



MICHIGAN SUGARBEET
REACH
Research & Education Advisory Council

VARIETY TRIAL RESULTS **2018**

REACH/SUGARBEET ADVANCEMENT COMMITTEE LIST

2018 Voting Membership

23 Voting Members

Company & Name	Terms Remaining	Expire
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Dennis Bischer	Permanent	
Jim Stewart	Permanent	
Corey Guza	Permanent	
Michigan Sugar Agriculturists (4 Years)		
Kerrek Griffes	1	2019
Kevin Messing	3	2021
Cassie Sneller	4	2022
Michigan Sugar Company District Board Members (1 year)		
Darrin Siemen (Secretary)	1	2019
Mark Sylvester (Chairman)	1	2019
Peter Maxwell	1	2019
Michigan Sugar Company At Large Growers (3 years)		
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Kurt Hrabal	3	2021
Scott Roggenbuck (Treasurer)	2	2020
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Michigan State University, University of Guelph, and USDA (3 years)		
Linda Hanson	2	2020
	1	2018
Christy Sprague	1	2019
Sugar Beet Seed Company (2 years)		
Rob Gerstenberger	1	2019
Agri-Business Retail (2 years)		
Jacob Hecht	1	2019
Agri-Business Manufacturing (2 years)		
David Reif	2	2020
Michigan Sugar Company Board of Directors (1 year)		
Clay Crumbaugh	1	2019
Kent Houghtaling	1	2019
SBA Director		
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Company	Name
Chairman of Board of Directors - MSC	Rick Gerstenberger
CEO of Michigan Sugar Company	Mark Flegenheimer

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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.



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2018 Variety Trial Results

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OVT Location Information

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Approval of Seed Varieties for the 2019 Crop

Fully Approved Varieties		
Unlimited Quantities		
B-12RR2N	C-G515	SX-RR1245N
B-1399	C-G675	SX-RR1264
B-149N	HIL-9865	
B-1690	HIL-9879NT	
C-RR059	SX-RR1243	

Limited Approved Varieties		
Quantities limited to 10% of acres		
B-1703	SX-RR1275N	MA-709
C-G752NT	SX-RR1276	
HIL-9908	SX-RR1278N	

Specialty Approved Varieties		
Variety	Specialty	Quantity
C-G333NT*	Nematode/Rhizoc	5000
B-1606N**	Nematode/Rhizoc/Alt.	Unlimited

Not Tested in 2018*		
Varieties on a 1 year plant out		
HM-28RR*	HM-9616RR*	SX-RR1251*
HM-173RR*	C-G351NT*	
HMNT9607RR*	SX-RR1212*	

* Approved to plant through 2019

** Approved to plant through 2021

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Approved Varieties for 2019

Michigan Sugar Company

2017 & 2018 Data

Variety	Approval Status	\$/A	All Values are % of Check											
			RWSA	RWST	T/A	Emer gence	Cercos pora	Alter naria	Cerc/Alt Comb.	Rhizoc tonia	Root Aphid	Aphan omyces	Fusar ium	Rhizo mania
C-G675	Full Approval	\$1,516	107.5	99.9	107.7	107 G+	101 F+	89 G+	96 G	87 G	15 G+	92 F+	116 P	88 G
SX-RR1264	Full Approval	\$1,515	107.3	102.1	105.1	102 F+	105 F+	100 G	103 F	104 F	17 G	71 G+	94 F	98 G-
B-1703	Limited Approval	\$1,494	106.0	99.6	106.3	111 G+	90 G	79 G+	86 G+	95 F+	8 G+	138 P	112 P	92 G
SX-RR1278N	Limited Approval	\$1,492	105.8	101.3	104.2	108 G+	112 F-	115 F	113 F-	112 P	60 F	74 G+	95 F	95 G-
B-1606N	Special Approval	\$1,469	104.2	97.1	107.2	102 F+	109 F	102 G-	106 F	95 F+	23 G	77 G	78 G	92 G
C-G752NT	Limited Approval	\$1,462	103.7	99.0	104.6	105 G	109 F	111 F+	110 F	99 F+	14 G+	86 F+	83 G-	96 G-
B-149N	Full Approval	\$1,456	103.3	95.5	108.0	106 G	120 P	117 F	119 F-	98 F+	9 G+	101 F	72 G+	84 G+
HIL-9865	Full Approval	\$1,451	102.9	102.1	100.7	102 F+	105 F+	112 F	108 F	100 F	30 F+	122 P	115 P	99 G-
SX-RR1275N	Limited Approval	\$1,448	102.7	99.8	103.0	105 G	111 F-	125 F-	117 F-	108 F-	134 F-	74 G+	97 F	78 G+
C-G515	Full Approval	\$1,440	102.0	99.4	102.7	103 F+	115 F-	154 P	131 P	93 G-	13 G+	102 F	75 G	91 G
SX-RR1243	Full Approval	\$1,440	102.2	99.3	102.9	104 G	108 F	107 F+	108 F	103 F	212 P	97 F	88 F+	94 G
SX-RR1276	Limited Approval	\$1,432	101.7	100.6	100.9	98 F	105 F+	111 F	107 F	111 P	188 P	77 G	98 F	78 G+
C-RR059	Full Approval	\$1,430	101.4	100.5	100.9	105 G	110 F	152 P	127 P	93 G-	23 G	109 F-	76 G	90 G
SX-RR1245N	Full Approval	\$1,427	101.2	99.8	101.3	110 G+	113 F-	121 F-	116 F-	108 F-	195 P	89 F+	105 P	87 G+
C-G333NT	Special Approval	\$1,427	101.3	96.2	105.1	101 F+	119 P	109 F+	115 F-	98 F+	19 G	111 F-	78 G	93 G
B-1690	Full Approval	\$1,423	101.0	102.0	99.1	102 F+	104 F+	133 F-	116 F-	97 F+	7 G+	100 F	74 G	91 G
MA-709	Limited Approval	\$1,421	100.6	100.3	100.7	107 G+	91 G	94 G	92 G	109 P	28 F+	98 F	113 P	103 F+
B-1399	Full Approval	\$1,409	99.8	96.6	103.4	102 F+	91 G	95 G	93 G	97 F+	14 G+	87 F+	67 G+	98 G-
B-12RR2N	Full Approval	\$1,378	98.0	99.6	97.9	93 F	106 F	103 G-	105 F	106 F-	139 F-	78 G	83 G-	99 G-
HIL-9908	Limited Approval	\$1,350	95.6	103.9	92.1	98 F	79 G+	91 G+	84 G+	100 F	33 F+	106 F-	114 P	112 F
HIL-9879NT	Full Approval	\$1,306	92.4	101.3	91.5	96 F	85 G	101 G	91 G	104 F	34 F+	133 P	113 P	119 F

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

\$/A: Gross dollars per acre assuming a \$40 payment and trial average RWST.



Rhizoctonia & Cercospora

Varieties for 2019 - Average of 2017 & 2018

Rhizoctonia

Variety	% of Check				Comments
	Rhizoc	RWSA	RWST	Cerc	
C-G675	87.0	107.5	99.9	100.6	Very High yielding variety with average quality. Good overall disease tolerance except poor on Fusarium.
C-RR059	92.7	101.4	100.5	109.7	High yielding variety with above average quality. Good overall disease package, but very susceptible to Alternaria.
C-G515	93.0	102.0	99.4	114.7	High yielding variety with average quality. Good overall disease package, but very susceptible to Alternaria.
B-1606N	94.5	104.2	97.1	109.5	High yielding nematode tolerant variety with moderate quality. Good overall disease package. Fair to good on Cercospora and Alternaria.
B-1703	94.7	106.0	99.6	89.7	High yielding variety with average quality. Very good Cercospora and Alternaria tolerance, but poor on Aphanomyces and Fusarium.

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

Cercospora

Variety	% of Check				Comments
	Cerc	RWSA	RWST	Rhizoc	
HIL-9908	78.4	95.6	103.9	100.1	High quality but low yielding variety. Excellent Cercospora and Alternaria tolerance. Fair disease package, except poor on Fusarium.
HIL-9879NT	85.1	92.4	101.3	104.2	High quality but low yielding Nematode variety. Very good Cercospora tolerance. Fair disease package, except poor on Fusarium.
B-1703	89.7	106.0	99.6	94.7	High yielding variety with average quality. Very good Cercospora and Alternaria tolerance, but poor on Aphanomyces and Fusarium.
MA-709	90.2	100.6	100.3	109.3	Moderate yield and quality with very good Cercospora and Alternaria tolerance. Fair disease package, but poor on Rhizoctonia and Fusarium.
B-1399	90.8	99.8	96.6	96.7	Moderate yielding variety with below average quality. Very good on Cercospora and Alternaria. Good disease package.

Note: Lower values are better for Cercospora and Rhizoctonia



High Quality

Varieties for 2019 - Average of 2017 & 2018

Variety	% of Check				Comments
	RWST	RWSA	Rhizoc	Cerc	
HIL-9908	103.9	95.6	100.1	78.4	High quality but low yielding variety. Excellent Cercospora and Alternaria tolerance. Fair disease package, except poor on Fusarium.
HIL-9865	102.1	102.9	100.2	104.5	High yielding and quality variety. Fair disease package, except poor on Aphanomyces and Fusarium.
B-1690	102.0	101.0	97.1	103.1	Moderate yielding and high quality variety. Fair to good disease package on all types of diseases. Slight weakness to Alternaria.
SX-RR1264	102.1	107.3	104.0	105.6	Very high yielding and high quality variety. Fair to good overall disease package. Very good for Aphanomyces.
SX-RR1278N	101.3	105.8	112.2	111.9	Very high yielding and high quality variety. Fair to good overall disease package except poor on Rhizoctonia.
HIL-9879NT	101.3	92.4	104.2	85.1	High quality but low yielding Nematode variety. Very good Cercospora tolerance. Fair disease package, except poor on Fusarium.
SX-RR1276	100.6	101.7	110.9	104.7	High yielding and quality variety. Fair disease package, but poor on Rhizoctonia and Root Aphid.
C-RR059	100.5	101.4	92.7	109.7	High yielding variety with above average quality. Good overall disease package, but very susceptible to Alternaria.

Note: Lower values are better for Rhizoctonia and Cercospora.



Sugarbeet Cyst Nematode

Varieties for 2019 - Average of 2017 & 2018

Variety	All Values are % of Check				Comments
	RWSA	RWST	Rhizoc	Cerc	
SX-RR1278N	105.8	101.3	112.2	111.9	Very high yielding and high quality Nematode tolerant variety. Fair disease package but poor on Rhizoctonia.
B-1606N	104.2	97.1	94.5	109.5	Very high yielding moderate quality Nematode tolerant variety. Good overall disease package.
C-G752NT	103.7	99.0	99.1	108.0	Very high yielding good quality Nematode tolerant variety. Good overall disease package.
B-149N	103.3	95.5	98.0	119.9	Very high yielding but low quality Nematode tolerant variety. Good disease package but poor for Cercospora.
SX-RR1275N	102.7	99.8	108.1	111.1	High yielding and good quality Nematode tolerant variety. Fair disease package, but weaker on Rhizoctonia, Cercospora, and Root Aphid.
C-G333NT	101.3	96.2	98.1	118.1	High yielding low quality Nematode tolerant variety. Good disease package but poor on Cercospora.
SX-RR1245N	101.2	99.8	108.1	112.6	High yielding good quality Nematode tolerant variety. Fair disease package, but poor on Rhizoctonia and Fusarium.
B-12RR2N	98.0	99.6	105.8	106.3	Moderate yield and quality Nematode tolerant variety. Fair disease package with susceptibility to Root Aphid.
HIL-9879NT	92.4	101.3	104.2	85.1	Very high quality but low yielding Nematode tolerant variety. Very good on Cercospora, fair on most other diseases, but poor on Aphanomyces and Fusarium.

