

Bonsucro Chain of Custody Standard

FINAL DRAFT

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1.Introduction

1.1 Bonsucro

Bonsucro is a global multi-stakeholder non-profit initiative dedicated to reducing the environmental and social impacts of sugarcane production while recognising the need for economic viability. The mission of Bonsucro is to achieve a sugarcane sector that is continuously improving and verified as sustainable by acting collaboratively within the sector and working to continuously improve the three pillars of sustainability: economic, social and environmental viability. Bonsucro aims to achieve this mission through providing the definition for sustainable sugarcane and all sugarcane derived products through a multi-stakeholder approach. Bonsucro also aims at ensuring the integrity of the implementation of the Bonsucro Production and Chain of Custody Standards, through the implementation of the Certification Protocol.

1.2 Objective of the Chain of Custody standard

The objective of this Bonsucro Chain of Custody (ChoC) Standard is to provide assurance that claims of compliance can be tracked along the supply chain. Organizations undergoing the Bonsucro certification process must comply with Bonsucro ChoC Standard. It must also be used by Certification Bodies and auditors when carrying out certification audits and surveillance audits. Finally it may be used by the wider audience of the sugarcane sector and any other interested parties.

1.3 Scope of the Bonsucro ChoC standard

The Bonsucro ChoC standard applies to any Organization purchasing, handling and/or trading Bonsucro-compliant material who wishes to make any claim about the status of the material or representation of the material. To further detail:

- Any company that takes ownership of Bonsucro Certified products;
- Any company that sells Bonsucro Certified products;
- Any company that wishes to make a claim against the purchase of Bonsucro Certified products;
- Mills, traders, refineries, wholesalers & manufacturers (any entity that uses Bonsucro certified Product as a raw material) need a Chain of Custody

Certification;

- Retailers & independent third parties (like storage facilities and transport) do not need an independent Chain of Custody certification.

The Standard describes the requirements to ensure the traceability of Bonsucro-compliant material by implementing a mass balance supply chain model. Any organization that wishes to make a claim regarding Bonsucro certified material shall hold a valid ChoC certificate.

Note: Organizations wishing to meet the EU-RED requirements for supplying sugarcane derived biofuels or bioliquids into the European Union shall follow the requirements laid out in the separate Bonsucro EU-RED ChoC standard. There are important differences in processing to qualify for EU-RED that should be considered by all organizations.

1.4 History of this document

In September 2018, upon the recommendation of the Bonsucro Secretariat, the Board of Directors agreed to start the revision process of the Bonsucro Mass Balance ChoC Standard and Guidance. The Board instructed the Secretariat to follow the Standard Revision Procedure set up in line with the ISEAL Code of Best Practice for Standard Setting. The Secretariat called for one representative of each class of membership to form the Standard Revision Taskforce (SRT). The SRT met remotely in October and December 2018. The SRT was given the task to draft the new version of the Bonsucro Mass Balance ChoC Standard and Guidance. All meeting minutes are publicly available on the Bonsucro website.

2. Definitions

Normative references for definitions referring to:

ISO 9000:2005; ISO 14001:2004; ISO IEC Guide 17000:2004; EU RED (2009/28/EC); EU FQD (2009/30/EC); CEN/TC383

Bonsucro certified members: Bonsucro members who have been certified against the Bonsucro Producer Standard and/or the Bonsucro Chain of Custody Standard.

Cane supply area: area which a mill defines as the land under cane production for the purposes of certification.

Carryover: the positive balance of Bonsucro certified product at the end of the inventory period, that is carried over to the next inventory period. The positive balance at the end of the inventory period is calculated as the balance at the beginning of the inventory period, plus the total volume of Bonsucro certified material & credits purchased during the inventory period minus the total volume of Bonsucro certified material & credits sold during the inventory period (taking into account relevant conversion factors if appropriate).

Certification Body: i.e. Conformity Assessment Body; Body that performs the audit.

Note 1 - An accreditation body is not a conformity assessment body (ISO/IEC 17000:2004)

(Source: Adapted from ISO/IEC 17011:2005).

Chain of Custody: sequence of responsibilities for and control of products or materials as they move through each step in the relevant supply chain (Source: ISO draft ChoC standard, 2015).

Chain of Custody system: set of measures designed to implement a chain of custody, including documentation of these measures.

Consignment: quantity (e.g. batch, lot, load) of product mass with attached data specifying the product content in terms of kilograms (or tons of sugar or litres/m³ of ethanol) and sustainability characteristics.

