

# 2022 VEGETABLE CHEMICAL USE SURVEY

OMB No. 0535-0218  
 Approval Expires: 11/30/2023  
 Project Code: 136  
 SurveyID: 2069



**NATIONAL  
 AGRICULTURAL  
 STATISTICS  
 SERVICE**

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ARIZONA ENTERPRISE

<b>VERSION</b> 01	<b>POID</b> _____	<b>SUBTRACT</b> _____
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**CONTACT RECORD**

DATE	TIME	NOTES

**INTRODUCTION:**

[Introduced yourself, and ask for the operator. Rephrase in your own words.]

We are collecting information on chemical use and pest management practices 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 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 is 0535-0218. The time required to complete this information collection is estimated to average 60 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.

H H M M
004 _____

BEGINNING TIME [MILITARY].....

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 on next page.

## CHANGE IN OPERATOR 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?.....

Yes=1	023
No=3	

[If item 1 = 1, continue

If item 1 = 3, go to Enumerator Note below.]

Operation Name _____
Operator Name _____
Address _____
Phone ( _____ ) _____ <input type="checkbox"/> Check if cell phone

[Enumerator Note: If the operation on the face page was in business part of the 2022 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?

1  Yes – Go to Conclusion

3  No – Continue

## SCREENING

1. Did this operation have any of the target crops during the 2022 crop year? [See page 6 for target crops.]

Yes - Continue

No - Write notes explaining the situation then go to Conclusion on back page.

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

--

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.

Partners: POID _____	Partners: POID _____
PARTNER NAME	PARTNER NAME
ADDRESS	ADDRESS
CITY STATE ZIP PHONE NUMBER	CITY STATE ZIP PHONE NUMBER
PHONE NUMBER <input type="checkbox"/> Check if cell phone	PHONE NUMBER <input type="checkbox"/> Check if cell phone
Partners: POID _____	POID _____
PARTNER NAME	PARTNER NAME
ADDRESS	ADDRESS
CITY STATE ZIP PHONE NUMBER	CITY STATE ZIP
PHONE NUMBER <input type="checkbox"/> Check if cell phone	PHONE NUMBER <input type="checkbox"/> Check if cell phone

A

## LAND OPERATED

A

## Acres Operated

[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--

a. own?.....

Acres

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, pastureland, wasteland, and government program land?

1  Yes – [Continue]

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

Name _____ Address _____ Phone (    ) _____ <input type="checkbox"/> Check if cell phone	Name _____ Address _____ Phone (    ) _____ <input type="checkbox"/> Check if cell 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
-----

**PGP 10 NUMBER**

015					
016					
017					
018					
019					

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

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 _____ Reporting ID _____ Address _____ Phone (    ) _____ <input type="checkbox"/> Check if cell phone	Name _____ Reporting ID _____ Address _____ Phone (    ) _____ <input type="checkbox"/> Check if cell phone
--	--

**VEGETABLE ACREAGE**

1. What target vegetable crops were on these [Section A, item 4] acres during the 2022 crop year? EXCLUDE new plantings of vegetables not intended for harvest in 2022.

Table 001	
Office Use Lines in Table	
Line 99	199

L I N E	1	2	3	4	5
	Crop	Crop Code	How many acres were planted for harvest in the 2022 crop year? (INCLUDE 2022 acres which were planted in other years.) Acres	Were any commercial fertilizers applied to this crop?  Yes = 1 No = 3	Were any herbicides, insecticides, fungicides, etc. applied to this crop?  Yes = 1 No = 3
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.
  - Crops planted in the fall of 2021 if they were part of the 2022 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 2022.
  - New plantings and other plantings which are not yet bearing (asparagus)..
  - 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	Cantaloupes
725	Lettuce, Head
728	Lettuce, Other
759	Spinach
752	Watermelons

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

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**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 9.

1. I need to record complete information on all commercial fertilizers applied to the bearing acres of target fruit grown during the 2022 crop year. INCLUDE all applications regardless of how they were applied such as irrigation water, foliar applications, etc. Record amount of an 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.

Office Use
200

Office Use Lines in Table	Table 001	299
------------------------------	--------------	-----

LINE	1	2	3	4	5	6	7	8	9	10
	Crop	Crop Code	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	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? [Include bearing acres only]	How many times was it applied?
			N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	S			Acres	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	23	33	34	36	37	40	41
17			31	32	33	34	36	37	40	41



## FERTILIZER APPLICATIONS

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? [INCLUDE bearing acres only]	How many times was it applied?
									Acres	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	23	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

**PESTICIDE APPLICATIONS**

[Enumerator Action: If pesticides were reported in Section B, column 4, continue. Otherwise, go 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 2022 crop year to each of the target vegetable crops you grew. Let's start with the first application to your crop since the 2021 crop year harvest.

INCLUDE 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.

Office Use Lines in Table	Table 001	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 (Herbicide, Insecticide, fungicide, etc.)	Trade Name and Formulation	Form Purchased (Liquid or Dry)	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 (Specify: _____)

Office Use

300
-----

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 this product 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 (Herbicide, Insecticide, fungicide, etc.)	Trade Name and Formulation	Form Purchased (Liquid or Dry)	EPA Reg. No.

**PESTICIDE APPLICATIONS**

**D**

**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.
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

**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

L I N E	6	OR	7	8	9	11
	How much was applied per acre per application?		What was the total amount applied per application?	[Enter unit code from above.]	How many acres were treated with this product? [Include bearing acres only.]	How many times was this product applied?
				Code	Bearing Acres	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 (Herbicide, Insecticide, fungicide, etc.)	Trade Name and Formulation	Form Purchased (Liquid or Dry)	EPA Reg. No.

