

# AGRICULTURAL RESOURCE MANAGEMENT SURVEY

OMB No. 0535-0218  
 Approval Expires: 07/31/2021  
 Project Code: 906  
 SMetaKey: 2054  
 Phase 2



**ERS**  
ECONOMIC RESEARCH SERVICE  
 National Agricultural Statistics Service  
 U.S. Department of Agriculture  
 NOC Division  
 9700 Page Avenue, Suite 400  
 St. Louis, MO 63132-1547  
 Phone: 1-888-424-7828  
 Fax: 855-415-3687  
 E-mail: [nass@nass.usda.gov](mailto:nass@nass.usda.gov)

## SOYBEAN PRODUCTION PRACTICES AND COSTS REPORT FOR 2018

<b>VERSION</b> 7	<b>ID</b> _____	<b>TRACT</b> 01	<b>SUBTRACT</b> _____	<b>C-TYPE</b> 120
---------------------	--------------------	--------------------	--------------------------	----------------------

### CONTACT RECORD

DATE	TIME	NOTES

**INTRODUCTION:**  
*[Introduce yourself, and ask for the operator. Rephrase in your own words.]*

We are collecting information on practices and costs to produce soybeans and need your help to make the information as accurate as possible. The information you provide will be used for statistical purposes only. Your responses will be kept confidential and any person who willfully discloses ANY identifiable information about you or your operation is subject to a jail term, a fine, or both. This survey is conducted in accordance with the Confidential Information Protection provisions of Title V, subtitle A, Public Law 107-347 and other applicable Federal laws. For more information on how we protect your information please visit: <https://www.nass.usda.gov/confidentiality>. Response is **voluntary**. We encourage you to refer to your farm records during the interview.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0535-0218. The time required to complete this information collection is estimated to average 65 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

H H M M

**BEGINNING TIME**  
 [MILITARY]

0004 _____
---------------

**SCREENING BOX**

0006
------

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

<b>POID</b> _____	<b>POID</b> _____
PARTNER NAME	PARTNER NAME
ADDRESS	ADDRESS
CITY STATE ZIP PHONE NUMBER	CITY STATE ZIP PHONE NUMBER
<b>POID</b> _____	<b>POID</b> _____
PARTNER NAME	PARTNER NAME
ADDRESS	ADDRESS
CITY STATE ZIP PHONE NUMBER	CITY STATE ZIP PHONE NUMBER

**A**

**SOYBEAN FIELD SELECTION**

**A**

1. **How many acres of soybeans did this operation plant for the 2018 crop year?** *[If no acres planted, review Screening Survey Information Form, make notes, then go to item 4 on back page]..* .....

TOTAL PLANTED ACRES
0050

**I will follow a simple procedure to make a random selection from the soybean fields planted for the 2018 crop.**

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].* .....

TOTAL NUMBER OF FIELDS PLANTED
0020

3. **Please list these fields according to identifying name/number or describe each field, then I will tell you which field has been selected.**

*[If there are more than 18 fields make sure item 2 is TOTAL fields planted, and list only the 18 fields closest to the operator's permanent residence. If respondent is unable to identify or describe the fields, use the Field Selection Grid Supplement.]*

FIELD NAME, NUMBER OR DESCRIPTION	FIELD NAME, NUMBER OR DESCRIPTION
1 _____	10 _____
2 _____	11 _____
3 _____	12 _____
4 _____	13 _____
5 _____	14 _____
6 _____	15 _____
7 _____	16 _____
8 _____	17 _____
9 _____	18 _____

APPLY "RANDOM NUMBER" LABEL HERE

4. [ENUMERATOR ACTION: Circle the pair of numbers on the above label associated with the last numbered field in item 3. Select the field according to the number you circled on the label, and record the selected number. If only one field, enter 1.] . . . . .

SELECTED FIELD NUMBER  
0021

5. 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.]

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

[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. 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.]

	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**

	ACRES												
1. How many acres of soybeans did this operation plant in the selected field for the 2018 crop? . . . . .	1301												
	CODE												
a. Are the acres in the selected field <b>CERTIFIED ORGANIC</b> ? . . . . . YES = 1	1300												
<i>[If YES, skip 1b and ask item 2.]</i>													
b. Was the selected field transitioning into organic soybean production in 2018? . . . . . YES = 1	1399												
	CODE												
2. <b>Were the acres in the selected field --</b>	1302												
<table border="0" style="width: 100%;"> <tr> <td style="width: 10px;">1</td> <td>owned by this operation?</td> </tr> <tr> <td>2</td> <td>rented for CASH with the payment being a fixed cash amount?</td> </tr> <tr> <td>3</td> <td>rented for CASH with the payment being a flexible cash amount?</td> </tr> <tr> <td>4</td> <td>rented for a SHARE of the crop?</td> </tr> <tr> <td>5</td> <td>rented for some combination of CASH and SHARE of the crop?</td> </tr> <tr> <td>6</td> <td>used RENT FREE?</td> </tr> </table>	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?	
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?												
	DOLLARS & CENTS PER ACRE												
3. <i>[If field is CASH RENTED (item 2 = 2, 3 or 5), ask item 3, else go to item 4.]</i> What was the cash rent paid per acre for the selected 2018 soybean field? . . . . .	1303												
	PERCENT												
4. <i>[If field is SHARE RENTED (item 2 = 4 or 5), ask--]</i> What was the landlord's share of the crop from the selected field? . . . . .	1304												
5. <i>[If field is RENTED (item 2 = 2, 3, 4, 5, or 6), ask--]</i> What was the total cost for all inputs provided by any landlord for the 2018 crop on the selected field? <i>Include</i> the costs for all inputs, such as seed, fertilizer, chemicals, technical services, custom operations, drying and irrigation. <i>Exclude</i> real estate tax expenses and lime costs paid by the landowner . . . . .	1305												
	DOLLARS & CENTS PER ACRE      OR      TOTAL DOLLARS												
	1306												
	YEAR												
6. In what year did you (the operator listed on the label) start operating the selected field? . . . . .	1312												
	MM DD YY												
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. Was the soybean seed planted on the selected field purchased? ..... YES = 1 CODE  
1309

[If item 8 = YES, ask --]

UNIT CODE  
1 = POUND  
4 = BUSHEL  
22 = ACRE  
23 = 50 LB BAG  
24 = 140,000 SEED UNITS

DOLLARS & CENTS PER UNIT

1319	1320
------	------

a. What was the total cost per unit (including both your and the landlord's share) of purchased seed for the selected field? **Include** cost of seed treatment. List the cost after deducting any rebates and discounts.....

b. Did you receive a rebate or discount on the seed you purchased? ..... YES = 1 CODE  
1286

[If item 8b = YES, ask --]

UNIT CODE  
1 = POUND  
4 = BUSHEL  
22 = ACRE  
23 = 50 LB BAG  
24 = 140,000 SEED UNITS

DOLLARS & CENTS PER UNIT

1287	1288
------	------

c. What was the rebate or discount per unit?.....

