AGRICULTURAL RESOURCE MANAGEMENT SURVEY

OMB No. 0535-0218
Approval Expires: 6/30/2026
Project Code: 906
SurveyID: 2054 Phase 2

NATIONAL AGRICULTURAL STATISTICS SERVICE

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SOYBEAN PRODUCTION PRACTICES AND COSTS REPORT FOR 2023

VERSION	ID	TRACT	SUBTRACT	C-TYPE
77	__ __ __ __ __ __ __ __ __	01	__ __	120

CONTACT RECORD

DATE	TIME	NOTES

H H M M

BEGINNING TIME [MILITARY] 0004 __ __ __ __

SCREENING BOX 0006

☐ Check if verified POID __ __ __ __ __ __ __ __ __ __

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

check if cell phone

Phone: (_____) _____ ☐

☐ Check if verified POID __ __ __ __ __ __ __ __ __ __

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

check if cell phone

Phone: (_____) _____ ☐

☐ Check if verified POID __ __ __ __ __ __ __ __ __ __

Name: _____

Address: _____

City:_____ State: _____ Zip: _____

check if cell phone

Phone: (_____) _____ ☐

☐ Check if verified POID __ __ __ __ __ __ __ __ __ __

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

check if cell phone

Phone: (_____) _____ ☐

A SOYBEAN FIELD SELECTION A

Total Planted Acres

1. How many total acres of soybeans did this operation plant for the 2023 crop year?..... 0050 .___

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

Code

a. Did you produce any acres of certified organic soybeans?..... Yes = 1 No = 3 xxxx

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

	Total Acres	Number of Fields
i. Conventional soybeans?.....	xxxx .___	xxxx
ii. Certified organic soybeans?.....	xxxx .___	xxxx

[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

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.]..... 0020

3. [Now, I need to identify an 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:

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

a. Farm Number (up to 8 digits)..... 1070

b. Tract Number (up to 7 digits)..... 1071

c. Field Number (up to 4 digits, exclude subfield letters)..... 1072

OFFICE USE
OY Field Substituted

0022

B **FIELD CHARACTERISTICS** — SELECTED FIELD **B**

1. How many acres of soybeans did this operation plant in the selected field for the 2023 crop?..... Acres 1301 .___

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 Code 1890

[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 ____

7. On what date was the selected field planted?..... M M D D Y Y 1308 __ __ __ __ __ __

a. What was your yield goal at planting for the selected field?..... Bushels per Acre 1311

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

INCLUDE
- operator, landlord, and contractor costs
- cost of see 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
a. GMO/GE purchased seed?	1214 .___ ___	1215	1216
b. Non–GMO/GE purchased seed?	1217 .___ ___	1218	1219
c. Homegrown seed?			1318
			100%

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

d. What was the cost per pound for cleaning and treating this seed?..... Dollars & Cents per Pound: 3321 .__ __

9. What was the seeding rate per acre the first time the selected field was planted?..... Units: 1313 .__ ; 2314

Unit Code
1=Pounds/Acre
2=Cwt/Acre
3=Tons/Acre
4=Bushels/Acre
23=50 lb. Bags/Acre

a. Was the soybean seed—..... (1 Drilled? 2 Planted in conventional rows? 3 Broadcast on the selected field?) ..... Code: 1316

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

10. What was the average soybean row width for the selected field?..... Inches: 1322

11. How many acres in the selected field had to be replanted to soybean? (Acres replanted = Number of Acres x Number of times replanted.)..... Acres: 1315 .__

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?) ..... Code: 3062

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

a. What was the name of the seed treatment? [Write seed treatment name in the box provided.]..... Seed Treatment Name: 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.]..... Code: 2325

13. For the 2023 soybean crop, did you plant a commercial seed product on the selected field?..... Yes=1 No=3: Code: 2340

[If item 13 = 1, ask—]

a. What was the name of the seed product? [Write seed product name in the box provided.]..... Commercial Seed Product Name: 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.]..... Code: 2343

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

xxxx ☐ High yield
xxxx ☐ High Protein content
xxxx ☐ Pest resistance
xxxx ☐ Resistance to herbicide intentionally applied to the field
xxxx ☐ Resistance to herbicide drift from nearby fields
xxxx ☐ Other (Specify: _____)

