

MINNESOTA BEST MANAGEMENT PRACTICES SURVEY - 2025

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U.S. Department of Agriculture
National Operations Division
9700 Page Avenue, Suite 400
St . Louis, MO 63132-1547
Phone: 1888-424-7828
Fax: 855-415-3678
E-mail: nass@usda.gov

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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. Survey respondents are randomly selected, and the reported results are based on advanced standardized statistical analyses conducted by Minnesota Department of Agriculture. 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. How many acres of [Crop1] and [Crop2] did you plant in 2025 on your operation?

	Acres
a. [Crop1]:	101
b. [Crop2]:	102

2. ²⁰¹ Did you have any acres of [Crop1] in 2025 that were planted to [Crop2] in 2024?

¹ ☐ Yes ³ ☐ No (**Go to question 4**)

3. **[Crop1] on [Crop2] acres.** What was the AVERAGE nitrogen rate (units per acre) that was applied across all acres of [Crop1] planted in 2025, that were planted to [Crop2] in 2024? Please include any nitrogen from phosphorus sources such as MAP/DAP/MEZ, sulfur sources such as thiosulfate and ammonium sulfate, and nitrogen in the starter in addition to the main source of nitrogen such as UAN solutions, urea, or anhydrous ammonia.

Total units (actual nitrogen) applied per acre (average per acre) ²⁰²

4. ²⁰³ Did you have any acres of [Crop1] in 2025 that were planted to [Crop1] in 2024?

¹ ☐ Yes ³ ☐ No (**Go to question 6**)

5. [Crop1] on [Crop1] acres. What was the AVERAGE nitrogen rate (units per acre) that was applied across all acres of [Crop1] planted in 2025, that were also planted to [Crop1] in 2024? Please include any nitrogen from phosphorus sources such as MAP/DAP/MEZ, sulfur sources such as thiosulfate and ammonium sulfate, and nitrogen in the stater in addition to the main source of nitrogen such as UAN solutions, urea, or anhydrous ammonia?.....

Total units (actual nitrogen) applied per acre (average per acre)
204

6. Which of the following precision agriculture tools do you use on the farm? (Check all that apply).

- a. 205 ☐ Auto Steer
- b. 206 ☐ Precision planting
- c. 207 ☐ Variable rate fertilizer applications
- d. 208 ☐ Precision spraying, such as auto boom shutoff
- e. 209 ☐ Nitrogen applications based on zone management
- f. 210 ☐ Nitrogen applications based on aerial imagery
- g. 211 ☐ Nitrogen applications based on in field variables such as in season soil tests
- h. 212 ☐ Nitrogen applications based on other in season variables not mentioned above

7. 213 How many acres of cover crops were planted in or grown after your [Crop1] or [Crop2] fields were harvested in 2025?

Acres
214
215

- a. Cover crop on [Crop1] acres:
- b. Cover crop on [Crop2] acres:

If you did not grow [Crop1] in 2025, go to question 16

8. 216 With the higher price of fertilizer, did you reduce your N rate on your [Crop1] acres?

- 1 ☐ Yes
- 3 ☐ No
- 5 ☐ Don't Know

9. 217 Was manure used on any of your [Crop1] acres in 2025?

- 1 ☐ Yes
- 3 ☐ No

218 If yes, was the manure tested within the last five years before application in 2025?

- 1 ☐ Yes
- 3 ☐ No

10. Which of the following factors determine the nitrogen rate calculation in the University of Minnesota nitrogen guidelines. – list factors?

- a. 219 ☐ Soil organic matter
- b. 220 ☐ Price of nitrogen
- c. 221 ☐ Yield goal
- d. 222 ☐ Previous crop
- e. 223 ☐ Variable rate
- f. 224 ☐ Price of [Crop1]
- g. 225 ☐ Cation exchange capacity (CEC)
- f. 226 ☐ Don't know

11. The Minnesota Department of Agriculture (MDA) has a vulnerable groundwater area map on its website that shows areas where fall nitrogen fertilizer applications are restricted:

a. How many [Crop1] acres do you have in a vulnerable groundwater area or a drinking water supply management area as defined by the MDA vulnerable groundwater area map?..... 233 ☐ Don't Know OR

Acres
234

b. 227 When was the last time you reviewed the MDA's Fall Nitrogen Fertilizer Restrictions map on the MDA website?

1 ☐ Date: _____

3 ☐ Don't Know

7 ☐ Never

12. 228 Do you use a nitrogen inhibitor on any of your [Crop1] acres?

1 ☐ Yes

3 ☐ No

5 ☐ Don't Know

13. 229 Do you side dress any nitrogen on your [Crop1] acres, including top dress or irrigation?

1 ☐ Yes

3 ☐ No

5 ☐ Don't Know

14. 230 Do you use a slow-release product such as ESN, Super U or other such product?

