

# 2016 VEGETABLE CHEMICAL USE SURVEY

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<b>VERSION</b> 01	<b>POID</b> _____	<b>SUBTRACT</b> _____
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CONTACT RECORD		
DATE	TIME	NOTES

**INTRODUCTION:**  
*[Introduce yourself, and ask for the operator. Rephrase in your own words.]*

We are collecting information on chemical use and need your help to make the information as accurate as possible. 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 control number for this information collection is 0535-0218. The time required to complete this information collection is estimated to average 70 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.

We encourage you to refer to your records during the interview.

**BEGINNING TIME [MILITARY].** ..... 004 \_\_\_\_\_

*[Name, address and partners verified and updated if necessary.]*

During the screening phase of the Vegetable Chemical Use Survey conducted in June and July, your operation was found to be growing or intending to grow vegetables this year. I now need to verify some of the information collected during the screening survey.

Verify operation name and operator on label and/or screener.

- If no changes, go to Section A, page 4.
- If changed, continue to "Change in Operating Status".

## CHANGE IN OPERATING STATUS

[ENUMERATOR NOTE: Skip this section if there is no change in operation name or operator.]

1. Has there been a change in operation name or operator?

**NO** - [Go to Enumerator Note below.]

**YES** - [Enter code 1, complete name and address information below for new operator, and read Enumerator Note.] .....

CODE

023

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Operation Name _____ Operator Name _____ Address _____ _____ Phone (_____) _____
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[ENUMERATOR NOTE: If the operation on the face page was in business part of the 2014 crop year, complete this questionnaire for the part of the year during which the operation did business, unless the operation has been taken over by a new operator. If the operator has changed midyear, please conduct this interview start to finish with the new operator after reading "Valid Substitution" rules in section 4 of the Interviewer's Manual.]

2. Has the operation printed on this questionnaire been combined or merged with any other farming operations?

Yes - [Go to "Conclusion".]

No - [Continue.]

# SCREENING

1. Did this operation have any of the target crops during the 2014 crop year?

**YES** - [Continue.]

**NO** - [Write notes explaining situation then go to "Conclusion" on back page.]

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2. Are the day-to-day decisions for this operation (name on label) made by –  
[Check one.]

one individual? [Go to Section A.]

a hired manager? [Go to Section A.]

partners? [Continue.]

3. **How many individuals are involved in the day-to-day decisions of this operation?**

[Enter the number of partners, including the partner named on the label.

Identify the other persons in this partnership below, then go to Section A.]

(Partners jointly operate land and share in decision making. **Do not include** landlords and tenants as partners.) . . . . .

NUMBER

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4. Please identify the other person(s) in this partnership, then go to Section A.

[Verify partners' names and make necessary corrections if names have already been entered.]

<b>PARTNERS</b>	<b>POID</b> _____	<b>PARTNERS</b>	<b>POID</b> _____
PARTNER NAME		PARTNER NAME	
ADDRESS		ADDRESS	
CITY	STATE ZIP PHONE NUMBER	CITY	STATE ZIP PHONE NUMBER
<b>PARTNERS</b>	<b>POID</b> _____	<b>PARTNERS</b>	<b>POID</b> _____
PARTNER NAME		PARTNER NAME	
ADDRESS		ADDRESS	
CITY	STATE ZIP PHONE NUMBER	CITY	STATE ZIP PHONE NUMBER

# CALIFORNIA SCREENING

1. What ID (*pesticide permit number*) does this operation use for reporting pesticide applications on the target acres to the County Agricultural Commissioners?.....

COUNTY	

NUMBER				

2. Is this ID used to report pesticide applications for any other operations?

- YES** - [Continue.]                       **NO** - [Go to item 3.]

a. What other operation(s) is this ID used to report for?

Name _____	Name _____
Address _____	Address _____
Phone (    ) _____	Phone (    ) _____

3. Does this operation use any **OTHER** ID's to report pesticide applications on the target acres to the County Agricultural Commissioners?

- YES** - [Continue.]                       **NO** - [Go to Section A.]

a. What are these other ID numbers?.....

COUNTY	

NUMBER				

b. Do you use any of these ID's to report pesticide applications for any other operation(s)?

- YES** - [Continue.]                       **NO** - [Go to Section A.]

(i) What other operation(s) use this ID for reporting? [*Identify operation and ID.*]

Name _____	Name _____
Reporting ID _____	Reporting ID _____
Address _____	Address _____
Phone (    ) _____	Phone (    ) _____

**A**

**LAND OPERATED**

**A**

**ACRES OPERATED**

**CODE**

[Enumerator Action: If acreage on the insert is verified as correct, enter code 1 in box 801, then skip to Section B. If acreage has changed, ask ALL questions.] . . . . .

801

Now I would like to ask about the total acres operated under this land arrangement.

1. How many acres does this operation---

**ACRES**

a. Own? . . . . . +

901 . \_\_\_\_

b. Rent or lease from others or use rent free?  
(Exclude land used on an animal unit month (AUM) basis.) . . . . . +

902 . \_\_\_\_

c. Rent to others? . . . . . -

905 . \_\_\_\_

2. [Calculate item 1a + 1b - 1c.] Then the total acres operated are: . . . . . =

900 . \_\_\_\_

a. Does this include the farmstead, all cropland, woodland, pasture land, wasteland, and government program land?

**YES** - [Continue.]

**NO** - [Make corrections, then continue.]

**The remaining questions in this survey refer to these [item 2] acres.**

3. Of the total acres operated, how many acres are considered cropland, including land in hay, summer fallow, cropland idle, cropland used for pasture and cropland in government programs? . . . . .

802 . \_\_\_\_

4. Of the total acres operated, how many acres are vegetables?  
(Include both target and non-target vegetables planted on the operation.) . . . . .

803 . \_\_\_\_

# ADA-ESD SCREENING

**[ENUMERATOR NOTE:** *If box is checked, begin with item 1.*  
*If box is NOT checked, go to page 6.]* . . . . .

1. What Pesticide Grower Permit number does this operation use for reporting chemical applications on these [Section A, item 2] acres to the Arizona Department of Agriculture – Environmental Services Division [ADA-ESD]? . . . . .

PGP 10 NUMBER					
020					

2. Is this permit number used to report chemical applications for acres other than these [Section A, item 2] acres?

- YES** - [Continue.]                       **NO** - [Go to item 3.]

**OFFICE USE**

012

a. What other operation(s) is this permit number used to report for?

Name _____	Name . . . . .
Address _____	Address . . . . .
Phone ( ) _____	Phone ( ) _____

3. Does this operation use any **OTHER** Pesticide Grower Permit number to report chemical applications to ADA-ESD for these [Section A, item 2] acres?

- YES** - [Continue.]                       **NO** - [Go to Section B.]

**OFFICE USE**

013

a. What are these PGP numbers? . . . . .

PGP 10 NUMBER					
015					
016					
017					
018					
019					

b. Do you use any of these ID's to report chemical applications for any other operation(s)?

- YES** - [Continue.]                       **NO** - [Go to Section B.]

(a) What other operation(s) use this Pesticide Grower Permit for reporting?  
[Identify operation and ID]

Name _____	Name . . . . .
Reporting ID _____	Reporting ID . . . . .
Address _____	Address . . . . .
Phone ( ) _____	Phone ( ) . . . . .

**B**

**VEGETABLE ACREAGE**

**B**

1. What **target vegetables** were on these [Section A, item 2] acres during the 2014 crop year? (**Exclude** new plantings of vegetables not intended for harvest in 2014.)

[Enumerator Note: If no target acreage is present, write notes and skip to "Conclusion" on back page.]

