agriculture are typical of India. According to the Economic Survey 2011–2012, 1.57 hectares is the average size of a farm. According to the Economic Survey 2011-2012, 56% of arable land is cultivated by landholdings that are less than 4 hectares in size.With an average productivity of 785 kg/ha over the previous five years, India is the world's greatest producer of pearl millet, both in terms of area (9.1 million hectares) and production (7.3 million tonnes) (WOAB, 2010). The area of pearl millet in India has decreased by 26% over the last five years when compared to the beginning of 1980, while production has increased by 19% due to a 44% increase in productivity. Throughout the nation, pearl millet is primarily grown during the Kharif (rainy) season. It is also grown to a smaller amount in Andhra Pradesh, Karnataka, Tamil Nadu, and Pondicherry during the Rabi (post-rainy) season. The cultivation of summer pearl millet varies from state to state depending on rainfall and soil type.

METHODOLOGY

Therefore study was conducted to assess the 'An Economic Analysis of Production And Marketing of Pearl Millet" in Jaipur district of Rajasthan was undertaken with the following specific objectives..

1. To study the socio economic profile of Pearl Milletgrowers in different size farm groups.
2. To find out the Costs and Returns per hectare of PearlMillet crop in different size farm groups.

The relevant Gramme Panchayat office will provide a comprehensive list of all villages; as a

result, the villages will be grouped in ascending order according to the area dedicated to the cultivation of pearl millet. There are 131 villages in the Govindgarh block. Then, 7 communities were chosen at random for the study out of a total of 120 settlements.

1. Marginal size agricultural group with less than 1 hectare of cultivable land
2. small farm group with a cultivated area of 1-2 hectare
3. medium-sized farm group with a cultivated area of more than 4 to 10 ha

In each chosen hamlet, a total of 10% of the three farm size groups' responses were chosen. There were 120 total respondents; out of those, 53 marginal respondents, 31 small respondents, and 36 medium respondents were chosen, correspondingly.the technique of conducting interviews to get data. The interview schedule was broken down into sections. Profiles of the respondents were included in the first segment, and questions about the economic analysis of the production and sale of pearl millet were included in the second. Input-Output Ratio (B.C. Ratio), Gross Income, Marketing Cost, and Marketable Surplus were used to analyse the data.

RESULT AND DISSCUSSION

revealed that, among farms of different sizes, the marginal size farms' total costs during the bearing period were higher (Rs 34223/ha) than those of small and medium size farms (Rs 35007/ha and Rs 34223/ha), respectively. The sample average for overall cost in the group of farms of various sizes was Rs. 35080/ha.Because most processes, including harvesting and weeding, required a lot of human labour, the cost of human labour, fertilisers, and machines labour made up the bulk of the variable expenses. According to the distribution of operational cost patterns under different inputs, the cost of labour was highest in medium size farms (Rs. 1500/ha), followed by small size (Rs. 1900/ha) and marginal size farms (Rs. 1300/ha), in that order.As Pearl millet might benefit from The price of the farmyard manure utilised ranged from Rs. 1000 (medium-sized farms) to Rs. 850 (marginal-sized farms) due to the usage of artificial fertiliser. However, the cost of fertilisers (Rs. 1375/ha) was the same across all farm size groups. Depreciation on fixed resources had a sample average of Rs. 1088.Interest on fixed capital was Rs. 1180 while interest on working capital was Rs. 700. Land revenue paid to the government in groups of various farm sizes was Rs 63.33.This table details the various variable inputs used by various farm groups, depending on their size, to produce pearl millet per hectare throughout the gestation period.

Table 1: Literacy in different size of farm group

The educational status of various farm size groupings is shown in Small size farms (62.31%) had the greatest literacy rate, followed by medium (54.23%) and marginal (42.75%) size farms. As a result, the sample average for the group of farms of various sizes was 53.43%. Among marginal, small, and medium farms, 11.82% had studied up to intermediate level; 18.67% had studied the elementary level; 14.15% had studied up to middle and high school; and 8.78% had studied all the way to graduation.According to the table, marginal size farms had the largest percentage of illiterates (57.25%), followed by medium size farms (45.77%), and small size farms (37.69%). The sample mean was The sample average for groups of farms of various sizes was 46.57%.

