



Gender-Inclusive Extension Approaches in Agriculture

**Kadari Kavyasree^{1*},
Pankaj Kumar²,
Anil Kumar³, Manjul Jain³**

¹Ph.D. Scholar, Department of
Agricultural Extension and
Education, PJTAU Rajendra
Nagar- 500086

²Farm manager, Agricultural
Department, Lala Ram Gopal
Vaidik Shodh Sansthan (Amar
Singh College Lakhaoti
Bulandshahr) U.P.- 203001

³Assistant Professor, School of
Agriculture, Eklavya University,
Damoh, Madhya Pradesh-
470661



Open Access

*Corresponding Author
Kadari Kavyasree *

Article History

Received: 15. 2.2026

Revised: 20. 2.2026

Accepted: 25. 2.2026

This article is published under the
terms of the [Creative Commons
Attribution License 4.0](https://creativecommons.org/licenses/by/4.0/).

INTRODUCTION

Agricultural extension plays a crucial role in transferring knowledge, technologies, and innovations from research institutions to farmers. Traditionally, extension systems have largely focused on male farmers, often overlooking the vital contributions of women in agriculture. However, women constitute a significant proportion of the agricultural workforce worldwide, particularly in developing countries. They are actively involved in crop production, livestock management, post-harvest processing, seed selection, and household food security.

Despite their substantial contributions, women farmers often face limited access to land, credit, training, inputs, markets, and decision-making platforms. These gender disparities reduce agricultural productivity and hinder rural development. Therefore, gender-inclusive extension approaches are essential to ensure equal access to information, resources, and opportunities for both men and women in agriculture. Gender-inclusive agricultural extension refers to strategies, policies, and practices that recognize and address gender differences in access to resources, responsibilities, and constraints, ensuring equitable participation and benefits for all genders.

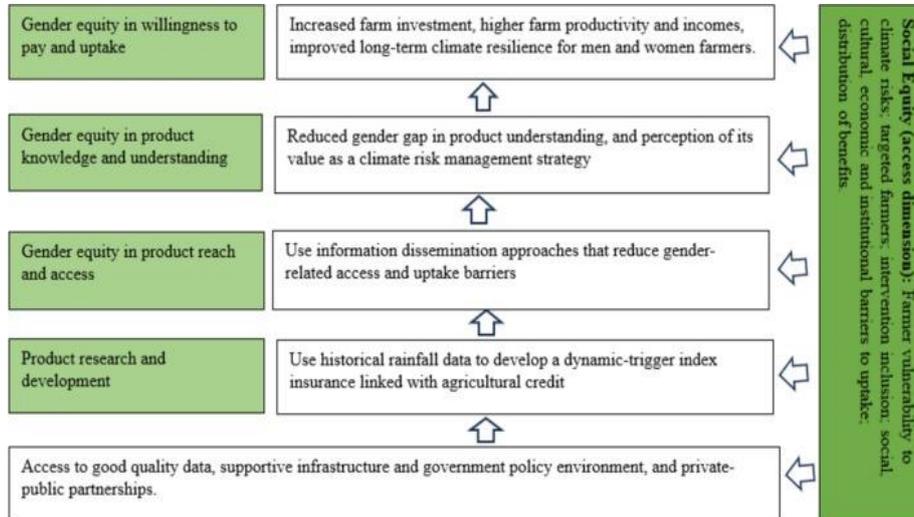
2. Concept and Meaning of Gender Inclusion in Agriculture

Gender inclusion in agriculture means acknowledging the socially constructed roles, responsibilities, and power relations between men and women, and designing interventions that reduce inequalities. It is not merely about increasing women's participation but about ensuring equal access to opportunities, services, and decision-making.

Agricultural extension services traditionally operated under the assumption that male household heads were the primary farmers. However, in many rural areas, women are either co-farmers or primary cultivators. Gender-inclusive extension recognizes women as farmers in their own right and tailors advisory services to meet their specific needs.

Key aspects of gender inclusion include:

- Equal access to training and capacity building
- Inclusion in farmer groups and cooperatives
- Access to credit, inputs, and technology
- Participation in leadership and decision-making
- Addressing time, mobility, and cultural constraints



Source: <https://www.sciencedirect.com/>

3. Importance of Gender-Inclusive Extension

Gender-inclusive agricultural extension is vital for achieving equitable growth and sustainable rural development.

3.1 Enhancing Agricultural Productivity

Ensuring equal access to land, inputs, credit, training, and technology for women farmers can significantly boost agricultural productivity. Studies indicate that when women receive the same resources as men, farm yields increase and overall production improves. Bridging the gender gap strengthens food security and enhances household income levels.

