

# AGRICULTURAL RESOURCE MANAGEMENT SURVEY

OMB No. 0535-0218  
 Approval Expires: 5/31/2025  
 Project Code: 906  
 SurveyID: 9071 Phase 2



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## WHEAT PRODUCTION PRACTICES AND COSTS REPORT FOR 2022

<b>VERSION</b> 34	<b>ID</b> _____	<b>TRACT</b> 01	<b>SUBTRACT</b> _____	<b>C-TYPE</b> 122
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### CONTACT RECORD

DATE	TIME	NOTES

The information you provide will be used for statistical purposes only. Your response will be kept confidential and any person who willfully discloses ANY identifiable information about you or your operation is subject to a jail term, a fine, or both. This survey is conducted in accordance with the Confidential Information Protection and Statistical Efficiency Act of 2018, Title III of Pub. L. No. 115-435, codified in 44 U.S.C. Ch. 35 and other applicable Federal laws. For more information on how we protect your information please visit: <https://www.nass.usda.gov/confidentiality>. Response is voluntary.

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H H M M

BEGINNING TIME   
 [MILITARY]

SCREENING BOX

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

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

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

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

check if  
cell phone

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

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

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

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

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

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

1. For this survey, you have been selected for the following type of wheat. All questions in this survey will refer to only this type of wheat, not any other types of wheat you may grow.

Type Code  
1=Winter Wheat  
2=Spring Wheat  
3=Durum Wheat

[ENUMERATOR ACTION]: Refer to the mailing label which identifies the type of wheat selected as winter wheat, spring wheat (not durum), or durum wheat. Enter the type of wheat in the box to the right.

0049

2. How many acres of the selected type of wheat did this operation plant for the 2022 crop year?.....

Total Planted Acres

0050

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

Total Number of Fields  
Planted

0020

3. What is the total number of fields for this type of wheat were planted on this operation?.....

[If only one field enter "1" and go to item 4.]

4. [Now, I need to identify a wheat field to be used for this survey.] The wheat 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:

5. The field selected is \_\_\_\_\_ (field name/number/description).  
During this interview, the wheat questions will be about this selected wheat field.  
[Be sure the operator can identify the selected field.]

6. 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

1. How many acres of wheat did this operation plant in the selected field for the 2022 crop?.....

Acres

1301

a. Are the acres in the selected field certified organic or transitioning into certified organic wheat 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

1891

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 2022 wheat 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 2022 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	OR	Total Dollars
1305		1306

6. What was the total cost for all inputs provided by any contractor for the 2022 crop on the selected field? INCLUDE the costs for all inputs, such as seed, fertilizer, chemicals, technical services, custom operations, drying, and irrigation.....

Dollars & Cents per Acre	OR	Total Dollars
1309		1310

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

Year

1312

8. 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

b. When planted, was this wheat field planted with the intention of--? INCLUDE wheat planted for commercial seed contract under other uses.....

- 1 Dual purpose: grain and grazing
  - 2 Harvesting for grain only
  - 3 Grazing only
  - 4 Dual purpose: grazing and cover crop
  - 5 Cover crop only
  - 6 Other uses - Specify: \_\_\_\_\_

Code

3117

9. What was the source of the wheat seed?.....

1 Purchased
2 Homegrown or traded
3 Both

Code
1317

[If item 9 = 2 or 3, ask--]

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

Dollars & Cents per Pound
3321

b. How much of the wheat seed planted in this field was grown (or received in trade) by this operation?.....

Percent
1318

[If any seed purchased (item 9 = 1 or 3), ask--]

10. What was the total cost per unit of purchased seed for the selected field? INCLUDE operator, landlord, and contractor costs, cost of seed treatment, and technology fee....

Dollars & Cents per Unit	1319	1320
-----------------------------	------	------

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

11. 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

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

Acres	1315
-------	------

13. For the 2022 wheat crop, was the wheat 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 13 = 1 or 2, continue, otherwise go to item 14.]

