

# POST-HARVEST MICROBIAL FOOD SAFETY PRACTICES - 2015

OMB No. 0535-XXXX  
Approval Expires: XX/XX/XXXX  
Project Code: XXX  
QID: XXXXXX SMetaKey: XXXX



United States  
Department  
of Agriculture



NATIONAL  
AGRICULTURAL  
STATISTICS  
SERVICE

## DRAFT VERSION 12

**USDA/NASS**  
National Operations Division  
9700 Page Avenue, Suite 400  
St. Louis, MO 63132-1547  
Phone: 1-800-424-7828  
Fax: 1-855-415-3687  
Email: nass@nass.usda.gov

Please make corrections to name, address and ZIP Code, if necessary.

### Economic Research Service

The information you provide will be used for statistical purposes only. In accordance with the Confidential Information Protection provisions of Title V, Subtitle A, Public Law 107-347 and other applicable Federal laws, your responses will be kept confidential and will not be disclosed in identifiable form to anyone other than employees or agents. By law, every employee and agent has taken an oath and is subject to a jail term, a fine, or both if he or she willfully discloses ANY identifiable information about you or your operation. Response is **voluntary**.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB number is 0535-XXXX. The time required to complete this information collection is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

**OVERVIEW:** This survey contains questions that ask about this operation's post-harvest activities, regardless of the state where those activities take place in the United States. **Exclude** any of your postharvest activities that occur outside the United States. For the purposes of this survey, produce **includes:** fruit, berries, vegetables, herbs, tree nuts, dry beans, peas and lentils, peanuts, sprouts, and mushrooms. This survey is asking **only** about microbial food safety for the firm listed on the label above.

## SECTION 1 – POST-HARVEST ACTIVITIES

1. Which of the following produce post-harvest activities were done on this operation in 2015? Check all that apply

- |   |   |
|---|---|
| xxx 1 <input type="checkbox"/> Acidification/pickling/fermenting  | xxx 11 <input type="checkbox"/> Packing or packaging in a packinghouse<br>( <b>Include</b> repacking)       |
| xxx 2 <input type="checkbox"/> Artificial ripening  | xxx 12 <input type="checkbox"/> Processing ( <b>Include</b> boiling, canning,<br>freezing, juicing, jams)   |
| xxx 3 <input type="checkbox"/> Coating/waxing   | xxx 13 <input type="checkbox"/> Shelling/hulling/winnowing  |
| xxx 4 <input type="checkbox"/> Cooling to reduce field heat ( <b>Include</b> air and<br>water, such as hydrocooling)            | xxx 14 <input type="checkbox"/> Transportation  |
| xxx 5 <input type="checkbox"/> Cutting, coring, chopping, shredding, slicing,<br>peeling, or trimming                           | xxx 15 <input type="checkbox"/> Sorting/culling/grading/sizing  |
| xxx 6 <input type="checkbox"/> Dehydration/drying   | xxx 16 <input type="checkbox"/> Storing ( <b>Include</b> cold, ambient or<br>controlled atmosphere storing) |
| xxx 7 <input type="checkbox"/> Fresh-cut (pre-cut, packaged, and ready-to-eat<br>bagged salads; bagged, baby-cut carrots, etc.) | xxx 17 <input type="checkbox"/> Washing/rinsing   |
| xxx 8 <input type="checkbox"/> Fumigation   | xxx 18 <input type="checkbox"/> Other (Specify <sup>xxx</sup> :<br>_____)                                   |
| xxx 9 <input type="checkbox"/> Product labeling (stickering)  |   |
| xxx 10 <input type="checkbox"/> Packing or packaging in the field   | xxx 19 <input type="checkbox"/> <b>None of the above – Go to Section 8</b>                                  |

2. In 2015, did this operation harvest any produce used to supply your post-harvest activities? . . . xxx 1  Yes 3  No

3. In 2015, did this operation pack or package produce in the field? For example, packing in the field into clamshells or boxes; including containers for direct-to-consumer sales or displays. . . . xxx 1  Yes 3  No

