

# 2023 IOWA COMMERCIAL HORTICULTURE SURVEY FOR FOOD CROPS

OMB No. 0535-0264  
Approval Expires: 1/1/0001  
Project Code: 473  
SurveyID: 9095



**USDA/NASS**  
National Operations Division  
9700 Page Avenue, Suite 400  
St. Louis, MO 63132-1547  
Phone: 1-888-424-7828  
FAX: 1-855-415-3687  
Email: [nass@usda.gov](mailto:nass@usda.gov)

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

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 and Statistical Efficiency Act of 2018, Title III of Pub. L. No. 115-435, codified in 44 U.S.C. Ch. 35 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 for this information collection is 0535-0264. The time required to complete this information collection is estimated to average 15 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.

## Section 1 - Crop Sales

1. Did you grow **fruits, vegetables, berries, nuts, honey, maple syrup, herbs, mushrooms, pumpkins, or ornamental gourds** in Iowa in 2023 that were or will be for sale?

xxxx

1 ☐ Yes - Continue

3 ☐ No - Go to Section 6

**Acres**

xxxx

2. How many acres of land did you use in 2023 to produce the crops listed in question 1?.....

**Years**

xxxx

3. How many years have you grown the crops or products mentioned in question 1 for sale?.....

**Dollars**

xxxx

4. What was the **total gross farm sales** of the crops or products mentioned in question 1 in 2023?  
(EXCLUDE value added products or sales of products you purchased for resale.).....

**Percent**

xxxx

5. What percent of your gross household income in 2023 came from the sale of crops or products mentioned in question 1?.....

**Section 1 - Crop Sales (continued)**

6. Were any of the fruits, vegetables, berries, nuts, honey, maple syrup, herbs, mushrooms, pumpkins, or ornamental gourds that you produced in 2023 covered by any federal crop insurance policy (including Whole Farm Revenue Protection and Micro Farm Insurance policies)?

xxxx

1 ☐ Yes3 ☐ No

7. In 2023, did you purchase any fruits, vegetables, berries, nuts, honey, maple syrup, herbs, mushrooms, pumpkins or ornamental gourds to resell?

xxxx

1 ☐ Yes - Continue3 ☐ No - Go to Question 9

8. What was the dollar value of the crops or products you purchased to resell?

xxxx

☐ \$1 to \$1,000☐ \$1,001 to \$5,000☐ \$5,001 to \$10,000☐ \$10,001 to \$15,000☐ \$15,001 to \$20,000☐ \$20,001 to \$25,000☐ \$25,001 to \$30,000☐ \$30,001 to \$40,000☐ \$40,001 or above

9. Please indicate the value of your 2023 **gross sales** of processed, value-added food products which you processed yourself or someone else custom processed for you. **EXCLUDE** gross sales of products you custom processed for another grower. **EXCLUDE** processed products you purchased for resale.

| Finished/Processed Product    | Gross Sales of Processed Goods (Dollars) |
|-------------------------------|------------------------------------------|
| a. Apple juice & cider.....   | 512                                      |
| b. Hard cider.....            | 513                                      |
| c. Red wine.....              | 515                                      |
| d. White wine.....            | 516                                      |
| e. Other fruit wines.....     | 517                                      |
| f. All baked goods.....       | 518                                      |
| g. Canned & jarred goods..... | 519                                      |
| h. All other products.....    | 520                                      |

**Section 1 - Crop Sales (continued)**

10. In the table below, please identify the markets where you sold fruits, vegetables, berries, nuts, honey, maple syrup, herbs, mushrooms, pumpkins, or ornamental gourds and estimate the percentage of total sales value generated from that market in 2023. **Percentages by market type should add to 100%.**

