Corn Production Practices Report for 2018

Agricultural Resource Management Survey

Phase II
Face Page

Verify Name and Address
Make Updates if Needed

AGRICULTURAL RESOURCE MANAGEMENT SURVEY

SURVEY CODE=48-300055501-7BNFRJ STR70 35 103
ARdb mk

(555) 555-5555 (555) 555-0000
Operation Name
Person/Target Name
Address
Anywhere, TX 12345

CORN PRODUCTION PRACTICES REPORT FOR 2018

<table>
<thead>
<tr>
<th>VERSION</th>
<th>POID</th>
<th>TRACT</th>
<th>SUBTRACT</th>
<th>C-TYPE</th>
</tr>
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<tbody>
<tr>
<td>78</td>
<td></td>
<td>01</td>
<td></td>
<td>105</td>
</tr>
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</table>

CONTACT RECORD

<table>
<thead>
<tr>
<th>DATE</th>
<th>TIME</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>
INTRODUCTION:

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

We are collecting information on the practices used to produce corn 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 your 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 to this survey is voluntary. We encourage you to refer to your farm records during the interview.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0555-0218. The time required to complete this information collection is estimated to average 35 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.

BEGINNING TIME [MILITARY] 0004 1 8 3 0

Verify Partner Information
Make Updates if Needed

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

48 300063160 01 01 44 013 022
(555) 555-5555
Partner 1
Anywhere, TX 12345

48 300063160 01 01 44 013 022
(555) 555-5555
Partner 2
Anywhere, TX 12345
Determine if in business for 2018.

Exclude:
- rented out land and
- Landlord only payments

**AGRICULTURAL RESOURCE MANAGEMENT SURVEY (ARMS) – PHASE II SCREENING SUPPLEMENT**

<table>
<thead>
<tr>
<th>VERSION</th>
<th>ID</th>
<th>TRACT</th>
<th>SUBTRACT</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>01</td>
<td>___</td>
</tr>
</tbody>
</table>

1. Does this operation do business under any other name? (such as a farm or ranch name)
   - ☐ NO – [Go to item 2]
   - ☐ YES – [Record other name below and ask---]
     a. Is __________________________ the name that should appear on the label?
       - ☐ NO
       - ☐ YES

2. During 2018, were any crops grown, hay cut or livestock or poultry raised on the total acres operated?
   - ☐ NO – [Continue]
   - ☐ YES – [Go to item 6]

3. During 2018, did this operation sell any agricultural products or receive any CRP or other government agricultural payments? (Exclude any income received as a landlord.)
   - ☐ NO – [Go to item 4]
   - ☐ YES – [Go to item 6]

4. [Complete only if items 2 and 3 are both ‘NO’]
   Is anyone now operating the land you [operation on the questionnaire face page] formerly operated?
   - ☐ YES – Complete name and address information below for new operator
   - ☐ NO – Make notes

<table>
<thead>
<tr>
<th>Name</th>
<th>NOTES:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address</td>
<td></td>
</tr>
<tr>
<td>Phone</td>
<td></td>
</tr>
</tbody>
</table>

5. The selected operation is out-of-business or duplicated, therefore the questionnaire does not need to be completed.

Enter code 9 in cell 0921 below.

Go to the questionnaire and enter code 1 in cell 9901 on the back page, then complete all other administrative boxes on the back page of the questionnaire.
6. Are the day-to-day decisions for this farming/ranching operation made by---

- [ ] one individual? [Enter code 1]
- [ ] a hired manager? [Enter code 8]
- [ ] partners? [Enter number of partners + operator]

[ENUMERATOR NOTE: If OpDom = 99, enter code 1 in cell 0923 on the next page, then go to the questionnaire and begin the interview with Section A; else, continue with the next page.]
7. Do you [target name] make any day-to-day decisions for another farm or ranch?

☐ NO – [Enter code 1 in cell 0923 below, then go to the questionnaire and begin the interview with Section 1.]

☐ YES – [Ask---]

a. How many total operating arrangements (including the sampled operation) do you (target operator) make day-to-day decisions for?.................................

b. [List or verify names associated with each additional operation. Use this page from other supplements for additional operations.]

c. Are the day-to-day decisions for this farming/ranching operation [operation 2] made by---
   ☐ one individual?
   ☐ a hired manager?
   ☐ partners? [List partners below.]

