DURUM WHEAT PRODUCTION PRACTICES AND COSTS REPORT FOR 2017

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

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

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

We encourage you to refer to your farm records during the interview.
1. **How many acres of wheat did this operation plant for the 2017 crop year?** [If no acres planted, review Screening Survey Information Form, make notes, then go to item 4 on back page].

   a. **Of the total (item 1) acres, how many were planted as--**

   (i) **Durum Wheat.**

   I will follow a simple procedure to make a random selection from the durum wheat fields planted for the 2017 crop.

2. **What is the TOTAL number of durum wheat fields that were planted on this operation?** [If only one field enter “1” and go to item 4].

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

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

<table>
<thead>
<tr>
<th>FIELD NAME, NUMBER OR DESCRIPTION</th>
<th>FIELD NAME, NUMBER OR DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>3</td>
<td>12</td>
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<tr>
<td>4</td>
<td>13</td>
</tr>
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<td>5</td>
<td>14</td>
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<td>6</td>
<td>15</td>
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<td>7</td>
<td>16</td>
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<tr>
<td>8</td>
<td>17</td>
</tr>
<tr>
<td>9</td>
<td>18</td>
</tr>
</tbody>
</table>
4. [ENUMERATOR ACTION: Circle the pair of numbers on the above label associated with the last numbered field in item 3. Select the field according to the number you circled on the label, and record the selected number. If only one field, enter 1.]

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

7. In the randomly selected field (Item 4), what kind of wheat was planted in this field?
   (If selected field is not durum wheat, go back to item 2 to collect durum wheat fields.)
1. How many acres of wheat did this operation plant in this field for the 2017 crop? .................

   a. Are the acres in this field CERTIFIED ORGANIC? .................. YES = 1
      [If NO, skip 1b and ask item 2.]

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

2. Were the acres in this 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?

3. [If field is CASH RENTED (item 2 = 2, 3 or 5), ask item 3, else go to item 4.]

   What was the cash rent paid per acre for this 2017 wheat field? ..................

4. [If field is SHARE RENTED (item 2 = 4 or 5), ask--]
   What was the landlord’s share of the crop from this field? ..................

5. [If field is RENTED (item 2 = 2, 3, 4, or 5), ask--]
   What was the total cost for all inputs provided by any landlord for the 2017 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). .................................

6. What was the total cost for all inputs provided by any contractor for the 2017 crop on the selected field? (Include the costs for all inputs, such as seed, fertilizer, chemicals, technical services, custom operations, drying and irrigation.). .................................

7. What year did you (the operator listed on the label) start operating this field? ..........................
8. On what date was this field planted? ..................................................  
   a. What was your yield goal at planting for this field? ............................  
   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 Cover crop?  
      5 Other uses - 
         [Specify: __________________________________]  

9. What was the source of the wheat seed?  
   [If item 9 = 2 or 3, ask--]  
   a. What was the cost per bushel for cleaning and treating this homegrown or traded seed?  
   [If item 9 = 2 or 3, ask--]  
   b. How much of the wheat seed planted in this field was grown (or received in trade)  
      by this operation?  

10. [If any seed purchased (item 9 = 1 or 3), ask --]  
    What was the total cost per unit (including both your and the landlord’s share)  
    of purchased seed for this field? (Include cost of seed treatment.)  
    
11. What was the seeding rate per acre the first time this field was planted?  

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

13. Did you plant an herbicide resistant wheat (such as Clearfield) seed variety  
    on this field--  
    a. for harvest in 2017?  
    b. for harvest in 2016?
14. For the 2017 wheat crop, did you purchase pre-treated seed or have the seed treated after purchase with a fungicide or insecticide? 

YES = 1

If item 14 is yes, ask --

a. Enter the appropriate product code from the Respondent Booklet (Page 2) (enter 999 if a seed treatment was applied but the product is not listed).

CODE 2325

15. Has harvest of this field been completed? 

YES = 1

16. Please report the following information about the acres harvested (or to be harvested) and the yields from this field.

<table>
<thead>
<tr>
<th>How many acres in this wheat field were (or will be)</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ACRES</td>
<td>UNITS PER ACRE</td>
</tr>
<tr>
<td>a. harvested for grain?</td>
<td>1346</td>
<td>___</td>
</tr>
<tr>
<td>b. harvested for hay, silage or green chop?</td>
<td>1349</td>
<td>___</td>
</tr>
<tr>
<td>c. harvested for commercial seed contract?</td>
<td>1431</td>
<td>___</td>
</tr>
<tr>
<td>d. abandoned?</td>
<td>1351</td>
<td>___</td>
</tr>
<tr>
<td>e. used for some other purpose?</td>
<td>1439</td>
<td>___</td>
</tr>
</tbody>
</table>

17. Was straw harvested from this field?

□ YES - [Enter code 1 and continue]  NO - [Go to item 19].

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

a. How many tons of wheat straw were harvested from these wheat acres (item 18)?

\[
\text{Tons per Acre} \times \text{Acres} = \text{Total Tons} \quad \text{OR} \quad \text{Bales} \times \text{Lbs per Bale} + \frac{2000}{\text{Lbs per Ton}} = \text{Total Tons}
\]

b. Of the total wheat straw harvested from this field (item 18a), what was the landlord’s share of the wheat straw?

19. What was the total cost of baler twine/wire used to bale the wheat straw from this field? 

[Include landlord’s share].

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

What was the price received per ton for all wheat straw (item 18a) sold from this field?
19. **What type of livestock grazed this wheat field during the 2017 crop year?**

   [If Item 19 is 4, go to Item 20, otherwise ask--]

   a. About how many **head** of livestock (item 19) grazed this wheat field?

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

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

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

   [If livestock NOT owned by this operator grazed on this field, ask---]

   e. What is the total dollar amount received from others for livestock grazing on this field? *(Include landlord’s share).*

   - 1 Cattle
   - 2 Sheep
   - 3 Other [Specify: ____________]
   - 4 Not grazed

   CODE

   - 3147

   HEAD

   - 1362

   DAYS

   - 1363

   CODE

   - 3060
   - 3061

   DOLLARS & CENTS

   OR

   TOTAL DOLLARS

   - 3150
   - 3151
20. Please report what crops were previously PLANTED on the majority of this field, including cover crops.

