

RESULTS OF AMERICAN CRYSTAL'S 2013 OFFICIAL CODED VARIETY TRIALS

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American Crystal's coded variety trials are designed to provide an unbiased evaluation of the potential of sugarbeet variety entries under several different environments. The two-year average of these evaluations then are used to establish a list of approved varieties which ensures the use of high quality, productive varieties to maximize returns for growers and the cooperative as a whole.

This report presents data from the 2013 American Crystal and Minn-Dak official trials and describes the procedures and cultural practices involved in the trials.

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Procedures and Cultural Practices

Sugarbeet official variety testing was conducted both in the Crystal and Minn-Dak areas of the Red River Valley by American Crystal Sugar Company personnel at the Technical Services Center.

All Crystal and Minn-Dak entries were coded by KayJay Ag Services. The seed then was sent to American Crystal Technical Services Center at Moorhead for official testing.

Soil type and disease pressure was observed for each of the trial sites (table 46). This information relates to the current year's results, not the multiple year summary results.

Eleven official yield trial sites were planted in the Crystal area with nine harvested. Four Minn-Dak official yield trial sites were planted with two harvested. We continued plant-to-stand trials (4.5 inch spacing) to evaluate the commercial and experimental RR varieties. All seed in the ACSC yield trials was treated with Tachigaren and an insecticide. Aphanomyces yield trials were planted at two locations with potential disease present. Plots were planted crosswise (90°) to the cooperators' normal farming operations, where possible. Row spacing was 22 inches. Plot rows for all official trials were maintained at 44 feet with about 37 feet harvested. Alpha lattice plot designs were used for all trials. Planting was performed with two 12-row vacuum planters, which included a SRES and a Hege. These planters gave excellent single seed spacing which contributed to easier emergence counts. Emergence counts were taken on one 44 foot row of each plot to be harvested. Multiple seedlings were counted as a single plant if they emerged less than one inch apart. The stands in all of the plant-to-stand coded trials were refined by removing doubles (multiple seedlings less than 1.5 inches apart) by hand but were not further reduced.

Six ACSC sites were used for variety approval calculations (Casselton, Reynolds, Alvarado, Grafton, St Thomas, Hallock). One site was abandoned due to variable Rhizoctonia infection (Grand Forks) and a second was abandoned due to extended

periods of standing water (Felton). One yield trial experienced sand syndrome conditions (Crookston). Foliar ratings and yield data are available for this site. The Climax site experienced moderate to severe Aphanomyces (data in table 3). The Hendrum site experienced drought and strong root aphid infection. These three sites were harvested but not included in variety approval calculations and kept separate for consideration by growers for special growing conditions (tables 6, 8, 9, 17, 19, 20). One Aphanomyces yield trial (Hillsboro) was abandoned due to minimal disease symptoms. Two RRV Rhizoctonia nurseries were abandoned due to lack of infection. The Rosemount Cercospora nursery was abandoned due to hail damage. Two MDFC sites were abandoned due to non-uniform growth (Norcross and Barnesville). Rhizomania was visually observed at two RRV sites in 2013. Rhizoctonia was less prevalent in 2013 following two applications of Quadris, an in-furrow treatment at plating and a broadcast treatment at the 6 leaf stage. Based upon yield and sugar performance and demonstration plot observations, root aphids likely affected some varieties more than others. Root aphids were observed at 9 of 12 yield sites. ACSC does not run root aphid evaluation nurseries, but seed companies may know tolerance levels of their varieties.

Roundup Powermax with Event and full rates of fungicides were applied using a pickup sprayer driven down the alleys. Hand weeding was used where necessary. All yield trials were treated with Quadris in-furrow (9 oz) and banded in the 6 leaf stage for Rhizoctonia control. Proline/Agri Tin, Topsin/Agri Tin, and Headline were used for Cercospora control in 2013. Ground spraying was conducted by ACSC technical staff.

RR varieties with commercial seed were planted in four-row, six replication trials. The RR experimental entries were planted in smaller two-row, four replication trials. Two applications of Roundup were made in the 4-6 (32 oz) and 8-12 (22 oz) leaf stages.

All plot rows were measured for total length after approximately 2.5 feet at each end were removed at the end of August, with skips greater than 60 inches (including short rows) being measured for adjustment purposes. Some sites had 10 feet removed from each end of rows where short rows were observed (short rows resulted from non-uniform seed distribution between rows of a single plot). Harvest was performed with two modified four-row harvesters (4310 and 4310A John Deere). All harvested beets of each plot were used for yield determination while one sample (approx 25 lbs) for sugar and impurity analysis was obtained from each plot. Quality analysis was performed at the ACSC Technical Services quality lab in Moorhead.

Varieties were planted in disease nurseries in North Dakota, Minnesota, Michigan and Colorado to evaluate disease tolerance.

ACSC adjusts the Cercospora, Aphanomyces, Rhizoctonia and Fusarium nursery data each year to provide a consistent target for variety approval criteria.

In January 2009, the ACSC Seed Committee exempted the currently approved conventional varieties from continued variety testing – 31 conventional varieties are approved for sale in 2014; many of these varieties were not tested since 2008. Conventional trials were discontinued in 2012. Data for conventional varieties tested in previous years can be found in Table 7 and 6.

Acknowledgements

Thanks to the beet seed companies for their participation in the official variety testing program and to all grower-cooperators, agricultural, and beet seed staffs for their assistance. Special thanks are extended to Dr. Mohamed Khan for CR nursery infection, Randy Nelson, Jason Brantner and Peter Hakk for RRV disease ratings, USDA staff in Michigan for CR nursery ratings, USDA staff in Colorado for Rhizoctonia nursery ratings, the Betaseed staff for Aphanomyces and Cercospora ratings in the Shakopee area, Germain's Seed Technology for seed treatments and Kay Jay Ag Services for sampling and coding all variety entries.

Table 1. Varieties Meeting ACSC Approval Criteria for the 2014 Sugarbeet Crop ++

Roundup Ready®					Conventional				
Full Market	Aph Spec	Rhc Spec	High Rzm	Full Market	Aph Spec	Rhc Spec	High Rzm		
BTS 80RR32	Yes			Hi Rzm	Beta 1100R	Yes			
BTS 80RR52	Yes	Aph	Rhc	Hi Rzm	Beta 1115R	Yes	Aph		
BTS 81RR17	Yes	Aph		Hi Rzm	Beta 1125R	Yes	Aph		
BTS 81RR78	Yes			Hi Rzm	Beta 1135R	Yes		Rhc	
BTS 89RR10	Yes		Rhc		Beta 1140R	Yes			
BTS 89RR50	Yes	Aph		Hi Rzm	Beta 1301R	Yes	Aph	Rhc	
BTS 89RR83	Yes		Rhc	Hi Rzm	Beta 1305R	Yes			
BTS 82RR22	New	Aph		Hi Rzm	Beta 1833R	No		Rhc	
BTS 82RR28	New			Hi Rzm					
BTS 82RR33	New			Hi Rzm	Crystal R308	Yes			
BTS 82RR80	New	Aph		Hi Rzm	Crystal R431	Yes			
					Crystal R434	Yes			
Crystal 093RR	Yes			Hi Rzm	Crystal R760	Yes			
Crystal 095RR	Yes			Hi Rzm	Crystal R761	Yes	Aph	Hi Rzm	
Crystal 101RR	Yes	Aph		Hi Rzm	Crystal R869	Yes			
Crystal 658RR	Yes		Rhc						
Crystal 765RR	Yes				Hilleshög 3035Rz	Yes		Rhc	
Crystal 768RR	Yes				Hilleshög 3052Rz	Yes			
Crystal 875RR	Yes	Aph	Rhc						
Crystal 981RR	Yes	Aph		Hi Rzm	Holly 317	Yes			
Crystal 985RR	Yes	Aph			Holly 701	Yes			
Crystal 986RR	Yes								
Crystal 246RR	New	Aph		Hi Rzm	Seedex Sonic	Yes			
Crystal 247RR	New			Hi Rzm	Seedex SX0873TT (Deuce)	Yes		Hi Rzm	
Crystal 248RR	New	Aph		Hi Rzm	Seedex Triton	Yes			
					Seedex Vault (SX0842)	Yes			
Hilleshög 4012RR	Yes								
Hilleshög 4022RR	Yes		Rhc		SESVanderhave H46519	Yes			
Hilleshög 4094RR	Yes		Rhc		SESVanderhave H46531	Yes			
Hilleshög 4195RR	Yes		Rhc		SESVanderhave H46711	Yes			
Hilleshög 4236RR (9236)	Yes				SESVanderhave H48607TT	Yes		Hi Rzm	
Hilleshög 4300RR (9300)	Yes				SESVanderhave H46714	No		Rhc	
Hilleshög 4302RR (9302)	Yes		Rhc		SESVanderhave H48716TT	Yes		Hi Rzm	
Hilleshög 4303RR (9303)	Yes				SESVanderhave H48717TT	Yes		Hi Rzm	
Hilleshög 4448RR (9448)	New				SESVanderhave H46801	Yes			
					SESVanderhave H48810TT	Yes		Hi Rzm	
Maribo MA102RR	Yes	Aph							
Maribo 104RR	Yes		Rhc						
Seedex VictorRR	Yes			Hi Rzm					
Seedex VisionRR	Yes								
Seedex Xavier RR (0816)	Yes	Aph							
Seedex Yukon RR (0828N)	New	Aph							
Seedex Zenith RR (0829N)	New								
SESVdh 36175RR	Yes								
SESVdh 36812RR	Yes			Hi Rzm					
SESVdh 36917RR	Yes								
SESVdh 36918RR	Yes								
SESVdh 36271RR	New			Hi Rzm					
SESVdh 36272RR	New								
SESVdh 36273RR	New								

**Conventional variety testing was voluntary since 2009.
Data for SOME conventional varieties are from 2008 only.**

++Roundup Ready sugarbeets are subject to the ACSC RRSB Bolter Dsestruction Policy

Roundup Ready® is a registered trademark of Monsanto Company.

Aph Spec = variety meets Aphanomyces speciality requirements

Rhc Spec = variety meets Rhizoctonia speciality requirements

Hi Rzm = variety has high Rhizomania tolerance (Dual Rzm resistance) as submitted by seed company

New = newly approved

Created 11-19-2013.

Table 3. Performance Data of RR Aphanomyces Specialty Varieties - Under Aphanomyces Conditions (Relative to Susceptible Checks) approved for 2014 Growing Season +++

Description **	Years Comm	Rev/Ton				Rev/Acre				Rec/Ton		Rec/Acre		Sugar		Yield		CR Rating +		Aph Root +			Fusarium +		Rhizoctonia +		
		Kind	Cmx	Mean	%Susc	Kind	Cmx	Mean	%Susc	Kind	Cmx	Kind	Cmx	Kind	Cmx	Kind	Cmx	13	12	13	12	2 Yr	13	12	13	12	
BTS 80RR52	2	53.25	33.66	43.46	103	1292	899	1095	140	320.2	254.9	7750	6792	17.30	14.12	24.1	26.6	4.52	4.40	4.0	4.0	4.0	3.6	2.8	3.8	3.7	
BTS 81RR17	1	48.42	30.88	39.65	94	1252	813	1033	132	304.1	245.7	7805	6506	16.64	13.79	25.5	26.6	4.45	4.36	3.9	3.3	3.6	3.2	2.5	4.1	4.0	
BTS 82RR22	NC	58.44	40.84	49.64	118	1400	886	1143	146	337.4	279.9	8046	6028	18.08	15.26	23.7	21.5	4.77	4.65	4.4	4.0	4.2	5.5	4.8	5.2	4.6	
BTS 82RR80	NC	49.88	32.91	41.39	98	1169	786	978	125	308.9	252.6	7195	5987	16.78	14.08	23.1	23.5	4.62	4.77	4.6	3.4	4.0	4.3	3.1	4.5	4.6	
BTS 89RR50	3	46.75	29.41	38.08	90	1325	867	1096	140	298.5	240.8	8473	7069	16.39	13.52	28.4	29.2	4.83	5.30	4.0	4.8	4.4	3.8	3.0	5.3	4.9	
Crystal 101RR	2	47.32	33.53	40.43	96	1430	934	1182	151	300.4	254.5	9084	7085	16.41	14.18	30.3	27.9	4.63	4.71	3.8	3.0	3.4	3.3	3.0	4.7	4.8	
Crystal 246RR	NC	52.76	31.85	42.31	100	1293	799	1046	134	318.5	249.0	7791	6192	17.11	13.73	24.4	24.6	4.48	4.49	4.9	3.8	4.4	4.2	3.3	4.6	4.3	
Crystal 248RR	NC	50.74	29.61	40.18	95	1240	777	1008	129	311.8	241.3	7632	6183	16.85	13.41	24.5	25.1	5.15	4.94	4.7	3.6	4.2	4.2	3.2	4.8	4.5	
Crystal 875RR	4	49.20	30.77	39.99	95	1459	894	1177	151	306.7	245.3	9097	7115	16.70	13.73	29.7	28.9	4.77	4.26	3.8	2.7	3.2	4.8	4.4	4.5	4.0	
Crystal 981RR	NC	46.64	31.30	38.97	93	1291	919	1105	142	298.2	247.1	8059	7168	16.42	13.77	26.3	28.7	5.09	5.15	3.5	3.1	3.3	3.8	2.9	3.7	4.5	
Crystal 985RR	3	50.06	32.55	41.31	98	1403	797	1100	141	309.5	251.2	8651	6160	16.81	14.01	27.9	24.5	4.49	4.41	3.9	3.1	3.5	4.4	3.5	4.6	4.4	
Maribo MA102RR	NC	51.96	35.58	43.77	104	1146	694	920	118	315.9	261.8	6959	5048	16.96	14.37	22.0	19.1	5.03	4.88	4.3	4.3	4.3	5.2	5.2	5.5	4.7	
Seedex SX0828NRR	NC	44.63	32.99	38.81	92	1168	801	984	126	291.5	252.9	7551	6115	15.84	13.87	25.6	24.1	4.69	4.72	4.3	4.1	4.2	3.5	4.1	4.8	4.3	
Seedex Xavier RR(0816)	NC	49.52	34.46	41.99	100	1170	757	963	123	307.8	257.6	7280	5662	16.59	14.17	23.7	21.9	4.85	4.43	4.4	4.2	4.3	5.5	5.3	4.6	4.7	
Aph Susc Checks		53.86	30.39	42.12		1107	454	780		322.2	244.0	6588	3598	17.36	13.58	20.3	14.7										
Mean of Aph Specialty Varieties		49.97	32.88	41.43		1288	830	1059		309.2	252.5	7955	6365	16.78	14.00	25.7	25.2										

%Susc = % of susceptible varieties.

+ Aph ratings are from Shakopee & Kindred (res=4.4, susc=5.5). CR ratings are from Rosemount, Michigan & Foxhome (res=4.5, susc=5.2).

