

18. Women Empowerment Through Agriculture Extension Services

Dr. Ashwini P. Dangore

Ph.D. Holder, Department of Extension Education,
Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth,
Dapoli, Ratnagiri.

Dr. Ankita D. Chakranarayan

Assistant Professor, Department of Agril. Economics,
College of Agriculture, Dhule.

Mayuri S. Raut

Ph.D. Scholar, Department of Agril. Economics,
Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola.

Anil R. Kakade

Ph.D. Scholar, Department of Fruit Science,
Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth,
Dapoli, Ratnagiri.

Abstract:

Women play a vital role in agriculture in India, contributing significantly to rural and agricultural economies. They are involved in various key activities such as crop production, livestock management, seed selection, harvesting, and post-harvest processing. Despite their indispensable contributions, women face numerous challenges in being recognized for their efforts, including limited access to resources, land ownership rights, financial assistance and technology. In order to better support women's entrepreneurship and empowerment in the agricultural sector, regulations guaranteeing women's equal access to resources, land rights, and opportunities for education and training must be put in place. Additionally, providing tailored financial and technical support, such as access to credit and agricultural extension services, can increase the involvement and output of women in agriculture. Agriculture extension services can play a vital role in improving women's productivity, involvement and socioeconomic standing by providing them with access to relevant information, training, technologies and market linkages. With the help of these services, women will be more equipped to adopt modern farming techniques, increase their crop yields, enhance food security and bring in more money for their families. Potential advantages of empowering women through agriculture extension services are numerous and wide-ranging. By increasing women's productivity and involvement in agriculture, it can contribute to enhanced food security, improved family health and nutrition, poverty reduction and job creation. Moreover, empowered women can also contribute to the efficiency and effectiveness of extension services by serving as knowledge multipliers within their communities, thus fostering sustainable agricultural development.

Keywords:

Women, Agricultural extension service, Empowerment, Entrepreneurship development, opportunities

18.1 Introduction:

Women empowerment is a key to long term overall development of a nation. As time has gone on, it is generally recognized that national progress is impossible to attain without ensuring women's development. Thus, a rising number of organizations as well as the Indian government recognized that the most logical strategy for combating poverty and promoting sustainable development is to prioritize women's empowerment in the Ninth and Tenth Five-Year Plans. While advancing female agricultural workers can contribute to increased agricultural output, food security and nutrition, it also promotes a fundamental human right.

According to the Food and Agriculture Organization of the United Nations, developing nations can see a 2.5–4.0 % increase in agricultural output if male and female farmers had equal access to productive resources. Thus empowerment of women in agriculture as in any other sphere of development is demanding and challenging and involves overcoming barriers so as to enable her to improve and shape her life comfortably in a sustainable fashion.

Empowerment is a useful strategy to eliminate gender-based bias and promote gender equality. The prevalence of discrimination and subordination against women based on their gender is closely linked to their economic reliance. Therefore, one of the main prerequisites for raising women's social status is their economic empowerment. Women cannot be treated equally to males in all spheres of life unless they achieve economic independence or significantly contribute to the family's sustenance. The main strategies for empowering women center on giving them more control over their material resources and enhancing their roles as wage earners and workers by organizing, mobilizing, and granting access to support services.

Women's empowerment through agriculture extension services is a vital strategy in achieving gender equality and sustainable development. Agriculture extension services serve a significant role in providing information, training and support to farmers, especially women, to boost their production, income and overall well-being. Recognizing the substantial contributions of women in agriculture and the difficulties they confront, empowering them through extension services is essential for attaining broader development goals and resolving gender inequities in rural communities.

Women form a substantial portion of the agricultural workforce globally, contributing significantly to food production, processing, and marketing. Women frequently confront a variety of obstacles in spite of their important role, including restricted access to resources like land, credit, inputs, and technology. Their ability to increase agricultural output and escape poverty may also be hampered by social and cultural norms that limit their access to extension services and participation in decision-making processes.

Agriculture extension services play a pivotal role in addressing the specific needs and constraints faced by women farmers. These services cover a wide range of tasks, such as training on sustainable farming methods, assistance in obtaining financing and inputs, market intelligence, and development of entrepreneurship and leadership skills. Tailoring extension programs to the needs and preferences of women, such as providing childcare facilities during training sessions or offering flexible timing, can enhance their participation and effectiveness.

