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# Business case for gender mainstreaming in cotton in Maharashtra



## CREDITS

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## LIST OF ABBREVIATIONS

AFARM	Action for Agricultural Renewal in Maharashtra
AFPRO	Action for Food Production
BCI	Better Cotton Initiative
BT	Bacillus thuringiensis
CICR	The Central Institute for Cotton Research
CIWA	Central Institute for Women in Agriculture
CMRCs	Community Managed Resource Centre
DAS	Days After Sowing
FAO	Food and Agriculture Organization
FGD	Focus Group Discussions
FPO	Farmer Producer Organizations
HA	Hectares
HDPS	High Density Plantation System
ICAR	Indian Council of Agricultural Research
IDH	IDH The Sustainable Trade Initiative
IFPRI	International Food Policy Research Institute
IPM	Integrated Pest Management
ITC	International Trade Centre
KGs	Kilograms
KVK	Krishi Vigyan Kendras
MAKAAM	Mahila Kisan Adhikaar Manch
MAVIM	Mahila Arthik Vikas Mahamandal
MCWP	Maharashtra Cotton Water Platform
NGO	Non Governmental Organization
OBC	Other Backward Classes
PoCRA	Project on Climate Resilient Agriculture
SC	Scheduled Caste
SEWA	Self Employed Women's Association
SHG	Self-Help Groups
SPO	Social Purpose Organization
ST	Scheduled Tribe
UNDP	United Nations Development Program
USAID	United States Agency for International Development
WWF	World Wide Fund for Nature

## LIST OF DEFINITIONS

Term	Definition
Farmer	A person who owns (as landowner, tenant or sharecropper) and cultivates the farmland.
Cultivator	A cultivator is someone who grows and tends crops, regardless of whether that person owns the land and regardless of whether the individual is paid wages for the labor provided. While a farmer is always a cultivator, a cultivator is not necessarily a farmer.
Cotton Productivity	Quantity of cotton produced per unit area of land.
Organic Cotton	Cotton which is grown using methods and materials that have low impact on the environment.
Bt Cotton	Bt cotton is an insect-resistant transgenic crop designed to combat the bollworm. Bt cotton was created by genetically altering the cotton genome to express a microbial protein from the bacterium <i>Bacillus thuringiensis</i> .
Seed Drop Rates	Refers to the number of seeds per hectare.

# TABLE OF CONTENTS

EXECUTIVE SUMMARY	5
INTRODUCTION: WOMEN IN COTTON CULTIVATION IN INDIA	9
APPROACH AND METHODOLOGY FOR THE STUDY	15
THE SOCIAL AND CULTURAL CONTEXT FOR WOMEN COTTON CULTIVATORS	20
CHAPTER 1:	24
GENDER ROLES AND RESPONSIBILITIES ON THE COTTON FARM	
1. Women play a critical role in stubble picking, sowing, weeding and cotton picking and storage	
2. Tasks undertaken by women directly impact the quantity and quality of cotton produced	
CHAPTER 2:	35
ACCESS AND CONTROL OVER RESOURCES FOR WOMEN CULTIVATORS	
1. Women have limited access to resources such as knowledge, skills, land, tools, government schemes, community organizations and finance	
2. Though women undertake majority of the tasks in cotton production, decision-making lies in the hands of the male farmers	
3. Alternate livelihoods were recognized as an important area of support	
CHAPTER 3:	51
RECOMMENDATIONS FOR EMPOWERING WOMEN CULTIVATORS ON THE FARM AND IN THE COMMUNITY	
1. Introduction to the intervention framework	
2. Recommendations	
ENDNOTES	62

## EXECUTIVE SUMMARY



Women play a critical role in cotton cultivation. According to the International Trade Centre, women cotton cultivators account for 70% of the labor in sowing and 90% of the labor in cotton picking.<sup>1</sup> While women perform a majority of the tasks involved in cotton cultivation, they play a limited part in agricultural decision-making, have limited involvement in market-facing roles and limited control over profits. In addition to this, women cultivators often fall on the shadow side of farm-related interventions and have reduced access to agronomic knowledge, skills and extension services. This limits their ability to maximize agricultural productivity and optimize yield. Literature shows that enhancing the agronomic knowledge and skills of women cultivators can enhance productivity and profitability of cotton.

To assess the potential of women cotton cultivators, IDH and Sattva conducted a gender analysis of cotton cultivation in Maharashtra. The gender analysis helped build an understanding of the gender division of roles and responsibilities on the farm, participation in decision-making and access to productive resources. The study also included building an understanding of current farm practices, the labor burden, and access to ecosystem support in the form of trainings, finance, extension services and government schemes. The study examined both the economic contributions of women cultivators on the farm and the various barriers that limit their role in cultivation.

## KEY INSIGHTS FROM THE STUDY

### 1. Social norms impact the way women engage with the agricultural ecosystem in rural communities.

- On the farm, women cultivators are typically responsible for tasks that are perceived to be 'lighter work', in spite of the fact that these tasks are highly manual in nature, drudgery-prone and require spending extensive amounts of time of the farm.
- Women cultivators have the dual responsibility of managing household tasks and working on the farm. While household responsibilities are unpaid and take up a significant amount of time, the economic contribution of women cultivators on their own field also goes unmeasured.
- Social norms limit mobility, and the ability of women cultivators to take on front-facing, 'high value' roles. They also limit access to productive resources such as land, extension services, tools and finance, that are relatively easier to access for their male counterparts.
- Lower levels of income and reduced control over agricultural profits also limit the level of empowerment women cultivators can achieve.

### 2. Tasks undertaken by women cultivators directly impact the quantity and quality of cotton produced.

- Women play a majority role in plant-spacing and seed plantation. Planting incorrectly can delay plant maturity, reduce lint yield and reduce cotton boll density.
- Women account for 84% of weeding activities. Weeding is a critical activity that, if done incorrectly, can reduce lint yields between 10-40% depending on the density of weeds.
- Women account for 74% of fertilizer application. Delayed application of fertilizers can reduce yield by 10-40%.
- While engaged in weeding activities, women are on the field during the early schedule of pest monitoring and can be trained in scouting for pests to reduce incidents of pest attacks, which could potentially reduce cost of production and increase profits.
- Women account for 94% of cotton picking activities. Unscientific picking practices can increase the presence of dust particles, hair and other contaminants in the cotton produced. This reduces the quality of cotton and affects the price at which cultivators are able to sell the cotton.

### 3. Though women undertake majority of the tasks in cotton production, primary decision-making still lies in the hands of male cultivators.

- Our study found that women cultivators perceived themselves to have a greater role in decision-making, whereas male cultivators perceived the participation of women in decision-making to be lower.
- Women cultivators were more likely to say that input decisions were made by both men and women cultivators, together. Male cultivators were more likely to say that these decisions were taken by men alone.
- Even when decisions were taken together, there could be varying degrees of participation by the women cultivators, and the final decisions were stated to be almost always taken by men.
- Prevailing social norms, limited access to knowledge and skills, and lack of participation in market-facing roles were found to impact the participation of women in decision-making.

### 4. Additionally, women have limited access to productive resources such as knowledge, skills, land, tools, government schemes, community organizations and finance.

- Only 33% of the women cultivators had attended any training in the last two years.
- Only 16% of the women cultivators surveyed held land titles in their name.
- 85% of the women cultivators surveyed had never accessed any government schemes, with lack of knowledge cited as the main limiting factor.
- SHGs remain an un-leveraged source of financial support for cotton. While most farmers depended on store credit, only 28% of the women cultivators shared that they get credit for cotton from SHGs.

## 5. Solving for the restrictions and challenges faced by women cotton cultivators, has the potential to achieve both business and social outcomes. Business outcomes include increase in cotton production, improvement in cotton quality and increase in household incomes, while social outcomes include increase in empowerment levels of women cotton cultivators.

- To achieve the desired business and social outcomes, Sattva recommends four strategies for interventions for women:
  - Building knowledge and skills in agronomic practices and functional digital and financial literacy .
  - Providing access to credit linkages, extension services and relevant government schemes.
  - Collectivizing women cultivators through Self-Help Groups (SHGs).
  - Sensitizing the community on the role of women cotton cultivators and influencing social norms.
- These interventions need to account for the following dynamics:
  - Lack of opportunity, time and mobility constraints were found to be restricting factors for women cultivators to attend training.
  - Lack of knowledge, paperwork and land titles were the biggest obstacles in claiming government support. Women in rural areas also tend to face legal, social, cultural, and economic restrictions that limit their access to credit.
  - SHGs can play a critical role in giving women easy access to knowledge, information, credit. Yet the potential of SHGs for mobilizing women remains unexploited.
  - Gender norms are a critical influencing factors and should be given due consideration in every intervention to ensure the success of the intervention in the long term.



# INTRODUCTION: WOMEN IN COTTON CULTIVATION IN INDIA

Cotton is an important cash crop that plays an integral role in the agricultural and industrial economy of the country. Cotton in India provides direct livelihood to 6 million farmers, and about 40-50 million people are employed in cotton trade and processing.<sup>2</sup> India is the largest producer and second largest exporter of cotton in the world.<sup>3</sup>

India has the largest area under cotton cultivation, yet ranks lowest on productivity.

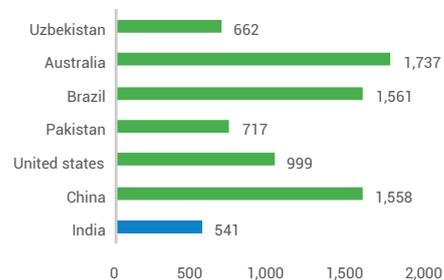
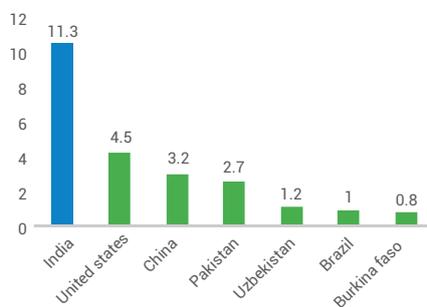
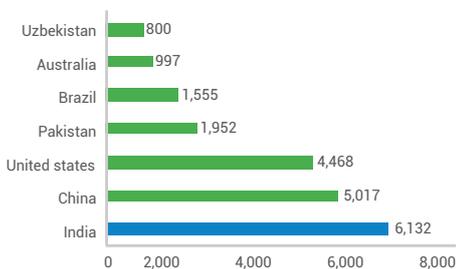


Figure 1: Production in Million Kgs (2017-18)

Figure 2: Area in Million Hectares (2017-18)

Figure 3: Productivity in Kgs/Ha (2017-18)

In 2017-18, India was the largest producer of cotton globally with a total production of

**6,132**  
million kgs

Globally, India has the largest area under cotton cultivation, about

**11.3**  
million hectares



Nearly  
**36%**  
of the world area



India's increase in cotton production has largely been driven by an increase in cultivation area



**56%**  
of the world's organic cotton is produced in India<sup>5</sup>



However, productivity of cotton in India is amongst the lowest in the world at

**541**  
kgs/hectare

At the state level, similar trends are observed: Maharashtra has the largest area of land under cotton production, yet the state recorded the lowest productivity amongst cotton-producing states in the country.

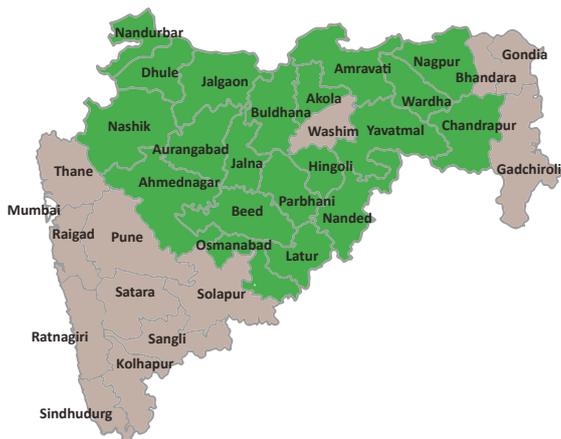


Figure 4: Cotton-producing districts in Maharashtra

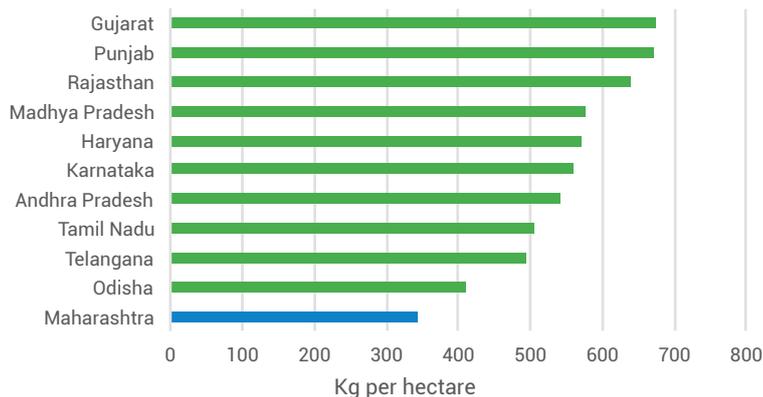


Figure 5: State-wise productivity of cotton in Maharashtra (2017-18)

- In 2017-18, Maharashtra was expected to hold 41% share in cotton production in the central zone (Gujarat, Maharashtra, and Madhya Pradesh) and 22% share in the country's total cotton production, as per an article titled 'India's Cotton Production Trend' (2018) by Textile Excellence.<sup>6</sup>
- As per data released by the Ministry of Agriculture and Farmer's Welfare in 2017-18, 42 lakh hectares of land were under cotton cultivation, highest amongst all cotton-producing states in India.<sup>7</sup>
- Yet, at 343.48 kgs/hectare, Maharashtra has the lowest productivity across states (with the national average being 541 kgs/hectare).<sup>8</sup>

Reasons for low cotton yield in India and Maharashtra can broadly be classified into the following categories:

- 1. Farm-related factors:** A study by WWF (2010) found that sub-optimal cultivation practices followed by farmers resulted in high input use. For example, indiscriminate use of pesticides resulted in increased resistance by pests, resurgence of attacks, increased expenditure, low productivity, soil damage, and crop loss. Further, most cotton cultivators use genetically modified cotton seeds because they have higher yield per plant. However, in the last few years in Maharashtra, these modified cotton seeds have seen an increasing resistance to pests.<sup>9</sup>
- 2. Inputs and Resources:** The Central Institute for Cotton Research (CICR) in India sheds light on the fact that cotton in Maharashtra is predominantly cultivated on marginal-to-small landholdings, where yield is low due to competition among different crops for acreage and competition among farmers for labor. The unavailability of labor causes delays in farming operations, which could result in difficulties in weeding, pest management, and picking.<sup>10</sup> The lack of irrigation facilities, coupled with non-availability of quality seeds, impact productivity as highlighted by Textile Excellence in the 2018 article titled 'India's Cotton Production Trend'.<sup>11</sup>
- 3. Climate-related factors:** CICR also highlights that changing patterns of monsoons reduce productivity on rainfed farms, which are widespread across Maharashtra.

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**Unpredictability of monsoons and the non-availability of quality seeds are factors that are beyond the control of the farmer. However, poor cultivation practices that affect productivity of cotton can be addressed through effective farm-level interventions.**

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According to the 2011 'Women in Cotton' report by the International Trade Centre (ITC), women cotton cultivators account for 70% of the labor in sowing and 90% of the labor in cotton picking.<sup>12</sup> Women cultivators are in charge of sowing seeds, removing stalks, ensuring optimum plant populations, weeding the field, applying fertilizers and harvesting the cotton.<sup>13</sup> Because of the significant role women cultivators play on the farm, interventions must be extended to both male and female cultivators, suited to their roles and responsibilities on the field. In 2018, IDH conducted a pilot study across households in Ghatanji and Kelapur blocks of Yavatmal, Maharashtra to analyze and document the gender division of roles and responsibilities as well as access and control over productive resources in cotton cultivation. The study also sought to understand how access to agronomic training by women cultivators could lead to better adoption of good cultivation practices and positively impact women cultivators and their households. The study found that 80% of farming activities were carried out by women cultivators, who were responsible for manual, drudgery-prone tasks, such as sowing, weeding, fertilizer application, transporting water for pesticides, and cotton picking. Further, on average, women spent 109 eight-hour-days on the field, which was nearly four times the amount of time spent by men.<sup>14</sup> The study found that men spent an average of 28 days on the field.

## Though women are engaged in multiple roles across the cotton production cycle, they continue to be ignored stakeholders in cotton-related interventions.<sup>15</sup>

- **Reduced access to knowledge and skill:** CottonConnect's report 'Women in Cotton' (2017) found that, without specific outreach efforts, only 4% women joined training programs that could assist them in their role as cultivators.<sup>16</sup>
- The report also found that where women cotton cultivators already played key roles, providing them with technical training could directly contribute to strengthening value chains. In implementation, CottonConnect built a base of agronomic knowledge and market access for the women cultivators, which resulted in yield improvement by 16% and reduced pesticide use by 43%.
- **Reduced access to land and other resources:** In 2018, Oxfam stated in an article that while over 85% of rural women in India were engaged in agriculture, only about 13% of them owned land. If women cultivators do not have land titles, they lack collaterals for loans and insurance, and have limited access to government benefits and other productive resources.<sup>17</sup>
- A study done by FAO in 2011 found that if women cultivators had the same access as men to productive resources like fertilizers and farm equipment, their productivity could increase by 20-30%.<sup>18</sup>
- **Reduced roles in decision-making:** The 'Women in Cotton' (2017) report also found that in India, women cultivators were less likely to participate in decisions around purchase of inputs, equipment and sales.
- Providing women with information helps empower women and increases their participation in decision-making. This could, in turn, increase the uptake of labor saving or drudgery-reducing technology. This could also improve productivity and reduce costs.<sup>19</sup> Evidence shows that yields improve when women cultivators have greater say in decision-making, leading to a potential 40% increase in profits.<sup>20</sup>
- **Reduced market facing roles:** The CottonConnect report further highlights that women cotton cultivators typically have reduced roles in transportation and sales, and thus limited direct access to profits and high-value roles.<sup>8</sup>
- A report by ACIDI-VOCA (2016) found that women cultivators were more likely to adopt new farming techniques introduced in trainings because, while men have experience managing cash crop farms, the management of cash crop farms is new to women. While men are used to being in a position of authority, women cultivators are more open to learn farming practices from people in authority, such as extension trainers or agents.<sup>21</sup>

**Challenges faced by women in cotton cultivation are complex and influenced by several underlying gender and social norms.**



Women cultivators often fall on the shadow side of farm-related interventions. Apart from the limitations mentioned above, the challenges faced by women in cotton cultivation are complex and are influenced by several underlying gender norms and social customs. Women also bear the dual responsibility of working on the farm and within the household. Therefore, while engaging with women cotton cultivators, we need to factor in the circumstances and constraints that women cultivators work within. This will help design relevant interventions that do not add to the work burden, but rather facilitate a shift to work of higher value through smart interventions targeting knowledge, technology and agency. Literature shows that productivity and profitability stand to improve with an increased focus on women.

## ABOUT THE STUDY

Between September 2018 and January 2019, Sattva and IDH conducted a gender analysis of cotton cultivation in the Vidarbha and Marathwada regions of Maharashtra to build a deeper understanding of gender roles and responsibilities in cotton cultivation. This included the gender division of access to resources, current farm practices, and the labor burden of male and women cultivators in the production process. The study sought to identify opportunities and blind spots that could enable ecosystem players, cotton value chain actors, businesses, and program implementers, to make well-founded decisions, based on a business case for strengthening the involvement of women cultivators.

Framework for gender analysis in agriculture: **Gender analysis is a thematic study of the roles played by women and men to gain insight into what they do, what resources they have access to, and what their needs are. A gender analysis helps identify opportunities for policy, programs and projects.**<sup>22</sup>

Building on the FAO gender analysis framework, a framework was developed by Sattva to understand the role of women in cotton cultivation and use this information to build a business case for strengthening their role. Three main areas of inquiry were identified. These were: **gender roles on the farm and in the household, ecosystem support for women cultivators, and gender norms that influence the role of women cultivators.** Within gender roles on the farm and in the household, the framework focuses on the current division of tasks, the inefficiencies that lie therein, decision-making patterns and access to productive resources. Within ecosystem support, the framework looks at training, tools, technology, collectivisation and policy support currently available to women cultivators. The framework also analyzes the underlying gender and socio-cultural norms, which could influence the division of roles and access to ecosystem support.

Category	Focus Points
Gender roles on the farm and in the household	Division of tasks - activities performed by men and women cultivators on the farm and in the household
	Current agricultural practices and inefficiencies in current agricultural practices conducted by women cultivators
	Division of decision-making power between men and women cultivators and its impact on cotton cultivation
	Women cultivators' access to and control of resources on the farm
Ecosystem Support for women cultivators	Access to training and extension services by women cultivators, and the impact of training on the quantity and quality of yield and productivity of the farm
	Access to and use of agricultural technology by women cultivators to improve efficiency and productivity on the farm
	Collectives and community organizations, and the role they play to strengthen women's access to resources and knowledge
	Policy support currently made available to cotton cultivators, with a focus on women cultivators
Gender norms	Gender norms impacting the roles, responsibilities and decision-making power of women cultivators on the farm, and their access to resources and support systems

Table 1: Gender Analysis Framework

THE STUDY USED QUANTITATIVE AND QUALITATIVE RESEARCH METHODS TO ANSWER THE FOLLOWING QUESTIONS:

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What is the role played by women cultivators in the production of cotton and how does it contribute to the quality and quantity of the cotton produced?