UNIT CODES for Seeding Rate  
1 = POUNDS/ACRE  
2 = CWT/ACRE  
4 = BUSHEL/ACRE  
25 = SEEDS/ACRE  
38 = SEEDS/FOOT

9. What was the seeding rate per acre the first time the selected field was planted? ..... UNITS  
1313      1314

a. Was the soybean seed-- ..... CODE  
1316

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

[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 soybeans? (Acres replanted = Number of acres times the number of times replanted.) ..... ACRES  
1315

12. For the 2018 soybean crop, was the soybean seed-- ..... CODE  
3062

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

[If item 12 = 1 or 2, ask--]

SEED TREATMENT NAME

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

--

b. What was the seed treatment code? Enter the appropriate seed treatment code from the Respondent Booklet (Pages 3 - 4). (Enter 999 if a seed treatment was applied but is not listed. Enter "-1" if the seed treatment is not known.) ..... CODE  
2325

13. Did the soybeans planted on the selected field have any of the following genetically modified organism/genetically engineered (GMO/GE) seed traits in 2018 or 2017?

- 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).....

1 2018 YES = 1	2 2017 YES = 1 N/A = 4 (No Soybeans in Field)
2306	2307
2312	2313
2310	2311
2330	2331

14. Did the soybeans planted on the selected field have any of the following traits (not GMO/GE) in 2018 or 2017?

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

1 2018 YES = 1	2 2017 YES = 1 N/A = 4 (No Soybeans in Field)
2332	2333
2334	2335
2336	2337
2338	2339

15. For the 2018 soybean crop, did you plant a commercial seed product on the selected field?..... YES = 1

**CODE**

2340
------

[If item 15 is "Yes", ask--]

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

**COMMERCIAL SEED PRODUCT NAME**

--

- b. What was the seed product code? Enter the appropriate product code from the Respondent Booklet (Page 5). (Enter 999 if a seed product was purchased but the product is not listed. Enter "-1" if the product is not known.).....

**CODE**

2343
------

16. Were the soybeans from the selected field sold (or will they be sold) through a market specifically for non-genetically modified soybeans?..... YES = 1

**CODE**

2383
------

[If item 16 = YES, ask--]

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

**DOLLARS & CENTS PER BUSHEL**

2384
------

17. Has harvest of the selected field been completed?..... YES = 1

**CODE**

1328
------

18. Now I need information about the acres harvested (or to be harvested) and the yields from the selected field.

How many acres in the selected soybean field were (or will be)--

	1 What yield per acre did you (or do you expect to) get for soybeans---	2 UNIT CODE 1 Pounds 2 CWT 3 Tons 4 Bushels
ACRES	UNITS PER ACRE	CODE
1346 .____	1347 .____	1348
1351 .____		

- a. harvested for grain or seed? .....
- b. abandoned? .....

**CROP CODE LIST for item 19 – PREVIOUSLY PLANTED CROPS**

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

19. Please report the history of crops on the majority of the selected field, including cover crops.

1 What crops were PLANTED on the selected field in---			2 What type of crop was grown on the selected field?	3 Was this a cover crop?	4 How did you terminate this cover crop?	5 Was the selected field irrigated?	6 Was the selected field no-tilled or strip-tilled? 1/
SEASON AND YEAR	CROP NAME	CROP CODE	CODE	YES = 1 NO = 3	CODE	YES = 1 NO = 3	YES = 1 NO = 3
a. SPRING/SUMMER OF 2018? .....	<b>Soybeans</b>	<b>26</b>	1486			2345	1344
b. FALL OF 2017? .....		1343	1487	1470	1471	2344	1345
c. SPRING/SUMMER of 2017? .....		1369	1488	1472	1473	2370	1371
d. FALL of 2016? .....		1372	1489	1474	1475	2373	1374
e. SPRING/SUMMER of 2016? .....		1375	1490	1476	1477	2376	1377
f. FALL of 2015? .....		1378	1491	1478	1479	2379	1380
g. SPRING/SUMMER of 2015? .....		1381	1492	1480	1481	2382	1383
h. FALL of 2014? .....		1366	1493	1482	1483	2367	1368
i. SPRING/SUMMER of 2014? .....		1340	1494	1484	1485	2341	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.

**DOLLARS &  
CENTS  
PER ACRE**

- j. [If a cover crop was planted in Spring/Summer 2017, or Fall 2017, ask—]  
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  
(enter zero if no program payment was received)? .....

1468	_____
1495	_____

20. **Has any part of the selected field been classified as “Highly Erodible”?** (Cropland identified as highly erodible is subject to highly erodible land conservation (HELIC) requirements. Producers who receive farm program payments are required to have (and apply) a written soil conservation plan, prepared in accordance with Federal standards.) . . . . YES = 1

**CODE**

1404
------

21. **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

1405
------

22. **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
------

23. **What is the primary soil texture of the selected field?** .....

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

**CODE**

2401
------

24. **Next we will ask about soil and water concerns that you have on the selected field.**

In the selected field, are you concerned about any of the following?	CODE  YES = 1 NO = 3	Have you received technical assistance from any of the following sources to evaluate this resource concern? (Report up to 2 sources that you received assistance from.)	
		Source 1	Source 2
a. Water-driven erosion. ....	2407	2417	2427
b. Wind-driven erosion. ....	2408	2418	2428
c. Soil compaction. ....	2409	2419	2429
d. Poor drainage. ....	2410	2420	2430
e. Low organic matter. ....	2411	2421	2431
f. Water quality. ....	2412	2422	2432
g. Other concerns. ....	2413	2423	2433
h. *No significant concerns. ....	2414		

**\*ENUMERATOR NOTE:** Enter Yes = 1 for item h, *No significant concerns*, **ONLY** if the respondent replies NO = 3 to all other concerns (items a – g).



