

## TURNING POINT SURVEY OF WEED CONTROL AND PRODUCTION PRACTICES IN SUGARBEET IN MINNESOTA AND EASTERN NORTH DAKOTA IN 2025

Thomas J. Peters<sup>1</sup>, Adam Aberle<sup>2</sup>, Eric Branch<sup>3</sup>, and Mark A. Boetel<sup>4</sup>

<sup>1</sup>Extension Sugarbeet Specialist and <sup>2</sup>Sugarbeet Research Specialist,  
North Dakota State University & University of Minnesota, Fargo, ND and

<sup>3</sup>Extension Sugarbeet Specialist, North Dakota State University & University of Minnesota, Fargo, ND

<sup>4</sup>Professor, Dept. of Entomology, North Dakota State University

The annual weed control and production practices live polling questionnaire was conducted using Turning Point Technology at the 2026 winter Sugarbeet Grower Seminars. Responses are based on production practices from the 2025 growing season. The survey focuses on responses from growers in attendance at the Fargo, Grafton, Grand Forks, Wahpeton, ND, and Willmar, MN, grower seminars. Respondents from seminars indicated the county in which the majority of their sugarbeet were produced (Tables 1–4). Survey results represent approximately 142,000 acres reported by 179 respondents (Table 5) compared with 199,000 acres in the 2025 survey and 210,000 acres represented in 2024. The average sugarbeet acreage per respondent was calculated from Table 5 at 793 acres, which is lower than the 855-acre average reported in 2025. Twenty-one percent of respondents planted 400–599 acres of sugarbeet, whereas only 4% reported planting 2,000 or more acres in 2025. Additional fungicide and insecticide questions were newly added to the 2026 Turning Point Survey (Tables 17–20); therefore, producer age demographics discussed in 2025 will be collected on a five-year basis.

Survey participants were asked a series of questions regarding their production practices used in sugarbeet in 2025. Growers were asked about their tillage practices for sugarbeet in 2025 (Table 6). Ninety-seven percent of all respondents indicated conventional tillage as their primary with 2% practicing strip tillage and 1% using no tillage. Across locations, 61% of respondents indicated wheat was the crop preceding sugarbeet (Table 7), 28% indicated corn (field and sweet) and ten-percent listed soybean. Preceding crops varied by location with 100% and 85% of Grand Forks and Fargo growers, respectively, indicating wheat preceded sugarbeet and 92% of Willmar growers indicated corn as their preceding crop. Thirty-six and twenty-two percent of Fargo and Grand Forks growers, respectively, who participated in the winter meetings used barley as a nurse or cover crop in 2025 (data not listed). Respondents at the Willmar and Wahpeton grower seminars were not surveyed regarding nurse or cover crop use in the 2025 survey.

Fifty-six percent of survey respondents indicated *Cercospora* leaf spot (CLS) as their most serious production problem (Table 8) in 2026 as compared with 16% of survey participants in 2024. Emergence and stand were named as the most serious overall by 15% of respondents across locations; however, emergence was the most serious problem for 34% of growers in Grand Forks. Twenty-three percent of respondents listed weeds as their most serious production challenge, contrary to fifty-two and fifty-four percent in 2024 and 2025, respectively.

Waterhemp was named as the most serious weed problem in sugarbeet for the sixth year in a row by 86% of respondents in 2026 (Table 9) as compared with 78% in 2025 and 76% in 2024. Kochia was rated as the most serious weed problem by 12% of respondents across all grower regions; 20% of Fargo growers and 18% of Grand Forks growers indicated kochia as their most challenging weed. The increased presence of glyphosate-resistant (GR) waterhemp and kochia, compounded by periods of hot and dry conditions followed by cool and wet conditions from May to June in 2024 caused multiple emergence flushes of both GR waterhemp and GR kochia (Ikley, personal communication 2026), which are likely the reasons for these weeds being named as the worst weeds. Grower regions south of Fargo are most affected by waterhemp; 96% of Willmar, 92% of Wahpeton, 80% of Fargo, and 74% of Grand Forks respondents indicated waterhemp as their most problematic weed. Waterhemp replaced kochia as the worst weed for 51% of respondents of the Grafton meeting (Drayton Factory District) in 2025. However, because Turning Point technology was not operational at the Grafton seminar, only 2025 Turning Point data are presented in the following; Thirty-seven percent of Grafton growers reported kochia as the most serious weed problem, 21% less than 2024. The recent registration and accepted use of kochia control herbicide phenmedipham (Spin-Aid), and widely available tallow amine adjuvant for improving glyphosate-resistant kochia control has likely created a shift in weed control problems for Grafton growers who have historically reported kochia as their most serious weed problem in sugarbeet.

