Traceability Overview

Traceability is a system in which fruits and vegetables can be traced from the field to the buyer by lot through unique codes. A code could be a number, number-letter combination, or some other designation that is unique to the lot. Each farm should have a traceability system in place that allows the grower to track the produce from the field (one step back) to the buyer (one step forward). Traceability is made easier by establishing lots so each distinct lot can be traced separately.

Who Needs a Traceability System?

Everyone. Being able to identify and recall a defined segment (or lot) of contaminated product not only protects consumer health, but also helps reduce your losses by not having to recall the entire lot. In case of a foodborne illness outbreak or customer complaint, you will be able to identify what products you have in the marketplace, determine when they were sold, and recall them if necessary. A working traceability system is an asset to your farm because it can be used to settle customer complaints and questions about the product that was sold. If you direct market at farmers markets or other places where the buyers are anonymous, develop a system to track what you took to market (where it came from and when it was harvested) and document what was sold (crop, volume, date and location). If you have an on-farm market, keep track of what you put out for sale and how much is sold each day. Another benefit of a traceability system is that it helps you keep track of when your produce was harvested so you can keep your inventory moving and reduce loss.

What is a Lot?

A lot is a distinct and limited portion of a crop. A lot could be defined as all of the same crop harvested from the same field on the same day. Some farms may find this definition results in lots that are too big, so they may choose to divide the harvest further, thereby making several different lots. Each lot must be assigned a unique lot number. The lot number should be on each container in the lot and recorded on the invoice. The benefit of having the lot number on the container is that in the case of co-mingling with other lots, each container is identifiable.

Lot Number Specifics

A lot number is a unique code that identifies a designated lot. The number (which can also include letters) should incorporate the date. Many growers find using the **Julian calendar** date useful when developing lot numbers. From the lot number, you should be able to identify the following information about the lot:

- Commodity/Produce item
- Farm location where produce was grown
- Field where produce was harvested
- Harvest date
- Harvest crew
- Packinghouse used (if any)
- Packing date (if different than harvest date)
- Packing crew (if different than harvest crew)

Growers can use existing farm and planting maps to establish field numbers to reference in harvest logs that track harvest and packing dates. If the farm only has a few employees, the employees can be grouped together as one harvest crew responsible for picking and packing all produce on the farm. All of this information should be linked to the lot number. Please see *Sample SOP: Traceability* for an example of how to develop a lot number.

Labeling Issues

Most farms are not required to label each piece of produce under the Federal Food, Drug and Cosmetic Act, but each farm should consider labeling each container that leaves the farm. This makes traceability of lots more efficient and effective.

Even growers who may be exempt from the Food Safety Modernization Act's produce rule *"must prominently and conspicuously display, at the point of purchase, the name and complete business address of the farm where the produce was grown, on a label, poster, sign, placard, or documents delivered contemporaneously with the produce in the normal course of business, or, in the case of Internet sales, in an electronic notice".* This means that growers who sell at farmers markets or have a CSA could meet this labeling requirement by making a simple sign with their farm address to hang at their booth or pick up site.

Traceability System Options

Traceability options range from paper systems to electronic ones; choose the system that works best for you. Growers can use simple systems like grocery store labeling guns for marking all the containers of a particular lot. Markers and self-adhesive mailing labels can also be used. Electronic traceability systems can also be purchased but are not required. Electronic systems often use bar code technology. As the need for traceability grows, commercial options may increase and become more affordable, making bar codes a reasonable option for small farms.