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



Variety Approval "Points" System

A Variety Evaluation Tool - Average of 2017 & 2018

The Point System summary page is a great variety evaluation tool. On one page varieties can be compared and all factors can be viewed. For all factors a larger number is better. Look for the larger numbers to find the best varieties for a certain trait. The good and poor qualities of each variety can also be found. Varieties accumulate points based on RWSA, RWST, Cercospora, Rhizoctonia, Root Aphid, Rhizomania, Emergence, Aphanomyces, and Nematode levels.

Variety		% Check		1.5X RWSA Variance	3X RWST Variance	Higher Points are Better						Total		
		RWSA	RWST			Cerc	Rhizoc	R Aph	Rzm	Emerg	Aph	Nem	Points	% Check
SX-RR1264		108.6	103.0	121.6	9.0	4.0	4.8	4.0	2.3	0.5	5.0	1.0	152.1	128.7
C-G675		108.9	100.8	122.1	2.3	4.5	8.5	5.0	2.5	0.0	3.5	1.0	149.5	126.4
SX-RR1278N		107.1	102.2	117.8	6.6	2.5	3.0	2.0	2.0	0.0	5.0	5.0	143.9	121.7
B-1703		107.3	100.5	118.3	1.6	6.5	7.0	5.0	2.5	0.0	1.5	1.0	143.3	121.3
HIL-9865		104.2	103.0	110.5	9.1	4.0	5.8	4.5	1.8	0.0	2.0	1.0	138.6	117.3
C-G752NT		105.1	99.9	112.7	-0.2	3.0	5.8	4.5	2.3	0.0	4.0	5.0	137.0	115.9
B-1690		102.2	102.9	105.6	8.6	4.0	6.3	5.0	2.3	-0.5	3.5	1.0	135.7	114.8
HIL-9908		96.8	104.8	92.0	14.5	10.0	7.8	4.0	1.8	0.0	2.0	1.0	133.1	112.6
C-RR059		102.6	101.4	106.5	4.3	2.5	7.5	3.5	2.3	1.5	3.0	1.0	132.1	111.7
B-1606N		105.6	97.9	113.9	-6.2	2.5	6.8	4.0	2.3	-0.5	4.5	3.5	130.7	110.5
SX-RR1275N		104.0	100.7	110.1	2.0	2.5	3.8	1.0	2.5	0.0	4.5	4.0	130.3	110.2
MA-709		101.9	100.9	104.8	2.7	7.0	3.5	4.5	1.8	0.0	3.5	1.0	128.7	108.9
C-G515		103.3	100.3	108.3	0.9	0.5	7.3	4.5	2.3	0.5	3.0	1.0	128.1	108.4
SX-RR1276		103.0	101.5	107.5	4.5	3.5	3.3	0.5	2.8	0.0	4.5	1.0	127.5	107.8
SX-RR1245N		102.5	100.7	106.3	2.2	3.0	3.8	0.0	2.5	2.0	4.0	3.5	127.2	107.6
SX-RR1243		103.5	100.2	108.8	0.5	1.5	4.8	0.5	2.0	1.5	3.5	1.0	124.0	104.9
B-149N		104.6	96.4	111.6	-10.9	0.0	6.0	4.5	2.8	1.5	3.5	4.0	122.9	103.9
B-1399		101.1	97.5	102.7	-7.5	6.5	6.3	4.5	2.0	1.0	4.0	1.0	120.4	101.9
C-G333NT		102.6	97.1	106.5	-8.8	0.5	6.0	5.0	2.0	0.0	3.0	3.5	117.7	99.5
B-12RR2N		99.2	100.5	98.0	1.5	3.5	4.3	0.5	1.8	-2.0	4.5	4.5	116.5	98.5
HIL-9879NT		93.6	102.2	83.9	6.5	9.0	4.3	4.0	1.0	-0.5	2.0	3.0	113.1	95.7

% check (C-G675, SX-RR1243, HIL-9879NT, B-12RR2N) = 100 X .7751 = 77.51 (approval level)



Official Variety Trial

Michigan Sugar Company

Average of 4 Locations - 2018

Trial Quality: Good
Plant/Harv: April 27/Oct 26
Plots: 2 rows x 38 ft.
Row Spacing: 22 inches
Seeding Rate: 2 inches, thinned
 to 200 beets/100 ft.

Locations: Grekowicz
 Sylvester
 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
SX-RR1264	\$1,634	10350	265	2	39.0	8	17.5	2	96.1	6	58.2	4
C-G675	\$1,617	10231	253	12	40.4	1	16.8	12	96.0	15	55.9	11
SX-RR1278N	\$1,614	10230	260	5	39.0	7	17.3	5	96.0	13	57.0	6
B-1703	\$1,604	10167	251	15	40.3	2	16.8	14	96.0	17	60.0	2
B-1606N	\$1,567	9928	246	19	40.1	3	16.4	19	96.2	4	53.8	18
C-G515	\$1,558	9863	253	13	38.9	9	16.8	13	96.0	14	56.1	8
C-RR059	\$1,547	9798	254	10	38.4	10	16.8	10	96.2	1	55.8	12
MA-709	\$1,528	9666	260	6	37.2	14	17.3	6	96.0	18	59.2	3
B-1399	\$1,527	9668	247	18	39.1	6	16.5	18	96.0	16	54.1	16
B-149N	\$1,525	9655	241	21	39.9	4	16.2	21	95.8	21	57.8	5
C-G752NT	\$1,523	9629	251	16	38.2	11	16.7	16	96.2	2	55.9	10
HIL-9865	\$1,518	9595	261	4	36.7	17	17.3	3	96.1	9	55.3	13
C-G333NT	\$1,515	9597	242	20	39.4	5	16.2	20	95.9	19	56.7	7
B-1690	\$1,514	9600	258	7	37.1	15	17.2	7	96.0	11	51.4	20
SX-RR1275N	\$1,508	9536	250	17	38.1	12	16.7	17	95.9	20	56.0	9
SX-RR1245N	\$1,504	9514	255	9	37.2	13	17.0	9	96.0	12	61.5	1
SX-RR1243	\$1,479	9351	252	14	37.1	16	16.7	15	96.1	10	54.7	15
SX-RR1276	\$1,471	9303	256	8	36.3	18	17.0	8	96.2	3	55.0	14
HIL-9908	\$1,460	9224	271	1	34.0	20	17.9	1	96.1	7	52.2	19
B-12RR2N	\$1,408	8916	253	11	35.0	19	16.8	11	96.1	8	53.9	17
HIL-9879NT	\$1,401	8855	261	3	33.9	21	17.3	4	96.1	5	49.1	21
Average	\$1,524.9	9651.2	254.3		37.87		16.91		96.05		55.69	
LSD 5%	112.2	718.8	5.6		2.6		0.3		N.S.		5.6	
CV %	5.2	5.3	1.6		4.8		1.3		0.3		7.1	

\$/A: Gross dollars per acre assuming a \$40 payment and trial average RWST.

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

Comments: These four trials had the best statistical analysis of the trials completed in 2018.

Comments for each trial appear on the individual trial pages. Most of these trials saw a significant dry period in July and August. Despite dry conditions, yields were above average. One location had confirmed Root Aphid pressure.

2018 Variety Trial Averages

Average of Six Locations

Farms: Chaffin Farms (Ithaca) E & R Farms (Bad Axe)
 Couture Flatland Farms (Ontario) Gardner Farms (Croswell)
 DVL Farms (Ruth) Sylvester Farms (Quanicassee)

Variety	\$/A	RWSA	RWST	T/A	% Sugar	% CJP
C-G675	\$1,590	9449	247	38.3	16.7	95.8
C-G333NT	\$1,512	8971	235	38.3	16.0	95.7
B-149N	\$1,510	8976	234	38.3	16.0	96.0
B-1606N	\$1,505	8914	238	37.7	16.2	95.7
SX-1264 RR	\$1,499	8886	257	34.7	17.3	96.0
B-1690	\$1,473	8733	245	35.8	16.6	96.0
SX-1245N RR	\$1,448	8632	246	35.0	16.6	95.9
SX-1243 RR	\$1,444	8608	240	35.7	16.3	95.8
B-1399	\$1,442	8585	237	36.2	16.1	95.8
C-G515	\$1,431	8489	237	35.9	16.2	95.8
B-12RR2N	\$1,379	8251	233	35.2	15.9	95.9
HIL-9879NT	\$1,264	7496	245	30.7	16.6	95.9
Average	\$1,458	8666	241	36.0	16.4	95.9
LSD 5%	—	675	9	2.0	0.5	ns
CV %	—	7	3	4.7	2.8	0.2

Comments: These results are the combined data of six Sugarbeet Advancement Variety Trials from 2018. These trials experienced a wide variation of environmental conditions, disease pressure and soil types. Individual trial data will give the best indication on how a variety will perform given specific conditions. Field placement of varieties should be based on past history of field issues and growers ability to manage them. Varieties vary greatly in disease resistance, yield potential and quality. For example, in nematode infested fields, tolerant varieties tend to perform the best (see Sylvester trial). Varieties may also respond differently based on soil texture. This year none of the trials were located in a field that had a high level of sand, but the DVL trial probably had the highest fraction of sand. All of these trials had enough leafspot (*Cercospora* and *Alternaria*) in them that at least some of the varieties would have had economic damage. The Gardner and Couture trials had the highest levels at harvest. None of the trials had even a moderate level of root disease, but the Chaffin, DVL and Gardner trials had the most. Root Aphid was found at most locations and it is suspected that it impacted some of the weaker varieties. Two of the trials were planted very early with the Chaffin trial planted on March 19 and the Sylvester trial planted on March 26. The early season drought was an issue at all locations, but all locations generally had favorable weather in the second half of the season. Use this data in conjunction with Michigan Sugar variety/nursery data and seed company information.

\$/A: Gross dollars per acre assuming a \$40 payment and a company average RWST of 238.

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



Plant To Stand

Michigan Sugar Company

Average of 4 Locations - 2018

Trial Quality: see trial pages
Plant/Harv: Apr 30/Oct 25
Plots: 6 Rows X 38 ft.
Row Spacing: 22 inches
Seeding Rate: 4.1 inches

Locations: Crumbaugh
 Gerstenberger
 Grekowicz
 Maurer

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
SX-RR1264	\$1,444	8587	242	3	35.1	1	16.5	3	95.5	2	184	1
B-1606N	\$1,382	8202	235	7	34.7	2	16.0	8	95.2	14	170	7
B-1690	\$1,330	7886	239	4	32.7	7	16.2	4	95.3	12	166	12
C-G333NT	\$1,321	7850	232	12	33.6	4	15.9	11	95.3	5	176	3
C-G675	\$1,319	7843	233	9	33.2	5	16.0	9	95.3	9	170	9
SX-RR1245N	\$1,318	7802	243	1	32.1	10	16.5	2	95.4	4	179	2
B-149N	\$1,313	7807	229	14	33.8	3	15.8	14	95.3	6	170	8
B-12RR2N	\$1,302	7711	233	10	32.9	6	15.9	10	95.2	13	168	10
C-RR059	\$1,292	7687	234	8	32.3	9	16.1	6	95.4	3	162	13
B-1399	\$1,287	7655	235	6	32.4	8	16.0	7	95.3	8	167	11
HIL-9865	\$1,255	7436	236	5	31.2	11	16.1	5	95.3	10	175	4
C-G515	\$1,235	7346	232	11	31.2	12	15.9	12	95.3	11	170	6
SX-RR1243	\$1,215	7207	231	13	31.0	13	15.9	13	95.3	7	175	5
HIL-9879NT	\$1,205	7162	243	2	29.1	14	16.5	1	95.5	1	162	14
Average	\$1,301.4	7727.1	235.4		32.51		16.09		95.32		171.0	
LSD 5%	101.1	601.2	8.4		2.1		0.5		N.S.		16.6	
CV%	5.4	5.4	2.5		4.6		2.2		0.2		6.8	

\$/A: Gross dollars per acre assuming a \$40 payment and trial average RWST.

