Partnership of:

Sugar Beet Growers
Michigan Sugar Company
Michigan State University
Agribusiness

MISSION STATEMENT

The mission of *Sugarbeet Advancement* is to generate research and utilize education to enhance productivity and profitability of the Great Lakes sugar beet industry. This will be accomplished through a cooperative effort involving Michigan State University, Michigan Sugar Company, Producers and Agribusiness. The *Sugarbeet Advancement* Committee will be active in identifying research needs, conducting educational programming, and identifying promotional and financial support to accomplish established goals.

Partnership of:

Sugar Beet Growers
Michigan Sugar Company
Michigan State University
Agribusiness

ACKNOWLEDGEMENTS

ON-FARM RESEARCH AND DEMONSTRATION

The Sugarbeet Advancement Committee is pleased to provide you with the Tenth Edition of the "Sugar Beet Research and Demonstration Report." The Sugarbeet Advancement efforts and priorities are directed by a 24 member committee. These members identify researchable issues that limit yield and profitability to Michigan Sugar Company members. The majority of research is uniquely conducted on farm in larger strip trials. This research has earned the confidence of growers and has served as a conduit to improve the speed of acceptance of new production practices.

In 2006, Michigan Sugar Company produced 3.8 million tons of beets. A record yield of 23.5 tons per acre and 18% sugar was achieved even though a September 15th early harvest was initiated and crop loss occurred due to excessive rainfall in some areas. Many fields in ideal growing areas produced 30 plus ton yields. Certainly ideal weather in many areas allowed us to achieve high yields. However, these yields would not have been as high if growers had not adopted better management practices from research conducted by Sugarbeet Advancement, Michigan Sugar Company and Michigan State University researchers. The 2006 experience certainly gives notice that a higher yield bar of 30 tons and high quality is achievable.

Research conducted this year by Sugarbeet Advancement included many high yielding fields but also involved several trials that were abandoned due to water damage. For this reason, it is imperative that the growers read the comments on each trial, know the trial reliability and utilize the statistical analysis. Statistical analysis is extremely important to understand if the differences that are seen are real or just trial variability. Every attempt is made to locate high quality sites and produce high quality data. If you have specific questions on trials, feel free to give us a call.

It seems impossible that Sugarbeet Advancement has been functioning for ten years. Yields in 1995-1996 were at 15 tons for two years running. Our goal was to improve yields to 20 tons. Yield increases have averaged about 8/10th of a ton per year. Michigan has led the nation in improvement of gross sugar per acre. In the future, we do expect tonnage to continue to improve with increased emphasis on high quality. The industry has a special appreciation for the cooperators that allow the field research conducted by Sugarbeet Advancement. From these sacrifices, large gains have occurred for the betterment of the industry.

Sugarbeet Advancement is always looking for grower input. We encourage you to contact any committee member with production concerns of the industry.

Sincerely,

Alan Sherwood
Sugarbeet Advancement Chair

Steve Poindexter
Sugarbeet Extension Educator

Sugarbeet Advancement

Partnership of:

Sugar Beet Growers
Michigan Sugar Company
Michigan State University
Agribusiness

TABLE OF CONTENTS

Special Thanks to Sugarbeet Advancement Partners:

Producer Cooperators
Michigan Sugar Agriculturalists and Company
MSU Extension Agents
MSU Ag Experiment Station
BetaSeed – Rob Gerstenberger
ACH Seeds – Andy Bernia
Hilleshog – Doug Ruppal
GTG – Randy Hemb
J & D Implement, Inc.
Sugarbeet Advancement Committee
Reggie VanSickle – Sugarbeet Advancement
B & B Research Farm – Paul Horny & Dennis Fleishman

Sugarbeet Advancement

Partnership of:

Sugar Beet Growers
Michigan Sugar Company
Michigan State University
Agribusiness

COMMITTEE LIST

Dave Bailey
Michigan Sugar Company
10338 North Dean
St. Louis, MI 48880
989-620-5449 (Cell)

Andy Bernia
ACH Seeds, Inc.
5191 Foss Road
Akron, MI 48701
989-691-5316
989-751-2744 (Cell)

Bob Boehm
Michigan Farm Bureau
P.O. Box 30960
Lansing, MI 48909
517-323-7000

Clay Crumbaugh
9224 North Crapo Road
St. Louis, MI 48880
989-681-3029

Kurt Ewald
LAKKE-Ewald Farms, Inc.
4949 Unionville Rd.
Unionville, MI 48767-9724
989-550-1191

Ralph Fogg
Michigan Sugar Company
2600 S. Euclid Avenue
P.O. Box 917
Bay City, MI 48706
989-686-1549

Dave Ganton
1700 Meridian
Reese, MI 48757
989-868-4520
989-225-6717

Ron Gehl
Michigan State University
580 Plant & Soil Science Build.
East Lansing, MI 48824-1311
517-355-0271 x 269
519-674-1532

Corey Guza
Michigan Sugar Company
2600 S. Euclid Avenue
P.O. Box 917
Bay City, MI 48706
989-686-1549

Kevin Hecht
Michigan Sugar Beet Growers
3287 S. Bradford Rd.
Vassar, MI 48768
989-652-0346

Dave Helmreich
6566 Frasier Rd.
Bay City, MI 48706
989-686-0486

Randy Hemb
Germain's Technology Group
160 W. Aspen Court Unit 8
Oak Creek, WI 53154-4450
517-297-9170 (Cellular)

Robert Henne
Michigan Sugar Beet Growers
8165 Richmond Road
Bay Port, MI 48722
989-453-3541

Lee Hubbell
Michigan Sugar Company
2600 S. Euclid Avenue
Bay City, MI 48706-3497
989-686-0161

Mike Leen
159 S. Howard Avenue
Croswell, MI 48422
810-679-2240
810-404-0240

Sugarbeet Advancement

Partnership of:

Sugar Beet Growers
Michigan Sugar Company
Michigan State University
Agribusiness

COMMITTEE LIST

Marty Lewis
MI Sugar Co-Op Board
5082 North Road
North Street, MI 48049
810-385-4888

Clay Maxwell
4676 South M-18
Beaverton, MI 48612
989-205-5352

Dr. Mitch McGrath
USDA – ARS – MWA
494D Plant & Soil Science Bldg.
East Lansing, MI 48824-1325
517-432-2355

Paul Pfenninger
Michigan Sugar Company
2600 S. Euclid Avenue
Bay City, MI 48706
989-686-1549

Steve Poindexter
Michigan State Univ. Ext.
One Tuscola Street Suite 100
Saginaw, MI 48607-1287
989-758-2500 Ext. 208

Scott Roggenbuck
8579 Helena Rd.
Harbor Beach, MI 48441
989-479-6854
989-550-4495

John Schulz
6066 French Road
Unionville, MI 48767
989-883-3030

Mark Seamon
Michigan State Univ. Ext.
One Tuscola Street Suite 100
Saginaw, MI 48607-1287
989-758-2500 Ext. 203

Alan Sherwood
Michigan Sugar Beet Growers
3346 East Monroe Road
St. Louis, MI 48880-9238
989-681-4192

Christy Sprague
Michigan State University
466 Plant and Soil Science Bldg.
East Lansing, MI 48824-1325
517-355-0271

James Stewart
Michigan Sugar Company
320 Sugar Street
Carrollton, MI 48724
989-752-8232

Ray VanDriessche
1470 S. Scheurmann
Bay City, MI 48708
989-686-1549

2006 Executive Committee:

Chairman - Alan Sherwood
Vice Chairman - Mike Leen
Treasurer - Kevin Hecht
Secretary - Corey Guza
Fifth Member - Paul Pfenninger

SUGARBEET ADVANCEMENT COMMITTEE
2006 VOTING MEMBERSHIP

24 Voting Members

Company	Name	Terms
Michigan Sugar Company	Paul Pfenninger (5th Member)	2
	Corey Guza (Secretary)	4
	Jim Stewart	3
	Roger Elston	1
	Ralph Fogg	2
	Dave Bailey	4
	Lee Hubbell	3
	Rick List	1
Michigan Sugar Company District Growers	Rob Henne (Chairman)	1
	Glenn Jack	1
	Dave Helmreich	1
	Clay Crumbaugh	1
Michigan Sugar Company At Large Growers	Alan Sherwood (Vice Chairman)	2
	Mark Helmreich (Treasurer)	1
	Dean Hadaway	3
	Kevin Hecht	3
Michigan State University	Mark Seamon	3
	Tim Harrigan	1
	Christy Sprague	2
Sugar Beet Seed Company	Rob Gerstenberger	1
Agri-Business	John Schulz	2
	Randy Hemb	1
Michigan Sugar Beet Growers Co-Op Board	Marty Lewis	1
	Clay Maxwell	1

Ex-Official Members

Company	Name
Farm Bureau	Bob Boehm
USDA	Mitch McGrath
SBA Director	Steve Poindexter

Chairman of Michigan Sugar Company Board of Directors – Tom Zimmer
CEO of Michigan Sugar Company – Mark Flegenheimer

Sugarbeet Advancement

Partnership of:

Sugar Beet Growers
Michigan Sugar Company
Michigan State University
Agribusiness

PREFACE

The Data in the 2006 *Sugarbeet Advancement* Research and Demonstration Book can be a valuable tool for making production decisions on your farm. Producers must understand the terminology to draw correct conclusions. Most of the research demonstration trials are replicated three or four times, either in a randomized format or complete randomized block. These trials have a statistical analysis run on them. Trials, which were not randomized and/or replicated, are considered as demonstrations with no statistical analysis run. The following comments should be helpful in your understanding of the results.

TREATMENT NAME -- Identify different named treatments in the trial.

RWSA -- Recoverable White Sugar Per Acre. This number is calculated by multiplying recoverable white sugar per ton by actual yield per acre. All reported numbers are rounded to the nearest pound.

ACTUAL YIELD T/A -- Tonnage calculated on per acre basis. Reported number is rounded to one-hundredth decimal point. Gross tons (no tare off).

RWST -- Recoverable White Sugar Per Ton incorporating sugar and clear juice purity. Reported number is rounded to the nearest pound. This is based on a 120-day slice (not fresh basis).

% SUGAR -- Percentage Sugar Content of Beet; rounded to the one-tenth decimal point.

% CJP -- Percentage Clear Juice Purity; rounded to the one-tenth decimal point.

RHIZOCTONIA BEETS – Average number of dead or dying beets from Rhizoctonia Crown Rot per indicated length of row.

POPULATION -- In monitoring trials, approximately 10- 20- and 30-day plant counts were taken to monitor emergence of each treatment. Results are reported on beets per 100 foot of row.

HARVEST POPULATION -- Beet population was taken after beet defoliation. All crowns were counted, including small beets, which may not be picked up by harvesters.

AVERAGES -- Use averages to compare treatments which are better or worse than average of trial.

LSD 5% -- Least Significant Difference at the 95% confidence level in which one treatment compared to another is actually different. This calculation is used to take into account soil variation and other factors. NS indicates differences between treatments are *Not Significant*.

C.V. % -- Coefficient of variation is an indicator of how much variation is in the trial. If C.V.'s are 5% or less, it is considered an excellent trial; 10% or less is a good trial; 15% is fair, and etc. The less variation the more reliable the results are.

