Socio-economic characteristics of soybean growers with existing and alternative farm plans in Latur district of Maharashtra

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Abstract : The present study was conducted during 2010-11 in Latur district of Maharashtra. About 32 soybean growers were randomly selected from eight villages of Udgir tehsil of Latur district. Data were collected by personal interview method by using pretested schedule. The results revealed that average age of farmer was 38.50 years, with standard deviation of 6.34 years. Average family size was 7.31 members with standard deviation of 2.23 members. Coefficient of variation with respect to family size was 31.28 per cent. Average land holding was found to be 3.45 hectares with standard deviation of 1.64 hectare and coefficient of variation was 47.54 per cent. Bullock pair was 0.53 number with standard deviation of 0.20 and its coefficient of variation was 37.82 per cent. Milch animal was 1.28 in numbers with standard deviation 0.42 in numbers and co-efficient of variation was 32.81 per cent. Investment on commonly used asset was Rs. 9663.44 with standard deviation of Rs. 3567.74 and its co-efficient of variation was 36.92 per cent. Investment on irrigation structure was Rs. 118929.63 with the standard deviation of Rs. 49831.51 and its co-efficient of variation was 41.90 per cent. In existing farm plan, total expenditure on all crops in the form of cost-C was Rs. 134517.47, gross return was Rs. 214568.50, and net profit on cost-C was Rs. 80051.03. Total expenditure of livestock enterprise was Rs. 48215.38, gross return was Rs. 58276.93 and net profit was Rs. 10061.55. With regard to farm as a whole was found to be Rs. 182732.85, gross return was observed to be Rs. 272845.43.and net profit was Rs. 90112.58. In regard to alternative farm plan total expenditure on all crops in the form of cost-C was Rs. 131218.99. Gross return from all crops was found to be Rs. 216617.97, and net profit was Rs. 85398.96. Total expenditure of livestock enterprise was Rs. 48011.35, gross return was Rs. 58381.82 and net profit was Rs. 10370.45. With respect to farm as a whole total expenditure on farms as a whole was Rs. 179230.34, gross return was Rs. 274999.79 and net profit was Rs. 95769.41.

Key Words : Soybean, Alternative farm plan, Existing farm plan

INTRODUCTION

Farm business is the use of scarce farm resources, having alternative uses to obtain maximum profit and farm management encompasses the topics like selection of size and appraisal of farm, appraisal of farm resources, investment decision, enterprise relationship, and choice of input output combination, cost and returns on individual enterprises and on the farm as a whole. This information needs to be studied, mainly because of cropping pattern followed by the cultivators is governed by many factors like socio-economic condition. Such study would help research workers to understand the present day technology adopted by the farmers and suggest new change either in cropping pattern or input utilization, so as to increase the productivity per unit of area. The comparative economics of various crops gives an idea about their profitability which would help the farmer for allocation of scarce resources. At the end major objective of farmer is to maximize returns from the farm as a whole. With recent technological developments in

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agriculture, farming has become more complex business and requires careful planning for successful organization. A farm planning is a programme of total farm activity of a farmer drawn up in advance. Farm is a socio-economic unit which not only provides income to a farmer but also a source of happiness to him and his family. It is also a decision making unit where the farmer has many alternatives for his resources in the production of crops and livestock enterprises and their disposal. Hence, the farms are micro units of vital importance which represents centre of dynamic decision making with regard to guiding the farm resources in production process. Farm planning is thus a process of making decisions regarding the organization and operation of a farm business so that it results in a continuous maximization of net returns of a farm business. Farm planning enables the farm (profit maximization or cost minimization) in a more organized manner (Johl and Kapur, 2001). It also helps in the analysis of existing resources and their allocation for achieving higher resource use efficiency of farm income and farm family welfare. Farm planning is an approach which introduces desirable changes in farm organization. Farm plan should have balanced combination of enterprises such combination in turn ensures the production of food, maintain soil fertility, increase in income, avoid excessive risks, utilize farmers knowledge and experience and take account of his likes and dislikes and provide for the use of latest technology. Today, there is an increasing need to help the farmers to become more effective managers of farming enterprises. Careful planning is often critical to the success of a business in every sector of the economy.

