

AGRICULTURAL RESOURCE MANAGEMENT SURVEY

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BARLEY PRODUCTION PRACTICES AND COSTS REPORT FOR 2027

VERSION 14	ID _____	TRACT 01	SUBTRACT __	C-TYPE 103
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CONTACT RECORD

DATE	TIME	NOTES

INTRODUCTION:

[Introduced yourself, and ask for the operator. Rephrase in your own words.]

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.

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 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.

We encourage you to refer to your farm records during the interview.

BEGINNING TIME H H M M
[MILITARY]

SCREENING BOX

0006

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

POID _____	POID _____
PARTNER NAME	PARTNER NAME
ADDRESS	ADDRESS
CITY STATE ZIP PHONE NUMBER	CITY STATE ZIP PHONE NUMBER
POID _____	POID _____
PARTNER NAME	PARTNER NAME
ADDRESS	ADDRESS
CITY STATE ZIP PHONE NUMBER	CITY STATE ZIP PHONE NUMBER

Total Planted Acres

1. How many acres of barley did this operation plant for the 2027 crop year?.....

0050	_____
------	-------

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

a. Of the total planted acres in item 1, how many acres were planted for--

Total Planted Acres

i. feed barley?.....

0061	_____
------	-------

ii. malt barley?.....

0062	_____
------	-------

iii. other uses?.....

0063	_____
------	-------

I will follow a simple procedure to make a random selection from the barley fields planted for the 2027 crop.

Total Number of Fields Planted

2. What is the total number of barley fields that were planted on this operation?.....

0020

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

3. Please list these field(s) 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

[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

4. The field selected is _____ (field name/number/description).
 During this interview, the barley questions will be about this selected barley field.
 [Be sure the operator can identify the selected field.]

5. 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.]

- a. Farm Number (up to 8 digits).....
- b. Tract Number (up to 7 digits).....
- c. Field Number (up to 4 digits, exclude subfield letters).....

Number
1070
1071
1072

OFFICE USE
OY Field Substituted

0022

1. How many acres of barley did this operation plant in the selected field for the 2027 crop?.....

Acres
1301

a. Was the selected field planted for--.....

1 feed?
2 malt?
3 other uses?

Code
1337

b. Are the acres in the selected field Certified Organic?.....

Code
Yes=1 1300
No=3

[If item 1b = 1, go to item 2.]

c. Was the selected field transitioning into organic barley production in 2027?.....

Code
Yes=1 1399
No=3

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 2027 barley 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 2027 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 . ____ OR 1306

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

Year
1312
_ _ _ _

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

M M D D Y
1308
_ _ _ _ 20 _

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

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

1311

0217

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

- 1 Dual purpose - grain and grazing?
- 2 Harvesting for grain only?
- 3 Grazing only?
- 4 Cover crop?
- 5 Other uses? [Specify: _____]

Code

3117

9. What was the source of the barley seed--.....

- 1 Purchased?
- 2 Homegrown or traded?
- 3 Both?

Code

1317

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

a. How much of the barley seed planted in the selected field was grown or received in trade by this operation?.....

Percent

1318

i. What was the cost per bushel for cleaning and treating this seed?.....

Dollars & Cents per Bushel

1321

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

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

Dollars & Cents per Unit

1319

Unit

- 1 Code
- 2 Pound
- 3 CWT
- 4 Ton
- 2 Bushel
- 2 Acre
- 2 50 Pound
- 3 Bag

1320

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

Units per Acre

1313

Unit Code

- 1 Pound
- 2 CWT
- 3 Ton
- 4 Bushel
- 2 50 Pound
- 3 Bag

1314

12. For the 2027 barley crop, was the barley seed--.....

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

Code

3062

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

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

Seed Treatment Name

1289

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

Code

2325

13. For the 2027 barley crop, did you plant a commercial seed product on the selected field?.....

Yes=1
No=3

Code

2340



[If item 13 = 1, ask--]

Commercial Seed Product Name

- a. What was the name of the seed product?
Write the seed product name in the box
provided (e.g. LCE, Genie, AAC Synergy,
AC Metcalfe).....