Agricultural extension services may empower women in a number of ways that benefit the community and the individual. Giving women the information and skills, they need to boost their income and production would improve food security and reduce poverty. Furthermore, empowering women in agriculture advances more general development goals including improved health, nutrition, and climate change resilience. Furthermore, financially independent women frequently reinvest their profits back into their communities and families, which has a dominant effect on social and economic advancement.

A. Definition of Empowerment:

The word empowerment means giving or providing power to do something. According to Pillai (1995) - Empowerment is an active multidimensional process which enables women to realize their full identity and power in all spheres of life. Women empowerment refers to increasing the spiritual, political, social, educational, gender and economic strength of women and communities of women.

B. Status of women in India:

In case of total population 68.86 % population lives in rural area whereas 31.14 % lives in urban India. In India, men contribute 51.47% of the population and women 48.53 %. The literacy rate for women in rural areas is 65.00%, whereas it is 82.80% for women in urban areas. In India out of 30 million women workforce, 20 million live in rural areas. According to the 2011 census, out of total female workers, 55% were agricultural labourers and 24% were cultivators. Around 63.00% of men who are economically active work in agriculture, compared to 78.00% of women. Women produce 60 to 80% of the food in most developing countries. (Source: Ministry of Statistics and Programme Implementation, 2021)

18.1.1 Role of women in Agriculture:

Agricultural development is the most important and main source of income for almost 70% of India's households. Considering that the great majority of Indians live in rural areas, the importance of agriculture cannot be undermined. A little over 60.00% of Indians are employed in agriculture, which contributing approximately 18.00% of the country's GDP. Globally, women are vital to agriculture, making substantial contributions to food production, processing, marketing and household food security. Therefore, among the ways that women contribute to agriculture are:

- In India, women make up 48.00% of self-employed farmers and 33.00% of the labour force in agriculture.

- With growing urban migration by men, the agriculture sector is being managed by women.
- Women contribute to agriculture in a variety of ways, including as laborers, entrepreneurs, and cultivators.
- In addition, rural women work in related industries such as horticulture, livestock rearing, post-harvest activities, agro/social forestry, fishing, etc.
- Women handle the majority of labour-intensive physical tasks in agriculture, including managing cattle, gathering fodder, milking, threshing, winnowing etc.
- One of the main ways that women contribute to the rural economy is through poultry farming.
- Cleaning, sorting, drying, and packing agricultural products are common tasks performed by women. Additionally, they are essential in the preparation and preservation of food, ensuring food security for their families.
- Women are frequently responsible for water collection, irrigation, and management of water resources, which are essential for agricultural production.
- Women participate in marketing agricultural products, selling surplus produce in local markets, and generating income for their families.
- Women produce between 60.00 to 80.00 percent of the food in most developing countries and are responsible for half of the world's food production, therefore, women's role in food production ensures the survival of millions of people worldwide.
- Rural women farmers carry out a variety of labor-intensive tasks, including picking, weeding, cutting grass, gathering cotton sticks, and separating fiber from seeds.
- Rural women's involvement in community management makes it possible for information to be extended and distributed at the local level.

18.2 Agricultural extension service:

Agricultural extension services refers to a set of services targeted to help women farmers improve their agricultural output. It is a vital component of agricultural development, aimed at providing women farmers with the necessary tools, knowledge and support to enhance their productivity and sustainability. Its primary goals revolve around disseminating relevant information, offering technical assistance and promoting best practices in farming.

Technical assistance is a cornerstone of agricultural extension services, wherein experts provide women farmer with guidance on various aspects of crop production, including soil management, pest control and irrigation techniques. This assistance ensures that women farmer adopt efficient and sustainable farming methods, resulting in higher yields and profitability in the end. Risk management is another key objective of agricultural extension services, as they help women farmers mitigate the impact of natural disasters, market fluctuations and other uncertainties. Through the dissemination of risk management strategies and insurance schemes, women farmers can safeguard their livelihoods and minimize losses during challenging times. Importantly, agricultural extension services are instrumental in addressing the specific needs of women farmers, who often face unique problems and barriers to participation in agriculture. By providing tailored support and resources, such as access to credit, land tenure rights and training opportunities, these services empower women to improve their agricultural output and enhance their economic independence.