<table>
<thead>
<tr>
<th>SEASON AND YEAR</th>
<th>CROP NAME</th>
<th>CROP CODE</th>
<th>YES = 1</th>
<th>CODE</th>
<th>YES = 1</th>
<th>YES = 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. FALL of 2016?</td>
<td>1343 Barley, 175 3 Dry Beans</td>
<td>21 Rice</td>
<td>193 Tobacco, burley</td>
<td>196 Tobacco, flue cured</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. SPRING/SUMMER of 2016?</td>
<td>310 Clover, 311 Grasses other than clover</td>
<td>98 Safflower</td>
<td>42 Vegetables</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. FALL of 2015?</td>
<td>6 Corn for grain, 1 Hay, alfalfa</td>
<td>25 Sorghum for grain</td>
<td>163 Wheat, durum</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. SPRING/SUMMER of 2015?</td>
<td>5 Corn for silage, 11 Hay, all other</td>
<td>24 Sorghum for silage</td>
<td>164 Wheat, other spring</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. FALL of 2014?</td>
<td>282 Cotton, Pima, 94 Mustard Seed</td>
<td>26 Soybeans</td>
<td>165 Wheat, winter</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. SPRING/SUMMER of 2014?</td>
<td>281 Cotton, Upland, 15 Oats</td>
<td>28 Sugarbeets</td>
<td>321 Perennual from previous year</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. FALL of 2013?</td>
<td>302 CRP, 16 Peanuts</td>
<td>30 Sunflowers</td>
<td>318 No crop planted during this period</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>h. SPRING/SUMMER of 2013?</td>
<td>320 Cultivated Fallow, 20 Potatoes</td>
<td>31 Sweet Potatoes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

[If a cover crop was planted in Spring/Summer or Fall 2016, ask--]

i. What was the seed cost per acre for the cover crop? ________________________________
21. Which of the following resource concerns do you have on this field?

<table>
<thead>
<tr>
<th>RESOURCE CONCERNS</th>
<th>CODE</th>
<th>Source 1</th>
<th>Source 2</th>
<th>Source 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Water-driven erosion.</td>
<td>2407</td>
<td>2417</td>
<td>2427</td>
<td>2437</td>
</tr>
<tr>
<td>b. Wind-driven erosion.</td>
<td>2408</td>
<td>2418</td>
<td>2428</td>
<td>2438</td>
</tr>
<tr>
<td>c. Soil compaction.</td>
<td>2409</td>
<td>2419</td>
<td>2429</td>
<td>2439</td>
</tr>
<tr>
<td>d. Poor drainage.</td>
<td>2410</td>
<td>2420</td>
<td>2430</td>
<td>2440</td>
</tr>
<tr>
<td>e. Low organic matter.</td>
<td>2411</td>
<td>2421</td>
<td>2431</td>
<td>2441</td>
</tr>
<tr>
<td>f. Water quality.</td>
<td>2412</td>
<td>2422</td>
<td>2432</td>
<td>2442</td>
</tr>
<tr>
<td>g. Other concerns.</td>
<td>2413</td>
<td>2423</td>
<td>2433</td>
<td>2443</td>
</tr>
<tr>
<td>h. No significant concerns.</td>
<td>2414</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
22. Which of the following conservation practices or plans are used on this field?

<table>
<thead>
<tr>
<th>CONSERVATION PRACTICES or PLANS</th>
<th>Was this practice or plan used in 2017?</th>
<th>In which year did you first use this practice or plan on this field?</th>
<th>Have you ever received at any time--</th>
<th>Does this practice or plan help satisfy?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>YES = 1</td>
<td>YEAR CODE</td>
<td>CODE CODE CODE</td>
<td>CODE CODE CODE</td>
</tr>
<tr>
<td>a. Conservation tillage [include no-till/direct seeding, mulch till, and ridge till]. . . . . . .</td>
<td>706 1449</td>
<td>726 736 746</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Cover crops [include grasses, legumes, forbs, or other herbaceous plants for seasonal cover and conservation]. . . . . .</td>
<td>707 617</td>
<td>727 737 747</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Structural practices to conserve soil? [include grass waterways, terraces, grade stabilization, contour buffer strips, etc.]. . . . . .</td>
<td>708 618</td>
<td>728 738 748</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Nitrogen application practices? [include split applications (at least 50% after crop emergence), applying no more than 30 days prior to planting, precision application, or using controlled release fertilizer]. . . . . .</td>
<td>709 619</td>
<td>729 739 749</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. Conservation plan specifying practices to reduce soil erosion?. . . . . .</td>
<td>702 612</td>
<td>722 732 742</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. Nutrient management plan specifying practices for fertilizer/manure application?. . . . . . .</td>
<td>703 613</td>
<td>723 733 743</td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. Pest management plan to implement Integrated Pest Management (IPM) to control weeds, insects, or disease?. . . . . . .</td>
<td>704 614</td>
<td>724 734 744</td>
<td></td>
<td></td>
</tr>
<tr>
<td>h. Irrigation water management plan specifying irrigation practices?. . . . . .</td>
<td>705 615</td>
<td>725 735 745</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
23. Is this field included in an existing conservation program contract through any of the following programs for which you or the landlord have received (or expect to receive) cost sharing payments, stewardship payments, or incentive payments?

<table>
<thead>
<tr>
<th>CODE</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2236</td>
<td>Environmental Quality Incentive Program (EQIP)</td>
</tr>
<tr>
<td>2240</td>
<td>Conservation Security or Conservation Stewardship Programs (CSP)</td>
</tr>
<tr>
<td>2244</td>
<td>Conservation Reserve Program (CRP)</td>
</tr>
<tr>
<td>2248</td>
<td>Other Federal, State, Local or non-government source</td>
</tr>
</tbody>
</table>

24. During the last four years, did you apply for conservation funding, through any Federal, State, or local program, for this field?