| Market                                                                                           | For the market on the left, in 2023 did you sell products you grew through this market? | If yes, please estimate percentage of total sales value generated in this market (Percent) |
|--------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| a. Auction                                                                                       | XXX 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No                        | XXX                                                                                        |
| b. Brokers and wholesalers                                                                       | XXX 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No                        | XXX                                                                                        |
| c. Community Supported Agriculture (CSA)                                                         | XXX 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No                        | XXX                                                                                        |
| d. Farmers market                                                                                | XXX 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No                        | XXX                                                                                        |
| e. Food hubs                                                                                     | XXX 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No                        | XXX                                                                                        |
| f. Institutions: hospitals and other care facilities                                             | XXX 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No                        | XXX                                                                                        |
| g. Institutions: Pre K schools, K through 12 schools, and universities/colleges                  | XXX 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No                        | XXX                                                                                        |
| h. On-farm sales/own store                                                                       | XXX 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No                        | XXX                                                                                        |
| i. Online sales                                                                                  | XXX 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No                        | XXX                                                                                        |
| j. On-site farm processing                                                                       | XXX 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No                        | XXX                                                                                        |
| k. Other growers                                                                                 | XXX 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No                        | XXX                                                                                        |
| l. Pick your own                                                                                 | XXX 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No                        | XXX                                                                                        |
| m. Processors (includes canneries, freezing, fresh cut processors, wineries and juice producers) | XXX 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No                        | XXX                                                                                        |
| n. Restaurants                                                                                   | XXX 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No                        | XXX                                                                                        |
| o. Retail stores and groceries                                                                   | XXX 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No                        | XXX                                                                                        |
| p. Roadside stand                                                                                | XXX 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No                        | XXX                                                                                        |
| <b>Total (Should equal 100%)</b>                                                                 |                                                                                         | <b>100%</b>                                                                                |

11. How did you advertise fruits, vegetables, berries, nuts, honey, maple syrup, herbs, mushrooms, pumpkins, or ornamental gourds you grew in 2023? **(Choose all that apply.)**

xxxx ☐ Product labeling

xxxx ☐ Television

xxxx ☐ Radio

xxxx ☐ Brochures

xxxx ☐ Point of sale signage

xxxx ☐ Business website

xxxx ☐ Facebook or other social media outlet

xxxx ☐ Direct mail

xxxx ☐ Newspaper/magazine

xxxx ☐ None

xxxx ☐ Word of mouth

xxxx ☐ Other (please specify: xxxxx \_\_\_\_\_)

12. If you sold any of the crops listed in Question 11 in 2023 to a processor, did you have a production contract with the processor?

xxx 1 ☐ Yes

3 ☐ No

2 ☐ Both (I sold some under a production contract and some without a contract)

## Section 2 - Feasibility of Processing Iowa - grown Fruits and Vegetables

- Do you have any interest in selling raw farm products to local processors focused on minimally processed local fruits and vegetables, such as fresh-cut, frozen, or canned products?  
 XXX <sub>1</sub> ☐ Yes <sub>2</sub> ☐ Maybe <sub>3</sub> ☐ No - Go to Question 4
- Of the crops you are currently producing, which would you be interested in selling to a processor and estimate how much would you be willing to sell annually? (Using the Target Crops and Codes table below, please fill in the table on page 5 with your responses.)

**Target Crops and Codes**

| <b>Vegetable crop</b> | <b>Code</b> | <b>Fruit crop</b>     | <b>Code</b> |
|-----------------------|-------------|-----------------------|-------------|
| Asparagus             | 301x        | Apples                | 401x        |
| Beans (green)         | 302x        | Pears                 | 405x        |
| Beets                 | XXXX        | Peaches               | 406x        |
| Broccoli              | 303x        | Tart Cherries         | 407x        |
| Cabbage               | 304x        | Watermelons           | 408x        |
| Cauliflower           | XXXX        | Cantaloupe/Muskmelons | 409x        |
| Carrots               | 305x        | Other Melons          | 410x        |
| Corn (sweet)          | 306x        | Chestnuts             | 411x        |
| Cucumbers             | 307x        | Hazelnuts             | 412x        |
| Eggplant              | 308x        | Walnuts               | 413x        |
| Kohlrabi              | XXXX        | Aronia berries        | 501x        |
| Lettuce               | 312x        | Blueberries           | 502x        |
| Okra                  | XXXX        | Blackberries          | 503x        |
| Onions (dry)          | 313x        | Raspberries           | 504x        |
| Peas                  | 314x        | Strawberries          | 505x        |
| Peppers (hot)         | 315x        |                       |             |
| Peppers (sweet)       | 316x        | Honey                 | XXXX        |
| Potatoes              | 317x        | Maple Syrup           | XXXX        |
| Radish                | XXXX        | Other                 | XXXX        |
| Rhubarb               | XXXX        |                       |             |
| Rutabaga              | XXXX        |                       |             |
| Spinach               | 320x        |                       |             |
| Squash (summer)       | 321x        |                       |             |
| Squash (winter)       | 322x        |                       |             |
| Sweet Potatoes        | 323x        |                       |             |
| Tomatoes              | 324x        |                       |             |
| Turnips               | XXXX        |                       |             |
| Zucchini              | XXXX        |                       |             |