Preplant incorporated (PPI) or preemergence (PRE) herbicides were applied by 91% of survey respondents in 2025 (Table 10). Ethofumesate alone accounted for 40% of responses, S-metolachlor alone for 25%, and the combination of S-metolachlor plus ethofumesate for approximately 26%. Use of soil-residual herbicides continues to be a foundational practice across locations.

Regarding activation method of ethofumesate (Table 11), 48% of respondents applied ethofumesate PRE, while 22% did not apply ethofumesate. Mechanical incorporation methods such as field cultivator were used by 15% of growers, while 5% used vertical tillage, and harrow packer and multi-weeder implements used by six percent growers.

Sixty percent of growers indicated excellent (11%) to good (48%) weed control from soil-applied herbicides (Table 12). Twenty-five percent reported fair control, and ten percent indicated poor control. Thirty-five percent of respondents reporting fair to poor weed control from PPI or PRE applications creates weed control challenges later in sugarbeet development (Table 14). A lack of rainfall for chloroacetamide herbicide activation, particularly from May 2–May 14 and May 22–June 4 was recorded at the Wahpeton NDAWN Station. The absence of precipitation during these windows likely limited proper herbicide incorporation into the soil profile, reducing residual efficacy and overall weed control performance.

The application of soil-residual herbicides applied early postemergence (lay-by) to the 2025 sugarbeet crop was reported by over 96% of respondents (Table 13). S-metolachlor was applied early postemergence by 62% of growers, while 26% applied Outlook and 9% applied Warrant. S-metolachlor use was particularly high in Fargo (90%) and Grand Forks (81%), whereas Outlook was more common in Willmar (63%).

Lay-by applications are postemergence to sugarbeet and preemergence to small-seeded broadleaf weeds and typically occur from cotyledon to the 6- or 8-leaf sugarbeet stage. Soil residual chloroacetamide herbicides (SOA 15) remain the primary method for controlling *Amaranthus* species in sugarbeet. Despite responsible weed management, waterhemp escapes still occur. Across locations surveyed, 13% of respondents used inter-row cultivation, 7% Ultra Blazer, 35% hand-weeding, 14% electric weeder, and 26% of growers left it in the field (Table 16).

Fifty-eight percent of growers utilized some level of hand-weeding in 2025 (Table 14). Approximately 29% indicated less than 10% of their acres were hand-weeded, while 17% reported 10–50% of acres hand-weeded. Approximately twelve percent of growers reported more than 50% of acres hand-weeded.

Thirty-nine percent of participants reported some level of row-crop cultivation in 2025 (Table 15). Twenty-four percent of respondents indicated less than 10% of their acres were cultivated, whereas 3% reported cultivating 100% of their acres.

Rhizoctonia management in 2025 relied heavily on seed-applied protection, with 41% of respondents using seed treatment alone and twenty-two percent combining seed treatment with in-furrow applications (Table 17). Likewise, 22% of growers integrated POST fungicides with seed treatments and only 2% reported using a seed treatment plus in-furrow plus two POST applications. Among POST products (Table 18), 24% used Excalia and 18% used Quadris, while thirty-eight percent of respondents reported no POST fungicide. Twenty-nine percent of respondents made five fungicide applications for *Cercospora* leaf spot (Table 19). Forty-five percent of Grand Forks growers made six fungicide applications for *Cercospora* leaf spot control, while forty percent of Wahpeton growers made seven applications. Few (4%) respondents made eight or more fungicide applications.

Root maggot was the most frequently reported insect issue in 2025, accounting for 29% of responses overall and 62% in Grand Forks. Seventeen percent of respondents indicated Springtails and 14% indicated cutworms, while 9% responded grasshoppers and 5% Lygus bugs. Both, grasshoppers and Lygus bugs, were more localized to Wahpeton and Willmar growing regions. Approximately 20% of respondents selected “Other,” suggesting variable or region-specific insect pressures, particularly in Fargo and Wahpeton.

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**Table 1. 2026 Fargo Grower Seminar – Number of survey respondents by county growing sugarbeet in 2025.**

County	Number of Responses	Percent of Responses
Barnes	1	5
Becker	2	9
Cass	2	9
Clay	9	41
Norman <sup>1</sup>	6	27
Traill	2	9
Total	22	100

<sup>1</sup>Includes Mahnomon County.**Table 2. 2026 Grand Forks Grower Seminar – Number of survey respondents by county growing sugarbeet in 2025.**

County	Number of Responses	Percent of Responses
Grand Forks	6	17
Marshall	1	3
Polk <sup>1</sup>	21	60
Traill	2	6
Walsh	4	11
Other	1	3
Total	35	100

