

Catalysing Conservation Agriculture Uptake in the Eastern Gangetic Plains of South Asia

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Abstract:

Conservation Agriculture (CA) has been promoted for decades in South Asia, with an increasing focus as a solution dense and persistent rural poverty in the Eastern Gangetic Plains (EGP). The EGP is distinct from the more agriculturally developed western Gangetic Plains (e.g. Punjab) and the adaptation, promotion and uptake of CA is different from what has occurred other parts of South Asia and globally.

CA can still be considered in its infancy in the EGP. To ensure the timely progression to wider dissemination and adoption of CA, we undertook a rigorous, theoretically structured and in depth qualitative assessment with more than 350 farmers and service providers across six locations in the Eastern gangetic plains (Sunsari, Nepal; Purnea, Bihar, India; Coochbehar and Malda, West Bengal, India; and Rajshahi and Rangpur, Bangladesh). Purposive sampling along the CA adoption pathway was employed to solicit information on farmer learning, evaluation and decision making on CA in the context of their broader farming systems. This furthers work presented under the same methodology at the 7th WCCA which was implemented in Africa, affording further opportunities for regional comparisons.

Key learnings have emerged from this work that have substantial ramifications to future spread, scaling and impact from CA in the EGP. These primarily revolve around key drivers of farmer interest in CA (labour scarcity at planning and increased success using herbicides), yet the inability for the vast majority of farmers in the EGP to invest in mechanisation equipment. As yet, growing demand has not led to appreciable increases in zero tillage services, a reflection of a focus primarily on agronomic research at plot and farm level and only limited research on, and success in promotion of, viable business models for zero tillage service provision.

Despite the potential scale bias, efforts must focus across the region on larger, more financially secure and risk-taking farmers who have the potential to invest in mechanisation equipment. These individuals, or those within farmer cooperatives, must be the backbone of future scaling efforts. Research must focus on ensuring profitable business models that entice investment in zero tillage equipment, particularly in the context of preceding investment on tillage equipment. Part of this also requires increased efforts to address seed gapping with maize, which has become more financially viable than wheat in the Rabi (winter) season. Our results also suggest that current entrepreneurs are focused more on scaling out to new geographies rather than scaling up within local communities, due to financial incentives of such expansion plans. The progress in increasing adoption is also variously increased (for increased subsidies and mandatory purchase of ZT equipment in West Bengal) to hampered (with government packaging of CA equipment in Bangladesh that makes individual

machines unaffordable) and will require further rethinking. These and many more recommendations developed through this study will help in the further spread of CA across the region.

Keywords: *Farmer perspectives; participatory assessment; South Asia; Conservation Agriculture;*