

**ETHIOPIAN
STANDARD**

ES 6794:2021

First edition
xx-xx-2021

Traceability for Fresh Fruits and Vegetables Implementation Guide

ICS: 67.200.10
Published by Ethiopian Standards Agency
©ESA/ISO



FOREWORD

This Ethiopian Standard has been prepared under the direction of the Technical committee for fruit and Vegetable (TC-13) and published by Ethiopian Standard Agency (ESA).

The standard has been developed to address observed needs and to support the local industry in order to make progress through upraising competitiveness and maintain comparative market advantage both domestically and internationally.

In the preparation of this standard reference has been made to the following:

- Food and agriculture organization of the united nation, 2017 , ISBN 978-92-5-109876-9

Traceability for Fresh Fruits and Vegetables Implementation Guide

1 Scope

The scope of this Guidance document establishes both the minimum requirements and the best practices for the sharing of information between trading partners. This guide covers

- Traceability practices from the supplier's processing facility to the point of sale to the consumer;
- Applies to fresh fruit and vegetables for human consumption.
- Traceability practices from grower to retail store or foodservice operator (i.e. external traceability).
- Applies to all levels of product and shipping containers, including pallets, cases and consumer items.
- All supply chain segments including, suppliers, wholesalers, distributors, and retailers.

2 Normative References

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

3 Terms and definitions

3.1

traceability

Traceability is a business process that enables trading partners to follow products as they move from the field to retail store or food service operator. Each Traceability Partner must be able to identify the direct source (supplier) and direct recipient (customer) of the product. Traceability as a business process can be utilized for a variety of business purposes, including:

- Product Recalls/Market Withdrawals;
 - Regulatory Compliance;
 - Public Health Trace-backs;
 - Food Safety and Quality Assurance; and
 - Process and Order Management.
-
- External Traceability is the business processes that occur between trading partners and the information/data exchanged to execute traceability.
 - Internal Traceability is the proprietary data and business processes a company uses within its own span of operations to execute traceability.

3.2

product Recall

is defined as the action to remove food from the market at any stage of the food chain, including that possessed by consumers. For the purposes of these Regulations, recall refers to food safety and food quality-based recalls.

3.3

GS1 Traceability Standard

GS1 standards are the common language of business and provide the framework required to support the traceability (business) process. This industry best practice implementation guideline is based on the GS1 Global Traceability Standard (GTS). Developed by industry, the standard defines the globally-accepted method for uniquely identifying:

- Trading parties (your suppliers, your own company, your customers, 3rd party carriers)
- Trading locations (can be any physical location such as a warehouse, packing line, storage facility, receiving dock or store).
- The products your company uses or creates
- The logistics units your company receives or ships
- Inbound and outbound shipments

The GS1 Global Traceability Standard also defines the essential pieces of information that have to be collected, recorded and shared to ensure one step up, one step down traceability. The standard is applicable to companies of all size and geography. While the GS1 Global Traceability Standard may be implemented independently from any specific technology, best business practices require adoption of bar coding on cases and/or pallets. Businesses are further encouraged to adopt electronic messaging to exchange essential business information. These technologies will be explored in the sections that follow.

GS1 is a not-for-profit standards organization with member affiliates in every country. Together with local/national produce trade associations they are important resources that are able to help your company understand the most effective way to implement traceability with your trading partners. They can also help your company to connect with technology providers that serve the produce industry. Information on how to obtain a copy of the Global Traceability Standard appears in Appendix A.

3.4

traceability Principles

a company must determine what needs to be traced. This is commonly referred to as the “traceable item.” A traceable item can be:

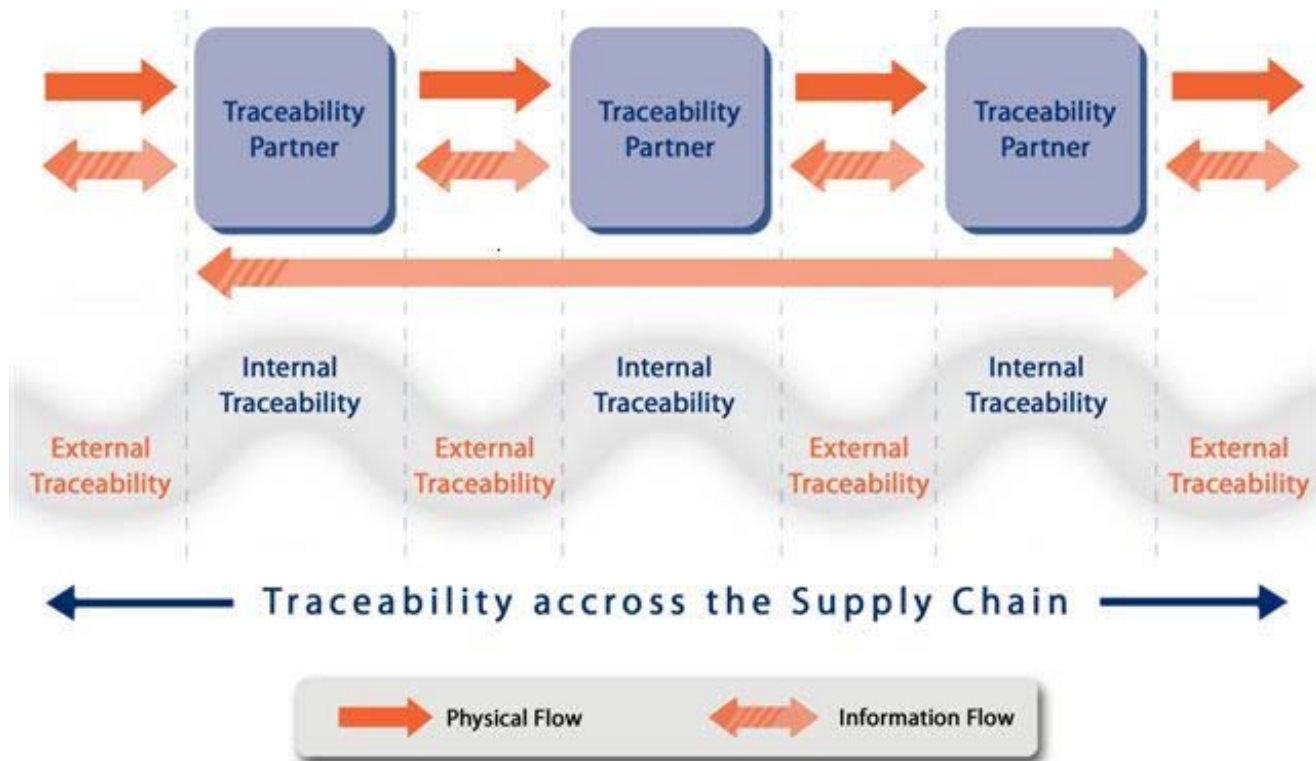
- a product or traded item (e.g. case/carton, consumer item)
- a Logistic Unit (e.g. bin, container)
- a shipment or movement of a product or trade item

There must be agreement between trading partners on what the traceable item is. This ensures that both partners are tracking the same thing. Otherwise the chain will be broken. Each Trading Partner must define at least one level of traceable item for each shipment.

- All traceable items must be uniquely identified and this information is shared between all affected supply chain partners.

- At a minimum, the identification of products for the purpose of traceability requires:
- The assignment of a unique GS1 Global Trade Item Number (GTIN)
- The assignment of a batch / lot.
- When a product is reconfigured and/or re-packed, the new product must be assigned new unique product identification (i.e. GTIN). A linkage must be maintained between the new product and its original inputs.
- When a Logistic Unit is reconfigured, the new Logistic Unit must be assigned a new unique identification (i.e. SSCC). A linkage must be maintained between the new Logistic Unit and its original input.
- All supply chain parties must systematically link the physical flow of products with the flow of information about them. Traceable item identification numbers must be communicated on related business documents.

Figure 1. Traceability across the supply chain



Note: A traceability partner can be a grower, packer/repacked distributor/trader, retail store or food service operator.

- Each Traceability Partner (company) must be able to identify the direct source (supplier) and direct recipient (customer) of traceable items. This is the "one step up, one step down" principle. This requires that supply chain partners collect, record/store and share minimum pieces of information for traceability which are described in the sections which follow.
- All supply chain parties require both internal and external traceability. (Implementation of internal traceability must ensure that the necessary linkages between inputs and outputs are maintained.
- Any asset (e.g. returnable pallet) which needs to be traced forward or traced back must be uniquely identified.
- Labels showing the traceable item identification number must remain on the packaging until the

traceable item is consumed or destroyed (by the next trading partner). This principle applies even when the traceable item is part of a larger packaging hierarchy.

Point of Sale (POS)-

It is the place where a retail transaction is completed. It is the point at which a customer makes a payment to the merchant in exchange for goods.

The “Farm Book”

is a simple notebook (e.g. a copybook) wherein a grower records cultural practices, plant protection treatments and additional information that may be considered of importance in relation to crop management.

3.5

recall preparedness

Any trading party may initiate a trace or recall request. Efficient trace or recall requests require that the suspect items are identified using their unique identification numbers.

To ensure preparedness in the event of an incident, every company should have a traceability team in place and practice/simulate recalls to test the traceability system in place.

Draft Food Traceability and Recall Legislation Recommendations, developed under a project (TCP/SLC/3403) funded by the Food and Agriculture Organization (FAO)– “Strengthening capacity for a rapid response to food safety events through enhancement of the food traceability and recall legislation and systems in the Caribbean Sub region”, 2014 – 2016.

2 Draft Food Traceability and Recall Legislation Recommendations, developed under a project (TCP/SLC/3403) funded by the Food and Agriculture Organization (FAO)– “Strengthening capacity for a rapid response to food safety events through enhancement of the food traceability and recall legislation and systems in the Caribbean Sub region”, 2014 – 2016..

3.6

business identification

Organizations (Companies or Persons) need to use a Food Business Identification number to identify the business they manage and then share that number with suppliers and customers.

The Food Business Identification number (BID) provides a uniform means of identifying a food business that is registered with the Competent Authority in a country. The BID is allocated by the Ministry of Agriculture, the Ministry of Health or any other designated government agency which maintains the National Business Registry for Food business operators.

