

# MINNESOTA ANNUAL PESTICIDE AND FERTILIZER SURVEY

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**United States  
 Department of  
 Agriculture**

**(Conducted by phone only)**



**NATIONAL  
 AGRICULTURAL  
 STATISTICS  
 SERVICE**



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 AGRICULTURE**

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Please make corrections to name, address and ZIP Code, if necessary.

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 and Statistical Efficiency Act of 2018, Title III of Pub. L. No. 115-435, codified in 44 U.S.C. Ch. 35 and other applicable Federal laws. For more information on how we protect your information please visit: <https://www.nass.usda.gov/confidentiality>. Response is **voluntary**.

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The Minnesota Department of Agriculture, in cooperation with the National Agricultural Statistics Service (NASS), will conduct periodic surveys of major crop producers that collect information on pesticide and fertilizer use and pesticide use rates. Survey respondents are randomly selected, and the reported results are based on advanced standardized statistical analyses conducted by NASS nationwide. Your response is necessary to help provide the best statistics possible. If there are any questions, contact the Minnesota State Statistician at (615) 728-3113.

1. Did this operation plant any **[[CORN]]** or **[[WHEAT]]** in 2023?

<sup>1</sup> Yes - Continue    <sup>3</sup> No – Go to Conclusion

**Section 2 – 2023 **[[Corn]]** Crop Acres**

2. How many acres of **[[Corn]]** were planted for the 2023 crop year? . . . . .

Acres

xxx
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[If **[[Corn]]** acres greater than zero, then continue, otherwise go to **Section 3.**]

3. How many acres of **[[Corn]]** were treated with herbicides? . . . . .

Acres

xxx
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4. How many acres of **[[Corn]]** were treated with insecticides? (Exclude seed treatments). . . . .

xxx
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5. How many acres of **[[Corn]]** were treated with fungicides? (Exclude seed treatments). . . . .

xxxx
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**Section 3 – 2023 **[[Wheat]]** Crop Acres**

6. How many acres of **[[Wheat]]** were harvested for the 2023 crop year? . . . . .

Acres

xxx
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[If **[[Wheat]]** acres are greater than zero then continue, otherwise go to **Section 4.**]

7. How many acres of **[[Wheat]]** were treated with herbicides? . . . . .

Acres

xxx
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8. How many acres of **[[Wheat]]** were treated with insecticides? (Exclude seed treatments). . . . .

xxx
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9. How many acres of *Wheat* were treated with fungicides? (Exclude seed treatments) . . . . .

xxxx
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**Corn Herbicide Questions:**

1. Please select which of the following best represents your view of the Minnesota Department of Agriculture's herbicide Best Management Practices for water quality?
  - a. the best management practices are not restrictive enough to protect water quality
  - b. The best management practices are too restrictive for protecting water quality
  - c. The best management practices are well designed and fair to protect water quality
  - d. I don't currently have enough knowledge of the best management practices to answer.
2. **Think about your largest corn field.** How many pre emergence/preplant applications of herbicides did you apply on this field? *Enter number*
3. (*If one or more*), did you incorporate the herbicides in the soil?
  - a. Yes
  - b. No
  - c. Some
4. How many **post** emergence applications of herbicides did you apply on this field? *Enter number*
5. Who scouted for weeds on your corn acres in 2019? Please list all that apply.
  - a. Farmer
  - b. Dealer
  - c. Independent crop consultant
  - d. Other
  - e. Did not scout
  - f. Do not know
6. Do you rotate your herbicide "Site of Action" on a yearly basis (different from previous year) on your corn fields?
  - a. Yes, all fields
  - b. Yes, some fields,
  - c. No
  - d. Do not know.
7. Did your corn fields have more than 30% residue when you planted your corn?
  - a. Yes, all fields
  - b. Yes, some fields
  - c. No
  - d. Do not know
8. How often did you calibrate your sprayer (or have it calibrated) for the 2019 corn crop?
  - a. Don't have a sprayer or didn't use it on 2019 corn crop
  - b. Once per year
  - c. Twice per year
  - d. Three times per year or more
  - e. Did not calibrate
9. Several herbicides require an application setback for surface water. Who identifies the sites where application setbacks are required? Please list all that apply.
  - a. Farmer
  - b. Dealer
  - c. Independent crop consultant
  - d. Other
  - e. No surface water around my corn acres.
10. Would you consider planting treated seed without an insecticide included in the seed treatment?
  - a. Will not consider it
  - b. Unlikely to consider it
  - c. May consider it.
  - d. Will consider it.



[If Herbicide, Insecticide or Fungicide type or quantity is unknown] May we call your dealer, co-op or applicator about the chemicals applied to your operation? Yes\_\_ No\_\_

If Yes, What is the name of the company? \_\_\_\_\_

Who should we contact for this follow up information? \_\_\_\_\_

Who should we contact at that company? \_\_\_\_\_

The next questions are intended for all crops with a focus on use of IPM for insect pests. Integrated Pest management, or IPM, is an approach that uses multiple pest control tactics in order to minimize economic, environmental, and human health risks.

