MICHIGAN SUGARBEET

REACh

Research & Education Advisory Council

2009 Variety Trial Results

MISSION STATEMENT

The mission of
The Michigan Sugarbeet Research and 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.

USDA

MICHIGAN SUGARBEET REACh
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Sugarbeet Advancement

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PIONEER • BIG CHIEF
MICHIGAN SUGAR

REACH - 2009 VARIETY RESULTS

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MICHIGAN SUGAR COMPANY

Approval of Seed Varieties for the 2010 Crop

The Seed Committee and Board of Michigan Sugar Company approved quantities of seed for commercial planting of the following varieties for the 2010 crop:

Fully Approved Varieties

(Unlimited Quantities)

	Until 2010		Until 2011
HM 27RR	Beta 5411R*	Crystal 271*	Beta 5833R**
HM 50RR	Beta 5451*	Crystal 963*	Beta 5930R**
HM 42RR	Crystal R442*	Crystal 355*	SX 1233**
SX 1260RR	HM 7172 Rz*		Crystal R509**

*Last year to plant is 2010 **Last year to plant is 2011

Limited Approved Varieties

(Quantities limited to 10% of acres)

HM 51RR
HM 55RR

Limited Approved Varieties

(Quantities limited to 5% of acres)

HM 110RR	SX 1281RR
Crystal RR840	BTS 18RR26
HM 133RR	BTS 18RR16
HM 131RR	

Specialty Approved Varieties

(Limited Quantities)

	Units	Specialty
HM 28RR		Approved 08
HM 29RR		Approved 08
BTS 17RR32		High Sugar
BTS 17RR62*		High Sugar
Crystal RR827		High Sugar
Crystal RR824		High Sugar
Crystal RR808	5% Sales	High Sugar
BTS 18RR4N		Nematode
HM 39RR		Rhizoctonia
BTS 18RR06	5% Sales	High Sugar

*Last year to plant is 2010

PIONEER · BIG CHIEF MICHIGAN SUGAR

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Summary of Data

Varieties For Sale Summary

Average of 2 Years OVT Data

			Values are % of Check					
Variety		$/A	RWSA	RWST	Cerc	Rhizoc	Root Aphid	Comments
Crystal RR827	High RWST	1462	120.2	105.8	128	121	90	Poor Rhizoc / Poor Cercospora
Crystal RR808	High RWST	1450	118.7	106.6	127	117	81	Poor Rhizoc / Poor Cercospora
Crystal RR824	High RWST	1443	118.5	102.0	134	120	86	Poor Rhizoc / Poor Cercospora
BTS 17RR32	High RWST	1411	116.0	101.4	127	117	68	Poor Rhizoc / Poor Cercospora
BTS 17RR62	High RWST	1409	115.8	105.0	141	116	81	Poor Rhizoc / Poor Cercospora
HM 110RR	Limited 5%	1360	111.5	100.9	110	100	131	Fair Rhizoc / Fair Cercospora
BTS 18RR16	Limited 5%	1359	111.7	101.8	97	107	113	Fair+ Cercospora / Fair- Rhizoc
BTS 18RR4N	Nematode	1359	111.6	98.9	134	107	113	Fair- Rhizoc / Poor Cercospora
HM 133RR	Limited 5%	1356	110.9	100.7	105	104	81	Fair Cercospora / Fair- Rhizoc
Crystal RR840	Limited 5%	1356	110.8	102.4	86	113	117	Good Cercospora / Fair- Rhizoc
HM 39RR	Rhizoc Spec.	1356	110.7	100.4	115	84	140	Good Rhizoc / Fair- Cercospora
HM 28RR	Spec. App.	1352	110.6	98.0	106	94	122	Fair Rhizoc / Fair Cercospora
BTS 18RR26	Limited 5%	1347	110.1	104.2	90	110	99	Good Cercospora / Fair- Rhizoc
SX 1281RR	Limited 5%	1341	109.7	101.1	104	98	99	Fair Cercospora / Fair Rhizoc
HM 27RR	Full Approval	1339	109.4	100.5	106	98	122	Good Rhizoc / Fair Cercospora
HM 29RR	Spec. App.	1339	109.5	98.7	108	98	117	Fair Rhizoc / Fair Cercospora
SX 1260RR	Full Approval	1338	109.6	99.1	113	111	131	Fair- Rhizoc / Fair- Cercospora
BTS 18RR06	High RWST	1337	109.9	103.2	118	106	45	Fair- Rhizoc / Fair- Cercospora
HM 131RR	Limited 5%	1334	109.2	101.7	101	96	113	Fair Cercospora / Fair Rhizoc
HM 50RR	Full Approval	1313	107.6	101.8	96	99	63	Fair+ Cercospora / Fair Rhizoc
HM 42RR	Full Approval	1302	106.8	101.8	98	100	86	Fair+ Cercospora / Fair Rhizoc

A Lower Value is Better for Cercospora, Rhizoctonia and Root Aphid
A Higher Value is Better for $/Acre, RWSA and RWST

Rhizoctonia & Cercospora Choices

All Values are % of Check

Rhizoctonia

Varieties	Rhizoc	RWSA	RWST	Cerc	Comments
HM 39RR	84	110.7	100.4	115	Good Rhizoctonia Tolerance
HM 28RR	93	110.6	98.0	106	Fair Rhizoctonia Tolerance
HM 131RR	94	109.2	101.7	101	Fair Rhizoctonia Tolerance
HM 29RR	96	109.5	98.7	108	Fair Rhizoctonia Tolerance
HM 27RR	96	109.4	100.5	106	Field Performance has been Good
SX 1281RR	97	109.7	101.1	104	Fair Rhizoctonia Tolerance
HM 50RR	97	107.6	101.8	96	Fair Rhizoctonia Tolerance
HM 42RR	98	106.8	101.8	98	Fair Rhizoctonia Tolerance

All Values are % of Check

Cercospora

Varieties	Cerc	RWSA	RWST	Rhizoc	Comments
Crystal 840RR	86	110.8	102.4	113	Good Cercospora Tolerance
BTS 18RR26	90	110.1	104.2	110	Good Cercospora Tolerance
HM 50RR	96	107.6	101.8	99	Fair+ Cercospora Tolerance
BTS 18RR16	97	111.7	101.8	107	Fair+ Cercospora Tolerance
HM 42RR	98	106.8	101.8	100	Fair+ Cercospora Tolerance

A Higher Value is Better for RWSA and RWST
A Lower Value is Better for Cercospora and Rhizoctonia

High Sugar & Nematode Choices

All Values are % of Check

High Sugar

Varieties	RWST	RWSA	Rhizoc	Cerc	Comments
Crystal RR808	106.6	118.7	117	127	Poor Rhizoc and Cerc
C RR827	105.8	120.2	121	128	Poor Rhizoc and Cerc
BTS 17RR62	105.0	115.8	116	141	Poor Rhizoc and Cerc
BTS 18RR26	104.2	110.1	110	90	Good Cerc / Fair- Rhizoc
BTS 18RR06	103.2	109.9	106	118	Fair- Rhizoc / Fair- Cerc
Crystal RR840	102.4	110.8	113	86	Good Cerc / Fair- Rhizoc
C RR824	102.0	118.5	120	134	Poor Rhizoc and Cerc
HM 50RR	101.8	107.6	99	96	Fair Rhizoc / Fair+ Cerc
HM 42RR	101.8	106.8	100	98	Fair Rhizoc / Fair+ Cerc
BTS 18RR16	101.8	111.7	107	97	Fair+ Cerc / Fair- Rhizoc
HM 131RR	101.7	109.2	96	101	Fair Cerc / Fair Rhizoc
BTS 17RR32	101.4	116.0	117	127	Poor Rhizoc and Cerc
SX 1281RR	101.1	109.7	98	104	Fair Cerc / Fair Rhizoc

All Values are % of Check

Nematode

Varieties	Nem	RWSA	RWST	Rhizoc	Cerc	Comments
BTS 18RR4N	65	111.6	98.9	107	134	Good Nem, Fair- Rhizoc, Poor Cerc

A Higher Value is Better for RWSA and RWST
A Lower Value is Better for Cercospora, Rhizoctonia and Nematode Tolerance

Varieties For Sale Traits

Average of 2 Years (2008-2009)

									Disease/Insect Nurseries				
Variety	Approval Status	$/A[1]	RWSA	RWST	Tons/ Acre	% Suc	% CJP	Emerg	Cerc	Root[2] Aphid	Rhizoc	Aph	Rhizom[3]
Crystal RR827	Spec - High Quality	1462	9971	282	35.1	18.9	95.1	Good	Poor	Good	Poor	Good	Fair
Crystal RR808	Spec - High Quality	1450	9871	284	34.5	19.0	95.2	Exc	Poor	Good	Poor	Good	Fair
Crystal RR824	Spec - High Quality	1443	9842	272	35.9	18.3	95.2	Good	Poor	Good	Poor	Fair	Good
BTS 17RR32	Spec - High Quality	1411	9631	270	35.4	18.1	95.3	Good	Poor	Good	Poor	Fair	Good
BTS 17RR62	Spec - High Quality	1409	9595	280	34.1	18.7	95.4	Fair	Poor	Good	Poor	Fair-	Good
HM 110RR	Limited 5%	1360	9265	269	34.2	18.1	95.2	Fair	Fair	Fair	Fair	Fair	Fair
BTS 18RR16	Limited 5%	1359	9281	272	33.9	18.4	94.9	Fair	Fair+	Fair	Fair-	Fair	Fair
BTS 18RR4N	Spec - Nematode	1359	9273	264	34.8	17.8	95.1	Exc	Poor	Fair	Fair-	Good	Fair
HM 133RR	Limited 5%	1356	9226	269	34.1	18.2	94.9	Good	Fair	Good	Fair-	Fair	Fair
Crystal RR840	Limited 5%	1356	9218	273	33.5	18.5	94.9	Fair-	Good	Fair	Fair-	Fair	Fair
HM 39RR	Spec - Rhizoc	1356	9218	268	34.2	18.1	95.1	Exc	Fair-	Fair	Good	Good	Good
HM 28RR	Special App.	1352	9200	261	34.9	17.6	95.2	Good	Fair	Fair	Fair	Fair	Good
BTS 18RR26	Limited 5%	1347	9172	278	32.7	18.8	95.0	Fair	Good	Good	Fair-	Good	Fair
SX 1281RR	Limited 5%	1341	9136	270	33.6	18.1	95.2	Good	Fair	Good	Fair	Good	Fair
HM 27RR	Full Approval	1339	9091	268	33.8	18.1	95.1	Fair	Fair	Fair	Good	Good	Good
HM 29RR	Special App.	1339	9098	263	34.4	17.8	95.1	Good	Fair	Fair	Fair	Fair	Good
SX 1260RR	Full Approval	1338	9108	264	34.2	17.8	95.1	Exc	Fair-	Fair	Fair-	Good	Good
BTS 18RR06	Spec - High Quality	1337	9124	275	32.9	18.4	95.5	Fair	Fair-	Good	Fair-	Good	Good
HM 131RR	Limited 5%	1334	9080	271	33.3	18.3	95.1	Exc	Fair	Fair	Fair	Fair	Fair
HM 50RR	Full Approval	1313	8944	271	32.7	18.3	94.9	Good	Fair+	Good	Fair	Fair	Fair
HM 42RR	Full Approval	1302	8885	272	32.4	18.4	94.8	Fair	Fair+	Good	Fair	Fair	Fair
Average		1365	9259	271	33.9	18.3	95.1						
LSD (P=.05)		50.8	352.0	7.7	1.5	0.5	0.4						
CV %		1.8	1.8	1.4	2.2	1.3	0.2						

