



Women in Agriculture: The Unsung Backbone of Indian Farming

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When we picture a farmer, the image that often comes to mind is of a man driving a tractor through the fields. Yet across India's vast agricultural landscape, the quiet hands that sow, weed, harvest, and nurture crops are most often those of women. From sun-soaked paddy fields in Kerala to the chilly apple orchards of Himachal, women have long been the invisible force sustaining Indian agriculture. They are cultivators, labourers, seed savers, and keepers of traditional knowledge — the true backbone of farming in India.

Invisible Yet Indispensable

Women contribute nearly 60–80% of the total agricultural labour in India. Specifically, women comprise 33% of the agriculture labour force and 48% of the self-employed farmers in India. They plant seedlings, transplant rice, collect fodder, care for livestock, process grains, and manage post-harvest activities. Yet their work frequently goes unrecognized — seen as an extension of household duty rather than as skilled, productive labour. While men may migrate to cities in search of non-farm jobs, women remain in villages, holding families and farms together. In many regions, agriculture has become “feminized”, with women managing everything from sowing to marketing. Despite this, their names rarely appear on land records or credit documents, depriving them of decision-making power and access to institutional support.

A Legacy Rooted in Tradition

For generations, Indian women have been custodians of seeds and soil. In traditional farming systems, they selected and stored the best seeds for the next crop — a practice that maintained genetic diversity long before the term “biodiversity” became popular. Women were the keepers of indigenous knowledge about soil fertility, pest management, and seasonal cycles. In tribal and hill communities, women still play a vital role in managing millets, pulses, and medicinal plants. Their understanding of mixed cropping, organic composting, and water conservation is often more sustainable than modern chemical-intensive methods. These traditional systems, passed down through oral traditions, represent centuries of ecological wisdom that continues to enrich rural life.

The Many Faces of Women Farmers

1. Cultivators and Labourers

A large proportion of women in rural India are either cultivators on small family farms or wage labourers on others' land. They perform some of the most labor-intensive operations — transplanting, weeding, threshing, winnowing, and harvesting. The repetitive, physically demanding nature of this work often leads to health problems, yet few safety measures or welfare schemes exist for them.

2. Seed Keepers and Knowledge Holders

Women have an innate connection with seed preservation. In many villages, community seed banks are run by women's groups that collect, clean, and exchange local varieties adapted to

their region. These women not only preserve biodiversity but also ensure seed sovereignty and resilience to climate shocks.

3. Livestock Managers

Livestock rearing — from milking cows to feeding poultry and goats — is another area dominated by women. The livestock sector contributes significantly to rural income, and women's role in animal care, fodder management, and milk processing adds to household food security and nutrition.

4. Entrepreneurs and Self-Help Leaders

In recent decades, women have stepped beyond the fields into agribusiness. Through self-help groups (SHGs), they engage in value addition — producing pickles, jams, coir mats, mushroom spawn, honey, and handicrafts. They manage dairy cooperatives, operate small nurseries, and even run custom-hiring centres for farm machinery. These enterprises provide livelihood and dignity, turning rural women into agents of economic change.

Barriers That Still Bind

Despite their immense contribution, women in agriculture face a web of constraints:

Lack of Land Ownership: Only about 13% of Indian women own agricultural land. Without legal ownership, they cannot access institutional credit, crop insurance, or government subsidies.

Limited Access to Technology and Training: Agricultural extension services and training programs often target male farmers, assuming they are the primary decision-makers.

Drudgery and Health Risks: Women work long hours, often without mechanized support. Tasks like manual transplanting or carrying heavy loads take a toll on their health.

Social Barriers: Cultural norms limit women's mobility and participation in formal markets or cooperatives.

Information Gaps: Lack of digital literacy and access to mobile-based advisories keeps many women away from real-time information about weather, prices, or pest alerts.

Bridging the Gender Gap

Empowering women in agriculture is not only a matter of equality but also of efficiency and productivity. Studies by the Food and Agriculture Organization (FAO) show that if women farmers had the same access to resources as men, farm yields could increase by up to 30%, significantly reducing global hunger.

1. Recognizing Women as Farmers

The first step is simple but crucial — recognizing women as farmers in their own right. Initiatives such as issuing Kisan Credit Cards and land titles in women's names give them a voice in decision-making. Several states now encourage joint land ownership between husbands and wives, promoting gender equity in land rights.

