

# AGRICULTURAL RESOURCE MANAGEMENT SURVEY

OMB No. 0535-0218  
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 SurveyID: 2054 Phase 2



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## SOYBEAN PRODUCTION PRACTICES AND COSTS REPORT FOR 2023

<b>VERSION</b> 77	<b>ID</b> _____	<b>TRACT</b> 01	<b>SUBTRACT</b> _____	<b>C-TYPE</b> 120
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### CONTACT RECORD

DATE	TIME	NOTES

The information you provide will be used for statistical purposes only. Your response 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.

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H H M M

BEGINNING TIME   
 [MILITARY]

SCREENING BOX

Check if verified POID \_\_\_\_\_

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

check if  
cell phone

Phone: (\_\_\_\_) \_\_\_\_\_

Check if verified POID \_\_\_\_\_

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

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cell phone

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Phone: (\_\_\_\_) \_\_\_\_\_

Check if verified POID \_\_\_\_\_

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

check if  
cell phone

Phone: (\_\_\_\_) \_\_\_\_\_

SOYBEAN FIELD SELECTION

Total Planted Acres

0050

1. How many total acres of soybeans did this operation plant for the 2023 crop year?.....

[If no acres were planted, review Screening Survey Information Form, make notes, then go to back page.]

Code

Yes = 1  
No = 3

4000

a. Did you produce any acres of certified organic soybeans?.....

b. Of the total (item 1) acres, how many were planted using/as —

Total Acres

Number of Fields

4001	4002
4003	4004

i. Conventional soybeans?.....

ii. Certified organic soybeans?.....

[I will follow a simple procedure to make a random selection from the soybean fields planted for the 2023 crop.]

Total Number Of  
Fields Planted

0020

2. What is the total number of soybean fields that were planted on this operation? [If only one field, enter "1" and go to item 4.].....

3. [Now, I need to identify a soybean field to be used for this survey.] The soybean field pre-selected for this interview is the:

- 1  Northern most field
- 2  Southern most field
- 3  Eastern most field
- 4  Western most field
- 5  Northeastern most field
- 6  Southeastern most field
- 7  Northwestern most field
- 8  Southwestern most field

Field description:

[Empty box for field description]

4. The field selected is \_\_\_\_\_ (field name/number/description). During this interview, the soybean questions will be about this selected soybean field.

[Be sure the operator can identify the selected field.]

5. For the randomly selected field above, please provide the following Farm Service Agency (FSA) identifiers:

[Having this information helps USDA make better use of other data you have provided to USDA and will improve the types of statistical analysis that can be done with the responses from this survey. If the physical field in this survey spans multiple FSA administrative fields, please include the farm, tract, and field number for the largest administrative field. These numbers are field identifiers that USDA uses to administer farm programs like crop insurance, commodity programs, and conservation programs.]

Number

1070

a. Farm Number (up to 8 digits).....

1071

b. Tract Number (up to 7 digits).....

1072

c. Field Number (up to 4 digits, exclude subfield letters).....

OFFICE USE  
OY Field Substituted

0022

1. How many acres of soybeans did this operation plant in the selected field for the 2023 crop?.....

Acres  
1301

Code

a. Are the acres in the selected field certified organic or transitioning into certified organic soybean production?.....

Yes, Certified Organic=1  
Yes, Transitioning=2  
No=3

4068

[If item 1a = 1 or 2, then ask—]

b. What was the cost, per acre, for third party organic certification?.....

Dollars & Cents per Acre  
1399

2. Were the acres in the selected field—.....

- 1 owned by this operation?
- 2 rented for cash with the payment being a fixed cash amount?
- 3 rented for cash with the payment being a flexible cash amount?
- 4 rented for a share of the crop?
- 5 rented for some combination of cash and share of the crop?
- 6 used rent free?

Code  
1302

[If field is cash rented (item 2 = 2, 3, or 5), ask item 3, otherwise go to item 4.]

3. What was the cash rent paid per acre for this 2023 soybean field?.....

Dollars & Cents per Acre  
1303

[If field is share rented (item 2 = 4 or 5), ask—]

4. What was the landlord's share of the crop from the selected field?.....

Percent  
1304

[If field is rented (item 2 = 2, 3, 4, 5, or 6) ask—]

5. What was the total cost for all inputs provided by any landlord for the 2023 crop on the selected field? INCLUDE the costs for all inputs, such as seed, fertilizer, chemicals, technical services, custom operations, drying, and irrigation. EXCLUDE real estate tax expenses and lime costs paid by the landowner.....

Dollars & Cents per Acre  
1305

OR

Total Dollars  
1306

6. What year did you (the operator listed on the label) start operating the selected field?.....

Year  
1312

M M D D Y Y

7. On what date was the selected field planted?.....

1308

Bushels per Acre

a. What was your yield goal at planting for the selected field?.....

1311

8. On the selected field, what was the source and cost of —

INCLUDE

- operator, landlord, and contractor costs
- cost of seed treatment and technology

Dollars & Cents per Unit	Unit Code 1 = Pound 4 = Bushel 22 = Acres 23 = 50 lb bag 24 = 140,000 Seed Units	Percent of Seed Planted
1214	1215	1216
1217	1218	1219
		1318

a. GMO/GE purchased seed?.....

b. Non-GMO/GE purchased seed?.....

c. Homegrown seed?.....

[If item 8c is greater than zero, continue. Otherwise go to item 9.]

Dollars & Cents per Pound

d. What was the cost per pound for cleaning and treating this seed?.....

3321

Unit Code  
1=Pounds/Acre  
2=Cwt/Acre  
4=Bushels/Acre  
25=Seeds/Acre  
38=Seeds/Foot

Units

1313 2314

9. What was the seeding rate per acre the first time the selected field was planted?.....

Code

a. Was the soybean seed—.....

1 Drilled?  
2 Planted in conventional rows?  
3 Broadcast on the selected field?

1316

[If drilled or planted (item 9a = 1 or 2), ask—]

Inches

10. What was the average soybean row width for the selected field?.....

1322

Acres

11. How many acres in the selected field had to be replanted to soybean? (Acres replanted = Number of Acres x Number of times replanted.).....

1315

Code

12. For the 2023 soybean crop, was the soybean seed—.....

1 Treated with a pesticide prior to purchase?  
2 Treated with a pesticide after purchase?  
3 Not treated with a pesticide?

3062

[If item 12 = 1 or 2, continue. Otherwise go to item 13.]

Seed Treatment Name

a. What was the name of the seed treatment?  
[Write seed treatment name in the box provided.].....

1289

b. What was the seed treatment code? [Enter the appropriate seed treatment code from the Respondent Booklet. Enter "999" if a seed treatment was applied but is not listed. Enter "-1" if the seed treatment is not known.].....

2325

Code

Code

13. For the 2023 soybean crop, did you plant a commercial seed product on the selected field?.....

Yes=1  
No=3

2340

[If item 13 = 1, ask—]

Commercial Seed Product Name

a. What was the name of the seed product?  
[Write seed product name in the box provided.]...

2342

b. What was the seed product code? [Enter the appropriate product code from the Respondent Booklet. Enter "999" if a seed product was purchased but is not listed. Enter "-1" if the product is not known.].....

2343

Code

14. For what reasons did you choose this commercial seed product? (Select all that apply.)

- 4005  High yield
- 4006  High Protein content
- 4007  Pest resistance
- 4008  Resistance to herbicide intentionally applied to the field
- 4009  Resistance to herbicide drift from nearby fields
- 4010  Other (Specify: \_\_\_\_\_)

Code

15. Were the soybeans from the selected field sold (or will they be sold) through a market specifically for non-genetically modified soybeans?.....

Yes = 1  
No = 3

2383

Dollars & Cents per Bushel

[If item 15 = 1, ask—]

a. What was the price premium (or the expected premium if not yet sold) received for these non-genetically modified soybeans?.....

2384

2023 Last time soybeans were planted  
 Yes = 1 Yes = 1  
 No = 3 No = 3  
 N/A = 3 N/A = 4

16. Did you plant genetically modified organism/genetically engineered (GMO/GE) soybeans in the selected field for 2023 or the last time soybeans were planted?.....

2300	2301
------	------

[If item 16 = 1 for either year, continue. Otherwise go to item 18.]

17. Did the soybeans planted on the selected field have any of the following genetically modified organism/genetically engineered (GMO/GE) traits in 2023 or the last time soybeans were planted?.....