Individual BIDs can be assigned to represent the organization as well as any individual trading subsidiaries.

3.7

trade item identification

A Trade Item is any product or service for which there is a need to retrieve pre-defined information and that may be priced, or ordered, or invoiced at any point in any supply chain.

Trade Item Identification is allocated by the creator of the product or service. The content, syntax, and format of the Trade Item Identification typically vary from one company to another, depending on company practice and the

precision desired. For example, the Trade Item Identification may be the Commodity/Product name or the Commodity/Product name plus the BID, and/or a Product Code or GTIN³ (If product goes to Retail POS).

3.8

batch/lot numbers and serial numbers

Lot or Batch Number means a reference number assigned by a food business operator to a series of similar goods, or goods produced under similar conditions. For crops, the lot number is the crop harvesting date, as decided when the crop/harvest starts. Lot and batch are defined/used synonymously and interchangeably.

All suppliers should assign Batch/Lot Numbers or Serial Numbers to case-level products they create. The content, syntax, and format of the batch or lot number itself typically varies from one company to another, depending on company practice and the precision desired. For example, a lot can represent all products produced in a day at one facility or the product produced in one hour from an individual packing line or it could represent a unique recipe run. In addition to the Batch/Lot Number, some suppliers also assign a unique Serial Number to each case and record the beginning and ending case Serial Numbers for each batch or lot.

It is important to remember that the range of products assigned to a single Batch/Lot Number also defines the minimum amount of product that may need to be removed from the supply chain in the event of a recall. This needs to be considered when defining your company's standard practice for setting the scope of each Batch/Lot Number for each type of product that is produced.

³ GTIN: Global Trade Item Number. Standardized number allocated by GS1 to identify a product

Serial Numbers can be assigned to each case or pallet at the time of packing by the supplier. The format of the Serial Number may include a code representing the production facility and production date and time follow. Suppliers that use a case Serial Number for product tracking in place of a Batch/Lot Number must manage the Serial Number in a way that it affords a similar level of traceability as would be provided by a Batch/Lot Number.

3.9

product labels

Product labels are elements that physically identify traceable items, such as a tag, a sticker, or printing on product packaging that provides information about the product inside. Usually they are attached to the packing of every packed product but also can be printed or affixed. Normally product labels include the following information:

Business Identification Number (BID)

Product Identification or Description

Batch number

Additional information (best before date, harvesting date, weight, quantity, price)

Bar code (if required by customer)

3.10

record keeping

It is the act of creating a permanent piece of information constituting an account of something that has occurred. Normally, records are relevant traceability information that link final products (outputs) with ingredients, raw material and packaging material through their batch numbers. The information may be recorded using:

Paper

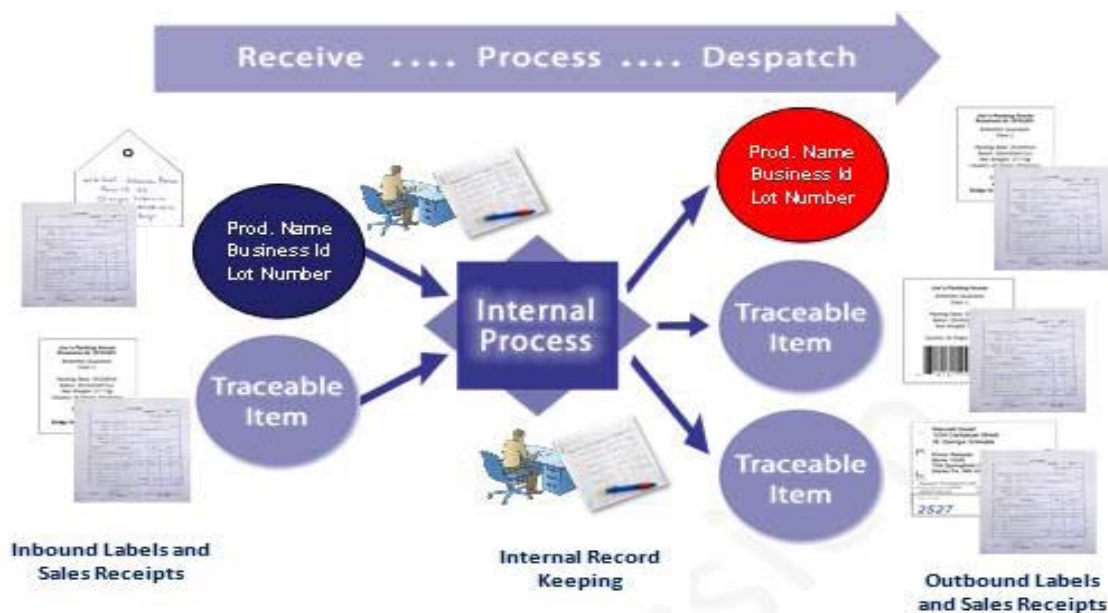
Pre-printed paper forms (examples in the last section of this document)

Copybooks or Farm books

Excel sheets

Software (Management software, ERP, Traceability software)

Figure 2. Traceability elements in the traceability flow



Records should be maintained and readily available regarding the production and distribution of food, and food ingredients to facilitate prompt traceback to the immediate previous source and trace forward to the next subsequent recipients if a known or probable adverse effect on consumer health is identified. Also, they should be used for timely and effective withdrawal or recall of products if known or probable adverse effects on consumer health are identified.

4 Traceability system requirements

Implementing a traceability system within a supply chain requires that all parties involved will link the physical flow of products with the flow of information about those products. Adopting regulations and industry standards for traceability processes ensures agreement about identification of the traceable items. This supports the visibility and continuity of information across the supply chain.

The following are the minimum requirements that should be implemented to build a Traceability System.

4.1 Identification of food business operator

At the time of application for registration of the food business for domestic or imported food, in accordance with the Food Safety Act, the food business operator shall include the following information relevant to traceability, in addition to other application requirements as may be prescribed:

- a) the name of the Fruit and vegetable business operator and contact information;
- b) the business identification and registration details;
- c) the name and contact details of the person responsible for traceability;
- d) the address and telephone numbers of all locations registered under the business;
- e) shelf-life of the produce;

- f) conservation and storage methods for the product;
- g) Country of origin, in the case of imported Fruit And vegetables;
- h) manufacturer or exporter company in the case of imported the Fruit and vegetable;
- i) the Fruit and vegetable business operator's food traceability management plan.

At the time of registration, the Competent Authority shall assign the food business operator with a food business identification number (BID) that is used for the purposes of traceability.

Any food business operator shall:

- a) keep records for identifying any party that has supplied the food business operator, or to whom the food business operator supplies, a food or any substance intended to be incorporated into a food.
- b) shall submit the identity and contact information of the traceability contact point for such food business to the Competent Authority upon request.

4.2 Identification and labeling

4.2.1 Identification

Food business operators must determine what needs to be traced. This is commonly referred to as the “traceable item.” A traceable item can be:

- a) a packaged product or traded item (e.g. case/carton, consumer item)
- b) a logistic unit (e.g. bin, container)
- c) a shipment or movement of a product or trade item

There should be an agreement between trading partners on what the traceable item is. This ensures that both partners are tracking the same thing. Otherwise the chain is broken. Each trading partner should define at least one level of traceable item for each shipment.

A food business operator assigns an identification and batch or lot number to a specific range of traceable items and this is the smallest traceable unit that can be recalled. Where a food business operator uses a serial number in the package for product tracking in place of a batch or lot number, the food business operator must manage the serial number in such a way that it affords a similar level of traceability as would be provided by a batch/lot number.

When a product is reconfigured and/ or re-packed, the new product must be assigned a new unique product identifier. A linkage should be maintained between the new product and its original inputs. A supplier and purchaser shall ensure the chain of custody of a traceable item and link the flow of a traceable item to the flow of information on such item, and record prescribed information on related business documents, including sales receipts.

4.3 Labeling

All food business operators must systematically link the physical flow of products with the flow of information about those products. Traceable item identification should be communicated on related business documents and/or labels.

All traceable items must bear a label attached to the packaging with the following information in its most current, accurate and easily readable form:

- a) food business identification number (BID) and the name of the brand owner;
- b) description of the type of item by brand name (if applicable) and by specific variety (e.g. brand x cheddar cheese,

not just cheese; romaine lettuce, not just lettuce);

c) product manufacturer, producer or processor;

d) batch/lot number;

e) code for date marking, as required by relevant legislation (e.g. best before, harvest, packing, manufactured or expiry); and

f) quantity.

A food business operator shall label food products at the time of packaging and shall temporarily label stored goods with a batch or lot number

Labels showing the traceable item identification number must remain on the packaging until the traceable item is consumed or destroyed (by the next trading partner). This principle applies even when the traceable item is part of a larger packaging hierarchy.

4.4 Record keeping:

A food business operator shall collect and maintain the required traceable item information and a copy of the sales receipt for each incoming and outgoing transaction.

A sales receipt or other documentation involving the sale or transfer of a traceable item shall include the following information:

a) the name and contact information of the supplier, or the customer or trading partner, including food business identification number;

b) a description of the traceable item, including the brand name where applicable, and the specific variety or type of food;

c) the batch or lot number or other specific identifier of the traceable item, including the date of harvesting or the standard bar code for products destined for a retail customer;

d) quantity and packaging information;

e) price by unit or weight;

f) the date of the transaction;

g) address of origin from where the traceable item was delivered for incoming transactions or address of destination to where the traceable item will be delivered for outgoing transactions;

h) the name and contact information of the transporter; and

i) any other information deemed appropriate by the Competent Authority.

A food business operator shall keep records collected and maintained at a registered location or at another readily available location and shall make the records available to the Competent Authority within the time limit prescribed by the Competent Authority.

Records are maintained by the food business operator for a period of [twenty-four (24)] months after the expiration of the shelf-life of the traceable item.

Chain of custody

A food business operator shall differentiate between Point of Sale traceability items and non-Point of Sale traceability items for the purposes of recall and labeling.

A supplier and purchaser shall ensure the chain of custody of a traceable item and link the flow of a traceable item to the flow of information on such item, and record prescribed information on related business documents, including

sales receipts.