**E PEST MANAGEMENT PRACTICES**

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.

[Enumerator Action: Were pesticide applications reported in Section B, column 5 on page 5?]

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?.....	Yes=1 No=3
2. Were any biological pesticides such as Bt ( <i>Bacillus thuringiensis</i> ), insect growth regulators, such as Courier, intrepid, etc., neem or other natural/biological based products sprayed or applied to manage pests?.....	Yes=1 No=3
3. 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 No=3

	<p>1 By deliberately going to the vegetable acres specifically for scouting activities. Enter code 1 and go to item 5.</p> <p>2 By conducting general observations while performing routine tasks. Enter code 2 and go to item 7.</p> <p>3 The vegetable acres were not scouted. Enter code 3 and go to item 10.</p>		Code
4. In 2022, how were your vegetable acres primarily scouted for insects, weeds, diseases and/or beneficial organisms?.....		Yes=1 No=3	Code

	Code
5. Was an established scouting process used such as systemic sampling, recording counts, insect traps, etc., on any vegetable acres?.....	Yes=1 No=3
6. Was scouting for pests done on these vegetable acres due to--	Code
a. a pest advisory warning?.....	Yes=1 No=3
b. a pest development model?.....	Yes=1 No=3

	1	
7. Were your vegetable acres scouted for --	Yes = 1 No = 3	<p>[If column 1 = Yes, ask--] Who did the majority of the scouting for [column 1]?</p> <p>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: _____)</p> <p style="text-align: right;">Code</p>
a. weeds?.....	612	614
b. insects or mites?.....	615	617
c. disease?.....	618	620

**E PEST MANAGEMENT PRACTICES**

**E**

		Code
8. Were written or electronic records kept to track the activity or numbers of weeds, insects or diseases?.....	Yes=1 No=3	623
9. Was scouting data compared to published information on infestation thresholds to determine when to take measures to manage pests?.....	Yes=1 No=3	624
10. Was field mapping data used for making pest management decisions?.....	Yes=1 No=3	625
11. Were the services of a diagnostic laboratory used for pest identification or soil or plant tissue pest analysis?.....	Yes=1 No=3	626
12. Were crop residues plowed down or removed to manage pests?.....	Yes=1 No=3	627
13. Were crops rotated during the past three years for the purpose of managing pests?.....	Yes=1 No=3	628
14. Were ground covers, mulches, or other physical barriers maintained to manage pest problems?.....	Yes=1 No=3	629
15. Was a crop variety chosen because it had resistance to a specific pest?.....	Yes=1 No=3	630
16. Was no-till or minimum till used to manage pests?.....	Yes=1 No=3	631
17. Were planting locations planned to avoid infestation of pests?.....	Yes=1 No=3	632
18. Were planting or harvesting dates adjusted to manage pests?.....	Yes=1 No=3	633
19. Were row spacing or plant density adjusted to manage pests?.....	Yes=1 No=3	634
20. Was a trap crop grown to help manage insects?.....	Yes=1 No=3	635
21. Were any beneficial organisms such as insects, nematodes, or fungi applied or released to manage pests?	Yes=1 No=3	636
22. Were floral lures, attractant repellants, pheromone traps or other biological pest controls used on any vegetable acres?.....	Yes=1 No=3	637
23. Were any vegetable acres cultivated for weed control during the growing season?.....	Yes=1 No=3	640
24. Were field edges, lanes, ditches, roadways or fence lines chopped, mowed, plowed, or burned to manage pests on any vegetable acres?.....	Yes=1 No=3	642
25. Were equipment and implements cleaned after completing field work to reduce the spread of pests?.....	Yes=1 No=3	643
26. Were any vegetable acres irrigated for the 2022 crop?.....	Yes=1 No=3	644
[If item 26 = Yes, ask--]		
a. Were water management practices, excluding chemigation, such as irrigation scheduling, controlled drainage, or treatment of retention water used to manage pests?.....	Yes=1 No=3	645

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

COMPLETION CODE for PEST MANAGEMENT PRACTICES	
1 Incomp/R	500

**CONCLUSION**

1. To receive the complete results of this survey on the release date, go to  
[https://www.nass.usda.gov/Surveys/Guide\\_to\\_NASS\\_Surveys/](https://www.nass.usda.gov/Surveys/Guide_to_NASS_Surveys/)

To have a summary emailed to you at a later date, please enter your email address.

1095

[Thank the respondent, then review this questionnaire.]

Ending time [Military].....

H	H	M	M
0005			
—	—	—	—

Office Use  
Time in Hours

006

**Record Use**

Did respondent use operation records to report pesticide data?

Code
064
Yes=1 No=3

**Supplement Use**

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

Pesticide Supplements.....

Number
068

**Contact Information**

Operation Email: (if different from above)

Operation Phone:

9937	9936	check if cell phone <input type="checkbox"/>
	( ) - _____	

Respondent Name:

Respondent Phone: (if different from above)

9912	9911	check if cell phone <input type="checkbox"/>	9910	MM	DD	YYYY
	( ) - _____		Date:	__	__	__

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-Spouse 3-Acct/Bkpr 4-Partner 9-Other	9902	2-PATI (tel) 3-PAPI (Face-to-Face)	9903	9998	9989		
							Eval.		Change
							9900		9985