



MICHIGAN SUGARBEET REACH

Research & Education Advisory Council



2010 VARIETY TRIAL RESULTS

REACH - 2010 VARIETY TRIAL RESULTS

TABLE of CONTENTS

<u>Table of Contents</u>	1	<u>WEST District Trials</u>	
		MSC OVT - Kawkawlin	25
<u>Approved Varieties</u>	2	MSC Plant to Stand - Kawkawlin	26
		SBA Variety Trial - Bay City	27
<u>Summary of Data</u>		SBA Variety Trial - Breckenridge	28
2 Year OVT Data - Percent of Check	4	<u>Nursery Data</u>	
Rhizoctonia Choices	5	Rhizoctonia - MSC Avg of 2 Years	30
Cercospora Choices	5	Rhizoctonia - USDA, 2 Years	31
High Sugar Choices	6	Cercospora - Avg of 2 Years	32
Cyst Nematode Choices	6	Cyst Nematode	33
2 Year OVT Data - Trial Results	7	Aphanomyces - Avg 2 years	34
OVT - Average of 4 Locations	8	Root Aphid	35
SBA Variety Trial Avg. - 5 Locations	9	Rhizomania - 2009 Data	36
SBA Emergence Avg. - 7 Locations	10		
SBA Rhizoctonia Summary	11	<u>SBA Rhizoctonia Variety Trials &</u>	
		<u>& Poncho Beta / Nematode Variety Trials</u>	
<u>EAST District Trials</u>		Rhiz. Resistant Trial - Breckenridge	38
MSC OVT - Sandusky	13	Rhiz. Resistant Trial - Pigeon	39
SBA Variety Trial - Harbor Beach	14	Poncho Beta / Nematode - Sebewaing	40
SBA Variety Trial - Sandusky	15	Poncho Beta / Nematode - Akron	41
SBA Variety Trial - Lambton, Ontario	16	Poncho Beta - Munger	42
		Poncho Beta - Saginaw	43
<u>CENTRAL District Trials</u>		<u>OVT Location Information</u>	44
MSC OVT - Pigeon	18		
MSC Plant to Stand - Pigeon	19	<u>Variety Approval Standards</u>	45-46
MSC OVT - Quanicassee	20		
MSC OVT - Frankenmuth	21	<u>Variety Approval Points System</u>	47-52
SBA Variety Trial - Elkton	22		
SBA Variety Trial - Unionville	23		

MICHIGAN SUGAR COMPANY

Approval of Seed Varieties for the 2011 Crop

Subject to it being lawful to purchase, receive, distribute and plant the varieties specified,

the Seed Committee and Board of Michigan Sugar Company approved quantities of seed for commercial planting of the following varieties for the 2011 crop:

Fully Approved Varieties

(Unlimited Quantities)

			<u>Until 2011</u>
HM 27RR	HM 110RR	HM 131RR	Beta 5833R*
HM 50RR	Crystal RR840	SX 1281RR	Beta 5930R*
HM 42RR	BTS 18RR26	HM133RR	SX 1233*
SX 1260RR			Crystal R509*

*Last year to plant is 2011

Limited Approved Varieties

(Quantities limited to 5% of acres)

Crystal RR191
 HM 9173RR
 Crystal RR197

Specialty Approved Varieties

(Limited Quantities)

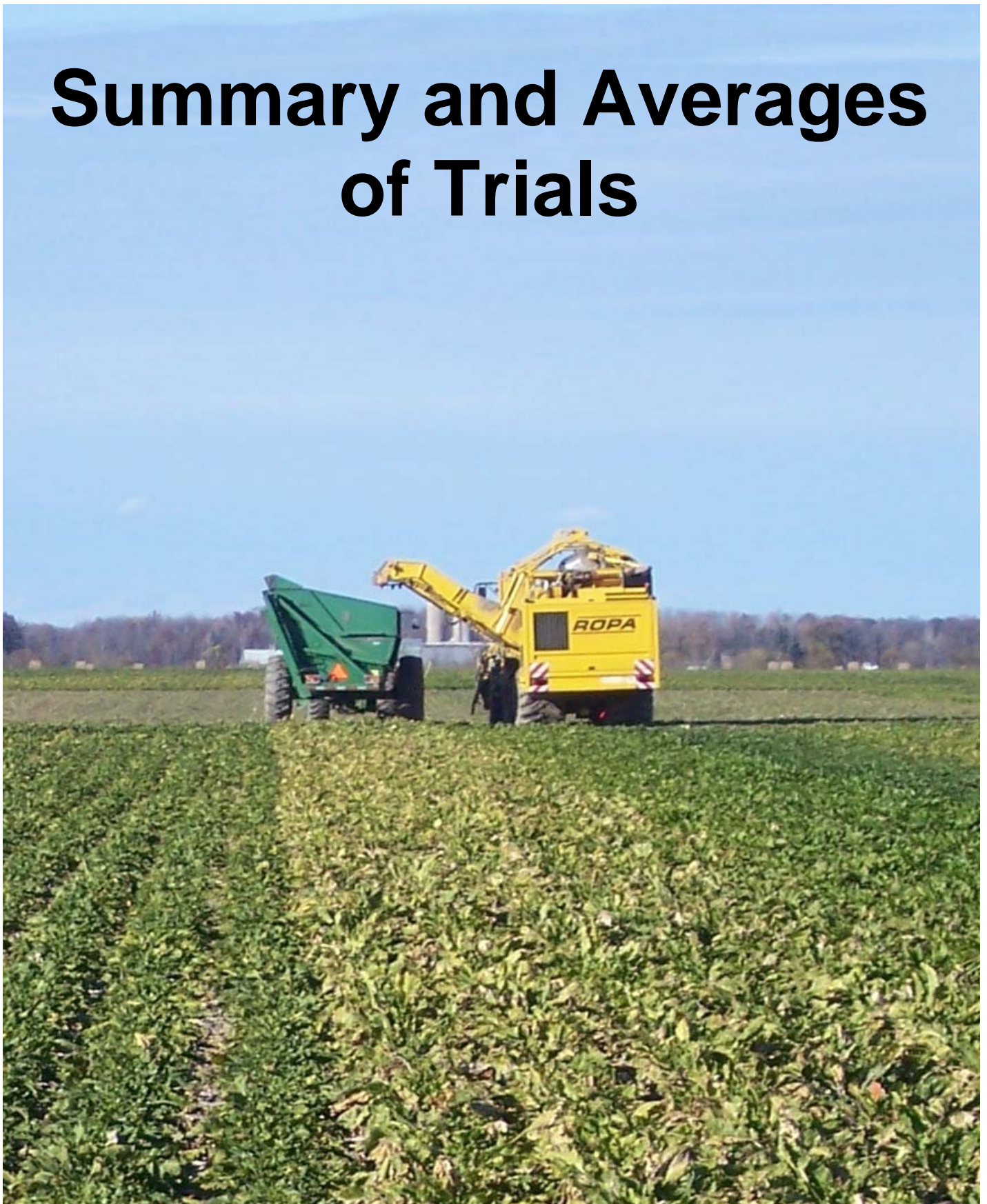
	<u>Units</u>	<u>Specialty</u>
HM 28RR		Rhizoctonia
HM 29RR		Rhizoctonia
BTS 17RR32		High Sugar
Crystal RR827		High Sugar
Crystal RR824		High Sugar
Crystal RR808		High Sugar
BTS 18RR4N		Nematode
HM 39RR		Rhizoctonia
BTS 18RR06		High Sugar
BTS 19RR90	5% Sales	High Sugar
SX 1291RR	5% Sales	Disease Pkg
BTS 19RR1N		Nematode



Corporate Agricultural Office
 2600 S. Euclid Avenue
 Bay City, Michigan 48706
 Telephone (989) 686-0161 - Fax (989) 671-3714

Use of these varieties is subject to them being lawful to purchase, receive, distribute and plant.

Summary and Averages of Trials





Varieties
May Be Available
Summary

Average of 2 Years OVT Data (2009-2010)

Values are % of Check

Variety	Approval Status	\$/A*	RWSA*	RWST*	Cerc**	Rhizoc**	Root** Aphid	Comments
Crystal RR827	Spec (RWST)	2006	109.8	108.1	115	109	99	Poor Rhizoc / Poor Cercospora
Crystal RR808	Spec (RWST)	1998	109.4	107.8	113	109	93	Poor Rhizoc / Poor Cercospora
BTS 19RR1N	Spec (Nem)	1994	109.3	102.1	131	109	147	Poor Rhizoc / Poor Cercospora
Crystal RR824	Spec (RWST)	1977	108.2	101.4	110	113	87	Poor Rhizoc / Poor Cercospora
BTS 18RR4N	Spec (Nem)	1961	107.5	103.2	118	107	131	Poor Rhizoc / Poor Cercospora
BTS 17RR32	Spec (RWST)	1905	104.4	100.3	113	110	77	Poor Rhizoc / Poor Cercospora
BTS 18RR26	Full Approval	1868	102.0	105.2	91	105	118	Fair - Rhizoc / Good Cercospora
Crystal RR840	Full Approval	1857	101.3	104.3	84	101	118	Fair Rhizoc / Good + Cercospora
HM 28RR	Spec (Rhizoc)	1837	100.3	99.0	98	98	112	Fair + Rhizoc / Fair + Cercospora
BTS 19RR90	Spec (RWST)	1835	100.1	103.9	108	107	60	Fair - Rhizoc / Fair - Cercospora
SX 1291RR	Spec (Dis Pkg)	1821	99.4	99.4	98	100	128	Fair+ Rhizoc / Fair + Cercospora
SX 1260RR	Full Approval	1808	98.9	98.8	101	108	130	Fair - Rhizoc / Fair + Cercospora
BTS 18RR06	Spec (RWST)	1801	98.5	105.1	115	107	55	Poor Rhizoc / Poor Cercospora
HM 110RR	Full Approval	1800	98.4	101.7	96	100	136	Fair + Rhizoc / Fair + Cercospora
HM 39RR	Spec (Rhizoc)	1796	97.9	99.2	113	88	150	Good Rhizoc / Poor Cercospora
SX 1281RR	Full Approval	1795	97.9	101.2	93	103	107	Fair Rhizoc / Good Cercospora
HM 133RR	Full Approval	1794	97.8	102.1	91	106	87	Fair - Rhizoc / Good Cercospora
HM 131RR	Full Approval	1774	96.9	101.4	89	102	112	Fair Rhizoc / Good Cercospora
HM 9173RR	Limited Approval	1767	96.5	100.0	94	106	123	Fair - Rhizoc / Good Cercospora
HM 27RR	Full Approval	1750	95.4	100.5	91	101	132	Fair Rhizoc / Good Cercospora

** A lower Value is Better for Cercospora, Rhizoctonia and Root Aphid

* A higher Value is Better for \$/Acre, RWSA and RWST

Use of these varieties is subject to them being lawful to purchase, receive, distribute and plant.



*Rhizoctonia &
Cercospora
Possible Choices for 2011*

2009-2010 Data

All Values Are % of Check

Rhizoctonia

Variety	Rhizoc**	RWSA*	RWST*	Cerc**	Comments
HM 39RR	87.9	97.9	99.2	112.7	Very Good Rhizoc Variety Root Aphid is a Concern
HM 27RR	100.7	95.4	100.5	91.2	Good Field Performance Root Aphid is a Concern
HM 28RR	97.9	100.3	99.0	97.7	Proven Field Performance Good Yield
HM 131RR	101.7	96.9	101.4	89.1	Good Quality
SX 1291RR	99.9	99.4	99.4	98.2	Good Yield
HM 110RR	99.7	98.4	101.7	95.8	Root Aphid is a Concern

All Values are % of Check

Cercospora

Variety	Cerc**	RWSA*	RWST*	Rhizoc**	Comments
Crystal 840RR	83.9	101.3	104.3	101.3	Emergence is a Concern
BTS 18RR26	90.9	102.0	105.2	105.2	Very Good Aph
HM 131RR	89.1	96.9	101.4	101.7	Well Balanced Variety
SX 1281RR	92.6	97.9	101.2	103.0	Well Balanced Variety
HM 133RR	90.6	97.8	102.1	106.1	Well Balanced Variety
HM 27RR	91.2	95.4	100.5	100.7	Root Aphid is a Concern

* A Higher Value is Better for RWSA and RWST

** A Lower Value is Better for Cercospora and Rhizoctonia

Use of these varieties is subject to them being lawful to purchase, receive, distribute and plant.



*High Sugar &
Nematode
Possible Choices for 2011
2009-2010 Data*

All Values are % of Check

High Sugar

Varieties	RWST*	RWSA*	Rhizoc**	Cerc**	Comments
Crystal RR808	107.8	109.4	109	113	V. High Quality and Yield, Poor Disease
Crystal RR827	108.1	109.8	109	115	V. High Quality and Yield, Poor Disease
BTS 18RR26	105.2	102.0	105	91	High Yield and Quality, Good Cerc
BTS 18RR06	105.1	98.5	107	115	High Quality, Fair Disease Tolerance
Crystal RR840	104.3	101.3	101	84	High Yield and Quality, Good Cerc
BTS 19RR90	103.9	100.1	107	108	High Quality, Moderate Yield
HM 133RR	102.1	97.8	106	91	High Quality, Good Cerc
HM 110RR	101.7	98.4	100	96	High Quality, Good Disease Tolerance
Crystal RR824	101.4	108.2	113	110	Very High Yield, Poor Rhizoc and Cerc
HM 131RR	101.4	96.9	102	89	Fairly Good Rhizoc and Cerc
SX 1281RR	101.2	97.9	103	93	Fair Rhizoc / Good Cerc
BTS 17RR32	100.3	104.4	110	113	High Yield, Poor Rhizoc and Cerc

All Values are % of Check

Nematode

Varieties	Nem**	RWSA*	RWST*	Rhizoc**	Cerc**	Comments
BTS 18RR4N	61	107.5	103.2	107	118	Performed Well in 2010
BTS 19RR1N	71	109.3	102.1	109	131	No Field Experience

** Lower is better for Nematode, Cercospora and Rhizoctonia

* Higher is better for RWSA and RWST

Use of these varieties is subject to them being lawful to purchase, receive, distribute and plant.