2023 Last time soybeans were planted  
 Yes = 1 Yes = 1  
 No = 3 No = 3  
 N/A = 3 N/A = 4

- a. Glyphosate tolerance (e.g. Roundup Ready®).....
- b. Glufosinate tolerance (e.g. LibertyLink®).....
- c. Dicamba tolerance (e.g. Xtend®).....
- d. HPPD tolerance (e.g. Balance®, MGI).....
- e. 2, 4-D tolerance (e.g. Enlist®).....
- f. High-oleic soybeans (e.g. Plenish®, Vistive Gold®).....

2306	2307
2312	2313
2310	2311
2330	2331
4011	4012
4013	4014

18. Did the soybeans planted on the selected field have any of the following traits in 2023 or the last time soybeans were planted?.....

2023 Last time soybeans were planted  
 Yes = 1 Yes = 1  
 No = 3 No = 3  
 N/A = 3 N/A = 4

- a. Sulfonylurea tolerance (e.g. Sulfonylurea Ready, SR, STS®, BOLT®).....
- b. Soybean cyst nematode resistance (e.g. SCN).....
- c. Soybean sudden death syndrome resistance (e.g. SDS).....
- d. Phytophthora root-rot resistance (e.g. PRR).....
- e. Aphid resistance (e.g. Rag1, Rag2).....

2332	2333
2334	2335
4015	4016
2336	2337
2338	2339

19. Has harvest of the selected field been completed?.....

Yes = 1	Code
No = 3	1328

[Now I need information about the acres harvested or to be harvested and the yields from the selected field.]

20. How many acres in this soybean field were or will be—

- a. harvested for grain?.....
- b. harvested for commercial seed contract?.....
- c. abandoned?.....

Acres	What yield per acre did you get or do you expect to get for soybeans— Units per Acre	Unit Code 1 Pounds 2 Cwt 3 Tons 4 Bushels Code
1346	1347	1348
1431	1432	1433
1351		

Crop Code List for item 21 – Previously Planted Crops			
190 Barley	311 Grasses including clover	22 Rye (cereal)	34 Annual ryegrass
6 Corn for grain	1 Hay, alfalfa	240 Sorghum, all	318 No crop planted
5 Corn for silage	11 Hay, all other	26 Soybeans	291 Other field crop
283 Cotton, all	15 Oats	263 Wheat, spring	292 Other crop
302 CRP	21 Rice	165 Wheat, winter	312 Cover crop mix

21. Please report what crops were previously planted on the majority of the selected field, including cover crops.

1 What crops were planted on the selected field in— [For perennial crops, (1, 11, 292, 302, and 311) report the crop code in all seasons when the crop was growing.]			2 Was this a cover crop?	3 If a cover crop was planted, how did you terminate this cover crop?	4 Was the selected field no-till or strip-tilled? <sup>1/</sup>
Season and Year	Crop Name	Crop Code	Yes=1 No=3	Code	Yes=1 No=3
a. Spring/Summer of 2023?.....	SOYBEANS				1344
b. Fall of 2022?.....		1343	1470	1471	1345
c. Spring/Summer of 2022?.....		1369	1472	1473	1371
d. Fall of 2021?.....		1372	1474	1475	1374
e. Spring/Summer of 2021?.....		1375	1476	1477	1377
f. Fall of 2020?.....		1378	1478	1479	1380
g. Spring/Summer of 2020?.....		1381	1480	1481	1383
h. Fall of 2019?.....		1366	1482	1483	1368
i. Spring/Summer of 2019?.....		1340	1484	1485	1342

<sup>1/</sup>No-till means leaving soil and previous crop residue undisturbed from harvest to planting. Strip-till means tilling a narrow strip over the row, leaving soil and previous crop residue between the rows undisturbed.

[If a cover crop was planted in Spring/Summer/Fall 2022, ask—]

- j. What was the seed cost per acre for the cover crop?.....
- k. What was the per-acre cost-share or financial assistance payments received for the cover crop? If no program payment was received, enter zero.....

Dollars & Cents per Acre

1468	• ____
1495	• ____

22. Is this field managed under an NRCS-approved conservation plan for highly erodible land (HEL)? (All fields that have been designated as HEL by USDA, and that are being actively farmed, are required to have soil conservation plans under the conservation compliance program.).....

Code

Yes=1 No=3	0702
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23. Does the selected field contain a wetland? Wetlands are subject to Wetland Conservation (WC) or "swampbuster" requirements. Producers who receive farm program payments must refrain from draining wetlands to make them ready for crop production.....

Yes=1 No=3	1405
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24. What is the slope of the selected field?.....

- 1 Nearly level (0 – 2%)
- 2 Even, moderate grade (3 – 9%)
- 3 Variable, moderate grade
- 4 Even, steep grade (10% or more)
- 5 Variable, steep grade

Code

2400
------

25. What is the primary soil type of the selected field?.....

- 1 Loam
- 2 Clay
- 3 Sandy
- 4 Mixed
- 5 Silty

Code

2401
------

26. In the selected field, are any of the following currently or historically a concern?

- Unit Code
- 1 Currently a concern
  - 2 A concern in the past but not anymore
  - 3 Not a concern

Code

2407
2408
2409
2410
2411
2412
2413
2415

a. Water-driven erosion.....

b. Wind-driven erosion.....

c. Soil compaction.....

d. Poor drainage.....

e. Low organic matter.....

f. Water quality.....

g. Other concerns.....

h. Water availability.....

[If item 26a – 26h are all "Not a Concern", ask—]

i. If the answer to all of the above was "Not a Concern", is it the case that there are no significant concerns on this field?.....

Code

2414
------

Yes=1  
No=3

27. Did the land use practices for the selected field include subsurface drainage?.....

Code

2402
------

Yes=1  
No=3

[If item 27 = 1, continue. Otherwise go to item 28.]

a. In what year was the current subsurface (tile) drainage installed?.....

Year

2403
------

b. What is the average depth of your draining system?.....

Inches

2604
------

c. What is the average or most common diameter of your tiles?.....

2605
------

d. Does this system include a mechanism for controlled drainage (e.g. stop logs, risers, or float mechanisms)?.....

Code

2406
------

Yes=1  
No=3

e. Does this drainage system have surface inlets?.....

Code

2719
------

Yes=1  
No=3

f. Where does this system empty?.....

- 1 An open, single stage ditch
- 2 A natural waterbody
- 3 A saturated buffer
- 4 A retention pond
- 5 Another type of receiving system

Code

2720
------

Unit Code  
 1 Current  
 2 Past  
 3 Never

28. Has the selected field ever been in any conservation contracts for which you or your landlord received (or expected to receive) cost-sharing payments, stewardship payments, or incentive payments?

- a. Environmental Quality Incentive Program (EQIP).....
- b. Conservation Security or Conservation Stewardship Programs (CSP).....
- c. Conservation Reserve Program (CRP).....
- d. Other Federal, State, Local or non-government source.....

2611
2612
2613
2614

Code

29. During the last four years, did you apply for conservation funding, either through any Federal, State, or local program, for the selected soybean field?.....

Yes=1  
 No=3

4017
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30. [Now I need information on soil, crop, and land management practices or activities used on the selected field and any financial assistance you may have received in conjunction with those practices.]

a. Please check any practices or activities that you used on the selected field this year or any time in the past.

<b>On-field Soil and Crop Management</b>  1 <input type="checkbox"/> No-till/strip-till 2 <input type="checkbox"/> Conservation tillage except no-till/strip-till 3 <input type="checkbox"/> Cover crop – single species 4 <input type="checkbox"/> Cover crop mix 5 <input type="checkbox"/> Contour farming 6 <input type="checkbox"/> Conservation crop rotation 7 <input type="checkbox"/> Laser leveling	10 <input type="checkbox"/> Terraces 12 <input type="checkbox"/> Grass waterway 20 <input type="checkbox"/> Implement a nutrient management plan – written plan. 21 <input type="checkbox"/> Precision nutrient application 22 <input type="checkbox"/> Subsurface phosphorous application 23 <input type="checkbox"/> No fertilizer application more than 30 days before planting 24 <input type="checkbox"/> Controlled release or enhanced efficiency fertilizer 26 <input type="checkbox"/> Split nitrogen application with at least 50% applied after planting	30 <input type="checkbox"/> Implement an integrated pest management plan – written plan 31 <input type="checkbox"/> Drift reducing spray nozzles 32 <input type="checkbox"/> Targeted sprayer – electrical control <b>Adjacent to Field</b> 33 <input type="checkbox"/> Filter strip 34 <input type="checkbox"/> Field border 35 <input type="checkbox"/> Riparian buffer – grass or forest 50 <input type="checkbox"/> Irrigation water management plan 99 <input type="checkbox"/> None of the above
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b. For each practice or activity checked in 30a, please complete one line of this table.