+ Fusarium ratings from Mhd (mod res=4.5, mod susc=5.7). Rhizoctonia ratings from Ft Collins and Mhd (res=3, susc=5+).

+++ 2013 Data from Kindred and Climax.

++ 2013 Revenue estimates based on a \$53.20 beet payment at 17.5% sugar and 1.5% loss to molasses. Revenue does not consider hauling or production costs.

Created 11-12-2013.

Table 4. 2013 Performance of Varieties - ACSC RR Commercial Yield Trial
6 sites - All Characters

Description @	Code	Rec/T lbs.	Rec/T %Mean	Rec/A lbs.	Rec/A %Mean	Loss Mol %	Rev/T \$ ++	Rev/T %Mean	Rev/A \$ ++	Rev/A %Mean	Sugar %	Yield T/A	Na ppm	K ppm	AmN ppm	Bolter %	Emerg. %	Tare %
BTS 80RR32	121	326.8	101	9198	108	1.28	55.23	102	1544	109	17.62	28.41	284	1922	379	0.00	68.2	5.5
BTS 80RR52	123	325.5	101	9117	107	1.42	54.85	101	1527	108	17.69	28.22	227	2016	483	0.00	70.3	5.6
BTS 81RR17	101	319.5	99	8297	98	1.44	53.04	98	1371	97	17.42	26.13	269	2027	482	0.00	74.7	6.9
BTS 81RR78	122	338.8	105	8999	106	1.31	58.86	108	1555	110	18.25	26.74	196	1879	443	0.00	72.1	5.6
BTS 89RR10	128	344.5	106	8067	95	1.28	60.55	111	1408	99	18.51	23.66	227	1970	385	0.00	71.4	6.7
BTS 89RR50	118	312.1	96	9234	109	1.48	50.83	94	1495	105	17.08	29.78	333	2178	451	0.00	71.4	4.8
BTS 89RR83	107	317.0	98	8807	104	1.27	52.31	96	1442	102	17.13	28.05	331	1857	370	0.00	73.0	5.2
Crystal 093RR	119	336.7	104	9091	107	1.28	58.22	107	1563	110	18.11	27.20	188	1859	428	0.01	79.2	5.5
Crystal 095RR	129	328.0	101	8918	105	1.32	55.61	102	1504	106	17.72	27.40	245	1921	423	0.00	71.0	5.5
Crystal 101RR	114	322.4	100	9214	108	1.43	53.92	99	1534	108	17.56	28.75	317	2159	424	0.00	77.6	5.5
Crystal 658RR	126	314.8	97	8128	96	1.19	51.65	95	1323	93	16.93	26.06	260	1850	336	0.00	74.3	6.0
Crystal 765RR	112	336.9	104	8763	103	1.27	58.28	107	1511	106	18.11	26.11	286	1879	376	0.00	73.8	5.2
Crystal 768RR	116	328.4	101	8752	103	1.39	55.73	103	1479	104	17.81	26.78	286	2011	442	0.00	72.1	6.5
Crystal 875RR	105	315.1	97	8674	102	1.35	51.74	95	1417	100	17.11	27.69	320	2003	403	0.06	71.9	6.0
Crystal 985RR	115	325.2	100	8499	100	1.25	54.75	101	1422	100	17.51	26.33	257	1875	383	0.00	73.6	5.6
Crystal 986RR	106	337.5	104	8843	104	1.20	58.46	108	1521	107	18.07	26.45	257	1743	375	0.00	70.3	6.2
Hilleshög 4012RR	127	318.0	98	8229	97	1.31	52.59	97	1356	95	17.21	25.99	374	1902	373	0.00	73.9	6.0
Hilleshög 4022RR	103	319.3	99	8153	96	1.34	52.99	98	1348	95	17.30	25.65	284	1973	408	0.00	72.3	5.6
Hilleshög 4094RR	113	315.6	97	8029	94	1.36	51.89	96	1318	93	17.15	25.47	309	1943	427	0.00	71.2	6.2
Hilleshög 4195RR	120	313.3	97	8596	101	1.40	51.19	94	1401	99	17.07	27.51	380	2003	415	0.00	73.3	5.4
Hilleshög 4236RR(9236)	110	339.5	105	7775	91	1.23	59.06	109	1348	95	18.21	23.00	222	1809	396	0.01	77.8	6.2
Hilleshög 4300RR(9300)	108	312.6	97	7872	93	1.25	50.97	94	1279	90	16.88	25.31	315	1909	347	0.00	76.7	7.1
Seedex Victor RR	117	312.0	96	8164	96	1.19	50.81	94	1324	93	16.79	26.30	290	1755	345	0.00	70.1	5.1
Seedex Vision RR	104	327.1	101	8071	95	1.16	55.32	102	1360	96	17.52	24.80	237	1805	336	0.01	64.8	6.2
Seedex Xavier RR(0816)	124	321.5	99	7849	92	1.19	53.66	99	1306	92	17.28	24.49	248	1903	327	0.02	68.5	6.0
SESVdh 36175RR	109	326.7	101	7989	94	1.18	55.21	102	1342	95	17.51	24.66	239	1861	331	0.00	74.1	6.2
SESVdh 36812RR	111	305.6	94	8527	100	1.22	48.87	90	1358	96	16.50	28.04	313	1744	374	0.00	71.4	5.6
SESVdh 36917RR	102	327.8	101	8301	98	1.15	55.55	102	1399	99	17.54	25.49	243	1767	334	0.06	70.1	5.9
SESVdh 36918RR	125	323.0	100	7817	92	1.23	54.11	100	1306	92	17.37	24.28	233	1893	363	0.05	69.5	6.2
RR Filler #01	130	320.6	99	9226	108	1.47	53.40	98	1526	107	17.51	29.02	313	2228	434	0.00	73.9	5.8
Trial Mean		323.7		8507		1.30	54.32		1420		17.48	26.46	276	1921	393	0.01	72.4	5.9
Coeff. of Var. (%)		3.7		5.9		8.3	6.7		7.7		3.2	5.1	26.7	5.3	13.7		8.4	29.6
Mean LSD (0.05)		8.5		438		0.07	2.56		87		0.40	1.30	57	78	36		3.5	0.9
Mean LSD (0.01)		11.3		579		0.10	3.38		115		0.53	1.71	75	103	47		4.6	1.2
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**	**

* 2013 Data from 6 sites

Analyzed 11/06/2013 21:54

Created 11-6-2013.

@ Some varieties not approved for sale. Refer to approval list for approval status.

Trial # = 13ACCom

++ Revenue estimates are based on a \$53.20 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

6 sites include: Casselton, Reynolds, Alvarado, Grafton, St Thomas, Hallock.

Table 5. 2013 Performance of Varieties - ACSC RR Commercial Yield Trial
Casselton ND - All Characters

Description @	Code	Rec/T lbs.	Rec/T %Mean	Rec/A lbs.	Rec/A %Mean	Loss Mol %	Rev/T \$ ++	Rev/T %Mean	Rev/A \$ ++	Rev/A %Mean	Sugar %	Yield T/A	Na ppm	K ppm	AmN ppm	Bolter %	Emerg. %
BTS 80RR32	121	303.2	101	10255	105	1.12	48.17	102	1630	107	16.28	33.88	280	1640	331	0.00	75.2
BTS 80RR52	123	301.3	100	10963	113	1.33	47.60	101	1737	114	16.41	36.21	231	1844	457	0.00	79.5
BTS 81RR17	101	297.0	99	10369	107	1.34	46.29	98	1625	106	16.20	34.73	281	1859	442	0.00	85.6
BTS 81RR78	122	315.1	105	9802	101	1.26	51.72	110	1597	104	17.00	31.42	210	1732	436	0.00	79.4
BTS 89RR10	128	311.8	104	9763	100	1.21	50.74	108	1588	104	16.80	31.19	300	1728	370	0.00	81.6
BTS 89RR50	118	296.2	99	10443	107	1.26	46.04	98	1623	106	16.07	35.29	318	1837	374	0.00	79.8
BTS 89RR83	107	293.2	98	10502	108	1.13	45.14	96	1620	106	15.79	35.77	325	1627	328	0.00	83.9
Crystal 093RR	119	314.9	105	10517	108	1.18	51.67	110	1722	113	16.92	33.67	213	1689	386	0.00	90.2
Crystal 095RR	129	308.1	103	9591	99	1.16	49.63	105	1542	101	16.56	31.31	236	1693	362	0.00	77.8
Crystal 101RR	114	303.8	101	10371	107	1.25	48.34	103	1646	108	16.44	34.60	293	1809	383	0.00	88.8
Crystal 658RR	126	288.2	96	9828	101	1.14	43.65	93	1491	98	15.55	33.84	263	1726	328	0.00	88.8
Crystal 765RR	112	304.2	101	8773	90	1.16	48.47	103	1388	91	16.36	28.68	355	1629	337	0.00	84.2
Crystal 768RR	116	298.0	99	9420	97	1.34	46.60	99	1471	96	16.25	31.60	295	1887	433	0.00	84.4
Crystal 875RR	105	295.5	99	10547	108	1.25	45.85	97	1650	108	16.04	35.60	354	1778	365	0.14	85.8
Crystal 985RR	115	294.4	98	9455	97	1.20	45.50	97	1461	96	15.92	32.11	297	1677	372	0.00	85.9
Crystal 986RR	106	305.9	102	10138	104	1.09	48.95	104	1621	106	16.38	33.32	290	1501	338	0.00	81.1
Hilleshög 4012RR	127	294.8	98	8855	91	1.27	45.63	97	1369	90	16.01	30.16	395	1762	372	0.00	86.3
Hilleshög 4022RR	103	302.3	101	9751	100	1.23	47.89	102	1538	101	16.34	32.18	298	1723	386	0.00	77.3
Hilleshög 4094RR	113	297.4	99	9260	95	1.26	46.40	98	1446	95	16.13	30.93	309	1723	411	0.00	77.9
Hilleshög 4195RR	120	297.9	99	9870	101	1.31	46.55	99	1541	101	16.20	33.12	393	1771	398	0.00	78.9
Hilleshög 4236RR(9236)	110	317.8	106	8561	88	1.17	52.55	111	1416	93	17.06	27.30	261	1681	367	0.00	80.6
Hilleshög 4300RR(9300)	108	293.0	98	9512	98	1.14	45.09	96	1466	96	15.79	32.61	316	1710	313	0.00	87.2
Seedex Victor RR	117	291.9	97	9742	100	1.14	44.77	95	1500	98	15.74	33.17	269	1664	342	0.00	81.0
Seedex Vision RR	104	297.9	99	8778	90	1.11	46.58	99	1366	89	16.01	29.35	270	1625	330	0.07	79.8
Seedex Xavier RR(0816)	124	293.9	98	8995	92	1.08	45.37	96	1391	91	15.77	30.41	254	1703	288	0.00	83.2
SESVdh 36175RR	109	302.5	101	9158	94	1.08	47.94	102	1444	94	16.19	30.67	252	1623	309	0.00	85.8
SESVdh 36812RR	111	276.9	92	9261	95	1.19	40.24	85	1348	88	15.04	33.41	327	1642	367	0.00	81.9
SESVdh 36917RR	102	300.2	100	9712	100	1.15	47.26	100	1531	100	16.16	32.20	277	1675	345	0.07	77.6
SESVdh 36918RR	125	305.5	102	9089	93	1.21	48.86	104	1454	95	16.49	29.68	268	1752	376	0.00	80.3
RR Filler #01	130	293.2	98	10776	111	1.27	45.14	96	1655	108	15.92	36.72	325	1811	381	0.00	85.3
Trial Mean		299.9		9735		1.20	47.15		1529		16.19	32.50	292	1717	368	0.00	82.5
Coeff. of Var. (%)		3.1		6.5		5.6	5.9		8.2		2.8	5.7	15.3	5.4	8.0		6.8
Mean LSD (0.05)		11.9		752		0.09	3.56		150		0.58	2.29	58	115	38		6.8
Mean LSD (0.01)		15.7		994		0.11	4.71		198		0.76	3.03	77	151	51		9.0
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2013 Data from Casselton ND

Analyzed 11/01/2013 11:57

Created 11-6-2013.

@ Some varieties not approved for sale. Refer to approval list for approval status.

Trial # = 138601

++ Revenue estimates are based on a \$53.20 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 6. 2013 Performance of Varieties - ACSC RR Commercial Yield Trial
Hendrum MN (Root Aphids & Drought conditions) - All Characters