How can business outcomes in cotton production be strengthened by enhancing the engagement of women cultivators on the farm?



How are women's roles on the farm influenced by underlying gender norms? How can these norms be influenced or changed to improve and enhance women's outputs and profitability?



What is the current ecosystem around women cultivators? How can it be strengthened to influence the contribution of women cultivators in cotton production?

## APPROACH AND METHODOLOGY FOR THE STUDY

The research study was carried out over five stages, and includes:

1. **A systematic review of Indian and international literature** on the role of women in agriculture, the role of women in cotton cultivation, and the social and cultural norms impacting women's roles.
2. **Formulation of hypotheses** based on literature review and Sattva's past experience in studying the value chain gender gap and consultation with the IDH team. The process of hypotheses development included conversations with agriculture experts and consultation with the Maharashtra Cotton Water Platform (MCWP) for feedback and validation. A gender consultation workshop was conducted with MCWP members, which was held in Mumbai on the 31<sup>st</sup> of October 2018. This served as a platform to gather inputs from gender experts, agricultural experts and social purpose organizations (SPOs) for the study.
3. **Quantitative surveys** with 515 women cotton cultivators and 164 male cotton cultivators. 19 focus group discussions were held with over 125 respondents across Amravati, Yavatmal, Aurangabad and Parbhani
4. **Qualitative interviews** with 26 relevant stakeholders including NGOs, Farmer Producer Organizations (FPOs), ginners, brands and experts in the field.
5. **Analysis of existing intervention models** by service providers and value-chain actors that provide support to women cotton cultivators.

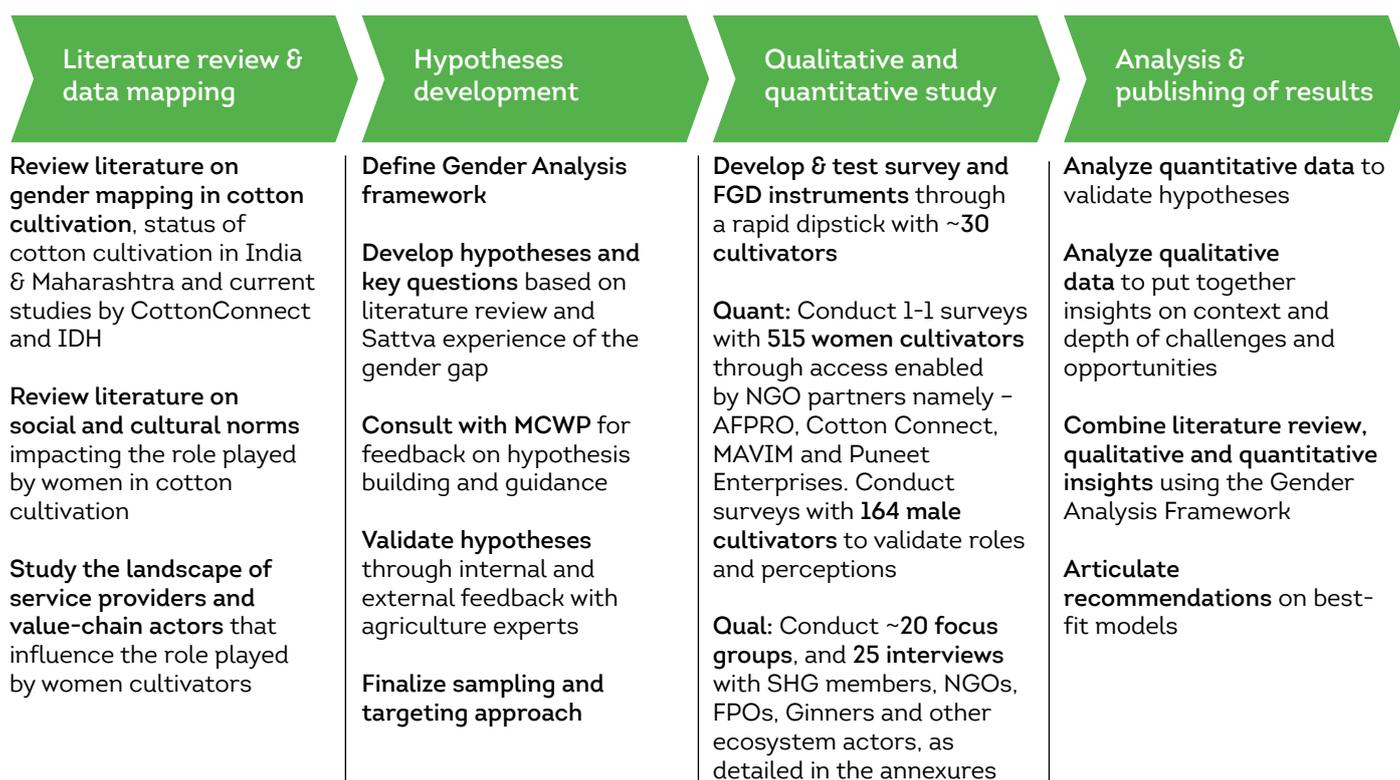


Figure 6: Approach and Methodology

Secondary research methods were also used to understand the role of women cotton cultivators on the field, their participation in decision-making, their access to productive resources such as land and agri-tech, and the impact of their roles on the profitability of cotton. Underlying gender norms were studied to provide deeper insight into farm management and reasons for the division of roles. The solution landscape for women cotton cultivators and existing intervention models were extensively researched through secondary methods to understand the support mechanisms extended to women cotton cultivators today. Further, key considerations and blind spots in interventions were identified through expert interviews and focus group discussions.

## Sampling And Targeting

- Vidarbha and Marathwada have the highest number of cotton-producing districts in Maharashtra and were selected as the target regions to conduct the study.<sup>23</sup>
- The districts were shortlisted based on volume of cotton production. Additionally, other parameters such as population and total female cultivator population were also taken into consideration. The districts selected for the study were Amravati and Yavatmal in Vidarbha and Aurangabad and Parbhani in Marathwada.
- Blocks and villages were shortlisted and selected through convenience sampling. Access to cotton farmers and cultivators was enabled by NGO partners who provide agronomic training and related support in the selected districts.
- One-on-one interviews were conducted with 515 female and 164 male cultivators. These interviews were supplemented by 19 FGDs conducted with groups of male and female cultivators. The following table provides an overview of the districts, blocks and respondents targeted.

Region	District	Blocks	Field Partners	Respondents spoken to (Female)	Respondents spoken to (Male)
Vidarbha	Amravati	Dhamangaon	MAVIM	59	20
		Dharyapur	MAVIM	63	16
	Yavatmal	Bhabhulgaon	AFPRO	60	19
		Ghatanji	AFPRO	58	20
Marathwada	Aurangabad	Phoolambri	Puneet Enterprises	75	25
		Sillod	Puneet Enterprises	82	22
	Parbhani	Jintur	Cotton Connect	24	16
		Parbhani	Cotton Connect	94	26

Table 2: Sampling and Targeting of respondents

One-on-one semi-structured interviews were conducted with the following organizations and individuals:

Category	Organizations
NGOs	AFPRO, Care India, CottonConnect, PoCRA, AFARM, MAVIM
Federations and FPOs	MahaCot, Ghatanji Krushi Vikas FPO (Ghatanji)
Ginners	Sant Prayag Ginning Factory (Parbhani), Success Cotton Industries (Parbhani), Sri Gajanand Cotton Industry (Amravati)
Brands	Arvind Group, Chetna Organic, C&A Foundation
Funders	UNDP, WWF, IDH

Table 3: Field informants interviewed



## Respondent profile

Cotton cultivators met for this study had the following characteristics:



Respondents ranged from

**20-60**  
years of age and had varied education statuses



**90%**  
of female and  
**94%**  
of male respondents were married



Farmers and cultivators spoken to were equally spread across social categories (general, SC, ST, OBC)



**76%**  
of male cultivators owned land titles. Less than  
**20%**  
of women spoken to had land in their name



**83%**  
of female and  
**90%**  
of male respondents were Hindus

Other religions represented were **Muslims** (5% of males, 5% of females) and **Buddhists** (3% of males, 10% of females)



**50%**  
of male cultivators and  
**33%**  
of female cultivators surveyed had received training in the last 2 years



Nearly  
**50%**  
of female cultivators were members of **Self-Help Groups (SHGs)**



**84%**

of men were native residents of the village where they currently lived, while **nearly half the female cultivators had migrated** to their current village of residence from within Maharashtra



**FPO presence was low** for both men and women cultivators

Distribution of respondents: Age-wise (Male and Female, n=679)

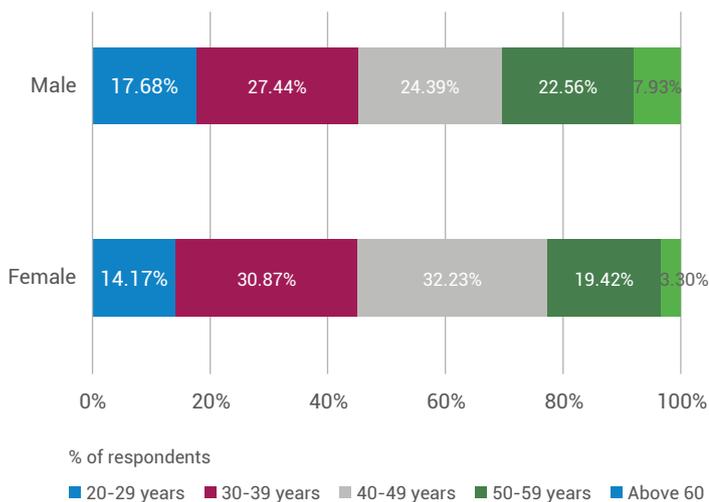


Figure 7: Age-wise distribution of respondents

Educational status of respondents, (Male and Female, n=679)

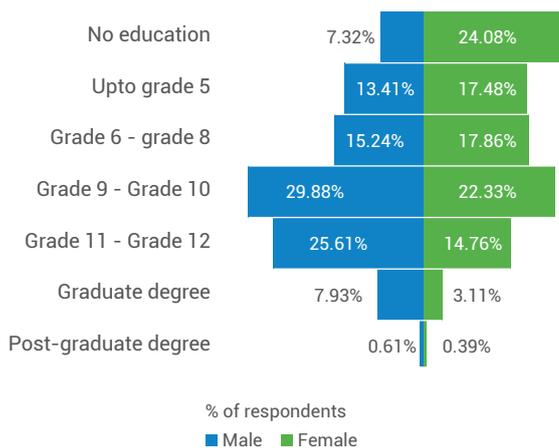


Figure 8: Educational status of respondents

Distribution of respondents: Caste (Male and Female), n=679

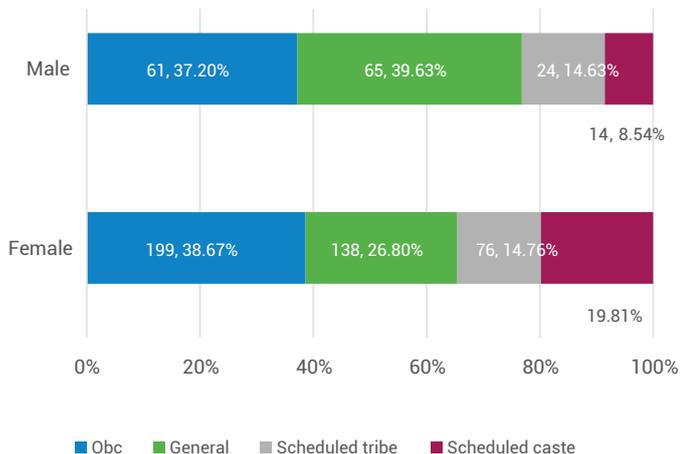


Figure 9: Caste-wise distribution of respondents

Distribution of respondents: Migration status (Male and Female, n=679)

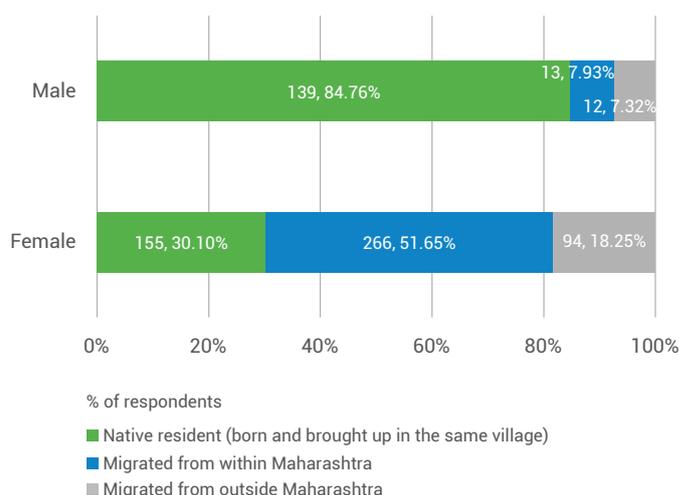


Figure 10: Migration status of respondents

Distribution of respondents: Cultivator status (Male and Female, n=679)

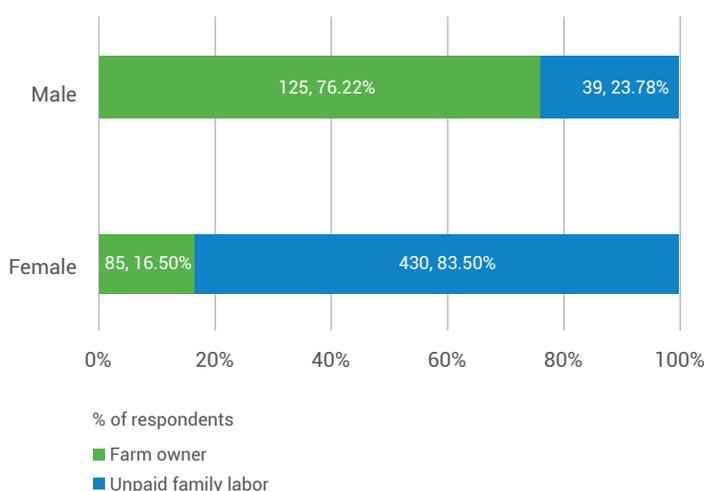


Figure 11: Cultivator status of respondents

SHG status, n=679

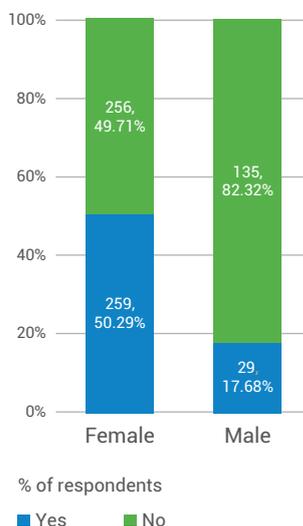


Figure 12a: SHG membership status of respondents

FPO status, n=679

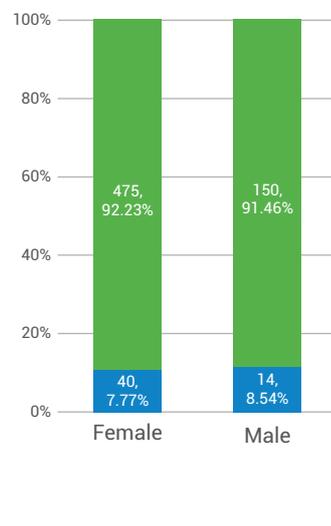


Figure 12b: FPO membership status of respondents

Distribution of respondents: income level (Male and Female, n=679)

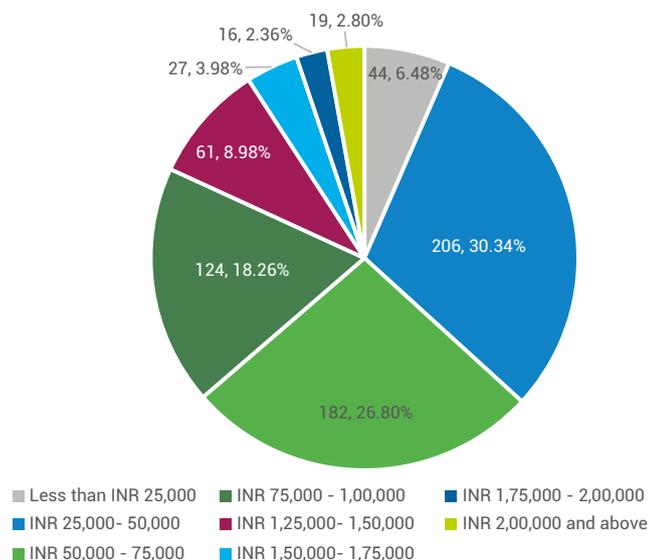


Figure 13: Income level of respondents

Received training in the last 2 years (Male and Female, n=679)

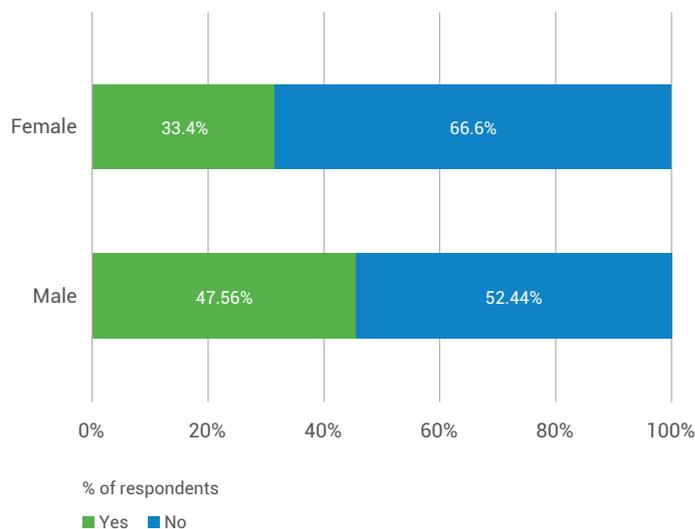
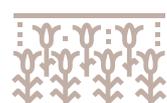


Figure 14: Training status of respondents

## Land profile

The land profile of cotton cultivators met for this study had the following characteristics:



Cultivators spoken to had land varying from under 1 hectare to over 10 hectares, though nearly

**70%**

of cultivators were **marginal/smallholding farmers** (less than 2 hectares)



**65-70%**

of cultivators possessed marginal and smallholding land that was **rainfed**. The use of irrigation increased with increase in the land size



**73.9%**

of cultivators practiced **multi-cropping** as part of their farming practices



Most **male cultivators inherited** land while women cultivators acquired land either through succession or division between spouses.

Size of landholding by respondents (Male and Female, n=679)

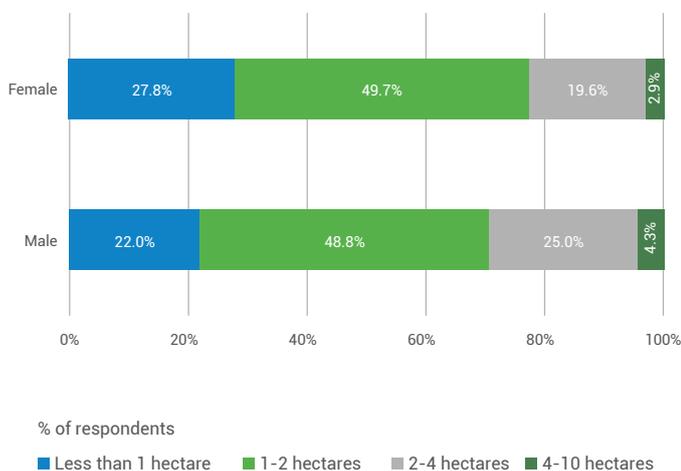


Figure 15: Land size of respondents

Rain-fed vs. Irrigated land (Male and Female, n=679)

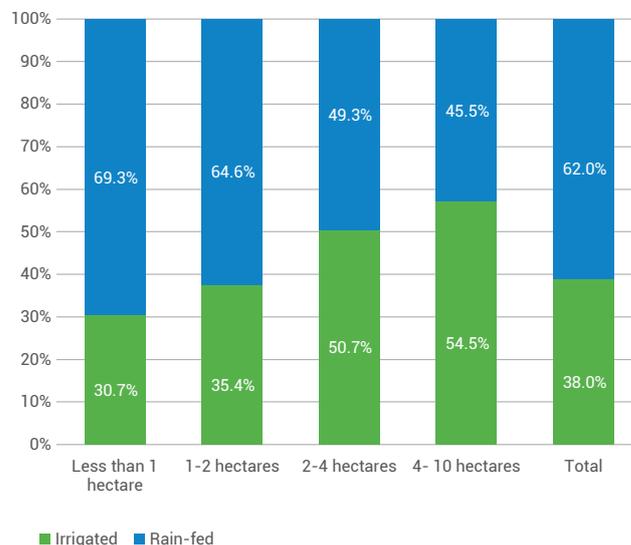


Figure 16: Irrigation status of land

Means of land acquisition (Male and Female, n=679)

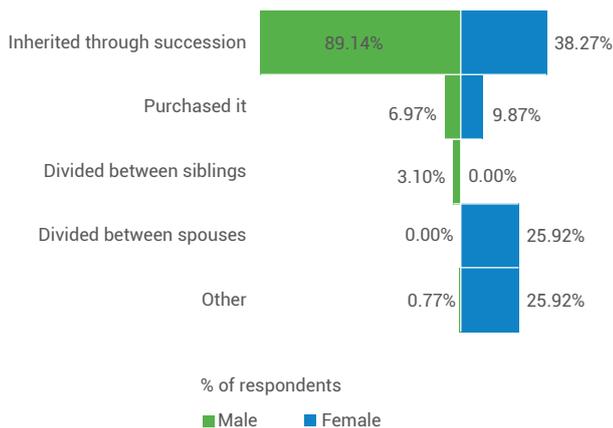


Figure 17: Means of land acquisition

Crops by land size (Male and Female, n=679)

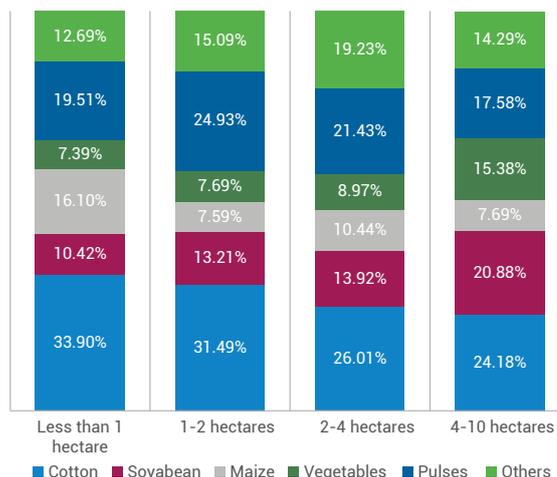


Figure 18: Majority of the cultivators grew other crops on land and dependency on cotton reduces as land sizes increases.