2342

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

Acres

1315

15. Was straw harvested from the selected field?.....

Code

3140

Yes=1
No=3

[If item 15 = 1 continue, otherwise go to item 17.]

16. How many acres of barley straw were harvested from the selected barley field?.....

Acres

1521

a. How many tons of barley straw were harvested from the selected barley (item 16) 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. What was the total cost of baler twine/wire used to bale the barley straw from the selected barley field including landlord's share.....

Total Dollars

1525

c. Was any barley straw sold?.....

Code

1527

Yes=1
No=3

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

i. What was the price received per ton for all barley straw sold from the selected barley field?.....

Dollars & Cents per Ton

1526

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

Code

1328

Yes=1
No=3

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

How many acres in this barley field were or will be--

- a. harvested for grain or seed?.....
- b. harvested for hay, silage or green chop?.....
- c. abandoned?.....
- d. used for some other purpose?.....

Acres	What yield per acre did you get or do you expect to get for barley--	Unit Code 1 Pounds 2 CWT 3 Tons 4 Bushels
	Units per Acre	Code
1346	1347	1348
1349	1350	Tons
1351		
1439		

19. Did any livestock graze the selected barley field during the 2027 crop year?.....

Code

1339

Yes=1
No=3

[If item 19 = 1 continue, otherwise go to item 21.]

20. What type of livestock grazed the selected barley field during the 2027 crop year? INCLUDE livestock

1 Cattle 2 Sheep	Code
---------------------	------

grazing before barley harvest and livestock "grazing-out" the field instead of harvesting barley.....

3 Other [Specify: _____]

1341

Head

1362

a. About how many head of livestock grazed on the selected barley field?.....

Number of Days

1363

b. How many days did this livestock graze on the selected barley field?.....

Code

1365

c. Was payment received from others for livestock grazing on the selected field?.....

Yes=1
No=3

[If item 20c = 1, ask--]

Total Dollars

1367

i. What was the total dollar amount received including the landlord's share?.....

Crop Code List for item 21 - Previously Planted Crops

190 Barley	311 Grasses including clover	22 Rye	165 Wheat, winter
6 Corn for grain	1 Hay, alfalfa	34 Ryegrass	318 No crop planted
5 Corn for silage	11 Hay, all other	240 Sorghum, all	291 Other field crop
283 Cotton, all	15 Oats	26 Soybeans	292 Other crop
302 CRP	20 Potatoes	263 Wheat, durum or spring	312 Cover crop mix

21. 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-- [For perennial crops, (1, 11, 34, 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 irrigated?	5 Was the selected field no-till or strip-tilled? ^{1/}
Season and Year	Crop Name	Crop Code	Yes=1 No=3	Code	Yes=1 No=3	Yes=1 No=3
a. Fall of 2018?.....		1343	1470	1471	2344	1345
b. Spring/Summer of 2018?....		1369	1472	1473	2370	1371
c. Fall of 2017?.....		1372	1474	1475	2373	1374
d. Spring/Summer of 2017?....		1375	1476	1477	2376	1377
e. Fall of 2016?.....		1378	1478	1479	2379	1380
f. Spring/Summer of 2016?....		1381	1480	1481	2382	1383
g. Fall of 2015?.....		1366	1482	1483	2367	1368
h. Spring/Summer of 2015?....		1340	1484	1485	2341	1342

¹No-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 2018, ask--]

Dollars & Cents
per Acre

i. What was the seed cost per acre for the cover crop?.....

1468	■	___

j. What was the per-acre cost-share or financial assistance payments received for the cover crop?.....

1495	■	___

[Enter zero if no program payment was received.]

22. Has any part of the selected field been classified as "Highly Erodible Land"? 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. A "written plan" is a plan prepared in accordance with Federal, State, or district standards.....

Code	
Yes=1	1404
No=3	
Yes=1	0702
No=3	

23. Do you have a written conservation plan that specifies practices to control soil erosion?.....

24. 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.....

Code	
Yes=1	1405
No=3	

25. 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

26. What is the primary soil texture 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.]

27. In the selected field, are you concerned about any of the following?	Code	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. 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		

28. 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?.....