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

14. For the 2022 wheat crop, did you plant a commercial seed product on the selected field?.....

Code
2340

Yes=1  
No=3

[If item 14 = 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

15. Did you use an "air-delivery" or "vacuum (pneumatic) planter"?

	Code
Yes=1	2323
No=3	

[If item 15 = 1, ask --]

a. Did you use a talc and/or graphite seed flow lubricant?

	Code
Yes=1	2324
No=3	

b. Did you use an alternative seed flow lubricant (e.g. Bayer Fluency Agent) instead of talc and/or graphite?

Yes=1	2394
No=3	

16. Has harvest of the selected field been completed?

	Code
Yes=1	1328
No=3	

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

17. How many acres in this wheat field were or will be--

Acres	Units per Acre	Unit Code 1=Pounds 2=Cwt 3=Tons 4=Bushels
1346	1347	1348
1349	1350	TONS
1431	1432	1433
1351		
1439		

a. harvested for grain, first crop?

b. harvested for hay, silage, or green chop?

c. harvested for commercial seed contract?

d. abandoned?

e. used for some other purpose?

18. Was straw harvested from the selected field?

1520  Yes – Continue

3  No – [go to item 20]

19. How many acres of this wheat field were harvested for straw?

Acres
1521

a. How many total tons of wheat straw were harvested from these wheat acres?

Total Tons
1522

$$\frac{\text{Total Tons}}{\text{Acres}} = \text{Tons per Acre}$$
**OR**

$$\frac{\text{Total Tons}}{\text{Bales}} \times \text{Lbs per Bale} \div 2000 = \text{Tons per Acre}$$

b. Of the total wheat straw harvested from this field (19a), what was the landlord's share of the wheat straw?

Percent	OR	Tons
1523		1524

c. What was the total cost of baler twine/wire used to bale the wheat straw from this field? INCLUDE landlord's share.

Total Dollars
1525

[If any wheat straw was sold, ask--]

d. What was the price received per ton for all wheat straw (19a) sold from this field?

Dollars & Cents Per Ton
1526

20. What type of livestock grazed this wheat field during the 2022 crop year?.....

1 Cattle
2 Sheep
3 Other, Specify: _____
4 Not grazed

Code
3147

[If item 20 is 4, go to item 21, otherwise, ask--]

a. About how many head of livestock (item 20) grazed this wheat field?.....

Head
1362

b. How many days did this livestock graze on this wheat field?.....

Days
1363

c. Was this wheat field "grazed-out" instead of harvested for grain?.....

Code
Yes=1 3060
No=3

d. Were the livestock that grazed this wheat field owned by this operation?.....

Yes=1 3061
No=3

[If item 20d=3, ask --]

e. What is the total dollar amount received from others for livestock grazing on this field? INCLUDE landlord's share.....

Dollars and Cents Per Acre
3063
_____

OR
Total Dollars
3064

## Crop Code List for item 21 - Previously Planted Crops

165 Wheat, winter	318 No crop (incl. Fallow)	42 Vegetables	22 Rye (cereal)
163 Wheat, durum	17 Dry peas	283 Cotton, all	240 Sorghum, all
164 Wheat, other spring	85 Canola	311 Grasses, (incl. clover)	34 Annual ryegrass
6 Corn for grain	190 Barley	1 Hay, alfalfa	312 Cover crop mix
26 Soybeans	3 Dry beans	11 Hay, all other	291 Other field crop
		302 CRP	292 Other crop

