



MICHIGAN SUGARBEET
REACH
Research & Education Advisory Council

2019 VARIETY TRIAL RESULTS

REACH/SUGARBEET ADVANCEMENT COMMITTEE LIST

2019 Voting Membership

23 Voting Members

Company & Name	Terms Remaining	Expire
Michigan Sugar Company		
Jim Ruhlman (5th Member)	Permanent	
Dennis Bischer	Permanent	
Jim Stewart	Permanent	
Corey Guza	Permanent	
Michigan Sugar Agriculturists (4 Years)		
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Kevin Messing	2	2021
Cassie Sneller	3	2022
Michigan Sugar Company District Board Members (1 year)		
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Troy Schuette	1	2020
Peter Maxwell (Secretary)	1	2020
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Andy Shaffner (Vice Chairman)	3	2022
Michigan State University, University of Guelph, and USDA (3 years)		
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Sugar Beet Seed Company (2 years)		
Andy Bernia	2	2021
Agri-Business Retail (2 years)		
Kyle Edler	2	2021
Agri-Business Manufacturing (2 years)		
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Michigan Sugar Company Board of Directors (1 year)		
Clay Crumbaugh	1	2020
Mark Sylvester (Chairman)	1	2020
SBA Director		
Daniel Bublitz	Permanent	

Ex-Officio Members

Company	Name
Chairman of Board of Directors - MSC	Rick Gerstenberger
CEO of Michigan Sugar Company	Mark Flegenheimer

MISSION STATEMENT:

The mission of the **Michigan Sugarbeet Research Education Advisory Council** is to be the central trusted source of agronomic information for the sugarbeet industry.

The council will provide direction for the Michigan-Ontario sugarbeet researchers and assemble and distribute research/agronomy information.

Cooperative educational efforts will be conducted with the goal of improving productivity and profitability for all stakeholders.



RESEARCH SPECIALISTS:

MICHIGAN SUGAR COMPANY

Corey Guza

PhD, Director of Agronomy and Research
989.415.3419
corey.guza@michigansugar.com

Jim Stewart

Director of Research
989.225.6720
james.stewart@michigansugar.com

Dennis Bischer

Director of Agronomy
989.551.4416
dennis.bischer@michigansugar.com

Brian Groulx

Research Manager
989.225.6709
brian.groulx@michigansugar.com

MICHIGAN STATE UNIVERSITY

Daniel Bublit

SBA Director
989.392.7805
bublitd@msu.edu

Tom Wenzel

Research Technician
989.737.9447
wenzelth@msu.edu

2019 Variety Trial Results

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OVT Location Information

OVT Cercospora Fungicide Application Information



Approval of Seed Varieties for the 2020 Crop

Fully Approved Varieties		
Unlimited Quantities		
B-1399	SX-RR1264	C-G752NT
B-1690	SX-RR1275N	MA-709
B-1703	SX-RR1278N	HIL-9865
SX-RR1243	C-RR059	HIL-9879NT
SX-RR1245N	C-G675	HIL-9908

Limited Approved Varieties		
Quantities limited to 5% of acres		
SX-2283	B-188N	MA-813NT
C-G861	B-1893	MA-814
C-G855	HIL-2240	

Specialty Approved Varieties		
Variety	Specialty	Quantity
C-G333NT*	Nematode/Rhizoc	5000 Units
B-1606N**	Nematode/Alt.	Unlimited
HIL-2238NT*	Nematode/Cerc.	2500 Units

* Approved to plant through 2020

** Approved to plant through 2021

Corporate Agricultural Office
122 Uptown Dr. Suite 300
Bay City, Michigan 48708
Telephone (989) 686-0161 - Fax (989) 671-3714



Approved Varieties for 2020

Michigan Sugar Company

2018 & 2019 Data

Variety	Approval Status	\$/A	All Values are % of Check											
			RWSA	RWST	T/A	Emergence	Cercospora	Alter naria*	Cerc/Alt Comb.	Rhizoc tonia	Root Aphid	Aphan omyces	Fusar ium	Rhizo mania
C-G675	Full Approval	\$1,688	107.0	100.3	105.6	103 G	103 F+	91 G+	97 G	90 G	18 G+	100 F	110 F-	89 G
C-G752NT	Full Approval	\$1,687	106.9	100.1	105.4	101 G	107 F	104 F+	105 F	99 F+	30 G	78 G	79 G	92 G
B-1606N	Special Approval	\$1,687	107.2	97.9	107.9	99 F+	110 F	99 G	104 F+	101 F	28 G	86 G	74 G+	90 G
B-1893	Limited Approval	\$1,676	106.4	100.4	104.6	102 G	109 F	126 F-	117 F-	101 F	22 G	83 G	77 G+	85 G
B-1703	Full Approval	\$1,674	106.3	99.7	105.4	109 G+	94 G	72 G+	83 G+	99 F+	3 G+	105 F	112 F-	94 G
SX-RR1264	Full Approval	\$1,664	105.6	104.0	100.6	97 F	102 F+	94 G	98 G	107 F-	32 G	82 G	104 F	109 F-
SX-RR1278N	Full Approval	\$1,659	105.5	100.8	103.2	105 G	116 P	111 F	113 F	115 P	97 F-	77 G	107 F	87 G
SX-2283	Limited Approval	\$1,651	104.9	102.1	101.4	107 G+	103 F+	99 G	101 F+	112 P	16 G+	71 G+	91 F+	102 F+
B-188N	Limited Approval	\$1,646	104.0	101.3	101.6	96 F	112 F-	109 F	110 F	99 F+	26 G	69 G+	86 G	103 F+
C-G861	Limited Approval	\$1,636	103.7	99.4	103.2	103 G	106 F	113 F	109 F	86 G+	49 F+	108 F-	114 P	94 G
HIL-9865	Full Approval	\$1,626	103.0	103.3	98.5	101 G	106 F	116 F	111 F	103 F	18 G+	93 F+	114 P	93 G
C-G855	Limited Approval	\$1,613	102.7	99.3	102.2	100 G	87 G+	84 G+	86 G+	86 G+	7 G+	111 F-	75 G+	107 F
B-1690	Full Approval	\$1,612	102.3	99.8	101.6	98 F	107 F	138 P	123 F-	95 G	15 G+	99 F+	73 G+	86 G
C-G333NT	Special Approval	\$1,611	102.3	96.6	104.6	102 G	116 P	106 F+	111 F	101 F	8 G+	95 F+	80 G	81 G+
C-RR059	Full Approval	\$1,608	102.0	99.1	101.8	104 G	114 F-	149 P	131 P	93 G	23 G	101 F	77 G+	88 G
HIL-2238NT	Special Approval	\$1,591	101.4	97.5	102.7	108 G	96 G	94 G	95 G	109 F-	30 G	118 P	121 P	83 G+
B-1399	Full Approval	\$1,585	100.6	96.2	103.5	102 G	90 G+	90 G+	90 G+	96 G	9 G+	90 F+	65 G+	95 G
SX-RR1275N	Full Approval	\$1,576	100.3	97.6	101.4	105 G	110 F	138 P	124 F-	108 F-	168 P	82 G	100 F	74 G+
MA-709	Full Approval	\$1,575	100.0	101.3	97.6	108 G+	93 G	91 G+	92 G	109 F-	24 G	103 F	114 P	103 F+
SX-RR1245N	Full Approval	\$1,566	99.3	99.3	98.8	107 G+	109 F	126 F-	118 F-	110 P	265 P	89 G	112 F-	90 G
HIL-2240	Limited Approval	\$1,566	99.5	100.9	97.5	107 G+	90 G+	94 G	92 G	117 P	23 G	101 F	109 F-	103 F+
MA-814	Limited Approval	\$1,556	98.9	100.5	97.1	110 G+	98 G	97 G	97 G	106 F-	16 G+	110 F-	103 F	119 F-
SX-RR1243	Full Approval	\$1,547	97.9	98.1	98.8	103 G	102 F+	108 F	105 F	107 F-	288 P	96 F+	96 F+	92 G
HIL-9908	Full Approval	\$1,492	94.6	103.2	90.7	98 F	77 G+	83 G+	80 G+	95 G	33 G	107 F-	117 P	117 F-
MA-813NT	Limited Approval	\$1,459	92.4	100.4	91.2	104 G	89 G+	94 G	92 G	106 F-	7 G+	106 F-	115 P	115 F-
HIL-9879NT	Full Approval	\$1,452	92.0	101.1	90.2	94 F	89 G+	97 G	93 G	105 F-	64 F	126 P	116 P	127 F-

A lower value is better for Cercospora, Alternaria, Rhizoctonia, Root Aphid, Aphanomyces, Fusarium and Rhizomania

\$/A: Gross dollars per acre assuming a \$45 payment and trial average RWST.

* Alternaria data from 2018 only



Rhizoctonia

Varieties for 2020 - Average of 2018 & 2019

Variety	% of Check				Comments
	Rhizoc	RWSA	RWST	Cerc/Alt	
C-G855	85.6	102.7	99.3	85.7	New variety with good leafspot tolerance. Average yield and quality. Slight weakness on Aphanomyces.
C-G861	86.0	103.7	99.4	109.1	New variety with good Rhizoctonia tolerance. Fair leafspot tolerance but weak on Fusarium.
C-G675	89.8	107.0	100.3	96.7	Very high yielding and above average quality variety. Good overall disease package but susceptible to Fusarium.
C-RR059	93.3	102.0	99.1	131.3	Susceptibility to Alternaria requiring increased fungicide applications. Variety has strong root rot characteristics.
B-1399	95.5	100.6	96.2	89.6	Average yield with lower than average quality. Well rounded disease package and very good for leafspot. Low risk variety.
B-1690	94.6	102.3	99.8	122.8	Average yielding and above average quality variety. Weak on Alternaria but otherwise well rounded disease traits.
HIL-9908	95.4	94.6	103.2	79.9	Newer below average yielding but excellent quality variety. High RWST as well as #1 for leafspot tolerance. Fair disease traits, weak on Fusarium.

Note: Lower values are better for Rhizoctonia and Cercospora/Alternaria. Rhizoctonia ratings are from Rhizoctonia Nurseries.



Cercospora - Alternaria

Varieties for 2020 - Average of 2018 & 2019

Variety	% of Check				Comments
	Cerc/Alt	RWSA	RWST	Rhizoc	
HIL-9908	79.9	94.6	103.2	95.4	Newer below average yielding but excellent quality variety. High RWST as well as #1 for leafspot tolerance. Fair disease traits, weak on Fusarium.
B-1703	82.8	106.3	99.7	98.5	Newer high yielding and average quality variety. Very good tolerance to leafspot, weaker on Aphanomyces and Fusarium.
C-G855	85.7	102.7	99.3	85.6	New variety with good leafspot tolerance. Average yield and quality. Slight weakness on Aphanomyces.
B-1399	89.6	100.6	96.2	95.5	Average yield with lower than average quality. Well rounded disease package and very good for leafspot. Low risk variety.
MA-709	91.6	100.0	101.3	109.1	Moderate yield but above average quality variety. Very good leafspot tolerance. Poor on Rhizoctonia and Fusarium.
HIL-2240	91.6	99.5	100.9	116.5	New moderate yielding and high quality variety. Very good leafspot tolerance but weak on Rhizoctonia and Fusarium.
MA-813NT	92.3	92.4	100.4	105.9	New nematode tolerant variety with below average yield and average quality. Good leafspot tolerance but weak on Rhizoctonia and Fusarium.
HIL-9879NT	93.4	92.0	101.1	105.1	Below average yielding but high quality nematode tolerant variety. Very Good leafspot tolerance. Poor on Aphanomyces and Fusarium.
HIL-2238NT	95.3	101.4	97.5	109.1	New nematode tolerant variety with better leafspot tolerance than most other nematode tolerant varieties. Weak on Aphanomyces and Fusarium.
C-G675	96.7	107.0	100.3	89.8	Very high yielding and above average quality variety. Good overall disease package but susceptible to Fusarium.
MA-814	97.1	98.9	100.5	106.3	New variety with moderate yield and average quality. Good leafspot tolerance but slight weakness on Rhizoctonia and Aphanomyces.
SX-RR1264	98.1	105.6	104.0	107.3	Very high yielding and high quality variety. Good overall disease package and full Root Aphid tolerance.

Note: Lower values are better for Cercospora/Alternaria and Rhizoctonia.



