



## Gender in Agriculture: A Review

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### ABSTRACT

The article highlights that, agriculture is one of the most widespread activities in the world and has a crucial role in food production, environmental protection, landscape preservation, rural employment and food security by men as well as women. From a gender point of view, there are significant gaps between women and men. Agriculture, one of the largest contributors for country's economic development, relies heavily on women employing the largest number of women in India. Women have a very important role to play in this. It would not exist without women, because agriculture was invented by women in rural India. Even today, in society, culture, religion, tradition, practically everywhere, agriculture is considered the business of men. According to The India Human Development Survey, 83% of agricultural land is owned by men, while only 2% is owned by women. This shows women participation in agriculture because of their low property ownership. Women have also had less access to formal information and communication systems associated with agricultural research and extension.

**KEYWORDS:** agriculture, economic development, women's role, livelihood, women's participation

### I. INTRODUCTION

Agriculture, one of the largest contributors to India's Gross Domestic Product (GDP) and a driving force for country's economic development, relies heavily on women employing the largest number of women in India. Women's continued role

in agriculture is well marked, well realised, however, it is often underestimated.

Agriculture has a history dating back thousands of years, and women have a very important role to play in this. It would not exist without women, because agriculture was invented by women. In rural India, the percentage of women who depend on agriculture for their livelihood is as high as 84%. India's livestock sector, which is the world's largest livestock production systems- over 70% livestock work is done by women. Women's participation rate in the agricultural sectors is about 47% in tea plantations, around 47% in cotton cultivation, 45% growing oil seeds, and 39% in vegetable production.

Even today, in society, culture, religion, tradition, practically everywhere, agriculture is considered the business of men. According to The India Human Development Survey, 83% of agricultural land is owned by men, while only 2% is owned by women. This shows how women are not considered farmers and are not seen as heirs to agriculture because of their low property ownership.

### II. Literature Review

- Yemisi et al. (2009) conducted a study on gender issues in agriculture and rural development and role of women in agriculture, also about the programmes, NGO's and civil societies which have empowered and given rural women farmers a voice. This data had been collected in Kaduna state of Nigeria and examined the level of participation of rural women in the decision making in different areas of agriculture and studies factors influencing



their participation in the decision making process in farm management. The study found that the women's participation in decision making was quite minimal. The findings revealed that a no. of barriers to women participation in agriculture activities has been identified. Some of these are customs beliefs, women's economic time burdens, law, customs, education etc. This study reported that the contribution made by women to agricultural production and rural development in Nigeria is grossly underappreciated in spite of the dominant role women play in the sector.

- Chayal and Dhaka (2016) Study found that work participation of women was maximum cutting, picking, cleaning of grains, storage, shifting production to threshing floor and the participation rate of women was affected by several factors like age, family condition, land holding, educational level, women participation was least in fertilizer application, leveling of field, and ploughing of field and absence of women participation in marketing operations.

- Logeswari et al. (2016) studied "Empowerment of women farmers for agricultural development and found that rural women participate in a broad range of agricultural activities and contribute 60 to 80 per cent of labor in agriculture and animal husbandry. The study further reported that the involvement of women in selection of suitable crops and adaption of good management practices is very low. The author found that the reasons are lack of authority, gender discrimination, farm women problem etc. when a women empowers herself in agriculture, the nation start developing faster and more widely.

### Gender and Agriculture

There is a strong relation between gender and agriculture in developing countries. Women are twice as likely as men to be involved in agriculture-related activity, according to the 2000 United Nations report on the status of women. National averages of female workers in the agricultural labor force vary, but globally women have a principal role in agribusiness, food processing, and consumer-related activity.<sup>3</sup> As producers, women who work in the field help feed their families. But it goes beyond farming alone, to encompass marketing and value-added food processing. Women do not, however, tend to own or control the key resources, such as land, on which their agricultural activities depend. These are usually the domain of men. Historically, women have also had less access to formal information and communication systems associated

with agricultural research and extension. Thus, complementary, conflicting, and collaborative gender roles and relations may characterize developing-country agriculture and rural development (Poats et al 1988).