OFFICE USE LINES IN TABLE	TABLE 001	199
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L I N E	1	2	3	4	5	6	7
	CROP	CROP CODE	How many acres of [crop] did this operation have?  ACRES	Were any commercial fertilizers applied to this crop?  [YES = 1]	Were any herbicides, insecticides, fungicides, etc. applied to this crop?  [YES = 1]	On what date did you complete harvest of your 2014 crop year on these [crop] acres?  MM DD YY	On what date did you complete harvest of your 2014 crop year [crop]?  MM DD YY
01			11 _____	12	13	14	15
02			11 _____	12	13	14	15
03			11 _____	12	13	14	15
04			11 _____	12	13	14	15
05			11 _____	12	13	14	15
06			11 _____	12	13	14	15
07			11 _____	12	13	14	15
08			11 _____	12	13	14	15
09			11 _____	12	13	14	15
10			11 _____	12	13	14	15
11			11 _____	12	13	14	15
12			11 _____	12	13	14	15
13			11 _____	12	13	14	15
14			11 _____	12	13	14	15
15			11 _____	12	13	14	15

**CALIFORNIA – CROP CODES**

701 ASPARAGUS	CARROTS	730 HONEYDEW	SQUASH
BEANS, SNAP	812 FRESH MARKET	LETTUCE	743 SQUASH, SUMMER
803 FRESH MARKET	912 PROCESSING	725 HEAD	744 SQUASH, WINTER
705 BROCCOLI	715 CELERY	728 OTHER, includes Romaine	748 STRAWBERRIES
CABBAGE	CORN, SWEET	732 ONIONS, BULB	TOMATOES
808 FRESH MARKET	818 FRESH MARKET	736 PEPPERS, BELL	850 FRESH MARKET
709 CANTALOUPE	CUCUMBERS	738 PUMPKINS	950 PROCESSING
714 CAULIFLOWER	820 FRESH MARKET	SPINACH	752 WATERMELONS
	723 GARLIC	840 FRESH MARKET	

**VEGETABLE ACREAGE**

L I N E	CAL – EPA SITE LOCATION NUMBER <i>(If Required)</i>						
01							
02							
03							
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							

**INCLUDES AND EXCLUDES**

**INCLUDE:**

**TARGET CROPS ONLY**

- All acreage equal to or greater than one tenth of an acre.
- All acreage for processing or fresh market.
- All acreage for roadside stands, farmer’s markets or U-pick sales.
- Acreage not harvested due to weather, economic or other reasons.
- Crops planted in the fall of 2013 if they were part of the 2014 crop.
- Double Cropping.

**EXCLUDE:**

- ALL CROPS GROWN IN ANOTHER STATE.
- All crops grown in greenhouses and hothouses.
- All vegetables grown for commercial transplanting.
- HOME GARDEN vegetable acreage.
- All mushrooms, potatoes, sweetpotatoes, dry beans.
- All vegetable acres grown by institutional, experimental, research and university farms.
- Non-target vegetables.



**VEGETABLE ACREAGE**

1. What **target vegetables** were on these [Section A, item 2] acres during the 2014 crop year? (**Exclude** new plantings of vegetables not intended for harvest in 2014.)

[ENUMERATOR NOTE: If no target acreage is present, write notes and skip to "Conclusion" on back page.]

OFFICE USE LINES IN TABLE	TABLE 001	199
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LINE	1	2	3	4	5
	CROP	CROP CODE	How many acres were PLANTED for harvest in the 2014 crop year? (Include 2014 acres which were planted in other years.) ACRES	Were any commercial fertilizers applied to this crop? [YES = 1]	Were any herbicides, insecticides, fungicides, etc. applied to this crop? [YES = 1]
01			11	12	13
02			11	12	13
03			11	12	13
04			11	12	13
05			11	12	13
06			11	12	13
07			11	12	13
08			11	12	13
09			11	12	13
10			11	12	13
11			11	12	13
12			11	12	13
13			11	12	13
14			11	12	13
15			11	12	13

- INCLUDE:**
- **TARGET CROPS ONLY.**
  - All acreage of TARGET CROPS for processing or fresh market.
  - All acreage equal to or greater than one tenth of an acre.
  - All bearing acreage of TARGET CROPS for roadside stands, farmer's markets or U-pick sales.
  - Acreage not harvested due to weather, economic or other reasons.
  - Crops planted in the fall of 2013 if they were part of the 2014 crop.
  - Double Cropping

- EXCLUDE:**
- **ALL CROPS GROWN IN ANOTHER STATE.**
  - All crops grown in greenhouses, hothouses and home gardens.
  - Plantings of crops not intended for harvest in 2014.
  - New plantings and other plantings which are not yet bearing (asparagus & strawberries)
  - All vegetables grown for commercial transplanting.
  - All mushrooms, potatoes, dry beans, sweet potatoes.
  - All vegetable acreage grown for seed only.
  - All vegetable acres grown by institutional, experimental, research and university farms.
  - Non-target vegetables.

**ARIZONA - CROP CODES**

709	CANTALOUPE	812
730	HONEYDEW	812
	LETTUCE	
725	HEAD	
728	OTHER, includes Romaine	
808	FRESH MARKET	818
	SPINACH	
709	CANTALOUPE	
840	FRESH MARKET	
744	CALIFORNIA	
752	WATERMELON	

**CALIFORNIA - CROP CODES**

NOTES:

CARROTS	730 HONEYDEW	SQUASH
FRESH MARKET	LETTUCE	743 SQUASH, SUMMER
PROCESSING	725 HEAD	744 SQUASH, WINTER
CELERY	728 OTHER, includes Romaine	748 STRAWBERRIES
CORN, SWEET	732 ONIONS, BULB	TOMATOES
FRESH MARKET	736 PEPPERS, BELL	850 FRESH MARKET
CUCUMBERS	738 PUMPKINS	950 PROCESSING
FRESH MARKET	SPINACH	752 WATERMELONS
GARLIC	840 FRESH MARKET	

# TARGET CROPS & CODES

COLORADO	
818	<b>CORN, SWEET</b> FRESH MARKET

FLORIDA	
803	<b>BEANS, SNAP</b> FRESH MARKET
808	<b>CABBAGE</b> FRESH MARKET
818	<b>CORN, SWEET</b> FRESH MARKET
820	<b>CUCUMBERS</b> FRESH MARKET
920	PROCESSING
736	<b>PEPPERS, BELL</b>
742	<b>SQUASH</b>
748	<b>STRAWBERRIES</b> ( <i>bearing age</i> )
850	<b>TOMATOES</b> FRESH MARKET
752	<b>WATERMELONS</b>

GEORGIA	
803	<b>BEANS, SNAP</b> FRESH MARKET
808	<b>CABBAGE</b> FRESH MARKET
818	<b>CORN, SWEET</b> FRESH MARKET
820	<b>CUCUMBERS</b> FRESH MARKET
732	<b>ONIONS, DRY</b>
736	<b>PEPPERS, BELL</b>
742	<b>SQUASH</b>
752	<b>WATERMELONS</b>

ILLINOIS	
903	<b>BEANS, SNAP</b> PROCESSING
818	<b>CORN, SWEET</b> FRESH MARKET
738	<b>PUMPKINS</b>

MICHIGAN	
701	<b>ASPARAGUS</b>
903	<b>BEANS, SNAP</b> PROCESSING
812	<b>CARROTS</b> FRESH MARKET
818	<b>CORN, SWEET</b> FRESH MARKET
820	<b>CUCUMBERS</b> FRESH MARKET
920	PROCESSING
738	<b>PUMPKINS</b>
742	<b>SQUASH</b>

MINNESOTA	
912	<b>CARROTS</b> PROCESSING
918	<b>CORN, SWEET</b> PROCESSING
935	<b>PEAS, GREEN</b> ( <i>exclude dried</i> ) PROCESSING

