

The Untapped Potential of Women in Agriculture

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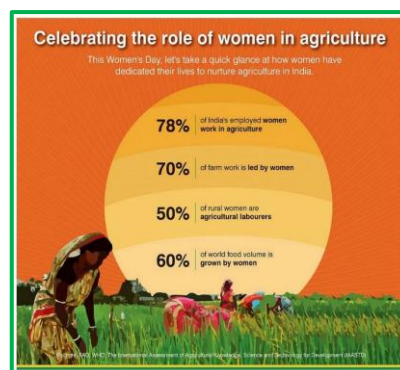
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When we think about a farmer, the first image that often comes to mind is a man standing in a field. But look closely at any farming village, and you will see another important picture. Women are sowing seeds, transplanting seedlings, removing weeds, harvesting crops, feeding cattle, managing poultry, sorting grains, drying vegetables, processing food and even selling farm products in local markets. Women have always been a part of agriculture. In many rural families, they work from early morning until late evening, contributing to both farming and household responsibilities. Yet, their contribution is often not fully recognized. This is one of the biggest untapped opportunities in agriculture today. Women are not just helping farmers. Women themselves are farmers, farm managers, entrepreneurs, innovators and decision-makers. If they are given better access to land, technology, finance, education, machinery and markets, they can play an even bigger role in transforming agriculture and rural communities.



Women: The Backbone of Rural Agriculture

Agriculture involves much more than simply ploughing a field and harvesting a crop. There are many activities before and after cultivation, and women are involved in a large part of this work. In rice cultivation, for example, women are often involved in nursery preparation, transplanting, weeding and harvesting. In vegetable farming, they may be involved in seed selection, nursery raising, harvesting, grading and marketing. In livestock farming, women frequently take responsibility for feeding animals, cleaning sheds, collecting milk and caring for young animals. The same is true for many other agricultural activities. Women also play an important role in post-harvest management. Cleaning, drying, sorting, grading and storing agricultural products may appear to be small tasks, but they are essential for maintaining quality and reducing losses. In many households, women are also responsible for deciding how food is stored, processed and used. This means that their contribution extends from **farm to plate**. However, much of this work is unpaid or treated as part of household duties. As a result, the actual economic value of women's contribution is often difficult to see.



More Than Agricultural Labour

One important change that agriculture needs is a change in the way we think about women working on farms. A woman who spends eight hours transplanting rice is often called a labourer. But what if she also selects the seed, decides which crop to grow, manages livestock, keeps records of farm expenses and helps sell the produce? She is not simply a farm worker. She is a farmer. The word "farmer" should not depend only on whose name appears on a land document. Farming is also about knowledge, labour, responsibility and decision-making. Recognizing women as farmers can help them access agricultural services, training, credit, insurance, technology and government support. This recognition is especially important because many women work on family farms but have limited control over the land or income generated from it.

The Problem of Land Ownership

Land is one of the most important resources in agriculture. It provides security and can help farmers obtain loans and invest in their farms. However, women in many parts of the country still have less access to land ownership than men. When a woman does not own or have secure rights over agricultural land, it can become more difficult for her to obtain formal credit, make independent farming decisions or invest in long-term improvements. This does not mean that women lack farming knowledge. Quite often, they have considerable practical experience. The problem is that knowledge without access to resources can limit what a person is able to achieve. Giving women stronger rights over land and including them in land records can therefore be an important step towards strengthening their position in agriculture.

Technology Can Change the Picture

Agriculture is changing rapidly. Smartphones, digital advisory services, drones, precision farming, improved irrigation systems and modern machinery are becoming increasingly common.



Women farmers should not be left behind in this transformation. A smartphone can provide information about weather conditions, pest attacks, crop prices and government schemes. Digital platforms can help farmers learn about new cultivation methods without travelling long distances. Modern machinery can also reduce physical labour. Consider activities such as weeding, harvesting or processing. These operations can be physically demanding and time-consuming. Appropriate machinery can reduce drudgery and allow women to spend more time on productive activities or education and entrepreneurship. But technology must be designed with women in mind. Machines should be affordable, easy to operate, safe and suitable for the size of farms where women commonly work. Training should also be provided in local languages. Simply introducing a machine is not enough. A technology becomes useful only when farmers can understand it, afford it and use it confidently.

Women and Climate Change

Climate change is already creating difficulties for farmers. Rainfall patterns are becoming less predictable in many areas. Heat waves, droughts, floods, changing pest patterns and water shortages can affect crop production. Women are deeply connected to farming and household food security, so they are also directly affected by these changes. At the same time, women can become important leaders in climate-resilient agriculture. Practices such as crop diversification, mixed farming, soil conservation, water-saving techniques, organic inputs, integrated pest management and the use of climate-resilient crop varieties can help farming families manage risk.