The traceability system shall:

- a) enable the identification of product through a Product ID, its Batch/lot number and their relation to identification and Batch/lot numbers of ingredients, raw materials and packaging in direct contact with food or packaging intended or expected to be in direct contact with food.
- b) have the ability to trace back from the customer through all stages of processing to the supplier of ingredients, raw material and primary packaging materials, including transportation.
- c) have the ability to trace forward from the suppliers of ingredients, raw material and primary packaging materials through all stages of processing to the customer, including transportation.

4.5 Recall and withdrawal

4.5.1 Recall strategy

A recall strategy should contain at least the following elements:

- a) depth of recall, which may extend to the consumer level, the retail level, or the wholesale level;
- b) the contents of public notifications to be issued depending on the classification and severity of the grounds for which a recall is issued;
- c) during urgent situations, public warning that is given nationwide or to affected geographical areas;
- d) effectiveness check level, which includes the method to be used for and depth recall effectiveness checks; and
- e) the disposal of recalled products.

A recall strategy should take into account at least the following factors:

- a) the health hazard evaluation;
- b) the type or use of the product;
- c) the ease in identifying the product;
- d) the degree to which the product's deficiency is obvious to the consumer or user;
- e) the amount of product remaining unused in the marketplace;
- f) the distribution pattern; and
- g) the continued availability of essential products.

The recall strategy would contain interim procedures to be put into effect in the period between the notification of a known or potential health hazard and a formal response to the hazard. The interim procedures would include the actions to be taken to ensure prompt warning regarding the extent of the recall. Warnings issued under this section shall identify the hazards involved and the steps to be taken to minimize exposure to the product hazard pending implementation of the full recall strategy.

4.6 Recall classification system

The Competent Authority would be responsible for establishing a recall classification system, to be used in either a recall initiated by the food business operator or a recall initiated by the Competent Authority⁶.

The recall classification system would specify the actions and timeframes to be undertaken depending on the type of non-compliance of the traceable item with these regulations. The recall classification system would establish fast-track procedures for food products that may pose risks to food safety.

The recall strategy would take into consideration the recall classification applicable to the situation.

4.7 Recall initiated by a food business operator

Where a food business operator has reason to believe that a traceable item which has been imported, produced, processed, manufactured or distributed is not in compliance with the Act, he/she shall immediately take any of the following recall actions specifying the prescribed particulars of the traceable product to be recalled:

- a) develop a recall strategy that meets the requirements in Section 4.6.1;
- b) stop the distribution of the product;
- c) withdraw the product from the market;
- d) notify the public, trading partners and consignees of a recall as prescribed;
- e) effectively and accurately inform the consumers of the reason for the recall and, if necessary, recall from consumers the products that have already supplied to them (when other measures are not sufficient to guarantee food safety) following the procedures established by the Competent Authority;
- f) issue a press release if so directed by the Competent Authority; and
- g) abide by other recall requirements as may be established by the Competent Authority.

2. The food business operator may request an informal discussion or hearing with the Competent Authority to discuss the recall actions to be taken, and shall provide the Competent Authority with the recall strategy and prescribed documentation.

4.8 Recall initiated by the competent authority

The Competent Authority could develop a recall strategy in accordance with the requirements presented in the Recall Strategy (see 5.2.5.1).

Where the Competent Authority determines, based on information gathered, that there is a reasonable probability that a food is not in compliance with the Act or with relevant food standards and the use of or exposure to such food could cause adverse health consequences, the Competent Authority would:

- a) provide a written recall order that includes a recall event number to the responsible food business operator, requiring a recall action to be taken within the period specified in the notice; or
- b) where the food business operator does not comply with the recall order within the specified period and in the manner prescribed by the Competent Authority, or where the food business operator is unable to conduct a recall for any reason, initiate recall actions.

Where the time frame for carrying out a recall order allows, the Competent Authority would provide the food business operator subject to a recall order with an opportunity for an informal hearing, addressing the actions required by the order and the grounds for such action.

The Competent Authority, when necessary, would develop an interim recall strategy to cover the time between notification of a known or potential health hazard and completion of a final formal strategy. The interim recall strategy would indicate the immediate actions to be taken by the responsible food business operator.

The Competent Authority would notify appropriate local authorities of recall actions that may be pertinent to a specific district or area. Where the local authorities request assistance, the Competent Authority would respond and assist in conducting or auditing the recall action.

Where the Competent Authority determines, after providing opportunity for an informal hearing under subsection (4) of this section that the removal of the traceable item from the market is necessary, the Competent Authority would, either:

- a) specify a timetable in which the recall shall occur, and shall amend the order to require recall of such traceable item or other appropriate action where required, and shall require periodic reports to the Competent Authority describing the progress of the recall and provide notice to consumers to whom such food product was, or may have been distributed; or
- b) revoke the order, where the food business operator shows evidence that adequate grounds do not exist to continue the actions required by the recall order, or that the traceable item complies with the requirements of these Regulations.

The food business operator would bear the costs of a recall initiated by the Competent Authority and be responsible for disposal of a recalled product.

4.9 Recall responsibilities and procedures involving an importer

Where an importer has reason to believe that a food item which he or she has imported is not in compliance with these Regulations, or receives a recall order from the Competent Authority, the food importer would:

- a) adapt the strategy to the situation
- b) immediately develop and implement a recall strategy based on the requirements of the Regulations, and, when appropriate, extend the recall to its consignees;
- c) provide the consignees with information necessary to make it possible to locate the product in its distribution system;
- d) inform the Competent Authority of where and how far into the supply chain the food has gone and whether any of the targeted product has reached consumers, and
- e) notify the public, trading partners and consignees of a recall, as prescribed.

Where a recall order involves an imported food, the Competent Authority would inform the relevant food safety authority in the country of origin of the particulars involving the recall order.

Termination of recall order

The Competent Authority would terminate a recall order when the Competent Authority determines that the recall activity has been completed, or is satisfied that the food business operator has brought the food in compliance with the Act and its Regulations, or has disposed of the food in the prescribed manner where required.

Once the Competent Authority terminates the recall order, the Competent Authority would notify the affected food business operator by letter and email that the Competent Authority considers the recall order terminated.

4.10 Implementation guide line for growers

This section is intended for Growers who are not packing the product (i.e. their only role is that of a primary producer).

Examples of Growers are: Produce Farmers

How to identify the farm

Growers need to use the Business Identification (BID) to identify the farms they manage (also called Farm ID). The BID can be used to uniquely identify a single Farm and its premises. The BID is allocated by the Ministry of Agriculture or any other designated government agency which maintains the National Farm Registry.

What additional farm information is required?

It is recommended to the Growers to identify all the plots in every farm they manage and if possible, all the crops in every plot. This shall give the opportunity to identify all the agricultural inputs used in every plot and crop. If all the crops are mixed in one plot (thus impossible to differentiate them), then it is assumed that all inputs used for one crop are used for all the other crops in the same plot. In the same sense, if it is not possible to differentiate the plots in a Farm, then it is assumed that all the inputs used for one plot are used in the whole Farm.

Capturing production inputs

To enable traceability, growers must maintain records of essential information related to the production of the product (e.g. agricultural inputs used, including date of application).

Information that must be recorded when buying or receiving, and retained Each time a grower buys or receives a product that may be applied to the crop it is required to retain a copy of the Sales Receipt given by the supplier. The Sales Receipt copy should at least include the following information:

- Supplier/Seller name

- Supplier/Seller contact information,

- Supplier BID Customer name,

- Customer BID

- Product Description (Brand name if applicable, including variety)

- Lot number or other batch identifier of the good

- Quantity and packaging information

- Purchasing or receiving date

- Address from where the good was purchased/delivered

- Name and contact information of the transporter

- Any other information deemed appropriate by the Competent Authority

It is recommended for growers to also include the following information:

- Sales Receipt number

- Product identification number (if available)

- Name and signature of person who received the product

- Name and signature of person who dispatched the product

- Identification of trade items and grower information

Each Trade Item destined for a subsequent trading partner (i.e. packing facility, retailer facility) must be identified. Examples of Trade Items include bags, cartons, bins, totes, containers, trailers (normally the container the Grower uses to transport the product). To assist customers with their subsequent traceability, growers shall attach a tag/label to their Trade Items, in human-readable format (could be handwritten), with all relevant grower/harvest information. Products are labeled at the time of packaging or distribution.

Identification of batches/lots Growers must assign a batch/lot number to the products they harvest. The batch/lot number itself depends on the grower's criteria.

Minimum information that must appear on the Trade Item label Each Trade Item shall provide at least the following data in human-readable format:

- Grower's name

BID (Farm BID)

Commodity name and, where applicable, variety name

Lot number (use of the harvesting date is recommended)

Code for date marking, as required by relevant legislation

Quantity

Traceability information to be recorded

Growers shall record (on paper or in electronic form) the required information associated with each plot/crop in any farm (BID) that they manage. These records should be organized chronologically by dates. Note: To record the traceability information, the use of a “Farm Book” is recommended. This tool gives the growers control over their farm, providing a method to record chronological information about the production of any crop within a harvesting season. Information that must be recorded when using agricultural inputs

Each time a grower applies or uses a product (agricultural input) in a plot or crop, the following information is recorded.

Farm Name

Farm BID

Plot identification (and crop identification if possible)

Date of application

Product Description (Brand name if applicable, including variety)

Lot number or other batch identifier of the good

Supplier BID

Quantity applied

Information that must be recorded and retained when selling

Each time a grower sells a Trade Item to a trading partner, the following data must be recorded in order to ensure that the traceability link is maintained. These represent the minimum data set required to ensure traceability between the grower and their trading partners.

Supplier/Seller name

Supplier/Seller contact information

Supplier BID

Customer name

Customer BID

Product Description (Brand name if applicable, including variety)

Lot number or other batch identifier of the good (i.e. harvesting date)

Quantity and packaging information

Date of transaction

Origin Address: Address from where the good was delivered

Destination Address: Address of receiving location/trading partner

Name and contact information of the transporter

Any other information deemed appropriate by the Competent Authority

4.10.1 Data retention

All companies are expected to maintain / retain records that will facilitate timely and accurate traceability and support any product recalls. Records are retained at a registered location or at another readily available location and made available to the Competent Authority within the time limit prescribed by [rule/order] approved by the Competent Authority. In the absence of a prescribed time, the retention time should be the maximum time by which the produce is consumed plus a safety margin of six months.