	<b>CODE</b>	2402
<b>25. Did the land use practices for the selected field include subsurface (tile) drainage? . . . YES = 1</b>		
<i>[If YES, ask--]</i>	<b>YEAR</b>	2403
a. In what year was the current subsurface (tile) drainage system installed? . . . . .		_____
	<b>FEET</b>	2607
b. What is the average width (space between tiles) of your drainage system? . . . . .		
	<b>INCHES</b>	2605
c. What is the average or most common diameter of your tiles? . . . . .		
	<b>HOURS</b>	2606
d. On average, how many hours does it take your field to return to normal soil moisture levels following a heavy rain? . . . . .		
	<b>CODE</b>	2406
e. Does this system include a mechanism for controlled drainage (e.g. stop logs, risers, or float mechanisms)? . . . . . YES = 1		
<b>26. Has the selected field been in any conservation program contracts for which you or your landlord received (or expected to receive) cost-sharing payments, stewardship payments, or incentive payments?</b>	<b>UNIT CODE</b>	
	1 = Current	
	2 = Past	
	3 = Never	
a. Environmental Quality Incentives Program. . . . .		2611
b. Conservation Stewardship Program. . . . .		2612
c. Conservation Reserve Program. . . . .		2613
d. Other Federal, State, Local, or non-Government source. . . . .		2614

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

a. From this list, please check any practices or activities that you used on the selected field this year or at any time in the past.

On-field Soil and Crop Management		
<input type="checkbox"/> 1 No-Till/Strip-Till	<input type="checkbox"/> 11 Water and sediment basins	<input type="checkbox"/> 30 Implement an integrated pest management plan (written plan)
<input type="checkbox"/> 2 Conservation Tillage (except no-till/strip-till)	<input type="checkbox"/> 12 Grass Waterway	<input type="checkbox"/> 31 Drift reducing spray nozzles
<input type="checkbox"/> 3 Cover crop (single species)	<input type="checkbox"/> 13 Grade Stabilization	<input type="checkbox"/> 32 Targeted sprayer (electrical control)
<input type="checkbox"/> 4 Cover crop mix	<input type="checkbox"/> 40 Implement an energy management plan (written plan)	<b>Adjacent to Field</b>
<input type="checkbox"/> 5 Contour Farming	<input type="checkbox"/> 20 Implement a nutrient management plan (written plan)	<input type="checkbox"/> 33 Filter strip
<input type="checkbox"/> 6 Conservation crop rotation	<input type="checkbox"/> 21 Precision nutrient application	<input type="checkbox"/> 34 Field border
<input type="checkbox"/> 10 Terraces	<input type="checkbox"/> 22 Subsurface phosphorous application	<input type="checkbox"/> 35 Riparian Buffer (grass or forest)

b. For each practice or activity checked in 27a, please complete one line of this table.

1 Practice or Activity on the selected field	2 Practice Code (see item 27a)	3 Have you ever received at any time--		4 Does this practice or activity help satisfy--	5 Was this practice or plan used on this selected field in 2018?  YES = 1 NO = 3
		Technical or planning assistance?	Financial assistance?		
	1610	1611 1 USDA NRCS field staff, cooperative extension, or Technical Service Providers 2 Other Sources of Outside Assistance, such as Soil and Water Conservation Service or a conservation organization 3 No Assistance Needed	1612 1 Environmental Quality Incentives Program (EQIP) 2 Conservation Stewardship Program (CSP) 3 Conservation Reserve Program (CRP) 4 Other Federal, State, and Local Programs 5 No Assistance Needed	1613 1 A Federal regulatory requirement 2 USDA conservation compliance provisions 3 Does not relate to any regulation or compliance requirement	1614
	1615	1616	1617	1618	1619
	1620	1621	1622	1623	1624
	1625	1626	1627	1628	1629
	1630	1631	1632	1633	1634
	1635	1636	1637	1638	1639
	1640	1641	1642	1643	1644
	1645	1646	1647	1648	1649

28. In 2018, were the soybeans in the selected field covered by a single or named peril crop insurance policy (e.g. hail, replant, wind, freeze)?

YES = 1

CODE

2520

[If YES, ask--]

a. In 2018, were the soybeans in the selected field covered by more than one single or named peril crop insurance policies (e.g. hail, replant, wind, freeze)?

YES = 1

2517

DOLLARS & CENTS PER ACRE

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

2521

PERCENT

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

2522

DOLLARS & CENTS PER ACRE

d. What premium cost per acre did you pay for the single peril policy covering the selected field?

2523

CODE

e. Did you (or will you) collect an indemnity payment for the selected field from the single peril policy during 2018?

YES = 1

1394

29. In 2018, were the soybeans in the selected field covered by a multi-peril crop insurance policy?

YES - [Enter code 1 and continue.]

NO - [Go to Section C.]

CODE

1385

a. Which coverage did you obtain?

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

CODE

1386

[If item 29a = 2, ask--]

(i) What percent of yield coverage did you select for the selected field?

1387

(ii) What percent of price coverage did you select for the selected field?

1388

[If item 29a = 3, ask--]

(iii) What percent of revenue coverage did you select for the selected field?

1389

PERCENT

b. What type of unit coverage did you purchase for the selected field?

- 1 Basic
- 2 Optional
- 3 Enterprise

CODE

2524

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

2525

YEAR

d. What is the 2018 Approved APH (actual production history) yield for the selected field?

BUSHELS PER ACRE

2526

**DOLLARS & CENTS  
PER ACRE**

e. What was the premium paid for multi-peril crop insurance for the selected field in 2018?  
(**Exclude any sign-up fee.**) . . . . .

2527
------

**CODE**

f. Did you (*or will you*) collect an indemnity payment for the selected field from Federal crop insurance during 2018? . . . . . **YES = 1**

2528
------

**C NUTRIENT or FERTILIZER APPLICATIONS---SELECTED FIELD**

**C**

1. **Were commercial nutrients or fertilizers applied to the selected field for the 2018 soybean crop? Include those from operators, landlords, and contractors.** . . . . . **YES = 1**

<b>CODE</b>	<b>OFFICE USE EDIT TABLE</b>
0202	0200

[If **COMMERCIAL** nutrient or fertilizer applied, continue; else go to Section D.]

2. **How many commercial nutrient or fertilizer applications were made to the selected field for the 2018 crop? Include applications made by airplanes and custom applicators.** . . . . .