[Enumerator Note: If "99: None of the above" was selected, report code "99" in the first row (item 1610).]

1	2	3	4	5
Practice or Activity on the Selected Field	Practice Code (see item 30a)	Was this practice or plan used on this selected field in 2023?	What financial assistance (cost share) has been received for this practice on this field?	Does this practice or activity help satisfy —
		Code	Code	Code
	1610	1614	1612	1613
	1615	1619	1617	1618
	1620	1624	1622	1623
	1625	1629	1627	1628
	1630	1634	1632	1633
	1635	1639	1637	1638
	1640	1644	1642	1643
	1645	1649	1647	1648
	1650	1654	1652	1653
	1655	1659	1657	1658
	1660	1664	1662	1663

31. In 2023, were the soybeans in the selected field covered by a single or named peril crop insurance policy (i.e. hail, replant, wind, freeze, etc.)?.....  
 Yes=1 1393  
 No=3

[If item 31 = 1, continue. Otherwise, go to item 32.]

a. In 2023, were the soybeans in the selected field covered by more than one single or named peril crop insurance policy (e.g. hail, replant, wind, freeze)?.....  
 Yes=1 2721  
 No=3

b. What was the dollar amount of coverage per acre for the single peril policy covering the selected field?.....  
 Dollars & Cents per Acre 1395

c. What was the premium cost per acre for the single peril policy covering the selected field in 2023? EXCLUDE any sign-up fee.....  
 Dollars & Cents per Acre 2722

d. What was the percent deductible for the single peril policy covering the selected field? (Record no deductible as 0%).....  
 Percent 2723

e. Did you (or will you) collect an indemnity payment for the selected field from the single peril policy during 2023?.....  
 Yes=1 2724  
 No=3

32. In 2023, were the soybeans in the selected field covered by a multi-peril federal program that provided protection against yield or revenue losses? These include crop insurance and crop disaster assistance programs.....  
 Yes=1 1385  
 No=3

[If item 32 = 1, continue. Otherwise go to Section C.]

a. What type of multi-peril coverage did you obtain?.....  
 Code 1386

- 1 Federal CAT (basic catastrophic insurance)
- 2 Yield Protection (YP)
- 3 Revenue Protection (RP)
- 4 Other multi-peril crop insurance

[If item 32a = 2, ask—]

i. What percent of yield coverage did you select for the selected field?.....  
 Percent 1387

ii. What percent of price coverage did you select for the selected field?.....  
 Percent 1388

[If item 32a = 3, ask—]

iii. What percent of revenue coverage did you select for the selected field?.....  
 Percent 1389

b. What type of unit coverage did you purchase for the multi-peril policy on the selected field?.....  
 Code 2524

- 1 Basic
- 2 Optional
- 3 Enterprise

c. In what year did you, the operator listed on the label, first purchase multi-peril crop insurance on the selected field?.....  
 Year 2525

d. What is the 2023 Approved APH (actual production history) yield for the selected field?.....  
 Bushels per Acre 2526

e. What was the premium paid for multi-peril crop insurance for the selected field in 2023? EXCLUDE any administrative fee.....  
 Dollars & Cents per Acre 2527

f. Did you or will you collect an indemnity payment for the selected field from multi-peril crop insurance during 2023?.....  
 Yes=1 2528  
 No=3



4. Were any nutrients or fertilizers applied by custom applicators?..... Yes=1 No=3 Code  
0214

[If item 4 = 1 continue. Otherwise go to item 5.]

a. Are you able to report the cost of nutrient or fertilizer materials and custom application separately?..... Yes=1 No=3 Code  
0216

[If item 4a = 1 continue. Otherwise go to item 5.]

b. Excluding the cost of the nutrient or fertilizer materials, how much was spent for custom application of nutrients or fertilizers on the selected field?

INCLUDE

- operator, landlord, and contractor costs
- costs for sulfur and micronutrients

EXCLUDE custom application of lime, gypsum, purchased manure, and purchased compost.....

Dollars & Cents per Acre	OR	Total Dollars
0219		0220

[If material and application costs can't be separated, exclude them here and record the total in item 5.]

5. What was the total cost of all nutrient or fertilizer products applied to the selected field?

INCLUDE

- operator, landlord, and contractor costs as well as the costs for sulfur and micronutrients
- materials applied to the selected field if it was fallow in 2022

EXCLUDE lime, gypsum, purchased manure, and purchased compost.....

Dollars & Cents per Acre	OR	Total Dollars
0221		0222

[If custom applied and the cost of materials can be separated from application costs, include the cost of materials only, otherwise, include both the material and application costs.]

6. Was gypsum applied to the selected field for the 2023 soybean crop?..... Yes=1 No=3 Code  
0218

7. Was a soil test for soil organic matter performed on the selected soybean field at some point in the last 10 years?..... Yes=1 No=3 Code  
3225

[If item 7 = 1, ask—]

a. What was the percentage of soil organic matter on the selected field for the most recent test?..... Percent  
3226

b. How many times have you tested the selected field for soil organic matter in the last 10 years?..... Number  
3227

[If item 7b is more than 1, ask—]

c. Based on these tests, is your soil organic matter content... Code  
3228

1 Increasing?  
2 Decreasing?  
3 Staying roughly the same?

8. Was a soil or plant tissue test performed on the selected soybean field in 2022 or 2023 for the 2023 crop?..... Yes=1 No=3 Code  
0224

[If item 8 = 1, continue. Otherwise go to item 13.]

9. Was a soil test for phosphorus performed on the selected soybean field in 2022 or 2023 for the 2023 crop?..... Yes=1 No=3 Code  
0225

[If item 9 = 1 ask—]

a. How many pounds of phosphorus per acre were recommended by the phosphorus test?..... Pounds per Acre  
0226

10. Was a soil test for nitrogen performed on the selected soybean field in 2022 or 2023 for the 2023 crop?..... Yes=1 No=3 Code 0227

[If item 10 = 1, ask—]

a. How many pounds of nitrogen per acre were recommended by the nitrogen test?..... Pounds per Acre 0228

11. Was a plant tissue test or leaf analysis for nutrient deficiency performed on the selected field in 2022 or 2023 for the 2023 crop?..... Yes=1 No=3 Code 0229

12. How much was spent for these soil and plant tissue tests on the selected field? INCLUDE operator, landlord, and contractor costs..... Dollars & Cents per Acre 0230 OR Total Dollars 0231

[If tests were done at no cost, continue. Otherwise go to item 12b.]

a. What is the reason why tests were done at no cost?..... Code 0232

1 Soil/plant tissue test provided free of charge by dealer, crop consultant, or extension service

2 Soil/plant tissue test costs were included in the total fertilizer costs reported in item 5

3 Some other reason

b. Did you receive a payment from a conservation program (CSP, EQIP, or other) for performing a soil or plant tissue test?..... Yes=1 No=3 Code 3231

[Enumerator Action: Refer to the Fertilizer Table, column 2. If nitrogen (N) was applied, complete item 13. If no nitrogen applied, go to item 15.]

13. Was the amount of nitrogen you decided to apply to the selected field based on— Code

a. Results of a soil or plant tissue test?..... Yes=1 No=3 0233

b. Crop consultant recommendation?..... Yes=1 No=3 0234

c. Fertilizer dealer recommendation?..... Yes=1 No=3 0235

d. Extension Service recommendation?..... Yes=1 No=3 0236

e. Cost of nitrogen and/or expected commodity price?..... Yes=1 No=3 0237

f. Contractor recommendation?..... Yes=1 No=3 0238

g. Routine practice – operator's own determination based on past experience, yield goal, etc.?.. Yes=1 No=3 0239

14. Which of the following products did you use to slow the breakdown of nitrogen on this field?..... Code 0241

1 Nitrification inhibitors (such as N-Serve)

2 Urease inhibitors (such as Agrotain)

3 Chemical-coated fertilizers (such as sulfur-coated urea and polymer-coated urea)

4 Other inhibitors

5 None

[If nitrogen inhibitors were used, continue. Otherwise go to item 15.]

a. How much nitrogen inhibitor did you mix with the nitrogen applied to the selected field?..... Pounds per Acre 2561 OR Gallons per Acre 2562

b. What was the cost of nitrogen inhibitors used on this field? INCLUDE operator, landlord, and contractor costs..... Dollars & Cents per Pound 0297 OR Dollars & Cents per Gallon 0298