1 ☐ Yes

3 ☐ No

5 ☐ Don't Know

15. 231 How important are yields in determining your nitrogen rate on [Crop1]? 1 very important. 5 not important [Select one]

1 ☐

2 ☐

3 ☐

4 ☐

5 ☐

Herbicide Best Management Practices (BMP) Adoption Survey 2025

16. On your 2025 [Crop1] and/or [Crop2] acres, did you (choose one from the list for each crop) If only one crop, check only in that column.

	[Crop1]	[Crop2]
a. Apply herbicides yourself.....	301 ☐	302 ☐
b. Have herbicides custom applied?.....	303 ☐	304 ☐
c. Apply some myself and some custom applied.....	305 ☐	306 ☐
d. Don't use herbicides	307 ☐	308 ☐

CONCLUDE interview if you did not use any herbicides on [Crop1] or [Crop2] in 2025.

For all the following questions, check the box if you did that practice **and** you planted that crop in 2025.

17. Who scouted your [Crop1] and/or [Crop2] fields for weeds in 2025? **(Check all that apply.)** If only one crop check only in that column.

	[Crop1]	[Crop2]
a. Myself, family members, or an employee.....	309 ☐	310 ☐
b. Dealer/coop.....	311 ☐	312 ☐
c. Crop consultant.....	313 ☐	314 ☐
d. None of my fields were scouted.....	315 ☐	316 ☐

(two questions dropped and removed here)

18. What type of tillage did you use before planting on the majority of your [Crop1] and [Crop2] fields in 2025 (Fall of 2024 and Spring of 2025)? **[Check one for each crop. If only one crop check only in that column.]**

	[Crop1]	[Crop2]
a. Conventional < 15% residue.....	331 ☐	332 ☐
b. Reduced Tillage 15% – 30% residue.....	333 ☐	334 ☐
c. Conservation Tillage > 30% residue.....	335 ☐	336 ☐
d. Strip Tillage.....	337 ☐	338 ☐
e. No Till.....	339 ☐	340 ☐

(one question dropped and removed here)

If no [Crop1] acres, go to question 20

19. On your [Crop1] acres applied with herbicides, did you use more than one mode of action (group). This could be from two or more products with different modes of action or a premix with two or more different modes of action?

342 ☐ All [Crop1] acres

343 ☐ Some [Crop1] acres

344 ☐ None of my [Crop1]

acres

345 ☐ Don't Know

(New Questions Added)

20. Do you have surface water, such as a river, stream (intermittent or continuous), lake, or pond, in the field or within 50 feet of the outside border of any of your [Crop1] or [Crop2] fields?

346 ☐ Yes **[Go to next question]**

347 ☐ No **[Go to question 23]**

21. Do you have non-crop vegetative buffers, such as grass or other permanent vegetation, next to the surface water?

348 ☐ Yes – All **[Go to next question]**

349 ☐ Yes – Some **[Go to next question]**

350 ☐ No **[Go to question 23]**

22. How many feet is the average width of the non-crop vegetative buffer next to the surface water?

351 _____ft

23. Do you have a well or sinkhole in the field or within 50 feet outside the border of any of your [Crop1] or [Crop2] fields?

352 ☐ Yes – All [Go to next question]

353 ☐ Yes – Some [Go to next question]

354 ☐ No [Go to question 26]

24. Do you maintain a setback (no herbicide application) or non-crop vegetative buffer for the areas around the well or sinkhole?

355 ☐ Yes – All [Go to next question]

356 ☐ Yes – Some [Go to next question]

357 ☐ No [Go to question 28]

25. How many feet is the average width of the setback or non-crop vegetative buffer to the well or sinkhole?

358 _____ft

26. Do you mix or load herbicides in any of your [Crop1] or [Crop2] fields?

359 ☐ Yes

360 ☐ No

361 ☐ Don't Know

Atrazine Use in [Crop1]

27. 401 Was atrazine applied on any of your [Crop1] acres in 2025, premixes included?

1 ☐ Yes - **Go to question 29.**

3 ☐ No - **Go to question 33.**

5 ☐ Don't Know - **Go to next question.**

7 ☐ No [Crop1] acres in 2025 - **Go to question 38.**

28. Were any of the following atrazine products applied to your [Crop1] fields? [**Check the box if the product was applied**]

a. 402 ☐ Acruron

b. 403 ☐ Callisto Xtra

c. 404 ☐ Atrazine 4L or 90DF

d. 405 ☐ Keystone LA NXT

e. 406 ☐ Harness Xtra

f. 407 ☐ Aatrex

g. 408 ☐ Breakfree NXT ATZ

h. 409 ☐ Cadence ATZ or LA NXT

- i. ⁴¹⁰ ☐ Lumax E
j. ⁴¹¹ ☐ Volley NXT

If you have selected one or more of these atrazine products, then **go to then next question**. If not, **skip to question 33**.

29. ⁴¹² When did you apply atrazine on the majority of your [Crop1] acres? [**Only check one**]

- 1 ☐ Crop preplant or preemergence
2 ☐ Crop post emergence - **Go to question to 31**
3 ☐ Split application (both pre and post on the same field)

30. ⁴¹³ Was atrazine incorporated though tillage?

