



WOMEN IN AGRI FOOD SYSTEMS IN BANGLADESH: CHALLENGES AND OPPORTUNITIES

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In Bangladesh, women play a significant role in agriculture, yet they often face challenges and disparities compared to men in terms of access to resources, technology, and opportunities. Here are some insights into gender gaps and challenges faced by women in agriculture:

Women Farmers in Bangladesh:

- **Approximately 50% of the agricultural labor force in Bangladesh comprises women.**
- **However, women account for only about 10-20% of farmers who have access to and utilize mechanization solutions**

Gender gaps in mechanization in Bangladesh

- **A 2021 study found that only 15% of women farmers in Bangladesh have access to mechanization services.**
- **The main challenges faced by women farmers in accessing mechanization are:**
 - **Lack of financial resources, access to credit, Lack of knowledge and skills**
 - **Gender-discriminatory social norms**
 - **Limited access to mechanization services & High cost of mechanization services**
 - **Gender yield gap**
- **The gender yield gap is the difference in crop yields between male and female farmers.**
- **In Bangladesh, the gender yield gap is estimated to be around 30%.**
- **This is due to a number of factors, including:**
 - **Women farmers have less access to land, inputs, and other resources.**
 - **Women farmers are more likely to be engaged in labor-intensive tasks, such as transplanting and weeding.**
 - **Women farmers are less likely to have access to information and training on agricultural technologies.**

Key Data

- Agriculture drives the economy of Bangladesh and a large number of people rely on it either directly or indirectly. It **employs 40.60 percent** of the country's total population ([BBS 2018](#)).
- In Bangladesh, women accounted for **3.84 percent** of the total agricultural labor force in 1974, and, as of 2018, it reached **31.22 percent** ([BBS 2019](#)).
- Women in rural Bangladesh are generally responsible for most of the agricultural work in the homestead and they have significant contributions at every stage of agricultural production processes ([Rahman 2010](#)).
- Overall, women contribute to **17 types of agricultural work in 21 agricultural activities**, including seed conservation, seed selection, seed dispersal, seed sowing, harvesting, processing, storage of the crops, etc. ([Sefat-E-Zerin 2019](#))
- According to the Food and Agriculture Organization (FAO), women make up about **47% of** the agricultural labor force in Bangladesh.
- However, access to mechanized tools and equipment remains limited for women. The International Labor Organization (ILO) reports that only around **5-7% of** agricultural machinery users in Bangladesh are women.

Gender Yield Gap:

The gender yield gap refers to the difference in agricultural productivity between male and female farmers.

Factors contributing to the gap:

- 1. Lack of customized machines and equipment for women:** The machines are often piloted with male farmers and fail to consider women's needs and preferences. Lack of pre-consultation with women in technology development, evaluation and their adoption results in machines that are not scale appropriate for women (too big to handle), easy to learn, handle, or maintain.
- 2. Limited access to finance:** The cost of machines often makes them unaffordable for small holder farmers, mainly women. Even where subsidies are provided, these are mostly availed by men as women have very little or no information.
- 3. Access to Resources:** Women often have limited access to land, credit, seeds, and modern farming technologies compared to men.
- 4. Education and Training:** Unequal access to education and agricultural training affects Women's ability to adopt modern farming techniques and technologies.
- 5. Restrictive Social and Cultural Norms:** Traditional gender roles limit women's participation in decision-making and access to resources, hindering their agricultural productivity. Social norms associated with gender roles often amplify gender gaps and influence women's ability to participate in training programs, access finance, or use technology.

ACCESS TO FINANCE FOR WOMEN IN BANGLADESH'S AGRIFOOD SYSTEMS

CHALLENGES:

- **Limited Access to Credit:** Women often face barriers in accessing formal financial services due to **lack of collateral and financial literacy**, restricting their ability to invest in agricultural activities.
- **Gender Disparity:** Socio-cultural norms often restrict women's rights to land ownership, limiting their eligibility for loans.
- **Lack of Financial Inclusion:** Many women in rural areas have limited access to banking facilities and microfinance institutions due to geographic remoteness or lack of awareness.
- **Risk Aversion:** Financial institutions may perceive lending to women in agriculture as risky due to factors such as variable incomes, resulting in limited loan offerings.

