



Leading Harvest Traceability Standard

Introduction

What the Leading Harvest Traceability Standard Does

The Leading Harvest Traceability Standard describes management system requirements for organizations that intend to make claims regarding Leading Harvest certified goods and/or document origin of goods. Conformance to the Leading Harvest Traceability Standard requires awareness and appropriate use of best management practices to advance sustainable agriculture.

What Is Addressed by the Leading Harvest Traceability Standard?

The Leading Harvest Traceability Standard applies to any organization that intends to purchase goods originating from a Leading Harvest certified farm and make claims related to the certification. The use of Leading Harvest trademarks and other types of claims are elaborated on in the Leading Harvest Claims Guidelines.

Identifying and managing Critical Control Points (CCPs) are essential in a traceability management system and is a focal point of this standard. Traceability Standard Users may be several supply chain steps away from the originating farm(s), thus complicating the management of how goods are traced.

Geographic Application of the Leading Harvest Traceability Standard

This standard is applicable worldwide through membership with Leading Harvest.

Impact of Scope and Scale Under the Leading Harvest Traceability Standard

The Leading Harvest Traceability Standard can be applied to organizations of any size. All Traceability Standard Users are held to the same standard, but the expectation of evidence of conformance may vary with the scope (i.e., types of goods, number of supply chain steps from farm, traceability model, etc.) and scale of the Traceability Standard User. These parameters influence the risk of error in documenting accurate traceability. Traceability Standard Users managing inputs from many different suppliers and having aggregators, processors, and distributors between them and supplying farms may need a greater level of conformance evidence than those managing inputs from one supplying farm that they purchase directly from.

References

This standard incorporates, by dated or undated reference, provisions from other publications. For dated and undated references, the latest edition of the publication applies.

Normative References

- Leading Harvest Farmland Management Standard
- Leading Harvest Claims Guidelines
- Leading Harvest Certification Body Administration
- Leading Harvest Standards Management
- Leading Harvest Standard Interpretations

Informative References

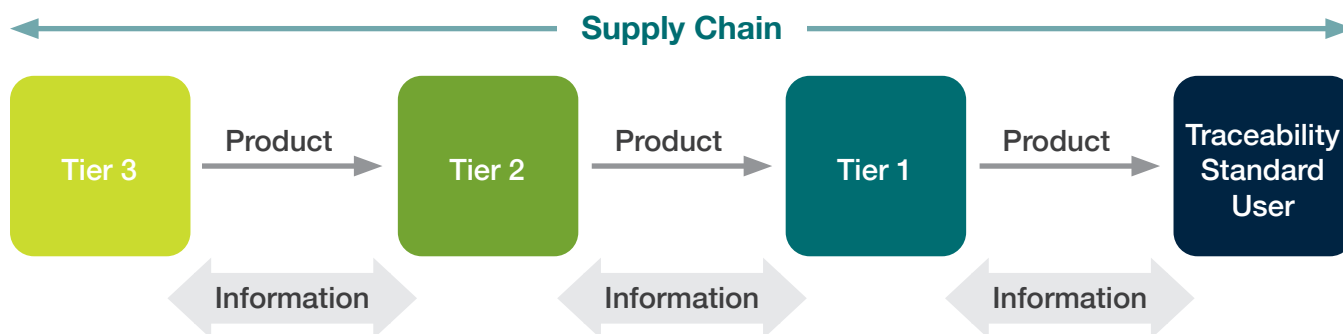
- ISO 22005:2007 Traceability in the feed and food chain — General principles and basic requirements for system design and implementation.
- ISO 14001:2015 Environmental Management Systems — Specification with guidance for use.
- ISO/IEC 17021-1:2015 Conformity assessment — Requirements for bodies providing audit and certification of management systems.

Traceability

Traceability describes the ability to identify and trace the origin, processing history, distribution and location of products and materials (“goods”) through supply chains. Traceability includes all the requirements needed to physically trace goods in the supply chain as well as the ability to tell what goods are made of and what the process was to make them.

This Leading Harvest Traceability Standard is an essential component of a management system designed to track Leading Harvest certified goods and related data to ensure transparency in the supply chain.

Traceability Standard Users must integrate management system practices that include collecting information about suppliers, manufacturing and acquisition dates, batch registration and other details related to the origin of the products.



To implement the Leading Harvest Traceability Standard in a management system, the following criteria must be met:

1. Critical Control Points (CCPs)

In this standard, a Critical Control Point (CCP) refers to a specific step or stage in the supply chain where a control measure must be applied to prevent, eliminate, or significantly reduce potential risks of traceability errors. Examples of CCPs include (but are not limited to) processing, packaging, labeling, distribution, and repackaging.

Traceability Standard Users shall:

- 1.1 Identify all Critical Control Points (CCPs) in its supply chain.
- 1.2 Identify and evaluate associated risks for each CCP.
- 1.3 Define critical limit values. These limits are specific values that indicate when a stage is under control or out of control and therefore represents an increased risk.
- 1.4 Develop and implement a monitoring procedure for each CCP, including monitoring frequency and techniques.
- 1.5 Develop and implement a corrective action procedure to address possible scenarios where a CCP is outside critical limits. This procedure shall include timely control and mitigation actions, cause analysis and corrective actions.

2. Volume Tracking and Accounting

Traceability Standard Users shall monitor the measurement and recording of quantity or volume of relevant goods as they move through the supply chain.