NEW JERSEY	
818	<b>CORN, SWEET</b> FRESH MARKET
820	<b>CUCUMBERS</b> FRESH MARKET
736	<b>PEPPERS, BELL</b>
743	<b>SQUASH</b> SUMMER SQUASH
744	WINTER SQUASH
850	<b>TOMATOES</b> FRESH MARKET

NEW YORK	
803	<b>BEANS, SNAP</b> FRESH MARKET
903	PROCESSING
808	<b>CABBAGE</b> FRESH MARKET
818	<b>CORN, SWEET</b> FRESH MARKET
820	<b>CUCUMBERS</b> FRESH MARKET
732	<b>ONIONS, DRY</b>
742	<b>SQUASH</b>

NORTH CAROLINA	
803	<b>BEANS, SNAP</b> FRESH MARKET
808	<b>CABBAGE</b> FRESH MARKET
818	<b>CORN, SWEET</b> FRESH MARKET
820	<b>CUCUMBERS</b> FRESH MARKET
920	PROCESSING
736	<b>PEPPERS, BELL</b>
742	<b>SQUASH</b>
850	<b>TOMATOES</b> FRESH MARKET
752	<b>WATERMELONS</b>

OHIO	
818	<b>CORN, SWEET</b> FRESH MARKET
920	<b>CUCUMBERS</b> PROCESSING
738	<b>PUMPKINS</b>
850	<b>TOMATOES</b> FRESH MARKET

OREGON	
903	<b>BEANS, SNAP</b> PROCESSING
818	<b>CORN, SWEET</b> FRESH MARKET
732	<b>ONIONS, DRY</b>
935	<b>PEAS, GREEN</b> ( <i>exclude dried</i> ) PROCESSING
748	<b>STRAWBERRIES</b> ( <i>bearing age</i> )

PENNSYLVANIA	
903	<b>BEANS, SNAP</b> PROCESSING
818	<b>CORN, SWEET</b> FRESH MARKET
738	<b>PUMPKINS</b>

SOUTH CAROLINA	
920	<b>CUCUMBERS</b> PROCESSING
752	<b>WATERMELONS</b>

TENNESSEE	
803	<b>BEANS, SNAP</b> FRESH MARKET
850	<b>TOMATOES</b> FRESH MARKET

TEXAS	
808	<b>CABBAGE</b> FRESH MARKET
709	<b>CANTALOUPE</b>
812	<b>CARROTS</b> FRESH MARKET
818	<b>CORN, SWEET</b> FRESH MARKET
920	<b>CUCUMBERS</b> PROCESSING
732	<b>ONIONS, DRY</b>
840	<b>SPINACH</b> FRESH MARKET
752	<b>WATERMELONS</b>

WISCONSIN	
903	<b>BEANS, SNAP</b> PROCESSING
808	<b>CABBAGE</b> FRESH MARKET
912	<b>CARROTS</b> PROCESSING
818	<b>CORN, SWEET</b> FRESH MARKET
918	PROCESSING
920	<b>CUCUMBERS</b> PROCESSING
732	<b>ONIONS, DRY</b>
935	<b>PEAS, GREEN</b> ( <i>exclude dried</i> ) PROCESSING

## NOTES

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WASHINGTON – CROP CODES	
701	<b>ASPARAGUS</b>
	<b>CARROTS</b>
912	PROCESSING
	<b>CORN, SWEET</b>
918	PROCESSING
732	<b>ONIONS, DRY</b>
	<b>PEAS, GREEN (exclude dried)</b>
935	PROCESSING
748	<b>STRAWBERRIES</b>

**NOTES**

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# FERTILIZER APPLICATIONS

**Enumerator Note---**  
 If column 4 of the table in Section B is YES for any crops, continue with item 1.  
 If column 4 of the table in Section B is NO for all crops, go to Section D, page 10.

1. I need to record complete information on all commercial fertilizers applied to the **target vegetables** grown during the 2014 crop year. Include all applications regardless of how they were applied (irrigation water, foliar applications, etc.). [Record amount of analysis of fertilizers applied or pounds of **actual plant nutrients** applied. Complete the table below (and any necessary supplemental fertilizer tables). Exclude micronutrients, lime, and gypsum.]

<b>OFFICE USE LINES IN TABLE</b>	<b>TABLE 001</b>	299
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LINE	1	2	3	4	5	6	7	8	9	10
	CROP	CROP CODE	NITROGEN N	PHOSPHATE P <sub>2</sub> O <sub>5</sub>	POTASH K <sub>2</sub> O	SULFUR S	How much was applied per acre per application?  [Leave this column blank if actual nutrients were reported.]	UNIT CODES 1 Pounds 12 Gallons 13 Quarts 15 Liquid Oz. 28 Dry Oz. 19 Actual Nutrients	How many acres was this applied to?  ACRES	How many times was it applied?  NUMBER
01			31	32	33	34	36	37	40	41
02			31	32	33	34	36	37	40	41
03			31	32	33	34	36	37	40	41
04			31	32	33	34	36	37	40	41
05			31	32	33	34	36	37	40	41
06			31	32	33	34	36	37	40	41
07			31	32	33	34	36	37	40	41
08			31	32	33	34	36	37	40	41
09			31	32	33	34	36	37	40	41
10			31	32	33	34	36	37	40	41
11			31	32	33	34	36	37	40	41
12			31	32	33	34	36	37	40	41
13			31	32	33	34	36	37	40	41
14			31	32	33	34	36	37	40	41
15			31	32	33	34	36	37	40	41
16			31	32	33	34	36	37	40	41
17			31	32	33	34	36	37	40	41

C

FERTILIZER APPLICATIONS

C

LINE	1	2	3	4	5	6	7	8	9	10
	CROP	CROP CODE	NITROGEN N	PHOSPHATE P <sub>2</sub> O <sub>5</sub>	POTASH K <sub>2</sub> O	SULFUR S	How much was applied per acre per application?  [Leave this column blank if actual nutrients were reported.]	UNIT CODES 1 Pounds 12 Gallons 13 Quarts 15 Liquid Oz. 28 Dry Oz. 19 Actual Nutrients	How many acres was this applied to?  ACRES	How many times was it applied?  NUMBER
18			31	32	33	34	36	37	40	41
19			31	32	33	34	36	37	40	41
20			31	32	33	34	36	37	40	41
21			31	32	33	34	36	37	40	41
22			31	32	33	34	36	37	40	41
23			31	32	33	34	36	37	40	41
24			31	32	33	34	36	37	40	41
25			31	32	33	34	36	37	40	41
26			31	32	33	34	36	37	40	41
27			31	32	33	34	36	37	40	41
28			31	32	33	34	36	37	40	41
29			31	32	33	34	36	37	40	41
30			31	32	33	34	36	37	40	41
31			31	32	33	34	36	37	40	41
32			31	32	33	34	36	37	40	41
33			31	32	33	34	36	37	40	41
34			31	32	33	34	36	37	40	41
35			31	32	33	34	36	37	40	41
36			31	32	33	34	36	37	40	41
37			31	32	33	34	36	37	40	41
38			31	32	33	34	36	37	40	41
39			31	32	33	34	36	37	40	41
40			31	32	33	34	36	37	40	41

D

## PESTICIDE APPLICATIONS

D

**[ENUMERATOR ACTION:** *If pesticides were reported in Section B, column 5, continue. Otherwise, skip to Section E.*]

1. Now I need to get complete information on all of the chemicals applied, including applications made by you and/or by custom applicators during the 2014 crop year to each of the **target vegetable crops** you grew. **Let's start with the first application to your [crop] since the 2013 crop year harvest.**