### OPERATION 2:

<table>
<thead>
<tr>
<th>OPERATION NAME (IF ANY)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OPERATOR NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ADDRESS</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>CITY</th>
<th>STATE</th>
<th>ZIP</th>
<th>PHONE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
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### PARTNERS:

<table>
<thead>
<tr>
<th>POID</th>
<th>PARTNER NAME</th>
<th>ADDRESS</th>
</tr>
</thead>
<tbody>
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<td></td>
</tr>
</tbody>
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<thead>
<tr>
<th>CITY</th>
<th>STATE</th>
<th>ZIP</th>
<th>PHONE</th>
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</thead>
<tbody>
<tr>
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<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>POID</th>
<th>PARTNER NAME</th>
<th>ADDRESS</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CITY</th>
<th>STATE</th>
<th>ZIP</th>
<th>PHONE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Every Sample has a screening information sheet showing the results from Phase 1 July 2018.

Use as a guide while collecting information.

Make notes if any major changes to acreage.

NOTE: This target may be involved in multiple operating arrangements. In Screening, the target reported being involved in 2 operating arrangement(s). Take care that the data collected in Phase II represents the specific operation identified by the name shown above. The selected subtract is the parent (OD 85) operation.

INFORMATION FROM SCREENING:

TYPE OF OPERATION REPORTED: PARTNERSHIP WITH 2 PARTNERS
RESPONDENT: OPERATOR OR MANAGER

THIS OPERATION IS SELECTED FOR THE PEANUTS: Peanuts - PPR.
THE SCREENING PHASE DATA ARE FROM COMPLETE RESPONSE.
DATA WERE COLLECTED BY ENUMERATOR: 98999

Total Acres Of Land Operated: 4,480.0
Total Acres Of Crop Land: 3,800.0

Total Acres Of CORN Planted For 2018: 360.0

PLEASE WRITE A NOTE TO EXPLAIN IF DATA REPORTED IN SECTION A (FIELD SELECTION SECTION), ITEM 1 FOR CORN ACRES PLANTED IS LESS THAN 270.0 OR GREATER THAN 450.0.
Section A – Field Selection

• Each field must be randomly selected from all of the operation’s fields.

• Random number sticker is unique to each operator’s form and ensures randomness if used appropriately.

• Beginning with Section B, questions in the questionnaire refer only to the field selected in Section A.
Section A – Field Selection

### CORN FIELD SELECTION

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Number or Description</th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>FM 456</td>
<td>700.0 ac</td>
</tr>
<tr>
<td>2</td>
<td>Sugar Lane</td>
<td>235.5 ac</td>
</tr>
<tr>
<td>3</td>
<td>FM 200</td>
<td>344.5 ac</td>
</tr>
<tr>
<td>4</td>
<td>Kirby Field</td>
<td>1720.0 ac</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>3000.0 ac</td>
</tr>
</tbody>
</table>

**TOTAL PLANTED ACRES:** 3000.0

**TOTAL NUMBER OF FIELDS PLANTED:** 4

1. How many acres of corn did this operation plant for the 2018 crop year?
   
   [If no acres planted, review Screening Survey Information Form, make notes, then go to Conclusion on back page.]
   
   I will follow a simple procedure to make a random selection from the corn fields planted for the 2018 crop.

2. What is the TOTAL number of corn fields that were planted on this operation?
   
   [If only one field, enter "1" and go to item 5.]

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.]
Section A – Field Selection

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. .................................................................

5. The field selected is __________ (field name/number/description). During this interview, the corn questions will be about this selected field. [Be sure the operator can identify the selected field.]
Section A – Field Selection

Item 1: Corn acres planted in selected field
• Enter how many acres of corn were planted

Item 5: Informing Respondent of Field Selection
• Tell the respondent which field is selected, and be certain that both of you can identify that field.

• For the remainder of the interview, the respondent must be able to focus on the selected field, and provide you with information for only that field to be a usable report.

• If respondent can’t provide information for the selected field; try to find out who can and leave a comment.
FIELD SELECTION EXERCISE
Section A - Answers
1. Mr. King has been selected for the 2018 Corn Production Practices & Cost Report. When you interview him, he tells you he planted thirteen fields of corn in 2018. On which corn field will you collect the data?

Answer: 8
2. Mr. Stout planted three fields of corn, but abandoned one field because it was hit hard by a recent hail storm. He only plans to harvest two fields of corn. When you interview Mr. Stout which field will be the sample field you collect data on?

Answer: 1

<table>
<thead>
<tr>
<th>ST: 48 corn</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLD: 1 2 3 4 5 6 7 8 9</td>
</tr>
<tr>
<td>SEL: 1 2 1 1 4 2 1 2 2</td>
</tr>
</tbody>
</table>

| FLD: 10 11 12 13 14 15 16 17 18 |
| SEL: 6 7 7 3 9 2 1 15 17 |

3 fields were planted. Some cost was incurred even for the abandoned field.
3. How do you select the sample field if the operator has more than 18 fields of corn? What is the correct procedure to follow?

