

Data Collection and Documentation

Knowledge Pack

Introduction to the Better Cotton
Initiative

THE BETTER COTTON INITIATIVE

Problem Statement for the Better Cotton Innovation Challenge

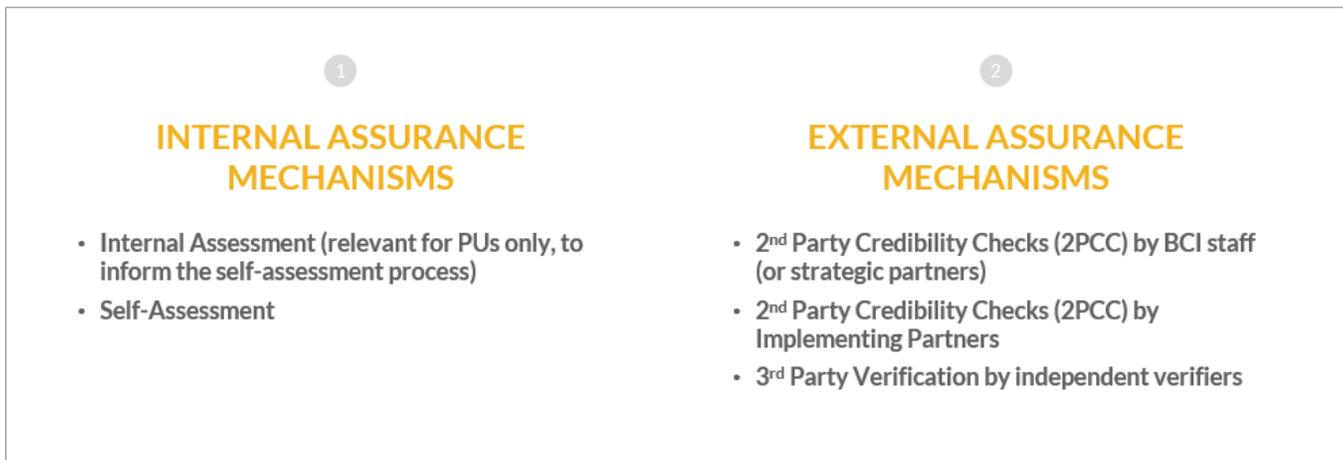
How might we increase the efficiency of data collection and documentation to ensure the cotton is produced sustainably?

As for any verification model, quality data is imperative to ensure the cotton produced is indeed better. BCI Field Facilitators collect over 50 data points per farmer on average, across areas such as income, fuel, water, fertilizer, pesticide, and labor practices. They spend nine to ten months collecting this information for the 400-500 farmers they each work with, with multiple and repetitive touchpoints in between. Additionally, the operating environment in some regions – for example poor connectivity and limited digital literacy – can make it even more difficult. This translates into a relatively high annual per farmer cost and time spent by field facilitators collecting data

Innovations over the years has made it possible to collect and document data in a resource efficient manner. These include IVRS based data collection that provides a means to collect last mile data, satellite augmented data collection that uses image recognition, and artificial intelligence and machine learning that can read and digitize various formats of data.

Better Cotton Initiative Assurance Programme

The BCI Assurance Programme has multiple internal and external assurance mechanisms. These balance the need to collect nuanced credible data with being cost-effective. The mechanisms are mentioned below:



For the innovation challenge we will focus on further improving the internal assurance mechanisms.

Recognizing the difference in production methods and workforce among cotton farmers, BCI has categorized farmers as Smallholders, Medium Farms and Large Farms. The Challenge will focus on smallholder farmers (although solutions for medium and large farmers are also welcomed), defined as farmers who are not structurally dependent on permanent hired labor and whose farm size does not exceed 20 ha of cotton. Smallholders are organised into Learning Groups (LGs). LGs are classed together to form a Producer Unit (PU). Each PU consists of 3,500 – 4,000 farmers for smallholders with a maximum of 100 LGs. For small holder farmers, self-assessment and licensing is done at the Producer Unit level.