*Varieties
May Be Available
For 2011*

Average of 2 Years OVT Data (2009-2010)

Variety	Approval Status	\$/A*	RWSA	RWST	Tons/ Acre	% Suc	% CJP	Emerg	Disease/Insect Nurseries			
									Cerc	Aphid	Rhizoc	Aph
Crystal RR827	Spec (RWST)	2006	10152	295.9	34.4	19.8	95.3	Fair	Poor	Fair +	Poor	Fair +
Crystal RR808	Spec (RWST)	1998	10131	295.2	34.4	19.7	95.3	Fair +	Poor	Fair +	Poor	Fair +
BTS 19RR1N	Spec (Nem)	1994	10086	279.4	36.2	18.7	95.3	Good +	Poor	Poor	Poor	Fair +
Crystal RR824	Spec (RWST)	1977	10022	277.5	36.2	18.7	95.0	Fair +	Poor	Good	Poor	Fair +
BTS 18RR4N	Spec (Nem)	1961	9916	282.2	35.3	18.9	95.4	Good	Poor	Poor	Poor	Good +
BTS 17RR32	Spec (RWST)	1905	9677	274.5	35.2	18.4	95.2	Fair	Poor	Good	Poor	Good
BTS 18RR26	Full Approval	1868	9459	288.2	32.9	19.3	95.1	Fair -	Good	Fair -	Fair -	Good
Crystal RR840	Full Approval	1857	9396	285.5	33.0	19.2	94.9	Poor	Good +	Fair -	Fair	Poor
HM 28RR	Spec (Rhizoc)	1837	9305	271.0	34.4	18.2	95.2	Fair	Fair +	Fair	Fair +	Fair -
BTS 19RR90	Spec (RWST)	1835	9297	284.5	32.7	19.1	95.1	Good +	Fair -	Good +	Fair -	Fair +
SX 1291RR	Spec (Rhizoc)	1821	9240	272.2	34.0	18.3	95.2	Good +	Fair +	Fair -	Fair +	Fair
SX 1260RR	Full Approval	1808	9172	270.7	33.9	18.3	95.0	Good	Fair +	Fair -	Fair -	Fair +
BTS 18RR06	Spec (RWST)	1801	9130	287.8	31.8	19.3	95.3	Fair -	Poor	Good +	Poor	Fair +
HM 110RR	Full Approval	1800	9145	278.5	32.8	18.7	95.3	Fair	Fair +	Poor	Fair +	Poor
HM 39RR	Spec (Rhizoc)	1796	9117	271.8	33.5	18.3	95.0	Fair	Poor	Poor	Good	Fair
SX 1281RR	Full Approval	1795	9111	277.0	32.9	18.7	95.1	Fair	Good	Fair	Fair	Fair
HM 133RR	Full Approval	1794	9103	279.4	32.6	18.9	94.8	Fair	Good	Good	Fair -	Fair
HM 131RR	Full Approval	1774	9005	277.7	32.4	18.8	94.9	Fair	Good	Fair	Fair	Fair +
HM 9173RR	Limited Approval	1767	8958	273.9	32.8	18.6	94.8	Fair +	Good	Fair -	Fair -	Fair +
HM 27RR	Full Approval	1750	8879	275.3	32.3	18.5	95.2	Fair	Good	Poor	Fair	Fair -
Average		1857	9415	279.9	33.7	18.8	95.1					
LSD (P=.05)			660.7	9.2	1.9	0.5	0.5					
CV%			3.4	1.6	2.7	1.3	0.2					

* \$/Acre was figured using a \$55.00 per ton payment.

Use of these varieties is subject to them being lawful to purchase, receive, distribute and plant.



*Official
Variety
Trial*

Average of 4 Locations
(Frankenmuth, Quanicassee, Sandusky, Pigeon)
2010

Variety	\$/Acre ¹	<u>RWSA</u>	<u>RWST</u> Rank	<u>Tons/A</u> Rank	<u>% Suc</u> Rank	<u>% CJP</u> Rank	<u>% Emerg</u> Rank
BTS 19RR1N	1982*	9712*	276.9 6	35.3* 1	18.7 8	95.0* 2	79.3* 1
BTS 18RR4N	1970*	9628*	281.7* 3	34.5* 2	18.9 4	95.1* 1	67.2 6
Crystal RR827	1960*	9588*	289.7* 1	33.4 5	19.5* 1	94.8* 3	63.3 12
Crystal RR808	1913*	9385*	288.0* 2	32.8 6	19.4* 2	94.8* 4	62.3 13
Crystal RR824	1889*	9261*	271.4 10	34.3* 3	18.5 10	94.6 6	67.9 5
BTS 17RR32	1809	8879	266.2 13	33.5 4	18.1 16	94.7* 5	66.1 8
BTS 18RR26	1760	8610	276.9 7	31.4 10	18.8 6	94.6 7	56.4 20
Crystal RR840	1751	8561	277.4 5	31.1 11	18.9 5	94.4 13	58.3 19
HM 28RR	1717	8400	262.6 17	32.3 8	17.9 17	94.5 11	65.8 9
BTS 18RR06	1708	8346	280.0 4	30.1 17	19.0* 3	94.5 9	59.9 18
SX 1260RR	1698	8335	258.0 19	32.5 7	17.7 20	94.3 15	66.6 7
BTS 19RR90	1697	8308	273.3 8	30.6 14	18.6 9	94.5 10	74.9 2
SX 1291RR	1666	8152	261.7 18	31.4 9	17.9 18	94.5 12	74.0 3
HM 110RR	1651	8101	269.6 11	30.2 16	18.4 13	94.6 8	60.5 17
HM 9173RR	1651	8076	262.8 16	31.0 13	18.2 14	94.0 19	70.2 4
HM 131RR	1639	8017	266.1 14	30.4 15	18.4 12	93.9 20	61.9 14
SX 1281RR	1633	7996	268.4 12	30.0 18	18.4 11	94.3 16	60.7 16
HM 39RR	1625	7947	257.7 20	31.1 12	17.7 19	94.2 17	65.7 10
HM 133RR	1621	7931	272.0 9	29.4 20	18.7 7	94.1 18	61.1 15
HM 27RR	1591	7781	264.9 15	29.6 19	18.1 15	94.4 14	63.4 11
Average	1747	8551	271.3	31.7	18.5	94.5	65.3
LSD (P=.05)	102.7	503.1	8.6	1.6	0.5	0.4	2.8
CV	4.2	4.3	2.3	3.6	2.0	0.3	4.5

1. \$/Acre: Gross dollars per acre assuming \$55 payment

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

Reps: 8 at each location

Quadris:1 Application

Row Width: 22 Inches

Cercospora Sprays: 4

Use of these varieties is subject to them being lawful to purchase, receive, distribute and plant.



2010 VARIETY TRIAL

Trial Averages - 5 of 7 Trials*

Cedar Pond Farms (Harbor Beach)
Knoerr Farms (Bay City)

Clay Crumbaugh (Breckenridge)
LAKKE Ewald Farms (Unionville)

Wadsworth Farms (Sandusky)

VARIETY	REV / ACRE	RWSA	RWST	TONS / ACRE	% SUGAR	% CJP
C-RR827	\$1,758	9304	307	30.3	20.5	95.2
C-RR824	\$1,740	9205	290	31.8	19.4	95.3
B-17RR32	\$1,680	8889	286	31.1	19.2	95.1
C-RR808	\$1,655	8784	303	28.9	20.2	95.4
HM-28RR	\$1,601	8488	278	30.5	18.9	94.8
B-18RR06	\$1,568	8305	299	27.8	20.0	95.1
B-18RR26	\$1,560	8295	296	27.9	20.0	94.9
C-RR840	\$1,549	8195	293	28.0	19.7	94.9
SX-1281RR	\$1,531	8110	287	28.2	19.3	94.9
HM-133RR	\$1,531	8109	288	28.1	19.5	94.8
HM-131RR	\$1,491	7916	286	27.6	19.4	94.8
HM-110RR	\$1,491	7900	281	28.1	19.1	94.6
AVERAGE	\$1,596	8458	291	29.0	19.6	94.9
LSD (5%)	--	533	8	1.5	0.4	0.4
C.V. (%)	--	5	2	4.1	1.5	0.4

Comments:

* The Schuette trial was not included in the "Trial Averages" due to a very high level of Cercospora Leaf Spot infection significantly impacting the results. Please see the Schuette trial individually.

The Lumley trial was not included in the "Trial Averages" due to very high variation. Use the Lumley trial data with caution.

Revenue is based on a \$55/ton payment and an "average RWST" equal to the trial averages of 291.

Use of these varieties is subject to them being lawful to purchase, receive, distribute and plant.

2010 VARIETY TRIALS

Emergence Summary

Averages of 7 Trials

EARLY COUNT	
8 - 17 Days	
SX-1281RR	84
HM-131RR	70
HM-133RR	69
C-RR827	57
C-RR824	52
HM-28RR	43
HM-110RR	43
B-17RR32	43
C-RR840	42
C-RR808	42
B-18RR26	37
B-18RR06	18
AVERAGE	50
LSD (5%)	13
CV (%)	24

MID COUNT	
16 - 32 Days	
SX-1281RR	154
HM-133RR	150
HM-131RR	148
C-RR824	146
HM-28RR	143
HM-110RR	140
C-RR808	136
B-17RR32	136
C-RR827	135
B-18RR06	123
B-18RR26	112
C-RR840	109
AVERAGE	136
LSD (5%)	14
CV (%)	10

FINAL COUNT	
29 - 43 Days	
C-RR824	181
HM-28RR	174
SX-1281RR	172
HM-133RR	170
C-RR808	168
B-17RR32	166
HM-131RR	165
HM-110RR	165
C-RR827	158
B-18RR06	156
B-18RR26	135
C-RR840	128
AVERAGE	162
LSD (5%)	11
CV (%)	6

Comments:

Stand Counts based on three 100 ft. replications at 7 locations.

2010 VARIETY TRIALS

Rhizoctonia Dead Beet Counts

	Cedar Pond	Crumbaugh	Ewald	Knoerr	Lumley	Schuetzte	Wadsworth	Average
HM-131RR	0	88	4	8	27	0	17	21
HM-133RR	0	98	14	8	19	0	25	23
HM-28RR	0	117	11	8	50	1	20	30
HM-110RR	0	93	39	9	51	0	41	33
C-RR840	0	134	46	17	17	4	50	38
B-18RR06	2	129	71	30	27	4	35	43
B-18RR26	0	158	9	49	56	12	58	49
SX-1281RR	0	119	19	5	202	0	38	55
B-17RR32	1	184	42	18	81	9	91	61
C-RR827	0	237	122	28	162	11	89	93
C-RR808	2	151	176	67	191	19	83	98
C-RR824	6	166	126	39	258	13	122	104
AVERAGE	1	140	57	24	95	6	56	54
LSD (5%)	NS	107	94	45	188	13	70	38
CV (%)	NS	45	98	112	117	129	74	66

Dead Beets per 1200 Ft. of Row

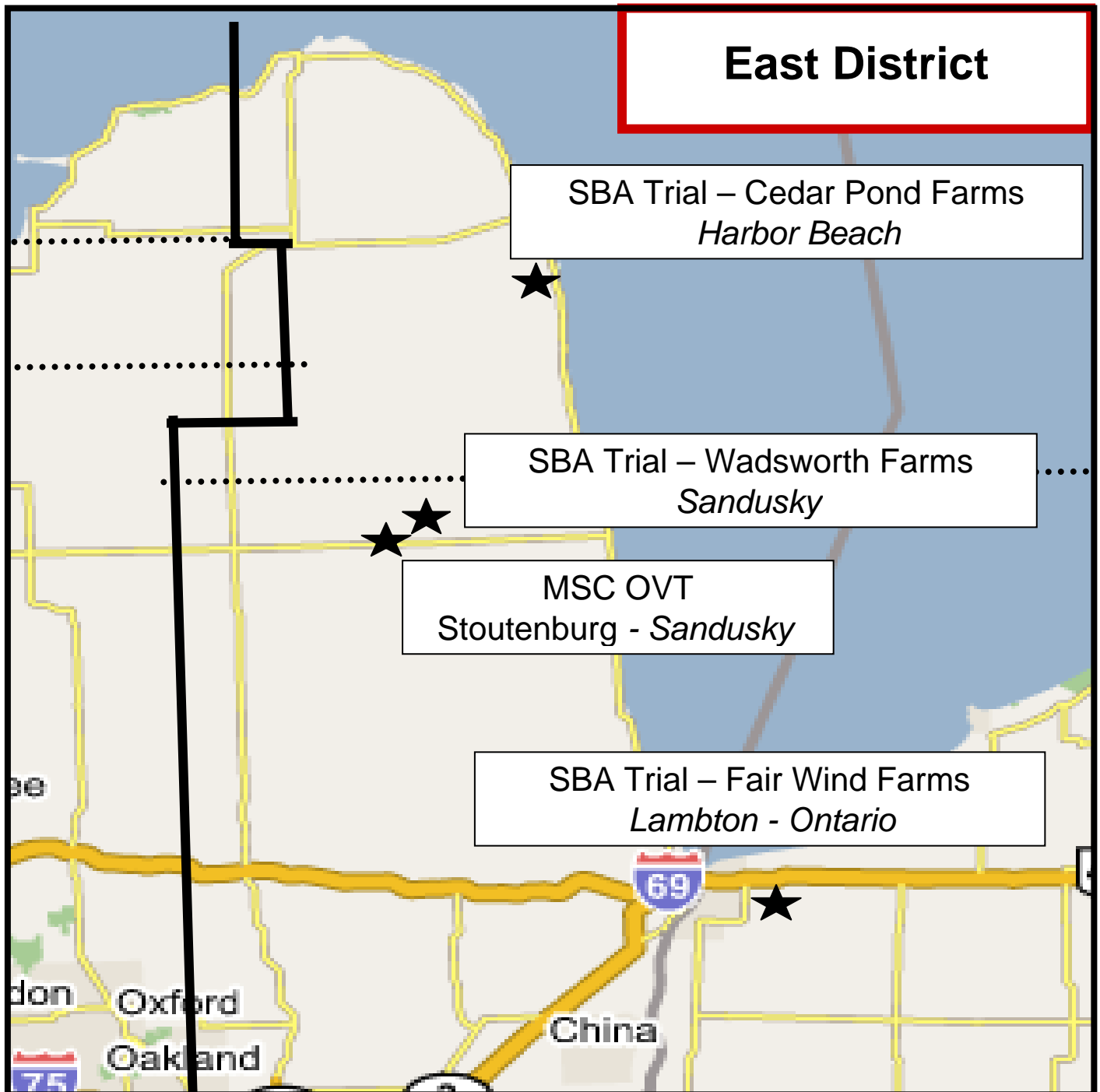
Averages of the 4 Most Representative Trials

	Crumbaugh	Ewald	Knoerr	Wadsworth	Average
HM-131RR	88	4	8	17	29
HM-133RR	98	14	8	25	36
HM-28RR	117	11	8	20	39
SX-1281RR	119	19	5	38	45
HM-110RR	93	39	9	41	45
C-RR840	134	46	17	50	62
B-18RR06	129	71	30	35	66
B-18RR26	158	9	49	58	69
B-17RR32	184	42	18	91	84
C-RR824	166	126	39	122	113
C-RR827	237	122	28	89	119
C-RR808	151	176	67	83	119
AVERAGE	140	57	24	56	69
LSD (5%)	107	94	45	70	38
CV (%)	45	98	112	74	39

The Cedar Pond and Schuetzte trials were not included due to very low counts.
The Lumley trial was not included due to high variability.

Use of these varieties is subject to them being lawful to purchase, receive, distribute and plant.

