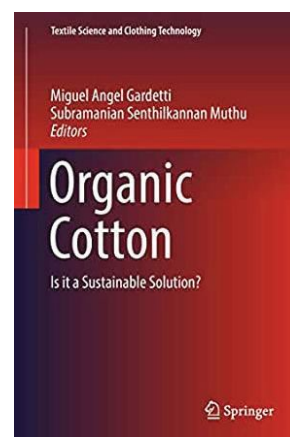


## Organic Cotton: Is it a Sustainable Solution?

Editors: Miguel Angel Gardetti, Subramanian Senthilkannan Muthu; Singapore: Springer Nature, 2019; ISBN 9789811087813; x+176 pp.; €103.99



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*"The researchers argue that through genetic engineering, hybrids should be created which leverage the positive qualities of cotton fibres while at the same time improve upon the deficient parameters."*

Historically cotton has been an important plant. Its historical imprint can be traced back to as early as 3000 B.C. with its early usage documented in India. As the world was being explored through conquests and colonisation, the usage of cotton spread to countries like Greece, Spain, Italy, China, Japan, England and even the Americas. At present, the cultivation of cotton is extensively practised in Brazil, China, Egypt, India, Iran, Mexico, Pakistan, Sudan and the United States of America. The utility of the cotton plant is not only limited to the textile industry as it is utilised for animal feed, production of vegetable oils and fertilizers. The cotton plant can be grown with or without the use of artificial chemicals such as pesticides, plant development controllers and defoliants. The latter is referred to as organic cotton while the former is referred to as white cotton. White cotton is notorious for being one of the most chemically intensive plants. It is grown on 3-5 per cent of the world's cultivated lands yet it accounts for 16-25 per cent of the total pesticide usage. With the realisation of the dangers of climate change, increased emphasis is being laid on adopting sustainable agricultural practices. Hence, organic cotton has been explored as a viable alternative for white cotton. Currently, the cultivation of organic cotton is led by India, China, Turkey, and the United States of America. This book is a collection of papers which investigate the various aspects of organic cotton relative to white cotton. It does not attempt to provide definitive conclusions about the sustainability

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of cotton but rather attempts to explore the multiple perspectives around organic and conventional cotton farming through empirical as well as qualitative analysis.

The book critically delves into the environmental impacts associated with the conventional farming of white cotton and the issues with organic cultivation of cotton. White cotton cultivation is chemical as well as water-intensive. The chemicals used are detrimental to the producers, consumers and to the environment. They leech into the soil and increase its toxicity while the residuals of pesticides and heavy metal ions (Arsenic, Chromium, Lead etc.) find their way into the finished products. Moreover, the cultivators of white cotton bear the brunt of continuous exposure to such chemicals and many of them require hospitalisation. Whereas white cotton farming demands on an average 2210 litres of water per kilogram of cotton, organic cultivation is possible with only 182 litres per kilogram. This becomes pertinent in the light of depleting water tables in various parts of the world due to anthropogenic factors. Having highlighted the negative environmental impacts of conventional cotton farming, the researchers further explore the issues which may have limited the adoption of organic cotton on a global scale.

The transition from conventional methods to organic methods is riddled with negative economic implications for the cultivator. For a conventional cotton farmer, one of the major barriers which hamstringing the popularity of organic cotton production is the lengthy transformational period of two to three years which is required to wash

away the chemicals from the soil. The production cost of organic cotton is further compounded due to the costs associated with a lower yield, organic certification, increased labour, and organic fertilisers and manure. The researchers estimate that organic cotton production is 50 per cent more costly than conventional cotton; the cost is passed on to the consumer. Despite there not being any apparent difference in the finished quality of products made from organic cotton, the cost of pure organic cotton products is 20-50 per cent greater than conventional cotton products.

The fibre properties of a cotton plant are an important determinant of its selling price as well as the likelihood of its usage in the production of high-quality yarns. Cotton fibre can be assessed on the parameters of its length, strength and thickness. The researchers in the book, through empirical analysis of select organic and white cotton fibres, establish that the latter have more desirable parameters. However, the naturally coloured fibres of organic cotton are resistant to fading and also offer protection from the UV rays. Further, the organic cotton fibres can seamlessly blend with the white cotton fibres and therefore be useful in the textile industry. The researchers argue that through genetic engineering, hybrids should be created which leverage the positive qualities of cotton fibres while at the same time improve upon the deficient parameters. If this is achieved, it would reduce the price of organic cotton products, and would attractively position the products of organic cotton to a regular consumer and not just the environmentally aware.

Organic farming of crops including cotton should be promoted with the aspect of intra-generational equity. However, the transition to a completely different framework is not solely determined by environmental sustainability. Organic farming has to be economically sustainable to producers as well as consumers. In the case of organic cotton, the high cost of production dissuades the farmers. The causality of the high costs is shared between specific organic farming practices and the presence of information asymmetry

both of which impact the yield. Despite the obvious environmental benefits of transitioning to organic cultivation of cotton, the shift has been at a sluggish pace. Apart from highlighting the benefits of organic cotton production, the various papers at their core, argue for a robust incentive system for the farmers in the form of exposure to better information, cost-sharing of certification and tax credits while at the same time leveraging technology to improve the fibres of organic cotton.

## USAID AND ASEAN SIGN INAUGURAL REGIONAL DEVELOPMENT COOPERATION AGREEMENT

The first Regional Development Cooperation Agreement was signed between USAID and ASEAN by USAID Principal Officer to ASEAN, Mr. Ryan Washburn and Secretary General of ASEAN, H.E. Dato Lim Jock Hoi on the sidelines of the ASEAN – US Ministerial Meeting. This agreement is an important milestone for US-ASEAN cooperation and is also a reflection of long-term strategic partnership for promotion of peace, democracy, and prosperity in the Southeast Asia Region.

The agreement has a value of up to USD 50 million and is a five-year agreement that will advance the ASEAN Community Vision 2025 and the ASEAN-U.S. Plan of Action (2021-2025). USAID continues to support ASEAN in meeting regional and global challenges that include COVID-19 pandemic, human trafficking, access to digital economy, and managing responses to natural disasters.

USAID and ASEAN will also launch a new joint initiative to counter the impacts of the COVID-19 pandemic and increase future preparedness through the ASEAN Public Health Emergency Coordination System (APHECS). APHECS will provide ASEAN Member States and other stakeholders a regional framework to guide coordination and communication in public health emergencies.

**Source:** US Embassy in Cambodia. (2020, September 10). USAID and ASEAN Sign Inaugural Regional Development Cooperation Agreement. Retrieved from: <https://kh.usembassy.gov/usaaid-and-asean-sign-inaugural-regional-development-cooperation-agreement/>