[1]$/Acre Payment: Variety RWST / Trial Avg RWST X Tons/A X $40/T

[2]Root Aphid: 2008 Data Only

[3]Rhizomania: Preliminary Results

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Official Variety Trial

Average of 3 Locations

(Frankenmuth, Quanicassee, and Ruth)

2009

Variety	$/Acre[1]	RWSA	RWST	Rank	Tons/A	Rank	% Suc	Rank	% CJP	Rank	%Emerg	Rank
Crystal RR808	**1505***	**10877***	**302***	1	36.0	5	**20.0***	1	**95.7***	13	**66***	3
Crystal RR824	**1492***	**10783***	284	16	**38.0***	1	19.0	13	95.4	20	61	5
Crystal RR827	**1483***	**10716***	**302***	2	35.4	10	**20.0***	2	**95.7***	10	56	12
BTS 17RR32	**1448***	**10474***	283	18	**36.9***	2	18.8	19	**95.7***	9	52	17
BTS 18RR26	1426	10307	**300***	3	34.4	16	**19.9***	3	**95.6***	15	49	19
HM 39RR	1424	10286	286	13	35.9	6	19.0	14	**95.8***	8	59	8
HM 133RR	1422	10274	287	12	35.8	7	19.1	11	**95.5***	16	57	11
Crystal RR840	1417	10231	294	7	34.9	14	19.6	6	95.4	19	39	21
SX 1281RR	1415	10226	286	15	35.7	8	18.9	15	**95.8***	6	60	6
HM 28RR	1414	10209	279	21	36.5	3	18.5	21	**95.9***	4	58	9
BTS 17RR62	1413	10212	**299***	4	34.2	19	**19.7***	5	**95.9***	3	53	16
BTS 18RR16	1413	10216	**297***	5	34.3	17	**19.8***	4	95.3	21	54	14
BTS 18RR4N	1412	10203	283	19	36.1	4	18.8	17	**95.6***	14	**69***	1
HM 110RR	1409	10188	287	11	35.4	11	19.0	12	**96.0***	1	56	13
SX 1260RR	1386	10009	283	17	35.3	12	18.8	18	**95.7***	11	**66***	2
HM 131RR	1382	9993	289	9	34.5	15	19.2	10	**95.8***	7	61	4
HM 27RR	1381	9977	286	14	34.9	13	18.9	16	**95.9***	5	51	18
HM 29RR	1378	9955	280	20	35.6	9	18.6	20	**95.7***	12	60	7
BTS 18RR06	1371	9914	296	6	33.4	21	19.5	7	**96.0***	2	43	20
HM 50RR	1365	9866	288	10	34.2	18	19.2	9	95.5	18	58	10
HM 42RR	1364	9856	291	8	33.7	20	19.4	8	**95.5***	17	54	15
Average	1400	10113	286		35.0		19.0		95.4		54	
LSD (P=.05)	58.7	422	4.8		1.5		0.3		0.5		6.0	
CV %	2.5	2.5	1.0		2.5		0.8		0.3		5.6	

1. $/Acre: Gross dollars per acre assuming $40 payment

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

Reps: 6 for one and 8 for two
Row Width: 22 inches

Quadris: 2 applications
Cercospora sprays: 3, control very good

Plant to Stand**

Average of 3 Locations

2009

Variety	$/A[1]	RWSA	RWST	Rank	Tons/A	Rank	% Suc	Rank	% CJP	Rank	% Emerg	Rank	Beets/100' at Harvest	Rank
Crystal RR824	**1285***	**9209***	284	6	**32.3***	1	18.8	6	**95.9***	3	53	6	133	5
BTS 17RR32	**1282***	**9220***	287	5	**32.0***	3	19.1	4	**95.7***	10	44	11	126	8
Crystal RR827	**1262***	**9073***	**300***	1	30.1	6	**19.8***	1	**96.0***	1	49	8	127	7
HM 28RR	**1258***	**9019***	279	11	**32.2***	2	18.5	11	**95.9***	5	58	2	**144***	2
HM 29RR	**1228***	**8804***	281	9	**31.3***	4	18.6	9	**96.0***	2	54	5	137	3
HM 39RR	1217	8737	283	7	30.7	5	18.8	7	**95.8***	9	56	3	133	4
BTS 17RR62	1184	8534	**292***	2	29.0	8	**19.3***	2	**95.7***	11	45	10	119	10
SX 1260RR	1163	8334	283	8	29.4	7	18.8	8	**95.8***	7	**68***	1	**146***	1
HM 27RR	1108	7978	280	10	28.3	9	18.6	10	**95.9***	4	50	7	119	11
HM 42RR	1100	7917	288	4	27.3	10	19.1	5	**95.8***	8	45	9	124	9
HM 50RR	1087	7814	289	3	26.9	11	19.2	3	**95.9***	6	56	4	127	6
Average	1198	8604	286		30.0		19.0		95.9		53		130	
LSD (P=.05)	63.9	456.8	9.3		1.2		0.5		0.4		6.4		10.5	
CV %	3.2	3.2	1.9		2.5		1.6		0.3		7.3		4.8	

1. $/Acre: Gross dollars per acre assuming $40 payment

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

**** The Plant to Stand trial uses less intense management than the OVT. It is planted with a 4.5 inch seed spacing, has only one Quadris application, and uses Beetcast to time fungicide applications for Cercospora.**

Reps: 6 Row Width: 22 inches

Sugarbeet Advancement

2009 VARIETY TRIALS
Trial Averages

Cedar Pond Farms (Harbor Beach)
Loren & Joshua Humm (Ithaca)
LAKKE Ewald Farms (Unionville)
Yoder Farms (Pigeon)

Brian Fox (Dover, Ontario)
Knoerr Farms (Bay City)
Wadsworth Farms (Sandusky)

VARIETY	REV / ACRE	RWSA	RWST	TONS / ACRE	% SUGAR	% CJP
C-RR824	**$1,206**	**9136**	**292**	**31.1**	**19.3**	**95.9**
B-17RR32	$1,190	9023	289	31.0	19.2	95.8
C-RR827 (2) **	**$1,159**	**9005**	**302**	**29.7**	**19.9**	**95.9**
HM-28RR	$1,179	8916	287	30.9	19.0	95.9
C-RR827	**$1,158**	**8786**	**300**	**29.1**	**19.8**	**95.7**
HM-29RR	$1,148	8701	285	30.3	18.9	96.0
SX-1260RR	**$1,129**	**8551**	**289**	**29.5**	**19.1**	**95.9**
B-17RR62	$1,101	8394	296	28.1	19.5	96.0
HM-27RR	**$1,080**	**8219**	**287**	**28.4**	**19.1**	**95.7**
HM-50RR	$1,070	8124	296	27.2	19.7	95.5
HM-42RR	**$1,061**	**8068**	**297**	**26.9**	**19.7**	**95.8**
HM-50RR (0)*	See Individual Trials					
AVERAGE	**$1,135**	**8629**	**293**	**29.3**	**19.4**	**95.8**
LSD (5%)	—	**438**	**6**	**1.2**	**0.3**	**0.3**
C.V. (%)	—	**5**	**2**	**4.0**	**1.5**	**0.3**

* HM-50RR (0) had no Quadris applied. ** C-RR827(2) had two Quadris applications.

Comments: This is the average of 7 variety trials. Refer to individual trials for specific conditions such as Rhizoctonia, emergence, and etc. Revenue per acre is based on a $40 per ton projected payment, an "average RWST" equal to the trial average of 293, and Quadris cost deducted from the revenue at a rate of $25.20 per acre plus a $7.50 application cost.

2009 VARIETY TRIALS
Average of 6 Locations
Final – Mid – and Early Emergence

TREATMENT NAME	EARLY *
SX-1260RR	177
C-RR824	138
B-17RR32	137
B-17RR62	131
C-RR827	119
HM-50RR	110
HM-42RR	104
HM-28RR	93
HM-27RR	86
HM-29RR	82
AVERAGE	117
LSD 5%	---
CV %	---

TREATMENT NAME	MID
SX-1260RR	196
C-RR824	190
B-17RR32	174
C-RR827	170
B-17RR62	170
HM-29RR	169
HM-50RR	162
HM-28RR	157
HM-42RR	153
HM-27RR	137
AVERAGE	167
LSD 5%	18
CV %	9

TREATMENT NAME	FINAL	% STAND
SX-1260RR	203	76
C-RR824	203	76
HM-29RR	197	74
B-17RR32	195	73
HM-28RR	194	73
C-RR827	188	70
B-17RR62	188	70
HM-50RR	185	69
HM-42RR	179	67
HM-27RR	165	62
AVERAGE	189	71
LSD 5%	12	--
CV %	6	--

***** Based on two trials

Comments:

- Stand counts based on three 100 ft. replications at 6 locations.
- Average seed spacing – 4 ½ inches
- Early stand counts approximately 10-12 days
- Mid-stand counts approximately 15-20 days
- Final stand counts approximately 28-32 days

Partnership of: Sugarbeet Growers
Michigan Sugar Company
Michigan State University
Agribusiness

WADSWORTH VARIETY / RHIZOCTONIA TRIAL

Treatment name	* Rhizoctonia 1200 ft. of row	Comments
HM-27RR	6	
HM-29RR	13	
HM-28RR	22	
HM-50RR	39	
C-RR827 (2)	49	2 Quadris Applications
HM-42RR	54	
B-17RR32	97	
SX-1260RR	114	
HM-50RR (0)	131	No Quadris Applied
C-RR827	221	
C-RR824	251	
B-17RR62	370	

AVERAGE – 114
LSD (10%) – 184

Comments: Trial had heavy levels of Rhizoctonia root rot. Trial received a single application of Quadris applied at 4-6 leaf stage to all varieties except C-RR827 (2) and HM-50RR (0). C-RR827 (2) received Quadris applications at 4-6 and 8-10 leaf stages. HM-50RR (0) did not have any Quadris applications.
* Rhizoctonia number represents dead or dying beets.