East District Trials





*Official
Variety
Trial*

Stoutenburg, Sandusky, MI
2010

Trial Quality: Very Good

Variety	\$/Acre ¹	RWSA	RWST Rank		Tons/A Rank		% Suc Rank		% CJP Rank		% Emerg Rank	
Crystal RR808	2089*	10017*	292*	1	34.3*	4	19.6*	1	95.1*	1	58	11
Crystal RR827	2031*	9737*	286*	2	34.1*	5	19.4*	2	94.6*	9	55	14
BTS 18RR4N	2026*	9711*	276	6	35.2*	2	18.6	6	95.1*	2	58	10
BTS 19RR1N	2011*	9641*	274	7	35.2*	1	18.5	8	95.0*	3	77*	1
Crystal RR824	1955	9372	272	9	34.5*	3	18.6	7	94.4	12	59	8
BTS 18RR26	1880	9011	280	3	32.3	11	19.2*	3	94.1	17	45	20
BTS 17RR32	1862	8925	265	10	33.6*	8	18.1	12	94.6*	5	58	9
BTS 19RR90	1842	8833	278	4	31.8	15	18.9	5	94.6*	8	74*	2
Crystal RR840	1814	8699	272	8	32.0	14	18.5	9	94.7*	4	51	19
HM-28RR	1804	8650	255	17	33.9*	7	17.5	18	94.5*	10	63	7
SX 1260RR	1794	8601	253	19	34.0*	6	17.4	19	94.3	15	64	6
BTS 18RR06	1783	8549	278	5	30.8	19	19.0	4	94.3	14	51	18
HM-131RR	1774	8503	265	11	32.1	13	18.3	11	94.1	18	54	16
SX 1291RR	1758	8427	256	16	32.9	9	17.5	16	94.6*	6	69	4
HM-9173RR	1747	8377	258	14	32.6	10	18.0	14	93.6	20	72*	3
HM-133RR	1738	8331	263	13	31.7	16	18.3	10	93.7	19	55	15
SX 1281RR	1728	8283	264	12	31.4	17	18.0	13	94.5*	11	54	17
HM-110RR	1654	7929	258	15	30.8	20	17.6	15	94.6*	7	55	13
HM-27RR	1648	7899	254	18	31.1	18	17.5	17	94.2	16	57	12
HM-39RR	1641	7867	245	20	32.1	12	16.9	20	94.4	13	65	5
Average	1829	8768	267		32.8		18.3		94.5		57	
LSD (P=.05)	99.7	478.1	9.5		1.7		0.5		0.6		7.3	
CV	5.7	5.7	3.7		5.3		2.9		0.7		12.6	

1. \$/Acre: Gross dollars per arce assuming \$55 Payment

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

Plant/Harvest Dates: April 21/Oct 12

Row Width: 22 inches

Reps: 8

Quadris: 1 Application

Cercospora Sprays: 4

Use of these varieties is subject to them being lawful to purchase, receive, distribute and plant.



2010 VARIETY TRIAL Cedar Pond Farms

Location: Huron Co., Ruth
Planting Date: 4/1/2010
Previous Crop: Soybeans
Soil Type: Loam
Spacings: Rows - 30", 53,500 Seeds/Ac
Fertilizer: 2x2 - 30# N, 31# P + Micros
 Sidedressed 75# N
 Fall Applied 175# K₂O

Tillage: Fall Chisel, Stale Seed Bed
Harvest Date: 11/2/2010
Sample Date: 10/18/2010
Herbicides: 3x Glyphosate
Replicated: 3x
Fungicide: 50 DSV - Proline
 110 DSV - Headline
 175 DSV - Inspire XT
 215 DSV - Kocide

VARIETY	REV / ACRE	RWSA	RWST	TONS / ACRE	% SUGAR	% CJP	POPULATIONS 100 Ft. of Row				RHIZ. 1200 Ft. of Row
							14 DAY	21 DAY	36 DAY	HARV.	
C-RR824	\$1,936	10682	303	35.3	20.1	95.6	64	171	217	170	6
C-RR827	\$1,847	10198	316	32.3	20.9	95.5	92	170	198	164	0
B-17RR32	\$1,840	10143	293	34.7	19.6	95.2	62	180	212	176	1
C-RR808	\$1,807	9994	313	31.9	20.8	95.5	35	138	183	145	2
HM-28RR	\$1,757	9716	296	32.8	19.7	95.6	45	174	221	180	0
B-18RR26	\$1,749	9666	312	31.0	20.8	95.3	47	132	160	125	0
B-18RR06	\$1,711	9425	312	30.3	20.7	95.5	14	155	197	158	2
C-RR840	\$1,678	9243	307	30.2	20.5	95.1	70	148	174	133	0
SX-1281RR	\$1,645	9072	299	30.4	19.9	95.5	92	184	207	164	0
HM-131RR	\$1,623	8980	302	29.7	20.2	95.3	108	195	211	178	0
HM-133RR	\$1,602	8842	300	29.5	20.1	95.1	88	182	211	169	0
HM-110RR	\$1,554	8573	294	29.2	19.8	95.0	49	161	196	164	0
AVERAGE	\$1,729	9545	304	31.4	20.2	95.3	64	166	199	160	1
LSD (5%)	--	645	10	1.9	0.6	0.7	24	23	21	19	NS
C.V. (%)	--	4	2	3.6	1.6	0.4	22	8	6	7	--

TRIAL RELIABILITY: Excellent

EMERGENCE: Excellent	CERC. LEAF SPOT: Excellent Control
RHIZOCTONIA: Very Low	NEMATODES: None
QUADRIS APP: In Furrow (7 oz.) & 8 Leaf (9 oz.)	WEATHER: Excellent

Comments: Excellent trial reliability. No disease issues from leaf spot or Rhizoctonia. Cooperator had excellent Rhizoctonia control with an in furrow and a foliar Quadris application. Revenue is based on a \$55/ton payment and an "average RWST" equal to the trial average RWST.

Use of these varieties is subject to them being lawful to purchase, receive, distribute and plant.



2010 VARIETY TRIAL Wadsworth Farms Inc.

Location: Sanilac Co., Sandusky
Planting Date: 4/1/2010
Previous Crop: Drybeans
Soil Type: Parkhill Loam
Spacings: Rows - 28", 57,000 Seeds/Ac.
Fertilizer: 2x2 - 240# 14-19-3 + Micros
 80# N Sidedress Anhydrous
 310# K₂O

Tillage: Fall Dominator, Stale Seedbed
Harvest Date: 11/3/2010
Sample Date: 10/18/2010
Herbicides: 3x Glyphosate
Replicated: 3x
Fungicide: 59 DSV - Proline
 124 DSV - Gem
 172 DSV - Inspire XT
 217 DSV - Eminent

VARIETY	REV / ACRE	RWSA	RWST	TONS / ACRE	% SUGAR	% CJP	POPULATIONS 100 Ft. of Row				RHIZ. 1200 Ft. of Row
							10 DAY	20 DAY	30 DAY	HARV.	
C-RR827	\$2,048	10830	310	34.9	20.6	95.4	21	172	199	--	89
C-RR824	\$1,994	10530	287	36.7	19.2	95.4	13	200	234	--	122
C-RR808	\$1,979	10448	312	33.5	20.6	95.8	4	157	201	--	83
HM-28RR	\$1,902	10033	273	36.8	18.5	94.9	9	186	217	--	20
B-18RR06	\$1,895	10008	308	32.5	20.5	95.5	0	155	199	--	35
B17RR32	\$1,890	9977	282	35.4	18.9	95.2	8	173	208	--	91
SX-1281RR	\$1,884	9934	291	34.2	19.4	95.3	72	208	225	--	38
B-18RR26	\$1,858	9817	301	32.6	20.0	95.6	14	146	174	--	58
C-RR840	\$1,853	9780	287	34.1	19.4	94.9	16	148	167	--	50
HM-131RR	\$1,819	9639	281	34.2	19.2	94.5	41	203	216	--	17
HM-133RR	\$1,797	9492	280	33.9	19.0	94.8	35	199	214	--	25
HM-110RR	\$1,743	9212	274	33.6	18.8	94.2	17	189	214	--	41
AVERAGE	\$1,889	9975	291	34.4	19.5	95.1	21	178	206	--	56
LSD (5%)	--	725	17	1.8	0.9	0.8	9	23	17	--	70
C.V. (%)	--	4	4	3.0	2.8	0.5	25	8	5	--	74

TRIAL RELIABILITY: Excellent

EMERGENCE: Excellent	CERC. LEAF SPOT: Excellent
RHIZOCTONIA: Moderate	NEMATODES: None Detected
QUADRIS APP: 4-6 Leaf	WEATHER: ---

Comments: Moderate amount of Rhizoctonia, especially in the first replication. Revenue is based on a \$55/ton payment and an "average RWST" equal to the trial average RWST.

Use of these varieties is subject to them being lawful to purchase, receive, distribute and plant.

Location: Ontario / Mark Lumley
Planting Date: 4/2/2010
Previous Crop: Soybeans
Soil Type: Loam
Spacings: Rows - 20", 52,000 Seeds/Ac
Fertilizer: In Furrow - 5 Gal. 6-24-6
 2x2 - 9 Gal. 28%
 50# N Broadcast

Tillage: Moldboard Plow, 2x S Tine
Harvest Date: 10/22/2010
Sample Date: 10/22/2010
Herbicides: 3x Glyphosate
Replicated: 3x
Fungicide: 60 DSV - Headline
 132 DSV - Proline
 169 DSV - Headline

VARIETY	REV / ACRE	RWSA	RWST	TONS / ACRE	% SUGAR	% CJP	POPULATIONS				RHIZ. 1200 Ft. of Row
							100 Ft. of Row				
							17 DAY	27 DAY	35 DAY	HARV.	
HM-133RR	--	6717	293	23.1	20.0	94.3	107	120	131	128	19
C-RR808	--	6552	306	21.4	20.6	94.9	78	103	119	107	191
HM-28RR	--	6268	286	21.9	19.4	94.5	90	115	123	121	50
B-18RR06	--	6134	307	19.9	20.6	95.1	68	99	102	98	27
C-RR827	--	6044	298	20.3	20.3	94.4	87	105	112	106	162
B-18RR26	--	5919	307	19.3	20.6	94.9	71	83	97	86	56
HM-131RR	--	5710	297	19.3	20.1	94.7	102	110	119	110	27
HM-110RR	--	5716	289	19.8	19.5	94.8	79	104	117	111	51
C-RR824	--	5595	291	19.2	19.7	94.6	112	118	131	124	258
C-RR840	--	5471	298	18.4	20.1	94.7	63	79	87	77	17
B-17RR32	--	5302	278	19.0	19.0	94.4	84	102	111	104	81
SX-1281RR	--	4453	282	15.8	19.5	93.8	106	105	109	105	202
AVERAGE		5824	294	19.8	20.0	94.6	87	103	113	106	95
LSD (5%)	--	NS	11	NS	0.6	0.7	25	16	17	18	188
C.V. (%)	--	20	2	20.0	1.7	0.4	17	9	9	10	117

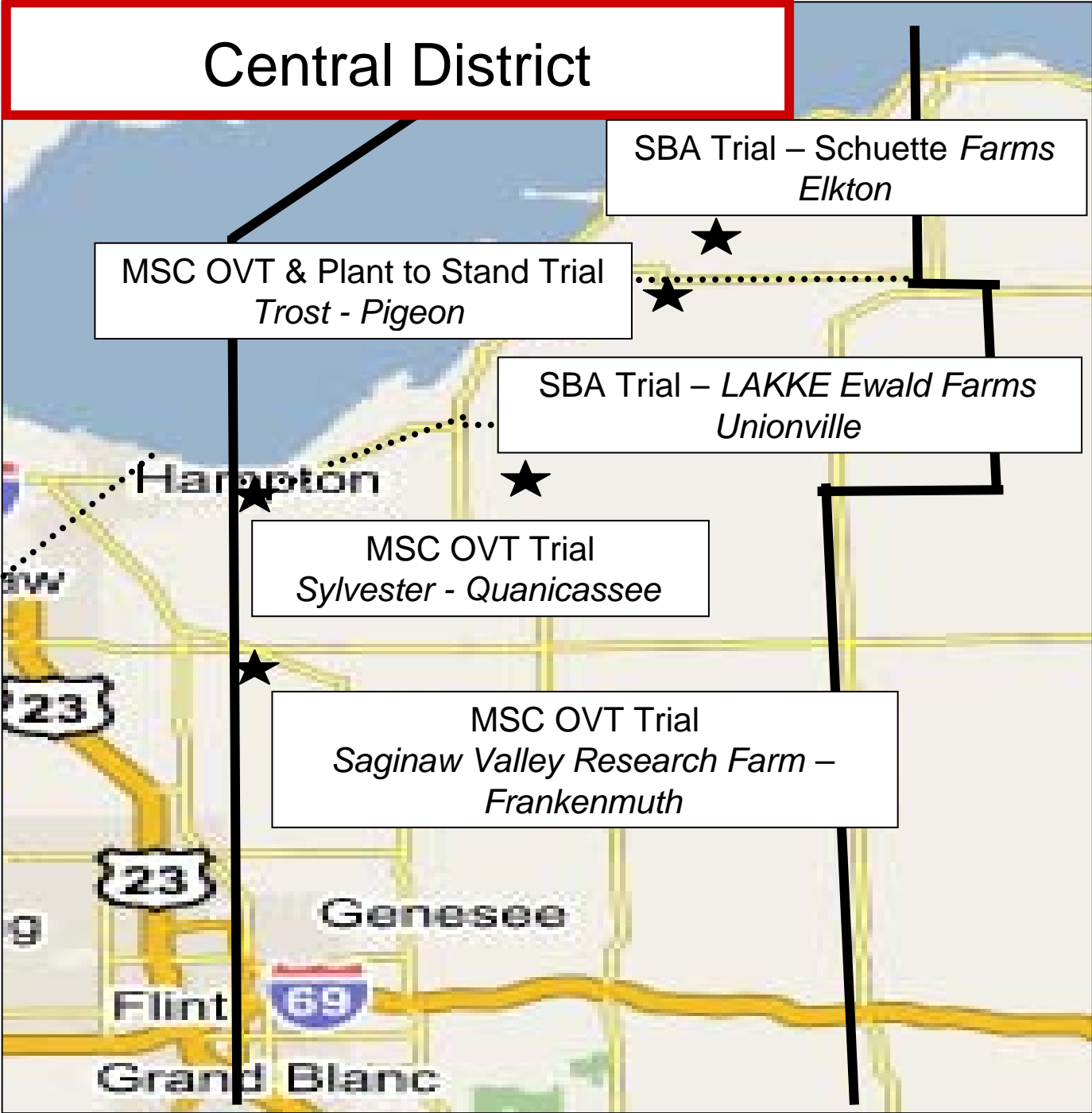
TRIAL RELIABILITY: Very Poor

EMERGENCE: Fair / Poor	CERC. LEAF SPOT: High Infection Level
RHIZOCTONIA: Moderate / High	NEMATODES: None
QUADRIS APP: None	WEATHER: Damaging heavy early rains

Comments: USE TRIAL DATA WITH CAUTION. Data in this trial may be unreliable because of large variability. Emergence population is low. Heavy early season rainfall damaged trial. Significant leaf spot caused defoliation. Trial had high levels of Rhizoctonia in spots. Sprayer tram lines affected results.

Use of these varieties is subject to them being lawful to purchase, receive, distribute and plant.