*[Complete the table for all chemical applications to the target vegetable crops. Use supplemental tables if necessary.]*

*(Include herbicides, insecticides, nematocides, miticides, fungicides, chemical thinners, growth regulators, microbial agents, pheromones, rodenticides, and soil fumigants. Exclude seed treatments, foliar applications of nutrients, and applications made to vegetables after harvest.)*

<b>OFFICE USE LINES IN TABLE</b>	<b>TABLE 001</b>	399
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CHEMICAL PRODUCT NAME	L I N E	1  CROP	2  CROP CODE	3  What products were applied to the [crop]?  [Enter product code.]	4  Was this product bought in liquid or dry form?  [Enter L or D.]	5  Was this part of a tank mix?  [If tank mix, enter line number of first product in mix.]
	01			61		63
	02			61		63
	03			61		63
	04			61		63
	05			61		63
	06			61		63
	07			61		63
	08			61		63
	09			61		63
	10			61		63
	11			61		63
	12			61		63
	13			61		63
	14			61		63
	15			61		63

*[For pesticides not listed in Respondent Booklet, specify---]*

Line No.	Pesticide Type <i>(Herbicide, Insecticide, Fungicide, etc.)</i>	Trade Name and Formulation	Form Purchased <i>(Liquid or Dry)</i>	EPA Reg. No.
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

# PESTICIDE APPLICATIONS

### CODES FOR COLUMN 8

1 POUNDS	30 GRAMS
12 GALLONS	40 KILOGRAMS
13 QUARTS	41 LITERS
14 PINTS	46 SPIRALS
15 OUNCES, LIQUID	47 PACKETS
28 OUNCES, DRY	50 OTHER ( <i>Specify _____</i> )

LINE	6	OR	7	8	9	10
	How much was applied per acre per application?		What was the total amount applied per application?	[Enter unit code from above.]  CODE	How many acres were treated with this product?  ACRES	When was it applied?  MM DD YY
01	65 . ____		73 . ____	74	77 . ____	83
02	65 . ____		73 . ____	74	77 . ____	83
03	65 . ____		73 . ____	74	77 . ____	83
04	65 . ____		73 . ____	74	77 . ____	83
05	65 . ____		73 . ____	74	77 . ____	83
06	65 . ____		73 . ____	74	77 . ____	83
07	65 . ____		73 . ____	74	77 . ____	83
08	65 . ____		73 . ____	74	77 . ____	83
09	65 . ____		73 . ____	74	77 . ____	83
10	65 . ____		73 . ____	74	77 . ____	83
11	65 . ____		73 . ____	74	77 . ____	83
12	65 . ____		73 . ____	74	77 . ____	83
13	65 . ____		73 . ____	74	77 . ____	83
14	65 . ____		73 . ____	74	77 . ____	83
15	65 . ____		73 . ____	74	77 . ____	83

[For pesticides not listed in Respondent Booklet, specify---]

Line No.	Pesticide Type <i>(Herbicide, Insecticide, Fungicide, etc.)</i>	Tradename and Formulation	Form Purchased <i>(Liquid or Dry)</i>	EPA Reg. No.
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____



D

**PESTICIDE APPLICATIONS**

D

CHEMICAL PRODUCT NAME	L I N E	1  CROP	2  CROP CODE	3 What products were applied to the [crop]?  [Enter product code.]	4 Was this product bought in liquid or dry form?  [Enter L or D.]	5 Was this part of a tank mix?  [If tank mix, enter line number of first product in mix.]
	16			61		63
	17			61		63
	18			61		63
	19			61		63
	20			61		63
	21			61		63
	22			61		63
	23			61		63
	24			61		63
	25			61		63
	26			61		63
	27			61		63
	28			61		63
	29			61		63
	30			61		63
	31			61		63
	32			61		63
	33			61		63

[For pesticides not listed in Respondent Booklet, specify---]

Line No.	Pesticide Type (Herbicide, Insecticide, Fungicide, etc.)	Trade Name and Formulation	Form Purchased (Liquid or Dry)	EPA Reg. No.
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

D

**PESTICIDE APPLICATIONS**

D

**CODES FOR COLUMN 8**

1 POUNDS	30 GRAMS
12 GALLONS	40 KILOGRAMS
13 QUARTS	41 LITERS
14 PINTS	46 SPIRALS
15 OUNCES, LIQUID	47 PACKETS
28 OUNCES, DRY	50 OTHER ( <i>Specify</i> )

LINE	6	OR	7	8	9	10
	How much was applied per acre per application?		What was the total amount applied per application?	[Enter unit code from above.]  CODE	How many acres were treated with this product?  ACRES	When was it applied?  MM DD YY
16	65 . ____		73 . ____	74	77 . ____	83
17	65 . ____		73 . ____	74	77 . ____	83
18	65 . ____		73 . ____	74	77 . ____	83
19	65 . ____		73 . ____	74	77 . ____	83
20	65 . ____		73 . ____	74	77 . ____	83
21	65 . ____		73 . ____	74	77 . ____	83
22	65 . ____		73 . ____	74	77 . ____	83
23	65 . ____		73 . ____	74	77 . ____	83
24	65 . ____		73 . ____	74	77 . ____	83
25	65 . ____		73 . ____	74	77 . ____	83
26	65 . ____		73 . ____	74	77 . ____	83
27	65 . ____		73 . ____	74	77 . ____	83
28	65 . ____		73 . ____	74	77 . ____	83
29	65 . ____		73 . ____	74	77 . ____	83
30	65 . ____		73 . ____	74	77 . ____	83
31	65 . ____		73 . ____	74	77 . ____	83
32	65 . ____		73 . ____	74	77 . ____	83
33	65 . ____		73 . ____	74	77 . ____	83

[For pesticides not listed in Respondent Booklet, specify---]

Line No.	Pesticide Type (Herbicides, Insecticides, Fungicides, etc.)	Trade name and Formulation	Form Purchased (Liquid or Dry)	EPA Reg. No.
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

D

## PESTICIDE APPLICATIONS

D

[ENUMERATOR ACTION: *If pesticides were reported in Section B, column 5, continue. Otherwise, skip to Section E.*]

1. Now I need to get complete information on all of the chemicals applied, including applications made by you and/or by custom applicators during the 2014 crop year to each of the **target vegetable crops** you grew. **Let's start with the first application to your [crop] since the 2013 crop year harvest.**

[Complete the table for all chemical applications to the target vegetable crops. Use supplemental tables if necessary.]

(**Include** herbicides, insecticides, nematocides, miticides, fungicides, chemical thinners, growth regulators, microbial agents, pheromones, rodenticides, and soil fumigants. **Exclude** seed treatments, foliar applications of nutrients, and applications made to vegetables after harvest.)