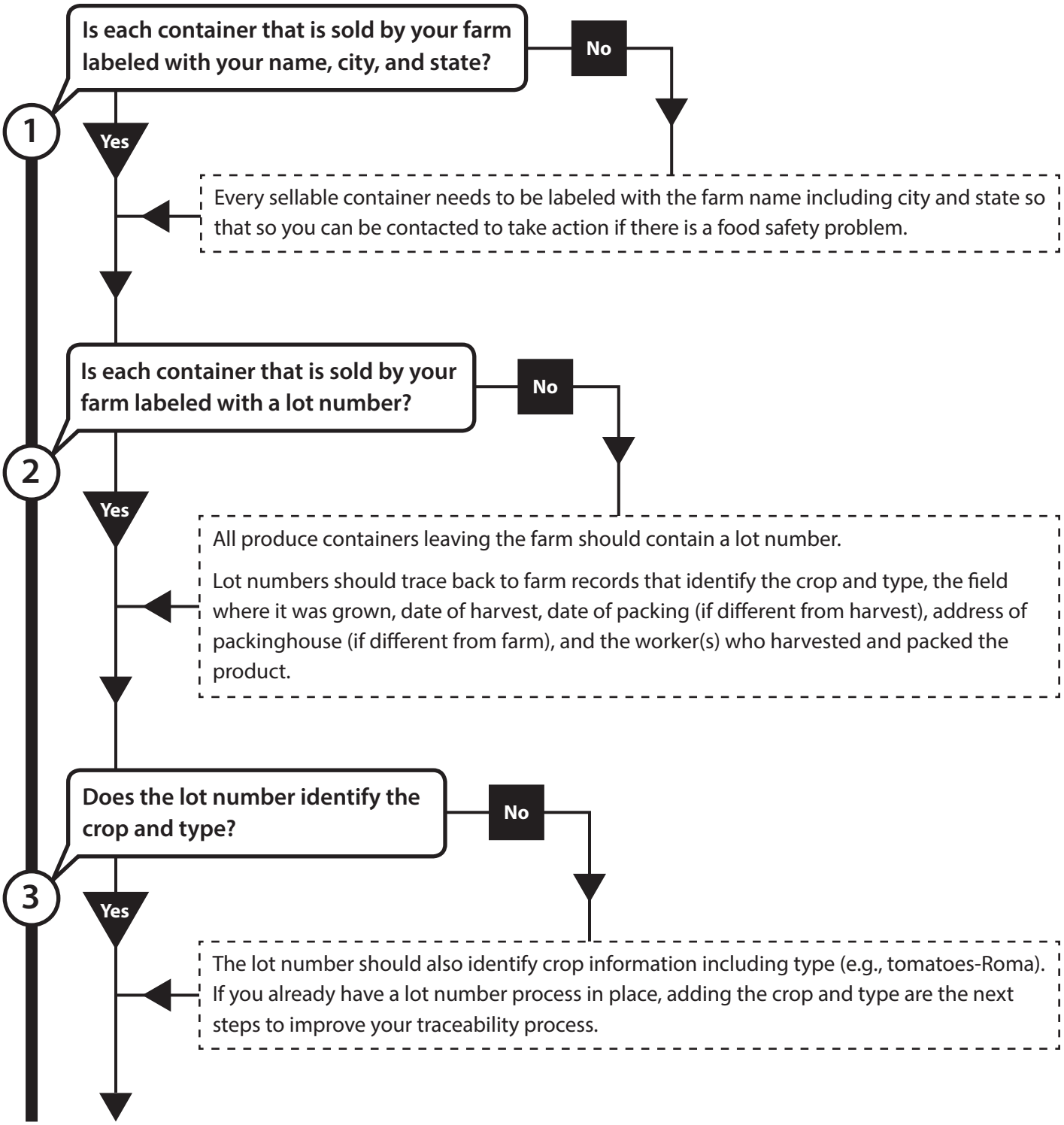
Testing the Traceability System with a Mock Recall

In a mock recall, a buyer is contacted and asked about a particular lot number or series of lot numbers. The buyer should be asked how much of the lot remains in their possession and how much has been sold. Document the buyer's response to your request about the selected lot numbers and match it with your farm information. If produce is sold through direct markets, the mock recall may include devising a way to contact a set of customers, such as through e-mail lists or by posting signs at the direct market stand. Collection of information could be done through e-mail, phone calls, or the postal service.