4. In 2015, did this operation pack or package produce in a packing house or packing shed?

xxx 1  Yes – Continue 3  No – Go to Item 5

a. Which of the following best describes the structures where this operation packed or packaged fresh produce in 2015? (Check all that apply)

- xxx 1  A floor, such as a concrete slab, driveway, parking lot, etc.
- xxx 2  A roof and a floor, such as a concrete slab
- xxx 3  Floor, roof, and some walls or screening, but not an enclosed structure
- xxx 4  Enclosed structure with openings, such as unscreened doors or windows
- xxx 5  Completely enclosed structure
- xxx 6  Other (Specify<sup>xxx</sup>: \_\_\_\_\_)

5. In 2015, was this operation registered with FDA under the Bioterrorism Act of 2002 (the Federal Food, Drug, and Cosmetic Act)?

xxx 1  Yes 3  No 2  Don't Know

6. Over the last three years, 2012-2014, what was this operation's **average** annual gross value of all produce sales? **Include** fresh, fresh-cut (pre-cut, packaged, and ready-to-eat bagged salads; bagged, baby-cut carrots, etc.), and processed produce sales

- xxx 1  Less than \$250,000 4  \$1,000,000 to \$4,999,999 7  \$20,000,000 to \$39,999,999
- 2  \$250,000 to \$499,999 5  \$5,000,000 to \$9,999,999 8  \$40,000,000 to \$59,999,999
- 3  \$500,000 to \$999,999 6  \$10,000,000 to \$19,999,999 9  \$60,000,000 and above

**[If the value of sales reported in Item 5 is less than \$1,000,000, continue; otherwise go to Item 7]**

7. Over the last three years, 2012-2014, was your operation's average annual gross value of human **food sales** (including your produce sales) less than \$1,000,000? Human food includes articles used for food or drink for humans. . . . . xxx 1  Yes 3  No

8. In 2015, how many weeks was the post-harvest season for this operation? **Include** all post-harvest activities such as packing, storing, etc. . . . .

Weeks
xxx

9. How many different produce commodities did this operation handle in 2015? For example, count all apples as one commodity; count spinach as one commodity. . . . .

Number
xxx

a. Were any of the (Item 8) produce commodities certified organic? . . . . . xxx 1  Yes 3  No

b. Were any of the (Item 8) produce commodities grown outside the U.S.? . . . . . <sup>xxx</sup> <sub>1</sub>  Yes <sub>3</sub>  No

10. In 2015, did another firm market the majority of produce sales for this operation? **Include** fresh, fresh-cut (pre-cut, packaged, and ready-to-eat bagged salads; bagged, baby-cut carrots, etc.), and processed produce sales. . . . . <sup>xxx</sup> <sub>1</sub>  Yes <sub>3</sub>  No

11. In 2015, what percentage of the produce sales from this operation were direct-to-consumer sales? **Include** sales at farmers markets, farm stands, Community Supported Agriculture, etc. **Include** fresh, fresh-cut, and processed produce sales. . . . .  
 . . . . .

<b>Percent</b>
xxx

12. What produce commodities handled by this operation made up the most value sold in 2015, and in what form were the products sold? Report the top five commodities starting first with the one that made up the most value in row (a).