Central District Trials





*Official
Variety
Trial*

Trost, Pigeon, MI
2010

Trial Quality: Very Good

Variety	\$/Acre ¹	RWSA	<u>RWST</u> Rank	<u>Tons/A</u> Rank	<u>% Suc</u> Rank	<u>% CJP</u> Rank	<u>% Emerg</u> Rank
BTS 18RR4N	2400*	10831*	258.3* 4	41.9* 2	17.7* 4	94.5* 1	71 14
BTS 19RR1N	2342*	10570*	250.6* 11	42.1* 1	17.3 15	94.2* 3	88* 2
Crystal RR827	2221	10024	261.1* 2	38.5 7	18.1* 1	93.9* 7	69 16
Crystal RR824	2208	9962	250.5* 12	39.8 3	17.4 10	93.9* 8	74 9
HM-28RR	2192	9892	250.6* 9	39.5 4	17.3 14	94.2* 5	75 7
SX 1291RR	2186	9865	250.6* 10	39.4 5	17.4 13	94.0* 6	89* 1
HM-110RR	2156	9729	261.3* 1	37.2 15	17.9* 3	94.3* 2	72 11
Crystal RR840	2102	9486	252.6* 7	37.7 10	17.6* 6	93.6 16	62 20
BTS 17RR32	2099	9472	246.3 16	38.5 8	17.2 17	93.8* 9	77 6
SX 1281RR	2096	9456	252.9* 5	37.4 11	17.7* 5	93.6 15	71 12
HM-27RR	2088	9421	252.9* 6	37.3 13	17.6* 7	93.7* 12	74 10
Crystal RR191	2081	9389	242.4 19	38.9 6	16.7 20	94.2* 4	78 4
BTS 19RR90	2064	9315	250.4* 13	37.3 14	17.5* 9	93.6 17	83* 3
HM-133RR	2043	9219	259.1* 3	35.7 19	18.0* 2	93.8* 10	69 17
SX 1260RR	2037	9191	247.0 15	37.3 12	17.2 16	93.7* 11	78 5
BTS 18RR26	2017	9103	245.2 17	37.1 16	17.1 18	93.6 13	65 18
BTS 18RR06	2006	9050	249.2 14	36.4 18	17.4 11	93.6 14	71 13
HM-131RR	1992	8987	245.0 18	36.7 17	17.4 12	92.9 20	74 8
HM-39RR	1991	8982	236.9 20	37.9 9	16.8 19	93.1 19	70 15
Crystal RR193	1890	8529	250.9* 8	34.0 20	17.6* 8	93.5 18	65 19
Average	2111	9524	250.7	38.0	17.4	93.8	73.7
LSD (P=.05)	139.8	630.8	12.0	2.1	0.6	0.8	6.4
CV	6.8	6.8	4.9	5.6	3.6	0.9	8.9

1. \$/Acre: Gross dollars per arce assuming \$55 Payment

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

Plant/Harvest Dates: April 12/Sept 30

Row Width: 22 inches

Reps: 8

Quadris: 1 Application

Cercospora Sprays: 4

Use of these varieties is subject to them being lawful to purchase, receive, distribute and plant.



Trost, Pigeon, MI
2010

*Plant
To
Stand*

Trial Quality: Good

Variety	\$/Acre ¹	RWSA	RWST		Tons/Acre		% Suc		% Purity		% Emerg		Dead Beets**		Cercospora		Canopy	
			Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank
BTS 18RR4N	2175*	10440*	274*	2	38.1*	3	18.5*	4	95.1*	1	82*	10	3.2*	13	3.5	14	25.2	5.8
Crystal RR824	2090*	10029*	263*	13	38.2*	2	17.9	14	94.8*	5	87*	3	1.5*	11	3.8	16	25.5	5.0
Crystal RR827	2045*	9894*	274*	1	36.0*	7	18.6*	1	94.8*	3	86*	4	7.4	16	3.8	17	25.5	4.8
BTS 17RR32	2045*	9842*	265*	10	37.1*	5	17.9*	12	95.0*	2	86*	5	0.6*	6	3.8	15	23.9	4.9
HM 28RR	2043*	9808*	260	15	37.8*	4	17.7	15	94.6*	7	86*	6	0.3*	4	2.3	7	22.4	6.6
HM 29RR	2038*	9783*	254	16	38.6*	1	17.5	16	94.0	15	81*	13	1.2*	10	2.4	9	21.4	6.6
HM 27RR	1945	9339	269*	5	34.8	9	18.2*	8	94.8*	4	85*	7	0.0*	1	2.4	8	21.3	7.8
Crystal RR840	1940	9306	269*	4	34.7	10	18.5*	2	94.1	12	70	17	5.6*	15	1.8*	1	26.2	5.2
SX 1281RR	1933	9281	264*	11	35.1	8	18.1*	10	94.5*	9	81*	12	0.3*	5	2.2	3	23.4	6.3
BTS 18RR26	1926	9243	267*	7	34.6	11	18.4*	5	94.1	14	79*	14	1.5*	12	2.0*	2	24.7	5.5
Crystal RR808	1909	9159	269*	3	34.1	13	18.3*	6	94.7*	6	77*	16	3.6*	14	3.5	13	23.7	5.2
SX 1260RR	1886	9026	262*	14	34.5	12	17.9*	13	94.6*	8	87*	1	0.8*	7	2.6	10	22.7	5.8
HM 131RR	1847	8852	265*	9	33.5	14	18.3*	7	94.0	16	78*	15	0.2*	3	2.3	6	22.5	6.2
HM 110RR	1840	8807	267*	8	33.1	15	18.2*	9	94.5*	11	83*	9	1.1*	9	2.2	4	23.0	6.2
HM 133RR	1818	8718	268*	6	32.5	16	18.5*	3	94.1	13	84*	8	0.1*	2	2.3	5	22.8	6.1
HM 39RR	1814	8699	237	17	36.8*	6	16.7	17	93.4	17	87*	2	0.8*	8	3.3	11	19.5	7.3
BTS 18RR06	1736	8341	263*	12	31.7	17	18.0*	11	94.5*	10	82*	11	8.3	17	3.3	12	25.3	4.3
Average	1943	9327	264.1		35.4		18.1		94.4		82.4		2.1		2.8		23.5	5.9
LSD 5%		820.0	13.3		2.7		0.7		0.8		10.5		6.2		0.3		3.0	0.9
CV %		7.7	4.4		6.8		3.2		0.8		11.1		na		9.5		11.5	13.2

** Dead beets caused by Rhizoc, Canopy Color: higher number is darker green

¹ \$/Acre: Gross dollars per acre assuming \$55 payment

Planted: April 12

Harvested: Oct 12

Seed Spacing: 4.5 inches

Plot Size: 4 Rows X 38 ft X 6 reps

Quadris: 1 application 6 leaf

Cerc Sprays: 4

* Results are not statistically different from the top ranking variety in each column.

Use of these varieties is subject to them being lawful to purchase, receive, distribute and plant.



*Official
Variety
Trial*

Sylvester, Quanicassee, MI
2010

Trial Quality: Fair +

Variety	\$/Acre ¹	RWSA	<u>RWST</u> Rank	<u>Tons/A</u> Rank	<u>% Suc</u> Rank	<u>% CJP</u> Rank	<u>% Emerg</u> Rank
BTS 19RR1N	1889*	10122*	304.7 5	33.3* 1	20.3* 5	95.4* 9	80* 4
BTS 18RR4N	1700	9110	314.9* 1	28.9 5	20.8* 1	95.7* 4	76 6
Crystal RR808	1697	9091	311.6* 3	29.2 4	20.5* 3	95.8* 2	72 12
Crystal RR827	1690	9055	314.2* 2	28.8 6	20.7* 2	95.7* 5	71 13
Crystal RR824	1665	8918	295.5 11	30.2 3	19.6 15	95.6* 7	75 9
BTS 17RR32	1663	8909	294.1 14	30.3 2	19.5 18	95.6* 8	76 8
BTS 18RR06	1591	8521	311.3* 4	27.4 9	20.5* 4	95.8* 3	68 16
BTS 18RR26	1583	8483	302.2 7	28.1 8	19.9 11	96.0* 1	65 20
Crystal RR840	1487	7968	302.7 6	26.2 13	20.2 7	95.2 10	66 18
SX 1260RR	1482	7938	277.9 20	28.6 7	18.8 20	94.9 14	67 17
HM-39RR	1473	7889	288.8 18	27.3 10	19.5 17	94.7 19	74 10
BTS 19RR90	1466	7852	296.6 10	26.5 11	19.7 13	95.6* 6	86* 1
HM-131RR	1456	7801	299.8 8	26.0 14	20.2 6	94.8 16	76 7
HM-28RR	1424	7627	293.2 16	26.0 15	19.7 14	95.1 12	79* 5
HM-9173RR	1421	7613	289.9 17	26.3 12	19.6 16	94.7 17	81* 3
HM-110RR	1402	7510	293.7 15	25.6 16	19.9 12	94.7 18	69 14
SX 1281RR	1372	7351	295.4 12	24.8 19	19.9 10	94.9 13	68 15
HM-133RR	1369	7334	294.8 13	24.9 17	20.0 8	94.6 20	73 11
SX 1291RR	1342	7190	288.6 19	24.9 18	19.5 19	94.9 15	82* 2
HM-27RR	1321	7079	298.3 9	23.7 20	20.0 9	95.1 11	66 19
Average	1525	8168	298.4	27.4	19.9	95.2	74
LSD (P=.05)	105.3	563.8	9.0	2.1	0.5	0.6	7.0
CV	7.1	7.1	3.1	7.6	2.5	0.7	9.6

1. \$/Acre: Gross dollars per arce assuming \$55 Payment

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

Plant/Harvest Dates: April 20/Oct 18
Reps: 8

Row Width: 22 inches
Quadris: 1 Application
Cercospora Sprays: 4

Use of these varieties is subject to them being lawful to purchase, receive, distribute and plant.



*Official
Variety
Trial*

Saginaw Valley Research Farm, Frankenmuth, MI
2010

Trial Quality: Good

Variety	\$/Acre	RWSA	<u>RWST</u> Rank	<u>Tons/A</u> Rank	<u>%Suc</u> Rank	<u>%CJP</u> Rank	<u>%Emerg</u> Rank
Crystal RR827	1987*	9537*	297.9* 1	32.0* 2	20.0* 1	95.1* 2	61 5
Crystal RR808	1880*	9023*	290.3* 2	31.1* 5	19.6* 2	94.9* 4	57 15
BTS 18RR4N	1845	8858	277.3 7	31.9* 3	18.7 6	95.1* 3	63 3
Crystal RR824	1832	8792	267.9 10	32.9* 1	18.3 10	94.4 13	60 9
BTS 19RR1N	1774	8515	278.2 6	30.7 6	18.6 8	95.4* 1	72* 1
BTS 17RR32	1710	8208	259.0 14	31.7* 4	17.6 16	94.8* 5	60 8
Crystal RR840	1686	8092	282.5 3	28.6 9	19.3 3	94.3 14	52 17
BTS 18RR26	1634	7844	280.2 5	28.0 11	19.1 5	94.5 9	49 19
SX 1260RR	1585	7608	253.7 18	30.0 7	17.4 18	94.4 10	61 6
HM-28RR	1548	7430	251.4 19	29.6 8	17.4 19	94.1 19	57 12
BTS 18RR06	1513	7265	282.0 4	25.8 19	19.2 4	94.4 11	46 20
HM-110RR	1507	7234	265.7 11	27.2 13	18.1 11	94.6 7	50 18
BTS 19RR90	1507	7233	268.2 9	27.0 15	18.4 9	94.3 15	64 2
SX 1291RR	1484	7126	251.2 20	28.4 10	17.3 20	94.4 12	63 4
HM-9173RR	1478	7094	258.5 15	27.5 12	17.8 13	94.3 16	61 7
HM-39RR	1469	7051	259.9 13	27.1 14	17.7 15	94.7 6	59 10
SX 1281RR	1436	6893	261.5 12	26.4 18	18.0 12	94.2 17	57 14
HM-133RR	1425	6839	271.2 8	25.2 20	18.6 7	94.1 18	57 13
HM-131RR	1412	6777	254.5 16	26.7 16	17.7 14	93.7 20	53 16
HM-27RR	1401	6726	254.4 17	26.4 17	17.4 17	94.5 8	57 11
Average	1606	7707	268.3	28.7	18.3	94.5	58
LSD (P=.05)	114.9	551.3	10.7	1.8	0.6	0.6	7.3
CV	7.5	7.5	4.2	6.4	3.6	0.7	13.0

1. \$/Acre: Gross dollars per arce assuming \$55 Payment

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

Plant/Harvest Dates: April 1/Oct 8

Reps: 8

Row Width: 22 inches

Quadris: 1 Application

Cercospora Sprays: 4

Use of these varieties is subject to them being lawful to purchase, receive, distribute and plant.



2010 VARIETY TRIAL

Schuette Farms Inc.

Location: Huron Co., Elkton
Planting Date: 4/15/2010
Previous Crop: Soybeans
Soil Type: Loam
Spacings: Rows - 30", 52,000 Seeds/Ac.
Fertilizer: 2x2 - 240# 9-28-7 + S, Mn, B
 20 Gal. 28% Preplant, 8 Gal. 28%
 Sidedress, 13,000 Gal Manure-Fall

Tillage: Fall Chisel - Spring 1x
Harvest Date: 10/26/2010
Sample Date: 10/11/2010
Herbicides: 3x Glyphosate
Replicated: 3x
Fungicide: 48 DSV - Proline
 115 DSV - Eminent
 169 DSV - Proline + Kocide
 193 DSV - Gem + Kocide

VARIETY	REV / ACRE	RWSA	RWST	TONS / ACRE	% SUGAR	% CJP	POPULATIONS 100 Ft. of Row				RHIZ. 1200 Ft. of Row
							15 DAY	32 DAY	43 DAY	HARV.	
HM-28RR	\$2,088	9627	247	39.1	17.1	94.0	60	209	208	168	1
HM-133RR	\$1,991	9207	255	36.1	17.5	94.4	76	184	183	159	0
C-RR808	\$1,975	9098	253	36.1	17.3	94.6	40	197	197	157	19
HM-110RR	\$1,938	8943	256	35.0	17.5	94.7	28	186	182	155	0
B-17RR32	\$1,907	8831	241	36.6	16.5	94.8	47	178	178	142	9
C-RR824	\$1,907	8810	252	35.0	17.1	95.1	61	155	192	142	13
SX-1281RR	\$1,898	8763	262	33.5	18.0	94.4	61	169	174	147	0
C-RR827	\$1,879	8685	249	34.9	16.9	94.9	63	158	156	134	11
B-18RR06	\$1,867	8598	257	33.6	17.6	94.6	16	179	183	152	4
B-18RR26	\$1,851	8537	261	32.8	17.8	94.6	38	144	141	124	12
H-131RR	\$1,833	8500	260	32.6	17.8	94.7	62	175	176	153	0
C-RR840	\$1,775	8226	259	31.7	17.9	94.2	39	122	120	107	4
AVERAGE	\$1,909	8819	254	34.7	17.4	94.6	49	171	174	145	6
LSD (5%)	--	942	16	2.7	0.8	0.9	25	31	28	27	13
C.V. (%)	--	6	4	4.5	2.8	0.6	30	11	9	11	129

TRIAL RELIABILITY: Good

EMERGENCE: Excellent	CERC. LEAF SPOT: High Infection Level
RHIZOCTONIA: Low	NEMATODES: None Detected
QUADRIS APP: None	WEATHER: Excellent

Comments: This trial had a high level of Cercospora Leaf Spot which caused nearly complete canopy burn down in some varieties. Varieties with better leaf spot resistance generally had better yield rankings than in other trials. Sugar content was below company average due to leafspot and heavy nitrogen and manure applications. Revenue is based on a \$55/ton payment and an "average RWST" equal to the trial average RWST.

Use of these varieties is subject to them being lawful to purchase, receive, distribute and plant.