3.2 Improving Household Nutrition

Women are primarily responsible for food preparation and family nutrition in most rural households. Providing them with knowledge on

improved crop practices, kitchen gardening, and diversified farming enhances dietary diversity and promotes better health outcomes for families.

3.3 Poverty Reduction

Empowering women through extension services increases their participation in income-generating activities. Greater access to knowledge and markets improves economic independence, contributing to poverty reduction and financial stability.

3.4 Sustainable Development

Gender equality supports environmental conservation, climate resilience, and long-term agricultural sustainability. Inclusive extension strengthens community resilience and promotes balanced rural development.



Source: <https://elearning.fao.org/>

4. Barriers to Gender Inclusion in Agricultural Extension

Despite increasing policy emphasis on gender equality, several structural and social barriers continue to limit women's effective participation in agricultural extension services.

4.1 Socio-Cultural Norms

In many rural societies, traditional gender roles restrict women's mobility and public participation. Cultural expectations may discourage women from attending training sessions, interacting with male extension workers, or speaking openly in community meetings. These norms reduce their access to valuable agricultural information and innovations.

4.2 Limited Access to Land and Credit

Women often do not hold legal ownership of land, even when they actively cultivate it. Lack of land titles limits their eligibility for institutional credit, subsidies, and government support programs, thereby restricting their ability to adopt improved technologies.

4.3 Time Constraints

Women balance farm activities with household responsibilities such as childcare, cooking, and water collection. This heavy workload limits their availability to attend extension programs or field demonstrations.

4.4 Male-Dominated Extension Systems

Extension services are often staffed primarily by men, and training schedules may not suit women's needs.

4.5 Information Gaps

Extension messages delivered through male networks or evening meetings may fail to effectively reach women farmers.

5. Principles of Gender-Inclusive Extension

Gender-inclusive extension approaches are guided by certain key principles:

1. **Equity and Equality** – Ensuring fair access to services and resources.
2. **Participation** – Encouraging active involvement of women in planning and decision-making.
3. **Accessibility** – Delivering services at times and locations convenient for women.

4. **Capacity Building** – Strengthening skills and leadership abilities of women farmers.

5. **Context-Specific Design** – Considering local socio-cultural conditions while designing interventions.

6. Gender-Inclusive Extension Strategies

Effective gender-inclusive agricultural extension requires deliberate strategies that address the specific needs, constraints, and opportunities of both men and women farmers. The following approaches help create equitable and participatory extension systems.

6.1 Participatory Rural Appraisal (PRA)

Participatory Rural Appraisal (PRA) involves engaging community members—both men and women—in identifying agricultural problems, priorities, and possible solutions. Through group discussions, mapping exercises, seasonal calendars, and focus group meetings, extension workers can better understand gender-specific roles and challenges. PRA ensures that women's voices are heard in program planning and decision-making, resulting in more relevant and inclusive interventions. It also builds local ownership and strengthens community participation.

6.2 Women Farmer Groups

The formation of women's self-help groups (SHGs), cooperatives, and Farmer Producer Organizations (FPOs) empowers women through collective action. These groups provide platforms for knowledge sharing, skill development, savings, credit access, and market linkage. Group-based extension activities increase confidence and leadership skills among women farmers. Collective bargaining also improves their access to inputs and better market prices, strengthening economic empowerment.

6.3 Female Extension Agents

Recruiting and training female extension personnel enhances communication with women farmers, especially in regions where cultural norms restrict interaction with male officers. Female agents often better understand women's challenges and can provide tailored advice. Their presence encourages greater participation of rural

women in training programs and demonstrations, fostering trust and inclusivity.

6.4 Gender-Sensitive Training Programs

Extension programs should be designed considering women's literacy levels, time availability, and social responsibilities. Trainings may be organized at convenient times and locations, such as within villages. Use of practical demonstrations, visual aids, local language communication, and hands-on activities improves understanding and adoption of technologies. Providing childcare facilities during training sessions can also increase participation.

6.5 ICT and Digital Inclusion

Information and Communication Technologies (ICTs) offer innovative ways to reach women farmers. Mobile-based advisory services, community radio, video demonstrations, and digital platforms can provide timely information on weather, crop management, and market prices. Promoting digital literacy among rural women ensures they can access and benefit from these tools.

6.6 Household Approach

Encouraging joint participation of husbands and wives in extension activities promotes shared decision-making within households. This approach reduces gender bias, improves cooperation, and ensures that agricultural knowledge benefits the entire family.

7. Role of Policy and Institutions

Governments and institutions play a decisive role in mainstreaming gender equality within agricultural extension systems. Policy frameworks must explicitly mandate equal participation of women in training programs, demonstrations, farmer field schools, and leadership platforms. Clear guidelines and targets for women's inclusion help ensure that extension services do not unintentionally favor male farmers. In addition, dedicated budget allocations for gender-focused initiatives are necessary to implement inclusive activities such as women-specific training sessions, leadership development programs, and support for women farmer groups.

