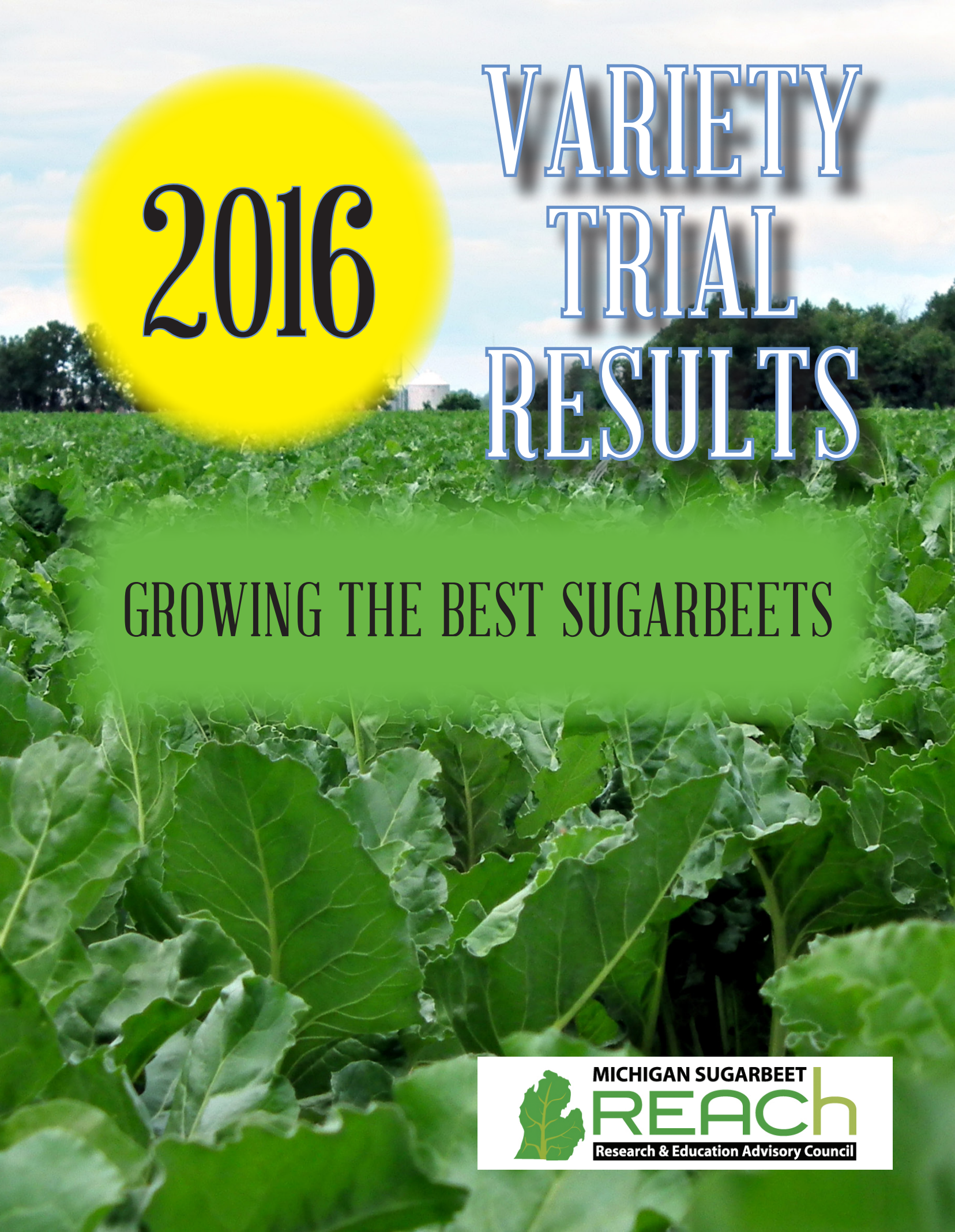

2016 VARIETY TRIAL RESULTS

GROWING THE BEST SUGARBEETS

MICHIGAN SUGARBEET REACh
Research & Education Advisory Council

REACh/SUGARBEET ADVANCEMENT COMMITTEE LIST
2016 Voting Membership

23 Voting Members

Company & Name	Terms	Expire
Michigan Sugar Company		
Jim Ruhlman (5th Member)	Permanent	
David Pratt	Permanent	
Jim Stewart	Permanent	
Brian Groulx	Permanent	
Michigan Sugar Agriculturists (4 Years)		
Russ Wegener	3	2019
Glenn Martus	1	2017
Dexter Auernhamer	2	2018
Michigan Sugar Company District Board Members (1 year)		
Chris Guza (Vice Chair)	1	2017
Mark Sylvester (Treasurer)	1	2017
Rick Leach	1	2017
Michigan Sugar Company At Large Growers (3 years)		
Chris Zeihm	3	2019
Kurt Hrabal	2	2018
Scott Roggenbuck (Chairman)	1	2017
Andy Shaffner (Secretary)	3	2019
Michigan State University,University of Guelph, and USDA (3 years)		
Linda Hanson	1	2017
Janice LeBoeuf	2	2018
Christy Sprague	3	2019
Sugar Beet Seed Company (2 years)		
	1	2017
Agri-Business Retail (2 years)		
Jacob Hecht	1	2017
Agri-Business Manufacturing (2 years)		
David Reif	2	2018
Michigan Sugar Company Board of Directors (1 year)		
Mark Richards	1	2017
Kent Houghtaling	1	2017
SBA Director		
Steve Poindexter	Permanent	

Ex-Officio Members

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

MICHIGAN SUGARBEET REACh
Research Education Advisory Council

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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2016 Variety Trial Results

Table of Contents

Approval of Seed Varieties

for the 2017 Crop

Fully Approved Varieties		
Unlimited Quantities		
HM-28RR	C-G351NT	HM-NT9607RR
C-RR059	B-1399	HM-9616
B-12RR2N	SX-RR1243	
SX-1212RR	B-149N	
HM-173RR	SX-RR1245N	

Limited Approved Varieties
Quantities limited to 5% of acres
C-G515
SX-RR1251

Specialty Approved Varieties		
Variety	**Specialty**	**Quantity**
HM-NT9617RR**	Nematode	Unlimited
B-133N**	Nematode/Rhizoc	7500 Units
C-G333NT**	Nematode/Rhizoc	Unlimited
MA-513NT**	Nematode	1000 Units
HIL-9732NT**	Nematode	1500 Units

Not Tested in 2016
Varieties on a 2 year plant out
HM-131RR*
C-RR202**
SX-1228RR**
SX-RR1235**

* - Can plant through 2017

**- Can plant through 2018

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Approved Varieties for 2017

Michigan Sugar Company

2015 - 2016 Data

Variety	Approval Status	$/A	All Values are % of Check									
			RWSA	RWST	T/A	Emergence	Cercospora	Rhizoctonia	Root Aphid*	Aphanomyces	Fusarium	Rhizomania
B-12RR2N	Full Approved	$1,578	108.5	103.2	104.9	99 F	102 F	108 F-	121 F-	74 G+	93 G	101 G
B-149N	Full Approved	$1,551	106.2	98.6	107.7	100 G-	112 F-	96 G-	47 G+	118 F	87 G	98 G
SX-RR1245N	Full Approved	$1,549	106.2	101.7	104.4	106 G	100 F	107 F-	112 F	88 G	121 F-	99 G
SX-RR1243	Full Approved	$1,544	105.4	101.5	104.0	100 G-	96 G-	98 G-	118 F	91 G	108 F+	101 G
B-1399	Full Approved	$1,529	104.8	98.6	106.3	108 G	85 G+	90 G	71 G	95 G	61 G+	101 G
C-RR059	Full Approved	$1,526	103.7	102.1	102.2	106 G	100 F	93 G	50 G+	100 F+	74 G	99 G
C-G515	Limited Approval	$1,526	103.6	101.4	102.7	97 F	104 F	96 G-	50 G+	103 F+	80 G	100 G
SX-RR1251	Limited Approval	$1,525	104.4	100.9	103.5	95 F-	104 F	105 F-	120 F	98 G	111 F	100 G
C-G333NT	Special Approval	$1,519	103.8	98.5	105.6	99 F	109 F	87 G	47 G+	99 G	79 G	95 G+
MA-513NT	Special Approval	$1,512	103.4	100.7	103.0	103 G-	119 P	104 F-	50 G+	132 P	138 P	101 G
HIL-9732NT	Special Approval	$1,498	102.4	101.1	101.6	100 G-	117 P	108 F-	54 G+	132 P	137 P	98 G
B-133N	Special Approval	$1,491	101.9	96.9	105.3	100 G-	112 F-	68 G+	47 G+	96 G	71 G	100 G
C-G351NT	Full Approved	$1,464	100.4	104.2	96.4	100 G-	94 G	98 G-	47 G+	104 F+	93 G	107 G-
SX-1212RR	Full Approved	$1,445	99.2	99.5	99.4	97 F	106 F	108 F-	141 P	101 F+	110 F	97 G+
HM-NT9617RR	Special Approval	$1,438	98.6	99.2	99.4	97 F	108 F	86 G	97 G-	94 G	104 G-	103 G
HM-28RR	Full Approved	$1,418	96.9	95.5	101.6	107 G	90 G	94 G	154 P	135 P	138 P	97 G+
HM-NT9607RR	Full Approved	$1,405	96.2	102.4	94.1	111 G+	92 G	99 G-	55 G+	125 F-	111 F	112 G-
HM-9616RR	Full Approved	$1,384	94.9	104.1	91.0	93 F-	92 G	67 G+	104 F+	140 P	120 F-	111 G-
HM-173RR	Full Approved	$1,370	93.7	96.4	97.4	100 G-	92 G	90 G	151 P	117 F	126 F-	99 G

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

$/A: Gross dollars per acre assuming $35 Payment

* 2015 Data only for Root Aphid.

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Rhizoctonia & Cercospora

Varieties for 2017 - Average of 2 Years

Rhizoctonia

Variety	% of Check				Comments
	Rhizoc	RWSA	RWST	Cerc	
HM-9616RR	67.1	94.9	104.1	91.9	Lower yielding nematode tolerant variety with very high quality, fairly good Cerc, good on other traits except for Aph and Fusarium.
B-133N	67.9	101.9	96.9	112.2	High yielding nematode tolerant variety but quality is low, Cerc tolerance is acceptable, good on other traits.
HM-NT9617RR	85.8	98.6	99.2	108.1	A lower yielding and lower quality nematode tolerant variety that has good overall traits except Cerc which is acceptable.
C-G333NT	87.5	103.8	98.5	109.4	Very high yielding nematode tolerant variety that is a little low on sugar, Cerc tolerance is fair to poor, other traits are in a good range.
B-1399	89.7	104.8	98.6	84.9	Good yielding variety that is a little low on sugar, very good Cerc tolerance, other traits are also in a good range.
C-RR059	93.2	103.7	102.1	100.1	Very high yielding and high quality variety, fairly good Cerc tolerance, other traits are also in a good range.

Note: Lower values are better for Rhizoctonia and Cercospora. Rhizoctonia ratings include Sugarbeet Advancement information, the worst approved variety had a rating of 175.

Cercospora

Variety	% of Check				Comments
	Cerc	RWSA	RWST	Rhizoc	
B-1399	84.9	104.8	98.6	89.7	A good yielding variety that is a little low on sugar that also has good Rhizoc tolerance. Other traits are also in a good range.
B-1399 is the only variety that is considered to have good Cercospora tolerance. Several other varieties (HM-28RR, HM-173RR, HM-9616RR, C-G351NT and C-RR059) have fairly good Cercospora tolerance (between 90 and 100% of check).					

Note: Lower values are better for Cercospora and Rhizoctonia

High Quality
Varieties for 2017 - Average of 2 Years

Variety	% of Check				Comments
	RWST	RWSA	Rhizoc	Cerc	
C-G351NT	104.2	100.4	98.0	94.1	Nematode tolerance, moderate yield, very high quality, fairly good Cerc, Rhizoc, Root Aphid and Fusarium tolerance, moderate Aph, fairly good emergence.
HM-9616RR	104.1	94.9	67.1	91.9	Low Yield, very high quality, good Cerc and very good Rhizoc tolerance, moderate Root Aphid tolerance, below average Aph, Fusarium and emergence
B-12RR2N	103.2	108.5	108.2	101.5	Nematode tolerance, very high yield and quality, very good Aph and fairly good Cerc and Fusarium tolerance, weak on Rhizoc and Root Aphids, moderate emergence.
HM-NT9607RR	102.4	96.2	98.6	92.0	Nematode tolerance, moderate yield, high quality, very good Cerc, fairly good Rhizoc, below average Aph and Fusarium tolerance, moderate Root Aphid tolerance, very good emergence.
C-RR059	102.1	103.7	93.2	100.1	High yield and quality, fairly good Cerc, Rhizoc and Aph tolerance, good Fusarium tolerance, susceptible to Alternaria leaf spot, good emergence.
SX-RR1245N	101.7	106.2	107.3	99.7	Nematode tolerance, high yield and quality, fairly good Cerc tolerance, susceptible to Rhizoc and Root Aphids, good Aph and moderate Fusarium tolerance, good emergence.
C-G515	101.4	103.6	95.8	103.7	High yield and quality, moderate Cerc and Aph tolerance, fairly good Rhizoc and Fusarium tolerance, good Root Aphid tolerance, below average emergence.

Note: Lower values are better for Rhizoctonia and Cercospora

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Sugarbeet Cyst Nematode

Varieties for 2017 - Average of 2 Years

Variety	All Values are % of Check					Comments
	Nem*	RWSA	RWST	Rhizoc	Cerc	
B-133N	73.1	101.9	96.9	67.9	112.2	High yielding variety with low quality. Good Rhizoc tolerance and fair Cerc tolerance. Root Aphid, Aph and Fusarium scores are good. Emergence is fair.
C-G351NT	77.4	100.4	104.2	98.0	94.1	Moderate yielding variety with very high sugar. Fairly good on Cerc and fair Rhizoc tolerance. Root Aphid, Aph and fusarium scores are good. Emergence is fair to good.
HIL-9732NT	77.4	102.4	101.1	107.9	117.2	Good yield and quality, weak on Cerc and Rhizoc, good on Root Aphids, below average on Aph and Fusarium, fairly good emergence.
MA-513NT	77.4	103.4	100.7	103.9	118.7	High yields and fairly good quality, weak on Cerc and Rhizoc, good on Root Aphids, below average on Aph and Fusarium, fairly good emergence.
HM-NT9617RR	77.4	98.6	99.2	85.8	108.1	Moderate producing variety with good Rhizoc tolerance and fair Cerc and Fusarium tolerance. Root Aphid and Aph scores are good. Emergence is slightly below average.
HM-NT9607RR	86.0	96.2	102.4	98.6	92.0	Low yielding variety with high quality. Good Rhizoc and fair Cerc tolerance. Good Root Aphid, fair to poor Aph and fair Fusarium scores. Emergence is fair to good.
C-G333NT	94.6	103.8	98.5	87.5	109.4	High yielding variety, quality a little low, Cerc tolerance is fair to poor but Rhizoc tolerance is good. Root Aphid, Aph and Fusarium scores are good. Emergence is fair.
B-12RR2N	107.5	108.5	103.2	108.2	101.5	Very high yield and quality, very good Aph and fairly good Cerc and Fusarium tolerance, weak on Rhizoc and Root Aphids, moderate emergence level.
B-149N	116.1	106.2	98.6	96.3	112.4	Very high yielding variety with average quality, fairly good Rhizoc tolerance but poor Cerc tolerance. Root Aphid, Aph and Fusarium scores are good. Emergence is slightly below average.
SX-RR1245N	120.4	106.2	101.7	107.3	99.7	High yielding variety with fairly good quality. Fair to good Cerc and below average Rhizoc tolerance. Poor Root Aphid, good Aph and fair Fusarium tolerance. Emergence is fair/good.