*** 1X - 2X - 3X** -- Indicates how many times a practice was done.

Sugarbeet Advancement

Partnership of:

Sugar Beet Growers
Michigan Sugar Company
Michigan State University
Agribusiness

VARIETY TRIAL

ON-FARM RESEARCH AND DEMONSTRATION

Cooperator:	**Cedar Pond Farms**	**Tillage:**	Fall Chisel – 1x Field Cultivator
Location:	Harbor Beach	**Harvest Date:**	10/25/06
Planting Date:	4/17/06	**Sampled:**	10/20/06
Previous Crop:	Soybeans	**Herbicides:**	3x Microrate
Soil Type:	Sandy Loam	**Replicated:**	3x
Row Spacing:	30 Inch	**# Rows Harvested:**	4
Fertilizer:	15 gal. 14-21-0 + Micro Starter 40 lbs. N / Applied by N Test Fall applied manure	**Fungicide:**	Quadris – 2-8 Leaf – Rhizoctonia Eminent – Supertin - Headline

VARIETY	RWSA	TONS PER ACRE	RWST	% SUGAR	% CJP	POPULATION 100 FT. ROW 10 DAY	20 DAY	30 DAY	HARVEST	1200 Ft. RHIZ
C-271	**9920**	**34.23**	**290**	**18.9**	**96.7**	**134**	**268**	**276**	**237**	**57**
B-5451	9879	33.96	291	19.1	96.1	144	250	262	238	68
B-4381 R	**9869**	**34.64**	**285**	**18.5**	**96.7**	**145**	**245**	**259**	**249**	**10**
C-963	9847	33.72	292	19.1	96.4	124	266	270	248	54
2763 RZ	**9829**	**34.69**	**283**	**18.5**	**96.6**	**60**	**273**	**274**	**266**	**88**
B-5411 R	9777	33.83	289	19.0	96.2	179	262	264	253	64
B-5833 R	**9662**	**35.06**	**276**	**18.2**	**96.2**	**183**	**243**	**264**	**251**	**24**
2771 RZ	9524	33.07	287	18.9	96.4	86	296	291	281	49
C-355	**9412**	**33.57**	**280**	**18.5**	**96.0**	**129**	**250**	**259**	**234**	**14**
7172 RZ	9319	34.27	272	18.1	95.7	91	246	258	241	2
R-442	**9294**	**32.91**	**283**	**18.7**	**95.9**	**145**	**232**	**248**	**224**	**56**
73 RZ	9057	33.07	274	18.2	**95.9**	81	156	163	176	60
AVERAGE	**9616**	**33.92**	**283**	**18.7**	**96.2**	**125**	**249**	**257**	**242**	**46**
LSD (5%)	**575**	**1.87**	**9**	**.4**	**.8**	**50**	**32**	**29**	**30**	**72**
C.V. (%)	**4**	**3.26**	**2**	**1.4**	**.5**	**24**	**8**	**7**	**7**	**93**

Comments: High yield environment. Trial planted under good soil conditions. Stand establishment was rapid and timely rainfall occurred all season. This was an exceptional looking field with minimal yield constraints. Excellent leafspot control and low levels of Rhizoctonia. Populations were very high with some varieties above optimum levels. Average harvest population was 57,000 plants per acre. VARIETY 73 RZ had a planter plate seed size mismatch that cause a lower population.

Trial Reliability: EXCELLENT

Cooperating Agriculturist(s): Bob Corrigan – Michigan Sugar Company

Sugarbeet Advancement

Partnership of:

Sugar Beet Growers
Michigan Sugar Company
Michigan State University
Agribusiness

VARIETY TRIAL

ON-FARM RESEARCH AND DEMONSTRATION

Cooperator:	**Knoerr Farms**	**Tillage:**	Fall Chisel – 1x Field Cultivator
Location:	Auburn / Bay County	**Harvest Date:**	10/30/06
Planting Date:	4/17/06	**Sample Date:**	10/18/06
Previous Crop:	Corn	**Herbicides:**	Microrate 3x
Soil Type:	Loam	**Replicated:**	3x
Row Spacing:	30-Inch / 4.3 Inch Seed Spacing	**# Rows Harvested:**	6
Fertilizer:	150 lbs. 13-24-16 25 gal. N 28%	**Fungicide:**	Quadris – 2-8 Leaf Stage 7/7/06 – Eminent 8/2/06 – SuperTin 9/4/06 - Headline

VARIETY	RWSA	TONS PER ACRE	RWST	% SUGAR	% CJP	POPULATION 100 FT. ROW 10 DAY	20 DAY	30 DAY	HARVEST	1200 Ft. RHIZ
R-442	**8022**	**26.38**	**304**	**19.9**	**96.2**	**123**	**201**	**202**	**192**	**1**
C-271	7675	25.02	307	20.0	96.6	123	204	202	197	15
B-5833 R	**7655**	**25.71**	**298**	**19.4**	**96.6**	**143**	**210**	**211**	**205**	**5**
B-4381 R	7534	25.15	300	19.5	96.5	127	202	205	207	5
B-5411 R	**7366**	**24.22**	**304**	**20.0**	**96.2**	**128**	**205**	**204**	**206**	**2**
B-5451	7340	23.56	311	20.3	96.4	106	189	195	191	17
C-963	**7336**	**23.55**	**312**	**20.4**	**96.2**	**156**	**230**	**231**	**228**	**43**
2763 RZ	7266	24.40	298	19.4	96.5	81	215	216	214	46
7172 RZ	**7261**	**24.35**	**299**	**19.6**	**96.0**	**77**	**205**	**206**	**210**	**0**
C-355	7219	24.48	295	19.4	96.0	120	195	202	192	9
73 RZ	**7177**	**24.53**	**292**	**19.2**	**96.3**	**51**	**183**	**187**	**189**	**4**
2771 RZ	6549	21.48	305	19.9	**96.5**	88	216	220	217	20
AVERAGE	**7367**	**24.40**	**302**	**19.8**	**96.3**	**110**	**205**	**207**	**204**	**14**
LSD (5%)	**648**	**2**	**9**	**.4**	**NS**	**22**	**22**	**20**	**NS**	**23**
C.V. (%)	**5**	**5.1**	**2**	**1.3**	**.3**	**12**	**6**	**6**	**7**	**3**

Comments: Trial planted in high residue corn stalks. Field was planted under good soil conditions with excellent emergence. Heavy rainfall occurred after emergence which slowed the growth of beets. Very low amount of Rhizoctonia found in field. Leafspot control was good. Trial looked good all year. There was minimal seedling disease. Harvest population was 35,000 plants per acre.

Trial Reliability: EXCELLENT

Cooperating Agriculturist(s): Rick List – Michigan Sugar Company

Sugarbeet Advancement

Partnership of:

Sugar Beet Growers
Michigan Sugar Company
Michigan State University
Agribusiness

VARIETY TRIAL

ON-FARM RESEARCH AND DEMONSTRATION

Cooperator:	**Brian Fox**	**Tillage:**	Moldboard Plow 1x Field Cult.
Location:	Ontario, Canada	**Harvest Date:**	11/14/06
Planting Date:	4-28-06	**Sample Date:**	11/14/06
Previous Crop:	Soybeans	**Herbicides:**	4x Microrate
Soil Type:	Clay Loam	**Replicated:**	3x
Row Spacing:	30 Inch - 4 3/16 Inch Seed Spacing	**# Rows Harvested:**	6
Fertilizer:	75 lbs. MAP / 10 gal. 28% Banded 250 lbs. Potash / Side Dress 60 lbs. N	**Fungicide:**	Headline – Senator+ EDBC - Headline

VARIETY	RWSA	TONS PER ACRE	RWST	% SUGAR	% CJP	POPULATION 100 FT. ROW 12 DAY	21 DAY	30 DAY	HARVEST	1200 Ft. RHIZ
B-5833 R	**9617**	**37.50**	**256**	**17.7**	**94.1**	**202**	**211**	**211**	**186**	**16**
C-355	9437	35.30	267	18.7	93.4	238	224	221	193	2
C-271	**9403**	**35.85**	**262**	**18.2**	**93.7**	**232**	**230**	**215**	**177**	**7**
73 RZ	9146	35.13	260	18.0	93.8	230	230	198	174	25
2771 RZ	**9060**	**33.10**	**274**	**18.8**	**94.3**	**226**	**222**	**190**	**159**	**71**
C-963	9033	33.60	269	18.8	93.4	229	232	206	177	36
R-442	**8941**	**33.30**	**268**	**18.7**	**93.5**	**201**	**203**	**175**	**138**	**30**
B-4381 R	8890	34.43	258	17.8	94.1	121	146	128	117	13
B-5411 R	**8810**	**33.73**	**261**	**18.3**	**93.5**	**205**	**196**	**154**	**133**	**19**
7172 RZ	8379	34.83	241	17.3	92.2	239	236	220	211	11
B-5451	**8173**	**32.40**	**252**	**17.8**	**93.1**	**189**	**196**	**178**	**142**	**55**
2763 RZ	8157	31.20	262	18.2	**93.8**	237	234	219	147	174
AVERAGE	**8921**	**34.20**	**261**	**18.2**	**93.6**	**212**	**213**	**193**	**163**	**38**
LSD (5%)	**934**	**2.86**	**12**	**.5**	**.8**	**41**	**48**	**54**	**56**	**139**
C.V. (%)	**6**	**4.9**	**3**	**1.8**	**.5**	**11**	**13**	**17**	**20**	**215**

Comments: High Yield Environment. Emergence was rapid under warm soil conditions. Leaf spot control was good. Some Rhizoctonia Crown Rot was present; however, one replication did have a significant level in some varieties. There was some seedling loss from the 21 to 30 day stand count and further significant stand loss up to harvest for some varieties. Trial was harvested under wet conditions. Average harvest stand was 29,000 plants per acre.

Trial Reliability: VERY GOOD

Cooperating Agriculturist(s): Wayne Martin - Michigan Sugar Company

Sugarbeet Advancement

Partnership of:

Sugar Beet Growers
Michigan Sugar Company
Michigan State University
Agribusiness

VARIETY TRIAL

ON-FARM RESEARCH AND DEMONSTRATION

Cooperator: **Bushey Farms**
Location: Elkton
Planting Date: 4/26/06
Previous Crop: Corn
Soil Type: Loam
Row Spacing: 22 Inch – 4.6 Inch Seed Spacing
Fertilizer: 20 gal. 28%
Fall applied Dairy manure

Tillage: Fall Chisel – 2x Field Cultivator
Harvest Date: 11/6/06
Sample Date: 10/12/06
Herbicides: Microrates 3x
Replicated: 4x
 # Rows Harvested: 8
Fungicide: GEM – 1st Eminent - 2nd

VARIETY	RWSA	TONS PER ACRE	RWST	% SUGAR	% CJP	POPULATION 100 FT. ROW 16 DAY	21 DAY	34 DAY	HARVEST	1200 Ft. RHIZ
C-963	**8002**	**26.55**	**302**	**19.9**	**96.0**	**70**	**121**	**164**	**169**	**14**
2763 RZ	7939	27.40	290	18.9	96.6	79	139	172	183	8
C-271	**7862**	**26.53**	**297**	**19.5**	**96.2**	**65**	**116**	**151**	**153**	**16**
B-5833 R	7674	26.75	287	18.9	96.2	66	117	151	161	1
R-442	**7592**	**26.10**	**291**	**19.3**	**95.8**	**91**	**125**	**139**	**134**	**8**
73 RZ	7501	25.55	294	19.4	96.0	66	119	150	159	19
B-5451	**7482**	**24.90**	**301**	**19.8**	**96.1**	**75**	**116**	**142**	**149**	**6**
C-355	7404	25.53	290	19.2	95.8	47	86	150	154	0
B-4381 R	**7355**	**24.80**	**297**	**19.4**	**96.6**	**69**	**96**	**142**	**164**	**2**
7172 RZ	7196	25.20	286	19.0	95.6	60	90	165	178	0
B-5411 R	**7158**	**24.65**	**291**	**19.3**	**95.8**	**62**	**111**	**137**	**156**	**2**
2771 RZ	7125	24.27	293	19.3	**96.2**	58	132	194	204	11
AVERAGE	**7524**	**25.68**	**293**	**19.3**	**96.1**	**67**	**114**	**155**	**164**	**7**
LSD (5%)	**397**	**1.1**	**8**	**.4**	**.6**	**NS**	**43**	**28**	**28**	**NS**
C.V. (%)	**4**	**3.0**	**2**	**1.3**	**.4**	**60**	**26**	**13**	**12**	**12**

Comments: Trial was slow to emerge. Field was planted under good soil conditions. Dairy manure was applied in the fall before beet planting. Rhizoctonia and seedling diseases were minimal. Leafspot control was fair to good. Weed control was a problem especially with small canopy beet varieties. Average harvest populations was 39,000 plants per acre.