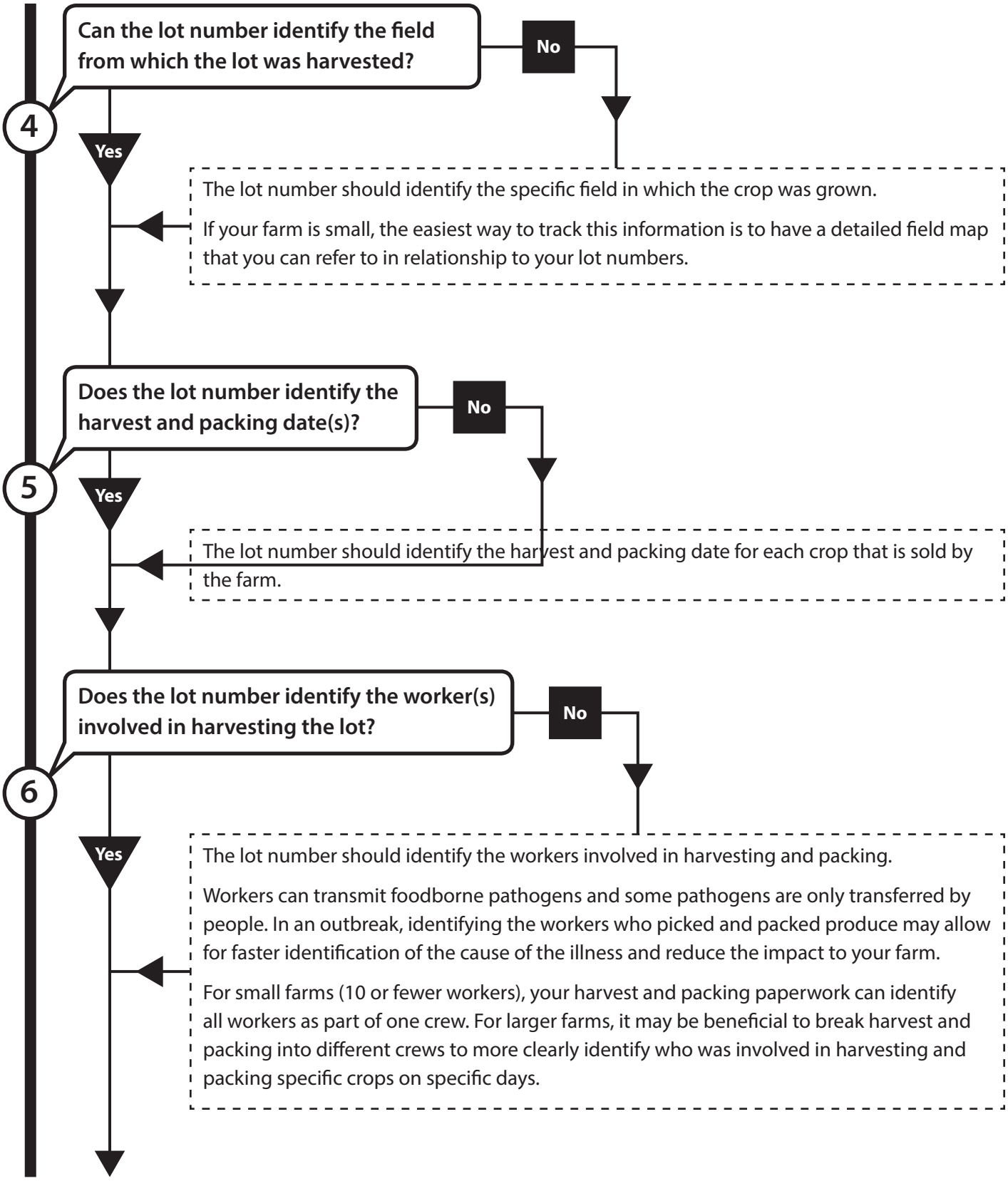
The information in the template food safety plan, SOPs, and recordkeeping logs are examples you can use. They are not intended to be used directly. Tailor each to fit your farm operation and practices. These documents are guidance for risk reduction and for educational use only. These documents are not regulatory and are not intended to be used as audit metrics. These documents are subject to change without notice based on the best available science.