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

[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?..... Yes = 1 No = 3: Dollars & Cents per Bushel: 2384 .__ __

	2023 Yes = 1 No = 3	Last time soybeans were planted Yes = 1 No = 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 Yes = 1 No = 3	Last time soybeans were planted Yes = 1 No = 3 N/A = 4
a. Glyphosate tolerance (e.g. Roundup Ready®)	2306	2307
b. Glufosinate tolerance (e.g. LibertyLink®)	2312	2313
c. Dicamba tolerance (e.g. Xtend®)	2310	2311
d. HPPD tolerance (e.g. Balance®, MGI)	2330	2331
e. 2, 4–D tolerance (e.g. Enlist®)	xxxx	xxxx
f. High–oleic soybeans (e.g. Plenish®, Vistive Gold®)	xxxx	xxxx

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 Yes = 1 No = 3	Last time soybeans were planted Yes = 1 No = 3 N/A = 4
a. Sulfonylurea tolerance (e.g. Sulfonylurea Ready, SR, STS®, BOLT®)	2332	2333
b. Soybean cyst nematode resistance (e.g. SCN)	2334	2335
c. Soybean sudden death syndrome resistance (e.g. SDS)	xxxx	xxxx
d. Phytophthora root–rot resistance (e.g. PRR)	2336	2337
e. Aphid resistance (e.g. Rag1, Rag2)	2338	2339

	Yes = 1 No = 3	Code
19. Has harvest of the selected field been completed?		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—	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
a. harvested for grain?	1346 .___	1347 .___	1348
b. harvested for commercial seed contract?	1431 .___	1432 .___	1433
c. abandoned?	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? Yes=1 No=3	3 If a cover crop was planted, how did you terminate this cover crop? 1 Tilled–in 2 Herbicide 3 Rolled 4 Grazed 5 Harvested for forage 6 Harvested for grain 7 Winter killed	4 Was the selected field no–till or strip–tilled?[1/] Yes=1 No=3
Season and Year	Crop Name	Crop Code		Code	
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

[1/]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—]

	Dollars & Cents per Acre
j. What was the seed cost per acre for the cover crop?.....	1468 .___ ___
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.....	1495 .___ ___

	Code
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.).....	0702 (Yes=1 No=3)
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.....	1405 (Yes=1 No=3)

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 (over 10%)
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

a. Water–driven erosion — 2407
b. Wind–driven erosion — 2408
c. Soil compaction — 2409
d. Poor drainage — 2410
e. Low organic matter — 2411
f. Water quality — 2412
g. Other concerns — 2413
h. Water availability — 2415

[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? Yes=1 No=3 — Code 2414

Code

27. Did the land use practices for the selected field include subsurface drainage? Yes=1 No=3 — 2402

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

Year

a. In what year was the current subsurface (tile) drainage installed? — 2403 ____

Inches

b. What is the average depth of your draining system? — 2604
c. What is the average or most common diameter of your tiles? — 2605

Code

d. Does this system include a mechanism for controlled drainage (e.g. stop logs, risers, or float mechanisms)? Yes=1 No=3 — 2406
e. Does this drainage system have surface inlets? Yes=1 No=3 — 2719

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

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?

Unit Code
1 Current
2 Past
3 Never

a. Environmental Quality Incentive Program (EQIP)	2611
b. Conservation Security or Conservation Stewardship Programs (CSP)	2612
c. Conservation Reserve Program (CRP)	2613
d. Other Federal, State, Local or non–government source	2614

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?

Code
Yes=1
No=3
2402

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.

On-field Soil and Crop Management

- 1 ☐ No-till/strip–till
- 2 ☐ Conservation tillage except no–till/strip–till
- 3 ☐ Cover crop – single species
- 4 ☐ Cover crop mix
- 5 ☐ Contour farming
- 6 ☐ Conservation crop rotation
- 7 ☐ Laser leveling
- 10 ☐ Terraces
- 12 ☐ Grass waterway
- 20 ☐ Implement a nutrient management plan – written plan.
- 21 ☐ Precision nutrient application
- 22 ☐ Subsurface phosphorous application
- 23 ☐ No fertilizer application more than 30 days before planting
- 24 ☐ Controlled release or enhanced efficiency fertilizer
- 26 ☐ Split nitrogen application with at least 50% applied after planting
- 30 ☐ Implement an integrated pest management plan – written plan
- 31 ☐ Drift reducing spray nozzles
- 32 ☐ Targeted sprayer – electrical control

