SURVEY OF FUNGICIDE USE IN SUGARBEET IN MONTANA AND WESTERN NORTH DAKOTA IN 2021

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Sugarbeet growers were asked to report production practices in a mailer sent out to growers in the Western North Dakota and Montana sugarbeet growing area. Survey responses are based on the 2021 growing year. Respondents indicated the county in which the majority of their sugarbeets were produced (Table 1). The average sugarbeet acreage per respondent grown in 2021 was calculated from Table 2 at between 200 and 299 acres. Respondents were also asked about their most serious production problem. Sixty eight percent of growers said weeds were the biggest concern, 16% said emergence, 11% said Cercospora Leaf Spot and five percent said Fusarium (Table 3).

Survey respondents were asked about soilborne disease and control practices. Sixty seven percent said that had no soilborne disease issues, 14% each said that they were most affected by rhizoctonia and fusarium while five percent said that they were affected by multiple soilborne diseases (Table 4). Additionally, participants were asked which fungicide they used to control rhizoctonia in-furrow. Eighty one percent did not use an in-furrow fungicide, 14% used Azteroid while 5% used Quadris or a generic product (Table 5). Growers were then asked which fungicide they used POST to control rhizoctonia. Seventy six percent did not use a POST fungicide while 24% used Quadris or a generic product (Table 6).

Survey participants were then asked a series of questions regarding their CLS fungicide practices on sugarbeet in 2021. Fifty seven percent said that they used two sprays to control Cercospora leaf Spot, 24% used one spray while 19% did not spray any fungicides to control CLS (Table 7). Fifty six percent of growers start their Cerocospora Leaf Spot sprays between August 1 and 10, 17% started between July 21 and 31 and after August 10 while six percent each started their CLS sprays before July 1 and between July 1 and 10 (Table 8). Growers were asked when they finished their CLS applications. Thirty eight percent made only one or zero applications, 19% finished their CLS sprays between August 1 and 10, 10% each finished their CLS sprays before August 1, between August 11 and 20 and between September 11 and 20 while five percent of growers finished their CLS sprays between September 1 and 10 (Table 9).

Sixty three percent of survey respondents made zero percent of their CLS applications by ground application. Eleven percent each made 41-60% and 100% of their application from the ground and another six percent made between 21 and 40% and 61% and 80% from the ground (Table 10). Sixty seven percent of growers used an aerial applicator for 100% of their applications, 11% each used an aerial applicator for 0% and 41%-60% of their CLS applications while another six percent used and aerial applicator for between 21% and 40% and 61% and 80% of their sprays for Cercospora Leaf Spot (Table 11).

Table 1. 2021 Western North Dakota and Montana Growers Survey – Number of survey respondents by county.

County	Number of Responses	Percent of Responses
Dawson	4	19
McKenzie	6	29
Prairie	1	5
Richland	9	43
Roosevelt	1	5
Total	21	101

Table 2. Total sugarbeet acreage operated by respondents in 2021.

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									
Dawson	4	25	0	25	50	0	0	0	0	0	0
McKenzie	6	0	0	33	17	17	17	0	17	0	0
Prairie	1	0	100	0	0	0	0	0	0	0	0
Richland	9	0	33	33	11	0	11	0	11	0	0
Roosevelt	1	0	0	100	0	0	0	0	0	0	0
Total	21	5	19	33	19	5	10	0	10	0	0

Table 3. What was your most serious production problem?

Location	Respondents	Aph	CLS	Emergence	Fusarium	Herbicide Injury	Rhizoc	Rhizomania	Root Maggot	Weeds
		% of respondents								
Dawson	3	0	0	67	0	0	0	0	0	33
McKenzie	6	0	17	0	0	0	0	0	0	83
Prairie	1	0	0	0	0	0	0	0	0	100
Richland	8	0	13	13	13	0	0	0	0	63
Roosevelt	1	0	0	0	0	0	0	0	0	100
Total	19	0	11	16	5	0	0	0	0	68

Table 4. What soil-borne diseases affected your sugarbeet production in 2021?