**Section 2 - Feasibility of Processing Iowa - grown Fruits and Vegetables (continued)**

3. Of the crops you are currently producing, do you have any interest in selling to a processor and estimate how much would you be willing to sell annually?

| 1<br>L<br>I<br>N<br>E | 2<br><br>Crop Name | 3<br><br>Crop code<br>(from list on Page 4 ) | 4<br><br>Potential annual sales to processor per<br>year in pounds<br>(Pounds) |
|-----------------------|--------------------|----------------------------------------------|--------------------------------------------------------------------------------|
| 01                    |                    | xxx                                          | xxx                                                                            |
| 02                    |                    | xxx                                          | xxx                                                                            |
| 03                    |                    | xxx                                          | xxx                                                                            |
| 04                    |                    | xxx                                          | xxx                                                                            |
| 05                    |                    | xxx                                          | xxx                                                                            |
| 06                    |                    | xxx                                          | xxx                                                                            |
| 07                    |                    | xxx                                          | xxx                                                                            |
| 08                    |                    | xxx                                          | xxx                                                                            |
| 09                    |                    | xxx                                          | xxx                                                                            |
| 10                    |                    | xxx                                          | xxx                                                                            |
| 11                    |                    | xxx                                          | xxx                                                                            |
| 12                    |                    | xxx                                          | xxx                                                                            |
| 13                    |                    | xxx                                          | xxx                                                                            |
| 14                    |                    | xxx                                          | xxx                                                                            |
| 15                    |                    | xxx                                          | xxx                                                                            |
| 16                    |                    | xxx                                          | xxx                                                                            |
| 17                    |                    | xxx                                          | xxx                                                                            |
| 18                    |                    | xxx                                          | xxx                                                                            |
| 19                    |                    | xxx                                          | xxx                                                                            |
| 20                    |                    | xxx                                          | xxx                                                                            |
| 21                    |                    | xxx                                          | xxx                                                                            |
| 22                    |                    | xxx                                          | xxx                                                                            |

**TABLE  
001**

**OFFICE USE  
LINES IN TABLE**

XXXX

## Section 2 - Feasibility of Processing Iowa - grown Fruits and Vegetables (continued)

4. Are you interested in utilizing custom processing services (co-packing/co-bottling) to further process the products you grow, where you would own and sell the final product?

xxx 1 ☐ Yes  
 2 ☐ Maybe  
 3 ☐ No - Go to Question 1 Section 3

5. What types of processing services are you interested in accessing from a custom processor (co-packer/co-bottler)?  
**(Choose all that apply.)**

xxxx ☐ Frozen  
 xxxx ☐ Canned  
 xxxx ☐ Fresh cut (slice and dice)  
 xxxx ☐ Dried  
 xxxx ☐ Bottled  
 xxxx ☐ Other (please specify xxxx \_\_\_\_\_)

6. Do you have markets identified for the processed products you're interested in having made at a custom processor?

xxxx 1 ☐ Yes                      3 ☐ No

7. Do you have in place any of the following activities that may support your readiness for selling wholesale to a processor? **(Choose all that apply.)**

xxxx 1 ☐ Understanding of USDA grade standards and standard packaging requirements  
 xxxx 2 ☐ Liability insurance  
 xxxx 3 ☐ On-farm food safety plan  
 xxxx 4 ☐ Pre season planning

**Section 3 - Irrigation**

1. Did you use irrigation in 2023?

xxx 1 ☐ Yes - Continue      3 ☐ No - Go to Section 4

2. Please select the type(s) of irrigation used at your farm in 2023. **(Choose all that apply.)**

xxx 1 ☐ Drip irrigation

2 ☐ Overhead irrigation (stationary sprinkler, hose pull sprinkler, etc.)