E.A. Bihn, M.A. Schermann, A.L. Wszelaki, G.L. Wall, and S.K. Amundson, 2014 www.gaps.cornell.edu

Traceability Decision Tree



Traceability Decision Tree



On-Farm Decision Tree Project: Traceability—v11 8/1/2014
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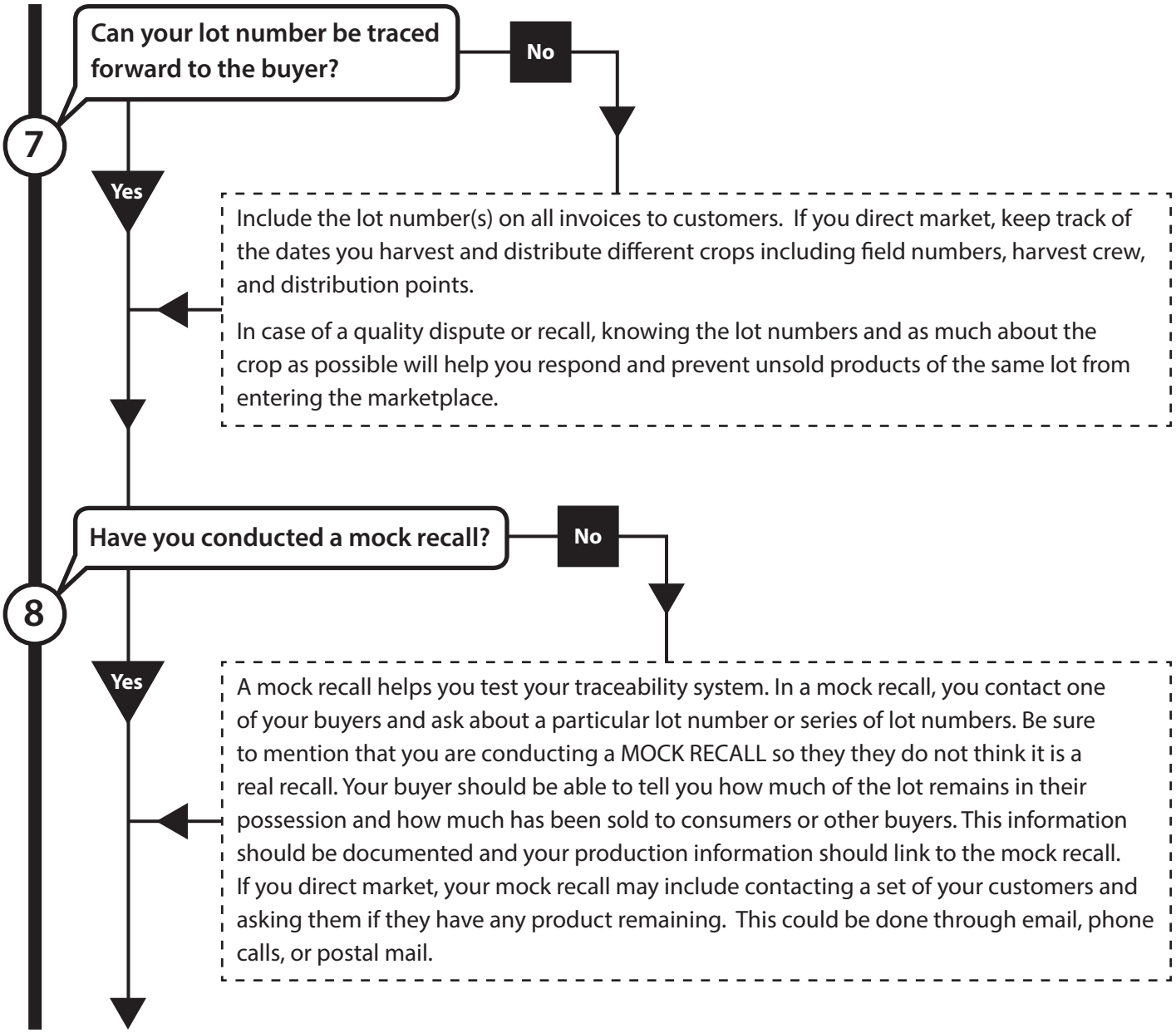
Traceability Decision Tree



Traceability Decision Tree

9

Can you successfully trace produce identified in the mock recall from your fields to the buyer?

