Spinning it around:
Investing in the business case for organic cotton producers in India

The Organic Cotton Accelerator, 2016
Bart Vollaard & Wouter van Monsjou
Executive summary

While organic cotton farming certainly scores higher on environmental and health benefits than conventional cotton production, this does not necessarily hold true for the financial benefits reaped by an organic cotton farmer. In India, the world’s largest producer of organic cotton, more and more farmers are moving away from organic cotton because of more lucrative alternatives such as organic food crops and conventional cotton, or because of difficulties like finding quality available organic seeds. In order to secure global organic cotton supply, meet consumer demand and improve the livelihoods of Indian organic cotton farmers and their families, it is essential to improve the farmer’s business case. This article zooms in to the underlying issues and provides the case for the much-needed collective action focused on priority areas such as 1) leveraging buying practices to the benefit of the farmer, 2) investing in improving access to and quality of organic inputs, particularly seed, and 3) ensuring the integrity and transparency throughout the supply chain.
Growing organic cotton

Like all crops, cotton used to be cultivated organically until the early twentieth century. With the introduction of synthetic (inorganic) pesticides and fertilizers — and subsequently genetically modified cotton — the world saw a rapid growth of chemically intensified cotton production. After decades of chemical crop enhancement, the adverse social and environmental effects became increasingly apparent. This led the first pioneers to begin cultivating cotton as a rotational crop on specialized organic farms, resulting in the birth of organic cotton and the eventual accreditation and certification of organic produce as we know it today (Ton, 2002).

Nowadays agricultural production is considered ‘organic’ when it is certified ‘organic’ by independent audits and certification bodies in line with the rules and regulations that apply in the particular country, region, or consumer market. Although national production standards might slightly differ, organic agriculture generally aims for a sustainable use of local natural resources for production without the application of external inputs like synthetic pesticides, chemical fertilizers, herbicides, defoliants, and genetically modified (GM) seed. External organic inputs may be used (ITC, 2007). Through these practices organic farming aims to restore the health of soils, ecosystems and people, and establish fair relationships and good quality of life for all involved (IFOAM, 2016).

Aware of the benefits of organic farming, consumer demand for organic produce has increased rapidly and has led the market size of organic food to grow to more than 60 billion Euros in 2014 (Willer & Lernoud, 2016). Following the trend for organic foods, global market value for organic textiles, and cotton specifically, shows a similar pattern (see box 1). Small and big fashion brands alike are making clear commitments to source their portfolio of raw materials more sustainably by 2020.

However, while demand has steadily increased over the past years, global supply has declined from 250,000 MT organic cotton fiber in 2009/10 to 115,000 MT in 2012/13 and stabilized since. Similarly, India, accounting for two-thirds of global production, saw organic cotton output decline from 195,412 MT in 2009/10 to 75,251 MT fiber in 2014/15 (~62%). (Textile Exchange, 2016). This drop in production can partly be explained by stricter regulatory procedures in India as a result of national standards of organic production in India such as NPOP and NOP (Ministry of Commerce & Industry, 2005) However, most Indian farmers are moving away from organic cotton production because of its relatively unattractive business case compared to more lucrative alternatives such as other organic (food) crops and conventional cotton, as well as the difficulty of accessing quality organic cotton seeds. (Bhosale, 2014) (Textile Exchange, 2016)

Box 1. Global market value grows as production goes down

To turn the tide, the organic cotton sector should focus its efforts on improving the holistic business case for organic cotton farmers, particularly in India. Not only to secure global organic cotton supply and meet consumer demand, but also to improve the livelihoods of the current 160,000 Indian organic cotton farmers and their families.

1 National mandatory standards like the European EC, the United States NOP, Indian NPOP, and Japanese JAS have defined strict requirements products have to comply with before being labelled as certified organic.

2 As reliable demand data for organic cotton fiber is difficult to estimate, total market value is used as a proxy.

3 While this article zooms in on the organic cotton business case only, OCA’s overall vision and approach accounts for other farm (e.g. intercropping, alternative livelihoods climate resilience) and macro level factors (e.g., governmental policies, price fluctuations, and climate) that influence the holistic business case.
Is there a business in organic cotton?