* The Nematode Score is an average of root ratings, yield and nematode counts

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

Variety Approval "Points" System

A Variety Evaluation Tool - 2 Year Average

The Point System summary page is a great variety evaluation tool. On one page, varities can be compared, and all factors can be viewed. For all factors, a larger number is better. Just 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	3X RWST	Higher Points are Better							Total	Points
	RWSA	RWST	Variance	Variance	Cerc	Rhizoc	R Aph	Rzm	Emerg	Aph	Nem	Points	% Check
B-12RR2N	106.6	102.2	116.4	6.6	1.5	2.0	2.0	2.5	0.0	5.0	5.0	141.0	119.8
C-RR059	103.1	102.2	107.8	6.6	3.5	4.8	5.0	2.8	1.0	4.0	2.0	137.4	116.7
C-G515	104.5	102.3	111.3	6.8	2.0	4.3	5.0	2.5	0.0	4.0	1.0	136.8	116.2
C-G351NT	98.8	104.7	97.0	14.1	4.0	3.8	5.0	1.8	-0.5	4.0	3.0	132.1	112.3
B-18RR4N	103.3	101.5	108.1	4.4	2.0	2.0	5.0	1.8	-0.5	4.5	3.5	130.7	111.1
SX-RR1245N	103.0	101.9	107.4	5.7	2.0	2.0	3.0	2.5	0.5	4.5	3.0	130.6	111.0
B-149N	106.1	99.3	115.3	-2.1	-3.0	4.3	5.0	2.5	0.0	3.0	3.5	128.4	109.1
C-G333NT	104.1	98.5	110.3	-4.5	-0.5	5.8	5.0	3.0	0.0	4.0	4.0	127.0	107.9
SX-RR1243	103.2	100.5	108.0	1.3	4.0	3.8	2.0	2.5	-0.5	4.0	1.0	126.1	107.2
SX-RR1251	104.1	100.7	110.3	2.1	2.0	2.5	2.0	2.5	0.0	3.5	1.0	125.9	107.0
B-1399	101.3	98.9	103.3	-3.3	7.0	5.0	4.0	2.5	1.0	4.0	1.0	124.5	105.8
HM-9616RR	95.0	104.8	87.5	14.4	4.0	9.3	3.0	1.5	-0.5	2.0	1.0	122.2	103.8
MA-513NT	103.2	100.5	107.9	1.4	-4.0	2.8	5.0	2.3	0.0	2.5	3.0	120.7	102.6
HIL-9732NT	101.3	100.7	103.1	2.0	-1.5	2.0	5.0	2.5	0.0	2.0	2.0	117.1	99.5
B-133N	100.1	96.7	100.3	-10.1	1.0	9.3	5.0	2.5	-0.5	4.0	2.5	114.0	96.8
HM-NT9607RR	94.1	103.1	85.1	9.1	3.0	3.5	5.0	1.0	0.5	2.5	1.5	111.3	94.6
SX-1212RR	99.8	99.6	99.4	-1.2	1.5	2.0	1.0	2.8	-0.5	4.0	1.0	109.9	93.4
HM-NT9617RR	97.0	98.2	92.4	-5.4	1.0	6.5	3.0	2.3	-0.5	4.5	3.5	107.2	91.1
HM-28RR	95.8	95.5	89.4	-13.5	5.0	4.5	1.0	2.8	1.0	2.0	1.0	93.1	79.1
HM-173RR	93.9	96.8	84.8	-9.8	5.0	5.3	1.0	2.5	-0.5	3.0	1.5	92.8	78.8

% check (B-18RR4N, HM-173RR, SX-1212RR, C-RR059) = 100 X .8577 = 85.77 (approval level)

Official Variety Trial

Michigan Sugar Company

Average of 6 Locations - 2016

Trial Quality: Good
Plant/Harv: April 15/Oct 19
Plots: 2 rows X 38 ft, 8 reps
Row Spacing: 22 inches
Seeding Rate: 2 inches,
thinned to 200 beets/100 ft
except Stoneman Ithaca = 150 beets/100 ft

Locations: Grekowicz
Rayl
Shaffner
Stoneman Ithaca
SVREC
Trost

Cerc Control: Good Control
6 to 7 Applic.
Rhizoc Control: Good Control
Quadris IF T-Band, 6-8 lf

Variety	$/A	RWSA	RWST		Yield		Sugar		CJP		Emerge		CLS*	
			Lb/T	Rank	T/A	Rank	%	Rank	%	Rank	%	Rank	0-9	Rank
B-12RR2N	**$1,500**	**10072**	**244**	**2**	**41.6**	**2**	**16.5**	**2**	95.4	9	54.7	12	1.6	18
SX-RR1245N	**$1,462**	**9841**	241	6	**41.1**	**4**	16.3	7	95.4	7	**60.0**	**5**	1.5	7
B-1399	**$1,452**	**9773**	232	16	**42.2**	**1**	15.7	18	**95.7**	**2**	**61.3**	**2**	**1.4**	**5**
B-18RR4N	$1,423	9568	239	8	40.1	7	16.2	8	95.2	12	52.8	17	1.6	14
B-149N	$1,422	9573	231	17	**41.4**	**3**	15.7	16	95.1	15	54.5	13	1.6	19
HIL-9732NT	$1,413	9521	241	7	39.6	10	16.3	3	95.2	14	55.0	9	1.5	10
SX-RR1251	$1,412	9514	239	9	40.1	8	16.1	10	95.5	6	49.9	20	1.5	6
C-G333NT	$1,410	9482	234	13	40.6	6	15.9	14	95.2	13	56.4	7	1.6	16
MA-513NT	$1,402	9461	238	11	39.7	9	16.2	9	95.1	16	53.6	15	1.5	8
C-G351NT	$1,383	9295	**247**	**1**	37.9	16	**16.6**	**1**	**95.5**	**4**	54.8	11	**1.3**	**1**
C-RR059	$1,379	9289	241	5	38.6	14	16.3	6	95.5	**5**	**60.7**	**3**	1.5	11
B-133N	$1,379	9257	227	19	**41.0**	**5**	15.6	19	94.7	19	55.0	10	1.6	13
SX-RR1243	$1,378	9297	238	10	39.1	12	16.1	11	**95.6**	**3**	53.8	14	**1.4**	**4**
C-G515	$1,376	9258	235	12	39.5	11	16.0	13	95.3	11	55.5	8	1.7	20
HM-NT9617RR	$1,347	9063	234	14	38.9	13	16.0	12	94.9	18	52.7	18	1.6	15
HM-NT9607RR	$1,326	8916	242	4	36.9	19	16.3	4	95.4	8	**62.6**	**1**	**1.4**	**3**
SX-1212RR	$1,311	8864	234	15	37.8	17	15.9	15	95.4	10	53.1	16	1.6	17
HM-28RR	$1,288	8676	226	20	38.4	15	15.5	20	95.0	17	**60.5**	**4**	1.6	12
HM-173RR	$1,269	8557	228	18	37.7	18	15.7	17	94.7	20	58.7	6	1.5	9
HM-9616RR	$1,265	8524	**243**	**3**	35.1	20	16.3	5	**95.7**	**1**	51.8	19	**1.4**	**2**
Average	$1,379.7	9290.0	236.8		39.36		16.06		95.28		55.87		1.513	
LSD 5%	49.5	333.6	3.9		1.3		0.2		0.2		2.8		0.09	
CV %	3.9	3.9	1.8		3.5		1.4		0.2		5.3		6.57	

***CLS:** Cercospora rating taken from the individual variety trials not from the Cercospora Nurseries. Ratings were taken one week prior to harvesting.

$/A: Gross dollars per acre assuming a $35 payment and trial average RWST.

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

Comments: The six OVT's used for approval in 2016 had good quality. Quadris was applied in-furrow and at the 6-8 leaf stage and Rhizoctonia control was very good. The average stand in the trials was 200 beets/100 ft. Two locations had a moderate level of nematode pressure (Rayl and Shaffner). An average of 6 fungicide applications were applied for Cerocspora control which provided very good control (below economic levels). The low RWST may have been due to the drought which stored nitrogen.

Official Variety Trial
Michigan Sugar Company
Average of 4 Non Nematode Locations - 2016

Trial Quality: Good
Plant/Harv: April 15/ Oct 19
Plots: 2 rows X 38 ft, 8 reps
Row Spacing: 22 inches
Seeding Rate: 2 inches,
thinned to 200 beets/100 ft
except Stoneman Ithaca = 150 beets/100 ft

Locations: Trost
Grekowicz
Stoneman Ithaca
SVREC

Cerc Control: Good Control
6 to 7 Applic.
Rhizoc Control: Good Control
Quadris IF T-Band, 6-8 lf

Variety	$/A	RWSA	RWST		Yield		Sugar		CJP		Emerge		CLS*	
			Lb/T	Rank	T/A	Rank	%	Rank	%	Rank	%	Rank	0-9	Rank
SX-RR1243	**$1,474**	**10078**	242	9	**41.9**	**2**	16.4	13	**95.3**	**1**	54.9	10	**1.1**	**1**
SX-RR1245N	**$1,468**	**10024**	247	5	**41.0**	**4**	16.7	5	**95.3**	**3**	**63.1**	**2**	1.2	11
SX-RR1251	**$1,465**	**10000**	241	12	**41.8**	**3**	16.4	11	95.1	9	47.6	20	**1.1**	**6**
B-12RR2N	**$1,451**	**9877**	**248**	**2**	40.2	6	**16.8**	**2**	**95.2**	**6**	52.9	15	1.3	20
B-1399	**$1,442**	**9843**	236	16	**42.0**	**1**	16.0	18	**95.3**	**2**	**60.9**	**4**	**1.1**	**5**
SX-1212RR	$1,421	9728	241	13	40.6	5	16.4	14	95.1	10	54.8	11	1.2	10
B-18RR4N	$1,408	9600	244	6	39.5	11	16.6	7	95.1	11	52.6	17	1.2	16
C-RR059	$1,408	9603	**247**	**3**	39.1	13	**16.8**	**3**	95.1	7	60.1	5	1.2	8
C-G515	$1,393	9493	241	11	39.8	10	16.5	9	94.8	15	54.7	12	1.2	17
MA-513NT	$1,392	9526	242	10	39.5	12	16.5	10	94.9	12	54.4	13	1.2	14
HIL-9732NT	$1,385	9458	244	7	39.0	14	16.6	6	94.8	14	55.3	9	1.2	12
C-G333NT	$1,372	9359	236	15	40.0	7	16.1	16	94.9	13	58.9	7	1.2	15
B-149N	$1,357	9275	233	17	39.9	8	16.0	17	94.8	16	54.0	14	1.2	18
HM-NT9617RR	$1,350	9212	239	14	38.8	15	16.4	12	94.7	18	52.5	18	1.2	13
HM-28RR	$1,342	9163	231	19	39.9	9	15.9	19	94.8	17	**61.1**	**3**	1.2	7
C-G351NT	$1,318	8987	**252**	**1**	36.0	20	**17.0**	**1**	**95.2**	**5**	52.8	16	**1.1**	**2**
HM-NT9607RR	$1,316	8961	244	8	36.9	18	16.5	8	95.1	8	**63.8**	**1**	**1.1**	**4**
HM-9616RR	$1,310	8943	**247**	**4**	36.4	19	16.7	4	**95.3**	**4**	51.4	19	**1.1**	**3**
HM-173RR	$1,292	8830	233	18	38.4	17	16.1	15	94.2	20	59.1	6	1.2	9
B-133N	$1,291	8782	230	20	38.7	16	15.9	20	94.4	19	56.1	8	1.3	19
Average	$1,382.7	9437.0	240.9		39.48		16.41		94.97		56.04		1.182	
LSD 5%	48.1	332.5	4.9		1.2		0.3		0.2		3.4		0.10	
CV %	3.7	3.8	2.2		3.3		1.7		0.2		6.4		9.03	

***CLS:** Cercospora rating taken from the individual variety trials not from the Cercospora Nurseries. Ratings were taken one week prior to harvesting.

$/A: Gross dollars per acre assuming a $35 payment and trial average RWST.

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

Comments: Trial quality for these four trials was good. Nematode pressure was not observed and soil tests came back negative for the pressure of nematodes. Cercospora control was good and was well below economic impact levels.

Official Variety Trial

Michigan Sugar Company

Average of 2 Nematode Locations - 2016

Trial Quality: Good
Plant/Harv: April 18/Oct 12
Plots: 2 rows X 38 ft, 9 reps
Row Spacing: 22 inches
Seeding Rate: 2 inches, thinned to 200 beets/100 ft

Locations: Shaffner
Rayl

Cerc Control: Fair Control
6 to 7 Applic.
Rhizoc Control: Good Control
Quadris IF T-Band, 6-8 lf

Variety	$/A	RWSA	RWST		Yield		Sugar		CJP		Emerge		CLS*	
			Lb/T	Rank	T/A	Rank	%	Rank	%	Rank	%	Rank	0-9	Rank
B-12RR2N	**$1,599**	**10460**	**235**	**3**	**44.3**	**3**	**15.8**	**2**	95.7	15	56.4	8	3.1	17
B-133N	**$1,556**	**10207**	223	17	**45.6**	**1**	15.2	15	95.3	19	53.8	13	2.8	8
B-149N	**$1,550**	**10167**	227	13	**44.4**	**2**	15.3	13	95.8	11	55.0	10	3.1	18
C-G351NT	**$1,513**	**9911**	**237**	**2**	41.6	6	**15.8**	**3**	96.1	7	56.9	6	**2.5**	**2**
C-G333NT	$1,485	9729	**231**	**8**	41.8	5	15.5	8	95.8	13	53.9	12	2.8	11
B-1399	$1,470	9635	226	14	42.4	4	15.0	16	**96.5**	**2**	**61.8**	**1**	**2.7**	**4**
HIL-9732NT	$1,468	9645	**234**	**5**	40.8	9	**15.7**	**4**	95.8	12	54.7	11	2.9	12
B-18RR4N	$1,453	9504	229	10	41.2	7	15.5	9	95.6	16	53.1	14	2.8	10
SX-RR1245N	$1,448	9475	229	11	41.1	8	15.4	11	95.8	14	56.8	7	2.8	7
MA-513NT	$1,421	9332	**231**	**7**	40.0	10	**15.7**	**5**	95.3	20	52.8	16	**2.7**	**5**
HM-NT9607RR	$1,346	8825	**238**	**1**	36.7	14	**15.9**	**1**	95.9	9	**61.5**	**2**	**2.5**	**1**
C-G515	$1,342	8788	223	16	39.1	11	14.9	17	**96.3**	**3**	56.4	9	3.3	20
HM-NT9617RR	$1,339	8764	224	15	39.1	12	15.2	14	95.5	18	52.9	15	2.9	13
C-RR059	$1,323	8662	229	12	37.7	13	15.3	12	**96.2**	**5**	**61.3**	**3**	3.0	15
SX-RR1251	$1,307	8543	**233**	**6**	36.5	15	15.6	6	**96.2**	**4**	52.2	19	2.8	9
HM-173RR	$1,223	8012	220	19	36.4	16	14.8	19	95.8	10	**58.2**	**5**	2.9	14
SX-RR1243	$1,185	7735	230	9	33.4	18	15.4	10	**96.1**	**6**	52.6	17	**2.7**	**6**
HM-28RR	$1,179	7700	216	20	35.5	17	14.7	20	95.6	17	**59.8**	**4**	3.0	16
HM-9616RR	$1,175	7688	**235**	**4**	32.6	19	15.5	7	**96.6**	**1**	52.3	18	**2.5**	**3**
SX-1212RR	$1,092	7137	221	18	32.1	20	14.9	18	96.0	8	51.3	20	3.2	19
Average	$1,373.6	8995.9	228.5		39.13		15.36		95.89		55.69		2.84	
LSD 5%	109.7	725.3	7.3		2.9		0.4		0.5		4.4		0.25	
CV %	8.6	8.7	3.5		7.8		2.5		0.5		8.5		9.62	

***CLS:** Cercospora rating taken from the individual variety trials not from the Cercospora Nurseries. Ratings were taken one week prior to harvesting.

$/A: Gross dollars per acre assuming a $35 payment and trial average RWST.

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

Comments: Trial quality for these two trials was fair. A moderate level of Nematode pressure was observed and confirmed with soil sampling. Cercospora pressure was near the economic impact level in these two trials.