3. Have you ever used overhead irrigation for frost protection?

xxx 1 ☐ Yes      3 ☐ No

4. In 2023, what was the source of your irrigation water? **(Choose all that apply.)**

xxxx ☐ Pond or lake

xxxx ☐ Driven/sand point well

xxxx ☐ Bored or drilled well

xxxx ☐ Stream

xxxx ☐ Municipal Water

xxxx ☐ Rainwater collection

## Section 4 - Production Practices

1. Did you implement a pesticide spray schedule in 2023?

- xxx 1 ☐ Yes, calendar based  
 2 ☐ Yes, pest modeling based  
 3 ☐ No

2. Only answer this question if you grew fruits, vegetables, berries, nuts, herbs, pumpkins, or ornamental gourds in 2023. If you did not grow any of those crops in 2023 please go to Section 5. What species of cover crops do you plant on fields used for horticultural crop production? **(Choose all that apply.)**

- xxxx ☐ None - Go to Question 4  
 xxxx ☐ Cereal rye  
 xxxx ☐ Hairy vetch  
 xxxx ☐ Oats  
 xxxx ☐ Field peas  
 xxxx ☐ Buckwheat  
 xxxx ☐ Cowpea  
 xxxx ☐ Sorghum sudangrass  
 xxxx ☐ Other (Please specify: xxx \_\_\_\_\_)

3. What month(s) did you establish a cover crop in 2023? **(Choose all that apply.)**

- xxxx ☐ January  
 xxxx ☐ February  
 xxxx ☐ March  
 xxxx ☐ April  
 xxxx ☐ May  
 xxxx ☐ June  
 xxxx ☐ July  
 xxxx ☐ August  
 xxxx ☐ September  
 xxxx ☐ October  
 xxxx ☐ November  
 xxxx ☐ December

4. How often do you test for fertility using the following methods?

|                         | Never                          | More than once per year    | Annually                   | Every 2 years              | Every 3 years              |
|-------------------------|--------------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| a. Soil testing         | xxx 1 <input type="checkbox"/> | 2 <input type="checkbox"/> | 3 <input type="checkbox"/> | 4 <input type="checkbox"/> | 5 <input type="checkbox"/> |
| b. Plant sap testing    | xxx 1 <input type="checkbox"/> | 2 <input type="checkbox"/> | 3 <input type="checkbox"/> | 4 <input type="checkbox"/> | 5 <input type="checkbox"/> |
| c. Plant tissue testing | xxx 1 <input type="checkbox"/> | 2 <input type="checkbox"/> | 3 <input type="checkbox"/> | 4 <input type="checkbox"/> | 5 <input type="checkbox"/> |



## Section 4 - Production Practices (continued)

5. Do you use any of these technologies or mechanizations on your farm? **(Choose all that apply.)**

- XXX ☐ Automatic weeder
- XXX ☐ Mechanical cultivator
- XXX ☐ Flame weeder
- XXX ☐ Finger/rotary weeder
- XXX ☐ Electrical weeder (aka weed zapper)
- XXX ☐ Large volume sprayer
- XXX ☐ Small volume sprayer
- XXX ☐ Precision sprayer
- XXX ☐ Pest/disease forecasting
- XXX ☐ Weather station
- XXX ☐ Soil moisture sensor
- XXX ☐ Temperature sensor
- XXX ☐ Frost protection
- XXX ☐ Mechanical harvester
- XXX ☐ Post-harvest washer/sorter
- XXX ☐ Post-harvest refrigeration
- XXX ☐ Plasticulture
- XXX ☐ Drip irrigation
- XXX ☐ Fertilizer injector
- XXX ☐ Mechanical transplanter
- XXX ☐ Aerial drones
- XXX ☐ None of the above