<table>
<thead>
<tr>
<th>CODE</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2357</td>
<td>YES = 1</td>
</tr>
</tbody>
</table>

[If item 24=1, go to Item 26--]

25. If you did not apply for conservation program funding for this field in the past four years, what were your reasons?

<table>
<thead>
<tr>
<th></th>
<th>Don't Know</th>
<th>Not a Reason</th>
<th>Minor Reason</th>
<th>Major Reason</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>[ ] 1</td>
<td>[ ] 2</td>
<td>[ ] 3</td>
<td>[ ] 4</td>
<td>2358</td>
</tr>
<tr>
<td>b</td>
<td>[ ] 1</td>
<td>[ ] 2</td>
<td>[ ] 3</td>
<td>[ ] 4</td>
<td>2359</td>
</tr>
<tr>
<td>c</td>
<td>[ ] 1</td>
<td>[ ] 2</td>
<td>[ ] 3</td>
<td>[ ] 4</td>
<td>2360</td>
</tr>
<tr>
<td>d</td>
<td>[ ] 1</td>
<td>[ ] 2</td>
<td>[ ] 3</td>
<td>[ ] 4</td>
<td>2361</td>
</tr>
<tr>
<td>e</td>
<td>[ ] 1</td>
<td>[ ] 2</td>
<td>[ ] 3</td>
<td>[ ] 4</td>
<td>2362</td>
</tr>
<tr>
<td>f</td>
<td>[ ] 1</td>
<td>[ ] 2</td>
<td>[ ] 3</td>
<td>[ ] 4</td>
<td>2363</td>
</tr>
<tr>
<td>g</td>
<td>[ ] 1</td>
<td>[ ] 2</td>
<td>[ ] 3</td>
<td>[ ] 4</td>
<td>2365</td>
</tr>
</tbody>
</table>

26. During the past four years, was this field included in an application that was rejected or has not yet been funded?

<table>
<thead>
<tr>
<th>CODE</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2368</td>
<td>YES = 1</td>
</tr>
</tbody>
</table>

27. Has the Natural Resource Conservation Service (NRCS) classified any part of this field as “Highly Erodible”? (Cropland identified as highly erodible is subject to highly erodible land conservation (HELC) 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.

<table>
<thead>
<tr>
<th>CODE</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1404</td>
<td>YES = 1</td>
</tr>
<tr>
<td>1405</td>
<td>YES = 1</td>
</tr>
</tbody>
</table>

28. Have you been notified by NRCS that this field contains a wetland?
29. **What is the slope of this 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**

30. **What is the primary soil type of this field?**

   1. Loam
   2. Clay
   3. Sandy
   4. Mixed

   **CODE**

31. **Did the land use practices for this field include subsurface drainage?**

   YES = 1

   [If YES, ask--]

   a. In what year was the subsurface drainage installed?

   **YEAR**

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

   **INCHES**

   c. What is the diameter of your tiles?

   **INCHES**

   d. On average, how many hours does it take your field to return to normal soil moisture levels following a heavy storm?

   **HOURS**

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

   YES = 1

   **CODE**

32. **Was the wheat in this field covered by a crop hail insurance policy?**

   YES = 1

   [If YES, ask--]

   a. What was the dollar amount of coverage per acre for the hail insurance policy covering this field?

   **DOLLARS & CENTS PER ACRE**

   b. What was the percent deductible for the hail insurance policy covering this field?

   *Record no deductible as 0%.*

   **PERCENT**

   c. What premium cost per acre did you pay for the hail insurance policy covering this field?

   **DOLLARS & CENTS PER ACRE**
33. **Was the wheat in this field covered by Federal Crop Insurance in 2017?**

☐ **YES** – [Enter code 1 and continue.]  
☐ **NO** – [Go to Section C.]

**CODE**

1385

---

**a. Which coverage did you obtain?...**

<table>
<thead>
<tr>
<th>CODE</th>
<th>Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Federal CAT (Basic catastrophic insurance)</td>
</tr>
<tr>
<td>2</td>
<td>Yield based (Individual)</td>
</tr>
<tr>
<td>3</td>
<td>Yield plus SCO (Supplemental Coverage Option)</td>
</tr>
<tr>
<td>4</td>
<td>Revenue based (Individual)</td>
</tr>
<tr>
<td>5</td>
<td>Revenue plus SCO (Supplemental Coverage Option)</td>
</tr>
<tr>
<td>6</td>
<td>Other Federal Crop insurance</td>
</tr>
</tbody>
</table>

**CODE**

1386

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**b. [If item 33a = 2 or 3, ask--]**

(i) What yield level did you select for your buy-up coverage for this field?  

(ii) What price level did you select for your buy-up coverage for this field?

**PERCENT**

1387  
1388

---

**c. [If item 33a = 4 or 5, ask--]**

What was the level of revenue coverage you obtained for this field?

**PERCENT**

1389
1. Were commercial nutrients or fertilizers applied to this field for the 2017 wheat crop? (Include those from operators, landlords, and contractors). YES = 1

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

2. How many commercial nutrient or fertilizer applications were made to this field for the 2017 crop? (Include applications made by airplanes and custom applicators). 

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

**CHECKLIST**

- **INCLUDE**
  - Custom applied nutrients or fertilizers
  - Nutrients or fertilizers applied in the fall of 2016 and those applied earlier if this field was fallow in 2016
  - Commercially prepared manure or compost

- **EXCLUDE**
  - Micronutrients
  - Unprocessed manure
  - Nutrients or fertilizers applied to previous crops in this field
  - Lime and gypsum/landplaster

**APPLICATION CODES for COLUMN 6**

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

<table>
<thead>
<tr>
<th>LINE</th>
<th>MATERIALS USED</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[Enter percentage analysis or actual pounds of plant nutrients applied per acre.]</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>[Show Common Nutrients or Fertilizers in Respondent Booklet.]</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>N Nitrogen</th>
<th>P₂O₅ Phosphate</th>
<th>K₂O Potash</th>
<th>S Sulfur</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
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<td>36</td>
<td>37</td>
<td>38</td>
<td>39</td>
</tr>
</tbody>
</table>

**ACRES**
4. Were any nutrients or fertilizers applied by custom applicators?
   ☐ YES - [Continue]        ☐ NO - [Go to item 5]
   a. Are you able to report the cost of nutrient or fertilizer materials and custom application separately?
      ☐ YES - [Continue]        ☐ NO - [Go to item 5]
   b. Excluding the cost of the nutrient or fertilizer materials, how much was spent for custom application of nutrients or fertilizers on this field? (Include operator, landlord, and contractor costs. Include costs for sulfur and micronutrients. Exclude custom application of lime, gypsum, purchased manure and purchased compost.) [If material and application costs can’t be separated, exclude them here and record the total in item 5].

5. What was the TOTAL cost of all nutrient or fertilizer products applied to this field? (Include operator, landlord, and contractor costs, as well as the costs for sulfur and micronutrients. Include materials applied to this field if it was fallow in 2016. Exclude lime, gypsum, purchased manure and purchased compost.) [If material and application costs can be separated, include the cost of materials ONLY; otherwise, include both the material and application costs].