Location: Tuscola Co.
Planting Date: 4/28/2010
Previous Crop: Wheat / Clover
Soil Type: Loam
Spacings: Rows - 20", 61,575 Seed/Ac.
Fertilizer: 2x2 - 15 Gal. 28%
 Preplant - 33 Gal. 28%

Tillage: Moldboard Plow, Spring 1x
Harvest Date: 10/12/2010
Sample Date: 10/11/2010
Herbicides: 3x Glyphosate
Replicated: 3x
Fungicide: 55 DSV - Proline
 119 DSV - GEM
 169 DSV - Eminent

VARIETY	REV / ACRE	RWSA	RWST	TONS / ACRE	% SUGAR	% CJP	POPULATIONS				RHIZ. 1200 Ft. of Row
							100 Ft. of Row				
							8 DAY	20 DAY	40 DAY	HARV.	
B-17RR32	\$1,655	8792	290	30.4	19.5	95.1	52	124	142	116	42
C-RR824	\$1,595	8468	288	29.4	19.3	95.3	57	142	150	134	126
HM-28RR	\$1,542	8205	276	29.7	18.8	94.5	63	155	171	154	11
HM-110RR	\$1,516	8051	293	27.5	19.6	95.3	63	138	149	125	39
SX-1281RR	\$1,504	7982	291	27.5	19.6	94.8	127	155	156	147	19
C-RR827	\$1,505	7961	299	26.8	20.1	94.9	75	142	155	121	122
HM-133RR	\$1,471	7829	297	26.3	20.0	95.0	84	137	140	128	14
C-RR808	\$1,438	7638	295	25.9	19.8	95.1	75	154	159	144	176
HM-131RR	\$1,419	7541	293	25.8	19.7	94.9	86	133	140	130	4
C-RR840	\$1,383	7345	299	24.6	19.9	95.5	40	95	107	96	46
B-18RR06	\$1,356	7204	297	24.3	19.9	95.3	16	122	131	109	71
B-18RR26	\$1,346	7157	291	24.6	19.7	94.8	43	113	119	109	9
AVERAGE	\$1,478	7848	292	26.9	19.7	95.0	65	134	143	126	57
LSD (5%)	--	1189	17 NS	4.5	0.8	0.9 NS	35	31	33	33	94
C.V. (%)	--	9	3	9.9	2.3	0.6	31	14	14	16	98

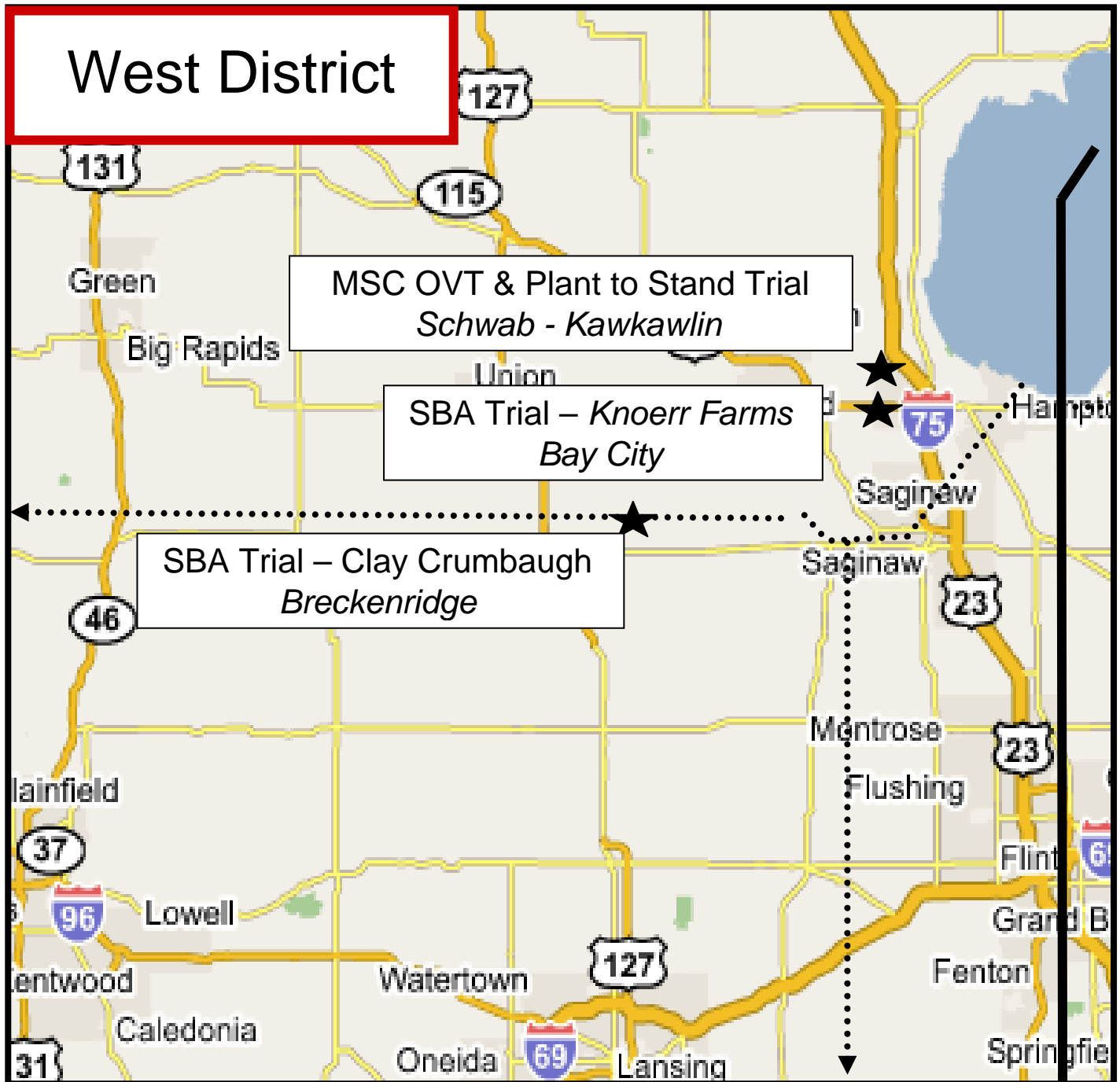
TRIAL RELIABILITY: Fair

EMERGENCE: Good	CERC. LEAF SPOT: Good Control
RHIZOCTONIA: Moderate	NEMATODES: Yes
QUADRIS APP: 4 - 6 Leaf	WEATHER: --

Comments: Coefficient of variation on Tons and RWSA indicate the trial reliability is only fair. Data was effected by patchy Rhizoctonia and sprayer tram lines. Revenue is based on a \$55/ton payment and an "average RWST" equal to the trial average RWST.

Use of these varieties is subject to them being lawful to purchase, receive, distribute and plant.

West District Trials





*Official
Variety
Trial*

Schwab, Kawkawlin, MI
Rhizoctonia Influence, 2010

***Trial Quality: Poor

Variety	\$/Acre ¹	RWSA	RWST Rank	Tons/A Rank	% Suc Rank	% CJP Rank	% Emerg Rank	Dead/Plot**	Rank
BTS 18RR4N	1623*	7444*	265.3* 1	28.1* 1	18.3* 1	93.9* 1	68.1 11	7.3	12
BTS 19RR1N	1444*	6619*	257.1* 4	25.8* 2	18.0* 8	93.3* 5	77.7* 2	10.0	16
HM-28RR	1398	6423	249.8* 15	25.7* 3	17.7* 12	93.0* 12	68.4 8	3.0*	8
SX 1281RR	1380	6359	254.6* 9	24.9* 5	18.1* 3	92.6 19	64.4 17	2.1*	7
BTS 19RR90	1373	6287	255.3* 7	24.7* 8	18.1* 4	92.9* 13	77.6* 3	7.0	11
HM-9173RR	1360	6244	251.9* 13	24.8* 7	17.9* 10	92.7* 17	74.1 4	3.4*	9
SX 1291RR	1359	6263	244.8 17	25.5* 4	17.2 19	93.3* 8	80.7* 1	1.0*	4
HM-27RR	1353	6198	252.6* 11	24.6 9	17.7* 13	93.3* 6	68.3 9	0.6*	2
HM-39RR	1325	6049	244.4 18	24.9* 6	17.6* 16	92.3 20	72.6 5	0.5*	1
Crystal RR827	1310	6115	255.0* 8	23.6 11	18.0* 9	93.0* 11	63.2 18	9.5	15
Crystal RR824	1302	6016	259.9* 3	23.0 14	18.1* 6	93.5* 2	72.3 6	10.0	17
Crystal RR808	1291	6002	252.3* 12	23.5 12	17.9* 11	92.8* 15	66.2 14	11.6	18
HM-131RR	1291	5940	256.6* 6	23.1 13	18.1* 5	93.1* 9	67.2 12	1.8*	6
SX 1260RR	1268	5822	243.6 19	23.9 10	17.4 18	92.8* 16	65.5 15	8.5	14
BTS 18RR26	1239	5703	253.0* 10	22.5 15	17.7* 14	93.4* 3	62.7 19	3.5*	10
BTS 18RR06	1219	5628	256.8* 5	21.8 16	18.1* 7	93.1* 10	67.2 13	7.6	13
HM-133RR	1212	5589	261.4* 2	21.3 19	18.3* 2	93.3* 4	65.4 16	0.9*	3
HM-110RR	1175	5376	249.9* 14	21.6 18	17.6* 17	93.3* 7	68.2 10	1.5*	5
BTS 17RR32	1120	5181	238.2 20	21.6 17	16.9 20	92.9* 14	68.6 7	15.6	20
Crystal RR840	1059	4879	249.4* 16	19.5 20	17.7* 15	92.7* 18	60.5 20	11.8	19
Average	1307.7	6007	252.6	23.7	17.8	93.1	68.9	5.9	
LSD (P=.05)	199.8	914.4	15.9	3.4	0.8	1.2	6.2	5.8	
CV %	15.6	15.6	6.4	14.7	4.5	1.3	9.1	108.8	

¹ \$/Acre: Gross dollars per acre assuming \$55 payment

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

** Dead Beets in 56 feet.

*** A lot of variability due to Rhizoctonia and some Aphanomyces and Cyst nematodes

Trial Quality: Poor

Row width: 22 inches

Plant/Harvest Dates: April 30 / Sept 30

Quadris: 1 Application

Reps: 8

Cercospora sprays: 4

Use of these varieties is subject to them being lawful to purchase, receive, distribute and plant.



Plant To Stand

Schwab, Auburn, MI Rhizoctonia Influence, 2010

****Trial Quality: Poor**

Variety	\$/Acre ¹	RWSA	Quality		Tons/Acre		% Suc		% Purity		% Emerg		Cerc		Dead**		Canopy			
			RWST	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	
HM 39RR	1485*	6914*	241	17	28.7*	1	17.2	17	92.9*	6	66*	3	70*	3	2.1	10	1.1*	3	15.8	6.5
HM 27RR	1472*	6867*	267*	3	25.7	4	18.8*	4	92.9*	5	60	10	65*	8	2.0	8	1.1*	2	19.8	7.3
BTS 18RR4N	1447*	6751*	268*	2	25.2	5	18.7*	5	93.5*	1	61	8	65*	7	2.4	16	19.6	13	21.8	6.0
HM 29RR	1421*	6604*	245	15	27.1*	2	17.6	14	92.2*	12	65*	4	69*	4	2.1	11	4.6*	5	17.5	6.0
HM 28RR	1408*	6554*	244	16	26.9*	3	17.6	16	92.2*	13	61	7	69*	5	1.9	5	5.5*	6	18.5	6.0
Crystal RR827	1385*	6482*	264*	4	24.5	7	19.0*	2	92.1*	14	59	11	65*	9	2.4	15	24.9	15	23.0	5.0
BTS 17RR32	1346*	6331*	254*	12	24.7	6	17.9	13	93.1*	2	70*	2	71*	2	2.2	12	21.0	14	20.7	4.8
HM 110RR	1343*	6253*	257*	9	24.4	8	18.5*	8	92.2*	11	56	13	62	12	2.0	7	1.1*	1	21.2	6.0
SX 1281RR	1342*	6261*	273*	1	22.9	10	19.1*	1	93.1*	3	62*	6	64	10	1.9	3	11.0*	8	21.0	6.5
HM 133RR	1340*	6229*	259*	6	24.1	9	18.9*	3	91.5	17	58	12	63	11	2.0	6	4.6*	4	19.8	5.8
BTS 18RR06	1269	5935	263*	5	22.5	13	18.6*	6	92.8*	8	54	16	60	15	2.2	13	16.2	11	23.7	4.5
Crystal RR824	1242	5854	256*	11	22.6	12	18.1*	12	92.9*	4	70*	1	72*	1	2.4	17	37.0	16	22.3	5.3
HM 131RR	1230	5781	252*	13	22.7	11	18.2*	11	92.0*	15	63*	5	66*	6	1.9	4	7.1*	7	20.7	5.8
Crystal RR840	1220	5692	258*	7	22.1	14	18.2*	10	92.9*	7	54	17	58	17	1.5*	1	15.3	10	24.3	5.3
BTS 18RR26	1193	5543	257*	8	21.6	16	18.4*	9	92.4*	9	54	15	58	16	1.5*	2	12.9*	9	21.3	5.5
SX 1260RR	1144	5377	245	14	21.8	15	17.6	15	92.2*	10	61	9	61	14	2.0	9	17.0	12	19.3	5.8
Crystal RR808	1142	5289	256*	10	20.8	17	18.5*	7	92.0*	16	55	14	62	13	2.3	14	37.8	17	20.2	5.0
Average	1319	6160	256.4		24.0		18.3		92.5		60.5		64.7		2.0		14.0		20.6	5.7
LSD 5%		961.0	23.3		2.9		1.1		1.6		8.9		7.0		0.2		13.5		3.1	0.8
CV%		13.5	7.9		10.7		5.2		1.6		12.9		9.5		9.1		95.6		13.3	12.4

** Dead beets caused by Rhizoc, Canopy Color: Higher number is darker green

*** Results are not statistically different from the top ranking variety in each column.**

¹ \$/Acre: Gross dollars per acre assuming \$55 payment

Planted: April 21

Plot Size: 4 Rows X 38 ft X 6 reps

Seed Spacing: 4.5 inches

Harvested: Sept 27

Quadris: 1 application 6 leaf

Cercospora Sprays: 4

Use of these varieties is subject to them being lawful to purchase, receive, distribute and plant.



2010 VARIETY TRIAL *Knoerr Farms*

Location: Bay County
Planting Date: 3/31/2010
Previous Crop: Wheat, Oilseed Radish
Soil Type: Loam
Spacings: 20" Rows, 60,000 Seeds/Ac
Fertilizer: 2x2 - 15 Gal. 19-17-0 + Mn & B
 25 Gal. 28% PPI

Tillage: Fall - Dominator, 1x Spring
Harvest Date: 10/23/2010
Sample Date: 10/15/2010
Herbicides: 3x Glyphosate
Replicated: 3x
Fungicide: 55 DSV - Proline
 100 DSV - Headline
 154 DSV Inspire XT

VARIETY	REV / ACRE	RWSA	RWST	TONS / ACRE	% SUGAR	% CJP	POPULATIONS 100 Ft. of Row				RHIZ. 1200 Ft. of Row
							15 DAY	21 DAY	37 DAY	HARV.	
C-RR827	\$1,594	8337	307	27.2	20.5	95.1	40	103	129	--	28
C-RR808	\$1,584	8286	313	26.5	20.5	96.0	55	124	147	--	67
C-RR824	\$1,446	7556	289	26.2	19.3	95.4	39	121	145	--	39
B-17RR32	\$1,368	7153	290	24.7	19.4	95.3	40	110	136	--	18
B-18RR06	\$1,322	6954	296	23.4	19.8	95.3	14	93	123	--	30
HM-28RR	\$1,316	6873	279	24.7	19.1	94.3	27	100	127	--	8
B-18RR26	\$1,294	6797	291	23.3	19.8	94.4	37	92	107	--	49
C-RR840	\$1,244	6522	287	22.7	19.6	94.3	53	100	111	--	17
HM-131RR	\$1,179	6186	273	22.6	18.6	94.7	60	112	123	--	8
HM-133RR	\$1,170	6120	281	21.8	19.1	94.6	66	137	154	--	8
SX-1281RR	\$1,148	6008	277	21.7	18.9	94.5	88	138	150	--	5
HM-110RR	\$1,140	5961	274	21.8	18.8	94.2	49	109	126	--	9
AVERAGE	\$1,317	6896	288	23.9	19.4	94.8	47	112	132	--	24
LSD (5%)	--	1044	12	3.4	0.6	0.9	19	28	27	--	45
C.V. (%)	--	9	2	8.5	1.8	0.5	24	15	12	--	112

TRIAL RELIABILITY: Fair / Good

EMERGENCE: Good / Fair	CERC. LEAF SPOT: Good Control
RHIZOCTONIA: Low	NEMATODES: Yes
QUADRIS APP: 4 - 6 Leaf	WEATHER: Dry End of Summer

Comments: Revenue is based on a \$55/ton payment and an "average RWST" equal to the trial average RWST.