Detail description of Literacy in pearl millet crop in different size of farm group

S.No	Particulars	Size of farm group			Sample average
		marginal	Small	Medium	
	Average size of farm group	4.90 (100%)	5.20 (100%)	7.55 (100%)	**5.88 (100)**
	Educational status				
	Primary	0.95 (18.59)	1.11 (21.35)	1.28 (16.88)	**1.11 (18.67)**
	Middle high School	0.68 (13.84)	0.90 (16.31)	0.99 (12.89)	**0.85 (14.15)**
	Intermediate	0.35 (6.40)	0.75 (13.78)	1.10 (13.96)	**0.73 (11.82)**
	Graduation and Above	0.20 (3.92)	0.60 (10.87)	0.80 (10.50)	**0.53 (8.78)**
	Total literacy	2.10 (42.75)	3.25 (62.31)	5.10 (54.23)	**3.48 (53.43)**
	Total illiteracy	2.77 (57.25)	1.94 (37.69)	3.44 (45.77)	**2.72 (46.57)**

Table 2: Variable inputs used in Pearl millet crop in different size of farm group in per hectare during gestation period

Number of respondents=120

M S M=53+31+36=120

S.No.	Different farm operation	Size of farm group			Sample average
		Marginal	Small	medium	
1	Hired human labor	1300	1900	1500	**1566.66**
2	Bullock labor charges	2800	2300	2900	**2666.66**
3	Machinery labor Charges	2400	2300	2200	**2300**
4	Cost of seedling	650	600	550	**600**
5	Cost of farm yard manure	850	800	1000	**883.33**
6	Cost of chemical fertilizer	1375	1375	1375	**1375**
7	Cost of irrigation charges	1000	1100	1300	**1133.33**
8	Miscellaneous charges	800	970	1000	**923.33**
9	Interest on working capital@6-8%	700	702	698	**700**
10	Deprecation on fixed resources 10%	1095	1000	1170	**1088.33**
11	Land revenue paid to government	90	60	40	**63.33**
12	Interest on fixed capital @10%	1450	1100	990	**1180**
13	Rental value of own land	17000	17000	17000	**17000**
14	Imputed value of family labor charges	4500	3800	2500	**3600**
	Total cost of cultivation	36010	35007	34223	**35080**

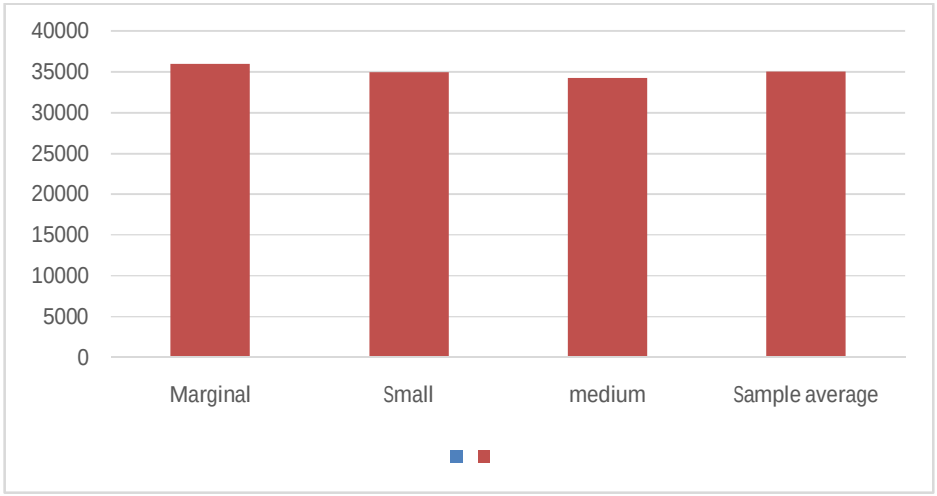

Fig. 1. Distribution of Variable inputs used in Pearl millet crop in different size of farm group in per hectare during gestation period.

