

Conservation Agriculture Practice in Bangladesh: Farmers' Socioeconomic Status and Soil Environment Perspective

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Abstract : The study was conducted to assess the impact of conservation agriculture practice on farmers' socioeconomic condition and soil environmental quality in Bangladesh. A total of 450 (i.e., 50 focal, 150 proximal and 250 control) farmers from five districts were selected for this study. Descriptive statistics like sum, averages, percentages, etc. were calculated to evaluate the socioeconomic data. Using Enyedi's crop productivity index, it was found that the crop productivity of focal, proximal and control farmers was increased by 0.9, 1.2 and 1.3 percent, respectively. The result of DID (Difference-in-difference) analysis indicated that the impact of conservation agriculture practice on farmers' average annual income was significant. Multidimensional poverty index (MPI) indicates that poverty in terms of deprivation of health, education and living standards was decreased; and a remarkable improvement in farmers' socioeconomic status was found after adopting conservation agriculture practice. Most of the focal and proximal farmers stated about increased soil environmental condition where majority of control farmers stated about constant environmental condition in this regard. The Probit model reveals that minimum tillage operation, permanent organic soil cover, and application of compost and vermicompost were found significant factors affecting soil environmental quality under conservation agriculture. Input support, motivation, training programmes and extension services are recommended to implement in order to raise the awareness and enrich the knowledge of the farmers on conservation agriculture practice.

Keywords : conservation agriculture, crop productivity, socioeconomic status, soil environment quality

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