Unit Code
 1 Current
 2 Past
 3 Never

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

2611
2612
2613
2614

NOTES

29. 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"/> 12 Grass waterway	<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"/> 20 Implement a nutrient management plan - written plan	<input type="checkbox"/> 31 Drift reducing spray nozzles
<input type="checkbox"/> 3 Cover crop - single species	<input type="checkbox"/> 26 Split nitrogen application with at least 50% applied after planting	<input type="checkbox"/> 32 Targeted sprayer - electrical control
<input type="checkbox"/> 4 Cover crop mix	<input type="checkbox"/> 21 Precision nutrient application	Adjacent to Field
<input type="checkbox"/> 5 Contour farming	<input type="checkbox"/> 23 No fertilizer application more than 30 days before planting	<input type="checkbox"/> 33 Filter strip
<input type="checkbox"/> 6 Conservation crop rotation	<input type="checkbox"/> 24 Controlled release fertilizer	<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 29a, please complete one line of this table.

1	2	3		4	5
Practice or Activity on the Selected Field	Practice Code (see item 29a)	On the selected field for this practice, have you ever received at any time--		Does this practice or activity help satisfy--	Was this practice or plan used on the selected field in 2019?
		Technical or planning assistance?	Financial Assistance?		
		1 USDA NRCS field staff, cooperative extension, or technical service providers 2 Other sources of assistance 3 No assistance needed	1 Environmental Quality Program (EQIP) 2 Conservation Stewardship Program (CSP) 3 Conservation Reserve Program (CRP) 4 Other Federal, State, and Local Programs 5 No assistance needed	1 A federal regulatory requirement 2 Highly erodible land conservation compliance 3 Does not relate to any regulation or compliance requirement	Yes=1 No=3
	1610	1611	1612	1613	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

30. In 2027, was the barley in the selected field covered by a single or named peril crop insurance policy (e.g. hail, replant, wind, freeze)?.....

Yes=1
No=3

Code

2520

[If item 30 = 1 ask, otherwise go to item 31.]

a. In 2027, was the barley in the selected field covered by more than one single or named peril crop insurance policies (e.g. hail, replant, wind, freeze)?.....

Yes=1
No=3

Code

2517

Dollar & 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

Dollar & 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 2027?.....

Yes=1
No=3

1394

31. In 2027, was the barley in the selected field covered by a multi-peril crop insurance policy?.....

Yes=1
No=3

Code

1385

[If item 31 = 1 ask, otherwise go to Section C]

a. Which coverage did you obtain?..

- 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--]

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

Percent

1387

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

Percent

1388

[If item 31a = 3, ask--]

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

Percent

1389

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

- 1 Basic
- 2 Optional
- 3 Enterprise

Code

2524

Year

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

2525

Bushels per Acre

d. What is the 2027 Approved APH (actual production history) yield for the selected field?.....

2526

Dollars & Cents

e. What was the premium paid for multi-peril crop insurance for the selected field in 2027?
EXCLUDE any sign-up fee.....

per Acre
2527

f. Did you or will you collect an indemnity payment for the selected field from multi-peril crop insurance during 2027?.....

Code	2528
Yes=1 No=3	

C NUTRIENT or FERTILIZER APPLICATIONS--SELECTED FIELD C

1. Were commercial nutrients or fertilizers applied to the selected field for the 2027 barley crop? INCLUDE those from operators, landlords, and contractors.....

Code	0202	Office Use Edit Table	0200
Yes=1 No=3			

[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 2027 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

<input type="checkbox"/> Nutrients or fertilizers applied in the fall of 2018 and those applied earlier if the selected field was fallow in 2018.