To know how the business case of organic cotton farming in India could be improved, one would first need to understand the current economics of organic cotton farming. When comparing the average annual profit and loss statements of conventional and organic cotton farming in Madhya Pradesh – the state accounting for half of the total Indian organic cotton production - it becomes apparent that organic farmers generally generate less profit from their cotton growing activities than a conventional farmer with the same cotton acreage. Although the cost of inputs such as fertilizer and pesticides is lower for an organic producer when compared to the more input-intensive conventional way of farming, this cost saving does not weigh up against the often lower seed cotton yields of an average organic farmer (around 1,500 kg/ha) versus an average conventional farmer (around 2,100 kg/ha), see box 2.

One way of improving the net income of organic cotton farmers is by enhancing yields through the more optimal use of quality organic inputs (e.g. seeds, fertilizer, and pesticides) and improved farming practices regarding for example soil management and rotational crop selection. The most pressing issue when considering input use in the Indian context is the current difficulty for organic farmers and farmer programs in accessing high-quality non-GM seed. First of all, non-GM seeds used in organic agriculture are often observed to have a lower yield potential compared to their conventional, genetically modified alternatives (Nagarajan, 2015) (Elum, 2015). While this difference in yield potential between non-GM and GM cotton cultivars varies from region to region, overall it has only increased since the boom of GM cotton in India and the consequent gap in research on non-GM cotton over the last decade. Another complication is that available non-GM cotton cultivars suited for organic agriculture often do not meet market quality standards like the staple length or fineness of fiber (Louis Bolk Institute, 2015).

With the predominance of GM cotton – currently covering more than 95% of Indian cotton acreage – the market demand for organic non-GM seeds has become low and fragmented (Textile Exchange, 2016). The result has been that many seed companies and the public sector stopped offering non-GM cotton seed, and farmers and farmer programs are scrambling to get access to the non-GM cotton available, taking into account regional farmer needs and agro-climatic conditions (Messmer, 2014). This makes improving the access to, and performance of, non-GM cotton seed an absolute priority to safeguard a viable business for organic cotton farmers in India. Similarly, the access to organic inputs such as farm yard manure, bio pesticides and bio fertilizers - and investments in training farmers in their proper use – represent another opportunity for the organic cotton sector in India.

While better agricultural practices and inputs certainly represent one way of increasing a farmer’s net income, improvements in buying relations and conditions are another essential element to make organic cotton farming competitive with conventional cotton. Nowadays the vast majority of Indian organic farmers sell their produce against the same price as conventional farmers do. Without minimum price guarantees for organic cotton and prices being determined by the negotiations between producers and buyers,

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It is important to note that this represents a farmer’s cotton income and not his total income. An organic farmer’s total income consists of more crops than cotton alone due to the holistic and multi-crop approach of organic agriculture (including for example rotation and intercropping methods). Multi-crop systems are also used in conventional agriculture, however not as a standard practice and therefore to a lesser extent.
price differentials (or premiums) are rarely received by farmers anymore (Gruère & Plastina, 2010). Moreover, there is significant leakage of organic cotton to the conventional market due to cotton availability being misaligned with brand purchases, and the lack of long-term demand projections and commitments. Even under optimal growing conditions, organic cotton does not necessarily yield higher outputs than conventional cotton, making price differentials and more secure offtake of organic produce a necessary incentive to make an attractive farmer business case. By paying differentials to farmers in cash at the moment of harvest delivery the incentivizing effect could be even larger, helping to attract new farmers to convert to organic practices. To enable such improved buying and trade relations with farmers, the sector would need to address the lack of transparency throughout the chain that currently prevents brands to understand where and by who their organic cotton is grown. Increasing this transparency would facilitate upfront commitments to organic cotton producers to guarantee offtake and subsequent payment of differentials (Rieple & Singh, 2010) (van Duijn & Hesp, 2016).

Market incentives become extra important when considering attracting conventional farmers to convert to organic. For a conventional farmer to become organically certified, his or her farm has to be clear of chemical pesticides and fertilizers for two or three consecutive years, depending on the standard\(5\). During these transition years, research shows that farmers experience significant drops in cotton yields (Eyhorn, 2007) (Forster, 2013). Not only because adapting to new agricultural practices takes time, but also because organic cotton producers incur additional costs for managing internal control systems and testing against GM contamination. Even if a farmer has enough upfront financial reserves to bridge lower income years, actual certification currently does not guarantee premiums are paid out.

Altogether this shows that structural action regarding both cotton production and market practices is required in order for organic cotton farming to make business sense again.