<b>OFFICE USE LINES IN TABLE</b>	<b>TABLE 001</b>	399
--------------------------------------	----------------------	-----

	L I N E	1  CROP	2  CROP CODE	3  What products were applied to the [crop]?  [Enter product code.]	4  Was this product bought in liquid or dry form?  [Enter L or D.]	5  Was this part of a tank mix?  [If tank mix, enter line number of first product in mix.]
	01			61		63
	02			61		63
	03			61		63
	04			61		63
	05			61		63
	06			61		63
	07			61		63
	08			61		63
	09			61		63
	10			61		63
	11			61		63
	12			61		63
	13			61		63
	14			61		63
	15			61		63

[For pesticides not listed in Respondent Booklet, specify---]

Line No.	Pesticide Type <small>(Herbicide, Insecticide, Fungicide, etc.)</small>	Trade Name and Formulation	Form Purchased <small>(Liquid or Dry)</small>	EPA Reg. No.
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

# PESTICIDE APPLICATIONS

### CODES FOR COLUMN 8

1 POUNDS	14 PINTS	30 GRAMS	46 SPIRALS
12 GALLONS	15 OUNCES, LIQUID	40 KILOGRAMS	47 PACKETS
13 QUARTS	28 OUNCES, DRY	41 LITERS	50 OTHER ( <i>Specify _____</i> )

L I N E	6	OR	7	8	9	10
	How much was applied per acre per application?		What was the total amount applied per application?	[Enter unit code from above.]  CODE	How many acres were treated with this product?  ACRES	How many times was it applied?  NUMBER
01	65 . ____		73 . ____	74	77 . ____	79
02	65 . ____		73 . ____	74	77 . ____	79
03	65 . ____		73 . ____	74	77 . ____	79
04	65 . ____		73 . ____	74	77 . ____	79
05	65 . ____		73 . ____	74	77 . ____	79
06	65 . ____		73 . ____	74	77 . ____	79
07	65 . ____		73 . ____	74	77 . ____	79
08	65 . ____		73 . ____	74	77 . ____	79
09	65 . ____		73 . ____	74	77 . ____	79
10	65 . ____		73 . ____	74	77 . ____	79
11	65 . ____		73 . ____	74	77 . ____	79
12	65 . ____		73 . ____	74	77 . ____	79
13	65 . ____		73 . ____	74	77 . ____	79
14	65 . ____		73 . ____	74	77 . ____	79
15	65 . ____		73 . ____	74	77 . ____	79

[For pesticides not listed in Respondent Booklet, specify---]

Line No.	Pesticide Type <i>(Herbicide, Insecticide, Fungicide, etc.)</i>	Tradename and Formulation	Form Purchased <i>(Liquid or Dry)</i>	EPA Reg. No.
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

**D PESTICIDE APPLICATIONS**

**D**

CHEMICAL PRODUCT NAME	L I N E	1  CROP	2  CROP CODE	3 What products were applied to the [crop]?  [Enter product code.]	4 Was this product bought in liquid or dry form?  [Enter L or D.]	5 Was this part of a tank mix?  [If tank mix, enter line number of first product in mix.]
	16			61		63
	17			61		63
	18			61		63
	19			61		63
	20			61		63
	21			61		63
	22			61		63
	23			61		63
	24			61		63
	25			61		63
	26			61		63
	27			61		63
	28			61		63
	29			61		63
	30			61		63
	31			61		63
	32			61		63
	33			61		63

[For pesticides not listed in Respondent Booklet, specify---]

Line No.	Pesticide Type (Herbicide, Insecticide, Fungicide, etc.)	Trade Name and Formulation	Form Purchased (Liquid or Dry)	EPA Reg. No.
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

D

# PESTICIDE APPLICATIONS

D

## CODES FOR COLUMN 8

1 POUNDS	14 PINTS	30 GRAMS	46 SPIRALS
12 GALLONS	15 OUNCES, LIQUID	40 KILOGRAMS	47 PACKETS
13 QUARTS	28 OUNCES, DRY	41 LITERS	50 OTHER ( <i>Specify</i> _____)

LINE	6	OR	7	8	9	10
	How much was applied per acre per application?		What was the total amount applied per application?	[Enter unit code from above.]  CODE	How many acres were treated with this product?  ACRES	How many times was it applied?  NUMBER
16	65 . ____		73 . ____	74	77 . ____	79
17	65 . ____		73 . ____	74	77 . ____	79
18	65 . ____		73 . ____	74	77 . ____	79
19	65 . ____		73 . ____	74	77 . ____	79
20	65 . ____		73 . ____	74	77 . ____	79
21	65 . ____		73 . ____	74	77 . ____	79
22	65 . ____		73 . ____	74	77 . ____	79
23	65 . ____		73 . ____	74	77 . ____	79
24	65 . ____		73 . ____	74	77 . ____	79
25	65 . ____		73 . ____	74	77 . ____	79
26	65 . ____		73 . ____	74	77 . ____	79
27	65 . ____		73 . ____	74	77 . ____	79
28	65 . ____		73 . ____	74	77 . ____	79
29	65 . ____		73 . ____	74	77 . ____	79
30	65 . ____		73 . ____	74	77 . ____	79
31	65 . ____		73 . ____	74	77 . ____	79
32	65 . ____		73 . ____	74	77 . ____	79
33	65 . ____		73 . ____	74	77 . ____	79

[For pesticides not listed in Respondent Booklet, specify---]

Line No.	Pesticide Type (Herbicides, Insecticides, Fungicides, etc.)	Trade name and Formulation	Form Purchased (Liquid or Dry)	EPA Reg. No.
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

# E PEST MANAGEMENT PRACTICES E

Now I have some questions about pest management practices you may have used on any of the **total vegetable acres** on this operation. *(Include both target and non-target vegetable crops grown.)*  
**By pests, we mean insects, weeds, and diseases.**

**1. [Enumerator Action: Were PESTICIDE APPLICATIONS reported in Section B, column 5 on page 5?]**

- YES** - [Continue.]                       **No** - [Go to item 5.]

		CODE
2. Was weather data used to assist in determining either the need or when to make pesticide applications? .....	YES = 1	600
3. Were any biological pesticides such as Bt ( <i>Bacillus thuringiensis</i> ), insect growth regulators ( <i>Courier, intrepid, etc.</i> ), neem or other natural/biological based products sprayed or applied to manage pests? .....	YES = 1	601
4. Were pesticides with different mechanisms of action rotated or tank mixed for the primary purpose of keeping pests from becoming resistant to pesticides? .....	YES = 1	602
5. In 2014, how were your vegetable acres primarily scouted for insects, weeds, diseases and/or beneficial organisms? .....		
1 By deliberately going to the vegetable acres specifically for scouting activities. <i>(Enter code 1 and go to item 6.)</i> 2 By conducting general observations while performing routine tasks. <i>(Enter code 2 and go to item 8.)</i> 3 The vegetable acres were not scouted. <i>(Enter code 3 and go to item 11.)</i>	.....	608
6. Was an established scouting process used ( <i>systemic sampling, recording counts, insect traps, etc.</i> ) on any vegetable acres? .....	YES = 1	609
7. Was scouting for pests done on these vegetable acres due to---		
a. a pest advisory warning? .....	YES = 1	610
b. a pest development model? .....	YES = 1	611

1		2 [If column 1 is YES, ask---] <b>Who did the majority of the scouting for [column 1]—</b>
8. Were your vegetable acres scouted for ---	YES = 1	CODE
a. weeds? .....	612	614
b. insects and mites? .....	615	617
c. disease? .....	618	620

- 1 Operator, partner or family member
- 2 An employee
- 3 Farm supply or chemical dealer
- 4 Independent crop consultant or commercial scout
- 5 Processor
- 6 Other (*specify:* \_\_\_\_\_ )