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

1 What crops were planted on the selected field in-- [For perennial crops, (1, 11, 292, 302, and 311) report the crop code in all seasons when the crop was growing.]			2 Was this a cover crop?	3 If a cover crop was planted, how did you terminate this cover crop?	4 Was the selected field no-till or strip-tilled? <sup>1/</sup>
Season and Year	Crop Name	Crop Code	Yes=1 No=3	Code	Yes=1 No=3
a. Spring/Summer of 2022?.....					1344
b. Fall of 2021?.....		1343	1470	1471	1345
c. Spring/Summer of 2021?.....		1369	1472	1473	1371
d. Fall of 2020?.....		1372	1474	1475	1374
e. Spring/Summer of 2020?.....		1375	1476	1477	1377
f. Fall of 2019?.....		1378	1478	1479	1380
g. Spring/Summer of 2019?.....		1381	1480	1481	1383
h. Fall of 2018?.....		1366	1482	1483	1368
i. Spring/Summer of 2018?.....		1340	1484	1485	1342

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

[If a cover crop was planted in Spring/Summer/Fall 2021, 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	•	__	__
------	---	----	----



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.).....

Yes=1  
No=3

Code  
0702

23. Does the selected field contain a wetland? Wetlands are subject to Wetland Conservation (WC) or "swampbuster" requirements. Producers who receive farm program payments must refrain from draining wetlands to make them ready for crop production.....

Yes=1  
No=3

Code  
1405

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

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

1	2	3	
26. In the selected field, are any of the following currently or historically a concern?	1 Currently a concern 2 A concern in the past but not anymore 3 Not a concern	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: 1 USDA - NRCS 2 Cooperative Extension Service 3 Other USDA staff, including Forest Service 4 Other (e.g. Soil and Water Conservation District, state agency) 5 None	
	Code	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. Water availability.....	2415	2416	2425
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	2414		

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

Code
2402

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

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

Year
2403
_ _ _ _

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. [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. 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.

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

b. For each practice or activity checked in 29a, please complete one line of this table.  
 [Enumerator Note: If "99:None of the above" was selected, report code "99" in the first row (item 1610).]

1	2	3	4	5
Practice or Activity on the Selected Field	Practice Code (see item 29a)  Code	Was this practice or plan used on this selected field in 2022? 1 Used in 2022 2 Not used in 2022 but used in earlier years  Code	What financial assistance (cost share) has been received for this practice on this field? 1 Received a payment in 2022 from EQIP, CSP, or similar program 2 Did not receive a payment in 2022 but have in earlier years 3 Have never received a payment for this practice  Code	Does this practice or activity help satisfy-- 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
	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

<p>30. In 2022, was the wheat in the selected field covered by a single or named peril crop insurance policy (e.g. hail, replant, wind, freeze, etc.)?.....</p>	Yes=1 No=3	Code 1393
[If item 30=1, continue. Otherwise, go to item 31.]		
<p>a. In 2022, was the wheat in the selected field covered by more than one single or named peril crop insurance policy (e.g. hail, replant, wind, freeze)?.....</p>	Yes=1 No=3	Code 2721
<p>b. What was the dollar amount of coverage per acre for the single peril policy covering the selected field?.....</p>		Dollars & Cents per Acre 1395
<p>c. What was the premium cost per acre for the single peril policy covering the selected field in 2022? EXCLUDE any sign-up fee.....</p>		2722
<p>d. What was the percent deductible for the single peril policy covering the selected field? (Record no deductible as 0%).....</p>		Percent 2723
<p>e. Did you (or will you) collect an indemnity payment for the selected field from the single peril policy during 2022?.....</p>	Yes=1 No=3	Code 2724
<p>31. In 2022, was the wheat in the selected field covered by a multi-peril crop insurance policy?.....</p>	Yes=1 No=3	Code 1385
[If item 31 = 1 ask--. Otherwise go to Section C]		
<p>a. Which coverage did you obtain?.....</p>	1 Federal CAT – basic catastrophic insurance 2 Yield Protection (YP) 3 Revenue Protection (RP) 4 Other multi-peril crop insurance	Code 1386
[If item 31a = 2, ask--]		
<p>i. What percent of yield coverage did you select for the selected field?.....</p>		Percent 1387
<p>ii. What percent of price coverage did you select for the selected field?.....</p>		1388
[If item 31a = 3, ask--]		
<p>iii. What percent of revenue coverage did you select for the selected field?.....</p>		Percent 1389
<p>b. What type of unit coverage did you purchase for the multi-peril policy on the selected field?.....</p>	1 Basic 2 Optional 3 Enterprise	Code 2524
<p>c. In what year did you, the operator listed on the label, first purchase multi-peril crop insurance on the selected field?.....</p>		Year 2525
<p>d. What is the 2022 Approved APH (actual production history) yield for the selected field?.....</p>		Bushels per Acre 2526
<p>e. What was the premium paid for multi-peril crop insurance for the selected field in 2022? EXCLUDE any administrative fee.....</p>		Dollars & Cents per Acre 2527
<p>f. Did you or will you collect an indemnity payment for the selected field from multi-peril crop insurance during 2022?.....</p>	Yes=1 No=3	Code 2528

