

**SURVEY OF FUNGICIDE USE IN SUGARBEET IN WESTERN NORTH DAKOTA
AND EASTERN MONTANA IN 2014**

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Other portions of this survey can be found in the Weed Control and Entomology sections.

Sugarbeet growers were asked to report fungicide usage and to indicate the number of applications per acre as a part of the biennial survey of sugarbeet growers in western North Dakota and eastern Montana. Foliar fungicide was applied to 111% of sugarbeet acreage in 2014 (Table 1). Eminent, Proline, and Headline were the top three fungicides applied by respondents in 2014. Six percent of reported acres were not treated with any fungicide for Cercospora leaf spot control.

Table 1. A summary of the fungicide use by survey respondents to control cercospora from 1991 to 2014.

Year Reported	Acres	Fungicide applied											Total	
		Super/Agri	Tin +			Topsin/			Inspire		Proline	Coppers		Other ¹
	Tin	Eminent	Headline	Gem	Topsin	Mancozeb	Benlate	Priaxor	XT					
		-----% of acres reported-----												
2014	7,556	-	42	21	9	-	-	-	5	5	24	-	5	111
2011	6,134	-	74	41	-	-	-	-	-	-	-	-	-	115
2009	3,441	-	-	60	-	-	-	-	-	-	-	-	-	60
2007	8,346	-	35	36	-	-	-	-	-	-	-	-	7	78
2005	7,733	-	-	1	-	-	-	-	-	-	-	-	-	1
2003	11,732	16	61	78	18	-	7	1	-	-	-	-	-	180
2001	22,125	64	50	-	-	2	<1	75	-	-	-	-	-	191
1999	12,296	113	7	-	-	3	2	93	-	-	-	-	10	228
1997	11,059	77	-	-	-	-	-	19	-	-	-	-	6	101
1995	12,338	260	-	-	-	-	51	18	-	-	-	-	3	336
1993	9,242	38	-	-	-	-	-	-	-	-	-	-	3	43
1992	12,791	23	-	-	-	-	-	-	-	-	-	-	-	25
1991	15,784	41	-	-	-	-	-	-	-	-	-	-	7	57

¹Other includes 2014: unknown; 2007: Quadris; 1999: Mancozeb+Topsin; 1995: Du-Ter, AgscoTN, and sulfur; 1992: unknown; 1991: Du-Ter and AgscoTN

Cercospora leaf spot control was rated excellent or good by 82% of respondents in 2014 (Table 2). This compares to 88% in 2011, 86% in 2009, 79% in 2007, 100% in 2005 and 94% in 2003. Most growers started applying fungicides to control Cercospora in late-July to early-August and finished in early-August (Table 3).

Table 2. Cercospora control rating by fungicide in 2014.

Fungicide	Responses	Cercospora control rating				
		Excellent	Good	Fair	Poor	No Response
		-----% of responses-----				
Eminent	9	22	44	22	-	11
Gem	2	100	-	-	-	-
Headline	8	38	50	13	-	-
Inspire XT	2	-	100	-	-	-
Priaxor	1	100	-	-	-	-
Proline	7	29	57	14	-	-
Total	29	34	48	14	-	3

Table 3. Timing of foliar fungicide applications for Cercospora control in sugarbeet from 2009 to 2014.

Year	First Application							Last Application						
	Resp	June 20-30	July 1-10	July 11-20	July 21-31	Aug 1-10	After Aug 10	Resp.	Before Aug 1	Aug 1-10	Aug 11-20	Aug 21-31	Sept 1-10	After Sept 10
	No.	% of respondents						No.	% of respondents					
2014	21	0	0	10	43	29	19	20	30	30	5	25	10	0
2011	17	5	5	12	65	5	5	16	19	6	19	31	25	-
2009	6	-	-	-	-	33	67	6	-	-	17	50	33	-

Fungicides were applied at a rate of 1.3 applications per respondent in 2014 as calculated from Table 4. A summary of fungicide applications from 1991 to 2014 is shown in Table 4. Of the sugarbeet acres treated with fungicide in 2014, 83% received aerial fungicide applications and 17% received fungicide applications by a ground sprayer (data not shown).

Table 4. The number of fungicide applications to control cercospora per respondent from 1991 to 2014.

Year	Number of respondents	Fungicide applications					
		0	1	2	3	4	5
		% of respondents					
2014	23	4	65	26	4		
2011	20	15	25	60	-	-	-
2009	15	53	47	-	-	-	-
2007	21	33	53	14	-	-	-
2005	24	96	4	-	-	-	-
2003	38	16	26	50	8	-	-
2001	65	2	14	57	28	-	-
1999	45	4	2	55	36	-	2
1997	43	28	42	28	2	-	-
1995	63	5	38	54	3	-	-
1993	66	81	14	5	-	-	-
1992	70	87	7	6	-	-	-
1991	84	50	27	17	6	-	-

Three respondents made in-furrow applications of Quadris in 2014 to control Rhizoctonia root rot (data not shown). Two of the three respondents who made an in-furrow application also reported making a foliar application of Quadris to control Rhizoctonia. Nine additional respondents reported making a foliar application of Quadris for Rhizoctonia control. Therefore a total of 48% of respondents made a POST fungicide application to control Rhizoctonia. Kabina seed treatments were commercially available for the first time in 2014 and 61% of respondents reported planting Kabina treated seed on 52% of reported acres.