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

Comments: The Plant to Stand trials are planted at 4.1 inch spacing with only commercially available varieties. Trials planted early in the season appeared to have better emergence conditions and overall stands reflected that. Overall yield and sugar content in these trials was above average. Disease control in these trials was good.



OVT Emergence

Michigan Sugar Company

Average of 2 Years, 2017 & 2018

Trial Quality: Good

Locations: 2017 - Crumbaugh, Gerstenberger, Grekowicz,
Maurer, Shaffner, SVREC, Sylvester, Trost
2018 - Maurer, Grekowicz, Sylvester, Trost

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

Seeding Rate: 1.9 inch seed spacing

Variety	% Emerge
B-1703	61.6
SX-RR1245N	60.7
SX-RR1278N	59.5
MA-709	59.4
C-G675	59.2
B-149N	58.6
C-RR059	57.9
SX-RR1275N	57.9
C-G752NT	57.9
SX-RR1243	57.5
C-G515	57.0
B-1399	56.7
SX-RR1264	56.6
B-1690	56.5
B-1606N	56.4
HIL-9865	56.2
C-G333NT	55.8
SX-RR1276	54.2
HIL-9908	54.0
HIL-9879NT	53.2
B-12RR2N	51.4
Average	57.03
LSD 5%	6.1
CV %	5.2

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

2018 Variety Trials

Emergence Summary

Early Counts

<i>Trial</i>	Couture	Chaffin	E & R	Gardner	Shaffner	Sylvester	DVL	Average
	Ontario	Gratiot	Huron	Sanilac	Midland	Tuscola	Huron	
Plant Date	4/30/18	3/19/18	5/1/18	4/30/18	4/28/18	3/26/18	5/1/18	
Count Days	10	38	13	11	11	32	10	
C-G675	186	63	230	111	95	80	136	140
C-G333NT	182	51	248	59	28	40	124	114
B-1606N	144	40	218	76	35	57	104	106
SX-1245N RR	169	52	215	64	60	29	92	105
C-G515	185	70	229	49	15	52	95	104
B-1690	144	41	222	71	21	77	83	103
B-149N	155	51	237	31	24	30	92	95
SX-1243 RR	140	57	204	68	29	26	88	93
SX-1264 RR	124	29	190	53	69	15	78	88
B-1399	120	10	203	75	7	12	58	79
HIL-9879NT	134	36	169	27	18	13	92	75
B-12RR2N	132	22	170	36	14	9	32	66
HIL-9865	—	—	194	40	46	15	96	—
Average	151	43	210	59	35	35	90	97
LSD 5%	45	18	25	45	21	11	29	—
CV %	17	25	7	45	35	19	19	—

Late Counts

<i>Trial</i>	Couture	Chaffin	E & R	Gardner	Shaffner	Sylvester	DVL	Average
Count Days	24	63	31	32	38	58	31	
C-G333NT	262	140	300	238	216	168	272	248
C-G675	257	131	269	225	197	183	226	232
B-149N	246	166	283	200	213	191	236	231
B-1606N	238	109	270	227	178	164	236	227
SX-1243 RR	232	147	271	225	171	158	222	222
B-1399	240	112	275	214	161	135	237	220
C-G515	248	134	263	200	169	168	215	219
SX-1245N RR	236	149	276	206	191	149	218	217
B-12RR2N	231	128	271	205	181	158	218	217
B-1690	225	70	266	222	166	158	202	215
HIL-9879NT	245	109	256	195	162	114	212	204
SX-1264 RR	207	105	261	209	189	121	214	202
HIL-9865	—	—	257	200	190	144	226	—
Average	239	125	271	213	183	155	226	221
LSD 5%	19	30	15	25	32	20	31	—
CV %	5	14	3	7	10	8	8	—

Comments: The Late Count average does not include the Shaffner trial due to water damage causing variability that occurred between the early and late counts. The averages for both the Early and Late counts also didn't include the Chaffin trial due to a very early planting, the amount of time it took for emergence, and the resulting variability and low final population. 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 - Clariva & Vibrance on HIL-9879NT; Crystal - Kabina; Betaseed - Kabina (B-149N, B-1606, B-1399), Kabina + Poncho Beta (B-1690), Systiva XS (B-12RR2N). Kabina & Systiva are not approved for use in Canada (Couture).

2018 Variety Trials

Root Rot and Leafspot Summary

Root Rot Summary

Fall Count of Dead Beets in 1200 Foot of Row

<i>Trial Location</i>	Chaffin	DVL	E & R	Gardner	Sylvester	Average
B-1606N	3	2	4	3	2	3
B-1690	5	3	2	3	1	3
B-1399	6	1	3	3	3	3
C-G675	16	3	1	1	8	6
C-G333NT	8	5	21	3	5	8
C-G515	30	1	4	8	2	9
B-149N	15	20	8	5	5	11
HIL-9879NT	29	9	18	13	16	17
SX-1243 RR	22	33	13	11	12	18
SX-1264 RR	49	31	33	28	25	33
B-12RR2N	61	68	34	49	19	46
SX-1245N RR	72	58	32	75	26	53
AVERAGE	26	19	14	17	10	17
LSD (5%)	41	20	30	27	16	12
CV (%)	98	59	117	90	82	54

Leafspot Ratings at Harvest

<i>Trial Location</i>	Chaffin	DVL	E & R	Gardner	Sylvester	Couture	Average
HIL-9879NT	1.7	2.3	2.8	4.3	3.2	3.8	3.0
B-1399	2.2	3.0	3.2	3.9	2.8	3.8	3.1
SX-1264 RR	2.5	2.7	2.9	4.8	2.4	4.5	3.3
C-G675	2.2	3.3	3.3	4.9	2.6	4.5	3.4
SX-1243 RR	2.3	3.0	4.1	5.1	2.7	4.8	3.7
B-1606N	3.0	3.8	3.7	5.8	3.4	5.6	4.2
B-12RR2N	3.0	4.3	4.7	5.2	3.6	4.8	4.3
SX-1245N RR	3.0	3.8	4.8	5.3	3.2	5.4	4.3
B-1690	4.2	4.0	4.2	5.1	4.5	5.4	4.6
C-G333NT	3.3	4.3	4.4	5.8	3.8	6.3	4.7
B-149N	4.2	4.8	4.2	6.1	4.2	5.8	4.8
C-G515	4.7	5.5	4.8	5.8	5.8	6.4	5.5
AVERAGE	3.0	3.7	3.9	5.2	3.5	5.1	4.1
LSD (5%)	0.6	0.6	0.6	0.4	0.5	0.3	0.5
CV (%)	10.8	9.1	8.5	4.0	8.3	3.9	10.0

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 Rhizoctonia or Fusarium. This year had relatively low levels in all trials. See the individual trials for Quadris treatments. The Leafspot Ratings are based on a 1-9 scale with a lower number being better. The rating is a combination rating for all leafspots, but primarily Cercospora and Alternaria.

East District Trials





Official Variety Trial

Michigan Sugar Company

Grekowicz, Port Hope - 2018

Trial Quality: Good
Plant/Harv: May 14/Oct 25
Plots: 2 rows X 38 ft., 8 reps
Row Spacing: 22 inches
Seeding Rate: 2 inches,
 thinned to 200 beets/100 ft.

Soil Type: Loam
% OM: 3.0 **pH:** 7.2 **CEC:** 12.3
Nutrients: P: Abv Opt K: Abv Opt
Mn: High **B:** Medium
Added N: 35 lbs.+10,000 gal. manure
Prev Crop: Wheat

****Cerc Control:** Good
 8 applications**
Rhizoc Control: Very Good
 Quadris IF, 6-8lf
Rainfall: 21.65 inches

Variety	\$/A	RWSA	RWST		Yield		Sugar		CJP	
			Lb/T	Rank	T/A	Rank	%	Rank	%	Rank
SX-RR1264	\$1,833	11579	266	2	43.4	7	17.6	2	96.1	10
SX-RR1278N	\$1,823	11520	257	9	44.9	2	17.1	9	95.8	15
B-149N	\$1,791	11317	246	19	45.9	1	16.5	19	95.8	16
C-G675	\$1,776	11223	257	10	43.8	3	17.0	12	96.2	4
C-G752NT	\$1,766	11159	255	13	43.8	4	16.9	13	96.2	8
SX-RR1276	\$1,742	11004	260	5	42.3	10	17.2	5	96.2	6
SX-RR1243	\$1,734	10956	257	8	42.6	9	17.1	11	96.1	9
B-1606N	\$1,726	10906	250	16	43.6	6	16.6	16	96.2	7
C-G515	\$1,726	10903	251	15	43.4	8	16.8	15	95.8	17
C-RR059	\$1,722	10879	249	17	43.7	5	16.5	18	96.2	5
SX-RR1245N	\$1,714	10831	258	7	41.9	13	17.2	7	96.0	11
MA-709	\$1,698	10729	255	12	42.0	12	17.2	8	95.5	20
B-1690	\$1,668	10535	261	4	40.4	17	17.3	4	96.2	1
HIL-9865	\$1,665	10519	263	3	39.9	18	17.4	3	96.2	2
B-1703	\$1,663	10510	252	14	41.7	15	16.8	14	96.0	12
SX-RR1275N	\$1,653	10444	247	18	42.2	11	16.6	17	95.5	19
B-12RR2N	\$1,633	10320	260	6	39.7	19	17.2	6	96.2	3
HIL-9908	\$1,622	10249	272	1	37.7	21	18.1	1	95.9	13
B-1399	\$1,617	10219	244	20	41.8	14	16.4	21	95.8	14
C-G333NT	\$1,606	10145	244	21	41.7	16	16.4	20	95.5	21
HIL-9879NT	\$1,577	9966	256	11	39.0	20	17.1	10	95.8	18
Average	\$1,702.7	10757.8	255.3		42.17		17.00		95.96	
LSD 5%	147.0	928.9	7.6		3.3		0.4		0.5	
CV %	8.7	8.7	3.0		7.9		2.5		0.5	

** See Cercospora Fungicide Application Page

\$/A: Gross dollars per acre assuming a \$40 payment and trial average RWST.

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

Comments: Growing conditions for this trial were better than most. Yield and sugar content were above average for a trial planted in mid-May. Disease control in this trial was good. Roots from this trial were placed into our storage room for varietal storage studies.



Official Variety Trial

Michigan Sugar Company

Maurer, Ruth - 2018

Trial Quality: Good
Plant/Harv: May 24/Oct 11
Plots: 2 rows X 38 ft., 8 reps
Row Spacing: 22 inches
Seeding Rate: 2 inches,
 thinned to 200 beets/100 ft.