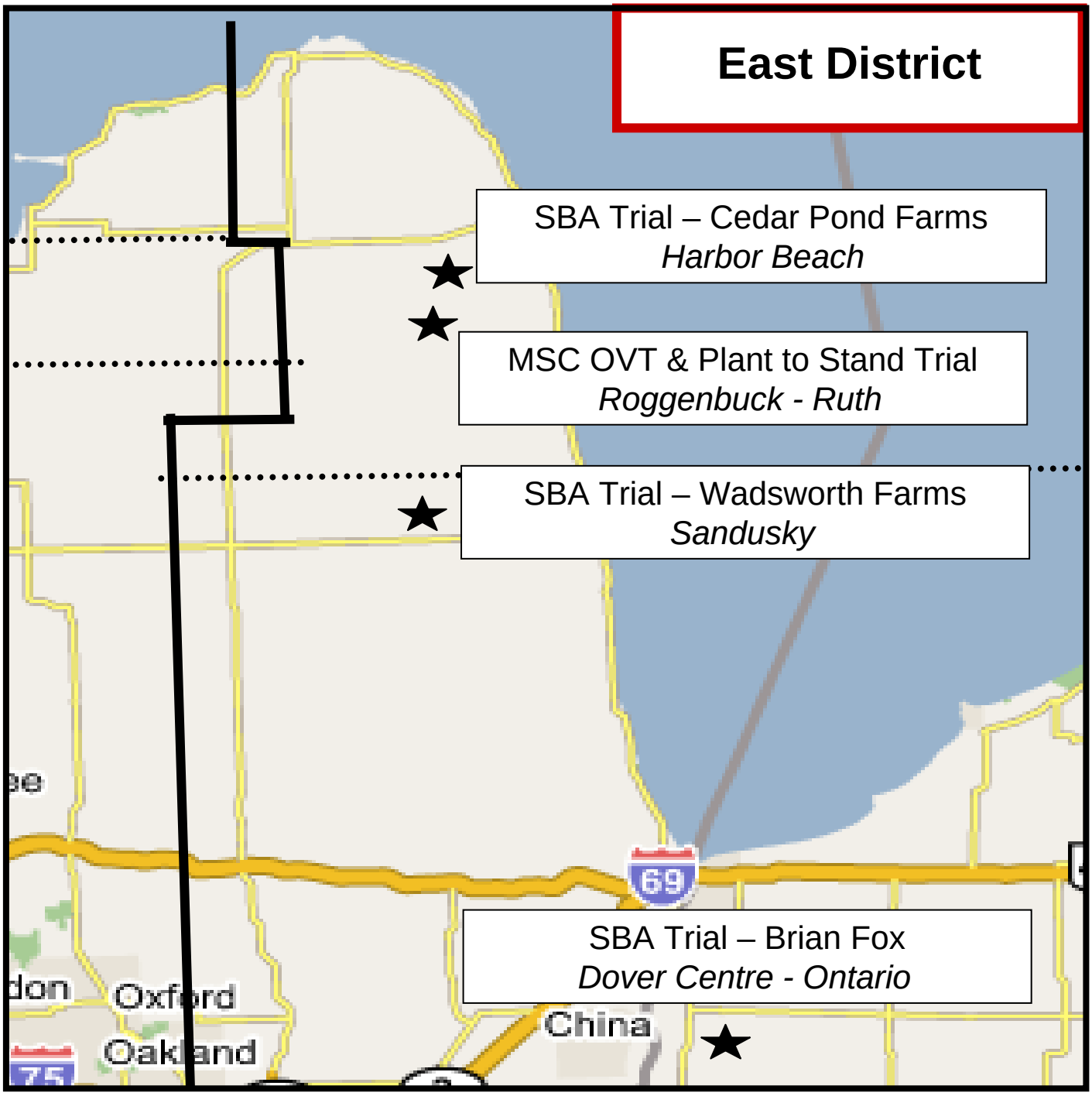
2009 FOX VARIETY / RHIZOCTONIA TRIAL

Treatment name	* Rhizoctonia 1200 ft. of row	Comments
HM-50RR (1)	5	1 Quadris Application
HM-27RR	6	
HM-50RR	14	
HM-28RR	14	
HM-42RR	14	
HM-29RR	16	
C-RR827 (1)	29	1 Quadris Application
SX-1260RR	31	
B-17RR62	42	
C-RR827	43	
B-17RR32	58	
C-RR824	65	

AVERAGE – 28
LDS (5%) – 19

Comments: Low-moderate levels of Rhizoctonia root rot. Quadris was only applied on HM-50RR (1) and C-RR827 (1). * Rhizoctonia numbers represent dead or dying beets.

East District Trials



2009 VARIETY TRIAL

Brian Fox

Location:	Dover, ON, Canada	**Tillage:**	Chisel Plow - Spring S Tine 2x
Planting Date:	5/8/2009	**Harvest Date:**	11/3/2009
Previous Crop:	Soybeans	**Sample Date:**	11/3/2009
Soil Type:	Loam	**Herbicides:**	Glyphosate 3x
Spacings:	4 1/8"	**Replicated:**	3x
Fertilizer:	10 gallons of 28% banded over row. P & K_20 variable rate applied. 60 lbs N sidedressed.	**Fungicide:**	Proline 55 DSV Headline 125 DSV

VARIETY	REV / ACRE	RWSA	RWST	TONS / ACRE	% SUGAR	% CJP	POPULATIONS 100 Ft. of Row				RHIZ. 1200 Ft. of Row
							12 DAY	17 DAY	30 DAY	HARV.	
HM-28RR	**$1,278**	**9595**	**295**	**32.5**	**19.5**	**95.9**	**157**	**190**	**188**	**186**	**14**
HM-27RR	$1,252	9391	301	31.2	19.9	95.8	146	167	174	164	6
C-RR824	**$1,251**	**9371**	**296**	**31.7**	**19.7**	**95.6**	**177**	**194**	**192**	**173**	**65**
HM-29RR	$1,248	9346	298	31.4	19.7	95.9	146	170	173	165	16
HM-50RR	**$1,232**	**9232**	**306**	**30.2**	**20.5**	**95.2**	**163**	**174**	**174**	**165**	**14**
SX-1260RR	$1,211	9097	295	30.8	19.6	95.6	212	209	202	188	31
HM-42RR	**$1,185**	**8878**	**313**	**28.4**	**20.7**	**95.7**	**155**	**173**	**173**	**166**	**14**
B-17RR32	$1,178	8827	285	31.0	19.1	95.2	184	201	196	171	58
HM-50RR (1)*	***$1,143***	**8819**	**305**	**28.9**	**20.3**	**95.6**	**165**	**185**	**180**	**169**	**5**
B-17RR62	$1,164	8730	303	28.8	20.1	95.5	151	174	175	169	42
C-RR827 (1)*	***$1,122***	**8664**	**305**	**28.4**	**20.3**	**95.3**	**142**	**161**	**164**	**148**	**29**
C-RR827	$1,144	8567	300	28.6	20.0	95.2	144	165	168	152	43
AVERAGE	**$1,201**	**9043**	**300**	**30.2**	**19.9**	**95.5**	**162**	**180**	**180**	**168**	**28**
LSD (5%)	—	**610**	**10**	**1.6**	**0.6**	**0.7**	**19**	**18**	**18**	**17**	**19**
C.V. (%)	—	**4**	**2**	**3.1**	**1.6**	**0.4**	**7**	**6**	**6**	**6**	**40**

* Varieties had a single application of Quadris (6-8 Leaf). All other varieties had no Quadris.

TRIAL RELIABILITY: High

EMERGENCE:	Excellent	**CERC. LEAF SPOT:**	Good
RHIZOCTONIA:	Low / moderate	**NEMATODES:**	None
QUADRIS APP:	None	**WEATHER:**	Good

Comments: Revenue per acre is based on a $40 per ton projected payment, an "average RWST" equal to the trial average of 300, and Quadris cost deducted from the revenue at a rate of $25.20 per acre plus a $7.50 application cost.

Official Variety Trial

Roggenbuck, Ruth, MI

2009

Variety	$/Acre[1]	RWSA	RWST	Rank	Tons/A	Rank	% Suc	Rank	% CJP	Rank	%Emerg	Rank
Crystal RR808	**1419***	**9737***	**295***	2	**33.0***	2	**19.4***	1	**96.1***	8	**64***	3
Crystal RR827	**1374***	**9438***	**291***	3	**32.4***	4	**19.2***	3	**95.9***	12	48	11
Crystal RR824	1309	9003	274	14	**32.8***	3	18.4	11	95.1	20	47	14
HM 28RR	1293	8872	266	20	**33.3***	1	17.7	20	**95.9***	10	47	13
Crystal RR840	1286	8834	283	5	**31.2***	13	18.9	6	95.6	18	35	20
BTS 18RR4N	1286	8808	274	13	**32.2***	7	18.1	14	**96.1***	4	**64***	2
HM 39RR	1281	8792	275	12	**32.0***	9	18.2	12	**96.1***	7	50	6
HM 27RR	1278	8773	273	16	**32.1***	8	18.0	16	**96.3***	3	50	5
HM 110RR	1269	8694	274	15	**31.8***	10	18.0	18	**96.4***	1	49	8
BTS 17RR32	1264	8711	268	19	**32.3***	5	17.9	19	**95.8***	13	40	18
BTS 18RR26	1263	8685	**289***	4	30.0	17	**19.2***	4	95.7	16	40	19
SX 1281RR	1262	8648	276	11	**31.4***	12	18.1	13	**96.3***	2	48	10
BTS 18RR16	1260	8638	283	6	30.6	15	**19.1***	5	94.9	21	45	16
HM 133RR	1252	8594	272	17	**31.6***	11	18.1	15	95.7	15	48	12
BTS 17RR62	1243	8512	**296***	1	28.8	21	**19.4***	2	**96.1***	6	44	17
HM 50RR	1238	8498	279	9	30.5	16	18.5	10	**95.9***	9	50	7
HM 29RR	1235	8474	263	21	**32.2***	6	17.6	21	95.6	17	49	9
SX 1260RR	1230	8424	271	18	**31.2***	14	18.0	17	**95.8***	14	**67***	1
BTS 18RR06	1216	8352	279	8	29.9	18	18.5	7	**95.9***	11	28	21
HM 131RR	1214	8343	280	7	29.7	19	18.5	8	**96.1***	5	53	4
HM 42RR	1173	8052	277	10	29.1	20	18.5	9	95.5	19	46	15
Average	1269	8616	278		31.3		18.4		95.8		48	
LSD (P=.05)	103.3	716	9.0		2.4		0.5		0.6		9.9	
CV %	7.1	7.1	2.8		6.5		2.4		0.6		17.8	

1. $/Acre: Gross dollars per acre assuming $40 payment

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

Trial Quality: Good
Plant/Harvest Dates: May 6 / Oct 12
Reps: 6

Row Width: 22 inches
Quadris: Twice 4 leaf & 10 leaf,
Rhizoc. Control Fair
Cercospora sprays: 3, control very good