Description @	Code	Rec/T lbs.	Rec/T %Mean	Rec/A lbs.	Rec/A %Mean	Loss Mol %	Rev/T \$ ++	Rev/T %Mean	Rev/A \$ ++	Rev/A %Mean	Sugar %	Yield T/A	Na ppm	K ppm	AmN ppm	Bolter %	Emerg. %
BTS 80RR32	121	300.3	106	8350	128	1.10	47.29	112	1310	133	16.12	27.88	223	1623	342	0.00	62.9
BTS 80RR52	123	304.8	107	7711	118	1.28	48.65	115	1245	127	16.53	24.99	192	1741	464	0.00	56.8
BTS 81RR17	101	276.5	97	6667	102	1.30	40.13	95	966	98	15.12	24.15	260	1711	457	0.00	64.6
BTS 81RR78	122	317.6	112	8098	124	1.12	52.49	124	1337	136	16.99	25.58	176	1566	381	0.00	69.8
BTS 89RR10	128	297.1	105	6974	107	1.25	46.32	110	1081	110	16.10	23.82	269	1784	398	0.00	67.3
BTS 89RR50	118	292.2	103	8015	123	1.27	44.85	106	1229	125	15.88	27.42	257	1828	402	0.00	66.4
BTS 89RR83	107	289.2	102	7778	119	1.13	43.94	104	1193	121	15.58	26.64	326	1538	343	0.00	63.1
Crystal 093RR	119	308.8	109	8330	128	1.17	49.85	118	1349	137	16.61	26.79	186	1669	393	0.00	73.8
Crystal 095RR	129	297.3	105	7786	119	1.15	46.40	110	1213	123	16.01	26.20	216	1533	401	0.00	66.4
Crystal 101RR	114	293.7	104	8244	126	1.39	45.30	107	1267	129	16.07	28.20	268	1875	479	0.00	76.5
Crystal 658RR	126	265.1	93	6101	94	0.90	36.70	87	844	86	14.15	23.13	290	1280	253	0.00	68.9
Crystal 765RR	112	305.8	108	8237	126	1.10	48.95	116	1310	133	16.38	27.15	283	1552	333	0.09	69.6
Crystal 768RR	116	307.0	108	8676	133	1.20	49.31	117	1385	141	16.55	28.47	201	1753	389	0.00	64.0
Crystal 875RR	105	273.0	96	5902	91	1.18	39.07	92	846	86	14.82	21.69	347	1609	361	0.00	66.6
Crystal 985RR	115	277.9	98	5639	86	1.05	40.54	96	832	85	14.95	20.11	297	1347	348	0.00	71.6
Crystal 986RR	106	308.1	109	7780	119	1.01	49.63	117	1246	127	16.42	25.48	209	1421	331	0.00	66.1
Hilleshög 4012RR	127	278.2	98	6862	105	1.24	40.65	96	1011	103	15.14	24.42	495	1597	349	0.00	70.2
Hilleshög 4022RR	103	288.8	102	6036	93	1.08	43.84	104	914	93	15.53	21.01	297	1556	316	0.00	66.1
Hilleshög 4094RR	113	271.0	96	5505	84	1.17	38.48	91	784	80	14.72	20.26	359	1564	355	0.00	64.8
Hilleshög 4195RR	120	268.6	95	6020	92	1.19	37.76	89	852	87	14.62	22.26	471	1582	329	0.00	71.0
Hilleshög 4236RR(9236)	110	305.9	108	6582	101	1.07	48.96	116	1056	107	16.37	21.41	246	1542	332	0.00	68.6
Hilleshög 4300RR(9300)	108	268.4	95	5113	78	1.06	37.70	89	717	73	14.48	19.06	379	1495	286	0.00	70.9
Seedex Victor RR	117	251.0	89	4118	63	0.90	32.49	77	539	55	13.44	16.23	313	1220	251	0.00	66.5
Seedex Vision RR	104	263.5	93	5198	80	0.93	36.22	86	718	73	14.10	19.59	321	1280	262	0.00	68.4
Seedex Xavier RR(0816)	124	254.5	90	3661	56	0.89	33.53	79	479	49	13.61	14.44	318	1200	252	0.00	71.9
SESVdh 36175RR	109	272.6	96	4960	76	0.91	38.96	92	710	72	14.55	18.19	292	1340	245	0.00	71.5
SESVdh 36812RR	111	243.6	86	4211	65	0.97	30.24	72	538	55	13.15	16.76	445	1126	284	0.00	69.2
SESVdh 36917RR	102	265.1	93	4587	70	0.92	36.71	87	642	65	14.18	17.09	281	1314	263	0.00	62.2
SESVdh 36918RR	125	259.4	91	3897	60	0.94	34.98	83	528	54	13.93	14.92	343	1324	258	0.00	64.5
RR Filler #01	130	303.3	107	8585	132	1.24	48.20	114	1372	139	16.41	28.14	226	1857	388	0.00	70.4
Trial Mean		283.6		6521		1.10	42.27		984		15.28	22.72	293	1528	341	0.00	67.7
Coeff. of Var. (%)		5.1		9.3		8.9	10.2		13.3		4.4	6.9	22.3	6.5	14.2		7.8
Mean LSD (0.05)		19.7		891		0.13	5.91		188		0.93	2.34	88	136	64		7.1
Mean LSD (0.01)		26.0		1181		0.17	7.82		249		1.24	3.10	117	179	85		9.4
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2013 Data from Hendrum MN (Root Aphids & Drought conditions)

Analyzed 11/01/2013 14:38

Created 11-6-2013.

@ Some varieties not approved for sale. Refer to approval list for approval status.

Trial # = 138603

++ Revenue estimates are based on a \$53.20 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 7. 2013 Performance of Varieties - ACSC RR Commercial Yield Trial
Reynolds ND - All Characters

Description @	Code	Rec/T lbs.	Rec/T %Mean	Rec/A lbs.	Rec/A %Mean	Loss Mol %	Rev/T \$ ++	Rev/T %Mean	Rev/A \$ ++	Rev/A %Mean	Sugar %	Yield T/A	Na ppm	K ppm	AmN ppm	Bolter %	Emerg. %
BTS 80RR32	121	292.0	96	8578	104	1.18	44.80	93	1312	101	15.79	29.46	207	1961	323	0.00	58.8
BTS 80RR52	123	299.8	99	8249	100	1.42	47.13	98	1299	100	16.41	27.54	170	1989	508	0.00	67.1
BTS 81RR17	101	293.2	97	7724	94	1.35	45.15	94	1194	92	16.01	26.17	193	2047	435	0.00	66.5
BTS 81RR78	122	312.0	103	8658	105	1.23	50.81	106	1413	108	16.83	27.72	135	1894	402	0.00	69.2
BTS 89RR10	128	317.3	105	7394	90	1.28	52.38	109	1216	93	17.15	23.57	174	2075	377	0.00	60.6
BTS 89RR50	118	282.3	93	8533	104	1.50	41.87	87	1272	98	15.61	30.03	270	2207	477	0.00	64.6
BTS 89RR83	107	284.3	94	8353	101	1.25	42.48	88	1243	95	15.46	29.45	290	1938	347	0.00	68.4
Crystal 093RR	119	314.3	104	8282	101	1.25	51.49	107	1354	104	16.96	26.31	159	1908	403	0.00	76.8
Crystal 095RR	129	299.2	99	8534	104	1.35	46.96	98	1336	102	16.31	28.45	190	1977	454	0.00	64.8
Crystal 101RR	114	299.3	99	8629	105	1.34	46.98	98	1357	104	16.30	28.82	199	2151	392	0.00	74.4
Crystal 658RR	126	294.7	97	7994	97	1.15	45.61	95	1233	95	15.88	27.16	205	1868	319	0.00	68.6
Crystal 765RR	112	314.5	104	8718	106	1.22	51.54	107	1430	110	16.94	27.65	201	1896	371	0.00	68.0
Crystal 768RR	116	314.4	104	8315	101	1.25	51.53	107	1363	105	16.98	26.48	169	1889	409	0.00	68.6
Crystal 875RR	105	301.3	100	8197	100	1.31	47.57	99	1294	99	16.38	27.37	207	2098	385	0.07	68.4
Crystal 985RR	115	307.4	102	8497	103	1.20	49.43	103	1368	105	16.57	27.59	183	1915	356	0.00	70.8
Crystal 986RR	106	310.5	103	8424	102	1.21	50.34	105	1369	105	16.73	26.95	201	1773	394	0.00	63.1
Hilleshög 4012RR	127	306.0	101	8062	98	1.26	48.99	102	1287	99	16.55	26.35	244	1863	390	0.00	66.9
Hilleshög 4022RR	103	304.2	100	7515	91	1.30	48.45	101	1199	92	16.51	24.79	199	2019	397	0.00	66.9
Hilleshög 4094RR	113	303.4	100	7499	91	1.33	48.21	100	1193	91	16.50	24.70	200	2009	422	0.00	67.1
Hilleshög 4195RR	120	299.0	99	8416	102	1.31	46.88	98	1318	101	16.25	28.10	249	2062	376	0.00	63.0
Hilleshög 4236RR(9236)	110	319.3	105	7636	93	1.21	52.99	110	1272	98	17.18	23.88	171	1845	383	0.00	71.5
Hilleshög 4300RR(9300)	108	302.6	100	7577	92	1.20	47.96	100	1187	91	16.33	25.45	204	1912	345	0.00	71.3
Seedex Victor RR	117	295.9	98	8448	103	1.14	45.97	96	1299	100	15.93	28.84	186	1767	342	0.00	63.9
Seedex Vision RR	104	308.7	102	8307	101	1.15	49.80	104	1333	102	16.58	26.95	167	1843	339	0.00	63.0
Seedex Xavier RR(0816)	124	312.6	103	8298	101	1.11	50.98	106	1356	104	16.75	26.62	162	1861	310	0.07	64.8
SESVdh 36175RR	109	311.4	103	8420	102	1.18	50.61	105	1359	104	16.74	27.25	183	1906	336	0.00	67.7
SESVdh 36812RR	111	293.0	97	8804	107	1.17	45.10	94	1355	104	15.83	30.20	195	1791	363	0.00	66.3
SESVdh 36917RR	102	301.5	100	8216	100	1.22	47.65	99	1303	100	16.29	27.16	185	1856	384	0.00	71.5
SESVdh 36918RR	125	302.3	100	8031	97	1.15	47.88	100	1275	98	16.26	26.55	177	1883	327	0.07	65.1
RR Filler #01	130	288.5	95	8797	107	1.48	43.73	91	1336	102	15.90	30.31	270	2285	441	0.00	69.7
Trial Mean		302.8		8237		1.26	48.04		1304		16.40	27.26	198	1950	384	0.00	67.2
Coeff. of Var. (%)		2.7		4.5		6.3	5.1		6.3		2.3	3.6	18.2	4.3	13.4		8.0
Mean LSD (0.05)		10.2		499		0.10	3.06		108		0.47	1.33	46	105	64		6.3
Mean LSD (0.01)		13.5		661		0.13	4.04		142		0.62	1.76	60	139	85		8.3
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2013 Data from Reynolds ND

Analyzed 10/23/2013 08:59

Created 11-6-2013.

@ Some varieties not approved for sale. Refer to approval list for approval status.

Trial # = 138604

++ Revenue estimates are based on a \$53.20 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 8. 2013 Performance of Varieties - ACSC RR Commercial Yield Trial
Climax MN (Heavy Aph pressure) - All Characters

Description @	Code	Rec/T lbs.	Rec/T %Mean	Rec/A lbs.	Rec/A %Mean	Loss Mol %	Rev/T \$ ++	Rev/T %Mean	Rev/A \$ ++	Rev/A %Mean	Sugar %	Yield T/A	Na ppm	K ppm	AmN ppm	Bolter %	Emerg. %
BTS 80RR32	121	238.8	95	5398	90	1.36	28.82	88	656	84	13.31	22.46	248	1867	465	0.00	78.9
BTS 80RR52	123	254.9	101	6792	114	1.38	33.66	103	899	116	14.12	26.58	180	1729	542	0.00	75.0
BTS 81RR17	101	245.7	98	6506	109	1.51	30.88	94	813	105	13.79	26.59	201	1884	596	0.00	80.2
BTS 81RR78	122	265.3	105	6298	106	1.43	36.76	112	877	113	14.68	23.62	150	1787	578	0.00	77.3
BTS 89RR10	128	271.9	108	6786	114	1.43	38.75	118	969	125	15.00	24.88	214	1898	526	0.00	83.6
BTS 89RR50	118	240.8	96	7069	119	1.49	29.41	90	867	112	13.52	29.24	279	1938	531	0.00	76.4
BTS 89RR83	107	244.2	97	6870	115	1.29	30.42	93	856	110	13.50	28.18	294	1662	454	0.00	74.3
Crystal 093RR	119	258.3	103	7359	123	1.43	34.67	106	989	127	14.35	28.52	182	1874	545	0.00	82.0
Crystal 095RR	129	255.9	102	5302	89	1.40	33.96	104	707	91	14.19	20.74	204	1785	533	0.00	70.9
Crystal 101RR	114	254.5	101	7085	119	1.45	33.53	102	934	120	14.18	27.88	244	1994	509	0.00	78.5
Crystal 658RR	126	246.8	98	5860	98	1.25	31.20	95	742	95	13.58	23.65	205	1733	429	0.00	74.8
Crystal 765RR	112	244.0	97	3598	60	1.38	30.39	93	454	58	13.58	14.68	281	1914	458	0.00	79.6
Crystal 768RR	116	244.6	97	5353	90	1.54	30.55	93	682	88	13.77	21.59	225	2039	574	0.00	77.0
Crystal 875RR	105	245.3	97	7115	119	1.47	30.77	94	894	115	13.73	28.90	245	1794	574	0.07	79.3
Crystal 985RR	115	251.2	100	6160	103	1.45	32.55	99	797	103	14.01	24.51	238	1826	550	0.00	78.3
Crystal 986RR	106	257.9	102	6722	113	1.30	34.54	105	902	116	14.20	25.97	227	1681	473	0.00	76.1
Hilleshög 4012RR	127	240.2	95	5224	88	1.39	29.24	89	646	83	13.39	21.45	275	1910	468	0.00	83.1
Hilleshög 4022RR	103	256.1	102	5742	96	1.35	34.00	104	766	99	14.15	22.32	206	1855	478	0.00	75.1
Hilleshög 4094RR	113	252.5	100	5759	97	1.35	32.92	101	748	96	13.99	22.93	243	1804	473	0.00	76.7
Hilleshög 4195RR	120	239.4	95	5338	89	1.49	28.98	89	654	84	13.46	22.00	352	1896	520	0.00	79.6
Hilleshög 4236RR(9236)	110	269.2	107	4644	78	1.27	37.93	116	662	85	14.72	17.04	181	1676	467	0.00	87.3
Hilleshög 4300RR(9300)	108	262.7	104	6276	105	1.25	35.98	110	861	111	14.40	23.90	220	1820	405	0.00	78.1
Seedex Victor RR	117	251.3	100	5776	97	1.22	32.56	99	748	96	13.79	23.03	208	1681	426	0.00	68.7
Seedex Vision RR	104	247.9	98	5013	84	1.35	31.55	96	635	82	13.75	20.39	217	1952	447	0.00	68.6
Seedex Xavier RR(0816)	124	257.6	102	5662	95	1.31	34.46	105	757	97	14.17	21.91	196	1837	456	0.07	79.7
SESVdh 36175RR	109	254.3	101	5771	97	1.25	33.47	102	757	97	13.98	22.86	225	1711	431	0.00	78.7
SESVdh 36812RR	111	245.6	97	5387	90	1.29	30.85	94	685	88	13.57	21.73	220	1752	457	0.00	74.7
SESVdh 36917RR	102	258.4	103	5793	97	1.27	34.71	106	782	101	14.19	22.35	204	1712	455	0.14	77.6
SESVdh 36918RR	125	256.9	102	5980	100	1.29	34.26	105	796	102	14.14	23.28	191	1853	440	0.00	76.0
RR Filler #01	130	243.9	97	6298	106	1.52	30.36	93	782	101	13.73	25.95	260	2030	540	0.00	68.6
Trial Mean		251.9		5965		1.37	32.74		777		13.97	23.64	227	1830	493	0.00	77.2
Coeff. of Var. (%)		3.8		8.7		6.1	8.8		11.6		3.2	7.9	15.2	5.2	9.8		8.0
Mean LSD (0.05)		12.4		683		0.11	3.72		119		0.57	2.40	43	124	59		7.8
Mean LSD (0.01)		16.4		903		0.14	4.92		157		0.75	3.17	57	164	78		10.4
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2013 Data from Climax MN (Heavy Aph pressure)

Analyzed 10/23/2013 09:48

Created 11-6-2013.

@ Some varieties not approved for sale. Refer to approval list for approval status.