4.10.2 Recall and withdrawal

Since the growers do not have the resources to recall/withdraw, it is suggested that the responsibility for recall/withdrawal upstream be placed on the packers and re-packers. As mentioned in the previous section, they only need to have the records on site or at a readily available location in order to be retrieved “as soon as possible” after request by any partner or by the competent authorities on demand.

4.10.3 Business scenario for growers

4.10.3.1 Grower delivers bulk to pack house (supermarket)

4.12.8.1.1 Description of the process:

The farmer grows, harvests, and transports vegetables to the supermarket which, in turn, receives, sorts, grades and packs the vegetables received into the “finished product” configurations. The process begins with the start of a cropping season or growing season. During this period, the farmer is responsible for recording and maintaining information for all the inputs used on the plot (seeds, chemicals, fertilizers, etc.). If the farmer plants mixed crops in the plot, then it is assumed that all the inputs are applied over all the crops in the plot. Once the vegetables are ready for harvest, the farmer is responsible for recording information that will enable batch/lot assignment during the packing process. The farmer is also responsible for providing this information to the supermarket when the product is delivered. All the vegetables that the farmer prepares to deliver to the supermarket should be labeled / tagged with the commodity name/description, product identification number (GTIN if applicable) and batch/lot number which is assigned.

4.12.8.1.2 Description of the traceability process for farmers:

Receiving Inputs When the farmer buys an agricultural input, he must keep and store the “Sales Receipt” (given by the input Supplier. The required traceability information in the Sales Receipt is the following:

Supplier Name,

Business Identification Number and Address

Date -

Product Description

Batch/lot number

Quantity

Farmer name,

address and Business ID Number

Note: If the input Supplier doesn't give a Sales Receipt with all the required information, then the farmer must register the required information using the sample Input Control Form

Farming and Harvesting Process Every day, the farmer records information related to the day's activity based on the. All agricultural inputs applied to each field are recorded. The information to record is as follows:

Farm ID

Campaign/Season

Plot

Crop (Commodity Name)

Input to be applied

Date of Application

Lot number

Quantity

Delivery Process

When the farmer delivers the product, the farmer must issue a sales receipt (one copy given to the supermarket, one copy retained by the farmer). The information to record in the sales receipt is as follows:

Farmer's Name, Business Identification Number and Delivery Address

Product Description

Batch number or Harvesting Date (dd/mm/yy)

Quantity

Receiving facility name, address and Supermarket Business ID Number

4.11 Implementation guideline for packers / re - packers

This section is intended for Packers and Re-packers, where the traceable item may be a Trade Item (packaging product) that goes to Retail Point-of-Sale (POS Trade Item) or a Trade Item (packaging product) that does not go to Retail Point-of-Sale (Non-POS Trade Item). Examples of Packers/Re-packers are:

Agricultural Cooperative

Packing House

Retail Pack House (e.g. Produce, Poultry, etc.)

Retail Store (which re-packs or re-labels)

4.11.1 Identification of the organization

Packers/Re-packers need to use the Business Identification number (BID) to identify the organization they manage and then share that number with suppliers and customers. The BID is allocated by the Ministry of Health or any other designated government agency which maintains the National Business Registry for Food Operators. Individual BIDs can be assigned to represent the organization as well as any individual trading subsidiaries.

4.11.2 Capturing production inputs

To enable traceability, packers/re-packers must maintain records of essential information related to the product they receive (e.g. produce, packaging material, etc.).

4.11.2.1 Information that must be recorded when buying or receiving, and retained

Suppliers deliver their products in bulk using various containers or bags for transport (Trade Items). Common examples of Trade Items include bags, totes, bins and trailers. Each Trade Item must be traceable. For this

reason, each Trade Item should carry a tag or label that shows the information about its content. This information guarantees uniqueness across all growing companies providing the product. Each time a product is received for packing, the following information must accompany the tag or label attached to the Trade Item:

- Supplier's BID (Farm Id)
 - Supplier's name
 - Commodity name and, where applicable, variety name
 - Lot number (typically harvesting date)
 - Code for date marking as required by relevant legislation
- Quantity
 - 5. The Competent Authority would notify appropriate local authorities of recall actions that may be pertinent to a specific district or area. Where the local authorities request assistance, the Competent Authority would respond and assist in conducting or auditing the recall action. 6. Where the Competent Authority determines, after providing opportunity for an informal hearing under subsection (4) of this section that the removal of the traceable item from the market is necessary, the Competent Authority would, either: a) specify a timetable in which the recall shall occur, and shall amend the order to require recall of such traceable item or other appropriate action where required, and shall require periodic reports to the Competent Authority describing the progress of the recall and provide notice to consumers to whom such food product was, or may have been distributed; or b) revoke the order, where the food business operator shows evidence that adequate grounds do not exist to continue the actions required by the recall order, or that the traceable item complies with the requirements of these Regulations. 7. The food business operator would bear the costs of a recall initiated by the Competent Authority and be responsible for disposal of a recalled product

4.11.3 Identification of trade items and packer/re-packer information

- Each time a Trade Item is created and destined for a subsequent trading partner, this must be identified. Examples of Trade Items include trays, bags, cartons, pallets and others. To assist customers with their subsequent traceability, Packers/Re-Packers shall attach to their Trade Items a label, in human-readable format, with all relevant traceability information. Products are labeled at the time of packaging or distribution.
- There are two types of Trade Items that can be created by a Packer/Re-Packer:
- POS Trade Items: Trade items that go to Retail Point of Sale (POS). Normally Consumer Units.
- Non-POS Trade Items: Trade items that never go to Retail Point of Sale (POS). Normally industrial products, logistic units, bulk products and others.

4.11.3.1 Identification of production batches/lots

- All packers/re-packers must assign a batch/lot number to products they create. The batch/lot number itself can vary from one organization to another, depending on the precision desired. For example, a batch/lot number can represent a day's packing or the product packed from an individual packing line. Packer/re-packer batch/lot numbers must be internally linked to the original grower/harvest information.
- It is important to remember that the batch/lot number relates to the scope of products that may be implicated in a recall and this needs to be considered during assignment.

4.11.3.2 How to identify non-POS trade items

- For packer and repacked, out bound trade item are typically back cases or container. To identify the Non-

POS Trade Items the use of at least business ID (BID), the commodity name and the associated production batch/lot number is required.

4.11.3.2.1 Guidelines for labeling Non-POS Trade Items:

- Each Non-POS Trade Item should provide the following data in human-readable format:
- Packer/Re-packer Name
- BID
- Commodity name and, where applicable, variety name
- Batch/Lot number (it is recommended to use the packing date)
- Code for date marking as required by relevant legislation
- Quantity
- Additional information required by relevant legislation (e.g. weight, price, Country of Origin, etc.)

4.11.3.3 Identification of POS Trade Items

To identify packaged products that go to a Point-of-Sale (POS Trade Items) the use of at least the Business ID (BID), the Commodity name and the associated production batch/lot number is required. Some retailers also may ask for the use of a GS1 Global Trade Item Number (GTIN) to identify trade items, so the use of this standard identification in addition to the Commodity name is recommended.

4.11.3.3.1 Global Trade Item Number

The Global Trade Item Number (GTIN) is a standardized and globally unique way to identify items traded in the supply chain. Where there is a requirement to accurately order, invoice, price or receive your product, the GTIN is the basic enabler. The GTIN provides a common language to support multiple business practices, including traceability. Where a product is sold under a brand name, the brand owner is responsible for assigning the GTIN.

4.11.3.3.2 Assigning a GTIN to the traded items produced by a company

Where product is sold under a brand name, the brand owner is responsible for assigning the GTIN. If the organization is the brand owner, the first step is to apply for a GS1 Company Prefix with a GS1 representative (normally the Bureau of Standards). If the company producing the item is not the brand owner, then brand owner's GTIN must be used.

See Appendix 1 - Section 9.1 for more information about GTIN assignment.

4.11.3.3.3 Guidelines to Label POS Trade Items:

Labels provide the means for identifying POS Trade Items to other trading partners. The label shows the product identifier (i.e. Product Identification number or GTIN if available) and associated batch/lot number in an easy-to-read human-readable form and, if required by the customer (usually retailers), should also provide product information using a GS1-compliant barcode. This ensures that the POS Trade Items can be identified quickly and accurately at any POS, anywhere in the world.

Additional information about creating GS1-compliant bar codes is at Appendix 1 - Section 9.1.1.

Each trade item label should provide the following data in human-readable format:

Grower/Packer's Name

BID

Commodity name and, where applicable, variety name

GTIN

Batch/Lot number (the use of packing date is recommended)

Code for date marking, as required by relevant legislation

Quantity

Additional information required by relevant legislation (e.g. weight, price, address, best before date, Country of Origin, etc.)

4.12 Traceability Information to be recorded

Traceability data is recorded (paper or electronic form) to ensure that the traceability link is maintained. The following list represents the minimum data required to ensure traceability between suppliers (i.e. growers) and trading partners (i.e. customers) of a company.

- Packer/Re-Packer's Name
- Packer/Re-Packer's BID
- Product Description (Brand name if applicable, including variety)
- Lot number or other batch identifier of the good (i.e. Packing Date)
- Shipped from location identification (i.e. shipping address)
- Shipped to location identification (i.e. address of receiving location/trading partner)
- Date of dispatch/shipment
- Name and contact information of the transporter
- Any other information deemed appropriate by the Competent Authority

It is recommended that the following information should also be recorded:

- Product identification number (GTIN, if available)
- Sales Receipt number
- Name of person who received the product
- Name of person who dispatched the product

4.13 Data retention

All organizations are expected to maintain records that will facilitate timely and accurate traceability and support any product recalls. Records are retained at a registered location or at another readily available location and made available to the Competent Authority within the time limit prescribed by [rule/order] approved by the Competent Authority.