2016 Variety Trial Averages

Average of Six Locations

Farms: Couture Flatland Farms (Ontario), Clay Crumbaugh (Breckenridge), DVL Farms (Ruth), E & R Farms (Bad Axe), Shaffner Brothers (Freeland), Sylvester Farms (Quanicassee)

Variety	$/A	RWSA	RWST	T/A	% Sugar	% CJP
B-1399	$1,474	**9669**	**245**	**39.6**	16.5	**95.4**
SX-RR1243	$1,427	**9443**	243	**38.6**	16.5	95.0
SX-RR1245N	$1,417	**9345**	**247**	37.7	**16.8**	94.9
C-RR059	$1,400	**9207**	239	**38.4**	16.4	94.7
C-G351NT	$1,369	9058	**250**	36.0	**17.0**	94.9
B-149N	$1,365	9005	230	**39.0**	15.8	94.6
B-12RR2N	$1,356	8963	**247**	36.2	**16.7**	95.0
C-G333NT	$1,336	8821	230	**38.2**	15.8	94.5
B-133N	$1,327	8753	228	**38.2**	15.9	94.1
SX-RR1235N	$1,319	8750	239	36.3	16.4	94.5
Hill-9616	$1,273	8398	240	34.9	16.4	94.9
Hill-NT9617	$1,271	8365	234	35.6	16.2	94.4
Average	$1,361	8981	239	37.4	16.4	94.7
LSD 5%	—	467	6	1.8	0.3	0.3
CV %	—	4	2	4.1	1.8	0.3

Comments: These results are the combined data of the 6 most reliable Sugarbeet Advancement variety trials from 2016. 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 fields, tolerant varieties tend to perform the best (see Sylvester trial). Varieties may also respond differently based on soil texture (see DVL trial). Rhizoctonia pressure was heavy at one location (see Crumbaugh trial). This year had a high pressure level for Cercospora leafspot and it had an influence on most of the trials. Use this data in conjunction with Michigan Sugar variety/nursery data and seed company information.

All varieties had the standard seed treatment plus Tachigaren 20. The varieties also contained these additional seed treatments by company: Seedex - Metlock, Rhizolex, Kabina & Nipsit (expcept for SX-RR1235 did not have Nipsit); Hilleshog - Cruiser Maxx & Vibrance; Crystal - Kabina & Poncho Beta (Diamond Plated Gold); Betaseed - Kabina (Betashield+). Note that Betaseed was the only company to not have an insecticide seed treatment on their varieties. However, insects are not believed to be an early season issue in any of the trials.

$/A: Gross dollars per acre assuming a $35 payment and a company average RWST of 230.

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

Plant To Stand
Michigan Sugar Company
Average of 3 Locations - 2016

Trial Quality: Very Good
Plant/Harv: Apr 20/Oct 6
Plots: 6 rows X 38 ft, 6 reps
Row Spacing: 22 inches
Seeding Rate: 4.1 inches

Locations: Grekowicz
Rayl
Trost

Cerc Control: Good Control
Rhizoc Control: Good Control
Other Problems: Nematodes at Rayl

Variety	$/A	RWSA	RWST		Yield		Sugar		CJP		CLS		Beets/100 ft*	
			Lb/T	Rank	T/A	Rank	%	Rank	%	Rank	0-9	Rank	Act.	Rank
SX-RR1245N	**$1,324**	**8218**	**227**	**2**	36.5	5	**15.5**	**2**	**94.9**	**3**	1.23	5	**159**	**6**
B-18RR4N	**$1,319**	**8171**	220	9	**37.2**	**3**	15.2	9	**94.7**	**9**	1.90	14	150	10
C-G351NT	**$1,299**	**8060**	**228**	**1**	35.4	10	**15.7**	**1**	94.6	10	**1.00**	**2**	155	8
B-12RR2N	**$1,299**	**8061**	218	11	**37.3**	**2**	15.1	11	94.6	11	1.85	12	151	9
B-149N	**$1,299**	**8063**	210	14	**38.5**	**1**	14.7	14	94.0	14	2.02	16	147	13
B-1399	**$1,266**	**7870**	220	8	35.7	7	15.1	10	**95.1**	**1**	1.19	4	**168**	**5**
C-G333NT	**$1,258**	**7795**	214	13	36.6	4	14.9	13	94.3	12	1.96	15	**170**	**3**
SX-RR1243	**$1,256**	**7822**	**223**	**6**	35.4	9	15.2	8	**95.0**	**2**	**1.04**	**3**	136	16
HM-NT9617RR	$1,250	7745	218	10	35.7	8	15.2	7	94.1	13	1.83	11	147	12
C-RR059	$1,245	7714	**223**	**5**	34.7	13	**15.4**	**4**	**94.8**	**6**	1.73	9	**168**	**4**
SX-1212RR	$1,235	7696	**222**	**7**	34.9	12	15.3	6	**94.8**	**5**	1.77	10	138	15
HM-28RR	$1,207	7488	216	12	34.7	14	14.9	12	**94.7**	**8**	1.65	7	**171**	**2**
B-133N	$1,172	7271	201	16	36.4	6	14.4	16	93.4	16	1.88	13	**159**	**7**
HM-9616RR	$1,171	7261	**223**	**4**	32.8	15	15.3	5	**94.8**	**4**	**0.92**	**1**	142	14
HM-NT9607RR	$1,170	7244	**223**	**3**	32.5	16	**15.4**	**3**	**94.7**	**7**	1.31	6	**178**	**1**
HM-173RR	$1,146	7146	205	15	35.1	11	14.4	15	94.0	15	1.71	8	150	11
Average	$1,244.8	7726.6	218.4		35.59		15.11		94.53		1.56		155.5	
LSD 5%	70.9	438.6	6.9		1.5		0.3		0.5		0.2		20.9	
CV %	5.0	4.9	2.8		3.7		2.0		0.4		13.0		11.7	

***Beets/100 ft =** Stand counts from Rayl location only, due to crust busting of Trost and Grekowicz locations.

$/A: Gross dollars per acre assuming a $35 payment and trial average RWST.

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

Comments: The average of three Plant to Stand trials provided useful information. Disease control was good. Stand establishment was slightly lower than average. Yield was good, but sugar content was below average. The Rayl location had moderate nematode pressure.

OVT Emergence

Michigan Sugar Company

Average of 2 Years, 2015 - 2016

Trial Quality: Good
Locations: 2015 - Maurer, Rayl, Shaffner, Trost, Stoneman
2016 - Rayl, Shaffner, SVREC, Stoneman Ithaca
Plot Size: 2 rows X 38 ft, 8 reps
Seeding Rate: 1.9 inch seed spacing

Variety	% Emerge
HM-NT9607RR	64.7
B-1399	62.7
HM-28RR	62.1
C-RR059	61.6
SX-RR1245N	61.5
MA-513NT	60.1
HM-173RR	58.4
C-G351NT	58.3
B-133N	58.3
HIL-9732NT	58.2
B-149N	58.1
SX-RR1243	58.0
C-G333NT	57.9
B-12RR2N	57.4
B-18RR4N	56.6
HM-NT9617	56.4
SX-1212RR	56.4
C-G515	56.4
SX-RR1251	55.3
HM-9616RR	54.0
Average	58.6
LSD 5%	4.8
CV %	3.9

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

Sugarbeet Advancement

2016 Variety Trials
Emergence Summary

Early Counts

Trial	Couture	Sylvester	Crumbaugh	E & R	DVL	Shaffner	Gardner	Average
	Ontario	Tuscola	Gratiot	Huron	Huron	Midland	Sanilac	
Plant Date	4/15/2016	4/16/2016	4/17/2016	4/18/2016	4/20/2016	4/20/2016	5/6/2016	
Count Days	10	16	16	16	—	19	13	
B-1399	69	**39**	**161**	**226**	No Early Count Due to Heavy Wheat Cover Crop	**196**	**43**	**133**
C-RR059	22	**52**	120	**207**		**209**	**48**	**127**
B-133N	71	**39**	127	179		**204**	**70**	**124**
Hill-NT9617	91	**55**	81	**188**		163	**67**	**111**
SX-RR1245N	**138**	**50**	86	**214**		168	**30**	109
SX-RR1235N	**125**	**49**	72	**185**		182	**60**	109
C-G351NT	68	**32**	101	165		186	**47**	106
SX-RR1243	**174**	**25**	97	**196**		171	**25**	103
B-12RR2N	76	**29**	70	175		183	**36**	98
Hill-9616	**164**	**46**	69	160		166	**35**	95
B-149N	53	**34**	84	133		192	**24**	93
C-G333NT	23	**21**	57	130		169	**20**	79
Average	89	39	94	180	—	182	42	107
LSD 5%	70	ns (26)	30	46	—	16	ns (34)	22
CV %	46	38	19	15	—	5	48	16

Late Counts

Trial	Couture	Sylvester	Crumbaugh	E & R	DVL	Shaffner	Gardner	Average
Count Days	32	45	39	44	42	36	26	
C-RR059	**235**	**201**	**219**	**286**	**249**	**235**	**161**	**225**
B-133N	**244**	**188**	**216**	**254**	**253**	**225**	**149**	**214**
B-1399	**224**	**188**	**232**	**281**	198	**226**	**157**	**214**
SX-RR1235N	**255**	**181**	166	**271**	213	214	**172**	203
C-G351NT	**246**	**174**	189	**270**	216	211	**158**	203
C-G333NT	**252**	**193**	182	**270**	214	210	**144**	202
B-149N	**244**	**178**	187	**270**	216	219	**137**	201
B-12RR2N	**249**	**158**	152	**254**	**235**	211	**167**	196
SX-RR1245N	**238**	**167**	154	**274**	221	206	**137**	193
SX-RR1243	**255**	**168**	190	**246**	206	201	**142**	192
Hill-NT9617	**232**	**165**	157	**252**	213	190	**132**	185
Hill-9616	**257**	**159**	142	**246**	214	197	**123**	180
Average	244	177	182	264	221	212	148	201
LSD 5%	ns (41)	ns (34)	33	ns (35)	23	11	ns (38)	16
CV %	10	11	11	8	6	3	15	7

Comments: The counts are the number of beets per 100 foot of row. All varieties had the standard seed treatment plus Tachigaren 20. The varieties also contained these additional seed treatments by company: Seedex - Metlock, Rhizolex, Kabina & Nipsit (expcept for SX-RR1235 did not have Nipsit); Hilleshog - Cruiser Maxx & Vibrance; Crystal - Kabina & Poncho Beta (Diamond Plated Gold); Betaseed - Kabina (Betashield+). Note that Betaseed was the only company to not have an insecticide seed treatment on their varieties. Kabina is not approved for use in Canada (Couture) but Vibrance and Maxim were used. The Couture trial was not included in the averages due to three factors: 1) Different seed treatments used in Canada, 2) Some rows were unevenly impacted by birds eating the seed where the seed trench was not completely closed, 3) It appeared some rows were planted at a slighlty shallower depth and impacted early variability.

2016 Variety Trials
Rhizoctonia Dead Beet Counts

September Counts of Dead Beets in 1200 Foot of Row

Trial Location	Couture	Crumbaugh	DVL	E & R	Gardner	Shaffner	Sylvester	Average
B-133N	Not counted due to lack of pressure in trial.	**51**	**6**	**1**	**1**	**3**	**0**	**10**
C-RR059		**72**	**11**	**0**	**1**	**4**	**1**	**15**
B-1399		**73**	**13**	**1**	**1**	**2**	**2**	**15**
Hill-NT9617		**84**	**24**	**0**	**0**	**12**	**6**	**21**
B-149N		**95**	**28**	**3**	**0**	**7**	**4**	**23**
C-G333NT		**67**	89	**3**	**3**	63	**4**	**38**
Hill-9616		210	**15**	**9**	**0**	**23**	19	**46**
SX-RR1243		266	87	**21**	**14**	**16**	**13**	**70**
C-G351NT		236	112	**28**	**13**	**11**	22	**70**
SX-RR1245N		332	78	**14**	**3**	**43**	21	82
B-12RR2N		328	69	**9**	**6**	90	29	89
SX-RR1235N		572	169	**22**	**29**	56	33	147
AVERAGE	—	199	58	9	6	28	13	52
LSD (5%)	—	115	45	ns (24)	ns (17)	50	18	71
CV (%)	—	34	38	157	172	107	81	117

Comments: Rhizoctonia dead/dying beet counts from Sugarbeet Advancement variety trials. Counts represent dead or dying beets in 1200 foot of row. This year had relatively low levels except for the Crumbaugh Trial, which had the most severe pressure. All trials received Quadris in-furrow and foliar at the 6-8 leaf stage.

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

East District Trials

Official Variety Trial

Michigan Sugar Company

Grekowicz Farms Inc., Kinde - 2016

Trial Quality: Very Good
Plant/Harv: May 5/Oct 6
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: 3.3 **pH:** 7.6 **CEC:** 10.9
Nutrient Levels: Above Opt: P,K High: MN, Medium: B
Added N: Manure + 60 lbs
Prev Crop: Wheat

Cerc Control: Very Good Control 6 applications**
Rhizoc Control: Good Control Quadris IF T-Band, 6-8 lf
Other Problems: None
Rainfall: 17.1 inches

Variety	$/A	RWSA	RWST		Yield		Sugar		CJP		CLS	
			Lb/T	Rank	T/A	Rank	%	Rank	%	Rank	0-9	Rank
B-12RR2N	**$1,568**	**10524**	**250**	**1**	**42.1**	**7**	**16.9**	**1**	**95.4**	**1**	1.2	15
C-G515	**$1,526**	**10242**	235	11	**43.6**	**1**	16.1	11	94.6	14	1.1	13
SX-RR1245N	**$1,508**	**10123**	**243**	**5**	41.8	10	**16.4**	**6**	**95.2**	**4**	1.1	9
SX-RR1243	**$1,502**	**10083**	232	13	**43.5**	**2**	15.8	16	**95.2**	**5**	1.1	7
B-18RR4N	$1,494	10026	**243**	**3**	41.2	13	**16.6**	**4**	**95.0**	**7**	1.2	17
C-RR059	$1,492	10011	241	6	41.6	12	**16.5**	**5**	94.8	11	1.1	10
HIL-9732NT	$1,483	9954	238	8	41.8	9	16.4	8	94.6	13	1.1	11
SX-RR1251	$1,476	9906	233	12	**42.6**	**4**	15.9	13	94.9	10	1.1	8
MA-513NT	$1,470	9863	241	7	41.0	14	**16.4**	**7**	**95.0**	**8**	1.3	20
B-1399	$1,460	9801	230	16	**42.6**	**3**	15.7	17	**95.2**	**3**	1.0	1
C-G333NT	$1,454	9756	231	15	**42.2**	**6**	15.9	12	94.5	17	1.1	12
B-149N	$1,446	9705	229	17	**42.4**	**5**	15.8	14	94.4	18	1.2	16
C-G351NT	$1,436	9640	**248**	**2**	39.0	19	**16.8**	**2**	**95.2**	**2**	1.0	2
HM-NT9617RR	$1,428	9582	235	9	40.7	15	16.2	9	94.6	15	1.1	14
SX-1212RR	$1,400	9396	232	14	40.5	16	15.8	15	**95.1**	**6**	1.2	18
HM-NT9607RR	$1,395	9364	235	10	39.8	18	16.1	10	94.7	12	1.1	4
HM-9616RR	$1,392	9343	**243**	**4**	38.5	20	**16.6**	**3**	94.9	9	1.1	6
B-133N	$1,380	9258	221	18	**41.9**	**8**	15.4	18	94.0	19	1.2	19
HM-28RR	$1,366	9165	220	19	41.6	11	15.2	20	94.6	16	1.1	3
HM-173RR	$1,314	8819	219	20	40.4	17	15.3	19	93.8	20	1.1	5
Average	$1,449.5	9728.1	234.9		41.45		16.09		94.78		1.11	
LSD 5%	73.0	489.8	8.5		1.8		0.5		0.4		ns	
CV %	5.4	5.4	3.9		4.6		3.2		0.5		19.3	

***CLS:** Cercospora rating taken from this trial not the Cercospora Nurseries. Rating taken one week prior to harvest.

**Cercospora Applications: 7/12 - Insp. + Manz., 7/26 - ST+Dith., 8/4 - Topguard+Manz., 8/19 - ST+Dith., 8/30 - Emi+Dith., 9/12 - Dith.

$/A: Gross dollars per acre assuming a $35 payment and trial average RWST.