Trial # = 138605

++ Revenue estimates are based on a \$53.20 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 9. 2013 Performance of Varieties - ACSC RR Commercial Yield Trial
Crookston MN (Sand Syndrome conditions) - All Characters

Description @	Rec/T Code	Rec/T lbs.	Rec/T %Mean	Rec/A lbs.	Rec/A %Mean	Loss Mol %	Rev/T \$ ++	Rev/T %Mean	Rev/A \$ ++	Rev/A %Mean	Sugar %	Yield T/A	Na ppm	K ppm	AmN ppm	Bolter %	Emerg. %	S-Synd 0-9
BTS 80RR32	121	263.1	97	5045	89	1.29	36.12	94	706	88	14.45	18.85	411	1379	482	0.00	65.5	4.00
BTS 80RR52	123	267.0	99	5196	92	1.45	37.28	97	736	92	14.80	19.13	369	1420	607	0.00	63.4	4.45
BTS 81RR17	101	264.7	98	5244	93	1.46	36.60	96	715	89	14.68	20.14	399	1474	583	0.00	74.4	2.90
BTS 81RR78	122	288.3	107	6305	111	1.31	43.67	114	956	119	15.73	21.81	279	1471	523	0.00	66.2	2.54
BTS 89RR10	128	287.8	106	5647	100	1.35	43.52	114	859	107	15.74	19.56	405	1526	493	0.00	66.1	2.22
BTS 89RR50	118	259.4	96	5231	92	1.47	34.99	91	704	88	14.44	20.24	513	1556	537	0.00	66.2	3.69
BTS 89RR83	107	268.3	99	5068	89	1.24	37.68	98	717	89	14.66	18.80	494	1230	446	0.00	69.5	3.78
Crystal 093RR	119	283.1	105	5917	104	1.26	42.11	110	888	110	15.42	20.77	277	1408	503	0.00	74.8	3.05
Crystal 095RR	129	282.2	104	7003	124	1.28	41.86	109	1049	130	15.39	24.64	398	1318	493	0.00	69.1	1.94
Crystal 101RR	114	266.8	99	5654	100	1.47	37.22	97	786	98	14.80	21.39	438	1682	530	0.00	76.1	3.15
Crystal 658RR	126	260.3	96	4573	81	1.24	35.28	92	617	77	14.25	17.71	405	1319	459	0.00	70.4	3.48
Crystal 765RR	112	271.2	100	3797	67	1.28	38.56	101	538	67	14.85	14.00	466	1363	456	0.00	75.6	4.23
Crystal 768RR	116	268.7	99	5203	92	1.38	37.80	99	733	91	14.81	19.35	397	1494	521	0.00	67.8	3.25
Crystal 875RR	105	260.7	96	6356	112	1.37	35.38	92	866	108	14.41	24.30	523	1452	488	0.00	72.4	1.21
Crystal 985RR	115	268.6	99	6671	118	1.30	37.75	99	938	117	14.73	24.69	438	1307	501	0.00	67.0	1.22
Crystal 986RR	106	288.0	106	7008	124	1.19	43.58	114	1052	131	15.58	24.47	350	1244	458	0.00	68.7	1.90
Hilleshög 4012RR	127	267.4	99	5733	101	1.22	37.41	98	806	100	14.60	21.35	535	1280	411	0.00	68.0	2.88
Hilleshög 4022RR	103	267.5	99	5397	95	1.32	37.42	98	755	94	14.69	20.08	446	1373	490	0.00	68.7	2.78
Hilleshög 4094RR	113	269.1	99	5622	99	1.35	37.92	99	798	99	14.82	20.64	452	1412	512	0.00	61.7	2.16
Hilleshog 4195RR	120	249.0	92	4977	88	1.41	31.87	83	637	79	13.86	19.99	608	1321	517	0.00	64.2	2.41
Hilleshög 4236RR(9236)	110	286.9	106	5442	96	1.17	43.26	113	820	102	15.51	18.97	291	1419	425	0.00	75.8	2.63
Hilleshög 4300RR(9300)	108	268.9	99	5783	102	1.23	37.86	99	807	100	14.68	21.59	416	1389	427	0.00	71.7	1.72
Seedex Victor RR	117	263.8	98	5936	105	1.00	36.31	95	821	102	14.18	22.57	396	1095	340	0.00	66.1	1.95
Seedex Vision RR	104	273.3	101	5566	98	1.16	39.17	102	814	101	14.82	20.14	374	1319	415	0.00	62.0	2.51
Seedex Xavier RR(0816)	124	275.7	102	5627	99	1.14	39.91	104	809	101	14.92	20.62	375	1236	414	0.07	73.8	2.46
SESVdh 36175RR	109	276.8	102	6384	113	1.14	40.24	105	929	116	14.99	22.81	448	1227	396	0.00	77.1	1.73
SESVdh 36812RR	111	248.9	92	5976	105	1.07	31.83	83	761	95	13.51	24.12	480	1045	383	0.00	64.7	1.98
SESVdh 36917RR	102	272.2	101	5360	95	1.10	38.85	101	757	94	14.71	19.90	385	1231	378	0.00	72.2	2.57
SESVdh 36918RR	125	276.7	102	6080	107	1.04	40.19	105	880	109	14.88	22.02	331	1206	365	0.07	66.7	1.94
RR Filler #01	130	269.5	100	6219	110	1.42	38.02	99	881	110	14.90	22.98	428	1596	519	0.00	69.4	2.94
Trial Mean		270.5		5667		1.27	38.32		804		14.79	20.92	418	1360	469	0.00	69.2	2.66
Coeff. of Var. (%)		3.9		7.7		9.8	8.2		11.0		3.2	6.3	18.1	7.7	14.6		8.6	30.92
Mean LSD (0.05)		13.0		594		0.16	3.89		118		0.58	1.81	94	137	85		6.8	1.03
Mean LSD (0.01)		17.1		786		0.21	5.14		156		0.77	2.40	125	181	112		9.0	1.36
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**	**

* 2013 Data from Crookston MN (Sand Syndrome conditions)

Analyzed 11/06/2013 11:08

Created 11-6-2013.

@ Some varieties not approved for sale. Refer to approval list for approval status.

Trial # = 138606

++ Revenue estimates are based on a \$53.20 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

S-Synd ratings on a scale of 1-9. (1=Ex, 9=Poor).

Table 10. 2013 Performance of Varieties - ACSC RR Commercial Yield Trial
Alvarado MN - All Characters

Description @	Code	Rec/T lbs.	Rec/T %Mean	Rec/A lbs.	Rec/A %Mean	Loss Mol %	Rev/T \$ ++	Rev/T %Mean	Rev/A \$ ++	Rev/A %Mean	Sugar %	Yield T/A	Na ppm	K ppm	AmN ppm	Bolter %	Emerg. %
BTS 80RR32	121	319.3	102	9686	115	1.18	53.00	103	1608	116	17.15	30.26	223	1768	368	0.00	68.4
BTS 80RR52	123	318.5	101	9272	110	1.30	52.76	103	1533	111	17.22	29.22	167	1807	465	0.00	70.5
BTS 81RR17	101	309.5	99	8165	97	1.34	50.04	97	1321	96	16.81	26.38	215	1819	476	0.00	73.7
BTS 81RR78	122	328.7	105	9517	113	1.20	55.81	109	1615	117	17.63	29.03	125	1662	437	0.00	69.0
BTS 89RR10	128	344.2	110	8381	99	1.19	60.46	118	1470	106	18.40	24.36	164	1783	389	0.00	69.7
BTS 89RR50	118	298.5	95	9038	107	1.39	46.74	91	1416	103	16.30	30.33	280	1968	445	0.00	71.8
BTS 89RR83	107	306.8	98	8886	105	1.08	49.25	96	1429	103	16.43	28.72	229	1555	342	0.00	69.2
Crystal 093RR	119	324.5	103	9411	112	1.18	54.56	106	1581	114	17.41	29.04	153	1652	423	0.07	78.4
Crystal 095RR	129	321.7	102	9669	115	1.22	53.72	104	1615	117	17.31	30.01	201	1649	436	0.00	71.7
Crystal 101RR	114	319.0	102	9709	115	1.33	52.89	103	1607	116	17.28	30.45	213	2014	414	0.00	73.4
Crystal 658RR	126	296.6	94	7404	88	1.05	46.18	90	1152	83	15.88	24.93	213	1619	306	0.00	73.2
Crystal 765RR	112	327.5	104	9446	112	1.13	55.44	108	1597	116	17.51	28.91	239	1654	353	0.00	70.2
Crystal 768RR	116	320.1	102	8891	105	1.31	53.23	103	1475	107	17.32	27.91	207	1824	457	0.00	69.0
Crystal 875RR	105	296.2	94	8065	96	1.32	46.05	90	1256	91	16.11	27.19	307	1743	436	0.00	68.7
Crystal 985RR	115	304.1	97	8558	101	1.17	48.41	94	1363	99	16.37	28.08	246	1654	376	0.00	73.5
Crystal 986RR	106	320.6	102	8839	105	1.07	53.39	104	1472	107	17.10	27.58	212	1517	349	0.00	68.8
Hilleshög 4012RR	127	311.4	99	7963	94	1.08	50.62	98	1296	94	16.65	25.42	280	1527	332	0.00	69.4
Hilleshög 4022RR	103	307.9	98	7996	95	1.16	49.56	96	1284	93	16.56	26.10	235	1621	387	0.00	75.8
Hilleshög 4094RR	113	313.5	100	8125	96	1.14	51.24	100	1326	96	16.82	25.98	225	1606	376	0.00	72.7
Hilleshög 4195RR	120	300.3	96	8111	96	1.23	47.28	92	1275	92	16.24	27.13	314	1740	375	0.00	74.1
Hilleshög 4236RR(9236)	110	327.6	104	7148	85	1.06	55.48	108	1213	88	17.43	21.85	170	1564	337	0.00	76.5
Hilleshög 4300RR(9300)	108	307.1	98	7711	91	1.08	49.32	96	1239	90	16.44	25.02	238	1633	320	0.00	75.4
Seedex Victor RR	117	306.0	97	7721	92	0.97	48.99	95	1236	90	16.27	25.28	236	1487	273	0.00	71.5
Seedex Vision RR	104	313.6	100	7798	92	0.97	51.28	100	1276	92	16.65	24.86	168	1548	285	0.00	64.1
Seedex Xavier RR(0816)	124	308.6	98	7296	86	1.09	49.78	97	1177	85	16.52	23.59	245	1675	311	0.00	70.8
SESVdh 36175RR	109	312.9	100	7501	89	1.06	51.05	99	1225	89	16.70	24.06	205	1660	307	0.00	73.4
SESVdh 36812RR	111	302.7	96	8328	99	1.02	47.99	93	1319	96	16.15	27.65	227	1427	330	0.00	73.2
SESVdh 36917RR	102	322.3	103	7864	93	0.95	53.88	105	1316	95	17.06	24.25	199	1444	277	0.14	70.1
SESVdh 36918RR	125	315.6	100	7362	87	0.99	51.88	101	1213	88	16.77	23.34	175	1585	286	0.00	72.4
RR Filler #01	130	317.7	101	9289	110	1.35	52.52	102	1535	111	17.23	29.27	246	2033	414	0.00	72.8
Trial Mean		314.1		8438		1.15	51.43		1381		16.86	26.87	219	1675	369	0.00	71.7
Coeff. of Var. (%)		2.9		4.7		7.0	5.3		6.4		2.5	4.1	20.0	5.7	10.5		7.6
Mean LSD (0.05)		11.6		507		0.10	3.49		113		0.54	1.33	58	122	50		6.2
Mean LSD (0.01)		15.4		670		0.13	4.62		149		0.72	1.76	76	161	66		8.2
Sig Lvl		**		**		**	**		**		**	**	**	**	**		*

* 2013 Data from Alvarado MN

Analyzed 10/23/2013 10:30

Created 11-6-2013.

@ Some varieties not approved for sale. Refer to approval list for approval status.

Trial # = 138608

++ Revenue estimates are based on a \$53.20 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 11. 2013 Performance of Varieties - ACSC RR Commercial Yield Trial
St Thomas ND - All Characters

Description @	Code	Rec/T lbs.	Rec/T %Mean	Rec/A lbs.	Rec/A %Mean	Loss Mol %	Rev/T \$ ++	Rev/T %Mean	Rev/A \$ ++	Rev/A %Mean	Sugar %	Yield T/A	Na ppm	K ppm	AmN ppm	Bolter %	Emerg. %
BTS 80RR32	121	328.4	100	7880	108	1.78	55.74	99	1329	107	18.22	24.17	576	2077	616	0.00	72.6
BTS 80RR52	123	333.8	101	7692	105	1.75	57.36	102	1318	106	18.43	23.24	423	2223	610	0.00	67.5
BTS 81RR17	101	316.8	96	6844	94	1.98	52.24	93	1128	91	17.81	21.58	560	2220	732	0.00	74.6
BTS 81RR78	122	347.6	105	7775	106	1.69	61.49	110	1370	110	19.08	22.48	403	2030	615	0.00	71.1
BTS 89RR10	128	355.0	108	6953	95	1.67	63.72	114	1246	100	19.43	19.63	407	2184	562	0.00	73.5
BTS 89RR50	118	315.2	96	7924	108	1.89	51.75	92	1297	104	17.64	25.20	579	2396	618	0.00	69.9
BTS 89RR83	107	314.0	95	7130	97	1.77	51.40	92	1161	93	17.47	22.93	694	2095	554	0.00	71.0
Crystal 093RR	119	351.8	107	8011	109	1.56	62.75	112	1423	115	19.14	22.88	259	1992	588	0.00	76.2
Crystal 095RR	129	339.6	103	7960	109	1.72	59.08	105	1381	111	18.71	23.45	449	2110	603	0.00	72.4
Crystal 101RR	114	317.1	96	7752	106	1.95	52.34	93	1274	103	17.82	24.52	705	2388	621	0.00	74.1
Crystal 658RR	126	328.1	100	7052	96	1.54	55.63	99	1193	96	17.94	21.60	458	1991	492	0.00	69.2
Crystal 765RR	112	344.7	105	7590	104	1.61	60.64	108	1334	107	18.87	22.10	484	2041	523	0.00	69.4
Crystal 768RR	116	327.9	100	7406	101	1.86	55.59	99	1252	101	18.26	22.65	642	2204	619	0.00	64.5
Crystal 875RR	105	332.0	101	7472	102	1.76	56.80	101	1276	103	18.33	22.62	550	2101	606	0.00	70.0
Crystal 985RR	115	344.1	104	7327	100	1.71	60.43	108	1294	104	18.89	21.08	453	2062	621	0.00	73.2
Crystal 986RR	106	354.1	107	7594	104	1.56	63.44	113	1360	110	19.26	21.47	456	1954	522	0.00	72.1
Hilleshög 4012RR	127	309.5	94	7211	99	1.78	50.06	89	1162	94	17.25	23.39	791	2165	511	0.00	71.7
Hilleshög 4022RR	103	318.3	97	6983	95	1.79	52.68	94	1154	93	17.72	21.96	572	2197	592	0.00	68.7
Hilleshög 4094RR	113	303.6	92	6589	90	2.03	48.29	86	1047	84	17.20	21.85	701	2229	718	0.00	68.4
Hilleshög 4195RR	120	299.1	91	7249	99	2.01	46.93	84	1141	92	16.96	24.07	827	2207	660	0.00	74.5
Hilleshög 4236RR(9236)	110	360.4	109	7007	96	1.59	65.33	117	1271	102	19.61	19.37	303	2027	595	0.07	79.5
Hilleshög 4300RR(9300)	108	313.4	95	6760	92	1.72	51.22	91	1102	89	17.38	21.65	587	2225	524	0.00	78.5
Seedex Victor RR	117	308.1	94	6909	94	1.67	49.63	89	1111	89	17.07	22.48	626	1925	556	0.00	66.6
Seedex Vision RR	104	340.7	103	7350	100	1.61	59.42	106	1287	104	18.65	21.50	460	2069	523	0.00	63.9
Seedex Xavier RR(0816)	124	335.5	102	6735	92	1.62	57.86	103	1168	94	18.40	19.98	446	2132	527	0.00	68.9
SESVdh 36175RR	109	340.5	103	6949	95	1.52	59.35	106	1208	97	18.55	20.43	419	2067	476	0.00	74.4
SESVdh 36812RR	111	308.5	94	7439	102	1.69	49.75	89	1196	96	17.10	24.08	604	1920	585	0.00	71.2
SESVdh 36917RR	102	344.1	104	7298	100	1.49	60.44	108	1288	104	18.68	21.19	423	1999	463	0.00	69.8
SESVdh 36918RR	125	318.4	97	6632	91	1.78	52.72	94	1109	89	17.69	20.61	440	2274	614	0.14	62.0
RR Filler #01	130	333.3	101	8070	110	1.88	57.20	102	1389	112	18.57	24.04	558	2427	603	0.00	67.6
Trial Mean		329.5		7318		1.73	56.04		1242		18.20	22.27	528	2131	582	0.00	70.9
Coeff. of Var. (%)		5.0		6.2		10.3	8.8		9.1		3.9	5.4	26.2	5.1	15.7		8.2
Mean LSD (0.05)		22.2		622		0.24	6.68		154		0.97	1.61	188	143	124		7.0
Mean LSD (0.01)		29.4		823		0.32	8.84		204		1.28	2.13	249	189	164		9.2
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2013 Data from St Thomas ND