Plant to Stand**

Roggenbuck, Ruth, MI

2009

	$/A[1]	RWSA	RWST	Rank	Tons/A	Rank	% Suc	Rank	% CJP	Rank	% Emerg	Rank	Beets/ 100 ft at Harvest	Rank
Crystal RR827	**1407***	**9829***	**299***	1	32.9	5	**19.4***	1	**96.8***	2	51	6	**144***	3
Crystal RR824	**1406***	**9821***	278	7	**35.4***	1	18.2	6	**96.6***	7	**60***	2	**150***	2
BTS 17RR32	**1400***	**9776***	288	3	**34.0***	4	18.8	3	**96.7***	5	44	11	**140***	6
HM 28RR	**1334***	**9319***	271	9	**34.4***	3	17.8	9	**96.6***	9	**59***	3	**142***	4
HM 29RR	**1318***	**9203***	266	11	**34.6***	2	17.4	11	**96.8***	3	53	5	**141***	5
BTS 17RR62	**1315***	**9181***	**290***	2	31.7	7	**19.0***	2	96.2	13	47	9	136	8
HM 39RR	1287	8991	278	6	32.3	6	18.1	7	**96.9***	1	56	4	139	7
SX 1260RR	1226	8560	272	8	31.5	8	17.9	8	**96.4***	11	**68***	1	**150***	1
HM 50RR	1212	8465	283	5	29.8	10	18.5	5	**96.8***	4	50	7	131	10
HM 42RR	1210	8451	284	4	29.7	11	18.7	4	**96.4***	10	46	10	134	9
HM 27RR	1177	8222	269	10	30.5	9	17.7	10	**96.6***	6	48	8	127	11
Average	1299	9074	280		30.9		18.3		96.6		49.5		140	
LSD (P=.05)	105	733.8	9.7		2.4		0.5		0.6		9.9		10.4	
CV %	7.0	7.0	3.0		6.4		2.4		0.6		16.2		6.4	

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

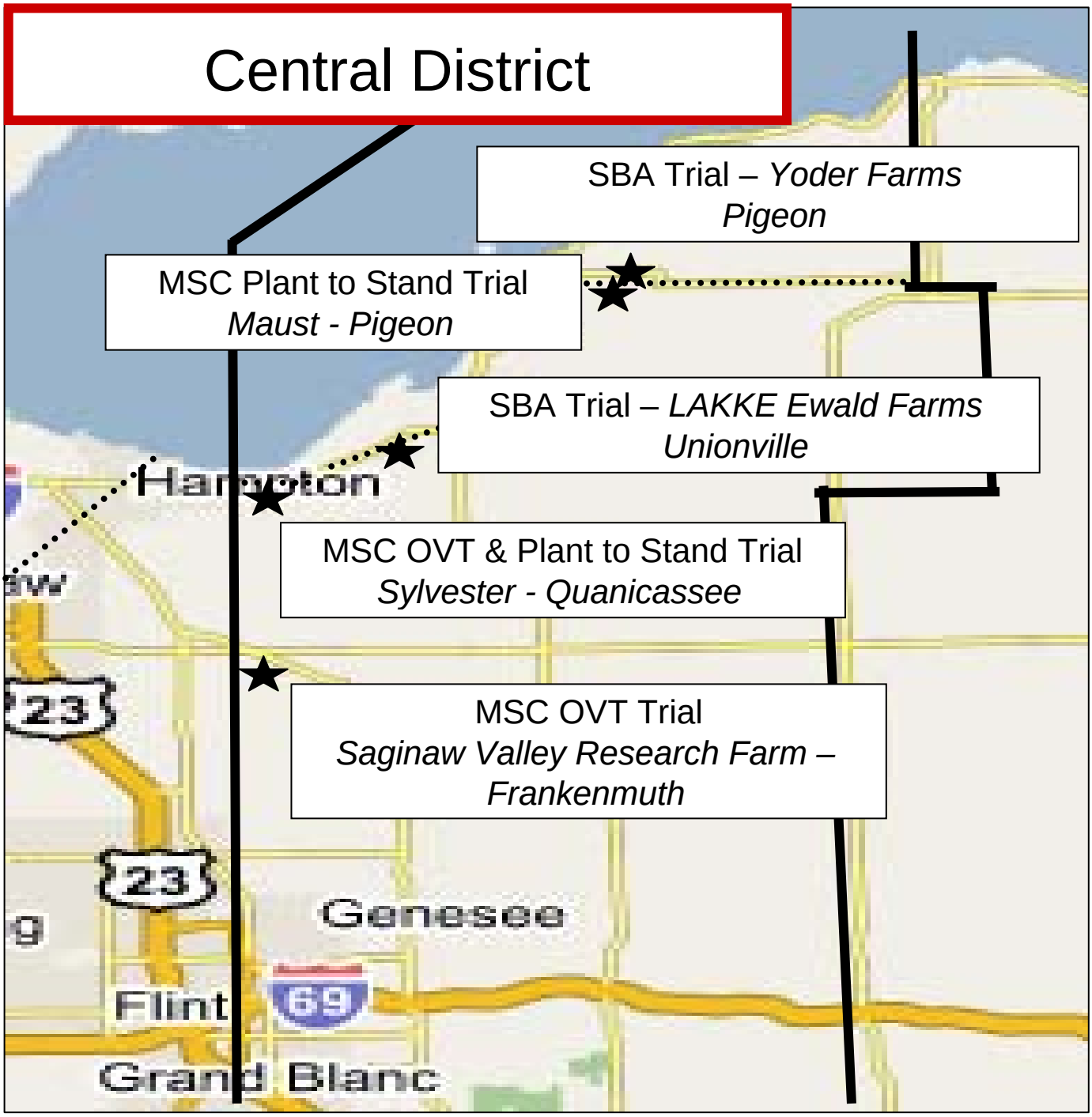
1. $/Acre: Gross dollars per acre assuming $40 payment

**** The Plant to Stand trial uses less intense management than the OVT. It is planted with a 4.5 inch seed spacing, has only one Quadris application, and uses Beetcast to time fungicide applications for Cercospora.**

Trial Quality: Good
Plant/Harvest Dates: May 6 / Oct 13
Reps: 6

Row Width: 22 inches
Quadris: 6 leaf, Rhizoc. Control Fair
Cercospora sprays: 3, control very good

Central District Trials



2009 VARIETY TRIAL

Cedar Pond Farms

Location:	Harbor Beach, Huron Co.	**Tillage:**	Stale Seed Beed
Planting Date:	4/15/2009	**Harvest Date:**	11/3/2009
Previous Crop:	Wheat	**Sample Date:**	10/21/2009
Soil Type:	Loam	**Herbicides:**	Glyphosate 2x
Spacings:	Seed - 4 1/8", Row - 30"	**Replicated:**	3x
Fertilizer:	8000 Gallons Manure 40 Lbs N. Sidedressed	**Fungicide:**	Proline (45 DSV) Gem (110 DSV)

VARIETY	REV / ACRE	RWSA	RWST	TONS / ACRE	% SUGAR	% CJP	POPULATIONS 100 Ft. of Row				RHIZ. 1200 Ft. of Row
							15 DAY	22 DAY	33 DAY	HARV.	
HM-28RR	**$1,372**	**10629**	**295**	**36.0**	**19.7**	**95.5**	**29**	**166**	**182**	**166**	**3**
C-RR824	$1,369	10607	302	35.1	20.0	95.7	99	222	222	196	13
C-RR827	**$1,348**	**10459**	**309**	**33.8**	**20.4**	**95.7**	**107**	**209**	**208**	**183**	**13**
B-17RR32	$1,338	10377	305	34.1	20.1	95.9	90	199	206	178	5
C-RR827 (2)**	***$1,294***	**10287**	**308**	**33.4**	**20.4**	**95.6**	**81**	**208**	**208**	**185**	**5**
SX-1260RR	$1,316	10210	294	34.8	19.5	95.5	141	224	220	188	1
HM-29RR	**$1,306**	**10141**	**297**	**34.2**	**19.5**	**96.0**	**18**	**173**	**195**	**177**	**5**
B-17RR62	$1,307	10140	315	32.2	20.7	96.0	111	221	222	201	10
HM-42RR	**$1,219**	**9471**	**303**	**31.3**	**20.2**	**95.2**	**53**	**179**	**187**	**170**	**1**
HM-50RR	$1,195	9281	303	30.7	20.2	95.2	52	192	204	180	4
HM-27RR	**$1,144**	**8901**	**300**	**29.7**	**19.9**	**95.5**	**26**	**138**	**150**	**148**	**0**
AVERAGE	**$1,292**	**10046**	**303**	**33.2**	**20.1**	**95.6**	**73**	**194**	**200**	**179**	**5**
LSD (5%)	—	**901**	**11**	**2.5**	**0.5**	**0.9 NS**	**32**	**31**	**34**	**28**	**13 NS**
C.V. (%)	—	**5**	**2**	**4.4**	**1.5**	**0.5**	**27**	**9**	**10**	**9**	**153**

** C-RR827(2) had two Quadris applications (4-6 & 8-10 Leaf).

TRIAL RELIABILITY: Good

EMERGENCE:	Excellent	**CERC. LEAF SPOT:**	Good / Excellent
RHIZOCTONIA:	Low	**NEMATODES:**	None
QUADRIS APP:	4-6 Leaf	**WEATHER:**	Good

Comments: Revenue per acre is based on a $40 per ton projected payment, an "average RWST" equal to the trial average of 303, and Quadris cost deducted from the revenue at a rate of $25.20 per acre plus a $7.50 application cost.

2009 VARIETY TRIAL

Wadsworth Farms Inc.

Location:	Sandusky, Sanilac Co.	**Tillage:**	Chisel, Spring Field Cult 1x
Planting Date:	4/17/2009	**Harvest Date:**	11/6-7/2009
Previous Crop:	Dry Beans	**Sample Date:**	10/19/2009
Soil Type:	Loam	**Herbicides:**	Glyphosate 2x
Spacings:	Seed - 4 1/16", Rows - 28"	**Replicated:**	3x
Fertilizer:	250#, 15-20-3 plus micros 80# N - anhydrous side dress Variable rate 0-0.60	**Fungicide:**	Eminent - 71 DSV Gem - 140 DSV

VARIETY	REV / ACRE	RWSA	RWST	TONS / ACRE	% SUGAR	% CJP	POPULATIONS 100 Ft. of Row				RHIZ. 1200 Ft. of Row
							DAY	16 DAY	30 DAY	HARV.	
HM-28RR	**$1,401**	**10,120**	**281**	**36.1**	**18.3**	**96.9**	**—**	**229**	**241**	**182**	**22**
HM-27RR	$1,356	9834	280	35.1	18.4	96.2	—	204	201	180	6
HM-29RR	**$1,355**	**9828**	**275**	**35.7**	**18.0**	**96.8**	**—**	**250**	**245**	**205**	**13**
C-RR827 (2) **	$1,302	9680	295	32.8	19.3	96.3	—	234	232	151	49
B-17RR32	**$1,301**	**9423**	**275**	**34.3**	**18.1**	**96.4**	**—**	**223**	**231**	**158**	**97**
C-RR824	$1,291	9382	279	33.6	18.3	96.4	—	245	241	152	251
SX-1260RR	**$1,279**	**9248**	**282**	**32.9**	**18.6**	**96.1**	**—**	**242**	**234**	**159**	**114**
C-RR827	$1,255	9134	292	31.2	19.2	96.3	—	230	228	111	221
HM-50RR	**$1,250**	**9094**	**288**	**31.5**	**19.1**	**95.7**	**—**	**210**	**209**	**163**	**39**
B-17RR62	$1,230	8920	280	31.9	18.3	96.5	—	216	218	134	370
HM-42RR	**$1,221**	**8877**	**287**	**30.9**	**18.9**	**96.2**	**—**	**218**	**223**	**173**	**54**
HM-50RR (0) *	$1,138	8053	284	28.4	18.9	95.7	—	230	226	157	131
AVERAGE	**$1,282**	**9299**	**283**	**32.9**	**18.6**	**96.3**	**—**	**228**	**227**	**160**	**114**
LSD (5%)	**—**	**652**	**13**	**1.8**	**0.8**	**1.0**	**—**	**18**	**17**	**35**	**184**
C.V. (%)	**—**	**4**	**3**	**3.2**	**2.6**	**0.6**	**—**	**5**	**4**	**13**	**115**

*HM-50RR (0) had no Quadris applied. **C-RR827 (2) had two applications of Quadris (4-6 & 8-10 leaf).