Conversion factors: are the ratio between the output material and the input material. Conversion factors will be specific to facilities and should be accurately and fully documented in the mass balance system.

Document: Information and its supporting medium. Note 1 - The medium can be paper, magnetic, electronic or optical computer disk, photograph or master sample, or a combination thereof; Note 2 - Adapted from ISO 9001:2000; ISO 14001:2004.

EU-RED: European Union Directive on the promotion of the use of energy from renewable sources (Renewable Energy Directive, 2009/28/CE).

Internal Control System (ICS): A set of rules, procedures, and organizational structures developed and maintained by the certified organization that ensure that Bonsucro ChoC requirements are met.

Inventory Period: A consistent period over which physical Bonsucro certified product and sustainability data is reconciled.

Finished product: A finished product is a product where no further modification occurs (including repacking).

Mass balance: A system for administratively monitoring the inputs and outputs of certified material/product throughout the supply chain. It allows for mixing of these materials/products with non certified material at any stage in the supply chain, provided that the outputs of certified material/product do not exceed the inputs of certified material/products.

Multi-sites: More than one location either within a single legal entity or across legal entities that are related via an ownership structure (e.g. common holding company). Such locations may be refineries, storage or other processing units. One site of an included legal entity shall be designated as responsible for maintaining the central administration of the ChoC requirements including the Mass Balance accounting using an Internal Control System (ICS).

Organization: legal entity or group of legal entities with one or more sites, seeking or holding Bonsucro ChoC certification. In case the organization holds a Bonsucro ChoC certificate, it is also referred to as Bonsucro ChoC Certificate Holder or Certificate Holder.

Site: a single functional unit of an organization or a combination of units situated at one locality, which is geographically distinct from other units (Adapted from ISO draft ChoC Standard, 2015 and EU-RED).

Supplier: Previous legal owner of the product in the Chain of Custody.

Sustainability characteristics: Confirm & describe compliance with the Bonsucro environmental, social and economic criteria for a consignment of sugarcane, sugar, bagasse and any other product derived from sugarcane, sugarcane residues or sugarcane waste.

Traceability: the ability to trace the history, application or location or source(s) of a product throughout the supply chain (adapted from ISO 9001).

3. System description

3.1 Elements of the Bonsucro Certification System

The Bonsucro Certification System consists of four main elements:

1. The “Bonsucro Production Standard” contains principles and criteria for achieving sustainable production of sugarcane and all sugarcane derived products in respect of economic, social and environmental dimensions. Bonsucro has developed guidance documents for members that provide further information on how to become compliant with the Bonsucro Production Standard.
2. The “Bonsucro Chain of Custody Standard” (ChoC) presents the requirements for Mass Balance activities. The standard includes references to Credit Trading however this is outside the scope of this Standard.
3. The “Bonsucro EU-RED Chain of Custody Standard” (EU-RED ChoC) which is a separate standard to the ‘generic’ Bonsucro Chain of Custody Standard and contains specific requirements for sugarcane products to be qualified for the EU-RED biofuels and bioliquids markets.
4. The “Bonsucro Certification Protocol”: Bonsucro has developed a Certification Protocol for auditors that lists the process and procedures for certification against the Bonsucro Standards. This includes: 1) rules and requirements for independent Certification Bodies to audit against the Bonsucro standards, and 2) audit procedures for independent Certification Bodies to verify compliance with the Bonsucro Standards.

Together, these four elements form the Bonsucro Certification System. As such, these individual documents must always be used in relation to each other.

3.2 Supply chain models

Bonsucro follows a mass balance approach for tracing Bonsucro certified material in the supply chain, ensuring that at every point in the supply chain volumes of Bonsucro certified outputs match volumes of Bonsucro certified inputs.

This Standard sets the requirements for **mass balance**.

In mass balance the volume of Bonsucro certified output is balanced with a physical volume of Bonsucro certified input. This allows the tracking of Bonsucro the products derived from certified sugarcane along the entire supply chain from field to mill (including transportation), through various steps of production (for example conversion processing, manufacturing, transformation) to warehousing, transportation and trade up to and including the end product manufacturer.

For mass balance the Chain of Custody requirements shall apply to every organization throughout the supply chain that:

- a. takes legal ownership and
- b. physically handles Bonsucro certified products at a location under the control of the organization including outsourced contractors.

After the end product manufacturer, when the product has been put in its final form and package there is no further requirement for ChoC certification. This means that retailers and distributors of finished products do not need Chain of Custody certification.