Analyzed 10/23/2013 13:46

Created 11-6-2013.

@ Some varieties not approved for sale. Refer to approval list for approval status.

Trial # = 138609

++ Revenue estimates are based on a \$53.20 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 12. 2013 Performance of Varieties - ACSC RR Commercial Yield Trial
Grafton ND - All Characters

Description @	Code	Rec/T lbs.	Rec/T %Mean	Rec/A lbs.	Rec/A %Mean	Loss Mol %	Rev/T \$ ++	Rev/T %Mean	Rev/A \$ ++	Rev/A %Mean	Sugar %	Yield T/A	Na ppm	K ppm	AmN ppm	Bolter %	Emerg. %
BTS 80RR32	121	348.0	100	9747	105	1.15	61.61	100	1729	105	18.55	28.02	174	1867	332	0.00	66.2
BTS 80RR52	123	353.3	101	10211	110	1.24	63.20	102	1818	111	18.89	28.97	123	1946	400	0.00	66.1
BTS 81RR17	101	351.7	101	8844	95	1.24	62.73	102	1573	96	18.83	25.24	132	1948	396	0.00	73.5
BTS 81RR78	122	358.8	103	9411	101	1.13	64.86	105	1691	103	19.04	26.30	109	1811	355	0.00	69.0
BTS 89RR10	128	364.9	105	8366	90	1.10	66.70	108	1529	93	19.37	23.04	125	1967	290	0.00	72.1
BTS 89RR50	118	339.0	97	10267	111	1.31	58.91	95	1789	109	18.26	30.30	209	2170	359	0.00	68.1
BTS 89RR83	107	343.8	99	9346	101	1.09	60.36	98	1637	100	18.31	27.40	153	1767	325	0.00	72.8
Crystal 093RR	119	359.5	103	9994	108	1.09	65.07	105	1813	110	19.08	27.80	106	1793	331	0.00	75.5
Crystal 095RR	129	350.0	100	8907	96	1.12	62.21	101	1580	96	18.65	25.73	133	1916	315	0.00	67.0
Crystal 101RR	114	352.7	101	10362	112	1.24	63.03	102	1843	112	18.89	29.53	158	2124	343	0.00	75.6
Crystal 658RR	126	339.8	98	8794	95	1.06	59.16	96	1516	92	18.05	26.08	137	1876	276	0.00	71.9
Crystal 765RR	112	360.9	104	9575	103	1.13	65.49	106	1730	105	19.19	26.69	151	1867	330	0.00	71.2
Crystal 768RR	116	346.2	99	10063	108	1.19	61.06	99	1771	108	18.48	28.96	141	1983	348	0.00	71.5
Crystal 875RR	105	343.5	99	9563	103	1.21	60.27	98	1669	102	18.36	27.95	186	2014	332	0.14	64.1
Crystal 985RR	115	346.6	100	8993	97	1.20	61.20	99	1595	97	18.52	25.78	155	1910	364	0.00	66.1
Crystal 986RR	106	364.4	105	9926	107	1.01	66.54	108	1803	110	19.21	27.30	133	1657	296	0.00	67.2
Hilleshög 4012RR	127	340.2	98	9111	98	1.16	59.26	96	1590	97	18.18	26.85	186	1903	326	0.00	74.8
Hilleshög 4022RR	103	345.9	99	9002	97	1.19	60.98	99	1579	96	18.47	26.12	148	2008	332	0.00	78.6
Hilleshög 4094RR	113	344.9	99	9195	99	1.17	60.69	98	1613	98	18.41	26.76	148	1940	334	0.00	72.1
Hilleshög 4195RR	120	340.5	98	9250	100	1.16	59.37	96	1609	98	18.19	27.28	154	1998	310	0.00	73.5
Hilleshög 4236RR(9236)	110	354.3	102	8475	91	1.12	63.50	103	1522	93	18.83	23.84	151	1765	347	0.00	74.6
Hilleshög 4300RR(9300)	108	342.1	98	8708	94	1.14	59.85	97	1517	92	18.21	25.44	159	1953	302	0.00	67.0
Seedex Victor RR	117	339.7	98	8977	97	0.97	59.12	96	1555	95	17.99	26.69	119	1697	264	0.00	67.2
Seedex Vision RR	104	348.8	100	8939	96	1.09	61.85	100	1578	96	18.54	25.84	150	1856	297	0.00	56.7
Seedex Xavier RR(0816)	124	346.2	99	8499	91	1.08	61.07	99	1505	92	18.41	24.58	136	1929	279	0.00	62.8
SESVdh 36175RR	109	344.7	99	8569	92	1.05	60.62	98	1514	92	18.27	24.72	133	1872	266	0.00	69.0
SESVdh 36812RR	111	336.0	96	9638	104	1.08	58.01	94	1651	101	17.86	28.84	151	1751	318	0.00	67.2
SESVdh 36917RR	102	348.1	100	8874	96	1.00	61.65	100	1566	95	18.40	25.59	126	1774	261	0.14	64.7
SESVdh 36918RR	125	353.0	101	9077	98	1.09	63.11	102	1621	99	18.75	25.74	113	1918	299	0.07	68.1
RR Filler #01	130	342.7	98	10047	108	1.36	60.03	97	1752	107	18.48	29.42	165	2259	391	0.00	69.5
Trial Mean		348.3		9291		1.14	61.72		1642		18.56	26.76	145	1908	324	0.00	69.5
Coeff. of Var. (%)		2.2		6.3		7.9	3.7		6.8		2.0	6.2	20.9	5.1	14.2		10.9
Mean LSD (0.05)		10.2		776		0.11	3.07		144		0.48	2.28	38	124	59		8.6
Mean LSD (0.01)		13.5		1027		0.15	4.06		191		0.64	3.02	51	164	78		11.4
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2013 Data from Grafton ND

Analyzed 10/24/2013 09:04

Created 11-6-2013.

@ Some varieties not approved for sale. Refer to approval list for approval status.

Trial # = 138610

++ Revenue estimates are based on a \$53.20 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 13. 2013 Performance of Varieties - ACSC RR Commercial Yield Trial
Hallock MN - All Characters

Description @	Code	Rec/T lbs.	Rec/T %Mean	Rec/A lbs.	Rec/A %Mean	Loss Mol %	Rev/T \$ ++	Rev/T %Mean	Rev/A \$ ++	Rev/A %Mean	Sugar %	Yield T/A	Na ppm	K ppm	AmN ppm	Bolter %	Emerg. %
BTS 80RR32	121	367.3	105	8886	111	1.27	67.41	109	1627	115	19.63	24.23	232	2201	316	0.00	68.4
BTS 80RR52	123	347.4	100	8275	103	1.54	61.42	99	1461	103	18.91	23.88	270	2340	476	0.00	72.3
BTS 81RR17	101	354.7	102	7943	99	1.40	63.61	103	1423	100	19.13	22.42	216	2296	392	0.00	74.5
BTS 81RR78	122	368.4	106	8659	108	1.36	67.74	110	1589	112	19.78	23.58	206	2150	412	0.00	75.0
BTS 89RR10	128	375.2	108	7521	94	1.22	69.78	113	1397	99	19.98	20.08	168	2139	316	0.00	71.9
BTS 89RR50	118	337.6	97	8959	112	1.58	58.50	95	1550	109	18.45	26.57	358	2500	431	0.00	73.7
BTS 89RR83	107	362.4	104	8512	106	1.28	65.94	107	1548	109	19.39	23.50	274	2166	310	0.00	73.9
Crystal 093RR	119	357.1	102	8280	104	1.35	64.36	104	1491	105	19.20	23.20	232	2115	397	0.00	79.5
Crystal 095RR	129	344.8	99	8624	108	1.34	60.64	98	1513	107	18.59	25.09	274	2223	360	0.00	71.5
Crystal 101RR	114	341.1	98	8110	101	1.52	59.53	96	1413	100	18.57	23.79	344	2515	391	0.00	77.8
Crystal 658RR	126	338.3	97	7759	97	1.19	58.71	95	1346	95	18.10	22.90	281	2016	287	0.00	74.0
Crystal 765RR	112	367.1	105	8637	108	1.31	67.34	109	1585	112	19.65	23.50	276	2203	327	0.00	78.0
Crystal 768RR	116	363.9	104	8578	107	1.35	66.39	108	1568	111	19.55	23.55	244	2262	357	0.00	72.1
Crystal 875RR	105	329.5	95	7951	99	1.32	56.07	91	1354	96	17.80	24.09	313	2310	294	0.00	72.1
Crystal 985RR	115	351.6	101	8122	102	1.14	62.70	102	1452	103	18.71	22.98	216	2100	254	0.00	73.8
Crystal 986RR	106	370.7	106	8111	101	1.23	68.43	111	1497	106	19.76	21.93	229	2056	317	0.00	67.7
Hilleshög 4012RR	127	345.5	99	8173	102	1.31	60.85	99	1441	102	18.57	23.64	357	2223	297	0.00	74.2
Hilleshög 4022RR	103	336.2	96	7871	98	1.34	58.08	94	1355	96	18.14	23.50	271	2241	342	0.00	68.0
Hilleshög 4094RR	113	330.6	95	7675	96	1.28	56.38	91	1311	93	17.80	23.21	269	2200	306	0.00	68.9
Hilleshög 4195RR	120	344.2	99	8563	107	1.40	60.48	98	1505	106	18.61	24.87	330	2264	358	0.00	74.8
Hilleshög 4236RR(9236)	110	359.7	103	7786	97	1.24	65.13	105	1408	99	19.23	21.71	269	1957	344	0.00	82.2
Hilleshög 4300RR(9300)	108	319.4	92	7006	88	1.24	53.03	86	1163	82	17.22	21.92	384	2053	279	0.00	79.7
Seedex Victor RR	117	331.8	95	7178	90	1.17	56.74	92	1227	87	17.75	21.62	279	1970	278	0.00	70.2
Seedex Vision RR	104	352.7	101	7440	93	1.08	63.02	102	1331	94	18.71	21.11	215	1911	247	0.00	61.5
Seedex Xavier RR(0816)	124	343.4	99	7317	91	1.16	60.24	98	1283	91	18.35	21.34	208	2131	261	0.07	61.1
SESVdh 36175RR	109	348.2	100	7110	89	1.14	61.66	100	1260	89	18.56	20.44	238	2016	263	0.00	71.1
SESVdh 36812RR	111	321.2	92	7757	97	1.19	53.56	87	1297	92	17.26	24.07	366	1941	276	0.00	68.6
SESVdh 36917RR	102	352.6	101	7612	95	1.11	63.00	102	1359	96	18.74	21.63	254	1872	265	0.00	67.1
SESVdh 36918RR	125	343.0	98	6853	86	1.13	60.11	97	1200	85	18.27	20.05	227	1948	270	0.00	67.9
RR Filler #01	130	347.6	100	8687	109	1.53	61.49	100	1536	108	18.92	25.02	309	2535	401	0.00	77.1
Trial Mean		348.4		7998		1.29	61.75		1416		18.71	22.98	270	2162	327	0.00	72.3
Coeff. of Var. (%)		5.0		6.7		8.4	8.5		9.3		4.4	5.4	28.5	5.9	14.2		7.7
Mean LSD (0.05)		21.8		673		0.14	6.55		166		1.03	1.57	97	155	59		6.5
Mean LSD (0.01)		28.8		889		0.18	8.65		219		1.36	2.08	129	204	77		8.5
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2013 Data from Hallock MN

Analyzed 10/24/2013 09:33

Created 11-6-2013.

@ Some varieties not approved for sale. Refer to approval list for approval status.

