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Introduction

Cotton is at the core of the global fashion and textile industry, accounting for almost 33% of all fiber consumption in the sector and 25% of the global fiber production (World Resources Institute, 2017; International Cotton Advisory Committee, 2021a; Ministry of Textiles [MoT], 2017). India is one of the world's largest cotton producers, with more than 6 million metric tons produced in 2018 (Shahbandeh, 2019). It is the main livelihood source for almost 6 million farmers in India, and the cotton processing industry employs approximately 45 million people in the country (MoT, 2017). Most cotton production has a negative environmental impact, however. Figures around conventional cotton water consumption vary widely and depend on context, but on average, the conventional cotton crop consumes an average of 1,931 liters of irrigation water and 6,003 liters of rainwater to produce one kilogram of cotton lint (International Cotton Advisory Committee, 2021b). Though cotton covers less than 3% of cultivated land globally, the crop uses 6% and 16% of the global supply of pesticides and insecticides, respectively (Laitala et al., 2018; Pesticide Action Network UK, 2018).

Organic cotton production has emerged as an alternative to mitigate these environmental impacts. The theory of change of organic cotton farming in India suggests that farmers adopting this approach may achieve greater economic outcomes because of a reduction in input costs of fertilizers and pesticides and, subsequently, a reduction in the demand for informal credit that is required to purchase chemical fertilizers and pesticides (De Hoop et al., 2018). In addition, organic cotton farmers may increase the value of the sales from their cotton production if they receive a price premium after certification. However, although organic cotton seems to have clear environmental benefits, organic cotton farmers' expectations about economic benefits are not always fulfilled (De Hoop et al., 2018).

This brief describes the findings of a qualitative study conducted by the American Institutes for Research (AIR) to understand how the COVID-19 pandemic and the March 2020 lockdown affected the organic cotton sector in areas of Madhya Pradesh. Organic cotton is a nascent sector in Madhya Pradesh, and stakeholders are still working to establish resilient market linkages to secure buyers and price premiums for organic cotton farmers. Various organizations, many supported by the Laudes Foundation, are stimulating organic cotton farming. This study investigates how the disruptions brought about by the pandemic and March 2020 lockdown affected these market linkages, as well as the livelihoods of farmers involved in organic cotton farming programmes. We outline strategies adopted by supply chain actors to minimize negative impacts on the industry, summarize the response initiatives from nongovernmental organizations and other agencies in the cotton growing area, and highlight the resilience of smallholder farmers in the face of a global pandemic up until March 2021. These findings could help the organic cotton sector in India identify successes and ongoing challenges as the pandemic continues and in the wake of other large communitywide shocks. Importantly, data collection for this brief occurred between November 2020 and January 2021, so the brief does not capture the devastating effects of the delta variant of the COVID-19 surge in

India, which started in February 2021 and resulted in a major health and humanitarian crisis. Despite this significant limitation, the data is relevant and provides early learnings about the organic cotton sector's response to COVID-19-related lockdowns and communitywide shocks. We encourage future research to examine the longer-term consequences of the delta variant on the organic cotton sector in India

Research Objectives. We conducted interviews with farmers and key organic cotton supply chain actors to understand how the COVID-19 pandemic and March 2020 country-wide lockdown changed the organic cotton supply chain and affected the livelihoods of organic cotton farmers in India. Through this study, we addressed three key questions:

1. How did the COVID-19 pandemic and the March 2020 lockdown affect the organic cotton supply chain in India?
2. How did the COVID-19 pandemic affect the livelihoods of organic cotton farmers in Madhya Pradesh in 2020?
3. How did the experience of the COVID-19 pandemic and March 2020 lockdown affect farmers' plans to cultivate organic cotton in future seasons?

Methodology. In collaboration with our partner, Outline India, we conducted qualitative interviews with key organic cotton supply chain actors. These actors included representatives of three implementing partners in Madhya Pradesh supporting organic cotton farming: Action for Social Advancement; World Wildlife Fund for Nature (India) with Self-Reliant Initiatives through Joint Action; and Aga Khan Foundation (n = 8). We also interviewed representatives of associated ginner (n = 3); spinners (n = 1); textile companies (n = 1); farmer producer companies (FPCs; n = 3); male and female organic cotton farmers (n = 9); and the Organic Cotton Accelerator¹ (OCA; n = 2). The research team analysed data through coding and interpretation of emergent themes and meanings. We conducted data analysis using NVivo, a qualitative data analysis software programme.