- 2.1 **Measuring quantity or volume:** Goods shall be measured at various points in the supply chain, such as during harvesting, packaging, transportation, processing and distribution. The measurement unit may be whichever best suits the goods, such as kilograms, tons, liters or number of items.
- 2.2 **Record of data:** All relevant data related to the quantity or volume of goods shall be recorded at each stage. This may include information on the type of goods, batch number, location, date and time of measurement, or any additional information such as traceability codes or identifiers.
- 2.3 **Attributes of the goods:** The defining attributes or special characteristics of the goods shall also be tracked and recorded as part of the traceability system, if relevant to the goods being traced. This may include information such as moisture content, dry matter, sugar content, acidity or other indicators relevant to the product.
- 2.4 **Accounting:** To reduce the risk of multiple Traceability Standard Users making claims about the same certified goods (i.e., double counting), Traceability Standard Users shall have documentation to support the quantity or volume traced is available from the farm(s) certified to the Leading Harvest Farmland Management Standard and has not already been claimed by a different Traceability Standard User.

3. Documentation and Records

Traceability Standard Users shall establish and maintain documents and procedures regarding relevant requirements according to this standard. At a minimum, this shall include:

- 3.1 Detailed description of the company's production or materials flow.
- 3.2 Procedures related to traceability, including responsible personnel.
- 3.3 Data security and accessibility.

4. Management Review and Continual Improvement

- 4.1 Traceability Standard Users shall establish and implement a management review system to examine findings and progress in implementing the traceability program, make appropriate improvements, and inform relevant personnel of changes.

5. Monitoring (Traceback Procedure)

Traceback of a product shall be conducted to confirm the origin of the certified goods to the desired level of the Traceability Standard User. Therefore, the Traceability Standard User shall develop a traceback procedure in order to identify and document the origin of a product within the supply chain. The procedure shall include the following, at minimum:

- 5.1 Description of the traceability system to be used (QR Codes, RFID tags, tracking system software, manual register, etc.).
- 5.2 Records to be maintained regarding the goods including suppliers, location, date and times, and other relevant data.
- 5.3 Description of how traceback exercises are conducted and documented, and findings recorded and addressed:
 - 5.3.1 Traceback exercises shall be conducted using information obtained from the traceability system.
 - 5.3.2 Root cause analysis and implementation of corrective actions in response to findings in the traceback exercises.
- 5.4 The traceback procedure shall be reviewed and updated at least annually to improve the accuracy and efficiency of traceability in the supply chain and allow continuous improvement of the system.

6. Traceability Models

Traceability Standard Users shall implement one of two traceability models: Segregation or Mass Balance. The traceability model shall allow the Traceability Standard User to trace back its certified goods to a Leading Harvest certificate holder (i.e., a Farmland Management Standard or Traceability Standard certified entity).

6.1 Segregation

Product segregation refers to the process of physically separating certified materials from non-certified materials throughout the entire supply chain.

- 6.1.1 The Traceability Standard User shall develop and document a segregation procedure that includes the following, at minimum:
 - 6.1.1.1 Defined criteria for physically segregating Leading Harvest certified goods from non-certified goods, such as separate designated storage areas to prevent contamination with non-certified goods.
 - 6.1.1.2 Clearly identifying all Leading Harvest certified goods to distinguish them from other non-certified goods, using color-coding, tags, or other systems.
 - 6.1.1.3 Records for each batch or shipment of goods, including when and where the shipment was received, who was responsible for handling it and where it was stored.
 - 6.1.1.4 Record-keeping of purchases relevant to certified goods, such as invoices, certificates and any other documentation regarding the goods relevant to traceability.
 - 6.1.1.5 Periodic monitoring and evaluation of its procedure and its effectiveness to ensure conformance and an action procedure to correct any discrepancies.

- 6.1.2 The Traceability Standard User shall ensure its supply chain actors (suppliers, manufacturers, etc.) who supply Leading Harvest certified goods have implemented procedures that meet the above requirements.
- 6.1.3 The Traceability Standard User shall implement a risk-based monitoring and evaluation system of its suppliers (example: conducting onsite inspections of suppliers).

6.2 Mass Balance

Mass balance is a model that allows the physical mixing of Leading Harvest certified goods and non-certified goods through an accounting system.

- 6.2.1 The Traceability Standard User shall develop and document a mass balance procedure that includes the following, at minimum:
 - 6.2.1.1 Defined boundaries of the system, including input and output points and all processes for which the model will be applied.
 - 6.2.1.2 Identification of all Leading Harvest certified goods included in the mass balance accounting system.
 - 6.2.1.3 Inputs: quantities and characteristics of the goods that enter the system (volume, weight, concentration, etc.).
 - 6.2.1.4 Outputs: quantities and characteristics of the goods that exit the system (product, byproduct, wastes, etc.).
 - 6.2.1.5 Internal processes, such as transformations, processing, mixing, etc.
 - 6.2.1.6 Determine conversion factors to be used: CERTIFIED OUTPUT/CERTIFIED INPUT.
 - 6.2.1.7 Calculate the mass balance: $\text{INPUT} - (\text{OUTPUT} + \text{LOSSES})$.
- 6.2.2 The Traceability Standard User shall ensure its supply chain actors (suppliers, manufacturers, etc.) who supply Leading Harvest goods have implemented procedures that meet the above requirements.
- 6.2.3 The Traceability Standard User shall implement a risk-based monitoring and evaluation system of its suppliers (example: conducting reviews of supplier volume accounting systems).

7. Training and Competence

- 7.1 Traceability Standard Users shall determine the necessary knowledge and/or skills of the personnel who will be responsible for the traceability management system.
- 7.2 Competency qualifications shall be detailed in the profile of the position.
- 7.3 All personnel with responsibilities in the traceability management system shall be appropriately trained to match their respective job duties.



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