

MINNESOTA ANNUAL PESTICIDE AND FERTILIZER SURVEY

CLEAN COPY FOR CROP YEAR 2024 SURVEY COLLECTED SPRING OF 2025

Corn and Soybean – Updated 4/25/2024
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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 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**.

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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 Department of Agriculture at (651) 201-6336.

1. Did this operation plant any **[[CORN]]** or **[[SOYBEAN]]** in 2024?

¹ Yes - Continue ³ No – Go to Conclusion

Section 2 – 2024 **[[Corn]]** Crop Acres

2. How many acres of **[[Corn]]** were planted for the 2024 crop year?

Acres
xxx

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

3. How many acres of **[[Corn]]** were treated with herbicides (**weed** killer)?

Acres
xxx

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

xxx

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

xxxx

Section 3 – 2024 **[[Soybean]]** Crop Acres

6. How many acres of **[[Soybean]]** were planted for the 2024 crop year?

Acres
xxx

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

7. How many acres of **[[Soybean]]** were treated with herbicides (**weed** killer)?

Acres
xxx

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

xxx

9. How many acres of *[[Soybean]]* were treated with fungicides? (Exclude seed treatments).

xxxx

10. What percent of soybean seeds were treated? xxx _____percent

If Q10 > 0, then go to Q11, else go to Section 4

11. Did your seed treatments on soybeans include an insecticide?

- a. Yes
- b. No
- c. Do not know

12. If Q11=Yes, Why does your seed treatment include an insecticide? (choose all that apply)

- a) To treat known soil pest problems
- b) To prevent possible soil pest problems
- c) To prevent possible above-ground pest problems (Ex. Soybean aphids)
- d) Insecticide treatment is part of the fungicide treatment package I use
- e) I do not choose the seed that is planted
- f) Other
- g) I don't know the reason why

13. If 12c selected, then, Do you purchase insecticide seed treatments specifically with the intent of managing soybean aphids?

- a. Yes
- b. No
- c. Sometimes
- d. Do not know

[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 at that company? _____

If Section 3, Q8> 0, then Continue, Elseif Section 2, Q6>0 skip to Question 10, Else goto Question 11.

You reported insecticides were applied to your soybean crop. The next questions will ask about those insecticide applications.

2. Where do you get your information when deciding which insecticide product to use (list all that apply)?
 - a. My Dealer/Coop/industry representative
 - b. Independent consultant
 - c. University extension
 - d. Other farmers
 - e. Internet
 - f. Other
3. How was the insecticide applied to your 2024 soybean crop (choose all that apply)?
 - a. Farmer- ground application
 - b. Farmer- aerial application
 - c. Dealer- ground application
 - d. Dealer- aerial application
 - e. Other
4. Which insects were you targeting? (choose all that apply)
 - a. Soybean aphid,
 - b. Spider mites,
 - c. Others
 - d. Do not know

If 4a=soybean aphid then ask questions 5,6,7,8, otherwise move to question 9

5. Who scouted your soybean fields for aphids? (choose all that apply)
 - a. Farmer
 - b. Dealer
 - c. Crop consultant
 - d. Other than the above
 - e. Did not scout
 - f. Do not know
6. What threshold (aphids per plant) did you use for applying the insecticide for soybean aphid (select one)?
 - a. Did not use thresholds
 - b. 1-30,
 - c. 31-50,
 - d. 51-100,
 - e. 101-150,
 - f. 151-200,
 - g. Do not know
7. Were records kept for soybean aphid thresholds?
 - a. Yes, for all fields
 - b. Yes, for some fields
 - c. No
 - d. Do not know

What factors other than thresholds did you consider to make an insecticide application for soybean aphids (choose all that apply)?

- e. Did not consider anything other than thresholds
- f. Followed an Integrated Pest Management plan

- g. Followed a calendar schedule
 - h. Followed advice from dealer
 - i. Followed advice from crop consultant
 - j. Followed other farmers
8. What factors other than cost and effectiveness were considered important when choosing an insecticide product (choose all that apply)?
- a. Safety to the applicator
 - b. Safety to insect predators
 - c. Setbacks from water
 - d. Label language regarding bees
 - e. Weather
 - f. Aphid resistance
 - g. None
9. Were there any bee hives within 3 miles of any soybean field when insecticide was applied?
- a. Yes
 - b. No
 - c. Do not know
10. What setbacks from water, if any, were used?
- a. No setbacks
 - b. Setbacks listed on the label
 - c. Label did not require setbacks from water
 - d. No water around the field
 - e. Do not know
11. What percentage of your soybean seeds were treated with insecticide (for all soybean acres)? (This question is placed at the end to avoid confusion with other insecticide application questions)
- a. None
 - b. 1-25
 - c. 26-50
 - d. 51-75
 - e. 76-99
 - f. 100
 - g. Do not know

(Complete Integrated Pest Management Section if corn or soybean insecticide acres were reported in Section 2, 3)

Integrated Pest Management

The next questions are intended for all crops with a focus on **the** use of Integrated Pest Management 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.

12. 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
13. 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
14. 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. No Challenges, I currently use Integrated Pest Management.

[If Corn Insecticide acres are 0, skip to 17]

15. **Since** insecticide was used on your **Corn**, was the decision to use **the** insecticide based on scouting results from the field where the applications were applied?
- a. Yes
 - b. No
 - c. **Sometimes**

[If Soybean Insecticide acres are 0, skip to 18]

16. **Since** insecticide was used on your soybean, was the decision to use **the** insecticide based on scouting results from the field where the applications were applied?
- a. Yes
 - b. No
 - c. **Sometimes**

17. 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

18. 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

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 [2024] 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 [2023] and no manure or compost applied anytime during the 2024 crop year.

Think about your largest [Corn] field that you planted in 2024 without any manure.

All following questions will be in relation to that specific field.

A1. How many acres were in this field in 2024? _____

A2. Was this field irrigated? Yes No

A3. What was the crop grown on this field in 2023 before the 2024 [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)] Was alfalfa the previous crop grown in 2023 2022 before the 2024 before the last two corn crops?

(1) YES

(3) NO

A5. What was the yield goal when planting this field in 2024? _____ 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 2024 [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) of nitrogen per acre applied to this field from all sources and all applications?

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

A11. If A10=Yes, then What type of nitrogen inhibitor or stabilizer did you use? [NEW QUESTION 8-2-24]

1. N-Serve
2. Instinct
3. Centuro
4. ESN