Soil Type: Loam
 % OM: 3.2 pH: 7.3 CEC: 12.6
Nutrients: P: Abv Opt K: Abv Opt
 Mn: High B: Medium
Added N: 135 lbs.
Prev Crop: Wheat

****Cerc Control:** Good
 8 applications**
Rhizoc Control: Good
 Quadris IF, 6-8 If
Rainfall: 16.43 inches

Variety	\$/A	RWSA	RWST		Yield		Sugar		CJP	
			Lb/T	Rank	T/A	Rank	%	Rank	%	Rank
SX-RR1275N	\$1,387	8197	235	12	34.9	2	15.8	12	95.9	12
C-G675	\$1,385	8183	234	13	35.0	1	15.7	13	95.8	15
HIL-9865	\$1,371	8101	242	6	33.4	8	16.2	7	95.8	16
SX-RR1264	\$1,345	7947	245	5	32.4	12	16.4	4	95.9	13
MA-709	\$1,342	7929	247	2	32.2	14	16.4	3	96.1	5
HIL-9908	\$1,339	7913	253	1	31.3	16	16.8	1	96.0	8
C-G752NT	\$1,331	7864	233	14	33.7	4	15.7	14	95.8	17
SX-RR1245N	\$1,324	7825	242	7	32.4	13	16.2	8	96.0	11
SX-RR1243	\$1,322	7811	233	15	33.6	5	15.6	16	96.0	10
B-1703	\$1,316	7778	232	16	33.5	6	15.7	15	95.7	18
B-1399	\$1,313	7756	228	19	34.1	3	15.4	18	95.6	20
SX-RR1278N	\$1,306	7718	242	9	32.0	15	16.3	6	95.6	19
C-G515	\$1,301	7690	237	11	32.4	11	15.8	11	96.2	3
SX-RR1276	\$1,277	7548	242	8	31.2	17	16.1	9	96.0	7
HIL-9879NT	\$1,265	7477	246	4	30.4	19	16.3	5	96.5	1
C-RR059	\$1,265	7476	239	10	31.2	18	15.9	10	96.3	2
B-1606N	\$1,265	7473	228	18	32.7	10	15.3	19	96.1	4
B-149N	\$1,263	7463	224	21	33.5	7	15.2	20	95.5	21
C-G333NT	\$1,242	7341	224	20	32.8	9	15.1	21	96.0	9
B-1690	\$1,183	6989	247	3	28.3	21	16.5	2	95.9	14
B-12RR2N	\$1,151	6802	232	17	29.3	20	15.5	17	96.1	6
Average	\$1,299.7	7680.0	237.4		32.39		15.90		95.94	
LSD 5%	95.8	565.9	8.4		2.4		0.5		0.4	
CV %	7.5	7.5	3.6		7.5		3.1		0.5	

**** See Cercospora Fungicide Application Page**

\$/A: Gross dollars per acre assuming a \$40 payment and trial average RWST.

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

Comments: This trial was planted in late May due to a rain event that delayed planting by 10 days. This trial was subject to dry conditions in June and July, but not as dry as others. An early October harvest produced respectable yield and sugar content. Disease control in this trial was good.



Plant To Stand

Michigan Sugar Company

Gerstenberger Farms, Sandusky - 2018

Trial Quality: Fair

Plant/Harv: May 1/Oct 10

Plots: 6 rows X 38 ft., 6 reps

Row Spacing: 22 inches

Seeding Rate: 4.1 inches

Soil Type: Sandy Loam

% OM: 2.2 **pH:** 6.0 **CEC:** 9.0

Nutrients: **P:** Abv Opt **K:** Abv Opt

Mn: High **B:** Low

Added N: 155 lbs.

Prev Crop: Soybeans

****Cerc Control:** Very Good

8 applications**

Rhizoc Control: Very Good

Quadris IF, 6-8 If

Rainfall: 13.04 inches

Variety	\$/A	RWSA	RWST		Yield		Sugar		CJP		Beets/100 ft	
			Lb/T	Rank	T/A	Rank	%	Rank	%	Rank	Act.	Rank
SX-RR1264	\$1,033	5888	230	4	25.5	1	15.7	4	95.2	9	184	1
SX-RR1245N	\$999	5697	234	2	24.3	2	15.9	2	95.2	8	147	11
B-1606N	\$964	5497	228	8	24.1	3	15.5	10	95.2	10	155	5
C-G333NT	\$953	5433	229	7	23.8	5	15.7	5	95.0	14	152	9
B-12RR2N	\$946	5394	226	11	23.9	4	15.5	11	95.3	4	156	3
SX-RR1243	\$876	4996	229	6	21.8	7	15.6	9	95.4	3	155	4
C-G675	\$868	4950	226	10	21.9	6	15.6	7	95.2	7	153	7
B-1399	\$857	4886	235	1	20.8	9	15.9	1	95.5	1	138	14
B-149N	\$851	4851	228	9	21.4	8	15.6	8	95.3	5	152	8
B-1690	\$851	4850	233	3	20.8	10	15.9	3	95.4	2	160	2
HIL-9865	\$794	4526	224	12	20.3	11	15.3	13	95.2	12	141	12
C-G515	\$778	4436	221	14	20.1	12	15.3	14	95.1	13	150	10
C-RR059	\$757	4314	223	13	19.2	13	15.4	12	95.2	11	140	13
HIL-9879NT	\$724	4127	230	5	18.0	14	15.7	6	95.2	6	154	6
Average	\$875.1	4989.0	228.3		21.83		15.61		95.23		152.7	
LSD 5%	98.3	560.6	10.8		2.3		N.S.		N.S.		24.1	
CV %	9.8	9.8	4.1		9.1		3.3		0.3		13.7	

**** See Cercospora Fungicide Application Page**

\$/A: Gross dollars per acre assuming a \$40 payment and trial average RWST.

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

Comments: This trial was extremely dry in June, July, and most of August. Stands in this trial were below optimal. These two factors combined for a lower than average yield. Sugar content was also lower than average probably due to the amount of rainfall received during the weeks leading up to harvest.



Plant To Stand

Michigan Sugar Company

Grekowicz, Port Hope - 2018

Trial Quality: Very Good

Plant/Harv: May 14/Oct 25

Plots: 6 rows X 38 ft., 6 reps

Row Spacing: 22 inches

Seeding Rate: 4.1 inches

Soil Type: Loam

% OM: 3.0 **pH:** 7.2 **CEC:** 12.3

Nutrients: **P:** Abv Opt **K:** Abv Opt

Mn: High **B:** Medium

Added N: 35lbs +10,000 gal manure

Prev Crop: Wheat

****Cerc Control:** Good

8 applications**

Rhizoc Control: Very Good

Quadris IF, 6-8 lf

Rainfall: 21.65 inches

Variety	\$/A	RWSA	RWST		Yield		Sugar		CJP		Beets/100 ft	
			Lb/T	Rank	T/A	Rank	%	Rank	%	Rank	Act.	Rank
SX-RR1264	\$2,018	12402	271	1	45.8	1	18.0	1	96.8	1	138	14
C-G675	\$1,876	11526	255	10	45.3	3	17.1	9	96.3	5	147	12
C-RR059	\$1,872	11501	260	6	44.3	6	17.4	5	96.3	6	150	11
B-1606N	\$1,850	11368	253	11	45.0	4	16.9	11	95.8	14	156	7
B-1690	\$1,844	11333	265	3	42.8	8	17.8	3	95.9	13	152	9
C-G333NT	\$1,813	11144	251	12	44.4	5	16.8	12	96.5	3	165	5
B-149N	\$1,811	11127	245	14	45.4	2	16.5	14	96.1	12	151	10
B-1399	\$1,787	10979	255	9	43.1	7	17.1	10	96.2	8	178	2
C-G515	\$1,764	10841	261	5	41.6	9	17.4	6	96.3	7	159	6
SX-RR1245N	\$1,729	10627	264	4	41.0	11	17.7	4	96.3	4	184	1
HIL-9879NT	\$1,707	10490	268	2	39.2	14	17.8	2	96.6	2	153	8
HIL-9865	\$1,675	10295	258	7	39.9	12	17.2	7	96.2	10	166	4
SX-RR1243	\$1,667	10246	248	13	41.4	10	16.7	13	96.2	9	169	3
B-12RR2N	\$1,663	10218	258	8	39.7	13	17.2	8	96.2	11	147	13
Average	\$1,791.1	11007.0	257.9		42.78		17.27		96.26		158.2	
LSD 5%	117.9	724.5	11.7		2.2		0.6		0.6		28.1	
CV %	5.7	5.7	3.9		4.4		3.1		0.6		15.4	

**** See Cercospora Fungicide Application Page**

\$/A: Gross dollars per acre assuming a \$40 payment and trial average RWST.

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

Comments: This trial received more rainfall in the mid-summer months than others. Stands were slightly below optimal, but did not appear to influence overall yield. Later October harvest saw good sugar levels. Disease control was very good in this trial.



Plant To Stand

Michigan Sugar Company

Maurer, Ruth - 2018

Trial Quality: Good

Plant/Harv: May 24/Oct 11

Plots: 6 rows X 38 ft., 4 reps

Row Spacing: 22 inches

Seeding Rate: 4.1 inches

Soil Type: Loam

% OM: 3.2 **pH:** 7.3 **CEC:** 12.6

Nutrients: **P:** Abv Opt **K:** Abv Opt

Mn: High **B:** Medium

Added N: 135 lbs.

Prev Crop: Wheat

****Cerc Control:** Very Good

8 applications**

Rhizoc Control: Good

Quadris IF, 6-8 lf

Rainfall: 16.43 inches

Variety	\$/A	RWSA	RWST		Yield		Sugar		CJP		Beets/100 ft	
			Lb/T	Rank	T/A	Rank	%	Rank	%	Rank	Act.	Rank
SX-RR1264	\$1,463	8658	241	5	36.0	1	16.3	5	95.7	9	185	2
B-1606N	\$1,438	8515	237	9	35.8	2	16.1	7	95.7	7	161	7
B-149N	\$1,414	8372	236	10	35.4	3	16.0	10	96.0	1	158	9
B-1399	\$1,392	8243	243	2	33.9	5	16.4	3	95.7	10	145	12
B-12RR2N	\$1,377	8149	239	6	34.1	4	16.0	8	95.7	11	159	8
C-G333NT	\$1,357	8036	241	4	33.3	6	16.4	4	95.9	2	166	5
C-RR059	\$1,310	7754	238	7	32.5	8	16.1	6	95.9	4	150	11
C-G675	\$1,301	7704	238	8	32.3	9	16.0	9	95.7	6	166	4
HIL-9865	\$1,285	7605	230	13	33.0	7	15.6	11	95.6	12	187	1
SX-RR1245N	\$1,264	7482	247	1	30.4	12	16.5	1	95.8	5	166	6
B-1690	\$1,253	7419	232	11	32.0	11	15.2	14	95.4	14	142	14
C-G515	\$1,251	7407	231	12	32.1	10	15.6	12	95.7	8	151	10
HIL-9879NT	\$1,220	7224	243	3	29.8	13	16.4	2	95.9	3	144	13
SX-RR1243	\$1,135	6718	227	14	29.6	14	15.5	13	95.6	13	170	3
Average	\$1,318.7	7806.1	237.4		32.86		16.01		95.73		160.6	
LSD 5%	161.5	956.1	16.5		3.1		0.8		0.3		35.6	
CV %	8.6	8.6	4.9		6.5		3.6		0.2		15.5	

**** See Cercospora Fungicide Application Page**

\$/A: Gross dollars per acre assuming a \$40 payment and trial average RWST.

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

Comments: This trial was planted in late May due to a rain event on May 14th that delayed planting. Stands in this trial were adequate but slightly below optimal. Despite the late planting, favorable growing conditions throughout the season produced above average yields and respectable sugar content for an early October harvest date. Slight Root Aphid pressure was observed at this location, but it does not appear to have been severe enough to have much affect on overall yield of the varieties.

