

Issue Brief

On Boosting Cotton Sustainability

Sustainable Production Can Improve Efficiencies and Enhance Livelihoods



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Issue: A uniform approach to measuring the sustainability of cotton farming systems and common metrics to do so are needed to move the cotton sector toward more sustainable modes of production.

Defining the Issue

Cotton is the most important natural fiber in the textile industry, providing livelihoods for millions of people across the globe. Producing cotton sustainably challenges both the development and textile sectors: The FAO hailed cotton a significant sustainable development opportunity, yet many farmers who produce it are exposed to pesticides. Plus, cotton's thirst has already damaged ecosystems. Lowering pesticide and water inputs in the cotton sector could alleviate health risks and environmental pressures in many parts of the world.

The time is ripe to move toward sustainable cotton production as consumers demand more earth-friendly products. We can boost the sustainability of cotton production by collecting consistent, comparable information. The cotton sector can move toward improved modes of production by adopting common metrics to build a common language for sustainability.

Cotton: A Global Fiber

Cotton is everywhere. We wear it in different forms, sit and sleep on it, and use it for personal care. Cotton-based fabrics offer breathability, flexibility, durability, and drying characteristics,

forming the basis of useful and comfortable products. Today, cotton is grown in over 100 countries and its cultivation supports the livelihoods of 21 million people in the top 28 clothing- and textile-producing countries (Cotton Australia, 2016; International Labour Organization, 2014). Despite cotton's ubiquitous presence, cultivating and harvesting good-quality fibers are fine arts unbeknownst to many of its consumers. The cotton plant produces a boll containing the cottonseed and fibers that are harvested for the food, feed, and textile industries. Cottonseed oil is found in several food products while the cottonseed husk is used as animal feed. Cotton fibers currently make up 30 percent of the total fibers consumed globally by the textile industry (International Cotton Advisory Committee, 2016).

Quality Is Paramount

Cotton fiber quality directly affects the bottom line of textile manufacturers in the form of processing waste and lower quality end products. For these reasons, the quality of cotton fibers harvested from the field, in addition to yields, dictates the profitability of cotton producers. To textile manufacturers, the following fiber characteristics are essential:

- length
- length uniformity
- fineness
- strength
- elongation
- maturity
- wax content
- color
- stickiness
- trash content.

For instance, finer and longer cotton fibers give finer and stronger yarns, while wax content can influence fabric drying capabilities and trash content can lead to fiber breakage while manufacturing and lower-fabric quality.

Growing cotton fibers of the right quality is greatly dictated by the varieties farmers choose to grow and the conditions in which cotton is grown, which can be difficult to control. The cotton variety and growing conditions primarily determine length, length uniformity, fineness, strength, elongation, maturity, wax content, and color while harvesting practices also influence stickiness and trash content. Thankfully for cotton farmers, optimizing yields correlates well with producing high-quality fibers.

Why Sustainable Cotton Matters

For farmers to truly benefit from cotton cultivation over the long term, more sustainable agricultural practices need to be adopted. The International Cotton Advisory Committee (ICAC) recently published indicators for measuring sustainability in cotton farming systems (ICAC Expert Panel on Social, Environmental & FAO Plant Production and Protection Division, 2015). Several voluntary sustainability standards such as Organic, Fairtrade, the Better Cotton Initiative, Cotton Made in Africa, and myBMP are working diligently to move the cotton sector toward sustainability. The Committee on Sustainability Assessment (COSA) plans to test the indicators proposed by ICAC in the field to establish and fine-tune a systematic

and pragmatic way to measure sustainability in cotton farming systems. Moving the sustainability yardsticks in the cotton sector will clearly require collaborative approaches engaging stakeholders throughout the value chain.

How to Grow Cotton Efficiently

Collecting field-level information on the types of cotton varieties grown, average day and night growing temperatures, water availability, and plant uptake, as well as harvesting approaches, provides valuable information for farmers to ascertain the potential quality of the cotton being grown. Furthermore, correlating this information to the compensation offered to cotton farmers for their crop as well as lab-level testing by textile manufacturers could provide a means to determine the factors affecting fiber quality. Such analyses could also gauge whether cotton lint purchasers are offering farmers adequate compensation for their harvest. Establishing a systematic and consistent approach to collect this information will enable every stakeholder in the supply chain to grow cotton in the most efficient manner.

Similarly, collecting consistent and comparable information related to the sustainability of cotton farming systems will allow for the establishment of common metrics, and a common language needed to move the sector effectively toward sustainability. COSA is well placed to contribute to this effort building on its work with numerous partners to measure the sustainability impacts of agricultural practices in other commodity sectors. Doing so will enable cotton farmers to make better decisions for the future of their families and communities.

References

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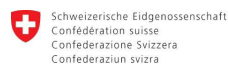
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