List the 18 fields closest to the homestead. If the operator is unable to list the corn fields by name, number, or other description, use the field selection grid to draw off (up to 18 of) the operator’s fields closest to the permanent residence.
4. You should list all targeted crop fields planted (up to twenty) prior to using the random number table to select your sample field?

Circle one: TRUE  FALSE

Up to 18
5. The Total Number of corn fields planted for Item #2 in Section A cannot be greater than 18?

Circle one: TRUE     FALSE

Record Total, but only list 18
6. Mr. Williams has two separate operations, his individual operation and one with his son in a partnership. The partnership operation has been selected for the corn report. Mr. Williams has a total of 11 corn fields planted, of which six are on his individual operation. How many fields are then eligible to be selected on the partnership operation?

Answer: _____________  
Only want fields of the selected operation

5
Section C: Purpose
Nutrient or Fertilizer Applications

- Identify fertilizers and nutrients used to produce the target commodity
- Analyze water quality
- Determine agricultural productivity issues and policies
- USDA publishes the amount of fertilizer used in crop production
- ERS estimates fertilizer expense for the commodities of interest
Fertilizer Use

Fertilizer refers to a soil-enriching input that contains one or more plant nutrients. For the 2016 crop year, farmers applied nitrogen to 97 percent of planted acres, at an average rate of 145 pounds per acre, for a total of 12 billion pounds. They applied phosphate to 79 percent of corn planted acres, potash to 65 percent, and sulfur to 33 percent. (Table 1)

Table 1. Fertilizer Applied to Corn Planted Acres, 2016 Crop Year

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>% of Planted Acres</th>
<th>Avg. Rate for Year (lbs/acre)</th>
<th>Total Applied (bil lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrogen (N)</td>
<td>97</td>
<td>145</td>
<td>12.2</td>
</tr>
<tr>
<td>Phosphate (P₂O₅)</td>
<td>79</td>
<td>61</td>
<td>4.2</td>
</tr>
<tr>
<td>Potash (K₂O)</td>
<td>65</td>
<td>80</td>
<td>4.5</td>
</tr>
<tr>
<td>Sulfur (S)</td>
<td>33</td>
<td>16</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Using Records and Respondent Booklet

• Use of Records
  – Because of record keeping requirements, most operators will have their application records for each field.
    • Encourage the respondent to use them.

• Use of the Respondent Booklet
  – Both you and the respondent should use it.
Section C – Nutrient or Fertilizer Applications

C  NUTRIENT or FERTILIZER APPLICATIONS---SELECTED FIELD  C

1. Were commercial nutrients or fertilizers applied to the selected field for the 2018 corn 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 the selected field for the 2018 crop? (Include applications made by airplanes and custom applicators). ........................................

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

<table>
<thead>
<tr>
<th>CHECKLIST</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INCLUDE</strong></td>
</tr>
<tr>
<td>□ Custom applied nutrients and fertilizers</td>
</tr>
<tr>
<td>□ Nutrients or fertilizers applied in the fall of 2017 and those applied earlier if this field was fallow in 2017.</td>
</tr>
<tr>
<td>□ Commercially prepared manure or compost</td>
</tr>
</tbody>
</table>

   | **EXCLUDE** |
   | □ Micronutrients |
   | □ Unprocessed manure |
   | □ Nutrients or fertilizers applied to previous crops in this field |
   | □ Lime and Gypsum/landplaster |

   | Office Use Lines in Table | TABLE 001 | 0299 2 |

   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
### Section C – Nutrient or Fertilizer Applications

#### APPLICATION CODES for COLUMN 6

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

| LINE | 2 MATERIALS USED | 3 What quantity was applied per acre? | 4 [Enter material code.] | 5 When was this applied? | 6 How was this applied? | 7 How many acres were treated in this application? |
|------|------------------|--------------------------------------|--------------------------|-------------------------|-------------------------|-------------------------------------------------
| 01   | 31 H | 32 O | 33 100 | 36 1 | 37 1 | 39 1 | 40 300.0 |
| 02   | 31 H | 32 0 | 33 0 | 34 0 | 36 200 | 37 1 | 38 4 | 39 1 | 40 344.5 |
| 03   | 31 H | 32 0 | 33 0 | 34 0 | 36 0 | 37 0 | 38 0 | 39 0 | 40 0 |
| 04   | 31 H | 32 0 | 33 0 | 34 0 | 36 0 | 37 0 | 38 0 | 39 0 | 40 0 |
| 05   | 31 H | 32 0 | 33 0 | 34 0 | 36 0 | 37 0 | 38 0 | 39 0 | 40 0 |
| 06   | 31 H | 32 0 | 33 0 | 34 0 | 36 0 | 37 0 | 38 0 | 39 0 | 40 0 |
| 07   | 31 H | 32 0 | 33 0 | 34 0 | 36 0 | 37 0 | 38 0 | 39 0 | 40 0 |
| 08   | 31 H | 32 0 | 33 0 | 34 0 | 36 0 | 37 0 | 38 0 | 39 0 | 40 0 |
• Percent analysis
  – Preferred method to report the data
  – Product can be more easily identified