Trial # = 138611

++ Revenue estimates are based on a \$53.20 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 15. 2013 Performance of Varieties - ACSC Experimental RR Official Trial

6 sites - All Characters

Adjusted to Comm. Trial Status		Rec/T	Rec/T	Rec/A	Rec/A	Loss	Rev/T	Rev/T	Rev/A	Rev/A	Sugar	Yield	Na	K	AmN	Bolter	Emerg.	Tare
Description @	Code	lbs.	%Mean	lbs.	%Mean	Mol %	\$ ++	%Mean	\$ ++	%Mean	%	T/A	ppm	ppm	ppm	%^	%^	%
BTS 82RR22	208	342.6	106	8747	102	1.26	59.81	111	1523	106	18.41	25.63	228	1900	387	0.11	79.7	4.0
BTS 82RR28	256	324.1	100	9287	108	1.39	54.40	101	1552	108	17.59	28.83	268	2075	426	0.00	78.7	3.8
BTS 82RR33	213	325.1	101	9602	112	1.28	54.69	101	1603	112	17.55	29.85	293	2004	357	0.00	75.4	3.9
BTS 82RR80	243	331.0	103	8255	96	1.33	56.43	104	1396	97	17.89	25.20	208	1866	462	0.07	77.8	5.0
BTS 8325	220	330.6	102	8905	103	1.25	56.31	104	1509	105	17.80	27.12	276	1857	383	0.00	81.1	4.5
BTS 8337	254	337.2	104	8942	104	1.30	58.22	108	1535	107	18.18	26.77	224	1891	431	0.04	74.0	5.0
BTS 8354	253	327.7	102	8243	96	1.48	55.45	103	1387	97	17.85	25.37	252	2040	510	0.00	72.5	5.1
BTS 8363	232	321.6	100	9466	110	1.24	53.66	99	1571	110	17.34	29.61	267	1905	361	0.00	75.8	4.0
BTS 8367	251	328.0	102	8630	100	1.25	55.55	103	1454	102	17.67	26.54	218	1861	397	0.00	75.2	4.8
BTS 8390	209	313.1	97	9624	112	1.33	51.15	95	1564	109	16.97	30.94	327	2064	363	0.07	76.8	4.4
BTS 83CN	239	329.1	102	8592	100	1.20	55.85	103	1445	101	17.67	26.47	238	1876	342	0.00	83.0	4.3
Crystal 246RR	206	324.7	101	9534	111	1.30	54.57	101	1591	111	17.54	29.63	277	1974	384	0.00	71.0	3.9
Crystal 247RR	250	325.7	101	9234	107	1.28	54.86	102	1546	108	17.58	28.61	281	2080	341	0.00	66.5	3.5
Crystal 248RR	223	321.8	100	9256	108	1.38	53.72	99	1534	107	17.46	29.07	241	2131	410	0.00	71.1	3.7
Crystal 354RR	244	334.2	104	8500	99	1.42	57.35	106	1447	101	18.13	25.72	216	2008	491	0.00	71.6	4.9
Crystal 355RR	246	331.6	103	8656	101	1.41	56.59	105	1468	102	17.99	26.35	251	2016	468	0.00	69.4	4.7
Crystal 356RR	212	320.1	99	9727	113	1.28	53.24	99	1606	112	17.30	30.68	265	1977	375	0.00	69.2	4.4
Crystal 357RR	217	323.4	100	9760	113	1.30	54.20	100	1626	114	17.48	30.39	259	2083	362	0.04	67.1	4.0
Crystal 358RR	230	317.1	98	9065	105	1.42	52.37	97	1487	104	17.28	28.88	277	2224	414	0.00	70.2	4.0
Crystal 359RR	257	316.7	98	9498	110	1.46	52.22	97	1560	109	17.29	30.21	320	2153	451	0.04	68.3	3.6
Crystal 981RR	237	317.5	98	8967	104	1.52	52.46	97	1471	103	17.37	28.53	344	2215	470	0.00	65.1	3.8
Hilleshög 4302RR(9302)	249	328.0	102	8295	96	1.21	55.55	103	1401	98	17.63	25.38	253	1833	357	0.00	66.4	3.5
Hilleshög 4303RR(9303)	226	330.1	102	8537	99	1.26	56.15	104	1448	101	17.77	25.97	254	1813	402	0.00	72.7	4.3
Hilleshög 4448RR(9448)	258	326.3	101	9042	105	1.21	55.01	102	1516	106	17.53	27.88	225	1728	401	0.00	68.7	3.5
Hilleshög 9513RR	221	314.5	97	8689	101	1.37	51.57	95	1420	99	17.09	27.76	357	2028	398	0.00	78.7	4.5
Hilleshög 9514RR	255	325.8	101	8269	96	1.40	54.87	102	1385	97	17.69	25.59	297	1974	456	0.00	78.8	5.2
Hilleshög 9516RR	245	323.6	100	9113	106	1.36	54.26	100	1519	106	17.54	28.40	299	1973	423	0.00	78.6	5.1
Hilleshög 9517RR	211	333.7	103	7825	91	1.31	57.22	106	1335	93	18.01	23.64	324	1938	386	0.00	67.7	5.1
Hilleshög 9521RR	219	306.6	95	8568	100	1.37	49.25	91	1370	96	16.69	28.07	338	2058	399	0.00	76.5	3.9
Hilleshög 9522RR	203	317.5	98	8511	99	1.29	52.45	97	1400	98	17.17	26.95	252	2029	372	0.00	67.4	3.9
Hilleshög 9525RR	227	338.1	105	7296	85	1.21	58.50	108	1259	88	18.13	21.56	213	1766	388	0.00	61.2	3.8
Hilleshög 9528RR	247	327.0	101	8630	100	1.14	55.25	102	1454	102	17.52	26.47	235	1702	354	0.00	72.2	4.4
Hilleshög 9531RR	248	309.8	96	7322	85	1.27	50.20	93	1179	82	16.77	23.80	387	1808	372	0.00	63.9	4.5
Maribo 104RR	215	335.9	104	7411	86	1.22	57.85	107	1272	89	18.04	22.18	255	1789	382	0.00	57.5	4.6
Maribo 305RR	233	323.9	100	9154	106	1.15	54.33	101	1529	107	17.36	28.43	241	1647	373	0.00	76.7	3.5
Maribo 306RR	228	323.4	100	8542	99	1.28	54.21	100	1430	100	17.47	26.45	295	1867	399	0.32	59.8	4.5
Maribo 307RR	202	308.8	96	8691	101	1.31	49.91	92	1399	98	16.75	28.28	306	1987	384	0.00	71.6	3.6
Maribo 309RR	236	330.1	102	9354	109	1.14	56.17	104	1586	111	17.68	28.45	216	1685	365	0.00	74.5	3.8
Maribo MA102RR	218	325.4	101	9301	108	1.13	54.77	101	1564	109	17.42	28.58	234	1674	353	0.00	74.3	3.6
Seedex RR0831N	222	319.9	99	7740	90	1.20	53.17	98	1278	89	17.21	24.41	262	1839	344	0.00	71.2	5.6
Seedex RR0832	205	325.0	101	8633	100	1.21	54.66	101	1448	101	17.46	26.65	255	1933	326	0.00	67.2	4.3
Seedex RR0833	229	318.5	99	7622	89	1.24	52.76	98	1259	88	17.18	24.02	231	1997	348	0.04	56.4	4.2
Seedex RR0834TT	234	305.8	95	8577	100	1.29	49.03	91	1369	96	16.58	28.20	253	1892	407	0.00	66.8	4.0
Seedex RR0835	241	326.6	101	7717	90	1.20	55.14	102	1294	90	17.54	23.81	248	1889	340	0.00	51.7	3.8
Seedex SX0828NRR	252	318.1	99	8228	96	1.23	52.62	97	1351	94	17.14	26.13	264	1893	355	0.00	70.2	4.1
Seedex SX0829NRR	242	318.4	99	7933	92	1.29	52.71	98	1306	91	17.21	25.12	247	1993	386	0.00	66.6	5.0
SESVdh 36271RR	204	319.3	99	8094	94	1.25	52.96	98	1337	93	17.23	25.47	255	1977	356	0.04	57.7	3.8
SESVdh 36272RR	210	332.3	103	8554	99	1.14	56.79	105	1454	102	17.77	25.93	197	1805	337	0.00	72.3	4.8
SESVdh 36273RR	224	324.7	101	8206	95	1.23	54.56	101	1376	96	17.47	25.37	267	1906	348	0.00	55.5	3.9
SESVdh 36275RR	235	322.4	100	8314	97	1.22	53.88	100	1381	96	17.34	25.99	237	1955	338	0.04	60.3	3.8
SESVdh 36277NRR	240	303.7	94	7791	91	1.27	48.40	90	1235	86	16.46	25.84	303	1930	363	0.00	59.5	4.0
SESVdh 38219TT RR(36219)	238	301.9	94	8553	99	1.30	47.88	89	1349	94	16.40	28.49	255	1929	409	0.00	67.5	4.6
SESVdh RR331	231	319.8	99	8036	93	1.20	53.12	98	1330	93	17.20	25.28	252	1884	338	0.04	65.4	4.1
SESVdh RR332	216	323.1	100	8384	97	1.21	54.08	100	1396	97	17.37	26.15	258	1880	347	0.00	67.8	4.1
SESVdh RR333	225	324.5	101	8600	100	1.18	54.51	101	1437	100	17.42	26.68	206	1952	317	0.00	66.0	4.1
SESVdh RR334	207	327.1	101	7941	92	1.21	55.27	102	1335	93	17.59	24.47	250	1953	329	0.00	58.3	3.3
SESVdh RR335	201	320.9	99	8389	97	1.21	53.46	99	1394	97	17.27	26.23	258	1860	348	0.00	61.8	3.8
SESVdh RR336	214	313.0	97	8991	104	1.15	51.14	95	1459	102	16.82	28.98	268	1731	344	0.04	64.5	3.8
RR Filler #02	259	330.6	102	9536	111	1.26	56.30	104	1614	113	17.80	29.08	255	2058	337	0.07	67.7	3.3
RR Filler #05	260	321.3	100	7839	91	1.38	53.58	99	1302	91	17.44	24.50	366	2032	404	0.00	64.9	5.7
BTS 80RR52(Check)	261	329.1	102	8936	104	1.40	55.85	103	1507	105	17.84	27.39	220	2006	470	0.00	66.9	3.8
Crystal 875RR(Check)	262	316.8	98	8495	99	1.40	52.26	97	1393	97	17.24	26.98	309	2075	424	0.04	68.6	4.7
Crystal 658RR(Check)	263	312.4	97	8154	95	1.15	50.97	94	1233	92	16.79	26.26	266	1817	316	0.00	68.1	4.3
Hilleshög 4012RR(Check)	264	315.1	98	8563	99	1.31	51.75	96	1400	98	17.07	27.34	386	1874	385	0.00	74.0	4.2
Trial Mean		322.9		8607		1.28	54.02		1433		17.43	26.86	267	1931	384	0.01	69.1	4.2
Coeff. of Var. (%)		2.7		6.0		7.6	4.8		7.1		2.4	5.6	20.1	5.0	14.4		9.0	33.9
Mean LSD (0.05)		8.3		446		0.06	2.43		87		0.42	1.38	38	80	36		4.5	0.9
Mean LSD (0.01)		10.9		588		0.09	3.20		114		0.56	1.81	50	105	47		5.9	1.2
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**	**