1. Were commercial nutrients or fertilizers applied to the selected field for the 2022 wheat crop? INCLUDE those from operators, landlords, and contractors.

Code	Office Use Edit Table
Yes=1 No=3	0202
	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 2022 crop? INCLUDE applications made by airplanes and custom applicators.....

Number
0203

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

**CHECKLIST**

**INCLUDE**

**EXCLUDE**

- |   |   |
|---|---|
| <input type="checkbox"/> Custom applied nutrients or fertilizers<br><br><input type="checkbox"/> Nutrients or fertilizers applied in the fall of 2021 and those applied earlier if the selected field was fallow in 2021.<br><br><input type="checkbox"/> Commercially prepared manure or compost | <input type="checkbox"/> Micronutrients<br><br><input type="checkbox"/> Unprocessed manure<br><br><input type="checkbox"/> Nutrients or fertilizers applied to previous crops in the selected field<br><br><input type="checkbox"/> Lime and gypsum/landplaster |
|---|---|

Office Use Lines in Table	Table 001	0299
------------------------------	--------------	------

**Nitrogen Codes for Column 2**

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

**Application Codes for Column 6**

- |   |                                |
|---|--------------------------------|
| 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     |

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 <sub>2</sub> O <sub>5</sub> Phosphate	K <sub>2</sub> O Potash	S Sulfur	Type of N Used					
	01	31	32	33	34					
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

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

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

a. Are you able to report the cost of nutrient or fertilizer materials and custom application separately?.....  
 Yes=1 [2216]  
 No=3

[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	OR	Total Dollars
0219 . ____		0220

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

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

INCLUDE

- operator, landlord, and contractor costs as well as the costs for sulfur and micronutrients
- materials applied to the selected field if it was fallow in 2021

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

Dollars & Cents per Acre	OR	Total Dollars
0221 . ____		0222

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

6. Was gypsum applied to the selected field for the 2022 wheat crop?.....  
 Yes=1 [0218]  
 No=3

7. Was a soil test for soil organic matter performed on this wheat field at some point in the last 10 years?.....  
 Yes=1 [3225]  
 No=3

[If item 7 = 1, ask--]

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

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

[If item 7b is more than 1, ask--]

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

8. Was a soil or plant tissue test performed on the selected wheat field in 2021 or 2022 for the 2022 crop?.....  
 Yes=1 [0224]  
 No=3

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

9. Was a soil test for phosphorus performed on the selected wheat field in 2021 or 2022 for the 2022 crop?.....  
 Yes=1 [0225]  
 No=3

[If item 9 = 1 ask--]

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

10. Was a soil test for nitrogen performed on this wheat field in 2021 or 2022 for the 2022 crop?..... Yes=1 0227  
 No=3

[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 2021 or 2022 for the 2022 crop?..... Yes=1 0229  
 No=3

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

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

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

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

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

3 Some other reason

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

[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 0233  
 No=3

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

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

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

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

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

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

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

1 Nitrification inhibitors (such as N-Serve)

2 Urease inhibitors (such as Agrotain)

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

4 Other inhibitors

5 None

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

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

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

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

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

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

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

c. Was lime applied to the selected field in 2021 or 2022 for the 2022 crop?..... Code  
 Yes=1 0240  
 No=3