<input type="checkbox"/> Commercially prepared manure or compost | <input type="checkbox"/> Micronutrients

<input type="checkbox"/> Unprocessed manure

<input type="checkbox"/> Nutrients or fertilizers applied to previous crops in the selected field

<input type="checkbox"/> Lime and gypsum/landplaster |
|---|---|

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

Nitrogen Codes for Column 2 Source/Form of N Used

Application Codes for Column 6

- | | |
|---------------------------|--|
| 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 |
| 4 Ammonium nitrate | [specify: _____] |
| 5 Sodium nitrate | |

- | | |
|---|--------------------------------|
| 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	8 Was this applied using variable rate technology (VRT)? Yes = 1 No = 3
	N Nitrogen	P ₂ O ₅ Phosphate	K ₂ O Potash	S Sulfur	Source/Form of N Used [Refer to code list above]						
01	31	32	33	34	35	36	37	38	39	40	27
02	31	32	33	34	35	36	37	38	39	40	27
03	31	32	33	34	35	36	37	38	39	40	27

0 4	31	32	33	34	35	36	37	38	39	40	▪____	27
0 5	31	32	33	34	35	36	37	38	39	40	▪____	27
0 6	31	32	33	34	35	36	37	38	39	40	▪____	27
0 7	31	32	33	34	35	36	37	38	39	40	▪____	27
0 8	31	32	33	34	35	36	37	38	39	40	▪____	27
0 9	31	32	33	34	35	36	37	38	39	40	▪____	27
1 0	31	32	33	34	35	36	37	38	39	40	▪____	27

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

	Code
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?.....

	Code
Yes=1	2216
No=3	

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

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

INCLUDE

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

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

Dollars & Cents per Acre		Total Dollars
0219	OR	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
- costs for sulfur and micronutrients
- materials applied to the selected field if it was fallow in 2026

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

Dollars & Cents per Acre		Total Dollars
0221	OR	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 2027 barley crop?.....

	Code
Yes=1	0218
No=3	

7. Was a soil test for soil organic matter performed on this barley 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 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 barley field in 2026 or 2027 for the 2027 crop?.....

	Code
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 barley field in 2026 or 2027 for the 2027 crop?.....

	Code
Yes=1	0225
No=3	

[If item 9 = 1 ask--]

Pounds per Acre

0226

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

10. Was a soil test for nitrogen performed on this barley field in 2026 or 2027 for the 2027 crop?.....

Yes=1
No=3

Code
0227

[If item 10 = 1, ask--]

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

Pounds per Acre
0228

11. Was a plant tissue test or leaf analysis for nutrient deficiency performed on the selected field in 2026 or 2027 for the 2027 crop?.....

Yes=1
No=3

Code
0229

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

Dollars & Cents per Acre OR Total Dollars

0230 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

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

Yes=1
No=3

Code
3231

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

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

Code

a. Results of a soil or plant tissue test?.....
Yes=1 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 goals etc.?.....
Yes=1 0239
No=3

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

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

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 2026 or 2027 for the 2027 crop?..... Code
 Yes=1 0240
 No=3

15. 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 2027 barley crop? EXCLUDE commercially prepared manure..... Code
 Yes=1 0246
 No=3

[If item 15 = 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 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 2027 barley crop, what was the percent of manure or compost applied--

Percent	
0254	+
0255	+
0256	+
100%	

i. in the Fall before planting?.....
 ii. in the Spring before planting?.....
 iii. after planting?.....

d. Was the manure or compost--.....

1 Lagoon liquid?
2 Slurry liquid?
3 Semi-dry or dry?

Code 0257

e. Was the manure or compost--.....

1 Broadcast or sprayed without incorporation?
2 Broadcast or sprayed with incorporation?
3 Injected/knifed in?
4 Sprayed using irrigation systems?

Code 0258

f. Was the major source of manure or compost--.....

1 Beef cattle?
2 Dairy cattle?
3 Hogs?
4 Sheep?
5 Poultry?
6 Equine?
7 Biosolids - municipal sludge?
8 Food waste?

Code 0259

9 Other? Specify: _____

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

[If item 15g = 2, continue, otherwise go to item 15h.]