Timeline. The timeline describes main events across three areas relevant to this research: the COVID-19 pandemic, the organic cotton harvest cycle and associated supply chain activities, and responses by the Indian government to curb COVID-19 cases. The pandemic's first and second

Research Overview

WHAT: Brief study on the impact of COVID-19 pandemic on organic cotton industry and supply chain actors in India.

WHERE: Three districts in Madhya Pradesh, India.

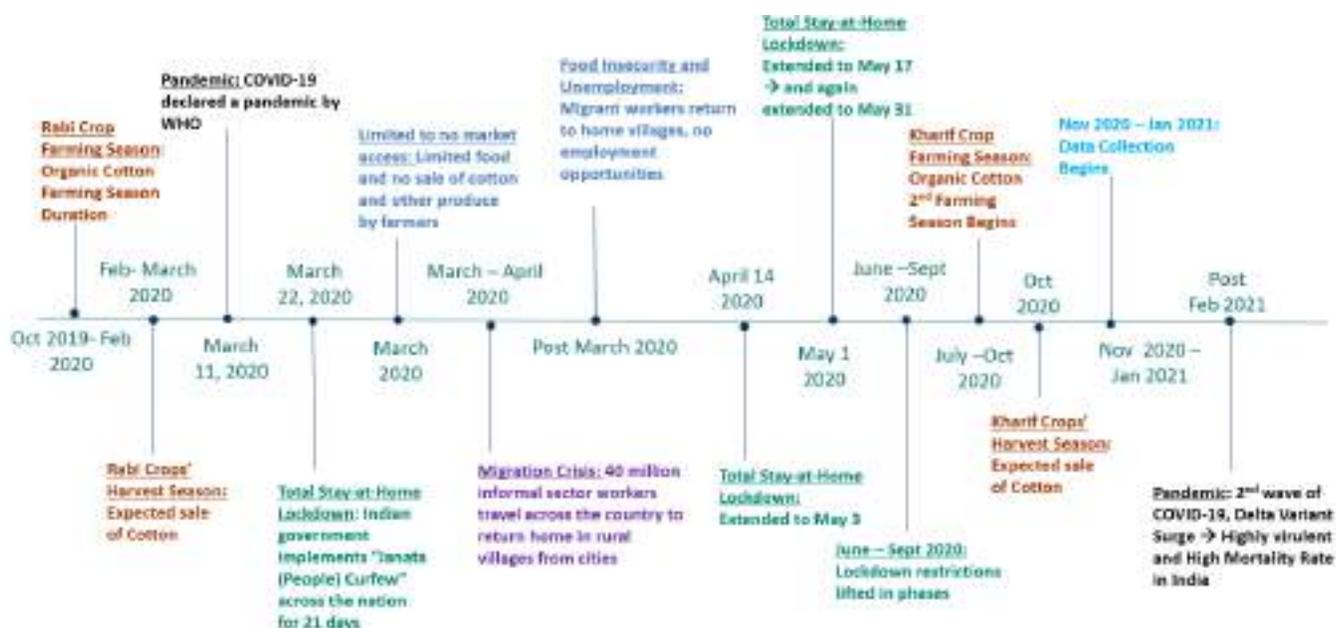
WHEN: November 2020- January 2021.

WHO: A variety of actors within the organic cotton supply chain.

HOW: Qualitative research study with 27 key informant interviews.

¹ OCA is a global multistakeholder organization based in the Netherlands that supports farm-level interventions in the organic cotton sector in several countries, including India.

waves impacted India in very different ways. As opposed to the first wave, the second wave was driven by the more virulent delta strain of COVID-19, which affected a younger population, became endemic in both urban centers and rural areas, and was associated with increased comorbidities and a higher mortality rate, resulting in a health and humanitarian crisis (Jain *et al.*, 2021; Chandra, 2021). It is important to note that the findings in this brief reflect the situation and experiences of organic cotton supply chain actors affected by the first wave of the pandemic. Data collection was conducted at a time when lockdowns were being lifted and before the emergence of the second wave in February 2021.