<b>NUMBER</b>
0203

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

<b>CHECKLIST</b>	
<p><input checked="" type="checkbox"/> <b>INCLUDE</b></p> <p><input type="checkbox"/> Custom applied nutrients and fertilizers</p> <p><input type="checkbox"/> Nutrients or fertilizers applied in the fall of 2017 and those applied earlier if the selected field was fallow in 2017.</p> <p><input type="checkbox"/> Commercially prepared manure or compost</p>	<p><input checked="" type="checkbox"/> <b>EXCLUDE</b></p> <p><input type="checkbox"/> Micronutrients</p> <p><input type="checkbox"/> Unprocessed manure</p> <p><input type="checkbox"/> Nutrients or fertilizers applied to previous crops in the selected field</p> <p><input type="checkbox"/> Lime and gypsum/landplaster</p>

<b>Office Use Lines in Table</b>	<b>TABLE 001</b>	0299
--------------------------------------	----------------------	------

<b>APPLICATION CODES for COLUMN 6</b>	
1 Broadcast, ground without incorporation	5 In irrigation water
2 Broadcast, ground with incorporation	6 Chisel/Injected or knifed in
3 Broadcast, by aircraft	7 Banded in or over row
4 In seed furrow	8 Foliar or directed spray

<b>L I N E</b>	<b>2 MATERIALS USED</b>				<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
	[Enter percentage analysis or actual pounds of plant nutrients applied per acre.]				What quantity was applied per acre?	[Enter material code.]	When was this applied?	How was this applied?	How many acres in the selected field were treated in this application?
	N Nitrogen	P <sub>2</sub> O <sub>5</sub> Phosphate	K <sub>2</sub> O Potash	S Sulfur	[Leave this column blank if actual pounds of nutrients were reported.]	1 Pounds 12 Gallons 19 Pounds of actual nutrients	1 In the fall before seeding 2 In the spring before seeding 3 At seeding 4 After seeding	[Refer to code list above.]	ACRES
<b>01</b>	31	32	33	34	36	37	38	39	40
<b>02</b>	31	32	33	34	36	37	38	39	40
<b>03</b>	31	32	33	34	36	37	38	39	40
<b>04</b>	31	32	33	34	36	37	38	39	40
<b>05</b>	31	32	33	34	36	37	38	39	40
<b>06</b>	31	32	33	34	36	37	38	39	40
<b>07</b>	31	32	33	34	36	37	38	39	40
<b>08</b>	31	32	33	34	36	37	38	39	40

4. Were any nutrients or fertilizers applied by custom applicators?

YES - [Continue]  NO - [Go to item 5]

a. Are you able to report the cost of nutrient or fertilizer materials and custom application separately?

YES - [Continue]  NO - [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. **Include** costs for sulfur and micronutrients. **Exclude** custom application of lime, gypsum, purchased manure and purchased compost. [If material and application costs can't be separated, **exclude** them here and record the total in item 5].

DOLLARS & CENTS PER ACRE

OR TOTAL DOLLARS

0219

0220

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. **Include** materials applied to the selected field if it was fallow in 2017. **Exclude** lime, gypsum, purchased manure and purchased compost. [If custom applied and the cost of material can be separated from application costs, include the cost of materials ONLY; otherwise, include both the material and application costs.]

DOLLARS & CENTS PER ACRE

OR TOTAL DOLLARS

0221

0222

CODE

0218

6. Was gypsum applied to the selected field for the 2018 soybean crop? YES = 1

3225

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

[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

8. Was a soil or plant tissue test performed on the selected soybean field in 2017 or 2018 for the 2018 crop?

YES [Continue.]  NO [Go to item 13.]

CODE

9. Was a soil test for phosphorus performed on the selected soybean field in 2017 or 2018 for the 2018 crop? YES = 1

0225

[If item 9 = 1, ask--]

POUNDS PER ACRE

a. How many pounds of phosphorus (per acre) were recommended (by the phosphorus test)? . . . .

0226

10. Was a soil test for nitrogen performed on the selected soybean field in 2017 or 2018 for the 2018 crop? ..... YES = 1

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 2017 or 2018 for the 2018 crop? ..... YES = 1

CODE
0229

12. How much was spent for these soil and plant tissue tests on the selected field in 2017 or 2018 for the 2018 crop? *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? .....

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.

CODE
0232
3231

b. Did you receive a payment from the Conservation Stewardship Program for performing a stalk or leaf tissue test for nitrogen application? ..... YES = 1

[ENUMERATOR ACTION: Refer to the Fertilizer Table, column 2. If nitrogen (N) was applied, complete item 13. If NO nitrogen applied, go to item 14.]

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

CODE
0233
0234
0235
0236
0237
0238
0239

a. Results of a soil or plant tissue test? ..... YES = 1

b. Crop consultant recommendation? ..... YES = 1

c. Fertilizer dealer recommendation? ..... YES = 1

d. Extension Service recommendation? ..... YES = 1

e. Cost of nitrogen and/or expected commodity price? ..... YES = 1

f. Contractor recommendation? ..... YES = 1

g. Routine practice (*operator's own determination based on past experience, yield goal, etc.*)? ..... YES = 1

h. [If nitrogen inhibitors were used, continue; else go to item 14.]

POUNDS PER ACRE
2561

OR GALLONS PER ACRE
2562

How much nitrogen inhibitor did you mix with the nitrogen applied to the selected field? .....

14. **Is lime ever applied to the selected field?** ..... YES = 1 CODE  
0242

[If no lime applied, go to item 15; else continue.]

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 2017 or 2018 for the 2018 crop? ..... YES = 1 CODE  
0240

15. **Was non-commercial manure (from own farm, from a neighbor's farm, etc.) or other organic material (including compost) applied to the selected field for the 2018 soybean crop? Exclude commercially prepared manure.**

**YES** - [Enter code 1 and continue]       **NO** - [Go to Section D] ..... CODE  
0246

a. How many acres in the selected field was manure or compost applied to? ..... ACRES  
0247

b. What was the amount of manure or compost applied to the selected field? ..... 1 Tons  
2 Gallons  
3 Bushels  
4 Cubic Yards CODE  
0248 **AND** UNITS PER ACRE  
0249 **OR** TOTAL UNITS  
0250

c. Of the total manure or compost applied to the selected field for the 2018 crop, what was the percent of manure or compost applied---

(i) in the fall before planting? ..... + PERCENT  
0254

(ii) in the spring before planting? ..... + 0255

(iii) after planting? ..... + 0256

d. Was the manure or compost---. . . 1 Lagoon liquid?  
2 Slurry liquid?  
3 Semi-dry or dry? 100%  
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 the manure or compost from--- . . . . .

- 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 15g = 2, ask--]

(i) What was the total cost of the purchased manure or compost applied to the selected field? **Include** operator, landlord, and contractor costs. **Include** any payment made for transportation costs. . . . .