<sup>1</sup>Includes 1 Pennington County Respondent.**Table 3. 2026 Wahpeton Grower Seminar - Number of survey respondents by county growing sugarbeet in 2025.**

County	Number of Responses	Percent of Responses
Cass	2	4
Clay	8	15
Grant	7	13
Richland	11	20
Roberts	1	2
Stevens	1	2
Traverse	2	4
Wilkin	22	41
Total	54	100

**Table 4. 2026 Willmar Grower Seminar - Number of survey respondents by county growing sugarbeet in 2025.**

County	Number of Responses	Percent of Responses
Chippewa	30	30
Kandiyohi	6	6
Pope	1	1
Redwood	2	2
Renville	23	29
Stevens	4	5
Swift	8	10
Yellow Medicine	1	1
Other	4	5
Total	79	100

**Table 5. Total sugarbeet acreage operated by respondents in 2025.**

Location	Responses	Acres of sugarbeet									
		<99	100-199	200-299	300-399	400-599	600-799	800-999	1000-1499	1500-1999	2000+
-----% of responses-----											
Fargo	20	0	5	0	5	20	25	10	20	10	5
Grand Forks	34	0	9	6	3	21	24	6	18	12	3
Wahpeton	51	4	8	6	8	25	16	14	16	4	0
Willmar	74	5	4	8	15	19	12	8	16	5	7
Total	179	3	6	6	10	21	17	1	17	7	4

**Table 6. Tillage system used in sugarbeet in 2025.**

Location	Responses	Previous Crop					
		Sweet Corn	Field Corn	Dry Bean	Peas	Soybean	Wheat
Fargo	21	0	0	0	0	15	85
Grand Forks	35	0	0	0	0	0	100
Wahpeton	52	0	21	0	0	17	62
Willmar	74	11	81	0	0	8	0
Total	182	3	26	0	0	10	62

**Table 7. Crop grown in 2024 that preceded sugarbeet in 2025.**

Location	Responses	Herbicide injury			Weeds	Root maggot
		Aph <sup>2</sup>	CLS <sup>1</sup>	Emerg <sup>3</sup>		
Fargo	27	0	59	15	0	4
Grand Forks	64	2	76	5	2	0
Wahpeton	55	2	55	6	0	0
Willmar	83	2	34	34	0	0
Total	229	2	56	15	0	1

**Table 8. Most serious production challenge in 2025.**

Location	Responses	PPI or PRE Herbicides Applied			Other	None
		S-metolachlor	ethofumesate	Ro-Neet SB		
Fargo	20	12	52	0	36	0
Grand Forks	40	52	10	0	5	32
Wahpeton	65	26	38	0	34	2
Willmar	82	10	59	1	27	2
Total	212	25	40	0	26	9

<sup>1</sup>Cercospora Leaf Spot<sup>2</sup>Aphanomyces<sup>3</sup>Includes Emergence/Stand<sup>4</sup>Includes all root diseases**Table 9. Most serious weed problem in sugarbeet in 2025.**

Location	Responses	PPI or PRE Herbicides Applied			Other	None
		S-metolachlor	ethofumesate	Ro-Neet SB		
Fargo	20	0	0	0	0	80
Grand Forks	34	0	0	6	18	74
Wahpeton	52	0	0	0	8	92
Willmar	70	1	0	0	2	96
Total	176	0	0	2	12	86

<sup>1</sup>colq=common lambsquarters, cora=common ragweed, gira=giant ragweed, rrpw=redroot pigweed, wahe=waterhemp.**Table 10. Preplant incorporated or preemergence herbicides used in sugarbeet in 2025.**

Location	Responses	PPI or PRE Herbicides Applied			Other	None
		S-metolachlor	ethofumesate	Ro-Neet SB		
Fargo	25	12	52	0	36	0
Grand Forks	40	52	10	0	5	32
Wahpeton	65	26	38	0	34	2
Willmar	82	10	59	1	27	2
Total	212	25	40	0	26	9

**Table 11. Activation method of ethofumesate applied preplant incorporated in 2025.**

Location	Responses	PPI or PRE Weed Control Satisfaction						Did not apply etho
		Field Cultivator	Multi-weeder	Harrow-packer	Vertical Tillage	Other	Etho PRE	
Fargo	20	15	5	5	15	5	55	0
Grand Forks	31	6	0	6	0	3	10	74
Wahpeton	52	13	6	2	2	6	63	8
Willmar	77	25	1	0	3	5	62	4
Total	180	15	3	3	5	5	5	22

