

# 2017 FRUIT CHEMICAL USE SURVEY

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ENTERPRISE

<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. Your responses will be kept confidential and any person who willfully discloses ANY identifiable information about you or your operation is subject to a jail term, a fine, or both. This survey is conducted in accordance with the Confidential Information Protection provisions of Title V, Subtitle A, Public Law 107-347 and other applicable Federal laws. For more information on how we protect your information please visit: <https://www.nass.usda.gov/confidentiality>. Response to this survey 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 45 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 farm records during the interview.

004 _____
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**BEGINNING TIME [MILITARY].** .....

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

1. During 2017, were any crops (**including** new plantings), livestock or poultry on the total acres operated? (**Exclude** crops produced by a tenant if [target] operator is landlord only.) .....  **YES** – [Go to item 1, page 2.]  **NO**-[Continue.]
2. During 2017, did this operation sell any agricultural products or receive government agricultural payments? (**Exclude** crops produced by a tenant if [target] operator is landlord only.) .....  **YES** - [Go to item 1, page 2.]  **NO**-[Continue.]
3. During 2017, were any crops stored on the total acres operated? (**Exclude** crops produced by a tenant if [target] operator is landlord only.) .....  **YES** - [Go to item 1, page 2.]  **NO**-[Continue.]
4. During 2017, did this operation have any fruit acres which were operated by a **management firm**? .....  **YES** - [Go to item 1, page 2.]  **NO**-[Go to page 4.]

## SCREENING

1. Did this operation have any of the target crops during the 2017 crop year?

**YES** - [Continue.]

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

**Notes**

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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 with questions 3 and 4.]

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**

--

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

## TARGET CROPS & CODES

---

### FLORIDA

320 Grapefruit  
335 Oranges, All  
349 Tangerines (*including Tangelos*)

### NEW YORK

301 Apples  
314 Cherries, Tart  
324 Grapes, All

### SOUTH CAROLINA

340 Peaches

### GEORGIA

309 Blueberries  
340 Peaches

### NORTH CAROLINA

301 Apples  
309 Blueberries

### TEXAS

320 Grapefruit  
340 Peaches

### MICHIGAN

301 Apples  
309 Blueberries  
312 Cherries, Sweet  
314 Cherries, Tart  
340 Peaches

### OREGON

301 Apples  
307 Blackberries  
309 Blueberries  
312 Cherries, Sweet  
520 Pears  
345 Raspberries

### WASHINGTON

301 Apples  
309 Blueberries  
312 Cherries, Sweet  
314 Cherries, Tart  
322 Grapes, Juice  
624 Grapes, Wine  
520 Pears  
345 Raspberries

### NEW JERSEY

309 Blueberries  
340 Peaches

### PENNSYLVANIA

301 Apples  
340 Peaches

## 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 (_____) _____
--

[ENUMERATOR NOTE: If the operation on the face page was in business part of the 2017 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.]

**A**

**LAND OPERATED**

**A**

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 in fruit?  
(**Include** bearing and non-bearing acreage in trees, vineyards and bushes.)..... 

803	_____
-----	-------

**B**

**FRUIT ACREAGE**

**B**

1. What **target fruit crops** were on these [Section A, item 4] acres during the 2017 crop year? (**Exclude** new plantings and other plantings which are not yet bearing.)

TABLE 001	
OFFICE USE LINES IN TABLE	
LINE 99	199

L I N E	1	2	3	6
	CROP	CROP CODE	How many BEARING acres of [crop] did this operation have?  ACRES	Were any herbicides, insecticides, fungicides, etc. applied to this crop?  [YES = 1]
01			11 . ____	13
02			11 . ____	13
03			11 . ____	13
04			11 . ____	13
05			11 . ____	13
06			11 . ____	13
07			11 . ____	13
08			11 . ____	13
09			11 . ____	13
10			11 . ____	13
11			11 . ____	13
12			11 . ____	13
13			11 . ____	13
14			11 . ____	13
15			11 . ____	13

- INCLUDE**
- **TARGET CROPS ONLY.**
  - All commercial bearing acreage equal to or greater than one tenth of an acre.
  - All bearing acreage of **TARGET CROPS** for processing or fresh market.
  - All bearing acreage of **TARGET CROPS** for roadside stands, farmer's markets or U-pick sales.
  - Bearing acreage not harvested due to weather, economic or other reasons.
  - Crops planted in the fall of 2016 if they were part of the 2017 crop.
- EXCLUDE**
- All crops grown in another state.
  - Non-commercial orchard and vineyard acreage (home garden).
  - Non-target fruits.
  - New plantings and other plantings which are not yet bearing.
  - **ALL TARGET CROPS** grown by institutional, experimental, research and university farms (abnormal farms).
  - Abandoned orchards and vineyards.