1 Commodity	2 Value  (Dollars)	Form of Product Sold				
		3 Fresh to retailers, foodservice, wholesalers, or consumers  (Percent)	4 Fresh in bulk to fresh-cut or other processors  (Percent)	5 Fresh-cut to retailers, foodservice, wholesalers, or consumers  (Percent)	6 Processed to retailers, foodservice, wholesalers, or consumers  (Percent)	
<sup>xxx</sup> a.	xxx	xxx %	Xxx %	xxx %	xxx %	<b>100%</b>
<sup>xxx</sup> b.	xxx	xxx %	xxx %	xxx %	xxx %	<b>100%</b>
<sup>xxx</sup> c.	xxx	xxx %	xxx %	xxx %	xxx %	<b>100%</b>
<sup>xxx</sup> d.	xxx	xxx %	xxx %	xxx %	xxx %	<b>100%</b>
<sup>xxx</sup> e.	xxx	xxx %	xxx %	xxx %	xxx %	<b>100%</b>

**SECTION 2 – FOOD SAFETY PLANS, THIRD PARTY AUDITS, STAFF AND TRAINING**

1. Does this operation currently have a food safety plan that covers post-harvest activities for produce?

<sup>xxx</sup> <sub>1</sub>  Yes – Continue <sub>3</sub>  No – Go to Item 2

a. Is the food safety plan written? . . . . . <sup>xxx</sup> <sub>1</sub>  Yes <sub>3</sub>  No

2. Did you have any third-party audits for microbial food safety that covered this operation in 2015?

<sup>xxx</sup> <sub>1</sub>  Yes – Continue <sub>3</sub>  No – Go to Item 6

3. Which of the following types of microbial third-party food safety audits covered this operation in 2015?

- a. Packinghouse. . . . . xxx 1  Yes 3   
No
- b. Cooler. . . . . xxx 1  Yes 3   
No
- c. Produce ranch/farm. . . . . xxx 1  Yes 3   
No
- d. Produce harvest crew . . . . . xxx 1  Yes 3   
No
- e. Other (Specify <sup>xxx</sup>: \_\_\_\_\_). . . . . xxx 1  Yes 3   
No

4. How many of the following types of (Item 3) third-party microbial food safety audits covered this operation in 2015? For example, if you have one packinghouse audit from a firm listed in row a and 20 ranch audits from the same firm, mark 21 audits in row a.

- a. Global Food Safety Initiative benchmark audits (Primus GFS, Safe Quality Food (SQF), Global Gaps, Canada Gap, British Retail Consortium (BRC)).. . . .
- b. Other private audits that are NOT benchmarked to the Global Food Safety Initiative (Primus, AIB, SCS, etc.).. . . .
- c. Addendums to standard audits for particular buyers or processors . . . . .
- d. Stand-alone buyer-specific audits you pay for (excluding addendums) . . . . .
- e. California or Arizona Leafy Greens Marketing Agreement audit. . . . .
- f. California Cantaloupe Advisory Board food safety standard audit . . . . .
- g. Tomato Food Safety Audit Protocol. . . . .
- h. USDA audit service which may be administered by a State Department of Agriculture (GAPs, Harmonized GAPs, GHPs, or others). . . . .
- i. Other (Specify <sup>xxx</sup>: \_\_\_\_\_). . . . .

Number
xxx
xxx
xxx
xxx
xxx
xxx
xxxx
xxx
xxx

5. What was the total amount you paid for the (item 4) third-party microbial food safety audits that covered this operation in 2015? (**Include** costs of belonging to CA and AZ LGMA and the CA Cantaloupe Advisory Board. **Exclude** the costs of preparing for audits and the costs of implementing changes afterwards. **Exclude** organic certification audits.) . . . . .

Dollars
xxx

6. In 2015, how many total people were part of this operation's microbial food safety staff for post-harvest activities? **Exclude** others who have only a small share of their time in microbial food safety and are not primarily responsible for day-to-day food safety on this operation. **Exclude** people whose jobs are only related to food quality or quality assurance activities. . . . .

Number
xxx

Number
xxx

a. Of the (Item 6) people on this operation's food safety staff, how many spent 100% of their time on microbial food safety during the season? .....

7. In 2015, did this operation hire an outside food safety consultant to develop or implement your food safety plan? .....<sup>xxx</sup>    1  Yes    3  No

8. Please answer the following questions about any microbial food safety training you may have provided to workers in **post-harvest** activities on this operation in 2015.