Women often have valuable traditional knowledge about local crops, seeds, livestock and natural resources. Combining this knowledge with modern agricultural science can create practical solutions for changing climatic conditions. However, climate change can also increase women's workload. When water becomes scarce, for example, collecting and managing water can become more difficult. When crop production declines, women may have to spend more time finding alternative sources of income. Therefore, climate-resilient agriculture should also consider the time, labour and needs of women.

From Farmers to Entrepreneurs

There is another major opportunity that deserves attention: agricultural entrepreneurship. Women do not have to remain limited to crop production. They can earn more by becoming involved in activities such as:

Food processing, Dairy and poultry farming, Mushroom cultivation, Beekeeping, Nursery raising, Seed production, Vermicompost production, Organic farming, Vegetable and flower cultivation, Pickle and spice production, Grain and pulse processing, Direct marketing of farm products. For example, instead of selling tomatoes immediately after harvest at a low price, a women's group could explore processing them into products with a longer shelf life. Similarly, women producing milk can move beyond selling raw milk and explore products such as curd, paneer or other value-added products where regulations, skills and market opportunities permit.



This is how women can move from being only producers to value creators.

The Power of Self-Help Groups

One woman working alone may face many difficulties. A group of women can have much greater strength.



Self-Help Groups have become an important part of rural development in India. Women can come together, save money, access credit, receive training and start small businesses. Working together can also improve their bargaining power. For example, if one farmer sells a small quantity of produce to a trader, she may have little influence over the price. If a group of women collectively produces, grades, packages and markets a larger quantity, they may have better opportunities to negotiate with buyers. Collective action can also help women access machinery and other resources that may be difficult for an individual farmer to purchase. This is why women's groups, cooperatives and Farmer Producer Organisations can become powerful tools for rural economic development.

Education and Agricultural Extension

Knowledge is one of the most valuable resources in farming. Farmers need information about soil health, improved varieties, fertilizer management, pest and disease control, irrigation, post-harvest handling and markets. Women need equal access to this information. Agricultural extension programmes have traditionally reached men more easily in many rural communities. Women may face practical barriers such as household responsibilities, lack of transportation, social restrictions or simply not being invited to training programmes. Extension programmes should therefore make a deliberate effort to reach women. Training sessions at convenient locations and times, demonstrations in villages, mobile-based advisory services and women-focused farmer groups can help. Most importantly, women should not be

treated as passive recipients of information. Their own experience and knowledge should be included in agricultural discussions.

Financial Independence Matters

Access to finance is another major challenge. A woman may have an excellent idea for starting a small agricultural business but may not have enough money to purchase equipment, inputs or raw materials. Affordable credit and financial literacy can make a significant difference. Women need to understand not only how to open a bank account but also how to use formal credit, insurance, digital payments and savings products responsibly. Financial independence can also strengthen women's position within the household. When women earn an income from agriculture or an agricultural enterprise, the benefits often go beyond the individual. Income may be used for children's education, better nutrition, healthcare, farm investment and household improvements. In this way, women's economic empowerment can become family empowerment.

The Role of Young Women

The future of women in agriculture will also depend on young women. Many rural young people are moving away from agriculture because they see farming as physically difficult, financially uncertain and less attractive than other careers. But agriculture today is changing.



Young women can build careers as agronomists, agricultural scientists, food technologists, farm managers, entrepreneurs, extension professionals, drone operators, digital agriculture specialists and agri-business owners. A young woman with agricultural education and access to technology can combine scientific knowledge with local farming experience. She can use social media to market farm products, digital platforms to reach customers and modern tools to improve production. Agriculture should therefore be presented to young women not simply as traditional field work, but as an industry full of science, business, technology and innovation.

The Opportunity We Cannot Ignore

For decades, the contribution of women to agriculture has often been described as a "helping hand." It is time to change that description. Women are not merely helping Indian agriculture. They are already carrying a significant part of it. The next step is to give them the opportunity to lead. Empowering women in agriculture can improve farm productivity, strengthen household incomes, create rural employment, support food security and encourage sustainable farming practices. It can also make rural communities stronger. The future of agriculture will certainly involve better seeds, advanced machinery, digital technology, artificial intelligence and climate-smart practices. But technology alone cannot transform agriculture. People transform agriculture and women must be at the centre of that transformation. The untapped potential of women in agriculture is not a distant possibility. It is already present in India's villages, fields, livestock sheds, kitchens, markets and small enterprises. All that is needed is the right support, the right opportunities and the recognition they deserve. When women farmers grow, families grow. When rural women prosper,

villages prosper. And when women lead agriculture, India's agricultural future becomes stronger, more inclusive and more sustainable

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