OPPORTUNITIES:

- **Microfinance and Women-Centric Initiatives:** Tailored microfinance programs and women-centric initiatives have been accepted to specifically to the financial needs of women in agriculture.
- **Technology Adoption:** Digital financial services, such as mobile banking and fintech solutions, can bridge the gap by providing easier access to financial services for women in remote areas.
- **Capacity Building and Education:** Financial literacy programs and capacity-building workshops can empower women by enhancing their understanding of financial management and accessing formal credit.
- **Policy Interventions:** Government policies aimed at promoting gender equality and supporting women in agriculture through access to credit can create an enabling environment.

LAND OWNERSHIP IN THE AGRICULTURAL SECTOR

CHALLENGES

- ❑ **Limited Access to Land:** Women in Bangladesh often face **restricted access** to agricultural land due to **cultural norms** favoring male land ownership.
- ❑ **Inheritance Laws:** **Traditional inheritance laws** often prioritize sons over daughters, leading to unequal distribution of land, further marginalizing women.
- ❑ **Lack of Awareness and Education:** **Limited awareness among** women about **their land rights** and how to navigate legal processes contributes to their exclusion from land ownership.
- ❑ **Social Stigma and Cultural Norms:** **Prevailing societal attitudes** often discourage women from actively engaging in land ownership or agricultural decision-making.

OPPORTUNITIES

- ❑ **Policy Reforms:** **Implementing and reinforcing policies** that ensure gender equality in land ownership can significantly improve women's access to agricultural land.
- ❑ **Education and Awareness Programs:** Initiatives aimed at educating women about their rights and providing them with legal literacy can empower them to claim and protect their land rights.
- ❑ **Capacity Building:** Training programs focusing on agricultural skills and management for women can enhance their capabilities as landowners and agricultural entrepreneurs.
- ❑ **Supportive Financial Services:** Access to credit facilities and financial services tailored for women can enable them to invest in agricultural ventures and acquire land.

Intra-household power relations

CHALLENGES:

- **Limited Decision-Making Power:** Women often have limited authority within households, impacting their ability to make decisions regarding farming practices, resource allocation, and income use.
- **Unpaid Family Labor:** Women's substantial contributions to agricultural labor often go unrecognized and are considered part of unpaid family work, leading to a lack of economic empowerment.
- **Sociocultural Norms:** Traditional gender roles and societal norms limit women's mobility, participation in community decision-making, and access to education and training opportunities.

OPPORTUNITIES:

- **Empowerment through Education:** Promoting education and skill development among women in rural areas can enhance their capacity to engage in decision-making processes and agricultural activities effectively.
- **Access to Resources and Services:** Ensuring equitable access to land rights, credit facilities, modern farming technologies, and extension services can empower women and improve their productivity.
- **Policy Support:** Implementing policies that enforce gender equality such as targeted agricultural interventions can address power imbalances and enhance women's roles in agrifood systems.

Evaluating mechanization's impact on women and households

Challenges:

Access to Machinery: Women often lack access to agricultural machinery due to socio-economic constraints, limiting their ability to adopt mechanized practices.

Skills and Training: Limited technical knowledge and training hinder women from effectively using and maintaining machinery, restricting their involvement in mechanized activities.

Gender Norms: Societal norms and cultural barriers sometimes discourage or restrict women's participation in operating machinery, limiting their engagement in mechanized farming practices.

Opportunities:

Increased Efficiency: Mechanization can enhance productivity and efficiency, benefiting women by reducing labor-intensive tasks and saving time.

Empowerment: Access to machinery can empower women by providing them with skills, autonomy, and decision-making opportunities within the agricultural sector.

Rural Development: Mechanization can contribute to overall rural development, potentially improving living standards for women and households involved in agriculture.