TRIAL RELIABILITY: Excellent

EMERGENCE:	Excellent	**CERC. LEAF SPOT:**	Excellent
RHIZOCTONIA:	Moderate	**NEMATODES:**	Detected
QUADRIS APP:	4-6 Leaf	**WEATHER:**	Good

Comments: Heavy Rhizoctonia level in the front part of trial. The harvest stand counts are low because they were taken in the worst part of the Rhizoctonia. Revenue per acre is based on a $40 per ton projected payment, an "average RWST" equal to the trial average of 283, and Quadris cost deducted from the revenue at a rate of $25.20 per acre plus a $7.50 application cost.

PIONEER • BIG CHIEF
MICHIGAN SUGAR

Official Variety Trial

Sylvester, Quanicassee, MI

2009

Variety	$/Acre[1]	RWSA	RWST	Rank	Tons/A	Rank	% Suc	Rank	% CJP	Rank	%Emerg	Rank
Crystal RR824	**1409***	**10429***	293	19	**35.6***	1	19.4	17	**95.7***	11	**74***	6
BTS 18RR16	**1383***	**10217***	**307***	5	33.3	8	20.4	4	95.4	17	67	15
BTS 18RR26	**1381***	**10226***	**312***	1	32.7	13	**20.7***	1	95.6	15	63	16
BTS 17RR32	**1381***	**10197***	293	16	**34.8***	3	19.4	18	**95.9***	6	59	19
Crystal RR808	**1374***	**10164***	**308***	3	33.0	10	**20.5***	2	95.3	21	**77***	5
BTS 18RR4N	**1361***	**10081***	289	20	**34.8***	2	19.3	20	95.4	18	**81***	1
Crystal RR827	**1354***	**9989***	**310***	2	32.3	16	**20.5***	3	95.6	14	71	11
HM 39RR	**1348***	**9959***	295	15	**33.8***	4	19.4	16	**96.0***	3	70	12
HM 133RR	**1342***	**9927***	299	9	33.2	9	19.8	9	95.7	13	72	9
HM 42RR	**1341***	**9912***	302	8	32.9	12	20.0	7	95.7	12	67	14
HM 29RR	**1333***	**9846***	293	17	**33.6***	7	19.4	19	**96.0***	5	**77***	4
SX 1281RR	**1330***	**9830***	293	18	**33.6***	6	19.5	12	95.3	20	**79***	2
HM 131RR	1314	9721	296	12	32.9	11	19.5	13	**95.9***	7	72	10
HM 28RR	1313	9682	287	21	**33.8***	5	19.0	21	**95.9***	9	74	7
BTS17RR62	1299	9627	**307***	4	31.3	21	20.2	5	**95.9***	8	61	17
HM 27RR	1296	9585	296	13	32.4	14	19.5	15	**96.1***	2	61	18
HM 50RR	1294	9574	295	14	32.4	15	19.7	10	95.3	19	73	8
BTS 18RR06	1294	9561	305	6	31.4	19	20.0	8	**96.3***	1	53	20
HM 110RR	1291	9550	297	10	32.1	17	19.7	11	**95.7***	10	68	13
Crystal RR840	1287	9521	303	7	31.4	20	20.1	6	95.5	16	47	21
SX 1260RR	1283	9489	296	11	32.1	18	19.5	14	**96.0***	4	**78***	3
Average	1334	9590	296		32.4		19.7		95.5		65	
LSD (P=.05)	90.3	633	6.8		2.1		0.3		0.6		7.2	
CV %	6.9	6.5	2.3		6.3		1.6		0.6		10.5	

1. $/Acre: Gross dollars per acre assuming $40 payment

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

Trial Quality: Good
Plant/Harvest Dates: May 4 / Oct 19
Reps: 8

Row Width: 22 inches
Quadris: Twice 6 leaf & 10 leaf,
Rhizoc. Control Very Good
Cercospora sprays: 3, control very good

Official Variety Trial

Saginaw Valley Research Farm, Frankenmuth, MI

2009

Variety	$/Acre[1]	RWSA	RWST	Rank	Tons/A	Rank	% Suc	Rank	% CJP	Rank	%Emerg	Rank
Crystal RR824	**1784***	**12917***	284	18	**45.4***	1	19.1	17	95.2	18	**79***	8
Crystal RR808	**1760***	**12730***	**304***	2	41.9	11	**20.2***	2	**95.6***	8	**83***	3
Crystal RR827	**1758***	**12720***	**306***	1	41.6	12	**20.2***	1	**95.7***	4	72	16
BTS 17RR62	**1729***	**12498***	294	8	42.5	6	19.6	8	**95.6***	9	68	17
BTS 17RR32	**1728***	**12515***	287	16	**43.6***	2	19.1	15	**95.5***	10	73	13
Crystal RR840	**1708***	**12339***	295	7	42.0	10	19.7	7	95.2	19	49	21
HM 110RR	**1702***	**12319***	291	10	42.3	7	19.3	13	**95.8***	3	72	15
HM 133RR	**1702***	**12301***	289	12	42.6	4	19.4	11	95.2	20	77	10
SX 1281RR	1686	12200	289	13	42.3	8	19.1	16	**95.9***	1	**79***	7
HM 39RR	1676	12107	288	15	42.1	9	19.3	14	**95.3***	16	76	12
SX 1260RR	1675	12113	284	20	42.7	3	19.0	19	**95.4***	12	**86***	2
HM 28RR	1669	12072	284	19	42.5	5	18.8	20	**95.8***	2	78	9
BTS 18RR26	1661	12010	297	5	40.5	16	19.8	5	**95.4***	11	65	19
HM 131RR	1646	11915	292	9	40.8	15	19.5	9	**95.4***	13	**79***	6
BTS 18RR06	1634	11827	**303***	3	39.0	21	**20.1***	3	**95.7***	5	61	20
BTS 18RR16	1632	11793	**302***	4	39.1	20	**20.0***	4	**95.7***	6	73	14
BTS 18RR4N	1622	11721	285	17	41.2	13	19.1	18	**95.4***	15	**86***	1
HM 42RR	1605	11605	296	6	39.2	19	19.7	6	**95.4***	14	76	11
HM 27RR	1600	11573	288	14	40.1	17	19.3	12	95.3	17	68	18
HM 29RR	1596	11545	283	21	40.9	14	18.8	21	**95.7***	7	**82***	4
HM 50RR	1593	11525	290	11	39.8	18	19.4	10	95.1	21	**80***	5
Average	1638	11847	289		41.2		19.3		95.2		70	
LSD (P=.05)	94.5	640	7.2		2.2		0.4		0.6		7.4	
CV %	5.8	5.5	2.5		5.5		2.1		0.6		10.0	

1. $/Acre: Gross dollars per acre assuming $40 payment

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

Trial Quality: Very Good
Plant/Harvest Dates: April 17 / Oct 14
Reps: 8

Row Width: 22 inches
Quadris: Twice 6 leaf & 10 leaf,
Rhizoc. Control Very Good
Cercospora sprays: 3, control very good

PIONEER • BIG CHIEF
MICHIGAN SUGAR

Plant to Stand[2]

Sylvester, Quanicassee, MI

2009

Variety	$/A[1]	RWSA	RWST	Rank	Tons/A	Rank	% Suc	Rank	% CJP	Rank	% Emerg	Rank	Beets/ 100 ft at Harvest	Rank	CLS** Rating	Rank
BTS 17RR32	**1402***	**10818***	308	6	**35.2***	1	20.2	6	**96.2***	10	65	11	154	10	2.5	10
Crystal RR827	**1350***	**10421***	**326***	1	31.9	7	**21.3***	1	**96.3***	6	69	10	152	11	2.8	11
Crystal RR824	**1348***	**10402***	305	9	**34.1***	2	20.0	8	**96.3***	7	71	8	155	8	3.0	13
HM 39RR	1327	10239	303	10	**33.8***	3	19.9	11	**96.2***	9	81	4	163	5	2.3	8
HM 29RR	1325	10222	306	8	33.4	5	19.9	10	**96.7***	1	74	6	**170***	3	2.3	7
BTS 17RR62	1319	10175	**320***	2	31.8	8	20.7	2	**96.6***	2	59	13	149	12	2.9	12
HM 28RR	1307	10088	300	13	33.7	4	19.6	13	**96.5***	3	81	3	**182***	2	2.2	5
HM 27RR	1260	9726	307	7	31.7	9	20.0	7	**96.4***	4	73	7	155	9	2.3	9
SX 1260RR	1241	9574	302	11	31.7	10	19.8	12	**96.1***	11	**93***	1	**183***	1	2.3	6
HM 42RR	1193	9208	311	5	29.6	12	20.3	5	**96.2***	8	63	12	148	13	**1.8***	1
HM 50RR	1148	8860	312	4	28.4	14	20.4	4	**96.3***	5	**85***	2	164	4	**1.9***	2
Average	1293	9976	309		32.3	7	20.2		96.3		74		161		2.4	
LSD (P=.05)	70.3	542.7	7.9		1.4		0.5		0.7		9.1		13.3		0.3	
CV %	4.8	4.8	2.2		3.9		2.0		0.6		10.7		7.2		10.5	

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

** 0-9 scale, 0 = no disease and 9 = leaves dead

1. $/Acre: Gross dollars per acre assuming $40 payment

2. The Plant to Stand trial uses less intense management than the OVT. It is planted with a 4.5 inch seed spacing, has only one Quadris application, and uses Beetcast to time fungicide applications for Cercospora.

