

Contribution of Rural Women to Enhance Organic and Sustainable Farming: A Review

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Abstract: The aim of the current review is to gather information from both online and offline sources regarding contribution of rural women to enhance organic and sustainable farming. In today's context, one of the most significant sources of renewable wealth in the world is indigenous agriculture. Organic farming is on the rise, and women play a vital role in that. Women in rural India are important to the progress of the rural economy. They play multiple roles as farmers, wage earners, and entrepreneurs. Women also care for the well-being of their family members and are responsible for providing food and care to the children and the elderly. In rural communities, agriculture and allied sector is the primary source of livelihood that includes 80 percent of all economically active women, out of which 33 percent constitute agricultural labour force and 48 percent are self employed farmers. Rural women are engaged at all levels of agricultural value chain; i.e., production-pre-harvest, post-harvest processing, packaging, marketing to increase productivity in agriculture. Organic farming is an agricultural method that uses fertilizers of natural origin. Different kind of natural products like compost manure, green manure, and bone meal etc. It originated early in the 20th century in reaction to rapidly changing farming practices. Organic farming continues to be developed by various organizations today. Use of bio pesticides (Biological pest control), mixed cropping and the nurturing of insect predators are encouraged. Organic and sustainable farming has the potential to create new structures that actively work towards achieving women's empowerment and protecting the use of indigenous knowledge. The present review complies the recent trends regarding various roles played by the women to enhance organic and sustainable farming.

Keywords: agriculture, organic farming, well-being, sustainable farming

Introduction - India is the second-most populous country in the world, with a large portion of its population residing in rural areas. Despite the rapid population growth, the people of India have maintained their cultural values and social norms. About 69% of the population lives in rural areas and women in these areas play a crucial role in economic development. Without their contributions, the country cannot achieve food security, Millennium Development Goals, socio-economic development, and sustainable development. Therefore, it is vital to recognize the important role that rural women play in the country's development and to provide them with support and opportunities to further their contributions to the nation's growth.

According to the 2011 Census, out of all the female primary workers, 55% are agricultural labourers and 24% are cultivators. However, just 12.80% of the operational land holdings are owned by rural women, reflecting the gender gap in land ownership in agriculture as well as the gap in access to financing resources, safe land titles, etc. Rural women can greatly increase farm output if they have equal access to the same resources as males.

Research suggests that women, including those in indigenous communities, can play a crucial role in environmental preservation. This is often achieved through their traditional knowledge and agricultural methods, which have been developed and refined over generations (Kennedy et al., 2017, Winniefridah and Manuku, 2013). In particular, indigenous women have a special relationship with natural resources and their cultures promote a balanced and respectful use of these resources to ensure their preservation for future generations.

Despite the important role that women and indigenous communities play in environmental preservation, many development schemes tend to ignore their needs and practices. This can result in a loss of traditional knowledge and practices, as well as a disregard for the importance of environmental preservation. To achieve sustainable development and promote environmental preservation, it is important to recognize and support the contributions of women and indigenous communities, and to work together to ensure that their knowledge and practices are valued and integrated into development schemes.

Rural women are responsible for managing complex households and pursuing multiple livelihood strategies. Their daily activities may involve various tasks, such as farming, raising animals, processing and preparing food, working in rural enterprises, collecting fuel and water, trading, and caring for family members while maintaining their homes (Ogato et al., 2009). Even though these activities are essential for the wellbeing of rural households, they are often not recognized as "economically active employment" in national accounts. As a result, the contributions of rural women to their households and the wider economy may be underestimated and undervalued. It is important to recognize and support the critical role of rural women in sustaining rural economies and promoting rural development. (Raney, T et al. 2011)

Globally, women farmers have been identified as playing a critical role in reducing world hunger. As new farmers, many women have turned towards organic farming practices with the goal of increasing access to food and improving nutrition for their families and local communities. Similar trends have been observed in North America and Europe, where women farmers have been found to work collaboratively and leverage their leadership positions to increase education, improve environmental health, and enhance food access in their communities. These findings suggest that women farmers are a valuable asset in the global fight against hunger and that their contributions should be further recognized and supported (Sarah Weston, 2018).

Organic farming can empower women and have positive effects on food security. Women who have control over resources like land and livestock have been found to optimize their use, leading to increased food production and improved nutritional health for their families (Madeley, 2002).

Women play a vital role in promoting sustainable development as consumers, producers, caretakers of their families, and educators. Their concern for the quality and sustainability of life for present and future generations is crucial. However, many women face discrimination, which limits their ability to fully participate in natural resource and environmental management. Factors such as a lack of training, lower status, limited land and property rights and lack of capital contribute to this limitation. To promote sustainable development, it is important to address these barriers and empower women to fully participate in natural resource management and environmental protection.

According to studies by the Food and Agriculture Organization (FAO), women are the mainstay of small-scale agriculture, farm labor force, and day-to-day family subsistence. However, they face greater challenges than men in accessing resources such as land, credit, and productivity-enhancing inputs and services. These challenges can hinder women's ability to effectively contribute to agricultural production and limit their potential for economic empowerment. Addressing these gender disparities in access to resources and services is crucial to achieving sustainable and inclusive agricultural development (Mbow, C.et.al, 2019).