Trial Reliability: VERY GOOD

Cooperating Agriculturist(s): Roger Elston – Michigan Sugar Company

Sugarbeet Advancement

Partnership of:

Sugar Beet Growers
Michigan Sugar Company
Michigan State University
Agribusiness

VARIETY TRIAL

ON-FARM RESEARCH AND DEMONSTRATION

Cooperator:	**Rick Gerstenberger**	**Tillage:**	Fall Chisel / Field Cult. 2x
Location:	Sandusky	**Harvest Date:**	11/4/06
Planting Date:	4/20/06	**Sample Date:**	10/26/06
Previous Crop:	Soybeans	**Herbicides:**	Micro Rate 3x
Soil Type:	Loam	**Replicated:**	3x
Row Spacing:	28 Inch / 4 Inch Seed Spacing	**# Rows Harvested:**	6
Fertilizer:	175 lbs. 15-29-9 + Micros 2x2 Alpine 6-24-6 / 2 gal. IF 90 lbs. N/ 28%	**Fungicide:**	Quadris – 2-8 Leaf Eminent - Headline

VARIETY	RWSA	TONS PER ACRE	RWST	% SUGAR	% CJP	POPULATION 100 FT. ROW 15 DAY	25 DAY	32 DAY	HARVEST	1200 Ft. RHIZ
C-963	**6747**	**25.27**	**267**	**18.5**	**93.8**	**128**	**148**	**142**	**127**	**60**
B-5451	6745	24.79	273	18.5	94.7	128	103	101	88	43
R-442	**6570**	**25.26**	**260**	**17.9**	**94.0**	**93**	**124**	**127**	**101**	**38**
B-5833 R	6543	24.64	265	18.1	94.7	110	114	117	104	28
C-355	**6473**	**26.23**	**247**	**17.4**	**93.3**	**116**	**97**	**100**	**89**	**28**
B-5411 R	6295	24.52	256	17.8	93.9	154	133	131	119	38
2763 RZ	**6079**	**22.83**	**266**	**18.1**	**94.7**	**151**	**160**	**161**	**131**	**30**
2771 RZ	5833	22.02	265	18.0	94.9	122	132	143	124	55
C-271	**5597**	**22.06**	**253**	**17.6**	**93.7**	**98**	**96**	**92**	**77**	**58**
B-4381 R	5466	21.82	251	17.2	94.5	118	110	105	96	24
7172 RZ	**4558**	**20.42**	**223**	**16.1**	**92.4**	**43**	**51**	**50**	**54**	**3**
73 RZ	4460	18.45	242	16.8	94.0	65	71	71	62	55
AVERAGE	**5947**	**23.19**	**256**	**17.7**	**94**	**111**	**112**	**112**	**98**	**38**
LSD 5%	**1053**	**3.43**	**20**	**1**	**1**	**32**	**62**	**59**	**51**	**37**
CV %	**10**	**8.7**	**5**	**3.4**	**.7**	**17**	**33**	**31**	**31**	**57**

Comments: Trial had crusting problems which caused the slow/weak emerging varieties to not establish good stands. Beet seedlings stressed, along with some seedling disease observed. Trial planted under good soil conditions but crusted after heavy rainfall. Rhizoctonia pressure was variable from light to moderate. A low to moderate amount of Aphanomyces scarring was seen on the roots. Cercospora leafspot control was fair to good. Harvest population was approximately 18,700 plants per acre. VARIETY 73 RZ had a planter plate seed size mismatch which caused lower population.

Trial Reliability: FAIR

Cooperating Agriculturist(s): Paul Wheeler – Michigan Sugar Company

Sugarbeet Advancement

Partnership of:

Sugar Beet Growers
Michigan Sugar Company
Michigan State University
Agribusiness

VARIETY TRIAL AVERAGES 2006

ON-FARM RESEARCH AND DEMONSTRATION

Cooperator:	**Average of Five Variety Trials**	**Tillage:**	-
Location:	Bay City-Elkton-Ruth-Sandusky-Ontario	**Harvest Date:**	-
Planting Date:	-	**Sample Date:**	-
Previous Crop:	-	**Herbicides:**	-
Soil Type:	-	**Replicated:**	-
Row Spacing:	-	**# Rows Harvested:**	-
Fertilizer:	-	**Fungicide:**	-

VARIETY	RWSA	TONS PER ACRE	RWST	% SUGAR	% CJP	POPULATION 100 FT. ROW EARLY	MID	FINAL	HARVEST	1200 Ft. RHIZ
B-5833 R	**8230**	**29.93**	**276**	**18.5**	**95.6**	**141**	**179**	**191**	**181**	**15**
C-963	8193	28.54	288	19.3	95.2	141	199	203	190	41
C-271	**8091**	**28.74**	**282**	**18.8**	**95.4**	**130**	**183**	**187**	**168**	**31**
R-442	8084	28.79	281	18.9	95.1	131	177	178	158	27
C-355	**7989**	**29.02**	**276**	**18.6**	**94.9**	**130**	**170**	**186**	**172**	**11**
B-5451	7924	27.92	286	19.1	95.3	128	171	176	162	38
B-5411 R	**7881**	**28.19**	**280**	**18.9**	**95.1**	**146**	**181**	**178**	**173**	**25**
2763 RZ	7854	28.10	280	18.6	95.6	122	204	208	188	69
B-4381 R	**7823**	**28.17**	**278**	**18.5**	**95.7**	**116**	**160**	**168**	**167**	**11**
2771 RZ	7618	26.79	285	19.0	95.7	116	200	208	197	41
73 RZ *	**7468**	**27.35**	**272**	**18.3**	**95.2**	**99**	**152**	**154**	**152**	**33**
7172 RZ	7343	27.81	264	18.0	**94.4**	102	166	180	179	3
AVERAGE	**7875**	**28.28**	**279**	**18.7**	**95.3**	**125**	**178**	**185**	**174**	**29**
LSD (5%)	**560**	**1.15**	**8**	**.4**	**.4**	**38**	**27**	**28**	**26**	**28**
C.V. (%)	**6**	**5**	**2**	**1.8**	**.3**	**24**	**12**	**12**	**12**	**76**

Comments: * Variety 73 RZ had a low population in two trials because of planter plate/seed size mismatch.

Trial Reliability: VERY GOOD

Cooperating Agriculturist(s):

Sugarbeet Advancement

Partnership Of:

Sugar Beet Growers
Michigan Sugar Company
Michigan State University
Agribusiness

2006 Variety Trials
(Average of Six Locations)
Final – Mid – and Early Emergence
Beets per 100 Feet of Row

	FINAL	MID	EARLY	% STAND
2771 RZ	212	204	100	74
2763 RZ	209	203	103	73
C-271	196	190	114	69
C-963	196	193	123	69
C-355	189	174	112	66
B-5833 R	189	178	130	66
R-442	180	178	115	63
7172 RZ	180	167	86	63
B-5411 R	180	179	124	63
B-5451	179	174	116	63
B-4381 R	171	162	100	60
73 RZ *	165	161	83	58
AVERAGE	187	180	109	66
LSD 5%	26	25	32	-
CV%	12	12	25	-

Comments: Stand counts based on three 100-foot replications at each location.
Average seed spacing = 4.2 Inches

- Early Stand Counts are approximately 10-Day Counts
- Mid Stand Counts are approximately 20-Day Counts
- Final Stand Counts are approximately 30-Day Counts

* Population was negatively affected in two out of six trials with seed size and planter plate mismatch

Sugarbeet Advancement

Partnership of:

Sugar Beet Growers
Michigan Sugar Company
Michigan State University
Agribusiness

On-Farm Research and Demonstration
2006 Variety Trial Emergence Results

Variety	% Emergence			Suggested Seed Spacing / Inch*
	2004	2005	2006	
7172 RZ	64	53	63	4
73 RZ			58	4 - 4.5
B-4381		54	60	4.5
C-963	66	54	69	4.5
C-271	68	60	69	4.5
R-442	72	58	63	4.5
2763 RZ		62	73	4.5
B-5451	72	59	63	4.5
B-5833		59	66	4.5
2771 RZ		63	74	4.5
C-355			66	4.5
B-5411			63	4.5

* Based on Average Emergence Conditions

On-Farm Research and Demonstration
2006 Rhizoctonia Beets

Variety	Rhizoctonia Dead Beets / 1200 Ft.*	
	2005	2006
7172 RZ	16*	4*
C-355	-	18*
B-5411 R	-	34*
5833 R	50*	39*
R-442	-	43*
B-4381 RZ	66*	47*
B-5451	76*	58
C-963	80	63
C-271	83	77
2771 RZ	116	58
2763 RZ	132	79
73 RZ	-	89

* *Average of 2005-2006 Variety Trials – Not Significantly Different from Best Variety*

Sugarbeet Advancement

Partnership of:

Sugar Beet Growers
Michigan Sugar Company
Michigan State University
Agribusiness

VARIETY TRIAL * RAINFALL DATA – NEAREST LOCATION

ON-FARM RESEARCH AND DEMONSTRATION

LOCATION COOPERATOR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	TOTAL RAINFALL
Bay City Knoerr	1.89	3.68	2.64	3.44	2.93	2.01	4.22	2.98	23.79
Caseville Bushey	2.90	3.91	1.75	2.93	1.90	3.50	4.32	.70	21.91
Ontario Fox	2.50	2.80	3.60	4.40	3.55	3.35	9.15	2.80	32.15
Ruth Cedar Pond	2.15	4.37	3.75	4.60	4.65	2.80	5.60	1.60	29.52
Sandusky Gerstenberger	2.91	2.30	2.75	4.83	3.25	3.45	4.71	1.80	26.00

* Rainfall data is at the nearest monitoring point to field. This data was not taken at the field, so some difference may occur at the actual location.