3.3 Unit of certification

An organization has two options for its chosen unit of certification. These are:

1. Single Site - a single functional part of an Organization's operations or a combination of parts situated at **one locality**, e.g. sugarcane mill, terminal, food processing, storage, tanks. Mills may only be single site units.
2. Multi Site - More than one location either within a single legal entity or across legal entities that are related via an ownerships structure (e.g. common holding company). Such locations may be refineries, storage or other processing units, or offices. The sites may be within a single country or across international borders. One site of an included legal entity shall be designated as responsible for maintaining the central administration of the ChoC requirements including the mass balance accounting using an Internal Control System (ICS). Mills may not use the option of multi-site certification.

4.The Bonsucro chain of custody standard

Principle 1: Implementing the chain of custody

Criterion 1.1 The organization shall implement the chain of custody requirements within the scope identified

Indicator 1.1.1: Overall management responsibility

The organization shall establish and document its commitment to implement and maintain the Bonsucro ChoC requirements. The commitment of the organization shall be made available to its personnel, suppliers, clients and other stakeholders.

Indicator 1.1.2: Procedures

The organization shall have written procedures and/or work instructions or equivalent to ensure the implementation of all elements of the Bonsucro ChoC requirements. This shall include at minimum the following:

- a. Complete and up to date procedures covering the implementation of all the elements of the supply chain model requirements.
- b. Complete and up to date records and reports that demonstrate compliance with the supply chain model requirements (including training records).
- c. Identification of the role of the person having overall responsibility for and authority over the implementation of these requirements and compliance with all applicable requirements. This person shall be able to demonstrate awareness of the organization's procedures for the implementation of this standard.

Indicator 1.1.3: Record keeping

The organization shall maintain accurate, complete, up-to-date and accessible records and reports covering all aspects of the Bonsucro ChoC Standard requirements. Retention times for all records and reports shall be a minimum of five (5) years.

Indicator 1.1.4: Training

The organization shall have a training plan on Bonsucro ChoC Standard requirements, which is subject to on-going review. Appropriate training shall be provided by the organization for personnel carrying out the tasks critical to the effective implementation of the supply chain certification standard requirements. Training shall be specific and relevant to the task(s) performed. Records of participants and content shall be maintained

Indicator 1.1.5: Internal audits

The organization shall conduct an annual internal audit to determine whether the organization;

- a. conforms to the requirements in the Bonsucro ChoC Standard
- b. effectively implements and maintains the standard requirements within its organization.
Any non-conformities found as part of the internal audit shall direct corrective action to be taken. The outcomes of the internal audits and all actions taken to correct nonconformities shall be subject to management review at least annually. The organization shall maintain the internal audit records and reports.
- c. corrective actions taken as a result of any nonconformities identified in the internal audit shall be documented, including dates and descriptions of actions taken to resolve them..

The procedure for the annual internal audit process shall be documented.

Indicator 1.1.6: Defining the unit of certification

The organization shall define and document its unit(s) of certification. In the case of multi-site certification, the organization shall define and document the legal entities and sites covered by the multi-site certificate, including details on the site which is the central office for administering Bonsucro ChoC data. The relationship between the sites shall be described and documented. The organization shall document any changes that may occur in the scope of the unit(s) of certification, and notify its certification body and the Bonsucro Secretariat at least one week before the change is taking effect.

Indicator 1.1.7: Outsourcing activities

In cases where a Bonsucro ChoC certified organization outsources activities to independent third parties (e.g. subcontractors for storage, transport or other outsourced activities), the certified organization shall ensure that the independent third party complies with the requirements of the Bonsucro ChoC Standard.

This requirement is not applicable to outsourced storage facilities where the management of the Bonsucro certified product(s) and instructions for tank movements are controlled directly by the certified organization (not the tank farm manager).

A Bonsucro certified organization which includes outsourcing within the scope of their Bonsucro ChoC certificate shall ensure the following:

- a. The certified organization has legal ownership of all input material to be included in outsourced processes.
- b. The certified organization has an agreement or contract covering the outsourced process with each contractor through a signed and enforceable agreement with the contractor. The certified organisation shall ensure that its certification body has access to the outsourcing contractor or operation if an audit is deemed necessary, including all necessary documentation. If this is not possible, the outsourced contractor shall obtain a Bonsucro ChoC certificate independently.
- c. The organization has a documented control system with explicit procedures for the outsourced process which is communicated to the relevant contractor and compliance is monitored.
- d. The organization shall record the names and contact details of all contractors used for the processing or physical handling of Bonsucro certified products. An up to date record shall be made available to the organizations certification body at its next audit.