16. Was non-commercial (unprocessed) manure from own farm, from a neighbor's farm, etc., or other organic material, including compost, applied to the selected field for the 2022 wheat crop? EXCLUDE commercially prepared manure..... Code  
 Yes=1 0246  
 No=3

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

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

b. What was the amount of manure or compost applied per acre to the selected field?..... Unit Codes  
 1 Tons  
 2 Gallons  
 3 Bushels  
 4 Cubic yards  
 Units per acre 0249 0248

c. Of the total manure or compost applied to the selected field for the 2022 wheat crop, what was the percent of manure or compost applied--

i. in the fall before planting?..... + 0254

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

iii. after planting?..... + 0256

= 100%

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

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

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

g. Was the manure or compost--..... Code  
 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)? 0260

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



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

INCLUDE

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

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

[If item 16gii = 1, ask--]

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

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

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

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

			Code
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--]

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

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

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

[If item 17 = 1, ask--]

			Code
a. What basis was used to determine these manure application rate restrictions--			
i. Nitrogen requirement of the crop?.....		Yes=1 No=3	0265

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

Now I have some questions about all the biocontrols or pesticides used on the selected field for the 2022 wheat crop, including both custom applications and applications made by this operation.

1. Were any herbicides, insecticides, fungicides or other biocontrols or pesticides used on this wheat field for the 2022 crop?.....

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

[Probe for applications made in the fall of 2021 and those made earlier if the selected field was fallow.]

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

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

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

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

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

## Applications Codes for Column 9

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

L I N E	9	10	11	12	13	14
	How was this product applied? [Enter code from above.]	How many acres in the selected field were treated with this product?  Acres	How many times was it applied?  Number	Were these applications made by--  1 Operator, partner, or family member? 2 Custom applicator? 3 Employee/Other?	What was the cost per unit of the product?  Dollars & Cents per Unit	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

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

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

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

4. What was the total cost of all chemical, biocontrol, or pesticide products applied to the selected field? INCLUDE operator, landlord, and contractor costs, defoliants, herbicides, insecticides, fungicides, surfactants, wetting agents, growth regulators, and materials applied before planting and during 2021 fallow period. EXCLUDE seed treatments..... Dollars & Cents per Acre OR Total Dollars  
0334 0335

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

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

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

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

Now I have some questions about your pest management decisions and practices used on the selected field for the 2022 wheat 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

	Yes=1 No=3	Code
1. Were weather data used to assist in determining either the need or when to make pesticide applications?.....		0800
2. Were any biological pesticides such as Bt ( <i>Bacillus thuringiensis</i> ), insect growth regulators, neem or other natural/biological based products sprayed or applied to manage pests in the selected field?.....		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?.....		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

	Yes=1 No=3	Code
4. Were herbicides applied to the selected wheat field before weeds emerged?.....		0803
5. Were herbicides applied to the selected wheat field after weeds emerged?.....		0805
6. Were records kept for the selected field to track the activity or numbers of weeds, insects, or diseases?.....		0823
7. Did you use published information on infestation thresholds to determine when to take measures to manage pests in the selected field?.....		1824

8. In 2022, 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	Code
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.]

	Dollars & Cents per Acre	OR	Total Dollars
11. How much was charged for the scouting services for the selected field? INCLUDE operator, landlord, and contractor costs.....	0821		0822

a. If scouting performed at no cost, explain: _____	Office Use	0333
---	------------	------

	Yes=1 No=3	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?.....		0824

1	2	3 [If column 2 = 1, ask--] Do you believe that the infestation/population level was higher than the economic threshold for treatment? 1 Much higher (over 1.5 times the threshold) 2 Higher (between 1 and 1.5 times threshold) 3 Lower (between 1 and .5 times the threshold) 4 Much lower (between .5 and 0 times the threshold) 99 Don't Know  Code
13. Do you believe that the selected field was infested with any of the following insects?	Yes=1 No=3	
a. Aphids	2266	2267
b. Armyworm	2278	2279
c. Cereal Leaf Beetle	2280	2281