* 2013 Data from 6 sites

11/06/2013 22:26

Table 16. 2013 Performance of Varieties - ACSC Experimental RR Official Trial

Casselton ND - All Characters

Adjusted to Comm. Trial Status		Rec/T	Rec/T	Rec/A	Rec/A	Loss	Rev/T	Rev/T	Rev/A	Rev/A	Sugar	Yield	Na	K	AmN	Bolter	Emerg.
Description @	Code	lbs.	%Mean	lbs.	%Mean	Mol %	\$ ++	%Mean	\$ ++	%Mean	%	T/A	ppm	ppm	ppm	%^	%^
BTS 82RR22	208	316.0	106	10048	100	1.18	51.72	111	1656	105	17.00	31.67	237	1722	365	0.43	83.0
BTS 82RR28	256	304.5	102	10618	105	1.20	48.40	103	1694	107	16.43	34.84	238	1841	351	0.00	81.9
BTS 82RR33	213	302.6	101	11013	109	1.11	47.88	102	1757	111	16.26	36.21	252	1774	297	0.00	75.5
BTS 82RR80	243	302.8	101	10014	99	1.17	47.95	102	1592	101	16.33	33.09	210	1640	391	0.00	82.9
BTS 8325	220	306.5	103	9874	98	1.16	49.02	105	1585	100	16.50	31.99	249	1668	361	0.00	79.6
BTS 8337	254	310.0	104	10544	105	1.23	50.00	107	1706	108	16.74	34.11	266	1743	390	0.21	78.3
BTS 8354	253	304.2	102	10054	100	1.27	48.33	103	1607	102	16.49	33.05	254	1886	389	0.00	74.0
BTS 8363	232	298.7	100	11025	109	1.06	46.76	100	1733	109	16.02	36.89	230	1666	297	0.00	79.1
BTS 8367	251	303.7	102	9624	96	1.25	48.19	103	1536	97	16.45	31.66	221	1793	413	0.00	80.4
BTS 8390	209	286.9	96	10955	109	1.23	43.36	93	1655	105	15.58	38.31	341	1865	332	0.21	85.0
BTS 83CN	239	300.0	100	10212	101	1.06	47.13	101	1605	101	16.09	34.29	232	1695	289	0.00	82.2
Crystal 246RR	206	293.0	98	11277	112	1.20	45.14	96	1746	110	15.86	38.19	252	1809	351	0.00	73.1
Crystal 247RR	250	295.0	99	10688	106	1.18	45.70	98	1663	105	15.95	36.18	264	1872	321	0.00	77.1
Crystal 248RR	223	303.8	102	10955	109	1.19	48.21	103	1739	110	16.40	36.37	237	1882	335	0.00	78.7
Crystal 354RR	244	307.2	103	9870	98	1.33	49.21	105	1582	100	16.69	32.36	238	1776	465	0.00	81.2
Crystal 355RR	246	308.4	103	10898	108	1.32	49.56	106	1749	111	16.74	35.40	238	1841	440	0.00	76.5
Crystal 356RR	212	284.4	95	10816	107	1.24	42.67	91	1631	103	15.48	37.92	309	1797	374	0.00	74.5
Crystal 357RR	217	294.4	99	11210	111	1.24	45.53	97	1737	110	15.97	37.97	266	1979	341	0.00	72.4
Crystal 358RR	230	296.4	99	10957	109	1.27	46.10	98	1705	108	16.10	37.00	274	1984	356	0.00	73.7
Crystal 359RR	257	294.2	98	10967	109	1.35	45.47	97	1703	108	16.06	37.33	314	1954	409	0.00	78.1
Crystal 981RR	237	289.2	97	10389	103	1.39	44.02	94	1576	100	15.84	35.99	350	1931	429	0.00	69.5
Hilleshög 4302RR(9302)	249	300.6	101	9770	97	1.10	47.30	101	1553	98	16.15	32.18	254	1703	300	0.00	73.7
Hilleshög 4303RR(9303)	226	311.4	104	9839	98	1.17	50.40	108	1599	101	16.76	31.67	259	1681	365	0.00	72.3
Hilleshög 4448RR(9448)	258	305.7	102	10741	107	1.16	48.77	104	1717	108	16.46	34.83	223	1630	379	0.00	69.6
Hilleshög 9513RR	221	292.4	98	9760	97	1.30	44.95	96	1504	95	15.93	33.45	350	1840	393	0.00	83.2
Hilleshög 9514RR	255	288.1	96	8759	87	1.32	43.72	93	1337	84	15.72	30.17	323	1809	421	0.00	81.5
Hilleshög 9516RR	245	296.9	99	11038	110	1.26	46.25	99	1725	109	16.12	37.12	301	1790	388	0.00	81.2
Hilleshög 9517RR	211	308.4	103	9744	97	1.19	49.56	106	1573	99	16.63	31.52	329	1701	351	0.00	74.2
Hilleshög 9521RR	219	287.0	96	10259	102	1.26	43.39	93	1556	98	15.61	35.71	340	1861	354	0.00	78.7
Hilleshög 9522RR	203	297.3	99	9061	90	1.16	46.38	99	1418	90	16.04	30.53	240	1741	348	0.00	63.5
Hilleshög 9525RR	227	315.7	106	9158	91	1.04	51.62	110	1504	95	16.85	28.64	191	1601	310	0.00	65.5
Hilleshög 9528RR	247	315.8	106	10140	101	1.05	51.66	110	1662	105	16.87	32.24	204	1651	302	0.00	76.5
Hilleshög 9531RR	248	288.4	97	8705	86	1.08	43.81	94	1329	84	15.51	29.94	328	1544	301	0.00	73.1
Maribo 104RR	215	319.9	107	8716	86	1.11	52.83	113	1450	92	17.12	27.10	231	1668	327	0.00	58.1
Maribo 305RR	233	302.6	101	10388	103	1.05	47.90	102	1652	104	16.21	34.11	226	1506	331	0.00	79.1
Maribo 306RR	228	306.7	103	9872	98	1.19	49.07	105	1584	100	16.54	32.10	264	1703	370	0.00	69.7
Maribo 307RR	202	288.7	97	10216	101	1.18	43.87	94	1563	99	15.62	35.21	297	1755	335	0.00	74.9
Maribo 309RR	236	314.1	105	10834	108	1.06	51.16	109	1772	112	16.79	34.40	188	1590	331	0.00	75.9
Maribo MA102RR	218	313.5	105	11127	110	1.04	51.00	109	1818	115	16.75	35.47	191	1576	317	0.00	79.5
Seedex RR0831N	222	291.2	97	9656	96	1.13	44.62	95	1490	94	15.71	33.03	286	1671	325	0.00	79.6
Seedex RR0832	205	305.1	102	10379	103	1.06	48.60	104	1657	105	16.35	33.85	231	1686	293	0.00	70.2
Seedex RR0833	229	293.7	98	8552	85	1.16	45.34	97	1328	84	15.86	28.82	210	1896	316	0.00	59.4
Seedex RR0834TT	234	283.8	95	10013	99	1.16	42.48	91	1507	95	15.36	35.10	250	1696	353	0.00	76.9
Seedex RR0835	241	296.7	99	9159	91	1.14	46.17	99	1428	90	15.98	30.90	306	1720	309	0.00	58.3
Seedex SX0828NRR	252	289.9	97	10205	101	1.14	44.24	95	1566	99	15.65	35.09	273	1664	335	0.00	77.7
Seedex SX0829NRR	242	291.7	98	9120	90	1.18	44.76	96	1399	88	15.78	31.44	255	1805	338	0.00	74.8
SESVdh 36271RR	204	303.9	102	9880	98	1.25	48.25	103	1556	98	16.45	32.98	260	1836	385	0.00	70.4
SESVdh 36272RR	210	306.9	103	10128	101	1.02	49.13	105	1630	103	16.40	32.91	198	1648	284	0.00	81.3
SESVdh 36273RR	224	309.4	104	10384	103	1.11	49.84	106	1682	106	16.61	33.47	232	1756	304	0.00	70.3
SESVdh 36275RR	235	288.7	97	9883	98	1.17	43.90	94	1506	95	15.62	34.23	243	1783	344	0.00	62.8
SESVdh 36277NRR	240	282.2	94	9394	93	1.15	42.03	90	1398	88	15.27	33.19	314	1713	319	0.00	57.5
SESVdh 38219TT RR(36219)	238	276.2	92	9643	96	1.19	40.32	86	1422	90	15.01	34.55	264	1668	380	0.00	70.4
SESVdh RR331	231	294.6	99	9460	94	1.11	45.58	97	1473	93	15.85	32.04	269	1744	293	0.00	74.0
SESVdh RR332	216	295.2	99	10082	100	1.13	45.76	98	1573	99	15.91	34.02	274	1792	296	0.00	72.3
SESVdh RR333	225	299.9	100	9720	96	1.06	47.10	101	1533	97	16.09	32.36	211	1748	282	0.00	76.0
SESVdh RR334	207	302.9	101	9359	93	1.13	47.99	103	1489	94	16.30	30.77	246	1791	305	0.00	60.4
SESVdh RR335	201	294.0	98	9107	90	1.10	45.42	97	1411	89	15.82	30.92	256	1686	307	0.00	71.9
SESVdh RR336	214	284.8	95	10768	107	1.05	42.75	91	1628	103	15.31	37.70	298	1527	303	0.00	75.4
RR Filler #02	259	298.9	100	10836	108	1.14	46.84	100	1703	108	16.10	36.13	299	1779	294	0.00	72.9
RR Filler #05	260	302.3	101	8869	88	1.21	47.79	102	1399	88	16.34	29.28	335	1700	361	0.00	74.8
BTS 80RR52(Check)	261	311.4	104	10324	102	1.20	50.39	108	1683	106	16.79	32.99	194	1819	377	0.00	69.1
Crystal 875RR(Check)	262	289.3	97	9969	99	1.41	44.08	94	1523	96	15.87	34.29	362	1882	460	0.00	77.8
Crystal 658RR(Check)	263	287.2	96	10107	100	1.10	43.45	93	1538	97	15.48	34.90	269	1680	308	0.00	71.9
Hilleshög 4012RR(Check)	264	291.9	98	9794	97	1.28	44.81	96	1504	95	15.88	33.64	419	1729	378	0.00	78.8
Trial Mean		298.8		10077		1.17	46.80		1583		16.14	33.69	265	1748	346	0.00	74.2
Coeff. of Var. (%)		3.1		6.7		5.8	5.6		8.1		2.7	5.9	17.5	5.0	9.1		8.0
Mean LSD (0.05)		13.8		990		0.10	3.95		189		0.66	3.01	71	133	48		9.1
Mean LSD (0.01)		18.2		1307		0.14	5.21		249		0.87	3.97	94	175	63		12.1
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2013 Data from Casselton ND

11/01/2013 14:04

Created 11-6-2013.

^ Vigor not collected. Bolter & emergence not adjusted to commercial status.

Trial # = 138301

@ Some varieties not approved for sale. Refer to approval list for approval status.

++ Revenue estimates are based on a \$53.20 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 17. 2013 Performance of Varieties - ACSC Experimental RR Official Trial

Hendrum MN (Root Aphids & Drought conditions) - All Characters

Adjusted to Comm. Trial Status Description @	Rec/T	Rec/T	Rec/A	Rec/A	Loss	Rev/T	Rev/T	Rev/A	Rev/A	Sugar	Yield	Na	K	AmN	Bolter	Emerg.	
	Code	lbs.	%Mean	lbs.	%Mean	Mol %	\$ ++	%Mean	\$ ++	%Mean	%	T/A	ppm	ppm	ppm	%^	%^
BTS 82RR22	208	316.4	112	7593	120	1.10	51.64	124	1249	132	16.93	23.85	204	1537	356	0.00	72.7
BTS 82RR28	256	297.5	106	8197	130	1.26	46.22	111	1281	135	16.12	27.40	276	1661	427	0.00	77.2
BTS 82RR33	213	286.8	102	7998	127	1.13	43.15	104	1223	129	15.48	27.59	311	1574	345	0.00	70.1
BTS 82RR80	243	283.4	101	6942	110	1.40	42.16	101	1042	110	15.55	24.32	275	1553	573	0.00	70.4
BTS 8325	220	291.4	104	6665	106	1.14	44.47	107	1024	108	15.71	22.78	316	1547	354	0.00	73.2
BTS 8337	254	308.9	110	8030	127	1.10	49.46	119	1291	136	16.57	25.94	263	1497	353	0.00	76.1
BTS 8354	253	295.7	105	6462	102	1.25	45.70	110	1000	105	16.03	22.02	278	1688	419	0.00	70.1
BTS 8363	232	296.0	105	7153	113	1.07	45.77	110	1114	117	15.87	24.14	268	1567	312	0.00	64.1
BTS 8367	251	307.4	109	8415	133	1.08	49.08	118	1349	142	16.47	27.21	198	1496	350	0.00	72.1
BTS 8390	209	277.8	99	7686	122	1.19	40.58	98	1134	120	15.06	27.49	341	1638	358	0.00	72.4
BTS 83CN	239	303.6	108	7726	122	1.12	47.98	115	1232	130	16.31	25.33	216	1518	378	0.00	68.4
Crystal 246RR	206	307.3	109	8586	136	1.17	49.03	118	1384	146	16.54	27.68	253	1665	356	0.00	70.9
Crystal 247RR	250	291.6	104	7803	124	1.13	44.51	107	1207	127	15.71	26.47	275	1647	329	0.00	61.6
Crystal 248RR	223	303.4	108	7431	118	1.16	47.91	115	1189	125	16.32	24.16	188	1702	358	0.00	69.3
Crystal 354RR	244	295.8	105	6088	96	1.22	45.73	110	948	100	16.00	20.41	219	1572	438	0.00	67.3
Crystal 355RR	246	294.8	105	6723	106	1.26	45.44	109	1054	111	15.99	22.48	244	1611	459	0.00	61.9
Crystal 356RR	212	282.0	100	7680	122	1.27	41.78	100	1150	121	15.37	27.03	305	1680	425	0.00	67.8
Crystal 357RR	217	287.9	102	7911	125	1.19	43.45	104	1212	128	15.57	27.19	286	1703	356	0.00	66.7
Crystal 358RR	230	292.0	104	7664	121	1.22	44.64	107	1182	125	15.80	26.13	278	1857	336	0.00	61.3
Crystal 359RR	257	293.4	104	8381	133	1.26	45.04	108	1303	137	15.91	28.28	303	1647	426	0.00	67.5
Crystal 981RR	237	291.9	104	8103	128	1.29	44.61	107	1248	132	15.86	27.50	255	1791	416	0.00	58.1
Hilleshog 4302RR(9302)	249	265.0	94	4628	73	0.95	36.90	89	673	71	14.22	16.70	261	1353	273	0.00	68.4
Hilleshog 4303RR(9303)	226	291.0	103	6152	97	1.17	44.34	107	945	100	15.71	21.13	315	1467	399	0.00	69.8
Hilleshog 4448RR(9448)	258	278.1	99	5971	95	1.08	40.66	98	874	92	14.99	21.53	304	1372	360	0.00	68.9
Hilleshog 9513RR	221	253.6	90	5991	95	1.11	33.61	81	809	85	13.79	23.29	432	1548	302	0.00	81.2
Hilleshog 9514RR	255	300.0	107	7137	113	1.34	46.92	113	1132	119	16.31	23.47	291	1733	468	0.00	76.4
Hilleshog 9516RR	245	278.4	99	7069	112	1.19	40.73	98	1049	111	15.09	25.06	309	1632	368	0.00	73.2
Hilleshog 9517RR	211	302.9	108	6021	95	1.09	47.76	115	972	102	16.25	19.45	280	1559	320	0.00	67.2
Hilleshog 9521RR	219	271.2	96	6052	96	1.12	38.68	93	871	92	14.68	22.22	346	1638	307	0.00	75.2
Hilleshog 9522RR	203	287.3	102	6956	110	1.08	43.29	104	1059	112	15.45	23.94	306	1474	329	0.00	68.4
Hilleshog 9525RR	227	285.8	102	3388	54	1.05	42.85	103	525	55	15.33	11.32	295	1405	322	0.00	67.5
Hilleshog 9528RR	247	293.2	104	5956	94	1.07	44.98	108	918	97	15.73	20.32	263	1507	324	0.00	66.7
Hilleshog 9531RR	248	261.1	93	4827	76	1.05	35.78	86	677	71	14.10	18.06	457	1386	285	0.00	68.1
Maribo 104RR	215	286.7	102	4603	73	1.11	43.11	104	698	74	15.45	16.09	293	1556	335	0.00	57.0
Maribo 305RR	233	292.3	104	7312	116	0.95	44.71	107	1135	120	15.57	24.62	252	1255	306	0.00	67.0
Maribo 306RR	228	276.1	98	5513	87	1.01	40.07	96	801	84	14.82	20.02	352	1331	303	0.00	68.7
Maribo 307RR	202	287.5	102	6809	108	1.07	43.32	104	1035	109	15.45	23.50	256	1587	306	0.00	59.3
Maribo 309RR	236	285.8	102	6836	108	1.01	42.84	103	1026	108	15.30	23.98	264	1341	322	0.00	73.0
Maribo MA102RR	218	266.6	95	5811	92	0.92	37.33	90	826	87	14.26	21.52	329	1262	262	0.00	71.8
Seedex RR0831N	222	279.1	99	5389	85	1.01	40.91	98	804	85	14.97	18.89	327	1400	285	0.00	69.2
Seedex RR0832	205	271.2	96	5447	86	0.96	38.67	93	785	83	14.53	19.93	273	1382	277	0.00	66.1
Seedex RR0833	229	263.2	94	3975	63	0.93	36.39	87	557	59	14.11	14.95	298	1300	265	0.00	59.0
Seedex RR0834TT	234	250.1	89	4702	74	0.97	32.63	78	625	66	13.48	18.47	366	1158	322	0.00	67.2
Seedex RR0835	241	277.6	99	5020	79	0.92	40.51	97	738	78	14.80	17.99	271	1327	261	0.00	57.0
Seedex SX0828NRR	252	263.1	93	5314	84	1.09	36.34	87	736	78	14.24	20.26	328	1438	344	0.00	65.8
Seedex SX0829NRR	242	282.7	100	6048	96	1.09	41.96	101	908	96	15.23	21.31	287	1552	326	0.00	65.6
SESVdh 36271RR	204	248.4	88	4365	69	0.98	32.13	77	553	58	13.41	18.00	352	1344	277	0.00	58.1
SESVdh 36272RR	210	288.6	103	5860	93	1.01	43.67	105	892	94	15.45	20.25	263	1434	299	0.00	71.0
SESVdh 36273RR	224	275.8	98	5032	80	0.96	39.98	96	737	78	14.77	18.12	294	1305	288	0.00	59.5
SESVdh 36275RR	235	246.5	88	4896	78	1.09	31.58	76	632	67	13.40	19.76	391	1498	305	0.00	64.1
SESVdh 36277NRR	240	238.0	85	3774	60	1.09	29.13	70	496	52	12.98	14.82	474	1333	331	0.00	55.6
SESVdh 38219TT RR(36219)	238	261.0	93	6291	100	1.03	35.73	86	871	92	14.07	23.86	299	1335	332	0.00	65.3
SESVdh RR331	231	263.7	94	5015	79	0.89	36.53	88	707	75	14.09	18.67	270	1329	232	0.00	67.2
SESVdh RR332	216	259.7	92	4572	72	0.93	35.36	85	636	67	13.92	17.21	334	1239	272	0.00	63.3
SESVdh RR333	225	274.0	97	5437	86	0.91	39.48	95	789	83	14.63	19.70	229	1312	261	0.00	63.2
SESVdh RR334	207	271.4	96	5135	81	0.94	38.74	93	750	79	14.53	18.50	321	1263	277	0.00	55.3
SESVdh RR335	201	263.6	94	5555	88	0.98	36.49	88	776	82	14.17	21.00	280	1389	290	0.00	63.5
SESVdh RR336	214	268.9	96	6455	102	0.93	37.98	91	924	97	14.38	23.75	337	1273	259	0.00	65.3
RR Filler #02	259	303.1	108	7643	121	1.07	47.81	115	1213	128	16.24	25.06	266	1565	310	0.00	65.5
RR Filler #05	260	273.3	97	5481	87	1.27	39.25	94	793	84	14.92	19.94	421	1475	451	0.00	57.8
BTS 80RR52(Check)	261	288.8	103	6672	106	1.31	43.72	105	1021	108	15.74	22.96	247	1678	474	0.00	66.1
Crystal 875RR(Check)	262	274.0	97	7149	113	1.24	39.47	95	1037	109	14.93	25.87	375	1653	385	0.00	65.2
Crystal 658RR(Check)	263	268.6	95	5700	90	0.93	37.90	91	809	85	14.37	21.21	260	1349	269	0.00	58.4
Hilleshog 4012RR(Check)	264	289.7	103	7056	112	1.12	43.98	106	1078	114	15.60	24.19	442	1547	299	0.00	70.7
Trial Mean		281.5		6316		1.09	41.60		948		15.17	22.13	299	1491	339	0.00	66.7
Coef. of Var. (%)		4.3		9.0		7.3	8.4		11.8		4.0	7.5	19.3	6.9	12.8		8.7
Mean LSD (0.05)		22.3		1071		0.14	6.40		210		1.12	3.13	106	179	76		9.4
Mean LSD (0.01)		29.5		1418		0.18	8.46		278		1.48	4.14	140	237	101		12.4
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2013 Data from Hendrum MN (Root Aphids & Drought conditions)