High Quality

Varieties for 2020 - Average of 2018 & 2019

Variety	% of Check				Comments
	RWST	RWSA	Rhizoc	Cerc/Alt	
SX-RR1264	104.0	105.6	107.3	98.1	Very high yielding and high quality variety. Good overall disease package and full Root Aphid tolerance.
HIL-9865	103.3	103.0	102.8	111.2	Above average yield and quality variety. Fair disease traits, but poor on Aphanomyces and Fusarium.
HIL-9908	103.2	94.6	95.4	79.9	Newer below average yielding but excellent quality variety. High RWST as well as #1 for leafspot tolerance. Fair disease traits, weak on Fusarium.
SX-2283	102.1	104.9	112.2	101.4	New high yielding and high quality variety. Good on leafspot tolerance but poor for Rhizoctonia. Other disease traits are good.
B-188N	101.3	104.0	98.5	110.3	New nematode tolerant variety with high yield and sugar. Fair tolerance to leafspot and good root disease traits.
MA-709	101.3	100.0	109.1	91.6	Moderate yield but above average quality variety. Very good leafspot tolerance. Poor on Rhizoctonia and Fusarium.
HIL-9879NT	101.1	92.0	105.1	93.4	Below average yielding but high quality nematode tolerant variety. Very Good leafspot tolerance. Poor on Aphanomyces and Fusarium.

Note: Lower values are better for Cercospora/Alternaria and Rhizoctonia.



Sugarbeet Cyst Nematode

Varieties for 2020 - Average of 2018 & 2019

Variety	All Values are % of Check				Comments
	RWSA	RWST	Rhizoc	Cerc/Alt	
B-1606N	107.2	97.9	100.8	104.2	High yielding and below average quality nematode tolerant variety. Better leafspot tolerance than some other high yielding nematode varieties. Good overall disease traits.
C-G752NT	106.9	100.1	98.5	105.0	Newer high yielding and average quality nematode tolerant variety. Slightly better leafspot tolerance than some other high yielding nematode tolerant varieties.
SX-RR1278N	105.5	100.8	114.5	113.5	High yielding and good quality nematode tolerant variety. Poor on Rhizoctonia and leafspot but otherwise good disease traits.
B-188N	104.0	101.3	98.5	110.3	New nematode tolerant variety with high yield and sugar. Fair tolerance to leafspot and good root disease traits.
C-G333NT	102.3	96.6	101.4	111.0	High yielding and below average quality nematode tolerant variety. Poor leafspot tolerance, fair to good on other disease traits.
HIL-2238NT	101.4	97.5	109.1	95.3	New nematode tolerant variety with better leafspot tolerance than most other nematode tolerant varieties. Weak on Aphanomyces and Fusarium.
SX-RR1275N	100.3	97.6	108.2	123.9	Newer average yielding and average quality nematode tolerant variety. Fair disease package.
SX-RR1245N	99.3	99.3	110.2	117.6	Average yielding and average quality nematode tolerant variety. Weaker disease package and poor on Root Aphids and Fusarium.
MA-813NT	92.4	100.4	105.9	92.3	New nematode tolerant variety with below average yield and average quality. Good leafspot tolerance but weak on Rhizoctonia and Fusarium.
HIL-9879NT	92.0	101.1	105.1	93.4	Below average yielding but high quality nematode tolerant variety. Very Good leafspot tolerance. Poor on Aphanomyces and Fusarium.

Note: Higher is better for Nematode, RWSA, and RWST. Lower is better for Cercospora/Alternaria and Rhizoctonia



Official Variety Trial

Michigan Sugar Company

Average of 5 Locations - 2019

Trial Quality: Very Good
Plant/Harv: see trial pages

Plots: 2 rows x 38 ft.

Row Spacing: 22 inches

Seeding Rate: 2 inches, thinned
 to 200 beets/100 ft.

Locations: Deshano
 Gerstenberger
 Grekowicz
 Maurer
 Trost

Cerc Control:
 see trial pages

Rhizoc Control:
 see trial pages

Variety	\$/A	RWSA	RWST		Yield		Sugar		CJP		Emerge	
			Lb/T	Rank	T/A	Rank	%	Rank	%	Rank	%	Rank
C-G752NT	\$1,852	10759	265	4	40.7	1	17.7	8	95.6	9	64.8	22
B-1606N	\$1,807	10502	259	15	40.7	2	17.4	16	95.3	18	64.6	24
B-188N	\$1,779	10324	270	3	38.3	8	17.9	3	95.8	5	64.8	23
B-1893	\$1,760	10216	265	6	38.5	7	17.9	4	95.2	21	66.5	15
C-G675	\$1,760	10213	265	7	38.6	5	17.8	5	95.4	11	67.0	14
B-1703	\$1,744	10125	263	8	38.6	6	17.7	9	95.3	16	70.8	6
HIL-9865	\$1,734	10067	271	1	37.1	16	18.0	1	95.9	2	65.1	21
B-1690	\$1,711	9930	256	21	38.9	3	17.4	14	94.7	26	66.3	16
SX-2283	\$1,709	9921	265	5	37.4	14	17.7	6	95.9	3	72.6	4
C-G333NT	\$1,707	9913	256	22	38.8	4	17.3	18	95.2	22	65.3	20
SX-RR1278N	\$1,704	9893	260	12	38.1	10	17.4	17	95.4	13	69.0	9
C-G861	\$1,697	9851	259	14	37.9	11	17.7	7	94.9	25	66.1	17
SX-RR1264	\$1,693	9825	271	2	36.3	20	17.9	2	96.0	1	56.8	26
C-RR059	\$1,670	9681	257	18	37.8	12	17.4	15	95.0	24	68.5	11
C-G855	\$1,652	9584	257	16	37.3	15	17.2	22	95.7	7	67.3	13
SX-RR1275N	\$1,643	9542	253	25	37.7	13	17.1	25	95.5	10	70.1	7
B-1399	\$1,643	9535	250	26	38.3	9	16.7	26	95.6	8	68.6	10
SX-RR1245N	\$1,628	9454	257	17	36.7	18	17.2	23	95.7	6	66.1	18
MA-709	\$1,621	9394	262	9	35.8	22	17.6	10	95.4	15	70.1	8
SX-RR1243	\$1,616	9381	254	23	36.9	17	17.1	24	95.8	4	68.4	12
MA-814	\$1,613	9355	257	20	36.5	19	17.3	20	95.3	19	73.6	3
HIL-2240	\$1,607	9313	259	13	36.0	21	17.6	11	95.2	20	71.4	5
HIL-2238NT	\$1,559	9050	253	24	35.7	23	17.3	21	95.2	23	75.2	1
HIL-9908	\$1,525	8840	261	10	33.8	25	17.5	12	95.4	12	65.3	19
HIL-9879NT	\$1,503	8713	260	11	33.5	26	17.4	13	95.4	14	63.5	25
MA-813NT	\$1,502	8701	257	19	33.9	24	17.3	19	95.3	17	73.7	2
Average	\$1,670.7	9695.5	260.1		37.31		17.48		95.43		67.75	
LSD 5%	84.9	508.6	6.7		1.6		0.4		0.6		3.0	
CV %	4.1	4.2	2.1		3.5		1.8		0.5		3.6	

\$/A: Gross dollars per acre assuming a \$45 payment and trial average RWST.

Bold: Results are not statistically different from top-ranking variety in each column.

Comments: The Official Variety Trials in 2019 were planted during 3 different planting windows. Some were planted in early April, others in mid-April, and the majority in mid-May. Disease control at all locations was very good. All locations suffered a dry period from mid-July through August. September rains boosted yield at all locations. The majority of these trials were harvested in October. Two trials had roots placed into storage.



Plant To Stand

Michigan Sugar Company

Average of 2 Locations - 2019

Trial Quality: see trial pages

Plant/Harv: May 15/Oct 29

Plots: 6 Rows X 38 ft.

Row Spacing: 22 inches

Seeding Rate: 4.1 inches

Locations: Gerstenberger

Grekowicz

Cerc Control:

see trial pages

Rhizoc Control:

see trial pages

Variety	\$/A	RWSA	RWST		Yield		Sugar		CJP		Beets/100 ft*	
			Lb/T	Rank	T/A	Rank	%	Rank	%	Rank	Act.	Rank
MA-709	\$2,051	11627	267	1	43.5	3	17.9	1	95.5	5	216	1
B-1703	\$2,041	11569	265	3	43.6	2	17.7	3	95.7	1	201	5
C-G675	\$2,032	11530	260	5	43.9	1	17.7	4	94.8	13	193	11
SX-RR1264	\$1,983	11253	266	2	42.4	8	17.8	2	95.6	3	165	17
HIL-9865	\$1,979	11227	262	4	42.8	5	17.6	6	95.4	7	199	7
C-G752NT	\$1,973	11190	258	6	43.3	4	17.6	5	94.7	14	192	12
SX-1278N	\$1,900	10783	253	9	42.5	7	17.0	12	95.5	4	195	9
B-1690	\$1,895	10750	251	12	42.6	6	17.4	9	94.0	16	192	13
B-1606N	\$1,889	10706	254	8	42.1	9	17.5	7	94.2	15	191	14
HIL-9879NT	\$1,868	10595	257	7	41.2	13	17.4	8	95.0	11	182	16
C-G333NT	\$1,863	10556	251	11	42.0	10	17.0	11	95.1	10	190	15
C-RR059	\$1,827	10365	249	13	41.6	12	17.3	10	93.8	17	201	4
SX-1275N	\$1,815	10286	248	14	41.6	11	16.7	14	95.3	8	211	2
SX-RR1243	\$1,778	10089	244	16	41.1	14	16.5	17	95.3	9	207	3
SX-RR1245N	\$1,691	9582	247	15	38.8	16	16.7	15	95.4	6	195	8
B-1399	\$1,679	9514	243	17	39.2	15	16.6	16	94.8	12	199	6
HIL-9908	\$1,615	9159	252	10	36.5	17	16.9	13	95.7	2	193	10
Average	\$1,875.2	10634.2	254.6		41.68		17.26		95.04		195.5	
LSD 5%	155.8	904.0	N.S.		3.2		N.S.		0.9		10.9	
CV%	3.9	4.0	2.8		3.7		2.5		0.5		2.6	

\$/A: Gross dollars per acre assuming a \$45 payment and trial average RWST.

Bold: Results are not statistically different from top ranking variety in each column.

Comments: These trials averaged to have a good number of beets/100' of row. One variety that was lower in stand was SX-RR1264, but this variety still yielded well and had good sugar content. Both of these trials were disease free and high yielding.

2019 Variety Trial Averages

Average of Three Non-Nematode Trials

Farms: Chaffin Farms (Ithaca)
Stephen Kearns (Ontario)
DVL Farms (Ruth)

Variety	\$/A	RWSA	RWST	T/A	% Sugar	% CJP
C-G752NT	\$1,816	10896	287	38.5	18.9	96.0
B-1606N	\$1,748	10488	277	38.6	18.4	95.7
C-G675	\$1,735	10407	287	36.9	18.9	96.0
SX-1275N	\$1,665	9989	282	35.7	18.7	95.9
HIL-9865	\$1,655	9932	284	35.2	18.7	96.0
SX-1278N	\$1,650	9897	282	35.5	18.7	95.7
SX-1264	\$1,646	9877	289	34.7	19.1	96.0
B-1690	\$1,624	9742	277	35.7	18.6	95.1
B-1399	\$1,592	9549	271	35.6	18.0	96.0
MA-709	\$1,562	9370	276	34.5	18.5	95.4
HIL-9908	\$1,552	9310	286	32.9	19.0	95.8
HIL-9879NT	\$1,457	8744	285	31.1	18.9	95.9
Average	\$1,642	9850	282	35.4	18.7	95.8
LSD 5%	68.2	409.1	5.8	1.4	0.3	0.5
CV %	4.4	4.4	2.2	4.2	1.6	0.5

About this summary: These results are the average of 3 Sugarbeet Advancement trials that had negligible sugarbeet cyst nematode pressure. In 2019, since half of the Sugarbeet Advancement variety trials had sugarbeet cyst nematode present, no combined average of all 6 trials is provided. An average of all 6 trials would favor the nematode varieties due to their performance in the nematode fields.

Comments: Generally the 2019 Sugarbeet Advancement variety trials had low levels of root rot disease, but the Chaffin and DVL location had the highest levels. All Sugarbeet Advancement trials in 2019 had very low leafspot pressure. These trials experienced similar weather conditions; wet spring/early summer, dry mid/late summer, and a wet fall. Even with the dry summer, root aphid was not found to be an issue at any of these locations. Soil types vary for these three trials. The Chaffin trial was on an irrigated muck field, the DVL trial was on a sandy field, and the Kearns trial was on a loam field. The soil types influenced the results. Use this data in conjunction with Michigan Sugar variety/nursery data and seed company information.

\$/A: Gross dollars per acre assuming a \$45 payment and a company average RWST of 270.

Bold: Results are not statistically different from top ranking variety in each column.