DOLLARS & CENTS PER ACRE

0284

OR

TOTAL DOLLARS

0285

CODE

0286

(ii) Did you hire someone to custom apply the manure or compost? . . . . . YES = 1

[If YES, ask--]

(a) What was the total cost paid to have manure or compost custom applied to the selected field? [*Do not report custom application cost if it was included with the purchased manure cost.*] . . . . .

DOLLARS & CENTS PER ACRE

0287

OR

TOTAL DOLLARS

0288

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

CODE

0261

CODE

16. Were the manure APPLICATION RATES to the selected field influenced by Federal, State, or local restrictions? . . . . . YES = 1

0264

[If item 16 is YES, ask--]

a. Was the basis to determine these manure application rate restrictions--

CODE

(i) Nitrogen requirement of the crop? . . . . . YES = 1

0265

(ii) Phosphorus requirement of the crop? . . . . . YES = 1

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 2018 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 the selected soybean field for the 2018 crop? . . . . . YES = 1

CODE	OFFICE USE

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

<b>Include</b> defoliant, fungicides, herbicides, insecticides, and other pesticides.  <b>Include</b> biological and botanical pesticides.	<b>Exclude</b> nutrients or fertilizers reported earlier and seed treatments.
--	---

OFFICE USE LINES IN TABLE	TABLE 001	0399
------------------------------	--------------	------

CHEMICAL PRODUCT NAME	LINE	2 What products were applied to the selected field?  <small>[Show product codes from Respondent Booklet.]</small>	3 Was this product bought in liquid or dry form?  <small>[Enter L or D]</small>	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 OR 7 How much was applied per acre per application?	7 What was the total amount applied per application in the selected field?	8 <small>[Enter unit code.]</small> 1 Pounds 12 Gallons 13 Quarts 14 Pints 15 Liquid Ounces 28 Dry Ounces 30 Grams
			01	61		63	64	65 _____
	02	61		63	64	65 _____	73 _____	74
	03	61		63	64	65 _____	73 _____	74
	04	61		63	64	65 _____	73 _____	74
	05	61		63	64	65 _____	73 _____	74
	06	61		63	64	65 _____	73 _____	74
	07	61		63	64	65 _____	73 _____	74
	08	61		63	64	65 _____	73 _____	74
	09	61		63	64	65 _____	73 _____	74
	10	61		63	64	65 _____	73 _____	74
	11	61		63	64	65 _____	73 _____	74
	12	61		63	64	65 _____	73 _____	74
	13	61		63	64	65 _____	73 _____	74
	14	61		63	64	65 _____	73 _____	74

2. [For biocontrols or pesticides not listed in Respondent Booklet, specify---]

LINE	Pesticide Type <small>(Herbicide, Insecticide Fungicide, etc.)</small>	EPA No. or Trade name and Formulation	Form Purchased <small>(Liquid or Dry)</small>	Where Purchased <small>[Ask ONLY if EPA No. cannot be reported.]</small>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____



3. Were any chemicals, biocontrols, or pesticides applied by custom applicators?

- YES – [Continue]
- NO – [Go to item 4]

OFFICE USE

a. Are you able to report the cost of chemical, biocontrol, and pesticide products and custom application separately?

0324
------

- YES – [Continue]
- NO – [Go to item 4]

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 2017 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

**NOTE 1:** If respondent cannot report TOTAL COST, itemize cost for each product in optional columns in Biocontrol or Pesticide Table.

**NOTE 2:** 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 2018 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? ..... YES = 1
- 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
- 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

CODE	
0800	
0801	
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? ..... YES = 1
- 5. Were herbicides applied to the selected soybean field AFTER weeds emerged? ..... YES = 1
- 6. Were records kept for the selected field to track the activity or numbers of weeds, insects or diseases? ..... YES = 1
- 7. Did you use published information on infestation thresholds to determine when to take measures to manage pests in the selected field? ..... YES = 1

CODE	
0803	
0805	
0823	
0824	

- 8. In 2018, 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 11.]
3 The selected field was not scouted. [Enter code 3 and go to item 14.]

CODE	
0808	

- 9. Was an established scouting process (systematic sampling, recording counts, etc.) used or were insect traps used in the selected field? ..... YES = 1

CODE	
0809	

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

- a. a pest advisory warning? ..... YES = 1
- b. a pest development model? ..... YES = 1

CODE	
0810	
0811	

1	2	3
<b>11. Was the selected soybean field scouted for--</b>  YES = 1 NO = 3	[If YES, ask--] <b>What was the infestation level for [column 1]?—</b>  1 Higher than normal 2 Normal 3 Lower than normal  <b>CODE</b>	[If column 1 = YES, ask--] <b>Who did the majority of the scouting for [column 1]?</b>  1 Operator, partner or family member 2 An employee 3 Farm supply or chemical dealer 4 Independent crop consultant or commercial scout  <b>CODE</b>
a. Weeds?.....	0812	0813
b. Insects or mites?.....	0815	0816
c. Diseases?.....	0818	0819
		0814
		0817
		0820

[If scouted by crop consultant or commercial scout, ask item 12; else go to item 13.]

**12. How much was charged for the scouting services for the selected field?**  
*Include operator, landlord and contractor cost.* .....

	DOLLARS & CENTS PER ACRE	OR	TOTAL DOLLARS
	0821		0822

a. [If scouting performed at no cost, explain:.....]

	OFFICE USE
	0333

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

	CODE
YES = 1	0825

**14. Did you do any of the following other type(s) of pest management practices for the specific purpose of managing or reducing the spread of pests in the selected field?**  
 [Enter code "1" for all that apply.]

	YES = 1	CODE
a. Use the services of a diagnostic laboratory for pest identification or soil plant tissue pest analysis for the selected field? .....		0841
b. Plow down crop residue (using conventional tillage)?.....		0842
c. Remove/burn down crop residue?.....		0843
d. Rotate crops in the selected field during the past three years?.....		0844
e. Maintain ground covers, mulches, or other physical barriers?.....		0845
f. Choose crop variety because of specific resistance to a certain pest?.....		0846
g. Use no-till or minimum till?.....		0847
h. Plan planting locations to avoid cross infestation of pests?.....		0848
i. Adjust planting or harvesting dates?.....		0849
j. Chop, spray, mow, plow, or burn field edges, lanes, ditches, roadways, or fence lines?.....		0850
k. Clean equipment and field implements after completing field work to reduce the spread of pests?.....		0851