• Pounds of actual nutrients
  – Only if absolutely necessary
  – Pounds of active ingredients
  – Units of $N$, $P_2O_5$, $K_2O$, $S$

• Name
  – Probe for percent analysis/pounds of actual nutrients
  – Use respondent booklet Page 6 for common fertilizers and their percent analysis.
• If a respondent knows only the total pounds of fertilizer or plant nutrients applied to the field, you must calculate rate per acre and enter it in the table.

\[ \text{Total Pounds} \div \text{Acres} = \text{Rate per Acre} \]

• If a farmer reports 35-45-20, he’s probably reporting pounds of actual nutrients

• For bulk blended fertilizer materials, use a separate line for each of the fertilizers that the dealer blended in the mixture.
Note the amount per acre is calculated as
320 pounds ÷ 20.0 acres treated = 16 pounds per acre.
• You will use a **NUTRIENT OR FERTILIZER SUPPLEMENT** if more than 8 lines are needed.

• Copy the identification as it appears on the questionnaire to the identification box on the supplement. Assign the next Table number (002, 003, 004, etc.) to each additional supplement used.

• You begin numbering the supplements with Table 002 because Table 001 appears in the questionnaire.

• **Record the number of supplements used on back page**
Supplements

- Refer to face page of questionnaire

- Be sure to record the number of supplements used on the back of questionnaire.

SUPPLEMENTS USED

8. [Record the total number of each type of supplement used to complete this interview.]
Section C Practice Exercise

Nutrient or Fertilizer
Section D – Pesticide Applications

FUNGICIDE

INSECTICIDE

HERBICIDE
NASS publishes estimates of pesticide use in crop production.

These data are used to evaluate issues of

- Food safety
- Water quality
- Pesticide cancellation
2016 Highlights

Pesticide Use

The pesticide active ingredients used on corn are classified as herbicides (targeting weeds), insecticides (targeting insects), fungicides (targeting fungal disease), or other chemicals (targeting all other pests and other materials, including extraneous crop foliage). Herbicides were applied to 97 percent of planted acres. Insecticides and fungicides were each applied to 12 percent of planted acres. (Fig. 2)

Among herbicides, atrazine was the most widely used active ingredient (applied to 60 percent of planted acres) (Table 2). It was also the most widely applied ingredient in the 2014 survey of corn producers.

Fig. 2. Pesticides Applied to Corn Planted Acres, 2016 Crop Year

<table>
<thead>
<tr>
<th>Herbicide</th>
<th>% of Planted Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atrazine</td>
<td>60</td>
</tr>
<tr>
<td>Glyphosate potassium salt</td>
<td>33</td>
</tr>
<tr>
<td>Glyphosate isopropylamine salt</td>
<td>32</td>
</tr>
<tr>
<td>Acetochlor</td>
<td>31</td>
</tr>
</tbody>
</table>

Table 2. Top Herbicides Applied to Corn Planted Acres, 2016 Crop Year

<table>
<thead>
<tr>
<th>Active Ingredient</th>
<th>% of Planted Acres</th>
<th>Avg. Rate for Year (lbs/acre)</th>
<th>Total Applied (mil lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atrazine</td>
<td>60</td>
<td>1.082</td>
<td>56.0</td>
</tr>
<tr>
<td>Glyphosate potassium salt</td>
<td>33</td>
<td>1.323 a</td>
<td>37.6 a</td>
</tr>
<tr>
<td>Glyphosate isopropylamine salt</td>
<td>32</td>
<td>1.011 a</td>
<td>28.5 a</td>
</tr>
<tr>
<td>Acetochlor</td>
<td>31</td>
<td>1.370</td>
<td>36.6</td>
</tr>
</tbody>
</table>

* Expressed in acid equivalent.

• All chemicals applied to the 2018 crop

• All chemical applications recorded in Section D

• Probe for pesticide applications not yet made
• Applications to fence rows, ponds, canals, ditch banks

• Adjuvants such as crop oil, wetting agents, spreaders, emulsifiers, dispersing agents, foaming agents, foam suppressants, and correctives

• All seed treatments, which involve coating the seed with insecticide or fungicide product just prior to planting.
• **Respondent Booklet**
  – Both you **and** the respondent should use one.

