

Evaluation of foliar fungicides to manage Cercospora leaf spot of CR+ sugar beet in Michigan, 2024

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Location: Frankenmuth (SVREC)	Treatment Timings: 21-28 days
Planting Dates: April 25, 2024	Pesticides: see table
Soil Type: Loam	O.M.: 5.08 pH: 7.5
Replicates: 4	Variety: C-G227

Summary: All fungicide programs had significantly lower AUDPCs than the non-treated control ($P < 0.0001$); values ranged from 1125.2-1232.8 for programs, while the control had a value of 2795.4. Programs 2, 3, 5, and 6 had significantly greater yields than the control ($P < 0.05$). All programs had significantly greater sugar content ($P < 0.0001$) and RWST ($P < 0.001$) than the control. Treated programs had a sugar content between 14.4 and 14.8% and an RWST between 248.5 and 255.4 lbs sugar/A; the control had a sugar content of 13.1% and RWST value of 218.9 lbs sugar/A.

Table 1. Area under the disease progress curve (AUDPC) and yield parameters from the tested fungicide programs.

No.	Treatment (Rate ^a) and Timing ^b	AUDPC ^{c,d}	Yield (t/A)	Sugar (%)	RWST ^e
1	Non-treated control	2795.4 a	17.4 b	13.1 b	218.9 b
2	Dithane F45 (51 fl oz) ABCD + Inspire XT (7 fl oz) BD + Super Tin (8 fl oz) C	1129.3 b	22.3 a	14.8 a	255.4 a
3	Dithane F45 (51 fl oz) ABCD + Proline (5.7 fl oz) B + Super Tin (8 fl oz) C + Provysol (5 fl oz) D	1125.2 b	21.0 a	14.8 a	255.2 a
4	Dithane F45 (51 fl oz) ABCD + Domark (6.9 fl oz) B + Super Tin (8 fl oz) C + Provysol (5 fl oz) D	1232.8 b	20.6 ab	14.4 a	248.5 a
5	Dithane F45 (51 fl oz) AC + Badge (32 fl oz) BD + Domark (6.9 fl oz) B + Super Tin (8 fl oz) C + Provysol (5 fl oz) D	1140.9 b	22.4 a	14.8 a	252.2 a
6	Dithane F45 (51 fl oz) AC + Badge (32 fl oz) BD + Provysol (5 fl oz) B + Super Tin (8 fl oz) C + Domark (6.9 fl oz) D	1188.3 b	23.0 a	14.8 a	252.5 a

^a All rates, unless otherwise specified, are listed as a measure of product per acre. MasterLock was added to all tank mixes at a rate of 0.25 % v/v.

^b Application letters code for the following dates: A=27 Jun, B=2 Jul, C=28 Jul, and D=23 Aug.

^c Area under the disease progress curve was calculated using disease severity scores (0-10 scale) collected 1 Jul, 18 Jul, 28 Jul, 12 Aug, and 29 Aug.

^d Column values followed by the same letter were not significantly different based on Fisher's Protected LSD ($\alpha=0.05$). If no letter, then means were not significantly different.

^e Pounds of recoverable white sugar per ton of beets.