Agriculture involves both self-employment and wage employment and accordingly requires precise information about who does what? In fact, the land holding of 75% of the farming community being small, the number of landless labourers has swelled up over time by working on others farm. The situation thus demands an understanding of activity performance of men and women and the children ñ girls and boys- whose lives are fundamentally structured in different ways. Their living pattern, working pattern, interaction style and sharing of scientific information differ within the 4 socio-economic groups. Similarly, a gender-based division of labour is universal, but culture and community diversities cause differentiation.

Gender, therefore, has to be recognized as the social characteristic that cuts across caste, class, occupation, age and ethnicity. It is gender that differentiates the roles, responsibilities, resources, constraints and opportunities of women and men in agriculture for which precise gender information is the need of the day. Building gender into agricultural development will lead to: Building inherent strength of women and men to mutually learn

- Overcoming gender based prejudices.
- Articulating gender perspectives in development activities.

### Farming in India has strengthened gender-based inequality?

This gender discrimination is deeply rooted in society and deprives women farmers of some of the most basic facilities like access to loans and irrigation systems.

- **First, non-recognition as farmers**– Female farmers are labeled as 'cultivators' or 'agricultural laborer's but not farmers. Without any recognition, they tend to get excluded from all the benefits of government schemes.

- According to the agricultural census, 73.2 percent of rural women workers are engaged in agriculture, yet they own only 12.8 percent of the land.

- **Second, the lack of land ownership makes female farmers "invisible"**. Without land,



they are not recognized as farmers despite their large contributions to the sector and this marginalization means they are especially vulnerable to exploitation by large corporations under the new laws.

- 83% of agricultural land in India is inherited by male members of the family and less than 2% by their female counterparts, according to India Human Development Survey (2018).

### Role of women in agriculture

Mainly rural women are engaged in agricultural activities in three different ways depending on the socio-economic status of their family and regional factors. They work as:

- Paid Labourers.
- Cultivator doing labour on their own land.
- Managers of certain aspects of agricultural production by way of labour supervision and the participation in post harvest operations.

The types of agricultural activities taken up by women include the following :

- Sowing
- Nursery management
- Transplanting
- Weeding
- Irrigation
- Fertilizer application
- Plant protection
- Harvesting, winnowing, storing etc.

### Empowering Women Farmers:

Skill and Capacity Building Several Inter-ministerial initiatives of Government of India have helped women farmers in receiving access to resources to enhance their livelihood, social and economic gains. The Ministry of Agriculture and Farmers' Welfare and Ministry of Rural Development through various schemes have encouraged participation of rural women farmer.

- The Mahila Kisan Sashaktikaran Pariyojana (MKSP) scheme was launched by Ministry of Rural Development to impart skill development and capacity building programmes for rural women. This scheme was introduced as a sub component of DAY-NRLM (Deendayal Antyodaya Yojana — National Rural Livelihoods Mission) and implemented through State Rural Livelihoods Mission (SRLM) across India.

- Under DAY-NRLM scheme, trainings on use of latest agriculture, allied techniques, agro-ecological best practices are being imparted to

women farmers through the community resource persons and extension agencies. Specific women farmer training programmes on topics like household food security by kitchen gardening and nutrition gardening; design and development of low/minimum cost diet; designing and development for high nutrient efficiency diet; Processing and cooking.

- Gender mainstreaming through SHGs; Storage loss minimisation techniques; Value addition; Women empowerment; Location specific drudgery reduction technologies; Rural Crafts; and Women and child care are organised through extension bodies (Ministry of Agriculture and Farmers' Welfare, 2021).

- These training programmes have opened avenues for new livelihood opportunities for rural women. Parallel research projects on introduction of new interventions in streamlining women engagement in farming sector, technology testing and refinement, gender sensitive extension approaches, and reduction etc. are led by ICAR Central Institute for Women in Agriculture, Bhubneshwar for enhancing participation of women in agriculture. Over the years, rural women participation in training sessions has been increased to many folds. Also, gender-specific interventions and its adoption are encouraged through these trainings and awareness camps.