## The social and cultural context for women cotton cultivators

Social norms impact the way women engage with the agricultural ecosystem in rural communities. An understanding of these norms is critical to comprehend factors that influence the role of women in agriculture. An understanding of prevailing norms also helps identify barriers that must be overcome to bring about any sustainable change in the roles and responsibilities of women cultivators, both on the farm and in the household.

These norms also influence access to front-facing roles such as sales and transportation. Asymmetrical flow of information and gender dynamics within the household can greatly influence access to and control over resources. In this section, we will take a look at some of the more prominent gender norms that emerged during our study.

“Women have multiple restrictions at work. They earn the bread for the family and do most of the household work as well, without any help from the men at home. Women cultivators are conditioned to believe that this is their responsibility and that they have to fulfil it. Bringing about the necessary behavior change will take time.”  
 - Shekhar Phatak, Arvind Bagh.



Social norms impact the way women engage with the agricultural ecosystem in rural communities.

## 1. On the farm, women typically undertake tasks that are perceived to be ‘lighter’ work in spite of the fact that they are highly drudgery-prone and require spending more time of the field.

- **Manual work done without the use of tools is considered to be ‘lighter work’:**

On the farm, women cultivators are often responsible for performing manual tasks such as weeding and picking, which involve extensive walking, bending and lifting, making them both time-intensive and drudgery-prone. A majority of these tasks are done by hand or involve the use of age-old tools and implements. Men are typically responsible for tasks that involve the use of machinery such as tractors or ox-drawn carts. These tasks are less time-intensive, and the use of machinery causes them to be perceived as ‘heavy work’. This is paradoxical because the manual tasks are more time-intensive and are far more demanding on the cultivator owing to the physical effort that is required in over a longer period of time to get these tasks done.

- **Women were perceived to be “better suited” to take on these manual tasks:**

Women cultivators spoken to during the study shared that according to the prevailing culture, cotton-production tasks that are more manual in nature are typically performed by women, which was validated through the surveys and FGDs conducted with both men and women. Both men and women cultivators believed that women were better suited to carry out these roles. This highlighted the deep-set gender norms that influence the kind of roles women cultivators can engage in on the farm.

## 2. Women cultivators have the dual responsibility of managing household tasks and working on the field. While household work is unpaid and takes up a significant amount of time, the economic contribution of women cultivators on their own field also goes unmeasured.

- **Women are typically responsible for the majority of child care responsibilities and household chores.** Depending on the household structure and size, these tasks may be extremely time-intensive.

Time	Activities by Women	Activities by Men
5:00 AM	Wake up	-
6:00 AM	House Cleaning + Getting ready	Wake up
7:00 AM	Tea, Breakfast, Cleaning Utensils	Livestock Care
8:00 AM	Food Preparation	Recreational Walk and Communication
9:00 AM	Cleaning Utensils	Preparation to go to the field
10:00 AM	Serving Food	Lunch
11:00 AM-5:00 PM	Field Work	Field Work
6:00 PM	Field Work	Livestock Care
7:00 PM	Tea Making	Recreational Walk and Communication
8:00 PM	Food Preparation	Watching TV
9:00 PM	Serving Food	Dinner
10:00 PM	Cleaning Utensils	Sleep
11:00 PM	Sleep	-

Table 4: Daily schedule of cultivators

- Table 4 shows that women cultivators spend nearly as much time (per day) on the field as men. The remainder of their time is dedicated to fulfilling varied household responsibilities. Findings from FGDs revealed that women cultivators also spend more farming days (80-90%) on the field compared to men (10-20%) through the cotton production cycle.
- Women cultivators additionally take on the responsibilities of rearing of small livestock, though the extent of these responsibilities differs by district and region. This additional work burden is unpaid and leaves women with less time per day available for agricultural work.<sup>24</sup>
- These time constraints and the lack of household support limit a woman cultivator's ability to participate in agricultural activities beyond the typically manual, labor-intensive tasks that they take up. Similarly, women find it challenging to make time for agronomic training, which inhibits their growth as cultivators.

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### 3. Social norms limit mobility; they limit the ability of women cultivators to take on front-facing, 'high value' roles; and they also limit access to productive resources such as land, tools and finance that are made more easily available to their male counterparts.

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- **Limited mobility:** The dual responsibility of working on the farm and within the household limits the disposable time available to women cultivators, which in turn limits their ability to travel to the market or access training programs and agricultural extension services.
  - **Limited access to front facing roles:** In FGDs, women cultivators shared that as per the prevailing cultural norms, women did not engage in marketing and sales activities, even when male members were absent in the household. It was shared that these roles were traditionally carried out by men and the status quo was seldom challenged by women. In many cases, women shared that they were afraid of becoming a topic of discussion within community forums when they took on unconventional roles.
  - **'Safety' concerns and 'lack of information'** limit the participation of women cultivators in market facing roles traditionally dominated by male cultivators.
  - **Men in FGDs stated that the participation of women cultivators was limited** because they lacked the information and exposure required to engage effectively in market facing roles.
  - **Both men and women expressed concern over the safety of women cotton cultivators** in the market, as the sale of cotton often required cultivators to travel long distances and stay overnight while visiting the market. Concerns over safety can also limit a woman cultivator's participation in training programs that require traveling to a distance.
  - **Women cultivators also shared that markets were not "women-friendly spaces."**
  - **Access to resources:** Access and control over assets such as land, finance, tools and technology, are greatly influenced by cultural norms. For example, land is almost always legally owned by a male member of the household. Women cultivators also have limited access to tools on the farm, owing to the fact that machinery-intensive tasks are carried out by male cultivators.
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## 4. Lower levels of income and reduced control over income also limit the level of empowerment women cultivators can achieve

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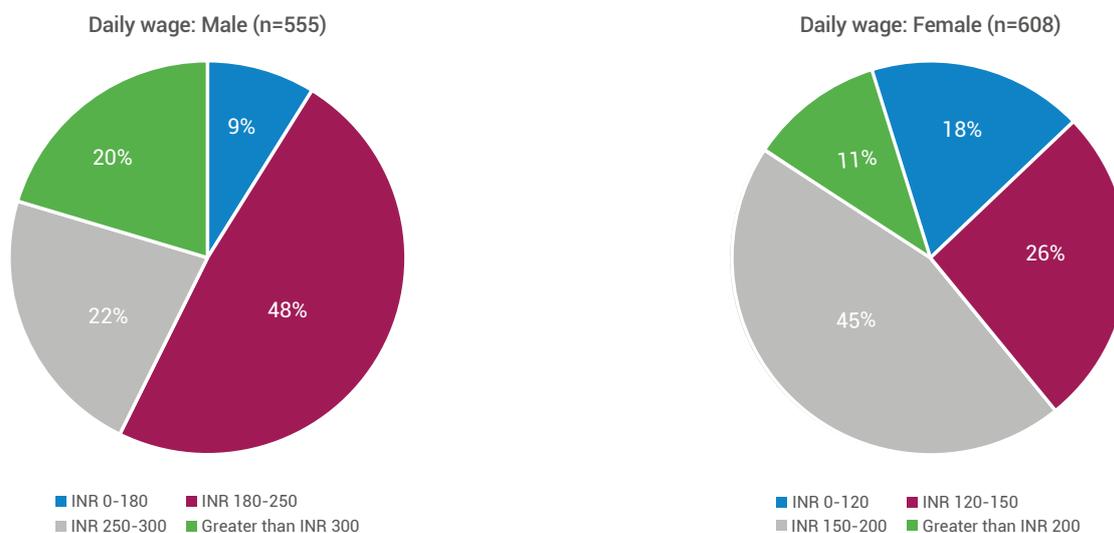


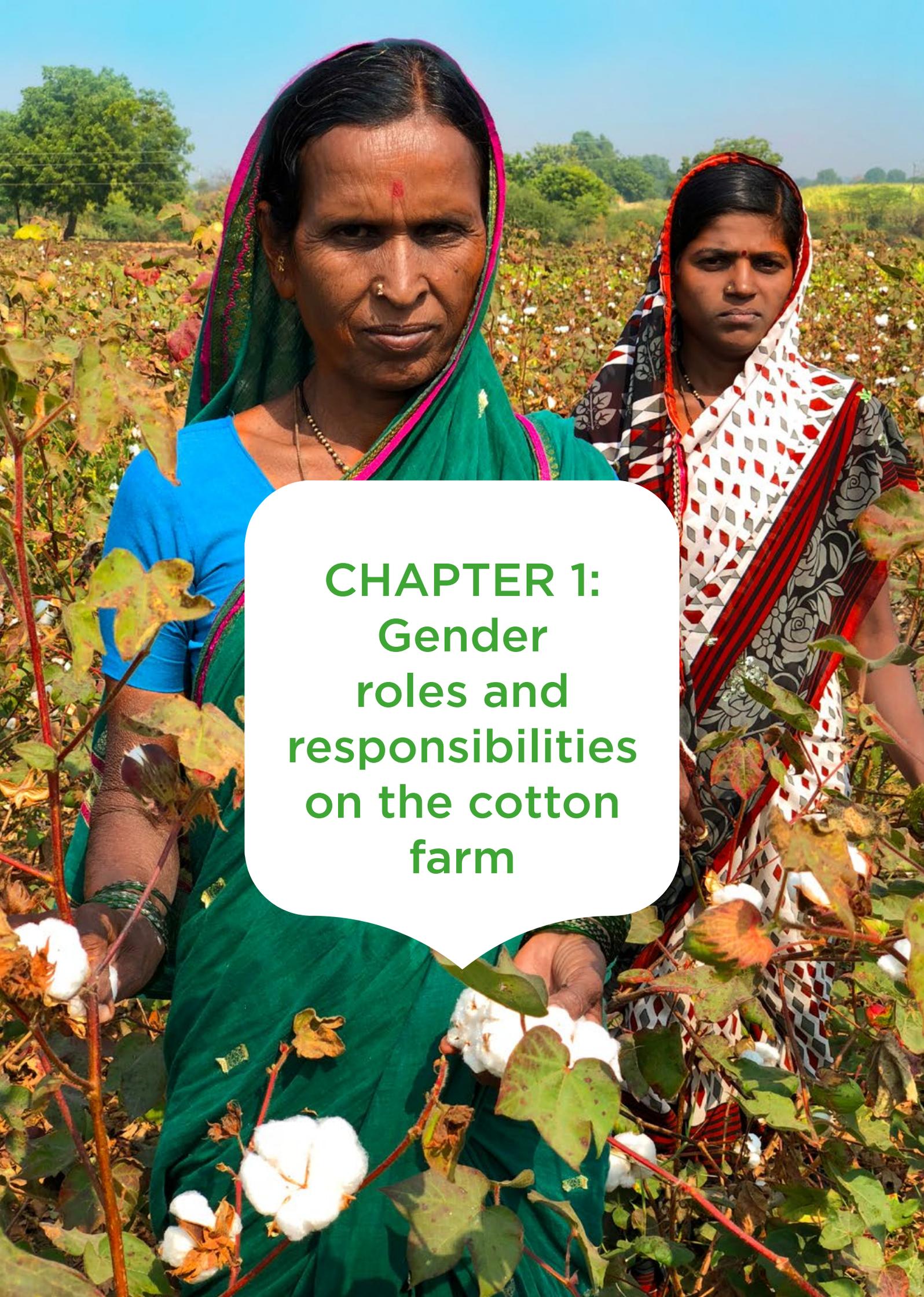
Figure 19: Gendered division of income

- **FGDs revealed that there was a clear gap in the daily wage paid to men and women.** Women cultivators were typically paid INR 150 per day and men were paid INR 200-300 per day for the different roles undertaken by male and female cultivators. The perception that men undertake the “heavier” work and the fact that men are responsible for all market facing roles are factors that contribute to the gender discrepancy in income.
- **Reduced control over income:** As per cultural norms, men go to the markets, and receive the payments in hand or in their bank. This gives them direct control over the income. Women cultivators in FGDs shared that limited access to markets result in men making almost all decisions related to purchase of inputs and equipment, and limits the participation of women in decision-making related to agricultural activities.

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**Gender norms influence how responsibilities are divided between men and women, both on the field and in the household. These norms limit the role of women cultivators, and also influence women cultivators’ access to, and control over, productive resources and income. Further, the uptake and success of policy and programmatic interventions can also be adversely impacted by prevailing social norms, especially by norms that restrict agency, mobility and decision-making power.**

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**CHAPTER 1:  
Gender  
roles and  
responsibilities  
on the cotton  
farm**

Across the production cycle, women play a critical role in stubble picking, sowing, weeding, cotton picking and storage.

## 1. Women play a critical role in stubble picking, sowing, weeding, cotton picking and storage

Pre-production tasks have been found to be dominated by men, while women play prominent roles in stubble picking and sowing. Women have increased participation in tasks that are done manually, such as production and picking activities. **88% of stubble picking, 89% of sowing, 84% of weeding, 74% of fertilizer application and 94% of the picking is done by women.** Tasks that involve the use of machinery such as plowing (softening the soil, uprooting the soil, marking the soil for seeds) and pesticide application have been found to be done by men. Despite their role in cotton production, survey findings reveal that **women cultivators' participation in market facing roles is limited with male farmers undertaking 86% of transportation and 97% of selling.**

Tasks Pre-production	 Uprooting Old Plants	 Stubble Picking	 Application of Manure	 Plowing	 Row-Making	 Sowing
Gendered Division of Tasks	 87% Uprooting of old plants is done by men	 88% Stubble picking is done by women	 79% Application of manure is done by men	 99% Plowing is done by men	 99% Row-Making is done by men	 89% Sowing is done by women
Tasks Production	 Weeding	 Fertilizer Application	 Fetching Water	 Pesticide Application	 Picking	
Gendered Division of Tasks	 84% Weeding is done by women	 74% Fertilizer application is done by women	 57% Transportation of water is done by women	 97% Pesticide application is done by men	 94% Picking is done by women	

Figure 20: Gender roles and responsibilities

## 2. Tasks undertaken by women cultivators directly impact the quantity and quality of cotton produced

Across the production cycle, women play a critical role in stubble picking, sowing, weeding, cotton picking, and storage. Owing to the time spent on weeding, women could potentially also play critical roles in scouting for pests. Each of these roles impact both the quality and quantity of cotton produced, as highlighted below:

Task	Involvement of Women	Impact on Cotton
Sowing	89%	Efficiency of sowing depends on row-making, plant-spacing and seed plantation. Low plant population can reduce the quantity of yield and impact profitability. Inaccuracies in depth of sowing can cause emergence problems. <sup>25</sup>
Weeding	84%	Weeds can reduce lint yields between 10-40% depending on the density of weeds. Weeds compete with the cotton crop for light, nutrients and moisture, and can also reduce fibre quality by affecting fibre length or by adding moisture to the bolls. <sup>26</sup>
Fertilizer Application	74%	Delayed application of fertilizers can reduce yield by 10-40%. Fertilizers are also a costly input, and inefficient usage of fertilizers increases cost of production. <sup>27</sup>
Pest Management	3%	Cotton is attractive to a range of pests, and is subject to diseases and weed infestations that affect quality and quantity of yield. <sup>28</sup> Unchecked use of pesticide can cause development of pest immunity, increased pest attacks and reduced yield. While engaged in weeding activities, women are on the field during the early schedule of pest monitoring and can be trained in scouting for pests to reduce incidents of pest attacks.
Picking and storage	94%	Unscientific picking practices can increase the presence of dust particles, hair and other contaminants in the cotton produce. This reduces the quality of cotton and affects the price at which cultivators are able to sell the cotton (FGD). Different types of cotton must also be picked and stored separately. Cotton with higher grade, higher staple and higher strength claim a better price.

Table 5: Impact of women's roles on cotton

# SOWING

The success of sowing operations is dependent on space between rows, space between plants, and depth at which seeds are sown.

## 1. Distance between rows:

Row-making is typically undertaken by men and can be optimized to increase yield per hectare.

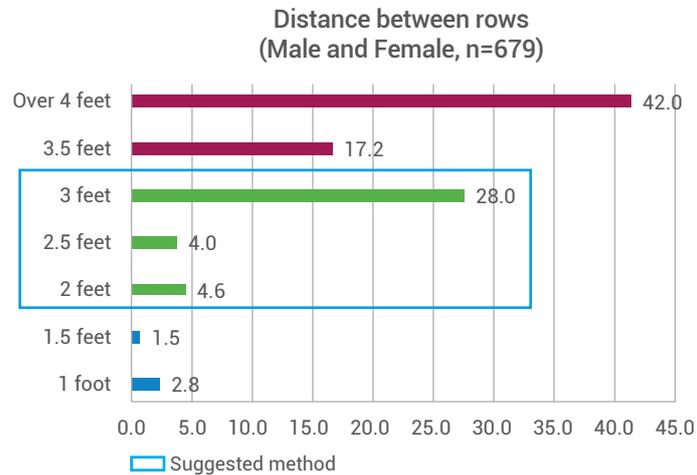


Figure 21: Distance between rows

- **Suggested method for conventional plantation:** CICR guidelines recommend that hybrid varieties of seeds should be sown in rows that are 2-3 feet apart, highlighted as green bars in the graph and desi varieties can be sown in rows 1.5-2 feet apart. FGDs revealed that American hybrid varieties were popular in regions surveyed.
- **Current practices:** Survey results reveal that irrespective of the type of seed, **59% of respondents reported planting cotton in rows that were greater than three feet apart.** In regions with low productivity, like those surveyed in this study, CICR recommends high density plantation systems (HDPS) to increase the plant population per unit area for improved productivity and sustainability of cotton production.<sup>29</sup>
- **Suggested method for high density plantations:** CICR recommends that ultra-narrow row spacing (spacing less than 1.5 feet) be practiced in Vidarbha and Marathwada to improve productivity, highlighted as blue bars in the graph.
- **Current practices:** According to the CICR guidelines, ultra-narrow spacing is recommended and yet **only 4% of respondents maintain ultra-narrow spacing, as per our findings.**

Depending upon the type of seed and irrigation methods used, incorrect row spacing can reduce plant population per hectare and delay crop development. Low populations typically bear fruit earlier but require time to accumulate a fruit load that allows for optimal yield.

## 2. Distance between plants:

Plant-spacing comes under the purview of women cultivators. Sub-optimal plant-spacing practices can delay maturity and lower the quality of cotton produced.

- **Suggested method:** CICR guidelines recommend that distance between plants (for non HDPS plantation) should be 2 feet for hybrid varieties and 0.5-0.75 feet for desi varieties on rainfed land in Maharashtra.

- **Current practices:** FGDs revealed that cultivators in this region typically used hybrid varieties and depend primarily on rain for land irrigation. **Based on the CICR standards, only 15.9% of survey respondents maintain the optimum distance between plants.**

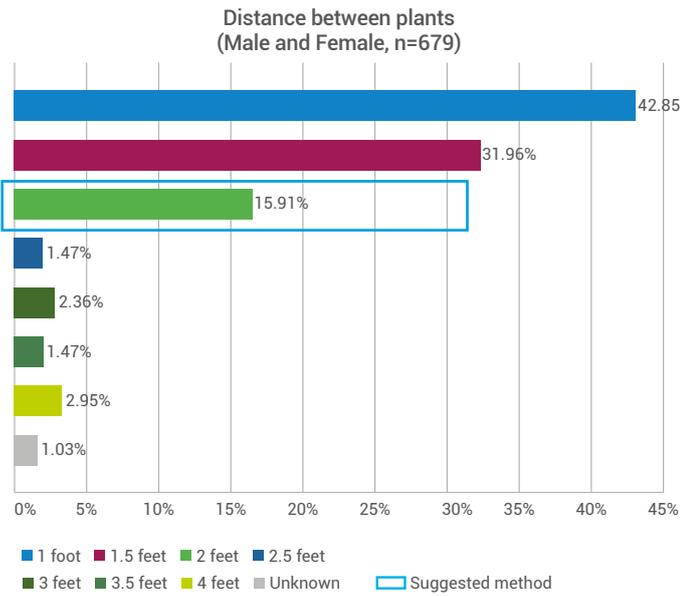


Figure 22: Distance between plants

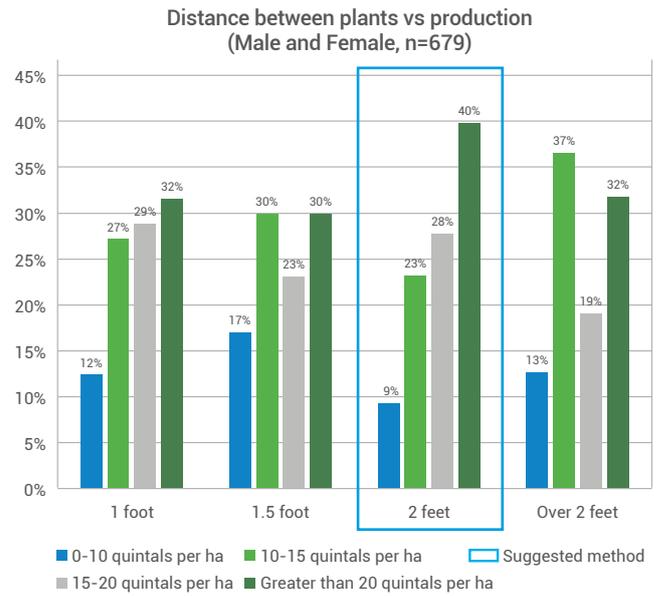


Figure 23: Variation in production with change in plant distance

Nearly 40% of respondents reported yield greater than 20 quintals per hectare when a distance of two feet between plants was maintained, revealing the benefit of maintaining optimum distance between plants.