Variety Trial

Couture Flatland Farms, Ontario - 2018

Trial Quality: Excellent	Soil Type: Loam	Cerc Control: Moderate disease pressure: See below for materials
Planted: April 30	Fertilizer: 2x2: 480# 10-16-6-14S- 1.5Mn-1Zn-2.5Mg-0.1B; S.D.: 100# N	
Harv/Samp: Oct 9 / Oct 9		Rhiz Control: Excellent control: Quadris I.F. (5.5 oz)
Plot Size: 3 reps	Prev Crop: Corn	
Row Spacing: 30 inch	Weather: Dry early; good weather late season	Other Pests: None
Seeding Rate: 51,000		

Variety	\$/A	RWSA	RWST	T/A	% Sugar	% CJP	Populations 100 Ft. of Row		Dead Beets / 1200 Ft	Leafspot Rating (1-9)
							10 Day	24 Day		
C-G675	\$2,115	10910	232	47.1	15.6	96.3	186	257	—	4.5
B-1690	\$2,081	10738	226	47.6	15.4	96.5	144	225	—	5.4
SX-1243 RR	\$1,997	10311	227	45.4	15.5	96.1	140	232	—	4.8
B-1606N	\$1,976	10200	215	47.5	14.7	95.8	144	238	—	5.6
B-12RR2N	\$1,975	10188	232	44.0	15.7	96.4	132	231	—	4.8
SX-1245N RR	\$1,946	10042	229	43.8	15.6	96.1	169	236	—	5.4
C-G333NT	\$1,928	9947	205	48.4	14.2	95.9	182	262	—	6.3
C-G515	\$1,897	9789	211	46.4	14.6	96.0	185	248	—	6.4
B-149N	\$1,890	9751	208	46.8	14.4	95.9	155	246	—	5.8
SX-1264 RR	\$1,852	9552	223	42.9	15.2	96.3	124	207	—	4.5
B-1399	\$1,830	9448	218	43.4	14.9	96.2	120	240	—	3.8
HIL-9879NT	\$1,632	8424	220	38.3	15.0	96.5	134	245	—	3.8

Average	\$1,927	9942	220	45.1	15.1	96.2	151	239	—	5.1
LSD 5%	—	537	11	1.5	0.6	ns	45	19	—	0.3
CV %	—	3	3	2.0	2.3	0.4	17	5	—	3.9

Comments: This trial was an excellent quality trial in a very high yielding location in Ontario. The trial did experience a dry period early in the season, like most of the growing area, but had few issues other than leafspot late in the season. Leafspot infection should have been high enough to impact results but does not seem to have had a large influence as some of the best leafspot varieties did not perform well. These results may have changed if the trial was left until long term storage. Leafspot fungicide sprays were as follows: 1. Copper + Dithane, 2. Proline + Copper, 3. Copper + Dithane, 4. Proline + Copper, 5. Copper + Dithane, 6. Copper + Dithane, 7. Copper, 8. Copper

\$/A: Gross dollars per acre assuming a \$40 payment a company average RWST of 238 and the early delivery premium.

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



Variety Trial

DVL Farms, Ruth - 2018

Trial Quality: Very Good	Soil Type: Loam	Cerc Control: Good/Fair control: See below for materials
Planted: May 1	Fertilizer: Fall: 200# K ₂ O; 1.5 ton beet lime; 2x2: 240# 17-21-105S-1Mn-0.5Zn-0.3B; Post: 92# N by	
Harv/Samp: Nov 5 / Oct 22		Rhiz Control: Good control: Quadris I.F. (5 oz) & 8 leaf (8 oz)
Plot Size: 3 reps	Prev Crop: Black Beans	
Row Spacing: 28 inch	Weather: Drought until the end of July, then very good	Other Pests: Leaf miner, Root Aphid
Seeding Rate: 56,000		

Variety	\$/A	RWSA	RWST	T/A	% Sugar	% CJP	Populations 100 Ft. of Row		Dead Beets / 1200 Ft	Leafspot Rating (1-9)
							10 Day	31 Day		
SX-1264 RR	\$1,726	10265	286	35.9	18.9	96.2	78	214	31	2.7
C-G675	\$1,691	10058	269	37.4	17.8	96.3	136	226	3	3.3
B-1399	\$1,666	9912	266	37.3	17.7	96.1	58	237	1	3.0
C-G333NT	\$1,641	9765	268	36.5	17.8	96.3	124	272	5	4.3
B-149N	\$1,584	9426	257	36.6	17.3	96.6	92	236	20	4.8
SX-1245N RR	\$1,568	9331	269	34.7	17.9	96.6	92	218	58	3.8
B-1690	\$1,567	9325	274	34.1	18.2	96.3	83	202	3	4.0
B-1606N	\$1,559	9280	263	35.3	17.5	96.5	104	236	2	3.8
HIL-9865	\$1,549	9221	265	34.8	17.7	96.1	96	226	21	3.0
SX-1243 RR	\$1,531	9111	256	35.6	17.2	96.2	88	222	33	3.0
C-G515	\$1,476	8784	265	33.1	17.7	96.2	95	215	1	5.5
HIL-9879NT	\$1,378	8202	277	29.5	18.5	96.3	92	212	9	2.3
B-12RR2N	\$1,374	8177	243	33.6	16.5	96.3	32	218	68	4.3
Average	\$1,562	9297	266	35.0	17.7	96.3	90	226	20	3.7
LSD 5%	—	722	9	2.6	0.5	ns	29	31	20	0.6
CV %	—	5	2	4.3	1.6	0.3	19	8	59	9.1

Comments: In the past few years, Sugarbeet Advancement has had variety trials with DVL Farms on fields that were light textured (dark sand). This field is more of a loam but still probably had a higher fraction of sand compared to the other trial locations. This field received the least amount of rain in May, June and early July of any of the trial locations. This location did have Root Aphid and it probably impacted some varieties. Root diseases were low across all the trial locations but may have had a small impact on a few varieties in this location. This was not the highest leafspot location, but some of the better leafspot varieties performed well. Even though the ratings were lower than other locations, the fact that this was a late harvested field may have allowed leafspot to be a larger influence than some of the other locations. Leafspot fungicides were as follows: 7/5 Proline + EBDC, 7/17 EBDC + Roundup, 7/28 EBDC + Badge, 8/7 Inspire + EBDC + Mustang Maxx + Roundup, 8/15 EBDC + Badge, 8/28 EBDC, 9/6 Enable + EBDC, 9/19 Badge. All with, MasterLock.

\$/A: Gross dollars per acre assuming a \$40 payment and a company average RWST of 238.

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

Variety Trial

Gardner Farms, Croswell - 2018

Trial Quality: Good	Soil Type: Loam	Cerc Control: Moderate/heavy pressure: See below for materials
Planted: April 30	Fertilizer: PPI: 19 gal of 28%; 2x2: 15 gal of 10-34-0; S.D.: 20 gal of 28%	
Harv/Samp: Oct 3 / Oct 2		
Plot Size: 3 reps	Prev Crop: Soybeans	Rhiz Control: Good control: Quadris I.F. (8 oz)
Row Spacing: 22 inch	Weather: Dry until late July, then good weather	Other Pests: Root Aphid
Seeding Rate: 65,000		

Variety	\$/A	RWSA	RWST	T/A	% Sugar	% CJP	Populations 100 Ft. of Row		Dead Beets / 1200 Ft	Leafspot Rating (1-9)
							11 Day	32 Day		
B-1690	\$1,686	8158	247	33.1	16.8	95.9	71	222	3	5.1
SX-1264 RR	\$1,632	7899	257	30.7	17.3	95.7	53	209	28	4.8
C-G675	\$1,620	7838	239	32.8	16.4	95.5	111	225	1	4.9
C-G515	\$1,578	7645	240	31.8	16.4	95.6	49	200	8	5.8
B-1606N	\$1,576	7628	229	33.3	15.8	95.3	76	227	3	5.8
C-G333NT	\$1,573	7614	227	33.5	15.6	95.2	59	238	3	5.8
B-149N	\$1,566	7578	227	33.3	15.6	95.8	31	200	5	6.1
B-1399	\$1,535	7439	233	31.9	16.0	95.2	75	214	3	3.9
SX-1243 RR	\$1,516	7343	232	31.6	15.9	95.5	68	225	11	5.1
HIL-9865	\$1,443	6983	245	28.5	16.6	95.4	40	200	32	6.2
SX-1245N RR	\$1,442	6974	238	29.4	16.1	95.3	64	206	75	5.3
B-12RR2N	\$1,409	6827	217	31.4	15.0	95.4	36	205	49	5.2
HIL-9879NT	\$1,311	6343	230	27.5	15.9	95.2	27	195	13	4.3
Average	\$1,530	7405	236	31.4	16.1	95.5	59	213	18	5.3
LSD 5%	—	767	13	2.4	0.8	ns	45	25	27	0.4
CV %	—	6	3	4.5	2.9	0.3	45	7	90	4.0

Comments: This trial location had the highest leafspot ratings of any of the Sugarbeet Advancement locations. This location was harvested on October 3 which likely prevented leafspot from being a larger influence in the results. Had this trial been harvested during long term storage, the poorer leafspot varieties almost surely would have performed worse. Root diseases (see Dead Beets) were relatively low, but may have been high enough to impact a few varieties. Leafspot fungicides were as follows: 6/30 Proline + Koverall + Coron, 7/18 Flint + Coron, 8/14 Super Tin + Badge, 9/12 Inspire XT. All applications included Cide Winder adjuvant.

\$/A: Gross dollars per acre assuming a \$40 payment, a company average RWST of 238 and the early delivery premium.

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

Central District Trials





Official Variety Trial

Michigan Sugar Company

Sylvester, Quanicassee - 2018

Trial Quality: Very Good
Plant/Harv: Apr 27/Oct 26
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: 3.1 **pH:** 7.7 **CEC:** 19.0
Nutrients: P: Abv Opt K: Abv Opt
Mn: High **B:** Medium
Added N: 185 lbs.
Prev Crop: Corn

****Cerc Control:** Good
 8 applications**
Rhizoc Control: Good
 Quadris IF, 6-8 lf
Rainfall: 22.99 inches

Variety	\$/A	RWSA	RWST		Yield		Sugar		CJP	
			Lb/T	Rank	T/A	Rank	%	Rank	%	Rank
SX-RR1278N	\$2,018	13229	282	1	47.0	2	18.5	1	96.3	2
B-1703	\$1,905	12488	261	12	47.8	1	17.5	11	95.6	21
SX-RR1264	\$1,861	12200	271	3	45.1	8	18.0	3	96.0	12
C-G675	\$1,847	12110	259	18	46.8	4	17.2	16	95.9	16
C-G333NT	\$1,819	11923	255	20	46.8	3	16.9	20	96.3	5
SX-RR1275N	\$1,797	11780	261	15	45.2	6	17.2	18	96.3	3
B-1690	\$1,796	11771	261	14	45.2	7	17.4	13	95.9	15
SX-RR1245N	\$1,795	11767	264	9	44.5	12	17.6	7	95.9	17
C-G515	\$1,791	11742	261	13	45.0	9	17.4	12	95.9	19
MA-709	\$1,777	11651	270	5	43.2	15	17.8	5	96.2	6
B-1399	\$1,767	11583	259	17	44.7	11	17.3	15	96.0	13
C-RR059	\$1,765	11572	265	7	43.6	13	17.6	8	96.1	11
B-1606N	\$1,759	11534	258	19	44.8	10	17.0	19	96.3	4
B-12RR2N	\$1,742	11418	263	10	43.5	14	17.5	10	95.9	18
B-149N	\$1,723	11297	248	21	45.6	5	16.6	21	95.8	20
C-G752NT	\$1,720	11278	262	11	43.0	17	17.2	17	96.6	1
SX-RR1243	\$1,712	11225	260	16	43.1	16	17.3	14	96.0	14
HIL-9865	\$1,701	11150	268	6	41.7	18	17.7	6	96.1	8
SX-RR1276	\$1,660	10880	265	8	41.1	19	17.5	9	96.2	7
HIL-9908	\$1,625	10651	280	2	38.1	21	18.5	2	96.1	9
HIL-9879NT	\$1,571	10299	270	4	38.2	20	17.9	4	96.1	10
Average	\$1,769.1	11597.6	263.9		43.99		17.50		96.08	
LSD 5%	98.4	645.1	6.8		2.3		0.4		0.4	
CV %	5.6	5.6	2.6		5.3		2.3		0.5	

** See Cercospora Fungicide Application Page

\$/A: Gross dollars per acre assuming a \$40 payment and trial average RWST.