Findings

How did the COVID-19 pandemic and the March 2020 lockdown affect the organic cotton supply chain?

The pandemic and lockdown affected the organic cotton supply chain in the following ways:

Limited market access for many organic cotton farmers:

The March 2020 lockdown coincided with the winter (Rabi) crop harvest season. Although farmers associated with one implementing partner had already sold their cotton by the time of the March 2020 lockdown, the pandemic and subsequent lockdown hindered market access to farmers associated with two other implementing partners. Analysis of procurement agreements by the Laudes Foundation also found that one implementing partner had a buying commitment that was not honored by the organic cotton



Source: Dinesh Khanna, 2021

brands, largely due to the timing of the cotton sale after lockdown and market uncertainty because of the COVID-19 pandemic. Meanwhile, the other implementing partner was unable to establish a brand commitment due to quality issues in the cotton product related to hailstorms. Furthermore, limited access to transportation to markets during the lockdown forced some farmers to sell cotton to petty traders or money lenders at very low prices (Rs 4,200/quintal), which was less than the minimum support price² (Rs 5,500/quintal)

because of the farmers' dire need of money. In addition, FPC representatives reported that the Cotton Corporation of India (CCI) also purchased cotton from some farmers.

Premium Delivery During Rabi Season 2020

Interview data suggest that only farmers who were associated with one of the three implementing partners in the study received the premium as intended during the Rabi 2020 season. This was due to the timing of the sale, which occurred before the March 2020 lockdown. Farmers associated with a second implementing partner received a very low premium from FPCs, as the sale occurred after the lockdown started and the associated spinner faced liquidity issues, causing it to dissolve agreements. The premiums were lower than expected because the Cotton Corporation of India purchased cotton from farmers at the minimum support price. The remaining farmers associated with the third implementing partner did not receive any premium due to the low quality of the cotton, which the associated brand refused to purchase. Not receiving a premium makes farming organic cotton unprofitable to farmers and is not sufficient to compensate for the low yield of organic cotton versus higher yield from conventional cotton.

- **Implementing partners secured farmers' access to inputs for the Kharif season:**

Representatives from all three implementing partners expressed concern over availability of inputs, such as non-genetically modified organism (GMO) seeds and biofertilizers, to start farming of organic cotton and other produce for the autumn cropping season (Kharif) which begins in July and has an expected harvest in October. Furthermore, implementers stated that when inputs were available, they were unaffordable for farmers because prices were inflated. However, most farmers reported receiving non-GMO seeds and technical assistance from implementing partners during this period as part of the Laudes Foundation-sponsored COVID-19 response initiatives, suggesting that implementing partners were successful in meeting this challenge. Nonetheless, some implementing partners noted supply-side challenges with access to and quality of non-GMO seeds, suggesting that greater investment could help solve the issue of limited availability and inconsistent distribution of inputs, such as non-GMO seeds.

- **Lower price for organic cotton:** Farmers associated with two of the implementing partners interviewed were unable to sell organic cotton to brands during the 2020 Rabi season because the brand either pulled out of the commitment, or no brand commitment was established in the first place. In these cases, farmers had to sell organic cotton in the market for lower prices, without receiving the expected premium. In one case, the implementing partner had established a brand commitment for 100 MT of cotton lint, but the commitment was withdrawn as the first wave of COVID hit in March 2020. CCI purchased 36 MT of this lint for a low premium of 1.5

² Minimum price for cotton paid by CCI as determined by the Indian government.

Rupees/Kg (compared with Rs 3/kg). The rest of the cotton was sold as conventional cotton for zero premium. Farmers associated with another implementing partner had preliminary discussions with brands but could not establish a commitment because of quality issues. Hence, none of their cotton was committed to any buyer, and they sold organic cotton as conventional cotton for lower prices and zero premium. Lastly, one of the implementing partners was able to sell 576 MT of lint through two brand commitments with the expected premium. Ginners and implementing partners worried that lower prices and reduced demand may decrease farmers' motivation to farm organic as opposed to conventional cotton.