Adjacent to Field

- 33 ☐ Filter strip
- 34 ☐ Field border
- 35 ☐ Riparian buffer – grass or forest
- 50 ☐ Irrigation water management plan
- 99 ☐ None of the above

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
		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 —
Practice or Activity on the Selected Field	Practice Code (see item 30a)	1 Used in 2023 2 Not used in 2023 but used in earlier years	1 Received a payment in 2023 from EQIP, CSP, or similar program 2 Did not receive a payment in 2023 but have in earlier years 3 Have never received a payment for this practice	1 A federal, state, or local regulatory requirement 2 Highly erodible land conservation compliance 3 Does not relate to any regulation or compliance requirement
	Code	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

Code

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 No=3 — 1393

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

Code

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 No=3 — 2721

Dollars & Cents per Acre

b. What was the dollar amount of coverage per acre for the single peril policy covering the selected field? — 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 — 2722 .__ __

Percent

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

Code

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

Code

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 No=3 — 1385

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

a. What type of multi–peril coverage did you obtain? — 1386

1 Noninsured Crop Disaster Assistance Program (NAP CAT)
2 Federal CAT (basic catastrophic insurance)
3 Noninsured Crop Disaster Assistance Program buy–up
4 Area Risk Protection (ARP)
5 Area Yield Protection (AYP) buy–up
6 Other Federal crop insurance

[If item 32a = 2, ask—]

Percent

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

ii. What percent of revenue coverage did you select for the selected field? — 1388

[If item 32a = 3, ask—]

Percent

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

Code

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

1 Basic
2 Optional
3 Enterprise

Year

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

CWT per Acre

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

Dollars & Cents per Acre

e. What was the premium paid for multi–peril crop insurance for the selected field in 2023? EXCLUDE any administrative fee — 2527 .__ __

Code

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

C NUTRIENT or FERTILIZER APPLICATIONS — SELECTED FIELD C

1. Were commercial nutrients or fertilizers applied to the selected field for the 2023 soybean crop? INCLUDE those from operators, landlords, and contractors..... Yes=1 No=3 | Code: 0202 | Office Use Edit Table: 0200

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

2. How many commercial nutrient or fertilizer applications were made to the selected field for the 2023 crop? INCLUDE applications made by airplanes and custom applicators..... | Number: 0203

3. Now I need to record information for each application.

CHECKLIST

INCLUDE	EXCLUDE
☐ Custom applied nutrients or fertilizers	☐ Micronutrients
☐ Nutrients or fertilizers applied in the fall of 2022 and those applied earlier if the selected field was fallow in 2022.	☐ Unprocessed manure
☐ Commercially prepared manure or compost	☐ Nutrients or fertilizers applied to previous crops in the selected field
	☐ Lime and gypsum/landplaster

Office Use Lines in Table	Table 001	0299

Nitrogen Codes for Column 2 Source/Form of N Used

1 Anhydrous ammonia
2 Nitrogen solution (UAN)
3 Urea
4 Ammonium nitrate
5 Sodium nitrate
6 Ammonia sulfate
7 Potassium nitrate, magnesium nitrate, and calcium nitrate
8 Other nitrogen fertilizer material [specify:_____]

Application Codes for Column 6

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

LINE	2 Materials Used [Enter percentage analysis or actual pounds of plant nutrients applied per acre.] [Show Common Nutrients or Fertilizers in Respondent Booklet] [Refer to nitrogen list above for type of nitrogen used.]					3 What quantity was applied per acre? [Leave this column blank if actual nutrients were reported]	4 [Enter material code] 1 Pounds 12 Gallons 13 Quarts 19 Pounds of actual nutrients	5 When was this applied? 1 In the fall before seeding 2 In the spring before seeding 3 At seeding 4 After seeding	6 How was this applied? [Refer to code list above]	7 How many acres in the selected field were treated in this application? Acres
	N Nitrogen	P_2O_5 Phosphate	K_2O Potash	S Sulfur	Source/Form of N Used [Refer to code list above]					
01	31	32	33	34	35	36	37	38	39	40 .___
02	31	32	33	34	35	36	37	38	39	40 .___
03	31	32	33	34	35	36	37	38	39	40 .___
04	31	32	33	34	35	36	37	38	39	40 .___
05	31	32	33	34	35	36	37	38	39	40 .___
06	31	32	33	34	35	36	37	38	39	40 .___
07	31	32	33	34	35	36	37	38	39	40 .___
08	31	32	33	34	35	36	37	38	39	40 .___
09	31	32	33	34	35	36	37	38	39	40 .___
10	31	32	33	34	35	36	37	38	39	40 .___