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

Comments: Trial had an exceptional yield and very good sugar levels considering the October 5th harvest date. Trial had excellent disease control and very dense canopy growth. Trial experienced a light crust after planting and was crust-busted. Emergence after crust-busting was good, but emergence numbers were not factored into Variety Approval.

Plant To Stand

Michigan Sugar Company

Grekowicz Farms Inc., Kinde - 2016

Trial Quality: Good
Plant/Harv: May 5/Oct 6
Plots: 6 rows X 38 ft, 6 reps
Row Spacing: 22 inches
Seeding Rate: 4.1 inches

Soil Type: Loam
% OM: 3.3 **pH:** 7.6 **CEC:** 10.9
Nutrient Levels: Above Opt: P,K
High: Mn, Medium: B
Added N: Manure+60 lbs
Prev Crop: Wheat

Cerc Control: Good Control
6 applications**
Rhizoc Control: Good Control
Quadris IF T-Band, 6-8
Other Problems: None
Rainfall: 17.1 inches

Variety	$/A	RWSA	RWST		Yield		Sugar		CJP		Beets/100 ft	
			Lb/T	Rank	T/A	Rank	%	Rank	%	Rank	Act.	Rank
C-RR059	**$1,574**	**9249**	**214**	**3**	**43.2**	**3**	**15.2**	**2**	**93.4**	**11**	**149**	**5**
B-18RR4N	**$1,558**	**9152**	**213**	**4**	**42.9**	**4**	**15.0**	**5**	**93.8**	**5**	130	15
B-1399	**$1,535**	**9017**	**211**	**7**	**42.8**	**5**	14.8	9	**94.1**	**1**	**145**	**6**
C-G333NT	**$1,517**	**8914**	204	11	**43.7**	**2**	14.6	10	93.2	13	**143**	**7**
C-G351NT	**$1,506**	**8846**	**221**	**1**	40.0	16	**15.6**	**1**	**93.6**	**8**	133	14
B-149N	**$1,506**	**8846**	201	12	**44.0**	**1**	14.4	12	93.1	14	135	12
HM-NT9617RR	**$1,502**	**8823**	**211**	**6**	41.8	7	**15.1**	**4**	**93.2**	**12**	137	11
SX-RR1245N	**$1,491**	**8762**	**212**	**5**	41.3	10	**14.8**	**7**	**94.1**	**2**	**150**	**3**
HM-NT9607RR	**$1,487**	**8734**	**215**	**2**	40.5	15	**15.2**	**3**	**93.6**	**7**	**158**	**1**
HM-28RR	**$1,468**	**8625**	**210**	**8**	41.0	11	14.8	8	**94.0**	**4**	**156**	**2**
B-12RR2N	**$1,457**	**8560**	206	10	41.6	8	14.4	11	**94.1**	**3**	140	10
SX-RR1243	$1,448	8509	200	14	**42.5**	**6**	14.2	14	**93.7**	**6**	140	9
HM-9616RR	$1,442	8473	**209**	**9**	40.6	14	**14.8**	**6**	**93.4**	**10**	129	16
SX-1212RR	$1,399	8221	201	13	41.0	12	14.3	13	**93.5**	**9**	134	13
HM-173RR	$1,269	7453	180	16	41.5	9	13.2	16	92.5	15	**150**	**4**
B-133N	$1,260	7402	181	15	40.9	13	13.4	15	91.9	16	**142**	**8**
Average	$1,463.7	8599.1	205.6		41.83		14.61		93.45		142.0	
LSD 5%	121.3	712.4	13.9		2.0		0.7		1.0		17.6	
CV %	7.2	7.2	5.9		4.1		4.4		0.9		10.8	

**Cercospora Applications: 7/12 - Insp.+Manz., 7/26 - St+Dith., 8/4 - Topguard+Manz., 8/19 - ST+Dith., 8/30 - Emi+Dith., 9/12 - Dith.

$/A: Gross dollars per acre assuming a $35 payment and trial average RWST.

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

Comments: Trial was planted on May 5th and harvested on October 6th. Yields were exceptional, but sugar content was low. Trial was crust-busted due to crusting conditions after planting. Stand established was slightly lower than average. Trial experienced adequate growing conditions, and disease control was very good.

Variety Trial

Couture Flatland Farms, Ontario - 2016

Trial Quality: Excellent
Planted: April 15
Harv/Samp: Sept 20 / Sept 20
Plot Size: 3 reps
Row Spacing: 30 inch
Seeding Rate: 50,000

Soil Type: Loam
Fertilizer: 400# K2O, 100# MAP; 2x2: 100# of MAP; Side-dress 140# N
Prev Crop: Corn
Weather: Good

Cerc Control: Good control: 1. Manzate, 2. Proline, 3. Manzate, 4. Proline, 5. Manzate
Rhizoc Control: Excellent control: Quadris I.F. & 6-8 leaf
Other Pests: None

Variety	$/A	RWSA	RWST	T/A	% Sugar	% CJP	Populations 100 Ft. of Row		Dead Beets / 1200 Ft
							10 Day	32 Day	
SX-RR1243	$2,564	**11418**	**229**	**49.8**	**15.7**	**94.8**	**174**	**255**	—
B-149N	$2,461	**10945**	**214**	**51.3**	**14.8**	**94.5**	53	**244**	—
SX-RR1245N	$2,459	**10953**	**226**	48.3	**15.6**	**94.6**	**138**	**238**	—
B-12RR2N	$2,431	**10815**	**227**	47.6	**15.6**	**95.0**	76	**249**	—
C-RR059	$2,392	**10651**	**215**	**49.6**	**14.8**	**94.7**	22	**235**	—
SX-RR1235N	$2,351	**10482**	**220**	47.7	**15.2**	**94.5**	**125**	**255**	—
C-G333NT	$2,344	10436	**211**	**49.4**	**14.7**	**94.3**	23	**252**	—
B-1399	$2,329	10368	**219**	47.3	**15.0**	**95.0**	69	**224**	—
Hill-9616	$2,318	10320	**225**	45.9	**15.5**	**94.6**	**164**	**257**	—
B-133N	$2,310	10280	**213**	48.2	**14.9**	**94.2**	71	**244**	—
C-G351NT	$2,265	10072	**231**	43.6	**15.8**	**94.9**	68	**246**	—
Hill-NT9617	$2,172	9665	**214**	45.1	**15.0**	**94.0**	91	**232**	—
Average	$2,366	10534	220	47.8	15.2	94.6	89	244	—
LSD 5%	—	957	ns (18)	2.4	ns (1.0)	ns (0.7)	70	ns (41)	—
CV %	—	5	5	2.9	4.0	0.4	46	10	—

Comments: Trial was planted April 15th and harvested during early dig on September 20th. Field had very little Rhizoctonia and leafspot control was considered good. Field had been irrigated during the summer and had a very dense canopy. Sugar content was low during early dig but tonnage was exceptional. Trial was in a very high yielding environment.

$/A: Gross dollars per acre assuming a $35 payment and a company average RWST of 230 along with the early delivery premium.

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

Variety Trial

DVL Farms, Ruth - 2016

Trial Quality: Excellent
Planted: April 20
Harv/Samp: Nov 10 / Oct 17
Plot Size: 3 reps
Row Spacing: 28 inch
Seeding Rate: 56,000

Soil Type: Avoca loamy sand
Fertilizer: Fall: 250# K_2O; 2x2: 237# 17-18-13-4S-1 Mn & B; Post: 200# urea
Prev Crop: Drybeans
Weather: Good

Cerc Control: Mod. Pressure: 1. Proline + EBDC, 2. Eminent + EBDC, 3. EBDC, 4. Proline + EBDC, 5. Copper
Rhizoc Control: Moderate Pressure: Quadris I.F. & 6-8 leaf
Other Pests: None

Variety	$/A	RWSA	RWST	T/A	% Sugar	% CJP	Populations 100 Ft. of Row		Dead Beets / 1200 Ft
							10 Day	42 Day	
SX-RR1243	$1,541	**10126**	**276**	**36.7**	**18.1**	**96.4**	—	206	87
SX-RR1245N	$1,535	**10084**	**279**	**36.2**	**18.3**	**96.4**	—	221	78
B-12RR2N	$1,490	**9785**	**280**	**35.0**	**18.4**	**96.5**	—	**235**	69
B-1399	$1,483	**9751**	**276**	**35.4**	**18.0**	**96.6**	—	198	**13**
SX-RR1212	$1,477	**9701**	**281**	34.6	**18.4**	**96.4**	—	207	142
B-149N	$1,468	**9646**	**271**	**35.7**	**17.8**	**96.4**	—	216	**28**
C-G333NT	$1,466	**9642**	**273**	**35.3**	**18.0**	**96.2**	—	214	89
C-G351NT	$1,457	9576	**283**	33.8	**18.6**	**96.2**	—	216	112
C-RR059	$1,451	9535	**284**	33.6	**18.6**	**96.3**	—	**249**	**11**
SX-RR1235N	$1,431	9403	**274**	34.3	**18.1**	**96.3**	—	213	169
SX-RR1228	$1,412	9268	**267**	34.7	**17.7**	**96.1**	—	183	147
B-133N	$1,401	9201	**269**	34.2	**17.8**	**96.0**	—	**253**	**6**
Hill-9616	$1,328	8731	**275**	31.8	**18.1**	**96.2**	—	214	**15**
Hill-NT9617	$1,323	8693	**268**	32.5	**17.8**	**95.9**	—	213	**24**

Average	$1,447	9510	275	34.6	18.1	96.3	—	217	71
LSD 5%	—	529	ns (15)	1.9	ns (0.8)	ns (0.4)	—	23	45
CV %	—	3	3	3.2	2.6	0.3	—	6	38

Comments: This trial was conducted to evaluate the performance of varieties on a sandy soil type. These soil types are droughty, prone to blow out and generally not conducive to high yields. Rainfall was a little short early in the season. Sugarbeets were stale seedbed planted into a wheat cover crop to prevent blowout. Trial had significant Rhizoctonia and late season foliar disease. This is the third season we have conducted variety research on light textured soil. Generally SEEDEX varieties have performed well in the last 3 years along with B-12RR2N. In 2014, the top 3 varieties in RWSA were SX-1212RR, SX-1228RR and B-12RR2N. The 2015 harvest data produced almost identical results with SX-1228RR, SX-1212RR, B12RR2N and C-G333NT being the top 4 varieties. The 2014 &15 trials had almost no Rhizoctonia. In 2016, this trial had significant Rhizoctonia. Trial results for the top 4 varieties were SX-1243RR, SX-1245RR, B-12RR2N and B-1399RR. It is thought that SX-1212RR and SX1228RR ranking fell due to their susceptibilities to Rhizoctonia.

$/A: Gross dollars per acre assuming a $35 payment and a company average RWST of 230.
Bold: Results are not statistically different from top ranking variety in each column.

Variety Trial

Gardner Farms, Croswell - 2016

Trial Quality: Low
Planted: May 6
Harv/Samp: Nov 1 / Oct 18
Plot Size: 2 rep
Row Spacing: 22 inch
Seeding Rate: 66,000

Soil Type: Loam
Fertilizer: PPI: 19 gal of 28%; 2x2: 15 gal of 10-34-0; S.D.: 20 gal of 28%; 2 foliar apps
Prev Crop: Corn
Weather: Crusting at emergence, dry through July

Cerc Control: Moderate pressure: 1. Proline, 2. Proline
Rhizoc Control: Excellent control: Quadris I.F. & 6-8 leaf
Other Pests: Aphanomyces, Root aphid

Variety	$/A	RWSA	RWST	T/A	% Sugar	% CJP	Populations 100 Ft. of Row		Dead Beets / 1200 Ft
							13 Day	26 Day	
B-12RR2N	$1,262	**8293**	281	**29.5**	18.4	**96.6**	**36**	**167**	**6**
C-G333NT	$1,201	**7894**	270	**29.3**	17.9	96.0	**20**	**144**	**3**
B-1399	$1,197	**7868**	281	**28.0**	18.4	**96.5**	**43**	**157**	**1**
SX-RR1235N	$1,194	**7844**	280	**28.0**	18.4	**96.2**	**60**	**172**	**29**
C-RR059	$1,190	**7820**	**289**	**27.0**	**19.0**	**96.3**	**48**	**161**	**1**
C-G351NT	$1,165	**7657**	**298**	**25.7**	**19.5**	**96.4**	**47**	**158**	**13**
SX-RR1245N	$1,143	**7509**	280	**26.8**	18.4	**96.3**	**30**	**137**	**3**
B-149N	$1,114	**7319**	257	**28.5**	17.2	95.7	**24**	**137**	**0**
SX-RR1243	$1,091	**7167**	259	**27.6**	17.3	95.8	**25**	**142**	**14**
Hill-9616	$1,010	**6637**	276	**24.0**	18.3	96.0	**35**	**123**	**0**
B-133N	$972	**6386**	257	**24.8**	17.3	95.5	**70**	**149**	**1**
Hill-NT9617	$932	**6127**	259	**23.7**	17.3	95.8	**67**	**132**	**0**
Average	$1,123	7377	274	26.9	18.1	96.1	42	148	6
LSD 5%	—	ns (1643)	14	ns (5.9)	0.9	0.5	ns (34)	ns (38)	ns (17)
CV %	—	10	3	10.0	2.8	0.3	48	15	172

Comments: USE TRIAL DATA WITH CAUTION. Coefficient of variation (C.V. %) was high at 10%. In this trial only 2 replications are being used because of uneven nature of emergence and impact of early season heavy rainfall. Emergence was impacted by crusting. Aphanomyces impacted yield. Rhizoctonia levels were relatively light. Low level of root aphid was detected on the most susceptible varieties. Leafspot infections came in later in the season.

$/A: Gross dollars per acre assuming a $35 payment and a company average RWST of 230.

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

Variety Trial

E & R Farms, Bad Axe - 2016

Trial Quality: Excellent
Planted: April 18
Harv/Samp: Nov 8 / Oct 17
Plot Size: 3 reps
Row Spacing: 30 inch
Seeding Rate: 59,000

Soil Type: Loam
Fertilizer: 2x2: 24.5 gal. of 16-18-0-3S + B & Mn; S.D.: 18 gal of 28; Fall: Manure
Prev Crop: Wheat
Weather: Good

Cerc Control: Early Burndown: See below for materials.
Rhizoc Control: Very Low Level: Quadris I.F. and 6-8 leaf
Other Pests: None