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	OR	Total Dollars
	0284		0285

ii. Did you hire someone to custom apply the manure or compost?.....	Code
	0286

[If item 15gii = 1, ask--]

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

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

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

i. Of the manure or compost applied to the selected field, was any tested for nutrient content prior to application?.....	Code
	0261

16. Were the manure application rates to the selected field influenced by Federal, State, or local restrictions?.....	Code
	0264

[If item 16 = 1, ask--]

a. What basis was used to determine these manure application rate restrictions--		Code	
	i. Nitrogen requirement of the crop?.....	Yes=1	0265
		No=3	
	ii. Phosphorus requirement of the crop?.....	Yes=1	0266
No=3			

D

BIOCONTROL or PESTICIDE APPLICATIONS--SELECTED FIELD

D

Now I have some questions about all the biocontrols or pesticides used on the selected field for the 2027 barley 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 barley field for the 2027 crop?.....

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

[Probe for applications made in the fall of 2018 and those made earlier if the selected field was fallow.]

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

INCLUDE defoliants, fungicides, herbicides, insecticides, and other pesticides. INCLUDE biological and botanical pesticides.	EXCLUDE adjuvants, nutrients or fertilizers reported earlier and seed treatments.
---	---

Office Use Line in Table	Table 001	0399
-----------------------------	--------------	------

Chemical Product Name	L I N E	2 What products were applied to the selected field? [Show product codes from Respondent Booklet.]	3 Was this product bought in liquid or dry form? [Enter L or D]	4 If this was part of a tank mix, enter line number of first product in mix.	5 When was this applied? 1 Before planting 3 At planting 4 After planting 5 Defoliation prior to harvest	6 OR 7		8 [Enter unit code] 1 Pounds 12 Gallons 13 Quarts 14 Pints 15 Liquid Ounces 28 Dry Ounces 30 Grams
						6 How much was applied per acre per application?	7 What was the total amount applied per application in the selected field?	
	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 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
	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?
01	76	77 .__	79	80
02	76	77 .__	79	80
03	76	77 .__	79	80
04	76	77 .__	79	80
05	76	77 .__	79	80
06	76	77 .__	79	80
07	76	77 .__	79	80
08	76	77 .__	79	80
09	76	77 .__	79	80
10	76	77 .__	79	80
11	76	77 .__	79	80
12	76	77 .__	79	80
13	76	77 .__	79	80
14	76	77 .__	79	80

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 _____	OR	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, defoliant, herbicides, insecticides, fungicides, surfactants, wetting agents, growth regulators, and materials applied before planting and during 2026 fallow period. EXCLUDE seed treatments..... Dollars & Cents per Acre OR Total Dollars

0334 _____	OR	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 _____	OR	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 _____	OR	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 _____	OR	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 2027 barley 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
No=3 | Code
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?..... | Yes=1
No=3 | Code
0801 |
| 3. Were pesticides with different mechanisms of action rotated or tank mixed for the primary purpose of keeping pests from becoming resistant to pesticides?..... | Yes=1
No=3 | Code
0802 |

[Enumerator Action: Were herbicide (pesticide product codes 10000-99000) applications reported in Section D, item 1, column 2?]

Yes - Continue No - Go to item 6

- | | | |
|---|---------------|--------------|
| 4. Were herbicides applied to the selected barley field before weeds emerged?..... | Yes=1
No=3 | Code
0803 |
| 5. Were herbicides applied to the selected barley field after weeds emerged?..... | Yes=1
No=3 | Code
0805 |
| 6. Were records kept for the selected field to track the activity or numbers of weeds, insects, or diseases?..... | Yes=1
No=3 | Code
0823 |
| 7. Did you use published information on infestation thresholds to determine when to take measures to manage pests in the selected field?..... | Yes=1
No=3 | Code
0824 |

8. In 2027, 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 13.]

Code

0808

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	Code 0809
--	---------------	--------------

10. Was scouting for pests done in the selected field due to--
- | | | |
|-----------------------------------|---------------|--------------|
| a. a pest advisory warning?..... | Yes=1
No=3 | Code
0810 |
| b. a pest development model?..... | Yes=1
No=3 | Code
0811 |