15. Is lime ever applied to the selected field?..... Code  
 Yes=1 0242  
 No=3

[If item 15 = 1 continue. Otherwise go to item 16.]

a. On average, how many years are there between applications of lime to the selected field?..... Years  
 0243

b. How many tons of lime were applied per acre the last time it was applied to the selected field?..... Tons per Acre  
 0244

c. Was lime applied to the selected field in 2022 or 2023 for the 2023 crop?..... Code  
 Yes=1 0240  
 No=3

16. Was non-commercial (unprocessed) manure from own farm, from a neighbor's farm, etc., or other organic material, including compost, applied to the selected field for the 2023 soybean crop? Code  
 EXCLUDE commercially prepared manure..... Yes=1 0246  
 No=3

[If item 16 = 1 continue. Otherwise go to Section D.]

a. To how many acres in the selected field was manure or compost applied?..... Acres  
 0247

b. What was the amount of manure or compost applied per acre to the selected field?..... Unit Codes  
 1 Tons  
 2 Gallons  
 3 Bushels  
 4 Cubic yards  
 Units per acre

b. What was the amount of manure or compost applied per acre to the selected field?..... 0249 0248

c. Of the total manure or compost applied to the selected field for the 2023 soybean crop, what was the percent of manure or compost applied— Percent  
 i. in the fall before planting?..... + 0254  
 ii. in the spring before planting?..... + 0255  
 iii. after planting?..... + 0256  
 = 100%

d. Was the manure or compost—..... Code  
 1 Lagoon liquid?  
 2 Slurry liquid?  
 3 Semi-dry or dry? 0257

e. Was the manure or compost—..... Code  
 1 Broadcast or sprayed without incorporation?  
 2 Broadcast or sprayed with incorporation?  
 3 Injected/knifed in?  
 4 Sprayed using irrigation systems? 0258

f. Was the major source of manure or compost—..... Code  
 1 Beef cattle?  
 2 Dairy cattle?  
 3 Hogs?  
 4 Sheep?  
 5 Poultry?  
 6 Equine?  
 7 Biosolids – municipal sludge?  
 8 Food waste?  
 9 Other?  
 Specify: \_\_\_\_\_ 0259

g. Was the manure or compost—.....	1 Produced on this operation? 2 Purchased? 3 Obtained at no cost off this operation? 4 Obtained with compensation (operator received payment for accepting the manure)?	Code 0260
------------------------------------	--	--------------

[If item 16g = 2, continue. Otherwise go to item 16h.]

i. What was the total cost of the purchased manure or compost applied to the selected field?.....	Dollars & Cents per Acre	OR	Total Dollars
	0284		0285

INCLUDE

- operator, landlord, and contractor costs
- any payment made for transportation costs

ii. Did you hire someone to custom apply the manure or compost?.....	Code 0286
	Yes=1 No=3

[If item 16gii = 1, ask—]

(a) What was the total cost paid to have manure or compost custom applied to the selected field? INCLUDE operator, landlord, and contractor cost.....	Dollars & Cents per Acre	OR	Total Dollars
	0287		0288

[Do not report custom application cost if it was included with the purchased manure or compost cost.]

h. What is the distance in miles between the manure or compost storage/production location and the selected field?.....	Miles 0291
---	---------------

i. Of the manure or compost applied to the selected field, was any tested for nutrient content prior to application?.....	Code 0261
	Yes=1 No=3

j. Was the application rate of commercial nitrogen fertilizer on the selected field reduced due to manure or compost application?.....	Code 0262
	Yes=1 No=3

[If 16j = 1, ask—]

i. By what percent did you reduce the commercial nitrogen fertilizer application rate on the selected field?.....	Percent 0263
---	-----------------

ii. Did you adjust the soybean harvest date for the selected field due to the application of manure or compost?.....	Code 0280
	Yes=1 No=3

17. Were the manure or compost application rates to the selected field influenced by Federal, State, or local restrictions?.....	Code 0264
	Yes=1 No=3

[If item 17 = 1, ask—]

a. What basis was used to determine these manure application rate restrictions—	Code
---	------

i. Nitrogen requirement of the crop?.....	Code 0265
	Yes=1 No=3

ii. Phosphorus requirement of the crop?.....	Code 0266
	Yes=1 No=3

**D BIOCONTROL or PESTICIDE APPLICATIONS — SELECTED FIELD**

**D**

Now I have some questions about all the biocontrols or pesticides used on the selected field for the 2023 soybean crop, including both custom applications and applications made by this operation.

1. Were any herbicides, insecticides, fungicides or other biocontrols or pesticides used on this soybean field for the 2023 crop?.....

Code	Office Use Edit Table
Yes=1 No=3	0302      0300

[Probe for applications made in the fall of 2022 and those made earlier if the selected field was fallow.]

If no biocontrols or pesticides applied, go to Section E.

INCLUDE defoliant, fungicides, herbicides, insecticides, and other pesticides.	EXCLUDE adjuvants, nutrients or fertilizers reported earlier and seed treatments.	Office Use Line in Table	Table 001	0399
INCLUDE biological and botanical pesticides.				

Chemical Product Name	LINE	2	3	4	5	6	OR	7	8
		What products were applied to the selected field? [Show product codes from Respondent Booklet.]	Was this product bought in liquid or dry form? [Enter L or D]	If this was part of a tank mix, enter line number of first product in mix.	When was this applied? 1 Before planting 3 At planting 4 After planting 5 Defoliation prior to harvest	How much was applied per acre per application?	What was the total amount applied per application in the selected field?	[Enter unit code] 1 Pounds 12 Gallons 13 Quarts 14 Pints 15 Liquid Ounces 28 Dry Ounces 30 Grams	
	01	61	62	63	64	65	73	74	
	02	61	62	63	64	65	73	74	
	03	61	62	63	64	65	73	74	
	04	61	62	63	64	65	73	74	
	05	61	62	63	64	65	73	74	
	06	61	62	63	64	65	73	74	
	07	61	62	63	64	65	73	74	
	08	61	62	63	64	65	73	74	
	09	61	62	63	64	65	73	74	
	10	61	62	63	64	65	73	74	
	11	61	62	63	64	65	73	74	
	12	61	62	63	64	65	73	74	
	13	61	62	63	64	65	73	74	
	14	61	62	63	64	65	73	74	

2. For biocontrols or pesticides not listed in the Respondent Booklet, specify—

Line	Pesticide Type (Herbicide, Insecticide, Fungicide, etc.)	EPA No. or Trade Name and Formulation	Form Purchased (Liquid or Dry)	Where Purchased (Ask only if EPA No. cannot be reported)



## Applications Codes for Column 9

- |   |                                  |
|---|----------------------------------|
| 1 Broadcast, ground without incorporation | 6 Chiseled/injected or knifed in |
| 2 Broadcast, ground with incorporation    | 7 Banded in or over row          |
| 3 Broadcast, by aircraft                  | 8 Foliar or directed spray       |
| 4 In seed furrow                          | 9 Spot treatments                |
| 5 In irrigation water                     |                                  |

L I N E	9	10	11	12	13	14
	How was this product applied? [Enter code from above.]	How many acres in the selected field were treated with this product?  Acres	How many times was it applied?  Number	Were these applications made by —  1 Operator, partner, or family member? 2 Custom applicator? 3 Employee/Other?	What was the cost per unit of the product?  Dollars & Cents per Unit	[Enter unit code]  1 Pounds 12 Gallons 13 Quarts 14 Pints 15 Liquid Ounces 28 Dry Ounces 30 Grams
01	76	77	79	80	81	82
02	76	77	79	80	81	82
03	76	77	79	80	81	82
04	76	77	79	80	81	82
05	76	77	79	80	81	82
06	76	77	79	80	81	82
07	76	77	79	80	81	82
08	76	77	79	80	81	82
09	76	77	79	80	81	82
10	76	77	79	80	81	82
11	76	77	79	80	81	82
12	76	77	79	80	81	82
13	76	77	79	80	81	82
14	76	77	79	80	81	82

3. Were any chemicals, biocontrols, or pesticides applied by custom applicators?..... Yes=1 No=3 Code  
0323  
 [If item 3 = 1 continue. Otherwise go to item 4.]

a. Are you able to report the cost of chemical, biocontrol, and pesticide products and custom application separately?..... Yes=1 No=3 Code  
0324  
 [If item 3a = 1, ask—]

b. Excluding the cost of the chemical, biocontrol, and pesticide products, how much was spent for custom application of such materials on the selected field? INCLUDE operator, landlord, and contractor costs..... Dollars & Cents per Acre OR Total Dollars  
0331 0332

4. What was the total cost of all chemical, biocontrol, or pesticide products applied to the selected field? INCLUDE operator, landlord, and contractor costs, defoliants, herbicides, insecticides, fungicides, surfactants, wetting agents, growth regulators, and materials applied before planting and during 2022 fallow period. EXCLUDE seed treatments..... Dollars & Cents per Acre OR Total Dollars  
0334 0335

a. How much was spent for herbicide products applied to the selected field? INCLUDE operator, landlord, and contractor costs..... Dollars & Cents per Acre OR Total Dollars  
3034 3035

b. How much was spent for insecticide products applied to the selected field? INCLUDE operator, landlord, and contractor costs..... Dollars & Cents per Acre OR Total Dollars  
3036 3037

c. How much was spent for fungicide products applied to the selected field? INCLUDE operator, landlord, and contractor costs..... Dollars & Cents per Acre OR Total Dollars  
3038 3039

Note: If custom applied and the costs for materials can be separated from application costs, include the cost for materials only. Otherwise, report both the material and application costs in item 4.

