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Constraints to Agricultural Diversification in Mirzapur District of Uttar Pradesh

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ABSTRACT

Institutional constraints play a significant role in diversification of agriculture in backward regions of the country. The present study was conducted in Mirzapur district of Uttar Pradesh with an objective to examining constraints that affect diversification. Using data from a primary survey in Mirzapur, it was found that lack of skill in modern agriculture, poor access to financial services, and lack of marketing facilities played a decisive role in agricultural diversification. Providing institutional support in the form of access to formal sources of finance and making farmers organizations will help in promoting diversification and reducing livelihood risks.

Keywords: Agriculture, Diversification, Constraints, Uttar Pradesh

Agricultural Diversification is defined as an adjustment in production portfolio or re-allocation of resources across commodities based on the comparative advantage created by technological changes and/or market opportunities (Joshi, 2014). Initially, diversification implies the addition of other crops and other enterprises at the farm household level. As the level of commercial orientation increases, however, one observes mixed farming systems giving way to specialized production units that are designed to rapidly respond to market price and quality inputs. Diversification at the agricultural sector level is therefore consistent with specialization at the farm or unit of production level (Pingali and Rosegrant, 1995). However, diversification at household level is a desirable alternative since it has the potential to reduce the livelihood risk. Ellis (1998)) defines rural livelihood diversification as "the process by which rural households construct an increasingly diverse portfolio of activities and assets in order to survive and to improve their standard of living".

Studies conducted on the topic show that mixed crop-livestock and livestock-fish-crop systems may have the potential to maintain an ecosystem's healthy functioning and enable it to absorb not only the shocks to the natural resource base (Holling, 1995, Prien et al., 1998) but also those brought about by sudden changes in the economic environment (Luu, 1999). Inversing the trend from specialization to diversification is not an easy task, given the specialized systems generally generate higher labour efficiency but it might be feasible if integration proves to be more profitable (Bosma *et al.*, 2005)

The foregoing concepts of diversification mainly focus on technology, market rationale and risk reducing strategy for livelihood security. Institutional, economic and social constraints such as unfavorable policies, higher marketing cost and limited access to credit and information also play a decisive role in the diversification process and are often underestimated and overlooked. These constraints not only impede the diversification process but also overall agricultural production. The present study was conducted in the Mirzapur District of Uttar Pradesh with a purpose to identify institutional, social and economic constraints that impede diversification of crops and enterprises in rural areas.

Table 1. Socio-economic Profile of selected Farmers in Mirzapur

Selected Block	Family size (No.)	Holding size (Ha)	Passed High school	Agiculture sole source of livelihood	Herfindal Index for Crop Diversification
Pahari	7	4.25	67%	33%	0.41
Manjhawa	5	4.75	65%	30%	0.43

Methodology

Mirzapur is located between the parallels of 23.52 °& 25.32 ° North latitude and 82.7 ° and 83.33° East longitude. This district was purposively selected for this study because the economy of the district is predominantly agrarian but as proximity to the cities of Varanasi and Allahabad, which act has potential markets for the produce of the district and could boost diversification of agriculture. The district has twelve developmental blocks out of which two blocks namely Pahari and Manjhwa were selected randomly for the study. Two villages from each block were selected randomly and a total of 30 farmers were selected using random sampling procedure for detailed interview. Thus a total of 180 farmers were interviewed for the study between June 1,2009 to May 31st, 2010. Descriptive information, farm Characteristics and farmers' perception about constraints to diversification were examined with the help of open ended questions. Constraints pertained to institutional, economic, information-related and social issues. Crop Diversificationwas examined with the help of Herfindhl Index (HI) as given below:

$HI = \sum P_i^2$ where P_i proportionate area of the ith crop in the gross cropped area. The index approaches towards zero for higher level diversification and 1 for prefect specialization.

Result and Discussion

The socio-economic profile presented in Table 1 shows that in spite a better level of education of farmers, dependence on agriculture was very high in the district. This shows ample scope for skill development even within agriculture so that farmers could take allied agri-activities such as protected cultivation, apiary and dairy. The level of diversification was not found to be very high as indicated by the index and showed scope for further diversification.

It was hypothesized that the constraints which impede development of agriculture could also hinder growth in diversification in rural areas. These constraints were categorized into four groups for the purpose of presentation. The groups were – institutional and informational constraints, communication and marketing constraints, economic constraints and social constraints. Results based on farmers' survey have been presented in Table 2 through Table 5.