PIONEER • BIG CHIEF
MICHIGAN SUGAR

Michigan Sugar Company – 2006

AVERAGE OF THREE YEARS

OFFICIAL VARIETY TRIAL

VARIETIES APPROVED FOR THE 2007 GROWING SEASON

APPROVAL	VARIETY	RWSA	RWST	% Suc	% CJP	T/A	% EMERG	CLS* Rating	NURSERIES			
									RA Root Aphid	RH Rhizoc-tonia	AP Aphano-myces	RZ Rhizo-mania
Fully Approved	**Crystal 271**	7282	259.5	18.00	93.93	28.05	64.0	3.17	F	P	E	
	Beta 5451	7189	258.2	17.97	93.79	27.94	65.8	3.17	E	F	E	
	Crystal 963	7149	256.5	17.91	93.66	27.86	65.5	3.10	E	F	E	
	Beta 5310	7067	254.3	17.69	93.90	27.81	61.5	2.55	G	P	E	
	Beta 5411R	7038	254.0	17.96	93.07	27.69	51.7	3.29	F	P	E	F
	Crystal 355	6897	253.1	17.70	93.62	27.29	61.3	1.60	F	G	E	
	HM 2767	6804	260.3	17.97	94.18	26.09	66.4	2.87	P	P	E	
	HM 2763Rz	6772	255.4	17.67	94.11	26.47	66.7	3.43	E	P	G	G
	HM 2771Rz	6703	256.9	17.85	93.91	26.11	62.5	2.96	F	P	E	G
	HM 7172Rz	6691	248.1	17.56	93.13	27.09	57.3	3.03	F	G	F	G
	HM 2761Rz	6662	252.6	17.68	93.56	26.39	61.6	3.24	F	P	E	G
	SX Prompt	6429	252.2	17.74	93.36	25.49	69.6	3.30	E	F	E	
Limited Approval	**Crystal R442**	7121	254.4	17.88	93.35	27.99	56.1	2.94	G	P	E	F
Plant Thru 2008	**Beta 5833R**	7145	251.9	17.47	94.08	28.45	66.4	3.59	E	F		G
	MEANS	6925	254.8	17.79	93.69	27.19	62.6	3.02				

* Lower number indicates more resistance.

Michigan Sugar Company

AVERAGE OF TWO YEARS

OFFICIAL VARIETY TRIAL – 2006

Varieties Approved for the 2007 Growing Season

APPROVAL	VARIETY	RWSA	RWST	% SUC	% CJP	T/A	% EMERG	CLS* RATING	NURSERIES			
									Root Aphid	Rhizoctonia	Aphanomyces	Rhizomania
Fully Approved	Crystal 271	7492	254.7	17.28	95.00	29.23	64.51	3.19	F	P	E	
	Beta 5451	7388	254.6	17.28	94.98	28.88	63.84	3.06	E	F	E	
	Crystal 963	7368	250.7	17.10	94.76	29.13	65.67	3.04	E	F	E	
	Beta 5310	7278	248.8	16.88	95.09	29.08	62.13	2.18	G	P	E	
	Beta 5411R	7225	250.2	17.26	94.17	28.62	50.28	3.08	F	P	E	F
	Crystal 355	7083	247.9	16.92	94.75	28.42	59.54	1.68	F	G	E	
	HM 2767	6985	257.9	17.34	95.42	26.89	64.21	2.73	P	P	E	
	HM 2763Rz	6915	251.4	16.99	95.21	27.28	65.38	3.48	E	P	G	G
	HM 7172Rz	6899	243.4	16.84	94.17	28.29	56.60	3.06	F	G	F	G
	HM 2771Rz	6860	252.5	17.09	95.12	27.01	60.81	3.00	F	P	E	G
	HM 2761Rz	6777	247.5	16.96	94.59	27.22	60.90	3.25	F	P	E	G
	SX Prompt	6644	249.6	17.14	94.46	26.44	69.42	3.45	E	F	E	
Limited Approval	Crystal R442	7367	252.5	17.29	94.54	28.97	56.60	3.01	G	P	E	F
	Beta 5930R (1531R)	7339	254.2	17.45	94.38	28.61	46.48	2.94			G	F
	Crystal R509 (Z589)	7134	246.0	16.82	94.70	28.80	67.50	3.52		G		G
	HM 80Rz	7056	247.9	16.79	95.14	28.12	66.70	3.48		P	F	G
Specialty Varieties	HM 79Rz	7276	243.9	16.78	94.43	29.70	66.78	3.34		G	E	G
Plant Thru 2008	Beta 5833R	7358	246.9	16.68	95.30	29.71	66.79	3.68	E	F		G
Mean		7136	250.0	17.05	94.79	28.36	61.90	3.06				

* Lower number indicated more resistance.

Rows: 2 Replications: 8 Row Spacing: 30”

Sprayed with Amistar/Quadris for Rhizoctonia Control

Michigan Sugar Company – 2006
Plant to Stand Trials
Average of Four Locations in Michigan

NO	VARIETY	RWSA	RWST	% Suc.	% CJP	T/A	% EMERG
13	Crystal 271	7766	265.9	17.93	95.08	28.84	66.0
1	Crystal 355	7660	264.3	17.87	94.99	28.99	61.0
11	Beta 5833R	7636	256.8	17.39	95.06	29.62	67.4
6	Beta 5310	7579	262.4	17.76	95.04	28.79	61.6
10	SX Prompt	7567	267.6	18.21	94.67	28.35	65.9
9	HM 2761Rz	7519	261.5	17.77	94.82	28.66	59.1
5	Crystal 963	7512	265.5	18.07	94.69	28.27	65.8
3	Beta 5451	7501	262.9	17.82	94.93	28.55	62.6
8	Crystal R442	7449	263.0	17.90	94.66	28.27	58.7
14	Beta 5411R	7412	256.3	17.49	94.67	28.77	54.8
15	HM 2767	7271	269.4	18.08	95.35	26.74	58.5
12	HM 73Rz	7236	263.1	17.81	94.93	27.00	55.9
2	HM 2763Rz	6921	256.8	17.29	95.38	26.83	60.3
7	HM 2771Rz	6849	263.2	17.69	95.34	25.83	55.4
4	HM 7172Rz	6830	247.5	17.17	93.91	27.73	60.7
	LDS (5%)	495	7.9	0.45	0.54	1.77	6.3
	CV	4.7	2.11	1.77	0.40	4.40	7.3
	Mean	7381	261.75	17.75	94.90	28.08	60.9

Sugarbeet Advancement

Partnership of:

Sugar Beet Growers
Michigan Sugar Company
Michigan State University
Agribusiness

NEMATODE TRIAL

ON-FARM RESEARCH AND DEMONSTRATION

Cooperator: **LAKKE-Ewald Farms**
Location: Tuscola County
Planting Date: 4/11/06
Previous Crop: Wheat
Soil Type: Tappan-Londo Loam
Row Spacing: 22 Inch
Fertilizer: 85 lbs. N – Broadcast 28%
VRT – P & K

Tillage: Fall – Plow / Spring – Field Cult. 1x
Harvest Date: 10/20/06
Sample Date: 10/10/06
Herbicides: Microrates
Replicated: 3x
 # Rows Harvested: 8
Fungicide: Quadris - 2-8 Leaf Stage
7/11/06 – Eminent
8/2/06 – SuperTin
8/29/06 - Headline

VARIETY	RWSA	TONS PER ACRE	RWST	% SUGAR	% CJP	POPULATION 100 FT. ROW 11 DAY	24 DAY	37 DAY	HARVEST	1200 Ft. RHIZ
B-5534 N	10939	38.13	287	19.5	94.7					
B-5833 R	10415	36.57	285	19.3	94.8	NOT TAKEN				
AVERAGE	10677	37.35	286	19.4	94.8					
LSD (5%)	NS 1103	.61	NS 29	NS 1.3	1.7					
C.V. (%)	3	.47	3	1.9	.5					

Comments: Trial was conducted to look at a nematode resistant variety compared to a susceptible variety. Nematodes were present, but low levels were found on beets and in soil samples. This was a very high yield environment. Leafspot control was fair/good for B-5534 N. A small but significant tonnage improvement occurred utilizing the nematode resistant variety under low level populations.

Trial Reliability: Excellent

Cooperating Agriculturist(s): Craig Rieman – Michigan Sugar Company

Sugarbeet Advancement

Partnership of:

Sugar Beet Growers
Michigan Sugar Company
Michigan State University
Agribusiness

NEMATODE TRIAL

ON-FARM RESEARCH AND DEMONSTRATION

Cooperator:	**Meylan Farms**	**Tillage:**	Fall: Chisel / 1x Triple K
Location:	Bay County / Auburn	**Harvest Date:**	11/9/06
Planting Date:	3/30/06	**Sample Date:**	10/9/06
Previous Crop:	Dry Beans	**Herbicides:**	2x Betamix
Soil Type:	Clay Loam	**Replicated:**	3x
Row Spacing:	30 Inch / 4.5 Inch Seed Spacing	**# Rows Harvested:**	12
Fertilizer:	30 gallons 28% pre-plant 17 gallons 19-17-0	**Fungicide:**	Headline – Eminent – Headline Quadris applied at four leaf stage

VARIETY	RWSA	TONS PER ACRE	RWST	% SUGAR	% CJP	POPULATION 100 FT. ROW 11 DAY HARVEST	24 DAY	37 DAY		1200 Ft. RHIZ
B-5534 N	7235	26.6	271	18.5	95.0					
B-5451	6918	24.0	289	19.5	94.5	NOT TAKEN				
AVERAGE	7077	25.3	280	19.0	94.8					
LSD (5%)	NS 337	2.0	17	NS 1.7	NS 1.3					
C.V. (%)	1	2.3	2	2.5	.4					

Comments: Nematodes were present at moderate to high levels. Variety B-5534 N had severe leafspot that caused burn down and high levels of Rhizoctonia Crown Rot. Variety B-5534 N is a high management variety that needs Quadris for Rhizoctonia Crown Rot control and additional leafspot sprays over standard varieties.

Trial Reliability: EXCELLENT

Cooperating Agriculturist(s): Tom Schlatter – Michigan Sugar Company

Sugarbeet Advancement

Partnership of:

Sugar Beet Growers
Michigan Sugar Company
Michigan State University
Agribusiness

NEMATODE TRIAL

ON-FARM RESEARCH AND DEMONSTRATION

Cooperator:	**VADER FARMS**	**Tillage:**	Fall Plow / Spring – Field Cult. 1x
Location:	Bay County – Akron	**Harvest Date:**	10/16/06
Planting Date:	4/11/06	**Sample Date:**	10/9/06
Previous Crop:	Wheat with Clover	**Herbicides:**	Microrated 4x
Soil Type:	Heavy Loam	**Replicated:**	3x
Row Spacing:	30 Inch	**# Rows Harvested:**	6
Fertilizer:	Fall – 40-25-200 20 gal. 20-11-1 + Mn 135# N Side Dress	**Fungicide:**	Quadris – 2-8 Leaf Eminent, Headline, Eminent, Headline

VARIETY	RWSA	TONS PER ACRE	RWS T	% SUGAR	% CJP	POPULATION 100 FT. ROW 10 DAY	20 DAY	30 DAY	HARVEST	1200 Ft. RHIZ
B-5833 R	8610	32.16	267	18.1	95.0					
B-5534 N	8128	32.17	253	17.5	94.0					
AVERAGE	**8369**	**32.16**	**260**	**17.8**	**94.5**					
LSD (5%)	**NS 488**	**NS 1.98**	**11**	**NS .9**	**.4**					
C.V. (%)	**2**	**1.75**	**1**	**1.4**	**.1**					

NOT TAKEN

Comments: This is a high yielding trial. Trial was conducted to compare B-5534 N, a nematode tolerant variety to B-5833 R, a susceptible variety**. No nematodes were found in the field.** Four spray program gave excellent leafspot control in both varieties. Tonnage yields of both varieties were identical in the absence of nematodes. In the absence of cyst nematodes there is no advantage of planting B-5534 N. Four leafspot sprays were needed to control leafspot; it is susceptible to Rhizoctonia and is a lower quality beet.

