**Food and Agriculture
Organization of the
United Nations**

# Gender dimension in the Cotton Sector:

## Characterising the role of women

## Key Messages:

1. Cotton is an important source of livelihood for millions of smallholders worldwide. It is estimated that about 31.5 million farmers produce cotton globally and nearly half of them are women.

2. Women face disproportionate barriers along the cotton value chain in terms of access to land, inputs and services that affect the quality of their participation and the benefit they can derive. In many countries, they are largely marginalized in low-skilled, low-paid and labour-intensive jobs.

3. Gender-sensitive policies and programmes can help ensure that benefits and incomes generated along the cotton value chain are equitably distributed among women and men.

4. Closing the gender gap in the cotton sector, such as in employment, wage, and land rights, can contribute significantly to the achievement of Sustainable Development Goals (SDGs) 1, 2 and 5.

5. Investments to strengthen cotton-producing countries' capacity to collect gender-disaggregated data and conduct gender-focused studies across cotton producing developing countries are needed to support the development of gender-sensitive policies and strategies.

# The economic significance of cotton in developing countries

Cotton is one of the most versatile crops used for clothing, homewares, cottonseed oil, animal feed, and industrial and beauty products. Cotton is an important raw material, accounting for about 30 percent of those used in the textile industry (FAO, 2021). It is the most widely produced natural fibre, accounting for 81 percent of world total natural fibre production (FAO, 2021). The cotton sector contributes significantly to the economies of many developing countries and to the livelihoods of millions of rural smallholders worldwide.

Cotton is cultivated on about 2.5 percent of the world arable land across 85 countries, 31 of which are classified as least developed countries (LDCs). Cotton production relies on smallholder farmers, rather than mass-scale farm production. In 2020, world cotton (seed cotton) production reached 82 million tonnes. China and India are the largest cotton producers globally, accounting for approximately 58 percent of world production, followed by the United States of America (12 percent) and Brazil (8 percent). Benin, Burkina Faso, Chad and Mali – the so-called Cotton-4 (or C-4) countries – account for 2.2 percent of global production (Figure 1).

**Figure 1.** Share of cotton seed production in the world total (2020)



India — 22%
United States of America — 12%
Brazil — 8%
Pakistan — 4%
C4 — 2%
others — 16%
China — 36%
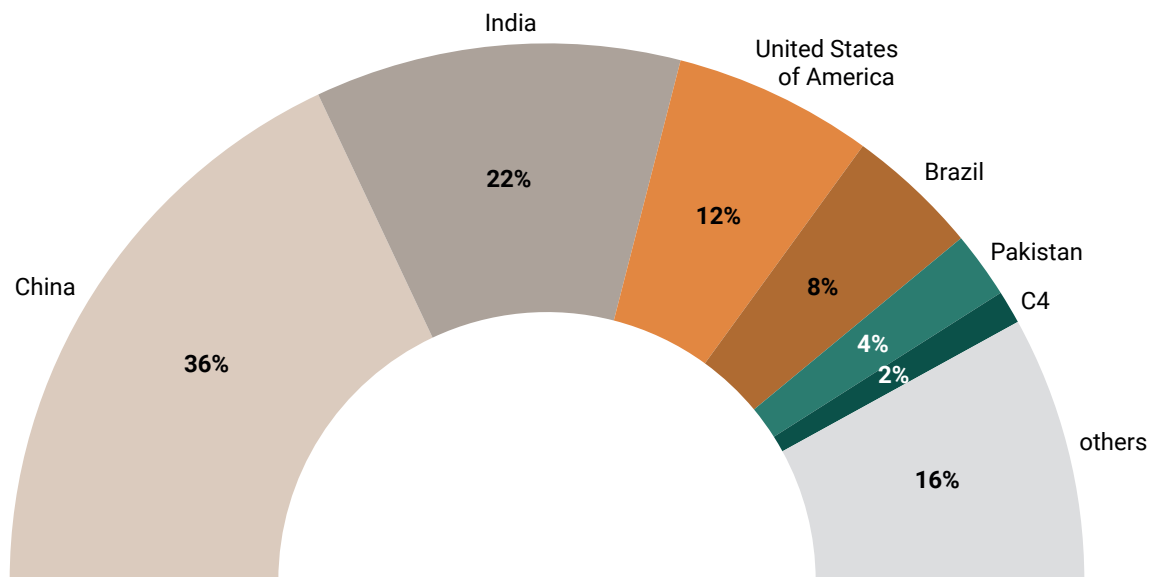
*Source: FAOSTAT (2022).*