Due to the use of artificial fertiliser, the cost of the farmyard manure used ranged from Rs. 1000 (for medium-sized farms) to Rs. 850 (for marginal-sized farms). The price of fertilisers, however, remained the same for all farm size categories and was Rs. 1375/ha. The sample average for depreciation on fixed assets was Rs. 1088.While interest on working capital was just Rs. 700, interest on fixed capital was Rs. 1180. The government received Rs 63.33 in land revenue divided among various farm sizes.The numerous variable inputs utilised by various farm groups, based on their size, to yield pearl millet per hectare over the course of the gestation are listed in this table.Small size farms had higher net returns per hectare (Rs. 15618/ha) than marginal and medium size farms (Rs. 13490/ha and Rs. 17525/ha, respectively).In a collection of farms of various sizes, the average pearl millet output was 22.5 qt/ha. In comparison to tiny 22.5qtl/ha and marginal 22qtl/ha farms, the yield was highest for medium size farms (23qtl/ha). The average cost of production was Rs. 1560.20 per quintal. The quintal's gross price was Rs. 2250.

Table: 3. Costs and Returns in Pearl millet crop per hectare in different Size of Farms Group Number of Respondents.
Number of respondents=120

M S M=53+31+36=120

(Value in rupees/qt.)

S. No	Different farm operation	Size of farm group			Sample average
		Marginal	Small	Medium	
1	Total cost of cultivation	36010	35007	34223	**35080**
2	Yield in quintal per hectare	22	22.5	23	**22.5**
3	Gross return per hectare in rupees	49500	50625	51750	**50625**
4	Net return per hectare	13490	15618	17525	**15544.33**
5	Cost of production per quintal	1636.81	1555.86	1487.95	**1560.20**
6	Price per quintal	2250	2250	2250	**2250**
7	Input and output ratio	1:1.37	1:1.44	1:1.51	**1:1.43**

That cost per hectare category for farms of various sizes. Medium-sized farms had the greatest cost per hectare (A1) ($13653/ha), followed by small-sized farms ($13107/ha), and marginal-sized farms ($13060/ha), respectively. Cost A2 for marginal, small, and medium-sized farms was Rs. 30060 per hectare, Rs. 30107 per hectare, and Rs. 30653 per hectare, respectively. In comparison to small size farms (Rs. 312070/ha) and marginal size farms (Rs. 31510/ha), Cost B was highest in medium size farms (Rs. 31643/ha) and lowest in medium size farms (Rs.In comparison to small size farms (Rs35007/ha), cost C was highest in medium size farms (Rs34223/ha), and lowest in marginal size farms (Rs36010/ha). The sample average for Cost A1, Cost A2, Cost B, and Cost C in the group of farms of various sizes was respectively Rs.13253/ha, Rs.30273.33/ha, Rs.31453/ha, and Rs.35080/ha..

Table: 4. Cost Concepts in Pearl millet crop per hectare indifferent Size of Farms Group

Number of Respondents =120

S M L= 58+ 41+ 21 =120

(Value in Rupees)

S. No	Different farm operation	Size of farm group			Sample average
		marginal	small	Medium	
1	Cost A_1	13060	13107	13653	**13273.33**
2	Cost A_2	30060	30107	30653	**30273.33**
3	Cost B	31510	31207	31643	**31453.33**
4	Cost C	36010	35007	34223	**35080.33**