**Table 12. Satisfaction in weed control from preplant incorporated and preemergence herbicides in 2025.**

Location	Responses	PPI or PRE Weed Control Satisfaction					
		Excellent	Good	Fair	Poor	Unsure	None Used
Fargo	20	30	60	10	0	0	0
Grand Forks	36	0	58	19	6	0	17
Wahpeton	51	12	53	31	4	0	0
Willmar	69	1	22	39	30	1	6
Total	176	11	48	25	10	0	6

**Table 13. Soil-residual herbicides applied early postemergence (lay-by) in sugarbeet in 2025.**

Location	Responses	Lay-by Herbicides Applied			
		S-metolachlor	Outlook	Warrant	None
Fargo	20	90	5	0	5
Grand Forks	36	81	11	0	8
Wahpeton	57	72	23	5	0
Willmar	103	6	63	30	1
Total	216	62	26	9	4

**Table 14. Percent of sugarbeet acres hand-weeded in 2025.**

Location	Responses	% Acres Hand-Weeded				
		0	< 10	10-50	51-100	>100
Fargo	21	48	38	14	0	0
Grand Forks	37	30	54	14	3	0
Wahpeton	50	66	10	16	8	0
Willmar	71	25	13	24	23	15
Total	179	42	29	17	9	4

**Table 15. Percent of sugarbeet acres row-crop cultivated in 2025.**

Location	Responses	% Acres Row-Cultivated				
		0	< 10	10-50	51-100	>100
Fargo	20	70	30	0	0	0
Grand Forks	39	64	31	3	3	0
Wahpeton	51	69	16	12	4	0
Willmar	69	41	20	13	14	12
Total	179	61	24	7	5	3

**Table 16. Rescue treatments used for escaped waterhemp in sugarbeet in 2025.**

Location	Responses	Glyphosate Application Tank-Mixes					
		IRC <sup>1</sup>	Ultra Blazer	Hand labor	Electric weeder	Left <sup>2</sup>	No escapes
Fargo	27	7	4	30	19	33	7
Grand Forks	47	11	0	47	4	30	9
Wahpeton	62	15	18	23	11	26	8
Willmar	116	17	6	41	20	14	2
Total	252	13	7	35	14	26	7

<sup>1</sup>Inter-row cultivation.<sup>2</sup>Waterhemp escape left in field.

**Table 17. What methods were used to control Rhizoctonia in 2025.**

Location	Responses	Sd t <sup>1</sup>	Sd t + in-f	Sd t + POST	Sd t + in-f + POST	Sd t+ in-f + 2XPOST
		-----% of responses-----				
Fargo	20	40	25	15	15	5
Grand Forks	37	27	35	30	8	0
Wahpeton	50	76	12	8	4	0
Wilmar	70	21	16	34	27	1
Total	177	41	22	22	14	2

<sup>1</sup>Seed treatment, seed treatment + in-furrow, seed treatment + POST, seed treatment + in-furrow + POST, seed treatment + in-furrow + 2xPOST.

**Table 18. Which POST fungicide did you use to control Rhizoctonia in 2025.**

Location	Responses	Azteroid	Azterknot	Excalia	Quadris	Proline	Elatus	Other	None
		-----% of responses-----							
Fargo	20	5	0	45	20	5	0	0	25
Grand Forks	40	4	0	2	10	4	0	2	78
Wahpeton	51	10	3	39	20	3	0	0	23
Wilmar	70	35	2	8	22	8	0	0	25
Total	181	14	1	24	18	5	0	1	38

**Table 19. How many fungicide applications did you make to control Cercospora leaf spot in 2025.**

Location	Responses	1	2	3	4	5	6	7	8	> 8	
		-----% of responses-----									
Fargo	20	5	0	0	25	40	20	10	0	0	
Grand Forks	51	0	0	2	6	35	45	10	0	2	
Wahpeton	72	0	1	1	3	12	28	40	8	6	
Wilmar	40	0	0	18	32	30	20	0	0	0	
Total	183	1	0	5	17	30	28	15	2	2	

**Table 20. What was your worst insect problem in 2025.**

Location	Responses	Armyw <sup>1</sup>	Cutw	Grassh	Lygus	Rtmgtt	Sprtls	Wt G.	Wirew	Other
		-----% of responses-----								
Fargo	18	11	17	0	0	17	22	0	0	33
Grand Forks	37	0	0	8	0	62	22	0	0	8
Wahpeton	45	7	20	29	2	9	7	4	4	18
Wilmar	73	0	21	1	19	** <sup>2</sup>	**	1	**	**
Total	173	4	14	9	5	29	17	1	1	20

<sup>1</sup>Armyworm, Cutworm, Grasshopper, Lygus Bugs, Root Maggot, Springtails, White Grubs, Wireworm, Other.

<sup>2</sup>Willmar grower seminar insects Armyworm = 1 % and Webworm = 0% and None = 56%.