

# BEST MANAGEMENT PRACTICES SURVEY - 2020

OMB No. 0535-0218  
 Approval Expires: 11/30/2023  
 Project Code: QID:  
 SMetaKey:



**United States  
 Department of  
 Agriculture**



**NATIONAL  
 AGRICULTURAL  
 STATISTICS  
 SERVICE**

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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 response 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**.

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 is 0535-0002. The time required to complete this information collection is estimated to average 15 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.

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 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.

## **SECTION 1 CROP ACRES**

Please report the total ACRES WITH CORN AND SOYBEANS you operated in 2020. Also, provide a breakdown of acres with and without irrigation. Acres under irrigation refers to acres where water was applied with an irrigation system for the purpose of producing the corn crop. Please provide the previous crop before being planted to corn. If you do not know an answer, please leave a question mark in the box next to the question.

1. Of all land operated in 2020, how many acres were:

	<b>2020 ACRES</b>
a. Acres planted to corn?.....	530
b. Of the acres in 1a, Corn acres not under irrigation?.....	531
c. Of the acres in 1a, Corn acres under irrigation?.....	532
d. Of the acres in 1a, Corn acres planted following corn?.....	533
e. Of the acres in 1a, Corn acres planted following soybeans?.....	534
f. Of the acres in 1a, Corn acres following alfalfa?.....	535
g. Of the acres in 1a, Corn acres planted with treated seed?.....	536
h. Of the acres in 1a, Corn acres planted with seed treated with an insecticide?.....	537
i. Acres planted to soybeans?.....	600
j. Of the acres in 1i, Soybean acres planted with treated seed?.....	601
k. Of the acres in 1i, Soybean acres planted with seed treated with an insecticide?.....	602

## **SECTION 2 RECORD KEEPING FOR FERTILIZER APPLICATIONS**

1. Did your operation plant any corn acres in 2020?

- Yes – continue to question 2 below       No – Go to Section 3

Please consider how you kept track of nitrogen fertilizer input for corn in 2020, such as rate, timing, placement, source and crediting of other nitrogen sources (e.g. manure, legumes etc.)

2. For total CORN ACRES you operated in 2020 (item 1a):

	<b>2020 CORN ACRES</b>
a. On how many acres were fertilizer inputs tracked by me using farm	540

management software, spreadsheets or similar?.....	
b. On how many acres were fertilizer inputs tracked by me using paper records?.....	541
c. On how many acres were fertilizer inputs tracked for me by others (e.g. fertilizer dealer, crop consultant)?.....	542

**SECTION 3 NITROGEN MANAGEMENT**

1. Did your operation plant any corn acres in 2020?

- Yes – continue to question 2 below       No – Go to Section 4

Please consider your nitrogen application preparations for the 2020 crop season. MRTN refers to the University of Minnesota’s Maximum Return To Nitrogen approach for estimating nitrogen rate on corn.

2. For total CORN ACRES you operated in 2020 (Item 1a):

	2020 CORN ACRES NON-IRRIGATED	2020 CORN ACRES IRRIGATED
a. On how many acres did you use the University of Minnesota’s MRTN approach to determine N rates?.....	543	544
b. On how many acres did you use other industry-recommended techniques (e.g. fertilizer dealer, crop consultant, crop management software) to determine N rates?.....	545	546
c. On how many acres did you use an in-season soil test, plant test or crop sensors to guide nitrogen fertilizer rates?.....	547	548

3. For total CORN ACRES you operated in 2020 (Item 1a), please record the acres fertilized with the strategies listed below. (INCLUDE fertilizer applications in the preceding fall and winter, as well as preplant, at-plant and in-season applications. EXCLUDE manure applications).