2019 Variety Trial Averages

Average of Three Nematode Trials

Farms: Herford Farms (Elkton)
 Sylvester Farms (Quanicassee)
 Wadsworth Farms Inc. (Sandusky)

Variety	\$/A	RWSA	RWST	T/A	% Sugar	% CJP
C-G752NT	\$1,669	10015	289	34.7	18.9	96.4
SX-1278N	\$1,620	9723	291	33.4	18.9	96.9
SX-1275N	\$1,609	9655	287	33.6	18.6	97.1
B-1606N	\$1,562	9371	282	33.2	18.6	96.3
C-G675	\$1,472	8829	292	30.2	19.0	96.7
B-1690	\$1,446	8675	279	31.1	18.3	96.5
HIL-9865	\$1,440	8641	288	30.0	18.6	97.1
HIL-9879NT	\$1,397	8380	288	29.1	18.8	96.6
MA-709	\$1,382	8290	288	28.7	18.7	96.9
B-1399	\$1,352	8111	275	29.5	17.9	97.1
SX-1264	\$1,337	8023	285	28.1	18.4	97.2
HIL-9908	\$1,320	7917	298	26.6	19.4	96.8
Average	\$1,467	8803	287	30.7	18.7	96.8
LSD 5%	74.8	448.9	6.5	1.6	0.4	0.4
CV %	5.4	5.4	2.4	5.5	2.0	0.4

About this summary: These results are the average of 3 Sugarbeet Advancement trials that had sugarbeet cyst nematode pressure. In 2019, since half of the Sugarbeet Advancement variety trials had sugarbeet cyst nematode present, no combined average of all 6 trials is provided. An average of all 6 trials would favor the nematode varieties due to their performance in the nematode fields.

Comments: Sugarbeet cyst nematode tolerant varieties should be used in fields where nematode is found. Generally, all three of these trials had low levels of root diseases. All Sugarbeet Advancement trials in 2019 had very low leafspot pressure, and none of these trials had high enough levels to be rated. These trials experienced similar weather conditions; wet spring/early summer, dry mid/late summer, and a wet fall. Even with the dry summer, root aphid was not found to be an issue at any of these locations. Use this data in conjunction with Michigan Sugar variety/nursery data and seed company information.

\$/A: Gross dollars per acre assuming a \$45 payment and a company average RWST of 270.

Bold: Results are not statistically different from top ranking variety in each column.



OVT Emergence

Michigan Sugar Company

Average of 2 Years, 2018 & 2019

Trial Quality: Good

Locations: 2018 - Maurer, Grekowicz, Sylvester, Trost
2019 - Deshano, Gerstenberger, Grekowicz
Maurer, Trost, Mininger

Plot Size: 2 Rows X 38 ft., 8 reps

Seeding Rate: 1.9 inch seed spacing

Variety	% Emerge
B-1703	64.6
MA-814	64.5
HIL-2238NT	63.2
MA-709	62.9
SX-2283	62.8
SX-RR1245N	62.8
HIL-2240	62.4
SX-RR1275N	61.8
MA-813NT	61.7
SX-RR1278N	61.6
C-RR059	61.3
C-G861	61.0
SX-RR1243	60.5
C-G675	60.5
B-1399	60.1
C-G333NT	59.9
B-1893	59.7
C-G752NT	59.1
HIL-9865	58.8
C-G855	58.5
B-1606N	57.8
B-1690	57.7
HIL-9908	57.2
B-188N	56.4
SX-RR1264	56.3
HIL-9879NT	54.7
Average	60.30
LSD 5%	6.2
CV%	5.0

Comments: Emergence counts were taken from OVT locations after full emergence to determine % emergence.

Early Counts

<i>Trial</i>	Chaffin	DVL	Herford	Kearns	Shaffner	Sylvester	Wadsworth	Average
	Gratiot	Huron	Huron	Ontario	Midland	Tuscola	Sanilac	
Plant Date	April 25	May 6	May 19	May 18	May 14	April 9	April 9	
Count Days	13	11	11	9	15	17	20	
C-G675	163	154	220	239	194	98	190	170
C-G752NT	162	149	221	254	201	84	198	169
B-1690	173	128	214	237	197	95	206	169
SX-1275N	180	104	203	240	193	70	163	152
B-1606N	143	124	212	218	203	85	142	151
B-1399	143	73	222	219	192	46	177	142
SX-1278N	138	94	212	252	200	58	130	139
HIL-9879NT	122	80	185	208	202	27	112	121
HIL-9908	135	87	185	219	180	27	103	119
HIL-9865	101	52	186	237	182	28	115	111
MA-709	91	34	182	200	170	11	80	95
SX-1264	86	17	168	187	169	10	53	84
C-RR059	157	—	—	—	—	—	—	—
Average	138	91	201	226	190	53	139	135
LSD 5%	31.8	19.3	23.6	35.8	18.0	19.6	63.1	13.3
CV %	14.1	12.9	7.0	9.4	5.6	21.7	26.8	14.7

Late Counts

<i>Trial</i>	Chaffin	DVL	Herford	Kearns	Shaffner	Sylvester	Wadsworth	Average
Count Days	36	37	36	31	48	51	44	
B-1399	238	233	229	271	217	218	271	234
B-1690	231	257	221	274	213	214	268	234
C-G675	229	265	225	261	203	209	265	233
B-1606N	230	259	221	247	219	200	247	229
C-G752NT	210	242	224	270	214	199	260	225
SX-1275N	232	245	206	248	204	197	266	225
HIL-9879NT	235	246	198	256	212	189	258	223
SX-1278N	224	233	220	259	215	187	246	221
HIL-9865	204	232	196	261	205	181	248	211
MA-709	210	220	195	244	192	179	227	204
HIL-9908	225	218	196	255	192	162	226	203
SX-1264	195	215	184	233	193	132	197	186
C-RR059	231	—	—	—	—	—	—	—
Average	223	239	210	257	207	189	248	219
LSD 5%	15.4	N.S.	19.6	N.S.	14.6	19.8	28.1	10.2
CV %	4.1	11.1	5.7	6.3	4.2	6.2	6.8	7.0

Comments: Averages do not include the Kearns Trial (Canada), as different seed treatments were used in this trial.

All varieties had the standard seed treatment plus Tachigaren 20. The varieties also contained these additional seed treatments by these companies: Seedex - Tri-Pak; Hillehog - Vibrance (HIL-9865, HIL-9908), Clariva & Vibrance (HIL-9879NT); Maribo - Clariva & Vibrance; Crystal - Kabina; Betaseed - Kabina. Kabina & Systiva are not approved for use in Canada (Kearns).

Bold: Results are not statistically different from top ranking variety in each column.

Root Rot Summary

Fall Count of Dead Beets in 1200 Foot of Row

<i>Trial Location</i>	Chaffin	DVL	Herford	Kearns	Shaffner	Sylvester	Wadsworth	Average
B-1690	2	4	0	6	9	0	0	3
HIL-9908	16	2	0	8	4	0	1	5
B-1399	11	6	2	2	8	1	2	5
C-G675	4	18	0	8	15	1	7	7
B-1606N	9	8	0	8	31	3	2	9
HIL-9879NT	40	22	1	5	29	19	14	18
C-G752NT	29	20	1	5	101	24	32	30
HIL-9865	55	60	3	12	73	16	25	35
SX-1264	30	101	5	22	78	25	35	42
MA-709	41	45	12	37	124	53	28	49
SX-1278N	126	71	6	23	289	12	8	77
SX-1275N	274	107	2	4	239	6	46	97
C-RR059	1	—	—	—	—	—	—	—
AVERAGE	49	39	3	12	83	13	17	31
LSD (5%)	75.2	55.6	5.9	N.S.	169.0	N.S.	N.S.	27.6
CV (%)	90.8	85.1	129.5	110.0	119.9	134.6	136.1	143.0

Comments: The Root Rot summary is a fall count of the dead/dying beets in 1200 foot of row from the Sugarbeet Advancement variety trials. The dead beets are likely due to root diseases including Rhizoctonia, Aphanomyces, and Fusarium. This year had relatively low overall root disease levels in the trials, but with more adult Aphanomyces than usual. See the individual trials for Quadris treatments.

Bold: Results are not statistically different from top ranking variety in each column.

East District Trials





Official Variety Trial

Michigan Sugar Company

Grekowicz, Port Hope - 2019

Trial Quality: Very Good
Plant/Harv: May 16/Oct 23
Plots: 2 rows X 38 ft., 8 reps
Row Spacing: 22 inches
Seeding Rate: 2 inches,
 thinned to 200 beets/100 ft.

Soil Type: Sandy Loam
% OM: 3.3 **pH:** 7.7 **CEC:** 8.7
Nutrients: P: Abv Opt K: Below Opt
Mn: High **B:** Medium
Added N: 35 lbs. + Manure
Prev Crop: Wheat

****Cerc Control:** Very Good
 8 applications**
Rhizoc Control: Very Good
 Quadris IF, 6-8 lf
Rainfall: 16.41 inches

Variety	\$/A	RWSA	RWST		Yield		Sugar		CJP	
			Lb/T	Rank	T/A	Rank	%	Rank	%	Rank
C-G675	\$1,895	10998	268	4	40.9	1	18.3	3	95.3	5
C-G752NT	\$1,859	10786	265	5	40.6	3	18.0	9	94.8	7
B-188N	\$1,843	10696	265	6	40.2	5	18.0	11	95.0	6
SX-2283	\$1,828	10606	270	3	39.3	8	18.1	6	96.0	1
C-G861	\$1,825	10590	260	10	40.7	2	18.0	10	93.9	21
B-1606N	\$1,805	10476	259	14	40.4	4	17.7	20	94.7	9
B-1893	\$1,784	10354	259	13	39.9	6	17.7	19	94.5	11
B-1703	\$1,742	10112	260	11	38.9	10	17.8	15	94.4	14
HIL-9865	\$1,711	9929	277	1	35.7	22	18.5	1	95.6	3
C-G333NT	\$1,704	9887	253	24	38.9	9	17.4	23	94.7	8
C-RR059	\$1,702	9876	256	18	38.5	11	17.8	14	93.7	24
B-1690	\$1,693	9824	256	20	38.4	12	18.1	7	92.9	26
SX-RR1278N	\$1,686	9787	257	17	38.1	13	17.7	18	94.2	18
SX-RR1264	\$1,683	9769	277	2	35.2	23	18.4	2	95.7	2
SX-RR1275N	\$1,679	9745	260	12	37.4	15	17.8	13	94.3	16
B-1399	\$1,654	9596	242	26	39.7	7	16.6	26	94.5	12
MA-814	\$1,648	9566	258	16	37.1	16	17.8	17	94.1	19
MA-813NT	\$1,643	9537	265	7	36.0	20	18.1	5	94.4	13
SX-RR1243	\$1,638	9506	256	19	37.1	17	17.5	22	94.6	10
C-G855	\$1,635	9490	252	25	37.7	14	17.3	25	94.3	15
MA-709	\$1,632	9471	263	8	36.0	21	18.1	8	94.2	17
HIL-2240	\$1,631	9466	262	9	36.1	19	18.2	4	93.8	22
HIL-2238NT	\$1,624	9423	255	21	36.8	18	17.9	12	93.8	23
SX-RR1245N	\$1,535	8907	258	15	34.4	25	17.4	24	95.4	4
HIL-9879NT	\$1,532	8892	254	23	35.0	24	17.5	21	94.1	20
HIL-9908	\$1,503	8723	255	22	34.2	26	17.8	16	93.5	25
Average	\$1,696.7	9846.6	260.1		37.83		17.83		94.49	
LSD 5%	141.9	823.4	13.2		2.5		0.6		1.2	
CV %	8.5	8.5	5.2		6.7		3.4		1.3	

** See Cercospora Fungicide Application Page

\$/A: Gross dollars per acre assuming a \$45 payment and trial average RWST.

Bold: Results are not statistically different from top-ranking variety in each column.

Comments: This trial was planted in mid-May into excellent field conditions. Emergence was fast and uniform. Very good growing conditions after planting produced a very large canopy and healthy roots. Dry weather in late July and August caused the canopy to regress, but it remained healthy through harvest. Very good tonnage and quality were realized during the late October Harvest. Roots from this trial were put into storage to assess varietal differences.



Official Variety Trial

Michigan Sugar Company

Maurer, Ruth - 2019

Trial Quality: Good
Plant/Harv: May 15/Oct 10
Plots: 2 rows X 38 ft., 8 reps
Row Spacing: 22 inches
Seeding Rate: 2 inches,
 thinned to 200 beets/100 ft.

