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Shifting gender roles in agriculture: Estimating the impact of a women-centric R&D programme in India

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Abstract

With the rapid structural transformation of the economy and the increased outmigration of male farmers, Indian agriculture has been increasingly feminized in the recent past. Nevertheless, the research-and-development (R&D) programmes in the field of agricultural and rural development often neglect to address the unique challenges that women farmers face in crop production and marketing. Furthermore, gender-sensitive socioeconomic research has revealed the intricate nature of intra-household decision-making and resource allocation, and that increased involvement of women in agriculture does not invariably ensure a better livelihood for them, especially when patriarchal norms and family relations remain strong. Women are often involved as unpaid family laborers than farm managers. Against background, the present study estimates the effects of an inclusive extension programme for women farmers of Odisha State, India. We aim to examine the changes in women's empowerment status as a result of their participation in a women-centric R&D initiative on sustainable intensification of rice-fallow systems. Maize was introduced with the help of demonstration trials, field days, and farmer training sessions, which were mediated through women's self-help groups (SHGs) to increase farm-household income in Mayurbhanj District. Using a cross-sectional dataset of 1,005 women farmers, the effects of the demonstration trials on maize adoption were obtained. Further, using a quasi-experimental approach with instrumental variables, we obtained the impact of maize adoption on women's empowerment, captured using the Abbreviated Women's Empowerment in Agriculture Index (a-WEAI). The analysis provided three broader lessons and implications for inclusive extension programmes on sustainable intensification of agricultural systems. First, targeted dissemination of new cash crops like maize is found to enhance women's agency in multiple ways. Second, implementing the R&D projects through SHGs is found to enhance women's active participation in group activities, which could improve their agency and control over production resources. Finally, gender-sensitive technology development and dissemination require a multi-pronged strategy to guide the agricultural R&D system for modifying institutional frameworks and mindset to promote gender-intentional sustainable intensification interventions. Increased investment and research focus are necessary to better understand and integrate gendered technology preferences into the broader sustainable intensification framework.

Keywords: Feminisation of agriculture, inclusive extension, maize