Current situation, target & destination of Mechanization of Bangladesh

Sl no.	Activities	Current Situation (%)	Target (Implementation of Mechanization)		
			Within 2025 year (%)	Within 2030 year (%)	Within 2041 year (%)
1	Land preparation	95	96	98	100
2	Irrigation	95	96	98	100
3	Threshing	75	85	90	95
4	Transplanting	6	10	30	60
5	Sowing	3	10	25	80
6	Harvesting	17	20	50	80
7	Drying	2	5	15	40
8	Spraying	90	95	97	100
9	Renewable Energy	2	10	30	50
10	Sensor based precision agriculture	0	5	10	50

Trends of Agricultural Mechanization in Bangladesh

Table: Machine provided through government subsidy program during 2020-2025

Machine	No of machines allocated	No of machines distributed
Combine Harvester	15500	8467
Reaper	6000	2196
Rice Transplanter	3000	330
Seeder/Bed Planter	5000	11894
Power Thresher	5000	8058
Maize Sheller	5000	1195
Dryer	5000	33
Power Sprayer	2000	152
Power Weeder	500	27
Potato Digger	3000	1008
Potato Chips Maker	1000	-
Carrot Washer	300	-
Total	51300	33360

(Source: DAE)

Addressing the unintended consequences of labor displacement

Challenges:

Labor Displacement Impact: Increased mechanization in agriculture leads to job displacement for women who predominantly engage in labor-intensive farming activities. This shift can result in reduced income and employment opportunities for women.

Economic Challenges: Women often the backbone of rural agricultural labor, face financial insecurities due to reduced opportunities. This leads to heightened vulnerability especially for female-headed households, impacting their livelihoods.

Opportunities:

Empowerment and Inclusion: Policies promoting gender equality, land rights, and access to credit and markets are crucial. Encouraging women's participation in decision-making processes within agriculture and policy making will foster more inclusive solutions.

Technological Adaptation: Exploring gender-responsive technologies that reduce labor while enhancing productivity can mitigate displacement effects. Access to these tools and training on their usage is pivotal for women's integration into mechanized agricultural systems.

Community Support and Awareness: Engaging communities to recognize the importance of women's roles in agrifood systems and advocating for their inclusion in decision-making processes can lead to more sustainable and equitable solutions.

Monitoring and Evaluation: Continuous assessment of policies and interventions is essential to ensure their effectiveness and address any unforeseen challenges that may arise in the process.

Catering to women's information needs

Challenges:

Access to Information: ----Women in rural areas often face limited access to agricultural information due to factors like illiteracy, lack of digital infrastructure, and cultural barriers, hindering their ability to adopt modern farming techniques.

Gender Disparities: -----ocietal norms often restrict women's participation in decision-making processes related to farming, resulting in a lack of access to extension services, market information, and agricultural training programs.

Technology Gap: ----Limited access to and familiarity with technology inhibits women from benefiting from digital agricultural resources, including apps, online courses, and market platforms. 66.53% man have mobilephone whereas 45.53% woman have mobile set.

Opportunities:

Tailored Information Delivery:-- Developing localized and context-specific information delivery methods such as radio programs, community meetings, or SMS services could effectively cater to women's information needs, considering their literacy levels and accessibility.

Capacity Building:--- Investing in educational programs tailored for women in agriculture can empower them with the necessary skills and knowledge, enabling better decision-making and increased productivity.

Empowering Women's Groups: ---Strengthening women's agricultural cooperatives or self-help groups can facilitate the sharing of information, resources, and best practices among women farmers.

Innovation for Accessibility: ----Initiatives introducing user-friendly, vernacular-language-based agricultural apps, and mobile services can bridge the technology gap for women, enhancing their access to information.

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Good case the introduction of empowering women via sustainable agricultural mechanization

1. Case study

Poly Rani - A Trailblazer in Machine Manufacturing: Poly Rani, a woman with a passion for machines, defied societal norms by actively engaging in her husband's machine manufacturing business, RK Metal Ltd of Faridpur. Starting with administrative responsibilities, Rani now plays a pivotal role in managing the finances and orders for the business, which has rapidly expanded with the support of CSISA-MEA. The business, now employing 15 staff, manufactures various small machines such as rice threshers and corn shellers, selling up to 400 machines annually. Poly Rani challenges gender stereotypes, proving that professions have no gender and envisioning a future where her daughters can also contribute to the mechanical workshop.



Good case for the introduction of empowering women via sustainable agricultural mechanization

2. Case study

Women's Group in Baliakandi - Seeding Change: In Baliakandi under Rajbari district, women's participation in agricultural work is increasing day by day. Along with men, women also contribute directly and indirectly to agriculture. They are doing agricultural work by going directly to the field with men. Modern machinery is being used in agriculture.