1 Post-harvest worker	2 How many total workers were involved in post-harvest activities on this operation in 2015?  (Number)	3 How many of these post-harvest workers were trained on microbial food safety by this operation in 2015?  [If zero, go to next row]  (Number)	4 What was the average number of minutes of microbial food safety training that each post-harvest worker received in 2015?  (Number)	5 What were the total training costs for visual aids, signage, notebooks, software packages, and hired trainers (instead of staff trainers)? <b>Exclude</b> hours workers spent in training as a cost in this column.  (Dollars)
a. Supervisory post-harvest workers	xxx	xxx	xxx	xxx
b. Non-supervisory post-harvest workers	xxx	xxx	xxx	xxx

### SECTION 3 – CLEANING, SANITIZING, AND ENVIRONMENTAL MONITORING

1. Which of the following container types were used to deliver produce to the **post-harvest** facility (include packinghouse and storage) and move product out of the post-harvest facility in 2015?

1 Container Type	2 Which of the following containers were used to <b>deliver produce</b> to the post-harvest facility in 2015?	3 Which of the following containers were used to <b>move product out</b> of the post-harvest facility in 2015?
a. New one-time use containers (including bags)	xxx 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No	xxx 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No
b. Reusable plastic containers (RPCs) cleaned and sanitized by the manufacturer	xxx 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No	xxx 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No
c. Reused containers not cleaned and sanitized by the manufacturer	xxx 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No	xxx 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No
d. Relined reusable containers	xxx 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No	xxx 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No
e. Other (Specify <sup>xxx</sup> : _____)	xxx 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No	xxx 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No

For the purposes of this survey, environmental monitoring includes the testing of surfaces to indicate whether there is potential for microbial contamination.

2. Were the following items used on this operation in 2015? How often were the items cleaned, sanitized, and subject to environmental monitoring? For each row, if you have multiple items, consider the item that is most frequently cleaned, sanitized, or monitored. **Exclude** reusable containers cleaned or sanitized by the manufacturer. Use the response codes listed in the table at the bottom of the page.

1  Item	2 Was the (column 1) item used by this operation in 2015?  [If No, go to the next row]	3 How often was this item <b>cleaned</b> ?  [Use Frequency Code below]  (Code)	4 How often was this item <b>sanitized</b> ? <b>(disinfected)</b>  [Use Frequency Code below]  (Code)	5 How often was <b>environmental monitoring</b> , carried out?  [Use Frequency Code below]  (Code)
a. Tools for harvesting and/or field packing that touch the crop	xxx 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No	xxx	xxx	xxx
b. Machinery for harvesting and/or field packing that touches the crop.	xxx 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No	xxx	xxx	xxx
c. Tools that touch the crop during post-harvest handling in a structure.	xxx 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No	xxx	xxx	xxx
d. Packing machinery and work surfaces that touch the crop in a post-harvest structure (mechanical sorters, tables, dunk tanks, flumes, produce-washing sinks, etc.).	xxx 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No	xxx	xxx	xxx
e. Packinghouse or processing room (floors, drains, etc.)	xxx 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No	xxx	xxx	xxx
e. Bathroom/port-a-potty for post-harvest workers	xxx 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No	xxx	xxx	xxx
g. Cooling system to reduce field heat ( <b>Include</b> air and water, such as hydrocooling)	xxx 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No	xxx	xxx	xxx
h. Ice making facility	xxx 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No	xxx	xxx	xxx
i. Cold storage	xxx 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No	xxx	xxx	xxx
j. Reusable containers that touch the crop	xxx 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No	xxx	xxx	xxx
k. Truck beds that touch the crop	xxx 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No	xxx	xxx	xxx
l. Other (Specify xxx: _____)	xxx 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No	xxx	xxx	xxx

#### RESPONSE CODES

##### Frequency Code

(Columns 3, 4, 5)