4.14 Recall and withdrawal

Packers/Re-Packers need to develop a recall strategy containing the following elements:

- depth of recall, which may extend to the consumer level, the retail level, or the wholesale level;
- the contents of public notifications to be issued depending on the classification and severity of the grounds for which a recall is issued;
- public warning that is given nationwide or to affected geographical areas during urgent situations;
- effectiveness check level, which includes the method to be used for and depth recall effectiveness checks;

and the disposal of recalled products.

It is recommended that at least one Mock Recall (simulation) should be carried out every year to test the strategy and the requirements.

4.14.1 Recalls requested by Competent Authority

For recalls requested by the Competent Authority, the following actions are undertaken by Packers / Re-Packers after the request to initiate the recall:

- stop the distribution of the product;
- withdraw the product from the market;
- notify the public, trading partners and consignees of a recall as prescribed;
- effectively and accurately inform the consumers of the reason for the recall and, if necessary, recall from consumers the products that have already been supplied to them (when other measures are not sufficient to guarantee food safety), following the procedures established by the Competent Authority;
- issue a press release if so directed by the Competent Authority; and
- abide by other recall requirements as may be established by the Competent Authority.

The recall is terminated when the Competent Authority determines that all reasonable efforts have been made to remove or correct the product in accordance with the recall strategy, and when it is reasonable to assume that the product subject to the recall has been removed and proper disposal or correction has been made commensurate with the degree of hazard of the recalled product. The appropriate authority would then issue written notification to the Packer/Re-Packer that the recall is terminated.

4.14.2 Voluntary recalls

For voluntary recalls, the implementation of the following actions is recommended:

- If the Packer/Re-Packer considers or has reason to believe that a food item which it has locally distributed is not in compliance with the food safety requirements, it shall immediately initiate procedures to withdraw the food in question from the market (where the food has left the immediate control of that initial food business operator) and inform the competent authorities.
- Where the product may have reached the consumer, the Packer/Re-Packer shall effectively and accurately inform the consumers of the reason for its withdrawal, and if necessary, recall from consumers the products that have already been supplied to them, when other measures are not sufficient to achieve a high level of health protection.
- The Packer/Re-Packer shall immediately inform the competent authorities if it considers or has reason to believe that the food which it has placed on the market may be injurious to human health. Also, it shall inform the competent authorities of the action taken to prevent risks to the final consumer

4.15 Business scenarios for packers/re-packers

4.15.1 Description of the process

The process starts when the packinghouse receives the produce the packaging material and other inputs. The packaging material and inputs may be received from multiple suppliers (manufacturing companies) and the produce from local farmers. All the packaging material, inputs and produce may contain multiple batch/lot

numbers. In the packinghouse the following activities are conducted on the product:

- Sorting/grading
- Packing (under Target Packers' Brand)
- Cooling
- Storing
- Selling
- Shipping

When packing, a label with the product name/description, product identification number (GTIN if applicable) and batch/lot number is assigned.

4.15.1.1 Description of the traceability process for packing houses

Receiving process

The product is harvested in the field at the grower's farm and placed in bins or bags (Trade Items) which are brought by truck to the Packinghouse. These Trade Items serve as the traceable unit between the Farm and the Packinghouse. A human-readable "field tag" is applied by the grower to the bin or bags used to transport the produce. When the truck arrives at the Packinghouse, the product is moved to a holding area until it is to be packed. When receiving, the Packinghouse must verify that all the received products are properly identified with a label (or tag) showing the following information:

- o Supplier Name
- o Supplier BID
- o Commodity Description
- o Harvesting Date (dd/mm/yy)
- o Quantity

Note: Labels must be attached by the farmer at origin or by the packinghouse when receiving and transferring the products to their own bins or containers.

The Packinghouse must keep a record with the information of all the products received using the sales receipt given by the supplier (one copy retained by the packinghouse, one copy remains with the supplier).

The information to be recorded in the sales receipt is as follows:

- Supplier Name, BID and Delivery Address
- Product received
- Batch number or Harvesting Date (dd/mm/yy)
- Receiving Date (dd/mm/yy)
- Quantity
- Receiving facility Name and Receiving Address and Packinghouse BID

Note: If it is not possible to obtain a Sales Receipt from the Supplier with the required traceability information, then the Packinghouse must record the required information using the Input Control Form and staple this together with the invoice given by the supplier.

- The Packinghouse shall also keep a record with the information of all the packaging material and inputs received using the sales receipt given by the supplier (one copy given to the packinghouse, one copy retained by the supplier). The information to be recorded in the sales receipt is as follows:

- Supplier Name, BID and Delivery Address
- Product received - Batch/Lot number
- Receiving Date (dd/mm/yy)
- Quantity
- Receiving facility Name, Address and Packinghouse BID

4.16 Implementation guideline for distributors / traders

This section is intended for Distributors/Traders where the traceable item would usually be a Trade Item (packaging product or logistic unit) that does not go to Retail Point-of-Sale (Non-POS Trade Item). Examples of Distributors/Traders are:

- Agricultural Cooperative
- Retail or Food service Distribution Centre
- Import and Export Warehouses
- Wholesaler
- Terminal

4.16.1 Identification of the organization

Distributors/Traders need to use the Business Identification number (BID) to identify the organization they manage and then share that number with suppliers and customers. The BID is allocated by the Ministry of Health or any other designated government agency which maintains the National Business Registry for Food Operators. Individual BIDs can be assigned to represent your organization as well as any individual trading subsidiaries.

4.16.2 Capturing inputs

Distributors/traders must capture traceability information from the products (trade items) they receive from suppliers. These products are identified using a label with the Supplier's BID, the Commodity name and the Lot/Batch number. Traceability is accomplished by associating each Supplier's BID and Commodity name with its batch/lot number. This information is recorded. To enable traceability, distributor/traders could also maintain records of other product inputs (e.g. packaging material) for their own use. This information could be critical to a company's body of internal traceability information; however, it is not absolutely necessary.

4.16.3 Identification of trade items

Where distributors/traders simply re-sell a product from their suppliers (i.e. products are not repackaged into other traded units), they must use the product information assigned by the suppliers to inbound products. Where distributors re-configure product received from suppliers, they are required to assign a new identification and label for each new product.

4.16.3.1 Identification of production batches/lots by a company

All distributors/traders must assign a batch/lot number to products they create. The batch/lot number itself can vary from one company to another, depending on the desired precision. For example, a batch/lot can represent a day's production or the product produced from an individual processing or packing line. It is important to remember that a company's batch/lot relates to the scope of products that may be implicated in a recall and needs to be considered during assignment.

4.16.4 Identification of logistic units

For distributors/traders, outbound logistics units are typically cases, pallets or containers. When a company's traceable item is one or more logistic units, the best business practice is to assign a Serial Number to each logistic unit. Each Serial Number that is assigned is unique to the individual logistic unit. There are no legal requirements to identify logistic units.

4.16.4.1 Case and logistic unit labels

4.16.4.1.1 Guidelines for Non-POS Trade Items labels

When the traceable item is the product (Non-POS Trade Item), labels provide a means of identifying that product to other trading partners. The label shows the product identifier (i.e. BID and Commodity Name) and associated batch/lot numbers in an easy-to-read human-readable form. This ensures that cases can be identified at any subsequent point in the supply chain. It should be noted that where the company's case product is sold to consumers in the case (i.e. the case is sold at retail Point-of-Sale), then a bar code symbol should be used to enable front end and POS scanning. If this is required by the customer, then the customer should be asked to provide assistance with using a bar code that can be scanned at their POS. If the traceable item is the logistic unit (i.e. each logistic unit needs to be uniquely identified and tracked), refer to the guidelines below for logistic unit labels.

4.16.4.1.2 Guidelines for Logistic unit labels:

When the traceable item is a logistic unit (e.g. pallet, container), the labels provide a means of identifying that shipping container to other trading partners. The label shows the logistic unit identifier (i.e. Serial Number) in an easy to read (human-readable) form. Additional information may be shown on the pallet label. This is usually determined by customer-specific relationships. There is no minimum requirement to identify logistics units. All that is needed is the assignment of a tag or a label to the logistic unit with a Serial Number. This will help in physically locating the logistic unit and relating it to the contents within. The best practice with regard to labeling a logistic unit is the use of GS1-compliant bar codes to provide the necessary information. This ensures that pallets can be identified quickly and accurately at any subsequent point in the supply chain, anywhere in the world.

4.16.5 Traceability information to be recorded

To ensure that the traceability link is maintained, data must be recorded. The following represents the minimum data required to ensure traceability between the suppliers and customers of a company.

When the supplier's product (package/case) is the traceable item

- Supplier's Name
- BID
- Product Description (Brand name if applicable, including variety)
- Lot number or other batch identifier of the good
- Shipped from location identification (i.e. shipping address)
- Shipped to location identification (i.e. address of receiving location/trading partner)
- Date of dispatch/shipment
- Sales Receipt Number

- Transporter Information (e.g. name, address, telephone number, and, if available fax number and email)
Trade item quantity and unit of measure
- Any other information deemed appropriate by the Competent Authority

When the supplier's logistic unit is the traceable item

- Supplier's Name
- BID
- Product Description (Brand name if applicable, including variety)
- Serial Number
- Shipped from location identification (i.e. shipping address)
- Shipped to location identification (i.e. address of receiving location/trading partner)
- Receiving date
- Sales Receipt Number
- Transporter Information (e.g. name, address, telephone number, and, if available fax number and email)
Any other information deemed appropriate by the Competent Authority

- When the company's (outbound) traceable item is a package/case (Non POS Trade Unit)
- Distributor/Trader BID
- Distributor/Trader name
- Trade item description
- Batch/lot number
- Trade item quantity and unit of measure
- Shipped from location (i.e. shipping location address)
- Shipped to location (i.e. address of receiving location/trading partner)
- Date of shipment
- Sales Receipt Number
- Transporter Information (e.g. name, address, telephone number, and, if available fax number and email)
- Any other information deemed appropriate by the Competent Authority

When the company's (outbound) traceable item is the logistic unit

- Distributor/Trader BID
- Distributor/Trader name
- Logistic unit Serial Number
- Shipped from location (i.e. shipping location address)
- Shipped to location (i.e. address of receiving location/trading partner)
- Date of shipment
- Sales Receipt Number
- Transporter Information (e.g. name, address, telephone number, and, if available fax number and email)
Any other information deemed appropriate by the Competent Authority

When the company's (outbound) traceable item is a shipment

- Distributor/Trader BID

- Distributor/Trader name
 - Unique shipment identifier (e.g. may be the bill of lading number)
 - Shipped from location (i.e. shipping location address)
 - Shipped to location (i.e. address of receiving location/trading partner)
 - Date of shipment
 - Sales Receipt Number
 - Transporter Information (e.g. name, address, telephone number, and, if available fax number and email)
- Any other information deemed appropriate by the Competent Authority

4.16.6 Data retention

All organizations are expected to maintain records that will facilitate timely and accurate traceability and support any product recalls. Records are retained at a registered location or at another readily available location and made available to the Competent Authority within the time limit prescribed by [rule/order] approved by the Competent Authority.

