



Adept to Adapt: Closing the Gender Capacity Gaps for Scaling Up System of Crop Intensification

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Abstract

The system of rice intensification (SRI) has been introduced as an alternative system for growing rice with lesser inputs and water. Labour is one of the most crucial concerns in the adoption of SRI by farmers. The adaptation to newer methods of rice cultivation is presumed to be easier if the workforce is adept to adapt. The new skills needed to adopt SRI, are transplanting young and single seedlings and use of mechanical weeders. The present study was therefore, undertaken, to identify training needs of women farmers in SRI cultivation. Line sowing was perceived as a new skill to be acquired and rated as highly skilful. Close attention was needed by women farmers/labour to systematically plant within the square. The paper attempts to apply the components of the community capitals framework (CCF) developed by Cornelia and Jan Flora (2013), for closing the gender capacity gaps in the uptake and scaling up of SCI/SRI. The seven forms of capital in this framework are considered not only as individual capabilities and endowments but are viewed as collective resources and are to be considered in the specific order of natural, cultural, human, social, political, financial and built capital. In this paper emphasis is being given to build the Human and Social Capital for closing the gender capacity gaps for scaling up SCI/SRI. There is immense scope of harnessing the potential of training members of women's self-help groups (SHG) to form a SRI task force to help in the wide spread adoption of SRI by farmers

Keywords: gender capacity gaps, SCI, SRI, group approaches, scaling up

Introduction

The adoption of Sustainable Crop Intensification (SCI) and System of Rice Intensification (SRI) technologies is dependent on the farm and farmer attributes apart from the technological innovations. Farming system intensification efforts need institutional innovations to link farmers to markets and other support services apart from technological changes. Technological innovations need to be promoted taking into account the existing cropping systems, natural, social, and economic resource base, skill sets, and risk taking capacity of the farmers. Globally women play a vital role in the food systems as producers, processors, and food providers for the family and are more vulnerable to disruptions in the climate and food systems. The capacity of women farmers to adopt new technologies and cropping practices is constrained by their low access to economic and social resources. Identifying and closing the gender capacity gaps will facilitate the adoption of crop intensification technologies.

The System of Rice Intensification (SRI) is a set of good agronomic practices of growing rice by using less seed,

labour, land, and water. Farmers need technical support to adopt the SRI practices as SRI is knowledge-based (Styger *et al.*, 2011). Labour is very critical to the adoption of SRI and skill enhancement of labour for transplanting young and single seedlings is very important.

Capacity as defined by UNDP is the ability of individuals and organizations or organizational units to perform functions effectively, efficiently, and sustainably (UNDP 1998). The paper attempts to apply the components of the community capitals framework (CCF) developed by Cornelia and Jan Flora (2013), for closing the gender capacity gaps in the uptake and scaling up of SCI/SRI. The seven forms of capital in this framework are considered not only as individual capabilities and endowments but are viewed as collective resources and are to be considered in the specific order of natural, cultural, human, social, political, financial and built capital. In this paper emphasis is being given to build the Human and Social Capital for closing the gender capacity gaps for scaling up SCI/SRI.

Human capital entails the literacy level, skills, abilities and knowledge and gendered disparities that exist with

respect to human capital based on prevailing social norms. Women farmers in most of the developing countries are disadvantaged by lesser years of schooling due to various socio-economic reasons. Moreover, skills are taught by family members based on gender with emphasis on home care skills for girls even though they are employed in farm activities. With men migrating for work, more and more of the productive activities are being performed by women farmers. There is an urgent need for skilling of women farmers in SCI, SRI and climate resilient farm practices and technologies. The skills for agricultural activities are acquired by women farmers mostly informally and inter-generationally, through non-formal means and by attending semi-structured training programs organized by NGO, KVK (farm science centres), and agricultural universities/institutes (Soundarya and Nitya, 2022).

Social capital refers to the interactions among people, their shared norms and support groups. Of the two dimensions of social capital *viz* bridging and bonding, women form associations and collectives by using bonding social capital. The bridging social capital is used to link the local groups to receive technical support. The barriers to bridging and bonding social capital are influenced by cultural and political capital. The local bonding and bridging networks of women can be effectively targeted for community adaptation. Women's networks are mostly informal, and often ignored by external agencies providing assistance for adaptation. Capacity building of women's collectives is essential to build the resource base and skills of women farmers and prevent elite capture of training opportunities by male members of the community.

Capacity building approaches for scaling up SCI/SRI

Closing the gender capacity-building gaps for scaling up SCI/SRI is being proposed based on the community capitals framework (CCF) developed by Cornelia and Jan Flora (2013).