- |                   |  |
|-------------------|--|
| 1 After every use | 5 Once a season                          |
| 2 Daily           | 6 Never                                  |
| 3 Weekly          | 7 Don't Know                             |
| 4 Monthly         | 8 Other: (Specify <sup>xxx:</sup> _____) |

**[If environmental monitoring was reported in Item 2, column 5 continue; otherwise go to Item 5]**

3. In 2015, which of the following environmental monitoring tests were for the (item 2) surfaces?

- |   |                   |                                |                            |
|---|-------------------|--------------------------------|----------------------------|
| a. Aerobic plate count .....  | <sup>xxx</sup> No | 1 <input type="checkbox"/> Yes | 3 <input type="checkbox"/> |
| b. Coliforms .....  | <sup>xxx</sup> No | 1 <input type="checkbox"/> Yes | 3 <input type="checkbox"/> |
| c. Fecal coliforms. ....  | <sup>xxx</sup> No | 1 <input type="checkbox"/> Yes | 3 <input type="checkbox"/> |
| d. Generic <i>E. coli</i> . ....  | <sup>xxx</sup> No | 1 <input type="checkbox"/> Yes | 3 <input type="checkbox"/> |
| e. <i>E. coli</i> STEC (shiga toxin-producing <i>E. coli</i> ) including <i>E. coli</i> O157:H7 ..... | <sup>xxx</sup> No | 1 <input type="checkbox"/> Yes | 3 <input type="checkbox"/> |
| a. <i>Salmonella</i> . ....   | <sup>xxx</sup> No | 1 <input type="checkbox"/> Yes | 3 <input type="checkbox"/> |
| b. <i>Listeria</i> . ....   | <sup>xxx</sup> No | 1 <input type="checkbox"/> Yes | 3 <input type="checkbox"/> |
| e. Other (Specify <sup>xxx:</sup> _____). ....  | <sup>xxx</sup> No | 1 <input type="checkbox"/> Yes | 3 <input type="checkbox"/> |

4. What will be the total cost of environmental monitoring indicated in item 2 during 2015?  
**Include** supplies and labor. ....

**Dollars**

xxx

5. What will be the total cost of cleaning and sanitizing indicated in item 2 during 2015?  
**Include** supplies and labor. ....

**Dollars**

None
 

xxx

6. Does this operation have produce packing machinery or reusable containers with food contact surfaces made of foam, cardboard, paper, wood, carpeting, or canvas? .....

<sup>xxx</sup> 1  Yes 3  No

7. In 2015, did this operation test for microbial contamination on produce handled for post-harvest activities:

- |   |                   |                                |                            |
|---|-------------------|--------------------------------|----------------------------|
| a. While still in the field? .....                              | <sup>xxx</sup> No | 1 <input type="checkbox"/> Yes | 3 <input type="checkbox"/> |
| b. On arrival at post-harvest facility? .....                   | <sup>xxx</sup> No | 1 <input type="checkbox"/> Yes | 3 <input type="checkbox"/> |
| c. During the post-harvest process? .....                       | <sup>xxx</sup> No | 1 <input type="checkbox"/> Yes | 3 <input type="checkbox"/> |
| d. On finished product leaving the post-harvest facility? ..... | <sup>xxx</sup> No | 1 <input type="checkbox"/> Yes | 3 <input type="checkbox"/> |

8. Which of the following microbial tests were used to monitor produce quality during post-harvest activities on this operation in 2015?



- a. Aerobic plate count .....<sup>xxx</sup> 1  Yes 3  No
- b. Coliforms .....<sup>xxx</sup> 1  Yes 3  No
- c. Fecal coliforms. ....<sup>xxx</sup> 1  Yes 3  No
- d. Generic *E. coli* .....<sup>xxx</sup> 1  Yes 3  No
- e. *E. coli* STEC, (shiga toxin-producing *E. coli*) including *E. coli* O157:H7 .....<sup>xxx</sup> 1  Yes 3  No
- f. *Salmonella* .....<sup>xxx</sup> 1  Yes 3  No
- g. *Listeria* .....<sup>xxx</sup> 1  Yes 3  No
- h. Other (Specify <sup>xxx</sup> \_\_\_\_\_). ....<sup>xxx</sup> 1  Yes 3  No

9. How many total microbial tests on produce handled for post-harvest activities did this operation have, or does this operation expect to have, in 2015? .....