1	2	3	4
11. Was this barley field scouted for--	Yes=1 No=3	[If Yes, ask--] What was the infestation level for [column 1]? 1 Higher than normal 2 Normal 3 Lower than normal Code	[If column 2 = Yes, ask--] Who did the majority of the scouting for [column 1]? 1 Operator, partner or family member 2 An employee 3 Farm supply or chemical dealer 4 Independent crop consultant or commercial scout Code
a. weeds?.....	0812	0813	0814

	0815	0816	0817
c. diseases?.....	0818	0819	0820

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

	Dollars & Cents per Acre	OR	Total Dollars
12. 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
			Code 0825
13. Did you use field mapping of previous weed problems to assist you in making weed management decisions?.....		Yes=1 No=3	
14. Did you do any of the following other types of pest management for the specific purpose of managing or reducing the spread of pests in the selected field?			Code
a. Use the services of a diagnostic laboratory for pest identification or soil plant tissue pest analysis for the selected field?.....		Yes=1 No=3	0841
b. Plow down crop residue using conventional tillage?.....		Yes=1 No=3	0842
c. Remove/burn down crop residue?.....		Yes=1 No=3	0843
d. Rotate crops in the selected field during the past three years?.....		Yes=1 No=3	0844
e. Maintain ground covers, mulches, or other physical barriers?.....		Yes=1 No=3	0845
f. Choose crop variety because of specific resistance to a certain pest?.....		Yes=1 No=3	0846
g. Use no-till or minimum till?.....		Yes=1 No=3	0847
h. Plan planting locations to avoid cross infestation of pests?.....		Yes=1 No=3	0848
i. Adjust planting or harvesting dates?.....		Yes=1 No=3	0849
j. Chop, spray, mow, plow, or burn field edges, lanes, ditches, roadways, or fence lines?.....		Yes=1 No=3	0850
k. Clean equipment and field implements after completing field work to reduce the spread of pests?.....		Yes=1 No=3	0851
l. Adjust row spacing, plant density, or row directions?.....		Yes=1 No=3	0852
m. Have the seed treated for insect or disease control after you purchased the seed for the selected field?.....		Yes=1 No=3	0854
n. Maintain a beneficial insect or vertebrate habitat?.....		Yes=1 No=3	0855
o. Maintain buffer strips or border rows to isolate barley from non-organic crops or land, or did you take a buffer harvest?.....		Yes=1 No=3	0856
p. Use a flamer to kill weeds?.....		Yes=1 No=3	0857
q. Plant earlier or later to avoid weeds?.....		Yes=1 No=3	0865
			Code
15. Were any beneficial organisms, such as insects, nematodes, or fungi, applied or released in the selected field to manage pests?.....		Yes=1 No=3	0853
16. Were floral lures, attractants, repellants, pheromone traps, or other biological pest controls used on the selected field?.....		Yes=1 No=3	0858

[If item 15 or item 16 = 1, ask--]

a. What were the total materials and application costs for all biological pest controls for the selected field? INCLUDE operator, landlord, and contractor costs. INCLUDE cost for beneficial organisms, insects, nematodes, and fungi. EXCLUDE biological pesticides previously reported.....

Dollars & Cents per Acre	OR	Total Dollars
0859		0860

	Code
17. Was a trap crop, excluding fallow, grown to help manage insects in the selected field?.....	Yes=1 0863 No=3
18. Was the selected field left fallow in 2026 to help manage insects on the selected field?.....	Yes=1 0864 No=3
19. Were water management practices such as irrigation scheduling, controlled drainage, or treatment of retention water used on the selected field to manage pests or toxin-producing fungi and bacteria?.....	Code Yes=1 0861 No=3
20. Was protection of beneficial organisms a factor in your pest control decisions for the selected field?.....	Yes=1 1765 No=3

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

	Code
a. Did you change timing of, reduce application rate of, or eliminate a pesticide application?.....	Yes=1 1766 No=3
b. Did you change to an alternative pesticide, biocontrol, or non-pesticide practice?.....	Yes=1 1767 No=3

	Unit Code	Code	AND	Units per Acre	OR	Total Units
21. If untilled, uncultivated or untreated with herbicides, how much yield loss (e.g. bushels per acre) do you think weeds would most likely cause on the selected field?.....	1 Pounds 2 CWT 3 Bushels 4 Tons	0828		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 2027 barley crop. Please...