**E PEST MANAGEMENT PRACTICES**

**E**

		CODE
9.	Were written or electronic records kept to track the activity or numbers of weeds, insects or diseases? . . . . .	YES = 1 <input type="text" value="623"/>
10.	Was scouting data compared to published information on infestation thresholds to determine when to take measures to manage pests? . . . . .	YES = 1 <input type="text" value="624"/>
11.	Was field mapping data used for making pest management decisions? . . . . .	YES = 1 <input type="text" value="625"/>
12.	Were the services of a diagnostic laboratory used for pest identification or soil or plant tissue pest analysis? . . . . .	YES = 1 <input type="text" value="626"/>
13.	Were crop residues plowed down or removed to manage pests? . . . . .	YES = 1 <input type="text" value="627"/>
14.	Were crops rotated during the past three years for the purpose of managing pests? . . . . .	YES = 1 <input type="text" value="628"/>
15.	Were ground covers, mulches, or other physical barriers maintained to manage pest problems? . . . . .	YES = 1 <input type="text" value="629"/>
16.	Was a crop variety chosen because it had resistance to a specific pest? . . . . .	YES = 1 <input type="text" value="630"/>
17.	Was no-till or minimum till used to manage pests? . . . . .	YES = 1 <input type="text" value="631"/>
18.	Were planting locations planned to avoid infestation of pests? . . . . .	YES = 1 <input type="text" value="632"/>
19.	Were planting or harvesting dates adjusted to manage pests? . . . . .	YES = 1 <input type="text" value="633"/>
20.	Were row spacing or plant density adjusted to manage pests? . . . . .	YES = 1 <input type="text" value="634"/>
21.	Was a trap crop grown to help manage insects? . . . . .	YES = 1 <input type="text" value="635"/>
22.	Were any beneficial organisms ( <i>insects, nematodes, fungi</i> ) applied or released to manage pests? . . . . .	YES = 1 <input type="text" value="636"/>
23.	Were floral lures, attractants, repellants, pheromone traps or other biological pest controls used on any vegetable acres? . . . . .	YES = 1 <input type="text" value="637"/>
24.	Were any vegetable acres cultivated for weed control during the growing season? . . . . .	YES = 1 <input type="text" value="640"/>
25.	Were field edges, lanes, ditches, roadways or fence lines chopped, mowed, plowed, or burned to manage pests on any vegetable acres? . . . . .	YES = 1 <input type="text" value="642"/>
26.	Were equipment and implements cleaned after completing field work to reduce the spread of pests? . . . . .	YES = 1 <input type="text" value="643"/>
27.	Were any vegetable acres irrigated for the 2014 crops? . . . . .	YES = 1 <input type="text" value="644"/>
a.	[If item 27 = YES, ask--] Were water management practices (excluding chemigation) such as irrigation scheduling, controlled drainage, or treatment of retention water used to manage pests? . . . . .	YES = 1 <input type="text" value="645"/>

COMPLETION CODE for FERTILIZER APPLICATIONS	
1 Incomp/R 3 Valid Zero	200

COMPLETION CODE for PESTICIDE APPLICATIONS	
1 Incomp/R 3 Valid Zero	300

COMPLETION CODE for PEST MANAGEMENT PRACTICES	
1 Incomp/R	500



# F MICROBIAL FOOD SAFETY PRACTICES F

The next few pages contain questions that ask about your operation's total produce acreage, in addition to the fruit covered previously, regardless of the state where that acreage is located. **Exclude** any acreage outside of the U.S. For the purposes of this part of the survey, produce **includes**: fruit, berries, vegetables, herbs, tree nuts, dry beans, peas and lentils, peanuts, sprouts, and mushrooms. These questions only ask about food safety practices with respect to microbial contamination.

1. In 2015, how many acres on your operation were used to grow **produce**? (**Include** each acre only once even if multiple crops were grown on it.) . . . . .
2. Including multi-cropped acres, how many total acres of **produce** were grown on your operation in 2015? . . . . .
3. What produce crops grown on your operation made up the most acreage in 2015, and how were they sold? Report the top five crops starting first with the one that made up the most acreage in row (a).

Acres
xxx _____
xxx _____

1 Crop	2 Acres  (include multi-cropped acres) (Number)	3 Direct-to-Consumer Sales  (Percent)	Non Direct-to-Consumer Sales			
			4 Fresh market  (Percent)	5 Fresh-cut market  (Percent)	6 Processed market  (Percent)	
xxx a.	xxx	xxx %	xxx %	xxx %	xxx %	100%
xxx b.	xxx	xxx %	xxx %	xxx %	xxx %	100%
xxx c.	xxx	xxx %	xxx %	xxx %	xxx %	100%
xxx d.	xxx	xxx %	xxx %	xxx %	xxx %	100%
xxx e.	xxx	xxx %	xxx %	xxx %	xxx %	100%

4. Over the last three years, 2012-2014, what was your operation's **average** annual gross value of all produce sales?  
xxx  
 1  Less than \$25,000      4  \$500,000 to \$999,999      7  \$10,000,000 to \$19,999,999  
 2  \$25,000 to \$249,999      5  \$1,000,000 to \$4,999,999      8  \$20,000,000 to \$39,999,999  
 3  \$250,000 to \$499,999      6  \$5,000,000 to \$9,999,999      9  \$40,000,000 and above

**[If the value of sales reported in Item 4 is less than \$500,000, continue; otherwise go to Item 6]**

5. Over the last three years, 2012-2014, was your operation's average annual gross value of **food sales** (including your produce sales) less than \$500,000? Food includes articles used for food or drink for humans or other animals. . . . . xxx  
 1  Yes      3  No

6. In 2015, how many of your operation's produce acres were either certified organic or in transition to become certified? . . . . .  
 None       Acres 

xxx _____
--------------

7. In 2015, were **commercial** livestock located adjacent to your produce acreage on land:
  - a. You operate? (**Include** livestock on your produce acreage) . . . . . xxx 1  Yes      3  No
  - b. Someone else operates? . . . . . xxx 1  Yes      3  No

**F MICROBIAL FOOD SAFETY PRACTICES**

**F**

8. In 2015, which of the following activities were completed for your operation's produce and where were they done?

1 Activity	2 On your produce operation	3 Off your produce operation	4 Did you have an ownership interest in this activity?
YES = 1	YES = 1	YES = 1	YES = 1
a. U-Pick	xxx	xxx	xxx
b. Harvest	xxx	xxx	xxx
c. Field Pack	xxx	xxx	xxx
d. Pack (other than field pack)	xxx	xxx	xxx
e. Cool	xxx	xxx	xxx
f. Wash	xxx	xxx	xxx
g. Hold/Store/Warehouse	xxx	xxx	xxx
h. Fresh Cut	xxx	xxx	xxx
i. Other processing (freezing, canning, juicing)	xxx	xxx	xxx

9. Excluding any direct-to-consumer sales, do you sell your own produce to retailers, foodservice, wholesalers, terminal markets, etc, instead of letting another firm (shipper, sales agent, marketer, etc.) sell for you? . . . . . xxx  
 1  Yes 3  No

10. Do you have a food safety plan that covers your produce operation in 2015?

xxx  
 1  Yes – Continue 3  No – Go to Item 12

a. Is the food safety plan written?. . . . . xxx  
 1  Yes 3  No

11. In 2015, did your food safety plan cover all of your produce commodities?

xxx 1  Yes – Go to Item 12  
 2  No – Continue

a. How many different food safety plans did you have for your produce commodities in 2015? . . . . .

**Plans**  
 xxx

12. Did you have any third party food safety audits that covered your produce operation in 2015?

xxx 1  Yes – Go to Item 13 3  No – Continue

a. What was the most recent year you had a third party food safety audit that covered your produce operation? Then go to Item 16 . . .