Code

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

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

Code

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

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

Office Use | 0215

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: 0219 .___ ___ OR Total Dollars: 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: 0221 .___ ___ OR Total Dollars: 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.]

Code

6. Was gypsum applied to the selected field for the 2023 soybean crop?..... Yes=1 No=3 | 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 | 3225

[If item 7 = 1, ask—]

Percent

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

Number

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

[If item 7b is more than 1, ask—]

Code

c. Based on these tests, is your soil organic matter content... 1 Increasing? 2 Decreasing? 3 Staying roughly the same? ..... | 3228

Code

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 | 0224

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

Code

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 | 0225

[If item 9 = 1 ask—]

Pounds per Acre

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

Code

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 | 0227

[If item 10 = 1, ask—]

Pounds per Acre

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

Code

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 | 0229

Dollars & Cents per Acre | OR | Total Dollars

12. How much was spent for these soil and plant tissue tests on the selected field? INCLUDE operator, landlord, and contractor costs ..... | 0230 .__ __ | OR | 0231

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

Code

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

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

| 0232

Code

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 | 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

Code

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

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

| 0241

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

Pounds per Acre | OR | Gallons per Acre

a. How much nitrogen inhibitor did you mix with the nitrogen applied to the selected field? ..... | 2561 .__ __ | OR | 2562 .__ __

Dollars & Cents per Pound | OR | Dollars & Cents per Gallon

b. What was the cost of nitrogen inhibitors used on this field? INCLUDE operator, landlord, and contractor costs ..... | 0297 .__ __ | OR | 0298 .__ __

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

[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?..... Yes=1 No=3 — Code 0240

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?
EXCLUDE commercially prepared manure..... Yes=1 No=3 — Code 0246

[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?..... — Units per acre 0249 .___ ___ ; Unit Codes 1 Tons, 2 Gallons, 3 Bushels, 4 Cubic yards — 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—..... 1 Lagoon liquid? 2 Slurry liquid? 3 Semi–dry or dry? ..... Code 0257

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

f. Was the major source of manure or compost—..... 1 Beef cattle? 2 Dairy cattle? 3 Hogs? 4 Sheep? 5 Poultry? 6 Equine? 7 Biosolids – municipal sludge? 8 Food waste? 9 Other? Specify:_____ ..... Code 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 0284 .__ __ OR Total Dollars 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?..... Yes=1 No=3 Code 0286

[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 0287 .__ __ OR Total Dollars 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?..... Yes=1 No=3 Code 0261

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

[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?..... Yes=1 No=3 Code 0280

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

[If item 17 = 1, ask—]

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

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

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

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.

		Code	Office Use Edit Table
1. Were any herbicides, insecticides, fungicides or other biocontrols or pesticides used on this soybean field for the 2023 crop?.....	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 defoliants, fungicides, herbicides, insecticides, and other pesticides. INCLUDE biological and botanical pesticides.	EXCLUDE adjuvants, nutrients or fertilizers reported earlier and seed treatments.	Office Use Line in Table	Table 001	0399

Chemical Product Name	LINE	2 What products were applied to the selected field? [Show product codes from Respondent Booklet.]	3 Was this product bought in liquid or dry form? [Enter L or D]	4 If this was part of a tank mix, enter line number of first product in mix.	5 When was this applied? 1 Before planting 3 At planting 4 After planting 5 Defoliation prior to harvest	6 How much was applied per acre per application? OR	7 What was the total amount applied per application in the selected field?	8 [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
2 Broadcast, ground with incorporation
3 Broadcast, by aircraft
4 In seed furrow
5 In irrigation water
6 Chiseled/injected or knifed in
7 Banded in or over row
8 Foliar or directed spray
9 Spot treatments

LINE	9 How was this product applied? [Enter code from above.]	10 How many acres in the selected field were treated with this product? Acres	11 How many times was it applied? Number	12 Were these applications made by — 1 Operator, partner, or family member? 2 Custom applicator? 3 Employee/Other?	13 What was the cost per unit of the product? Dollars & Cents per Unit	14 Unit Code 1 Pounds 15 Liquid Ounces 12 Gallons 28 Dry Ounces 13 Quarts 30 Grams 14 Pints
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

Code

3. Were any chemicals, biocontrols, or pesticides applied by custom applicators?..... Yes=1 No=3 | 0323

[If item 3 = 1 continue. Otherwise go to item 4.]