### Towards a viable organic farming business case

A viable farmer business case is essential for the future of the organic cotton sector. To make sure the attractiveness and competitiveness of organic cotton farming increases, collective action is needed on the following interlinked key priority areas: 1) leverage buying practices to the benefit of the farmer; 2) invest in improving access to and quality of organic inputs, particularly seed, and 3) ensure integrity of organic cotton as well as transparency throughout the supply chain.

By improving buying practices and conditions for organic farmers and the organizations directly managing organic farming programs, the risks of investing in organic practices and the certification scheme could be shared more equally along the chain. This would create incentives to continue or start organic farming. By making timely, upfront commitments of sourcing organic cotton from farmers and farmer programs – prior to the cotton growing season – the downstream buyers can secure the demand for the organic cotton. Moreover, to reward organic cotton practices a differential payment (an extra percentage upon conventional market price) would need to reach the farmer. For this to become common practice, it is equally important to organize transparency, collaboration and traceability in the supply chain in such a way that the differential actually gets to the farmer when it is paid by the end customer. Last of all, by engaging more directly with the base of the supply chain, and improving conditions such as timely commitments and differentials, brands and retailers also have more leverage to request quality servicing of farmers by farmer program manager, e.g. by requesting access to quality, non-GM seed to be provided to the farmer, which would reduce the risk of GM contamination or poorer yields.

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5 3 years for European standards and 2 for United States
As mentioned above, improving access to inputs such as seeds to farmers via the supply chain is one way of improving a farmer’s cotton productivity, quality and integrity. However, to ensure that better inputs become available on the market there is a need to invest in research and development. Key priority – particularly in GM cotton dominated India – is to invest in breeding programs that develop cotton cultivars that perform well under organic growing conditions and that keep up with the performance of GM cotton in terms of yields and market requirements. For farmers, seeds with high yield potential, resistance to drought, pests and diseases and adapted to local conditions can ensure higher yield and subsequent incomes.

For the market, long to extra-long staple cotton, with the right micronaire (fineness), whiteness and fiber strength is also required to ensure cost-efficient processing into high quality garments. Investing in the necessary cotton breeding efforts is of precompetitive interest to the sector and it requires the collaboration of all relevant stakeholders, from public and private breeders, farmer groups, researchers, and the textile industry. Besides quality seeds, facilitating access to training on good (organic) agricultural practices and other organic inputs like bio fertilizers and pest control materials and methods is essential too.

With improved buyer relations as well as access to better seeds and other inputs, the business case for the organic cotton sector and livelihoods of its farmers can be improved. This will make farmers want to stay or start growing organic cotton, ultimately growing and securing the Indian (and global) future supply. Moreover, the use of quality non-GM seeds⁶ will also minimize the risk of GM contamination at the source of the supply chain. To further reduce GM contamination risk, control of GM contamination should be standard practice at different steps of the production cycle – from the seeds that are distributed to the cotton delivered at harvest. To ensure the integrity of organic cotton as it moves down the value chain it is crucial that an effective traceability system is in place that allows end users to track their products down to the farmer programs. Additional functionalities of such a traceability system – such as the tracking of differential payment to the farmer – could be built in to facilitate the differential payments and timely volume commitments by brands and retailers.

For all the different intervention areas discussed, the magic is in the mix. The solutions are interlinked, reinforce each other, and should be developed and implemented jointly to work at a larger systemic sector level. The Organic Cotton Accelerator is working on many of these areas to prototype solutions and bring them together. With the joint forces of our partners and all other relevant stakeholders in the organic cotton sector we are hopeful that we can spin this around and secure a prosperous organic cotton sector which benefits everyone – from farmer to consumer.

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⁶Lack of access to and availability of high quality non-GM seeds is a major issue affecting the business case for organic cotton farmers. The issues regarding organic cotton seeds and OCA’s approach to contribute to solving these go beyond the farmer business case and scope of this article. Another OCA article on this topic will soon be published.
Bibliography


van Duijn, H., & Hesp, S. (2016). It is all in the garment- Developing a scalable assurance delivery system for organic cotton. Utrecht: OCA.

About OCA

The Organic Cotton Accelerator (OCA) is a multistakeholder initiative, focused on creating a prosperous organic cotton sector which benefits everyone—from farmer to consumer.

This is one of a series of papers that explain the challenges the organic cotton sector is currently facing, and the proposed solutions that OCA and its partners are working on to come to structural sector change.

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