No

Use this opportunity to assess weaknesses in your traceability that prevented a successful traceback from happening. Identify what pieces of traceability are missing and implement changes to address these weaknesses.

Yes

All products from this farm can be traced from the farm to the buyer through our identification system. Our traceability program includes labels with the farm name, city, and address on each sellable container. Lot numbers identify the field, date of harvest, date of packing, packinghouse, and workers involved in harvesting and packing. Lot numbers and date of sale are included on invoices to wholesale buyers. We have conducted a mock recall to test the system and were able to successfully track a lot from our fields to a buyer.

Finished

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Sample SOP: Traceability

Revision: 3.0
Date: 11/11/13

1—Purpose

Describes our farm's traceability system.

2—Scope

Applies to all lots of produce sold by our farm.

3—Responsibility

The farm food safety manager is responsible for making certain that the traceability process is functioning on a day-to-day basis. The farm owner is responsible for responding to any problems that the farm food safety manager is unable to resolve.

4—Materials

- System for labeling lots (lot numbers, labeling stickers, etc.)
- System for organizing lot numbers (database, logs, etc.)
- A map of the farm and fields to identify locations
- Names and crew number designations (if applicable) of workers harvesting and packing produce

5—Procedure

This procedure should result in the labeling of every lot that is sold by the farm.

1. Assign each commodity with a unique lot number.
2. Collect the following information for each lot:
    a. Commodity including type (e.g., romaine lettuce, roma tomatoes)
    b. Farm of origin
    c. Field of origin
    d. Harvest date
    e. Harvest crew
    f. Packing house used (if any)
    g. Packing date (if different than harvest date)
    h. Packing crew (if different than harvest crew)
3. Create a unique lot number using our coding system to assign a code for all of the variables listed above. *Note: This sample coding system is provided as an example. Use a system of numbers and/or letters to develop a lot coding system that makes sense to you.*

C05	009	155	02	157	01	SRCF/SRCF
Commodity type	Field of origin	Harvest date	Harvest Crew	Packing date	Packing crew	Farm/Packinghouse

Code to Lot Number System

C05 = Cabbage (variety #5 = SuperStar)

009 = Field 9

02 = Harvest Crew #2

155 = June 4 (Julian Date)

157 = June 6 (Julian Date)

01 = Packing Crew #1

HCF = Happy Cabbage Farm

Initial codes, such as field of origin, harvest crew, harvest date, and commodity/type, are assigned in the field and attached to picking totes with a card. Our farm uses the Julian calendar for its date assignment. Additional codes are added in the packinghouse including packing date and packing crew. The farm and packinghouse code is static because there is only one farm and one packinghouse on the farm.

4. Label each ***[enter type of container to be labeled, e.g. box, carton, bin]*** of the lot with the unique lot number.
5. Include lot numbers on invoices when produce is sold.
6. Keep all codes on file for two years ***[enter location here]***.

Sample Recall Contact List

Farm Name, Address, Contact person and phone number and/or Logo

Product Withdrawal: Still under the farm's control (at the warehouse, on the truck). Product has not reached the consumer.

Product Recall: In the hands of the consumers and the consumers need to be notified.

You should have a plan to handle product traceability, recovery and disposal of affected product. This may mean designating a field for disposal or a commercial landfill where it can be taken.