Code

a. Are you able to report the cost of chemical, biocontrol, and pesticide products and custom application separately?..... Yes=1 No=3 | 0324

[If item 3a = 1, ask—]

	Dollars & Cents per Acre	OR	Total Dollars
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.....	0331 .__ __		0332

	Dollars & Cents per Acre	OR	Total Dollars
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.....	0334 .__ __		0335
a. How much was spent for herbicide products applied to the selected field? INCLUDE operator, landlord, and contractor costs.....	3034 .__ __		3035
b. How much was spent for insecticide products applied to the selected field? INCLUDE operator, landlord, and contractor costs.....	3036 .__ __		3037
c. How much was spent for fungicide products applied to the selected field? INCLUDE operator, landlord, and contractor costs.....	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.

E PEST MANAGEMENT PRACTICES — SELECTED FIELD E

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

		Code
1. Were weather data used to assist in determining either the need or when to make pesticide applications?	Yes=1 No=3	0800
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?	Yes=1 No=3	0801
3. Were pesticides with different mechanisms of action rotated or tank mixed for the primary purpose of keeping pests from becoming resistant to pesticides?	Yes=1 No=3	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

		Code
4. Were herbicides applied to the selected soybean field before weeds emerged?	Yes=1 No=3	0803
5. Were herbicides applied to the selected soybean field after weeds emerged?	Yes=1 No=3	0805
6. Were records kept for the selected field to track the activity or numbers of weeds, insects, or diseases?	Yes=1 No=3	0823
7. Did you use published information on infestation thresholds to determine when to take measures to manage pests in the selected field?	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 14.]

Code 0808

		Code
9. Was an established scouting process such as systematic sampling, recording counts, etc. used or were insect traps used in the selected field?	Yes=1 No=3	0809

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

		Code
a. a pest advisory warning?	Yes=1 No=3	0810
b. a pest development model?	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

		Code
12. Were scouting data compared to published information on infestation thresholds to determine when to take measures to manage pests in the selected field?	Yes=1 No=3	0824
13. Did you use field mapping of previous weed problems to assist you in making weed management decisions?	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 No=3	0841
b. Plow down crop residue using conventional tillage?	Yes=1 No=3	0842
c. Remove/burn down crop residue?	Yes=1 No=3	0843
d. Rotate crops in the selected field during the past three years?	Yes=1 No=3	0844
e. Maintain ground covers, mulches, or other physical barriers?	Yes=1 No=3	0845
f. Choose crop variety because of specific resistance to a certain pest?	Yes=1 No=3	0846
g. Use no–till or minimum till?	Yes=1 No=3	0847
h. Plan planting locations to avoid cross infestation of pests?	Yes=1 No=3	0848
i. Adjust planting or harvesting dates?	Yes=1 No=3	0849
j. Chop, spray, mow, plow, or burn field edges, lanes, ditches, roadways, or fence lines?	Yes=1 No=3	0850
k. Clean equipment and field implements after completing field work to reduce the spread of pests?	Yes=1 No=3	0851
l. Adjust row spacing, plant density, or row directions?	Yes=1 No=3	0852
m. Have the seed treated for insect or disease control after you purchased the seed for the selected field?	Yes=1 No=3	0854
n. Maintain a beneficial insect or vertebrate habitat?	Yes=1 No=3	0855
o. Use a flamer to kill weeds?	Yes=1 No=3	0857
p. Maintain buffer strips or border rows to isolate soybean from non–organic crops or land, or did you take a buffer harvest?	Yes=1 No=3	0856
q. Plant earlier or later to avoid weeds?	Yes=1 No=3	0865

		Code
15. Were any beneficial organisms, such as insects, nematodes, or fungi applied or released in the selected field to manage pests?	Yes=1 No=3	0853
16. Were floral lures, attractants, repellants, pheromone traps, or other biological pest controls used on the selected field?	Yes=1 No=3	0858

[If item 16 or item 17 = 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

		Code
17. Was a trap crop, excluding fallow, grown to help manage insects in the selected field?	Yes=1 No=3	0863
18. Was the selected field left fallow in 2022 to help manage insects on the selected field?	Yes=1 No=3	0864
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 No=3	0861

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

[If item 21=1, continue. Otherwise go to item 22.]