Planting at lower seed drop rates (seeds per hectare), increases chances of delayed maturity, and reduces lint yield and boll density, as per a report by Louisiana State University.<sup>30</sup>

### 3. Depth of seeds:

Depth of seed plantation is undertaken by women cultivators and can be influenced to improve output.

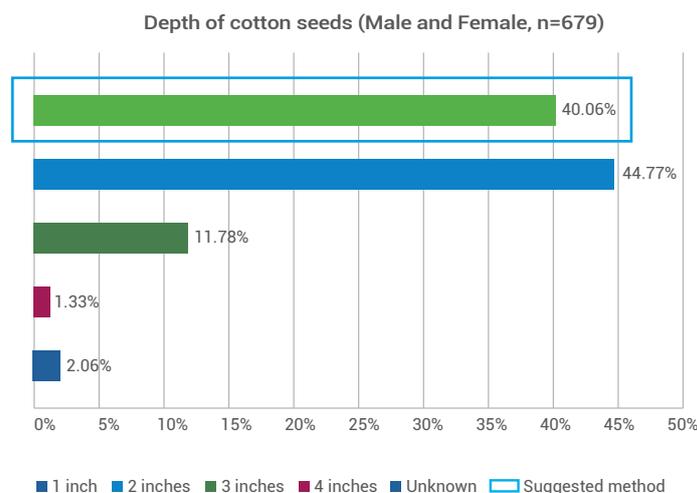


Figure 24: Depth of cotton seeds

- **Suggested method:** Agronomic experts in the field extension teams of AFPRO and AFARM highlighted that the optimum depth for sowing cotton seeds is up to one inch deep in the soil. This is especially true in the case of BT cotton seeds, which are predominantly used by the farmers in the region. This was also confirmed through our interviews with cotton experts.

- **Current practices:** Our survey results found that **60%** of the population in Marathwada and Vidarbha plant seeds deeper than one inch.

A study undertaken by Louisiana State University highlights that planting seeds deeper than one inch can hamper or cause delays in seed germination.<sup>31</sup>

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## WEEDING

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Survey results found that women account for **84%** of weeding on the farm. Weeding is a critical activity that can impact yield and fibre quality if not done appropriately.

- **Suggested practices:**
  - **Scientific knowledge of good and bad weeds can make weeding more effective.** The ability to identify and isolate bad weeds can make the manual process of weeding more efficient for women cultivators.
  - **Land preparation through deep ploughing can reduce weeds** which will be beneficial to women as it will reduce the time involved in manual weeding, which is highly drudgery-prone.
  - **Weeds that are important for microbial action should be retained in the soil for mulching.** Mulching is the process of using garden leftovers to cover any bare soil in the garden. Mulching returns organic materials and nutrients to the soil, and it has the added benefit of preventing weeds or unwanted grass growth.
  - **Use of weedicide should be avoided** because it destroys all plants, irrespective of the type of weed. It also kills the good weeds. Weedicides also damage natural habitats and growth. While application of weedicides reduces the drudgery involved in weeding, weedicides pose more of a threat than a solution.
- **Current practices:** Weeding is done manually, by hand or with the use of sickles. The task is highly drudgery-prone, involving long hours of walking and bending. The task is undertaken with knowledge passed on over the generations, without any scientific knowledge on the types of weeds. The use of technology for weeding is currently limited in the regions of Vidarbha and Marathwada.

A report titled “Weed Competition in Cotton” (2018)<sup>32</sup> highlights that bad weeds can restrict air movement and raise moisture levels in the cotton canopy, resulting in boll rot and quality loss. This can also reduce lint yields anywhere between 10-40% depending on the density of weeds. Weeds can also reduce fiber quality by affecting fiber length, uniformity, strength, or microns.

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## FERTILIZER APPLICATION

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Women cultivators undertake **75%** of the activity involved in fertilizer application. Excessive or incorrect use of fertilizers can increase the cost of production and increase the incidence of pest and weed attacks.

### Time of fertilizer application:

- **Suggested method:** CICR recommends that nitrogen should be applied in two splits for rainfed cotton, i.e. 50% at the time of sowing and 50% at the time of square formation. CICR also recommends three splits for irrigated cotton, i.e. 1/3<sup>rd</sup> at sowing, 1/3<sup>rd</sup> one month after sowing, and the remaining 1/3<sup>rd</sup> sixty days after sowing (DAS). Phosphorus and Potassium should be applied as basal dose (i.e. at the time of sowing or planting) for both rainfed and irrigated cotton.

- Current practices:** All cultivators are expected to apply the full dose of Potassium and Phosphorus and either half or a third dose of nitrogen at the time of sowing (based on whether the land is irrigated or rainfed). Our study found that **only 30% of the surveyed population applied fertilizers at the time of sowing**. Further, 62% of respondents surveyed stated that their land was rainfed, which requires only two rounds of fertilizers per guidelines. **Yet 72% of respondents applied three rounds of fertilizers**.

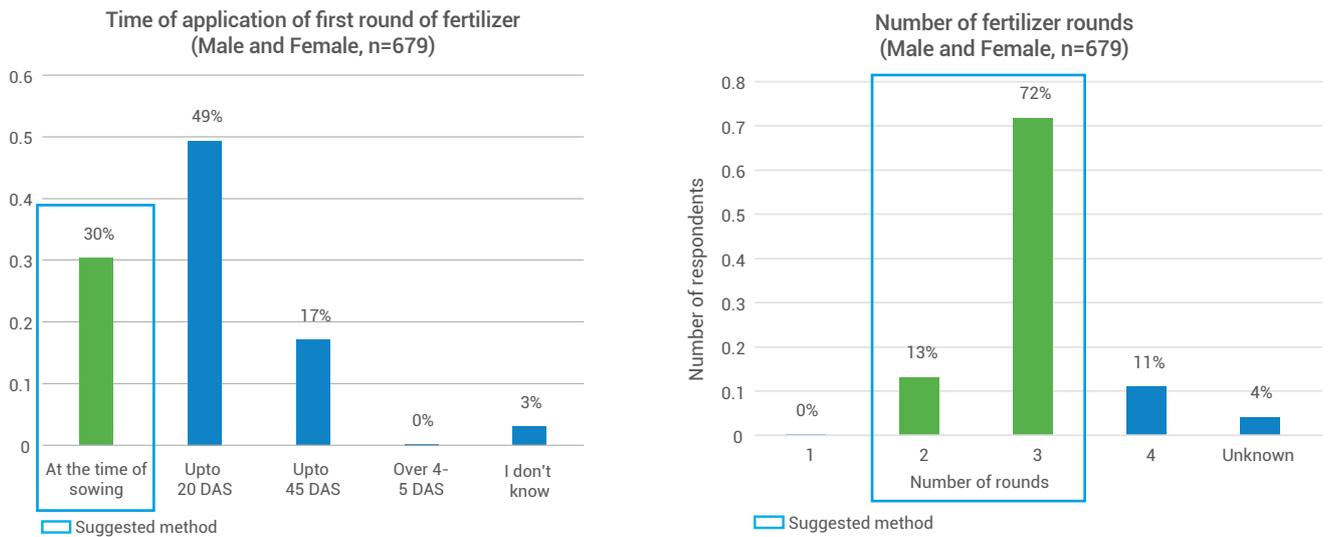


Figure 25: Time of application and number of fertilizer rounds

Delayed application of the basal dose of fertilizers affects both the nutrition of the plant and the quality of cotton, and can reduce the cotton yield between 10-40%.

**Method of fertilizer application:**

- Suggested method:** Immobile nutrients like Phosphorus and Potassium need to be placed effectively near the roots. CICR guidelines recommend that these fertilizers be applied as a basal dose, which should be given at the time of sowing by making circles around the root and applying it 5-6 centimeters away from dibbled seed.
- Current practices:** Findings show that while most cultivators apply fertilizers near the roots, **only 8.39% of cultivators follow CICR guidelines**.

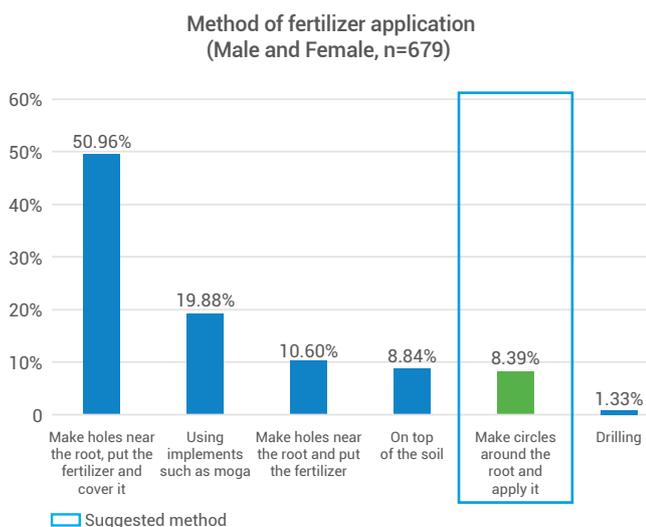


Figure 26: Method of fertilizer application

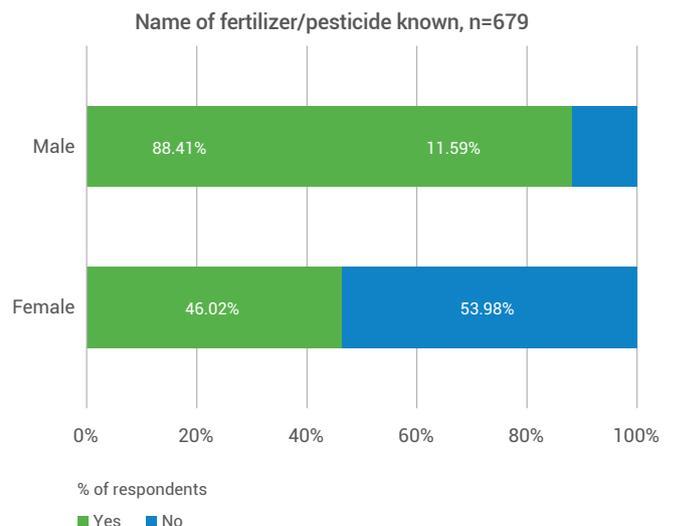


Figure 27: Ability to name fertilizer and pesticide used

Our survey findings also reveal that though women undertake 75% of the work in fertilizer application, more than 50% of the women surveyed are unaware of the names of fertilizers used on the farm.

“Currently, women cultivators are not provided with information on the rationale behind the application of fertilizer. If women cultivators were provided with information regarding the right amount of fertilizers to be applied, they would be equipped to administer the right number of doses, reducing costs by 50% and improving profit 1.5 times.”  
- Milind Kamble, AFPRO

If women lack knowledge of the fertilizers they use, it could affect the amount of fertilizers used and the method of fertilizer application. This could, in turn, increase cost of input and potentially affect the yield of cotton.

## PEST MANAGEMENT

Excessive application of pesticides can make crop protection increasingly expensive. While men undertake 97% of the work on pesticide application, women can be trained in pest identification to improve overall pest management.

- **Suggested method:** In order to prevent the overuse of pesticides, CICR recommends that farmers scout for cotton pests regularly. Only when the pest population numbers exceed the number of beneficial insects, is it recommended that farmers adopt suitable interventions, thus giving due consideration to natural pest regulation.
- **Current practices:** Only 22% of cultivators applied pesticides based on need (when there was a pest attack) while nearly 58% of cultivators applied 3-4 rounds of pesticides.

Cotton is attractive to a wide range of pests. Excessive application of pesticides has been a contributing factor to increased pest resistance and disruption of natural pest populations. This increased resistance ultimately makes it difficult to eliminate pests, thus making crop protection more difficult and expensive.

Given the importance of pest management, it is critical that these practices are improved to increase profitability. For this, cultivators can adopt integrated pest management practices, and women could play an increased role in scouting and monitoring of pests.

The time spent by women on the field can be leveraged to implement integrated pest management.

### Integrated Pest Management (IPM):

- Integrated Pest Management seeks to manage pests sustainably and profitably, using a combination of cultural, biological and chemical approaches based on the type and intensity of the pest attack.
- IPM programs use current, comprehensive information on the life cycles of pests and their interaction with the environment.
- This information, in combination with available pest control methods, is used to manage pest damage by the most economical means and with the least possible hazard to people, land, and the environment.
- Using a seasonal calendar, our study found that during the months from July to September - when the spraying of pesticides takes place - women cultivators spend most of their time on the field, engaged in weeding and fertilizer application.
- Currently, survey findings show that, without training, only 27% of women cultivators could identify the types of pests in the field. With training, this increased to 81%. Given the time they spend on the field, women cultivators can be equipped in the prevention and monitoring of pests, thus optimizing their time spent on the field while improving the effectiveness of pest management.

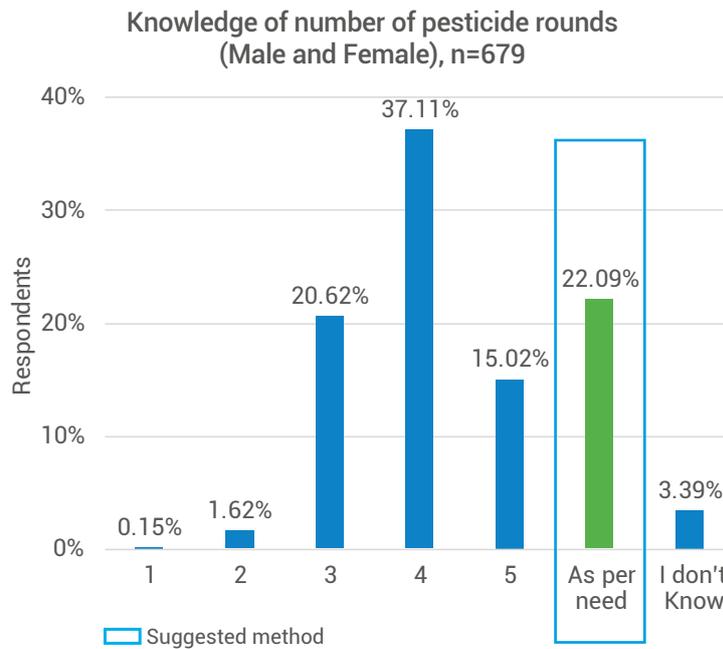


Figure 28: Knowledge of number of pesticide rounds

“Women cultivators are on the field all day but are unable to take action during the incidence of a pest attack because they are unaware of the type of pests that exist. If women cultivators were trained with visuals and samples, they could be better equipped to be proactive in pest management.”  
 - Santosh Malkuji Pusnagar, Ghatanji Krushi Vikas

If women were provided with the knowledge to identify pests, they could closely monitor and identify pest attacks, ultimately reducing the cost of pesticides and protecting the crop from damage.

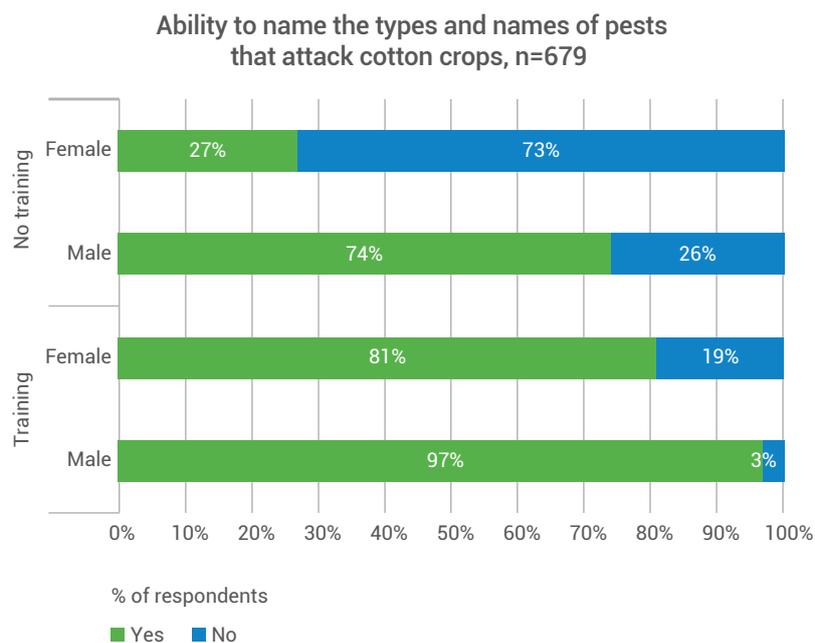


Figure 29: Ability to name pests on the field

## PICKING AND STORAGE

94% of respondents said picking of cotton is done by women cultivators. Hand picking, if done incorrectly, can reduce the quality of cotton.

### Suggested method:

- The right method of picking cotton is to pick from the lower rung to avoid contamination.
- Cultivators are required to cover their hair and avoid chewing tobacco to reduce contamination.
- Time of picking also impacts quality. Cotton should not be picked early in the morning to prevent the presence of moisture in it.
- Picking should be done with cotton bags, as fibers from polypropylene bags contaminate the cotton. If polypropylene bags must be used, they should be colored, so that these fibers can be easily identified and separated from the cotton fibers.
- **Current practices:** Findings show that, currently, only 38% of untrained women cultivators follow any scientific method of picking. This number increases to 87% in the case of trained women cultivators. Incorrect picking of cotton can be remedied with training on good practices, and the use of cotton bags for picking.

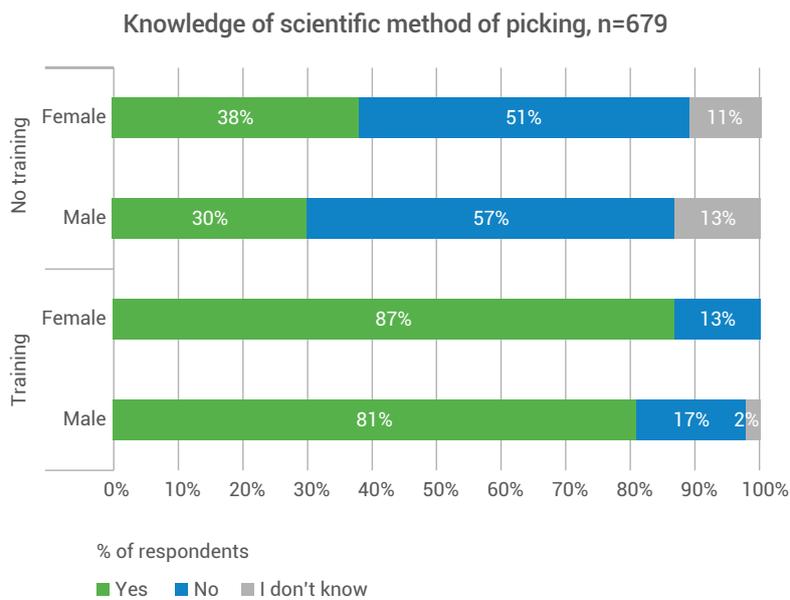


Figure 30: Knowledge of scientific method of picking

“Often times, farmers use fertilizer bags made out of polypropylene for picking cotton. Polypropylene fibers get into the cotton and because they don’t pick up the dye, they stand out in the finished product.”  
- Pragnesh Shah, Arvind Group

Incorrect methods of picking can be a source of contamination (dirt, stones, hair, plastic, moisture, and other ‘trash’). Minimizing trash content is important because if contaminants are removed at the time of ginning, it could also cause loss of fiber.