Location	Respondents	Root disease					
		Rhizoctonia	Aphanomyces	Fusarium	Rhizomania	All	None
		% of respondents					
Dawson	4	0	0	0	0	0	100
McKenzie	6	0	0	33	0	17	50
Prairie	1	0	0	0	0	0	100
Richland	9	33	0	11	0	0	56
Roosevelt	1	0	0	0	0	0	100
Total	21	14	0	14	0	5	67

Table 5. Which fungicide did you apply in-furrow to control R. solani in 2021?

Location	Respondents	In-furrow fungicide use			
		Azteroid	Quadris or generic	Other	None
		% of respondents			
Dawson	4	50	0	0	50
McKenzie	6	0	0	0	100
Prairie	1	0	0	0	100
Richland	9	11	11	0	78
Roosevelt	1	0	0	0	100
Total	21	14	5	0	81

Table 6. Which POST fungicide did you use to control R. solani in 2021?

		POST fungicide					
Location	Respondents	Azteroid	Quadris or generic	Proline	Priaxor	Other	None
		----------% of respondents----------					
Dawson	4	0	25	0	0	0	75
McKenzie	6	0	33	0	0	0	67
Prairie	1	0	0	0	0	0	100
Richland	9	0	22	0	0	0	78
Roosevelt	1	0	0	0	0	0	100
Total	21	0	24	0	0	0	76

Table 7. How many fungicide application did you make to control CLS in 2021?

		Number of applications								
Location	Respondents	0	1	2	3	4	5	6	7	>7
		----------% of respondents----------								
Dawson	4	0	0	100	0	0	0	0	0	0
McKenzie	6	0	33	67	0	0	0	0	0	0
Prairie	1	100	0	0	0	0	0	0	0	0
Richland	9	33	33	33	0	0	0	0	0	0
Roosevelt	1	0	0	100	0	0	0	0	0	0
Total	21	19	24	57	0	0	0	0	0	0

Table 8. What date was your first CLS application?

		Date of first CLS application					
Location	Respondents	Before July 1	July 1-10	July 11-20	July 21-31	August 1-10	After August 10
		----------% of respondents----------					
Dawson	4	0	0	0	25	50	25
McKenzie	6	0	0	0	0	83	17
Prairie	0	0	0	0	0	0	0
Richland	7	14	14	0	14	43	14
Roosevelt	1	0	0	0	100	0	0
Total	18	6	6	0	17	56	17

Table 9. What date was your last CLS application in 2021?

		Date of last CLS application							
Location	Respondents	Before August 1	August 1-10	August 11-20	August 21-31	Sept 1-10	Sept 11-20	Later than Sept 20	Made zero or 1 CLS applications
		----------% of respondents----------							
Dawson	4	0	0	25	25	25	25	0	0
McKenzie	6	0	33	17	17	0	0	0	33
Prairie	1	0	0	0	0	0	0	0	100
Richland	9	11	22	0	0	0	11	0	56
Roosevelt	1	100	0	0	0	0	0	0	0
Total	21	10	19	10	10	5	10	0	38

Table 10. What percent of total fungicide applications for CLS were made by ground application?

Location	Respondents	0%	1%-20%	21%-40%	41%-60%	61%-80%	81%-99%	100%
		----------% of respondents----------						
Dawson	4	25	0	25	0	0	0	50
McKenzie	6	67	0	0	17	17	0	0
Prairie	0	0	0	0	0	0	0	0
Richland	7	86	0	0	14	0	0	0
Roosevelt	1	100	0	0	0	0	0	0
Total	18	67	0	6	11	6	0	11

Table 11. What percent of total fungicide applications for CLS were made by an aerial applicator?

Location	Respondents	0%	1%-20%	21%-40%	41%-60%	61%-80%	81%-99%	100%
		----------% of respondents----------						
Dawson	4	50	0	0	0	25	0	25
McKenzie	6	0	0	17	17	0	0	67
Prairie	0	0	0	0	0	0	0	0
Richland	7	0	0	0	14	0	0	86
Roosevelt	1	0	0	0	0	0	0	100
Total	18	11	0	6	11	6	0	67