• **Refer to the product by specific name**
  – Verify the formulation **and** form with the operator.

• **Respondent Records**
  – Ask for product label or detailed itemized receipts.

~Record correct product code~
Section D – Biocontrol or Pesticide Applications

Now I have some questions about all the biocontrols or pesticides used on the selected field for the 2018 corn crop, including both custom applications and applications made by this operation.

1. Were any herbicides, insecticides, fungicides or other biocontrols or pesticides used on the selected corn field for the 2018 crop? ........... YES = 1

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>CODE</th>
<th>OFFICE USE EDIT TABLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glyfos x-tra</td>
<td>0302</td>
<td>0300</td>
</tr>
<tr>
<td>Lorsban 4E</td>
<td>0399</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CHEMICAL PRODUCT NAME</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6 OR</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glyfos x-tra</td>
<td>L</td>
<td>-</td>
<td>64</td>
<td>1</td>
<td>24.00</td>
<td>73</td>
<td>.</td>
</tr>
<tr>
<td>Lorsban 4E</td>
<td>L</td>
<td>-</td>
<td>64</td>
<td>4</td>
<td>1.00</td>
<td>73</td>
<td>.</td>
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</table>
### Section D – Biocontrol or Pesticide Applications

#### APPLICATIONS CODES for column 9

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Broadcast, ground without incorporation</td>
</tr>
<tr>
<td>2</td>
<td>Broadcast, ground with incorporation</td>
</tr>
<tr>
<td>3</td>
<td>Broadcast, by aircraft</td>
</tr>
<tr>
<td>4</td>
<td>In Seed furrow</td>
</tr>
<tr>
<td>5</td>
<td>In Irrigation water</td>
</tr>
<tr>
<td>6</td>
<td>Chisel/injected or knifed in</td>
</tr>
<tr>
<td>7</td>
<td>Banded in or over row</td>
</tr>
<tr>
<td>8</td>
<td>Foliar or directed spray</td>
</tr>
<tr>
<td>9</td>
<td>Spot treatments</td>
</tr>
</tbody>
</table>

#### Table

<table>
<thead>
<tr>
<th>LINE</th>
<th>9</th>
<th>10 How many acres in the selected field were treated with this product</th>
<th>11 How many times was it applied</th>
<th>12 Were these applications made by –</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>76</td>
<td>1</td>
<td>200.0</td>
<td>2</td>
</tr>
<tr>
<td>02</td>
<td>76</td>
<td>8</td>
<td>344.5</td>
<td>1</td>
</tr>
<tr>
<td>03</td>
<td>76</td>
<td>__</td>
<td></td>
<td></td>
</tr>
<tr>
<td>04</td>
<td>76</td>
<td>__</td>
<td></td>
<td></td>
</tr>
<tr>
<td>05</td>
<td>76</td>
<td>__</td>
<td></td>
<td></td>
</tr>
<tr>
<td>06</td>
<td>76</td>
<td>__</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Common Errors

• **Unit Code**
  – Was the unit code recorded correctly?
  – Should be 5 digits
  – Compare similar reports for the product of interest, if available

• **Rate Applied**
  – Similar products are recommended at different rate.
  – Was the rate recorded correctly?
  – Should total be in the rate-per-acre column or vice versa?
Several products have more than one formulation.

- **Product Code**
  - 40304 Olympus Flex, (Herbicide, **Dry form, 11.25% active ingredients**)
Product Code
40501- Olympus 70% Water Dispersible (Herbicide, Dry form, 70% active ingredient)

Make sure you have the right formulation of the product.
Product Code

- 70072 Tilt Fungicide is recommended at 2-4 fl.oz./acre
- 70606 Tilt Bravo SE is recommended at 1.5 -2.5 pints/acre
Multiple EPA Numbers

We want the EPA Registration Number

EPA REG. NO
Product Code Issues

Pesticide NOT found in Respondent Booklet?

- Leave Column 2 blank (product code) and fill out information below.

<table>
<thead>
<tr>
<th>LINE</th>
<th>Pesticide Type (Herbicide, Insecticide Fungicide, etc.)</th>
<th>EPA No. or Trade name and Formulation</th>
<th>Form Purchased (Liquid or Dry)</th>
<th>Where Purchased [Ask ONLY if EPA No. cannot be reported.]</th>
</tr>
</thead>
<tbody>
<tr>
<td>03</td>
<td>Herbicide</td>
<td>34704-790 or Topside</td>
<td>Dry</td>
<td>Sunray Coop</td>
</tr>
</tbody>
</table>

- It is important to record the rest of the information: amount applied, when applied, how applied, etc.
- Check product label for EPA Registration Number
- It is important to record the rest of the information for the product such as amount applied, when applied, how applied, etc.
• EPA number does not match whole product name