Use of these varieties is subject to them being lawful to purchase, receive, distribute and plant.



2010 VARIETY TRIAL *Clay Crumbaugh*

Location: Gratiot County
Planting Date: 3/29/2010
Previous Crop: Soybeans
Soil Type: Parkhill Loam
Spacings: Rows - 30", 55,000 Seeds/Ac
Fertilizer: 2x2 - 50#, 30#, 30#, + Bn & Mn
 45# N Pre-emerge in 20" Band

Tillage: Fall Zone Till, No Spring Tillage
Harvest Date: 11/1/2010
Sample Date: 10/13/2010
Herbicides: 3x Glyphosate
Replicated: 3x
Fungicide: 55 DSV - Eminent
 110 DSV - Headline
 165 DSV - Agritin

VARIETY	REV / ACRE	RWSA	RWST	TONS / ACRE	% SUGAR	% CJP	POPULATIONS 100 Ft. of Row				RHIZ. 1200 Ft. of Row
							11 DAY	16 DAY	29 DAY	HARV.	
C-RR827	\$1,797	9194	302	30.4	20.2	95.2	23	97	156	114	237
C-RR824	\$1,722	8790	282	31.2	19.1	94.6	16	113	200	154	166
B-17RR32	\$1,643	8381	277	30.3	18.8	94.8	5	82	175	148	184
HM-133RR	\$1,617	8263	283	29.2	19.2	94.7	28	93	159	137	98
C-RR840	\$1,579	8087	284	28.4	19.3	94.5	16	70	131	112	134
B-18RR26	\$1,576	8037	287	28.1	19.5	94.5	11	77	148	118	158
B-18RR06	\$1,554	7936	280	28.4	19.2	94.1	0	60	158	135	129
HM-110RR	\$1,509	7705	272	28.3	18.6	94.3	16	91	169	132	93
HM-28RR	\$1,488	7615	268	28.4	18.3	94.5	9	65	154	124	117
C-RR808	\$1,474	7553	281	26.8	19.2	94.4	7	79	167	133	151
SX-1281RR	\$1,475	7552	275	27.4	18.8	94.3	43	121	186	151	119
HM-131RR	\$1,414	7232	281	25.7	19.1	94.5	33	105	169	142	88
AVERAGE	\$1,571	8029	281	28.6	19.1	94.5	17	88	164	133	140
LSD (5%)	--	1005	19	2.7	0.9	0.9	13	31	29	36	107
C.V. (%)	--	7	4	5.7	2.9	0.6	44	21	10	16	45

TRIAL RELIABILITY: Good

EMERGENCE: Good	CERC. LEAF SPOT: Good Control
RHIZOCTONIA: Moderate / Heavy in spots	NEMATODES: None Detected
QUADRIS APP: 4 - 6 Leaf	WEATHER: Heavy Early Rain, Dry Late Summer

Comments: Trial was stale seed bed planted into fall zone till. Rhizoctonia levels significantly impacted yield and harvest stand. Revenue is based on a \$55/ton payment and an "average RWST" equal to the trial average RWST.

Use of these varieties is subject to them being lawful to purchase, receive, distribute and plant.

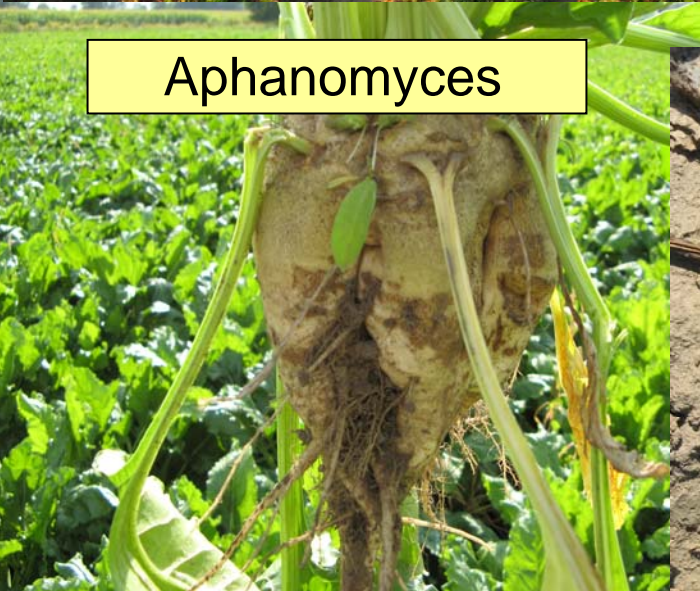
Nursery Data



Cercospora



Rhizoctonia



Aphanomyces



Rhizoctonia



Root Aphid



Nematodes



Rhizoctonia
Nursery

Average of 2 Yrs.
Michigan Sugar and Ft. Collins

Variety	2009		2010	Average*
	Mich.*	Ft. Collins*	Ft Collins*	
HM 39RR	3.8	4.3	5.5	4.5
HM 28RR	4.3	5.1	5.7	5.0
HM 110RR	4.6	5.0	5.8	5.1
SX 1291RR	4.3	5.1	6.0	5.1
HM 27RR	4.6	5.4	5.5	5.2
Crystal RR840	4.3	5.3	6.0	5.2
HM 131RR	3.9	5.4	6.4	5.2
SX 1281RR	4.4	5.6	5.9	5.3
BTS 18RR26	4.5	5.4	6.3	5.4
HM 9173RR	4.2	5.6	6.5	5.4
HM 133RR	4.5	5.8	6.1	5.5
BTS 19RR90	4.9	5.9	5.7	5.5
BTS 18RR06	4.9	5.6	6.0	5.5
BTS 18RR4N	4.8	5.5	6.2	5.5
SX 1260RR	4.7	5.4	6.5	5.5
BTS 19RR1N	4.7	5.7	6.3	5.6
Crystal RR808	4.7	5.6	6.4	5.6
Crystal RR827	4.9	5.6	6.4	5.6
BTS 17RR32	4.5	5.8	6.6	5.6
Crystal RR824	5.1	5.6	6.6	5.8
Average	4.5	5.4	6.1	5.4

* 0-7 Rating: Based upon 0 = no disease and
7 = beets completely rotted.

Use of these varieties is subject to them being lawful to purchase, receive, distribute and plant.



Rhizoctonia *Nursery*

USDA - FT. Collins, CO
Avg, of 2 Years (2009-2010)

Variety	Disease Index 0-7 Rating*
HM 39RR	4.9
HM 28RR	5.4
HM 110RR	5.4
HM 27RR	5.5
SX 1291RR	5.6
Crystal RR840	5.7
SX 1281RR	5.8
BTS 19RR90	5.8
BTS 18RR06	5.8
BTS 18RR4N	5.9
BTS 18RR26	5.9
HM 131RR	5.9
HM 133RR	6.0
SX 1260RR	6.0
BTS 19RR1N	6.0
Crystal RR808	6.0
Crystal RR827	6.0
HM 9173RR	6.1
Crystal RR824	6.1
BTS 17RR32	6.2
Average	5.8
LSD (P=.05)	0.5
CV	4.3

* 0-7 Rating: Based upon 0 = no disease and
7 = beets completely rotted.

Use of these varieties is subject to them being lawful to purchase, receive, distribute and plant.



*Cercospora
Nursery*

Michigan Sugar Trials
Avg. of 2 Years (2009-2010)

Variety	Cercospora 0-9 Rating*
Crystal RR840	3.57
HM 131RR	3.72
HM 133RR	3.79
BTS 18RR26	3.83
HM 27RR	3.84
SX 1281RR	3.89
HM 9173RR	3.96
HM 110RR	4.02
HM 28RR	4.11
SX 1291RR	4.11
SX 1260RR	4.22
BTS 19RR90	4.51
Crystal RR824	4.64
Crystal RR808	4.75
HM 39RR	4.76
BTS 17RR32	4.78
Crystal RR827	4.87
BTS 18RR06	4.88
BTS 18RR4N	4.95
BTS 19RR1N	5.45
Average	4.33

* Cercospora Ratings: 0 to 9 scale with 0 = no infestation
and 9 = complete desiccation of leaves

Use of these varieties is subject to them being lawful to purchase, receive, distribute and plant.



Cyst Nematode Nursery

Vader's Farm, Unionville, MI
2010

Variety	Nematode Rating 0-5*	RWSA	RWST	Tons / Acre	% Suc	% CJP
BTS 18RR4N	1.04	4727	182.1	25.3	13.9	90.7
BTS 19RR1N	1.14	4972	180.9	27.4	13.6	91.3
HM 28RR	1.20	3758	196.2	19.0	14.8	91.1
SX 1260RR	1.47	3861	182.3	21.1	13.8	90.9
Crystal RR827	1.57	4563	185.1	24.8	14.1	90.7
BTS 17RR32	2.01	3032	158.0	19.5	12.4	89.9
Average	1.35	4188.5	181.4	22.9	13.8	90.9
LSD (P=.05)	0.59	1251.2	15.1	6.3	0.9	1.2
CV	37.0	25.3	7.0	23.2	5.4	1.1

* Nematode Rating Scale: 10 beets per plot rated

- 0 no cysts found
- 1 1 cyst per root
- 2 2-4 cysts per root
- 3 5-10 cysts per root
- 4 more than 10 cysts per root
- 5 too many to count

Plot Size: 2 rows X 25 ft

Reps: 6

Planted: June 26th

Harvested: September 2nd

Use of these varieties is subject to them being lawful to purchase, receive, distribute and plant.



Aphanomyces *Nursery*

Shakopee, MN
Average of 2 Years

Variety	Root (1-9) ¹	Foliar (1-9)	Stand Loss ² %
Resistant Check	2.3	1.3	13.1
BTS 18RR4N	2.8	1.8	36.7
BTS 18RR26	3.1	2.3	33.0
BTS 17RR32	3.2	2.2	38.5
BTS 19RR1N	3.4	2.7	38.4
HM 9173RR	3.4	2.5	41.1
Crystal RR827	3.5	2.8	31.3
BTS 18RR06	3.5	2.1	37.1
Crystal RR808	3.6	2.8	36.8
Crystal RR824	3.7	3.0	38.8
BTS 19RR90	3.7	2.9	46.5
SX 1260RR	3.7	3.2	34.8
HM 131RR	3.7	3.1	41.2
SX 1281RR	3.9	3.0	40.5
HM 39RR	3.9	3.5	44.4
SX 1291RR	3.9	3.3	43.7
HM 133 RR	4.1	3.5	47.4
HM 28RR	4.2	3.4	44.7
HM 27RR	4.2	3.8	46.6
Crystal RR840	4.5	3.6	43.1
HM 110RR	4.5	3.7	49.2
Susc. Check	5.5	4.2	52.6
Grand Mean	3.7	2.9	40.0
LSD (P=.05)	1.2	1.3	13.3
CV	14.9	20.6	16.0

¹ 1. = no damage, 9 = dead

² percent of plants that died from highest population to Aug 18th

Use of these varieties is subject to them being lawful to purchase, receive, distribute and plant.



Root Aphid Nursery

Shakopee, MN
2009

Variety	1-4 Rating*
BTS 19RR90	1.37
BTS 18RR06	1.43
BTS 17RR32	1.87
Crystal RR824	2.00
HM 9133RR	2.07
HM 28RR	2.24
Crystal RR808	2.33
Crystal RR827	2.37
HM 9131RR	2.53
SX 1281RR	2.57
Crystal RR840	2.60
HM 29RR	2.60
HM9173RR	2.80
SX 1260RR	2.83
SX 1291RR	2.93
BTS 18RR26	3.07
HM 9110RR	3.10
HM 27RR	3.17
BTS 18RR4N	3.27
BTS 19RR1N	3.37
Average	2.53

* Rating Scale

1=No aphids

2=A few young aphids

3=A few adult and young aphids

4=Many adult and young aphids

Use of these varieties is subject to them being lawful to purchase, receive, distribute and plant.



Rhizomania Nursery

USDA Trial
Salinas, CA - 2009

Variety	DI ¹	(0-4) ²	Tons/A
BTS 18RR06	3.5	78.8	32.8
Tolerant Check	3.7	71.4	39.6
HM 28RR	3.8	68.7	34.6
HM 27RR	3.9	69.2	39.2
BTS 17RR32	3.9	71.9	38.8
HM 39RR	3.9	66.6	37.0
BTS 19RR90	4.1	66.5	33.4
HM 9173RR	4.1	64.6	37.8
SX 1260RR	4.2	62.1	34.6
SX 1291RR	4.3	63.9	37.2
Crystal RR824	4.3	60.9	38.2
SX 1281RR	4.5	56.2	34.9
HM 131RR	4.6	56.3	35.1
HM 133RR	4.8	51.2	36.4
Crystal RR827	4.8	53.6	35.4
BTS 18RR4N	4.9	49.3	37.7
Crystal RR808	4.9	54.9	36.9
BTS 19RR1N	5.1	45.0	35.7
HM 110RR	5.2	48.0	34.6
Crystal RR840	5.4	37.6	31.5
Susceptible Check	5.5	38.1	29.7
BTS 18RR26	5.6	37.2	31.7
Average	4.5	57.8	35.6
LSD (0.05)	0.4	9.3	2.8
C.V.	12.8	21.1	10.4

¹ DI = 0 to 9 Scale

0 = No Disease

9 = Dead Beets

Rhizomania Disease Index (DI) was considered to be the most reliable indicator of Rhizomania resistance in this trial.

² Percent of beets in categories 0 through 4 - considered Rhizomania resistant.

Use of these varieties is subject to them being lawful to purchase, receive, distribute and plant.

Sugarbeet Advancement Rhizoctonia Variety Trials & Poncho Beta / Nematode Variety Trials





2010 RHIZOCTONIA RESISTANT VARIETY TRIAL

Steve Hoard

Location: Gratiot Co., Breckenridge
Planting Date: 4/14/2010
Previous Crop: Soybeans
Soil Type: Loam
Spacings: Rows - 30", 52,000 Seeds/Ac.
Fertilizer: 2x2 - 20 Gal.
 Sidedress - 28 Gal. 28%

Tillage: Fall - V Rip, Spring 1x
Harvest Date: 10/30/2010
Sample Date: 10/15/2010
Herbicides: 3x Glyphosate
Replicated: 3x
Fungicide: Eminent
 Headline
 Eminent

VARIETY	REV / ACRE	RWSA	RWST	TONS / ACRE	% SUGAR	% CJP	POPULATIONS 100 Ft. of Row				RHIZ. 1200 Ft. of Row
							13 DAY	DAY	26 DAY	HARV.	
HM-29RR	\$1,509	7570	280	27.1	19.1	94.4	120	--	253	--	83
HM-27RR	\$1,503	7553	283	26.7	19.5	93.9	99	--	247	--	47
HM-28RR	\$1,471	7373	271	27.3	18.8	93.7	70	--	243	--	34
HM-131RR	\$1,400	7022	288	24.4	19.9	93.7	137	--	230	--	175
HM-39RR	\$1,276	6416	265	24.2	18.4	93.6	109	--	254	--	125
SX-1281RR	\$1,271	6388	272	23.5	19.0	93.2	146	--	241	--	440
AVERAGE	\$1,405	7054	276	25.5	19.1	93.7	114	--	245	--	151
LSD (5%)	--	531	--	2.0	--	--	45	--	15	--	177
C.V. (%)	--	4	--	4.2	--	--	22	--	3	--	65

TRIAL RELIABILITY: Good

EMERGENCE: Excellent	CERC. LEAF SPOT: Good Control
RHIZOCTONIA: Moderate	NEMATODES: None Detected
QUADRIS APP: 4-6 Leaf	WEATHER: Heavy Early Rains

Comments: Trial had a moderate amount of Rhizoctonia. Statistics were not performed on the sugar results due to a limited number of samples being available. Use the sugar results with caution. Trial had great emergence but received heavy early rains that caused some damage.