- About 58,295 Krishi Sakhi were trained by 735 State Level Resource Persons under Deendayal Antyodaya Yojana-National Rural Livelihoods Mission (DAY-NRLM) and 1.23 lakh women farmers participated in special women farming training conducted by KVK (Ministry of Agriculture and Farmers' Welfare, 2021a).

- Pradhan Mantri Kaushal Vikas Yojana (PMKVY) implemented by Ministry of Skill Development and Entrepreneurship provides several short duration skill training programmes viz. Short-Term Training (STT) and Recognition of Prior Learning (RPL), etc. for rural youth and women to earn their livelihood.

- Government schemes viz. The Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY) is a placement linked skill development program for wage employment for rural youth. Also, Farmers Producer organisation (FPO) and women self-help groups (SHG's) played significant role in dissemination of these programmes amongst rural women.

- The Mahila Shakti Kendra (MSK) developed by Ministry of Women and Child Development has empowered rural women through



community participation and raising awareness on girl education, maternal care and health etc.

- **Biotech-Krishi Innovation Science Application Network (Biotech-KISAN)** Programme was initiated by The Department of Biotechnology (DBT) provide scientific solutions to farmers in north east region to link available innovative agriculture technologies to the farm with the small and marginal farmers, especially women farmers of the region (Ministry of Science and Technology, 2021).

### Gender Issues

Women's contribution to agriculture, whether it is in subsistence farming or commercial agriculture, when measured in number of tasks performed and time spent, is greater than men. Their contribution in agriculture is aptly highlighted by a micro study conducted in Indian Himalayas which found that on a one hectare farm, a pair of bullocks work for 1060 hours, a man for 1212 hours and a woman for 3485 hours. Generally, operations performed by men are those that entail use of machinery and animals. Contrary to this, women always rely on manual labour using only their own energy. Not only are women overworked, their work is more arduous than that undertaken by men. Further, since women's work is largely based on human energy it is considered unskilled and hence less productive. On this basis, women are invariably paid less wage despite their working harder and for longer hours. This makes the woman's work invisible.

**Access to resources-** Despite their role as a backbone of food production and provision for family consumption in developing countries, women remain limited in their access to critical resources and services due to cultural, traditional and sociological factors.

- **Access to land-** Not even 2% of the land is owned by women, while the proportion of female heads continues to grow. Land reforms programme, together with break-up of communal land holding have led to the transfer of exclusive land rights to males as heads of the household which ignores both the existence of the female headed household and the rights of married women to a joint share.
- **Access to agricultural inputs-** Women access to technological inputs such as improved seeds, fertilizers and pesticides is limited as they are frequently not reached by extension services. In addition they often lack cash needed to purchase inputs even when they are subsidized.

- **Access to education, trainings and extension services-** Two- third of one billion illiterates in the world are women and girls. Available figures show that only 5% of extension services have been addressed to rural women, while no more than 15% of the world's extension agents are women.

- **Access to research and appropriate technologies-** Women farmers' roles and needs are often ignored when devising technology that may cause labour displacement or decrease workload.

### Developmental Initiatives-

Efforts have been made by department of agriculture to incorporate gender issues into development agenda and ensure full and equitable participation of women in all agricultural development programmes. In an effort to 'engender agricultural process' the DOAC implemented special programmes/ schemes for women in agriculture sector, where a composite package of training, extension, input, managerial and entrepreneurial support was provided to selected farm women beneficiaries. Different approaches were followed in all these projects to provide a complete support package to women farmers. The technical back-stopping was provided through a blend of 'skilled-based' capacity building exercises coupled with extension support through "On field Demonstration", "Mahila-Goshties" and "Study Tours".