Table 2. Credit and information constraints faced by the sample farmers in Mirzapur

S. No.	Particulars of the Constraints	Per cent of respondents (n=120)
1	Lack of educational and training facilities	72.20
2	Scarcity of technical knowledge	46.70
3	Scarcity of commercial and cooperative banks	41.10
4	Lack of informal and formal discussion groups	30.00
5	Gram Panchayat's ineffective role in agricultural diversification	43.30
6	Lack of effective community leaders in the village	40.30
7	Lack of microfinance agencies and self-help groups	35.20
8	High rates of interest of private money lenders	31.90
9	Procedural complications with commercial banks	38.50
10	Non-availability of credit on time	56.90

A perusal of Table 2 shows that lack of educational and training facilities was the most important constraint faced by farmers followed by scarcity of technical knowledge. It shows lack of skill development in modern agriculture as well as inadequate extension services available to the farmers. Access to financial services, particularly institutional sources of finance

was another constraint. Lack of farmers groups, ineffective community leadership and lack of self-help groups were other major constraints as reported by farmers. It may be mentioned that social capital and source of information plays a very significant role in changes to a farming system. Social networks, local government (Gram Panchayats) and friends and relatives play a significant role in information dissemination regarding prices and market (Bosma *et. al*, 2005).

Table 3. Communication and Marketing Constraints for sample farmers of Mirzapur

S. No.	Particulars	Per cent
1.	No facilities for processing and value addition	47.80
2.	Lack of input market facilities in the village	42.90
3.	Lack of all season road to the nearest market	35.50
4.	Output market is far away	42.20
5.	Non–availability/very low frequency of transport means e.g vehicles	41.20
6.	High marketing cost	39.60
7.	Lack of amenities in market including toilets and drinking water	78.00
8.	Cheating and malpractices by middlemen in the market	41.80

Marketing is the most important decision for earning higher income. Constraints related to marketing have been presented in Table 3. Lack of facilities for processing and value addition was the most important factor that hindered diversification to vegetables and fruits. Distance of market for inputs and outputs was other factor were found place in the priority list of farmers. Ilbery (1991) shows that proximity of villages to main roads and urban hubs increases the probability to take up a diversification activity. He reasons that better access to the market makes marketing and customer binding more efficient. High marketing cost and exploitation by the middlemen still persists in the agricultural marketing system which needs to be taken care of.

The economic constraints identified by respondents are presented in the Table 4. Inappropriate technology which included poor seeds and unavailability of trained personnel were the most important constraints to diversification felt by farmers. This

Table 4. Economic constraints faced by the sample farms in the study area

S.No.	Particular	Per cent
1	Non-availability of labour for loading and unloading	52.00
2.	Non-availability of agricultural inputs on time	52.00
3.	Non availability of labour	54.72
4.	Lack of knowledge about price and market information	36.70
4	Volatile market prices	31.10
5	Low price of the commodity in the village	60.00
6	Higher cost of agricultural inputs	52.00
7.	Lack of irrigation facilities	56.70
8.	Unavailability of trained personnel	69.20
9.	Inappropriate technology	53.30

reinforces the finding of inadequate skill development in the region regarding high value agriculture. The other important constraints were non-availability of labour, non-availability of inputs on time and volatile market prices. Exploitation of farmers was also in the form of low prices being paid by village traders to farmers. Due to low marketable surplus it becomes uneconomical for farmers to individually go the market for selling the produce. This can be overcome by group marketing by farmers (Birthal, 2008).

Table 5: Social constraints faced by the sample farms in the study area

S.No.	Particulars	Per cent
1	Lack of participation in socio-cultural societies	38.90
2	Attachment to traditional farming	45.60
3	Poverty	52.20
4	Resistance in adoption of new technology due to fear of failure	44.40
5.	Bribery and leakages in subsidies	24.40

Social constraints to diversification are presented in Table 5. It can be seen that poverty was the most important factor for trying alternative farming systems due to lack of risk bearing ability and investment resources. Such condition was aggravated by high rate of interest by private money lenders and inaccessibility to institutional sources

of finance. Risk-averse behavior was also shown by the attachment to traditional farming and fear of failure. Extension activities and removal of leakages in subsidy schemes could help improve the adoption of new crops and cropping systems.

Conclusion

In this paper, we have examined the constraints to agricultural diversification in Mirzapur district of Uttar Pradesh using primary level data for the period June 2009 to May 2010. Different constraints were grouped into institutional, marketing, economic and social constraints and found that these constraints played a significant role in the growth of agricultural diversification in the district. Lack of educational and training facilities deprived farmers from acquiring skills in modern agriculture. Non-availability of labour, credit and other inputs on time were found to be other constraints. Marketing related problems and farmers' attachment to traditional farming systems were also found to be affecting the diversification process. It was suggested that institutional sources of finance and organized /group marketing by farmers be encouraged for overcoming these problems.

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