Trial Reliability: EXCELLENT

Cooperating Agriculturist(s): Craig Rieman – Michigan Sugar Company

Sugarbeet Advancement

Partnership of:

Sugar Beet Growers
Michigan Sugar Company
Michigan State University
Agribusiness

OILSEED RADISH TRIAL

ON-FARM RESEARCH AND DEMONSTRATION

Cooperator: **Bernia Family Farms**
Location: Tuscola County
Planting Date: 4/20/06
Previous Crop: Dry Beans (2005) Wheat/Clover/Radish (2004)
Soil Type: Clay Loam
Row Spacing: 22 Inch
Fertilizer: 5 gal. 10-34-0 + 13 gal. 28% + 4 gal. ThioSol & Micro's / 25 gal. 28% Broadcast

Tillage: Chisel Plow – 1x Danish Tine
Harvest Date: 11/10/06
Sample Date: 11/10/06
Herbicides: 2x Split Rate Progress Stinger
Replicated: -
 # Rows Harv. 8
Fungicide: Eminent – Topsin+EDBC - Headline

5 Foot Buffer		B-5534 N*					B-5833 R					5 Foot Buffer
		1	2	3	4	5	6	7	8	9	10	
	Previous Crop / (Year)	Summer Radish (2004)	Spring Radish (2004)	Clover + Spring Radish (2004)	Untreated Check	Clover (2004)	Clover + Spring Radish (2004)	Spring Radish (2004)	Summer Radish (2004)	Untreated Check	Clover (2004)	
	T/A	34.97	35.18	37.43	33.63	35.25	29.03	28.80	28.45	24.19	29.35	
	RWSA	9700	9493	9881	8894	8385	7661	7917	7788	6612	8013	
	RWST	277	270	264	264	238	264	275	274	273	273	
	% Sugar	18.7	18.3	17.8	17.8	16.4	17.6	18.0	18.1	18.2	18	
	% CJP	95	94.8	95.1	95.1	94.6	95.8	96.5	96.1	95.9	96.4	

Comments: Trial/demonstration was conducted to look at the effect of Oil Seed Radish and clover in a field that was highly infested with sugar beet cyst nematode. Clover was established in wheat two years ago. Summer radish was established in wheat stubble and spring radish was established in the wheat as a frost seeding in 2004. In the early spring of 2005, the whole field was seeded to oilseed radish and killed prior to dry bean planting. Each strip was 60 feet wide the entire length of the field. Field was split with a nematode resistant variety (B-5534 N) and a susceptible variety (B-5833 R). Variety B-5534 N highly susceptible to leafspot. Increased yield improvement also occurred when oil seed radish was used and also when clover was used. The largest response occurred in the susceptible variety and a smaller response was seen in the resistant variety. This trial demonstrates that up to 13 ton yield increase can occur in nematode infested fields by combining resistant varieties, oil seed radish and clover in rotation.

Trial Reliability: NOT REPLICATED

Cooperating Agriculturist(s): Craig Rieman – Michigan Sugar Company

Sugarbeet Advancement

Partnership of:

Sugar Beet Growers
Michigan Sugar Company
Michigan State University
Agribusiness

X-BEET

ON-FARM RESEARCH AND DEMONSTRATION

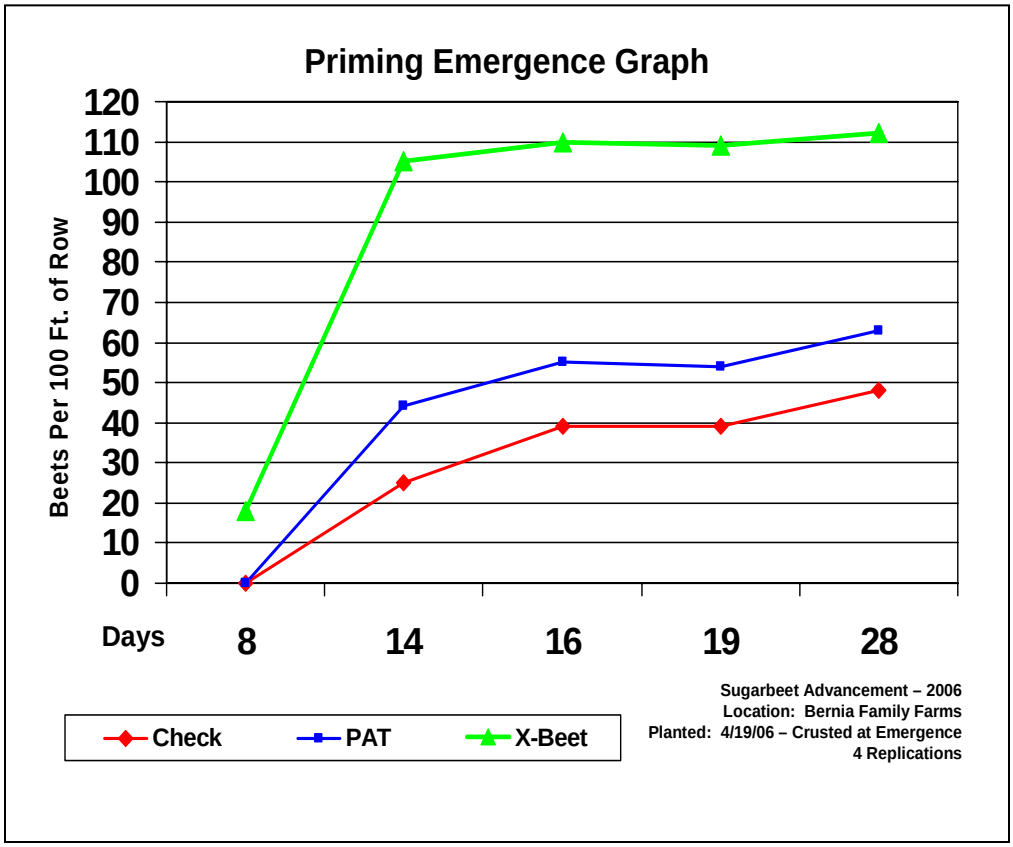
Cooperator:	**Bernia Family Farms**	**Tillage:**	Chisel Plow – 1x Danish Tine
Location:	Akron	**Harvest Date:**	11/14/06
Planting Date:	4/19/06	**Sample Date:**	10/10/06
Variety:	C-963	**Herbicides:**	Split Rate Progress Stinger - 2x
Soil Type:	Clay Loam	**Replicated:**	4x
Row Spacing:	22 Inch – 5.5 Inch Seed Spacing	**# Rows Harvested:**	8
Fertilizer:	5 gal. 10-34-0 + 13 gal. 28% N + 4 gal. ThioSol + Micro's applied 2x2 25 gal. 28% Broadcast	**Fungicide:**	Eminent, Topsin+EDBC, Headline, Quadris applied 2-8 Leaf stage

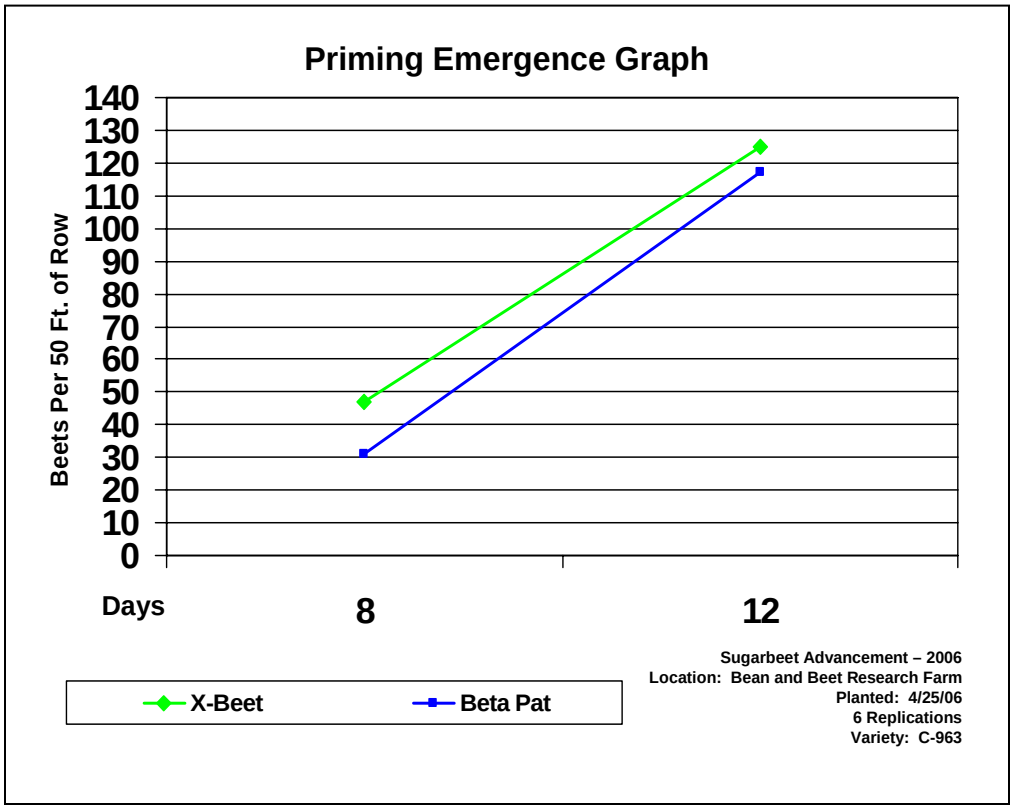
VARIETY	RWSA	TONS PER ACRE	RWST	% SUGAR	% CJP	POPULATION 100 FT. ROW 8 DAY	14 DAY	19 DAY	28 DAY	1200 Ft. RHIZ
X-BEET	8599	31.48	273	18.3	95.3	18	105	109	112	-
PAT	6381	26.95	237	16.6	93.5	0	44	54	63	-
CHECK	5816	24.63	236	16.8	93.0	0	25	39	48	-
AVERAGE	6932	27.69	249	17.2	94	6	58	67	74	-
LSD (5%)	609	.83	23	1.2	1.2	3	13	15	14	-
C.V. (%)	5	1.73	5	4.1	.8	27	13	13	11	-

Comments: Trial was conducted to compare and evaluate traditional priming (PAT) to a new priming method called X-BEET from GTG. All seed treated was from the same seed lot. Prior to emergence, a heavy rainfall occurred that formed a significant crust. Trial was crust busted with a quad-runner. X-BEET was significantly faster in emerging than traditional PAT and non primed CHECK seed. Faster emerging seed was better able to emerge through the crust before it hardened which produced a significantly higher yield. Low population beets have reduced quality and tonnage.