In cases where scientific methods of picking were used, there was only a 3% increase in the population of cultivators claiming a selling price greater than INR 5,000 per quintal. **This highlights factors other than picking practices – storage and segregations – that impact the quality and the selling price of cotton. Experts shared that:**

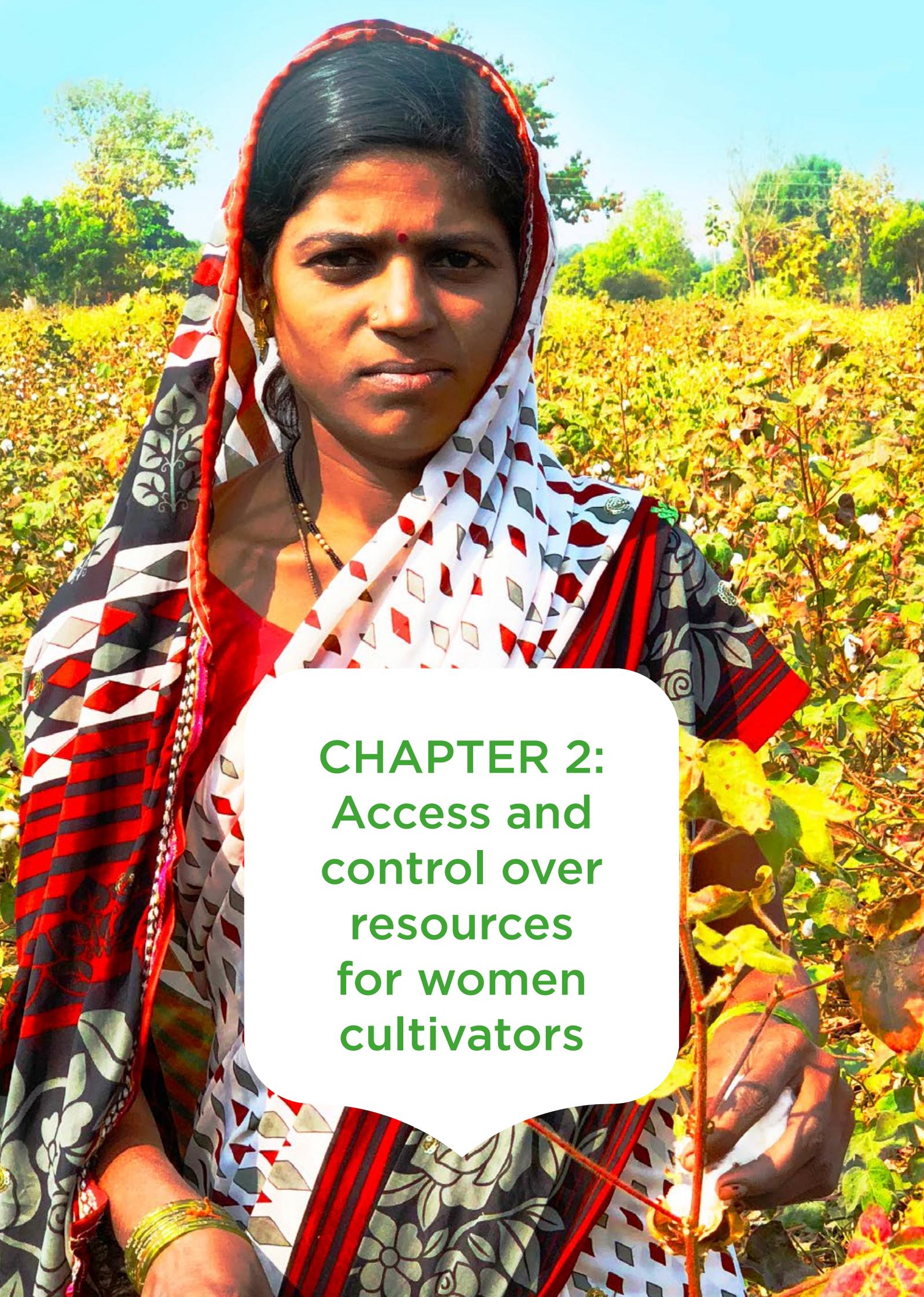
- If cotton is stored when it is too moist, or in conditions that are moist, there is a high risk of microbial damage.
- Cotton also needs to be stored free from other sources of contamination (trash).
- Cotton from different pickings has to be stored separately, to ensure consistency in the variety of cotton picked.
- Cotton produced from different types of seeds also needs to be picked and stored separately. Survey findings revealed that irrespective of land size, all farmers sow three different varieties of seeds, which could adversely impact the consistency in the fibers picked and stored.
- Without clear knowledge of staples and grades, women cultivators could pick and store cotton ineffectively, resulting in inconsistency in cotton fiber (no clear distinction in grades) and ultimately affecting the price at which the cotton is sold.



Figure 31: Relationship between method of picking and selling price

**Lack of attention given to the type and number of seeds used and lack of attention given to storage of different pickings of cotton, increases risks of inconsistency in the cotton produce taken to the market, directly impacting the price at which it is sold. Apart from cotton picking practices, incorrect storage and transportation can contribute to the presence of contaminants, thus reducing the quality of cotton and its selling price.**

Yield per hectare in Maharashtra continues to remain the lowest in the country at 343.48 kg per hectare, despite having the highest area under cotton production. This section highlighted the number of roles women undertake throughout the production process and the impact of their roles on the quality and quantity of cotton produced. Improving the ability of women cultivators to perform their roles better and enabling them to take better decisions can improve output, reduce input costs, and drive overall profitability, thus highlighting the business case for mainstreaming gender in cotton cultivation in Maharashtra.



**CHAPTER 2:**  
**Access and  
control over  
resources  
for women  
cultivators**

# 1. Women have limited access to resources such as knowledge, skills, land, tools, government schemes, community organizations and finance

The 2011 FAO report titled “Gender differences in assets” highlights that, across developing countries, agricultural productivity is underperforming, partly because of the reduced access that women cultivators have to assets and opportunities they need to achieve their potential. While there are regional differences that can influence the degree of gender inequality in access, the underlying causes are mostly social norms and household responsibilities that create time constraints, and interdependency of assets (for example, having access to land helps with access to credit which helps with access to purchased inputs). This reduces the productivity of women cultivators and results in increased costs in terms of lost output, income and ultimately welfare of households, communities and nations.<sup>33</sup>

A study conducted by the International Trade Center in 2011 highlights that in most smallholder dominated countries, women cotton cultivators struggle with the lack of access to resources such as credit, property entitlement, representation and participation in collective organizations, and coverage by national labor legislation.<sup>34</sup> Another study by FAO states that, if this was rectified and if women were given the same access as men to productive resources such as farm equipment and inputs, their productivity could increase by 20-30%.<sup>35</sup> In this section, we will look at the access that women cultivators have to productive resources such as land, tools and technology, government resources, finance and collective organizations.

## A. Access to Knowledge and Skills

Only 33% of women cultivators surveyed had attended any training in the last two years. Lack of opportunity, time and mobility constraints were found to be limiting factors.

In FGDs, women cultivators shared that, irrespective of the type of agronomy-related training program, if it were offered to both men and women, men were more likely to attend it. FGDs also revealed that, as per prevailing social norms, women cultivators have the dual responsibility of working on the farm and managing household responsibilities, which limits the time available to access training and other support programs. Sattva’s survey findings revealed that:

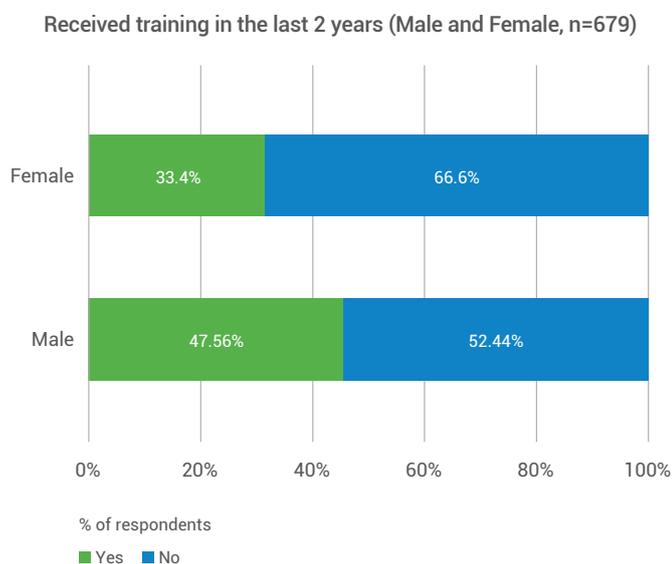


Figure 32: Training status of cultivators



Figure 33: Reasons women cultivators don't take up training

- Of the women cultivators who did not receive training, **77% cited the lack of opportunity as the primary reason.**
- For those who had the opportunity (77 women cultivators), the **timing of training, lack of time, and the absence of women trainers were cited as common limitations for participating in training programs.** Household responsibilities pose time constraints, and while women cultivators typically have spare time in the evening, it raises safety concerns over attending the trainings.
- Women cultivators also shared that they lose out on labor earnings in the process of attending trainings.

Training provides women cultivators access to information and knowledge that they cannot otherwise access as easily as their male counterparts.

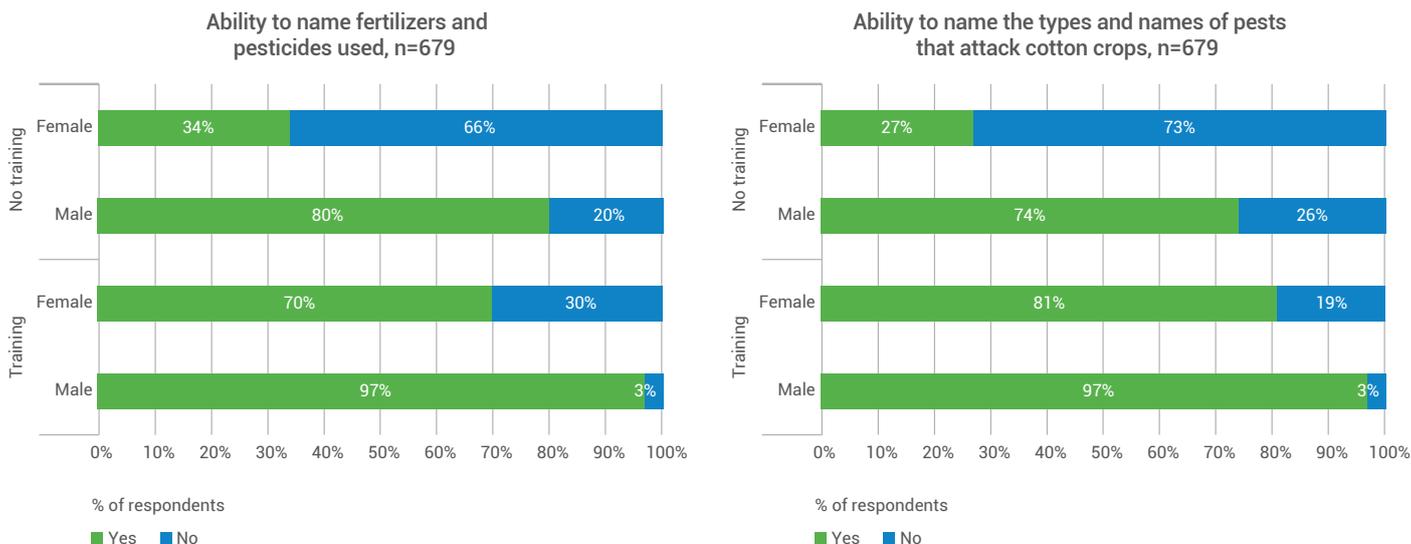


Figure 34: Knowledge gained through training

Figure 34 highlights that for women, access to training led to an almost doubling of knowledge on the names of inputs and the types of pests, while the increase in knowledge for men was only marginal. This shows that while male cultivators access information from multiple sources such as visits to the local markets, extension services and conversations with other farmers, women lack similar conventional avenues, and therefore, the benefit women cultivators derive from training is much higher.

When training was provided to women cultivators, they identified reduced cost of inputs, improved quality and cleaner picking as benefits from the training.

“Most trainings are attended by men because men typically own the land and are therefore recognized as farmers. It is assumed that male trainees will pass the information onto the women (and family) labor, but that does not always happen.”  
 - Sangeeta Shete, IDH the Sustainable Trade Initiative Gender Expert

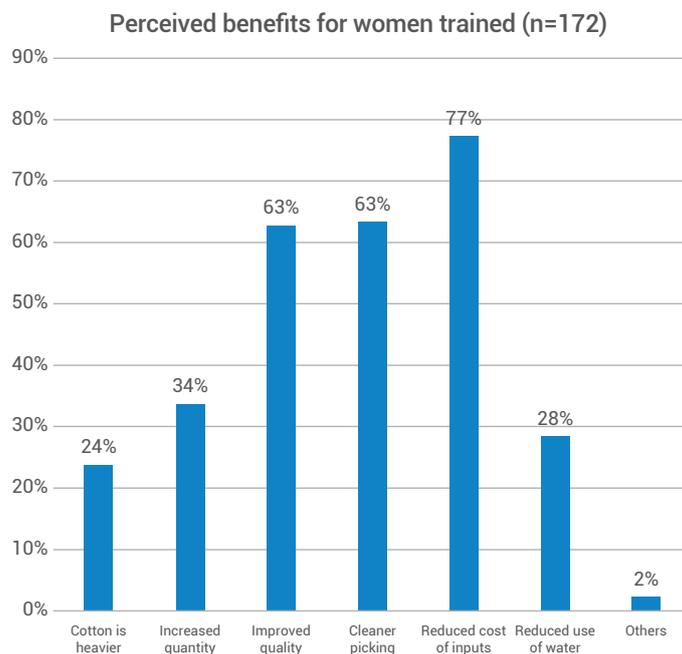


Figure 35: Perceived benefits of training for women

In terms of benefits derived from training, our findings show that 77% of women cultivators identified reductions in input cost while 62% highlighted improvements in picking practices and quality of cotton.

- Women cultivators in FGDs shared that, through the trainings, they learnt about the **right spacing between seeds/plants**.
- Prior to the training, women cultivators shared that they would apply multiple rounds of pesticides. However, their **input costs have come down** since the time they started using pesticides in smaller quantities. The cost of fertilizers also reduced because cultivators were made aware of the right quantity that is to be applied.
- As part of UMED, Maharashtra's State Rural Livelihoods Mission, women cultivators in Ghatanji were trained in sustainable agriculture practices, including the production of fertilizers and pesticides at home. This helped **reduce crop damage through pest attacks** and was a contributing factor in **improving their output** from 9 quintals per acre to 14 quintals per acre.

FGDs with trained women cultivators showed that as they were given increased access to information through training, they developed a greater understanding of the right kind of inputs and a newfound confidence to participate in and influence decision-making within the household. This knowledge better equipped them to apply fertilizers effectively and at the right time, and to purchase the right kind of seeds.

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## The Empowered Women Cotton Cultivators of Parbhani: A Case Study

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In Murumba village of Parbhani district, there is a group of trained women cotton cultivators who are driving social change through their communities. In our FGD with eight such cultivators, we learned that these women had been organized into SHGs through BCI interventions over the past 10 years. The SHGs met twice a month and were leveraged as channels to provide training and gender sensitization programs to both male and female cultivators alike.

The positive benefits of supporting interventions were seen across the group. Some women cultivators shared that they had attended seminars on field practices. Training on the correct method for sowing, application of pesticides and even financial management was made available to them, once or twice a year. Mobile updates were made available to ensure awareness of these training programs. Some other areas of support provided to women cultivators include:

**Improved Farm Practices:** Women cultivators shared that, through the trainings, they gained knowledge on the right space between the plants, the scientific method of picking, and the optimum quantum of fertilizers and pesticides. Earlier, farms were characterized by indiscriminate use of seeds and pesticides to improve output, but this has now been toned down to meet the BCI/CICR standards.

**Identification of Pests:** Before women cultivators had access to training, identification of pests was the sole responsibility of the male farmer. However, women cultivators shared that, after the trainings, they involve themselves in this process to contribute to the monitoring and identifying of pests.

**Purchase of Inputs:** Women shared that, since they undertake picking activities, they use their knowledge of good and substandard seeds to contribute to decision-making in the purchase of seeds. Women cultivators said that they interact with other farmers and enquire about their production. Accordingly, they try to contribute to purchase decisions.

**Decision-Making:** Women cultivators shared that all decisions are taken by both the male and female cultivator together. While this was not the case earlier, men and women have learnt how to work together through trainings. Earlier, men would have the final say in decisions and the women cultivators lacked the knowledge to push for their perspective. The trainings equipped women cultivators with the knowledge to enable them to make their point. The SHGs also serve as learning groups for the women cultivators, wherein they discuss relevant topics and farm practices to support each other.

The trained women cultivators shared that the improved use of inputs resulted in reduced input costs and improved output. Further, these training sessions granted women cultivators increased access to knowledge, allowing them to gain the confidence to contribute to improved decision-making in the household.

## B. Access to productive resources

- **Land Ownership**

Increased landholding improves women cotton cultivator's participation in decision-making, but only 16% of the women surveyed held land in their name.

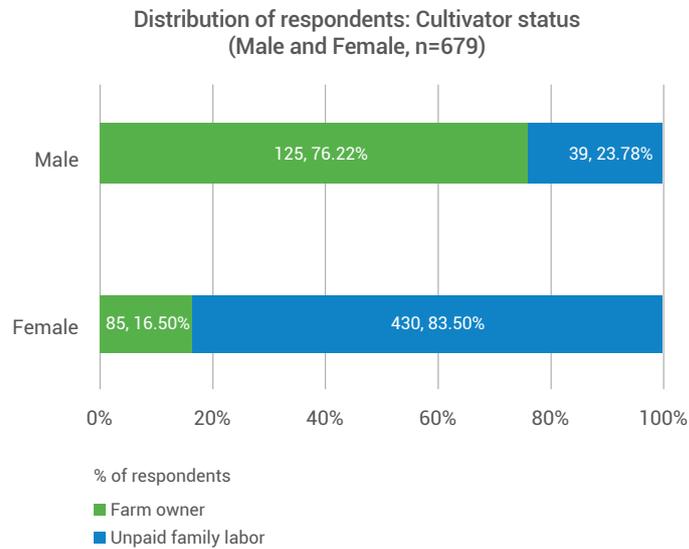


Figure 36: Cultivator status of respondents

In 2018, Oxfam stated in an article that while over 85% of rural women in India were engaged in agriculture, only about 13% of them owned land. As such, the government does not identify them as farmers, and this impedes their access to loans, insurance and government benefits.<sup>36</sup> Study findings show that **increasing women's ownership of land is becoming more and more important:**

- **Higher male outmigration:** 15% of respondents mentioned that the male head of the family has permanently migrated out of the village, and 10% of respondents mentioned that the male head migrated during the non-cotton growing season. As male cultivators migrate to urban areas in search of jobs, women of the household tend to the land. As a result, the number of women cultivators taking charge of agricultural operations is growing. Since women cultivators are not recognized as farmers, they have limited access to loans, insurance, government benefits and credit, which restricts their agricultural productivity.<sup>37</sup>

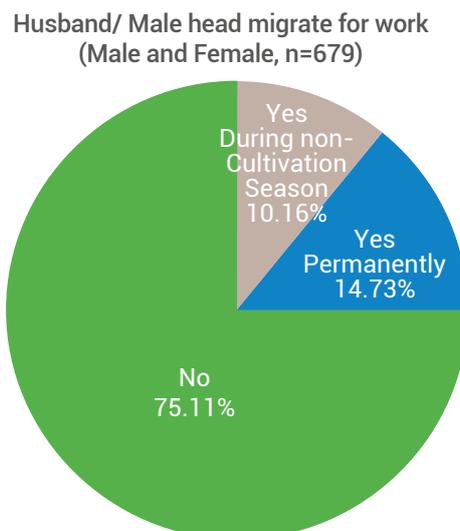


Figure 37: Outmigration status

**Improved access to resources:** Preliminary results from the 2011 International Trade Center study show that, among the different possible ways to empower women cultivators, their involvement in women associations or cooperative unions and the strengthening of land ownership rights demonstrate tangible impact on incomes and women's involvement in decision-making processes.<sup>38</sup> **Yet, our survey findings show that 83% of women do not own land.**

- **Improved rights for women cultivators and increased investment in land fertility:** United Nations and ExxonMobil Foundation’s Women’s Economic Roadmap on farming highlighted that increased land rights improve women’s economic security, resulting in increased household expenditure and education for women, and reduction in daily hours of household work for women cultivators. The findings also highlighted that women who owned land were also more likely to increase investments in land fertility, thereby improving yield and profit per hectare.

“Land determines who accesses finance and schemes. Eligibility criteria of schemes, by default, makes it applicable for the male farmers because the land titles are in their name.”  
 – Sangram Salunke, AFPRO

FGD’s revealed that, even in cases where women cultivators owned land, decision-making still lay in the hands of the men in the family. However, when landowning women cultivators were given access to information and training, they used their knowledge to contribute to and influence farm-related decisions.

### Tools and Technology:

Currently, all the tasks, predominantly done by women cultivators (Stubble picking, sowing, fertilizer application, and picking) are highly manual in nature.

Task	 Soil Preparation	 Seed Plantation	 Weeding	 Fertilizer Application	 Pesticide Application	 Picking	 Transport	 Sales
Done By								
% done by tools	75% - 85%	15%	63%	22%	87%	4%	N/A	N/A
Tools Used	Tractors, Bullock Carts	Sickle	Sickle	Sickle	Pump and Spray	N/A	N/A	N/A

Figure 38: Task-wise use of tools and technology

International Trade Centre’s (ITC) 2011 report titled “Women in Cotton” suggests that there is a need to improve the work of women by designing cost-effective tools and techniques based on ergonomic considerations to avoid physical load-carrying, strain and long hours of work.<sup>39</sup>

- Findings of 3D4AgDev Program showed that improved tools and implements help incorporate **labor-saving strategies**, allowing women cultivators to get more work done in less time, freeing up time for other activities.<sup>40</sup>
- College of Home Science, Udaipur found that use of technology **improved output** for women cultivators. Drudgery-reducing sickles increased fodder cut by 52%. Mechanical weeders cleaned 25% more area than manual weeding in the same time, and mechanical pickers took half the time as hand picking to cover the same area.<sup>41</sup>

Field practitioners within implementation teams of CSOs shared that providing women cultivators with tools and implements stands to reduce time spent on cultivation.