Farm Name
Name of Contact #1
Phone # (w)
Phone # (c)
Name of Contact #2
Phone # (w)
Phone # (c)

Buyer #1
Name of Contact #1
Phone # (w)
Phone # (c)
Name of Contact #2
Phone # (w)
Phone # (c)

Buyer #2
Name of Contact #1
Phone # (w)
Phone # (c)
Name of Contact #2
Phone # (w)
Phone # (c)

Buyer #3
Name of Contact #1
Phone # (w)
Phone # (c)
Name of Contact #2
Phone # (w)
Phone # (c)

Buyer #4
Name of Contact #1
Phone # (w)
Phone # (c)
Name of Contact #2
Phone # (w)
Phone # (c)

Other Relevant Contacts

Name of Auditor
Name of Company
Phone # (w)
Phone # (c)

Other Important Contacts

Name
Phone # (w)
Phone # (c)

To view Guidance for Industry, Product Recalls, Including Removals and Corrections, see http://www.fda.gov/Safety/Recalls/IndustryGuidance/ucm129259.htm

Sample Mock Recall Log

Name of operation: *Happy Cabbage Farm* **Conducted by:** *Fred* **Date:** *8-25-13*

Farm Address: *210 W. Farm Rd., Any City, NY 14456*

Selected Lot number(s): *224-5-1-M-13, 224-5-1-A-13*

Please see the food safety plan for overall traceback procedures.

Step backward								
Lot #	**Commodity/ Variety**	**Field of origin (#)**	**Harvest date**	**Harvest crew (# or name)**	**Packinghouse address**	**Packing date**	**Packing crew (# or name)**	**Shipping date**
224-5-1-M-13	*Cabbage/Fresco*	*Field 5 (see map)*	*8-12-13*	*Crew #1*	*Field packed*	*8-12-13*	*Crew #1*	*8-13-13*
224-4-1-A-13	*Cabbage/Fresco*	*Field 4 (see map)*	*8-12-13*	*Crew #1*	*Field packed*	*8-12-13*	*Crew #1*	*8-13-13*
Additional information about the selected lots: *No overhead irrigation was applied and manure was last applied three years ago to these fields. Produce was field packed and sent directly to store.*								

Step forward				
Customer contacted	**Date lot(s) was received**	**Amount of lot remaining in customer's possession**	**Amount of lot sold**	**Additional information**
Retailer of choice	*8-13-13*	*5 bags of lot 224-5-1-M-13*	*All of 224-4-1-A-13* *20 bags of lot 224-5-1-M-13*	

Reviewed by: _____ **Title:** _____ **Date:**_____

Template Language for Traceability Section of a Farm Food Safety Plan

Risk Assessment

Fresh produce is labeled so it can be removed from the marketplace if it is contaminated or has some other issue that makes it unsafe for humans to eat. Our farm has established a traceability system to identify our produce in the marketplace so that we can recall the product if a problem is identified.

Actions to Reduce Risks

All produce harvested and packed for sale is organized into a lot system. Each lot is given a unique number that identifies the:

- Commodity, including type (e.g., Romaine lettuce)
- Farm where grown
- Field where grown
- Harvest date
- Harvest crew
- Packinghouse used (if any)
- Packing date (if different than harvest date)
- Packing crew (if different than harvest crew)

Each ***[package type, e.g. box, clamshell, pallet]*** is labeled with the lot number. Lot numbers are included on all invoices, so that the farm and buyers know what lots have been purchased. We use a ***[paper or electronic]*** traceability system. All records are kept ***[enter location here]***.

In addition to lot numbers, each ***[invoice or container type IF you are labeling them with farm contact information]*** contains the postal address, telephone number, and e-mail address for the farm.

All wholesale buyers are listed on our Recall Contact List so they can be contacted immediately in case of a recall or other problem. Our traceability system is tested through ***[add frequency here, e.g. annual]*** mock recalls. During mock recalls, we call one of our buyers and ask them to trace a specific lot number or set of lot numbers. The buyer is asked when they received the lot(s), how much of the lot(s) remains in their possession and how much of the lot(s) has been sold. This information is recorded on the Mock Recall record keeping sheet and kept on file ***[enter location here]***.

All logs and record keeping sheets are reviewed by management ***[can enter name of individual here, if only one person]*** and kept on file for at least 2 years.