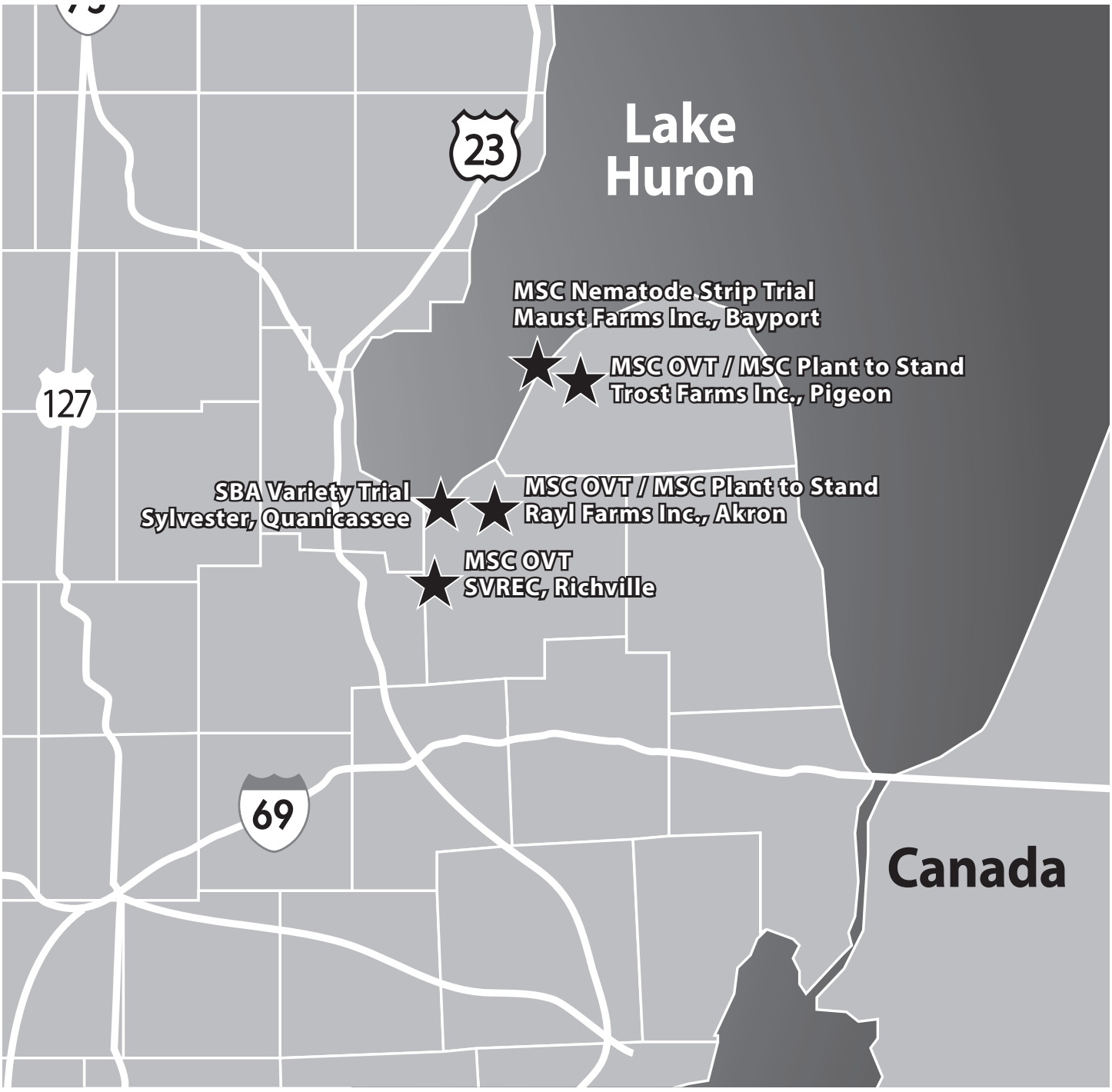
Variety	$/A	RWSA	RWST	T/A	% Sugar	% CJP	Populations 100 Ft. of Row		Dead Beets / 1200 Ft
							16 Day	44 Day	
B-1399	$1,240	**8151**	**227**	**35.9**	**15.9**	**93.8**	**226**	**281**	**1**
SX-RR1243	$1,093	7184	**213**	33.7	**15.2**	**93.1**	**196**	**246**	**21**
C-G351NT	$1,090	7159	**220**	32.6	**15.7**	**93.0**	165	**270**	**28**
SX-RR1245N	$1,072	7047	211	33.4	**15.2**	92.6	**214**	**274**	**14**
Hill-9616	$1,043	6855	**211**	32.4	**15.2**	**92.9**	160	**246**	**9**
Hill-NT9617	$996	6549	204	32.1	14.9	92.2	**188**	**252**	**0**
SX-RR1235N	$975	6410	202	31.7	14.8	92.1	**185**	**271**	**22**
C-RR059	$973	6396	197	32.5	14.4	92.2	**207**	**286**	**0**
B-12RR2N	$962	6314	209	30.2	15.1	92.7	175	**254**	**9**
B-133N	$953	6268	188	33.4	14.1	91.2	179	**254**	**1**
C-G333NT	$947	6224	193	32.3	14.2	91.9	130	**270**	**3**
B-149N	$941	6187	186	33.2	13.8	92.0	133	**270**	**3**
Average	$1,024	6729	205	32.8	14.9	92.5	180	264	9
LSD 5%	—	592	15	1.4	0.8	1.0	46	ns (35)	ns (24)
CV %	—	5	4	2.4	3.0	0.7	15	8	157

Comments: Trial had fall manure applied. Trial had early season dry conditions. Rhizoctonia disease levels were very low. Heavy levels of leaf spot caused complete burn down of foliage and complete regrowth. This trial had leafspot materials applied by airplane. Aerial applications of fungicides appeared to not be as effective as ground application in 2016. Leafspot sprays were as follows: 1. Minerva + Ballad, 2. Copper + EBDC, 3. Tin + EBDC, 4. Enable + EBDC, 5. Copper + EBDC. Variety B-1399, the most leafspot tolerant variety, yielded significantly better than all other varieties under heavy leafspot conditions.

$/A: Gross dollars per acre assuming a $35 payment and a company average RWST of 230.

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

Central District Trials



Official Variety Trial

Michigan Sugar Company

Trost Farms Inc., Pigeon - 2016

Trial Quality: Good
Plant/Harv: May 3/Oct 5
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:** 7.1 **CEC:** 14.7
Nutrient Levels: Above Opt: P, K
High: Mn, Medium: B
Added N: 120 lbs
Prev Crop: Corn

Cerc Control: Very Good Control
7 applications**
Rhizoc Control: Good Control
Quadris IF T-Band, 6-8 lf
Other Problems: None
Rainfall: 15.7 inches

Variety	$/A	RWSA	RWST		Yield		Sugar		CJP		CLS	
			Lb/T	Rank	T/A	Rank	%	Rank	%	Rank	0-9	Rank
SX-RR1245N	**$1,304**	**8794**	238	9	**36.9**	**1**	16.2	9	95.1	9	0.86	17
SX-1212RR	**$1,296**	**8736**	238	8	**36.7**	**3**	16.2	8	95.0	13	0.81	7
SX-RR1243	**$1,293**	**8717**	**243**	**4**	**36.0**	**4**	**16.4**	**4**	**95.5**	**1**	0.67	1
B-12RR2N	**$1,283**	**8652**	**244**	**3**	**35.5**	**5**	**16.5**	**3**	**95.3**	**2**	0.75	4
SX-RR1251	**$1,280**	**8634**	**244**	**2**	**35.4**	**6**	**16.5**	**2**	**95.2**	**5**	0.83	13
B-1399	**$1,248**	**8417**	229	16	**36.7**	**2**	15.6	17	**95.2**	**7**	0.83	10
C-RR059	$1,183	7977	**240**	**5**	33.3	7	16.3	7	**95.3**	**3**	0.86	16
B-18RR4N	$1,159	7816	237	11	32.9	11	16.2	11	95.0	12	0.89	20
HM-173RR	$1,142	7701	237	12	32.6	13	**16.3**	**5**	94.4	19	0.86	18
HM-NT9617RR	$1,140	7690	234	13	32.8	12	16.1	13	94.6	18	0.83	14
HM-9616RR	$1,123	7572	**239**	**7**	31.8	15	16.2	12	**95.3**	**4**	0.81	9
B-149N	$1,117	7532	227	18	33.2	8	15.6	19	94.8	15	0.78	5
HM-28RR	$1,112	7501	228	17	33.0	10	15.7	16	94.7	16	0.81	6
C-G333NT	$1,099	7412	225	20	33.0	9	15.5	20	94.7	17	0.83	12
C-G515	$1,096	7388	233	15	31.7	16	16.0	14	94.9	14	0.83	15
HIL-9732NT	$1,095	7380	238	10	31.0	17	16.2	10	95.0	10	0.83	11
MA-315NT	$1,068	7202	234	14	30.8	18	15.9	15	95.0	11	0.86	19
HM-NT9607RR	$1,059	7143	**240**	**6**	29.8	19	**16.3**	**6**	**95.1**	**8**	0.72	3
B-133N	$1,059	7140	225	19	31.8	14	15.6	18	94.3	20	0.81	8
C-G351NT	$1,041	7017	**248**	**1**	28.3	20	**16.8**	**1**	**95.2**	**6**	0.67	2
Average	$1,159.9	7821.2	236.0		33.16		16.10		94.98		0.81	
LSD 5%	79.5	536.4	8.3		2.0		0.5		0.4		n.s.	
CV %	7.4	7.4	3.8		6.5		3.1		0.4		32.7	

***CLS:** Cercospora rating taken from this trial not the Cercospora Nurseries. Rating taken one week prior to harvest.

**Cercospora Applications: 6/30 - Manz., 7/11 - Insp. + Manz., 7/25 - ST+Dith., 8/3 - Topguard+Manz., 8/19 - ST+Dith. 8/30 - Emi+Dith., 9/12 - Manz.

$/A: Gross dollars per acre assuming a $35 payment and trial average RWST.

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

Comments: Trial yielded well and had average sugar content. Disease control was excellent. Trial experienced a light crust after planting and was crust-busted. Emergence after crust-busting was good, but emergence numbers were not factored into Variety Approval.

Official Variety Trial
Michigan Sugar Company
Rayl Farms Inc., Akron - 2016

Trial Quality: Fair
Plant/Harv: Apr 20/Sep 21
Plots: 2 rows X 38 ft, 8 reps
Row Spacing: 22 inches
Seeding Rate: 2 inches, thinned to 200 beets/100 ft

Type: Sandy Loam
% OM: 2.8 **pH:** 7.3 **CEC:** 11.6
Nutrient Levels: Above Opt: P, K Medium: Mn, Medium: B
Added N: 150 lbs
Prev Crop: Wheat

Cerc Control: Fair to Good Control 6 applications**
Rhizoc Control: Good Control Quadris IF T-Band, 6-8 lf
Other Problems: Nematode
Rainfall: 16.5 inches

Variety	$/A	RWSA	RWST		Yield		Sugar		CJP	
			Lb/T	Rank	T/A	Rank	%	Rank	%	Rank
B-12RR2N	**$1,404**	**8871**	**227**	**5**	**39.1**	**1**	**15.4**	**3**	95.5	12
B-18RR4N	**$1,305**	**8246**	220	10	**37.4**	**2**	15.1	11	95.2	16
SX-RR1245N	$1,280	8085	223	9	**36.4**	**5**	15.1	9	95.5	10
C-G351NT	$1,269	8017	**228**	**4**	35.2	8	**15.4**	**4**	95.7	8
C-G333NT	$1,246	7874	217	14	**36.4**	**6**	14.9	12	95.1	18
B-149N	$1,244	7861	213	18	**36.9**	**3**	14.6	19	95.2	15
B-133N	$1,237	7815	213	19	**36.7**	**4**	14.7	16	94.8	19
B-1399	$1,228	7759	218	13	35.6	7	14.7	17	**96.2**	**2**
HIL-9732NT	$1,192	7532	223	8	33.7	10	15.1	8	95.6	9
SX-RR1251	$1,182	7469	**234**	**1**	32.0	14	**15.6**	**1**	**96.1**	**3**
HM-NT9617RR	$1,169	7388	215	17	34.4	9	14.7	14	95.2	17
MA-513NT	$1,166	7367	219	12	33.7	11	15.1	10	94.7	20
C-G515	$1,144	7227	216	15	33.4	12	14.6	18	95.8	6
SX-RR1243	$1,134	7164	**230**	**2**	31.2	16	**15.4**	**2**	**96.0**	**4**
C-RR059	$1,127	7121	224	7	31.8	15	15.1	7	95.8	7
HM-28RR	$1,105	6982	213	20	32.9	13	14.5	20	95.4	14
HM-NT9607RR	$1,081	6828	**226**	**6**	30.3	17	**15.3**	**5**	95.4	13
HM-9616RR	$1,029	6504	**228**	**3**	28.6	20	15.2	6	**96.5**	**1**
HM-173RR	$1,016	6419	216	16	29.9	18	14.7	15	95.5	11
SX-1212RR	$1,001	6325	220	11	28.7	19	14.8	13	95.9	5
Average	$1,177.8	7442.6	221.2		33.71		15.00		95.57	
LSD 5%	113.6	718.0	7.9		3.1		0.4		0.5	
CV %	10.4	10.4	3.8		9.8		2.9		0.6	

***CLS:** Cercospora rating taken from this trial not the Cercospora Nurseries. Rating taken one week prior to harvest.

**Cercospora Applications: 7/11 - Insp. + Manz., 7/25 - ST+Dith., 8/3 - Topguard+Manz., 8/15 - ST+Dith., 8/29 - Emi+Dith., 9/12 - Badge.

$/A: Gross dollars per acre assuming a $35 payment and trial average RWST.

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

Comments: Trial had a level of Cercospora Leafspot that was near economic impact level. Trial was harvested early and had good overall yield, but sugar levels were low. Trial area had a moderate amount of nematode pressure. Trial experienced a drought in mid-summer which slowed growth for an extended period.

Official Variety Trial

Michigan Sugar Company

SVREC., Richville - 2016

Trial Quality: Good
Plant/Harv: Apr 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: 2.5 **pH:** 7.7 **CEC:** 14.2
Nutrient Levels: Above Opt: P, Opt: K
High: Mn, Medium: B
Added N: 120 lbs
Prev Crop: Wheat

Cerc Control: Good Control
6 applications**
Rhizoc Control: Good Control
Quadris IF T-Band, 6-8 lf
Other Problems: None
Rainfall: 17.0 inches

Variety	$/A	RWSA	RWST		Yield		Sugar		CJP		CLS	
			Lb/T	Rank	T/A	Rank	%	Rank	%	Rank	0-9	Rank
SX-1212RR	**$1,324**	**10112**	266	11	**37.9**	**1**	17.6	11	**96.2**	**12**	1.83	13
SX-RR1243	**$1,321**	**10089**	**272**	**6**	**37.1**	**2**	**17.9**	**8**	**96.4**	**3**	**1.50**	**1**
SX-RR1251	**$1,277**	**9750**	267	10	**36.6**	**5**	17.6	12	**96.2**	**8**	**1.67**	**6**
MA-513NT	**$1,270**	**9700**	264	14	**36.8**	**3**	17.5	14	96.0	17	**1.72**	**7**
SX-RR1245N	**$1,263**	**9646**	**276**	**2**	34.9	8	**18.2**	**2**	**96.4**	**1**	1.83	12
B-1399	**$1,247**	**9526**	259	17	**36.7**	**4**	17.1	19	**96.4**	**4**	**1.58**	**4**
B-149N	$1,211	9251	258	20	**35.9**	**6**	17.1	20	**96.1**	**13**	1.94	17
C-RR059	$1,193	9112	**275**	**3**	33.1	14	**18.1**	**3**	**96.3**	**7**	1.75	8
HIL-9732NT	$1,191	9097	**270**	**8**	33.7	10	**17.9**	**7**	96.0	18	1.83	14
HM-28RR	$1,191	9092	259	19	35.1	7	17.2	18	**96.1**	**15**	1.81	9
C-G333NT	$1,180	9012	265	12	34.0	9	17.5	13	**96.3**	**5**	1.94	16
B-18RR4N	$1,179	9005	268	9	33.6	12	17.7	9	**96.2**	**11**	1.81	11
C-G515	$1,166	8902	**274**	**4**	32.4	15	**18.1**	**4**	**96.2**	**9**	2.03	20
HM-173RR	$1,153	8805	265	13	33.2	13	17.7	10	95.6	20	1.81	10
HM-NT9617RR	$1,150	8785	261	16	33.6	11	17.4	15	95.9	19	1.89	15
B-12RR2N	$1,149	8773	**272**	**7**	32.3	16	**17.9**	**6**	**96.3**	**6**	1.97	18
HM-9616RR	$1,123	8573	**274**	**5**	31.3	18	**18.0**	**5**	**96.4**	**2**	**1.53**	**2**
C-G351NT	$1,117	8533	**279**	**1**	30.6	19	**18.4**	**1**	**96.2**	**10**	**1.56**	**3**
HM-NT9607RR	$1,089	8313	263	15	31.6	17	17.4	16	**96.1**	**14**	**1.64**	**5**
B-133N	$1,028	7853	259	18	30.3	20	17.2	17	96.1	16	2.03	19
Average	$1,191.2	9096.5	267.3		34.03		17.68		96.16		1.78	
LSD 5%	103.4	789.6	9.6		2.6		0.5		0.4		0.2	
CV %	9.3	9.3	3.9		8.2		3.3		0.4		14.1	

***CLS:** Cercospora rating taken from this trial not the Cercospora Nurseries. Rating taken one week prior to harvest.

**Cercospora Applications: 7/11 - Insp. + Manz., 7/26 - ST+Dith., 8/5 - Topguard+Manz., 8/19 - ST+Dith., 8/29 - Emi+Dith., 9/9 - Dith.

$/A: Gross dollars per acre assuming a $35 payment and trial average RWST.

