Aurup Ratan Dhar

Enhancing Farmers' Livelihood Through Adoption of Conservation Agriculture

A Socioeconomic Study

Master's Thesis

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ENHANCING FARMERS' LIVELIHOOD THROUGH ADOPTION OF CONSERVATION AGRICULTURE: A SOCIOECONOMIC STUDY

A Thesis

By

Aurup Ratan Dhar

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DEDICATED TO

MY BELOVED MOTHER

ABSTRACT

The research was conducted to evaluate the impact of practicing conservation agriculture on farmers' livelihood enhancement in two districts of Bangladesh. A total of 120 farmers (20 from focal and 100 from control group) were surveyed from Jamalpur and Bogra districts for collecting necessary data and information. An amalgam of descriptive statistics, mathematical and statistical analyses was used to analyze the data. It was seen that 80.0 and 39.0 percent focal and control farmers, respectively had basic knowledge about conservation agriculture. Majority of the farmers (35.0 percent) were within the late majority group in terms of adopting this farming practice. The benefit cost ratio (BCR) of focal and control farmers in wheat and bean production were increased to 2.67 and 2.20, and 2.77 and 2.57 from 2.16 and 2.06, and 2.30 and 2.38, respectively after practicing conservation agriculture which indicated an increase in net return from crop farming. According to Enyedi's crop productivity index, crop productivity of focal farmers in response to the entire region was moderately lower compared to control farmers, but it was expected to increase in the next years of crop production if practicing conservation agriculture would be continued. It was evident from percentage perception index (PPI) that most of the focal farmers (65.0 percent) experienced improved environmental condition after adopting conservation agriculture but in case of control farmers, this context was not in favour of them. The estimates of logistic regression model showed that five (05) out of eight (08) explanatory variables included in the model were found significant in explaining the variation in adopting conservation agriculture practice by the farmers which were educational level of household head, farm size, farm income, extension contact and farming experience of the farmers. Average annual income of focal and control farmers was increased by 9.6 and 6.0 percent, respectively after adopting conservation agriculture. The estimated results of difference-in-difference (DID) analysis showed that average annual farm income, non-farm income, total income and total expenditure were Tk. 2466, Tk. 1793, Tk. 4259 and Tk. 393, respectively, where most of the values were statistically significant that indicated a significant impact of conservation agriculture practice on farmers' average annual income and expenditure. From multidimensional poverty index (MPI), it was reflected that 24.6 and 45.8 percent focal and control farmers, respectively were deprived of all the index indicators of a single dimension or at a combination of the indicators across dimensions. On the contrary, 75.4 and 54.2 percent focal and control farmers, respectively were privileged of the indicators which implies a better livelihood condition of the focal farmers for practicing conservation agriculture. The major problems faced by the farmers included lack of good quality inputs, high price of inputs, lack of knowledge on conservation agriculture practice, less production due to minimum tillage, lack of extension service, etc. Considering the research findings, some crucial policy recommendations have been arisen which are: input support and extension services should be properly implemented, and initiative for scientific and technical training programmes should be arranged by different government and non-government organizations to enrich the knowledge of the farmers on conservation agriculture practice.

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The Author

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