The share of cotton in gross domestic product (GDP) is small in some developing countries such as India (0.6 percent), Pakistan (0.7 percent), Burkina Faso (2 percent), Benin (1.8 percent), and Mali (0.7 percent), but the cotton crop can still account for a significant share of agricultural GDP (AGDP) in these countries. In 2020, cotton contributed to 3 percent of AGDP in India. In Benin and Burkina Faso, the share of cotton in AGDP was 6.5 percent and 10.7 percent, respectively (Table 1). Cotton production can also provide significant returns in the main growing areas of these countries, despite its relatively small contribution to overall GDP. Importantly, the cotton sector provides job and income opportunities that enable smallholders to access essential goods and services.

**Table 1.** Seed cotton production as a percentage share of GDP and AGDP (2020)

| | Share in GDP (%) | Share in Agricultural GDP (%) |
|---|---|---|
| Australia | 0.1 | 3.5 |
| Benin | 1.8 | 6.5 |
| Brazil | 0.3 | 4.3 |
| Burkina Faso | 2.0 | 10.7 |
| Cameroon | 0.4 | 2.5 |
| Cote d'Ivôire | 0.3 | 1.6 |
| Egypt | 0.0 | 0.1 |
| India | 0.6 | 3.1 |
| Madagascar | 0.1 | 0.3 |
| Mali | 0.4 | 1.1 |
| Pakistan | 0.7 | 3.2 |
| Türkiye | 0.1 | 2.1 |

*Source: FAOSTAT (2022).*

Cotton export revenues represent a major source of foreign exchange, especially for developing countries, and their contribution to food security is of primary importance in the C-4 countries. In 2020, revenues from cotton exports accounted for more than 70 percent of the food import bill in Mali, 38 percent in Benin and 49 percent in Burkina Faso (Table 2). In many cases, this contribution is underestimated, as it does not include the revenues generated by the cotton allied industries, such as agricultural inputs, machinery and equipment, cottonseed crushing and textile manufacturing (Valderrama, 2004).

**Table 2.** Cotton export revenues as a share of merchandise export and food import bill (2020)

| | Cotton export revenues | |
|---|---|---|
| | Share in merchandise exports (%) | Share in food imports (%) |
| Azerbaijan | 1.1 | 11.0 |
| Benin | 21.9 | 38.3 |
| Burkina Faso | 6.3 | 49.4 |
| Côte d'Ivoire | 1.2 | 5.8 |
| Egypt | 0.6 | 0.9 |
| India | 0.6 | 7.9 |
| Mali | 12.5 | 73.8 |
| Pakistan | 0.3 | 0.7 |
| Togo | 6.6 | 7.1 |
| Uganda | 0.9 | 9.5 |
| Uzbekistan | 1.4 | 9.3 |

*Source: Computation based on data from The World Bank World Development Indicators, FAOSTAT, and Trade Data Monitor (TDM).*

## The gender dimensions of cotton production

Cotton production plays an important role in poverty alleviation and food security, securing incomes for millions of farmers in many developing countries. It is estimated that globally around 31.5 million farmers depend on the cotton cultivation for their livelihoods (ICAC, 2021). In households that are specialized in cotton production, there is a positive relation between cotton production and their ability to buy basic foodstuffs and other goods and services. Cotton production and value chain operations generate employment for both women and men. Globally, it is estimated that up to 190 million people earn a living from their involvement in the cotton production sector (FAO, 2021). Women contribute significantly to cotton farming, constituting a large share of the workforce involved in primary production. Out of the 31.5 million farmers who cultivate cotton worldwide, it is estimated that 46 percent are women (Table 3).