Number
xxx

10. What will be the total cost of all tests for microbial contamination conducted on produce handled for post-harvest activities on this operation in 2015? (**Include** lab costs, material costs, labor, and transportation costs. ) .....

Dollars
xxx

### SECTION 4 – WATER TESTING AND TREATMENT

1. Which of the following water sources were used for post-harvest activities in 2015? How often was the water source tested, what water standard was used, and was the water treated? **Include** primary water sources – water coming into your post-harvest operation. **Exclude** testing and treatments on reused or recirculated water which will be covered later in Item 2. Use the response codes listed in the table at the bottom of the page.

1	2	3	4	5	6
Water Source	Did this operation use the (column 1) water source for post-harvest activities in 2015?  [If No, go to next row]	Does the (column 1) water touch the produce or food contact surface?	How often was the water from this source tested in 2015 for generic <i>E. coli</i> or other indicator?  [Use Frequency of Testing code]  [If code 6 or 7, go to column 6]  (Code)	What water standard did you consider acceptable?  [Use Water Test Standard code]  (Code)	What did you use to treat this water in 2015?  [Use Water Treatment code]  (Code)
a. Standing surface water (ponds, lakes, reservoirs)	<sup>xxx</sup> 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No	<sup>xxx</sup> 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No	<sup>xxx</sup>	<sup>xxx</sup>	<sup>xxx</sup>

b. Flowing surface water (rivers, canals, streams, irrigation ditches)	xxx 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No	xxx 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No	xxx	xxx	xxx
c. Ground water (wells)	xxx 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No	xxx 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No	xxx	xxx	xxx
d. Public water system with potable water	xxx 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No	xxx 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No	xxx	xxx	xxx
e. Other (Specify <sup>xxx</sup> : _____)	xxx 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No	xxx 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No	xxx	xxx	xxx

RESPONSE CODES		
Frequency of Testing Code (Column 4)	Water Test Standard Code (Column 5)	Water Treatment Code (Column 6)
1 – Once a day 2 – Once a week 3 – Once a month 4 – 3 times a season 5 – Once a year 6 – Never test because I rely on municipal water testing results 7 – Never test for another reason 8 – Other (Specify <sup>xxx</sup> : _____)	1 – Normal or expected range based on historic water samples 2 – EPA recreational water standard (1986 or 2012 standard) 3 – EPA drinking water standard which is no generic <i>E. coli</i> 4 – Other (Specify <sup>xxx</sup> : _____)	1 – Chemical treatment 2 – Ultra violet light treatment 3 – Filtration 4 – N/A – didn't treat 5 – Don't Know 6 – Other (Specify <sup>xxx</sup> : _____)

2. In 2015, was water reused or recirculated in post-harvest activities on this operation? For example, water in dump tanks, flumes, produce-washing sinks, etc.

<sup>xxx</sup> 1  Yes – Continue    3  No – Go to Item 8

3. How often was reused or recirculated water for post-harvest activities replaced with new water on this operation in 2015? (Check one.)

<sup>xxx</sup> 1  More than once a day  
 2  Every day  
 3  Every week  
 4  Other (Specify<sup>xxx</sup>: \_\_\_\_\_)

4. In 2015, did this operation add water disinfectants to reused or recirculated water for post-harvest activities?

<sup>xxx</sup> 1  Yes – Continue    3  No – Go to Item 8

a. Does this operation test reused or recirculated water to determine when to add water disinfectants?