6. Was gypsum applied to this field for the 2017 wheat crop? YES = 1

7. Was a soil test for Soil Organic Matter performed on this wheat field at some point in the last 10 years? YES = 1
   [If item 7 = 1, ask--]  
   a. What was the percentage of Soil Organic Matter on the field for the most recent test?  
   b. How many times have you tested this field for Soil Organic Matter in the last ten years?  
   [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

8. Was a soil or plant tissue test performed on this wheat field in 2016 or 2017 for the 2017 crop?  
   ☐ YES [Continue.]        ☐ NO [Go to item 13.]

9. Was a soil test for phosphorus performed on this wheat field in 2016 or 2017 for the 2017 crop? YES = 1
   [If item 9 = 1, ask--]
   a. How many pounds of phosphorus (per acre) were recommended (by the phosphorus test)?
10. **Was a soil test for nitrogen performed on this wheat field in 2016 or 2017 for the 2017 crop?**

   [If item10 = 1, ask---]

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

11. **Was a plant tissue test or leaf analysis for nutrient deficiency performed on this field in 2016 or 2017 for the 2017 crop?**

12. **How much was spent for these soil and plant tissue tests on this field in 2016 or 2017 for the 2017 crop?** [Include landlord and contractor costs.]

   [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?

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

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

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

   a. Results of a soil or plant tissue test?

   b. Crop consultant recommendation?

   c. Fertilizer dealer recommendation?

   d. Extension Service recommendation?

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

   f. Contractor recommendation?

   g. Routine practice (operator’s own determination based on past experience, yield goal, etc.)?

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

   How much nitrogen inhibitor did you mix with the nitrogen applied to this field?
14. Is lime ever applied to this field?  
   YES = 1  
   [If no lime applied, go to item 15; else continue.]
   a. On average, how many years are there between applications of lime to this field?  
   b. How many tons of lime were applied per acre the last time it was applied to this field?  
   c. Was lime applied to this field in 2016 or 2017 for the 2017 crop?  
      YES = 1  
      [If field is rented (Section B, item 2 = 2, 3, 4, or 5), ask---]
   d. Considering the last time it was applied, what percent of the total cost of lime and its application was paid by the landlord(s)?

15. Was non-commercial manure (from own farm, from a neighbor’s farm, etc.) or other organic material (excluding compost) applied to this field for the 2017 wheat crop? (Exclude commercially prepared manure.)
   □ YES - [Enter code 1 and continue]  
   □ NO - [Go to item 17].
   a. How many acres in this field was manure applied to?
   b. What was the amount of manure applied to this field?
      1 Tons  2 Gallons  3 Bushels
      CODE 0248  UNITS PER ACRE 0249 AND TOTAL UNITS 0250
   c. Of the total manure applied to this field for the 2017 crop, what was the percent of manure applied---
      (i) in the fall before planting?  
      (ii) in the spring before planting?  
      (iii) after planting?  
      1 Lagoon liquid?  2 Slurry liquid?  3 Semi-dry or dry?
      CODE 0257
   d. Was the manure---.  
      1 Broadcast or sprayed without incorporation?  
      2 Broadcast or sprayed with incorporation?  
      3 Injected/knifed in?
      CODE 0258
   e. Was the manure---.  
      1 Lagoon liquid?  2 Slurry liquid?  3 Semi-dry or dry?
      CODE 0257
f. Was the major source of the manure from—. . . .

1. Beef cattle?
2. Dairy cattle?
3. Hogs?
4. Sheep?
5. Poultry?
6. Equine?
7. Biosolids (municipal sludge)?
8. Food waste?
9. Other? [Specify: ____________________ ]

CODE

0259

---


g. Was the manure—. . . . .

1. Produced on this operation?
2. Purchased?
3. Obtained at no cost off this operation?
4. Obtained with compensation? (Operator received payment for accepting the manure.)

CODE

0260

---

[If item 15g = 2, ask—]

DOLLARS & CENTS PER ACRE OR TOTAL DOLLARS

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

CODE

0284

0285

---

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

[If YES, ask—]

CODE

0286

---

DOLLARS & CENTS PER ACRE OR TOTAL DOLLARS

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

CODE

0287

0288

---

h. Of the manure applied to this field, was any tested for nutrient content prior to application? _____________________  YES = 1

CODE

0261

---

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

[If item 16 is YES, ask—]

CODE

0264

---

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

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

CODE

0265

0266

(ii) Phosphorus requirement of the crop? _____________________  YES = 1
17. Was non-commercial compost applied to this field for the 2017 wheat crop?

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

a. How many acres in this field was the compost applied to?

b. What was the amount of compost applied to this field?

<table>
<thead>
<tr>
<th>CODE</th>
<th>UNITS PER ACRE</th>
<th>OR</th>
<th>TOTAL UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>0269</td>
<td></td>
<td>AND</td>
<td></td>
</tr>
<tr>
<td>0270</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>0271</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Tons</td>
<td></td>
</tr>
<tr>
<td>2 Cubic Yards</td>
<td></td>
</tr>
</tbody>
</table>

1. Beef cattle?
2. Dairy cattle?
3. Hogs?
4. Sheep?
5. Poultry?
6. Equine?
7. Biosolids (municipal sludge)?
8. Food waste?
10. Other? [Specify: ____________________ ]

D. Was the compost---

<table>
<thead>
<tr>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>0272</td>
</tr>
</tbody>
</table>

[If item 17d = 2, ask---]

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

<table>
<thead>
<tr>
<th>DOLLARS &amp; CENTS</th>
<th>OR</th>
<th>TOTAL DOLLARS</th>
</tr>
</thead>
<tbody>
<tr>
<td>0273</td>
<td></td>
<td>0274</td>
</tr>
</tbody>
</table>

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

[If YES, ask---]

(a) What was the total cost paid to have compost custom applied to this field? (Include operator, landlord, and contractor costs.) [Do not report custom application cost if it was included with the compost cost].

<table>
<thead>
<tr>
<th>DOLLARS &amp; CENTS</th>
<th>OR</th>
<th>TOTAL DOLLARS</th>
</tr>
</thead>
<tbody>
<tr>
<td>0276</td>
<td></td>
<td>0277</td>
</tr>
</tbody>
</table>

(iii) What is the distance in miles between the compost storage/production location and this field?