Now I have some questions about your pest management decisions and practices used on the selected field for the 2023 soybean crop. By pests, we mean weeds, insects, and diseases.

[Enumerator Action: Were pesticide applications reported in Section D?]

Yes – Continue     No – Go to item 6

1. Were weather data used to assist in determining either the need or when to make pesticide applications?.....
2. Were any biological pesticides such as Bt (*Bacillus thuringiensis*), insect growth regulators, neem or other natural/biological based products sprayed or applied to manage pests in the selected field?.....
3. Were pesticides with different mechanisms of action rotated or tank mixed for the primary purpose of keeping pests from becoming resistant to pesticides?.....

		Code
Yes=1	No=3	0800
Yes=1	No=3	0801
Yes=1	No=3	0802

[Enumerator Action: Were herbicide (pesticide product codes 40000–49999) applications reported in Section D, item 1, column 2?]

Yes – Continue     No – Go to item 6

4. Were herbicides applied to the selected soybean field before weeds emerged?.....
5. Were herbicides applied to the selected soybean field after weeds emerged?.....
6. Were records kept for the selected field to track the activity or numbers of weeds, insects, or diseases?.....
7. Did you use published information on infestation thresholds to determine when to take measures to manage pests in the selected field?.....

		Code
Yes=1	No=3	0803
Yes=1	No=3	0805
Yes=1	No=3	0823
Yes=1	No=3	1824

8. In 2023, how was the selected field primarily scouted for insects, weeds, diseases, and/or beneficial organisms?.....

1 By deliberately going to the field specifically for scouting activities [Enter code 1 and go to item 9.]  
 2 By conducting general observations while performing routine tasks [Enter code 2 and go to item 10.]  
 3 The selected field was not scouted. [Enter code 3 and go to item 13.]

		Code
Yes=1	No=3	0808

9. Was an established scouting process such as systematic sampling, recording counts, etc. used or were insect traps used in the selected field?.....

		Code
Yes=1	No=3	0809

10. Was scouting for pests done in the selected field due to —

- a. a pest advisory warning?.....
- b. a pest development model?.....

		Code
Yes=1	No=3	0810
Yes=1	No=3	0811

[If scouted by crop consultant or commercial scout, ask item 11. Otherwise go to item 12.]

11. How much was charged for the scouting services for the selected field? INCLUDE operator, landlord, and contractor costs.....

Dollars & Cents per Acre
0821

OR

Total Dollars
0822

- a. If scouting performed at no cost, explain: \_\_\_\_\_

Office Use
0333

12. Were scouting data compared to published information on infestation thresholds to determine when to take measures to manage pests in the selected field?.....

		Code
Yes=1	No=3	0824

13. Did you use field mapping of previous weed problems to assist you in making weed management decisions?.....

		Code
Yes=1	No=3	0825

14. Did you do any of the following other types of pest management for the specific purpose of managing or reducing the spread of pests in the selected field?

	Code
a. Use the services of a diagnostic laboratory for pest identification or soil plant tissue pest analysis for the selected field?.....	Yes=1 0841 No=3
b. Plow down crop residue using conventional tillage?.....	Yes=1 0842 No=3
c. Remove/burn down crop residue?.....	Yes=1 0843 No=3
d. Rotate crops in the selected field during the past three years?.....	Yes=1 0844 No=3
e. Maintain ground covers, mulches, or other physical barriers?.....	Yes=1 0845 No=3
f. Choose crop variety because of specific resistance to a certain pest?.....	Yes=1 0846 No=3
g. Use no-till or minimum till?.....	Yes=1 0847 No=3
h. Plan planting locations to avoid cross infestation of pests?.....	Yes=1 0848 No=3
i. Adjust planting or harvesting dates?.....	Yes=1 0849 No=3
j. Chop, spray, mow, plow, or burn field edges, lanes, ditches, roadways, or fence lines?.....	Yes=1 0850 No=3
k. Clean equipment and field implements after completing field work to reduce the spread of pests?.....	Yes=1 0851 No=3
l. Adjust row spacing, plant density, or row directions?.....	Yes=1 0852 No=3
m. Have the seed treated for insect or disease control after you purchased the seed for the selected field?.....	Yes=1 0854 No=3
n. Maintain a beneficial insect or vertebrate habitat?.....	Yes=1 0855 No=3
o. Use a flamer to kill weeds?.....	Yes=1 0857 No=3
p. Maintain buffer strips or border rows to isolate soybeans from non-organic crops or land, or did you take a buffer harvest?.....	Yes=1 0856 No=3
q. Plant earlier or later to avoid weeds?.....	Yes=1 0865 No=3

15. Were any beneficial organisms, such as insects, nematodes, or fungi applied or released in the selected field to manage pests?.....

Code
Yes=1 0853 No=3

16. Were floral lures, attractants, repellants, pheromone traps, or other biological pest controls used on the selected field?.....

Yes=1 0858 No=3
--------------------

[If item 15 or item 16 = 1, ask—]

a. What were the total materials and application costs for all biological pest controls for the selected field?

INCLUDE

- operator, landlord, and contractor costs
- cost for beneficial organisms, insects, nematodes, and fungi

EXCLUDE biological pesticides previously reported.....

Dollars & Cents per Acre	OR	Total Dollars
0859		0860

17. Was a trap crop, excluding fallow, grown to help manage insects in the selected field?.....

Code
Yes=1 0863 No=3

18. Was the selected field left fallow in 2022 to help manage insects on the selected field?.....

Yes=1 0864 No=3
--------------------

19. Were water management practices such as irrigation scheduling, controlled drainage, or treatment of retention water used on the selected field to manage pests or toxin-producing fungi and bacteria?.....

Yes=1 0861 No=3
--------------------

20. Was protection of beneficial organisms a factor in your pest control decisions for the selected field?..... Yes=1 1765  
No=3

[If item 20 = 1, continue. Otherwise go to item 21.]

a. Did you change timing of, reduce application rate of, or eliminate a pesticide application?..... Yes=1 1766  
No=3

b. Did you change to an alternative pesticide, biocontrol, or non-pesticide practice?..... Yes=1 1767  
No=3

Code  
Unit Codes  
1 Pounds  
2 CWT  
3 Tons  
4 Bushels  
Units per Acre

21. If untreated (either with herbicides, tillage, or cultivation), how much yield loss (e.g. bushels per acre) do you think weeds would most likely cause on the selected field? 2735 2736

22. Did pests, such as weeds, insects, pathogens, or animals, cause any yield loss on the selected field in spite of your pest control efforts?..... Yes=1 0827  
No=3

[If item 22 = 1, ask—]

a. How much yield loss per acre do you think was caused by all pests on the selected field in spite of the management practices you used to reduce those losses?.....

