

# MINNESOTA BEST MANAGEMENT PRACTICES SURVEY - 2025

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

<sup>1</sup>  Yes                      <sup>3</sup>  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. <sup>203</sup> Did you have any acres of [Crop1] in 2025 that were planted to [Crop1] in 2024?

<sup>1</sup>  Yes                      <sup>3</sup>  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. <sup>205</sup>  Auto Steer
- b. <sup>206</sup>  Precision planting
- c. <sup>207</sup>  Variable rate fertilizer applications
- d. <sup>208</sup>  Precision spraying, such as auto boom shutoff
- e. <sup>209</sup>  Nitrogen applications based on zone management
- f. <sup>210</sup>  Nitrogen applications based on aerial imagery
- g. <sup>211</sup>  Nitrogen applications based on in field variables such as in season soil tests
- h. <sup>212</sup>  Nitrogen applications based on other in season variables not mentioned above

7. <sup>213</sup> 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. <sup>216</sup> With the higher price of fertilizer, did you reduce your N rate on your [Crop1] acres?

- <sup>1</sup>  Yes
- <sup>3</sup>  No
- <sup>5</sup>  Don't Know

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

- <sup>1</sup>  Yes
- <sup>3</sup>  No

<sup>218</sup> **If yes,** was the manure tested within the last five years before application in 2025?

- <sup>1</sup>  Yes
- <sup>3</sup>  No

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

- a. <sup>219</sup>  Soil organic matter
- b. <sup>220</sup>  Price of nitrogen
- c. <sup>221</sup>  Yield goal
- d. <sup>222</sup>  Previous crop
- e. <sup>223</sup>  Variable rate
- f. <sup>224</sup>  Price of [Crop1]
- g. <sup>225</sup>  Cation exchange capacity (CEC)
- f. <sup>226</sup>  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 <input type="checkbox"/>	302 <input type="checkbox"/>
b. Have herbicides custom applied?.....	303 <input type="checkbox"/>	304 <input type="checkbox"/>
c. Apply some myself and some custom applied.....	305 <input type="checkbox"/>	306 <input type="checkbox"/>
d. Don't use herbicides	307 <input type="checkbox"/>	308 <input type="checkbox"/>

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 <input type="checkbox"/> | 310 <input type="checkbox"/> |
| b. Dealer/coop.....                            | 311 <input type="checkbox"/> | 312 <input type="checkbox"/> |
| c. Crop consultant.....                        | 313 <input type="checkbox"/> | 314 <input type="checkbox"/> |
| d. None of my fields were scouted.....         | 315 <input type="checkbox"/> | 316 <input type="checkbox"/> |

(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 <input type="checkbox"/> | 332 <input type="checkbox"/> |
| b. Reduced Tillage 15% - 30% residue.....  | 333 <input type="checkbox"/> | 334 <input type="checkbox"/> |
| c. Conservation Tillage > 30% residue..... | 335 <input type="checkbox"/> | 336 <input type="checkbox"/> |
| d. Strip Tillage.....                      | 337 <input type="checkbox"/> | 338 <input type="checkbox"/> |
| e. No Till.....                            | 339 <input type="checkbox"/> | 340 <input type="checkbox"/> |

(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. <sup>401</sup> 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. <sup>402</sup>  Acruron

b. <sup>403</sup>  Callisto Xtra

c. <sup>404</sup>  Atrazine 4L or 90DF

d. <sup>405</sup>  Keystone LA NXT

e. <sup>406</sup>  Harness Xtra

- f. <sup>407</sup>  Aatrex
- g. <sup>408</sup>  Breakfree NXT ATZ
- h. <sup>409</sup>  Cadence ATZ or LA NXT
- i. <sup>410</sup>  Lumax E
- j. <sup>411</sup>  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. <sup>412</sup> When did you apply atrazine on the majority of your [Crop1] acres? [**Only check one**]

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

30. <sup>413</sup> Was atrazine incorporated through tillage?

- <sup>1</sup>  All [Crop1] acres
- <sup>3</sup>  Some [Crop1] acres
- <sup>4</sup>  None
- <sup>5</sup>  Don't Know

31. <sup>414</sup> 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?

- <sup>1</sup>  Yes
- <sup>3</sup>  No
- <sup>5</sup>  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. <sup>415</sup>  Soil Texture
- l. <sup>416</sup>  Soil Organic Matter
- m. <sup>417</sup>  Weed Species
- n. <sup>418</sup>  Weed Pressure
- o. <sup>419</sup>  Effectiveness
- p. <sup>420</sup>  Other
- q. <sup>421</sup>  Don't Know

## **Acetochlor Use in**

### **[Crop1]**

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

- <sup>1</sup>  Yes - **Go to question 35**
- <sup>3</sup>  No - **Go to question 38**
- <sup>5</sup>  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. <sup>511</sup> 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. <sup>512</sup> 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. <sup>601</sup> 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. <sup>602</sup> 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. <sup>603</sup> 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. <sup>604</sup>  Soil Texture
- s. <sup>605</sup>  Soil Organic Matter
- t. <sup>606</sup>  Weed Species
- u. <sup>607</sup>  Weed Pressure
- v. <sup>608</sup>  Effectiveness
- w. <sup>609</sup>  Other
- x. <sup>610</sup>  Don't Know

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