- l. Adjust row spacing, plant density or row directions? . . . . . YES = 1
- m. Have the seed treated for insect or disease control after you purchased the seed for the selected field? . . . . . YES = 1
- n. Maintain a beneficial insect or vertebrate habitat? . . . . . YES = 1
- o. Maintain buffer strips or border rows to isolate soybeans from non-organic crops or land, or did you take a buffer harvest? . . . . . YES = 1
- p. Use a flamer to kill weeds? . . . . . YES = 1
- q. Plant earlier or later to avoid weeds? . . . . . YES = 1

- 15. **Were any beneficial organisms (insects, nematodes, fungi) applied or released in the selected field to manage pests?** . . . . . YES = 1
- 16. **Were floral lures, attractants, repellants, pheromone traps or other biological pest controls used on the selected field?** . . . . . YES = 1

[If item 15 or item 16 is YES, 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. Include cost for beneficial organisms (insects, nematodes, and fungi). Exclude biological pesticides previously reported.** . . . . .
- |  |                             |    |               |
|--|-----------------------------|----|---------------|
|  | DOLLARS & CENTS<br>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

CODE

- 18. **Was the selected field left in fallow in 2017 to help manage insects on the selected field?** . . . . . YES = 1

- 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

- 20. **Was protection of beneficial organisms a factor in your pest control decisions for the selected field?** . . . . . YES = 1

[If Item 20 is YES, continue. Else go to Item 21.]

- a. Did you change timing of, reduce application rate of, or eliminate a pesticide application? . . . . . YES = 1
- b. Did you change to an alternative pesticide, biocontrol, or non-pesticide practice? . . . . . YES = 1

- 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?** . . . . .
- |  |                     |  |      |  |     |  |                |  |    |  |             |
|--|---------------------|--|------|--|-----|--|----------------|--|----|--|-------------|
|  | UNIT CODE           |  | CODE |  | AND |  | UNITS PER ACRE |  | OR |  | TOTAL UNITS |
|  | 1 BUSHELS<br>2 TONS |  | 0828 |  |     |  | 0829           |  |    |  | 0830        |

22. If you used GMO/GE glyphosate-tolerant seeds on the selected field in 2018, indicate the number of consecutive years you have planted GMO/GE glyphosate-tolerant corn, soybeans, or any other GMO/GE glyphosate-tolerant crop . . . . .

NUMBER OF YEARS

1970

YEAR

1971

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

NUMBER OF YEARS

1972

YEAR

1973

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

24. Did you observe “cupping” or other symptoms associated with dicamba drift/volatility on the selected field in 2018? . . . . .

CODE

1974

YES = 1

[If item 24 = YES, continue, else proceed to item 25.]

a. Do you believe that the damage you observed on the selected field in 2018 was due to drift (not volatility)? . . . . .

YEAR

1975

YES = 1

25. As far as you are aware, did farmers in neighboring fields observe “cupping” or other symptoms associated with dicamba drift/volatility in 2018? . . . . .

CODE

1976

YES = 1

a. As far as you are aware, did farmers in your county observe “cupping” or other symptoms associated with dicamba drift/volatility in 2018? . . . . .

1977

YES = 1

26. As far as you are aware, did farmers in neighboring fields plant dicamba-tolerant soybeans in 2018? . . . . .

1978

YES = 1

a. As far as you are aware, did farmers in your county plant dicamba-tolerant soybeans in 2018? . . . . .

1979

YES = 1

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

1 Active Ingredients	2 2018 YES = 1 NO = 3	3 2017 YES = 1 NO = 3	4 2016 YES = 1 NO = 3	5 2015 YES = 1 NO = 3	6 2014 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. Active Ingredients in the Sulfonylurea family (e.g. chlorimuron, foramsulfuron, Synchrony® XP, Leadoff®, Basis®)	2016	2017	2018	2019	2020



CODE

2021

28. Have herbicide-tolerant seeds been planted on the selected field any time since 2014? . . YES = 1

[If item 28 is YES, continue, else 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	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. Active Ingredients in the Sulfonylurea family (e.g. chlorimuron, foramsulfuron, Synchrony® XP, Leadoff®, Basis®)	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 2018 soybean crop. Please...**

- ▶ begin with the first field operation after harvest of previous crop, including operations for a cover crop established since the previous crop was harvested [if fallow during 2017, list operations starting with fall 2016];
- ▶ 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	
<b>Include</b> all field work using machines for---	
<input type="checkbox"/>	Land Forming/Levee Building
<input type="checkbox"/>	Tillage
<input type="checkbox"/>	Preparing for Irrigation
<input type="checkbox"/>	Planting
<input type="checkbox"/>	Fertilizer & Pesticide applications
<input type="checkbox"/>	Harvesting & Hauling beans to storage or first point of sale
<b>Exclude</b>	
<input type="checkbox"/>	Lime & Gypsum/landplaster applications
<input type="checkbox"/>	Compost & Non-Commercial Manure applications

LINE No.	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 CUSTOM (column 5 = code 6), skip columns 6-11]					
					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, or hauling? [Example: backhoes, disk border maker, ditcher, rear mounted blade, trucks, wagons, forklifts, etc.] HOURS	10 Which Power Source was used? <sup>1/</sup> Tractors: 1= (<40 HP) 2= (40-99 HP) 3= (100-149 HP) 4= (150-199 HP) 5= (>=200 HP) Other: 66=Animal Drawn 77=Pick-up 99=Self Propelled 1/ 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

2. **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 2018 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	2	3
	scouting for weeds, insects and diseases? HOURS	irrigating? HOURS	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 ( <b>Exclude</b> custom and contract labor)	1110	1111	1112
Paid full-time workers ( <b>Exclude</b> custom and contract labor)	1113	1114	1115

3. **What was the average hourly wage rate paid to part-time or seasonal hired workers on the selected field? *Exclude* custom and contract workers, payroll taxes and benefits.. . . . .** DOLLARS & CENTS PER HOUR
- 1119  
\_\_\_\_\_
4. **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
- 1118  
\_\_\_\_\_
5. **Was any contract labor used on the selected field? . . . . . YES = 1** CODE
- 1116
- [If YES, ask --]
- a. **What was the average cost per acre for this contract labor? *Include* operator, landlord, and contractor costs.. . . . .** DOLLARS & CENTS PER ACRE
- 1117  
\_\_\_\_\_
6. **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

7. **Now I need some information on how much was spent (or will be spent) for custom services used on the selected field for the 2018 soybean crop.**

1 <b>CUSTOM SERVICE</b>	2 Including operator, landlord, and contractor costs, how much was spent for [column 1] on the selected field for the 2018 soybean crop?  <b>DOLLARS &amp; CENTS PER ACRE</b>
✓ ← [Check box for each service performed; refer to item 1 if necessary.] Which of the following services were performed for the 2018 soybean crop on the selected field?	
<input type="checkbox"/> a. Custom land preparation and/or shaping? .....	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? $\frac{\text{_____} \times \text{_____}}{\text{_____}} = \text{_____}$ (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? $\frac{\text{_____} \times \text{_____}}{\text{_____}} = \text{_____}$ (Dollars & cents per unit x Total units hauled from field ÷ Acres harvested in field = Dollars & cents per acre)	1127 _____

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

YES = 1

CODE
1195

9. **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** – [Continue]       **NO** – [Go to item 11]

Which of the following services did you obtain?