Units per Acre	OR	Total Units
0829	0828	0830

Unit Codes  
1 Pounds  
2 CWT  
3 Tons  
4 Bushels

23. If you used GMO/GE glyphosate-tolerant seeds on the selected field in 2023, indicate the number of consecutive years you have planted GMO/GE glyphosate-tolerant corn, soybeans, or any other GMO/GE glyphosate-tolerant crop..... 1970

a. What year did you first plant any GMO/GE glyphosate-tolerant seeds on the selected field?..... 1971 \_ \_ \_ \_

24. If you used GMO/GE dicamba-tolerant seeds on the selected field in 2023, indicate the number of consecutive years you have planted GMO/GE dicamba-tolerant soybeans, or any other GMO/GE glyphosate-tolerant crop..... 1972

a. What year did you first plant any GMO/GE dicamba-tolerant seeds on the selected field?..... 1973 \_ \_ \_ \_

25. On the selected field in 2023, did you observe symptoms associated with injury from dicamba such as leaf cupping, an increased number of nodes, or height reduction?..... Yes=1 1974  
No=3

[If item 25 = 1, continue. Otherwise go to item 26.]

a. Did you report the injury to the state or local officials?..... Yes=1 1981  
No=3

b. Was the injury investigated by state or local officials?..... Yes=1 1982  
No=3

26. As far as you are aware, did farmers in neighboring fields observe leaf cupping or other symptoms associated with injury from dicamba in 2023?..... Yes=1 1976  
No=3

[If item 26 = 1, continue. Otherwise go to item 27.]

a. As far as you are aware, did farmers in your county observe leaf cupping or other symptoms associated with injury from dicamba in 2023?..... Yes=1 1977  
No=3

27. As far as you are aware, did farmers in neighboring fields plant dicamba–tolerant soybeans in 2023?.....

Yes = 1  
No = 3

Code  
1978

[If item 27 = 1, continue. Otherwise go to item 28.]

a. As far as you are aware, did farmers in your county plant dicamba–tolerant soybeans in 2023?.....

Yes = 1  
No = 3

Code  
1979

28. On the selected field in 2023, did you observe symptoms associated with injury from 2, 4–D such as leaf strapping, stem twisting, or callous tissue formation?.....

Yes = 1  
No = 3

Code  
4018

29. Have any of the following herbicides been used on the selected field in the specified years since:

1	2	3	4	5	6
Active Ingredients	2023 Yes = 1 No = 3	2022 Yes = 1 No = 3	2021 Yes = 1 No = 3	2020 Yes = 1 No = 3	2019 Yes = 1 No = 3
a. Glyphosate (e.g. Roundup®)	2001	2002	2003	2004	2005
b. Glufosinate (e.g. Liberty®)	2006	2007	2008	2009	2010
c. Dicamba (e.g. Xtend®, Xtendimax®, Engenia®)	2011	2012	2013	2014	2015
d. 2, 4–D (e.g. Enlist®)	2738	2739	2740	2741	2742

30. Have herbicide–tolerant seeds been planted on the selected field any time since 2019?.....

Yes = 1  
No = 3

Code  
2021

[If item 30 = 1, continue. Otherwise go to Section F.]

If column 2 = 1, ask questions in columns 3 – 6

1 For herbicide tolerant seeds that are tolerant of —	2 Have you noticed a decline in the effectiveness of herbicides in controlling weeds in the selected field?  Yes = 1 No = 3	3 What was the first year you noticed a decline in the effectiveness of herbicides in controlling weeds in the selected field?  Year	After noticing the decline in the effectiveness of this herbicide in controlling weeds on the selected field, did you —		
			4 Stop planting herbicide resistant crops with this trait?  Yes = 1 No = 3	5 Change tillage practices?  Yes = 1 No = 3	6 Switch to an alternative herbicide?  Yes = 1 No = 3
a. Glyphosate (e.g. Roundup®)	2022	2023 — — — —	2024	2025	2026
b. Glufosinate (e.g. Liberty®)	2027	2028 — — — —	2029	2030	2031
c. Dicamba (e.g. Xtend®, Xtendimax®, Engenia®)	2032	2033 — — — —	2034	2035	2036
d. 2, 4–D (e.g. Enlist®)	2743	2744 — — — —	2745	2746	2747

Completion Code for Pest Management Data	
1 Incomplete/Refusal	0500

**F FIELD OPERATIONS — SELECTED FIELD**

1. Including custom operations, I need to list field work performed by machines on the selected field for the 2023 soybean crop. Please...

- begin with the first field operation after harvest of the previous crop, including operations for a cover crop established since the previous crop was harvested. If fallow during 2022, list operations starting with fall 2021.
- list the operations in order through harvest and hauling of this crop to storage or first point of sale; and
- maintain the order of tandem hook-ups.

Codes for Column 5	
1	You (the Operator)
2	Partner
3	Unpaid Worker
4	Paid Part-time or Seasonal Worker
5	Paid Full-time Worker
6	Custom Applicator

Office Use Lines in Table
0499

Check List

INCLUDE all field work using machines for—

- Land forming/Levee Building
- Tillage
- Preparing for Irrigation
- Planting
- Fertilizer & Pesticide applications
- Harvesting & Hauling to storage or first point of sale

EXCLUDE

- Lime & Gypsum/land plaster applications
- Compost & Non-commercial manure applications

1 LINE No.	2 SEQUENCE No.	3 What operation or equipment was used?	4 [Record machine code from Respondent Booklet.] Code	5 Who was the machine operator? [Enter code from above.] Code	[If Column 5 = code 6, skip columns 6 thru 11]					
					6 What was the size or swath of the [machine] used? Code	7 [Record size unit code.] 1 Feet 2 Row 3 Moldboard bottoms Hauling 4 Pounds 5 Bushels 6 Tons Code	8 How many acres were covered? EXCLUDE land forming and hauling operations. Acres	OR	9 How many total hours were spent on land forming and hauling? [Example: backhoes, disk border maker, ditcher, rear mounted blade, trucks, wagons, forklift etc.] Hours	10 What power source was used? Tractors 1 <40 HP 2 40-99 HP 3 100-149 HP 4 150-199 HP 5 >=200 HP OR 66 Animal Drawn 77 Pick up <sup>1/</sup> 99 Self-Propelled Code
01	87		88	89	90	91	92	93	94	95
02	87		88	89	90	91	92	93	94	95
03	87		88	89	90	91	92	93	94	95
04	87		88	89	90	91	92	93	94	95
05	87		88	89	90	91	92	93	94	95
06	87		88	89	90	91	92	93	94	95
07	87		88	89	90	91	92	93	94	95
08	87		88	89	90	91	92	93	94	95
09	87		88	89	90	91	92	93	94	95
10	87		88	89	90	91	92	93	94	95
11	87		88	89	90	91	92	93	94	95
12	87		88	89	90	91	92	93	94	95
13	87		88	89	90	91	92	93	94	95
14	87		88	89	90	91	92	93	94	95
15	87		88	89	90	91	92	93	94	95
16	87		88	89	90	91	92	93	94	95
17	87		88	89	90	91	92	93	94	95
18	87		88	89	90	91	92	93	94	95

<sup>1/</sup>If trucks other than pick-ups are used as the power source, use truck codes in Respondent Booklet

Office Use
0400

[Enumerator Action: Were machine or equipment codes reported in item 1?]

4029  Yes – Continue

No – Go to item 3

2. Were any of the machines or equipment reported in Columns 2 or 3 of item 1 purchased new during 2023?.....

Code	4030
Yes = 1	
No = 3	

[If item 2 = 1, continue. Otherwise go to item 3.]

1 Machine purchased new in 2023	2 [Record machine code from respondent booklet.] Code	3 Dealer's list price of the machine. (This should be the "sticker price," not including discounts or trade-in values for used machinery.) Dollars
4031	4032	4033
4034	4035	4036
4037	4038	4039
4040	4041	4042
4043	4044	4045

3. Now I need some additional information about your labor.  
Please report the paid and unpaid labor that worked on the selected field to produce the 2023 soybean crop.  
EXCLUDE labor that was reported for field work performed by machines.

Type of Workers	How many hours did (type of worker) spend on the selected field —		
	1 scouting for weeds, insects and diseases? Hours	2 irrigating? Hours	3 performing other work by hand? Hours
	You (the operator).....	1101	1102
Partner(s).....	1104	1105	1106
Unpaid workers.....	1107	1108	1109
Paid part-time or seasonal workers EXCLUDE custom and contract labor.....	1110	1111	1112
Paid full-time workers EXCLUDE custom and contract labor.....	1113	1114	1115

4. What was the average hourly wage rate paid to part-time or seasonal hired workers on the selected field? Part-time workers are defined as those who worked for wages or salaries for less than 30 hours a week on average. EXCLUDE custom and contract workers, payroll taxes and benefits.....

Dollars & Cents Per Hour	OR	Total Dollars per Week	AND	Number of Hours Worked Each Week
1119 . ____		2119		3119

5. What was the average hourly wage rate paid to full-time hired workers on the selected field? EXCLUDE custom and contract workers, payroll taxes and benefits.....