<table>
<thead>
<tr>
<th>MILES</th>
</tr>
</thead>
<tbody>
<tr>
<td>0291</td>
</tr>
</tbody>
</table>
BIOCONTROL or PESTICIDE APPLICATIONS

Now I have some questions about all the biocontrols or pesticides used on this field for the 2017 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 2017 crop?

<table>
<thead>
<tr>
<th>CODE</th>
<th>EDIT TABLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>0302</td>
</tr>
<tr>
<td>0000</td>
<td></td>
</tr>
</tbody>
</table>

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

   Include defoliants, fungicides, herbicides, insecticides, and other pesticides.

   Exclude nutrients or fertilizers reported earlier and seed treatments.

---

<table>
<thead>
<tr>
<th>CHEMICAL PRODUCT NAME</th>
<th>LINE</th>
<th>2</th>
<th>What products were applied to this field?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>3</td>
<td>Was this product bought in liquid or dry form?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4</td>
<td>Was this part of a tank mix?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5</td>
<td>When was this applied?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6</td>
<td>How much was applied per acre per application?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7</td>
<td>What was the total amount applied per application in this field?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8</td>
<td>[Enter unit code.]</td>
</tr>
<tr>
<td></td>
<td>01</td>
<td>63</td>
<td>64</td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
<td>14</td>
<td>63</td>
<td>64</td>
</tr>
</tbody>
</table>

2. [For biocontrols or pesticides not listed in Respondent Booklet, specify---]
## APPLICATIONS CODES for column 9

<table>
<thead>
<tr>
<th>LINE</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>76</td>
<td>77</td>
<td>___</td>
<td>79</td>
</tr>
<tr>
<td>02</td>
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<td>79</td>
</tr>
</tbody>
</table>

**[Enter code from above.]**

<table>
<thead>
<tr>
<th>How was this product applied?</th>
<th>How many acres in this field were treated with this product?</th>
<th>How many times was it applied?</th>
<th>Were these applications made by---</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Broadcast, ground without incorporation</td>
<td>6 Chisel/injected or knifed in</td>
<td>7 Banded in or over row</td>
<td>8 Foliar or directed spray</td>
</tr>
<tr>
<td>2 Broadcast, ground with incorporation</td>
<td></td>
<td></td>
<td>9 Spot treatments</td>
</tr>
<tr>
<td>3 Broadcast, by aircraft</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 In seed furrow</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 In irrigation water</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**[ENUMERATOR NOTE: ]**

Use these columns only if TOTAL COST (item 4 on next page) cannot be provided.

---

## OPTIONAL ITEM 4

What was the cost per unit of the product?

**UNIT CODE**
- 1 Pounds
- 12 Gallons
- 28 Dry Ounces
- 13 Quarts
- 30 Grams
- 14 Pints

**DOLLARS & CENTS PER UNIT**

<table>
<thead>
<tr>
<th>LINE</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
</tr>
</thead>
<tbody>
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<td>81</td>
<td>81</td>
<td>81</td>
<td>81</td>
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<td>82</td>
<td>82</td>
<td>82</td>
<td>82</td>
</tr>
</tbody>
</table>
3. **Were any chemicals, biocontrols, or pesticides applied by custom applicators?**

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

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

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

   b. Excluding the cost of the chemical, biocontrol, and pesticide products, how much was spent for custom application of such materials on this field? **(Include operator, landlord, and contractor costs.)**

4. **What was the TOTAL COST of all chemical, biocontrol, or pesticide products applied to this field?** **(Include operator, landlord, and contractor costs, defoliants, herbicides, insecticides, fungicides, surfactants, wetting agents, growth regulators, and materials applied before planting and during 2016 fallow period. Exclude seed treatments.)**

   a. How much was spent for **herbicide** products applied to this field? **(Include operator, landlord, and contractor costs.)**

   b. How much was spent for **insecticide** products applied to this field? **(Include operator, landlord, and contractor costs.)**

---

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

**NOTE 2:** If custom applied and the costs for materials can be separated from application costs, include the cost for materials only. Otherwise, report both the material and application costs in item 4.
Now I have some questions about your pest management decisions and practices used on this field for the 2017 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]  

1. **Was weather data used to assist in determining either the need or when to make pesticide applications?**  
   - **YES** = 1  
   - **0800**

2. **Were any biological pesticides such as Bt \((\text{Bacillus thuringiensis})\), insect growth regulators, neem, or other natural/biological based products sprayed or applied to manage pests in this field?**  
   - **YES** = 1  
   - **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  
   - **0802**

**ENUMERATOR ACTION:** Were HERBICIDE (pesticide product codes 40000-49999) applications reported in Section D, item 1, column 2?

- **YES** – [Continue]  
- **NO** – [Go to item 6]  

4. **Were herbicides applied to this wheat field BEFORE weeds emerged?**  
   - **YES** = 1  
   - **0803**

5. **Were herbicides applied to this wheat field AFTER weeds emerged?**  
   - **YES** = 1  
   - **0805**

6. **Were records kept for this field to track the activity or numbers of weeds, insects or diseases?**  
   - **YES** = 1  
   - **0823**

7. **Did you use published information on infestation thresholds to determine when to take measures to manage pests in this field?**  
   - **YES** = 1  
   - **0824**

8. **In 2017, how was this 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** This field was not scouted. [Enter code 3 and go to item 14.]

**ENUMERATOR ACTION:** Was an established scouting process \((\text{systematic sampling, recording counts, etc.})\) used or were insect traps used in this field?

- **YES** = 1  
- **0809**

10. **Was scouting for pests done in this field due to---**

    a. **a pest advisory warning?**  
    - **YES** = 1  
    - **0810**

    b. **a pest development model?**  
    - **YES** = 1  
    - **0811**
11. Was this wheat field scouted for--

<table>
<thead>
<tr>
<th></th>
<th>YES = 1</th>
<th>CODE</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Weeds?</td>
<td>0812</td>
<td>0813</td>
<td>0814</td>
</tr>
<tr>
<td>b. Insects or mites?</td>
<td>0815</td>
<td>0816</td>
<td>0817</td>
</tr>
<tr>
<td>c. Diseases?</td>
<td>0818</td>
<td>0819</td>
<td>0820</td>
</tr>
</tbody>
</table>

[If column 1 = 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

12. How much was charged for the scouting services for this field?

[Include operator, landlord and contractor cost.]