4.16.7 Recall and withdrawal

Distributors/Traders need to develop a recall strategy containing the following elements:

- depth of recall, which may extend to the consumer level, the retail level, or the wholesale level; the contents of public notifications to be issued depending on the classification and severity of the grounds for which a recall is issued;
- public warning that is given nationwide or to affected geographical areas during urgent situations;
- effectiveness check level, which includes the method to be used for and depth recall effectiveness checks; and
- the disposal of recalled products. It is recommended that at least one Mock Recall

(simulation) should be carried out every year to test the strategy and the requirements.

4.16.8 Business scenarios for distributors/traders

4.16.8.1 Scenario 1: Distributor receives imported product from a grower/exporter

4.16.8.1.1 Description of the Process

The Island Distribution Company is a re-seller of products that is sourced from growers/exporters. The Island Distribution Company Trace Trade Items received from suppliers at the case level. Island Distribution also traces Trade Items on outbound distribution.

4.16.8.1.2 Description of the Traceability Process

Receiving Process

When the product arrives at Island Distribution, it is unloaded and verified against the information previously received and with the information on the "Sales Receipt". Then, the product is palletized and the pallet tagged with a Serial Number which is placed on each pallet. Likewise, if the grower/exporter does not identify a batch/lot number for each case, a unique number such as the shipment identification from the grower/shipper documentation is assigned as a batch/lot number.

Processing

The product is stored pending sale and shipment to a customer.

Delivery Process

Once the pallet is ready to be shipped to a customer, Island Distribution records the outbound pallet Serial number for each pallet on a shipment/order so they can identify exactly what is on the shipment and the product begins its journey to the next stage in the supply chain.

4.16.9 Manufacturer / processors

This section is intended for Manufacturers/Processors where the traceable item would usually be a Trade Item (packaging product) that goes to Retail Point-of-Sale (POS Trade Item), but sometimes they can manufacture a Trade Item (packaging product) that does not go to a Retail Point-of-Sale (Non-POS Trade Item). Normally manufacturers/processors can use ingredients and/or raw material to manufacture their products or simply process raw material into a new product.

Examples of Manufacturers are:

- Condiments Manufacturer
- Fish Processor
- Poultry Processor
- Nutmeg Processor
- Cacao Processor

4.16.9.1 Identification of the organization

Manufacturers/Processors need to use the Business Identification number (BID) to identify the organization they manage and then share that number with suppliers and customers. The BID is allocated by the Ministry of Health or any other designated government agency which maintains the National Business Registry for Food Operators. Individual BIDs can be assigned to represent an organization as well as any individual trading subsidiaries.

4.16.9.2 Capturing production inputs

Manufacturers may receive different types of inputs to elaborate their products. These inputs (trade items) may be raw material, live animals, ingredients or packaging material and each one of them must be traceable. Manufacturers/Processors must retain a copy of the Sales Receipt given by the Supplier of the received trade items (or given by the Manufacturer/Processor to the Supplier in the absence thereof). The Sales Receipt copy shall have at least the following information:

- Supplier/Seller name
- Supplier/Seller contact information
- Supplier BID
- Customer name
- Customer BID
- Product Description (Brand name if applicable, including variety)
- Lot number or other batch identifier of the good (i.e. harvesting date)
- Quantity and packaging information ☐
- Date of transaction

- Origin Address: Address from where the good was delivered
- Destination Address: Address of receiving location/trading partner
- Name and contact information of the transporter
- Any other information deemed appropriate by the Competent Authority

It is recommended that the receiving information should also be recorded in a record-keeping system (paper or electronic form) and should **include** the following information:

- Sales Receipt number
- Product identification number (if available)
- Name of person who received the product
- Name of person who dispatched the product from the supplier

Also, received trade items must be traceable. For this reason, each Trade Item shall carry a tag or label that shows the Supplier BID and the Batch/lot number. Each time an input is received, the following information must accompany the tag or label attached to the Trade Item depending on its type (raw material, live animals, ingredients or packaging material):

4.16.9.2.1 Ingredients and packaging material

Suppliers deliver their products (ingredients or packaging material) using different formats that can be containers, cases, bins, bags or bulk loads (Trade Items). Each Trade Item must be traceable. For this reason, each Trade Item carries a tag or label that shows the Supplier BID and the Batch/lot number. Each time a manufactured/processed product is received for use as an ingredient, the following information must accompany the tag or label attached to the Trade Item:

- Supplier's Name
- Supplier BID
- Trade Item Description
- Trade Item GTIN (if available)
- Batch/Lot number
- Code for date marking as required by relevant legislation
- Quantity

4.16.9.2.2 Raw material

Suppliers of Raw material normally deliver fresh products in bulk using various containers or bags to transport the Trade Items. Common examples of Trade Items include bags, cases and bins. Each Trade Item must be traceable. For this reason, each Trade Item should carry a tag or label that shows the Supplier Business ID and the Harvest date/Slaughter date. Each time a product is received for use in the process, the following information must accompany the tag or label attached to the Trade Item:

- Supplier's BID
- Supplier's name
- Commodity name and, where applicable, variety name
- Lot number (typically harvesting date)
- Code for date marking as required by relevant legislation
- Quantity

- Business scenarios for packers/re-packers 3.7.1 Scenario 1: Shed (packinghouse) packed product (fresh produce) 3.7.1.1 Description of the process The process starts when the packinghouse receives the produce the packaging material and other inputs. The packaging material and inputs may be received from multiple suppliers (manufacturing companies) and the produce from local farmers. All the packaging material, inputs and produce may contain multiple batch/lot numbers. In the packinghouse the following activities are conducted on the product:

- Sorting/grading
- Packing (under Target Packers' Brand)
- Cooling

4.16.9.3 Identification of trade items and manufacturer/processor information

Each time a Trade Item is created and destined for a subsequent trading partner, it must be identified. Examples of Trade Items include trays, bags, cartons, pallets and others.

To assist customers with their subsequent traceability, Manufacturers/Processors shall attach a label to their Trade Items, in human-readable format, with all relevant traceability information. Products are labeled at the time of packaging or distribution.

Two types of Trade Items can be created by a Manufacturer/Processor:

- POS Trade Items: Trade items that go to Retail Point of Sale (POS). Normally Consumer Units.
- Non-POS Trade Items: Trade items that never go to Retail Point of Sale (POS). Normally these would comprise industrial products, logistic units, bulk products and others.

Depending on the type of Trade Item, there are different requirements to identify them and for the labels to be placed on each Trade Item.

4.16.9.3.1 Identification of production batches/lots

All Manufacturers/Processors must assign a batch/lot number to products they create. The batch/lot number itself can vary from one organization to another, depending on the precision desired. For example, a batch/lot number can represent a day's manufacturing or the product packed from an individual manufacturing line. Manufacturer batch/lot numbers must be internally linked to the original information on the ingredient or raw material used.

It is important to remember that the batch/lot number relates to the scope of products that may be implicated in a recall and needs to be considered during the assignment.

4.16.9.3.2 Identification of Non-POS Trade Items

Non-POS Trade Items are products that are usually sold as ingredients to other Manufacturing Companies or to a Food Operator Service. These Items never cross a Retailer Point-of-Sale. To identify Non-POS Trade Items, the Business ID, the Commodity name and the associated production batch/lot number are used.

4.16.9.3.2.1 Guidelines to Label Non-POS Trade Items

Each Non-POS Trade Item should provide the following data in human-readable format:

- Manufacturers/Processor Name
- BID
- Trade Item Description

- Batch/Lot number
- Code for date marking as required by relevant legislation
- Quantity
- Additional information required by relevant legislation (e.g. weight, price, Country of Origin, etc.)

4.16.9.3.3 Identification of POS Trade Items

The use of the Business Identification number (BID), the Commodity name and the associated production batch/lot number is required to identify products that go to a Point-of-Sale (POS Trade Items). Some retailers also may ask for the use of a GS1 Global Trade Item Number (GTIN) to identify trade items so the use of this standard identification in addition to the Commodity name is recommended (this is usually a minimum requirement for supermarkets, however it is not required by the Regulations Concerning the Traceability and Recall of Food Products).

4.16.9.3.4 Global Trade Item Number

The Global Trade Item Number (GTIN) is a standardized and globally unique way to identify items traded in the supply chain. Where there is a requirement to accurately order, invoice, price or receive your product, the GTIN is the basic enabler. The GTIN provides a common language to support multiple business practices, including traceability. Where product is sold under a brand name, the brand owner is responsible for assigning the GTIN.

4.16.9.3.4.1 Assignment of GTIN to the traded items that a company produces

Where product is sold under a brand name, the brand owner is responsible for assigning the GTIN. If the organization is the brand owner, the first step is to apply for a GS1 Company Prefix with a GS1 representative (normally the Bureau of Standards). If your company is not the brand owner, you must use the brand owner's GTIN.

4.16.9.3.4.2 Guidelines for Labels on POS Trade Items:

Labels provide a means for identifying POS Trade Items to other trading partners. The label shows the product identifier (i.e. the GTIN) and associated batch/lot number in an easy-to-read, human-readable form and, if required by the customer (usually retailers), the label should also provide product information using a GS1-compliant bar code. This ensures that the POS Trade Items can be identified quickly and accurately at any POS, anywhere in the world.

