



PROBLEMS AND PROSPECTS OF CROP DIVERSIFICATION IN INDORE DISTRICT OF MADHYA PRADESH, INDIA

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Abstract

This study was designed to measure problems and prospects of crop diversification in Indore district of Madhya Pradesh. In present investigation, we use the multi stage sampling technique was used for drawing a sample. , Ninety farmers were selected using proportional allocation. All the primary data collected was related to the agricultural year 2013-14. The problems faced by the sample farmers of crop diversification as lack of infrastructure, lack of farm resources, illiteracy, ignorance, lack of capital, risk taking ability, climatic factors, lack of technical knowledge and socio economic factors constraints, respectively. The various prospects felt by the sample farmers include area expansion under crops, availability of needed inputs for crop diversification, production can be increased with the adoption of improved production technologies, favorable climate for crop diversification, receiving higher comparative price for product under crop diversification and improvement in quality of production under crop diversification. These prospects ensure that crop diversification has the potential to flourish the agriculture sector of the study area.

Key words : Crop diversification, problems, prospects.

Introduction

Diversification can be interpreted as diverting a sizeable acreage from the existing cropping system to some other alternate crops or cropping system or farm enterprises, while maintaining a general equilibrium of meeting the four F's needs *viz.* Food, Fodder, Fibre and Fuel, while simultaneously taking care of basic soil health and productivity of agro ecosystem of the area at large. It is an important tool for acceleration of agricultural growth in the country by promoting food and nutritional security, income growth, poverty alleviation, employment generation, judicious use of natural resources, sustainable agricultural development and environmental and ecological improvement. In India, more than 80% of farming community belongs to marginal and small farmers having only 32.5% of the total operational land area. The income from seasonal field crops alone is hardly sufficient to sustain the small farmer's family. With the gradual decline in farm size, it has become increasingly difficult to produce enough food and other farm produce for the subsistence of their family. High degree of risk and

uncertainty is attached with the crop cultivation in India. With a view to mitigate the risk and uncertainties in income, diversification is necessary in the cropping pattern. The study was conducted in the Mhow block of Indore district of Madhya Pradesh, India. The present investigation aims to examine Crop Diversification and its Impact on Farmer's Income in Indore District Problems and prospects of crop diversification in Indore district of Madhya Pradesh. In view of above investigation entitled "Problems and prospects of crop diversification in Indore District of Madhya Pradesh" was undertaken with following objective to identify problems and prospects of crop diversification.

Materials and Methodology

Mhow block was selected randomly out of the four blocks of Indore district, which were arranged on the basis of area of different crops. Five villages were selected randomly for study from the villages listed in ascending order on the basis of cropped area. The data was analysed using appropriate tools like tabular analysis, using average

and percentage of sample households. Ninety farmers were selected using proportional allocation. Both primary and secondary data was utilized in the present study. Primary data was collected from the respondents. The data was collected using survey method. The data on different aspects was collected through pre-tested interview schedule. Each of the respondents was approached personally for recording relevant data. The secondary data was collected from published record from district head quarter. A multi stage sampling technique was used for drawing a sample for the present study. Problems and prospects can be physical or biological, technological and socio economic. They were obtained by analyzing the personal interviews of the respondents.

Results and Discussion

Problems and prospects of crop diversification

The various problems faced by the sample farmers of crop diversification were recorded as per the incidence of their severity commonly faced by all the respondents. The observed problems are presented in Table 1. The most important problem faced by the farmer was the lack of infrastructure. This was the major problem faced by all the sample farmers irrespective of the size of the farm holdings. It contributes to 89 per cent among small farmers, 91 per cent among medium farmers and 90 per cent among large farmers. Lack of farm resources was another constraint experienced by farmers in crop diversification and it contribute to 68 per cent among small farmers, 45 per cent among medium farmers and 10 per cent among large farmers. According to the survey conducted on the study area, it is observed that about 27 per cent small farmers, 21 per cent medium farmers and 15 per cent large farmers faced the problem of illiteracy. Ignorance was another important constraint which was mostly seen among the small farmers. Ignorance was observed to be 46 per cent among small farmers, 30 per cent among medium farmers and 10 per cent among large farmers. The lack of capital was a major constraint came in the way of crop diversification and this problem was faced by 81 per cent among small farmers, 45 per cent among medium farmers and 40 per cent among large farmers. Another important constraint reported was the risk taking ability which was reported to be 49 per cent among small farmers, 36 per cent among medium farmers and 30 per cent among large farmers. The climatic factors were also included among the problems faced by the farmers in crop diversification. The climatic factors contribute about 27 per cent among small farmers, 45 per cent among medium farmers and 80 per cent among large farmers. Lack of technical knowledge experienced

by 54 per cent among small farmers, 42 per cent among medium farmers and 25 per cent among large farmers. The socio economic constraints were also reported among the farmers and it accounts for 68 per cent among small farmers, 30 per cent among medium farmers and 10 per cent among large farmers. It is then concluded that there were several constraints felt by the farmers of all the categories. Some of them are related with the extension agencies and can be removed if the extensions agencies are more active and do their work with responsibility. The various prospects faced by the sample farmers of crop diversification were recorded as per their incidence among the respondents. The observed prospects are presented in Table 2.