18.2.1 Types of Agricultural Extension Service:

Agricultural extension services for women farmers typically belong to three main groups:

- A. Technology Transfer Services:** It aims to introduce modern and appropriate agricultural technologies to women farmers. This entails sharing information on enhanced crop types, productive agricultural methods and utilization of modern tools and equipment. Extension workers conduct training sessions, demonstrations, and field visits to educate women farmers about the benefits and proper implementation of these technologies. By adopting such advancements, women farmers can boost their productivity and sustainability in agricultural activities.
- B. Advisory Services:** It provides personalized guidance and support to women farmers across various aspects of agriculture. Extension workers offer expert advice on crop selection, land preparation, pest and disease management, and post-harvest practices tailored to the unique requirements of women farmers. They also assist in accessing market information, pricing trends, and opportunities for value addition. By receiving targeted advisory support, women farmers can make educated decisions to improve their agricultural practices, enhance crop production and increase their income.
- C. Facilitation Services:** It focuses on creating an enabling environment for women farmers to access resources, services, and markets. Extension workers facilitate the formation of women farmer groups, cooperatives, and self-help organizations to foster collective action and mutual support. They also establish linkages between women farmers and government agencies, financial institutions, input suppliers, and buyers. Moreover, facilitation services advocate for women's rights and representation in decision-making processes related to agriculture and rural development. By strengthening social networks and empowering women farmers, facilitation services contribute to their socio-economic empowerment and sustainable development.

These three categories of agricultural extension services are instrumental in addressing the specific needs and challenges faced by women farmers, ultimately enhancing their productivity, livelihoods and overall well-being.

18.2.2 Agriculture Extension Services in India:

Agricultural Extension Services are essential for sharing agricultural information, encouraging best practices and supporting rural areas' sustainable development in India. These services are provided by a number of organizations, with the Public Extension System serving as a major participant. It includes a number of government organizations, including district-level agricultural offices, state departments of agriculture and the Ministry of Agriculture and Farmers Welfare. Additionally, businesses in the private sector include those that deal in agro-based products, the crop science business, suppliers of seeds and inputs, technological companies and purchasers of agricultural goods. Boards for commodities, associations of farmers and non-governmental or non-profit organizations.

Public Extension Services: In India, Public Extension Services are managed by the Public Extension System. KVKs, State Departments of Agriculture, ICAR Organizations,

Universities of Agriculture, ATMAs and a few more Central and State Government organizations make up the majority of these organizations.

- A. KVK (Krishi Vigyan Kendras (KVKs)):** It play a significant part in the frontline extension system, which serve as knowledge hubs at the grassroots level. KVKs bridge the gap between scientific research and farm-level application by conducting on-farm trials, demonstrations, and training programs. They focus on disseminating innovative technologies and practices tailored to local agro-climatic conditions, thereby empowering women farmers to enhance productivity and sustainability. It also play a vital role in capacity building and human resource development by training farmers, extension workers and rural youth in modern agricultural techniques. Through their extension activities, KVKs promote inclusive and participatory approaches, engaging with farmers' groups, women's self-help groups and other stakeholders to ensure the relevance and effectiveness of their interventions.
- B. Agriculture Technology Management Agency (ATMA):** This multi-agency platform places a strong emphasis on institutional and procedural improvements. ATMA's mission is to improve the efficiency and effectiveness of technology dissemination by facilitating collaboration, coordination and resource mobilization at the district level. It fosters the adoption of location-specific agricultural technologies and practices through a decentralized and participatory approach, emphasizing farmer-centric extension services.
- C.** By strengthening linkages between research, extension and farmers' organizations, ATMA promotes sustainable agricultural development, enhances farmers' incomes and contributes to rural livelihoods improvement. Through capacity building, technology transfer and institutional strengthening, ATMA aims to catalyze agricultural growth and rural transformation across India. It serves as a link between the district's non-governmental organizations, agricultural development agencies, research organizations and line departments.
- D. National Mission on Agricultural Extension & Technology (NMAET):** It is a government initiative aimed at bolstering agricultural development in India. It focuses on various key objectives and functions to support women farmers, sustainable agriculture, capacity building, data dissemination and youth employment opportunities. It seeks to guarantee that women farmers have easy access to machinery, insecticides and seeds at reasonable costs.

a. Functions of NMAET:

- It promotes sustainable agriculture practices by encouraging the adoption of eco-friendly farming techniques and the efficient use of resources to ensure long-term environmental sustainability.
- Capacity building, which involves training farmers and extension workers to improve their skills and knowledge in modern agricultural practices. This empowers them to make informed decisions and adopt innovative technologies to increase productivity and profitability.
- Collaborating with knowledge producers to gather data and distribute it to the recipients via all available channels.
- The advancement of underprivileged farming communities operating in challenging areas where low production, it causes the low macro yield.