Each label should provide the following data in human-readable format:

- Manufacturers/Processor Name
- BID
- Trade Item Description
- GTIN
- Batch/Lot number
- Code for date marking as required by relevant legislation
- Quantity
- Additional information required by relevant legislation (e.g. weight, price, Country of Origin, etc.)

4.16.9.4 Identification of cases or packs

For Manufacturers/Processors, outbound items are typically cases or packs containing multiple items (POS or Non POS Trade Items). When the company's traceable item is a case or pack, the minimum required is to identify each traceable item with the BID and the content information (the Trade Item Description and the batch/lot number).

4.16.9.5 Traceability information to be recorded

To ensure that the traceability link is maintained, the following data must be recorded (paper form or electronic). The following represents the minimum data required to ensure traceability between the suppliers and the customers of a company.

- Identification (Trade Item Description/Commodity Name, Supplier's Name, Supplier BID) and Batch/Lot numbers or Manufacturing Date/harvesting Shipped from location identification (i.e. shipping address)
- Shipped to location identification (i.e. address of receiving location/trading partner)
- Date of dispatch/shipment
- Transporter information (name, address, telephone number, and, if available fax number and email)
- Any other information deemed appropriate by the Competent Authority.

4.16.9.6 Data retention

All organizations are expected to maintain records that will facilitate timely and accurate traceability and support any product recalls.

Records are retained at a registered location or at another readily available location and are made available to the Competent Authority within the time limit prescribed by [rule/order] approved by the Competent Authority.

4.16.9.7 Recall and withdrawal

Manufacturers/Producers need to develop a recall strategy containing the following elements:

- depth of recall, which may extend to the consumer level, the retail level, or the wholesale level;
- the contents of public notifications to be issued depending on the classification and severity of the grounds for which a recall is issued;
- public warning that is given nationwide or to affected geographical areas during urgent situations;
- effectiveness check level, which includes the method to be used for and depth recall effectiveness checks; and
- the disposal of recalled products.

4.16.9.8 Business scenarios for manufacturer/processor

4.16.9.9 Implementation Guideline for Retail Stores

This section is intended for Retail Stores where the traceable item is usually a Point-of-Sale (POS) Trade Item (Consumer unit), although sometimes it may also be a Non POS Trade Item (logistic unit).

Examples of Retail Stores are:

- Supermarket Stores
- Grocery Stores
- Grocery Chains

5 Unique identification of the organization

Retail Stores need to use the Business Identification number to identify the organization they manage and then share that number with suppliers and customers. The Business ID is allocated by the Ministry of Health or any other designated government agency which maintains the National Business Registry for Food Operators.

Individual BIDs can be assigned to represent an organization as well as any individual trading subsidiaries.

5.1 Capturing inputs

Retail stores must capture traceability information from the products (Consumer units) sent by their suppliers. These products are identified using a Global Trade Item Number (GTIN). The assignment of GTINs for each product traded (i.e. all product configurations) is the responsibility of the brand owner and must be recorded in the Retailer's internal systems prior to the product being traded. Use of the GTIN ensures unique product identification across all of a supplier's product configurations and uniqueness across all sources of supply.

Retail stores may also need to capture information about outbound shipments to stores; these are typically bags or cases. The bags and cases are identified at the time that they are created by the supplier and are individually identified using GTIN and batch/lot number. This number is assigned by the supplier/shipper or the retailer and appears on individual labels. The label provides a reference that can be traced to the original source. Each order that is shipped to a store should have the linkage between the order, GTIN, batch/lot number, and quantity shipped. The retailer may also create new logistics units and this information must be captured as well.

To enable traceability, retail stores must also maintain records of other product inputs (e.g. packaging material) for their own use. This information is equally critical to the company's body of internal traceability information.

5.2 Identification of trade items

Normally retailers need to cut and re-pack fresh produce that arrive from their suppliers in large sizes or in bulk. Each time there is a need to identify these products (intended to pass through a Point-of-Sale); it is necessary to use GTIN and associated production batch/lot number. The batch/lot number is determined by the trading party that created the individual trade item.

What is a Global Trade Item Number?

A Global Trade Item Number (GTIN) is a standardized and globally unique way to identify items traded in the supply chain. Where there is a requirement to accurately order, invoice, price or receive your product, then the GTIN is the basic enabler. The GTIN provides a common language to support multiple business practices, including traceability.

5.3 Traceability information to be recorded

To ensure that the traceability link is maintained, the following data must be recorded (paper form or electronic). The following represents the minimum data required to ensure traceability with the company's source of supply.

When the supplier's product (trade item) is the traceable item:

- Supplier's name
- Supplier BID
- Trade item identifier (GTIN)
- Trade item description
- Batch/Lot number
- Trade item quantity and unit of measure
- Shipped from location identification (i.e. shipping address)
- Shipped to location identification (i.e. address of receiving location/trading partner)
- Date of shipment
- Date of receipt
- Transporter information (name, address, telephone number, and, if available fax number and email)
- Any other information deemed appropriate by the Competent Authority

When the retailer's product (trade item) is the traceable item (Product re-packaged by the retailer):

- Retailer's name
- Retailer BID
- Trade item identifier (GTIN)
- Trade item description
- Batch/Lot number
- Trade item quantity and unit of measure
- Shipped from location identification (i.e. shipping address)
- Shipped to location identification (i.e. address of receiving location/trading partner)
- Date of shipment
- Date of receipt
- Transporter information (name, address, telephone number, and, if available fax number and email)
- Any other information deemed appropriate by the Competent Authority

5.4 . Data retention

All organizations are expected to maintain records that will facilitate timely and accurate traceability and support any product recalls.

Records are retained at a registered location or at another readily available location and made available to the Competent Authority within the time limit prescribed by [rule/order] approved by the Competent Authority.

5.5 . Recall and withdrawal

Retailers need to develop a recall strategy containing the following elements:

- depth of recall, which may extend to the consumer level, the retail level, or the wholesale level;
- the contents of public notifications to be issued depending on the classification and severity of the grounds for which a recall is issued;
- public warning that is given nationwide or to affected geographical areas during urgent situations;
- effectiveness check level, which includes the method to be used for and depth recall effectiveness checks; and

- the disposal of recalled products.

It is recommended that at least one Mock Recall (simulation) is carried out every year to test the strategy and the requirements.

6. Implementation Guideline for Foodservice Operators

This section is intended for Foodservice Operators. Examples of Foodservice Operators are:

- Restaurants
- Hotel Restaurants
- Fast Food Restaurant chains

6.1 . Identification of the organization

Foodservice Operators need to use the Business Identification number (BID) to identify the organization they manage and then share that number with suppliers. The Business ID is allocated by the Ministry of Health or any other designated government agency which maintains the National Business Registry for Food Operators.

Individual BIDs can be assigned to represent your organization as well as any individual trading subsidiaries.

6.2. Capturing inputs

Foodservice operators must capture product information from their supplier companies. Depending on the supplier, there are different ways these products are identified. Some items are received with identification (Global Trade Item Number (GTIN)), while other items received are identified via the Suppliers Business ID and the Commodity name or Trade Item Description.

When the trading relationship requires that the inbound product is traceable, this is accomplished by associating the identification of each product (GTIN or Supplier Business ID plus Commodity or Trade Item name) with its batch/lot number. Product identification and batch/lot information is displayed on individual case labels.

Foodservice operators may also need to capture information about outbound shipments to locations; these are typically cases. The cases are identified at the time that they are created by the supplier and are individually identified using product identification (GTIN or Supplier BID plus Commodity or Trade Item name) and batch/lot number. This number is assigned by the supplier/shipper or the foodservice operator and appears on individual case labels. The case label provides a reference that can be traced to the original source. Each order that is shipped to a location should have the linkage between the order, Product identification, batch/lot number, and quantity shipped.

6.3. Traceability information to be recorded

To ensure that the traceability link is maintained, the following data must be collected and recorded. The following represents the minimum data required to ensure traceability with a company's source of supply.

- When the supplier's product (trade item) is the traceable item:
- Supplier's name
- Supplier BID
- Trade item description
- Batch/Lot number

- Trade item quantity and unit of measure
- Shipped from location identification (i.e. shipping address)
- Shipped to location identification (i.e. address of receiving location/trading partner)
- Date of shipment
- Date of receipt
- Transporter information (name, address, telephone number, and, if available fax number and email)
- Any other information deemed appropriate by the Competent Authority

It is also recommended that the following information is recorded:

- Product identification number (GTIN, if available)
- Sales Receipt number
- Name of person who dispatched the product
- Name of person who received the product

6.4. Data retention

All organizations are expected to maintain records that will facilitate timely and accurate traceability and support any product recalls.

Records are retained at a registered location or at another readily available location and shall make the records available to the Competent Authority within the time limit prescribed by [rule/order] approved by the Competent Authority.

6.5 Recall and withdrawal

Foodservice Operators need to develop a recall strategy for foods stored in their warehouses containing the following elements:

- depth of recall, which may extend to the consumer level;
- the contents of public notifications to be issued depending on the classification and severity of the grounds for which a recall is issued;
- public warning that is given nationwide or to affected geographical areas during urgent situations;
- effectiveness check level, which includes the method to be used for and depth recall effectiveness checks; and
- the disposal of recalled products.

6.5.1. Recalls requested by the Competent Authority

For recalls requested by Competent Authority, the following actions are undertaken by Food service Operators after the request to initiate the recall:

- stop the distribution of the product;
- withdraw the product from the facilities;
- notify trading partners of the prescribed recall;
- abide by other recall requirements as may be established by the

6.5.2. Voluntary recalls

- For voluntary recalls, implementation of the following actions is recommended:
- If the Foodservice Operator considers or has reason to believe that a food item which it has locally distributed is not in compliance with the food safety requirements, it shall immediately initiate

procedures to withdraw the food in question from the market where the food has left the immediate control of that initial food business operator and inform the competent authorities.

- Where the product may have reached the consumer, the Foodservice Operator shall effectively and accurately inform the consumers of the reason for its withdrawal, and if necessary, recall from consumers the products already supplied to them when other measures are not sufficient to achieve a high level of health protection.
- The Foodservice Operator shall immediately inform the competent authorities if it considers or has reason to believe that the food which it has placed on the market may be injurious to human health. Also, it shall inform the competent authorities of the action taken to prevent risks to the final consumer. Competent Authority.