**1. Sowing:** Machines for sowing are available in the market. If women were trained to use these machines, the time and cost of labor could reduce. Sowing would then happen as per schedule and productivity could potentially increase by 30%.

**2. Weeding:** Mechanical weeders that can be operated by hand are available at an affordable rate in the market. Women cultivators can use these weeders with ease. However, while these tools exist, there is a lack of access for women cultivators.

**3. Picking:** Cotton picking bags can be used for reducing drudgery, avoiding contamination in cotton, and ensuring higher quality of cotton.

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## Drudgery Management for Farm Women: A Case Study

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**Implemented by:** College of Home Science, Maharana Pratap University of Agriculture and Technology, Udaipur

**About College of Home Science:** Maharana Pratap University of Agriculture and Technology is the second agricultural university in the state of Rajasthan. The College of Home Science was established in 1966 with a mission to improve the standard of living for rural families and empower women with self-employment and service support to enable them to manage resources more effectively.

**The Challenge:** Women cultivators spend most of their time on the field engaged in drudgery-prone, time-consuming activities whereas mechanization remains the domain of men.

### The Intervention<sup>42</sup>

- **Setting up of technological resource centres:** Technical skilling of women is enabled through education, training and technological interventions, using the participatory approach of self-help groups. The technological research centre is set up to display technologies, give out equipment on hire or sale, offer training in the usage of technology, and provide any additional information that may be needed. Women-friendly technologies are demonstrated and given to cultivators for practice. Examples of drudgery-reducing tools include improved sickles, weeders, and cotton pickers.
- **Setting up stakeholder linkages:** To ensure the sustainability of the product, linkages are being built with the local government, department of agriculture and other NGOs. The objective of the project is to increase agricultural productivity and efficiency, thereby increasing household income to support women farmers' access to better health and education.

### The Outcome<sup>43</sup>

- **Sickles:** Use of improved serrating sickles increased fodder cut by 52% as opposed to conventional sickles.
- **Weeders:** Mechanical weeders cleaned 25% more area as compared to the area covered by manual weeding in the same time. There was also a 50% reduction in the labor needed per day, resulting in a saving of INR 300 per day.
- **Mechanical Pickers:** These tools took half the time as hand picking to cover the same area. Quantity of cotton picked also increased to 38 kg per day, as compared to the 20 kg picked by hand per day. The economic benefit was INR 300 per day.

Further, technology remains an unexplored means of reaching women cultivators. A study on "Women in Cotton: Use of Technology" in 2018 showed that mobile phones could be leveraged to ensure that women cultivators have **access to training and knowledge** within their homes at any time that is convenient to them. The study showed that only 56% of farmers currently use smartphones, and only 10% of them are women. Yet, 100% of the women interviewed in their study said that they would like to use mobile phones to access information relating to cotton.<sup>44</sup>

**Access to agronomic tools and technology, coupled with training on the use of tools, could help women cultivators save time on the farm, which would reduce drudgery and increase efficiency of production.**

## C. Access to Government Schemes

Nearly 85% of the women surveyed had never accessed any government schemes, with lack of knowledge cited as the main limiting factor.

Women in rural areas tend to face legal, social, cultural, and economic restrictions that limit their access to credit, and this is true in vertically integrated cotton-growing schemes as well.<sup>45</sup> Studies show that women's reduced land-ownership often puts them on the shadow side of government interventions and schemes to support cotton farming.<sup>46</sup> It also reduces women cultivators' access to extension services. However, our findings showed that there were other reasons that also contributed to women's limited access to government schemes.

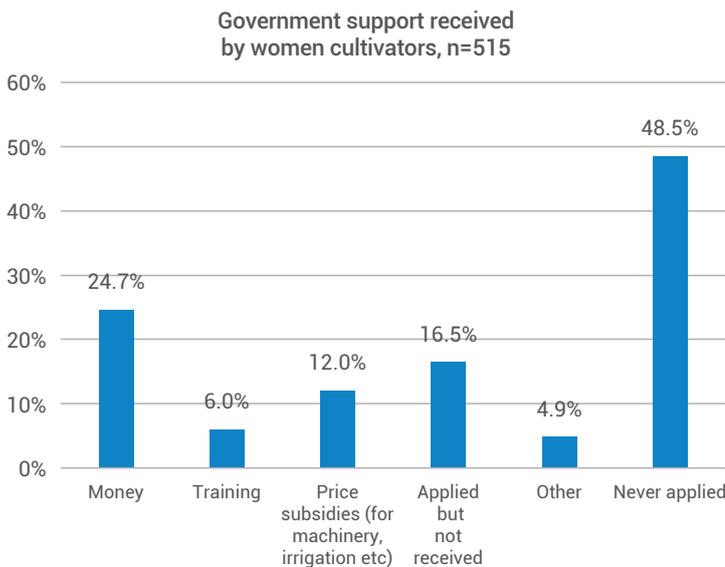


Figure 39: Government support received by women cultivators

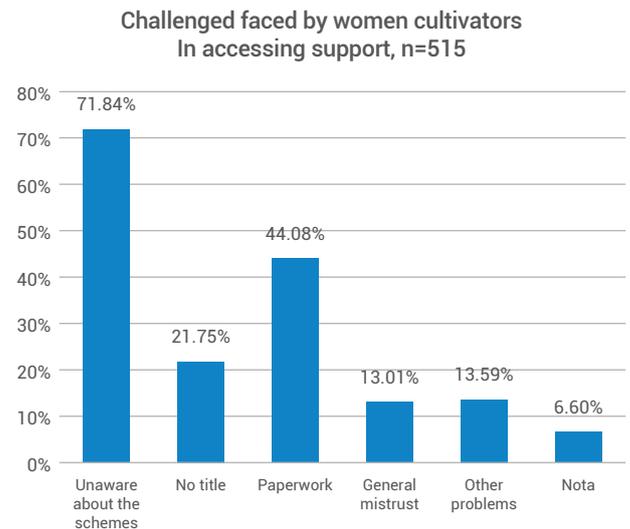


Figure 40: Challenges faced by women cultivators

- Most farmers / cultivators across FGDs shared that they had never applied for any government schemes.
- Lack of knowledge, paperwork and land titles were the biggest obstacles for women cultivators in claiming government support. Male cultivators shared that they faced similar challenges.
- Increased awareness alone however, was not found to be the solution. Across FGDs, women shared that they struggled with securing the right documents and dealing with the bureaucracy in the process.
- Applications for schemes also required consistent follow-up by farmers, and women cultivators shared that they did not have the time to do that, given their time commitment to household responsibilities.

**Survey findings show that only 11% of women cultivators currently access government extension services**

A 2018 report by IFPRI, titled "Women's self-help groups, decision-making, and improved agricultural practices in India" states that extension services directed at women can improve their access to information on agricultural practices, while increasing their exposure to pricing strategies, markets and crop diversity. This has the potential to increase their adoption of technology, improving their technical efficiency, and increasing their production diversity on the farm.<sup>47</sup>

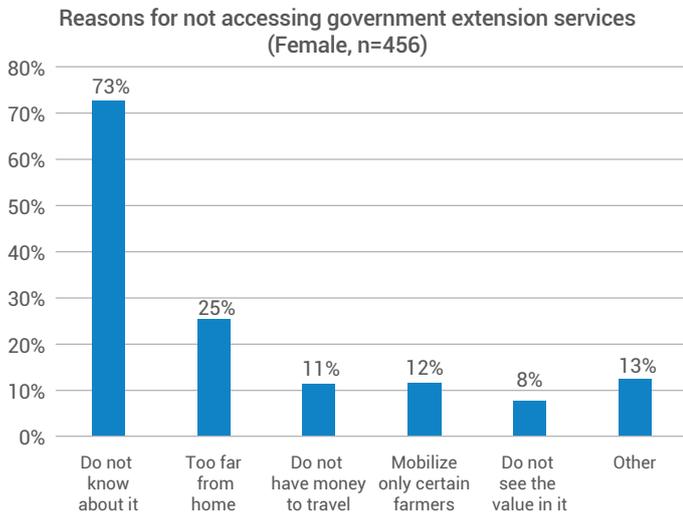


Figure 41: Factors limiting women cultivator’s access to extension

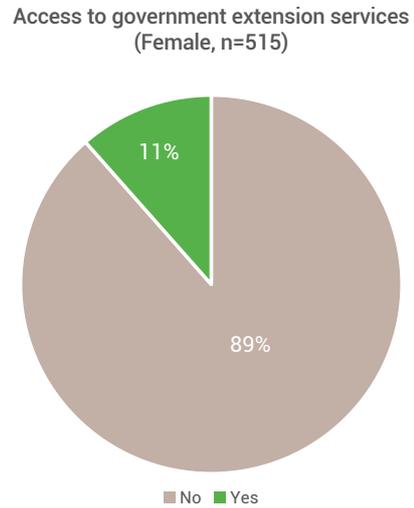


Figure 42: Access to extension for women cultivators

- Despite the benefits of extension services, very few women cultivators across FGDs had accessed these services.
- **Agricultural extension services had been accessed by only 11% of the women cultivators** that were spoken to across FGDs. Further, focus on cotton through extension services was found to be limited.
- Most women cultivators cited **lack of awareness and distance from centers** as reasons for not accessing services. Experts also pointed out that KVK programs take place 10-15 kms away and women have lesser access to them because they cannot travel far from home.
- FGDs showed that there was also a **perception among farmers that extension workers typically mobilized a select few farmers**, which could be based on biases such as landholding sizes and caste.

Women cultivators in FGDs shared that the lack of knowledge and handholding support results in an increased time commitment for them to access government schemes and extension services.

## D. Access to Community Organizations

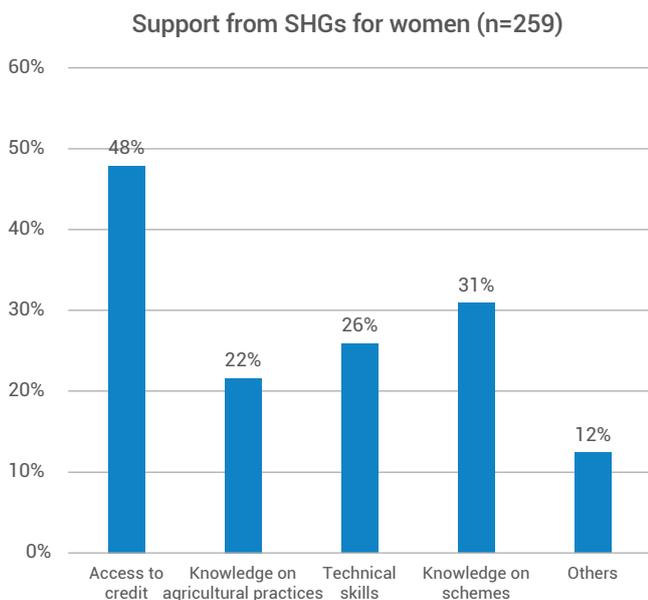


Figure 43: Support by SHG for women cultivators

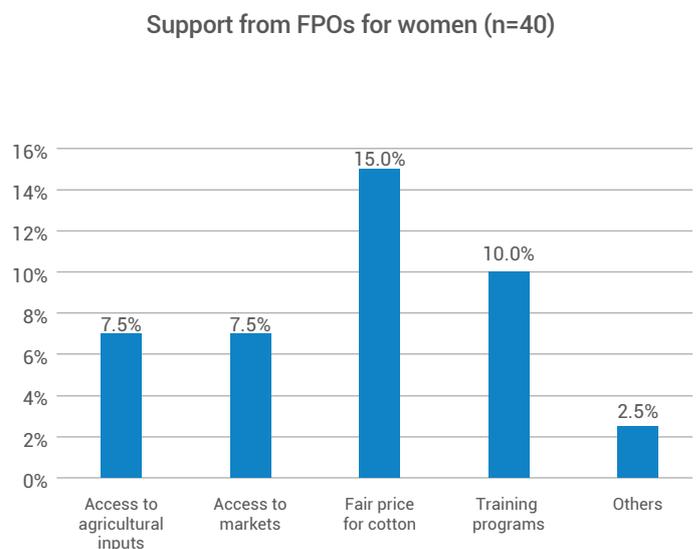


Figure 44: Support from FPOs for women cultivators

Nearly 50% of the women cultivators surveyed were members of SHGs, and most women cultivators leveraged their membership to access credit.

A 2018 report by IFPRI found that that women's groups improved access to information and participation in decision-making around agriculture, and decreased the gender gap in empowerment within the household.<sup>48</sup> FGDs revealed that, of all the support provided by SHGs, most women cultivators leveraged their membership to access credit. Nearly 54% of the members of SHGs surveyed said that they receive financial support through their SHGs.

Solutions and inefficiencies can also be addressed through FPOs, but participation is limited. Only 7.7% of women cultivators and 8.5% of male farmers were found to have FPO membership.

FPOs support farmers in the provision of inputs, tools, finance, and the sale of produce. For women cultivators who were members of FPOs, the most common area of support stated was fair price for cotton based on quality and quantity. Sales made as a collective tend to be in larger quantities, granting cultivators a higher bargaining power and increased profits.

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## Intervention: Women-Led Krushi Kendra

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**Implemented by:** Mahila Arthik Vikas Mahamandal (MAVIM)

**About MAVIM:** The organization serves as a state-level agency and vehicle for the implementation of the various schemes initiated by the Central and State government for women development, by leveraging the far and wide-running network of self-help groups that it has established.

**The Challenge:** Women are often ignored stakeholders in training interventions, and because they lack knowledge, they lack the opportunity to participate in decision-making at the farm level. There is a need to set up sustainable models of training that are provided by women in order to reach women cultivators.

**The Intervention:**<sup>49</sup> MAVIM initiated a one-year partnership with IDH and BCI, starting 2015. The program was extended and ran its course into March 2017 and aimed to drive the dual objectives of:

1. Promoting sustainable agricultural practices and training of cotton cultivators at the farm-level via the Community Managed Resource Centre (CMRCs), which are a federation of over 2,000 SHGs in the cluster. The goal of the program is to reduce the vulnerability of cotton farmers to the unpredictability of cotton production such as the variances in crop cycles, climate and external costs in production.
2. The Project is centered on capacity-building of the CMRCs to be self-sustaining. The idea is to enable them to be the gatekeepers and aggregators for a variety of services to the cultivators in the cluster, in addition to their role as support to SHGs. This allows them to continue strengthening livelihoods among the farmer community in the village.

**The Outcome:**<sup>50</sup>

- Training was delivered to 9,904 farmers, organized into 462 groups across 109 villages.
- Staff members shared that women-owned and women-led Krushi Kendras were set up, managed by members of SHGs under the Amravati CMRC. This was found to have improved women's access to markets, knowledge and confidence, enabling them to play a greater role in decision-making.

Survey findings revealed that only half of the women are members of SHGs, with 50% of members leveraging their membership for access to finance. FPOs remain an untapped form of collectivization.

## E. Access to Finance

A 2017 study by CGAP titled “Cultivating Opportunities for Women in Agriculture” highlights that men typically access formal financial services; however, women depend heavily on informal options such as SHGs, family, and friends. The limited access to finance is also related to the lack of collaterals that are needed to borrow money from formal sources of credit.

SHGs remain an unexploited source of financial support for cotton. While most farmers depend on store credit, only 28% women cultivators shared that they get credit for cotton from SHGs.

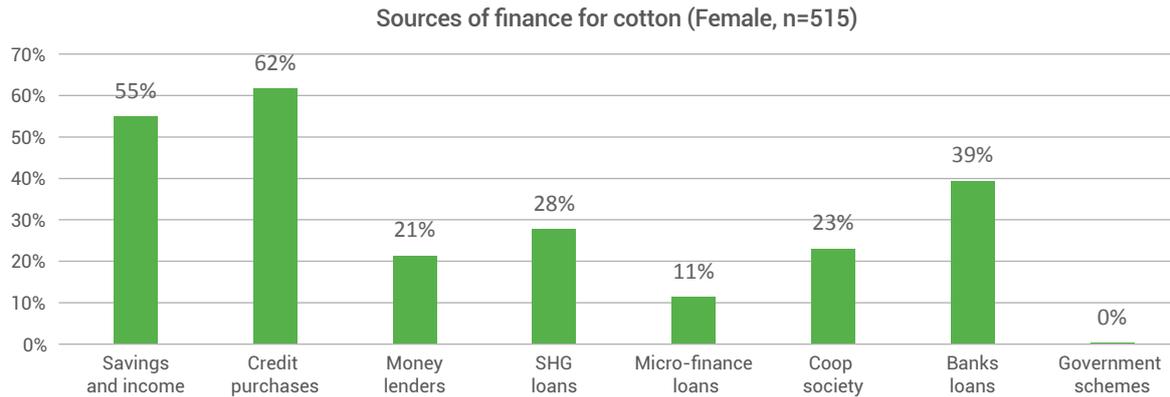


Figure 45: Sources of finance for women cultivators

Survey findings reveal that the most common source of credit is that which is provided by shopkeepers at the time of input purchase, followed by personal savings and income. Across FGDs, women and male cultivators shared that the paucity of finance at the time of input purchase resulted in farmers taking loans and getting caught up in a vicious cycle of repayment.

Women's dependence on informal finance implies that it is harder for them to access financial products that informal providers do not offer, such as insurance and long-term loans. This, in turn, limits their investment on the farm, purchasing-power for inputs and equipment, and the ability to hire additional labor. It likely also contributes to a lower ability to diversify their income portfolios.<sup>51</sup> The 2015 World Bank report titled “Access to Finance for Women in Agricultural Dependent Households” further states that this in turn, translates into lower productivity and yield of cotton.

Studies globally show that female members at MFIs have lower portfolio risk, fewer write-offs, and fewer provisions, making women an attractive, safe and profitable investment.<sup>52</sup>

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## Intervention: Advancing Women's Leadership and Access to Finance

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Implemented by: TechnoServe

**About TechnoServe:** A social purpose organization, Technoserve has a global presence in 29 countries. By creating knowledge, capital and market linkages, the organization has worked to develop sustainable and competitive farms and industries across developing countries.

**The Challenge:** Despite their role in cotton production, women have a limited control over productive resources and income earners through their labor. Further, women's membership in Farmer Producer Companies is limited, and even when women cultivators are members, their participation in leadership roles is minimal, which also limits their access to the benefits that could otherwise be leveraged to improve their position in agriculture.

**The Intervention:**<sup>53</sup> TechnoServe, in partnership with Visa Inc. and Gap Inc's PACE program, is working on "Advancing Women's Leadership and Access to Finance." This initiative is being implemented across 60 villages in the cotton-growing belt of Madhya Pradesh.

- The objective of the project is to provide women cultivators with the skills and tools they need to enable them with more control over their livelihoods, work, and future. The training includes life-skills support and enables women to increase their membership and leadership roles in farmer producer companies, and to access financial services.
- TechnoServe has linked up with two farmer producer organizations in the region, to leverage the network of the local stakeholders and collectives to ensure the sustainability of women-led initiatives in the future.
- TechnoServe also worked with financial service providers to provide women with knowledge on financial strategies that can be leveraged to achieve greater farm operations success.

**The Outcome:**<sup>54</sup>

- Through this program, TechnoServe sought to reach out to 4,500 women farmers across three FPOs over a period of 12 months.

Leveraging credit services provided by SHGs can serve as an additional source of finance, and can work to reduce the burden on the cultivators, while giving women cultivators a greater say in decision-making on the purchase and use of inputs, given they are the ones that bring in the credit.



## 4. Though women undertake majority of the tasks in cotton production, primary decision-making still lies in the hands of the male cultivators

FGDs found that women played a reduced role in decision-making, especially in relation to market-facing decisions. This included decisions relating to the purchase of inputs and equipment, and decisions on the sale of produce.

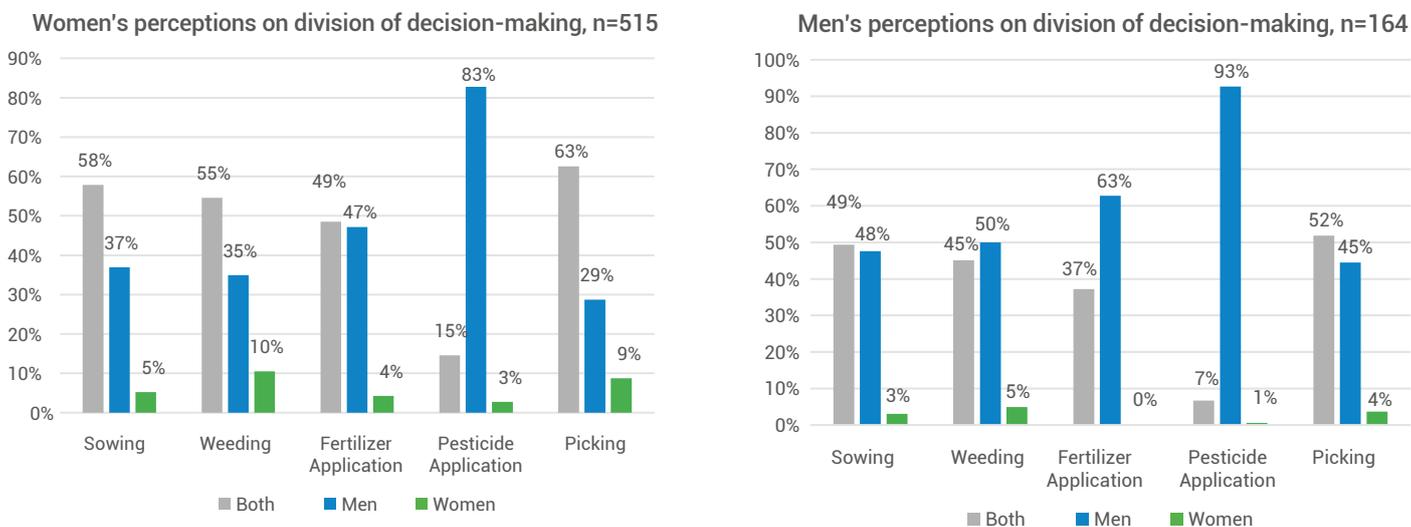


Figure 46: Male and Female perceptions on decision-making

In the survey and FGDs alike, cultivators shared that decisions for the purchase and use of inputs were either made by men, or both men and women together.