Soil Type: Sandy Clay Loam
% OM: 2.8 **pH:** 7.5 **CEC:** 10.2
Nutrients: P: Abv Opt K: Abv Opt
Mn: High **B:** Low
Added N: 135 lbs.
Prev Crop: Corn

****Cerc Control:** Very Good
 8 applications**
Rhizoc Control: Very Good
 Quadris IF, 6-8 lf
Rainfall: 21.43 inches

Variety	\$/A	RWSA	RWST		Yield		Sugar		CJP	
			Lb/T	Rank	T/A	Rank	%	Rank	%	Rank
C-G752NT	\$1,614	9863	294	1	33.5	2	18.8	1	96.6	3
B-1606N	\$1,592	9727	281	6	34.6	1	18.4	4	96.3	16
C-G333NT	\$1,460	8920	280	7	31.8	3	18.2	10	96.2	20
B-1893	\$1,452	8871	282	4	31.4	4	18.6	2	96.2	19
B-1703	\$1,424	8704	282	5	30.9	8	18.3	9	96.1	21
HIL-9865	\$1,388	8483	273	12	31.0	6	17.9	14	96.4	11
SX-RR1278N	\$1,367	8352	270	20	31.0	7	17.6	24	96.3	15
SX-RR1275N	\$1,366	8350	266	22	31.3	5	17.7	21	96.3	14
C-G855	\$1,366	8347	275	10	30.4	9	18.0	12	96.8	1
B-188N	\$1,357	8294	283	3	29.4	17	18.5	3	96.4	8
B-1690	\$1,347	8231	278	8	29.6	14	18.4	7	95.9	23
MA-814	\$1,344	8215	271	16	30.3	10	17.6	22	96.5	5
C-G675	\$1,338	8177	275	11	29.7	12	18.4	5	96.1	22
SX-2283	\$1,331	8132	278	9	29.3	19	18.4	8	96.4	7
HIL-2238NT	\$1,330	8126	271	15	30.0	11	18.0	11	95.8	25
SX-RR1245N	\$1,307	7986	270	18	29.5	15	17.7	20	96.3	13
SX-RR1264	\$1,307	7985	285	2	28.1	22	18.4	6	96.6	2
C-RR059	\$1,301	7951	271	14	29.3	18	17.8	16	95.4	26
MA-709	\$1,288	7871	266	24	29.6	13	17.5	25	96.3	17
B-1399	\$1,288	7870	269	21	29.4	16	17.6	23	96.4	6
SX-RR1243	\$1,246	7612	263	25	28.9	20	17.8	18	96.4	12
HIL-2240	\$1,236	7553	272	13	27.6	23	17.9	15	96.5	4
C-G861	\$1,226	7491	263	26	28.4	21	17.8	17	95.9	24
HIL-9879NT	\$1,155	7061	271	17	26.0	24	18.0	13	96.2	18
HIL-9908	\$1,131	6914	270	19	25.6	25	17.8	19	96.4	10
MA-813NT	\$1,037	6336	266	23	23.8	26	17.3	26	96.4	9
Average	\$1,330.6	8131.6	274.1		29.62		18.02		96.27	
LSD 5%	140.7	859.8	8.7		3.0		0.6		0.4	
CV %	10.7	10.7	3.2		10.2		3.6		0.5	

**** See Cercospora Fungicide Application Page**

\$/A: Gross dollars per acre assuming a \$45 payment and trial average RWST.

Bold: Results are not statistically different from top-ranking variety in each column.

Comments: This trial was planted in mid-May due to the wet spring conditions. Favorable spring growing conditions gave way to an abnormally dry summer. Dry conditions persisted until close to harvest which lead to respectable yield and excellent sugar content for an early October harvest. Disease control was very good.



Official Variety Trial

Michigan Sugar Company

Gerstenberger Farms, Sandusky - 2019

Trial Quality: Very Good
Plant/Harv: May 15/Oct 29
Plots: 2 rows X 38 ft., 7 reps
Row Spacing: 22 inches
Seeding Rate: 2 inches,
 thinned to 200 beets/100 ft.

Soil Type: Loam
% OM: 2.9 **pH:** 7.4 **CEC:** 11.6
Nutrients: P: Abv Opt K: Opt
Mn: High **B:** Low
Added N: 155 lbs.
Prev Crop: Corn

****Cerc Control:** Very Good
 8 applications**
Rhizoc Control: Very Good
 Quadris IF, 6-8 lf
Rainfall: 23.53 inches

Variety	\$/A	RWSA	RWST		Yield		Sugar		CJP	
			Lb/T	Rank	T/A	Rank	%	Rank	%	Rank
B-188N	\$2,210	12999	273	5	47.6	4	18.3	6	95.4	6
C-G752NT	\$2,182	12837	265	12	48.5	1	17.7	16	95.5	4
SX-RR1264	\$2,144	12615	274	2	46.0	11	18.5	3	95.1	13
B-1606N	\$2,137	12569	261	16	48.0	2	17.9	14	94.5	25
B-1703	\$2,133	12545	266	11	47.2	8	18.0	13	95.6	3
SX-RR1243	\$2,119	12466	263	15	47.3	6	17.6	19	95.7	1
B-1893	\$2,118	12459	271	6	45.9	12	18.4	5	94.8	19
C-G675	\$2,105	12385	268	9	46.3	10	18.2	7	95.0	14
B-1690	\$2,092	12308	256	24	48.0	3	17.4	22	94.9	17
HIL-9865	\$2,087	12279	274	3	44.8	14	18.4	4	95.4	9
C-RR059	\$2,077	12221	259	19	47.3	7	17.6	18	94.8	20
C-G333NT	\$2,075	12207	258	20	47.4	5	17.4	21	95.6	2
SX-2283	\$2,069	12173	276	1	44.0	17	18.7	1	94.9	15
C-G861	\$2,036	11979	274	4	43.8	19	18.7	2	94.6	22
B-1399	\$2,035	11974	256	23	46.7	9	17.3	25	95.3	12
SX-RR1245N	\$2,032	11956	260	17	45.8	13	17.5	20	95.4	8
SX-RR1278N	\$2,032	11955	268	10	44.7	15	18.1	8	94.9	16
MA-709	\$1,971	11597	264	14	43.9	18	18.0	12	94.6	23
C-G855	\$1,937	11395	257	21	44.2	16	17.3	23	95.4	7
MA-814	\$1,919	11292	265	13	42.6	23	18.1	10	94.6	24
HIL-9908	\$1,904	11202	270	7	41.5	24	18.1	9	95.5	5
HIL-2240	\$1,883	11079	254	25	43.5	20	17.8	15	94.3	26
HIL-9879NT	\$1,877	11042	269	8	41.1	25	18.1	11	95.3	11
HIL-2238NT	\$1,876	11036	257	22	42.9	22	17.3	24	95.4	10
MA-813NT	\$1,810	10647	259	18	41.0	26	17.7	17	94.7	21
SX-RR1275N	\$1,792	10542	244	26	43.2	21	16.7	26	94.8	18
Average	\$2,025.1	11913.7	264.0		45.12		17.88		95.07	
LSD 5%	166.1	976.9	14.3		2.4		0.7		N.S.	
CV %	7.8	7.8	5.1		5.1		3.9		1.5	

** See Cercospora Fungicide Application Page

\$/A: Gross dollars per acre assuming a \$45 payment and trial average RWST.

Bold: Results are not statistically different from top-ranking variety in each column.

Comments: Very high yielding trial with good quality. Growing conditions were very good other than a dry period in July-August. Late September rains boosted yield. Disease control was very good. Roots from this trial were placed into storage to compare varietal differences.



Plant To Stand

Michigan Sugar Company

Grekowicz, Port Hope - 2019

Trial Quality: Very Good
Plant/Harv: May 16/Oct 23
Plots: 6 rows X 38 ft., 4 reps
Row Spacing: 22 inches
Seeding Rate: 4.1 inches

Soil Type: Sandy Loam
% OM: 3.3 **pH:** 7.7 **CEC:** 8.7
Nutrients: **P:** Abv Opt **K:** Below Opt
Mn: High **B:** Medium
Added N: 35 lbs. + Manure
Prev Crop: Wheat

****Cerc Control:** Very Good
 8 applications**
Rhizoc Control: Very Good
 Quadris IF, 6-8 lf
Rainfall: 16.41 inches

Variety	\$/A	RWSA	RWST		Yield		Sugar		CJP		Beets/100 ft	
			Lb/T	Rank	T/A	Rank	%	Rank	%	Rank	Act.	Rank
MA-709	\$1,891	10490	268	2	39.1	4	18.1	1	94.9	5	209	1
B-1703	\$1,884	10455	262	3	39.8	1	17.7	3	95.0	4	195	4
C-G675	\$1,777	9859	248	8	39.5	3	17.3	9	93.5	13	182	14
HIL-9865	\$1,771	9827	259	4	37.9	10	17.7	5	94.6	7	193	6
C-G752NT	\$1,762	9777	251	7	39.0	6	17.6	6	93.4	14	184	10
B-1606N	\$1,754	9732	246	10	39.6	2	17.3	10	93.4	15	182	13
C-G333NT	\$1,740	9657	248	9	39.0	5	17.0	12	94.5	9	171	15
SX-RR1264	\$1,731	9606	268	1	35.9	16	18.1	2	95.2	1	150	17
HIL-9879NT	\$1,680	9322	255	6	36.5	15	17.7	4	93.8	12	167	16
SX-1275N	\$1,678	9312	244	11	38.2	7	16.9	13	94.0	10	203	2
B-1690	\$1,674	9288	244	12	38.0	8	17.2	11	93.2	16	183	12
SX-1278N	\$1,650	9158	242	14	37.9	9	16.5	16	95.0	3	188	7
C-RR059	\$1,610	8933	242	13	36.9	12	17.4	8	92.4	17	194	5
SX-RR1245N	\$1,587	8804	240	15	36.8	13	16.5	15	94.5	8	187	8
B-1399	\$1,559	8652	237	16	36.6	14	16.5	14	93.8	11	187	9
SX-RR1243	\$1,540	8545	231	17	36.9	11	15.9	17	94.7	6	200	3
HIL-9908	\$1,478	8203	259	5	31.8	17	17.5	7	95.1	2	184	11
Average	\$1,692.1	9389.3	249.7		37.61		17.24		94.17		185.7	
LSD 5%	211.0	1170.8	N.S.		3.6		1.1		N.S.		N.S.	
CV %	8.8	8.8	6.9		6.8		4.6		1.4		14.3	

** See Cercospora Fungicide Application Page

\$/A: Gross dollars per acre assuming a \$45 payment and trial average RWST.

Bold: Results are not statistically different from top-ranking variety in each column.

Comments: This trial had adequate emergence and very good growing conditions until later in the summer. The good conditions produced a very large canopy that was difficult to sustain when the dry period of July and August came. September rains helped boost yields, but stands under 200 beets/100' hurt sugar content compared to the same varieties in the Official Variety Trial at this location that was thinned to a higher stand.



Plant To Stand

Michigan Sugar Company

Gerstenberger Farms, Sandusky - 2019

Trial Quality: Good

Plant/Harv: May 15/Oct 29

Plots: 6 rows X 38 ft., 4 reps

Row Spacing: 22 inches

Seeding Rate: 4.1 inches

Soil Type: Loam

% OM: 2.9 **pH:** 7.4 **CEC:** 11.6

Nutrients: **P:** Low **K:** Opt

Mn: High **B:** Low

Added N: 155 lbs.

Prev Crop: Corn

****Cerc Control:** Very Good

8 applications**

Rhizoc Control: Good

Quadris IF, 6-8 lf

Rainfall: 23.53 inches

Variety	\$/A	RWSA	RWST		Yield		Sugar		CJP		Beets/100 ft	
			Lb/T	Rank	T/A	Rank	%	Rank	%	Rank	Act.	Rank
C-G675	\$2,287	13201	273	1	48.3	2	18.1	1	96.0	10	204	9
SX-RR1264	\$2,235	12901	264	5	48.8	1	17.5	7	96.1	7	180	17
MA-709	\$2,212	12764	267	3	47.8	4	17.7	4	96.1	8	224	1
B-1703	\$2,198	12683	269	2	47.4	6	17.7	3	96.3	3	206	7
HIL-9865	\$2,188	12627	264	6	47.8	3	17.5	9	96.2	6	205	8
C-G752NT	\$2,184	12603	265	4	47.5	5	17.6	5	96.0	11	200	15
SX-1278N	\$2,150	12408	264	7	47.0	8	17.5	8	96.1	9	203	12
B-1690	\$2,116	12211	258	10	47.3	7	17.6	6	94.7	17	202	13
HIL-9879NT	\$2,056	11868	259	9	45.9	10	17.2	12	96.2	5	197	16
C-RR059	\$2,044	11797	256	12	46.2	9	17.3	10	95.1	15	208	6
B-1606N	\$2,024	11680	262	8	44.6	14	17.7	2	95.0	16	200	14
SX-RR1243	\$2,016	11634	257	11	45.2	11	17.2	11	95.8	12	214	3
C-G333NT	\$1,985	11456	255	13	45.1	12	17.1	13	95.8	13	209	5
SX-1275N	\$1,951	11260	251	15	45.0	13	16.6	16	96.6	1	219	2
B-1399	\$1,798	10376	249	16	41.8	15	16.7	15	95.7	14	212	4
SX-RR1245N	\$1,795	10361	254	14	40.9	17	16.8	14	96.4	2	203	10
HIL-9908	\$1,753	10116	246	17	41.2	16	16.3	17	96.3	4	203	11
Average	\$2,058.2	11879.1	259.4		45.76		17.28		95.90		205.3	
LSD 5%	232.0	1339.0	N.S.		4.4		N.S.		0.9		N.S.	
CV %	7.9	7.9	4.6		6.8		4.4		0.7		9.5	

**** See Cercospora Fungicide Application Page**

\$/A: Gross dollars per acre assuming a \$45 payment and trial average RWST.

Bold: Results are not statistically different from top-ranking variety in each column.