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

Comments: Trial yielded very well and had excellent sugar content considering the October 10th harvest date. Trial experienced a dry period through mid-summer which limited canopy growth. Rhizoctonia control was good and Cercospora Leafspot levels were kept well below economic injury levels.

Plant To Stand

Michigan Sugar Company

Trost Farms Inc., Pigeon - 2016

Trial Quality: Good
Plant/Harv: May 3/Oct 4
Plots: 6 rows X 38 ft, 6 reps
Row Spacing: 22 inches
Seeding Rate: 4.1 inches

Soil Type: Sandy Clay Loam
% OM: 2.9 **pH:** 7.1 **CEC:** 14.7
Nutrient Levels: Above Opt: P, K
High: Mn, Medium: B
Added N: 120 lbs
Prev Crop: Corn

Cerc Control: Very Good Control
7 applications**
Rhizoc Control: Good Control
Quadris IF T-Band, 6-8 lf
Other Problems: None
Rainfall: 16.4 inches

Variety	$/A	RWSA	RWST		Yield		Sugar		CJP		CLS		Beets/100 ft	
			Lb/T	Rank	T/A	Rank	%	Rank	%	Rank	0-9	Rank	Act.	Rank
SX-RR1243	**$1,249**	**8382**	**244**	**2**	**34.4**	**5**	**16.5**	**3**	**95.4**	**5**	**0.67**	**4**	142	10
SX-1212RR	**$1,245**	**8352**	**241**	**5**	**34.7**	**4**	**16.3**	**4**	**95.2**	**9**	1.00	10	145	8
B-1399	**$1,241**	**8329**	**239**	**8**	**34.9**	**2**	**16.1**	**8**	**95.7**	**1**	**0.50**	**1**	162	2
B-149N	**$1,182**	**7933**	226	14	**35.1**	**1**	15.5	14	94.8	13	1.29	16	132	16
SX-RR1245N	**$1,178**	**7905**	**246**	**1**	32.2	8	**16.6**	**1**	**95.5**	**3**	0.88	6	162	1
HM-173RR	**$1,175**	**7885**	227	13	**34.9**	**3**	15.8	12	94.2	16	0.96	9	155	4
C-G351NT	**$1,155**	**7749**	**243**	**3**	31.8	9	**16.5**	**2**	95.2	10	**0.54**	**2**	136	13
B-12RR2N	$1,141	7656	**242**	**4**	31.6	10	**16.3**	**5**	**95.5**	**4**	1.17	12	140	11
C-RR059	$1,124	7544	**240**	**6**	31.4	11	**16.3**	**6**	**95.3**	**7**	0.92	8	145	7
B-18RR4N	$1,120	7516	232	11	32.4	7	15.7	13	**95.3**	**6**	1.17	13	147	6
HM-28RR	$1,093	7334	225	15	32.5	6	15.5	15	94.7	14	0.88	7	159	3
C-G333NT	$1,079	7241	230	12	31.4	12	15.8	11	94.9	12	1.21	15	134	14
HM-NT9617RR	$1,066	7151	234	9	30.5	14	**16.0**	**9**	94.9	11	1.00	11	137	12
HM-9616RR	$1,060	7112	**240**	**7**	29.7	15	**16.2**	**7**	**95.6**	**2**	**0.54**	**3**	132	15
HM-NT9607RR	$1,009	6771	234	10	29.0	16	15.9	10	**95.2**	**8**	0.83	5	150	5
B-133N	$1,004	6734	215	16	31.2	13	15.0	16	94.3	15	1.17	14	142	9
Average	$1,132.7	7599.7	234.8		32.36		15.99		95.10		0.92		145.0	
LSD 5%	95.6	641.4	9.3		2.3		0.5		0.5		0.3		n.s.	
CV %	7.3	7.3	3.5		6.3		2.7		0.4		32.0		13.6	

**Cercospora Applications: 6/30 - Manz., 7/11 - Insp.+Manz., 7/25 - St+Dith., 8/3 - Topguard+Manz., 8/19 - ST+Dith., 8/30 - Emi+Dith., 9/12 - Manz.

$/A: Gross dollars per acre assuming a $35 payment and trial average RWST.

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

Comments: Trial was planted on May 3rd and harvested on October 4th. Trial experienced a slight crusting after planting and was crust-busted. Yields and sugar content were good considering an early October harvest. Disease control was excellent.

Plant To Stand

Michigan Sugar Company

Rayl Farms Inc., Akron - 2016

Trial Quality: Good
Plant/Harv: Apr 20/Sep 23
Plots: 6 rows X 38 ft, 6 reps
Row Spacing: 22 inches
Seeding Rate: 4.1 inches

Soil Type: Sandy Loam
% OM: 2.8 **pH:** 7.3 **CEC:** 11.6
Nutrient Levels: Above Opt:P, K Medium: Mn, Medium: B
Added N: 150 lbs
Prev Crop: Wheat

Cerc Control: Fair to Good Control 6 applications**
Rhizoc Control: Good Control Quadris IF T-Band, 6-8 lf
Other Problems: Nematode
Rainfall: 16.5 inches

Variety	$/A	RWSA	RWST		Yield		Sugar		CJP		CLS		Beets/100 ft	
			Lb/T	Rank	T/A	Rank	%	Rank	%	Rank	0-9	Rank	Act.	Rank
SX-RR1245N	**$1,302**	**7988**	**221**	**4**	**36.1**	**5**	**15.2**	**2**	95.1	10	**1.6**	**4**	**159**	**6**
B-12RR2N	**$1,299**	**7965**	206	15	**38.5**	**1**	14.4	12	94.4	13	2.5	10	151	9
B-18RR4N	**$1,279**	**7844**	**216**	**7**	**36.3**	**3**	**14.9**	**7**	94.9	11	2.6	13	150	10
B-133N	**$1,252**	**7678**	208	13	**37.0**	**2**	14.6	8	93.9	16	2.6	12	**159**	**7**
C-G351NT	**$1,237**	**7586**	**222**	**3**	34.2	8	**15.2**	**3**	95.1	9	**1.5**	**3**	155	8
BTS-149N	**$1,208**	**7412**	204	16	**36.2**	**4**	14.3	16	94.2	14	2.8	16	147	13
HM-NT9617RR	$1,183	7259	209	12	34.8	7	14.6	9	94.2	15	2.7	14	147	12
C-G333NT	$1,178	7229	207	14	34.8	6	14.3	15	94.8	12	2.7	15	**170**	**3**
SX-RR1243	$1,072	6575	**225**	**2**	29.3	12	**15.1**	**4**	**96.0**	**1**	**1.4**	**2**	136	16
SX-1212RR	$1,062	6516	**225**	**1**	28.9	14	**15.2**	**1**	**95.6**	**3**	2.5	11	138	15
HM-28RR	$1,061	6505	214	9	30.4	9	14.6	11	**95.4**	**6**	2.4	7	**171**	**2**
C-RR059	$1,035	6348	**215**	**8**	29.5	10	14.6	10	**95.6**	**2**	2.5	9	**168**	**4**
B-1399	$1,021	6264	211	10	29.5	11	14.4	13	**95.6**	**4**	1.9	6	**168**	**5**
HM-NT9607RR	$1,015	6228	**221**	**5**	28.2	15	**15.1**	**5**	**95.3**	**8**	1.8	5	**178**	**1**
HM-9616RR	$1,011	6199	**221**	**6**	28.1	16	**15.0**	**6**	**95.4**	**5**	**1.3**	**1**	142	14
HM-173RR	$994	6098	210	11	29	13	14.3	14	**95.3**	**7**	2.5	8	150	11
Average	$1,138.0	6981.0	214.7		32.57		14.74		95.05		2.20		155.5	
LSD 5%	113.6	696.9	11.2		2.7		0.5		0.8		0.3		20.9	
CV %	8.7	8.7	4.5		7.3		3.2		0.8		11.7		11.7	

**Cercospora Applications: 7/11 - Insp.+Manz., 7/25 - St+Dith., 8/3 - Topguard+Manz., 8/15 - ST+Manz., 8/29 - Emi+Dith., 9/12 - Badge.

$/A: Gross dollars per acre assuming a $35 payment and trial average RWST.

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

Comments: Trial was planted on April 20th and harvested on September 21st. Yields were good, but sugar content was low, possibly due to the early harvest and excess nitrogen due to the drought. Trial had good disease control, with Cercospora Leafspot levels controlled below economic injury level. Stand establishment was good, but there were slight differences between varieties. Trial area had moderate nematode pressure.

Nematode Strip Trial

Michigan Sugar Company

Maust Farms Inc., Bayport - 2016

Trial Quality: Good
Location: Maust
Plot Size: 6 Rows X 300 ft, 5 reps

Cerc Control: Good
Rhizoc Control: Good

Variety	$/A	RWSA	RWST		Yield		Sugar		CJP		Emerge		CLS	
			Lb/T	Rank	T/A	Rank	%	Rank	%	Rank	%	Rank	0-9	Rank
B-18RR4N	**$1,262**	**7837**	220.0	5	**35.7**	**2**	**15.1**	**4**	95.1	10	**57.6**	**5**	**2.3**	**4**
C-G333NT	**$1,237**	**7682**	213.4	9	**36.0**	**1**	14.6	8	95.2	9	56.4	6	2.6	11
B-149N	**$1,216**	**7556**	216.6	7	**34.9**	**3**	**15.0**	**6**	94.6	11	55.8	8	2.8	12
B-12RR2N	**$1,210**	**7516**	**223.8**	**2**	**33.6**	**5**	**15.2**	**2**	**95.5**	**4**	47.2	11	2.3	7
SX-RR1245N	**$1,185**	**7359**	**228.5**	**1**	32.2	7	**15.3**	**1**	**96.1**	**1**	55.9	7	**1.9**	**1**
HM-NT9617RR	**$1,161**	**7212**	**222.3**	**3**	32.4	6	**15.1**	**3**	95.4	7	54.9	9	**2.3**	**5**
B-133N	$1,143	7097	209.9	11	**33.9**	**4**	14.6	10	94.5	12	**60.5**	**3**	2.4	9
C-G351NT	$1,120	6954	220.6	4	31.5	8	**15.0**	**5**	**95.4**	**6**	50.5	10	**2.1**	**3**
C-RR059*	$1,025	6368	218.7	6	29.1	9	14.8	7	**95.9**	**3**	**59.7**	**4**	2.6	10
B-173RR*	$987	6132	212.4	10	28.8	10	14.5	11	95.3	8	**64.8**	**2**	2.4	8
SX-1212RR*	$865	5371	214.2	8	25.1	12	14.6	9	**95.4**	**5**	46.7	12	**2.0**	**2**
B-1399*	$852	5295	208.6	12	25.4	11	14.1	12	**96.0**	**2**	**65.4**	**1**	2.3	6
Average	$1,105.2	6865.0	217.4		31.5		14.8		95.4		56.3		2.3	
LSD 5%	117.5	729.7	7.1		3.3		0.4		0.7		7.8		0.4	
CV %	8.3	8.3	2.6		8.1		1.9		0.5		10.9		13.2	

$/A: Gross dollars per acre assuming a $35 payment and average RWST.

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

***** C-RR059, HM-173RR, SX-1212RR and B-1399 are not nematode tolerant varieties and were included for comparison.

Comments: A nematode variety strip trial was conducted in 2016 (6 rows X 300 ft) comparing approved commercial nematode varieties to our check varieties. The quality was good and nematode levels caused significant losses in all non-nematode varieties.

Variety Trial

Sylvester Farms, Quanicassee - 2016

Trial Quality: Good
Planted: April 16
Harv/Samp: Oct 29 / Oct 19
Plot Size: 3 reps
Row Spacing: 24 inch
Seeding Rate: 65,000

Soil Type: Loam
Fertilizer: Fall: Variable K_2O; PPI: 55 gal. 28%, 2x2: 36-28-0-9 + Mn & B
Prev Crop: Corn
Weather: Good

Cerc Control: Good Control: 6 applications. See below for materials
Rhizoc Control: Good Control: In Furrow & 8 leaf foliar, 10 oz in both
Other Pests: Sugarbeet cyst nematode

Variety	$/A	RWSA	RWST	T/A	% Sugar	% CJP	Populations 100 Ft. of Row		Dead Beets / 1200 Ft
							16 Day	45 Day	
SX-RR1245N	$1,466	**9624**	**279**	**34.5**	**18.7**	**95.3**	**50**	**167**	21
B-1399	$1,462	**9597**	**273**	**35.2**	**18.2**	**95.8**	**39**	**188**	**2**
SX-RR1235N	$1,441	**9467**	**274**	**34.6**	**18.4**	95.2	**49**	**181**	33
C-RR059	$1,431	**9400**	**273**	**34.4**	**18.3**	**95.4**	**52**	**201**	**1**
C-G351NT	$1,418	**9314**	**275**	**33.9**	**18.4**	**95.4**	**32**	**174**	22
B-149N	$1,416	**9310**	**265**	**35.2**	17.7	**95.6**	**34**	**178**	**4**
B-12RR2N	$1,405	**9220**	**275**	**33.6**	**18.4**	**95.5**	**29**	**158**	29
B-133N	$1,388	**9119**	**260**	**35.1**	17.6	94.9	**39**	**188**	**0**
SX-RR1243	$1,382	**9082**	**271**	**33.5**	**18.1**	**95.8**	**25**	**168**	**13**
C-G333NT	$1,350	**8873**	**256**	**34.7**	17.3	**95.3**	**21**	**193**	**4**
Hill-NT9617	$1,317	**8660**	**262**	**33.1**	17.7	94.9	**55**	**165**	**6**
Hill-9616	$1,271	**8354**	**262**	**31.9**	17.5	**95.6**	**46**	**159**	19
Average	$1,396	9168	269	34.1	18.0	95.4	39	177	13
LSD 5%	—	ns (790)	ns (16)	ns (2.4)	0.9	0.6	ns (26)	ns (34)	18
CV %	—	5	4	4.2	2.9	0.4	38	11	81

Comments: Trial had 6 applications of fungicides for leafspot control. Overall leafspot control was good. Sugar content was good for the year. Differences in leafspot susceptibility were seen. Low levels of Rhizoctonia. Sugarbeet cyst nematode was found. Cercospora leafspot fungicides all included a sticker and were as follows: 1. Inspire + EBDC, 2. Tin + EBDC, 3. Topguard + EBDC, 4. Tin + EBDC, 5. Copper, 6. Eminent + EBDC

$/A: Gross dollars per acre assuming a $35 payment and a company average RWST of 230.