Trial Quality: Very Good
Plant/Harvest Dates: May 4 / Oct 20
Reps: 6

Row Width: 22 inches
Quadris: 6 leaf, Rhizoc. Control good
Cercospora sprays: 3, control very good

PIONEER • BIG CHIEF
MICHIGAN SUGAR

Official Variety Trial

Spero, Saginaw, MI

Affected by Aphanomyces, Not included in average or for approval

2009

Variety	$/A[1]	RWSA	RWST	Rank	Tons/A	Rank	% Suc	Rank	% CJP	Rank	%Emerg	Rank	Aph**	Rank
Crystal RR827	**1508***	**9611***	**269***	1	**35.8***	1.0	**18.4***	1	**94.4***	6	47	9	0.51	18
BTS 17RR32	1372	8702	250	17	**35.1***	2.0	17.5	14	93.5	21	44	13	0.66	20
BTS 18RR4N	1336	8528	255	10	**33.4***	3.0	17.6	9	94.0	14	**55.1***	1	**0.24***	5
Crystal RR840	1332	8493	256	9	**33.3***	5.0	17.6	10	**94.2***	10	33	21	**0.14***	2
Crystal RR808	1331	8482	**260***	6	32.7	8.0	**18.0***	3	93.8	19	**49.9***	4	**0.44***	15
HM 27RR	1294	8232	248	19	**33.3***	4.0	17.0	20	**94.4***	4	39	18	**0.33***	7
HM 133RR	1291	8226	**258***	7	32.0	14.0	17.6	11	**94.6***	2	44	15	0.64	19
Crystal RR824	1284	8191	251	16	32.7	9.0	17.4	15	93.9	17	**53.1***	2	**0.46***	16
BTS 18RR16	1283	8176	255	11	32.2	12.0	17.5	13	**94.2***	8	44	12	**0.43***	13
SX 1281RR	1282	8179	251	15	32.6	10.0	17.3	17	**94.4***	5	48	6	**0.36***	11
HM 28RR	1280	8143	248	20	32.9	6.0	17.1	19	**94.2***	7	48	7	**0.34***	8
HM 110RR	1278	8129	250	18	32.7	7.0	17.3	16	93.8	18	44	14	**0.35***	9
HM 39RR	1276	8136	254	13	32.0	13.0	17.7	8	93.7	20	48	8	**0.44***	14
HM 131RR	1266	8072	**262***	3	30.9	16.0	**17.9***	5	**94.5***	3	**52.5***	3	**0.17***	3
HM 29RR	1260	8033	254	14	31.7	15.0	17.2	18	**95.0***	1	47	10	**0.21***	4
SX 1260RR	1248	7976	245	21	32.5	11.0	17.0	21	94.0	16	**48.3***	5	**0.31***	6
HM 42RR	1242	7894	**261***	4	30.4	19.0	**18.0***	4	94.1	12	35	19	**0.41***	12
HM 50RR	1231	7846	257	8	30.6	17.0	17.8	7	94.0	15	44	16	0.48	17
BTS 18RR06	1216	7761	255	12	30.5	18.0	17.6	12	**94.1***	11	34	20	**0.35***	10
BTS 18RR26	1200	7620	**263***	2	29.2	20.0	**18.1***	2	94.0	13	40	17	**0.09***	1
BTS 17RR62	1006	6445	**261***	5	24.6	21.0	**17.9***	6	**94.2***	9	44	11	1.27	21
Average	1277	8030	252		31.2		17.4		93.9		42		0.41	
LSD (P=.05)	115.5	735	11.6		2.8		0.6		0.9		6.9		0.37	
CV %	9.4	9.4	4.7		9.2		3.4		1.0		15.5		108.9	

[1] $/Acre: Gross dollars per acre assuming $40 payment

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

** 0 = no damage, 9 = dead

Trial Quality: Fair
Plant/Harvest Dates: May 13 / Oct 16
Reps: 8

Row Width: 22 inches
Quadris: Twice 6 leaf & 10 leaf,
Rhizoc. Control Good
Cercospora sprays: 3, control very good

2009 VARIETY TRIAL

LAKKE-Ewald Farms

Location: Unionville, Tuscola Co.
Planting Date: 4/15/2009
Previous Crop: Wheat / Clover
Soil Type: Loam
Spacings: Seed - 4 1/2", Row -22"
Fertilizer: 12 Gallons 28% 2x2,
MAP & Potash Variable Rate Applied
Additional N (30 - 57# of N) Variable

Tillage: Fall Plow, Spring Field Cult. 2x
Harvest Date: 10/13/2009
Sample Date: 10/13/2009
Herbicides: Glyphosate
Replicated: 3X
Fungicide: Proline (46 DSV)
Gem (105 DSV)

VARIETY	REV / ACRE	RWSA	RWST	TONS / ACRE	% SUGAR	% CJP	POPULATIONS 100 Ft. of Row				RHIZ. 1200 Ft. of Row
							DAY	15 DAY	33 DAY	HARV.	
C-RR824	**$1,327**	**10,024**	**295**	**34.0**	**19.4**	**96.1**	**—**	**214**	**220**	**213**	**11**
B-17RR32	$1,316	9944	297	33.5	19.4	96.5	—	185	205	189	3
C-RR827 (2)**	***$1,253***	**9715**	**303**	**32.1**	**19.8**	**96.4**	**—**	**190**	**204**	**196**	**0**
C-RR827	$1,278	9668	306	31.6	20.0	96.2	—	181	197	186	2
HM-28RR	**$1,219**	**9222**	**293**	**31.5**	**19.1**	**96.6**	**—**	**166**	**207**	**203**	**1**
HM-29RR	$1,165	8841	285	31.0	18.7	96.5	—	186	208	203	1
B-17RR62	**$1,156**	**8748**	**300**	**29.2**	**19.5**	**96.7**	**—**	**175**	**201**	**191**	**1**
SX-1260RR	$1,148	8700	289	30.1	18.9	96.6	—	225	218	214	1
HM-50RR	**$1,125**	**8527**	**299**	**28.6**	**19.6**	**96.3**	**—**	**149**	**198**	**197**	**0**
HM-42RR	$1,110	8426	301	28.0	19.7	96.3	—	181	207	203	0
HM-50RR (0)*	***$1,141***	**8420**	**294**	**28.6**	**19.6**	**95.6**	**—**	**192**	**196**	**191**	**0**
HM-27RR	$1,090	8291	277	29.9	18.6	95.3	—	137	174	173	0
AVERAGE	**$1,194**	**9044**	**295**	**30.7**	**19.3**	**96.3**	**—**	**182**	**203**	**197**	**2**
LSD (5%)	**—**	**505**	**11**	**0.8**	**0.6**	**1.0**	**—**	**21**	**14**	**16**	**4**
C.V. (%)	**—**	**3**	**2**	**1.6**	**2.0**	**0.6**	**—**	**7**	**7**	**5**	**122**

* HM-50RR (0) had no Quadris applied. ** C-RR827(2) had two Quadris applications (4-6 & 8-10 leaf).

TRIAL RELIABILITY: Excellent

EMERGENCE:	Excellent	**CERC. LEAF SPOT:**	Very good
RHIZOCTONIA:	Low	**NEMATODES:**	Low
QUADRIS APP:	4-6 Leaf	**WEATHER:**	Good

Comments: Revenue per acre is based on a $40 per ton projected payment, an "average RWST" equal to the trial average of 295, and Quadris cost deducted from the revenue at a rate of $25.20 per acre plus a $7.50 application cost.

Plant to Stand**

Maust, Pigeon, MI
2009

Variety	$/A[1]	RWSA	RWST	Rank	Tons/A	Rank	% Suc	Rank	% CJP	Rank	% Emerg	Rank	Beets/ 100 ft at Harvest	Rank
HM 28RR	**1135***	**7649***	**267***	8	**28.6***	1	**18.2***	9	**94.6***	6	33	3	**107***	1
Crystal RR824	**1104***	**7405***	**270***	5	**27.5***	2	**18.3***	6	**94.9***	3	29	6	**94***	5
BTS 17RR32	**1051***	**7065***	**264***	11	**26.8***	3	**18.2***	10	94.2	11	24	11	84	8
HM 29RR	**1040***	**6988***	**271***	4	**25.8***	5	**18.4***	4	**94.6***	7	36	2	**101***	3
HM 39RR	**1039***	**6982***	**269***	6	**26.0***	4	**18.4***	5	**94.3***	9	32	5	**97***	4
Crystal RR827	**1037***	**6968***	**275***	2	**25.4***	6	**18.6***	3	**95.0***	2	27	9	84	9
SX 1260RR	**1020***	**6867***	**275***	1	25.0	7	**18.6***	2	**95.0***	1	**44***	1	**104***	2
BTS 17RR62	929	6245	**266***	9	23.5	8	**18.3***	7	94.2	10	28	8	73	11
HM 50RR	909	6118	**273***	3	22.4	11	**18.7***	1	**94.5***	8	33	4	87	7
HM 42RR	906	6093	**268***	7	22.7	9	**18.2***	8	**94.8***	5	26	10	90	6
HM 27RR	891	5985	**264***	10	22.7	10	18.0	11	**94.8***	4	29	7	75	10
Average	1006	6761	269		25.1		18.3		94.6		31		91	
LSD (P=.05)	141	952	13.5		3.5		0.7		0.8		7.8		15.9	
CV %	12.4	12.4	4.3		12.2		3.2		0.7		22.1		15.4	

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

1. $/Acre: Gross dollars per acre assuming $40 payment

**** The Plant to Stand trial uses less intense management than the OVT. It is planted with a 4.5 inch seed spacing, has only one Quadris application, and uses Beetcast to time fungicide applications for Cercospora.**

Trial Quality: Fair
Plant/Harvest Dates: April 24 / Sept 16
Reps: 6

Row Width: 22 inches
Quadris: 6 leaf, Rhizoc. Control good
Cercospora sprays: 3, control very good

2009 VARIETY TRIAL

Knoerr Farms

Location:	Bay County	**Tillage:**	Chisel, Spring Field Cult. 1x
Planting Date:	4/13/2009	**Harvest Date:**	10/20/2009
Previous Crop:	Corn	**Sample Date:**	10/15/2009
Soil Type:	Loam	**Herbicides:**	Glyphosate 3x
Spacings:	5 1/2" - 20" rows	**Replicated:**	3X
Fertilizer:	25 Gallons 28% 14 Gallons 19-17-0, 2 X 2 Foliar-Coron applied	**Fungicide:**	Proline (45 DSV) Headline (90 DSV) Inspire XT (135 DSV)

VARIETY	REV / ACRE	RWSA	RWST	TONS / ACRE	% SUGAR	% CJP	POPULATIONS 100 Ft. of Row				RHIZ. 1200 Ft. of Row
							DAY	18 DAY	36 DAY	HARV.	
C-RR824	**$1,148**	**9298**	**313**	**29.7**	**20.6**	**95.9**	**—**	**140**	**158**	**158**	**0**
B-17RR32	$1,117	9055	307	29.5	20.3	95.7	—	131	153	152	0
C-RR827 (2)**	***$1,081***	**9024**	**326**	**27.7**	**21.3**	**96.1**	**—**	**127**	**146**	**150**	**0**
B-17RR62	$1,090	8844	325	27.2	21.2	96.2	—	128	143	152	0
C-RR827	**$1,084**	**8814**	**327**	**26.9**	**21.4**	**96.1**	**—**	**144**	**160**	**165**	**0**
HM-29RR	$1,073	8714	310	28.1	20.3	96.1	—	170	182	179	0
HM-28RR	**$1,045**	**8463**	**312**	**27.2**	**20.4**	**96.2**	**—**	**132**	**173**	**169**	**0**
HM-27RR	$997	8115	312	26.0	20.5	96.1	—	126	144	137	0
SX-1260RR	**$978**	**7939**	**306**	**26.0**	**20.3**	**95.7**	**—**	**138**	**154**	**147**	**0**
HM-50RR (0) *	$953	7517	318	23.6	21.1	95.5	—	139	152	161	0
HM-50RR	**$905**	**7395**	**313**	**23.6**	**20.7**	**95.7**	**—**	**130**	**143**	**151**	**0**
HM-42RR	$902	7344	316	23.3	20.8	95.7	—	109	137	141	0
AVERAGE	**$1,031**	**8377**	**315**	**26.6**	**20.7**	**95.9**	**—**	**134**	**154**	**155**	**—**
LSD (5%)	**—**	**937**	**8**	**2.8**	**0.4**	**.7 NS**	**—**	**21 NS**	**19**	**18**	**—**
C.V. (%)	**—**	**7**	**1.5**	**6.3**	**1.1**	**0.4**	**—**	**14**	**7**	**7**	**—**

*HM-50RR (0) had no Quadris applied. **C-RR827(2) had two applications of Quadris (4-6 & 8-10 leaf).