**NOTES:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Now I have some questions about pesticide and chemical applications to your **bearing fruit acreage** before harvest. Please consider all applications made to trees, vineyards or bushes which occurred **after last season's harvest**.

1. Since last year's (2016) harvest, did you use **herbicides** on any of your bearing fruit acreage? .....  YES  NO
  
2. Since last year's (2016) harvest, did you use **insecticides, nematocides or miticides** on any of your bearing fruit acreage? .....  YES  NO
  
3. Since last year's (2016) harvest, did you use any **fungicides** on any of your bearing fruit acreage? .....  YES  NO
  
4. Since last year's (2016) harvest, did you use any other chemicals such as chemical thinners, growth regulators, microbial agents, pheromones, rodenticides, soil fumigants, etc. on any of your bearing fruit acreage? .....  YES  NO
  
5. **[ENUMERATION ACTION:** *If ALL items 1 – 4 are NO, go to Section E, page; else continue.*]

D

## PESTICIDE APPLICATIONS

D

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

6. 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 2017 crop year to each of the **target FRUIT crops** you grew. **Let's start with the first application to your [crop] since the 2016 crop year harvest.**

[Complete the table for all chemical applications to the target fruit 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 fruit 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 <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	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	11
	How much was applied per acre per application?	What was the total amount applied per application?	[Enter unit code from above.]  CODE	What percent of the rows were covered? 100 All Rows 50 Every Other Row --- Other  [Enter percent covered.]	How many acres were treated with this product? [Include bearing acres only.]  BEARING ACRES	How many times was it applied?  NUMBER
01	65	73	74	75	77	79
02	65	73	74	75	77	79
03	65	73	74	75	77	79
04	65	73	74	75	77	79
05	65	73	74	75	77	79
06	65	73	74	75	77	79
07	65	73	74	75	77	79
08	65	73	74	75	77	79
09	65	73	74	75	77	79
10	65	73	74	75	77	79
11	65	73	74	75	77	79
12	65	73	74	75	77	79
13	65	73	74	75	77	79
14	65	73	74	75	77	79
15	65	73	74	75	77	79

[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 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	11
	How much was applied per acre per application?		What was the total amount applied per application?	[Enter unit code from above.]  CODE	What percent of the rows were covered? 100 All Rows 50 Every Other Row -- Other [Enter percent covered.]	How many acres were treated with this product? [Include bearing acres only.]  BEARING ACRES	How many times was it applied?  NUMBER
16	65 . ____		73 . ____	74	75	77 . ____	79
17	65 . ____		73 . ____	74	75	77 . ____	79
18	65 . ____		73 . ____	74	75	77 . ____	79
19	65 . ____		73 . ____	74	75	77 . ____	79
20	65 . ____		73 . ____	74	75	77 . ____	79
21	65 . ____		73 . ____	74	75	77 . ____	79
22	65 . ____		73 . ____	74	75	77 . ____	79
23	65 . ____		73 . ____	74	75	77 . ____	79
24	65 . ____		73 . ____	74	75	77 . ____	79
25	65 . ____		73 . ____	74	75	77 . ____	79
26	65 . ____		73 . ____	74	75	77 . ____	79
27	65 . ____		73 . ____	74	75	77 . ____	79
28	65 . ____		73 . ____	74	75	77 . ____	79
29	65 . ____		73 . ____	74	75	77 . ____	79
30	65 . ____		73 . ____	74	75	77 . ____	79
31	65 . ____		73 . ____	74	75	77 . ____	79
32	65 . ____		73 . ____	74	75	77 . ____	79
33	65 . ____		73 . ____	74	75	77 . ____	79

[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 No.
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

---

**NOTES:**

# PEST MANAGEMENT PRACTICES

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

**[Enumerator Action: Were PESTICIDE APPLICATIONS reported in Section B, column 5 on page 6?]**

- YES** - [Continue.]                       **No** - [Go to item 4.]