- **Temporary closure of cotton processing facilities:** The two ginners and one spinner interviewed said that their facilities had been closed for more than a month due to lockdown restrictions. Because of social distancing, these facilities also operated at lower capacity, which led to workers working longer shifts to limit the number of people in a facility. Although these closures resulted in some reduced production and layoffs, respondents indicated that they expected organic cotton production to continue expanding in future seasons.

“
The pandemic has destroyed my life and other farmers in the village. We do not have money to buy food and other essential items and there is a shortage of ration and food items in the market. There is a shortage of money and there was no transportation available to even sell the cotton and markets were closed.
”
– Organic cotton farmer

How did the COVID-19 pandemic and the March 2020 lockdown affect the livelihoods of organic cotton farmers?

Aside from the health risks of the pandemic, farmers' livelihoods were negatively affected due to compounding factors, such as lower-than-expected revenue from the organic cotton harvest, increased food requirements for families because of the return of migrant workers, food shortages, and increased food prices. Most farmers relied on emergency relief efforts by the implementing partners (sponsored by the Laudes Foundation's and other emergency grants) and the government to receive food. Implementing partners distributed a variety of essential food items, such as rice, oil, vegetables, and pulses. As part of COVID-19 relief, the Indian government also distributed food rations through its Public Distribution System (PDS), which is the central government's food security system. A few farmers mentioned that they received grains such as wheat at no cost from the PDS. Other farmers interviewed stated that they purchased food ration items at a price. The sale of food ration items at a cost seemed to be driven by the shortage of food supply from the PDS.

- **Lower-than-expected revenues from the organic cotton harvest:** Farmers associated with the organic cotton programs run by implementing partners generally received less-than-market-price value for organic cotton during the harvest of March 2020. Across the three partners, only one implementing partner had their purchasing agreement honored by the

organic cotton brand. Several farmers interviewed reported selling organic cotton at low or zero premium. Farmers who were not able to sell to dedicated buyers did not have adequate access to the market due to lack of transportation.

- **Increased need for food because of return of migrant workers:** Program areas were affected by an influx of migrant workers returning from urban areas during the lockdown. This increased the need for food in farmers’ households as there were more people to feed. Interview data suggest that farmers and migrant workers expressed a desire to work but most remained unemployed due to limited job opportunities across the areas where the farmers were situated.

Government Responses:

- *Public Distribution System:* Provision of rationed food items.
- *National Rural Employment Guarantee Schemes:* To support livelihood of struggling farmers and returning migrant workers.

- **Food shortages and increased food prices:** One implementing partner representative stated that limited market and supply chain access led to food shortages, which increased prices of essential items, such as oil and rice, by Rs 20–30, forcing some farmers to rely only on food rations provided by the government and food donated by implementing partners. Furthermore, some farmers also stated that high-interest loans from informal money lenders enabled them to purchase food. Farmers associated with one implementing partner relied on their own supplies of pulses for their staple food while reducing the diversity and number of meals. Other farmers relied heavily on food rations and their own agricultural produce to survive.

Laudes Foundation’s Emergency Grant:

Implementing partners received emergency funding from the Laudes Foundation to respond to COVID-19 and to mitigate the effects of the pandemic on farmers in the organic cotton farming sector. Implementing partners used the grant in different ways to support farmers.

Covid Responses from implementing partners:

<p>Immediate Relief: The implementing partners distributed food grains, soaps, and personal protective equipment (PPE), such as face masks. Two implementing partners also purchased and distributed seeds, including non-GMO cotton seeds, to assist farmers in the upcoming Kharif cropping season.</p>	<p>Information Campaigns: Two implementing partners carried out communication initiatives to increase awareness of COVID-19, social distancing norms, and hand-washing protocols. To reduce in-person contact, an implementing partner also provided virtual agriculture</p>	<p>Supporting Farmer Producer Companies [FPCs]: To assist other actors in the supply chain, one implementing partner created a risk mitigation fund covering up to 15% of risks for FPCs, which purchased Rabi crops from farmers. Similarly, another implementing partner also supported FPCs to facilitate collective procurement of</p>
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trainings via tablets and WhatsApp for its farmers.

inputs for farmers in time for the Kharif cropping season.