- begin with the first field operation after harvest of previous crop, including operations for a cover crop established since the previous crop harvested. If fallow during 2026, list operations starting with fall 2025.
- list the operations in order through harvest and hauling of this crop to storage or first point of sale; and
- maintain the order of tandem hook-ups.

Codes for Column 5

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

Office Use
 Lines in Table
 0499

Check List

INCLUDE all field work using machines for--

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

EXCLUDE

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

1 L I N E No.	2 S E Q U E N C E No.	3 What operation or equipment was used?	4 [Record machine code from Respondent Booklet.] Code	5 Who was the machine operator? [Enter code from above.] Code	[If Column 5 = code 6, skip columns 6 thru 11]					
					6 What was the size or swath of the [machine] used?	7 [Record size unit code.] 1 Feet 2 Row 3 Moldboard bottoms Hauling 4 Pounds 5 Bushels 6 Tons Code	8 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 ^{1/} 99 Self-Propelled Code	11 What was the fuel type of the tractor? [Record fuel type only if Power code 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

¹If 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 2027 barley crop.
 EXCLUDE labor that was reported for field work performed by machines.

Type of Workers	How many hours did (type of worker) spend on the selected field--		
	1 scouting for weeds, insects and diseases? Hours	2 irrigating? Hours	3 performing other work by hand? Hours
You (the operator)	1101	1102	1103
Partner(s)	1104	1105	1106
Unpaid workers	1107	1108	1109
Paid part-time or seasonal workers EXCLUDE custom and contract labor	1110	1111	1112
Paid full-time workers EXCLUDE custom and contract labor	1113	1114	1115

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, 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

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 cost of materials and/or application.....

1136

--

1137

--

12. Please report how any data from the selected field in 2027 will be stored and accessed.

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

- i. Paper hard copy?.....
- ii. Personal computer?.....
- iii. Mobile device?.....

Code	
Yes=1	2485
No=3	
Yes=1	2486
No=3	
Yes=1	2487
No=3	
Yes=1	2488
No=3	

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

[If item 12b = 1, 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?.....
- d. Did you share any of the data collected from the selected field with a third party through an agricultural technology provider website?.....

Code	
Yes=1	2489
No=3	
Yes=1	2490
No=3	
Yes=1	2460
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 barley field?.....

[If item 13 = 1, continue, otherwise go to item 16.]

Please report the data collection technologies you used on the selected field in 2027 to produce this crop. 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 Tool Used Yes = 1 No = 3	3 Collected GPS coordinates Yes = 1 No = 3	4 Data was/will be used to create a map Yes = 1 No = 3	5 Replacement Cost Total Dollars	6 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. 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 13a column 2 = 1, continue, otherwise go to item 15.]

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

- a. add/improve tile drainage?.....

Code	
Yes=1	1141
No=3	

Yes=1	1144
No=3	
Yes=1	1143
No=3	

c. help determine chemical input use?.....

[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 2027 for the selected field from any of the following--

	Yes=1	No=3	Code
a. input dealers without other fee-for-services?.....			2491
b. input dealers with other fee-for-services?.....			2492
c. custom service providers?.....			2493
d. USDA/university extension services?.....			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. EXCLUDE costs for any of these services if they were previously reported as part of the costs of materials and/or application.....	3150		3151

16. Was any of the following GPS-enabled (Global Positioning System) equipment used to produce barley on the selected field in 2027?

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

17. 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

18. Was any guidance auto-steering equipment, excluding Light Bar, used on the selected field?.....

	Yes=1	No=3	Code
			2148

[If item 18 = 1 continue, otherwise go to item 19.]

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

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

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

Code

19. Was a variable rate applicator used on this field?.....

Yes=1
No=3

2164

[If item 19 = 1 continue, otherwise go to Section G]

Please report the variable rate applicator types you used on the selected field to produce the barley in 2027.