• Whole product name is not in respondent booklet (5-digit product code is needed)

• Product code is in respondent booklet, but the product is used off-label

• Unknown product name
<table>
<thead>
<tr>
<th>WP (Wettable Powder)</th>
<th>DF (Dry Flowable)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dry powders</strong></td>
<td>• Small pellets, like wettable granules</td>
</tr>
<tr>
<td><strong>Dissolve or disperse in water</strong></td>
<td>• Pour easily for mixing with water</td>
</tr>
<tr>
<td><strong>Dry units – pounds, dry ounces, grams</strong></td>
<td><strong>Dry units – pounds, dry ounces, grams</strong></td>
</tr>
</tbody>
</table>
TANK MIXES

Two or more individual products mixed in the spray tank and applied to the field

Each product in the tank mix must be identified individually, each on a separate line

Each product in the tank mix should have the same number in Column 4, the line number of the first product.
## Tank Mix Example

<table>
<thead>
<tr>
<th>CHEMICAL PRODUCT NAME</th>
<th>LINE</th>
<th>2 What products were applied to this field?</th>
<th>3 Was this product bought in liquid or dry form?</th>
<th>4 Was this part of a tank mix?</th>
<th>5 When was this applied?</th>
<th>6 How much was applied per acre per application?</th>
<th>7 What was the total amount applied per application in this field?</th>
<th>8 [Enter unit code.]</th>
<th>9 How was this product applied?</th>
<th>10 How many acres in this field were treated with this product?</th>
<th>11 How many times was it applied?</th>
<th>12 Were these applications made by...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Far-go-granular</td>
<td>01</td>
<td>040316</td>
<td>D</td>
<td>---</td>
<td>1 12.00</td>
<td>1 1 6 5.0</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1 2</td>
</tr>
<tr>
<td>Banvel (4L)</td>
<td>02</td>
<td>040310</td>
<td>L</td>
<td>2 4 1.00</td>
<td>14 1 5.0</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1 2</td>
</tr>
<tr>
<td>Express (DR)</td>
<td>03</td>
<td>040962</td>
<td>D</td>
<td>2 4 .13</td>
<td>15 1 5.0</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1 2</td>
</tr>
</tbody>
</table>

In this example,
- Product lines 2 and 3 are in a tank mix.
- For products mixed in a tank mix, columns 4, 5, 9, 10, 11, and 12 must be the same.
How much **PRODUCT** was applied?

- Unit refers to amount of chemical product.
- Usually mixed with water (diluted) to form a spray solution.
- **YOU** should record amount of chemical product applied.

If gallons are reported, ask the respondent – Did the operation actually spray gallons of pesticide or gallons of pesticide mixed with water?
Other Resources

EPA Product Label Search


CDMS Product Label Database

• [http://www.cdms.net/Label-Database](http://www.cdms.net/Label-Database)
Supplements

2018 AGRICULTURAL RESOURCE MANAGEMENT SURVEY
Phase II

PRODUCTION PRACTICES REPORT
PRODUCTION PRACTICES & COST REPORT

BIOCONTROL or PESTICIDE APPLICATIONS SUPPLEMENT

Target Commodity: (Check one)
- SOYBEAN PPCR
- CORN PPR
- PEANUT PPR

Refer to face page of questionnaire

corn

<table>
<thead>
<tr>
<th>VERSION</th>
<th>ID</th>
<th>TRACT</th>
<th>SUBTRACT</th>
<th>C - TYPE</th>
<th>TABLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>79</td>
<td>POID</td>
<td>01</td>
<td></td>
<td>106</td>
<td>002</td>
</tr>
</tbody>
</table>
Supplements

Be sure to record the number of **supplements** used on the back of questionnaire.

It is not asking about applications there, only supplement sheets added.★
Section E – Pest Management Practices

• Pest management practices
  • Activities done specifically to manage pests
  • Must have been done in the selected field
2016 Highlights

Pest Management Practices

The survey asked growers to report on the practices they used to manage pests, including weeds, insects, and diseases. Corn growers reported practices in four categories:

Surveyed States: Acres of Corn Planted, 2016

<table>
<thead>
<tr>
<th>U.S. Total</th>
<th>millions of acres</th>
<th>% of U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iowa</td>
<td>13.9</td>
<td>14.8</td>
</tr>
<tr>
<td>Illinois</td>
<td>11.6</td>
<td>12.3</td>
</tr>
<tr>
<td>Nebraska</td>
<td>9.9</td>
<td>10.5</td>
</tr>
<tr>
<td>Minnesota</td>
<td>8.5</td>
<td>9.0</td>
</tr>
<tr>
<td>Indiana</td>
<td>5.6</td>
<td>6.0</td>
</tr>
<tr>
<td>South Dakota</td>
<td>5.6</td>
<td>6.0</td>
</tr>
<tr>
<td>Kansas</td>
<td>5.1</td>
<td>5.4</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>4.1</td>
<td>4.3</td>
</tr>
<tr>
<td>Missouri</td>
<td>3.7</td>
<td>3.9</td>
</tr>
<tr>
<td>Ohio</td>
<td>3.6</td>
<td>3.8</td>
</tr>
<tr>
<td>North Dakota</td>
<td>3.5</td>
<td>3.7</td>
</tr>
<tr>
<td>Texas</td>
<td>2.9</td>
<td>3.1</td>
</tr>
<tr>
<td>Michigan</td>
<td>2.4</td>
<td>2.6</td>
</tr>
<tr>
<td>Kentucky</td>
<td>1.5</td>
<td>1.6</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>1.4</td>
<td>1.5</td>
</tr>
<tr>
<td>Colorado</td>
<td>1.3</td>
<td>1.4</td>
</tr>
<tr>
<td>New York</td>
<td>1.1</td>
<td>1.2</td>
</tr>
<tr>
<td>North Carolina</td>
<td>1.0</td>
<td>1.1</td>
</tr>
<tr>
<td>Georgia</td>
<td>0.4</td>
<td>0.4</td>
</tr>
<tr>
<td>Total, Surveyed States</td>
<td>86.9</td>
<td>92.4</td>
</tr>
</tbody>
</table>

Numbers may not add due to rounding.

- **Prevention** practices involve actions to keep a pest population from infesting a crop or field.
- **Avoidance** practices use cultural measures to mitigate or eliminate detrimental effects of pests.
- **Monitoring** practices observe or detect pests through sampling, counting, or other forms of scouting.
- **Suppression** practices involve controlling or reducing existing pest populations to mitigate crop damage.

The most widely used monitoring practice in growing corn was scouting for weeds, used on 90 percent of corn planted acres. The top avoidance practice was crop rotation (79 percent). (Table 3) In each category, the most widely used practice in 2016 was also the top practice in the 2014 survey.

Table 3. Top Practice in Category, 2016 Crop Year

<table>
<thead>
<tr>
<th>Crop Category</th>
<th>Practice Description</th>
<th>% of Corn Planted Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitoring</td>
<td>Scouted for weeds (deliberately, or by general observations while performing tasks)</td>
<td>90</td>
</tr>
<tr>
<td>Avoidance</td>
<td>Rotated crops during last three years</td>
<td>79</td>
</tr>
<tr>
<td>Prevention</td>
<td>Used no-till or minimum till</td>
<td>64</td>
</tr>
<tr>
<td>Suppression</td>
<td>Maintained ground covers, mulches, or other physical barriers</td>
<td>38</td>
</tr>
</tbody>
</table>
Section E – Pest Management Practices

PEST MANAGEMENT PRACTICES

Now I have some questions about your pest management decisions and practices used on this field for the 2018 corn crop. By pests, we mean WEEDS, INSECTS, and DISEASES.

Enumerator Action: Were PESTICIDE APPLICATIONS reported in Section D?

- YES - [Continue.]
- NO - [Go to item 6.]

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

2. Were any biological pesticides such as Bt (Bacillus thuringiensis), insect growth regulators, neem or other natural/biological based products sprayed or applied to manage pests in the selected field? YES = 1

3. Were pesticides with different mechanisms of action rotated or tank mixed for the primary purpose of keeping pests from becoming resistant to pesticides? YES = 1

5. Were records kept for the selected field to track the activity or numbers of weeds, insects or diseases? YES = 1

6. Did you use published information on infestation thresholds to determine when to take measures to manage pests in the selected field? YES = 1

8. In 2018, how was the selected field primarily scouted for insects, weeds, diseases, and/or beneficial organisms?

1. By deliberately going to the field specifically for scouting activities [Enter code 1 and go to item 9.]
2. By conducting general observations while performing routine tasks [Enter code 2 and go to item 11.]
3. This field was not scouted. [Enter code 3 and go to item 14.]