Dollars & Cents Per Hour	OR	Total Dollars per Week	AND	Number of Hours Worked Each Week
1118 . ____		2118		3118



6. Was any contract labor used on the selected field?.....

Yes=1  
No=3

Code
1116

[If item 6 = 1, continue. Otherwise go to item 7.]

a. What was the average cost per acre for this contract labor?  
INCLUDE operator, landlord, and contractor costs.....

Dollars & Cents  
Per Acre

1117	. ____
------	--------

7. What percent of the total number of unpaid hours worked on the selected field was performed by workers under 16 years of age? Estimates of labor costs for unpaid workers are based on off-farm wage rates, which are different for workers under 16 relative to those 16 and older.....

Percent

1120
------

8. Now I need some information on how much was spent or will be spent for custom services used on the selected field for the 2023 soybean crop.

1 Custom Service	2
Which of the following services were performed for the 2023 soybean crop on the selected field?  [Check box for each service performed; refer to item 1 if necessary.]	Including operator, landlord, and contractor costs, how much was spent for [column 1] on the selected field for the 2023 soybean crop?  Dollars & Cents per Acre
<input type="checkbox"/> a. Custom land preparation, shaping and/or leveling?.....	1121  . ____
<input type="checkbox"/> b. Custom cultivating?.....	1122  . ____
<input type="checkbox"/> c. Custom planting and/or reseeding?.....	1123  . ____
<input type="checkbox"/> d. Custom harvesting?.....	1124  . ____
<input type="checkbox"/> e. Custom hauling to storage or point of first sale? (____.____ x _____ ÷ _____ = _____.____) (Dollars & cents per unit x Total units hauled from field ÷ Acres harvested in field = Dollars & cents per acre)	1126  . ____
<input type="checkbox"/> f. Custom harvesting and hauling from field to storage or point of first sale? (____.____ x _____ ÷ _____ = _____.____) (Dollars & cents per unit x Total units hauled from field ÷ Acres harvested in field = Dollars & cents per acre)	1127  . ____

9. Were the soybeans harvested and hauled from the selected field dried (or will be dried) before they were sold or stored?.....

Yes=1  
No=3

Code
2748

10. Did you hire or receive any technical or consultant services to make recommendations such as for nutrient, pest control, irrigation, or precision farming for the selected field?.....

Yes=1  
No=3

1196
------

[If item 10 = 1, continue. Otherwise, go to item 14.]

11. Which of the following technical or consultant services did you obtain to make recommendations for the selected field?

		Code
a. Nutrient recommendations/management service?.....	Yes=1 No=3	1129
b. Soil or tissue sample collection?.....	Yes=1 No=3	1130
c. Pest control recommendations/management service?.....	Yes=1 No=3	1131
d. Pest scouting?.....	Yes=1 No=3	1132
e. Irrigation management service (i.e. irrigation scheduling)?.....	Yes=1 No=3	1133
f. Yield map or remote sensing map development/interpretation?.....	Yes=1 No=3	1134
g. Other custom or technical service? [Specify: _____].....	Yes=1 No=3	1135

[If any item in 11a–g = 1, continue. Otherwise go to item 14.]

		Code
12. Were any of the technical or consultant services listed in item 11a–g provided to you at no–cost or were partially reimbursed by the Natural Resources Conservation Service (NRCS)?.....	Yes=1 No=3	4046

13. If Yes to any of these services in item 11a–g, what was the cost for all of these services? INCLUDE operator, landlord, and contractor costs. EXCLUDE cost of soil or tissue tests or scouting costs previously reported. Do not report costs for any of these services reported above if they were previously reported as part of the cost of materials and/or application.....

Dollars & Cents per Acre	OR	Total Dollars
1136		1137

14. Please report how any data from the selected field in 2023 will be stored and accessed.

		Code
a. Did you access the data collected from the selected field on a —		
i. Paper hard copy?.....	Yes=1 No=3	2485
ii. Personal computer?.....	Yes=1 No=3	2486
iii. Mobile device?.....	Yes=1 No=3	2487
b. Did you access the data collected from the selected field through an agricultural technology provider website?.....	Yes=1 No=3	2488

[If item 14b = 1, continue. Otherwise, go to item 15.]

		Code
c. Did you opt out of allowing your agricultural technology provider website to share data collected from the selected field with any third party?.....	Yes=1 No=3	2489
d. Did you share any of the data collected from the selected field with a third party through an agricultural technology provider website?.....	Yes=1 No=3	2490

15. Please report the data collection technologies you used on the selected field to produce this crop.

1  Data Collection Tool	2  Was this tool used on the selected field?  Yes=1 No=3	3	4	5	6
		If the tool was used—			
		Did this tool collect GPS coordinates?  Yes=1 No=3	Are data from this tool used to create a map?  Yes=1 No=3	What is the replacement cost of this tool?  Total Dollars	What is the annual fee for using this tool? 1/  Total dollars
a. Yield monitor.....	2461	2462	2463	2570	2571
b. Soil tests on core sample performed on-farm or sent out to a laboratory.....	2464	2465	2466	2572	2573
c. Soil sensor tests.....	2467	2468	2469	2574	2575
d. Hard-wired crop condition sensors.....	2470	2471	2472	2576	2577
e. Wireless crop condition sensors.....	2473	2474	2475	2578	2579
f. Aircraft or satellites.....	2445	2446	2447	2448	2449
g. Drones or Unmanned Aerial Vehicles (UAV)..	2455	2456	2457	2458	2459
h. Custom service applications – data from completed work on your field.....	2479	2480	2481	2582	2583
i. Public data downloaded from online sources.	2482	2483	2484		

1/ INCLUDE custom service fees, data subscriptions, and online tool subscriptions.

[If item 15a column 2 = 1, continue to item 16. Otherwise go to item 17.]

16. Did you use the yield monitor information to—

	Code
a. add/improve tile drainage?.....	Yes=1 1141 No=3
b. negotiate new crop leases?.....	Yes=1 1144 No=3
c. help determine chemical input use?.....	Yes=1 1143 No=3

[If any item 15 column 2 = 1, continue. Otherwise go to item 19.]

17. Using data collected from the previous tools table in item 15, did you obtain crop management recommendations, such as data interpretation, in 2023 for the selected field from any of the following—

	Code
a. input dealers without other fee-for-services?.....	Yes=1 2491 No=3
b. input dealers with other fee-for-services?.....	Yes=1 2492 No=3
c. custom service providers?.....	Yes=1 2493 No=3
d. USDA/university extension services?.....	Yes=1 2494 No=3

[If any item 17a–d = 1, ask—]

e. What was the cost for all of these services? INCLUDE operator, landlord and contractor costs. EXCLUDE costs for any of these services if they were previously reported as part of the costs of materials and/or application.....	Dollars & Cents per Acre 3150	OR	Total Dollars 3151
---	----------------------------------	----	-----------------------

[If item 15g column 2 = 1, ask—]

18. In the selected field, did you use the UAV for any of the following purposes?

	Code
a. Weed analysis?.....	Yes=1 3161 No=3
b. Yield analysis?.....	Yes=1 3165 No=3
c. Moisture analysis?.....	Yes=1 3166 No=3

19. Was any of the following GPS-enabled (Global Positioning System) equipment used to produce soybeans on the selected field in 2023?

	Code
a. Mounted in-cab heads-up displays?.....	Yes=1 2155 No=3
b. Smart phones or computer tablets?.....	Yes=1 2156 No=3
c. Automatic section control, such as auto sprayer boom controls or automatic section shut offs?.....	Yes=1 2165 No=3

20. If any GPS-enabled equipment was used, what was the cost to purchase and install all GPS-enabled equipment, not including guidance auto-steering equipment? INCLUDE cost for GPS receiver and annual GPS subscription fee, and operator, landlord, and contractor costs. EXCLUDE costs for any of this equipment if they were previously reported as part of the costs of materials and/or application.....

Dollars & Cents per Acre	OR	Total Dollars
2166		2167

21. Were any automated guidance systems (i.e. auto-steer), excluding Light Bar, used on the selected field?.....

Code
Yes=1 2148 No=3

[If item 21 = 1, continue. Otherwise go to item 21f.]

	Code
a. Was the automated guidance system..... 1 New, owned? 2 Used, owned? 3 Leased?	2158

	Year
b. What year was the automated guidance system first purchased?.....	2159 _ _ _ _

Dollars & Cents per Acre	OR	Total Dollars
c. What is the replacement cost for the automated guidance system?..... 2160		2161

Dollars & Cents per Acre	OR	Total Dollars
d. What is the annual fee for the automated guidance system?..... 2162		2163

e. For what reasons did you choose to use an automated guidance system? (Select all that apply.)

