

Entry No. IRRC-0136

Category : International Rice Research Conference

Select Theme : Disruptive technologies and innovations

Endorsement email :

Keyword 1 : Agritech – Fintech connection

Keyword 2 : Public-private partnerships

Keyword 3 : Knowledge intensive agriculture

Title of Entry : The Economics of Adoption and Spread of Mechanical Rice Transplanters in Odisha, India

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Select only one type of presentation

: 15 minute oral presentation

Abstract

: Manual transplanting is a labor intensive traditional method of rice establishment practiced widely in Odisha. The rising cost of farm labor is an important driver for a trend towards increasing use of mechanical rice transplanters (RT) in recent years for labor saving. This trend is reinforced by the government-subsidized promotion of rice transplanter in the state of Odisha. However, the spread of rice transplanters is limited to some pockets only, with the area covered being less than two percent of the total rice area of the state. The paper is based on an analysis of state and district level sales data of rice transplanters in Odisha during 2010-2016, a review of government policies for RT promotion, and surveys of farmers (60 numbers), custom RT service providers(35 numbers) and owner user farmers (36 numbers) across seven coastal as well as inland districts in the state. High capital cost and low capacity utilization make the individual ownership of rice transplanter unviable despite the subsidy. Custom hiring, although potentially economically viable, has also not spread much due to a host of constraints that include high risk associated with the dominant rainfed ecology, poorly-developed custom hiring market, and poor technical performance of rice transplanters on farmers' field conditions. The paper concludes that the future expansion of rice transplanters in Odisha is critically dependent on local adaptation of imported rice transplanters for cost reduction and improved performance, and formulation of supportive policies that promote the development of a custom hiring market that can provide services tailored to farmer needs in a flexible manner in the dominant rainfed ecology of Odisha.

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