Trial Reliability: VERY GOOD

Cooperating Agriculturist(s): Craig Rieman – Michigan Sugar Company


Priming Emergence Graph
Beets Per 100 Ft. of Row
120
110
100
90
80
70
60
50
40
30
20
10
0
Days
8
14
16
19
28
Check
PAT
X-Beet
Sugarbeet Advancement – 2006
Location: Bernia Family Farms
Planted: 4/19/06 – Crusted at Emergence
4 Replications


Priming Emergence Graph
Beets Per 50 Ft. of Row
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
Days
8
12
X-Beet
Beta Pat
Sugarbeet Advancement – 2006
Location: Bean and Beet Research Farm
Planted: 4/25/06
6 Replications
Variety: C-963

Sugarbeet Advancement

Partnership of:

Sugar Beet Growers
Michigan Sugar Company
Michigan State University
Agribusiness

X-BEET PRIMING TRIAL

ON-FARM RESEARCH AND DEMONSTRATION

Cooperator:	**Bean and Beet Research Farm**	**Tillage:**	-
Location:	Saginaw County	**Harvest Date:**	9/26/06
Planting Date:	4/11/06	**Variety:**	C-963
Previous Crop:	Soybeans	**Herbicides:**	-
Soil Type:	Clay	**Replicated:**	6x
Row Spacing:	30 Inch	**# Rows Harvested:**	-
Fertilizer:	-	**Fungicide:**	-

TREATMENT	RWSA	TONS PER ACRE	RWST	% SUGAR	% CJP	POPULATION 50 FT. ROW 10 DAY	14 DAY	25 DAY	HARVEST	1200 Ft. RHIZ
X-Beet	6982	24.56	284	19.0	95.2	99	119	111	-	-
Check	5458	19.94	274	19.0	94.4	0	16	54	-	-
PAT	5422	19.85	273	18.5	94.1	8	39	53	-	-
AVERAGE	5954	21.45	277	18.8	94.6	36	58	73	-	-
LSD (5%)	889	3.03	10	.4	.7	8	8	10	-	-
C.V. %	12	11	3	1.8	.6	22	13	14	-	-

Comments: Trial was conducted to evaluate traditional priming (PAT) to a new priming technique called X-Beet. All seed treated from the same seed lot. Some rainfall occurred after planting causing a tight soil condition that then dried to become very hard. Faster emerging X-Beet was better able to emerge and establish a stand than PAT or standard Check treatments. X-Beet produced a significantly higher tonnage and improved quality. See picture centerfold and graph for complete emergence data.

Trial Reliability: FAIR

Cooperating Agronomist(s): Paul Horny, Dennis Fleishman – Bean and Beet Research Farm

Sugarbeet Advancement

Partnership Of:

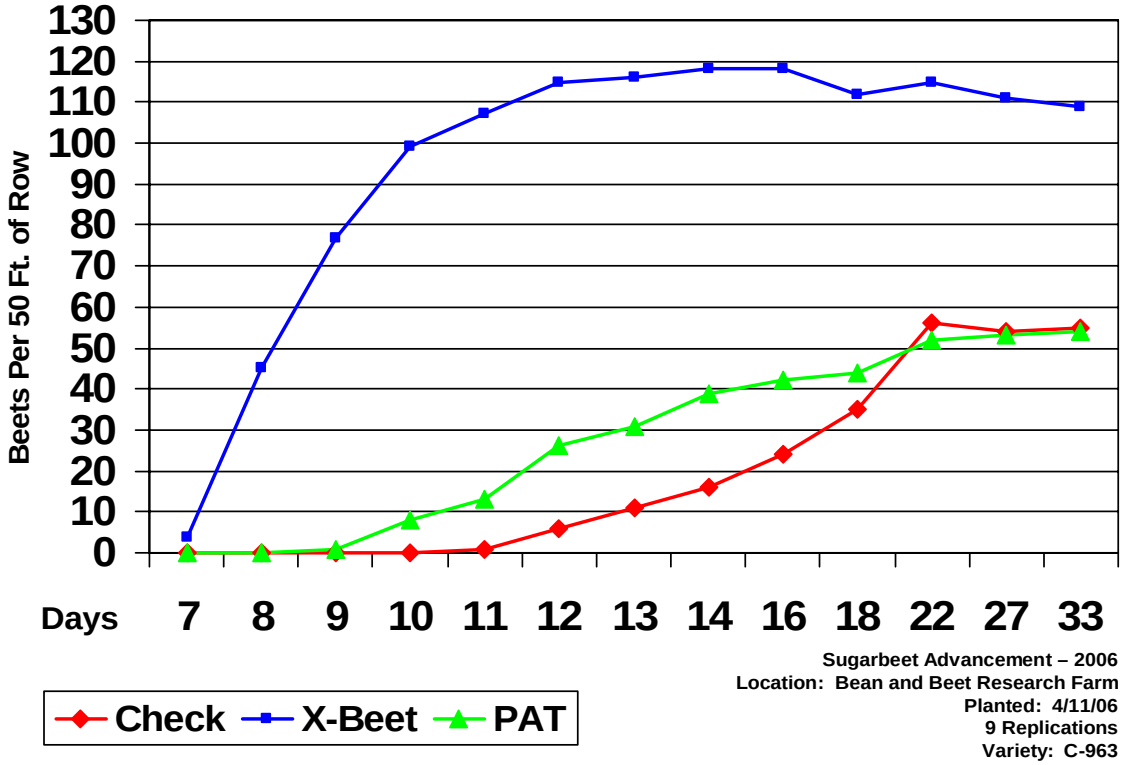
Sugar Beet Growers
Michigan Sugar Company
Michigan State University
Agribusiness

2006 X Beet Trial
(Bean and Beet Farm)
9 Replications
Beets per 50 Feet of Row

Emergence

	7 Day	8 Day	9 Day	10 Day	11 Day	12 Day	13 Day	14 Day	16 Day	18 Day	20 Day	25 Day
Check	0	0	0	0	1	6	11	16	24	35	53	53
PAT	0	0	1	8	13	26	31	39	42	44	56	54
X Beet	4	45	77	99	108	116	116	119	118	112	115	111
Ave	–	–	–	–	–	–	–	–	–	–	–	–
LSD 5%	**1**	**6**	**8**	**8**	**7**	**6**	**6**	**8**	**9**	**8**	**10**	**10**
CV %	**102**	**39**	**30**	**22**	**16**	**13**	**12**	**13**	**15**	**13**	**13**	**14**

Priming Emergence Graph



Sugarbeet Advancement – 2006
Location: Bean and Beet Research Farm
Planted: 4/11/06
9 Replications
Variety: C-963

Michigan Sugar Company
X-Beet Trial – 2006
Huron County

Cooperator:	**Dennis Schuette**	**Tillage:**	Conventional
Location:	Huron County	**Harvest Date:**	11/15/06
Planting Date:	4/21/06	**Sample Date:**	-
Previous Crop:	Dry Beans	**Herbicides:**	Pyramin pre – split rates
Soil Type:	Loam	**Replicated:**	3x
Row Spacing:	30 Inch	**# Rows Harvested:**	6
Variety:	C-963	**Fungicide:**	Eminent/Gem 55/55

TREATMENT	RWSA	TONS PER ACRE	RWST	% SUGAR	% CJP	POPULATION 100 FT. ROW				
						10 Day	12 Day	14 Day	20 Day	32 Day
X-Beet	8554	29.83	286	19.22	95.20	20	56	71	94	102
PAT	6462	24.78	261	17.98	94.14	1	18	35	60	71
CHECK	4830	19.96	242	16.92	93.71	0	3	12	26	39
AVERAGE	6616	24.86	263	18.04	94.35	7	26	40	60	71
LSD (5%)	1157	3.0	15.8	1	1.16	12.9	13.9	12	32	32
C.V. (%)	7.7	5.3	7.0	2.5	.55	81	23.91	13.4	23	20

Comments: Strip Trial Results. Average emergence conditions, some crusting. Trial was conducted by Roger Elston and Dr. Corey Guza, Michigan Sugar Company

Sugarbeet Advancement

Partnership of:

Sugar Beet Growers
Michigan Sugar Company
Michigan State University
Agribusiness

REPLANT TRIAL

ON-FARM RESEARCH AND DEMONSTRATION

Cooperator: **Dan Roggenbuck**
Location: Huron County
Planting Date: 4/21/06 / Replant 5/17/06
Previous Crop: Black Beans
Soil Type: Clay Loam
Row Spacing: 28 Inch
Fertilizer: Pen Manure 12 t/a + 75 lbs. N
Potash - 200 lbs. /A
Starter – 11 gal.
14-18.6-0 + Micros

Tillage: Fall: Chisel / Spring: 1x Danish Tine
Harvest Date: 11/2/06 Sampled: 10/20/06
Variety: C-963
Herbicides: Microrates 4x
Replicated: 4x
 # Rows Harvested: 8
Fungicide: 7/25/06 – Eminent
2-8 Leaf Stage - Amistar

TREATMENT	RWSA	TONS PER ACRE	RWST	% SUGAR	% CJP	POPULATION 100 FT. ROW 10 DAY	20 DAY	30 DAY	FINAL	1200 Ft. RHIZ
C-963	6615	25.34	261	18.2	93.5	-	-	-	105	-
C-963 Replant	6379	23.78	268	18.5	94.0	-	-	-	200	-
AVERAGE	**6497**	**24.56**	**264**	**18.3**	**93.8**	**-**	**-**	**-**	**-**	**-**
LSD (5%)	**NS 1190**	**NS 1.95**	**NS 29**	**NS 1.5**	**NS 1.2**	**-**	**-**	**-**	**-**	**-**
C.V. (%)	**8**	**3.5**	**5**	**3.6**	**.5**	**-**	**-**	**-**	**-**	**-**

Comments: Trial was originally conducted to evaluate a new proprietary priming process developed by GTG called X-Beet compared to traditional PAT and non-primed treatment. After planting, heavy rainfall occurred causing a crusting situation on all treatments. Because of faster speed of emergence than other treatments, only the strips of X-Beet established a marginally acceptable stand of 105 beets per 100 foot of row. Cooperator was able to direct replanted beets in only the Check and PAT beets that did not establish (30 days later). Seed used for replants was the same seed (X-Beet, C-963) that was used in the original planting. Replanted beets emerged and established a final stand of 200 beets per 100 foot of row. This population was double the non replanted X-Beet. Data indicated no significant difference of replanting a marginally thin stand of beets (105 beets/100ft) 30 days after planting if weed control can be maintained.