### Women and Green Revolution-

The green revolution of 1960 and 1970s with its package of improved seeds, farm technology, better irrigation and chemical fertilizers was highly successful in meeting its primary objective of increasing crop yields and aggregate food supply. Yet despite its success in increasing aggregate food supply, the green revolution, did not necessarily translate its benefits to the lower strata of rural poor including women. So a gender friendly second green revolution is to be ushered in.

### Some Administrative Reforms-

The government in partnership with NGO's has to further accelerate the process of bringing about these reforms.

- Full and equal rights should be given to women to own land and other properties.
- Ensuring that, women's unpaid work and contribution to on-farm and off-farm production should be recorded in national account.



- Making appropriate technologies available to rural women which focus on utilizing locally available materials.
- Revising legislation which guarantees equal pay for work of equal value, improving working conditions and enforcing legal standards.
- Promoting and increase in number of female extension functionaries and agricultural researchers.

### Policy Options for Technology-led Gender Sensitive Agriculture

1. Development of improved farm and home technologies integrating the livelihood opportunities of women in research: Varieties, cropping sequences, farm management, post-harvest operations, low cost improved implements and tools suited to the needs of farm women standardised in terms of energy, cost and time efficiency and comfort in use based on ergonomics of women, incorporating the indigenous knowledge available, (seed treatment drums, seeders, transplanters, interculturators/weeders, pedal operated threshers, miniaturized grain mills, dal mills, cleaners, graders, maize shellers, ground decorticators), non-pesticidal pest management, smokeless chullah, Solar driers and other non-conventional energy devices etc.
2. Providing counselling and vocational training for knowledge and skill development in areas where women participation is high such as Dairy, sericulture, bee keeping, mushroom cultivation, poultry, rabbit rearing, livestock management, bio-diversity maintenance, waste land development, pond management (common properties management), nursery management, integrating farming systems, rural crafts, entrepreneurial development and frontier areas such as bio-technology, hybrid seed production, Computer aided water management, renewable energy technologies etc.
3. Women groups can be organized for production purposes involving various enterprises and providing specialised short-term and long term training for entrepreneurial development in areas like raw material procurement, processing, storage, quality control and marketing of finished products etc.
4. Farm women can also be trained in safe handling and safety precautions for equipment and pesticides as well as educating on occupational health hazards and first aid training, including research and support components in training, providing package of technology, services and public policy which function in a mutually reinforcing manner.

Therefore, appropriate technology kits to be designed and distributed.

5. Screening the existing technologies and developing inventory by documenting women specific technologies which are relatively simplified, economical in terms of time and resources, efficient and capable of drudgery reduction and increasing women employment which will also serve the purpose of setting research priorities suitable for women.

6. On-the-spot guidance and service for the women co-operatives (dairying etc.). Recognising and supporting successful NGOs through technical services. Information shops to be set up in areas where women programmes are implemented for continuous upgrading of knowledge and information.

7. Advocating in the policy making bodies for:

a. Tree pattas for farm women with a right to use tree products

b. Legislation that offers social security, health insurance and accident cover maternity benefits, crèche & primary health facilities, subsidies extension to farm women at normal times and at times of natural calamities.

c. Comprehensive legislation covering wastelands, degraded forests in and around villages to be distributed to landless labour families in the name of women only.

d. Constituting separate cells in R&D institutes, SAUs for promoting work on women in agriculture and for gender equity evaluation, monitoring and evaluation.

e. NCW and its multi-disciplinary task force of professional women to advise Government on documentation preparation for a sub-chapter on 'Women in Agriculture' spelling the Govt.'s proposals related to public policies regarding production and post-harvest technologies, training and re-training, techno- infrastructure including support services, trade, land ownership, wages and credit.

f. Subjecting all research proposals to gender audit before approval.

g. Policy interventions to build in access for resources and enterprises, such as milch animals, sheep and poultry; short-term operational ownership for women due to leasing land; and joint ownership for existing land resources.