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

Comments: This trial was never as dry as other areas of the growing region in 2018. Although below average rainfall occurred in July and August, light rains throughout that period helped to continue root and canopy growth. Yield and sugar content for this trial are above average for 2018. Roots from this trial were placed into our storage room for varietal storage studies.



Official Variety Trial

Michigan Sugar Company

Trost Farms, Pigeon - 2018

Trial Quality: Good
Plant/Harv: May 1/Oct 22
Plots: 2 rows X 38 ft., 5 reps
Row Spacing: 22 inches
Seeding Rate: 2 inches,
 thinned to 200 beets/100 ft.

Soil Type: Clay Loam
% OM: 2.7 **pH:** 6.3 **CEC:** 16.0
Nutrients: P: Abv Opt K: Abv Opt
Mn: High **B:** Medium
Added N: 175 lbs.
Prev Crop: Corn

****Cerc Control:** Very Good
 8 applications**
Rhizoc Control: Very Good
 Quadris IF, 6-8 lf
Rainfall: 14.88 inches

Variety	\$/A	RWSA	RWST		Yield		Sugar		CJP	
			Lb/T	Rank	T/A	Rank	%	Rank	%	Rank
B-1703	\$1,533	9894	260	11	38.0	2	17.1	12	96.5	2
B-1606N	\$1,518	9799	249	19	39.3	1	16.6	19	96.0	18
SX-RR1264	\$1,499	9675	277	2	34.9	8	18.2	2	96.6	1
C-G675	\$1,458	9407	261	9	36.1	4	17.3	8	96.1	16
C-RR059	\$1,436	9266	263	7	35.2	6	17.4	7	96.4	5
C-G515	\$1,413	9116	261	10	35.0	7	17.3	10	96.3	9
B-1399	\$1,412	9113	254	17	35.9	5	16.8	18	96.5	3
B-1690	\$1,411	9104	265	6	34.4	10	17.5	6	96.2	14
C-G333NT	\$1,391	8978	246	20	36.5	3	16.4	20	96.0	20
HIL-9865	\$1,334	8609	272	4	31.7	13	17.9	4	96.3	10
B-149N	\$1,324	8541	246	21	34.7	9	16.4	21	96.2	15
SX-RR1278N	\$1,310	8453	261	8	32.4	11	17.3	9	96.3	7
MA-709	\$1,294	8353	267	5	31.3	14	17.7	5	96.0	19
C-G752NT	\$1,273	8214	254	18	32.4	12	16.9	17	96.1	17
HIL-9908	\$1,253	8084	279	1	28.9	19	18.3	1	96.4	4
SX-RR1276	\$1,205	7779	256	14	30.4	15	17.0	14	96.3	11
SX-RR1275N	\$1,197	7723	256	15	30.2	16	17.1	13	95.8	21
HIL-9879NT	\$1,190	7676	274	3	28.1	20	18.1	3	96.2	13
SX-RR1245N	\$1,183	7632	255	16	30.0	17	16.9	16	96.3	8
SX-RR1243	\$1,148	7410	256	13	28.9	18	16.9	15	96.4	6
B-12RR2N	\$1,104	7125	259	12	27.5	21	17.2	11	96.2	12
Average	\$1,327.9	8569.1	260.6		32.94		17.24		96.24	
LSD 5%	105.0	677.5	7.8		2.5		0.5		0.4	
CV %	8.0	8.0	3.0		7.7		2.7		0.4	

**** See Cercospora Fungicide Application Page**

\$/A: Gross dollars per acre assuming a \$40 payment and trial average RWST.

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

Comments: This trial was subject to some of the most dry conditions of our trials in 2018. The dry conditions promoted Root Aphid pressure, and this pressure was observed in late July. Roots remained healthy overall, but the yields of Root Aphid susceptible varieties dramatically declined in this trial. Overall yields and sugar content were above average for this trial as harvested during the first week of permanent piling. Roots from this trial were placed into our storage room for varietal storage studies.



Nematode Variety Trial

Michigan Sugar Company

Sylvester, Quanicassee - 2018

Trial Quality: Good

Location: Sylvester Nematode

Plot Size: 6 rows X 38 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-1606N	\$1,529	8783	226	6	39.0	1	15.8	6	94.6	7	73.4	7
B-149N	\$1,526	8764	227	5	38.7	2	15.9	5	95.0	1	79.2	4
C-G333NT	\$1,497	8598	225	7	38.2	3	15.8	7	94.8	4	79.9	3
B-12RR2N	\$1,488	8547	236	1	36.2	5	16.3	2	94.9	2	82.8	1
SX-RR1245N	\$1,438	8257	227	4	36.4	4	15.9	4	94.6	6	80.3	2
C-RR059	\$1,426	8189	231	3	35.4	6	16.1	3	94.8	5	76.3	5
HIL-9879NT	\$1,354	7779	236	2	33.0	7	16.3	1	94.8	3	74.1	6
Average	\$1,465.4	8416.63	229.5		36.70		16.01		94.79		78.02	
LSD 5%	N.S.	N.S.	N.S.		2.6		N.S.		N.S.		4.8	
CV %	7.5	7.5	4.9		5.9		4.2		0.5		5.2	

\$/A: Gross dollars per acre assuming a \$40 payment and trial average RWST.

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

Comments: Commercial Nematode Tolerant varieties were tested against each other in this variety trial. Overall disease control was very good. Nematode pressure was moderate, and growing conditions did not directly impact non-nematode control varieties within the trial. Emergence was good, and seasonal growing conditions were favorable in general.

Variety Trial

E & R Farms, Bad Axe - 2018

Trial Quality: Very good	Soil Type: Loam	Cerc Control: Fair control: See below for materials
Planted: May 1	Fertilizer: Fall: 20 ton cattle manure; 2x2: 24.5 gal 16-18-0-3S + Mn&B; S.D.: 25 gal 28%	
Harv/Samp: Oct 30 / Oct 22		Rhiz Control: Good control: Quadris I.F. (7.5 oz) & 6-8 Leaf (9 oz)
Plot Size: 3 reps	Prev Crop: Corn	
Row Spacing: 30 inch	Weather: Drought until late July, then good	Other Pests: Root Aphid
Seeding Rate: 59,000		

Variety	\$/A	RWSA	RWST	T/A	% Sugar	% CJP	Populations 100 Ft. of Row		Dead Beets / 1200 Ft	Leafspot Rating (1-9)
							13 Day	31 Day		
C-G675	\$1,451	8633	248	34.8	16.8	95.7	230	269	1	3.3
SX-1264 RR	\$1,439	8566	266	32.2	17.9	96.4	190	261	33	2.9
B-1399	\$1,377	8193	240	34.2	16.3	96.5	203	275	3	3.2
B-1606N	\$1,366	8128	243	33.5	16.5	95.8	218	270	4	3.7
B-149N	\$1,316	7833	232	33.8	15.9	96.6	237	283	8	4.2
C-G333NT	\$1,282	7632	229	33.3	15.8	96.1	248	300	21	4.4
HIL-9865	\$1,261	7502	250	30.0	16.8	96.4	194	257	25	4.0
B-1690	\$1,245	7414	244	30.4	16.6	96.3	222	266	2	4.2
HIL-9879NT	\$1,245	7407	253	29.3	17.0	96.3	169	256	18	2.8
C-G515	\$1,231	7330	234	31.2	16.1	96.1	229	263	4	4.8
SX-1245N RR	\$1,095	6518	232	28.1	15.8	96.3	215	276	32	4.8
SX-1243 RR	\$1,089	6471	228	28.4	15.6	96.0	204	271	13	4.1
B-12RR2N	\$990	5899	218	27.0	15.0	96.2	170	271	34	4.7
Average	\$1,260	7502	240	31.2	16.3	96.2	210	271	15	3.9
LSD 5%	—	432	9	1.8	0.5	0.5	25	15	30	0.6
CV %	—	3	2	3.3	1.9	0.3	7	3	117	8.5

Comments: This trial was very dry during the June/July drought which caused some canopy damage. This location did have Root Aphid and it appears to have been a large factor since the bottom three varieties are less tolerant. This was not the highest leafspot location, but some of the better leafspot varieties performed well. Even though the ratings were lower than other locations, the fact that this was a late harvested field may have allowed leafspot to be a larger influence than some of the other locations. Leafspot fungicides were as follows: 6/28 EBDC + Roundup, 7/9 Eminent + EBDC, 7/27 Copper + EBDC, 8/7 Super Tin + Topsin, 8/20 Inspire XT + EBDC, 9/10 Super Tin + EBDC, 9/26 Copper.

\$/A: Gross dollars per acre assuming a \$40 payment and a company average RWST of 238.

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

Variety Trial

Sylvester Farms, Quanicassee - 2018

Trial Quality: Good	Soil Type: Loam	Cerc Control: Good/Fair control: See below for materials
Planted: March 26	Fertilizer: Fall: P & K, PPI: 45 gal 28%; 2x2: 7 gal 10-34-0, 3 gal Thiosul, 8 gal 28%	
Harv/Samp: Sept 22 / Sept 21		
Plot Size: 3 reps	Prev Crop: Wheat / Clover	Rhiz Control: Good control: I.F. (8 oz + Must.), 8 leaf (10 oz + EBDC)
Row Spacing: 24 inch	Weather: Dry until the end of July, then very good	Other Pests: Sugarbeet Cyst Nematode, Root Aphid
Seeding Rate: 62,000		

Variety	\$/A	RWSA	RWST	T/A	% Sugar	% CJP	Populations 100 Ft. of Row		Dead Beets / 1200 Ft	Leafspot Rating (1-9)
							32 Day	58 Day		
B-12RR2N	\$1,921	8344	236	35.3	16.3	95.0	9	158	19	3.6
SX-1245N RR	\$1,899	8246	238	34.7	16.4	94.8	29	149	26	3.2
C-G675	\$1,879	8161	238	34.2	16.4	94.7	80	183	8	2.6
B-1606N	\$1,865	8098	230	35.3	16.0	94.7	57	164	2	3.4
C-G333NT	\$1,827	7933	227	35.0	15.8	94.5	40	168	5	3.8
SX-1243 RR	\$1,815	7881	237	33.3	16.3	94.9	26	158	12	2.7
B-149N	\$1,808	7857	223	35.2	15.6	94.6	30	191	5	4.2
SX-1264 RR	\$1,639	7104	244	29.2	16.8	95.0	15	121	25	2.4
B-1690	\$1,608	6981	228	30.7	15.8	94.9	77	158	1	4.5
C-G515	\$1,554	6748	221	30.5	15.4	94.7	52	168	2	5.8
HIL-9865	\$1,552	6739	240	28.0	16.5	95.1	15	144	24	3.3
B-1399	\$1,544	6711	221	30.3	15.4	94.6	12	135	3	2.8
HIL-9879NT	\$1,511	6564	239	27.4	16.5	94.8	13	114	16	3.2
Average	\$1,725	7490	232	32.2	16.1	94.8	35	155	11	3.5
LSD 5%	—	691	7	3.2	0.4	0.4	11	20	16	0.5
CV %	—	5	2	5.9	1.5	0.2	19	8	82	8.3

Comments: This trial was planted very early on March 26. The seed went through some freeze events but still managed to establish a decent final stand, averaging 155 beets per 100 foot of row. This is a field that has Sugarbeet Cyst Nematode and the results highly favor the nematode varieties. Leafspot was starting to become an issue but most of the infection came on only a few weeks before the early harvest. This likely prevented much damage to most varieties. Root Aphid was found but does not appear to have a large impact on results. Leafspot fungicides were as follows: 6/20 Inspire + Badge, 7/2 Super Tin + EBDC, 7/15 Topguard + Badge, 7/30 Priaxor + EBDC, 8/10 Super Tin + EBDC, 8/20 Proline + Badge, 9/5 EBDC + Badge, 9/17 Badge, all with a sticker.