- Establishing a connection between the mission and the local level via efficient channels such as Kisan call centers and farmers portal. These platforms enable women farmers to seek expert advice, access information and conveniently access government programmes and services.
- Offering young people opportunities for both on- and off-agricultural employment through a variety of projects and programmes. It encourages young people to take up farming as a viable career option by providing them with training, financial support and market linkages.

E. National Institute of Agricultural Extension Management (MANAGE): Under the Department of Agriculture, Cooperation and Farmers' Welfare, it is an independent organization. Its job is to support national and state governments in improving their agricultural extension management programmes. It facilitates policy formulation, research, capacity building and programme implementation in collaboration with the central government.

F. Extension Education Institutes (EEIs): It's, established across various regions, focus on imparting extension education and training programs to agricultural professionals and stakeholders. They bridge the gap between research institutions and farmers by disseminating knowledge and promoting innovative agricultural practices.

G. State Agriculture Management and Extension Training Institute (SAMETI): It operate at the state level and it play an important role in implementing extension programs tailored to local agricultural needs. They work closely with state governments to develop and execute capacity building initiatives, training programs and project evaluations aimed at enhancing agricultural productivity and sustainability.

- **Private Extension Services:** Private Extension Services involve a diverse array of stakeholders, including cooperatives, progressive farmers, farmers' organizations (CIGs, FPOs), input dealers, NGOs, private banks, private media, donor agencies, consulting firms and agri-entrepreneurs. These entities collaborate to deliver extension services tailored to the specific needs of women farmer, offering expertise, resources, and support across various agricultural sub-sectors.

Women's empowerment is greatly enhanced by Agricultural Extension Services, which give them access to knowledge, technology, information, skills and risk management techniques. These services give women farmers the tools they need to increase their profitability and productivity in a variety of agricultural endeavors. By gaining knowledge of contemporary farming methods, market trends and financial management, they have greater capacity to make decisions and enhance their standard of living in general. Consequently, there is a rise in the number of women working in agriculture, which boosts farming households' incomes and advances efforts towards gender equality and economic empowerment.

18.2.3 Key Aspects of Women Empowerment Through Agricultural Extension Services:

The purpose of women empowerment through agriculture extension services is to increase the socioeconomic standing, productivity and involvement of women in the agricultural sector utilizing a variety of strategy.

Women's empowerment is greatly enhanced by agriculture extension services, which give them access to resources, knowledge and opportunities to better their lives and agricultural practices. The following are some key aspects of women empowerment through agricultural extension services:

- A. Access to Information and Training:** Extension services give women farmer access to current, pertinent information on market trends, crop types, pest control, advanced agricultural techniques and climate-smart practices. Women farmers can enhance their skills in areas including crop production, livestock management, post-harvest handling and entrepreneurship by participating in training programs designed specifically to meet their requirements.
- B. Technology Adoption:** Extension services help women farmers become more productive and efficient by helping them embrace the right technologies. This could involve using digital farming solutions, mechanical tools, drip irrigation systems and improved seeds. Women can enhance their overall livelihoods, decrease labour costs and increase yields by implementing technology into their farming operations.
- C. Access to Inputs and Resources:** Women often face barriers in accessing essential agricultural inputs such as seeds, fertilizers, pesticides and financing. Extension services can help bridge this gap by facilitating access to subsidized inputs, microfinance services and agricultural credit schemes tailored to the needs of women farmers. Providing women with access to resources enables them to make improvements to their farms, increase production, and raise their earnings.
- D. Farm Advisory Services:** Extension agents offer personalized advisory services to women farmers based on their specific needs, challenges and priorities. They provide recommendations, problem-solving support and technical direction specific to the socioeconomic environment, market demand and agro-ecological circumstances of the area.
- E. Market Linkages and Value Addition:** Extension services help women farmers to reach markets, bargain fairly for their output, and enhance the value of their farm-produced goods. This could entail introducing women to resources for market knowledge, teaching them in post-harvest handling and processing methods, and assisting them in joining farmer cooperatives and group marketing campaigns. Women can raise their income levels and gain more financial freedom by entering new markets and improving the quality of their products.
- F. Capacity Building and Networking:** Extension services play a crucial role in building the capacity of women farmers by providing training, networking opportunities and mentorship. Women farmers can exchange information, experiences, and best practices through women's groups, cooperatives, and farmer field schools. Women can handle obstacles more effectively and take advantage of chances for empowerment and advancement by strengthening their networks and support systems.
- G. Gender Mainstreaming and Social Empowerment:** Agriculture extension services should adopt a gender-sensitive approach that recognizes and addresses the unique needs, priorities and constraints of women farmers. In order to do this, it is necessary to overcome cultural norms and biases that prevent women from participating in agriculture, promote gender equality in homes and communities, and provide women the chance to lead and make decisions on agricultural development projects.