MATERIAL AND METHODS

Multistage random sampling design was used in selection of district, tehsil, villages and soybean growers. In the first stage, Latur district was selected purposively. In the second stage, Udgir tehsil was selected on the basis of higher area under soybean. In the third stage, eight villages were selected from given tehsil on the basis of higher area under soybean production. The selected villages were namely

Belsakarga, Dhondihipparga, Madlapur, Mogha, Mortalwadi, Rawangaon, Tadlapur, Togri and in the fourth stage, four soybean growers were randomly selected from each of the villages. The cross sectional data were collected from 32 soybean growers with the help of pre-tested schedule for the year 2010-2011.

Tabular analysis was used to analyze the data. Tabular analysis comprised of arithmetic mean, percentage and ratio. This method was used to determine the costs and returns of all crops and livestock enterprise on the farm. Tabular analysis was also used in case of land use pattern, cropping pattern and socioeconomic characteristics of the farmer.

RESULTS AND DISCUSSION

The results obtained from the present investigation as well as relevant discussion have been summarized under following heads :

Socio-economic characteristics of farmer:
Socio-economic characteristics of soybean farmers were calculated and are presented in Table 1. The results revealed that average age of farmer was 38.50 years, with standard deviation of 6.34 years. It means that age of farmer was ranging from 32.16 years to 44.84 years. Coefficient of variation was 16.46 per cent, education level was 1.91 scores with standard deviation of 0.82 scores and coefficient of variation was 42.93 per cent. It inferred that, education level was ranging from literate to high school standard. Average family size was 7.31 members with standard deviation of 2.23 members. Coefficient of variation with respect to family size was 31.28 per cent. It was clear that, family size was ranging from 5.08 members to 9.54 members. Occupation level was 1.31 score with standard deviation of 0.30 and coefficient of variation was 22.90 per cent. Thus, occupation level was mostly ranging from agriculture to industry. Land holding was found to be 3.45 hectares with standard deviation of 1.64 hectare and coefficient of variation was 47.54 per cent. Thus, land holding was ranging from small farm (1.18 ha) to large farm (5.09 ha). Bullock pair was 0.53 numbers with standard deviation of 0.20 and its co-efficient

Table 1 : Socio-economic characteristics of farmer on soybean based farming system			
Particulars	Mean	SD	CV %
Age of farmer (Years)	38.50	± 6.34	16.46
Education level (score) (Illiterate/ primary school/High school)	1.91	± 0.82	42.93
Family size (No.)	7.31	± 2.23	31.28
Occupation level (score) (Agriculture/Industry/Service)	1.31	± 0.30	22.90
Land holding (ha.)	3.45	± 1.64	47.54
Bullock pair (No.)	0.53	± 0.20	37.82
Milch animal (No.)	1.28	± 0.42	32.81
Investment on commonly used assets (Rs.)	9663.44	± 3567.74	36.92
Investment on irrigation structure (Rs.)	118929.63	±49831.51	41.90

of variation was 37.82 per cent. By considering the mean value of bullock pair, it was clear that some of the farmers might not be maintaining the bullock pair on their farms. Milch animal was 1.28 in numbers with standard deviation of 0.42 in numbers and coefficient of variation was 32.81 per cent. Investment on commonly used asset was Rs. 9663.44 with standard deviation of Rs. 3567.74 and its coefficient of variation was 36.92 per cent. Investment on commonly used asset was ranging from Rs. 6993.70 to Rs. 13231.18. Investment on irrigation structure was Rs. 118929.63 with the standard deviation of Rs. 49831.51 and its coefficient of variation was 41.90 per cent. Thus, investment on irrigation on structure was ranging from Rs. 69098.12 to Rs. 168761.14. Findings are consistent with the results obtained by Singh and Ramanna (1982).