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

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

   a. a pest advisory warning? ................................................................. YES = 1

   b. a pest development model? ............................................................. YES = 1

11. Was this field scouted for--

   YES = 1

   a. weeds? ....................................................... 0812 1

   b. insects or mites? ........................................ 0815 1

   c. diseases? ............................................... 0818 –

   2

   [If YES, ask—] What was the infestation level for [column 1]? –

   1 Higher than normal
   2 Normal
   3 Lower than normal

   3

   [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

   CODE

   0810 –
   0811 –
   0815 1
   0817 1
   0818 –
   0819 –
   0820 –
Section E – Pest Management Practices

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?  [Enter code “1” for all that pp

a. Use the services of a diagnostic laboratory for pest identification or soil plant tissue pest analysis for this field? .................................................................

b. Plow down crop residue (using conventional tillage)? .................................................................

c. Remove/burn down crop residue? ......................................................................................

d. Rotate crops in this field during the past three years? .................................................................

e. Maintain ground covers, mulches, or other physical barriers? .................................................................

f. Choose crop variety because of specific resistance to a certain pest? .................................................................

g. Use no-till or minimum till? ..............................................................................................

h. Plan planting locations to avoid cross infestation of pests? .................................................................

i. Adjust planting or harvesting dates? ..............................................................................................

j. Chop, spray, mow, plow, or burn field edges, lanes, ditches, roadways, or fence lines? .................................................................

k. Clean equipment and field implements after completing field work to reduce the spread of pests? .................................................................

l. Adjust row spacing, plant density, or row directions? ........................................................................
m. Have the seed treated for insect or disease control after you purchased the seed for this field?  

n. Maintain a beneficial insect or vertebrate habitat?  
o. Maintain buffer strips or border rows to isolate corn from non-organic crops or land, or did you take a buffer harvest?  
p. Use a flamer to kill weeds?  

q. Plant earlier or later to avoid weeds?  

15. Were any beneficial organisms (insects, nematodes, fungi) applied or released in this field to manage pests?  

16. Were floral lures, attractants, repellants, pheromone traps or other biological pest controls used on this field?  

17. Was a trap crop (excluding fallow) grown to help manage insects in this field?  

18. Was this field left fallow in 2017 to help manage insects in this field?  

19. Were water management practices such as irrigation scheduling, controlled drainage, or treatment of retention water used on this field to manage for pests or toxin-producing fungi and bacteria?
Section E – Pest Management Practices

• Pest management practices
  • Activities done specifically to manage pests
  • Must have been done in this field

• Pay attention to enumerator actions
  • Changed from previous years
  • Refer back to Section D

• Please compare items
  • Items 6, 9, should agree
  • Refer to Interviewer’s Manual page 5086
CONCLUSION

5. To receive the complete results of this survey on the release date, go to http://www.nass.usda.gov/Surveys/Guide_to_NASS_Surveys/

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

1095

Would you like to receive a copy of the results of this survey in the mail? YES = 1

[I thank the respondent, then review this questionnaire.]

6. ENDING TIME [MILITARY].

RECORDS USED

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

a. [fertilizer data?] YES = 1

b. [pesticide data?] YES = 1

SUPPLEMENTS USED

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

Reported by: John Doe

[Table]

**OFFICE USE**

<table>
<thead>
<tr>
<th>R. Unit</th>
<th>Ptr 1 Str</th>
<th>Ptr 2 Str</th>
<th>Ptr 3 Str</th>
<th>Ptr 4 Str</th>
<th>OPS</th>
<th>SSO 1</th>
<th>ADJ</th>
<th>Optional Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>9921</td>
<td>9922</td>
<td>9923</td>
<td>9927</td>
<td>9928</td>
<td>923</td>
<td>9907</td>
<td>922</td>
<td>9906</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9916</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Response</th>
<th>Respondent</th>
<th>Mode</th>
<th>Enum.</th>
<th>POID</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-Comp</td>
<td>1-Op/Mgr</td>
<td>2-PATI (tel)</td>
<td>9903</td>
<td>9989</td>
</tr>
<tr>
<td>2-R</td>
<td>2-Sp</td>
<td>3-PAPI (Face-to-Face)</td>
<td>9998</td>
<td></td>
</tr>
<tr>
<td>3-Inac</td>
<td>3-Acct/Bkpr</td>
<td>4-Partner</td>
<td>9900</td>
<td></td>
</tr>
<tr>
<td>4-Office Hold</td>
<td>9-Other</td>
<td></td>
<td></td>
<td>9985</td>
</tr>
</tbody>
</table>

Telephone: (555) 211 3111
• Use of Records
  • Encourage the respondent to use them.
Shipping and Due Dates

– Ship completed forms to Supervisor for review.

– Supervisor ship to the office

• Have everything in the office by
  – November 20th
  – Tuesday before Thanksgiving.
  – Allowances for late appointments
  – Try to get done before December list surveys
Reminders...

- Yes & No
  - 1 = Yes
  - Dash = No or Zero (0)

- Pay attention to skip instructions
- Fill in the decimals where needed
- Record data in units applied per acre
- Record each application on a separate line
- Use Records and Respondent Booklet
Questions?