	CODE
a. Nutrient recommendations/management service? .....	1129
b. Soil or tissue sample collection? .....	1130
c. Pest control recommendations/management service? .....	1131
d. Pest scouting? .....	1132
e. Irrigation management service (i.e. irrigation scheduling)? .....	1133
f. Yield map or remote sensing map development/interpretation? .....	1134
g. Other custom or technical service? [Specify: _____] .....	1135

10. **If YES to any of these services, what was the cost for all of these services? Include operator, landlord, and contractor costs. Exclude cost of soil/tissue tests or scouting cost reported earlier. Do not report 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
1136 _____

OR

TOTAL DOLLARS
1137 _____

**11. Please report how any data from the selected field in 2018 will be stored and accessed.**

[Enter code "1" for all that apply.]

a. Did you access data collected from the selected field on a --

**CODE**

(i) Paper hard copy? . . . . . **YES = 1**

2485
------

(ii) Personal computer? . . . . . **YES = 1**

2486
------

(iii) Mobile device? . . . . . **YES = 1**

2487
------

b. Did you access data collected from the selected field through an agricultural technology provider website? . . . . . **YES = 1**

2488
------

[If item 11b = YES, ask--]

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**

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**

2490
------

**CODE**

**12. Were there (or will there be) any data collection tools (yield monitors, GPS mapping, etc.) used during field operations on the selected soybean field? . . . . . YES = 1**

2460
------

[If YES, continue; else go to Item 13.]

Please report the data collection technologies you used on the selected field in 2018 to produce this crop. Also indicate if the data is collected with Global Positioning System (GPS) coordinates and if the data will be used to create a map. In the fifth column, report how much it would cost you to replace the data collection tool. In the sixth column, report the annual cost of using the data collection tool. Include custom service fees, data subscriptions, and online tool subscriptions. If the replacement cost or annual fee does not apply to a particular data collection tool, leave that cell blank.

1	2	3	4	5	6
<b>Data Collection Tool</b>	<b>Tool Used</b>	<b>Collected GPS coordinates</b>	<b>Data was/will be used to create a map</b>	<b>Replacement Cost</b>	<b>Annual Fee</b>
	<b>YES = 1 NO = 3</b>	<b>YES = 1 NO = 3</b>	<b>YES = 1 NO = 3</b>	<b>Total Dollars</b>	<b>Total Dollars</b>
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. Drones, aircraft or satellites. . . . .	2476	2477	2478	2580	2581
g. Custom service applications (data from completed work on your field). . . . .	2479	2480	2481	2582	2583
h. Public data downloaded from online sources. . . . .	2482	2483	2484		

[If item 12a = 1 in column 2, continue, else go to item 14.]

13. Did you use the yield monitor information to--- [Enter code "1" for all that apply.]

a. add/improve tile drainage? .....	YES = 1	1141
b. negotiate new crop leases? .....	YES = 1	1144
c. help determine chemical input use? .....	YES = 1	1143

[If any tools used in item 12, continue, else go to item 15.]

14. Using data collected from the above/previous tools table, (item 12) did you obtain crop management recommendations (data interpretation) in 2018 for the selected field from any of the following--[Enter code "1" for all that apply.]

a. Input dealers without other fee-for-services? .....	YES = 1	2491
b. Input dealers with other fee-for services? .....	YES = 1	2492
c. Custom service providers? .....	YES = 1	2493
d. USDA/University extension services? .....	YES = 1	2494

[If crop management recommendations were obtained, ask--]

	DOLLARS & CENTS PER ACRE	OR	TOTAL DOLLARS
e. What was the cost for all of these services? Include operator, landlord, and contractor costs. Do not report costs for any of these services if they were previously reported as part of the costs of materials and/or application.	3150		3151

15. Was any of the following GPS-enabled (Global Positioning System) equipment used to produce soybeans on the selected field in 2018? [Enter code "1" for all that apply.]

		CODE
a. Mounted in-cab heads-up displays? .....	YES = 1	2155
b. Smartphones or computer tablets? .....	YES = 1	2156
c. Guidance auto-steering? .....	YES = 1	2148

[If item 15c = 1 continue, else go to Item 15d]

		CODE
(i) Was the guidance auto-steering equipment. ....	<div style="border: 1px solid black; padding: 2px;">                     1 New, owned                      2 Used, owned                      3 Leased                 </div>	2158

		YEAR
(ii) What year was guidance auto-steering first purchased. ....		2159

	DOLLARS & CENTS PER ACRE	OR	TOTAL DOLLARS
(iii) What is the replacement cost for guidance auto-steering equipment? . . .	2160		2161
(iv) What is the annual fee for guidance auto-steering? .....	2162		2163

d. Variable rate applicator? .....	YES = 1	2164
------------------------------------	---------	------

[If item 15d = 1 continue, else go to Section G.]

16. Please report the variable rate applicator types you used on the selected field to produce the soybean crop in 2018.

1 <b>Was a variable rate applicator used on the selected field for--</b>	2 Tool Used  <b>YES = 1 NO = 3</b>	3 <b>Was this applicator—</b> 1 Sensor-based 2 GPS-based 3 Both 4 Neither  <b>CODE</b>	4 <b>Was this applicator—</b> 1 New, owned 2 Used, owned 3 Leased  <b>CODE</b>	5 <b>What year was the applicator first used?</b>  <b>YEAR</b>	6 <b>Premium paid for the applicator</b>  <b>TOTAL DOLLARS</b>
a. Seeding	1158	2170	2171	2172	2173
b. Fertilizer/lime applications	1152	2174	2175	2176	2177
c. Pesticide applications	1159	2178	2179	2180	2181

ACRES

1. How many acres in the selected field were irrigated for the 2018 soybean crop?

[If none, go to **Conclusion**]. . . . .