	Code
14. Did you use field mapping of previous weed problems to assist you in making weed management decisions?.....	Yes=1 0825 No=3

	Code
15. 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?	
a. Use the services of a diagnostic laboratory for pest identification or soil plant tissue pest analysis for the selected field?.....	Yes=1 0841 No=3
b. Plow down crop residue using conventional tillage?.....	Yes=1 0842 No=3
c. Remove/burn down crop residue?.....	Yes=1 0843 No=3
d. Rotate crops in the selected field during the past three years?.....	Yes=1 0844 No=3
e. Maintain ground covers, mulches, or other physical barriers?.....	Yes=1 0845 No=3
f. Choose crop variety because of specific resistance to a certain pest?.....	Yes=1 0846 No=3
g. Use no-till or minimum till?.....	Yes=1 0847 No=3
h. Plan planting locations to avoid cross infestation of pests?.....	Yes=1 0848 No=3
i. Adjust planting or harvesting dates?.....	Yes=1 0849 No=3
j. Chop, spray, mow, plow, or burn field edges, lanes, ditches, roadways, or fence lines?.....	Yes=1 0850 No=3
k. Clean equipment and field implements after completing field work to reduce the spread of pests?.....	Yes=1 0851 No=3
l. Adjust row spacing, plant density, or row directions?.....	Yes=1 0852 No=3
m. Have the seed treated for insect or disease control after you purchased the seed for the selected field?.....	Yes=1 0854 No=3
n. Maintain a beneficial insect or vertebrate habitat?.....	Yes=1 0855 No=3
o. Use a flamer to kill weeds?.....	Yes=1 0857 No=3
p. Maintain buffer strips or border rows to isolate wheat from non-organic crops or land, or did you take a buffer harvest?.....	Yes=1 0856 No=3
q. Plant earlier or later to avoid weeds?.....	Yes=1 0865 No=3

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

Code
0853
Yes=1 No=3

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

Code
0858
Yes=1 No=3

[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. INCLUDE cost for beneficial organisms, insects, nematodes, and fungi. EXCLUDE biological pesticides previously reported.....

Dollars & Cents per Acre	OR	Total Dollars
0859		0860

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

Code
0863
Yes=1 No=3

19. Was the selected field left fallow in 2021 to help manage insects on the selected field?.....

Code
0864
Yes=1 No=3

20. 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?.....

Code
0861
Yes=1 No=3

21. Was protection of beneficial organisms a factor in your pest control decisions for the selected field?.....

Code
1765
Yes=1 No=3

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

a. Did you change timing of, reduce application rate of, or eliminate a pesticide application?.....

Code
1766
Yes=1 No=3

b. Did you change to an alternative pesticide, biocontrol, or non-pesticide practice?.....

Code
1767
Yes=1 No=3

- Unit Codes
- 1 Pounds
  - 2 CWT
  - 3 Tons
  - 4 Bushels

22. 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	OR	Total Units
2735		2736

23. Did pests, such as weeds, insects, pathogens, or animals, cause any yield loss on the selected field in spite of your pest control efforts?.....

Code
0827
Yes=1 No=3

[If item 23 = 1, ask]

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

Units per Acre	OR	Total Units
0829		0830

Completion Code for Pest Management Data	
1 Incomplete/Refusal	0500

**F FIELD OPERATIONS - SELECTED FIELD**

1. Including custom operations, I need to list field work performed by machines on the selected field for the 2022 wheat 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 2021, list operations starting with fall 2020.
- 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--	
<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 to storage or first point of sale
EXCLUDE	
<input type="checkbox"/>	Lime & Gypsum/land plaster applications
<input type="checkbox"/>	Compost & Non-commercial manure applications

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

<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 2022 wheat 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 EXCLUDE custom and contract labor	1110	1111	1112
Paid full-time workers EXCLUDE 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? 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

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

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

	Code
	1116
	Yes=1 No=3

[If item 5 = 1, continue. Otherwise go to item 6.]

