AN ECONOMIC ANALYSIS OF ZERO-TILLAGE WHEAT PRODUCTION IN EASTERN UTTAR PRADESH, INDIA

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ABSTRACT

Conservation agriculture saves the cost of irrigation, energy and protects the environment while leading to improved productivity on a sustainable basis. The present study was an attempt to analyze the farm-level impact of zero-tillage wheat production in Kaushambi district of Uttar Pradesh. Purposive random sampling is used for the selection of blocks, village and respondents for collecting primary data. Zero-tillage adopters and non-adopters were taken as a respondent in the cultivation of the wheat crop. Inputs cost and yield differences of zero-tillage adopters and non-adopters were used to analyze the economic benefits associated with zero-tillage and saving of diesel for land preparation and sowing of the wheat crop was used as environmental benefits of zero-tillage. A study revealed that per hectare, cost of cultivation was reduced by Rs. 7228 and yield were increased by 5.9 quintals under zero tillage as compared to conventional method of wheat cultivation. From the adoption of zero-tillage, per hectare diesel was saved by 28.4 liters and therefore, 73.9 kg carbon dioxide (CO₂) and 19.9 kg carbon were reduced. Among some constraints, important first four ranks were assigned to weed problem on farmers’ field, poor soil quality, upland area and uncertainty of irrigation. A study suggested that the government should provide subsidy on the zero-tillage machine. It will enhance the availability of machine in the study area and it will also reduce the cost of hiring the zero-tillage machine. By adoption of zero-tillage for the wheat sowing be beneficial in terms of yield gain, cost saving, energy saving, and environment protection and reduction in the import of diesel which ultimate cut down the foreign exchange.

KEYWORDS: Zero-Tillage, Cost of Cultivation, Garrett Raking & RCT

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