Addressing Unique Needs: One implementing partner installed a hand pump in one of the two districts to reduce the disproportionate impact on women, who were required to travel at least 500 meters one way to collect more water to meet new needs, such as frequent hand washing and subsistence farming. The same implementing partner promoted subsistence farming among 1,064 families through “kitchen” gardens, plotted on half acres of land. Another implementing partner partnered with the local government to support the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) by providing technical assistance and guidance to local village councils on ways to create MGNREGS jobs to support the local economy.

How did the experience of the COVID-19 pandemic and the March 2020 lockdown affect farmers’ plans to cultivate organic cotton in future seasons?

- Despite having received lower prices than expected during the March 2020 lockdown, most farmers planned to continue growing organic cotton in future harvest seasons. A few farmers noted they would grow conventional cotton at the same time as organic cotton, or would limit their organic cotton production, because they did not receive as high a price for organic cotton as they expected.

“
Organic cotton does not cost much. I can make pesticides and fertilizers at home all by myself which is very useful.
– Organic cotton farmer
”

- Some farmers mentioned that producing organic cotton made sense to them because of the lower input cost, as illustrated in the pull quote above. In addition, a couple of farmers noted water shortages, which limited the number of crops they could plant each year.
- FPCs, ginners and implementing partners were optimistic about the outlook of organic cotton for future seasons despite difficulties encountered during the March 2020 lockdown.
- Of the implementing partners interviewed for this study, two had purchasing agreements in place for the following harvest season at the time of data collection.
- However, because these data were collected before the second wave of COVID-19 in India, we do not know whether these farmers continued to have the same perceptions after the delta wave.

Conclusions and Recommendations

- **Purchasing agreements with organic brands are key to guaranteeing premiums for organic cotton farmers.** Brands pulling out of purchasing agreements due to market uncertainty

increases organic cotton farmers' risks. Furthermore, weather conditions may affect the quality of the organic cotton, causing supply chain actors to refuse products. It is unclear what enforcement mechanisms exist to hold brands accountable to these agreements. FPCs could play a key role in buffering individual farmers from that risk. For instance, one implementing partner developed a **risk mitigation fund**, which allows FPCs to pay farmers in advance for organic cotton, thus alleviating some of the risk for farmers. However, it is unclear whether this system will remain effective if brands pull out of purchasing agreements.

- **Recommendation:** Continue to develop risk mitigation funds mechanisms for FPCs and consider ways to cover FPCs' losses in case brands pull out of purchase agreements or farmers face climate shocks. Furthermore, consider strengthening enforcement mechanisms for purchasing agreements to reduce the risk that brands will pull out of them. For instance, brands focusing on social impact could show their commitment to organic cotton farmers by honoring purchasing agreements during shocks and/or contributing to FPCs' risk mitigation funds.
- Implementing partners' strategies to deliver non-GMO seeds and virtual technical assistance to farmers during lockdown worked well, with several farmers noting that they had received seeds in a timely manner, as well as satisfactory and accessible training materials. Access to inputs and guidance on the preparation of biofertilizers and pesticides is critical for farmers to maintain organic cotton production during negative shocks, such as COVID-19.
 - **Recommendation:** Consider maintaining and further developing virtual platforms for technical assistance even when travel restrictions are not in place, as an additional resource for in-person technical assistance. These platforms can potentially increase the cost-effectiveness of programming and become an important way to reach farmers during potential future crises.
- **Implementing partners noted challenges in accessing non-GMO seeds and onerous certification processes.** Non-GMO seeds were hard for some implementing partners to secure, and implementing partners stated that the onus of the certification process rests with the farmers.
 - **Recommendation:** Increase access to non-GMO cotton seeds and simplify certification processes to increase accessibility of these seeds for farmers.
- Emergency distribution of food and hygiene items during the lockdown appears to have been a lifeline for many farmers we interviewed. Farmers relied on food distribution from implementing partners and the government to secure their food supply during the lockdown.
 - **Recommendation:** Continue encouraging farmers to plant edible crops alongside organic cotton to help safeguard food security during other crisis or emergency situations. To mitigate or prevent future food shortages among vulnerable households, consider

investing in programmes which could support low-cost storage of food crops and develop community-level grain and pulses food banks.

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