**N/A** **Year (YYYY)**  
 xxx

**F MICROBIAL FOOD SAFETY PRACTICES**

**F**

13. Which of the following types of microbial third party food safety audits covered your produce operation in 2015?

- a. Produce farm/ranch (field) audit. . . . . xxx 1  Yes 3  No
- b. Produce harvesting crew. . . . . xxx 1  Yes 3  No
- c. Produce packinghouse. . . . . xxx 1  Yes 3  No
- d. Produce cooler. . . . . xxx 1  Yes 3  No
- e. Other (Specify: xxx \_\_\_\_\_). . . . . xxx 1  Yes 3  No

14. How many of the following types of third party food safety audits covered your produce operation in 2015?

- |   | None                     | Number |
|---|--------------------------|--------|
| a. Global Food Safety Initiative benchmark audit (Primus GFS, Safe Quality Food (SQF), Global Gaps, Canada Gap, British Retail Consortium (BRC)). . . . . | <input type="checkbox"/> | xxx    |
| b. Other general private audit that is not benchmarked to the Global Food Safety Initiative (Primus, AIB, SCS, etc.). . . . .                             | <input type="checkbox"/> | xxx    |
| c. Addendum to standard audit for a particular buyer or processor. . . . .  | <input type="checkbox"/> | xxx    |
| d. Stand-alone buyer-specific audit you pay for (excluding addendum). . . . .   | <input type="checkbox"/> | xxx    |
| e. California or Arizona Leafy Greens Marketing Agreement audit . . . . .   | <input type="checkbox"/> | xxx    |
| f. California Cantaloupe Advisory Board food safety standard audit . . . . .  | <input type="checkbox"/> | xxx    |
| g. Tomato Food Safety Audit Protocol . . . . .  | <input type="checkbox"/> | xxx    |
| h. USDA audit service which may be administered by a State Department of Agriculture (GAP's, GHP's, Harmonized Gaps, or others). . . . .                  | <input type="checkbox"/> | xxx    |
| i. Other (Specify: xxx _____). . . . .  | <input type="checkbox"/> | xxx    |

15. What was the total amount you paid for the third party food safety audits that covered your produce 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
-----

**F MICROBIAL FOOD SAFETY PRACTICES**

**F**

16. Which of the following types of water were used during the production, harvest, and post-harvest activities of your operation's produce in 2015? Use the response codes listed in the table at the bottom of the page.

1		2	3	4	5
Water Use		What was the <b>largest</b> source (in terms of volume) of water used for this activity?  (See column 2 code below)	How often did you test the water from this source in 2015 for microbial content (generic <i>E. coli</i> or other indicator)? If code 7 or 8, go to column 5.  (See column 3 code below)	What water standard did you consider acceptable?  (See column 4 code below)	What did you use to treat this water in 2015?  (See column 5 code below)
	<b>YES = 1</b>				
a. Water used during production that <b>does not touch</b> the harvested part of the crop (furrow, drip, flood irrigation, etc.)	xxx	xxx	xxx	xxx	xxx
b. Water used during production that <b>touches</b> the harvested part of the crop (overhead irrigation; pesticide/fungicide applications; frost protection, etc.)	xxx	xxx	xxx	xxx	xxx
c. Water used for harvest and post-harvest activities (including packing) where water <b>touches</b> the produce or a food contact surface (hydrating, washing or cooling produce; cleaning food contact surfaces on tools or machinery)	xxx	xxx	xxx	xxx	xxx

RESPONSE CODES			
Column 2	Column 3	Column 4	Column 5
Water Source Code	Frequency of Testing During 2015 Code	Water Test Standard Code	Water Treatment Code
1 Standing surface water (ponds, lakes, reservoirs) 2 Flowing surface water (rivers, canals, streams, irrigation ditches) 3 Ground water (wells) 4 Public water system with potable water 5 Treated waste water 6 Reclaimed tail water 7 Don't know 8 Other: (Specify: _____)	1 Once a year 2 Once every <b>four</b> months 3 Once every <b>three</b> Months 4 Once every <b>two</b> months 5 Once every month 6 More often than once a month 7 Water is never tested 8 N/A – Rely on someone else's tests of this operation's water 9. Don't know 10 Other: (Specify: _____)	1 Normal or expected range based on historic water samples 2 EPA Recreational Water Standard (1986 or 2012 standard) 3 Leafy Greens Marketing Agreement (LGMA) standard for water that does not touch the harvested part of the crop 4 Maximum of 1,000 <i>E. coli</i> CFU/mL 5 Maximum of 500 <i>E. coli</i> CFU/mL 6 EPA drinking water standard which is no generic <i>E. coli</i> 7 Reclaimed water standard 8. Don't know 9. Other: (Specify: _____)	1 Chemical 2 Ultra violet light 3 Filtration 4 N/A – didn't treat 5 Don't know 6 Other (Specify: _____)

# F MICROBIAL FOOD SAFETY PRACTICES F

**[If water tests were reported in Item 16, column 3 (codes 1, 2, 3, 4, 5, 6, 10), or water treatments in column 5 (codes, 1, 2, 3, 6) continue; otherwise go to Item 20]**

**For Items 17, 18, and 19, please consider all of the water sources used on your produce operation, not just the largest source of water.**

17. How many total water tests for microbial contamination were conducted, or do you expect to have, conducted, on your produce operation in 2015? (**Include** all tests on **all** water sources). . . . .

Number  
xxx

18. What will be the total cost of all water tests on **all** water sources conducted for microbial contamination on your produce operation in 2015? (**Include** lab costs, material costs (vials, etc.), labor, and transportation costs.) . . . . .

Dollars  
xxx

19. What will be the total costs in 2015 for water **treatments**? **Include** supplies, other treatment costs, and labor. . . . .

Dollars  
xxx

20. Were any of the following animal manure products applied to the produce acreage on your operation in 2015?

1  Manure Product		2  Is the compost made using a method validated by a scientifically recognized, controlled microbial process that is actively managed and meets time/temperature requirements from EPA?	3  What documentation do you have to indicate the microbial content of your manure products or the process used to produce it?  Check all that apply
a. Composted manure <b>made on your farm</b>	xxx YES = 1	xxx 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No 2 <input type="checkbox"/> Don't know	xxx <input type="checkbox"/> Time/temperature measurements xxx <input type="checkbox"/> Microbial testing results xxx <input type="checkbox"/> Other xxx <input type="checkbox"/> None
b. Composted manure <b>purchased from others</b>	xxx	xxx 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No 2 <input type="checkbox"/> Don't know	xxx <input type="checkbox"/> Time/temperature measurements xxx <input type="checkbox"/> Microbial testing results xxx <input type="checkbox"/> Certificate of Conformance xxx <input type="checkbox"/> Certificate of Analysis xxx <input type="checkbox"/> Approved by an organic certifying agent xxx <input type="checkbox"/> Other xxx <input type="checkbox"/> None
c. Manure treated with a physical or chemical process (pasteurization, heat drying, alkali stabilization, etc.)	xxx		xxx <input type="checkbox"/> Time/temperature measurements xxx <input type="checkbox"/> Microbial testing results xxx <input type="checkbox"/> Certificate of Conformance xxx <input type="checkbox"/> Certificate of Analysis xxx <input type="checkbox"/> Approved by an organic certifying agent xxx <input type="checkbox"/> Other xxx <input type="checkbox"/> None
d. Decomposed manure (stored or aged in stacks)	xxx		xxx <input type="checkbox"/> Microbial testing results xxx <input type="checkbox"/> Other xxx <input type="checkbox"/> None
e. Raw manure	xxx		xxx <input type="checkbox"/> Microbial testing results xxx <input type="checkbox"/> Other xxx <input type="checkbox"/> None

21. In 2015, was a pre-harvest assessment of the produce acres done within 3 days of harvest in order to identify potential microbial contamination problems? . . . . .  Yes  No

**F MICROBIAL FOOD SAFETY PRACTICES F**

22. How many days long was the produce **harvest** season in 2015? . . . . . xxx

23. In 2015, did this operation pack or package any produce?

xxx 1  Yes - Continue 3  No – Go to Item 24

a. How many days long was the produce **packing** season in 2015? . . . . . xxx

Days

b. In 2015, did this operation pack or package produce in the field? . . . . . xxx 1  Yes 3  No

c. 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 24

d. 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.
- 2  A roof and a floor, such as a concrete slab
- 3  A floor, roof, and some walls or screening but not an enclosed structure
- 4  Enclosed structure with openings, such as unscreened doors or windows
- 5  Completely enclosed structure
- 6  Other (Specify: xxx \_\_\_\_\_)

24. Which of the following types of items that touched this crop during the 2015 season were used on this produce operation? How often were the items cleaned and sanitized? **Exclude** items used during harvest or postharvest if this crop was custom harvested or packed by someone else.