- Women cultivators believe that they have a greater role in decision-making than male cultivators think they do:** Across activities, women cultivators shared that there were decisions that women did make. Of the women cultivators surveyed, 2% said selling, 3% said plowing, 3.5% said row-making and 5% said fertilizer-related decisions were made by them. However, the responses by male cultivators ranged between 0-1%.
- Women cultivators were more likely to say that decisions were made by both men and women.** On the contrary, male cultivators were more likely to say men made the decisions unilaterally. This can be seen in figure 46, where male responses for the decision-making category 'both' are consistently 8-10% points lower than women's responses.
- Even when decisions were taken together, there could be varying degrees of participation by the women cultivators.** While, in some cases, women and men would actually make the decision together, the final decision was almost always taken by the male member of the household most of the times. Some women cultivators shared that exposure to training and knowledge had given them the confidence to put forward their point of view and fight for it to be considered.

Limited access to the resources as highlighted in the previous section, impact the participation of women in decision-making. Other contributing factors highlighted in FGDs included:

- 'Lack of information'** was cited by both men and women as a common reason for the limited participation of women cultivators in decision-making. Men shared that they accessed the market and interacted with market agents and other farmers and therefore had regular access to agricultural information. This allowed them to make the final purchase decisions. Cultivators shared that women cultivators' contribution to decision-making was limited because they lacked relevant technical knowledge.
- 'Limited access to markets'** was also a contributing factor. Women cultivators shared that they rarely went to the market and therefore their role in the purchase of inputs was limited. They also said that fertilizers were previously made at home, and this helped reduce the cost of production. Since inputs are now purchased from markets, women's contributions to input-related decisions have reduced.
- 'Limited negotiation skills':** Women cultivators were found to struggle not only with limited technical knowledge but also with the lack of negotiation and communication skills, which makes it harder for them to participate in market-facing roles.

Women cultivators who had greater access to resources such as information and technology were able to take more informed decisions on what should happen in the field to improve yield and economic outcomes.<sup>55</sup> Similar trends were seen in our study, where women cultivators shared that increased knowledge levels gave them the confidence to put forward their points of view with regards to farm-related decisions.

- FGDs revealed that, when women cultivators received training, they contributed to seed purchase decisions based on the knowledge of soil type, weather variations and crop rotation.
- Women cultivators also shared that, since they were involved in picking the cotton, they had the knowledge about the type of seeds that produced the best yield based on the size of bolls and ease of picking. This put them in a position to contribute to decision-making in seed purchase.
- The benefits of increased participation of women cultivators in decision-making extend to the entire household. A report by The World Bank in 2011 shows that, when women have greater control over decision-making on the household income through their own earnings or through cash transfers, their children benefit as a result of more spending on food and education.

Providing women cultivators with productive resources, increased exposure to market spaces, access to information through training, and support systems through collectives can give them the confidence they need to put forward their points of view and impact decision-making for increased profitability on the farm and improved social outcomes (access to education, nutrition) within the household.

## 5. Alternative livelihoods were recognized as an important area of support

Women cultivators across all FGDs stated that alternative livelihoods were an important area of support for them, especially when the cotton production cycle ends. Yet, nearly 40% of the women cultivators surveyed said that they were not engaged in any alternative livelihoods.

Cotton production is vulnerable to changes in climate, resulting in low and unstable incomes despite the high cost of production. Cotton could also be associated with poor health conditions due to high levels of drudgery and improper use of agro-chemicals. As such, many individuals and families migrate from rural areas, as they see no viable option for moving out of poverty within their own villages. This can be seen in our previous section, where we discussed that nearly 25% population migrates, either temporarily or permanently. Support in the form of alternate livelihoods can play a key role in ensuring the sustainability of cotton production in the long run.

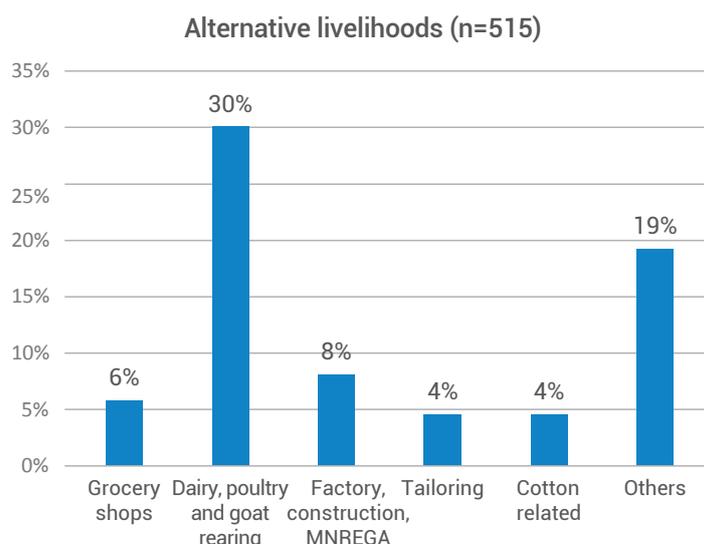


Figure 47: Alternative livelihoods of women cultivators

Survey findings revealed that allied agricultural livelihoods were the most prevalent source of secondary income:

- 30% of the women cultivators surveyed engaged in dairy, poultry, or goat farming.
- Other cultivators had non-agricultural livelihoods such as tailoring (4%), small shops (6%), and construction work (8%).

- There were instances where women were engaged in cotton-related activities such as providing labor in cotton grading stations or using cotton for the production of certain goods such as the wick used in candles.
- Women cultivators across FGDs shared that most cultivators work on neighboring farms in the village to supplement income.
- Women cultivators in FGDs shared that the alternative livelihoods provided should not be too time-consuming and should be something they can take up alongside farm activities.

**“Alternate livelihoods can be used as an opportunity to build a case to show that women are capable of contributing economically, and therefore should be taken seriously on the farm too”**

**– Somatish Bannerjee, Intellecap**

Scaling up the support to smallholding farmers and creating alternate and sustainable livelihood options in rural areas, with a special focus on women and youth, is fundamental to addressing the root causes of rural distress migration.

**Securing  
income will be  
fundamental  
to securing the  
sustainability  
of cotton  
production.**



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## Intervention: Seed Guardians

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**Implemented by:** Chetna Organic

### **About Chetna Organic:**

Chetna Organic works with small and marginal landholding farmers to improve their farming livelihoods and to make farming a sustainable, profitable and attractive occupation for farmers. Chetna operates in Maharashtra, Odisha and Andhra Pradesh and works predominantly with rainfed farmers. Collective action and fair supply chains have allowed Chetna Organic to reach over 35,000 farmers over 10 years.<sup>56</sup>

**The Objective:** Adopting multi-cropping and intercropping activities in the field help improves the health of the crop and the field, and the inclusion of pulses helps increase soil fertility. Chetna helps farmers achieve economic and nutritional security by promoting these cropping systems in cotton among small and marginal holding farmers.

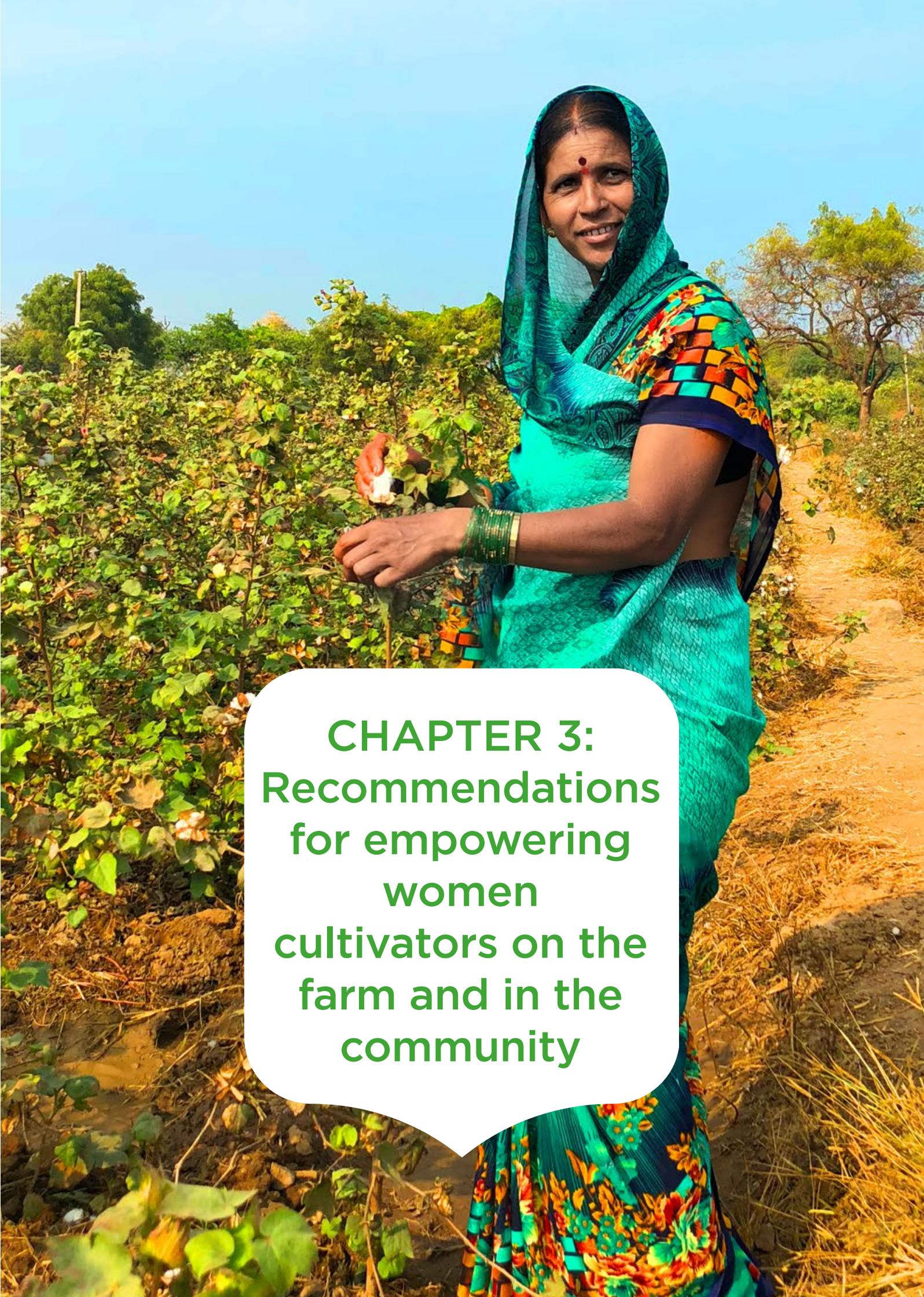
**The Intervention:** The Seed Guardians program is supported by Textile Exchange and Inditex, and is being implemented in three districts of Odisha. The objective of the program is to promote women-managed and women-controlled seed enterprises to empower women to deliver organic cotton to the markets while enabling them to provide food security for their families through seed-saving. Seed Custodians are farmers who assume responsibility for setting up and managing the seed banks initiated in villages. Chetna Organic, in collaboration with Central Institute for Cotton Research (CICR), Nagpur, has taken up frontline demonstrations for cotton to support farmer in improving cotton productivity through High Density Planting System (HDPS) in light soils under rainfed conditions, allowing seed reuse and reducing dependency on seed purchasing.

- **Pre-season Training** programs were conducted at cluster and village level, covering issues of seeds, including concerns over GM crops, importance of cultivating heirloom varieties, their nutritional value, resistance to abiotic stress like water and heat, and biotic stress like pests and diseases.
- **Midseason Training** was conducted on ways and methods to reduce cost of cultivation and improve soil fertility and pest management. The trainings also covered Chetna's standards in organic farming, certification procedures and further steps.

Along with this, farmers attended a season-long training that gave them insights into basic skills related to sowing, flowering and harvesting of other crops.

### **The Outcome:**

- Over three years, the project plans to establish five seed banks producing at least 25 varieties of fiber and food crop seeds, impacting over 500 families - a minimum of 2,500 men, women, and children.
- Since the year 2013, 72 men and women cultivators have been identified as Seed Guardians. Of these, 18 women cultivators have undergone thorough training to enable them to become master trainers and seed custodians. Budget-friendly infrastructure required for conservation of seeds, have been made available to these trainers in the seed banks.

A woman wearing a vibrant, multi-colored sari with a floral pattern is standing in a field of green plants. She is smiling and looking towards the camera. She has a bindi on her forehead and is wearing several bangles on her right wrist. The background shows a dirt path and some trees under a clear blue sky.

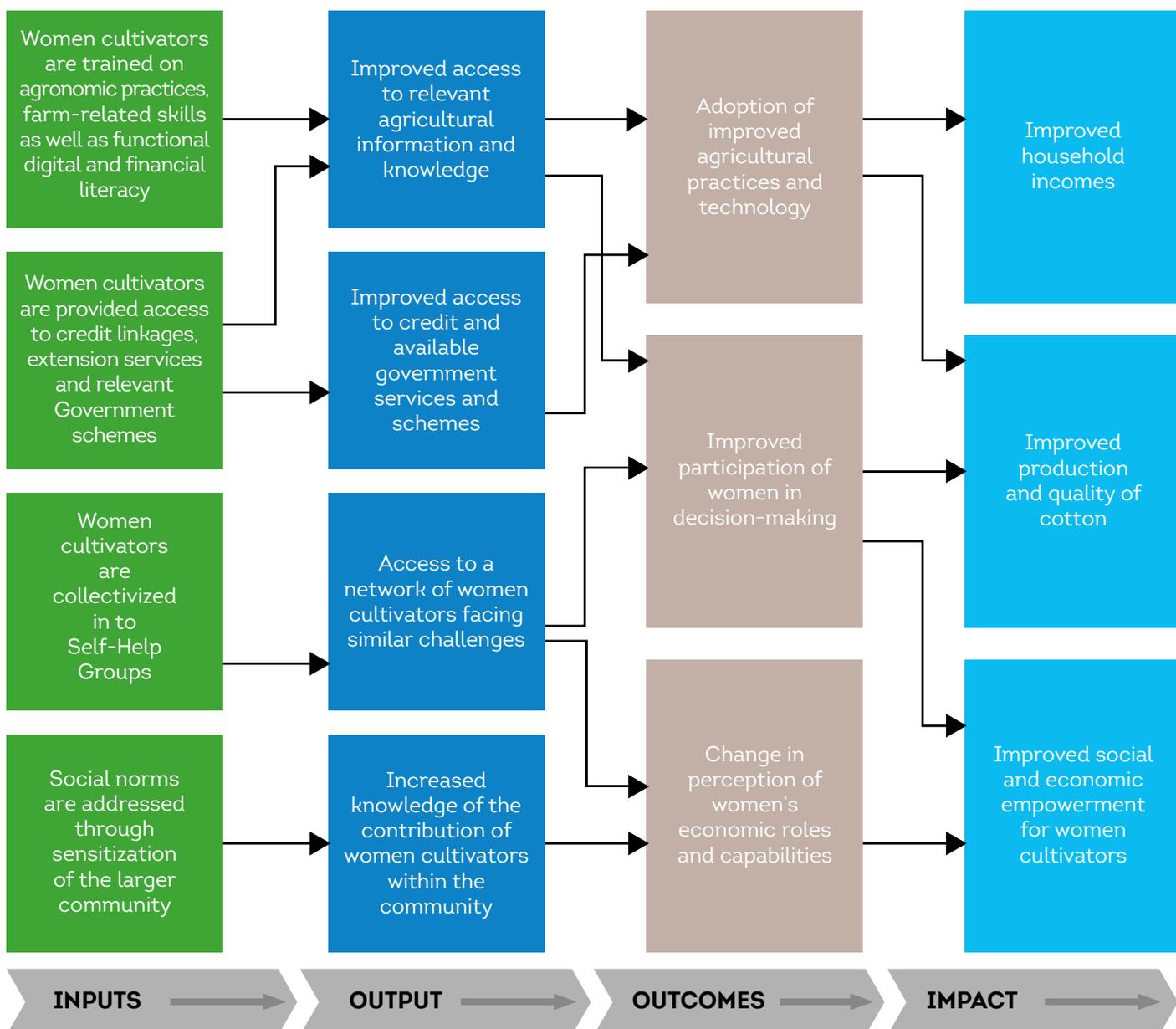
**CHAPTER 3:**  
**Recommendations**  
**for empowering**  
**women**  
**cultivators on the**  
**farm and in the**  
**community**

Given the role that women cultivators play in cotton production, it is important that we recognize them as important stakeholders in designed interventions. Our study revealed that women cultivators continue to remain on the shadow side of cotton-related programs and interventions. Despite the extensive contribution of women cultivators to pre-production and production-related activities, they lack access to agronomic knowledge and skill-enhancing opportunities as well as regular access to information on agricultural inputs and markets. They also struggle with access to productive resources and have limited participation in decision-making on the field. In addition, women cultivators also have time and mobility constraints that inhibit them from taking on opportunities beyond the routine time spent by them on the farm and on household responsibilities. We see a twofold advantage to interventions that will address these challenges:

**1. Business-related outcomes:** Interventions aimed at women cotton cultivators have the potential to improve quantity and quality of cotton produced. These interventions could help reduce the cost of production incurred by cotton-cultivating households and thereby increase household income. This would also lead to improved production volumes and quality of cotton in the cotton supply chain.

**2. Social outcomes:** Interventions aimed at women cotton cultivators have the potential to improve agency and increase participation of women cultivators in decision-making on the farm. These interventions can therefore change the perception of women cultivators' economic role and contributions and thereby improve their social and economic empowerment.

Given that the challenges faced by women cotton cultivators are multifold and exacerbated by the social norms within which cotton production takes place, achieving desired business and social outcomes will require programs and interventions that account for these various dynamics. The following theory of change describes a potential pathway to the business and social outcomes that programs targeted towards women cultivators should aim to achieve:



This paper identifies four key strategies that should be directed towards women cotton cultivators in order to achieve the desired business and social outcomes. These four strategies align closely with International Food Policy Research Institute's (IFPRI) intervention activity areas that categorize recommendations and programs that are directed to women in cotton into four major buckets - **building knowledge and skills, providing goods and services, strengthening organizations, and influencing gender norms and attitudes.**

## The 4 key strategies identified for women cotton cultivators are:



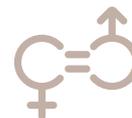
**Building knowledge and skills in agronomic practices, functional digital and financial literacy**



**Providing access to credit linkages, extension services and relevant government schemes**



**Collectivizing women through Self-Help Groups**



**Sensitizing the community on the role of women cotton cultivators and influencing social norms**

### Strategy 1:

#### Business knowledge and skills in agronomic practices and functional digital and financial literacy

Building knowledge and skills, primarily through provision of trainings, is a mainstay of several development interventions. As might be expected from agricultural projects, agricultural training and extension services are the most common form of capacity-building, although implementation modalities may be quite diverse in content and form. On-ground experience also testifies to the fact that successful interventions are those that club digital information channels with traditional agronomic training methods. Such hybrid models allow traditional, hands-on learning gained through trainings to be combined with digital literacy, which can sustain and even enhance those learnings over time.

Based on study findings, two key intervention areas were identified for women cotton cultivators within Strategy 1:

##### 1. Agronomic training

Agronomic training provides women cultivators with access to information and knowledge that they cannot otherwise access as easily as their male counterparts. Survey findings revealed that only 33% of the women cultivators surveyed have attended any agronomic training in the last two years. Women cultivators who received training identified reduced cost of inputs, improved cotton quality and cleaner picking as benefits from the training. Women cultivators who attended trainings were also far more likely to possess knowledge of fertilizers and pesticides used on the farm.

##### Challenges and opportunities identified through the study:

- **Roles performed by women directly impact the quantity and quality of cotton produced.** Our study found that in most cases, these tasks were not carried out as per prescribed guidelines, thus reflecting the potential for improving cotton cultivation practices and thereby improving the quantity and quality of cotton produced.
- **Women are responsible for plant-spacing and seed-planting.** Incorrect methods of plant-spacing and seed-planting increase chances of delayed seed germination, and reduce lint yield and boll density.
- **Women are responsible for weeding.** Weeding is currently done manually, without any knowledge of good weeds and bad weeds. Bad weeds can restrict air movement and raise moisture levels in the cotton canopy, resulting in boll rot and quality loss.
- **Women are responsible for fertilizer application.** Our study found that without training, women were far less likely to have knowledge of types of fertilizers used. If women cultivators lack knowledge of the fertilizers they use, it could affect the amount of fertilizers used and the method of fertilizer application. This could increase cost of input and potentially affect the yield of cotton.
- **There is potential for training women in pest management** owing to the fact that women spend an extensive amount of time on the field and this time spent on the field can be leveraged for scouting of pests.