<table>
<thead>
<tr>
<th></th>
<th>DOLLARS &amp; CENTS PER ACRE</th>
<th>OR</th>
<th>TOTAL DOLLARS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0821</td>
<td>__</td>
<td>0822</td>
</tr>
</tbody>
</table>

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

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

<table>
<thead>
<tr>
<th></th>
<th>YES = 1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0825</td>
</tr>
</tbody>
</table>
14. Did you do any of the following other type(s) of pest management practices for the specific purpose of managing or reducing the spread of pests in this field? [Enter code “1” for all that apply.]
   a. Use the services of a diagnostic laboratory for pest identification or soil plant tissue pest analysis for this field?  
      \[ \text{YES} = 1 \]  
      0841
   b. Plow down crop residue (using conventional tillage)?  
      \[ \text{YES} = 1 \]  
      0842
   c. Remove/burn down crop residue?  
      \[ \text{YES} = 1 \]  
      0843
   d. Rotate crops in this field during the past three years?  
      \[ \text{YES} = 1 \]  
      0844
   e. Maintain ground covers, mulches, or other physical barriers?  
      \[ \text{YES} = 1 \]  
      0845
   f. Choose crop variety because of specific resistance to a certain pest?  
      \[ \text{YES} = 1 \]  
      0846
   g. Use no-till or minimum till?  
      \[ \text{YES} = 1 \]  
      0847
   h. Plan planting locations to avoid cross infestation of pests?  
      \[ \text{YES} = 1 \]  
      0848
   i. Adjust planting or harvesting dates?  
      \[ \text{YES} = 1 \]  
      0849
   j. Chop, spray, mow, plow, or burn field edges, lanes, ditches, roadways, or fence lines?  
      \[ \text{YES} = 1 \]  
      0850
   k. Clean equipment and field implements after completing field work to reduce the spread of pests?  
      \[ \text{YES} = 1 \]  
      0851
   l. Adjust row spacing, plant density or row directions?  
      \[ \text{YES} = 1 \]  
      0852
   m. Have the seed treated for insect or disease control after you purchased the seed for this field?  
      \[ \text{YES} = 1 \]  
      0854
   n. Maintain a beneficial insect or vertebrate habitat?  
      \[ \text{YES} = 1 \]  
      0855
   o. Maintain buffer strips or border rows to isolate wheat from non-organic crops or land, or did you take a buffer harvest?  
      \[ \text{YES} = 1 \]  
      0856
   p. Use a flamer to kill weeds?  
      \[ \text{YES} = 1 \]  
      0857
   q. Plant earlier or later to avoid weeds?  
      \[ \text{YES} = 1 \]  
      0858

15. Were any beneficial organisms (insects, nematodes, fungi) applied or released in this field to manage pests?  
\[ \text{YES} = 1 \]  
0853

16. Were floral lures, attractants, repellants, pheromone traps or other biological pest controls used on this field?  
\[ \text{YES} = 1 \]  
0858

[If item 15 or item 16 is YES, ask--]
   a. What were the TOTAL materials and application costs for all biological pest controls for this field?
      \text{Include} operator, landlord, and contractor costs. \text{Include} cost for beneficial organisms (insects, nematodes, and fungi). \text{Exclude} biological pesticides previously reported.  
      \[ \text{DOLLARS & CENTS PER ACRE OR TOTAL DOLLARS} \]  
      0859 0860
17. **Was a trap crop (excluding fallow) grown to help manage insects in this field?**  
   YES = 1

18. **Was this field left in fallow in 2016 to help manage insects on this field?**  
   YES = 1

19. **Were water management practices such as irrigation scheduling, controlled drainage, or treatment of retention water used on this field to manage pests or toxin-producing fungi and bacteria?**  
   YES = 1

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

   *If Item 20 is YES, continue. Else go to Item 21.*
   a. **Did you change timing of, reduce application rate of, or eliminate a pesticide application?**  
      YES = 1
   b. **Did you change to an alternative pesticide, biocontrol, or non-pesticide practice?**  
      YES = 1

21. **Did pests (weeds, insects, pathogens, animals) cause any yield loss on this field in spite of your pest control efforts?**  
   YES = 1

   *If YES, ask--*
   a. **How much yield loss do you think was caused by all pests on this field in spite of the management practices you used to reduce those losses?**

<table>
<thead>
<tr>
<th>CODE</th>
<th>UNITS PER ACRE</th>
<th>TOTAL UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>0828</td>
<td>0829 AND OR</td>
<td>0830</td>
</tr>
</tbody>
</table>

Completion Code for Pest Management Data

1 – Incomplete/Refusal 0500
1. Including custom operations, I need to list field work performed by machines on this field for the 2017 wheat 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 2016, list operations starting with fall 2015];
- 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.

**CHECK LIST**

**CODES FOR COLUMN 5**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>You (the Operator)</td>
</tr>
<tr>
<td>2</td>
<td>Partner</td>
</tr>
<tr>
<td>3</td>
<td>Unpaid Worker</td>
</tr>
<tr>
<td>4</td>
<td>Paid Part-time or Seasonal Worker</td>
</tr>
<tr>
<td>5</td>
<td>Paid Full-time Worker</td>
</tr>
<tr>
<td>6</td>
<td>Custom Applicator</td>
</tr>
</tbody>
</table>

**OFFICE USE LINES IN TABLE**

0499

**[IF CUSTOM (column 5 = code 6), skip columns 6-11]**

<table>
<thead>
<tr>
<th>No.</th>
<th>CODE</th>
<th>CODE</th>
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<td>___</td>
<td>93</td>
<td>94</td>
<td>95</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**OFFICE USE**

0400

**Include** all field work using machines for---

- Land Forming/Levee Building
- Tillage
- Preparing for Irrigation
- Planting
- Fertilizer & Pesticide applications
- Harvesting & Hauling (grain & straw) to storage or first point of sale

**Exclude**

- Lime & Gypsum/landplaster applications
- Compost & Non-Commercial Manure applications

---

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

---

\[ \text{Total Hours} = (\text{Total Hours} + \text{Total Hours}) \times \text{Number of Trucks} \]
2. **Now I need some additional information about your labor.**
   Please report the paid and unpaid labor that worked on this field to produce the 2017 wheat crop. *(Exclude labor that was reported for field work performed by machines.)*