2. Tailored Training and Extension

Women-friendly training programs that accommodate their time, literacy level, and local context can make a big difference. Demonstrations on improved seeds, composting, or water management held at village levels attract more participation when women scientists and extension workers lead them.

The ICAR and Krishi Vigyan Kendras (KVKs) across India have introduced drudgery-reducing tools and women-centric modules to improve efficiency in tasks like weeding, milking, and threshing.

3. Access to Credit and Markets

Microfinance institutions and SHGs have transformed rural finance for women. Linking SHGs to producer companies or Farmer Producer Organizations (FPOs) helps women collectively market their produce, negotiate better prices, and invest in processing units. When women move from being labourers to entrepreneurs, they gain confidence, independence, and respect.

4. Technology that Eases Toil

Designing farm tools suited to women's ergonomics — lighter sickles, weeders, and transplanters — can significantly reduce physical strain. Mechanization targeted at smallholders, especially women farmers, enhances productivity while improving their health and safety.

5. Education and Digital Inclusion

Education remains the foundation for empowerment. Promoting digital literacy among rural women helps them access market prices, government schemes, and weather forecasts. Mobile apps and online platforms are slowly bridging this information gap, giving women farmers a new digital identity.

Stories of Strength from the Field

Across India, countless stories testify to women's resilience and innovation in agriculture.

In Odisha, a group of tribal women formed a millet growers' collective that revived forgotten local varieties and won national recognition for their biodiversity conservation efforts.

In Kerala, women self-help groups under the Kudumbashree Mission have turned barren plots into thriving vegetable gardens, ensuring both income and household nutrition.

In Maharashtra, women dairy entrepreneurs manage cooperatives, using mobile banking to handle daily transactions.

In Tamil Nadu, women engaged in mushroom cultivation and vermicomposting have become successful micro-entrepreneurs through training and credit support from agricultural universities.

These examples show that when women are given resources and recognition, they not only uplift themselves but also strengthen their communities.

Women and Climate-Smart Agriculture

Women are often the first to feel the impact of climate change — declining rainfall, degraded soils, and unpredictable seasons directly affect their livelihoods. Their adaptive capacity, however, is remarkable. Women-led groups in several states are now adopting climate-smart practices such as rainwater harvesting, integrated farming, and organic composting.

They play a crucial role in spreading awareness about sustainable agriculture, conserving seeds of drought-tolerant varieties, and managing community nurseries. Integrating women's traditional ecological knowledge with modern science can lead to resilient and climate-adaptive farming systems.

Policies and Pathways Ahead

Recognizing the pivotal role of women, the Government of India has launched several initiatives:

The Mahila Kisan Sashaktikaran Pariyojana (MKSP) under the National Rural Livelihoods Mission aims to empower women farmers through capacity building and collective action.

The ICAR-Central Institute for Women in Agriculture (CIWA) at Bhubaneswar focuses on research and policy interventions for gender mainstreaming in agriculture.

Various state missions promote drudgery reduction tools, livestock management training, and entrepreneurship among women farmers.

Yet, the road ahead calls for stronger implementation, gender-sensitive budgeting, and inclusive decision-making at all levels — from village panchayats to national policy boards.

Beyond the Fields: The Changing Narrative

The definition of a "farmer" is evolving. Today's women farmers are not just cultivators — they are leaders, innovators, and entrepreneurs. They manage climate risks, adopt new technologies, and mentor others through community networks.

Young educated women are returning to villages, introducing hydroponics, precision farming, and online agri-marketing platforms. Social media has become a tool for rural women to share experiences, promote products, and inspire others. This changing face of women in agriculture offers hope for a more inclusive and modern rural economy.

A Call for Recognition

The story of Indian agriculture cannot be told without honouring the women who have sustained it. Their work may be unseen, but it is deeply felt — in every grain of rice, every drop of milk, and every field that blooms under their care.

To truly achieve sustainable agricultural growth, we must place women at the centre of our policies, programs, and progress. Empowering them is not an act of charity — it is an investment in the nation's food security and social stability.

Conclusion: The Heartbeat of Indian Agriculture

Women have always tilled the land, saved the seeds, and fed the families. They may not always own the soil they work on, but their labour nourishes the nation. Recognizing their contribution is the first step toward equality; empowering them ensures the future of Indian farming. As India moves toward a new era of smart, sustainable, and climate-resilient agriculture, the hands that have always nurtured the soil must now also shape its destiny. For behind every green field and every harvest lies the strength, resilience, and silent courage of India's women — the true heartbeat of our agriculture.