Comments: This trial was planted into very good conditions and had rainfall almost immediately after planting. Continued spring rains helped provide very good emergence conditions. Summer conditions were not optimal for growth, but late rains help boost yield. Disease control in this trial was very good.

Variety Trial

Stephen Kearns, Ontario - 2019

Trial Quality: Excellent	Soil Type: Loam	Cerc Control: Good control: See below for materials
Planted: May 18	Fertilizer: PPI: 36 gal of 28% and 4 gal of ATS	
Harv/Samp: Oct 18 / Oct 18		
Plot Size: 3 reps		Rhiz Control: Very good control: Quadris I.F. (7 oz)
Row Spacing: 30 inch	Prev Crop: Wheat	
Seeding Rate: 54,000	Weather: Wet early with a dry summer	Other Pests: Aphanomyces

Variety	\$/A	RWSA	RWST	T/A	% Sugar	% CJP	Populations 100 Ft. of Row		Dead Beets / 1200 Ft	Leafspot Rating (1-9)
							9 Day	31 Day		
HIL-9865	\$1,946	11678	316	36.9	20.6	96.4	237	261	12	1.8
C-G752NT	\$1,937	11620	314	37.0	20.6	96.2	254	270	5	1.7
B-1606N	\$1,936	11614	303	38.3	20.0	96.0	218	247	8	1.7
SX-1275N	\$1,931	11583	315	36.8	20.6	96.2	240	248	4	1.5
C-G675	\$1,923	11540	312	37.0	20.4	96.2	239	261	8	1.0
SX-1278N	\$1,902	11410	318	35.9	20.7	96.4	252	259	23	1.5
SX-1264	\$1,891	11346	313	36.2	20.6	96.0	187	233	22	1.7
B-1690	\$1,852	11109	311	35.7	20.6	95.6	237	274	6	1.5
B-1399	\$1,776	10658	302	35.3	19.7	96.5	219	271	2	0.8
MA-709	\$1,734	10403	303	34.3	20.1	95.7	200	244	37	1.5
HIL-9908	\$1,647	9882	311	31.8	20.4	96.0	219	255	8	0.8
HIL-9879NT	\$1,582	9489	311	30.5	20.4	96.0	208	256	5	1.2
Average	\$1,838	11028	311	35.5	20.4	96.1	226	257	12	1.4
LSD 5%	82.7	496.2	7.2	1.7	0.4	0.4	35.8	N.S.	N.S.	0.4
CV %	2.7	2.7	1.4	2.8	1.1	0.3	9.4	6.3	110.0	18.4

Comments: This was an excellent quality trial with no major issues. Sugar quality was very high. Leafspot levels were below expected economic damage. Root rot damage was very low but Aphanomyces was a contributor on the dead beets that were found. The leafspot program was as follows: 7/2 EBDC + Copper, 7/13 Proline + EBDC, 7/28 Caramba + EBDC, 8/6 Proline + EBDC, 8/20 EBDC + Copper, 8/31 Proline + EBDC, 9/16 EBDC + Copper, 9/27 Proline.

\$/A: Gross dollars per acre assuming a \$45 payment and a company average RWST of 270.

Bold: Results are not statistically different from top ranking variety in each column.

Variety Trial

DVL Farms, Ruth - 2019

Trial Quality:	Very good	Soil Type:	Loamy sand	Cerc Control:	Excellent control: See below for materials
Planted:	May 6	Fertilizer:	2x2: Dry blend of N,P, K, S, Mn & B; S.D. 92# N by urea; Streamer: 30# N by 28%	Rhizoc Control:	Good control: Quadris I.F. (4.5 oz w/ Mustang) & 8 Leaf (10 oz w/ 3/4# EBDC in 12" band)
Harv/Samp:	Nov 2 / Oct 22	Prev Crop:	Black beans	Other Pests:	Aphanomyces
Plot Size:	3 reps	Weather:	Wet early, dry July & August, wet late		
Row Spacing:	28"				
Seeding Rate:	56,000				

Variety	\$/A	RWSA	RWST	T/A	% Sugar	% CJP	Populations 100 Ft. of Row		Dead Beets / 1200 Ft
							11 Day	37 Day	
SX-1275N	\$1,442	8654	292	29.6	18.9	97.0	104	245	107
C-G752NT	\$1,409	8453	292	28.9	19.0	96.8	149	242	20
B-1606N	\$1,400	8398	294	28.6	19.1	96.8	124	259	8
SX-1278N	\$1,394	8363	294	28.4	19.1	96.8	94	233	71
C-G675	\$1,389	8336	301	27.7	19.4	97.0	154	265	18
HIL-9865	\$1,352	8113	290	28.0	18.8	97.0	52	232	60
HIL-9908	\$1,319	7912	298	26.5	19.5	96.5	87	218	2
B-1399	\$1,301	7804	274	28.5	18.0	96.4	73	233	6
SX-1264	\$1,296	7775	308	25.3	19.9	97.1	17	215	101
MA-709	\$1,282	7690	290	26.6	18.9	96.7	34	220	45
B-1690	\$1,271	7626	283	27.0	18.6	96.3	128	257	4
HIL-9879NT	\$1,160	6959	296	23.5	19.2	96.9	80	246	22

Average	\$1,335	8007	293	27.4	19.0	96.8	91	239	39
LSD 5%	122.2	733.4	10.4	2.4	0.6	N.S.	19.3	N.S.	55.6
CV %	5.4	5.4	2.2	5.2	1.8	0.3	12.9	11.1	85.1

Comments: This trial was performed on a loamy sand. The drought likely had a greater influence on yield results due to the soil type. The trial had excellent emergence and stands may have been higher than ideal, especially considering the loamy sand soil. There was some early season water damage. Aphanomyces was present in the trial. It did not cause much early season damping off but caused scarring and contributed to late season dead beets. Total root diseases were approaching a level that could potentially lead to economic damage for the worst varieties. The leafspot program was as follows: 6/26 EBDC in 12" band, 7/11 Proline + EBDC, 7/26 Gem + EBDC, 8/9 Topguard + EBDC, 8/23 EBDC, 9/4 Inspire XT + EBDC. All sprays included a sticker.

\$/A: Gross dollars per acre assuming a \$45 payment and a company average RWST of 270.

Bold: Results are not statistically different from top ranking variety in each column.

Variety Trial

Wadsworth Farms Inc., Sandusky - 2019

Trial Quality: Good	Soil Type: Loam/Mucky Loam	Cerc Control: Excellent control: See below for materials
Planted: April 9	Fertilizer: Fall: V.R. 343# potash; 2x2: 36#-32#-6#-25S- 3Mn-0.2 B; PPI: 135#N by urea/ESN	
Harv/Samp: Nov 9 / Oct 22	Prev Crop: Drybeans	Rhizoc Control: Good control: Quadris I.F. (6 oz) & 8-10 Leaf (16 oz)
Plot Size: 3 reps	Weather: Wet early, dry July & August, wet late. Significant hail on July 23	Other Pests: Sugarbeet cyst nematode
Row Spacing: 27.56"		
Seeding Rate: 56,000		

Variety	\$/A	RWSA	RWST	T/A	% Sugar	% CJP	Populations 100 Ft. of Row		Dead Beets / 1200 Ft
							20 Day	44 Day	
C-G752NT	\$1,752	10513	283	37.1	18.4	96.9	198	260	32
SX-1278N	\$1,658	9948	288	34.6	18.5	97.4	130	246	8
B-1606N	\$1,614	9685	281	34.5	18.3	96.8	142	247	2
SX-1275N	\$1,586	9518	283	33.6	18.2	97.7	163	266	46
HIL-9879NT	\$1,420	8519	283	30.1	18.4	96.9	112	258	14
B-1690	\$1,416	8494	272	31.2	17.7	97.2	206	268	0
C-G675	\$1,291	7749	277	28.0	18.0	97.2	190	265	7
HIL-9865	\$1,291	7743	276	28.1	17.7	97.6	115	248	25
MA-709	\$1,279	7673	277	27.7	18.0	97.1	80	227	28
B-1399	\$1,226	7358	270	27.2	17.4	97.7	177	271	2
HIL-9908	\$1,176	7053	287	24.6	18.6	97.1	103	226	1
SX-1264	\$1,121	6728	275	24.5	17.6	97.9	53	197	35
Average	\$1,403	8415	279	30.1	18.1	97.3	139	248	17
LSD 5%	165.4	992.2	N.S.	3.5	0.7	0.6	63.1	28.1	N.S.
CV %	7.0	7.0	2.5	6.9	2.2	0.3	26.8	6.8	136.1

Comments: Sugarbeet cyst nematode was present in this field and impacted the results. The trial was planted on April 9 and took a long time to reach full emergence. Final population still ended up being very high. The trial received a hale storm on July 23 and caused significant leaf damage. Root and leafspot diseases were very low. The leafspot program was as follows: 6/26 EBDC, 7/8 Proline + EBDC, 7/23 Super Tin + Topsin + EBDC, 8/1 Enable + EBDC, 8/15 Super Tin + EBDC, 8/28 Inspire + EBDC, 9/17 Super Tin + EBDC. All sprays included a sticker.

\$/A: Gross dollars per acre assuming a \$45 payment and a company average RWST of 270.

Bold: Results are not statistically different from top ranking variety in each column.

Central District Trials





Official Variety Trial

Michigan Sugar Company

Trost Farms, Pigeon - 2019

Trial Quality: Good
Plant/Harv: May 16/Oct 9
Plots: 2 rows X 38 ft., 8 reps
Row Spacing: 22 inches
Seeding Rate: 2 inches,
 thinned to 200 beets/100 ft.

Soil Type: Sandy Clay Loam
% OM: 4.4 **pH:** 6.9 **CEC:** 13.1
Nutrients: P: Abv Opt K: Abv Opt
Mn: High **B:** Med
Added N: 100 lbs + Manure
Prev Crop: Alfalfa

****Cerc Control:** Very Good
 8 applications**
Rhizoc Control: Very Good
 Quadris IF, 6-8 If
Rainfall: 19.31 inches

Variety	\$/A	RWSA	RWST		Yield		Sugar		CJP	
			Lb/T	Rank	T/A	Rank	%	Rank	%	Rank
C-G752NT	\$1,770	9365	237	12	39.6	1	16.3	11	94.4	18
B-188N	\$1,709	9043	249	2	36.4	18	16.6	6	95.2	4
B-1893	\$1,704	9013	244	4	36.9	11	17.0	2	93.9	22
HIL-9865	\$1,701	8997	253	1	35.5	22	17.2	1	95.1	5
B-1606N	\$1,697	8977	232	18	38.8	4	16.0	18	94.3	19
MA-709	\$1,695	8965	246	3	36.5	16	16.7	4	95.1	6
C-RR059	\$1,684	8911	238	10	37.4	8	16.7	3	94.5	17
B-1703	\$1,681	8891	235	15	37.9	6	16.4	9	93.7	23
C-G675	\$1,677	8874	240	9	37.0	10	16.6	5	94.2	21
C-G855	\$1,671	8839	241	7	36.7	13	16.2	13	94.8	10
SX-RR1278N	\$1,671	8838	236	14	37.5	7	16.1	16	94.8	11
HIL-2240	\$1,668	8825	241	6	36.6	14	16.5	8	94.9	9
B-1690	\$1,667	8818	227	23	39.0	2	15.8	23	93.2	25
SX-RR1264	\$1,663	8796	243	5	36.2	19	16.4	10	95.6	2
C-G333NT	\$1,653	8743	224	25	39.0	3	16.0	21	92.9	26
SX-2283	\$1,635	8651	237	13	36.6	15	16.3	12	95.0	8
MA-814	\$1,631	8627	231	20	37.3	9	16.0	19	94.3	20
B-1399	\$1,607	8503	224	26	38.0	5	15.4	25	94.7	13
SX-RR1275N	\$1,601	8468	230	21	36.8	12	15.7	24	95.0	7
C-G861	\$1,597	8450	232	17	36.4	17	16.6	7	93.3	24
SX-RR1245N	\$1,565	8279	232	19	35.7	21	15.9	22	94.7	12
HIL-9908	\$1,556	8233	238	11	34.5	24	16.2	14	95.2	3
HIL-9879NT	\$1,528	8082	240	8	33.6	26	16.2	15	94.6	14
SX-RR1243	\$1,522	8054	224	24	35.9	20	15.1	26	95.8	1
MA-813NT	\$1,511	7996	233	16	34.4	25	16.1	17	94.5	16
HIL-2238NT	\$1,498	7924	227	22	34.9	23	16.0	20	94.6	15
Average	\$1,636.9	8660.2	236.0		36.73		16.24		94.54	
LSD 5%	130.5	690.5	12.3		2.3		0.6		1.1	
CV %	8.1	8.1	5.3		6.4		3.8		1.2	

**** See Cercospora Fungicide Application Page**

\$/A: Gross dollars per acre assuming a \$45 payment and trial average RWST.

Bold: Results are not statistically different from top-ranking variety in each column.