<table>
<thead>
<tr>
<th>TYPE OF WORKERS</th>
<th>How many hours did (type of worker) spend on this field---</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>scouting for</td>
</tr>
<tr>
<td>You (the operator)</td>
<td>1101</td>
</tr>
<tr>
<td>Partner(s)</td>
<td>1104</td>
</tr>
<tr>
<td>Unpaid workers</td>
<td>1107</td>
</tr>
<tr>
<td>Paid part-time or seasonal workers <em>(Exclude custom and contract labor)</em></td>
<td>1110</td>
</tr>
<tr>
<td>Paid full-time workers <em>(Exclude custom and contract labor)</em></td>
<td>1113</td>
</tr>
</tbody>
</table>

3. **What was the average hourly wage rate paid to part-time or seasonal hired workers on this field?** *(Exclude custom and contract workers, payroll taxes and benefits.)*

4. **What was the average hourly wage rate paid to full-time hired workers on this field?** *(Exclude custom and contract workers, payroll taxes and benefits.)*

5. **Was any contract labor used on this field?**
   *YES = 1*
   [If YES, ask ---]
   a. What was the average cost per acre for this contract labor?
   *(Include operator, landlord, and contractor costs.)*

6. **What percent of the total number of unpaid hours worked on this 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.)*
7. Now I need some information on how much was spent (or will be spent) for custom services used on this field for the 2017 wheat crop.

<table>
<thead>
<tr>
<th>CUSTOM SERVICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Which of the following services were performed for the 2017 wheat crop on this field?</td>
</tr>
</tbody>
</table>

☑ [Check box for each service performed; refer to item 1 if necessary.]

<table>
<thead>
<tr>
<th>Service</th>
<th>Per Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Custom land preparation and/or shaping</td>
<td>1121</td>
</tr>
<tr>
<td>b. Custom cultivating</td>
<td>1122</td>
</tr>
<tr>
<td>c. Custom planting and/or reseeding</td>
<td>1123</td>
</tr>
<tr>
<td>d. Custom harvesting</td>
<td>1124</td>
</tr>
<tr>
<td>e. Custom hauling to storage or point of first sale</td>
<td>1126</td>
</tr>
<tr>
<td>f. Custom harvesting and hauling from field to storage or point of first sale</td>
<td>1127</td>
</tr>
<tr>
<td>g. Custom raking, baling, and hauling the straw from this field</td>
<td>1128</td>
</tr>
</tbody>
</table>

2. Including operator, landlord, and contractor costs, how much was spent for [column 1] on this field for the 2017 wheat crop?

<table>
<thead>
<tr>
<th>DOLLARS &amp; CENTS PER ACRE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1121</td>
</tr>
<tr>
<td>1122</td>
</tr>
<tr>
<td>1123</td>
</tr>
<tr>
<td>1124</td>
</tr>
<tr>
<td>1126</td>
</tr>
<tr>
<td>1127</td>
</tr>
<tr>
<td>1128</td>
</tr>
</tbody>
</table>

8. Was the wheat harvested and hauled from this field dried (or will be dried) before it was sold or stored? YES = 1

9. Did you hire any technical or consultant services to make recommendations (such as for nutrient, pest control, irrigation, or precision farming) for this field?

   ☐ YES – [Continue]    ☐ NO – [Go to item 11]

Which of the following services did you obtain?

<table>
<thead>
<tr>
<th>Service</th>
<th>YES = 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Nutrient recommendations/management service</td>
<td>1129</td>
</tr>
<tr>
<td>b. Soil or tissue sample collection</td>
<td>1130</td>
</tr>
<tr>
<td>c. Pest control recommendations/management service</td>
<td>1131</td>
</tr>
<tr>
<td>d. Pest scouting</td>
<td>1132</td>
</tr>
<tr>
<td>e. Irrigation management service (i.e. irrigation scheduling)</td>
<td>1133</td>
</tr>
<tr>
<td>f. Yield map or remote sensing map development/interpretation</td>
<td>1134</td>
</tr>
<tr>
<td>g. Other custom or technical service [Specify: _______________________]</td>
<td>1135</td>
</tr>
</tbody>
</table>
10. If YES to any of these services, what was the cost for all of these services? *(Include operator, landlord, and contractor costs. Exclude cost of soil/tissue tests or scouting cost reported earlier. Do not report costs for any of these services if they were previously reported as part of the costs of materials and/or application.)*  

<table>
<thead>
<tr>
<th>DOLLARS &amp; CENTS</th>
<th>PER ACRE</th>
<th>OR</th>
<th>TOTAL DOLLARS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1136</td>
<td></td>
<td>1137</td>
<td></td>
</tr>
</tbody>
</table>

11. Were there *(or will there be)* any data collection tools *(yield monitors, GPS mapping, etc.)* used during field operations on this wheat field?  

[If YES, continue; else go to Item 12]  

Please report the data collection technologies you used on this field to produce this crop. Also indicate if the data is collected with Global Positioning System (GPS) coordinates and if the data will be used to create a map.  

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Collection Tool</td>
<td>Tool Used</td>
<td>Collected with GPS</td>
<td>Data was/will be used to create a map</td>
</tr>
<tr>
<td>a. Yield monitor</td>
<td>2461</td>
<td>2462</td>
<td>2463</td>
</tr>
<tr>
<td>b. Soil tests on core sample <em>(performed on-farm or sent out to a laboratory).</em></td>
<td>2464</td>
<td>2465</td>
<td>2466</td>
</tr>
<tr>
<td>c. Soil sensor tests</td>
<td>2467</td>
<td>2468</td>
<td>2469</td>
</tr>
<tr>
<td>d. Hard-wired crop condition sensors</td>
<td>2470</td>
<td>2471</td>
<td>2472</td>
</tr>
<tr>
<td>e. Wireless crop condition sensors</td>
<td>2473</td>
<td>2474</td>
<td>2475</td>
</tr>
<tr>
<td>f. Drones, aircraft or satellites</td>
<td>2476</td>
<td>2477</td>
<td>2478</td>
</tr>
<tr>
<td>g. Custom service applications <em>(data from completed work on your field).</em></td>
<td>2479</td>
<td>2480</td>
<td>2481</td>
</tr>
<tr>
<td>h. Public data downloaded from online sources</td>
<td>2482</td>
<td>2483</td>
<td>2484</td>
</tr>
</tbody>
</table>

12. Please report how your farm data will be stored and accessed. *[Enter code “1” for all that apply.]*  

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

   (i) Paper hard copy?  