In addition to providing food, a sustainable farming system should also maintain biodiversity, regulate climate, and provide ecosystem services including regulating water flow and water quality (Foley et al. 2005). In order to produce food in a way that is more environmentally friendly, organic agriculture was created as a farming method. Organic farming has been found to provide more environmental advantages than conventional farming on a per-area basis.

For over a decade, sustainable development has been a topic of great interest and accomplishment around the world. In order to achieve the goal of sustainable development, sustainable agriculture is essential. Sustainable agriculture refers to the effective management of agricultural resources to meet the ever-changing human needs while preserving or enhancing the quality of the environment and conserving natural resources. According to the Food and Agriculture Organization (FAO), sustainable agriculture is necessary to ensure that the agriculture growth rate can keep up with the demand for food without depleting vital resources. All definitions of sustainable agriculture share the common goal of maintaining an agricultural growth rate that meets the needs of all living beings while safeguarding our planet's natural resources.

One of the many methods used to achieve the goals of sustainable agriculture is organic farming. Numerous methods employed in organic farming, such as intercropping, mulching, and combining crops and livestock, are not new to other agricultural systems, including the traditional agriculture practised in ancient nations like India. However, Organic farming is a method of agriculture that is guided by laws and certification programs, which prohibit the use of synthetic inputs. The central focus of organic farming is the health of the soil, which is achieved through the use of natural fertilizers and crop rotation. Modern agricultural practices, on the other hand, rely heavily on technology and the use of chemical fertilizers and pesticides, which have negative effects on the environment and human health. These negative effects include soil erosion, water shortages, soil contamination, and genetic erosion. As a result, many people are beginning to question the use of these synthetic inputs and are turning to organic farming as a more sustainable and environmentally friendly alternative. (S.Narayan, 2005).

The International Federation of Organic Agriculture Movement (Willer et al 2008) has identified several key goals of organic farming. These objectives include producing high-quality food in ample amounts that is in sync with natural systems and cycles. Additionally, organic farming seeks to enhance biological cycles within the farming system by involving microorganisms, soil flora and fauna, plants, and animals. Organic farming also aims to maintain long-term soil fertility and preserve the genetic diversity of the production system and its surrounding plant and wildlife. Another critical objective of organic farming is promoting the healthy use and proper care of water resources and all life therein. Finally, organic farming seeks to create a harmonious balance between crop production and animal husbandry. Overall, these goals aim to create a sustainable agricultural system that protects the environment, promotes biodiversity, and produces healthy and nutritious food.

Food preparation and preservation have traditionally been carried out by women, which can lower food waste and boost food security. Through traditional methods such as drying, fermenting, and pickling, women have developed techniques to extend the shelf-life of perishable crops. Furthermore, women have actively participated in farmer-to-farmer extension programs, where they share their knowledge and skills with other farmers. These extension programs are crucial in promoting sustainable agriculture as they rely on local expertise and cater to the needs of small-scale farmers.

Conclusion- In conclusion, women have played a significant role in promoting sustainable and organic farming practices, bringing innovative ideas and solutions to address the challenges facing the agricultural sector. Their involvement has helped promote biodiversity, conserve natural resources, and improve food security and nutrition. Women have also been instrumental in the adoption of sustainable farming practices, working collaboratively with policymakers, researchers, and NGOs. However, women farmers continue to face several challenges, including limited access to resources and education. Addressing these challenges requires efforts from various stakeholders to promote gender equity in agriculture and empower women farmers to take on leadership roles in sustainable and organic farming.

References:

1. Altieri, M. A. (2002). Agroecology: the science of natural resource management for poor farmers in marginal environments. *Agriculture, Ecosystems & Environment* 93(1-3): 1-24.
2. Foley, J. A., DeFries, R., Asner, G. P., Barford, C., Bonan, G., Carpenter, S. R., & Snyder, P. K. (2005). Global consequences of land use. *science*, 309(5734), 570-574.
3. Narayan, S. (2005). Organic Farming in India: Relevance. *Problems and Constraints, occasional paper NABARD*.

4. Ogato, G. S., Boon, E. K., & Subramani, J. (2009). Gender roles in crop production and management practices: A case study of three rural communities in Ambo District, Ethiopia. *Journal of human ecology*, 27(1), 1-20.
5. Raney, T., Anríquez, G., Croppenstedt, A., Gerosa, S., Lowder, S. K., Matuschke, I., & Skoet, J. (2011). The role of women in agriculture.
6. Pandey, J., & Singh, A. (2012). Opportunities and constraints in organic farming: an Indian perspective. *Journal of Scientific Research*, 56(1), 47-72.
7. Winniefridah, M. and M. Manuku (2013), *Traditional Science of Seed and Crop Yield Preservation: Exploring the Contributions of Women to Indigenous Knowledge Systems in Zimbab.*
8. Lichtenberg, E. M., Kennedy, C. M., Kremen, C., Batary, P., Berendse, F., Bommarco, R., ... & Crowder, D. W. (2017). A global synthesis of the effects of diversified farming systems on arthropod diversity within fields and across agricultural landscapes. *Global change biology*, 23(11), 4946-4957.
9. Sarah West, 2018. How organic farming empowers women. Posted under Better Planet.
10. Mbow, C., Rosenzweig, C., Barioni, L. G., Benton, T. G., Herrero, M., Krishnapillai, M., & Xu, Y. (2019). Food security.