\$/A: Gross dollars per acre assuming a \$40 payment, a company average RWST of 238 and the early delivery premium.

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

West District Trials





Plant To Stand

Michigan Sugar Company

Crumbaugh Legacy Inc., Breckenridge - 2018

Trial Quality: Good
Plant/Harv: Apr 30/Sept 13
Plots: 6 rows X 38 ft, reps
Row Spacing: 22 inches
Seeding Rate: 4.1 inches

Soil Type: Loamy Sand
% OM: 2.8 **pH:** 6.2 **CEC:** 9.5
Nutrients: **P:** Abv Opt **K:** Abv Opt
Mn: High **B:** Low
Added N: 135 lbs.
Prev Crop: Corn

****Cerc Control:** Good
 6 applications**
Rhizoc Control: Good
 Quadris IF, 6-8 If
Rainfall: 21.05 inches

Variety	\$/A	RWSA	RWST		Yield		Sugar		CJP		Beets/100 ft	
			Lb/T	Rank	T/A	Rank	%	Rank	%	Rank	Act.	Rank
B-1690	\$1,459	7942	225	4	35.3	1	15.8	5	94.3	1	212	7
B-1606N	\$1,365	7430	220	7	33.8	3	15.5	7	94.0	10	209	9
SX-RR1245N	\$1,360	7400	226	3	32.6	9	16.0	3	94.1	7	218	4
SX-RR1264	\$1,360	7399	224	5	33.0	6	15.9	4	94.2	2	230	1
HIL-9865	\$1,344	7316	231	1	31.7	10	16.2	2	94.1	6	207	12
C-G675	\$1,321	7190	215	10	33.4	4	15.3	10	93.9	12	212	6
C-RR059	\$1,319	7180	215	9	33.3	5	15.4	8	94.2	3	210	8
B-12RR2N	\$1,301	7083	209	11	33.9	2	14.9	12	93.8	13	209	10
B-149N	\$1,263	6873	208	12	32.9	8	14.9	11	94.0	8	218	5
SX-RR1243	\$1,262	6866	220	6	31.2	12	15.6	6	94.2	5	207	11
HIL-9879NT	\$1,251	6807	230	2	29.6	14	16.2	1	94.2	4	197	14
C-G333NT	\$1,247	6787	206	13	32.9	7	14.8	13	93.9	11	220	3
C-G515	\$1,231	6697	216	8	31.0	13	15.3	9	94.0	9	222	2
B-1399	\$1,197	6513	205	14	31.7	11	14.8	14	93.7	14	205	13
Average	\$1,305.8	7105.9	217.9		32.58		15.48		94.05		212.6	
LSD 5%	160.7	874.7	8.2		3.6		0.5		N.S.		17.6	
CV %	9.7	9.7	3.0		8.8		2.4		0.3		6.5	

** See Cercospora Fungicide Application Page

\$/A: Gross dollars per acre assuming a \$40 payment and trial average RWST.

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

Comments: This trial received adequate amounts of rainfall early in the season to promote canopy growth. Later in the season, this trial location also suffered some dry conditions; although not as severe as other areas. This trial was harvested in early September. The yield and sugar for this harvest date are above average. Stands were excellent in this trial and overall emergence conditions were excellent as well.

Variety Trial

Chaffin Farms, Ithaca - 2018

Trial Quality: Good	Soil Type: Loam	Cerc Control: Good/Fair control: See below for materials
Planted: March 19	Fertilizer: Fall: 12,000 gal of dairy manure; Spring: broad. 180# potash w/ Zn & Mn & 75# of actual N	
Harv/Samp: Oct 18 / Oct 15		Rhiz Control: Good control: Quadris 6-8 leaf (15 oz)
Plot Size: 3 reps	Prev Crop: Chopped corn	
Row Spacing: 20 inch	Weather: Very good after emergence	Other Pests: Root Aphid
Seeding Rate: 70,000		

Variety	\$/A	RWSA	RWST	T/A	% Sugar	% CJP	Populations 100 Ft. of Row		Dead Beets / 1200 Ft	Leafspot Rating (1-9)
							38 Day	63 Day		
B-149N	\$1,992	11412	258	44.3	17.2	96.2	51	166	15	4.2
C-G675	\$1,937	11092	255	43.6	17.1	96.4	63	131	16	2.2
C-G333NT	\$1,905	10935	252	43.3	16.9	96.2	51	140	8	3.3
SX-1245N RR	\$1,862	10679	273	39.1	18.1	96.4	52	149	72	3.0
C-G515	\$1,856	10636	251	42.3	16.9	96.3	70	134	30	4.7
SX-1243 RR	\$1,836	10532	263	40.0	17.6	96.1	57	147	22	2.3
C-RR059	\$1,808	10364	251	41.2	16.9	96.4	59	148	6	4.3
B-1606N	\$1,774	10152	247	41.2	16.6	95.8	40	109	3	3.0
B-12RR2N	\$1,756	10070	251	40.1	16.8	96.3	22	128	61	3.0
SX-1264 RR	\$1,736	9932	266	37.4	17.7	96.3	29	105	49	2.5
B-1399	\$1,713	9809	246	40.0	16.5	96.3	10	112	6	2.2
B-1690	\$1,709	9781	252	38.8	17.0	95.9	41	70	5	4.2
HIL-9879NT	\$1,403	8038	249	32.3	16.9	96.2	36	109	29	1.7
Average	\$1,791	10264	255	40.3	17.1	96.2	45	127	25	3.1
LSD 5%	—	1315	13	4.7	0.7	ns	23	30	41	0.6
CV %	—	8	3	7.0	2.4	0.4	30	14	98	10.8

Comments: This trial was planted very early on March 19. The seed went through multiple freeze events and took a very long time to emerge with the first counts done 38 days after planting and still only averaging 45 beets per 100 foot of row. The final emergence counts were done 63 days after planting and averaged 127 beets per 100 foot of row. After emergence, the trial generally had very good weather with the most consistent rain compared to other locations. The trial ended up being very high yielding with the results being highly related to emergence. Leafspot and root diseases were probably past economic levels for some of the varieties. Root Aphid was found but not believed to be a big factor in the results. Leafspot fungicide materials were as follows: 6/15 Topguard, 7/5 Super Tin; 7/24 Inspire XT; 8/15 Super Tin; 8/31 Copper; 9/8 Topguard; 9/18 Cuprofix; 9/28 Cuprofix

\$/A: Gross dollars per acre assuming a \$40 payment, a company average RWST of 238 and the early delivery premium.

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

Nursery Data





Rhizoctonia Nursery

Michigan Sugar Company

Average of 2 years, 2017 & 2018

Trial Quality: Good
Location: 2017 - Blumfield, SVREC, 2018 - Blumfield, 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-G675	3.8	21.0
C-RR059	4.0	26.3
C-G515	4.0	26.3
B-1606N	4.1	28.1
B-1703	4.1	29.2
B-1399	4.2	30.5
B-1690	4.2	30.6
B-149N	4.2	32.2
C-G333NT	4.3	31.5
C-G752NT	4.3	33.0
HIL-9908	4.3	33.8
HIL-9865	4.3	34.1
SX-RR1243	4.5	37.3
SX-RR1264	4.5	38.1
HIL-9879NT	4.5	38.1
B-12RR2N	4.6	40.2
SX-RR1245N	4.7	42.4
SX-RR1275N	4.7	42.6
MA-709	4.7	43.4
SX-RR1276	4.8	45.7
SX-RR1278N	4.9	46.7
Average	4.37	34.78
LSD 5%	0.4	
CV %	4.3	

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

***Rating System:**

0 = No Infection	4 = 26 to 50% rotted roots
1 = less than 2% infection	5 = 51 to 75% rotted roots
2 = less than 5% rotted roots	6 = 76 to 95% rotted roots
3 = 5 to 25% 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, 2017 & 2018

Trial Quality: Good

Locations: 2017 - Blumfield East, SVREC

2018 - 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	2017 CLS Rate 0-9	2018 CLS Rate 0-9
HIL-9908	3.5	3.5	3.6
HIL-9879NT	3.8	4.0	3.7
B-1703	4.0	3.7	4.4
MA-709	4.1	3.9	4.2
B-1399	4.1	3.8	4.4
C-G675	4.5	4.2	4.9
B-1690	4.7	4.5	4.8
HIL-9865	4.7	4.7	4.7
SX-RR1276	4.7	4.7	4.7
Resistant Check	4.7	4.5	5.0
SX-RR1264	4.8	5.0	4.5
B-12RR2N	4.8	4.7	4.9
C-G752NT	4.9	4.8	4.9
SX-RR1243	4.9	5.0	4.8
B-1606N	4.9	4.9	5.0
C-RR059	4.9	4.9	5.0
SX-RR1275N	5.0	5.0	5.0
SX-RR1278N	5.0	5.0	5.1
SX-RR1245N	5.1	5.3	4.9
C-G515	5.2	4.9	5.4
C-G333NT	5.3	5.3	5.4
Susceptible Check	5.4	5.4	5.3
B-149N	5.4	5.3	5.5
Average	4.72	4.65	4.78

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 result.



Alternaria

0-5 Ratings from Official Variety Trials

Average of 2 Years, 2017 & 2018

Trial Quality: Good

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

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

Variety	Alternaria 0-5	% Check	% Injury
B-1703	1.3	79.3	1.6
C-G675	1.5	88.8	2.2
HIL-9908	1.5	91.1	2.1
MA-709	1.6	93.7	2.3
B-1399	1.6	94.6	2.2
SX-RR1264	1.7	100.1	2.5
HIL-9879NT	1.7	100.8	2.6
B-1606N	1.7	102.0	2.6
B-12RR2N	1.7	103.1	2.7
SX-RR1243	1.8	107.3	3.0
C-G333NT	1.8	108.9	3.0
C-G752NT	1.9	110.6	3.0
SX-RR1276	1.9	111.5	3.2
HIL-9865	1.9	111.9	3.4
SX-RR1278N	1.9	115.2	3.3
B-149N	2.0	117.3	3.6
SX-RR1245N	2.0	121.0	4.0
SX-RR1275N	2.1	124.7	4.8
B-1690	2.2	133.0	5.1
C-RR059	2.6	152.4	6.8
C-G515	2.6	154.0	7.7
Average	1.87	110.54	3.41

Alternaria Rating (0-5 scale): 1 = 1% leaf injury, 1.5 = 2% leaf injury, 2 = 3% leaf injury,
2.5 = 6.5% leaf injury.