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 2022 wheat crop.

1 Custom Service	2
Which of the following services were performed for the 2022 wheat crop on the selected field?  [Check box for each service performed; refer to item 1 if necessary.]	Including operator, landlord, and contractor costs, how much was spent for [column 1] on the selected field for the 2022 wheat crop?  Dollars & Cents per Acre
<input type="checkbox"/> a. Custom land preparation, shaping and/or leveling?.....	1121  . ____
<input type="checkbox"/> b. Custom cultivating?.....	1122  . ____
<input type="checkbox"/> c. Custom planting and/or reseeding?.....	1123  . ____
<input type="checkbox"/> d. Custom harvesting?.....	1124  . ____
<input type="checkbox"/> e. Custom hauling to storage or point of first sale? ( $\frac{\text{Dollars \& cents per unit} \times \text{Total units hauled from field}}{\text{Acres harvested in field}} = \text{Dollars \& cents per acre}$ )	1126  . ____
<input type="checkbox"/> f. Custom harvesting and hauling from field to storage or point of first sale? ( $\frac{\text{Dollars \& cents per unit} \times \text{Total units hauled from field}}{\text{Acres harvested in field}} = \text{Dollars \& cents per acre}$ )	1127  . ____
<input type="checkbox"/> g. Custom raking, baling, and hauling the straw from the selected field? ( $\frac{\text{Dollars \& cents per unit} \times \text{Total units hauled from field}}{\text{Acres harvested in field}} = \text{Dollars \& cents per acre}$ )	1128  . ____

	Code
8. Was the wheat harvested and hauled from the selected field dried (or will be dried) before it was sold or stored?.....	2748 Yes=1 No=3
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?.....	1196 Yes=1 No=3

[If item 9 = 1, continue. Otherwise, go to item 12.]

	Code
10. Which of the following technical or consultant services did you obtain to make recommendations for the selected field?	
a. Nutrient recommendations/management service?.....	1129 Yes=1 No=3
b. Soil or tissue sample collection?.....	1130 Yes=1 No=3
c. Pest control recommendations/management service?.....	1131 Yes=1 No=3
d. Pest scouting?.....	1132 Yes=1 No=3
e. Irrigation management service (i.e. irrigation scheduling)?.....	1133 Yes=1 No=3
f. Yield map or remote sensing map development/interpretation?.....	1134 Yes=1 No=3
g. Other custom or technical service? [Specify: _____].....	1135 Yes=1 No=3

[If any item in 10a–g = 1, continue. Otherwise go to item 12.]

11. What was the cost for any technical or consultant services reported in item 10. 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

12. Please report how any data from the selected field in 2022 will be stored and accessed.

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

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

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

13. Were there or will there be any data collection tools such as yield monitors, GPS mapping, etc. used during field operations on this wheat field?.....	Code Yes=1 2460 No=3
--	----------------------------

[If item 13 = 1, continue. Otherwise go to item 17.]

Please report the data collection technologies you used on the selected field to produce this crop. Also indicate if the data are 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 costs 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 the cell in that column blank.

1 Data Collection Tool	2	3	4	5	6
	Tool Used Yes=1 No=3	Collected GPS coordinates Yes=1 No=3	Data was/will be used to create a map Yes=1 No=3	Replacement Cost Total Dollars	Annual Fee 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		

[If item 13a column 2 = 1, continue. Otherwise go to item 16.]

14. Did you use the yield monitor information to--

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

[If any item 13 column 2 = 1, continue. Otherwise go to item 16.]