Comments: This trial was planted later than normal in mid-May along with many other fields in the area. Adequate spring growing conditions gave way to drier than average summer conditions. This field's history of alfalfa and manure likely played a role in the lower than average sugar content and RWST. Also, the amount of rainfall received during the weeks prior to harvest rehydrated the crop reducing quality. Overall this trial was disease free, had excellent yields, and quality levels that were mostly a result of environmental impacts.



Nematode Variety Trial

Michigan Sugar Company

Sylvester, Quanicassee - 2019

Trial Quality: Good

Location: Sylvester

Plot Size: 6 rows X 50 ft., 6 reps

Cerc Control: Very Good

Rhizoc Control: Very Good

Variety	\$/A	RWSA	RWST		Yield		Sugar		CJP		Emerge	
			Lb/T	Rank	T/A	Rank	%	Rank	%	Rank	%	Rank
B-1703	\$1,427	8951	288	4	31.0	3	18.7	4	96.9	11	68.5	1
B-149N	\$1,398	8770	282	8	31.1	2	18.2	7	97.2	3	66.2	3
B-1606N	\$1,393	8735	275	13	31.7	1	18.0	11	96.7	14	59.3	11
C-G752NT	\$1,385	8689	292	1	29.8	4	18.8	1	97.2	7	59.4	10
SX-RR1275N	\$1,321	8284	282	7	29.4	5	18.1	10	97.6	1	64.7	5
C-G675	\$1,317	8261	289	3	28.6	9	18.8	2	96.9	13	61.1	9
C-G333NT	\$1,310	8219	283	6	29.1	6	18.4	6	97.0	10	58.9	12
SX-RR1278N	\$1,282	8042	278	10	28.9	8	18.1	9	96.9	12	67.4	2
SX-RR1264	\$1,270	7963	284	5	28.0	12	18.4	5	97.1	8	53.4	14
SX-RR1243	\$1,259	7898	272	14	29.0	7	17.6	14	97.2	5	63.7	6
SX-RR1245N	\$1,241	7783	278	11	28.1	11	17.9	12	97.4	2	63.5	7
B-1399	\$1,236	7753	276	12	28.1	10	17.9	13	97.2	6	65.4	4
HIL-9908	\$1,165	7306	291	2	25.1	14	18.8	3	97.2	4	63.4	8
HIL-9879NT	\$1,152	7223	280	9	25.8	13	18.2	8	97.0	9	57.4	13
Average	\$1,296.9	8134.15	282.2		28.85		18.29		97.10		62.31	
LSD 5%	84.9	532.4	N.S.		1.9		N.S.		N.S.		6.0	
CV %	6.2	6.2	4.6		6.2		4.3		0.6		9.1	

\$/A: Gross dollars per acre assuming a \$45 payment and trial average RWST.

Bold: Results are not statistically different from top ranking variety in each column.

Comments: This field has a history of nematode population at a level that would reduce yield. On average, varieties with nematode tolerance did yield better than non-nematode tolerant varieties. Some of the highest yielding non-nematode varieties still produced respectable yields in this trial. Yield and sugar content were both very good considering a September 26th harvest date.

Variety Trial

Herford Farms, Elkton - 2019

Trial Quality: Very good	Soil Type: Loam	Cerc Control: Excellent control
Planted: May 19	Fertilizer: Fall manure	
Harv/Samp: Nov 6 / Oct 17		
Plot Size: 3 reps	Prev Crop: Wheat / radish	Rhizoc Control: Excellent control: Quadris at 6-8 leaf (14.25 oz)
Row Spacing: 22 inch	Weather: Wet early, dry July & August, wet late	Other Pests: Sugarbeet cyst nematode
Seeding Rate: 60,000		

Variety	\$/A	RWSA	RWST	T/A	% Sugar	% CJP	Populations 100 Ft. of Row		Dead Beets / 1200 Ft
							11 Day	36 Day	
SX-1275N	\$1,726	10358	296	35.0	19.2	96.8	203	206	2
SX-1278N	\$1,716	10293	296	34.8	19.4	96.4	212	220	6
C-G675	\$1,679	10073	299	33.7	19.5	96.5	220	225	0
C-G752NT	\$1,647	9885	291	34.0	19.2	95.9	221	224	1
MA-709	\$1,608	9646	299	32.2	19.4	97.0	182	195	12
B-1606N	\$1,597	9582	289	33.2	19.1	95.8	212	221	0
HIL-9865	\$1,589	9532	293	32.5	19.2	96.5	186	196	3
B-1690	\$1,554	9323	280	33.3	18.6	95.7	214	221	0
SX-1264	\$1,552	9311	297	31.4	19.3	96.8	168	184	5
B-1399	\$1,533	9195	280	32.8	18.4	96.4	222	229	2
HIL-9879NT	\$1,508	9048	295	30.7	19.3	96.4	185	198	1
HIL-9908	\$1,477	8862	304	29.2	19.8	96.5	185	196	0

Average	\$1,599	9592	293	32.7	19.2	96.4	201	210	3
LSD 5%	113.9	683.5	11.8	2.1	0.6	N.S.	23.6	19.6	5.9
CV %	4.2	4.2	2.4	3.9	1.8	0.5	7.0	5.7	129.5

Comments: This trial had sugarbeet cyst nematode present and the non-nematode varieties showed more wilting stress during the dry period of July/August. Yield results tend to favor the nematode varieties. This trial was planted later in May but had excellent emergence and early season growth. This field had manure applied the previous fall. The levels of root disease and leafspot were very low.

\$/A: Gross dollars per acre assuming a \$45 payment and a company average RWST of 270.

Bold: Results are not statistically different from top ranking variety in each column.

Variety Trial

Sylvester Farms, Quanicassee - 2019

Trial Quality: Good
Planted: April 9
Harv/Samp: Oct 15 / Oct 14
Plot Size: 3 reps
Row Spacing: 24 inch
Seeding Rate: 62,000

Soil Type: Loam
Fertilizer: Fall: P & K; 2x2: 10 gal 28%, 6 gal 10-34-0, 2 gal Thio, Mn & B; PPI: 40 gal 28%, 4 gal Thio
Prev Crop: Wheat / radish
Weather: Wet early, dry July & August, wet late

Cerc Control: Excellent control: See below for materials
Rhizoc Control: Good control: Quadris I.F. (10 oz + Mustang), 8-10 leaf (10 oz)
Other Pests: Sugarbeet cyst nematode, Aphanomyces

Variety	\$/A	RWSA	RWST	T/A	% Sugar	% CJP	Populations 100 Ft. of Row		Dead Beets / 1200 Ft
							17 Day	51 Day	
C-G752NT	\$1,608	9647	291	33.2	19.1	96.4	84	199	24
SX-1275N	\$1,515	9090	282	32.2	18.4	96.8	70	197	6
SX-1278N	\$1,488	8927	291	30.7	18.9	96.9	58	187	12
B-1606N	\$1,474	8846	277	31.9	18.2	96.4	85	200	3
C-G675	\$1,444	8666	299	29.0	19.5	96.5	98	209	1
HIL-9865	\$1,442	8649	295	29.4	19.0	97.3	28	181	16
B-1690	\$1,368	8210	283	29.0	18.5	96.7	95	214	0
SX-1264	\$1,339	8031	283	28.4	18.4	96.9	10	132	25
HIL-9908	\$1,306	7837	303	25.9	19.7	96.7	27	162	0
B-1399	\$1,297	7780	274	28.4	17.8	97.1	46	218	1
HIL-9879NT	\$1,262	7571	287	26.4	18.8	96.5	27	189	19
MA-709	\$1,258	7550	288	26.3	18.8	96.8	11	179	53
Average	\$1,400	8400	288	29.2	18.7	96.7	53	189	13
LSD 5%	118.2	709.1	11.7	2.8	0.7	N.S.	19.6	19.8	N.S.
CV %	5.0	5.0	2.4	5.7	2.1	0.4	21.7	6.2	134.6

Comments: Sugarbeet cyst nematode was present in this field and impacted the results. The trial was planted on April 9 and took a long time to reach full emergence. Final populations were lower than ideal for some varieties. Root diseases were generally low, but Aphanomyces was a contributor to some of the dead beets that were found. Both Cercospora and Alternaria leafspot were found early in the trial (mid-June), but did not progress to become an economic issue. The leafspot program was as follows: 6/19 EBDC, 6/30 Propulse + Badge, 7/12 Super Tin + EBDC, 7/24 Provysol + EBDC, 8/7 Priaxor + EBDC, 8/16 Inspire XT + Badge, 8/30 Super Tin + EBDC, 9/17 Delaro + Badge. All sprays included a sticker.

\$/A: Gross dollars per acre assuming a \$45 payment and a company average RWST of 270.

Bold: Results are not statistically different from top ranking variety in each column.

West District Trials





Official Variety Trial

Michigan Sugar Company

Deshano, Kawkawlin - 2019

Trial Quality: Good
Plant/Harv: Apr 22/Sep 27
Plots: 2 rows X 38 ft., 8 reps
Row Spacing: 22 inches
Seeding Rate: 2 inches,
 thinned to 200 beets/100 ft.

Soil Type: Sandy Clay Loam
% OM: 2.9 **pH:** 6.7 **CEC:** 12.1
Nutrients: P: Abv Opt K: Abv Opt
Mn: High **B:** Low
Added N: 135 lbs.
Prev Crop: Wheat

****Cerc Control:** Very Good
 7 applications**
Rhizoc Control: Very Good
 Quadris IF, 6-8 lf
Rainfall: 23.33 inches

Variety	\$/A	RWSA	RWST		Yield		Sugar		CJP	
			Lb/T	Rank	T/A	Rank	%	Rank	%	Rank
C-G752NT	\$1,834	10942	266	14	41.2	2	17.5	11	96.5	25
B-1606N	\$1,804	10762	260	22	41.4	1	17.1	23	96.7	13
C-G861	\$1,801	10743	267	11	40.2	3	17.5	10	96.6	17
HIL-9865	\$1,785	10650	278	1	38.3	9	18.1	1	97.0	5
C-G675	\$1,782	10632	272	7	39.1	7	17.8	6	96.7	16
SX-RR1275N	\$1,778	10607	266	12	39.9	4	17.3	17	97.1	3
B-188N	\$1,775	10590	278	2	38.1	10	18.0	2	97.1	2
SX-RR1278N	\$1,766	10534	267	10	39.4	6	17.5	12	96.8	11
B-1690	\$1,755	10469	265	18	39.5	5	17.4	15	96.5	24
B-1893	\$1,741	10384	270	8	38.6	8	17.7	8	96.6	18
B-1703	\$1,739	10373	273	4	38.0	12	17.8	7	96.9	8
SX-RR1245N	\$1,700	10140	266	13	38.1	11	17.4	14	96.8	10
SX-2283	\$1,683	10041	266	15	37.8	14	17.3	18	97.0	6
SX-RR1264	\$1,670	9962	277	3	36.0	19	18.0	3	97.1	4
C-G855	\$1,652	9852	262	20	37.7	15	17.1	21	97.0	7
C-G333NT	\$1,644	9808	265	16	37.0	16	17.4	13	96.6	21
B-1399	\$1,631	9731	257	25	37.8	13	16.8	26	97.2	1
HIL-2240	\$1,616	9640	267	9	36.1	18	17.6	9	96.5	22
C-RR059	\$1,584	9446	260	23	36.4	17	17.1	22	96.6	19
SX-RR1243	\$1,554	9268	264	19	35.2	20	17.3	19	96.7	15
HIL-9908	\$1,531	9129	273	6	33.5	24	17.9	4	96.6	20
MA-814	\$1,522	9076	258	24	35.1	21	16.9	25	96.9	9
MA-709	\$1,519	9063	273	5	33.2	25	17.8	5	96.8	12
MA-813NT	\$1,507	8987	261	21	34.4	22	17.2	20	96.5	23
HIL-2238NT	\$1,465	8741	257	26	34.0	23	17.0	24	96.2	26
HIL-9879NT	\$1,423	8489	265	17	32.0	26	17.4	16	96.7	14
Average	\$1,664.0	9925.3	266.6		37.23		17.45		96.76	
LSD 5%	166.5	993.2	11.3		3.4		0.7		0.5	
CV%	10.1	10.1	4.3		9.2		3.9		0.5	

**** See Cercospora Fungicide Application Page**

\$/A: Gross dollars per acre assuming a \$45 payment and trial average RWST.

Bold: Results are not statistically different from top-ranking variety in each column.

Comments: This trial was planted on April 22, earlier than many fields in the area. The weather after planting helped with emergence and overall growth. Some excess moisture was received during the Memorial Day weekend, but the soil type and drainage of the field handled this well. Dry conditions became evident in July-August, but the September rains helped to boost yield. Sugar content was very good for a September harvested field. Disease control in this trial was very good.