	2020 CORN ACRES NON-IRRIGATED	2020 CORN ACRES IRRIGATED
a. All nitrogen fertilizer was applied in spring or in-season (no fall application)?.....	550	551
b. Fall/winter applied nitrogen fertilizer was more than 75% of total nitrogen fertilizer?.....	552	553
c. More than 50% of nitrogen fertilizer was applied in-season (include fertigation).....	554	555
d. Fall/winter nitrogen fertilizer was applied with a nitrification inhibitor.....	556	557
e. Spring nitrogen fertilizer was applied with a nitrification inhibitor.....	558	559

**SECTION 4 GENERAL KNOWLEDGE**

For this question, please check the boxes as appropriate. The University of Minnesota recommends the Maximum Return to Nitrogen (MRTN) approach for nitrogen rate on corn.

1. Which of the following factors are included in the MRTN ratio (check two boxes)

a. Soil organic matter.....	560	
b. Price of nitrogen.....	561	
c. Yield goal.....	562	
d. Previous crop.....	563	
e. Variable rate.....	564	
f. Price of corn.....	565	
g. Cation exchange capacity (CEC).....	566	

**SECTION 5**

**OTHER TECHNIQUES**

4. Does your operation use other practices to reduce nitrogen losses from your fields?

Yes – continue to question 2 below

No – Go to Section 6

2. What are the top three practices are you using to reduce nitrogen losses from your fields? Please list/explain below and specify the acres

		Acres where practices are used
a. Specify:	701 _____ _____ _____	702 _____ _____ _____
b. Specify:	703 _____ _____ _____	704 _____ _____ _____
c. Specify:	705 _____ _____ _____	706 _____ _____ _____

**SECTION 6****PESTICIDE QUESTIONS**

Who plays a role in the following decisions? (please **check** all that apply, and **circle** the **check** that makes the **primary** decision)

<b>Decision</b>	<b>Myself</b>	<b>Relative/ friend/ neighbor</b>	<b>Employee</b>	<b>Dealer/seed or chemical company rep</b>	<b>Commercial applicator</b>	<b>Independent crop consultant/ agronomist</b>	<b>Other</b>	<b>I don't know</b>	<b>Does not occur</b>
Which herbicide(s) is used	801	802	803	804	805	806	807	808	809
Which insecticide(s) is used	810	811	812	813	814	815	816	817	818
Which fungicide(s) is used	819	820	821	822	823	824	825	826	827
Which seed treatments are used	828	829	830	831	832	833	834	835	836

Who do you get information from about the following? (please **check** all that apply and **circle** the **check** that makes **primary** influence).

*Efficacy in this question refers to the level of control that an herbicide has on weeds, insecticide has on insects, and fungicide has on pathogens.*

	<b>Extension</b>	<b>Relative/friend/ neighbor</b>	<b>Dealer/seed or chemical company rep</b>	<b>People on social media or blogs</b>	<b>Independent crop consultant/ agronomist</b>	<b>MN Department of Agriculture</b>	<b>Other</b>	<b>I don't know</b>	<b>I don't get this information</b>
Integrated pest management	850	851	852	853	854	855	856	857	858
Insecticide efficacy	859	860	861	862	863	864	865	866	867
Herbicide efficacy	868	869	870	871	872	873	874	875	876
Fungicide efficacy	877	878	879	880	881	882	883	884	885
Insecticide application timing	886	887	888	889	890	891	892	893	894
Herbicide application timing	895	896	897	898	899	900	901	902	903
Fungicide application timing	904	905	906	907	908	909	910	911	912

The survey results will be available on the internet at <https://www.mda.state.mn.us/> in summer, 2022.

**This completes the survey. Thank you for your help!**

Respondent Name: _____	9911 Phone: ( _____ ) _____ --	9910    MM    DD    YY
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Response	9901	Respondent	9902	Mode	9903	Enum.	Eval.	Change	Office Use for POID			
1-Comp		1-Op/Mgr		1-Mail		9998	9900	9985	9989			
2-R		2-Sp		2-Tel								
3-Inac		3-Acct/Bkpr		3-Face-to-Face								
4-Office Hold		4-Partner		4-CATI								
5-R – Est		9-Oth		5-Web			<b>R. Unit</b>					
6-Inac – Est				6-E-mail								
7-Off Hold – Est				7-Fax			9921		9907	9908	9906	9916
				8-CAPI								
				19-Other								
S/E Name												