To earn a licence, Producers need to fulfill the following requirements:

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1. Comply with Core Indicators of the Principles and Criteria¹
2. Report on Results Indicators²

1. Compliance with Core Indicators

The 7 principles against which the assessment takes place are as follows:

- Principle 1: BCI Farmers minimise the harmful impact of crop protection practices
- Principle 2: BCI Farmers promote water stewardship
- Principle 3: BCI Farmers care for the health of soil
- Principle 4: BCI Farmers enhance biodiversity and use land responsibly
- Principle 5: BCI Farmers care for and preserve the quality of fibre
- Principle 6: BCI Farmers promote decent work
- Principle 7: BCI Farmers operate an effective management system

These farmers complete an annual Self-Assessment questionnaire on Core and Improvement Indicators and submit it to BCI 4 weeks before the beginning of harvest. The online Self-Assessment survey covers all Core and Improvement Indicators relevant for each Producer category. It automatically generates an indication of compliance or noncompliance with the Core Indicators, which feeds into the decision-making process for licensing. This is followed by an Internal Assessment on a sample of farmers in the PU to inform the Self-Assessment process. The Internal Assessment covers a sample of smallholder farmers i.e., covers 10% of LGs under a PU.

In assessing compliance against each of the indicators, the assessment is binary i.e., either a farmer complies or does not comply. Within non-compliance, there are two types namely, 'systematic' and 'incidental'. 'Systematic' means that the challenge is inherent in their current processes and therefore are non-compliant, whereas, 'incidental' means that their non-compliance was not because of their processes and rather circumstantial.

- In the case of 'systematic' non-conformity, the PU is denied the licence and if it is identified in the active cotton growing period, the existing licence is cancelled immediately. The PU can re-apply for the licence in the following season.
- In the case of 'incidental' non-conformity, the PU has 6 months to implement corrective measures to prevent the identified non-conformity from re-occurring in the future. The BCI Secretariat is responsible for validating the implementation of corrective measures, either through the evaluation of submitted evidence and / or by ensuring a follow-up External Assessment. Failure to implement corrective measures in the given timeline results in cancellation of licence.

For further details on the indicators, read the document [attached](#).

(https://www.dropbox.com/preview/Knowledge%20sharing%20-%20Dalberg%26IDH/31.%20BCI%20Principles%20Criteria%20Indicators%20Matrix_V%202.0.xlsx?role=work)

2. Report on Results Indicators

Each smallholder farmer is supposed to maintain a farmer field book (FFBs). The indicators reported on are:

- Pesticide use

¹ The 7 Better Cotton Principles are further defined through 42 criteria and a subset of 164 indicators. The indicators are differentiated as Core Indicators and Improvement Indicators. Core Indicators are those that all Producers need to meet to be licensed, whereas, Improvement Indicators are meant to incentivize continuous improvement across all areas of sustainable production.

² It is important to emphasize that this requirement focuses on the reporting of data, not the content of that data. The content of Results Indicator data and any trends/ impacts revealed are used for learning processes only and are not a basis for disqualifying Producers or cancelling licences.

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- Fertilizer use
- Water use
- Yield
- Profitability
- Eliminating child labour through partnerships
- Improving understanding and awareness of child labor issues
- Inclusion of women farmer and workers in training

A representative sampling-based approach at the PU level is taken at the small holder farmer level, as opposed to 100% data collection from all farms in the medium farm level.

For further details on the Results Indicator, read the document [attached](#).

([https://www.dropbox.com/preview/Knowledge%20sharing%20-%20Dalberg%26IDH/27.2%20BCI%202018-19%20RIR%20Template %20SH_MF_ALL_FINAL.xlsx?role=work](https://www.dropbox.com/preview/Knowledge%20sharing%20-%20Dalberg%26IDH/27.2%20BCI%202018-19%20RIR%20Template%20SH_MF_ALL_FINAL.xlsx?role=work))

For further details, read [The Better Cotton Assurance Programme](#) and [Working with Results Indicators](#)

How is this data collect?

- Data on the indicators mentioned above is collected in a physical format via FFBs. Farmers are required to capture the data in an on-going basis – some are able to self-report the data while others save receipts (fuel, pesticides, motor / electricity bills, labor costs, etc.) that Field Facilitators (FFs) use to fill their FFBs.
- The data from farmers is collected via in-person meetings (in groups or personal home visits) by the FFs. This data capture process spans across a timeline of 9-10 months and includes multiple and repetitive touchpoints between FFs and farmers – averaging 2-3 times a month
- Once collected, the data goes to the Producer Unit where it is verified for quality, standardized for units / formulae, and converted from the physical format to a digital template. Field Facilitators often assist the PU manager in verification.