8. Launching of mass literacy Campaign with the help of State and District level legal aid boards for farm women regarding their rights and awareness creation in the aspects of environmental degradation and consequences. Getting trained or have awareness on existing constitutional provisions for



women in providing equality, opportunity and protection to women in agriculture in order to develop realistic plans for farm women development.

9. Energising extension system through sensitising extension personnel in gender related issues, and through development of technical women cadre in extension on priority basis to serve technological needs of women farmers. Multi-disciplinary team approach for all extension activities with one women member in the team to study impact of technologies on women and on sustainability of natural resources is essential.

10. Further, working along with agricultural labour inspectors for enforcing labour wages for farm women and counselling the farm women labour to get due wages and for awareness creation, working through mahila mandals and panchayats for organised extension work. Using progressive farm women as potential resource persons to facilitate extension work, and to interact with research and extension functionaries and following peripatetic training following the family approach at the time, duration and location is preferred by the farm women.

11. Documentation of the indigenous knowledge of farm women both at home and farm and validating, refining and blending with modern technologies for impact. Documenting the occupational health hazards, occurrence of accidents for women in various agro-climatic zones and the reasons for the same. Maintaining feedback from farmwomen on working of various tools /implements /equipment is thus essential.

12. Developing databases for the above publications, professional women available in agriculture field with their specialized areas of work for networking and awareness creation among the organisations dealing with agriculture and women. Creation of databases or Agricultural Census with separate section for women to include qualification in terms of different categories of women in agriculture, different categories of agricultural operations to facilitate desired policy shift by the Government. Database on activities and multiple roles of farm women in farming systems and farm women needs and software at R&D institutes to include latest technologies, indigenous technologies and success stories /experiences etc.

13. Promoting environmentally friendly concepts on sustainable agriculture such as natural/ organic farming which are traditionally practiced by farm women.

14. Promoting publications on gender issues for sensitising at national and international levels and

for interactions, and publications for communicating the women specific technologies in local languages.

15. Organising Mahila gosthis, Farm women Days, Melas, Exhibitions for sharing information and getting direct feedback and communicating modern technologies and concepts through various traditional media specific to a region which are appealing to farm women by working with the traditional artists for the treatment of the knowledge base.

16. Following Participatory approach in appraisal, technology development and transfer. Emphasising on action research and demonstration oriented technology transfer programmes.

17. In Agricultural Education, by formulating a gender-sensitive curriculum with special emphasis on sustainable agriculture through compulsory 'Rural Work Experience Programme' for the agricultural graduates to identify gender-specific technologies, present level of adoption, their impact to provide feedback to the R&D system.

18. Low wage rates of female labour are due to the seasonal and informal nature of employment, wrong pre-assumption that female do less work than their men counterpart (Sakamma and Umesh 2018).

19. So to strengthen women's participation in agriculture and allied sectors and to improve their access to land, credit and benefit of different Govt. programs, Ministry of Agriculture and Farmers Welfare has policy provisions like joint leasing for both domestic and agricultural land under National policy for farmers.

20. Under credit facility provisions government has framed policy for issuing Kisan Credit Cards to women for creating livelihood through livestock practices and agricultural processing.

21. Further, in each KVK there provision of Subject Matter Specialist (SMS) of Home Science to create awareness among women farmers about their role in upliftment of socio-economic conditions of the society. Men and women are like two sides of a balance.

22. Balance in society can be achieved only when both the sides are considered equal. Hence, ignoring the role of women especially in a developing state like Bihar cannot bring development in real senses.

### III. Conclusion

As has been illustrated above, women play a vital role in agriculture throughout the developing world, often contributing the bulk of agricultural labor. Women's labor is often misunderstood, undervalued and deeply informed by the gender roles in their homes and communities. It is precisely because gender underpins every aspect of daily life



that must be attentive to gender, or risk exacerbating existing inequality. Gender is a development issue. Gender considerations in improving the efficiency of resource use, promoting equality, and empowering women are difficult to incorporate into social institutions and structures—policies, laws, markets, and public agencies.

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