7. Glossary

The terms presented below are drawn mainly from the Draft Food Traceability and Recall Legislation Recommendations¹⁸, from the GS1 Global Traceability Standard¹⁹ and finally from the ISO 22005:2007²⁰.

Term	Definition
Actor	A role that a user plays with respect to a system.
Application Identifier (AI)	The field of two or more characters at the beginning of an Element String that uniquely defines its format and meaning.
Batch	A specific quantity of ingredients or a food that is intended to have uniform character and quality, within specified limits, and is produced according to a single manufacturing order during the same cycle of manufacture.
Batch/Lot Number	A reference number assigned by a food business operator to a series of similar goods, or goods produced under similar conditions. For crops, the lot number is the crop harvesting date, as decided when the crop starts. Lot and batch are synonyms.
Business Identification Number (BID)	A uniform means of identifying a food business that is registered with the Competent Authority.
Consumer Unit	The trade item intended to be sold to the end customer.
Data Carrier	A means to represent data in a machine readable form; used to enable automatic reading of the Element Strings.
Date of Dispatch	Date on which goods should be shipped or dispatched by the Supplier.
Event	An occurrence of a process in a specific time or a period of time
External Traceability	This takes place when instances of a traceable item are physically handed over from one trading partner (traceable item source) to another (traceable item recipient).
Farm ID	Location Reference used to uniquely identify a single Farm and its premises. The Farm ID is allocated by the Ministry of Agriculture or any other designated government agency which maintains the National Farm Registry.
Food Business Operator	A physical or legal person who undertakes any of the activities related to any stage of production, processing, storage and distribution of food or food ingredients which are not for self-consumption.

18. Draft Food Traceability and Recall Legislation Recommendations, developed under a project (TCP/SLC/3403) funded by the Food and Agriculture Organization (FAO)– “Strengthening capacity for a rapid response to food safety events through enhancement of the food traceability and recall legislation and systems in the Caribbean Sub region”, 2014 – 2016.

19. GS1 Global Traceability Standards – Business Process and System Requirements for Full Chain Traceability (GS1 GTS). 20 ISO 22005:2007, Traceability in feed and food chain – General principles and

basic requirements for system design and implementation.

Term	Definition
GTIN (Global Trade Item Number)	The format in which Global Trade Item Numbers (GTIN's) must be represented in a 14-digit reference field (key) in computer files to ensure uniqueness of the identification numbers. GS1 Global definition: A particular Global Trade Item Number, a numerical value used to uniquely identify a trade item. A trade item is any trade item (trade item or service) upon which there is a need to retrieve pre-defined information that may be planned, priced, ordered, delivered and/or invoiced at any point in any supply chain.
Identification	The identity assigned to an item or party that is needed to access other relevant information about the item or party.
Identification Carrier	Mark/tag/label/accompanying document sometimes called "passport" or "identity card" in some industry sectors.
Internal Process	A series of actions, changes or function(s) within a company or organization that brings about a result.
Internal Traceability	This takes place when a trading partner receives one or several instances of traceable items as inputs that are subjected to internal processes, before one or several instances of traceable items are output.
Label	A tag, sticker or printing on product packaging that provides information about the product inside, in accordance with the definition included in the Act, and with specific reference to traceable items
Link	Recording the information necessary to establish the relationship to other relevant information.
Location	A place of production, handling, storage and/or sale.
Logistic Unit	An item of any composition established for transport and/or storage that needs to be managed through the supply chain.
Party	A party (or) location is any legal, functional or physical entity involved at any point in any supply chain and upon which there is a need to retrieve pre-defined information. A party is uniquely identified by a Business Id or Farm Id
Point-of-Sale (POS)	It is the place where a retail transaction is completed. It is the point at which a customer makes a payment to the merchant in exchange for goods.
Process	A series of actions or steps towards achieving a particular end. Examples of common processes include Production, Transformation, Quality Control, Storage, Transportation, Movement, Recycle, Return, Packing, Receiving, and Traceability.
Product Description	A piece of information reflecting a characteristic related to an identification number [e.g. an expiration date]

Term	Definition
	A precise number of articles, pieces or units. Used in conjunction with Unit of Measure.

Recall	The action to remove food from the market at any stage of the food chain, including that possessed by consumers. For the purposes of these Regulations, recall refers to food safety and food quality-based recalls.
Recall Classification	The classification assigned to a particular product recall to indicate the relative degree of public health hazard presented by the product being recalled.
Recall Strategy	A planned specific course of action to be taken in conducting a specific recall.
Receipt Date	Date/time on which the goods were received by a given party.
Record	Act of creating a permanent piece of information constituting an account of something that has occurred.
Risk	A function of the probability of an adverse health effect and the severity of that effect.
Serial Number	A code, numeric or alphanumeric, assigned to an item for its lifetime. A unique individual item may be identified with the combined Product Identification (i.e. Global Trade Item Number) and Serial Number.
Share	Act of exchanging information about an entity or traceable item with another Trading Partner.
Shipping Date	Date on which goods should be shipped or dispatched by the Supplier.
Shipped from Location	Identification of the party from where goods will be or have been shipped.
Shipped to Location	Identification of the party to where goods will be or have been shipped.
Shipment	An item or group of items delivered to one party's location at one moment in time that have undergone the same dispatch and receipt processes.
Shipment Reference Number	GS1 Global definition: The reference number assigned to a shipment.
Traceability	The ability to discern, identify and follow the movement of a food or substance intended to be or expected to be incorporated into a food, through all stages of production, processing and distribution.
Traceability Data	Any information about the history, application or location of a traceable item, either Master Data or Transactional Data.
Traceable Item	Any item that is subject to the obligation of traceability under this Act and these Regulations encompassing food, all food ingredients, feed, raw materials, and any other substance entering, within, or exiting from an operation or intended to be, incorporated into a food through all stages of processing and distribution, as well as packaging materials intended to be in direct contact with food.

Term	Definition
Trace Request	A formal inquiry about the history, application or location of a traceable item. A request can trigger subsequent trace requests up or down the supply chain in order to fulfil the original request. The requesting party requires a response from the data source.
Tracing (Tracing Back)	The ability to identify the origin, attributes, or history of a particular traceable item located within the supply chain by reference to records held. "Tracking back" and "tracking forward" are the preferred terms used in this document.
Tracking (Tracking)	The ability to follow the path of a traceable item through the supply

Forward)	chain as it moves between parties.
Trade Item	Any item (product or service) on which there is a need to retrieve pre-defined information and that may be priced, or ordered, or invoiced at any point in any supply chain.
Trading Partner	Any Supply Chain Partner that has a direct impact on the flow of goods through the supply chain. Examples include Third Party Logistics Provider, Manufacturer, Retailer, and Grower.
Transformation	A change to the nature of a traceable item that changes the identity and/or the characteristics of the traceable item. The act of changing the item such as combining ingredients to make a finished product or case-picking to create a new pallet. Transformation can be production, aggregation, grouping, splitting, mixing, packing and repacking traceable items.
Transporter	The party that handles and/or stores the traceable item from one point to another without transforming the item. Receives, carries, and delivers on or more traceable items. The Transporter may only have “possession, custody, control” of a traceable item, as distinct from ownership.
Unit of Measure	Relating to a specific quantity.

8. Appendixes 1: Global Trade Item Number (Gtin)

8.1 GTIN assignment further explained

The Global Trade Item Number (GTIN) uniquely identifies trade items, including both products and services that are sold, delivered, and invoiced at any point in the supply chain. GTINs provide unique identification worldwide. The GTIN is most frequently encountered at Point-of-Sale and on cases and pallets of products in a distribution/warehouse environment. It is normally requested by retailers.

Key Benefits of the GTIN

- Facilitates the global flow of trade items (products and services) and associated information used in electronic commerce
- Uniquely identifies trade items at all levels of packaging (item, case, and pallet)
- Delivers trade item data in a consistent format and structure
- Simplifies supply chain management
- Employs the globally accepted GS1 System, in which the language is standardized, understood and used by multiple industries

Organization and Objectives

The Ethiopian Standards Agency (ESA) is the national standards body of Ethiopia established in 2010 based on regulation No. 193/2010. ESA is established due to the restructuring of Quality and Standards Authority of Ethiopia (QSAE) which was established in 1998.

ESA's objectives are:-

- ❖ Develop Ethiopian standards and establish a system that enable to check whether goods and services are in compliance with the required standards,
- ❖ Facilitate the country's technology transfer through the use of standards,
- ❖ Develop national standards for local products and services so as to make them competitive in the international market.

Ethiopian Standards

The Ethiopian Standards are developed by national technical committees which are composed of different stakeholders consisting of educational Institutions, research institutes, government organizations, certification, inspection, and testing organizations, regulatory bodies, consumer association etc. The requirements and/or recommendations contained in Ethiopian Standards are consensus based that reflects the interest of the TC representatives and also of comments received from the public and other sources. Ethiopian Standards are approved by the National Standardization Council and are kept under continuous review after publication and updated regularly to take account of latest scientific and technological changes. Orders for all Ethiopian Standards, International Standard and ASTM standards, including electronic versions, should be addressed to the Documentation and Publication Team at the Head office and Branch (Liaisons) offices. A catalogue of Ethiopian Standards is also available freely and can be accessed from our website.

ESA has the copyright of all its publications. No part of these publications may be reproduced in any form without the prior permission in writing of ESA.

International Involvement

ESA, representing Ethiopia, is a member of the International Organization for Standardization (ISO), and Codex Alimentarius Commission (CODEX). It also maintains close working relations with the International Electro-technical Commission (IEC) and American Society for Testing and Materials (ASTM). It is a founding member of the African Regional Organization for standardization (ARSO).

More Information?

Contact us at the following address.

The Head Office of ESA is at Addis Ababa.

☎ 011- 646 06 85, 011- 646 05 65

☎ 011-646 08 80

✉ 2310 Addis Ababa, Ethiopia

E-mail: info@ethiostandards.org,

Website: www.ethiostandards.org



Standard Mark