Trial Reliability: GOOD

Cooperating Agriculturist(s): Bob Corrigan – Michigan Sugar Company

Sugarbeet Advancement

Partnership of:

Sugar Beet Growers
Michigan Sugar Company
Michigan State University
Agribusiness

BACTERIAL SEED TREATMENT TRIAL

ON-FARM RESEARCH AND DEMONSTRATION

Cooperator:	**Sturm Farms**	**Tillage:**	-
Location:	Huron County	**Harvest Date:**	10/26/06 Sampled: 10/2/06
Planting Date:	4/21/06	**Variety:**	7172 RZ
Previous Crop:	-	**Herbicides:**	-
Soil Type:	-	**Replicated:**	6
Row Spacing:	28 Inch	**# Rows Harvested:**	-
Fertilizer:	-	**Fungicide:**	-

TREATMENT	RWSA	TONS PER ACRE	RWST	% SUGAR	% CJP	POPULATION 100 FT. ROW 10 DAY	20 DAY	30 DAY	HARVEST	1200 Ft. RHIZ
Check	7827	28.28	277	19.3	93.4	49	192	198	-	-
Bacterial Seed Treatment	7701	28.49	270	18.9	93.2	35	194	197	-	-
AVERAGE	**7764**	**28.39**	**274**	**19.1**	**93.3**	**42**	**193**	**197**	**-**	**-**
LSD (5%)	**NS 300**	**NS .55**	**NS 9**	**NS .6**	**NS .4**	**NS 18**	**NS 16**	**NS 27**	**-**	**-**
C.V. (%)	**3**	**1.3**	**2**	**2**	**.3**	**44**	**8**	**10**	**-**	**-**

Comments: A bacterial seed treatment product was applied to the seed at time of coating. Research was conducted on this product to evaluate possible benefits to sugar beets in root and yield enhancement. No significant yield differences were measured. Product marketed by Montana Micro Bio Products.

Trial Reliability: EXCELLENT

Cooperating Agriculturist(s): Roger Elston – Michigan Sugar Company

Sugarbeet Advancement

Partnership of:

Sugar Beet Growers
Michigan Sugar Company
Michigan State University
Agribusiness

BACTERIAL SEED TREATMENT TRIAL

ON-FARM RESEARCH AND DEMONSTRATION

Cooperator:	**Hecht Farms**	**Tillage:**	-
Location:	Tuscola County	**Harvest Date:**	10/9/06 Sampled: 10/2/06
Planting Date:	4/19/06	**Variety:**	7172 RZ
Previous Crop:	-	**Herbicides:**	-
Soil Type:	-	**Replicated:**	5x
Row Spacing:	28 Inch	**# Rows Harvested:**	4
Fertilizer:	-	**Fungicide:**	-

TREATMENT	RWSA	TONS PER ACRE	RWST	% SUGAR	% CJP	POPULATION 100 FT. ROW 10 DAY	20 DAY	30 DAY	HARVEST	1200 Ft. RHIZ
Bacterial Seed Treatment	8327	30.78	271	18.6	94.0	73	110	117	-	-
Check	8119	29.87	272	18.8	93.8	91	135	143	-	-
AVERAGE	**8223**	**30.33**	**271**	**18.7**	**93.9**	**82**	**122**	**130**	**-**	**-**
LSD (5%)	**NS 715**	**NS 2.41**	**NS 7**	**NS .5**	**NS .6**	**13**	**14**	**8**	**-**	**-**
C.V. (%)	**5**	**4.5**	**2**	**1.5**	**0.4**	**13**	**10**	**5**	**-**	**-**

Comments: A bacterial seed treatment product was applied in the seed coating. Research was conducted on this product to evaluate possible benefits to sugar beets on root and yield enhancement. No significant yield differences were measured. In this trial some seedling disease and crusting did occur. There were some differences in emergence between the treatments. This difference was not seen in two other identical trials. Product marketed by Montana Micro Bio Products.

Trial Reliability: EXCELLENT

Cooperating Agriculturist(s): Jeff Karst – Michigan Sugar Company

Sugarbeet Advancement

Partnership of:

Sugar Beet Growers
Michigan Sugar Company
Michigan State University
Agribusiness

BACTERIAL SEED TREATMENT TRIAL

ON-FARM RESEARCH AND DEMONSTRATION

Cooperator:	**Bean and Beet Research Farm**	**Tillage:**	-
Location:	Saginaw County	**Harvest Date:**	10/11/06
Planting Date:	4/18/06	**Variety:**	7172 RZ
Previous Crop:	-	**Herbicides:**	-
Soil Type:	-	**Replicated:**	6x
Row Spacing:	30 Inch	**# Rows Harvested:**	2
Fertilizer:	-	**Fungicide:**	-

TREATMENT	RWSA	TONS PER ACRE	RWST	% SUGAR	% CJP	POPULATION 100 FT. ROW 9 DAY	16 DAY	22 DAY	HARV	1200 Ft. RHIZ
Bacterial Seed Treatment	8195	30.8	266	18.3	94.2	23	97	109	-	-
Check	7846	30.7	255	17.6	94.2	22	94	104	-	-
AVERAGE	**8020**	**30.8**	**260**	**17.9**	**94.2**	**22**	**96**	**106**	**-**	**-**
LSD (5%)	**NS 1230**	**NS 1.9**	**NS 14**	**NS .8**	**NS .8**	**NS 11**	**NS 14**	**NS 8**	**-**	**-**
C.V. (%)	**10**	**7.2**	**4**	**3.2**	**0.6**	**35**	**10**	**5**	**-**	**-**

Comments: A bacterial seed treatment product was applied to the seed at time of coating. Research was conducted on this product to evaluate possible benefits to sugar beets in root and yield enhancement. NO significant yield differences or emergence was measured. Product marketed by Montana Micro Bio Products.

Trial Reliability: FAIR

Cooperating Agronomist(s): Paul Horny and Dennis Fleishman, Bean and Beet Research Farm

Sugarbeet Advancement

Partnership of:

Sugar Beet Growers
Michigan Sugar Company
Michigan State University
Agribusiness

BACTERIAL SEED TREATMENT
AVERAGE OF THREE TRIALS

ON-FARM RESEARCH AND DEMONSTRATION

Cooperator:	**B&B Farm, Hecht and Sturm Farms**	**Tillage:**	-
Location:	Huron, Saginaw and Tuscola Counties	**Harvest Date:**	-
Variety:	7172 RZ	**Type of Harvester:**	-
Previous Crop:	-	**Herbicides:**	-
Soil Type:	-	**Replicated:**	-
Row Spacing:	-	**# Rows Harvested:**	-
Fertilizer:	-	**Fungicide:**	-

TREATMENT	RWSA	TONS PER ACRE	RWST	% SUGAR	% CJP	POPULATION 100 FT. ROW EARLY	MID	LATE	HARVEST	1200 Ft. RHIZ
Bacterial	**8074**	**30.2**	**269**	**18.6**	**93.8**	**51**	**166**	**177**	**-**	**-**
Check	**7931**	**29.62**	**268**	**18.6**	**93.8**	**61**	**170**	**183**	**-**	**-**
AVERAGE	**8003**	**29.82**	**269**	**18.6**	**93.8**	**56**	**168**	**180**	**-**	**-**
LSD (5%)	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**-**	**-**
C.V. %	**2**	**1**	**2**	**1.5**	**0.2**	**13**	**8**	**7**	**-**	**-**

Comments: Average of three trial locations indicates no significant yield or growth differences of a bacterial product that was incorporated into the palletized seed coating. Product is marketed by Montana Micro Bio Products.

Trial Reliability: EXCELLENT

Sugarbeet Advancement

Partnership of:

Sugar Beet Growers
Michigan Sugar Company
Michigan State University
Agribusiness

QUADRIS TRIAL

ON-FARM RESEARCH AND DEMONSTRATION

Cooperator: **LaRaCha Farms**
Location: Tuscola County
Planting Date: 4-20-06
Previous Crop: Corn
Soil Type: Medium Loam
Row Spacing: 28”
Fertilizer: 400 lbs. 2-10-40
40 gal. 28% N/A + 1 qt. Boron
5 gal. 10-34-0 + Mn & Zn

Tillage: Fall: Plow / Spring: 1x Danish Tine
Harvest Date: 11/8/06
Sample Date: 10/9/06
Herbicides: Pre-Durango & Request – Microrated 4x
Replicated: 4x
 # Rows Harvested: 6
Fungicide: Quadris In Furrow
7/15/06 – Eminent
8/11/06 – Headline
9/17/06 Eminent

TREATMENT In Furrow Rate	RWSA	TONS PER ACRE	RWST	% SUGAR	% CJP	POPULATION 100 FT. ROW 10 DAY	20 DAY	30 DAY	HARV.	1200 Ft. RHIZ
C-963 Check	**5151**	**18.6**	**277**	**17.9**	**97.4**	**137**	**180**	**185**	**-**	**107**
C-271 ½ Rate	5137	18.7	275	17.7	97.2	119	185	183	-	31
C-963 ½ Rate	**5110**	**18.4**	**278**	**18.0**	**97.3**	**130**	**189**	**188**	**-**	**58**
C-271 Check	5033	18.4	274	17.8	97.1	157	197	199	-	81
C-963 Full Rate	**4927**	**17.8**	**277**	**17.9**	**97.2**	**117**	**176**	**175**	**-**	**18**
C-271 Full Rate	4728	17.5	275	17.7	97.6	119	190	199	-	17
AVERAGE	**5014**	**18.2**	**276**	**17.8**	**97.3**	**130**	**186**	**185**	**-**	**52**
LSD (5%)	**NS 523**	**NS 1.8**	**NS 9**	**NS .5**	**NS .7**	**48**	**NS 37**	**NS 38**	**-**	**NS 96**
C.V. (%)	**7**	**6.7**	**2**	**1.7**	**.5**	**25**	**13**	**14**	**-**	**122**

Comments: Trial was conducted to compare the control of Rhizoctonia when using full and half rates of Quadris in furrow at planting. Rates were approximately 10.5 and 5.25 oz/acre. Rhizoctonia levels were low to moderate. Trial results and yield was greatly affected by high levels of sugar beet cyst nematode. No significant differences were measured at the 95% confidence level. Some trends did emerge such as: Full rate of Quadris may slow down emergence but did not affect final stand. As Quadris rate increased, Rhizoctonia levels trended down. This data should be used with caution!