- 1 ☐ All [Crop1] acres
3 ☐ Some [Crop1] acres
4 ☐ None
5 ☐ Don't Know

31. ⁴¹⁴ Did you apply one pound or less per acre of the active ingredient (atrazine) on the majority your [Crop1] acres in the 2025 crop year?

- 1 ☐ Yes
3 ☐ No
5 ☐ Don't Know

32. Which of the following factors were considered when choosing the rate of atrazine on your [Crop1] fields in 2025 besides cost? (**Select all that apply**)

- k. ⁴¹⁵ ☐ Soil Texture
l. ⁴¹⁶ ☐ Soil Organic Matter
m. ⁴¹⁷ ☐ Weed Species
n. ⁴¹⁸ ☐ Weed Pressure
o. ⁴¹⁹ ☐ Effectiveness
p. ⁴²⁰ ☐ Other
q. ⁴²¹ ☐ Don't Know

Acetochlor Use in

[Crop1]

33. ⁵⁰¹ Was acetochlor applied on any of your [Crop1] acres in 2025, premixes included?

- 1 ☐ Yes - **Go to question 35**
3 ☐ No - **Go to question 38**
5 ☐ Don't Know - **Go to next question**

34. Were any of the following acetochlor products applied to your [Crop1] fields? [**Check the box if the product was applied.**]

- a. ⁵⁰² ☐ Resicore
b. ⁵⁰³ ☐ Tripleflex
c. ⁵⁰⁴ ☐ Surestart
d. ⁵⁰⁵ ☐ Harness
e. ⁵⁰⁶ ☐ Staunch

- f. ⁵⁰⁷ ☐ Surpass
- g. ⁵⁰⁸ ☐ Volley or Volley NXT
- h. ⁵⁰⁹ ☐ Keystone
- i. ⁵¹⁰ ☐ Warrant

If you have selected one or more of these acetochlor products, then **go to then next question**. If not, **skip to question 38**

35. ⁵¹¹ When did you apply acetochlor on the majority of your [Crop1] acres? [**Only check one**]

- ¹ ☐ Crop preplant or preemergence
- ² ☐ Crop post emergence - **Go to question 37**
- ³ ☐ Split application (both pre and post on the same field)

36. ⁵¹² Was acetochlor incorporated through tillage?

- ¹ ☐ All [Crop1] acres
- ³ ☐ Some [Crop1] acres
- ⁴ ☐ None
- ⁵ ☐ Don't Know

37. Which of the following factors were considered when choosing the rate of acetochlor on your [Crop1] fields in 2025 besides cost? (**Select all that apply**)

- a. ⁵¹³ ☐ Soil Texture
- b. ⁵¹⁴ ☐ Soil Organic Matter
- c. ⁵¹⁵ ☐ Weed Species
- d. ⁵¹⁶ ☐ Weed Pressure
- e. ⁵¹⁷ ☐ Effectiveness
- f. ⁵¹⁸ ☐ Other
- g. ⁵¹⁹ ☐ Don't Know

Acetochlor Use in [Crop2]

38. ⁶⁰¹ Was Warrant or Warrant Ultra applied to your [Crop2] fields?

- ¹ ☐ Yes - **Go to next question**
- ³ ☐ No - **Conclude survey**
- ⁵ ☐ Don't Know - **Conclude survey**

39. ⁶⁰² When did you apply acetochlor on the majority of your [Crop2] acres? [**Only choose one**]

- ¹ ☐ Crop preplant or preemergence
- ² ☐ Crop post emergence - **Go to question to 41**
- ³ ☐ Split application (both pre and post on the same field)

40. ⁶⁰³ Was acetochlor incorporated through tillage?

- ¹ ☐ All [Crop2] acres
- ² ☐ Some [Crop2] acres
- ³ ☐ None

5 ☐ Don't Know

41. Which of the following factors were considered when choosing the rate of acetochlor on your [Crop2] fields in 2025 besides cost? (**Select all that apply**)

- r. ⁶⁰⁴ ☐ Soil Texture
- s. ⁶⁰⁵ ☐ Soil Organic Matter
- t. ⁶⁰⁶ ☐ Weed Species
- u. ⁶⁰⁷ ☐ Weed Pressure
- v. ⁶⁰⁸ ☐ Effectiveness
- w. ⁶⁰⁹ ☐ Other
- x. ⁶¹⁰ ☐ Don't Know

Response		Respondent		Mode		Enum.	Eval.	Change	Office Use for POID				
1-Comp 2-R 3-Inac 4-Office Hold 5-R -- Est 6-Inac --Est 7-Off Hold --Est	9901	1-Op/Mgr 2-Sp 3-Acct/Bkpr 4-Partner 9-Oth	9902	1-PASI (Mail) 2-PATI (Tel) 3-PAPI (Face-to-Face) 6-Email 7-Fax 19-Other	9903	9998	9900	9985	9989				
									_____ - _____ - _____				
									Optional Use				
									9907	9908	9906	9916	
S/E Name:													