TRIAL RELIABILITY: Good

EMERGENCE:	Excellent - 40,000 Plants / Acre	**CERC. LEAF SPOT:**	Excellent
RHIZOCTONIA:	None	**NEMATODES:**	None
QUADRIS APP:	4-6 Leaf	**WEATHER:**	Heavy early season rainfall

Comments: Trial planted into extremely heavy residue corn stalks. High yielding and high quality trial. The Rhizoctonia counts were actually all zero. Revenue per acre is based on a $40 per ton projected payment, an "average RWST" equal to the trial average of 315, and Quadris cost deducted from the revenue at a rate of $25.20 per acre plus a $7.50 application cost.

2009 VARIETY TRIAL

Yoder Farms, Inc.

Location:	Pigeon, Huron Co.	**Tillage:**	Chisel, Spring Field Cult. 1x
Planting Date:	4/15/2009	**Harvest Date:**	10/1/2009
Previous Crop:	Wheat and Clover	**Sample Date:**	9/30/2009
Soil Type:	Loam	**Herbicides:**	Glyphosate 2x
Spacings:	Seed - 5 1/2", Row - 20"	**Replicated:**	3X
Fertilizer:	23 gallons, 28%, broadcast at planting 22 gallons, 28%, side dress	**Fungicide:**	Eminent - Headline -

VARIETY	REV / ACRE	RWSA	RWST	TONS / ACRE	% SUGAR	% CJP	POPULATIONS 100 Ft. of Row				RHIZ. 1200 Ft. of Row
							DAY	15 DAY	33 DAY	HARV.	
B-17RR32	**$1,415**	**10,754**	**303**	**35.5**	**19.7**	**96.6**	**—**	**102**	**177**	**177**	**5**
C-RR824	$1,355	10,277	304	33.9	19.6	97.1	—	124	185	172	6
C-RR827 (2)**	***$1,287***	**10,050**	**306**	**32.8**	**19.9**	**96.7**	**—**	**75**	**161**	**158**	**1**
C-RR827	$1,291	9824	309	31.8	20.1	96.6	—	107	172	165	7
SX-1260RR	**$1,273**	**9697**	**297**	**32.6**	**19.4**	**96.7**	**—**	**136**	**188**	**179**	**7**
B-17RR62	$1,242	9432	306	30.9	19.9	96.5	—	103	171	163	21
HM-28RR	**$1,236**	**9426**	**286**	**32.9**	**19.1**	**95.6**	**—**	**61**	**171**	**175**	**1**
HM-29RR	$1,231	9393	285	32.9	18.9	95.9	—	62	177	174	0
HM-42RR	**$1,234**	**9391**	**308**	**30.5**	**20.0**	**96.7**	**—**	**55**	**146**	**148**	**0**
HM-50RR	$1,193	9096	304	29.9	20.0	96.0	—	75	174	163	0
HM-27RR	**$1,157**	**8808**	**300**	**29.4**	**19.7**	**96.1**	**—**	**52**	**148**	**142**	**1**
HM-50RR (0)*	*$1,168*	8749	295	29.7	19.5	95.8	—	67	157	156	4
AVERAGE	**$1,257**	**9575**	**300**	**31.9**	**19.7**	**96.3**	**—**	**85**	**169**	**164**	**4**
LSD (5%)	**—**	**846**	**11**	**2.6**	**0.5**	**1.0**	**—**	**27**	**22**	**23**	**8**
C.V. (%)	**—**	**5**	**2**	**4.8**	**2.0**	**0.6**	**—**	**19**	**8**	**8**	**173**

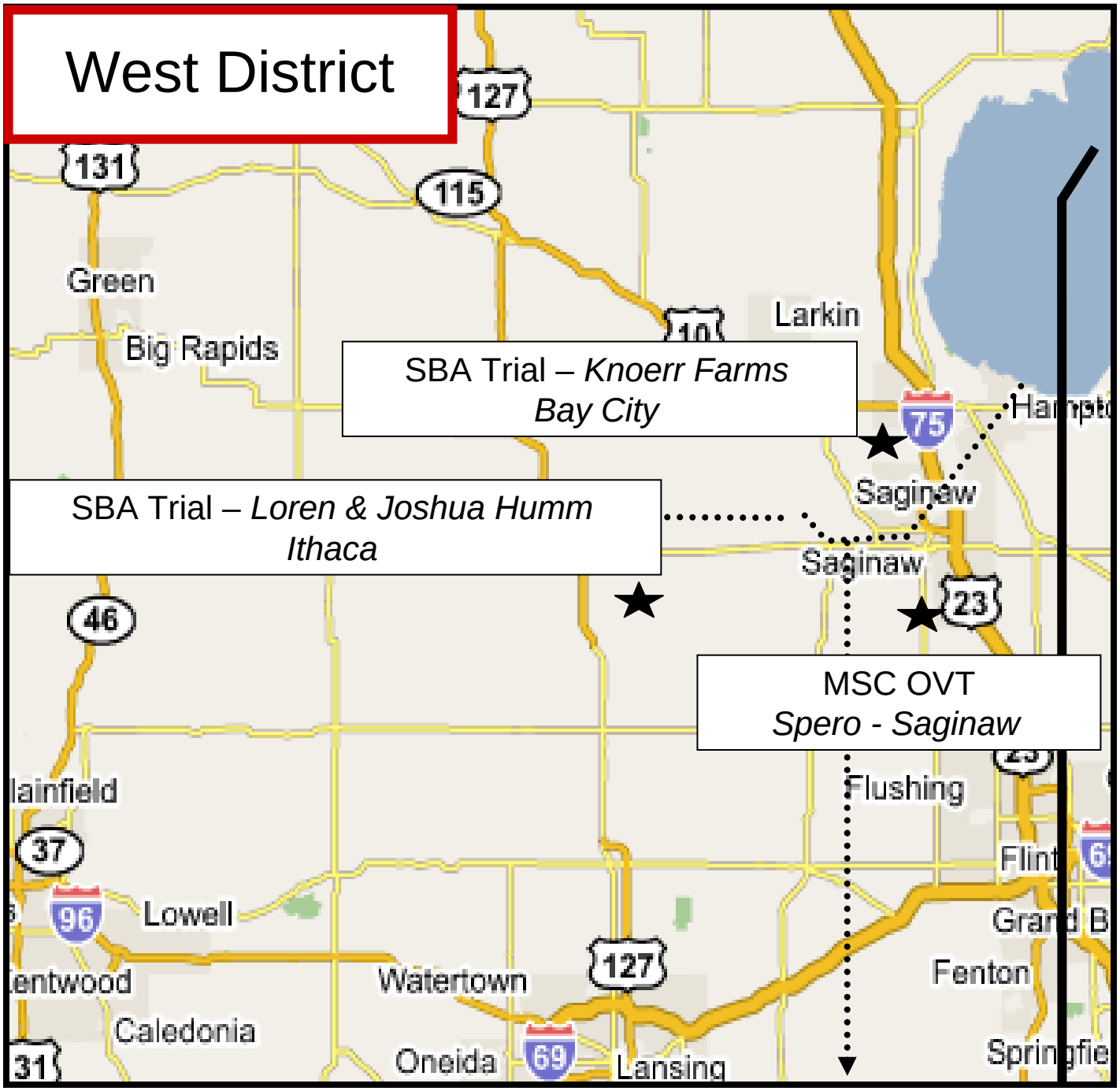
* HM-50RR(0) had no Quadris. ** C-RR827(2) had in furrow plus 6-8 leaf application

TRIAL RELIABILITY: Excellent

EMERGENCE:	Excellent - 44,000 PPA	**CERC. LEAF SPOT:**	Good
RHIZOCTONIA:	Very low	**NEMATODES:**	Low
QUADRIS APP:	In furrow	**WEATHER:**	Good

Comments: Very good field. Good field conditions; some root aphid found in sampling. Revenue per acre is based on a $40 per ton projected payment, an "average RWST" equal to the trial average of 300. Quadris cost was deducted from the revenue at a rate of $18.90 per acre for the in furrow application and $25.20 per acre plus a $7.50 application cost for the 6-8 leaf application.

West District Trials



2009 VARIETY TRIAL

Loren and Joshua Humm

Location: Ithaca, Gratiot Co.
Planting Date: 4/25/2009
Previous Crop: Corn
Soil Type: Loam
Spacings: Seed - 3.8", Row - 28"
Fertilizer: 15 gallon, 28%, 2X2
110 lbs. total N Urea / ESN
120 lbs. K_2O Fall applied

Tillage: Fall Chisel, Field Cult. 2X
Harvest Date: 10/6/2009
Sample Date: 10/5/2009
Herbicides: Glyphosate 3x
Replicated: 3x
Fungicide: Proline 60 DSV
Kocide 3000, 120 DSV

VARIETY	REV / ACRE	RWSA	RWST	TONS / ACRE	% SUGAR	% CJP	POPULATIONS 100 Ft. of Row				RHIZ. 1200 Ft. of Row
							DAY	DAY	30 DAY	HARV.	
C-RR827 (2) **	**$820**	**5613**	**272**	**20.6**	**18.5**	**94.7**	**—**	**—**	**102**	**96**	**11**
C-RR827	$766	5038	255	19.8	17.6	94.0	—	—	109	107	17
C-RR824	**$757**	**4994**	**255**	**19.6**	**17.4**	**94.6**	**—**	**—**	**118**	**109**	**39**
SX-1260RR	$750	4964	258	19.2	17.5	95.0	—	—	108	110	7
HM-28RR	**$752**	**4956**	**247**	**20.1**	**16.8**	**94.9**	**—**	**—**	**115**	**108**	**0**
B-17RR32	$723	4778	253	18.9	17.4	94.5	—	—	99	92	23
HM-29RR	**$704**	**4644**	**248**	**18.8**	**16.9**	**94.7**	**—**	**—**	**138**	**128**	**2**
HM-50RR (0)*	$675	4273	251	17.0	17.3	94.2	—	—	100	98	1
HM-50RR	**$640**	**4242**	**261**	**16.3**	**17.9**	**94.4**	**—**	**—**	**121**	**121**	**0**
HM-27RR	$631	4195	237	17.7	16.3	94.6	—	—	77	78	2
HM-42RR	**$615**	**4089**	**253**	**16.2**	**17.4**	**94.5**	**—**	**—**	**86**	**90**	**1**
B-17RR62	$591	3941	242	16.3	16.7	94.4	—	—	89	84	5
AVERAGE	**$702**	**4644**	**253**	**18.4**	**17.3**	**94.5**	**—**	**—**	**105**	**102**	**9**
LSD (5%)	—	**553**	**16**	**2.0**	**0.8**	**1.0**	**—**	**—**	**23**	**19**	**14**
C.V. (%)	—	**7**	**4**	**6.3**	**2.8**	**0.7**	**—**	**—**	**13**	**11**	**97**

* HM-50RR (0) had no Quadris applied. ** C-RR827(2) had two Quadris applications (4-8 &.8-12)

TRIAL RELIABILITY: Fair

EMERGENCE:	Poor	**CERC. LEAF SPOT:**	Good
RHIZOCTONIA:	Very Low	**NEMATODES:**	None detected
QUADRIS APP:	4-6 Leaf	**WEATHER:**	Heavy rainfall at planting

Comments: Trial received 4 inches of rainfall immediately after planting was completed. The rain caused soil crusting and compact soil conditions throughout the growing season. Trial was rotary hoed in an attempt to break up the crust. The fast emerging varieties, such as SX-1260RR, may have incurred higher rotary hoe damage as compared to slower emerging varieties due to being closer to the soil surface. Growth of all varieties was slow and stands were thin. Aphanomyces injury was evident, especially on B-17RR62. Revenue per acre is based on a $40 per ton projected payment, an "average RWST" equal to the trial average of 253, and Quadris cost deducted from the revenue at a rate of $25.20 per acre plus a $7.50 application cost.