<sup>xxx</sup> 1  Yes – Continue    3  No – Go to Item 7

5. How often was reused or recirculated water for post-harvest activities tested on this operation in 2015? (Check one.)

- <sup>xxx</sup> 1  More than once per day
- 2  Once a day
- 3  Continuously with a meter
- 4  Other (Specify <sup>xxx</sup>: \_\_\_\_\_)

6. Which of the following tests were used to determine when disinfectants should be added to reused or recirculated water for post-harvest activities on this operation in 2015?

- a. Total chlorine ..... <sup>xxx</sup> No 1  Yes 3
- b. Free chlorine ..... <sup>xxx</sup> No 1  Yes 3
- c. Oxidation Reduction Potential (ORP) ..... <sup>xxx</sup> No 1  Yes 3
- d. Water temperature ..... <sup>xxx</sup> No 1  Yes 3
- e. Water pH. .... <sup>xxx</sup> No 1  Yes 3
- f. Microbial test results ..... <sup>xxx</sup> No 1  Yes 3
- g. Other (Specify <sup>xxx</sup>: \_\_\_\_\_). .... <sup>xxx</sup> No 1  Yes 3

7. Which of the following water disinfectants were added to reused or recirculated water for post-harvest activities on this operation in 2015?

- a. Chlorine ..... <sup>xxx</sup> No 1  Yes 3
- b. Chlorine dioxide ..... <sup>xxx</sup> No 1  Yes 3
- c. Peroxyacetic acid. .... <sup>xxx</sup> No 1  Yes 3
- d. Other (Specify <sup>xxx</sup>: \_\_\_\_\_). .... <sup>xxx</sup> No 1  Yes 3

8. Now considering all water used, how many total water **tests** did this operation have, or does this operation expect to have, for post-harvest activities in 2015? (**Include** tests on all (item 1) primary water sources and (item 2) reused and recirculated water.) . . . . .

None

Number
xxx

9. What will be the total cost of all (item 8) water **tests** on all water sources, including primary and reused and recirculated water, used in post-harvest activities on this operation in 2015? (**Include** lab costs, material costs, labor and transportation costs.) . . .

None

Dollars
xxx

10. What will be the total cost of water **treatments** on all water sources, including primary and reused or recirculated water, used in post-harvest activities on this operation in 2015? **Include** costs for lab work, chemicals, materials, labor and transportation. . . . .

None

Dollars
xxx

### SECTION 5 – COOPERATIVE MEMBERSHIP

1. Was this operation organized as a cooperative in 2015?

xxx <sub>1</sub>  Yes – Continue      <sub>3</sub>  No – Go to Section 6

2. How many cooperative members/growers used this post-harvest operation in 2015? . . .

Number
xxx

3. Did this cooperative operation require members to have a microbial food safety plan for the growing/harvesting of produce in 2015?

xxx <sub>1</sub>  Yes – Continue      <sub>3</sub>  No – Go to Item 4

a. Did you require written food safety plans from cooperative members? . . . . . xxx <sub>1</sub>  Yes    <sub>3</sub>  No

4. Did this cooperative operation require members to have third-party microbial food safety audits in 2015?

xxx <sub>1</sub>  Yes – Continue      <sub>3</sub>  No – Go to Section 6

a. Was the third-party food safety audit a group audit for multiple members? . . . . . xxx <sub>1</sub>  Yes    <sub>3</sub>  No

### SECTION 6 – GROWING OPERATIONS IN THE UNITED STATES

1. Did this operation grow produce in the U.S. for use in post-harvest activities in 2015? (**Exclude** produce grown by cooperative members.)

xxx <sub>1</sub>  Yes – Continue      <sub>3</sub>  No – Go to Item 5

Acres
xxx

2. In 2015, how many acres were used to grow produce on this operation? .....

3. In 2015, how many produce commodities were grown by this operation in 2015? For example, count all apples as one commodity; count spinach as one commodity. ....