Existing farm plan and alternative farm plan:

Per field costs, returns and profitability in existing condition on soybean based farming system with respect to all crops and livestock enterprise were calculated and are presented in the Table 2. Results revealed that in all 10 crops consisted with 4.25 hectares. Total expenditure on all crops in the form of cost-C was Rs. 134517.47. Gross return from all crops to be Rs. 214568.50. Net profit on cost-C was Rs. 80051.03. Profitability on crossbred cow and buffalo enterprise with their cost and return were also calculated. It was observed that in existing condition size of cow enterprise was 0.57 while the size of buffalo enterprise was 0.71. Total expenditure on crossbred cow enterprise was Rs. 20664.60 followed by buffalo enterprise was Rs. 27550.78. Gross

return from crossbred cow enterprise was Rs. 26366.00. While gross return from buffalo was Rs. 31910.93 while net profit from crossbred cow enterprise was Rs. 5701.40 followed by buffalo enterprise (Rs. 4360.15). Total size of livestock enterprise was 1.28 units. Total expenditure of livestock enterprise was Rs. 48215.38 and gross return from livestock enterprise was Rs. 58276.93 and net profit obtained from livestock enterprises were Rs. 10061.55. With regard to farm as a whole consisted with all crops and livestock enterprises were also calculated. The results revealed that expenditures on farms as a whole was found to be Rs. 182732.85. While gross return was observed to be Rs. 272845.43. Net profit on farm as a whole was Rs. 90112.58.

With regard to alternative farm plan, results revealed that total expenditure on all crops in the form of cost-C was Rs. 131218.99. Gross return from all crops was found to be Rs. 216617.97. Net profit on cost -C was Rs. 85398.96. It was observed that in optimum farm plan size of crossbred cow enterprises was 0.65, while the size of buffalo enterprise was 0.63. Total expenditure of livestock enterprise was Rs. 48011.35 and gross return from livestock enterprise was Rs. 58381.82 and net profit obtained from livestock enterprises was Rs. 10370.45. It was obvious that crossbred cow enterprise was most profitable than buffalo enterprise with respect to farm as a whole total expenditure on farm as a whole was Rs.179230.34. While gross return was Rs. 274999.79. Net profit on farms as a whole was Rs. 95769.41. In farms as a whole the net profit obtained in existing farm plan was Rs. 90112.58 and in alternative farm plan it was Rs.

Table 2 : Existing farm plan and alternative farm plan for soybean based farming system (at 10%)

Sr. No.	Particulars	Area (ha)	Existing farm plan			Alternative farm plan			
			Cost-C/TC (Rs.)	Gross return (Rs.)	Net profit (Rs.)	Area (ha)	Cost-C (Rs.)	Gross return (Rs.)	Net return (Rs.)
	Crop								
1.	Soybean	1.89	43322.72	97885.50	54562.78	2.08	47677.91	107725.84	60047.92
2.	Tur	0.48	12502.78	16553.00	4050.22	0.48	12502.78	16553.00	4050.22
3.	Greengram	0.15	5881.05	6401.00	519.95	0.05	1960.35	2133.66	173.31
4.	Blackgram	0.16	5439.35	6129.00	689.65	0.07	2379.00	2681.43	301.72
5.	Jowar	0.43	12657.44	16922.00	4264.56	0.43	12657.44	16922.00	4264.56
6.	Wheat	0.44	16666.84	26304.00	9637.16	0.48	18182.00	28695.27	10513.26
7.	Gram	0.25	12137.24	15020.00	2882.76	0.25	12137.24	15020.00	2882.76
8.	Sunflower	0.14	7280.36	8234.00	953.64	0.10	5200.25	5881.42	681.17
9.	Maize	0.11	6995.09	7901.00	905.91	0.09	5723.25	6464.45	741.19
10.	Groundnut	0.20	11634.60	13219.00	1584.40	0.22	12798.06	14540.90	1742.84
11.	All crops	4.25	134517.47	214568.50	80051.03	4.25	131218.99	216617.97	85398.96
12.	Crossbred cow	0.57	20664.60	26366.00	5701.40	0.65	23564.89	30066.49	6501.59
13.	Buffalo	0.71	27550.78	31910.93	4360.15	0.63	24446.46	28315.33	3868.86
14.	All livestocks	1.28	48215.38	58276.93	10061.55	1.28	48011.35	58381.82	10370.45
15.	Farm as a whole	-	182732.85	272845.43	90112.58	-	179230.34	274999.79	95769.41

95769.41. It means increased in share in alternative farm plan was 6.36 per cent. These results are in agreement with the results obtained by Sharma and Sharma (2004) and Dubey and Sen (1988).

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