15. Using data collected from the previous tools table in item 13, did you obtain crop management recommendations, such as data interpretation, in 2022 for the selected field from any of the following--

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

[If any item 15a-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	

[If item 13g column 2 = 1, continue. Otherwise go to item 17.]

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

	Code
a. Weed analysis?.....	Yes=1 3161 No=3
b. Spraying herbicide or fungicide?.....	Yes=1 3162 No=3
c. Insect analysis?.....	Yes=1 3163 No=3
d. Insect control?.....	Yes=1 3164 No=3
e. Yield analysis?.....	Yes=1 3165 No=3
f. Moisture analysis?.....	Yes=1 3166 No=3
g. Equipment check?.....	Yes=1 3167 No=3

17. Was any of the following GPS-enabled (Global Positioning System) equipment used to produce wheat on the selected field in 2022?

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

18. 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

19. Was any guidance auto-steering equipment, excluding Light Bar, used on the selected field?..... Yes=1 No=3 Code  
2148

[If item 19 = 1 continue, otherwise go to item 20.]

a. Was the guidance auto-steering equipment..... 1 New, owned?  
2 Used, owned?  
3 Leased? Code  
2158

b. What year was guidance auto-steering equipment first purchased?..... Year  
2159

c. What is the replacement cost for guidance auto-steering equipment?..... Dollars & Cents per Acre OR Total Dollars  
2160 2161

d. What is the annual fee for guidance auto-steering?..... Dollars & Cents per Acre OR Total Dollars  
2162 2163

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

[If item 20 = 1 continue, otherwise go to Section G]

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

1	2	3	4	5	6
Was a variable rate applicator used on the selected field for--	Tool Used  Yes=1 No=3	Was this applicator?-- 1 Sensor-based 2 GPS-based 3 Both 4 Neither  Code	Was this applicator?-- 1 New, owned 2 Used, owned 3 Leased  Code	What year was the applicator first used?  Year	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

Acres

1160	_____
------	-------

1. How many acres in the selected field were irrigated for the 2022 wheat crop?.....

[If none, go to Conclusion]

2. Now I have some questions about the irrigation systems and water used on the selected field for the 2022 wheat 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 wheat 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 wheat 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 2022 growing season? EXCLUDE the selected field.....

Acres	1174
	_____

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

Dollars & Cents per Acre	OR	Total Dollars
1189		1190

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

Code	1191
Yes=1 No=3	

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

a. What was the total cost for the water purchased for the selected field during the 2022 growing season? INCLUDE operator, landlord, and contractor costs and ditch maintenance costs for the selected field.....

Dollars & Cents per Acre	OR	Total Dollars
1193		1194

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

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

Total Dollars	1201
---------------	------

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

6. What was the total amount spent for poly pipe used on the selected field during the 2022 growing season? INCLUDE operator, landlord, and contractor costs.....

Total Dollars	1202
---------------	------

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

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

Inches	1203
Feet	1204

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

Code	1205
------	------

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

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

Yes=1 No=3	1206
	Number

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

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

Inches	1207
--------	------

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

Feet	1208
------	------

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.....

Code	1210
------	------

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

Yes=1 No=3	1211
	Acres

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

e. Excluding the selected field, how many other acres on this operation were irrigated using the same wells during the 2022 growing season?.....

Code	2211
------	------

9. Was any additional mainline or lateral pipe used to carry water from the source to the system in the same wells during the 2022 growing season?.....

Yes=1 No=3	1212
	Inches

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

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

Feet	1213
------	------

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

# CONCLUSION

**Location of Selected Field**

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

Office Use  
State County FIPS Code

1. What county is the selected wheat 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 2023 to collect it. I'll call you then to set up a time that is good for you.

To receive the complete results of this survey on the release date, go to [nass.usda.gov/results](http://nass.usda.gov/results)

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

1095
------

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

**Records Use**

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

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

**Supplements Used**

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

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

Operation Email: (if different from above)

Operation Phone:

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

Respondent Name:

Respondent Phone (if different from above)

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

**OFFICE USE**

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