Number
xxx

4. Did this growing/harvesting operation have a food safety plan in 2015?

xxx 1  Yes – Continue    3  No – Go to Item 5

a. Was the food safety plan for this growing/harvesting operation written? ..... xxx 1  Yes    3  No

5. In 2015, did this operation provide post-harvest activities for produce grown by others?

xxx 1  Yes – Continue    3  No – Go to Section 7

Number
xxx

6. How many other growers were used, or are expected to be used to supply produce for post-harvest activities on this operation in 2015?

7. Did this operation require a third-party food safety audit for all other growers who were used, or are expected to be used, to supply produce for post-harvest activities on this operation in 2015? xxx 1  Yes    3  No

8. What percent of the produce, by value, sourced for post-harvest activities came from the following sources in 2015?

- a. Produce grown by cooperative members .....
- b. Produce grown by this operation. ....
- c. Produce handled by this operation for other growers for a fee .....
- d. Produce purchased from other growers through a contract .....
- e. Produce purchased from other growers on spot market without a contract .....
- f. Other (Specify xxx: \_\_\_\_\_).

Percent
xxx
xxx
xxx
xxx
xxx
xxx

**100%**

### SECTION 7 – PRODUCE TRACEABILITY

1. Does this operation currently have a traceability plan that covers your produce sales?

xxx 1  Yes – Continue    3  No – Go to Item 2

a. Were traceability records kept in an electronic format for this operation in 2015? ..... <sup>xxx</sup> 1  Yes 3  No

2. Did this operation have a lot assignment process to identify your produce sales in 2015?

<sup>xxx</sup> 1  Yes – Continue 3  No – Go to Item 4

3. Which of the following characteristics were used to identify a lot of produce for this operation in 2015?

- a. Grower..... <sup>xxx</sup> No 1  Yes 3
- b. Harvest location (ranch/farm, orchard, vineyard) ..... <sup>xxx</sup> No 1  Yes 3
- c. Harvest date..... <sup>xxx</sup> No 1  Yes 3
- d. Harvest crew or individual harvest employee identification..... <sup>xxx</sup> No 1  Yes 3
- e. Processing or packing location..... <sup>xxx</sup> No 1  Yes 3
- f. Processing or packing date and/or time ..... <sup>xxx</sup> No 1  Yes 3
- g. Processing or packing line..... <sup>xxx</sup> No 1  Yes 3
- h. Other (Specify <sup>xxx</sup> \_\_\_\_\_)..... <sup>xxx</sup> No 1  Yes 3

4. Does this operation currently have a recall plan that covers your produce sales?

<sup>xxx</sup> 1  Yes – Continue 3  No – Go to Item 6

5. In 2015, did this operation perform recall exercises to test the recall plan for your produce sales? ..... <sup>xxx</sup> 1  Yes 3  No

6. In 2015, did this operation have product recall insurance to cover produce sales? ..... <sup>xxx</sup> 1  Yes 3  No

**SECTION 8 – CONCLUSION**

Respondent Name:	9911 Phone:	9910    MM    DD    YY Date:    _ _ _ _
------------------	----------------	--

**OFFICE USE ONLY**

Response	Respondent	Mode	Enum.	Eval.	Change	Office Use for POID
1-Comp 2-R 3-Inac 4-Office Hold	9901 1-Op/Mgr 2-Sp 3-Acct/Bkpr 4-Partner	9902 1-Mail 2-Tel 3-Face-to-Face 4-CATI	9903 9903	9998 9900	9985 9985	9989 _ _ _ _ - _ _ _ - _ _ _

5-R – Est 6-Inac – Est 7-Off Hold – Est		9-Oth		5-Web 6-e-mail 7-Fax 8-CAPI 19-Other			<b>R. Unit</b>		<b>Optional Use</b>			
							9921		9907	9908	9906	9916

S/E Name

Thank you for your time. Please return this questionnaire in the enclosed envelope.

**Comments:**