- **Incorrect methods of picking can be a source of contamination** (dirt, stones, hair, plastic, moisture, and other 'trash'), which could directly impact the price at which the cotton is sold.
- Apart from the activities performed by women directly, **knowledge and information about the tasks performed by men** (such as purchase of inputs, soil preparation, and row-making), will enable women to play a greater role in decision-making within the household. During FGDs, both men and women identified lack of information as a factor that limits the role of women in decision-making.
- **The increase in migration of male cultivators is increasing the responsibility that women cultivators have in managing farm activities.** Training women cultivators in dealing with the markets including identification of cotton quality, selling, and negotiating will enable women to play a larger role, especially important in households where all farming responsibilities fall on male cultivators.

#### Intervention:

Agronomic trainings were provided to women cultivators to improve cultivation practices in tasks performed directly by them, and to improve knowledge of tasks typically performed by their male counterparts.

We identified two groups of women cultivators that could benefit from agronomic trainings:

#### 1. Women as cultivators (family labor):

Agronomic training in critical activities performed by women on the farm.

Trainings to women cultivators would include:

- Skill training in sowing, weeding, integrated pest management, fertilizer application (types of fertilizers) and picking practices.
- Knowledge of other critical agricultural activities, typically performed by men, such as soil preparation, types of pesticides to be used, row-making for sowing.
- Knowledge of tools used on the farm with demonstrated use of tools used by women in activities performed by them.
- Knowledge of inputs used on the farm such as seeds, fertilizers and pesticides.

#### 2. Women as farm managers (land holders or managers):

In addition to the points mentioned under women cultivators, women farm managers should also be provided agronomic trainings in:

- Types of irrigation systems, as relevant to the region.
- Knowledge of cotton quality and grading, knowledge of which is critical for picking, storing and selling of cotton.
- Negotiation skills, including buying and selling.
- People management skills relevant to managing farm labor.

#### Intervention success indicators:

Outcomes	Impact
<b>Business</b> <ul style="list-style-type: none"> <li>• Increase in knowledge of cotton-related agronomic practices</li> <li>• Improvement in agronomic practices on the farm (shift from current practices to suggested/prescribed practices)</li> <li>• Increase in knowledge related to cotton business</li> <li>• Increase in knowledge of inputs and tools used on the farm</li> </ul>	<b>Business</b> <ul style="list-style-type: none"> <li>• Increase in cotton production (yield)</li> <li>• Improvement in quality of cotton produced by trained households</li> <li>• Increase in revenue from cotton production</li> <li>• Reduction in cost of cotton production</li> </ul>
<b>Social</b> <ul style="list-style-type: none"> <li>• Increase in knowledge, resulting in increased involvement in decision-making on the farm and within the household</li> <li>• Greater control over income and involvement in financial decisions within the household</li> </ul>	<b>Social</b> <ul style="list-style-type: none"> <li>• Change in perception of women's economic contribution to the household</li> </ul>

## 2. Functional Digital and Financial Literacy

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Functional Digital Literacy enables women cultivators to gain regular access to agricultural information within their households. Additionally, financial literacy plays a critical role in helping women holistically understand agricultural operations and participate in agricultural decision-making. Financial literacy is also a critical step in increasing access to credit for women cultivators. Our study found that access to knowledge and information gave women cultivators more confidence to participate in decision-making.

### Challenges and opportunities identified through the study:

- Women lack regular access to information on agricultural practices and markets unlike their male counterparts who interact frequently with the market and other farmers/cultivators. Lack of access to information has been identified as a key barrier in decision-making for women
- Women have limited opportunity to go out and seek information on a regular basis given their dual responsibility of managing household responsibilities and working on the farm. This is further exacerbated by various social norms that restrict mobility. The widespread availability of the internet on smartphones in rural India makes a strong case for digital literacy for women, both from a business and social lens.
- Additionally, women lack participation in market facing roles, which typically reduces their exposure to purchase of inputs and sale of cotton produce. For women who manage their farms (in case of male out-migration or women-headed households), basic financial knowledge will play a critical enabling role in helping them manage agricultural operations.

### Intervention:

Irrespective of whether women cultivators work on their household land or manage it, functional digital and financial literacy should be provided to them through trainings. Functional literacy here refers to literacy in the most relevant financial and digital skills that will be useful for women cotton cultivators on a daily basis on the farm and within the household.

### These trainings can be provided in the following areas:

- Using smartphones and navigating the internet to search and discover information including communication through applications and email.
- Access to real-time information portals for agricultural information relevant to the region.
- Access to government schemes, market information and economic opportunity through the internet.
- Basic financial literacy including income, budgeting, expenses, savings, loans, insurance, pension, and other key financial concepts.
- Knowledge on sources of financial services and credit such as banks, digital financial services (mobile wallets, UPI), MFIs, SHGs.



**Intervention success indicators:**

Outcomes	Impact
<p><b>Business</b></p> <ul style="list-style-type: none"> <li>● Increase in access to agronomic and market-related information</li> <li>● Increase in awareness and adoption of digital services including usage of smartphones</li> <li>● Increase in usage of relevant websites/ applications to source market information</li> <li>● Increase in usage of relevant websites to get information on government schemes</li> </ul>	<p><b>Business</b></p> <ul style="list-style-type: none"> <li>● Increase in information on agricultural practices, sought through digital mediums</li> <li>● Increase in information and knowledge on weather, markets and agricultural inputs</li> <li>● Increase in applications for relevant government schemes</li> </ul>
<p><b>Social</b></p> <ul style="list-style-type: none"> <li>● Increase in access to information, resulting in increased involvement in decision-making within the household</li> <li>● Increase in involvement of women cotton cultivators in decision-making on the farm</li> <li>● Greater control over income and involvement in financial decisions within the household</li> </ul>	<p><b>Social</b></p> <ul style="list-style-type: none"> <li>● Increase in participation in decision-making (both household and farm-related decision)</li> <li>● Increase in agency in accessing knowledge, information and economic opportunity digitally</li> </ul>

**Strategy 2:**

**Provision of goods and services includes the direct provision of goods, generally through asset transfer programs targeted at women, and services such as agricultural extension.**

Within Strategy 2, interventions suggested for women cotton cultivators include linkage to credit, linkage to extension services, and linkage to government schemes.

**1. Linkage to credit**

A 2017 study by CGAP titled “Cultivating Opportunities for Women in Agriculture”<sup>57</sup> highlights that men typically access formal financial services; however, women depend heavily on informal options such as SHGs, family, and friends. The limited access to finance is also related to the lack of collaterals that are needed to borrow money from formal sources of credit. Women in rural areas also tend to face legal, social, cultural, and economic restrictions that limit their access to credit.<sup>58</sup>

**Challenges and opportunities identified through the study:**

- Providing women with greater access to finance, and production inputs is critical to closing the productivity gap between men and women. Microfinance institutions and other financial service providers with presence in rural areas can play a key role in supporting women farmers.<sup>59</sup>
- Our survey findings reveal that the most common source of credit is that which is provided by shopkeepers at the time of input purchase, followed by personal savings and income. Across FGDs, women and male cultivators shared that the paucity of finance at the time of input purchase resulted in the farmers taking loans and getting caught up in a vicious cycle of repayment. Additionally, loans taken through informal sources have high interest rates and often require households to give a part of their production to the moneylender.
- Linking women cultivators to credit through MFIs and other relevant formal sources would not only help households access formal finance, but could also potentially also increase the role of women in decision-making within the household, given that they will bring in the credit.

**Intervention:**

In addition to providing functional digital and financial literacy, providing linkages to credit is critical. This includes building awareness amongst women cultivators on various loans that they are eligible to access, and linking women cultivators to MFIs that provide services suited to meet their needs.

## Building awareness amongst communities on relevant credit options:

- MFIs can use their network of field staff to provide information to women cotton cultivators on loans that they are eligible to access, along with the benefits of accessing these loans. This requires working closely with the MFIs to see the business case in doing so, given that it directly expands their customer base.
- Identifying and training eligible women as banking correspondents is another way to build local leadership and effectively reach women cotton cultivators. Awareness provided through women from the community will also be received with greater trust.

## Adjusting financial services to address women's needs better:

- Microfinance products generate different outcomes for men and women. MFIs should therefore tailor product specifications, such as loan amounts and repayment schedules to meet the needs of women cultivators.
- Savings products designed for women are a fundamental element of risk management. A diversified MFI product offer should also include other financial services that help reduce vulnerability, such as microinsurance.
- Adjusting collateral requirements and encouraging the registration of property in women's names are other essential components of gendered microfinance.
- Women's groups can be formed as a means of lowering costs of providing loans for the MFIs. These joint liability groups are also a means of securing credit worthiness and hedging risks of providing loans with lesser collateral. For women, these groups provide a sense of security in taking loans because it helps them get past the fear of availing formal credit.
- Additionally, apart from leveraging women's groups to access MFI loans, SHGs can, in themselves, be a source of credit for women cotton cultivators.

Outcomes	Impact
<b>Business</b> <ul style="list-style-type: none"> <li>● Increase in the number of women cultivators accessing loans for agricultural purposes</li> </ul>	<b>Business</b> <ul style="list-style-type: none"> <li>● Increase in income levels and greater control over finances for women cultivators</li> <li>● Reduction in cost of production with increase in reliance on formal sources of credit</li> </ul>
<b>Social</b> <ul style="list-style-type: none"> <li>● Increased participation in decision-making within the household</li> <li>● Increased self-reliance amongst women cotton cultivators</li> </ul>	<b>Social</b> <ul style="list-style-type: none"> <li>● Enhancing perceptions of women's contribution to household income and family welfare, and increasing women's participation in household decisions about expenditure</li> <li>● Improvement in attitude towards women's role in the household</li> </ul>

## 2. Linkage to extension services and government schemes:

Studies show that the reduced land ownership of women often puts them in the shadow side of government interventions and schemes to support cotton farming.<sup>60</sup> It also reduces women cultivators' access to extension services. Our study found that only 15% of women cultivators had accessed government schemes and only 11% had accessed agricultural extension services.

## Challenges and opportunities identified through the study:

- Our findings showed that there are very specific reasons that contribute to women's limited access to government schemes and extension services, which can be addressed through relevant interventions.

- For women cultivators, lack of knowledge, paperwork and land titles were the biggest obstacles in claiming government support. Increased awareness alone however, was not found to be the solution. Across FGDs, women shared that they struggled with securing the right documents and dealing with the bureaucracy in the process.

- Additionally, our study found that extension services directed at women can improve their access to information on agricultural practices while increasing their exposure to pricing strategies, markets and crop diversity. This has the potential to increase their adoption of technology, improving their technical efficiency and increasing their production diversity on the farm.<sup>61</sup>

#### **Intervention:**

**Increasing community awareness of government schemes through village-level community leaders and increasing access to extension services through leveraging of existing on-ground networking.**

#### **Increasing access to government schemes and government extension services:**

- A proven model of increasing access to government schemes has been: identifying and training women within the community to become community leaders in providing access to government schemes. These community leaders, equipped with relevant knowledge and skills, go out to the larger community and enable women cultivators to access relevant government schemes.
- This not only provides these women with an additional source of livelihood (as community leaders charge a small fee for their services) but also ensures that women cultivators have the required handholding support from the time of applying for the scheme to the time of actually availing the scheme.
- An alternate way of increasing access to government schemes is through digital mediums. However, hybrid models that blend online channels with offline support have been found to be far more effective, especially given that women cultivators find it challenging to navigate the process of applying for and availing government schemes.
- Providing access to government extension services through Self-Help Groups can increase access to services. In women's groups, women feel more comfortable accessing extension services, especially when this requires traveling outside of their village. Additionally, providing information through trusted social networks can improve the spread of information.
- Information that is customized to cultivator needs can play a more significant role in behaviour change on the farm. SHGs or NGOs implementing interventions in the community can also be a medium to encourage women to attend extension information / training sessions that are relevant to the tasks done by them, thus making it worth their time.
- Additionally, digital extension services can be accessed in a customized manner and at a time that is convenient to the women cotton cultivators. Thus, providing digital literacy, as described in Strategy 1, and access to real-time information portals for cultivators can enable women cultivators to access information without having to leave their homes.

### **Strategy 3:**

**Strengthening organizations (particularly SHGs) play an important role in reaching women cotton cultivators and delivering interventions.**

Given the social norms and mobility constraints faced by women cultivators, interventions can reach women cultivators far more effectively when they are organized into women's groups. SHGs have become a central component of many rural development interventions. Women's groups can also work to sustain the implementation of a project in the long run. Nearly 50% of the women cultivators surveyed were members of SHGs and most women cultivators leveraged their membership to access credit.

A 2018 report by IFPRI found that **women's groups improved access to information, improved participation in decision-making around agriculture, and decreased the gender gap in empowerment within the household.**<sup>62</sup>

## Challenges and opportunities identified through the study:

- Our study found that women cotton cultivators who were part of SHGs were able to leverage the group for knowledge-sharing and credit. The women also had a platform to discuss challenges and they gained the confidence to play a stronger role on the farm. The collectives also helped sustain other intervention efforts as the SHGs became a space to regularly engage with the women cultivators.
- SHGs can play a critical role in giving women easy access to knowledge, information, and credit. This is especially critical for women, who, unlike men, do not have regular access to market information.
- SHGs become a forum where women can freely share challenges and learnings. The SHGs also become a forum for discussing new agronomic practices and learning from other cultivators.
- SHGs can help mobilize women for various development programs and interventions and can also help sustain various interventions provided to women.

## Intervention:

Strengthening the role of SHGs to become a forum for engaging with women cultivators, providing them access to information, mobilizing them for various relevant interventions (such as training programs), enabling access to microcredit, and enhancing their confidence to play a stronger role in household agricultural activities and decision-making.

## Setting up and sustaining SHGs to foster and enable:

- **Access to information:** A study conducted by FAO found that women's groups improved access to information. Women's groups also improved women's decision-making power around agriculture and decreased the gender gap in empowerment within the household.
- **Improved agricultural practices:** Given the limited reach of government extension services in India as well as the potential gains from empowering women in agriculture, women's SHGs could provide agricultural information to women farmers, increasing adoption of improved agricultural practices. In Parbhani, women cultivators shared that they interact frequently with each other, visit each other's farms to see how crops are performing, and discuss crop performances of previous years.
- **Improved decision-making:** A group of women cultivators who had received training and were part of an SHG also shared in FGDs that the frequent SHG meetings provided them with a forum to discuss their challenges and learnings and gave them the confidence to participate in decision-making within the household. Women cultivators also shared that being collectivized into SHGs has given them the knowledge to contribute to decision-making.
- **Access to credit:** FGDs revealed that, of all the support provided by SHGs, most women cultivators leveraged their membership to access credit. Nearly 54% of the members of SHGs surveyed said that they receive financial support through their SHGs.

Outcomes	Impact
<b>Business</b> <ul style="list-style-type: none"> <li>● Increased access to agricultural information, extension services and development programs through SHGs</li> <li>● Increased access to micro-credit through SHGs</li> </ul>	<b>Business</b> <ul style="list-style-type: none"> <li>-</li> </ul>
<b>Social</b> <ul style="list-style-type: none"> <li>● Increased community participation and support</li> <li>● Increased access to program interventions through SHGs</li> </ul>	<b>Social</b> <ul style="list-style-type: none"> <li>● Increased confidence levels that result in increased participation in decision-making within the household</li> <li>● Increased self-reliance amongst women cotton cultivators</li> </ul>

## Strategy 4:

### Influencing gender norms and attitudes through awareness trainings and community conversations can form a critical part of intervention programs.

While awareness trainings are a one-way approach, community conversations address norms and attitudes through two-way exchanges between community members and program implementers. Gender norms influence all interventions and should be given due consideration in every intervention to ensure the success of the intervention in the long term.

There is a need for information programs, training and awareness-raising at all levels to sensitize both men and women about the societal value and benefits of increasing the participation of women. This is key to ensuring the sustainability of interventions providing knowledge, skills, goods and services.

Further, interventions directed at supporting and improving the role of women in cotton need to be designed with sensitivity to cultural norms, including the mobility constraints and time constraints that women face owing to their dual responsibilities on the farm and in the household.

#### Challenges identified:

- The study revealed that gender norms can impact the success of all interventions. Gender norms influence the division of roles in the household and on the farm, and limit women's ability to take on unconventional roles. Norms also impact women cultivators' access to resources such as land and tools, that are otherwise freely available to their male counterparts. Of the women cultivators spoken to who did not receive training, 77% cited the lack of opportunity as the main reason for not attending. For those who had the opportunity, time constraints and the absence of women trainers came out as common limitations in accessing training. Women are also usually responsible for child care and household chores. They also take on the responsibilities of rearing small livestock. This limits the time they have to access training, knowledge and increased economic opportunities.
- There are prevailing gender norms that prevent women's participation. Both men and women need to be sensitized with regards to the role women could potentially play in cotton

#### Intervention:

**Providing gender sensitization workshops to communities and intervention program staff and demonstrating the business value of strengthening the role of women cultivators, to challenge existing biases.**

- **Sensitization workshops:** Both men and women cultivators are stakeholders in cotton production. They need to be sensitized to the role women play in cotton, and the potential benefits if interventions were provided to women cultivators.
- **Gender sensitization of communities:** Working with entire rural communities (not only women) and raising men's awareness of the benefits of gender equality for agricultural production to overcome resistance to the social change that a gender-equitable extension might entail.
- **Gender sensitization of program staff:** Provision of professional training on gender issues and extensionists can become models for gender sensitive and participatory communication within farming communities.
- **Demonstrate the business case** of engaging women participants in programs designed for non-gender outcomes. Demonstrating clear value can help the community change their perceptions of the roles played women on the field and of the potential still waiting to be unlocked.

Stage-wise tools for making existing cotton-related interventions gender inclusive:

## PLANNING

- **Gender disaggregated data:** Collecting gender disaggregated baseline data collection, through baseline, pre-feasibility studies and consultations with key stakeholders, both men and women, to ensure that the needs of women cultivators are taken into account. This could also be done through rapid appraisals, wherein focus group discussions are conducted with groups of men and women separately to understand gendered constraints and opportunities. This can encourage participation of women in programs.
- **Impact indicators that drive gender inclusion:** Identifying the right outcomes and impact indicators that drive the program to be gender inclusive. This could be in the form of indicators that are gender disaggregated and that nudge program implementors to ensure focus on both men and women cultivators.
- **Selecting gender inclusive program implementors:** It is ideal for funders to select program partners who have demonstrated gender inclusivity in recent or past projects.

## OUTREACH AND EXECUTION

- **Reaching women cultivators through trusted touchpoints:** Implementing partners can leverage the existing network of community organizations, such as SHGs for example, to improve the reach of existing interventions and to mobilize women cultivators through trusted networks.
- **Solve for social constraints of women cultivators:** Program interventions must be executed in a way that accounts for the mobility constraints of women cultivators. For example, providing creches and other basic facilities that could make it easier for women cultivators to attend trainings.
- **Gender sensitization within the larger community:** Gender norms cannot change in isolation. Gender sensitization workshops can help men realize the value of women cultivators, both on the farm and within the household, and bridge the perception gap.
- **Inclusive demonstration sites:** Demonstration sites should include trials of both women's and men's preferred practices and crops for consideration.

## EVALUATION

- **Gender sensitive evaluation process:** Identifying the roles that women and men play in addressing issues that the program aims to address and assessing how the participation of both men and women contributed to the achievement of outcomes. Some examples involve evaluating to what extent the program challenged traditional power relations, introduced practices that promote equity, and reduced gender inequalities and how addressing gender issues has contributed to dealing with the development issues at stake.
- **Holistic program evaluation:** Project implementors should record and use both women's and men's perceptions and evaluations of the project. Data on the participation of men and women should be collected throughout the project cycle.

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## ABOUT SATTVA

Sattva ([www.sattva.co.in](http://www.sattva.co.in)) is a social impact strategy consulting and implementation firm. Sattva works closely at the intersection of business and impact, with multiple stakeholders including non-profits, social enterprises, corporations and the social investing ecosystem. Sattva works on the ground in India, Africa and South Asia and engages with leading organizations across the globe through services in strategic advisory, realizing operational outcomes, CSR, knowledge, assessments, and co-creation of sustainable models. Sattva works to realize inclusive development goals across themes in emerging markets including education, skill development and livelihoods, healthcare and sanitation, digital and financial inclusion, energy access and environment, among others. Sattva has offices in Bangalore, Mumbai, Delhi and Paris. Sattva Knowledge works on research and insights to influence decision-making and action towards social impact in the ecosystem in Asia. Sattva Knowledge has partnered with organizations such as CII, USAID, AVPN, DFID, GIZ and Rockefeller Foundation to publish research, case studies and insights, and engages sector leaders through roundtables, conferences and impact circles.

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## ABOUT IDH

IDH the Sustainable Trade Initiative (“IDH”) accelerates and upscales sustainable trade by building impact-oriented coalitions of front running companies, civil society, governments, knowledge institutions and other stakeholders in several commodity sectors. IDH jointly formulates strategic intervention plans with public and private partners and co-invests with partners in activities that work towards establishing a business case for public good. Gender is a key impact theme in IDH’s 2016-2020 Strategic Plan, towards which IDH aims to embed gender equality in their transformation strategy. IDH integrates gender in their value chain approach, committing to address gender issues by demonstrating how gender-smart business practices drive impact. To this end, IDH has developed a Gender Tool with key performance indicators for program planning, and gender transformative interventions through proof of concept projects in sectors like tea, cocoa, coffee, flowers, apparel and cotton. In the next year, IDH will also launch an approach for gender lens investing for both donors and the private sector partners.