**Table 3.** Share of male and female farmers in total cotton farmers (2020)

|  | Male farmers (%) | Female farmers (%) |
|---|---|---|
| Australia | 77 | 23 |
| Benin | 93 | 7 |
| Brazil | 81 | 19 |
| Burkina Faso | 89 | 11 |
| China | 37 | 63 |
| India | 60 | 40 |
| Greece | 52 | 48 |
| Mali | 99 | 1 |
| Pakistan | 93 | 7 |
| Türkiye | 77 | 23 |
| Uzbekistan | 93 | 7 |
| C-4 | 93 | 7 |
| Africa excluding C-4 | 77 | 23 |
| World | 54 | 46 |
| World excluding China | 69 | 31 |

*Source: ICAC Cotton Data Book June 2021.*

The share of female farmers is particularly high in China (63 percent of 15 million cotton farmers) and in India (40 percent out of 10.3 million farmers overall). In Pakistan and the C-4 countries (as a group), women represent 7 percent of all the cotton farmers. In the C-4 countries, the percentage of women farmers ranges from 1 percent in Mali to 11 percent in Burkina Faso. In Benin, the share of women farmers increased from 9 percent in 2016 to 12 percent in 2020, but down to 7 percent in 2021. In Greece and Türkiye, respectively 48 percent and 23 percent are women cotton farmers. In Australia and Brazil, two other major cotton-producing countries, women account, respectively, for 23 percent and 19 percent of all the cotton farmers. Excluding the C-4 countries, 23 percent of the cotton farmers in Africa are women, with substantial variances across countries.

Women contribute significantly to cotton farming both as farmers or hired labourers. In developing countries, where seed cotton production is mostly smallholder-driven, women play a prominent role in production. In these countries, cotton is largely hand-picked – traditionally by women, who are generally involved in tasks that require manual work, such as stubble picking, sowing, weeding, fertilization and stalk destruction. According to a survey by the International Trade Centre (ITC), women typically supply 65 percent of the labour associated with cotton picking and 55 percent of the labour for sowing (ITC, 2011). In India, the world's second largest cotton producing country, the majority of cotton workers are women supplying 70 percent of labour in sowing and 90 percent in cotton picking. In Pakistan, women

have a significant role in cotton picking (Druczaa and Peveri, 2018). In Latin America, women account for around 60 percent of labour for cotton picking and 35 percent for planting (ITC, 2011).

Women's contribution to the cotton value chain is undervalued in many contexts. They usually carry out low-skilled, low-paid, labour-intensive tasks in cotton cultivation, and are less likely to engage in the most profitable value-adding activities further downstream (African Development Bank, 2015; Cotton Connect, 2016; the Sustainable Trade Initiative [IDH], 2019). The gender pay gap in the cotton industry is still widespread globally. In rural India, for instance, the average income for women is 78 percent of men's income (Cotton Connect, 2016).

In sub-Saharan Africa (SSA), women supply more than half of the labour required to plant, nurture and harvest the cotton crop. In addition to operating their own farms, another five to ten million people perform seasonal labour on cotton farms. Of those, about two-thirds, or between three and seven million, are women since most seasonal work consists of planting and harvesting. As highlighted in the study by ITC (2011), women are regularly paid less than men, in some cases as much as 90 percent less than their male counterparts.

In developing countries, women cotton farmers commonly own smaller cotton plots and overall manage less land area than male farmers. In Burkina Faso, one of the main cotton producers in Africa, the estimated average land area farmed by male cotton farmers was 2.45 hectares per year in the period 2018¬–2020, while female farmers planted on average 0.6 hectares of crop area, equalling around 25 percent of the land farmed by men.[1] Assuming equal yields per hectare, women farmers earn approximately one-fourth of what male farmers on average earn from cotton production. In Benin, female cotton farmers produce less cotton than male farmers: 10 percent of all farmers are female, but they produced only about 6 percent of total output in 2021.[2]

The gender gap in land rights remains a critical issue worldwide, as are other forms of gender-based discrimination and inequalities in agriculture (see Box 1). Land rights for rural women are crucial because of their potentially tangible impact on incomes and decision-making power at household and community level. Deep-rooted social gender norms and discrimination prevent women from inheriting the land, shaping the different roles and entitlements of men and women in society in many cotton-producing countries (Cotton Connect, 2016; IDH, 2019; African Development Bank, 2015). Women's limited access to, and control over, land hampers their access to finance and affects their likelihood of

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[1]  *Computation based on data from Direction de Statistique Agricole, Burkina Faso.*
[2]  *Computation based on data from Direction de Statistique Agricole, Benin.*

investing in their farms. In the Indian state of Maharashtra, a major cotton producer, a survey by IDH showed that only 16 percent of female cotton cultivators held land titles in their names, which reduced their opportunities to access loans, insurance and government support due to the lack of collateral (IDH, 2019). Moreover, women cotton farmers are scarcely represented in governance processes and mechanisms due to gender stereotypes. In Benin, women are rarely involved in the management of stakeholder organizations, despite their prominent role in cotton production (Alidou and Niehof, 2013).