## Section 5 - Labor

1. Did you utilize any of the following forms of unpaid labor on your farm in 2023? **(Choose all that apply.)**

- XXX ☐ Regular volunteers, 10 or more
- XXX ☐ Regular volunteers, fewer than 10
- XXX ☐ Unpaid family members
- XXX ☐ Work days, 10 or more volunteers
- XXX ☐ Word days, fewer than 10 volunteers
- XXX ☐ Work trade (such as trading labor with other farmers or exchanging produce for labor)
- XXX ☐ None of the above

2. How has your reliance on unpaid labor changed compared with pre-COVID prior to March 2020?

- XXXX ☐ Increased significantly
- ☐ Increased a little
- ☐ Stayed the same
- ☐ Decreased a little
- ☐ Decreased significantly
- ☐ Not applicable

**Section 5 - Labor (continued)**

3. Since the COVID-19 pandemic (March 2020) has it been more difficult to find and pay labor?

xxx 1 ☐ Yes

2 ☐ No, my operation has **always** had challenges with finding and paying labor.

3 ☐ No, pandemic disruptions have not impacted my ability to find and pay labor.

4. Which challenges, if any, have you experienced in accessing paid labor? **(Choose all that apply.)**

xxx ☐ Cannot afford paid labor/paying labor cuts into profits

xxx ☐ Small labor pool

xxx ☐ Lack of quality labor

xxx ☐ Cost of hourly labor has gone up

xxx ☐ None of the above

5. Which of the following do you/your farm participate in? **(Choose all that apply.)**

xxx ☐ We accept Supplemental Nutrition Assistance Program (SNAP aka food stamps) as payment

xxx ☐ We accept Double Up Food Bucks as payment

xxx ☐ We accept WIC and Senior Farmers Market Nutrition Program vouchers as payment

xxx ☐ We donate fruits or vegetables to food banks, pantries, or other community food entities

xxx ☐ We allow people with lower incomes to barter or trade labor for produce

xxx ☐ We participate in the Local Food Procurement Program

xxx ☐ None of the above

**Section 6 - Conclusion**

1. **If you answered “No” to Section 1, Question 1**, please specify the reason(s) you did NOT grow or sell fruits, vegetables, berries, nuts, honey, maple syrup, herbs, mushrooms, pumpkins, or ornamental gourds in Iowa in 2023.

**(Choose all that apply.)**

xxx ☐ I quit farming.

xxx ☐ I retired from farming.

xxx ☐ I farmed in 2023, but quit producing the aforementioned crops.

xxx ☐ I grew those crops in a state OTHER than Iowa.

xxx ☐ I grew those crops but did NOT sell them.

xxx ☐ My crops failed in 2023.

xxx ☐ Other (*please specify*:<sup>xxxx</sup> \_\_\_\_\_)

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

Project supported in part by the USDA-AMS Specialty Crop Block Grant Program 21SCBPIA1066. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the USDA.

| OFFICE USE ONLY                                                                           |      |                                                       |      |                                                                                        |      |       |         |        |                     |      |      |      |
|-------------------------------------------------------------------------------------------|------|-------------------------------------------------------|------|----------------------------------------------------------------------------------------|------|-------|---------|--------|---------------------|------|------|------|
| Response                                                                                  |      | Respondent                                            |      | Mode                                                                                   |      | Enum. | Eval.   | Change | Office Use for POID |      |      |      |
| 1-Comp<br>2-R<br>3-Inac<br>4-Office Hold<br>5-R – Est<br>6-Inac – Est<br>7-Off Hold – Est | 9901 | 1-Op/Mgr<br>2-Sp<br>3-Acct/Bkpr<br>4-Partner<br>9-Oth | 9902 | 1-PASI (Mail)<br>2-PATI (Tel)<br>3-PAPI (Face-to-Face)<br>6-Email<br>7-Fax<br>19-Other | 9903 | 9998  | 9900    | 9985   | 9989                |      |      |      |
|                                                                                           |      |                                                       |      |                                                                                        |      |       |         |        |                     |      |      |      |
|                                                                                           |      |                                                       |      |                                                                                        |      |       | R. Unit |        | Optional Use        |      |      |      |
|                                                                                           |      |                                                       |      |                                                                                        |      | 9921  |         |        | 9907                | 9908 | 9906 | 9916 |
| S/E Name                                                                                  |      |                                                       |      |                                                                                        |      |       |         |        |                     |      |      |      |