- 4047  Increase yields      4048  Reduce input costs      4049  Reduce operator fatigue
- 4050  Improve soil conditions (i.e. soil compaction)      4051  Technology came "standard" on my equipment      4052  Reduce environmental impacts (i.e. emissions)
- 4053  Other

[If item 21 = 3, ask—]

f. For what reasons did you choose not to use an automated guidance system? (Select all that apply.)

- 4054  Costs are too high relative to benefits      4055  Benefits are uncertain      4056  Too complicated to use
- 4057  Not sufficiently accurate      4058  Not suitable for my operation      4059  Other

Code

22. Was a variable rate applicator used on the selected field?..... Yes=1 No=3 2164

[If item 22 = 1 continue. Otherwise go to Section G.]

Please report the variable rate applicator types you used on the selected field to produce this crop. If a particular row's variable rate applicator was not used, leave that row blank.

1	2 Tool Used	3 Was this applicator?—	4 Was this applicator?—	5 What year was the applicator first used?	6 Premium paid for the applicator
Was a variable rate applicator used on the selected field for—	Yes=1 No=3	1 Sensor-based 2 GPS-based 3 Both 4 Neither  Code	1 New, owned 2 Used, owned 3 Leased  Code	Year	Total Dollars
a. seeding.....	1158	2170	2171	2172 _ _ _ _ _	2173
b. fertilizer/lime applications.....	1152	2174	2175	2176 _ _ _ _ _	2177
c. pesticide applications.....	1159	2178	2179	2180 _ _ _ _ _	2181
d. irrigation applications.....	1197	2182	2183	2184 _ _ _ _ _	2185

Acres

1. How many acres in the selected field were irrigated for the 2023 soybean crop?..... 

1160	.____
------	-------

[If none, go to Conclusion]

2. Now I have some questions about the irrigation systems and water used on the selected field for the 2023 soybean crop.

	Unit	System
a. What type(s) of irrigation system(s) was (or were) used to irrigate the selected field? [Show System Type Codes in the Respondent Booklet. Enter System Type Code for the system covering the most field acres.].....	System Type Code	1161
b. What was the total quantity of water applied to the selected field during the entire growing season? INCLUDE all water used from both on-farm and off-farm sources.....	Inches per Acre	1162
	OR	1163
	Total Acre Feet	

[If operator cannot provide item 2b, ask (i) and (ii). Otherwise go to 2c]

i. What is the total number of hours this system was used to apply water to the selected field during the soybean growing season?.....	Total Hours	1164
ii. How many gallons per minute were applied?.....	Gallons per Minute	1165
c. What percent of the water used to irrigate the selected field through this system came from surface water sources?.....	Percent	1166
d. What was the number of times the selected field was irrigated during the soybean growing season using this system? INCLUDE any pre-plant irrigation.....	Number of Irrigations	1167

e. What was the pump type? [If more than one pump in the system, enter type for pump closest to water source.].....

- |               |
|---------------|
| 1 Turbine     |
| 2 Submersible |
| 3 Centrifugal |
| 4 Booster     |
| 5 Siphon      |
| 99 No Pump    |

[If code 99, go to item j.].....

Code	1168
------	------

f. What was the average pumping rate?.....

Gallons per Minute	1169
--------------------	------

[If item 2a = code 1-9 (Pressure System), ask—]

g. What was the system operating pressure?.....

Pounds per Square Inch	1170
------------------------	------

h. What was the primary motor type used to pump the water?.....

- |               |
|---------------|
| 1 Diesel      |
| 2 Gasoline    |
| 3 LP Gas      |
| 4 Natural Gas |
| 5 Electricity |
| 6 Solar Power |

Code	1171
------	------

i. What was the average motor size?.....

Horsepower	1172
------------	------

[If No Pump was used, item 2e = 99, ask—]

j. What was the average flow rate?.....

Gallons per Minute	1173
--------------------	------

k. How many other acres on this operation were irrigated using the selected field's irrigation system during the 2023 growing season? EXCLUDE the selected field.....

Acres	1174
-------	------

	Dollars & Cents per Acre	OR	Total Dollars
3. What was the cost of the fuel or electricity used to irrigate the selected field? INCLUDE operator, landlord, and contractor costs.....	1189		1190
			Code
4. Was any water purchased to irrigate the selected field? INCLUDE landlord's share and purchases from all sources.....		Yes=1 No=3	1191
[If item 4 = 1, continue. Otherwise go to item 5.]			
	Dollars & Cents per Acre	OR	Total Dollars
a. What was the total cost for the water purchased for the selected field during the 2023 growing season? INCLUDE operator, landlord, and contractor costs and ditch maintenance costs for the selected field.....	1193		1194
			Total Dollars
[If siphon tubes were used, item 2a = 10 or 11, ask—]			
5. What would be the total cost to replace all the siphon tubes used on the selected field?.....			1201
			Total Dollars
[If poly pipe system was used, item 2a = 14, ask—]			
6. What was the total amount spent for poly pipe used on the selected field during the 2023 growing season? INCLUDE operator, landlord, and contractor costs.....			1202
			Inches
[If gated pipe system was used, item 2a = 15 or 16, ask—]			
7. What was the average diameter of gated pipe used to irrigate the selected field?.....			1203
			Feet
a. What was the total length of gated pipe used?.....			1204
			Code
[If Pipe systems were used, item 2a = 10, 11, 14, 15 or 16, ask—]			
8. Were wells used to supply irrigation water for the selected field?.....		Yes=1 No=3	1205
			Number
[If item 8 = 1, continue. Otherwise go to item 9.]			
a. How many wells were used to irrigate the selected field?.....			1206
			Inches
b. What was the average diameter of the outer well casing?.....			1207
			Feet
c. What was the average pumping depth of these wells during the irrigation season? Pumping depth is the depth to water at the start of the irrigation season, plus an average decline in the water level caused by pumping during the irrigation season.....			1208
			Code
d. Were other fields irrigated using water pumped from wells that supplied water to the selected field?.....		Yes=1 No=3	1210
			Acres
[If item 8d = 1, continue. Otherwise go to item 9.]			
e. Excluding the selected field, how many other acres on this operation were irrigated using the same wells during the 2023 growing season?.....			1211
			Code
9. Was any additional mainline or lateral pipe used to carry water from the source to the system in the same wells during the 2023 growing season?.....		Yes=1 No=3	2211
			Inches
[If item 9 = 1, continue. Otherwise go to Conclusion.]			
a. What was the average diameter in inches of the most common type of this additional pipe used?....			1212
			Feet
b. How many feet of this additional pipe were used to bring water to the selected field?.....			1213

# CONCLUSION

**Location of Selected Field**

I need to locate the selected field of soybeans on this map.

Office Use  
State County FIPS Code

1. What county is the selected soybean field in?.....

	0010
--	------

<b>LATITUDE</b>	<b>LONGITUDE</b>
9854	9855
<i>decimal</i>	<i>decimal</i>

[Enumerator Action: Use the iPad app to find the coordinates for the center of the selected field. Confirm with the operator using the aerial imagery that this is the correct field.]

We will need additional information to complete this study. We will contact you in February or March 2024 to collect it. I'll call you then to set up a time that is good for you.

2. Ending time.....

Office Use Only				
Ending Time (Military)		OR	Total Time	
Hours	Minutes		Hours	Minutes
0005		0008		

3. Records Use – [Did respondent use farm/ranch records to report—]

[fertilizer data?]..... Yes=1 No=3	[pesticide data?]..... Yes=1 No=3	[majority of this expense data?]..... Yes=1 No=3
Code 0011	Code 0012	Code 0013

4. Supplements Used – [Record the total number of each type of supplement used to complete this interview.]

Fertilizer Supplement.....	Pesticide Supplement.....	Field Operations.....
Number 0041	Number 0042	Number 0043

**Contact Information**

Operator Email: 9929

Operator Phone: 9917

9917 Check to receive results by email <input type="checkbox"/>	9918 ( ) _____	check if cell phone <input type="checkbox"/>
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Operation Email: (if different from above) 9937

Operation Phone: (if different from above) 9920

9920 Check to receive results by email <input type="checkbox"/>	9936 ( ) _____	check if cell phone <input type="checkbox"/>
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Respondent Name: 9912

Respondent Phone (if different from above) 9911

9911 ( ) _____	check if cell phone <input type="checkbox"/>	9910 MM DD YY Date: ____ ____ ____
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This completes the survey. The results will be available on the release date at [nass.usda.gov/results](http://nass.usda.gov/results)  
Thank you for your help.

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	