Indicator 1.1.8: Accuracy of measuring equipment

The organization shall maintain the accuracy of any measuring equipment used. Calibration shall be carried out at least annually.

Principle 2: Validating and reconciling Bonsucro data

Criterion 2.1 The organization shall validate and document Bonsucro data

Indicator 2.1.1: Verification of Bonsucro status of the supplier

The receiving organization shall verify the current Bonsucro status of the supplier at the time of the purchase.

Indicator 2.1.2: Verification of data of the incoming Bonsucro certified product

In case of mass balance, the receiving organization shall verify that the supplier contract, invoice and/or supporting documentation, including associated sustainability characteristics of Bonsucro certified products meet the following requirements:

- Description of the raw material of Bonsucro compliant product (sugarcane or sugarcane residues or wastes).
- The mass (kg or tonnes) or volume (litres or m3).
- Specification of sugar (sugar content in % sucrose), molasses for fermentation (% Brix), or specification of ethanol (alcohol content in % v/v) or for any other derived products the appropriate measure of purity.
- Evidence showing compliance with the Bonsucro Production Standard.
- Buyer and seller contact information.

The data shall be entered into the receiving organization's administrative system within one month of taking ownership.

Indicator 2.1.3: Conversion rates

A conversion rate describes the change in quantity of a specific material that occurs due to processing of the respective material at a specific site. Conversion rates and the resulting changes of quantities shall be site-specific and product-specific. Conversion rates shall be based on actual data (e.g. processing or production data). The output weight or volume after conversion shall be expressed as 100% sucrose, % Brix or ethanol equivalents.

Conversion ratios used shall be documented and are subject to verification during the audit.

Conversion rates shall be provided by all the elements of the chain of custody each time such a change in quantity occurs.

In the case of multisite certificates, the designated Central Office shall keep records of conversion ratios realized at each site included in the multisite certificate and for all products processed on those sites.

Indicator 2.1.4: Mixing of Bonsucro certified products with products fungible with sugarcane-derived products

In every case where a batch of Bonsucro certified product was mixed with other products which are fungible with sugarcane-derived products, the Bonsucro data may be allocated to any physical consignment taken from that batch, provided that input and output of Bonsucro data match (no overclaiming of Bonsucro data).

Indicator 2.1.5: Supply of Bonsucro certified product

The organization shall provide that the delivery contract, invoice and/or supporting documentation, including associated sustainability characteristics of Bonsucro certified products meet the following requirements:

- Description of the raw material of Bonsucro compliant product (sugarcane or sugarcane residues or wastes).
- The mass (kg or tonnes) or volume (litres or m³).
- Specification of product purity (sucrose content % in sugar), molasses for fermentation (% Brix), or specification of ethanol (alcohol content in % v/v) or for any other derived products the appropriate measure of purity.
- Evidence showing compliance with the Bonsucro Production Standard.
- Buyer and seller contact information.

The sale data shall be entered into the organization's administrative system within one month of terminating ownership.

Indicator 2.1.6: Inventory periods

The organization shall undertake inventories of the input/output balance of the Bonsucro certified product at fixed regular intervals, for each operation site,

with the intervals not exceeding three months. The inventory shall include checking the mass balance stock-keeping and the credit mass balance stock-keeping (if any), taking into consideration relevant conversion rates.

Fixed inventory periods shall be continuous in time, i.e. gaps between inventory periods shall not occur. During any periods without movement of Bonsucro certified material mass balances shall be kept.

The inventory periods for the certification period shall be clearly documented at the beginning of the certification term by the organization and shall be verified during the audit. For each inventory period a mass balance calculation including sustainability data transfer to the next period (carry over) must be documented and provided during the audit.

The inventory shall be undertaken at the level of the unit of certification (i.e. a single site, a multi-site or a group).

Indicator 2.1.7: Balancing Bonsucro volumes during and between inventory periods

The volume of Bonsucro certified product received shall be greater than or equal to the volume of Bonsucro certified product supplied to clients over a fixed inventory period of maximum three months.

Where the balance of inputs and outputs is positive at the end of organization's inventory period, sustainability data for the positive balance may be carried into the next inventory period. This is called carry over.

Indicator 2.1.8. Expiration of Bonsucro sustainability data

Sustainability data entered into an organization's mass balance system shall no longer be attached to outgoing consignments after three (3) years from the date of entry into the system. Carryover shall be adjusted downward to reflect any expiring date of the material.

If the organization's ChoC certificate is no longer valid, all remaining sustainability data in the organization's administrative system becomes invalid.