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**Box 1. The gender gap in agriculture**

The "gender gap" is the difference between women and men in society as measured in various social, economic, political and cultural dimensions, such as labour participation, wage, education attainment, health, and political participation, among others. The gender pay gap (or gender wage gap) refers for instance to the difference between median earnings of men and women, relative to median earnings of men (OECD, 2022). Currently, the global gender pay gap stands at 20 percent, indicating that women are paid on average 20 percent less than men worldwide (ILO, 2022). In 2022, overall progress for closing the global gender gap has stalled in many countries, and major efforts are needed to advance the gender policy agenda globally (WEF, 2022).

In agriculture, closing the gender gap would produce significant economic and social gains (FAO, 2011). Women contribute significantly to agricultural development, making up 43 percent of the global agricultural labour force. Yet, they are overrepresented in the lower-skilled and lower-paid jobs, especially in the informal sector. Moreover, women disproportionately shoulder the burden of unpaid care and domestic work, compared to men. They have reduced access to, and control over, productive resources, credit, technology, markets, inputs and extension services, among others. Evidence shows that women, more than men, often have inadequate access to securing land rights, including land ownership, management, transfer and economic rights (FAO, 2018).

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Women cotton farmers also face greater difficulties than men in accessing productive inputs and resources, such as seeds, fertilizer and pesticides, agriculture technologies and mechanization, credit, extension services and training in Good Agricultural Practices (GAPs), resulting in negative impacts on productivity. Lack of access to cash and credit also constrain women from hiring wage labourers. Labour shortage caused by poor cash flow can disrupt cotton farming, delaying planting beyond the optimum planting season and holding up harvesting, eventually resulting in reduced yields and loss of earnings.

## Closing the gender gap in the cotton sector

Gender inequalities in cotton farming remain a pressing challenge in many cotton-producing developing countries. Gender-based constraints often affect women's full and decent participation in the cotton value chain, with adverse impacts on them as well as their households' livelihoods. If not adequately addressed, gender inequalities can also worsen, and women's already vulnerable socioeconomic status can exacerbate, especially in fragile contexts, as a result of the compounding impacts of climate change and intersecting crises.

Empowering women in the cotton value chain can have positive effects on their livelihoods, including increased financial autonomy, decision-making and wellbeing. This, in turn, can be beneficial for their households in terms of improved living standards, food security and nutrition, education and health of children (FAO, 2011, 2017). Achieving gender equality can also have positive macroeconomic impacts on agricultural productivity and economic growth, while contributing to the achievement of the SDGs, particularly SDG 1 "Ending poverty in all its forms everywhere", SDG 2 "End hunger, achieve food security, and improved nutrition and promote sustainable agriculture", and SDG 5 "Achieve gender equality and empower all women and girls".

Projects and programmes that promote the development of equitable and sustainable cotton value chains will benefit substantially from the incorporation of the gender dimension in strategies, interventions and analyses in the project cycle, from design to evaluation. Gender-sensitive value chain assessments can generate evidence on gender-specific dynamics occurring locally, in support of follow-up strategic actions, by helping to identify existing challenges and emerging opportunities for women cotton farmers (see some examples of gender strategies in Box 2).