		CODE
1.	Was weather data used to assist in determining either the need or when to make pesticide applications? .....	600 YES = 1
2.	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? .....	601 YES = 1
3.	Were pesticides with different mechanisms of action rotated or tank mixed for the primary purpose of keeping pests from becoming resistant to pesticides? .....	602 YES = 1
4.	<div style="display: flex; align-items: flex-start;"> <div style="flex: 1;">           In 2017, how were your fruit acres primarily scouted for insects, weeds, diseases and/or beneficial organisms?            .....         </div> <div style="border: 1px solid black; padding: 5px; margin-left: 10px; flex: 1;">           1 By deliberately going to the fruit acres specifically for scouting activities. (<i>Enter code 1 and go to item 5.</i>)            2 By conducting general observations while performing routine tasks. (<i>Enter code 2 and go to item 7.</i>)            3 The fruit acres were not scouted. (<i>Enter code 3 and go to item 10.</i>)         </div> <div style="flex: 1; text-align: right; vertical-align: middle;">           .....            608         </div> </div>	608
5.	Was an established scouting process used ( <i>systemic sampling, recording counts, insect traps, etc.</i> ) on any fruit acres? .....	609 YES = 1
6.	Was scouting for pests done on these fruit acres due to---	
a.	a pest advisory warning? .....	610 YES = 1
b.	a pest development model? .....	611 YES = 1

**PEST MANAGEMENT PRACTICES**

1		2 [If column 1 is YES, ask--] <b>Who did the majority of the scouting for [column 1]—</b>	
7. Were your fruit acres scouted for ---		<b>YES = 1</b>	<b>CODE</b>
a. weeds?.....	612	1 Operator, partner or family member 2 An employee 3 Farm supply or chemical dealer 4 Independent crop consultant or commercial scout	
b. insects or mites?.....	615		
c. disease?.....	618		

		CODE
8. Were written or electronic records kept to track the activity or numbers of weeds, insects or diseases?.....	<b>YES = 1</b>	623
9. Was scouting data compared to published information on infestation thresholds to determine when to take measures to manage pests?.....	<b>YES = 1</b>	624
10. Was field mapping data used for making pest management decisions?.....	<b>YES = 1</b>	625
11. Were the services of a diagnostic laboratory used for pest identification or soil or plant tissue pest analysis?.....	<b>YES = 1</b>	626
12. Were crop residues ( <i>including drops, rotting fruit and/or debris</i> ) removed to manage pests?.....	<b>YES = 1</b>	627
13. Were ground covers, mulches, or other physical barriers maintained to manage pest problems?.....	<b>YES = 1</b>	629
14. Were any beneficial organisms ( <i>insects, nematodes, fungi</i> ) applied or released to manage pests?.....	<b>YES = 1</b>	636
15. Were floral lures, attractants, repellants, pheromone traps or other biological pest controls used on any fruit acres?.....	<b>YES = 1</b>	637
16. Were any fruit acres cultivated for weed control during the growing season?.....	<b>YES = 1</b>	640
17. Were field edges, lanes, ditches, roadways or fence lines chopped, mowed, plowed, or burned to manage pests on any fruit acres?.....	<b>YES = 1</b>	642
18. Were equipment and implements cleaned after completing field work to reduce the spread of pests?.....	<b>YES = 1</b>	643
19. Were any fruit acres irrigated for the 2017 crops?.....	<b>YES = 1</b>	644
a. [If item 19 is YES, ask--] Were water management practices (excluding chemigation) such as irrigation scheduling, controlled drainage, or treatment of retention water used to manage pests?.....	<b>YES = 1</b>	645

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

COMPLETION CODE for PEST MANAGEMENT PRACTICES	
1 Incomp/R	500

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**NOTES:**

# 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.

Pesticide Supplements.....

NUMBER
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-PATI (Tel) 3-PAPI (Face-to-Face)	9903	9998	9989		
							Eval.		Change
							9900	9985	