Use of these varieties is subject to them being lawful to purchase, receive, distribute and plant.



2010 RHIZOCTONIA RESISTANT VARIETY TRIAL

Randy Sturm

Location: Huron Co., Pigeon Planting Date: 4/1/2010 Previous Crop: Soybeans Soil Type: Clay Loam Spacings: Rows - 28" Fertilizer: Broadcast 561# of 3-16-38 + Micros, Broadcast 15 Gal 28% + 3 Gal Thiosul Sidedress 20 Gal. 28%	Tillage: Fall-Chisel, 1x Spring Harvest Date: 10/22/2010 Sample Date: 10/11/2010 Herbicides: 2x Glyphosate Replicated: 3x Fungicide: 57 DSV - Proline 134 DSV - GEM
---	---

VARIETY	REV / ACRE	RWSA	RWST	TONS / ACRE	% SUGAR	% CJP	POPULATIONS 100 Ft. of Row				RHIZ. 1200 Ft. of Row
							14 DAY	21 DAY	46 DAY	HARV.	
HM-27RR	\$1,583	7399	257	28.9	17.5	94.6	24	155	195	--	17
HM-28RR	\$1,565	7315	254	28.9	17.4	94.5	16	155	211	--	31
SX-1281RR	\$1,542	7231	271	26.7	18.3	95.1	66	197	211	--	55
HM-39RR	\$1,542	7227	246	29.4	16.8	95.0	43	199	236	--	36
HM-29RR	\$1,523	7150	248	28.8	17.2	94.1	32	177	210	--	59
HM-131RR	\$1,514	7090	268	26.5	18.2	94.7	29	165	185	--	25
AVERAGE	\$1,545	7235	258	28.2	17.6	94.7	35	174	208	--	37
LSD (5%)	--	483 NS	23	1.7	1.2	1.2	31	62	35	--	40
C.V. (%)	--	4	5	3.4	3.8	0.7	49	19	9	--	59

TRIAL RELIABILITY: Excellent

EMERGENCE: Good RHIZOCTONIA: Low QUADRIS APP: None	CERC. LEAF SPOT: Moderate / High Infection Level NEMATODES: None WEATHER: --
---	---

Comments: Trial had a moderately low amount of Rhizoctonia. No Quadris was applied. Trial had a moderate high level of Cercospora leaf spot infection. Revenue is based on a \$55/ton payment and an "average RWST" equal to the trial average RWST.

Use of these varieties is subject to them being lawful to purchase, receive, distribute and plant.



PONCHO BETA SEED TREATMENT / NEMATODE VARIETY COMPARISON

Haag Farms

Location: Huron County
Planting Date: 3/30/2010
Previous Crop: Dry Beans
Soil Type: Loam
Spacings: Rows - 28", 53,000 Seeds/Ac.
Fertilizer: 2x2 - 250# 14-9-7
 Sidedress - 32 Gal. 28%
 Fall - 225# K₂O

Tillage: Fall Chisel - 1x Spring
Harvest Date: 10/22/2010
Sample Date: 10/19/2010
Herbicides: 2x Glyphosate
Replicated: 3x
Fungicide: 56 DSV - Proline
 162 DSV - Gem
 183 DSV - Eminent

VARIETY	REV / ACRE	RWSA	RWST	TONS / ACRE	% SUGAR	% CJP	POPULATIONS 100 Ft. of Row	
							30 DAY	HARV.
B-17RR32 + Poncho Beta	\$1,840	8519	257	33.2	17.6	94.4	86	108
B-17RR32	\$1,637	7572	253	30.0	17.4	94.2	63	73
LSD (5%)	--	473	21 NS	2.0	0.7 NS	1.8 NS	--	--

B-18RR4N	\$1,717	8305	274	30.3	18.6	94.7	73	91
B-17RR32	\$1,643	7968	258	30.8	17.7	94.4	63	73
LSD (5%)	--	336	16	2.2 NS	1 NS	.7 NS	14	38 NS
CV (%)	--	2	3	3.0	3.0	3.0	15	25

TRIAL RELIABILITY: Good CV's

EMERGENCE:	Poor	CERC. LEAF SPOT:	Good
RHIZOCTONIA:	Low / Moderate	NEMATODES:	None Detected
QUADRIS APP:	None	WEATHER:	--

Comments: Both trials conducted in same field. Trial was conducted to compare Poncho Beta seed treatment and a nematode resistant variety against B-17RR32 as a check. No insect feeding was observed. Poor emergence occurred and the yield differences that were measured are possibly due to population differences. It is unknown if there was any insect pressure that caused stand differences. It is unknown if the check and Poncho Beta treated seed were from the same seed lot. Nematodes were not visually confirmed in the field. Revenue is based on a \$55/ton payment and an "average RWST" equal to the trial average RWST.

Use of these varieties is subject to them being lawful to purchase, receive, distribute and plant.



PONCHO BETA SEED TREATMENT / NEMATODE VARIETY COMPARISON

Rayl Farms

Location: Tuscola Co.
Planting Date: 3/29/2010
Previous Crop: Wheat
Soil Type: Loam
Spacings: Rows - 22", 63,000 seeds/acre
Fertilizer: 2x2 - 8 Gallon, 10-34-0 + Thiosol
 150# N / Acre

Tillage: Fall chisel / stale seed bed
Harvest Date: 9/30/2010
Sample Date: 9/27/2010
Herbicides: 3x
Replicated: 3x
Fungicide: Proline
 GEM
 Eminent
 Headline

VARIETY	REV / ACRE	RWSA	RWST	TONS / ACRE	% SUGAR	% CJP	POPULATIONS				RHIZ. 1200 Ft. of Row
							100 Ft. of Row				
							24 DAY	31 DAY	58 DAY	HARV.	
B-17RR32 + Poncho Beta	--	8285	285	29.1	18.9	95.8	80	109	131	--	--
B-17RR32	--	7971	284	28.1	19.1	95.1	68	100	136	--	--
LSD (5%)	--	1382 NS	19 NS	3.5 NS	0.9 NS	1.5 NS	27NS	24 NS	9 NS	--	--

B-18RR4N	\$1,726	9119	297	30.7	19.7	95.6	31	109	145	--	94
B-17RR32	\$1,511	7971	284	28.1	19.1	95.1	68	100	136	--	152
LSD (10%)	--	907	6	3.7NS	0.1	1.6 NS	31	17 NS	20 NS	--	NS
CV (%)	--	5	2	5.0	1.0	0.5	24	16	8	--	--

TRIAL RELIABILITY: Good

EMERGENCE: Fair	CERC. LEAF SPOT: Good
RHIZOCTONIA: Low	NEMATODES: None Detected
QUADRIS APP: 6-8 Leaf	WEATHER: ---

Comments: Both trials conducted in same field. Trial was conducted to compare Poncho Beta seed treatment and a nematode resistant variety against B-17RR32 as a check. No insect feeding was observed. It is unknown if the check and Poncho Beta treated seed were from the same seed lot. The nematode variety showed a yield increase over B-17RR32, but nematodes were not visually confirmed in the field. Revenue is based on a \$55/ton payment and an "average RWST" equal to the trial average RWST.

Use of these varieties is subject to them being lawful to purchase, receive, distribute and plant.



PONCHO BETA SEED TREATMENT

Bublitz Farms

Location:	Bay County	Tillage:	Fall Moldboard, 2x Spring
Planting Date:	3/30/2010	Harvest Date:	9/21/2010
Previous Crop:	Corn	Sample Date:	9/21/2010
Soil Type:	Loam	Herbicides:	3x Glyphosate
Spacings:	Rows 30", 50,000 Seeds/Ac.	Replicated:	5x
Fertilizer:	Blend 10-34-0 + Thiosol; Sidedress 26 gallon 28%	Fungicide:	Proline Headline Kocide

VARIETY	REV / ACRE	RWSA	RWST	TONS / ACRE	% SUGAR	% CJP	POPULATIONS 100 Ft. of Row		
							Early	Final	HARV.
B-18RR4N	--	6930	288	24.1	19.4	94.8	81	133	--
B-18RR4N + Poncho Beta	--	6567	284	23.1	19.2	94.9	84	132	--
AVERAGE	--	6749	286	23.6	19.3	94.8	82	132	--
LSD (5%)	--	364 NS	6 NS	1.0 NS	0.2 NS	0.7 NS	18 NS	26 NS	--
C.V. (%)	--	3	1	2.5	0.6	0.4	19	17	--

TRIAL RELIABILITY: Excellent

EMERGENCE:	Good	CERC. LEAF SPOT:	Good
RHIZOCTONIA:	Low	NEMATODES:	Yes
QUADRIS APP:	8 leaf	WEATHER:	--

Comments: Trial found no significant difference between treatments. No insect feeding was observed.

Use of these varieties is subject to them being lawful to purchase, receive, distribute and plant.



PONCHO BETA SEED TREATMENT

Houghtaling Farms

Location: Saginaw County
Planting Date:
Previous Crop: Corn
Soil Type: Loam
Spacings: Rows - 30 inch
Fertilizer: 2x2 - 35-17-0
 PPI - 30 gallon 28%
 Fall - 400 lbs. Potash

Tillage: Fall Chisel Plow
Harvest Date: 11/3/2010
Sample Date: 10/19/2010
Herbicides: 4x Glyphosate
Replicated: 5x
Fungicide: Proline
 Gem
 Eminent

VARIETY	REV / ACRE	RWSA	RWST	TONS / ACRE	% SUGAR	% CJP	POPULATIONS 100 Ft. of Row		
							Early	Final	HARV.
B-17RR32 + Poncho Beta	--	6957	267	26.1	18.0	95.1	--	189	--
B-17RR32	--	7235	273	26.6	18.2	95.6	--	195	--
AVERAGE	--	7096	270	26.3	18.1	95.4	--	192	--
LSD (5%)	--	460 NS	12 NS	1.4 NS	0.7 NS	0.3	--	47 NS	--
C.V. (%)	--	4	3	3.0	2.0	0.2	--	7	--

TRIAL RELIABILITY: Very Good

EMERGENCE: Good	CERC. LEAF SPOT: Good
RHIZOCTONIA: Low	NEMATODES: None Detected
QUADRIS APP: In Furrow (2" Band, 3 oz/ac)	WEATHER: --

Comments: Trial found no significant difference between treatments. No insect feeding was observed.



OVI Information

2010

	<u>Quanicassee</u>	<u>Frankenmuth</u>	<u>Sandusky</u>	<u>Pigeon</u>	<u>Auburn</u>
Grower	Sylvester	Saginaw Valley Research Farm	Stoutenburg	Trost	Schwab
Trial Quality	Fair-Good	Good	Very Good	Very Good	Poor*
Planted	20-April	1-April	21-April	12-April	30-April
Harvested	18-Oct	8-Oct	6-Oct	12-Oct	30-Sept
Soil Type	Sandy Clay Loam	Clay Loam	Sandy Clay Loam	Sandy Clay Loam	Sandy Clay Loam
Soil pH	7.8	7.7	7.6	6.9	7.0
Soil %OM	3.8	2.6	2.9	2.5	2.3
CEC meq/100g	15.2	15.1	11.1	10.0	9.9
Phosphorus	Abv. Optimum	Abv. Optimum	Abv. Optimum	Abv. Optimum	Abv. Optimum
Potassium	Below Optimum	Optimum	Abv. Optimum	Abv. Optimum	Optimum
Magnesium	Abv. Optimum	Abv. Optimum	Abv. Optimum	Abv. Optimum	Abv. Optimum
Manganese	High	High	Medium	High	Medium
Boron	Medium	Medium	Low	Low	Low
Zinc	Medium	Medium	Medium	High	High
Nitrogen Added	100	100	85	100	99

* Due to Signifigate Rhizoctonia

* Seasonal Rainfall

	<u>Quanicassee</u>	<u>Frankenmuth</u>	<u>Sandusky</u>	<u>Pigeon</u>	<u>Auburn</u>
April	0.93	1.88	1.15	0.02	
May	3.17	2.44	2.65	2.25	3.91
June	4.78	2.36	3.28	5.20	7.28
July	1.33	1.00	3.18	5.77	1.87
August	1.8	2.01	0.73	2.33	1.58
September	3.68	3.44	5.06	3.79	1.74
October	1.68	0.88	0.13		
Total	17.37	14.01	16.18	19.36	16.38

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

Michigan Sugar Company

Sugarbeet Variety Approval System for 2010

Revised 2009

Objective:

The purpose of the Official Variety Trials (OVT) testing program is to identify and evaluate improved sugarbeet varieties for Michigan Sugar Company growers. The variety approval process is based primarily on a mathematical system which measures the yield, quality, storability and Cercospora leafspot levels of new varieties. Minimum levels for RWSA, RWST, RWST-Storage and Cercospora leafspot tolerance must be met before a variety will be fully approved. Additional testing is conducted to measure other varietal traits such as emergence and tolerance to pests and diseases. No variety may be sold or given away unless approved by Michigan Sugar Company.

The yield, quality, storability and Cercospora tolerance of new varieties are measured against approved “check varieties”. The current check varieties for yield, quality, storability and Cercospora are:

HM 50RR, BTS 17RR32, HM 28RR, and Seedex 1260RR.

The Performance Standards used to approve a variety will include:

Varieties first tested in:	<u>Before 2008</u>	<u>2008-2009</u>	<u>2010: Minimum in Point System</u>
RWSA:	86.5%	89.2%	94.25% or more of the check varieties.
RWST:	98.9%	99.9%	101.2% or more of the check varieties.
RWST-Storage:	7% under RWST requirement (2012?)		
Cercospora Leafspot:	101.3%	101.3%	124.7% or less of the check varieties.

These performance standards are based on an average of the most recent 3 years of data.

Limited Approval (5%):

After 2 consecutive years of successful testing (performance standards passed) a variety will be advanced to Limited Approval (5%). This is intended to be a test marketing period and the variety can be planted on up to 5% of the Co-op’s acreage. Commercially processed seed must be used. If the OVT performance standards are maintained during this test marketing period the variety will become fully approved.

Limited Approval (10%):

If the performance standards are maintained after 3 consecutive years of successful testing, but the variety was not test marketed or if commercial seed is not available after 2 years of successful testing, the variety will be advanced to Limited Approval (10%). Varieties in this category can be planted on up to 10% of the Co-op’s acreage. If the performance standards are maintained during this test marketing period and commercial plantings were successful the variety will become fully approved.

Use of these varieties is subject to them being lawful to purchase, receive, distribute and plant.