> **Box 2. Gender strategies for sustainable and inclusive cotton sector development**
> The +Cotton project is an initiative developed by FAO, the Brazilian Cooperation Agency of the Ministry of Foreign Affairs (ABC/MRE) and seven partner countries, namely Argentina, Bolivia, Ecuador, Colombia, Haiti, Paraguay, and Peru (FAO, 2022, 2019). Launched in 2013, the programme aims to support sustainable and inclusive development of the cotton value chain in the region, with the goal to promote rural development, value addition, fair trade and agro-textile systems. The project has mobilized regional networks of cotton stakeholders,

engaging more than 90 public and private sector institutions from partner countries. Gender equality is one of the strategic axes of the project in support of women farmers involved in cotton cultivation, processing and marketing (FAO, 2017). In the context of the Brazil-FAO International Cooperation, a gender-focused study was conducted in 2017 in five +Cotton project countries (Argentina, Bolivia, Colombia, Paraguay and Peru) to analyse the factors constraining women's participation in the cotton value chain, and identify potential areas for empowerment (FAO, 2017). By adopting a community-based participatory approach, the study identified successful cases in Paraguay, Bolivia and Peru where the joint strategies of producer organizations grounded on a vision of equity positively impacted on farms' business management improving the quality of life of their members. One of the case studies was on the native cotton (or naturally coloured cotton) in Peru, which offered unique opportunities for artisan women to participate in the value chain. The gender study overall contributed to global and sectoral policy analysis that would support countries in future action for developing a more inclusive cotton sector.

**The gender strategy of the Better Cotton Initiative (BCI)**

The Better Cotton Initiative (BCI), or Better Cotton, is the world's leading sustainability initiative for cotton with more than 2 300 members and stakeholders. BCI has adopted a gender strategy to realize the vision of a transformed, sustainable cotton industry where all participants have equal chances to thrive (Better Cotton, 2022). Positive gender results were achieved in BCI programmes in a few countries during the 2018-2019 cotton season, as reported in monitoring and evaluation reports (BCI, 2019). In Mali, about 39 percent of farmers who received training on a wide range of themes (from efficient harvesting techniques to raising awareness on the importance of equal pay) were women. More than 2 000 women were trained in leadership skills, giving rise to women leaders who are capable of promoting their interests in the cotton sector. Challenges persist in many countries to ensure women's access to training, which is constrained due to sociocultural reasons.

**CARE India's gender-sensitive project for sustainable cotton farming in Maharashtra State**

CARE India has developed a project to improve women's engagement in resilient and sustainable cotton-based farming in the Vidarbha region of Maharashtra. In 2019, a gender qualitative analysis was conducted in ten villages of the project area, with the goal to better understand specific gender aspects of the cotton value chain and inform project development

initiatives (CARE, 2019). The analysis provided insights on how gender inequality dynamics affected farms and households, identifying potential ways for engaging women farmers in the cotton value chain. Evidence-based recommendations of this study included the need to create more opportunities for women through women-friendly services and resources, such as learning and skills development, improved technology and inputs, facilitation of collectivization and farmers' groups, and promotion of sustainable farming practices.

Several key policy recommendations emerge in the literature on the role of women in the cotton sector can be enhanced. Strengthening the gender responsiveness of legislative and policy frameworks is crucial to adequately address gender-based constraints rooted in discriminatory social norms and practices that hamper women's full and meaningful participation in the cotton value chains (FAO, 2017). A set of comprehensive and aligned gender-responsive policy measures across relevant sectors is needed to address gender inequalities, encompassing various sociocultural, economic, policy and normative domains, and ensure that cotton value chains become more equitable and inclusive (FAO, 2011).

Developing tools for making cotton-related interventions gender inclusive is also important. Unlocking the potential of women cotton farmers by increasing access to, and control over, productive assets, knowledge, technology and credit will help increase yields and maximize the economic gain of women and various stakeholders involved in the cotton value chain. Adopting solutions to support women cotton farmers in production, including by reducing their work burden, and improve their working conditions, will help reduce the gender productivity gap, boost economic growth and the overall sustainability of the cotton sector by allowing an increasing share of women to be fully and gainfully involved in the value chain. More studies are needed to investigate the gender dynamics in the cotton sector and their implications for sustainable and inclusive development. Effective and appropriate data collection methods and gender analyses are key to the formulation of sound and appropriate policies that can address the existing gender-based constraints and pave the way for women's more equitable participation in the cotton value chains. In this regard, more and systematic investments are needed to strengthen cotton-producing countries' capacity to collect gender-disaggregated data and conduct gender analysis in support of gender transformational policies and interventions to ensure a more efficient, inclusive and sustainable development of the cotton sector and optimize its contribution to the achievement of the 2030 Agenda and the SDGs.

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