Study No.167

Impacts and Constraints Evaluation of Organic Farming in West Bengal

Executive Summary

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2011

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Introduction

Organic agriculture is one of several approaches to sustainable agriculture and many of the techniques used (e.g. inter-cropping, rotation of crops, mulching, integration of crops and livestock) are practiced under various agricultural systems. The basic rules of organic production are that natural inputs are approved and synthetic inputs are prohibited.

Objectives of the study

- To study the status of organic farming in West Bengal;
- To study the comparative economics of crop production under organic and inorganic farming;
- To study the impact of organic farming in relation to quality of produce and price premium;
- To study the farmers' awareness regarding organic farm practices;
- To study the constraints in adoption of organic farming.

Database and Methodology

The study has been confined to **two districts** i.e. one from southern part (North 24 Parganas district) and another from northern part (Jalpaiguri district) of West Bengal. In the second stage, **four blocks**, two from each district have been selected purposively. Among the selected blocks, government agency is working in two blocks. NGOs are working in other two blocks. In the next stage, **four villages**, one from each block has been selected. Among the four villages, government agriculture department is working in two villages (bio-village, selected purposively) and NGOs are working in another two villages (selected randomly).

Selection of farmers

All the farmers have been sub-divided into four categories based on size of land holdings viz., (i) sub-marginal (below 0.50 ha), (ii) marginal (0.51 ha to 1.00 ha), (iii) small (1.01 ha to 2.00 ha) and (iv) medium (2.01 ha to 4.00 ha). There is no big farmer in the study area. In the next stage, 30 farmers i.e. 15 each from organic and inorganic farms have been selected from each village based on simple random

sampling with proportional allocation. Thus, all total 120 farm households have been selected for in-depth study.

Methods of data collection

The primary data have been collected by personal interview using pre-tested survey schedule specially prepared for this purpose. The reference period of the study is 2009-10. Different aspects of farm operation have been obtained for both organic and inorganic farming systems. These aspects are (i) record of organic farmers indicating the number of years engaged in organic practices, (ii) season wise record of crops both in organic and inorganic farms, (iii) input and output record of both organic and inorganic farms, (iv) cost of cultivation as well as cost of production record for different crops of both group of farmers, (v) record of price received from sale of products in market and (vi) input uses record both in organic and inorganic farms.

Measurement of variables

On the basis of extensive review of studies and consultation with the experts, the relevant variables associated with the adoption and non-adoption of organic farming were identified. The variables related to adoption of organic farming are measured on the basis of 5-point scale following the scoring method as very strong = 5, strong = 4, medium = 3, low = 2 and nil = 1. Similarly, the variables related to non-adoption of organic farming are measured as very strong = 1, strong = 2, medium = 3, low = 4 and nil = 5.

Results and Discussions

The discussion on characteristics of sample farmers has focused on the aspect that farming is the earning sources of more than 86 % of the total income for all the sample households in both the farming system in the study area. So, all the sample households are involved in subsistence farming.

- **Status of organic farming in West Bengal**

Number of organic farms has been extended to 37.32 per cent and 24.34 per cent in North 24 parganas district and 47.24 per cent and 18.59 per cent in Jalpaiguri district compare to the number of farms at the beginning stage in NGO and Government area, respectively. The overall increase in area under organic farming has been found to be 6.57 per cent and 6.14 per cent in North 24 Parganas district and 2.12 per cent and 3.77 per cent in Jalpaiguri district for NGO (in more than 10 years) and Government (in 5 years) activity area respectively.

- **Comparative economics of crop production under organic and inorganic farming**

Economics of organic vis-à-vis inorganic farm practices of six crops under study may be summarized as, though cost of cultivation was higher and production was lower in organic than inorganic system for lady's finger, potato and chilli, but price of the organic product was higher than inorganic in the study area. This was resulted a favorable return / cost ratio for organic farming system. The return / cost ratio of organic cowpea was higher than inorganic cowpea in NGO area. This was happened due to higher price of organic cowpea. In case of brinjal, though production was lower and cost of cultivation was higher in organic system, but as the price of organic product was higher than inorganic product, return/cost ratio for both organic and inorganic farming system was more or less same. The same fact was replicated for cauliflower in NGO area, but in Government area organic cauliflower exhibited lower production and same price with inorganic product and lower but favorable return / cost ratio.

- **Impact of organic farming in relation to quality of produces and price premium**

From the above observations of 4 selected study area, it appear that in organic farming system, market price for organic produce is one of the most effective tools for reducing the disparity of income between organic and inorganic farming. As compared to market area, the impact level of price has been found lower for Government activity area than NGO activity area. Perhaps it was the result of more intensive campaigning regarding consumers' awareness and the quality of organic farm products by the NGOs.

- **Farmers' awareness regarding organic farm practices**

Organic farmers in both NGOs and Government area were not motivated like a layman to adopt organic technology in their farm. But it was observed in the study that the organic farmers were much aware regarding good quality of organic product, beneficial role of organic crops in human health, high profitability of organic farming than other system, etc.

- **Constraints in adoption of organic farming**

There are seventeen constraints found to be dominating in non-adoption of organic farming in these study areas. Among these, the constraints like high cost of organic inputs, no market for organic product, unavailability of organic inputs , less yield and no price advantage for organic product are found to be the major constraints according to their ranking as first, second, third, fourth and fifth. The next important constraints are found to be no consumers demand for organic product. According to the ranking, the seventh position is obtained by less or equal profitability. Small holding size, inconvenience of organic techniques, unavailability of the scope, higher production risk, no suitable land for organic farming are the next important constraints by obtaining the rank eighth, ninth, tenth, eleventh and twelfth, respectively. Lack of training of organic practices, more recurring cost for input are found to be the next

important constraints by obtaining the rank thirteenth and fourteenth. The other constraints in order to importance are lack of awareness, low employment potentiality and lack of experience of organic farming as these constraints obtained the rank by fifteenth, sixteenth and seventeenth. In regards to the relative importance of different constraints it is found that socio-economic constraints is the main hurdle followed by infrastructural, technological and situational in the process of adoption of organic farming.