Nursery Data

Cercospora Nursery

Michigan Sugar Trials

Avg. of 2 Years (2008-2009)

Variety	Cercospora 0-9 Rating*
C RR840	2.7
BTS 18RR26	2.8
HM 50RR	3.0
BTS 18RR16	3.0
HM 42RR	3.0
HM 131RR	3.1
SX 1281RR	3.2
HM 133RR	3.3
HM 27RR	3.3
HM 28RR	3.3
HM 29RR	3.3
HM 110RR	3.4
SX 1260RR	3.5
HM 39RR	3.6
BTS 18RR06	3.6
C RR808	3.9
BTS 17RR32	3.9
C RR827	3.9
C RR824	4.1
BTS 18RR4N	4.2
BTS 17RR62	4.4
Average	3.4
LSD 5%	0.4
CV %	7.9

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

Rhizoctonia Nursery

Michigan Sugar Trials

Avg. of 2 Years (2008 and 2009)

Variety	Disease Index 0-7 Rating*
HM 39RR	4.5
HM 131RR	4.6
HM 29RR	4.8
HM 42RR	4.8
HM 27RR	4.9
HM 28RR	4.9
HM 50RR	4.9
HM 133RR	5.0
SX 1281RR	5.1
Crystal RR840	5.1
HM 110RR	5.1
BTS 18RR26	5.2
BTS 18RR16	5.2
SX 1260RR	5.3
BTS 17RR32	5.4
BTS 18RR4N	5.4
Crystal RR808	5.5
BTS 17RR62	5.5
BTS 18RR06	5.5
Crystal RR827	5.5
Crystal RR824	5.7
Average	5.1
LSD 5%	0.40
CV %	3.8

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

Rhizoctonia Nursery

USDA - Ft. Collins, CO

Avg. of 2 Years (2008 and 2009)

Variety	Disease Index 0-7 Rating*
HM 39RR	3.5
HM 28RR	4.2
HM 110RR	4.3
SX 1281RR	4.5
HM 50RR	4.6
BTS 18RR06	4.6
HM 27RR	4.6
BTS 18RR16	4.7
HM 131RR	4.7
BTS 18RR4N	4.8
HM 29RR	4.8
HM 42RR	4.9
BTS 18RR26	5.1
HM 133RR	5.1
SX 1260RR	5.2
Crystal RR840	5.4
BTS 17RR62	5.4
Crystal RR824	5.4
Crystal RR808	5.4
BTS 17RR32	5.6
Crystal RR827	5.7
Average	4.9
LSD 5%	1.04
CV %	10.3

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

Aphanomyces Nursery

Shakopee, MN
Average of 2 Years

Name	Aphanomyces Ratings Root (1-9)[1]	Aphanomyces Ratings Foliar (1-9)	Stand Loss[2] %
Resistant Check	2.7	1.4	7.5
BTS 18RR26	3.2	1.9	30.5
Crystal RR808	3.2	1.9	26.5
BTS 18RR4N	3.3	2.0	34.0
SX 1260RR	3.3	2.4	29.0
HM 39RR	3.4	2.3	32.5
Crystal RR827	3.4	2.2	24.5
SX 1281RR	3.4	1.9	27.0
BTS 18RR06	3.4	1.9	22.5
HM 27RR	3.5	2.7	33.5
HM 29RR	3.5	2.3	33.5
BTS 17RR32	3.5	2.3	34.0
Crystal RR824	3.5	2.4	34.5
HM 131RR(9131RR)	3.6	2.3	32.5
BTS 18RR16	3.6	2.2	36.5
HM 133RR(9133RR)	3.6	2.5	39.5
Crystal RR840	3.7	2.1	30.5
HM 50RR	3.7	2.3	28.5
HM 28RR	3.7	2.4	34.5
HM 42RR	3.8	2.4	36.0
HM 17RR62	3.8	2.2	19.0
HM 110RR(9110RR)	4.0	2.6	36.5
Susceptible Check	6.1	4.0	52.0
Average	3.6	2.3	31.1
LSD (P=.05)	0.4	0.6	11.6
CV %	5.7	12.8	17.9

[1] = no damage, 9 = dead

[2] percent of plants that died from highest population to July 29

Cyst Nematode Nursery

Vader's Farm, Akron MI

2009

Variety	Avg Rating	Nem Rate 0-5	Root Rate 0-3	RWSA	RWST	Tons/A	% Suc	% CJP
BTS 18RR4N	1.29	1.43	1.14	5081	206	24.8	14.6	93.4
BTS 19RR1N	1.41	1.76	1.06	4798	200	23.9	14.3	93.5
HM 9176RR	1.42	1.70	1.15	3645	196	18.6	14.3	92.4
Beta 1643N	1.56	1.88	1.24	5167	212	24.4	15.0	93.6
HM 28RR	1.94	2.33	1.55	4071	213	19.2	15.2	93.2
B 17RR32	2.10	2.56	1.65	4724	208	22.7	14.7	93.7
Average	1.62	1.94	1.30	4581	206	22.3	14.7	93.3
LSD (P=.05)	0.43	0.65	0.34	615	9.6	3.0	0.5	0.8
CV %	22.4	28.1	22.0	11.3	3.9	11.2	2.9	0.7

Nem Rate 0-5: 0 = no nematodes visible, 5 = very high nematode infestation

Root Rate 0-3: 0 = no root symptoms, 3 = high level of sprangling, hairy roots, small beets

Root Aphid Nursery

Shakopee, MN

2008

Variety	0-4 Rating*
BTS 18RR06	1.02
HM 50RR	1.41
BTS 17RR32	1.53
Crystal RR808	1.77
HM 133RR	1.80
BTS 17RR62	1.80
Crystal RR824	1.87
HM 42RR	1.89
Crystal RR827	2.01
SX 1281RR	2.16
BTS 18RR26	2.18
HM 131RR	2.45
BTS 18RR16	2.52
BTS 18RR46	2.53
Crystal RR840	2.62
HM 29RR	2.64
HM 27RR	2.69
HM 28RR	2.73
SX 1260RR	2.92
HM 110RR	2.93
HM 39RR	3.10
Average	2.22

* RATING SCALE
1=NO APHIDS
2=A FEW YOUNG APHIDS
3=A FEW YOUNG AND ADULT APHIDS
4=MANY YOUNG AND ADULT APHIDS

Rhizomania Nursery

USDA - Salinas, CA

Avg. of 2 Years (2008-2009)

Variety	Disease Index 0-9[1]	% Resistant Roots[2]
HM 29RR	3.71	68.9
HM 28RR	3.80	66.3
HM 27RR	3.88	66.3
HM 39RR	3.93	66.7
BTS 18RR06	3.95	68.6
BTS 17RR62	3.99	67.6
BTS 17RR32	4.11	65.0
SX 1260RR	4.16	62.0
Crystal RR824	4.36	57.7
BTS 18RR16	4.45	54.9
HM 9131RR	4.64	51.4
HM 9133RR	4.88	45.8
SX 1281RR	4.89	50.4
BTS 18RR4N	4.89	43.2
Crystal RR808	4.95	50.0
Crystal RR840	5.05	42.6
HM 9110RR	5.10	47.9
BTS 18RR26	5.12	38.2
Crystal RR827	5.21	41.9
HM 50RR	5.59	37.0
HM 42RR	5.66	34.8
Average	4.58	53.7
LSD 5%	0.78	13.3
CV%	8.11	11.9

[1]0-9 Rating: Rating scale of 0 (no disease) to 9 (dead beet)

[2]Resistant Roots: % of beets in classes 0 through 4 which are considered resistant

OVT Information

2009

	Quanicassee	Frankenmuth	Ruth	Saginaw
Grower	Sylvester	Saginaw Valley Research Farm	Roggenbuck	Spero
Trial Quality	Good	V. Good	Good	Fair
Planted	4-May	17-Apr	6-May	13-May
Harvested	20-Oct	14-Oct	12-Oct	16-Oct
Soil Type	Sandy Clay Loam	Sandy Loam	Sandy Loam	Loam
Soil pH	7.7	7.6	7.8	7.3
Soil %OM	3.1	2.5	2.2	3.3
CEC meq/100 g	15.6	13.9	10.7	13.8
Phosphorus	Abv. Optimum	Abv. Optimum	Abv. Optimum	Abv. Optimum
Potassium	Abv. Optimum	Optimum	Abv. Optimum	Optimum
Magnesium	Abv. Optimum	Abv. Optimum	Abv. Optimum	Abv. Optimum
Manganese	Medium	High	High	High
Boron	Medium	Low	Low	Medium
Zinc	Medium	Medium	Medium	High
Nitrogen Added	90	125	80	120

* Seasonal Rainfall

	Quanicassee	Frankenmuth	Ruth	Saginaw
April	5.03	4.87	4.85	5.88
May	2.19	1.47	6.85	1.60
June	5.84	5.53	11.12	3.85
July	3.40	3.55	3.22	2.33
August	4.35	2.96	1.28	2.93
September	1.26	0.98	1.55	0.75
October	2.27	1.74	0.65	1.60
Total	24.34	21.10	29.52	18.94

*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 2009

Revised 1/11/07

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 2771Rz, Crystal R442, Beta 5833R, and HM 7172Rz.**

The Performance Standards used to approve a variety will include:

RWSA: 99.4% or more of the check varieties.
RWST: 99.7% or more of the check varieties.
RWST-Storage: 92.7% or more of the check varieties.
Cercospora Leafspot: 113.7% 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.

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 118.7% or less or it will be disapproved. If a variety's 3 year leafspot level exceeds the limit of 118.7% 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 two from each 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

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