Trial Reliability: FAIR

Cooperating Agriculturist(s): Dave Ganton – Michigan Sugar Company

Sugarbeet Advancement

Partnership of:

Sugar Beet Growers
Michigan Sugar Company
Michigan State University
Agribusiness

STARTER FERTILIZER TRIAL

ON-FARM RESEARCH AND DEMONSTRATION

Cooperator: **Stoutenburg Farms**
Location: Sanilac County
Planting Date: 4/25/06
Previous Crop: Soybeans
Soil Type: Clay Loam
Row Spacing: 28 Inch
Fertilizer: 100 lbs. N from 28% PPI
Starter – See Treatments

Tillage: Fall: V-ripped/Spring: 2x Field Cult.
Harvest Date: 11/4/06
Variety: C-442 R
Herbicides: Microrates 4x
Replicated: 3x
 # Rows Harvested: 8
Fungicide: Quadris applied 2-8 leaf stage
Eminent
Headline

STARTER TREATMENT	RWSA	T/A	RWST	% SUGAR	% CJP	POPULATION 100 FT. ROW 10 DAY	20 DAY	30 DAY	HARVEST	1200 Ft. RHIZ
10-34-0 2x2	7903	30.05	262	18.1	94.0	183	178	188	-	-
IF Ag Spectrum + 10-34-0 2x2	7873	30.10	262	18.1	93.9	114	150	166	-	-
IF Ag Spectrum + 28% 2x2	7767	29.85	260	18.0	93.9	166	198	190	-	-
28% 2x2	6955	26.56	261	17.9	94.3	183	206	204	-	-
IF 10-34-0	6938	26.87	258	17.9	93.8	121	157	168	-	-
IF Ag Spectrum	6600	25.61	257	18.0	93.4	159	170	169	-	-
Check	5936	24.53	242	17.2	92.9	195	200	194	-	-
AVERAGE	7139	27.65	257	17.9	93.7	160	180	183	-	-
LSD (5%)	1273	3.74	17	0.7	0.9	39	50	NS 43	-	-
C.V. (%)	10	9.3	4	2.6	0.5	14	16	13	-	-

Comments: Trial was conducted to look at the effect of In Furrow, 2x2 and combinations of In Furrow and 2x2 fertilizer applications. Soil test indicated Phosphorous levels at 66 ppm/high levels. Fertilizer application rates for In Furrow was 4.6 gallons per acre and any 2x2 applications were 15 gallons per acre. Ag Spectrum was applied in combination with Grozyme and Kick Off. Definite visual response (larger leaf) area was seen with either 28% or 10-34-0 applied 2x2. With In Furrow applications alone, visual response was not seen. In Furrow applications did generally slow emergence and in some cases reduced stand when applied at the 4.6 gallon rate. (See photo in center of book)

Trial Reliability: FAIR

Cooperating Agriculturist(s): Mike Leen – Michigan Sugar Company

Sugarbeet Advancement

Partnership of:

Sugar Beet Growers
Michigan Sugar Company
Michigan State University
Agribusiness

LEAFSPOT/FUNGICIDE TIMING TRIAL

ON-FARM RESEARCH AND DEMONSTRATION

Cooperator:	**LAKKE-EWALD**	**Tillage:**	Fall: Chisel / Spring: Field Cult.
Location:	Tuscola County	**Harvest Date:**	10/26/06
Planting Date:	4/17/06	**Variety:**	C-355
Previous Crop:	Dry Beans	**Herbicides:**	Microrates
Soil Type:	Tappan Londo Loam	**Replicated:**	3x
Row Spacing:	22 Inch	**# Rows Harvested:**	8
Fertilizer:	100 lbs. N – 28% Broadcast VRT – P & K	**Fungicide:**	7/11/06 – Headline 8/7/06 – SuperTin 8/30/06 - Eminent

TREATMENT	RWSA	TONS PER ACRE	RWST	% SUGAR	% CJP	POPULATION 100 FT. ROW Day / Harvest 10	20	30	H	1200 Ft. RHIZ
Eminent – SuperTin – Headline	**10,112**	**32.89**	**308**	**20.1**	**96.4**					
Headline – SuperTin - Eminent	**9941**	**32.73**	**304**	**19.8**	**96.6**	**NOT TAKEN**				
AVERAGE	**10,026**	**32.81**	**306**	**19.9**	**96.5**					
LSD (5%)	**NS 553**	**NS .83**	**NS 11**	**NS .7**	**NS .5**					
C.V. %	**4**	**1.7**	**2**	**2.4**	**0.4**					

Comments: Trial was conducted to see if the timing of Headline and Eminent at the beginning or end of a leafspot spray program would enhance sugar beet yields. Three fungicide applications were made along with a highly leafspot resistant variety C-355 was used to assure no Cercospora leafspot was present. Research from other beet production areas indicate that a possible growth hormone yield response may occur if Headline is placed last in the spray program even in the absence of leafspot. This trial would indicate that if leafspot is well controlled there is no significant difference in the placement of Headline at the beginning or the end of a spray program. In the presence of leafspot results may differ.

Trial Reliability: EXCELLENT

Cooperating Agriculturist(s): Craig Rieman – Michigan Sugar Company

Sugarbeet Advancement

Partnership of:

Sugar Beet Growers
Michigan Sugar Company
Michigan State University
Agribusiness

LEAFSPOT / FUNGICIDE TIMING TRIAL

ON-FARM RESEARCH AND DEMONSTRATION

Cooperator:	**Sherwood Farms**	**Tillage:**	Fall: Chisel / Spring: 1x Field Cult.
Location:	Gratiot County	**Harvest Date:**	10/23/06 Sampled: 10/19/06
Planting Date:	4/18/06	**Variety:**	7172 RZ
Previous Crop:	Dry Beans	**Herbicides:**	Microrates 2x
Soil Type:	Loam	**Replicated:**	6x
Row Spacing:	30 Inch	**# Rows Harvested:**	6
Fertilizer:	200 lbs. 11-11-11 + Micros 26 gal. 28%	**Fungicide:**	7/8 – 8/2 – 8/18 – 8/31 Eminent-SuperTin-Topsin+Pennecozeb-Headline Headline-SuperTin-Topsin+Pennecozeb-Eminent

TREATMENT	RWSA	TONS PER ACRE	RWST	% SUGAR	% CJP	POPULATION 100 FT. ROW Day / Harvest 10	20	30	H	1200 Ft. RHIZ
Eminent-SuperTin-Topsin+Pennecozeb-Headline	7479	27.91	268	18.0	95.3					
Headline-SuperTin-Topsin+Pennecozeb-Eminent	7463	27.78	269	18.0	95.5	NOT TAKEN				
AVERAGE	7471	27.84	268	18.0	95.4					
LSD (5%)	NS 538	NS 1.91	NS 5	NS .3	NS .4					
C.V. %	5	4.6	1	1	0.3					

Comments: Trial was conducted to see if the timing of Headline and Eminent at the beginning or end of a leafspot spray program would enhance sugar beet yields. Four fungicide applications were made to assure no Cercospora leafspot was present. Research from other beet production areas indicate that a possible growth hormone yield response may occur if Headline is placed last in the spray program even in the absence of leafspot. This trial would indicate that if leafspot is well controlled there is no significant difference in the placement of Headline at the beginning or the end of a spray program. In the presence of leafspot results may differ.

Trial Reliability: EXCELLENT

Cooperating Agriculturist(s): Dave Bailey – Michigan Sugar Company

Sugarbeet Advancement

Partnership of:

Sugar Beet Growers
Michigan Sugar Company
Michigan State University
Agribusiness

LEAFSPOT SPRAY PROGRAM FOR VARIETY C-355

ON-FARM RESEARCH AND DEMONSTRATION

Cooperator:	**Huron Soil Conservation District**	**Tillage:**	Fall: Plow / Zone Builder
Location:	Tuscola County	**Harvest Date:**	11/6/06
Planting Date:	4/20/06	**Variety:**	C-355
Previous Crop:	Soybeans Corn	**Herbicides:**	Microrates 6x – 225 GDD's
Soil Type:	Loam	**Replicated:**	12x
Row Spacing:	30 Inch	**# Rows Harvested:**	4
Fertilizer:	At Planting 33-0-0-12 Sulpher 123#/A Based on nitrate test total N for soy Previous crop 41 lbs. /A – corn 100 lbs. /A	**Fungicide:**	7/17/06 - 71 DSV – Eminent 8/24/06 – 72 DSV - Headline

# Of Sprays	RWSA	TONS PER ACRE	RWST	% SUGAR	% CJP	POPULATION 100 FT. ROW 10 DAY	20 DAY	30 DAY	HARV.	1200 Ft. RHIZ
1 Spray at 71 DSV	7602	26.7	284	18.7	96.1					
2 Sprays at 71-72 DSV	7943	27.8	286	18.8	96.4	NOT TAKEN				
AVERAGE	7772	27.2	285	18.7	96.2					
LSD (5%)	NS 712	NS 1.9	NS 9	NS .5	NS .4					
C.V. %	10	7.9	3	2.9	.5					

Comments: This trial was conducted to evaluate a one and two fungicide spray program on a new highly tolerant leafspot variety (C-355). Twelve replications were combined including corn/soybean previous crop and conventional/zone till tillage systems. Leafspot control was considered good with either the one or two spray interval. Observation strips left on the outside of the trial with no fungicides applied had significant leafspot. No significant differences were measured in quality or tonnage. It appears that growers may be able to reduce and/or possibly delay fungicide applications when utilizing this variety. There are large differences in leafspot inoculums in the Great Lakes growing region. Other areas may require more or less sprays than indicated in this trial. Utilize Michigan Sugar Company data to further evaluate this variety.

Trial Reliability: GOOD

Cooperating Agriculturist(s): **Jeff Karst – Michigan Sugar Company**
Andy Bernia – Crystal Beet Seed

Sugarbeet Advancement

Partnership of:

Sugar Beet Growers
Michigan Sugar Company
Michigan State University
Agribusiness

ZONE / CONVENTIONAL TILLAGE TRIAL

ON-FARM RESEARCH AND DEMONSTRATION

Cooperator:	**Huron / Tuscola Soil Conservation District**	**Tillage:**	Fall: Plow / Zone Builder
Location:	Tuscola County	**Harvest Date:**	11/6/06
Planting Date:	4/20/06	**Variety:**	C-355
Previous Crop:	Soybeans Corn	**Herbicides:**	Microrates 6x – 225 GDD's
Soil Type:	Loam	**Replicated:**	12x
Row Spacing:	30 Inch	**# Rows Harvested:**	4
Fertilizer:	At Planting 33-0-0-12 Sulpher 123#/A Based on nitrate test total N for soy Previous crop 41 lbs. /A – corn 100 lbs. /A	**Fungicide:**	7/17/06 - 71 DSV – Eminent 8/24/06 – 72 DSV - Headline

TREATMENT/ PREVIOUS CROP	RWSA	TONS PER ACRE	RWST	% SUGAR	% CJP	POPULATION 100 FT. ROW 10 DAY	20 DAY	30 DAY	FINAL STAND	1200 Ft. RHIZ
Zone Tillage Corn	**8063**	**28.0**	**288**	**18.9**	**96.3**	**-**	**-**	**-**	**194**	**-**
Zone Tillage Soybeans	**7630**	**26.3**	**290**	**19.1**	**96.1**	**-**	**-**	**-**	**208**	**-**
Conventional Tillage Soybeans	**7748**	**27.2**	**285**	**18.7**	**96.3**	-	-	-	**185**	-
Conventional Tillage Corn	**7648**	**27.5**	**278**	**18.3**	**96.3**	-	-	-	**186**	-
AVERAGE	**7772**	**27.2**	**285**	**18.7**	**96.2**	**-**	**-**	**-**	**193**	**-**
LSD (5%)	**NS 876**	**NS 2.5**	**12**	**.6**	**NS .6**	**-**	**-**	**-**	**-**	**-**
C.V. %	**9**	**7.5**	**3**	**2.8**	**.5**	**-**	**-**	**-**	**-**	**-**

Comments: Trial was conducted to evaluate and compare producing sugar beets utilizing conventional fall moldboard plow with one time spring tillage, to a conservation system of fall zone building with direct planting in the spring. Corn and soybeans were previous crops to beets. Ideal stands were established with both tillage systems. No significant differences were measured in RWSA or Tons. This trial was incorporated the latest in technology utilizing GDD's and DSV from BEETCAST to time herbicide and fungicide sprays. Weed control was excellent and leafspot control was also good with either one or two sprays when using a highly resistant variety (C-355). Pre side dress nitrate testing was followed. A total of 41 pounds of actual Nitrogen was applied when the previous crop was soybeans and 100 lbs. with corn.

Trial Reliability: GOOD

Cooperating Agriculturist(s): **Jeff Karst – Michigan Sugar Company**
Greg Renn – Huron Soil Conservation District
Brent Larson – Tuscola Soil Conservation District
Andy Bernia – Crystal Beet Seed