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

West District Trials

Official Variety Trial

Michigan Sugar Company

Shaffner Brothers LLC., Freeland - 2016

Trial Quality: Fair
Plant/Harv: Apr 18/Oct 12
Plots: 2 rows X 38 ft, 8 reps
Row Spacing: 22 inches
Seeding Rate: 2 inches, thinned to 200 beets/100 ft

Soil Type: Silt Loam
% OM: 3.2 **pH:** 7.3 **CEC:** 18.4
Nutrient Levels: Above Opt: P, K Medium: Mn, Medium: B
Added N: 150 lbs
Prev Crop: Navy Beans

Cerc Control: Fair to Good Control 7 applications**
Rhizoc Control: Good Control Quadris IF T-Band, 6-8 lf
Other Problems: Nematode
Rainfall: 20.4 inches

Variety	$/A	RWSA	RWST		Yield		Sugar		CJP		CLS	
			Lb/T	Rank	T/A	Rank	%	Rank	%	Rank	0-9	Rank
B-133N	**$1,869**	**12599**	232	14	**54.4**	**1**	15.6	11	95.8	17	2.8	7
B-149N	**$1,851**	**12474**	**240**	**8**	**52.0**	**2**	15.9	9	96.4	8	3.1	18
B-12RR2N	**$1,788**	**12050**	**244**	**6**	49.5	3	**16.3**	**4**	95.9	16	3.1	17
C-G351NT	**$1,751**	**11805**	**246**	**2**	48.0	5	**16.3**	**5**	96.5	5	**2.5**	**2**
HIL-9732NT	**$1,745**	**11759**	**245**	**3**	47.9	6	**16.4**	**2**	96.0	14	2.9	12
C-G333NT	**$1,719**	**11583**	**244**	**4**	47.3	7	**16.2**	**6**	96.4	7	2.8	11
B-1399	**$1,708**	**11511**	234	11	49.3	4	15.4	14	96.7	2	**2.7**	**4**
MA-513NT	$1,676	11297	**244**	**5**	46.3	8	**16.4**	**3**	95.8	18	**2.7**	**5**
SX-RR1245N	$1,612	10865	235	10	45.9	9	15.7	10	96.0	13	2.8	8
HM-NT9607RR	$1,606	10822	**250**	**1**	43.2	14	**16.5**	**1**	96.4	6	**2.5**	**1**
B-18RR4N	$1,597	10762	**238**	**9**	45.1	10	**16.0**	**7**	95.9	15	2.8	10
C-G515	$1,535	10349	231	17	44.8	11	15.2	17	96.9	1	3.3	20
C-RR059	$1,514	10203	233	12	43.6	13	15.4	15	96.6	3	3.0	15
HM-NT9617RR	$1,504	10139	232	15	43.8	12	15.6	12	95.8	19	2.9	13
SX-RR1251	$1,427	9616	233	13	41.1	16	15.5	13	96.4	9	2.8	9
HM-173RR	$1,425	9605	223	18	43.0	15	15.0	18	96.1	11	2.9	14
HM-9616RR	$1,316	8872	**241**	**7**	36.6	18	15.9	8	96.6	4	**2.5**	**3**
HM-28RR	$1,249	8419	220	20	38.1	17	14.9	20	95.7	20	3.0	16
SX-RR1243	$1,232	8307	231	16	35.6	19	15.4	16	96.2	10	**2.7**	**6**
SX-1212RR	$1,179	7949	222	19	35.6	20	14.9	19	96.0	12	3.2	19
Average	$1,565.2	10549.3	235.9		44.5		15.7		96.2		2.8	
LSD 5%	185.2	1248.0	12.6		4.8		0.6		n.s.		0.3	
CV %	12.7	12.7	5.8		11.6		4.1		0.9		9.6	

***CLS:** Cercospora rating taken from this trial not the Cercospora Nurseries. Rating taken one week prior to harvest.

**Cercospora Applications: 6/29 - Manz., 7/11 - Insp. + Manz., 7/26 - ST+Dith., 8/3 - Topguard+Manz., 8/18 - ST+Dith. 8/29 - Emi+Dith., 9/13 - Badge+Manz.

$/A: Gross dollars per acre assuming a $35 payment and trial average RWST.

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

Comments: Trial yielded exceptionally well. Trial area had a moderate amount of nematode pressure which impacted certain varities. Cercospora Leafspot control was fair to good and the average rating was near the economic injury level. Trial also experienced a moderate level of Alternaria and Bacterial Leafspot.

Official Variety Trial
Michigan Sugar Company
Stoneman Farms Inc., Ithaca - 2016

Trial Quality: Good
Plant/Harv: May 9/Oct 19
Plots: 2 rows X 38 ft, 8 reps
Row Spacing: 22 inches
Seeding Rate: 2 inches, thinned to 150 beets/100 ft

Soil Type: Loam
% OM: 3.4 **pH:** 6.7 **CEC:** 11.3
Nutrient Levels: Above Opt: P, K High: Mn, Low: B
Added N: 120 lbs
Prev Crop: Corn

Cerc Control: Very Good Control 6 applications**
Rhizoc Control: Good Control Quadris IF T-Band, 6-8 lf
Other Problems: None
Rainfall: 22.2 inches

Variety	$/A	RWSA	RWST		Yield		Sugar		CJP		CLS	
			Lb/T	Rank	T/A	Rank	%	Rank	%	Rank	0-9	Rank
SX-RR1251	**$1,817**	**11709**	222	16	**52.8**	**1**	15.5	14	**94.0**	**11**	1.0	7
B-1399	**$1,804**	**11626**	224	12	**52.0**	**2**	15.5	15	**94.5**	**3**	1.0	9
B-12RR2N	**$1,794**	**11560**	**226**	**9**	**51.0**	**5**	**15.8**	**10**	**93.9**	**12**	1.1	20
B-18RR4N	**$1,793**	**11553**	**229**	**8**	**50.4**	**9**	**15.9**	**7**	**94.1**	**8**	1.1	19
SX-RR1245N	**$1,790**	**11533**	**229**	**7**	**50.5**	**8**	**15.8**	**9**	**94.4**	**4**	1.0	10
C-G515	**$1,775**	**11439**	223	14	**51.3**	**3**	15.7	12	93.5	18	1.0	3
SX-RR1243	**$1,773**	**11423**	223	13	**51.2**	**4**	15.5	16	**94.3**	**6**	1.0	4
HIL-9732NT	**$1,770**	**11402**	**229**	**5**	49.7	11	**16.1**	**4**	93.7	17	1.1	17
MA-513NT	**$1,760**	**11337**	**229**	**6**	49.5	12	**16.1**	**6**	93.7	15	1.1	15
C-RR059	**$1,756**	**11311**	**234**	**2**	48.5	13	**16.2**	**2**	**94.1**	**7**	1.0	1
C-G333NT	**$1,747**	**11254**	223	15	**50.5**	**7**	15.6	13	**94.0**	**9**	1.1	14
HM-NT9607RR	**$1,711**	**11025**	**237**	**1**	46.5	18	**16.3**	**1**	**94.5**	**2**	1.0	11
HM-28RR	$1,691	10894	219	18	49.9	10	15.3	18	93.8	14	1.1	13
B-133N	$1,688	10876	214	19	**50.8**	**6**	15.2	19	93.4	19	1.0	2
HM-NT9617RR	$1,675	10791	226	10	48.0	15	**15.9**	**8**	93.7	16	1.0	12
C-G351NT	$1,669	10756	**233**	**4**	46.2	19	**16.1**	**3**	**94.3**	**5**	1.0	6
SX-1212RR	$1,655	10666	226	11	47.2	17	**15.7**	**11**	**94.0**	**10**	1.0	5
B-149N	$1,647	10613	220	17	48.4	14	15.4	17	93.8	13	1.1	18
HM-9616RR	$1,596	10284	**234**	**3**	44.0	20	**16.1**	**5**	**94.5**	**1**	1.0	8
HM-173RR	$1,551	9995	212	20	47.3	16	15.2	20	92.9	20	1.1	16
Average	$1,723.1	11102.3	225.5		49.28		15.75		93.96		1.03	
LSD 5%	118.2	761.4	11.2		2.8		0.6		0.6		n.s	
CV %	7.4	7.4	5.3		6.1		4.0		0.6		10.6	

***CLS:** Cercospora rating taken from this trial not the Cercospora Nurseries. Rating taken one week prior to harvest.

**Cercospora Applications: 7/11 - Insp. + Manz., 7/25 - ST+Dith., 8/3 - Topguard+Manz., 8/15 - ST+Dith., 8/29 - Emi+Dith. 9/9 - Dith.

$/A: Gross dollars per acre assuming a $35 payment and trial average RWST.

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

Comments: Trial yielded exceptionally well. Disease control was excellent, but trial had low sugar content. Stand establishment in this trial was lower than other Official Variety Trials, and it was thinned to a stand of 150 beets/100' of row instead of 200 beets/100' of row.

Official Variety Trial *Rhizoctonia*

Michigan Sugar Company

Stoneman Farms Inc., Breckenridge - 2016

Trial Quality: Poor
Plant/Harv: Apr 25/Sept 15
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: 3.9 **pH:** 6.7 **CEC:** 12.3
Nutrient Levels: Above Opt: P,K High: Mn, Low: B
Added N: Manure + 60 lbs
Prev Crop: Black Beans

Cerc Control: Good Control 6 applications**
Rhizoc Control: Poor Control Quadris IF T-Band, 6-8 lf
Other Problems: Rhizoctonia
Rainfall: 15.0 inches

Variety	$/A	RWSA	RWST		Yield		Sugar		CJP		Emerge		Dead	
			Lb/T	Rank	T/A	Rank	%	Rank	%	Rank	%	Rank	%	Rank
C-RR059	**$1,527**	**8045**	**197**	**2**	**40.8**	**3**	**14.3**	**3**	**92.6**	**3**	**55.5**	**3**	**11.1**	**1**
B-1399	**$1,481**	**7801**	**188**	**7**	**41.6**	**1**	13.6	12	**92.8**	**2**	**57.3**	**2**	**12.4**	**2**
C-G333NT	**$1,459**	**7686**	**188**	**6**	**40.8**	**2**	13.7	7	**92.5**	**4**	54.0	6	**15.5**	**7**
C-G515	**$1,446**	**7617**	**187**	**8**	**40.7**	**4**	13.8	6	**92.1**	**9**	52.6	10	**15.1**	**6**
B-12RR2N	**$1,376**	**7252**	**190**	**5**	**38.0**	**9**	**14.0**	**5**	**92.2**	**7**	47.6	13	29.1	14
HM-NT9607RR	**$1,360**	**7166**	**197**	**4**	36.5	12	**14.3**	**4**	**92.5**	**5**	**54.5**	**4**	**14.5**	**5**
B-149N	**$1,356**	**7147**	184	10	**38.9**	**7**	13.6	13	**92.1**	**10**	45.3	16	**20.9**	**10**
HM-NT9617RR	$1,315	6929	184	11	37.3	10	13.6	10	**91.8**	**11**	41.5	19	**16.0**	**8**
HM-173RR	$1,314	6926	175	17	**39.1**	**6**	13.3	17	91.1	17	**54.5**	**5**	**12.8**	**3**
B-133N	$1,304	6872	171	19	**40.2**	**5**	13.0	19	91.2	15	53.6	7	**13.2**	**4**
C-G351NT	$1,294	6817	**202**	**1**	33.6	17	**14.6**	**1**	**92.9**	**1**	52.9	9	**26.2**	**12**
HM-28RR	$1,278	6731	172	18	**38.7**	**8**	13.1	18	91.0	18	**59.5**	**1**	**18.9**	**9**
HIL-9732NT	$1,261	6646	179	15	36.9	11	13.6	14	90.8	19	49.6	12	38.3	18
SX-RR1243	$1,260	6641	186	9	35.7	13	13.7	9	**92.1**	**8**	42.4	18	35.9	16
HM-9616RR	$1,228	6471	**197**	**3**	32.5	20	**14.3**	**2**	**92.4**	**6**	45.0	17	**24.3**	**11**
SX-RR1251	$1,186	6250	182	13	34.0	16	13.6	15	91.6	12	37.9	20	37.1	17
MA-513NT	$1,177	6203	181	14	34.4	14	13.6	11	91.2	16	47.6	14	27.6	13
SX-RR1245N	$1,156	6089	178	16	33.5	18	13.4	16	91.2	14	53.1	8	40.2	20
B-18RR4N	$1,142	6018	183	12	32.6	19	13.7	8	91.4	13	51.1	11	38.5	19
SX-1212RR	$1,117	5888	168	20	34.4	15	12.9	20	90.5	20	45.4	15	33.4	15
Average	$1,301.9	6859.6	184.4		37.02		13.69		91.80		50.05		24.06	
LSD 5%	204.4	1077.1	15.3		4.3		0.7		1.3		5.5		15.3	
CV %	16.9	16.9	8.9		12.4		5.8		1.5		11.7		68.5	

***CLS:** Cercospora rating taken from this trial not the Cercospora Nurseries. Rating taken one week prior to harvest.

**Cercospora Applications: 6/30 - Manz., 7/11 - Insp. + Manz., 7/25 - ST+Dith., 8/3 - Topguard+Manz., 8/15 - ST+Dith.,. 8/29 - Emi+Dith.

$/A: Gross dollars per acre assuming a $35 payment and trial average RWST.

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

Comments: This trial had a high level of Rhizoctonia, and was not used for Variety Approval. Data can be used with discretion to evaluate varieties for tolerance to Rhizoctonia.

Variety Trial

Shaffner Brothers, Freeland - 2016

Trial Quality: Excellent
Planted: April 20
Harv/Samp: Nov 13 / Oct 19
Plot Size: 3 rep
Row Spacing: 22 inch
Seeding Rate: 63,000

Soil Type: Clay Loam
Fertilizer: PPI: 90# ESN/urea; 2x2: 25 gal 15-16-1 + micros; Foliar: boron
Prev Crop: Drybeans
Weather: Good

Cerc Control: Good control: 1. Proline + EBDC, 2. Tin + EBDC, 3. Inspire + EBDC, 4. Tin + EBDC
Rhizoc Control: Light-Moderate Pressure: Quadris I.F. & 6-8 leaf
Other Pests: Root aphid

Variety	$/A	RWSA	RWST	T/A	% Sugar	% CJP	Populations 100 Ft. of Row		Dead Beets / 1200 Ft
							19 Day	36 Day	
SX-RR1243	$1,950	**12815**	**274**	**46.8**	18.2	**95.8**	171	201	**16**
B-1399	$1,907	**12532**	268	**46.8**	17.8	**96.0**	**196**	**226**	**2**
C-RR059	$1,903	**12508**	**272**	**46.0**	18.2	95.4	**209**	**235**	**4**
C-G351NT	$1,861	12231	**281**	43.6	**18.8**	95.3	186	211	**11**
SX-RR1245N	$1,824	11988	270	44.4	18.1	95.4	168	206	**43**
B-149N	$1,792	11774	255	**46.1**	17.3	95.2	192	219	**7**
SX-RR1235N	$1,778	11689	266	44.0	17.9	95.2	182	214	56
C-G333NT	$1,776	11674	256	**45.6**	17.3	95.3	169	210	63
B-12RR2N	$1,755	11534	**280**	41.2	**18.5**	**95.9**	183	211	90
B-133N	$1,750	11498	256	45.0	17.4	94.8	**204**	**225**	**3**
Hill-9616	$1,627	10692	266	40.2	17.8	**95.6**	166	197	**23**
Hill-NT9617	$1,618	10634	263	40.4	17.7	95.2	163	190	**12**
Average	$1,795	11798	267	44.2	17.9	95.4	182	212	28
LSD 5%	—	565	11	1.4	0.5	0.5	16	11	50
CV %	—	3	2	1.9	1.8	0.3	5	3	107

Comments: High yielding trial that looked very good all season. Trial harvested in late season on November 13th. Foliage of beets was relatively healthy with lower levels of leafspot. Sugar content was good. Low level of root aphid was seen on the most susceptible varieties.

$/A: Gross dollars per acre assuming a $35 payment and a company average RWST of 230.

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

Variety Trial

Clay Crumbaugh, Breckenridge - 2016

Trial Quality: Good
Planted: April 17
Harv/Samp: Sept 23 / Sept 23
Plot Size: 3 reps
Row Spacing: 30 inch
Seeding Rate: 54,000

Soil Type: Loam
Fertilizer: 2x2: 360# 15-9-7 + S & B, Total N: 144#
Prev Crop: Soybeans
Weather: Very dry through July, good rest of season

Cerc Control: Moderate Pressure: 1. EBDC + Copper, 2. Eminent + DBDC, 3. Tin + EBDC, 4. Inspire + EBDC
Rhizoc Control: Heavy Pressure: Quadris I.F. and 6-8 leaf
Other Pests: None

Variety	$/A	RWSA	RWST	T/A	% Sugar	% CJP	Populations 100 Ft. of Row		Dead Beets / 1200 Ft
							16 Day	39 Day	
B-1399	$1,662	**7614**	**207**	**36.8**	14.2	**95.1**	**161**	**232**	**73**
C-RR059	$1,473	6752	196	34.5	13.7	**94.4**	120	**219**	**72**
SX-RR1245N	$1,391	6374	**217**	29.4	**14.9**	**94.8**	86	154	332
B-149N	$1,346	6170	190	32.5	13.5	93.7	84	187	**95**
B-133N	$1,342	6151	184	33.3	13.2	93.4	127	**216**	**51**
B-12RR2N	$1,333	6108	**209**	29.2	**14.5**	**94.7**	70	152	328
C-G333NT	$1,325	6074	189	32.2	13.4	94.0	57	182	**67**
SX-RR1243	$1,317	6036	195	31.0	13.7	**94.2**	97	190	266
C-G351NT	$1,308	5997	**210**	28.5	**14.6**	**94.6**	101	189	236
Hill-NT9617	$1,306	5986	196	30.6	13.8	93.9	81	157	**84**
Hill-9616	$1,187	5438	201	27.0	14.1	**94.4**	69	142	210
SX-RR1235N	$1,101	5047	196	25.7	13.9	93.8	72	166	572
Average	$1,341	6146	199	30.9	14.0	94.3	94	182	199
LSD 5%	—	583	12	1.9	0.7	1.0	30	33	115
CV %	—	6	4	3.6	2.9	0.6	18	11	34

Comments: Trial was harvested during early dig on September 23rd. Trial had a heavy amount of Rhizoctonia pressure which greatly impacted yield. Sugar content was low because of moderate leafspot pressure in conjunction with early harvest. The most leafspot tolerant variety (B-1399RR) in combination with good Rhizoctonia tolerance yielded better than more susceptible varieties.