Code

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

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

Unit Codes
1 Pounds
2 CWT
3 Tons
4 Bushels

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?

Units per Acre	Unit Code
2735	2736

Code

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 No=3 | 0827

[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	Unit Code	OR	Total Units
0829	0828		0830

Number of Years

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

Year

a. What year did you first plant any GMO/GE glyphosate–tolerant seeds on the selected field?..... | 1971 — — — —

Number of Years

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 dicamba–tolerant crop..... | 1972

Year

a. What year did you first plant any GMO/GE dicamba–tolerant seeds on the selected field?..... | 1973 — — — —

Code

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 No=3 | 1974

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

Code

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

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

Code

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 No=3 | 1976

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

Code

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 No=3 | 1977

Code

27. As far as you are aware, did farmers in neighboring fields plant dicamba–tolerant soybeans in 2023?..... Yes = 1 No = 3 | 1978

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

Code

a. As far as you are aware, did farmers in your county plant dicamba–tolerant soybeans in 2023?..... Yes = 1 No = 3 | 1979

Code

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 | xxxx

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

1 Active Ingredients	2 2023 Yes = 1 No = 3	3 2022 Yes = 1 No = 3	4 2021 Yes = 1 No = 3	5 2020 Yes = 1 No = 3	6 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®)	xxxx	xxxx	xxxx	xxxx	xxxx

Code

30. Have herbicide–tolerant seeds been planted on the selected field any time since 2019?..... Yes = 1 No = 3 | 2021

[If item 30 = 1, continue. Otherwise skip.]

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®)	2037	2038 — — — —	2039	2040	2041

Completion Code for Pest Management Data	
1 Incomplete/Refusal	0500

F **FIELD OPERATIONS** — SELECTED FIELD **F**

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?	7 [Record size unit code.] 1 Feet 2 Row 3 Moldboard bottoms Hauling 4 Pounds 5 Bushels 6 Tons Code	8 OR 9 How many acres were covered? EXCLUDE land forming and hauling operations. Acres	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[1/] 99 Self-Propelled Code	11 What was the fuel type of the tractor? [Record fuel type only if Column 10 equals 1–5] 1 diesel 2 gasoline 3 LP gas 4 other 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

[1/]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 Question 1?]

xxxx 1 ☐ Yes – Continue 3 ☐ No – Go to item 3

2. Were any of the machines or equipment reported in Columns 2 or 3 of Question 1 purchased new during 2023?..... Yes = 1 No = 3 | Code: xxxx

[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
xxxx	xxxx	xxxx
xxxx	xxxx	xxxx
xxxx	xxxx	xxxx
xxxx	xxxx	xxxx
xxxx	xxxx	xxxx

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	1103
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

Code

6. Was any contract labor used on the selected field?..... Yes=1 No=3 | 1116

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

Dollars & Cents Per Acre

a. What was the average cost per acre for this contract labor? INCLUDE operator, landlord, and contractor costs..... | 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 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.]	2 Including operator, landlord, and contractor costs, how much was spent for [column1] on the selected field for the 2023 soybean crop? Dollars & Cents per Acre
☐	a. Custom land preparation, shaping and/or leveling?.....	1121 .___ ___
☐	b. Custom cultivating?.....	1122 .___ ___
☐	c. Custom planting and/or reseeding?.....	1123 .___ ___
☐	d. Custom harvesting?.....	1124 .___ ___
☐	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 .___ ___
☐	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 .___ ___

Code

9. Were the soybeans harvested and hauled from the selected field dried (or will be dried) before it was sold or stored?..... Yes=1 No=3 | 2748

10. Did you hire 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 13.]

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 13.]