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

2. Now, I have some questions about irrigation systems and water used on the selected field for the 2018 soybean crop.

	↓	
a. What irrigation system was used to apply the most water on the selected field? [Show <b>System Type Codes</b> (Page 28) in the Respondent Booklet]. . . . .	SYSTEM TYPE CODE	1161
b. What was the total quantity of water applied to the selected field during the entire growing season? <b>Include ALL water used from both on-farm and off-farm sources and applied by any irrigation system</b> . . . . . [If operator cannot provide item 2b, ask (i) & (ii), else go to 2c]	INCHES PER ACRE	1162
	OR TOTAL ACRE-FEET	1163
(i) What was the <b>total</b> number of <b>hours</b> 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 came from surface water sources? . . . . .	PERCENT	1166
d. What was the number of times the selected field was irrigated during the soybean growing season? <b>Include any pre-plant irrigation.</b> . . . . .	NUMBER OF IRRIGATIONS	1167
e. Was the pump type--- [If more than one pump in the system, enter type for pump closest to water source.]	CODE	1168
	1 TURBINE? 2 SUBMERSIBLE? 3 CENTRIFUGAL? 4 BOOSTER? 5 SIPHON? 99 NO PUMP? [If code 99, go to item j.]	
f. What was the average pumping rate? . . . . .	GALLONS PER MINUTE	1169
g. [If item 2a = code 1-9 (PRESSURE SYSTEM), ask---] What was the system operating pressure? . . . . .	POUNDS PER SQUARE INCH	1170
h. What was the primary motor type used to pump the water?	CODE	1171
	1 DIESEL 2 GASOLINE 3 LP GAS 4 NATURAL GAS 5 ELECTRICITY 6 SOLAR POWER	
i. What was the average motor size? . . . . .	HORSEPOWER	1172
j. [If <b>NO PUMP</b> was used (item 2e = 99), ask---] 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 2018 growing season? <b>Exclude the selected field</b> ... . . . .	ACRES	1174

3. What was the cost of the fuel or electricity used to irrigate the selected field? **Include operator, landlord, and contractor costs.** . . . . .

	OR	
DOLLARS & CENTS PER ACRE		TOTAL DOLLARS
1189		1190
. ____		



4. Was any water purchased to irrigate the selected field? *Include* landlord's share and purchases from all sources.

YES - [Enter code 1 and continue.]  NO - [Go to item 5].

CODE

1191

a. What was the total cost for the water purchased for the selected field during the 2018 growing season? *Include* operator, landlord, and contractor costs and ditch maintenance costs for the selected field.

DOLLARS & CENTS PER ACRE

1193

OR TOTAL DOLLARS

1194

[If SIPHON TUBES were used (item 2a = 10 or 11), ask--]

TOTAL DOLLARS

1201

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

[If POLY PIPE system was used (item 2a = 14) ask--]

TOTAL DOLLARS

1202

6. What was the total amount spent for poly pipe used on the selected field during the 2018 growing season? *Include* operator, landlord, and contractor costs.

[If GATED PIPE system was used (item 2a = 15 or 16), ask--]

INCHES

1203

7. What was the average diameter of gated pipe used to irrigate the selected field?

FEET

1204

a. What was the total length of gated pipe used?

8. Were wells used to supply irrigation water for the selected field?

YES - [Enter code 1 and continue]  NO - [Go to item 9].

CODE

1205

NUMBER

1206

a. How many wells were used to irrigate the selected field?

INCHES

1207

b. What was the average diameter of the outer well casing?

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].

FEET

1208

d. Were other fields irrigated using water pumped from wells that supplied water to the selected field?

YES - [Enter code 1 and continue]  NO - [Go to item 9].

CODE

1210

ACRES

1211

e. Excluding the selected field, how many other acres on this operation were irrigated using the same wells during the 2018 growing season?

9. Was any additional mainline or lateral pipe used to carry water from the source to the system in the selected field? *Include* underground pipe. *Exclude* any system pipe within the selected field.

YES - [Continue]  NO - [Go to Conclusion]

INCHES

1212

a. What was the average diameter (in inches) of the most common type of this additional pipe used?

FEET

1213

b. How many feet of this additional pipe were used to bring water to the selected field?

---

**NOTES:**

---

**NOTES:**

# CONCLUSION

## LOCATION OF SELECTED FIELD

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

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

COUNTY NAME

OFFICE USE  
COUNTY FIPS CODE



Field description . . . . .

Field location . . . . . N

LATITUDE

LONGITUDE

d d m m s s

d d d m m s s

OR

LATITUDE

LONGITUDE

decimal

decimal

3. [ENUMERATOR ACTION: *Mark map to indicate where the selected soybean field is located. Be sure the "X" marked on map is in the county identified above.*]

4. We will need additional information to complete this study. We will contact you in February or March 2019 to collect it. I'll call you then to set up a time that is good for you.

5. To receive the complete results of this survey on the release date, go to [http://www.nass.usda.gov/Surveys/Guide to NASS Surveys/](http://www.nass.usda.gov/Surveys/Guide%20to%20NASS%20Surveys/).

To have a summary emailed to you at a later date, Please enter your email address:

Would you like to receive a copy of the results of this survey in the mail? . . . . . YES = 1  
[Thank the respondent, then review this questionnaire.]

CODE

H H M M

6. ENDING TIME [MILITARY]. . . . .

## RECORD USE

7. [Did respondent use farm/ranch records to report--]

YES = 1

YES = 1

YES = 1

fertilizer data? . . . . .

pesticide data? . . . . .

Majority of this expense data? . . . . .

## SUPPLEMENTS USED

8. [Record the total number of each type of questionnaire supplement used to complete this interview.]

NUMBER

NUMBER

NUMBER

FERTILIZER APPLICATIONS. . . . .

PESTICIDE APPLICATIONS. . . . .

FIELD OPERATIONS. . . . .

Reported by: _____	9910 M M D D	18	9911 Telephone: (____) _____
--------------------	-----------------	----	---------------------------------

OFFICE USE										
R. Unit	Ptr 1 Str	Ptr 2 Str	Ptr 3 Str	Ptr 4 Str	OPS	SSO 1	ADJ	Optional Use		
9921	9922	9923	9927	9928	923	9907	922	9906	9916	
Response		Respondent		Mode		Enum.	POID			
1-Comp 2-R 3-Inac 4-Office Hold		9901 1-Op/Mgr 2-Sp 3-Acct/Bkpr 4-Partner 9-Other		9902 2-PATI (tel) 3-PAPI (Face-to-Face)		9903 9998		9989		
								9900		9985
						Eval.		Change		