Monitoring and evaluation mechanisms should incorporate gender-disaggregated data to measure outreach, participation, adoption rates, and impact among men and women separately. Such data helps identify gaps and improve program effectiveness. Institutions should also adopt gender-sensitive indicators to assess empowerment, decision-making power, and access to resources.

Agricultural universities and research institutions have an important responsibility to integrate gender studies into extension education and training curricula. Sensitizing future extension professionals to gender dynamics ensures that they recognize the unique challenges faced by women farmers. Capacity-building programs for existing staff should also include gender analysis tools, communication skills, and inclusive planning methods. Strong institutional commitment is essential to create a supportive environment for gender-responsive agricultural development.

8. Gender and Climate-Smart Agriculture

Climate change poses serious risks to agricultural livelihoods, particularly for women who often have limited access to land, credit, irrigation, and climate information. Gender-inclusive extension is crucial for promoting climate-smart agriculture (CSA) practices that enhance resilience and sustainability.

Extension services can provide women farmers with access to drought-resistant and flood-tolerant crop varieties, water conservation techniques such as rainwater harvesting and micro-irrigation, and diversified cropping systems that reduce risk. Training in soil health management, agroforestry, integrated farming systems, and sustainable livestock practices further strengthens adaptive capacity.

By equipping women with knowledge on climate adaptation and mitigation strategies, extension systems help communities better cope with climate variability. Inclusive approaches also encourage women's participation in local climate planning and natural resource management committees. Empowered women contribute to improved household preparedness, resource

conservation, and long-term environmental sustainability.

9. Impact of Gender-Inclusive Extension

Effective gender-inclusive extension generates wide-ranging socio-economic benefits. When women gain equal access to agricultural knowledge and resources, farm productivity increases due to improved management practices and higher adoption of technologies. Increased productivity translates into improved household income and greater economic security.

Women's enhanced earnings often lead to better investment in children's nutrition, education, and healthcare, thereby improving overall family well-being. Inclusive extension also strengthens rural institutions by promoting participation, leadership, and collective action among women. Greater involvement in farmer groups and community organizations enhances social capital and cooperation.

Moreover, gender-inclusive approaches promote equality in household decision-making, reducing power imbalances and fostering mutual respect. Over time, such interventions contribute to long-term socio-economic development, poverty reduction, and reduced gender disparities in rural areas.

10. Future Directions

To strengthen gender-inclusive extension systems, strategic actions are required. Increasing recruitment and training of female extension personnel will improve outreach and trust-building with women farmers. Integrating gender analysis into all agricultural programs ensures that interventions address specific needs and constraints.

Promoting digital literacy among rural women enables them to access mobile advisories, market information, and climate forecasts. Encouraging youth and women entrepreneurship in agriculture, agribusiness, and value addition enhances income opportunities and innovation. Developing gender-responsive monitoring and evaluation systems ensures accountability and continuous improvement.

Sustained capacity building, institutional support, and active community engagement are essential to maintain inclusive agricultural growth. By prioritizing gender equality, extension systems can foster resilient, productive, and equitable farming communities.

CONCLUSION

Gender-inclusive extension approaches in agriculture are essential for achieving equitable, productive, and sustainable farming systems. Recognizing women as key stakeholders and ensuring their equal access to knowledge, resources, and decision-making platforms enhances agricultural productivity and rural development. By addressing socio-cultural barriers, promoting participatory methods, strengthening institutional support, and integrating gender-sensitive strategies, agricultural extension systems can become more inclusive and effective. Gender equality in agriculture is not only a matter of social justice but also a strategic pathway to food security, economic empowerment, and sustainable development.

REFERENCES

- James, B. Gender-Inclusive Agricultural Extension: International Perspectives on Women's Access to Training and Advisory Support.
- Lopez, D. E., Frelat, R., & Badstue, L. B. (2022). Towards gender-inclusive innovation: Assessing local conditions for agricultural targeting. *PLoS One*, 17(3), e0263771.
- Priya, N. K., Sivanarayana, G., & Roy, G. S. (2025). Designing Gender-Inclusive Extension Approaches for Women Empowerment. *New Frontiers in Agricultural Extension Strategies*, 156.
- Suryawanshi, D. Gender-inclusive Extension Strategies: Transforming Agricultural and Community Development. *Agriculture and Allied Sciences*, 73.
- Timu, A. G., Manoti, D., Shee, A., & You, L. (2024). Impacts of gender-inclusive extension approaches on farmer understanding and willingness to pay for bundled financial services. *Current Research in Environmental Sustainability*, 8, 100268.