a) Favourable climate : Mhow block of Indore district is situated in Malwa plateau of Madhya Pradesh which is the best track of quality and higher production of agricultural produce. There is heavy black soil and suitable agro climatic condition for vegetables and other remunerative crops production giving opportunity for higher productivity and to improve the economic condition of the farmers due to crop diversification as per the demands of the people of the thickly populated Indore city. Favourable climate has been ranked at the fourth position among the total six prospects.

b) Availability of needed inputs : The area under study is near to a big market having availability of all types of capital intensity inputs and labour, which is the yield attribute in the nature. Hence, farmers can easily change their input requirements as per the requirements in crop diversification in agriculture. The availability of needed inputs for crop diversification has been ranked at second position among the whole six prospects.

c) Adoption of improved production technology : In general, the aim of agricultural economist is to reduce the marginal cost of output for getting the maximum profit with the use of improved agricultural technology. This can occur either by adopting existing inputs but in different composition or by introducing new factors of production either by replacing old ones or simply by additional inputs. With regard to the above fact, application of adequate quantities of farm power with other inputs like high yielding variety, adequate fertilizer application, plant protection measures, irrigation, etc. are the main necessary condition for optimum output in agriculture and crop diversification is also adopted on the basis of optimum output, hence must be considered towards crop diversification. The adoption of improved technology has been ranked at the third position among the nine prospects in crop diversification.

Table 1 : Constraints related to crop diversification of sample farmers.

S. no.	Constraints	Small Farmers (37)	Medium Farmers (33)	Large Farmers (20)	Overall (90)	Rank Obtained
1.	Lack of infrastructure	33 (89)	30 (91)	18 (90)	81 (90)	I
2.	Lack of farm resources	25 (68)	15 (45)	2 (10)	42 (47)	III
3.	Illiteracy	10 (27)	7 (21)	3 (15)	20 (22)	IX
4.	Ignorance	16 (46)	10 (30)	2 (10)	28 (31)	VIII
5.	Lack of capital	30 (81)	15 (45)	8 (40)	53 (59)	II
6.	Risk taking ability	17 (49)	12 (36)	6 (30)	35 (39)	VII
7.	Climatic factors	10 (27)	15 (45)	16 (80)	41 (46)	IV
8.	Lack of technical knowledge	20 (54)	14 (42)	5 (25)	39 (43)	V
9.	Socio economic factors	25 (68)	10 (30)	2 (10)	37 (41)	VI

*Figure in parentheses show percentage to total sample in each size group.

Table 2 : Prospects related to crop diversification of sample farmers.

S. no.	Prospects	Small Farmers (37)	Medium Farmers (33)	Large Farmers (20)	Overall (90)	Rank Obtained
1.	Favourable climate	20 (54)	10 (30)	9 (45)	39 (43)	IV
2.	Availability of inputs	15 (41)	19 (58)	18 (90)	52 (58)	II
3.	Adoption of improved technology	9 (24)	21 (64)	19 (95)	49 (54)	III
4.	Area expansion under crops	10 (27)	27 (82)	18 (90)	55 (61)	I
5.	Quality of production	10 (27)	11 (33)	12 (60)	33 (90)	VI
6.	Higher comparative price of product	4 (11)	15 (45)	18 (90)	37 (41)	V

*Figure in parentheses show percentage to total sample in each size group.

d) Prospects of area expansion under crops :

Crop production has shown a tremendous growth during the last fifteen years, particularly in the fertile and non-water lodging soils of the Malwa plateau of Madhya Pradesh. Besides, acreage is increasing in the area with increase in production and productivity also progressive farmers have shown the possibilities of crop cultivation in all types of soil in the study area. The prospect of area expansion has been placed at the first position as per the information collected from the sample farmers of the study area.

e) Increase in the quality of product: The quality of product can be increased with the use of post-harvest technologies and proper marketing functions like proper packaging, proper transportation and to sale the product in accordance with grading. The superior quality of cash crop faced better marketing price and it may be highly remunerative. The increase in the quality of the produce has been ranked at the sixth position among all the six prospects of crop diversification.

f) Receives higher comparative price of product: The higher comparative price of the crops can be received

with increase of its utility. The utility of the crops can be increased for selling in the market when there is a heavy demand, to sell at the place where crops can be demanded more and in better quality of produce which can give more comparative price.

References

- Chawala, J. S. and T. S. Chahal (1985). Towards diversification in Punjab Agriculture. *Indian Journal of Agricultural Economics*, **40(3)** : 345.
- Chand, R. (1996). Agricultural diversification and farm and non-farm employment in Himachal Pradesh. *Indian Journal of Labour Economics*, **39(4)** : 841-852.
- Gupta, R. P. and S. K. Tiwari (1985). Factor affecting crop diversification: An empirical analysis. *Indian Journal of Agricultural Economics*, **40** : 304-309.
- Joshi, P. K., Laxmi Joshi and P. S. BIRTHAL (2006). Diversification and its impact on small holders: Evidence from a study on vegetable production. *Agril. Econ. Rech. Review*, **19(2)** : 219-236.
- Singh, Jogender, V. P. Chahal and V. P. Yadav (2007). Diversification in farming : Problem and Prospects. *4th National Extension Education Congress, March 09-11, 2007, Society of Extension Education, Agra & JNKVV, Jabalpur*: 74.