   (ii) Personal computer?  

   (iii) Mobile device?  

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

   [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 this field with any third party?  

d. Did you share any of the data collected from this field with a third party through an agricultural technology provider website?
13. Did you obtain crop management recommendations (data interpretation) based on that data you collected from-- [Enter code “1” for all that apply.]

- a. Input dealers? .................................................................................................................................................. YES = 1 2491
- b. Integrated input providers? .................................................................................................................................. YES = 1 2492
- c. Custom service providers? .................................................................................................................................... YES = 1 2493
- d. USDA/University extension services? .................................................................................................................. YES = 1 2494

14. Did you use the yield monitor information to--- [Enter code “1” for all that apply.]

- (i) monitor crop moisture content to determine need for crop drying? ........................................................................ YES = 1 1140
- (ii) add/improve tile drainage? ...................................................................................................................................... YES = 1 1141
- (iii) negotiate new crop leases? ....................................................................................................................................... YES = 1 1144
- (iv) other uses [specify:] _________________________________________ ................................................................ YES = 1 1147

15. Was any of the following GPS-enabled (Global Positioning System) equipment used to produce crops on this field? [Enter code “1” for all that apply.]

- a. Guidance auto-steering (excluding Light Bar)? ........................................................................................................ YES = 1 2148
- b. Light Bar? ................................................................................................................................................................. YES = 1 2149
- c. Variable rate application for seeding? .......................................................................................................................... YES = 1 1158
- d. Variable rate application for fertilizer/lime? .................................................................................................................... YES = 1 1152
- e. Variable rate application for pesticide applications? ...................................................................................................... YES = 1 1159
- f. “Smart” technologies like Google Glass or other heads-up cab control displays? ............................................................. YES = 1 2150
- g. Other GPS-enabled equipment? ..................................................................................................................................... YES = 1 1151
- h. Any farming-specific apps for phones and tablets? .......................................................................................................... YES = 1 1267
1. How many acres in this field were irrigated for the 2017 wheat crop? [If none, go to Conclusion].

<table>
<thead>
<tr>
<th>SYSTEM 1</th>
<th>SYSTEM 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1161</td>
<td>1175</td>
</tr>
</tbody>
</table>

2. Now, I have some questions about irrigation systems and water used on this field for the 2017 wheat crop.

   - **a.** What type(s) of irrigation system(s) was (or were) used to irrigate this field? [Show System Type Codes in the Respondent Booklet. Enter System Type Code for up to two systems covering the most field acres.]
     - **UNIT**
       - **SYSTEM 1**
         - 1161
       - **SYSTEM 2**
         - 1175
       - **INCHES PER ACRE OR TOTAL ACRE-FEET**
         - 1162
         - 1176
     - **CODE**
       - 1
       - 2
       - 3
       - 4
       - 5
       - 6
       - 99

   - **b.** What was the total quantity of water applied to this 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**
       - 1163
       - 1177

   - **c.** What percent of the water used to irrigate this field through this system came from surface water sources?
     - **PERCENT**
       - 1166
       - 1180

   - **d.** What was the number of times this field was irrigated during the wheat growing season using this system? (Include any pre-plant irrigation.)
     - **NUMBER OF IRRIGATIONS**
       - 1167
       - 1181

   - **e.** Was the pump type---
     - **CODE**
       - 1
       - 2
       - 3
       - 4
       - 5
       - 99

   - **f.** What was the average pumping rate?
     - **GALLONS PER MINUTE**
       - 1169
       - 1183

   - **g.** [If item 2a = code 1-9 (PRESSURE SYSTEM), ask---]
     - What was the system operating pressure?
     - **POUNDS PER SQUARE INCH**
       - 1170
       - 1184

   - **h.** What was the primary motor type used to pump the water?
     - **CODE**
       - 1
       - 2
       - 3
       - 4
       - 5
       - 6

   - **i.** What was the average motor size?
     - **HORSEPOWER**
       - 1172
       - 1186

   - **j.** [If NO PUMP was used (item 2e = 99), ask---]
     - What was the average flow rate?
     - **GALLONS PER MINUTE**
       - 1173
       - 1187

   - **k.** How many other acres on this operation were irrigated using this field’s irrigation system during the 2017 growing season? (Exclude this field.)
     - **ACRES**

3. What was the cost of the fuel or electricity used to irrigate this field? (Include operator, landlord, and contractor costs.)
4. Was any water purchased to irrigate this field? (Include landlord’s share and purchases from all sources.)

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

   a. What was the total cost for the water purchased for this field during the 2017 growing season? (Include operator, landlord, and contractor costs and ditch maintenance costs for this field.)

   [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 this field? 

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

6. What was the total amount spent for poly pipe used on this field during the 2017 growing season? (Include operator, landlord, and contractor costs.)

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

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

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

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

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

   a. How many wells were used to irrigate this field?

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

   c. What was the average pumping depth of these wells during the irrigation season?

   [Pumping depth is the depth to water at the start of the irrigation season, plus an average decline in the water level caused by pumping during the irrigation season.]

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

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

   e. Excluding this field, how many other acres on this operation were irrigated using the same wells during the 2017 growing season?

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

   ☐ YES – [Continue]   ☐ NO – [Go to Conclusion]

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

   b. How many feet of this additional pipe were used to bring water to this field?
LOCATION OF SELECTED FIELD

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

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

Field description .........................................

Field location ........................................... N

   d  d  m  m  s  s

   __ __ __ __ __ __

   W  d  d  d  m  m  s  s

   __ __ __ __ __ __

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

4. We will need additional information to complete this study. We will contact you in February or March 2018 to collect it. I’ll call you then to set up a time that is good for you.

5. To receive the complete results of this survey on the release date, go to www.nass.usda.gov/results/. Would you rather have a brief summary mailed to you at a later date? .................................................. YES = 1

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

   CODE

   9990

   HH MM

   0005

   __ __ __

RECORDS USE

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

   a. [fertilizer data?] ......................................................... YES = 1

   b. [pesticide data?]. ......................................................... YES = 1

   c. [majority of this expense data?] ...................................... YES = 1

SUPPLEMENTS USED

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

   FERTILIZER APPLICATIONS

   NUMBER

   0041

   PESTICIDE APPLICATIONS

   FIELD OPERATIONS

   0042

   0043

Reported by: ________________________________

Telephone: (______) ____________