1 Item that TOUCHES the crop  <b>YES = 1</b>	xxx	2 How often is this item <b>cleaned</b> ? [Use Frequency Code table below]  (Code)	3 How often is this item <b>sanitized (disinfected)</b> ? [Use Frequency Code table below]  (Code)	4 Does this item contain any food contact surface made of foam, paper, cardboard, wood, carpeting, or canvas?
a. Tools used for harvesting and/or field packing	xxx	xxx	xxx	xxx 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No 2 <input type="checkbox"/> Don't know
b. Machinery used for harvesting and/or field packing	xxx	xxx	xxx	xxx 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No 2 <input type="checkbox"/> Don't know
c. Tools used during packing or handling in a packing house	xxx	xxx	xxx	xxx 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No 2 <input type="checkbox"/> Don't know
d. Fixed machinery and work surfaces in post-harvest handling (mechanical sorter, work surface, dunk tanks, flumes, etc.)	xxx	xxx	xxx	xxx 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No 2 <input type="checkbox"/> Don't know
e. Reusable containers or bins used during harvest	xxx	xxx	xxx	xxx 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No 2 <input type="checkbox"/> Don't know
f. Reusable containers or bins used <b>only</b> to transport the crop from the field to a packinghouse	xxx	xxx	xxx	xxx 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No 2 <input type="checkbox"/> Don't know

**Frequency Code**

1 - Daily 2 - Weekly 3 - Monthly 4 - Once a season 5 - N/A 6 - Never 7 – Other: (Specify \_\_\_\_\_)

**F MICROBIAL FOOD SAFETY PRACTICES**

**F**

25. In 2015, what will be the total cost of cleaning and sanitizing the items in Item 25? None  
**Include** supplies and labor. . . . .  Dollars  
xxx

26. In 2015, did your operation have a designated person with the primary responsibility for microbial food safety?  
 xxx 1  Yes - Continue 3  No – Go to Item 27

a. What percent of this person’s daily time was spent on food safety in 2015? . . . . . Percent  
xxx

27. In 2015, how many other people (excluding the one reported in Item 26) were on your microbial food safety staff? **Exclude** managers and others who have only a small share of their time on food safety and are not primarily responsible for day-to-day food safety on your operation. **Exclude** people only involved in food quality or quality assurance activities.. . . . . Number  
xxx

**[If Item 27 equals zero, go to Item 28; otherwise continue.]**

a. Of the (item 27) people on your food safety staff, how many were working full time on microbial food safety during the season? . . . . . Number  
xxx

28. In 2015, did you hire an outside microbial food safety consultant to develop or implement your food safety plan? . . . . . xxx 1  Yes 3  No

29. Which of the following types of people were used to harvest produce on your operation in 2015?

1  People		2 How many of these people were used to harvest produce on your operation in 2015?  (Number)	3 How many of these people were trained on microbial food safety by your operation in 2015? If contract crews are trained by someone else, exclude them.  [If zero, go to column 5]  (Number)	4 What was the average number of minutes of microbial food safety training that your operation provided for these people in 2015?  (Number)	5 What were the total training costs for visual aids, signage, notebooks, software packages, and hired trainers (instead of your own staff trainers), etc. for these people? Include costs to instruct customers at u-pick operations about safety while on your operation.  (Dollars)
a. Customer (e.g. Pick-your-own)	xxx	xxx	xxx	xxx	xxx
b. Unpaid labor including family and volunteers	xxx	xxx	xxx	xxx	xxx
c. Direct hire	xxx	xxx	xxx	xxx	xxx
d. Contract harvest crew	xxx	xxx	xxx	xxx	xxx

**F**

30. During the 2015 produce harvest season, did your operation provide toilets or handwashing sinks within one-quarter mile of the produce field for those harvesting produce? **Include** portable facilities in the field, access to facilities in nearby buildings, and facilities for u-pick operations.

1 Facility  YES = 1	xxx	2 During the 2015 produce harvest season, how many of each facility were provided to harvesters within one-quarter mile of the produce field? (Number)	3 For how many days were these facilities provided to people harvesting produce? (Number)
a. Toilet/Port-a-potty	xxx	xxx	xxx
b. Hand washing sink	xxx	xxx	xxx

31. Which of the following methods were used on your produce operation **to reduce the potential of uncontrolled water runoff** into the produce fields in 2015? *Check all that apply.*

- xxx  Ditch
- xxx  Berm
- xxx  Vegetative buffer strip
- xxx  Evaporation pond
- xxx  Retention system or retention pond
- xxx  Drainage system
- xxx  Other (Specify: xxx \_\_\_\_\_)

32. In 2015, did you monitor your field to check for potential animal intrusion? . . . . . xxx 1  Yes 3  No

33. Which of the following methods were used on your produce operation **to reduce potential animal intrusion** into the produce fields in 2015? *Check all that apply.*

- xxx  Put up fencing around the fields
- xxx  Put up fencing around standing surface water
- xxx  Remove animal harborage and attractants (removing excess brush, old equipment, and cull piles)
- xxx  Trap or shoot animals
- xxx  Employ animal deterrents such as noise makers (including gunfire), Mylar strips, fake owls or coyotes, and repellants
- xxx  Clear a buffer zone around your field to increase your ability to detect animal intrusion
- xxx  Other (Specify: xxx \_\_\_\_\_)

34. Have you heard of the Food Safety Modernization Act (FSMA) Proposed Rule for Produce Safety?

- xxx  
1  Yes - Continue 3  No – Go to Section G

35. Which of the following sources have you used for information on the Food Safety Modernization Act (FSMA) Proposed Rule for Produce Safety? *Check all that apply.*

- xxx  Produce/agricultural news
- xxx  The FSMA legislation or proposed rules
- xxx  FDA listening sessions, public meetings, webinar, or FSMA website
- xxx  Produce Safety Alliance
- xxx  University training/extension/education meetings
- xxx  Commodity organization training/education meetings.
- xxx  Neighbors or other growers
- xxx  Other (Specify: xxx \_\_\_\_\_)



## CONCLUSION

### SURVEY RESULTS

1. To receive the complete results of this survey on the release date, go to [www.nass.usda.gov/results/](http://www.nass.usda.gov/results/). Would you rather have a brief summary mailed to you at a later date? ..... **YES = 1** CODE  
9990

*[Thank the respondent, then review this questionnaire.]*

**ENDING TIME [MILITARY].** ..... 005

**OFFICE USE  
TIME IN HOURS**

006

### RECORD USE

Did respondent use operation records to report pesticide data? ..... **YES = 1** CODE  
064

### SUPPLEMENT USE

Record the total number of supplements used to complete this interview.

Fertilizer Supplements ..... NUMBER  
067

Pesticide Supplements ..... 068

Reported by: _____	9910 M M D D Y Y	9911 Telephone: _____
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OFFICE USE									
R. Unit	Ptr 1 Str	Ptr 2 Str	Ptr 3 Str	Ptr 4 Str	OPS	SSO 1	ADJ	Optional Use	
9921	9922	9923	9927	9928	923	9907	922	9906	9916
Response		Respondent		Mode		Enum.	POID		
1-Comp 2-R 3-Inac 4-Office Hold	9901	1-Op/Mgr 2-Sp 3-Acct/Bkpr 4-Partner 9-Other	9902	2-Tel 3-Face-to-Face	9903	9998	9989		
							Eval.		Change
							9900	9985	