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



Cyst Nematode Nursery

Michigan Sugar Company

Average of 2 Years, 2017 & 2018

Trial Quality: Good

Locations: 2017 Kirkpatrick, 2018 Sylvester Nematode

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

Cerc Control: Very Good

Rhizoc Control: Very Good

Quadris IF, 6-8 If

Variety	\$/A	RWSA	RWST		Yield		Sugar		CJP	
			Lb/T	Rank	T/A	Rank	%	Rank	%	Rank
C-G752NT	\$1,585	9905	267.5	3	37.9	1	18.1	3	95.5	2
SX-RR1278N	\$1,528	9526	268.5	2	36.3	3	18.2	2	95.3	3
B-149N	\$1,483	9299	254.5	9	37.4	2	17.4	9	95.2	7
B-12RR2N	\$1,474	9164	263.0	5	35.6	4	18.0	4	95.2	5
SX-RR1275N	\$1,450	9021	265.0	4	34.9	8	18.0	5	95.2	6
SX-RR1245N	\$1,428	8979	258.5	8	35.6	5	17.6	7	95.0	9
B-1606N	\$1,431	8952	261.5	6	35.0	7	17.8	6	95.1	8
C-G333NT	\$1,425	8931	259.0	7	35.3	6	17.6	8	95.3	4
HIL-9879NT	\$1,372	8588	272.0	1	32.3	10	18.4	1	95.5	1
Susceptible Check	\$1,339	8308	248.0	10	34.4	9	17.1	10	94.7	10
Average	\$1,451.5	9067.1	261.8		35.45		17.79		95.18	
LSD 5%	N.S.	N.S.	10.9		N.S.		0.6		N.S.	
CV %	5.9	5.9	1.8		4.5		1.4		0.2	

\$/A: Gross dollars per acre assuming a \$40 payment and trial average RWST.

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



Root Aphid Nursery

Syngenta

Average of 2017 & 2018

Variety	% Infected
B-1690	1.3
B-1703	1.4
B-149N	1.6
C-G515	2.3
B-1399	2.5
C-G752NT	2.5
C-G675	2.7
SX-RR1264	3.0
C-G333NT	3.3
C-RR059	4.1
B-1606N	4.1
MA-709	5.0
HIL-9865	5.3
HIL-9908	5.8
HIL-9879NT	5.9
SX-RR1278N	10.6
SX-RR1275N	23.4
B-12RR2N	24.3
SX-RR1276	33.0
SX-RR1245N	34.2
SX-RR1243	37.1
Average	10.1
LSD 5%	16.2
CV %	76.7

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



Aphanomyces Nursery

BETASEED, Shakopee, MN

Average of 2 years, 2017 & 2018

Variety	Root Rating 1 - 9 Scale	Canopy Rating 1 - 9 Scale	Stand Loss 1 - 5 Scale
SX-RR1264	2.8	1.3	1.0
SX-RR1275N	2.9	1.7	1.0
SX-RR1278N	2.9	1.3	1.0
SX-RR1276	3.0	1.1	1.0
B-1606N	3.0	1.7	1.0
B-12RR2N	3.0	1.5	1.0
C-G752NT	3.3	2.1	1.0
B-1399	3.4	1.6	1.0
SX-RR1245N	3.5	1.9	1.0
C-G675	3.6	1.9	1.0
SX-RR1243	3.8	1.7	1.0
MA-709	3.8	2.1	1.0
B-1690	3.9	2.2	1.0
B-149N	3.9	2.4	1.0
C-G515	4.0	2.1	1.0
HIL-9908	4.1	1.9	1.0
C-RR059	4.3	2.3	1.0
C-G333NT	4.3	2.4	1.0
HIL-9865	4.8	2.4	1.0
Susceptible Check	5.1	2.8	1.0
HIL-9879NT	5.2	2.9	1.0
B-1703	5.4	3.2	1.0
Average	3.81	2.01	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, 2017 & 2018

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-RR1276	1.9	11815	17.4	39.0	0.4
SX-RR1275N	1.9	11722	17.3	39.1	0.0
B-149N	2.0	11209	17.0	38.5	0.0
SX-RR1245N	2.1	11539	17.2	38.9	0.5
C-G675	2.1	11371	17.3	38.1	0.3
C-RR059	2.1	11326	18.0	36.8	0.0
C-G515	2.2	11717	18.0	37.8	0.0
B-1690	2.2	11730	18.2	37.5	0.0
B-1703	2.2	11071	17.3	37.3	0.0
B-1606N	2.2	11128	17.4	37.4	0.2
C-G333NT	2.2	10708	17.4	35.6	0.0
SX-RR1243	2.2	10483	16.9	35.7	1.0
SX-RR1278N	2.3	10870	17.2	36.5	1.6
C-G752NT	2.3	10956	17.7	36.0	0.0
B-1399	2.4	9866	16.8	34.4	0.0
SX-RR1264	2.4	10231	17.0	34.7	4.3
B-12RR2N	2.4	10633	17.5	34.9	0.3
HIL-9865	2.4	10982	17.7	35.7	1.9
MA-709	2.5	9837	17.3	32.6	4.8
HIL-9908	2.7	9037	17.3	30.1	1.7
HIL-9879NT	2.8	8210	17.1	27.9	1.3
Susceptible Check	4.4	4799	15.0	18.7	98.8
Average	2.34	10510.9	17.27	35.14	5.30
LSD 5%	0.5	1465.3	0.6	4.7	2.3
CV %	10.5	6.7	1.7	6.5	21.2

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, 2017 & 2018

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	2017 Rating 1-9	2018 Rating 1-9
B-1399	4.0	3.0	4.9
B-149N	4.2	3.5	5.0
B-1690	4.4	3.3	5.4
C-G515	4.4	3.2	5.7
C-RR059	4.5	3.0	6.0
C-G333NT	4.6	3.4	5.7
B-1606N	4.6	3.7	5.5
B-12RR2N	4.9	3.9	5.9
C-G752NT	4.9	4.1	5.7
SX-RR1243	5.2	4.0	6.4
Susceptible Check	5.3	6.3	7.1
SX-RR1264	5.5	4.5	6.6
SX-RR1278N	5.6	4.6	6.7
SX-RR1275N	5.7	4.9	6.6
SX-RR1276	5.8	4.9	6.7
SX-RR1245N	6.2	4.8	7.6
B-1703	6.6	5.8	7.5
MA-709	6.7	5.9	7.4
HIL-9879NT	6.7	6.1	7.3
HIL-9908	6.7	6.3	7.1
HIL-9865	6.8	6.5	7.0
C-G675	6.8	6.2	7.5
Average	5.45	4.63	6.41
LSD 5%	1.1		
CV %	9.3		

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

	Breckenridge	Sandusky	Port Hope	Ruth	Quanicassee	Quanicassee	Pigeon
Grower	Crumbaugh	Gerstenberger	Grekowicz	Maurer	Sylvester	Sylvester Nematode	Trost
Trial Quality	Good	Fair	OVT - Good PTS - Very Good	OVT - Good PTS - Good	Very Good	Good	Good
Planted	April 30	May 1	May 14	May 24	April 27	May 9	May 1
Harvested	Sept 13	Oct 10	Oct 25	Oct 11	Oct 26	Oct 8	Oct 22
Soil Type	Loamy Sand	Sandy Loam	Loam	Loam	Sandy Clay Loam	Clay Loam	Clay Loam
Soil pH	6.2	6.0	7.2	7.3	7.7	7.4	6.3
Soil OM	2.8%	2.2%	3.0%	3.2%	3.1%	3.8%	2.7%
Phosphorus	Above Opt	Above Opt	Above Opt	Above Opt	Above Opt	Above Opt	Above Opt
Potassium	Above Opt	Above Opt	Above Opt	Above Opt	Above Opt	Above Opt	Above Opt
Magnesium	Above Opt	Above Opt	Above Opt	Above Opt	Above Opt	Above Opt	Above Opt
Manganese	High	High	High	High	High	High	High
Boron	Low	Low	Medium	Medium	Medium	Medium	Medium
Zinc	High	High	High	Medium	Medium	Medium	High
Nitrogen Added	135 lbs.	155 lbs.	Manure + 35 lbs.	135 lbs.	185 lbs.	155 lbs.	175 lbs.

Seasonal Rainfall*

April	0.78	0.32			1.33	0.06	0.07
May	4.47	1.44	2.39	2.62	3.06	3.06	2.07
June	3.64	0.89	1.99	0.94	1.94	2.03	1.20
July	1.92	1.57	0.93	2.59	4.06	4.05	1.28
August	7.94	4.93	11.35	6.81	8.08	10.36	5.62
September	2.30	2.04	2.74	2.52	1.55	2.00	1.86
October		1.85	2.25	0.95	2.97	1.78	2.78
Total	21.05	13.04	21.65	16.43	22.99	23.34	14.88

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



Official Variety Trials

Cercospora Fungicides: Application Dates and Products

Location	Treatment 1***	Treatment 2***	Treatment 3***	Treatment 4***
Crumbaugh	6/15 - EBDC*	6/25 - Proline + EBDC*	7/12 - Super Tin + EBDC*	7/25 - Inspire XT + EBDC*
Gerstenberger	6/25 - EBDC*	7/3 - Proline + EBDC*	7/16 - Super Tin + EBDC*	7/26 - Inspire XT + EBDC*
Grekowicz	6/25 - EBDC*	7/3 - Proline + EBDC*	7/16 - Super Tin + EBDC*	7/26 - Inspire XT + EBDC*
Maurer	6/25 - EBDC*	7/3 - Proline + EBDC*	7/16 - Super Tin + EBDC*	7/26 - Inspire XT + EBDC*
Sylvester	6/15 - EBDC*	6/26 - Proline + EBDC*	7/13 - Super Tin + EBDC*	7/25 - Inspire XT + EBDC*
Sylvester Nematode	6/26 - EBDC*	7/2 - Proline + EBDC*	7/17 - Super Tin + EBDC*	7/26 - Inspire XT + EBDC*
Trost	6/15 - EBDC*	6/26 - Proline + EBDC*	7/13 - Super Tin + EBDC*	7/25 - Inspire XT + EBDC*

Location	Treatment 5***	Treatment 6***	Treatment 7***	Treatment 8***
Crumbaugh	8/9 - Super Tin + EBDC*	8/20 - Topguard + Priaxor + EBDC**		
Gerstenberger	8/14 - Super Tin + EBDC*	8/22 - Topguard + Priaxor + EBDC**	9/6 - Minerva Duo + EBDC**	9/25 - Proline + Badge
Grekowicz	8/13 - Super Tin + EBDC*	8/23 - Topguard + Priaxor + EBDC**	9/6 - Minerva Duo + EBDC**	9/26 - Proline + Badge
Maurer	8/13 - Super Tin + EBDC*	8/23 - Topguard + Priaxor + EBDC**	9/6 - Minerva Duo + EBDC**	9/25 - Proline + Badge
Sylvester	8/10 - Super Tin + EBDC*	8/20 - Topguard + Priaxor + EBDC**	9/5 - Minerva Duo + EBDC**	9/24 - Proline + Badge
Sylvester Nematode	8/10 - Super Tin + EBDC*	8/20 - Topguard + Priaxor + EBDC**	9/5 - Minerva Duo + EBDC**	9/24 - Proline + Badge
Trost	8/14 - Super Tin + EBDC*	8/23 - Topguard + Priaxor + EBDC**	9/7 - Minerva Duo + EBDC**	9/25 - Proline + Badge

* = Manzate Max

**= Koverall

***= Masterlock included in all Treatments.

Comments: Average application timing following triazoles tank mixed with EBDC'S was 16 days.

Average application timing following Super Tin mixed with EBDC'S was 9 days (sprayed mid season during high pressure).

Average application timing following an EBDC or Copper sprayed alone was 9 days (sprayed early season under reduced pressure).

Applications are made at 22.5 GPA / water and 100 PSI.

NOTES

NOTES

Presented In Partnership



Education

(Publications, meetings, seminars, web resources, clinics, reporting sessions.)



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