#### IPM Questions

1. What is your primary source of information on Integrated Pest Management for insects?
  - a. University extension
  - b. Independent crop consultant
  - c. Seed or chemical company representative
  - d. Internet
  - e. Other farmers
  - f. Other
  - g. I do not get information about IPM for insects
  
2. Which of these Integrated Pest Management practices do you use for insect pest management (select all that apply)?
  - a. Biological control (Enum Note use of beneficial insects to kill pests)
  - b. Cultural control (Enum Note tillage, crop rotation, delayed planting)
  - c. Resistant or tolerant crop seed selection (Enum Note. Bt traits, cultivar selection)
  - d. Physical control (Enum Note barriers around crops such as high and low tunnels)
  - e. Chemical control (Enum Note pesticides)
  - f. Other
  - g. I don't have pests to manage
  
3. What do you view as the primary challenge for implementing Integrated Pest Management?
  - a. Cost
  - b. Time
  - c. Understanding of how to use Integrated Pest Management
  - d. Other
  - e. I don't see any challenges
  
4. If insecticide was used on your Corn, was the decision to use insecticide based on scouting results from the field where the applications were applied?
  - a. Yes
  - b. No
  - a) Occasionally
  - b) Insecticide was not used
  
5. If insecticide was used on your Wheat, was the decision to use insecticide based on scouting results from the field where the applications were applied?
  - a. Yes
  - b. No
  - c) Occasionally
  - d) Insecticide was not used
  
6. Do you use pest update information from any of the following sources to make insect pest management decisions (choose all that apply)?
  - a. Text alerts
  - b. Postal mail
  - c. Email
  - d. Social media

- e. Websites and/or blogs
  - f. Other
  - g. I do not use pest updates to make management decisions
7. What factors do you consider when choosing an insecticide (list all that apply)?
- a. Insect resistance to certain insecticides
  - b. Rotation of modes of action
  - c. Toxicity of insecticide to bees
  - d. Toxicity of insecticide to humans
  - e. Prior experience with insecticide
  - f. Cost of insecticide
  - g. Other
  - h. No insecticides are used

## Section 6 – [Corn] Fertilizer Management

I will now ask you about your fertilizer inputs on [Corn] acres.

Did all your [Corn] fields receive manure for the [2023] crop year?

1. Yes, all my [Corn] fields received manure. Go to Section 7.
2. No, I have at least 1 [Corn] field with no manure applied. - Continue

First on a [Corn] field with no manure or compost applied in the fall of [2022] and no manure or compost applied anytime during the 2023 crop year.

**A1.** Do you have a [Corn] field without manure applied in the fall of 2022 or anytime in [2023] before or during the crop year? Yes \_\_\_\_ [continue] No \_\_\_\_ [Skip to Section 7]

Think about your largest [Corn] field that you planted in 2023 without any manure.

I will now ask you questions about that specific field. All following questions will be in relation to that specific field.

**A5.** How many acres are in this field in 2023? \_\_\_\_\_

**A2.** Was this field irrigated? Yes No

**A3.** What was the crop grown on this field in 2022 before the 2023 [Corn] crop? (Not including cover crop)

- 1 Soybeans
- 2 corn
- 3 alfalfa (any alfalfa mix)
- 4 small grains (oat, wheat, rye, barley)
- 99 other

**A4. If Corn [A3 (2)]** What was the crop harvested from this field in the 2021 season, before the last two crops?

- 1 Soybeans
- 2 corn
- 3 alfalfa (any alfalfa mix)
- 4 small grains (oat, wheat rye, barley)
- 99 other

What was the yield goal when planting this field in 2023? \_\_\_\_\_ bushels per acre.

**A6.** What was the average yield of this field over the past three [Corn] crops? (or estimate if unknown) \_\_\_\_\_

**A7.** Was any commercial fertilizer applied to this [Corn] field for the 2023 [Corn] crop? Yes No  
IF no go to Section 7.

**A8.** Was any commercial fertilizer applied with a variable rate or more than one rate such as by management zone or grid on this [Corn] field? Yes No

If yes, please use a field average for all the fertilizer rate questions.

**A9.** What was the total units (actual pounds) per acre of nitrogen applied to this field from all sources and all applications on this field? \_\_\_\_\_

**A9.** What type of fertilizer was used to supply the majority of the nitrogen applied to this field?

- 10 Anhydrous Ammonia
- 11 Urea (urea and coated urea such as ESN or Super U)
- 12 Liquid N (such as 28% or 32%)
- 13 Other
- 99 Unknown

**A10.** Did you use a nitrogen inhibitor or stabilizer on this field? Yes No DK

I will now ask you for all your commercial fertilizer applications made on this field for the 2023 crop year, again including any 2022 fall applications of commercial fertilizer. Each individual application will be recorded separately, preferably as units per acre.