18.2.4 Challenges for Agriculture Extension Services:

Agricultural extension services play a crucial role in disseminating new technologies, best practices and information to women farmer, facilitating their adoption and implementation. However, these services face several challenges that can hinder their efficacy and impact. The following list includes some challenges that agricultural extension services must overcome:

A. Limited Access to Information and Communication Technologies (ICTs):

Many women farmers faced lack access to ICTs like mobile phones and internet connectivity, which are necessary for getting timely information and support, especially in isolated or rural locations.

B. Inadequate Funding and Resources: Budgetary restrictions frequently affect agricultural extension services, which results in a lack of personnel, opportunities for training, and infrastructure development.

C. Limited women Participation and Engagement: The effectiveness and sustainability of extension programme may be hindered by low levels of female participation and engagement.

D. Language and Cultural Barriers: Extension materials and services may not be tailored to the linguistic and cultural preferences of women farmers, which could result in poor communication and the acceptance of recommended practices.

E. Climate Change and Environmental Degradation: Climate variability and environmental degradation pose enormous problems to agriculture, requiring extension services to provide adaptive strategies and resilience-building measures.

18.3 Conclusion:

Women have made significant contributions to the growth and development of agriculture through their work in horticulture, fishing, crop production, animal husbandry and natural resource management etc. Therefore, recognizing and integrating rural women into society through ensuring their access to resources, technology, health facilities, education and ownership rights as well as skill development will increase agricultural output and help in building an empowered nation. Agricultural extension services play an important role in empowering women farmers, promoting sustainable livelihoods, enhancing agricultural productivity and contributing to food security and rural development.

They facilitate ongoing learning, innovation and adaptation within the farming community by acting as a link between agricultural knowledge and practice. The challenges requires a multi-dimensional approach involving policy support, investment in infrastructure and human resources, stakeholder collaboration and the integration of innovative technologies and approaches into extension services.

18.4 References:

1. Agarwal G. and Harigopal. 2018. Empowerment of women through self-help group - A case study of Banswara district of Rajasthan. *International Journal of Research and Innovation in Social Science*. 2(2):15-19.

2. Cohen MJ and Manusha Lemma. 2011. Agricultural extension services and gender equality. *International food policy research institute*, discussion paper 01094.
3. Indoria D. and Balai CM. 2018. Farm Women Empowerment through Secondary agriculture. *International Journal of Current Microbiology and Applied Sciences*. 6: 69-71.
4. Jayasheela G. 2015. The role of women: in Indian agriculture sector. *International Journal of creative research thoughts*. 3(2): 375-382.
5. Katungi E, Edmeades S and Smale M. 2007. Gender, social capital and information exchange in rural Uganda. *Journal of Agricultural Education and Extension*. 13(2):81-92.
6. Lal Banarsi. 2023. Strategies for empowerment of women through extension and advisory services. *Statetimes.in*
7. Maheshwari J and Geeta Mangtani. 2018. Role of Women in Agriculture Sector of India. *International Journal of Research in all Subjects in Multi Languages*. 6(3):227-230.
8. Manesh Rani, Manju Metha and Kavita Rani. 2019. Role of rural women in agriculture: A review. *The Pharma Innovation Journal*. 8(5): 205-207.
9. Meti SK. 2013. Social and Economic Empowerment of Farm Women in Agro Based Entrepreneurship for Sustainable Income. *International Conference of Social Science Research*. Penang Malaysia: 1024-1031.
10. Poree Saikia, Das MD and Deka MB. 2018. Impact of agricultural extension services on empowerment of farm women of Assam. *Asian Journal of Home Science*. 13(1): 37-46.
11. Saikia P, Das MD and Saikia P. 2013. Extent of participation of rural women in decision making related to livestock activities. *Advance making related to livestock activities. Adv. Res. J. Soc. Sci.*, 4: 39-42.
12. Seema Yadav, Dubey SK, Singh SK and Singh R. 2024. Agro-based enterprises -A way forward to women empowerment. *Indian farming*. 74(3):26-29.
13. Swanson BE and Rajalahti R. 2010. Strengthening agricultural extension and advisory systems: Procedures for assessing, transforming, and evaluating extension systems. Food and Agriculture Organization of the United Nations (FAO).