Variety Trial

Chaffin Farms, Ithaca - 2019

Trial Quality: Good	Soil Type: Muck	Cerc Control: Excellent control: See below for materials
Planted: April 25	Fertilizer: Fall: 12,000 gal dairy manure; PP: 55# N & 5# S	
Harv/Samp: Nov 8 / Nov 8		
Plot Size: 3 reps	Prev Crop: Chopped corn	Rhizoc Control: Fair control: Quadris broadcast (16 oz) + EBDC
Row Spacing: 20 inch		
Seeding Rate: 70,000	Weather: Wet early and late, some water damage; irrigated field	Other Pests: Weed pressure

Variety	\$/A	RWSA	RWST	T/A	% Sugar	% CJP	Populations 100 Ft. of Row		Dead Beets / 1200 Ft
							13 Day	36 Day	
C-G752NT	\$2,102	12614	254	49.7	17.2	95.1	162	210	29
B-1606N	\$1,909	11451	235	48.8	16.2	94.5	143	230	9
C-G675	\$1,891	11346	247	45.9	16.9	94.8	163	229	4
C-RR059	\$1,802	10810	228	47.2	16.3	92.8	157	231	1
SX-1264	\$1,752	10510	247	42.5	16.8	94.9	86	195	30
B-1690	\$1,748	10490	237	44.3	16.7	93.4	173	231	2
B-1399	\$1,698	10186	237	43.0	16.1	95.1	143	238	11
HIL-9908	\$1,689	10135	250	40.5	17.0	94.9	135	225	16
MA-709	\$1,669	10016	236	42.5	16.4	94.0	91	210	41
HIL-9865	\$1,668	10005	245	40.8	16.8	94.6	101	204	55
SX-1278N	\$1,653	9918	235	42.3	16.4	93.9	138	224	126
HIL-9879NT	\$1,631	9784	249	39.3	17.0	94.9	122	235	40
SX-1275N	\$1,622	9731	240	40.6	16.5	94.6	180	232	274
Average	\$1,756	10538	241	43.6	16.6	94.4	138	223	49
LSD 5%	185.6	1113.6	14.5	3.3	0.6	N.S.	31.8	15.4	75.2
CV %	6.3	6.3	3.6	4.5	2.2	1.0	14.1	4.1	90.8

Comments: This trial was performed on a muck soil under pivot irrigation. The field was a very high yielding environment with excellent growth throughout the season. Manure was applied the previous fall and the combination of muck soil and manure likely influenced the lower sugar quality results. The trial experienced small areas of weed pressure and early season water damage that likely increased the variability of the results. There was enough root rot in this trial to negatively impact some varieties. Even with irrigation, leafspot levels were still low. The leafspot program was as follows: 6/10 EBDC with Quadris, 6/25 Inspire XT + EBDC, 7/13 Super Tin + Topsin + EBDC, 7/28 Delaro + EBDC, 8/11 Super Tin + EBDC, 8/26 Topguard + EBDC, 9/10 Eminent + EBDC. All sprays included a sticker.

\$/A: Gross dollars per acre assuming a \$45 payment and a company average RWST of 270.

Bold: Results are not statistically different from top ranking variety in each column.

Variety Trial

Shaffner Farms, Freeland - 2019

Trial Quality:	Excellent	Soil Type:	Clay loam	Cerc Control:	Excellent control: 6 sprays
Planted:	May 14	Fertilizer:	2x2: 25 gal of 16-16-1 w/ micros; PPI: 100# N by urea/AMS blend	Rhizoc Control:	Fair control: Quadris I.F. (10 oz)
Harv/Samp:	Oct 16	Prev Crop:	Soybeans	Other Pests:	Fusarium, Aphanomyces, Root aphid
Plot Size:	3 reps	Weather:	Wet early, dry July & August, very wet late		
Row Spacing:	22 inch				
Seeding Rate:	62,000				

Variety	\$/A	RWSA	RWST	T/A	% Sugar	% CJP	Populations 100 Ft. of Row		Dead Beets / 1200 Ft
							20 Day	44 Day	
HIL-9865	—	—	291	—	18.8	97.0	182	205	73
C-G675	—	—	289	—	18.7	97.1	194	203	15
SX-1264	—	—	289	—	18.6	97.2	169	193	78
MA-709	—	—	286	—	18.5	96.9	170	192	124
C-G752NT	—	—	286	—	18.5	97.2	201	214	101
SX-1275N	—	—	284	—	18.3	97.4	193	204	239
HIL-9908	—	—	284	—	18.4	97.0	180	192	4
HIL-9879NT	—	—	283	—	18.4	96.9	202	212	29
B-1690	—	—	282	—	18.4	96.8	197	213	9
B-1606N	—	—	281	—	18.2	97.1	203	219	31
SX-1278N	—	—	277	—	18.0	97.0	200	215	289
B-1399	—	—	272	—	17.7	97.1	192	217	8

Average	—	—	283	—	18.4	97.0	190	207	83
LSD 5%	—	—	10.1	—	0.6	0.3	18.0	14.6	169.0
CV %	—	—	2.1	—	2.0	0.2	5.6	4.2	119.9

Comments: This was a high quality trial that was unable to have the yield data collected due to the extremely wet fall and extended harvest in this growing area. The trial was in a clay loam field and was a high yielding environment. Sugar samples were hand dug on October 16. This location had some of the highest numbers for dead beet counts with Rhizoctonia, Aphanomyces, and Fusarium all contributing.

Bold: Results are not statistically different from top ranking variety in each column.



Nursery Data





Rhizoctonia Nursery

Michigan Sugar Company

Average of 2 years, 2018 & 2019

Trial Quality: Good

Location: 2018 - Blumfield East, SVREC, 2019 - Blumfield East, SVREC

Plot Size: 2 rows X 25 ft., 6 reps

Inoculation: Inoculated with Rhizoctonia Solani AG 2-2 IIIB

Variety	Root Rating* 0-7	Estimated Root Rot %
C-G855	3.6	16.7
C-G861	3.6	17.1
C-G675	3.8	20.3
C-RR059	3.9	23.6
B-1690	4.0	25.3
HIL-9908	4.0	26.1
B-1399	4.0	26.2
B-1703	4.1	28.9
B-188N	4.1	29.2
C-G752NT	4.1	28.8
Resistant Check	4.2	29.7
B-1606N	4.2	29.0
B-1893	4.2	31.1
C-G333NT	4.2	31.4
HIL-9865	4.3	32.7
HIL-9879NT	4.4	35.6
MA-813NT	4.4	35.9
MA-814	4.5	36.3
SX-RR1243	4.5	36.9
SX-RR1264	4.5	37.5
SX-RR1275N	4.5	38.3
HIL-2238NT	4.6	39.3
MA-709	4.6	39.3
SX-RR1245N	4.6	40.4
SX-2283	4.7	42.5
SX-RR1278N	4.8	44.9
HIL-2240	4.9	47.0
Susceptible Check	4.9	48.5
Average	4.01	29.12
LSD 5%	0.4	10.3
CV %	5.1	17.2

Bold: Results are not significantly different from the top ranking variety in each column

***Rating System:**

0 = No Infection	1 = less than 2% rotted roots	2 = less than 5% rotted roots
3 = 5 to 25% rotted roots	4 = 26 to 50% rotted roots	5 = 51 to 75% rotted roots
6 = 76 to 95% rotted roots	7 = 100% rotted roots	

During evaluations, roots were dug and assigned values from 0 to 7. Each plot contained approximately 50 roots and each root was rated.



Cercospora Nursery

Michigan Sugar Company

Average of 2 years, 2018 & 2019

Trial Quality: Good

Locations: 2018 - Blumfield East, SVREC

2019 - Blumfield East, SVREC

Plot Size: MSC - 2 Rows X 17.5 ft., 5 reps

SVREC - 2 Rows X 20 ft., 5 reps

Inoculation: Trials are Inoculated

Variety	Avg of 2 Years CLS Rate 0-9	2018 CLS Rate 0-9	2019 CLS Rate 0-9
HIL-9908	3.9	3.6	4.2
C-G855	4.4	3.9	5.0
B-1399	4.5	4.4	4.7
HIL-9879NT	4.5	3.7	5.4
HIL-2240	4.6	4.1	5.0
MA-813NT	4.6	3.5	5.6
MA-709	4.7	4.2	5.2
B-1703	4.7	4.4	5.1
HIL-2238NT	4.9	4.4	5.4
MA-814	5.0	4.6	5.3
SX-RR1264	5.2	4.5	5.8
C-G675	5.2	4.9	5.5
SX-RR1243	5.2	4.7	5.6
SX-2283	5.2	4.5	6.0
Resistant Check	5.3	5.0	5.5
C-G861	5.4	4.9	5.8
HIL-9865	5.4	4.7	6.0
C-G752NT	5.4	4.9	5.8
B-1690	5.4	4.8	6.1
B-1893	5.5	5.2	5.8
SX-RR1245N	5.5	4.8	6.2
B-1606N	5.6	5.0	6.2
SX-RR1275N	5.6	5.0	6.1
B-188N	5.7	5.1	6.2
C-RR059	5.8	5.0	6.6
C-G333NT	5.9	5.4	6.4
SX-RR1278N	5.9	5.1	6.7
Susceptible Check	6.0	5.3	6.7
Average	5.17	4.63	5.72

Cercospora Rating (0-9 Scale): 0 = no spots, 1 = very few spots, 2 = up to 10 spots/leaf, 2.5 = up to 50 spots/leaf, 3 = 100 to 200 spots/leaf (approx 3% leaf injury), 4 = up to 10 % injury, 5 = up to 25 % injury, 6 = up to 50% injury, 7 = up to 75% injury, 8 = up to 90% injury, 9 = leaves completely dead.

Comments: These are inoculated trials. Ratings begin when the disease level approaches economic damage. Each trial is rated at least 5 times, until most varieties begin to burn down. Ratings are averaged to provide results.



Alternaria

0-6 Ratings

2018

Trial Quality: Good

Locations: Akron, Breckenridge, Elkton, Harbor Beach, Pigeon, Richville, Ruth

Plot Size: 2 rows X 38 ft., 4 reps

Variety	Alternaria 0-6	% Check	% Injury
B-1703	1.5	72.2	1.8
HIL-9908	1.8	83.2	2.7
C-G855	1.8	84.0	2.7
B-1399	1.9	89.9	3.0
MA-709	1.9	90.6	3.0
C-G675	1.9	91.3	3.0
HIL-2240	2.0	93.6	3.3
HIL-2238NT	2.0	94.3	3.3
MA-813NT	2.0	94.3	3.3
SX-RR1264	2.0	94.3	3.3
MA-814	2.0	96.5	3.3
HIL-9879NT	2.1	97.2	3.8
B-1606N	2.1	98.7	3.8
SX-2283	2.1	99.4	3.8
C-G752NT	2.2	103.9	4.0
C-G333NT	2.3	106.1	4.3
SX-RR1243	2.3	107.6	4.3
B-188N	2.3	109.0	4.3
SX-RR1278N	2.3	110.5	4.3
C-G861	2.4	112.7	4.8
HIL-9865	2.5	116.4	5.0
SX-RR1245N	2.7	126.0	6.4
B-1893	2.7	126.0	6.4
SX-RR1275N	2.9	137.8	7.8
B-1690	2.9	138.5	7.8
C-RR059	3.2	148.8	10.8
Average	2.22	104.72	4.40

Alternaria Rating (0-6 scale): 1 = 1% leaf injury, 2 = 3.3% leaf injury, 3 = 8.5% leaf injury,
4 = 20% leaf injury, 5 = 35% leaf injury.

Comments: Ratings came from the Official Variety Trials and the Cercospora Nurseries.



Cyst Nematode Nursery

Michigan Sugar Company

Average of 2 Years, 2018 - 2019

Trial Quality: Good to Very Good

Cerc Control: Very Good

Locations: 2018 & 2019 Sylvester Nematode

Rhizoc Control: Very Good

Plot Size: 2018 - 2 rows X 25 ft., X 6 reps

Plot Size: 2019 - 2 rows X 38 ft., X 6 reps

Variety	\$/A	RWSA	RWST		Yield		Sugar		CJP	
			Lb/T	Rank	T/A	Rank	%	Rank	%	Rank
C-G752N	\$1,698	10042	251.6	7	40.3	1	16.9	7	96.0	8
SX-RR1278N	\$1,645	9721	259.1	1	37.9	4	17.3	1	96.2	3
C-G675	\$1,609	9522	253.7	6	38.1	2	17.0	6	96.0	7
B-188N	\$1,588	9395	251.0	8	38.0	3	16.8	9	96.1	4
SX-RR1275N	\$1,586	9371	257.0	3	37.0	5	17.1	4	96.2	2
B-1606N	\$1,537	9092	255.2	5	36.1	10	17.0	5	96.0	6
SX-RR1245N	\$1,524	9027	249.0	10	36.8	7	16.7	10	95.9	9
C-G333N	\$1,518	8985	247.1	11	36.8	6	16.6	11	95.8	11
HIL-2238N	\$1,493	8806	245.3	12	36.6	8	16.6	12	95.6	12
Susceptible Check	\$1,482	8751	243.2	13	36.6	9	16.5	13	95.5	13
SX-RR1243	\$1,476	8734	250.3	9	35.5	11	16.9	8	95.9	10
M-813N	\$1,447	8539	257.1	2	33.7	12	17.2	3	96.3	1
HIL-9879N	\$1,367	8067	256.4	4	31.9	13	17.2	2	96.1	5
Average	\$1,536.2	9080.8	252.0		36.55		16.92		95.97	
LSD 5%	157.5	952.0	N.S.		2.7		N.S.		N.S.	
CV %	4.7	4.8	2.0		3.3		1.7		0.3	

\$/A: Gross dollars per acre assuming a \$45 payment and trial average RWST.