In Baliakandi Upazila, a group of nine women seized the opportunity presented by CSISA-MEA to provide planting services using a power tiller-operated seeder (PTOS). These enterprising women, earning approximately \$500 each annually, recognized the potential in the rice transplanter and underwent training to raise seedlings using modern technology. Having successfully produced and sold seedlings sufficient for 10 hectares, the group is now poised to invest in a rice transplanter, marking a significant stride in women-led businesses in the mechanization sector.

Pramila Mandal, the wife of Kumaresh Chandra Mandal, is planting seedlings of Ropa Aman paddy with a rice transplanter machine along with six women. Instead of planting rice seedlings by hand, Promila is using this modern machine. They took Tk 800 to plant rice seedlings on 22 decimal of the land with a rice transplanter.

She also said, "I have developed the LSP network in collaboration with the Agriculture Office. There are 20 members. 15 of them are women. Through this network, I have planned to plant rice seedlings with rice transplanter machine on 50 acres of land this season.



RECOMMENDATIONS AND SUGGESTIONS CONTINUE

- **Recommendations and suggestions in the country and regional levels**
- **Country level:**
 - Increase access to credit and other financial resources for women farmers.
 - Provide training and capacity building on mechanization for women farmers.
 - Promote gender-sensitive agricultural extension services.
- **Education and Awareness: Gender-Sensitive Policies:**
 1. **Information Dissemination:** Conduct awareness campaigns through community gatherings, workshops, or digital platforms to educate women about the benefits and methods of mechanized farming.
 2. **Demonstration Farms:** Set up demonstration farms showcasing the advantages of mechanization, encouraging women to adopt these practices.
 3. **Collaboration with NGOs:** Partner with non-governmental organizations (NGOs) to reach remote areas and educate women on the benefits of mechanization and how to access it.
- 1. **Policy Reforms:** Advocate for policies that prioritize gender equality in access to agricultural resources and technologies, including mechanization.
- 2. **Legal Support:** Ensure legal frameworks protect women's rights to own land and machinery, enabling them to invest in and benefit from mechanization.
- 3. **Inclusive Decision-Making:** Encourage women's participation in decision-making processes related to agricultural policies and resource allocation.

RECOMMENDATIONS AND SUGGESTIONS CONTINUE

- 1. Infrastructure Development:** Improve rural infrastructure to facilitate the transportation and use of machinery in remote areas where women often work.
- 2. Technical Support:** Establish mechanisms for ongoing technical assistance and support for women in maintaining and repairing machinery.
- 3. Market Access:** Help women access markets for their mechanized agricultural produce by providing logistical support and market linkages.

Data Collection and Research:

- 1. Gender-Disaggregated Data:** Collect and analyze data that specifically highlights women's roles, challenges, and successes in adopting mechanization.
- 2. Research Initiatives:** Invest in research focusing on identifying specific barriers faced by women in adopting mechanization and finding targeted solutions.

Collaboration and Partnerships:

- 1. Public-Private Partnerships:** Foster collaborations between government bodies, private sectors, NGOs, and local communities to create sustainable solutions for women's access to mechanization.
- 2. Peer Networks:** Encourage the formation of women-centric agricultural networks or forums where experiences, challenges, and best practices can be shared.

By implementing these strategies, Bangladesh and regional stakeholders can create an environment conducive to

Recommendations And Suggestions Continue

By fostering an ecosystem that promotes women's participation in sustainable agricultural mechanization, Bangladesh embarks on a journey of empowerment, where access to resources, education, and decision-making processes becomes a reality for its female population. It's a journey that not only cultivates crops but cultivates dreams, aspirations, and a future where women are equal architects of progress in the fertile lands they till.

- **REGIONAL LEVEL:**
- Develop and implement regional policies and programs to support gender mainstreaming in sustainable agri food system.
- Promote knowledge sharing and best practices on gender mainstreaming in sustainable agri food system.

CONCLUSION

Gender mainstreaming in sustainable agri food system is essential to improving the livelihoods of women farmers and reducing the gender yield gap.

Governments, donors, and other stakeholders need to work together to address the challenges and constraints faced by women in accessing and using agri food system.



Thank You