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

Acres

1160	_
------	---

1. How many acres in the selected field were irrigated for the 2027 barley crop?.....

[If none, go to Conclusion]

2. Now I have some questions about the irrigation system and water used on the selected field for the 2027 barley crop.

a. What type of irrigation system was used to irrigate the selected field? [Show System Type Codes in the Respondent Booklet. Enter System Type Code for system that applied the most water.].....

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 and applied by any irrigation system.....

Unit	System
System Type Code	1161
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 barley growing season?.....

ii. How many gallons per minute were applied?.....

c. What percent of the water used to irrigate the selected field through this system came from surface water sources?.....

d. What was the number of times the selected field was irrigated during the barley growing season using any system? INCLUDE any pre-plant irrigation.....

Total Hours	1164
Gallons per Minute	1165
Percent	1166
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 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 2027 growing season? EXCLUDE the selected field.....

Acres	1174 _____
-------	---------------

	Dollars & Cents per Acre	OR	Total Dollars
3. What was the cost of the fuel or electricity used to irrigate the selected field? INCLUDE operator, landlord, and contractor costs.....	1189		1190

Code

4. Was any water purchased to irrigate the selected field ? INCLUDE landlord's share and purchases from all sources.....		Yes=1 No=3	1191
--	--	---------------	------

[If item 4 = 1 ask, otherwise go to item 5.]

	Dollars & Cents per Acre	OR	Total Dollars
a. What was the total cost for the water purchased for the selected field during the 2027 growing season? INCLUDE operator, landlord, and contractor costs and ditch maintenance costs for the selected field.....	1193		1194

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

Total Dollars

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

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

Total Dollars

6. What was the total amount spent for poly pipe used on the selected field during the 2027 growing season? INCLUDE operator, landlord, and contractor costs.....			1202
---	--	--	------

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

Inches

7. What was the average diameter of gated pipe used to irrigate the selected field?.....			1203
--	--	--	------

Feet

a. What was the total length of gated pipe used?.....			1204
---	--	--	------

Code

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

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

Number

a. How many wells were used to irrigate the selected field?.....			1206
--	--	--	------

Inches

b. What was the average diameter of the outer well casing?.....			1207
---	--	--	------

c. What was the average pumping depth of these wells during the irrigation season? Pumping depth is the depth to water at the start of the irrigation season, plus an average decline in the water level caused by pumping during the irrigation season.....			1208
--	--	--	------

Feet

Code

d. Were other fields irrigated using water pumped from wells that supplied water to the selected field?.....		Yes=1 No=3	1210
--	--	---------------	------

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

Acres

e. Excluding the selected field, how many other acres on this operation were irrigated using the same wells during the 2027 growing season?.....			1211
--	--	--	------

Code

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=1 No=3	2211
--	--	---------------	------

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

Inches

a. What was the average diameter in inches of the most common type of this additional pipe used?....			1212
--	--	--	------

Feet

b. How many feet of this additional pipe were used to bring water to the selected field?.....			1213
---	--	--	------

CONCLUSION

Location of Selected Field

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

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

County Name

Office Use
State County FIPS Code

	0010 _ _ _ _ _
--	-------------------

a. Field description.....

--

b. Field location.....

	LATITUDE			LONGITUDE					
N	0054 _ _ . _ _ ' _ _ . _ _	W	0055 _ _ . _ _ ' _ _ . _ _						
	<i>d d m m s s</i>		<i>d d d m m s s</i>						

OR

	LATITUDE			LONGITUDE					
	0051 _ _ . _ _ ' _ _ . _ _			0052 _ _ . _ _ ' _ _ . _ _					
	<i>decimal</i>			<i>decimal</i>					

[Enumerator Action: Mark map to indicate where the selected barley field is located. Be sure the "X" marked on map is in the county identified above.]

We will need additional information to complete this study. We will contact you in February or March 2028 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 https://www.nass.usda.gov/Surveys/Guide_to_NASS_Surveys/

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

1095 _ _ _ _ _

3. Ending time [Military].....

	H	H	M	M					
	0005 _ _ . _ _ ' _ _ . _ _								

Records Used

4. [Did respondent use farm/ranch records to report—]

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

Supplements Used

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

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