Bold: Results are not statistically different from top ranking variety in each column.



Root Aphid Nursery

Hillehog Seed LLC.

Average of 2018 & 2019

Variety	% Infected
B-1703	0.5
MA-813NT	1.0
C-G855	1.1
C-G333NT	1.3
B-1399	1.4
B-1690	2.3
SX-2283	2.4
MA-814	2.4
C-G675	2.7
HIL-9865	2.7
B-1893	3.4
C-RR059	3.5
HIL-2240	3.6
MA-709	3.7
B-188N	4.0
B-1606N	4.3
HIL-2238NT	4.6
C-G752NT	4.6
SX-RR1264	4.9
HIL-9908	5.0
C-G861	7.5
HIL-9879NT	9.9
SX-RR1278N	14.9
SX-RR1275N	25.8
SX-RR1245N	40.8
SX-RR1243	44.2
Average	7.8
LSD 5%	6.8
CV %	42.6

Syngenta conducts a replicated field trial (plots 4 rows X 30 ft).
Beets are rated for Root Aphids at harvest.



Aphanomyces Nursery

BETASEED, Shakopee, MN

Average of 2 years, 2018 & 2019

Variety	Root Rating 1 - 9 Scale	Canopy Rating 1 - 9 Scale	Stand Loss 1 - 5 Scale
B-188N	3.3	2.0	1.0
SX-2283	3.4	1.7	1.0
SX-1278N	3.7	1.9	1.0
C-G752NT	3.7	2.0	1.0
SX-RR1275N	3.9	2.0	1.0
SX-1264	3.9	2.0	1.0
B-1893	4.0	2.3	1.0
B-1606N	4.1	2.3	1.0
SX-RR1245N	4.3	2.4	1.0
B-1399	4.3	2.3	1.0
HIL-9865	4.5	2.6	1.0
Resistant CK	4.5	2.8	1.0
C-G333NT	4.5	2.6	1.0
SX-RR1243	4.6	2.4	1.0
B-1690	4.7	3.1	1.0
C-G675	4.8	3.3	1.0
C-RR059	4.8	3.0	1.0
HIL-2240	4.9	3.0	1.0
MA-709	4.9	3.5	1.0
B-1703	5.0	2.9	1.0
MA-813NT	5.1	3.1	1.0
HIL-9908	5.1	3.3	1.0
C-G861	5.2	3.5	1.0
MA-814	5.3	3.3	1.0
Moderate CK	5.3	4.0	1.0
C-G855	5.3	3.4	1.0
HIL-2238NT	5.7	3.8	1.0
Susceptible CK	6.0	4.4	1.0
HIL-9879NT	6.0	4.2	1.0
Average	4.65	2.86	1.00

Root and Canopy Ratings (1 - 9 scale): 1 = very little damage, 2 = up to 20% damage, 4 = up to 60% damage, 6 = up to 70% damage and 8 = up to 90% damage.

Stand Rating (1 - 5 scale): 1 = up to 20% loss, 2 = up to 40% loss, 3 = up to 60% loss, 4 = up to 80% loss, and 5 = up to 100% loss.



Rhizomania Nursery

USDA, Kimberly, Idaho

Average of 2 Years, 2018 & 2019

Trial Quality: Good
Location: Kimberly, Idaho
Plot Size: 2 rows X 24 ft., 6 reps

Variety	Root Rating 0-9	RWSA	% Sugar	T/A	Foliar Rating 0-100
SX-RR1275N	2.0	11969	18.1	37.6	3.5
C-G333NT	2.1	11808	18.3	37.0	0.5
HIL-2238NT	2.2	11325	17.9	36.2	0.6
B-1893	2.3	11440	18.1	35.7	0.4
B-1690	2.3	11670	18.9	35.5	0.1
SX-RR1278N	2.3	11314	18.1	35.6	3.2
C-RR059	2.3	11491	18.6	35.4	0.0
C-G675	2.4	11381	18.2	35.6	0.4
B-1606N	2.4	11235	18.2	35.3	0.8
SX-RR1245N	2.4	11100	17.9	35.1	1.7
C-G752NT	2.4	11211	18.5	34.6	0.0
SX-RR1243	2.4	10774	17.8	34.3	3.4
HIL-9865	2.5	11093	18.4	34.1	4.9
B-1703	2.5	10800	18.1	33.9	0.1
C-G861	2.5	11126	18.3	34.8	0.4
B-1399	2.5	10081	17.3	33.6	1.4
SX-2283	2.7	9859	17.5	31.8	20.1
MA-709	2.7	10147	17.9	32.3	3.8
B-188N	2.7	10542	18.6	32.2	0.2
HIL-2240	2.7	9841	17.7	31.7	6.1
C-G855	2.8	10019	18.2	31.2	0.4
SX-RR1264	2.9	9429	17.5	30.4	4.8
MA-813NT	3.1	8610	17.6	27.9	3.4
HIL-9908	3.1	9048	18.3	28.0	0.2
MA-814	3.1	8604	17.9	27.1	2.8
HIL-9879NT	3.4	7807	17.6	25.2	4.3
Susceptible Check	4.7	4979	16.2	17.7	100.0
Average	2.64	10322.3	17.98	32.57	6.18
LSD 5%	0.5	1320.1	0.4	4.5	9.6
CV %	8.8	6.2	1.1	6.7	75.5

Root Rating (1-9 scale): 1 = very little damage, 2 = up to 20% damage, 4 = up to 60% damage, 6 = up to 75% damage and 8 = up to 90% damage.

Foliar Rating: 0 = best, 100 = worst.



Fusarium Nursery

American Crystal Sugar Company

Average of 2 years, 2018 & 2019

Trial Quality: Good

Evaluated: 4 evaluation dates towards end of season

Plot Size: 2 rows X 17 ft., 4 reps

Variety	Avg of 2 Years Rating 1-9	2018 Rating 1-9	2019 Rating 1-9
B-1399	3.7	4.9	2.4
B-1690	4.1	5.4	2.8
B-1606N	4.2	5.5	2.9
C-G855	4.3	4.9	3.7
B-1893	4.4	5.5	3.3
C-RR059	4.4	6.0	2.8
C-G752NT	4.5	5.7	3.2
C-G333NT	4.6	5.7	3.4
B-188N	4.9	6.3	3.5
SX-2283	5.1	6.2	4.1
SX-RR1243	5.4	6.4	4.5
SX-RR1275N	5.7	6.5	4.8
MA-814	5.8	7.2	4.4
SX-RR1264	5.9	6.6	5.2
SX-RR1278N	6.0	6.6	5.5
HIL-2240	6.2	6.9	5.5
C-G675	6.2	7.5	5.0
SX-RR1245N	6.3	7.6	5.1
B-1703	6.4	7.5	5.2
MA-709	6.5	7.4	5.5
C-G861	6.5	7.4	5.6
HIL-9865	6.5	7.0	6.0
MA-813NT	6.5	7.5	5.6
HIL-9879NT	6.6	7.3	5.9
HIL-9908	6.6	7.1	6.1
Susceptible Check	6.8	7.1	6.4
HIL-2238NT	6.8	7.5	6.2
Average	5.58	6.55	4.61
LSD 5%	1.0		
CV %	8.4		

Foliar Rating (1-9 scale): 1 = very little damage, 2 = up to 20% damage, 4 = up to 60% damage, 6 = up to 75% damage, and 8 = up to 90% damage. Values are an average of 4 ratings.



Official Variety and Plant to Stand Trials

Michigan Sugar Company

Location Information

	Kawkawlin	Sandusky	Port Hope	Ruth	Pigeon
Grower	Deshano	Gerstenberger	Grekowicz	Maurer	Trost
Trial Quality	OVT - Good	OVT - Very Good PTS - Very Good	OVT - Very Good PTS -Very Good	OVT - Good	OVT - Good
Planted	April 22	May 15	May 16	May 15	May 16
Harvested	Sept 27	Oct 29	Oct 23	Oct 10	Oct 9
Soil Type	Sandy Clay Loam	Loam	Sandy Loam	Sandy Clay Loam	Sandy Clay Loam
Soil pH	6.7	7.4	7.7	7.5	6.9
Soil OM	2.9%	2.9%	3.3%	2.8%	4.4%
Phosphorus	Above Opt	Above Opt	Above Opt	Above Opt	Above Opt
Potassium	Above Opt	Optimum	Below Opt	Above Opt	Above Opt
Magnesium	Above Opt	Above Opt	Above Opt	Above Opt	Above Opt
Manganese	High	High	High	High	High
Boron	Low	Low	Medium	Low	Medium
Zinc	High	High	Medium	High	Medium
Nitrogen Added	135 lbs.	155 lbs	35 lbs + Manure	135 lbs	100 lbs + Manure
Seasonal Rainfall*					
April	2.02				
May	4.51	3.34	3.15	4.28	3.56
June	6.09	4.31	3.65	6.15	3.95
July	1.91	4.93	2.03	2.98	2.88
August	1.89	1.37	1.43	2.35	3.00
September	6.91	4.63	3.91	3.95	4.48
October		4.95	2.24	1.72	1.44
Total	23.33	23.53	16.41	21.43	19.31

* Rainfall amounts included from 2 weeks before planting to the date of harvest at each location.



Official Variety Trials

PIONEER • BIG CHIEF
MICHIGAN SUGAR

Cercospora Fungicides: Application Dates and Products

Location	Treatment 1**	Treatment 2**	Treatment 3**	Treatment 4**
Deshano	6/25 - EBDC*	7/3 - Delaro (+Proline) +EBDC*	7/17 - SuperTin + Topsin + EBDC*	7/31 - Inspire XT + EBDC* + Boron 10%
Gerstenberger	6/29 - EBDC*	7/9 - Delaro (+Proline) +EBDC*	7/22 - SuperTin + Topsin + EBDC*	8/5 - Inspire XT + EBDC* + Boron 10%
Grekowicz	6/29 - EBDC*	7/8 - Delaro (+Proline) +EBDC*	7/22 - SuperTin + Topsin + EBDC*	8/5 - Inspire XT + EBDC* + Boron 10%
Maurer	6/29 - EBDC*	7/8 - Delaro (+Proline) +EBDC*	7/22 - SuperTin + Topsin + EBDC*	8/5 - Inspire XT + EBDC* + Boron 10%
Trost	6/29 - EBDC*	7/8 - Delaro (+Proline) +EBDC*	7/22 - SuperTin + Topsin + EBDC*	8/5 - Inspire XT + EBDC* + Boron 10%
Sylvester	6/26 - EBDC*	7/8 - Delaro (+Proline) +EBDC*	7/17 - SuperTin + Topsin + EBDC*	7/31 - Inspire XT + EBDC* + Boron 10%

Location	Treatment 5**	Treatment 6**	Treatment 7**	Treatment 8**
Deshano	8/14 - SuperTin + EBDC*	8/26 - Provysol + Priaxor + EBDC*	9/9 - SuperTin + EBDC*	
Gerstenberger	8/19 - SuperTin + EBDC*	8/29 - Provysol + Priaxor + EBDC*	9/11 - SuperTin + EBDC*	9/24 - Propulse + Badge
Grekowicz	8/19 - SuperTin + EBDC*	8/28 - Provysol + Priaxor + EBDC*	9/9 - SuperTin + EBDC*	9/24 - Propulse + Badge
Maurer	8/19 - SuperTin + EBDC*	8/29 - Provysol + Priaxor + EBDC*	9/11 - SuperTin + EBDC*	9/24 - Propulse + Badge
Trost	8/19 - SuperTin + EBDC*	8/28 - Provysol + Priaxor + EBDC*	9/9 - SuperTin + EBDC*	9/24 - Propulse + Badge
Sylvester	8/14 - SuperTin + EBDC*	8/26 - Provysol + Priaxor + EBDC*	9/9 - SuperTin + EBDC*	

EBDC* = Manzate Max

**Masterlock included in all Treatments.

Comments: Trials were sprayed on 14 day intervals or as close as weather would allow. When an impending rain was forecasted, applications were made ahead of the rain if possible. Overall control in all trials was very good. All varieties were able to be controlled well below economic impact levels. All applications were made at 22.5 GPA/water and 100 PSI using JD 3D nozzles.

NOTES

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Michigan Sugar Company
122 Uptown Drive, Suite 300
Bay City, MI 48708

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