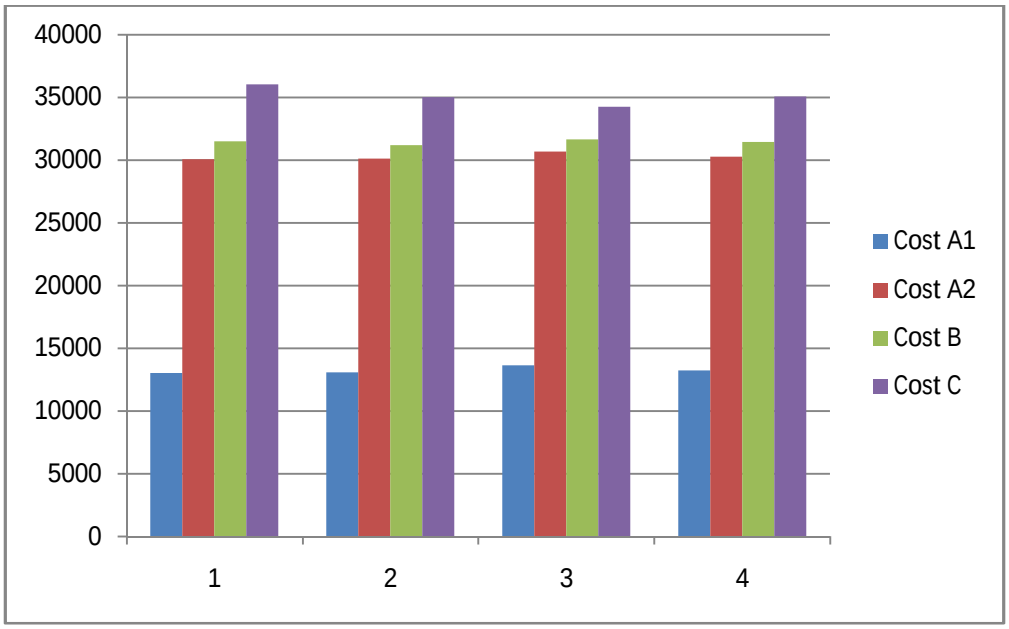

Fig. 2. Distribution of Cost Concepts in Pearl millet crop per hectare in different Size of Farms Group

This grouping of Profitability Measures in Pearl Millet Farming includes farms of various sizes. In comparison to small and marginal size farms (Rs. 50625/ha and Rs. 51750/ha, respectively), medium size farms had higher gross returns per hectare (Rs. 51750/ha). As a result, the sample average for gross returns in the group of farms of various sizes was 50625/ha.In the categories of marginal, small, and medium-sized farms, the respective farm business incomes were Rs. 19440/ha, Rs. 20518/ha, and Rs. 21097/ha. In a collection of farms of various sizes, the sample average for farm business income was Rs.20351.66/ha. Small size farms had higher net returns per hectare (Rs. 15618/ha) than marginal and medium size farms (Rs. 17525/ha and Rs. 13490/ha, respectively). The sample average of net returns for groups of farms of various sizes was 15544.33/ha.In groups of various farm sizes, the sample average of family labor income was Rs. 19171.66/ha.

Table: 5. Measures of Farm Profitability in Pearl millet crop per hectare in different Size of Farms Group

Number of respondents=120

M S M=53+31+36=120

(Value in rupees)

S.No	Particulars	Size of farm group			Sample average
		marginal	Small	medium	

1	Gross return	49500	50625	51750	**50625**
2	Farm business income	19440	20518	21097	**20351.66**
4	Net returns	13490	15618	17525	**15544.33**
5	Family labor income	17990	19418	20107	**19171.66**

CONCLUSIONS

The research demonstrates that Pearl millet is produced and sold in The study's analysis of Jaipur includes the socioeconomic characteristics of the sample respondents, the economics of producing Pearl Millet, the price spread, and the barriers to Pearl Millet production and commercialization. The findings show that the respondents' socioeconomic standing was judged to be moderate, with access to all assets, a primary education, and a solid economic foundation. When compared to medium-sized farms and small-sized farms, large farms are more economically advantageous for producing pearl millet. According to the report, there is room to raise the producer's rupee share. by improving market efficiency, which will limit the use of intermediaries and lower marketing expenses and profit margins. This will be the method used to increase the profitability of pearl millet farming. High labour costs and a lack of knowledge of new technology among various farm size groups, followed by a significant price swing, were identified to be the key output restrictions in Pearl mille.

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