Full Approval:

After 3 consecutive years of testing a variety will be advanced from Limited Approval to Full Approval assuming the 3 year OVT data averages pass all requirements and the variety has been test marketed and commercial seed is available. Fully approved varieties do not have limits on the amount of seed that can be sold or planted. A fully approved variety must maintain a leafspot level of “**not more than 5% above the required level**” or it will be **disapproved**. If a variety’s 3 year leafspot level “**is more than 5% above the required level**” it will be disapproved and put on a 2 year plant out. A disapproved variety can be reinstated if the latest 3 year average meets the leafspot level.

If a fully approved variety is not submitted for testing, it will be disapproved and put on a 2 year plant out.

Specialty Approval:

Varieties may be approved as “Specialty Varieties” if they do not meet the performance standards but have other desirable characteristics such as insect or disease tolerance. To be considered for a specialty approval the variety must be designated by the seed company as having the specialty trait and must be successfully tested by the Company in an approved nursery. Commercial seed must also be available. If approved by the Seed Committee, the variety can be sold for 2 years after approval and the seed committee will determine the quantity of seed that can be sold each year.

Seed Committee:

The Michigan Sugar Company Seed Committee is comprised of the following members: 4 employees from the Agricultural Department, 3 members from the Board of Directors and 6 Grower members representing different growing districts. The chairman will be elected from the 6 Grower members. Each member on the Seed Committee has 1 vote.

Variety Approval and Policy Changes are Subject to Board of Director Approval

Use of these varieties is subject to them being lawful to purchase, receive, distribute and plant.

Michigan Sugar Company
Variety Approval "Points" System
 (Valid 2010 through 2014)

The Variety Approval Points System will be used to approve varieties that enter the Official Variety Trials in 2010, 2011, 2012, 2013 and 2014. The system will be evaluated in 2014 to determine if it will be used going forward.

The purpose of the points system is to provide an avenue to approve higher quality, higher yielding varieties. In addition, the system allows resistance traits such as Rhizoctonia to contribute toward a variety's chance of being approved. The system also provides incentives to seed companies to breed for the traits that are important to our growers and the Coop.

Varieties accumulate approval points based upon RWSA, RWST, Cercospora, Rhizoctonia, Root Aphid, Rhizomania and Emergence levels. Minimum levels for RWSA, RWST and Cercospora must be met, in addition to a total points score.

<u>Approval Levels Needed (% of check varieties)</u>			
<u>RWSA</u>	<u>RWST</u>	<u>Cercospora</u>	<u>Points</u>
94.25	101.2	124.7	99.2
minimum	minimum	maximum	minimum

The current check varieties are: HM 28RR, HM 50RR, SX 1260RR and B 17RR32

Approval points are accumulated as follows:

RWSA levels are determined from OVT trials and expressed as a % of check.

RWST levels are determined from OVT trials and expressed as a % of check, then the variance from 100 (above or below) is multiplied by 3.

Example: Variety A has an RWST of 103% of check: $103 - 100 = 3 \times 3 = 9$ points

Variety B has an RWST of 98% of check: $100 - 98 = 2 \times 3 = -6$ points

Cercospora: Percent of check is determined for each variety from Michigan Sugar trials. Points are distributed according to a conversion table (see below). There is a wide range of points (from 10 to -18) which rewards tolerant varieties but becomes increasingly punitive as the leafspot susceptibility increases.

Rhizoctonia: Percent of check is determined for each variety from Michigan Sugar and USDA (Ft Collins, CO) trials. HM 39RR, HM 50RR and C RR808 are the check varieties. Varieties can gain from 0 to 10 points. (See conversion table below)

Root Aphid: Actual values (not % of check) are used to assign points. The trial is conducted by BetaSeed in Shakopee, MN. Varieties receive from 0 to 5 points. (See conversion table below)

Use of these varieties is subject to them being lawful to purchase, receive, distribute and plant.

Rhizomania: Actual values (not % of check) are used to assign points. The trial is conducted by the USDA in Salinas, CA. The trial values are divided into 5 equal categories and points are assigned in a conversion table. Varieties gain 1 to 3 points.

Emergence: Percent emergence is calculated from the OVT trials based upon the number of emerged plants in comparison to the number of seeds planted. The conversion table is designed to reward or subtract points as a variety's emergence moves upward or downward in the trial. The scale becomes more generous or more punitive at the top and bottom ends of the scale. Varieties are not considered if commercially prepared seed was not used.

Conversion Tables (from data to points)

Cercospora	
% of Check*	Points
71.3 or less	10
>71.3-80.2	8
>80.2-89.1	6
>89.1-93.5	5
>93.5-98.0	4
>98.0-102.4	3
>102.4-106.9	2
>106.9-111.4	1
>111.4-113.6	0
>113.6-115.8	-2
>115.8-116.7	-3
>116.7-117.6	-4
>117.6-118.5	-5
>118.5-119.4	-6
>119.4-120.3	-8
>120.3-121.2	-10
>121.2-122.0	-12
>122.0-122.9	-14
>122.9-123.8	-16
>123.8-124.7	-18
Compare to Check Varieties: HM 28RR, HM 50RR, B 17RR32, SX 1260RR. Scale will be the same each year	

Rhizoctonia	
% of Check*	Points
81.5 - 84.5	10
84.6 - 87.6	9
87.7 - 90.7	8
90.8 - 93.8	7
93.9 - 96.9	6
97.0 - 100.0	5
100.1 - 103.1	4
103.2 - 106.2	3
106.3 - 109.3	2
109.4 - 112.4	1
112.5 +	0
Compare to Check Varieties: HM 39RR C RR808, HM 50RR Range of trial divided into equal segments	

Rhizomania	
Rating	Points
4.10-4.51	3
4.52-4.93	2.5
4.94-5.35	2
5.36-5.77	1.5
5.78-6.20	1
The range of the scale will be adjusted for each years results	

Root Aphid	
Rating	Points
1.0-1.49	5
1.5-1.99	4
2.0-2.49	3
2.5-2.99	2
3.0-3.49	1
3.5 +	0
This scale will stay the same every year.	

Emergence		% of
% Emerg	Points	Range
77.8 - 79.3	5	5
75.7 - 77.79	4	7
73.1 - 75.69	3	9
70.1 - 73.09	2	10
66.6 - 70.09	1	12
62.4 - 66.59	0	14
58.9 - 62.39	-1	12
56.9 - 58.89	-2	10
53.3 - 56.89	-3	9
51.2 - 53.29	-4	7
49.7 - 51.19	-5	5
Commercial Seed Only		
The range of the scale will be adjusted for each years results.		

Use of these varieties is subject to them being lawful to purchase, receive, distribute and plant.

Michigan Sugar Company
Variety Approval "Points" System

Adding the Points Up - Examples

Example: Crystal RR827 has an RWSA % check value of 113.9 which equals its points. This is the starting point and other factors will be added or subtracted from the RWSA level. The RWST level for C RR827 is 109.7 (% check). So, $109.7 - 100 = 9.7 \times 3 = 29.1$ points. C RR827 has a Cercospora % check of 125.4. From the table this equals a -18 points. The Rhizoc level is 109.2 which converts to 2 points. The Root Aphid level is 2.3 which equals 3 points. Rhizomania results are not yet available. Crystal RR827 has an emergence level of 63.3% which converts to 0 points. Total points are 130 which is 120.8 % of the check varieties.

Parameter Measured	<u>Crystal RR827</u>		<u>HM 28RR</u>		<u>SX 1260RR</u>	
	Actual Value	Points	Actual Value	Points	Actual Value	Points
RWSA	113.9	113.9	99.8	99.8	99	99
RWST	109.7	29.1	99.4	-1.8	97.6	-7.4
Cercospora	125.4	-18	98.2	3	98.1	3
Rhizoctonia	109.2	2	97.5	5	107.2	2
Root Aphid	2.4	3	2.2	3	2.8	2
Rhizomania*	na	0	na	0	na	0
Emergence	63.3	0	65.8	0	66.6	1
Total Points		130.0		109.0		99.6
Points % check		120.8		101.3		92.6

* We do not have results from the 2010 Rhizomania nursery.

Use of these varieties is subject to them being lawful to purchase, receive, distribute and plant.

Michigan Sugar Company
Variety Approval Points System
First Year Varieties
2010 Data

Variety	RWSA % ck		RWST % ck		Cerc % ck		Points % ck	
	Need 94.25	Yes/ No	Need 101.2	Yes/ No	124.7 or Lower	Yes/ No	Need 99.19	Yes/ No
Crystal RR059	106.3	Yes	106.4	Yes	112.7	Yes	125.7	Yes
Crystal RR074NT	113.2	Yes	105.8	Yes	116.9	Yes	123.0	Yes
Crystal RR046	110.1	Yes	102.4	Yes	101.3	Yes	115.4	Yes
BTS 10RR34	104.3	Yes	103.2	Yes	97.6	Yes	115.1	Yes
BTS 10RR73	99.3	Yes	102.8	Yes	87.4	Yes	111.1	Yes
BTS 10RR17	97.5	Yes	101.8	Yes	97.2	Yes	107.7	Yes
Cyrstal RR086	94.5	Yes	100.8	No	85.9	Yes	105.0	Yes
BTS 10RR10	103.6	Yes	99.7	No	98.0	Yes	102.0	Yes
SX 1204RR	94.7	Yes	100.1	No	93.8	Yes	101.4	Yes
HM-9261RR	96.0	Yes	97.7	No	96.0	Yes	94.1	No
SX 1205RR	92.0	No	100.9	No	106.8	Yes	92.8	No
HM-9258RR	95.5	Yes	100.6	No	119.3	Yes	90.7	No
HM-9259RR	100.7	Yes	97.0	No	118.0	Yes	87.4	No
HM-9260RR	93.3	No	95.2	No	114.7	Yes	80.3	No
HM-9264RR	93.1	No	98.2	No	117.5	Yes	78.9	No
HM-9265RR	87.3	No	99.0	No	123.1	Yes	66.6	No
HM-9266RR	94.3	Yes	95.2	No	126.4	No	60.1	No
SX 1203RR	95.6	Yes	93.3	No	126.8	No	57.8	No

Comments

Varieties first tested in 2010 will be approved according to the Points System.
Six 1st year varieties are on approval track.

Each category must be passed to be approved.

The following page shows how the points were arrived at for each variety.

Use of these varieties is subject to them being lawful to purchase, receive, distribute and plant.

Michigan Sugar Company
Variety Approval Points System
First Year Varieties
2010 Data

Variety	RWSA	RWST Actual	3X rwst Variance	Cerc	Rhizoc	Root Aph*	Rzm*	Emerg*	Points** Actual	% ck
Crystal RR059	106.3	106.4	19.2	0.0	9.0	2.5		0.0	137.0	125.7
Crystal RR074NT	113.2	105.8	17.3	-4.0	5.0	2.5		0.0	134.0	123.0
Crystal RR046	110.1	102.4	7.2	3.0	3.0	2.5		0.0	125.8	115.4
BTS 10RR34	104.3	103.2	9.6	4.0	5.0	2.5		0.0	125.4	115.1
BTS 10RR73	99.3	102.8	8.3	6.0	5.0	2.5		0.0	121.1	111.1
BTS 10RR17	97.5	101.8	5.4	4.0	8.0	2.5		0.0	117.3	107.7
Cyrstal RR086	94.5	100.8	2.4	6.0	9.0	2.5		0.0	114.4	105.0
BTS 10RR10	103.6	99.7	-0.9	3.0	3.0	2.5		0.0	111.1	102.0
SX 1204RR	94.7	100.1	0.3	4.0	9.0	2.5		0.0	110.5	101.4
HM-9261RR	96.0	97.7	-7.0	4.0	7.0	2.5		0.0	102.5	94.1
SX 1205RR	92.0	100.9	2.7	2.0	2.0	2.5		0.0	101.1	92.8
HM-9258RR	95.5	100.6	1.8	-6.0	5.0	2.5		0.0	98.8	90.7
HM-9259RR	100.7	97.0	-8.9	-5.0	6.0	2.5		0.0	95.3	87.4
HM-9260RR	93.3	95.2	-14.3	-2.0	8.0	2.5		0.0	87.5	80.3
HM-9264RR	93.1	98.2	-5.5	-4.0	0.0	2.5		0.0	86.0	78.9
HM-9265RR	87.3	99.0	-3.1	-16.0	2.0	2.5		0.0	72.6	66.6
HM-9266RR	94.3	95.2	-14.3	-18.0	1.0	2.5		0.0	65.5	60.1
SX 1203RR	95.6	93.3	-20.1	-18.0	3.0	2.5		0.0	63.0	57.8

* We do not have nursery results for 2010 for root aphid and Rhizomania.

Emergence will not be used until a variety is commercially produced.

** % check (B 32, HM 28, SX 1260, HM 50) = $100 \times .9919 = 99.19\%$ check (approval level)

** Varieties must also pass minimum levels for RWSA and RWST and not be over on leafspot.

Use of these varieties is subject to them being lawful to purchase, receive, distribute and plant.

Michigan Sugar Company
 How Approved Varieties Compare in the Points System
 (These varieties will not be in the Points System)
 2010 Data

Variety	RWSA	RWST Actual	3X RWST Variance	Cerc	Rhizoc	R Aph	Rzm*	Emerg	Total Points	% of** Check
Crystal RR808	111.5	109.0	27.0	-2.0	3.0	3.0		-1.0	141.5	130.8
BTS 18RR4N	114.4	106.6	19.9	-2.0	4.0	1.0		1.0	138.3	127.8
BTS 19RR1N	115.4	104.8	14.4	-2.0	4.0	1.0		0.0	132.8	122.7
Crystal RR827	113.9	109.7	29.1	-18.0	2.0	3.0		0.0	130.0	120.2
Cyrstal RR840	101.7	105.0	14.9	5.0	5.0	2.0		-2.0	126.7	117.1
BTS 18RR26	102.3	104.8	14.3	5.0	4.0	1.0		-2.0	124.7	115.2
Crystal RR824	110.1	102.7	8.1	0.0	2.0	3.0		1.0	124.1	114.7
BTS 19RR90	98.7	103.4	10.3	3.0	7.0	5.0		0.0	124.0	114.6
HM-133RR	94.2	102.9	8.8	6.0	5.0	3.0		-1.0	116.1	107.3
HM-50RR	95.6	102.3	6.8	6.0	3.0	3.0		0.0	114.39	105.7
HM-110RR	96.3	102.0	6.1	5.0	6.0	1.0		-1.0	113.3	104.7
SX 1281RR	95.0	101.6	4.7	5.0	6.0	2.0		-1.0	111.7	103.2
HM-28RR	99.8	99.4	-1.8	3.0	5.0	3.0		0.0	109.0	100.8
BTS 17RR32	105.5	100.7	2.2	-4.0	2.0	4.0		0.0	109.8	101.4
HM-131RR	95.3	100.7	2.1	6.0	3.0	2.0		-1.0	107.4	99.2
HM-27RR	92.5	100.3	0.8	5.0	8.0	1.0		0.0	107.2	99.1
BTS 18RR06	99.2	106.0	17.9	-18.0	5.0	5.0		-3.0	106.1	98.1
SX 1291RR	96.9	99.0	-2.9	4.0	5.0	2.0		0.0	105.0	97.0
HM-9173RR	96.0	99.5	-1.6	5.0	3.0	2.0		0.0	104.4	96.5
SX 1260RR	99.0	97.6	-7.4	3.0	2.0	2.0		1.0	99.6	92.1
HM-39RR	94.4	97.5	-7.4	-5.0	8.0	0.0		0.0	90.0	83.2

* Rhizomania data not available

** % check (B 32, HM 28, SX 1260, HM 50) = 100 X .9919 = 99.19 % check (approval level)

Use of these varieties is subject to them being lawful to purchase, receive, distribute and plant.