Building Human Capital: Training needs of women farmers in SRI cultivation

The gendered division of SRI activities has been reported by many researchers. Based on the training needs identified for SRI adoption (Waris, 2017) it is highly imperative to train women farmers in different aspects of SRI practices to build their knowledge and skills to ensure the widespread adoption of SRI. Farmers need to pay

more attention to crop establishment, the use of younger seedlings, the need for timely transplantation and timely weeding, and better water management (Ravindra and Bhagya Laxmi, 2011). Long-term and comprehensive skill-based training in the specific SCI/SRI activities are to be organized to build the capacity of women farmers

Creating a skilled SRI task force of women farmers

There are several constraints for farmers to shift to SRI. Some of these constraints can be overcome with training support. Subhashini *et al.*, (2013) opined that training a cadre of women labourers in every village can help spread SRI and also provide a good income for the women. The training institutions like, Krishi Vigyan Kendra, Farmers Training Centre, and other research institutes need to design skill-based training programs for labour to develop their expertise in pulling out and transplanting young seedlings. There is immense scope of harnessing the potential of training members of Women's Self-Help Groups (SHG) to form a SRI task force by

- Providing long-term and comprehensive skill-based training especially in line sowing and uprooting very young seedlings.
- Training a cadre of women laborers in every village can help spread SRI and also provide a good income for the women.

Building social capital: Group approaches to scale up SRI cultivation

The collective action of women SHG members could be harnessed for faster and widespread adoption of SCI/SRI as the group approach is being perceived to have the potential to reach women directly for the dissemination of improved technologies. There has been ample evidence to show that strong women's groups contribute substantially to the development and convergence of services and activities. Women farmers can be trained to supply skilled labour for seed preparation, nursery, transplanting, and also using mechanical weeder through the formation of SRI-SHGs

- Self Help Groups (SHGs) are playing a major role in poverty reduction and women's empowerment through financial inclusion.
- SRI can help them in meeting their food grain requirements along with the conservation of resources



- SHG monthly cluster meetings are an important avenue to train farm women in SRI practices
- Training of selected members from each SHG in batches

Gender norms, resources, and agency in innovation uptake

The design, development and promotion of improved technologies and interventions has to consider the differential needs, priorities and barriers faced by both men and women in the adoption of these technologies (Doss, 2001; Kingiri, 2010; WB, FAO, and IFAD, 2008). Moreover, a farmer's gender can affect the adoption of new technologies and crop varieties (Doss, 2001). Intra-household gender dynamics, responsibilities, knowledge level and position in the household also have an influence on the adoption/dis-adoption of technologies. Young women farmers, in the presence of older women at home may have very less or no agency in technology adoption decisions. Women farmers are constrained in adopting new technologies and interventions primarily due to restricting gender norms, lack of access to land, capital, credit and information (Krishna *et al.*, 2020; Nyasimi and Huyer 2017, and Zonibel Woods, 2022).

Gender targeting of extension and advisory services/remodeling the dissemination systems

Women farmers need to be provided with extension and advisory services as studies have indicated their positive influence on the innovativeness of women farmers (Badstue *et al.*, 2018). Acknowledging women as farmers and not as helpers of men farmers and counting them in the design of technological interventions is essential (Devkota *et al.*, 2015; Badstue *et al.*, 2020, Soundarya and Nitya, 2022). The lack of access to extension services by women farmers needs to be addressed to design programs based on their needs to upgrade their knowledge and skills (Zonibel Woods, 2022). Gender-specific barriers to technology adoption need to be studied for increasing the adoption of crop intensification practices and technologies.

Promoting labour-saving and productivity-enhancing technologies

The gendered division of agricultural activities necessitates the development of labour-saving and productivity-enhancing technologies for women. Socially and culturally

women have not been encouraged to use mechanical options in planting, weeding and harvest operations. With increasing feminization, the need for women-friendly implements is gaining traction and intensive training is to be imparted to women farmers for the use and repair of agricultural machines. Mechanized SRI operations have been demonstrated successfully and women farmers need to be trained in the use of machinery.

Gender-responsive information services and products

Women farmers often lack access to information and communication technologies like the internet, YouTube, mobile phones, and other social media options which hinders their ability to access information on SCI, SRI, climate-resilient practices and acquire skills and resources to use this information. The differential access to ICTs is primarily due to lower literacy levels, socio-cultural norms, and gendered division of labour. Bridging the gender digital divide may be attempted through roping in mobile service firms to provide low-cost handsets to women's groups as a part of their CSR initiative.

Conclusion

The adaptation to newer methods of crop cultivation is presumed to be easier if the workforce is adept to adapt it. Reskilling and upskilling programmes are important for the capacity building of women farmers due to the increasing feminization of agricultural work. More investments and customized training programs are needed for capacity building of women farmers to adopt SCI/SRI and other climate-resilient practices.

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