		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	xxxx

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 If the tool was used— Did this tool collect GPS coordinates? Yes=1 No=3	4 If the tool was used— Are data from this tool used to create a map? Yes=1 No=3	5 If the tool was used— What is the replacement cost of this tool? Total Dollars	6 If the tool was used— 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.

16. Did you use the yield monitor information to—

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

[If any item 15 column 2 = 1, continue. Otherwise go to item 18.]

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 No=3	2491
b. input dealers with other fee–for–services?.....	Yes=1 No=3	2492
c. custom service providers?.....	Yes=1 No=3	2493
d. USDA/university extension services?.....	Yes=1 No=3	2494

[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	OR	Total Dollars
3150 .__ __		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 No=3	3161
b. Yield analysis?	Yes=1 No=3	3165
c. Moisture analysis?	Yes=1 No=3	3166

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 No=3	2155
b. Smart phones or computer tablets?	Yes=1 No=3	2156
c. Automatic section control, such as auto sprayer boom controls or automatic section shut offs?	Yes=1 No=3	2165

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?..... Yes=1 No=3 — Code 2148

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

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

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

c. What is the replacement cost for the automated guidance system?.....

Dollars & Cents per Acre	OR	Total Dollars
2160 .__ __		2161

d. What is the annual fee for the automated guidance system?.....

Dollars & Cents per Acre	OR	Total Dollars
2162 .__ __		2163

e. What is the primary reason you chose to use an automated guidance system? (Select all that apply.)

xxxx ☐ Increase yields
xxxx ☐ Reduce input costs
xxxx ☐ Reduce operator fatigue
xxxx ☐ Improve soil conditions (i.e. soil compaction)
xxxx ☐ Technology came "standard" on my equipment
xxxx ☐ Reduce environmental impacts (i.e. emissions)
xxxx ☐ Other

[If item 21 = 3, ask—]

f. What is the primary reason you chose not to use an automated guidance system? (Select all that apply.)

xxxx ☐ Costs are too high relative to benefits
xxxx ☐ Benefits are uncertain
xxxx ☐ Too complicated to use
xxxx ☐ Not sufficiently accurate
xxxx ☐ Not suitable for my operation
xxxx ☐ 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 Was a variable rate applicator used on the selected field for—	2 Tool Used Yes=1 No=3	3 Was this applicator?— 1 Sensor–based 2 GPS–based 3 Both 4 Neither Code	4 Was this applicator?— 1 New, owned 2 Used, owned 3 Leased Code	5 What year was the applicator first used? Year	6 Premium paid for the applicator 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

G IRRIGATION G

	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 OR Total Acre Feet	1162 / 1163

[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

[If siphon tubes were used, item 2a = 10 or 11, ask—]

Total Dollars

5. What would be the total cost to replace all the siphon tubes used on the selected field?..... 1201

[If poly pipe system was used, item 2a = 14, ask—]

Total Dollars

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

[If gated pipe system was used, item 2a = 15 or 16, ask—]

Inches

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

[If Pipe systems were used, item 2a = 10, 11, 14, 15 or 16, ask—]

Code

8. Were wells used to supply irrigation water for the selected field?..... Yes=1 No=3 | 1205

[If item 8 = 1 continue. Otherwise go to item 9.]

Number

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

[If item 8d = 1 continue. Otherwise go to item 9.]

Acres

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

[If item 9 = 1 continue. Otherwise go to Conclusion.]

Inches

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 oats on this map.

	County Name	Office Use State County FIPS Code
1. What county is the selected oat field in?.....		0010 __ __ __ __ __

	LATITUDE	LONGITUDE
a. Field location.....	9854 __ __ . __ __ __ __ __ *decimal*	9855 _ __ __ __ . __ __ __ __ __ *decimal*

[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.

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

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

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

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

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

Contact Information

Operator Email:		Operator Phone:	
9929	9917 Check to receive results by email ☐	9918 ( ) _____	check if cell phone ☐

Operation Email: (if different from above)		Operation Phone: (if different from above)	
9937	9920 Check to receive results by email ☐	9936 ( ) _____	check if cell phone ☐

Respondent Name:	Respondent Phone (if different from above)		
9912 _____	9911 ( ) _____	check if cell phone ☐	9910 MM DD YY Date: __ __ __ __ __ __

This completes the survey. The results will be available on the release date at 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