$/A: Gross dollars per acre assuming a $35 payment and a company average RWST of 230 along with 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, 2015-2016

Trial Quality: Good
Location: 2015 and 2016 Blumfield
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 %
HM-9616RR	**3.0**	5.0
B-133N	**3.0**	10.0
HM-NT9617RR	3.8	21.4
Resistant Check	3.8	21.8
C-G333NT	3.9	23.0
B-1399	4.0	25.0
HM-173RR	4.0	25.0
C-RR059	4.2	28.8
HM-28RR	4.2	29.8
C-G515	4.3	31.8
B-149N	4.3	32.3
C-G351NT	4.4	34.3
SX-RR1243	4.4	34.5
HM-NT9607RR	4.4	34.8
MA-513NT	4.6	40.8
SX-RR1251	4.7	41.5
SX-RR1245N	4.8	44.5
HIL-9732N	4.8	45.3
B-12RR2N	4.8	45.5
SX-1212RR	4.8	45.8
B-18RR4N	4.8	46.0
Susceptible Check	5.0	50.5
Average	4.3	32.6
LSD 5%	0.8	
CV %	8.5	

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

0 = No Infection
1 = less than 2% infection
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, 2015-2016

Trial Quality: Good
Locations: 2015 - Blumfield, SVREC, Yoder (Pigeon)
2016 - Blumfield, Laker (Elkton), Gilford, 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	2015 CLS Rate 0-9	2016 CLS Rate 0-9
B-1399	**3.5**	3.5	3.6
HM-28RR	**3.7**	4.0	3.5
HM-173RR	**3.8**	3.9	3.7
HM-9616RR	**3.8**	3.9	3.7
HM-NT9607RR	**3.8**	4.0	3.6
C-G351NT	**3.9**	4.0	3.8
SX-RR1243	**4.0**	3.8	4.1
Resistant Check	**4.1**	3.7	4.6
SX-RR1245N	**4.1**	3.9	4.4
C-RR059	**4.1**	4.0	4.3
B-12RR2N	**4.2**	4.3	4.1
B-18RR4N	**4.2**	4.3	4.1
C-G515	4.3	4.3	4.3
SX-RR1251	4.3	4.3	4.3
SX-1212RR	4.4	4.3	4.4
HM-NT9617RR	4.5	4.3	4.6
C-G333NT	4.5	4.6	4.5
B-133N	4.6	4.6	4.6
B-149N	4.7	4.8	4.5
HIL-9732NT	4.8	4.5	5.2
MA-513NT	4.9	4.7	5.1
Susceptible Check	5.5	6.4	4.6
Average	4.26	4.27	4.25

Cercospora 0-9 Rating 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% leaf 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: Trial began being rated when Cercospora levels reach economic impact levels (ratings of 3). Trials are rated 5-7 times until most susceptible varieties reach a rating of 9. All ratings are averaged together to obtain ratings in chart above. All varieties will eventually burn down if not sprayed with fungicide.

Cyst Nematode Nursery

Michigan Sugar Company

Average of 2 Years, 2015 - 2016

Trial Quality: Excellent
Locations: 2015 Yoder and VanDenBoom, 2016 Maust
Plot Size: 2 rows X 25 ft X 6 reps

Cerc Control: Good
Rhizoc Control: Good

Variety	$/A	RWSA	RWST		Yield		Sugar		CJP	
			Lb/T	Rank	T/A	Rank	%	Rank	%	Rank
B-12RR2N	**$1,771**	**9254**	**238.5**	**1**	**39.2**	**1**	**16.0**	**1**	95.9	3
C-G333NT	$1,525	7940	227.0	8	35.4	2	15.3	7	95.8	8
B-18RR4N	$1,485	7712	**230.5**	**5**	33.9	5	**15.5**	**5**	95.8	5
B-149N	$1,478	7645	221.1	12	35.1	3	15.0	12	95.5	12
C-G351NT	$1,473	7626	**229.5**	**6**	33.7	7	**15.4**	**6**	95.8	6
MA-513NT	$1,449	7541	**231.5**	**4**	33.0	9	**15.7**	**3**	95.5	10
SX-RR1245N	$1,423	7415	223.8	10	33.7	6	15.1	10	95.8	7
HM-NT9617RR	$1,420	7407	222.5	11	34.0	4	15.1	11	95.5	11
B-133N	$1,375	7158	218.9	14	33.3	8	14.9	14	95.4	14
HIL-9732NT	$1,354	7032	**231.6**	**3**	30.8	10	**15.6**	**4**	95.6	9
C-RR059*	$1,293	6682	228.7	7	29.8	11	15.3	8	96.2	1
HM-NT9607RR	$1,266	6515	**235.7**	**2**	27.9	13	**15.8**	**2**	95.9	2
HM-173RR*	$1,204	6258	220.7	13	28.7	12	15.0	13	95.4	13
SX-1212RR*	$1,135	5834	224.7	9	26.4	14	15.1	9	95.9	4
Average	$1,403.7	7287.2	227.5		32.5		15.3		95.7	
LSD 5%	71.2	406.0	9.0		2.2		0.6		n.s.	
CV %	2.4	2.6	1.8		3.1		1.7		0.2	

$/A: Gross dollars per acre assuming a $35 payment and average RWST.

Bold: Results are not statistically different from top ranking variety in each column.
* C-RR059, HM-173RR and SX-1212RR are not nematode tolerant varieties and were included for comparison.

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Root Aphid Nursery

Average of 2 years

Beta - 2015 and Syngenta 2015 - 2016

Variety	% Infected
B-149N	0.5
C-G333NT	0.6
B-133N	0.6
C-G515	1.1
C-RR059	1.9
C-G351NT	2.2
HM-NT9607RR	2.5
B-18RR4N	3.1
Resistant Check	5.7
MA-513NT	7.6
HIL-9732NT	7.6
B-1399	7.9
HM-9616RR	13.3
HM-NT9617RR	13.6
HM-28RR	28.7
HM-173RR	29.2
SX-RR1245N	29.3
B-12RR2N	34.1
SX-RR1243	43.0
SX-1212RR	46.1
SX-RR1251	50.5
Susceptible Check	54.9
Average	17.5
LSD 5%	20.8
CV	72.0

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

Aphanomyces Nursery

BETASEED, Shakopee, MN

Average of 2 years, 2015 - 2016

Variety	Root Rating 1 - 9 Scale	Canopy Rating 1 - 9 Scale	Stand Loss 1 - 5 Scale
B-12RR2N	2.56	1.23	1.0
Resistant Check	2.57	1.25	1.0
B-18RR4N	2.84	1.37	1.0
SX-RR1245N	3.04	1.31	1.0
SX-RR1243	3.15	1.48	1.0
Moderate Check	3.24	1.65	1.0
HM-NT9617RR	3.25	1.44	1.0
B-1399	3.29	1.98	1.0
B-133N	3.35	1.79	1.0
SX-RR1251	3.40	1.78	1.0
C-G333NT	3.44	1.77	1.0
C-RR059	3.48	1.90	1.0
SX-1212RR	3.50	1.63	1.0
C-G515	3.59	2.00	1.0
C-G351NT	3.62	2.34	1.0
HM-173RR	4.08	2.15	1.0
B-149N	4.10	2.07	1.0
HM-NT9607RR	4.36	2.75	1.0
MA-513NT	4.58	2.90	1.0
HIL-9732NT	4.59	2.71	1.0
HM-28RR	4.70	2.89	1.0
HM-9616RR	4.85	3.15	1.0
Susceptible Check	5.81	3.65	1.0
Average	3.7	2.0	1.0

Root and Canopy Ratings (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.

Stand Rating (1 to 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, 2015 & 2016

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
C-G333NT	2.1	12774	17.9	41.7	0.0
HM-28RR	2.1	11846	17.0	40.6	0.3
SX-1212RR	2.1	12081	17.0	40.8	0.2
B-149N	2.2	12644	17.7	41.7	0.0
HIL-9732NT	2.2	12746	18.2	40.4	1.0
C-RR059	2.2	12564	18.5	39.3	0.0
HM-173RR	2.2	12119	17.3	41.0	0.2
SX-RR1245N	2.2	12731	17.6	41.7	0.2
B-133N	2.2	11482	17.8	37.7	0.2
C-G515	2.2	11876	18.2	38.3	0.2
SX-RR1251	2.2	12362	17.6	40.2	0.2
B-12RR2N	2.2	12285	18.2	38.9	0.2
B-1399	2.2	12026	17.6	39.5	0.0
SX-RR1243	2.2	11642	17.4	38.3	0.4
MA-513NT	2.2	12354	18.2	39.4	1.7
HM-NT9617RR	2.3	10787	17.5	35.8	0.2
B-18RR4N	2.3	10891	17.4	36.3	0.5
C-G351NT	2.4	11601	18.2	36.5	0.2
HM-9616RR	2.4	10353	18.2	32.7	2.2
HM-NT9607RR	2.5	10407	18.2	33.0	2.0
Susceptible Check	3.7	6781	15.8	25.2	100.0
Average	2.3	11635.5	17.7	38.0	5.2
LSD 5%	0.2	1148.0	0.5	3.8	1.1
CV %	4.9	4.7	1.4	4.8	10.0

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 to 100 (worst)

Fusarium Nursery

American Crystal Sugar Company

Average of 2 years, 2015 - 2016

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	2016 Rating 1-9	2015 Rating 1-9
B-1399	**2.2**	2.2	2.2
Tolerant Check	**2.4**	2.5	2.3
B-133N	**2.6**	2.6	2.6
C-RR059	**2.7**	2.7	2.7
C-G333NT	2.9	2.6	3.1
C-G515	2.9	2.8	2.9
B-149N	3.2	3.3	3.0
B-18RR4N	3.2	3.3	3.2
C-G351NT	3.4	3.6	3.2
B-12RR2N	3.4	3.4	3.4
HM-NT9617RR	3.7	4.1	3.4
SX-RR1243	3.9	3.8	4.0
SX-1212RR	4.0	3.9	4.1
HM-NT9607RR	4.0	4.1	3.9
SX-RR1251	4.0	4.1	4.0
HM-9616RR	4.4	4.8	3.9
SX-RR1245N	4.4	4.8	3.9
Susceptible Check	4.5	4.7	4.2
HM-173RR	4.6	4.6	4.5
HIL-9732NT	5.0	5.1	4.8
MA-513NT	5.0	5.2	4.8
HM-28RR	5.0	4.9	5.1
Average	3.7	3.8	3.6
LSD 5%	0.5		
CV%	6.9		

Rating Scale: 1 to 9 (Foliar Ratings) 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 Trials

Michigan Sugar Company

Location Information

	Kinde	Ithaca	Richville	Pigeon	Akron	Freeland	Breckenridge
Grower	Grekowicz	Stoneman	SVREC	Trost	Rayl	Shaffner	Stoneman
Trial Quality	Very Good	Good	Good	Good	Fair	Fair	Poor
Planted	May 5	May 9	Apr 15	May 3	Apr 20	Apr 18	Apr 25
Harvested	Oct 6	Oct 19	Oct 10	Oct 5	Sep 21	Oct 12	Sep 15
Soil Type	Loam	Loam	Sandy Clay Loam	Sandy Clay Loam	Sandy Loam	Silt Loam	Sandy Clay Loam
Soil pH	7.6	6.7	7.7	7.1	7.3	7.3	6.7
Soil OM	3.3%	3.4%	2.5%	2.9%	2.8%	3.2%	3.9%
Phosphorus	Above Opt	Above Opt	Optimum	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	Medium	Medium	Low
Boron	Medium	Low	Medium	Medium	Medium	Medium	Low
Zinc	Medium	High	Medium	High	High	High	High
Nitrogen Added	Manure+60 lbs	120 lbs	120 lbs	120 lbs	150 lbs	150 lbs	Manure+60lbs
Seasonal Rainfall*							
April			1.43		1.18	1.69	1.29
May	2.56	4.19	0.39	2.78	2.65	3.18	3.25
June	3.15	0.72	1.52	2.00	1.35	0.73	0.5
July	2.38	4.91	3.8	1.91	3.75	2.74	3.21
August	5.64	5.78	6.67	6.14	5.71	6.84	5.20
September	2.98	3.19	2.81	2.54	1.81	3.88	1.5
October	0.40	3.37	0.41	0.34		1.36	
Total	17.11	22.16	17.03	15.71	16.45	20.42	14.95

* Rainfall amounts included from month of planting to the date of harvest at each location.

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Official Variety Trials

Cercospora Fungicides: Application Dates and Products

Location	Treatment 1	Treatment 2	Treatment 3	Treatment 4
Grekowicz	7/12 - Inspire XT + Manzate Max	7/26 - Super Tin + Dithane	8/4 - Topguard + Manzate Max	8/18 - Super Tin + Dithane
Maust	7/12 - Inspire XT + Manzate Max	7/26 - Super Tin + Dithane	8/4 - Topguard + Manzate Max	8/22 - Super Tin + Dithane
Rayl	7/11 - Inspire XT + Manzate Max	7/25 - Super Tin + Dithane	8/3 - Topguard + Manzate Max	8/15 - Super Tin + Manzate Max
Shaffner	6/29 - Manzate Max	7/11 - Inspire XT + Manzate Max	7/26 - Super Tin + Dithane	8/3 - Topguard + Manzate Max
Stoneman - Breck.	6/30 - Manzate Max	7/11 - Inspire XT + Manzate Max	7/25 - Super Tin + Dithane	8/3 - Topguard + Manzate Max
Stoneman - Ithaca	7/11 - Inspire XT + Manzate Max	7/25 - Super Tin + Dithane	8/3 - Topguard + Manzate Max	8/15 - Super Tin + Manzate Max
SVREC	7/11 - Inspire XT + Manzate Max	7/26 - Super Tin + Dithane	8/5 - Topguard + Manzate Max	8/19 - Super Tin + Dithane
Trost	6/30 - Manzate Max	7/11 - Inspire XT + Manzate Max	7/25 - Super Tin + Dithane	8/3 - Topguard + Manzate Max

Location	Treatment 5	Treatment 6	Treatment 7	Trial Cercospora Rating
Grekowicz	8/30 - Eminent + Dithane	9/12 - Dithane		1.11
Maust	8/31 - Eminent + Dithane	9/12 - Manzate Flowable		2.30
Rayl	8/29 - Eminent + Dithane	9/12 - Badge SC		2.20
Shaffner	8/18 - Super Tin + Manzate Max	8/29 - Eminent + Dithane	9/13 - Badge SC + Manzate Flowable	2.80
Stoneman - Breck.	8/15 - Super Tin + Manzate Max	8/29 - Eminent + Dithane		N/A
Stoneman - Ithaca	8/29 - Eminent + Dithane	9/9 - Dithane		1.78
SVREC	8/29 - Eminent + Dithane	9/9 - Dithane		1.78
Trost	8/19 - Super Tin + Manzate Max	8/30 - Eminent + Dithane	9/12 - Manzate Flowable	0.81

Comments: Average application timing following Triazoles tank mixed with EBDC's was 14.5 days.
Average application timing following Super Tin tank mixed with EBDC's was 9 days. (sprayed mid season during high pressure)
Average application timing following an EBDC or Copper sprayed alone was 10 days. (sprayed early or late season under reduced pressure)
Applications are made at 22.5 GPA/water and 100 PSI.
Cercospora ratings are on 0-9 scale (lower is better), economic injury begins at level of 3.

NOTES

NOTES

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Michigan Sugar Company
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Bay City, MI 48708

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