11/06/2013 15:22

Created 11-6-2013.

^ Vigor not collected. Bolter & emergence not adjusted to commercial status.

Trial # = 138303

@ Some varieties not approved for sale. Refer to approval list for approval status.

++ Revenue estimates are based on a \$53.20 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 18. 2013 Performance of Varieties - ACSC Experimental RR Official Trial

Reynolds ND - All Characters

Adjusted to Comm. Trial Status Description @	Rec/T Code	Rec/T lbs.	Rec/T %Mean	Rec/A lbs.	Rec/A %Mean	Loss Mol %	Rev/T \$ ++	Rev/T %Mean	Rev/A \$ ++	Rev/A %Mean	Sugar %	Yield T/A	Na ppm	K ppm	AmN ppm	Bolter %^	Emerg. %^
BTS 82RR22	208	319.9	105	7837	97	1.17	53.13	109	1300	101	17.19	24.62	142	1808	378	0.00	72.9
BTS 82RR28	256	302.2	99	8507	105	1.36	47.83	98	1339	104	16.46	28.33	195	2073	434	0.00	65.0
BTS 82RR33	213	300.8	99	8757	108	1.19	47.42	98	1376	107	16.24	29.30	182	1906	346	0.00	66.9
BTS 82RR80	243	313.8	103	7777	96	1.21	51.29	105	1268	98	16.92	24.93	149	1816	408	0.00	72.7
BTS 8325	220	308.8	101	8173	101	1.19	49.82	102	1317	102	16.63	26.53	179	1797	380	0.00	78.9
BTS 8337	254	315.5	103	8386	103	1.24	51.81	107	1376	107	16.98	26.67	157	1818	419	0.00	64.8
BTS 8354	253	312.8	103	7578	93	1.32	51.02	105	1233	95	16.98	24.38	154	1956	455	0.00	64.6
BTS 8363	232	295.2	97	8610	106	1.23	45.75	94	1330	103	16.00	29.37	191	1932	363	0.00	69.9
BTS 8367	251	306.7	101	7618	94	1.26	49.20	101	1218	94	16.57	24.94	150	1899	408	0.00	63.3
BTS 8390	209	298.2	98	9007	111	1.26	46.64	96	1406	109	16.15	30.40	197	1971	379	0.21	69.6
BTS 83CN	239	304.1	100	8026	99	1.18	48.40	100	1271	98	16.37	26.58	183	1883	341	0.00	75.5
Crystal 246RR	206	303.9	100	8618	106	1.21	48.33	99	1367	106	16.43	28.53	176	1907	373	0.00	68.1
Crystal 247RR	250	308.7	101	8915	110	1.16	49.79	102	1432	111	16.61	29.02	162	1968	316	0.00	63.3
Crystal 248RR	223	296.3	97	8455	104	1.41	46.07	95	1311	102	16.22	28.71	191	2129	453	0.00	64.3
Crystal 354RR	244	311.9	102	7993	98	1.35	50.75	104	1300	101	16.95	25.66	164	1936	475	0.00	68.6
Crystal 355RR	246	311.1	102	7917	98	1.35	50.49	104	1281	99	16.89	25.50	170	1859	491	0.00	70.3
Crystal 356RR	212	293.3	96	8739	108	1.23	45.18	93	1343	104	15.89	29.86	207	1924	353	0.00	63.4
Crystal 357RR	217	297.4	98	8727	108	1.29	46.41	95	1361	105	16.16	29.41	211	2044	371	0.00	60.7
Crystal 358RR	230	297.9	98	8570	106	1.38	46.56	96	1335	103	16.27	28.86	204	2177	414	0.00	72.6
Crystal 359RR	257	296.4	97	8718	107	1.35	46.13	95	1356	105	16.19	29.36	233	2085	400	0.00	60.0
Crystal 981RR	237	297.3	98	8419	104	1.53	46.38	95	1307	101	16.37	28.49	217	2215	511	0.00	60.4
Hilleshög 4302RR(9302)	249	311.1	102	7661	94	1.20	50.50	104	1246	96	16.78	24.56	159	1804	394	0.00	56.5
Hilleshög 4303RR(9303)	226	315.2	103	8449	104	1.19	51.73	106	1383	107	16.95	27.00	162	1896	363	0.00	66.5
Hilleshög 4448RR(9448)	258	311.2	102	8634	106	1.17	50.52	104	1401	108	16.73	27.81	142	1699	403	0.00	67.3
Hilleshög 9513RR	221	303.2	99	8136	100	1.26	48.13	99	1292	100	16.41	26.91	215	1988	365	0.00	70.2
Hilleshög 9514RR	255	309.4	101	8124	100	1.41	50.00	103	1310	101	16.85	26.38	221	1992	480	0.00	68.7
Hilleshög 9516RR	245	300.4	99	8481	104	1.39	47.30	97	1333	103	16.39	28.24	219	2074	449	0.00	67.4
Hilleshög 9517RR	211	322.5	106	7766	96	1.30	53.91	111	1296	100	17.43	24.06	198	2012	396	0.00	54.0
Hilleshög 9521RR	219	289.9	95	8146	100	1.35	44.19	91	1242	96	15.82	28.18	217	1988	437	0.00	68.6
Hilleshög 9522RR	203	297.4	98	8066	99	1.35	46.40	95	1264	98	16.22	26.99	195	2020	431	0.00	60.3
Hilleshög 9525RR	227	323.0	106	6738	83	1.12	54.08	111	1138	88	17.29	20.72	132	1713	364	0.00	54.3
Hilleshög 9528RR	247	309.7	102	8180	101	1.11	50.08	103	1321	102	16.58	26.58	152	1688	362	0.00	72.4
Hilleshög 9531RR	248	295.3	97	8662	85	1.26	45.79	94	1064	82	16.02	23.25	242	1880	386	0.00	57.3
Maribo 104RR	215	317.0	104	6985	86	1.20	52.26	107	1142	88	17.05	22.25	176	1869	365	0.00	52.0
Maribo 305RR	233	308.7	101	8743	108	1.09	49.78	102	1406	109	16.53	28.44	158	1625	353	0.00	67.4
Maribo 306RR	228	313.2	103	8073	99	1.23	51.12	105	1317	102	16.91	25.85	175	1912	376	0.00	53.5
Maribo 307RR	202	295.4	97	8044	99	1.34	45.82	94	1242	96	16.11	27.41	186	2064	417	0.00	68.9
Maribo 309RR	236	324.5	106	9276	114	1.17	54.51	112	1556	121	17.39	28.66	130	1711	406	0.00	66.8
Maribo MA102RR	218	312.7	103	9024	111	1.13	50.98	105	1467	114	16.76	29.06	160	1731	357	0.00	65.6
Seedex RR0831N	222	306.7	101	7554	93	1.12	49.21	101	1212	94	16.46	24.69	155	1804	331	0.00	66.5
Seedex RR0832	205	315.6	104	8739	108	1.19	51.84	107	1429	111	16.95	27.89	150	1909	364	0.00	67.9
Seedex RR0833	229	298.6	98	7123	88	1.25	46.77	96	1110	86	16.18	23.99	155	2021	359	0.00	52.6
Seedex RR0834TT	234	287.1	94	8378	103	1.25	43.32	89	1260	98	15.61	29.35	171	1848	418	0.00	61.7
Seedex RR0835	241	312.4	102	7383	91	1.13	50.90	105	1204	93	16.74	23.62	148	1844	333	0.00	53.9
Seedex SX0828NRR	252	297.1	97	7699	95	1.16	46.33	95	1200	93	16.05	25.97	173	1910	327	0.00	62.5
Seedex SX0829NRR	242	300.9	99	7710	95	1.23	47.43	98	1214	94	16.24	25.75	182	1958	368	0.00	63.2
SESVdh 36271RR	204	296.1	97	7471	92	1.18	46.01	95	1155	89	15.99	25.47	175	1855	363	0.00	55.8
SESVdh 36272RR	210	310.8	102	8046	99	1.10	50.40	104	1303	101	16.67	25.99	138	1737	346	0.00	65.5
SESVdh 36273RR	224	310.6	102	7490	92	1.23	50.35	104	1202	93	16.77	24.46	155	1932	378	0.00	52.0
SESVdh 36275RR	235	304.5	100	7973	98	1.16	48.56	100	1272	99	16.38	26.17	156	1975	317	0.00	59.1
SESVdh 36277NRR	240	284.2	93	7636	94	1.25	42.47	87	1138	88	15.48	26.94	204	1974	362	0.00	55.1
SESVdh 38219TT RR(36219)	238	284.8	93	8250	102	1.28	42.65	88	1234	96	15.51	29.13	160	2005	395	0.00	65.8
SESVdh RR331	231	302.4	99	7751	95	1.16	47.90	98	1222	95	16.31	25.84	169	1893	345	0.00	65.0
SESVdh RR332	216	316.6	104	8536	105	1.23	52.13	107	1396	108	17.06	27.18	144	1964	373	0.00	60.4
SESVdh RR333	225	299.2	98	8086	100	1.19	46.95	97	1267	98	16.17	27.12	148	2042	331	0.00	66.4
SESVdh RR334	207	311.4	102	7919	98	1.17	50.58	104	1272	99	16.74	25.78	171	1969	319	0.00	61.6
SESVdh RR335	201	308.7	101	7862	97	1.13	49.80	102	1269	98	16.59	25.53	136	1802	341	0.00	59.4
SESVdh RR336	214	294.1	96	8716	107	1.23	45.44	93	1341	104	15.92	29.80	184	1803	401	0.00	62.8
RR Filler #02	259	306.0	100	8330	103	1.14	49.00	101	1330	103	16.46	27.36	176	1923	311	0.00	62.7
RR Filler #05	260	308.5	101	7676	95	1.30	49.73	102	1233	95	16.72	25.02	233	1984	389	0.00	63.8
BTS 80RR52(Check)	261	303.3	99	8414	104	1.36	48.16	99	1333	103	16.51	27.79	176	1976	462	0.00	68.1
Crystal 875RR(Check)	262	304.5	100	8255	102	1.37	48.56	100	1314	102	16.58	27.18	202	2084	433	0.00	65.9
Crystal 658RR(Check)	263	295.0	97	7514	93	1.14	45.69	94	1162	90	15.92	25.57	174	1867	331	0.00	68.2
Hilleshög 4012RR(Check)	264	299.0	98	8319	102	1.27	46.89	96	1303	101	16.21	27.88	274	1891	377	0.00	70.7
Trial Mean		304.8		8118		1.24	48.64		1291		16.48	26.77	177	1918	385	0.00	64.2
Coef. of Var. (%)		2.3		4.9		8.2	4.3		6.0		1.9	4.5	18.4	4.7	18.0		10.0
Mean LSD (0.05)		10.8		636		0.15	3.24		124		0.49	1.94	48	134	97		9.4
Mean LSD (0.01)		14.3		840		0.19	4.27		163		0.65	2.57	63	177	128		12.4
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2013 Data from Reynolds ND

10/23/2013 09:44

Created 11-6-2013.

^ Vigor not collected. Bolter & emergence not adjusted to commercial status.

Trial # = 138304

@ Some varieties not approved for sale. Refer to approval list for approval status.

++ Revenue estimates are based on a \$53.20 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 19. 2013 Performance of Varieties - ACSC Experimental RR Official Trial

Climax MN (Heavy Aph pressure) - All Characters

Adjusted to Comm. Trial Status Description @	Rec/T Code	Rec/T lbs.	Rec/T %Mean	Rec/A lbs.	Rec/A %Mean	Loss Mol %	Rev/T \$ ++	Rev/T %Mean	Rev/A \$ ++	Rev/A %Mean	Sugar %	Yield T/A	Na ppm	K ppm	AmN ppm	Bolter % [^]	Emerg. % [^]
BTS 82RR22	208	279.9	111	6028	103	1.26	40.84	124	886	115	15.26	21.45	168	1784	453	0.00	87.0
BTS 82RR28	256	249.8	99	6035	103	1.42	32.08	98	783	102	13.90	24.00	258	1939	489	0.21	84.1
BTS 82RR33	213	243.0	96	5311	91	1.27	30.11	92	661	86	13.41	21.83	287	1887	385	0.00	84.5
BTS 82RR80	243	252.6	100	5987	102	1.44	32.91	100	786	102	14.08	23.51	187	1826	563	0.00	84.1
BTS 8325	220	243.5	96	5215	89	1.33	30.26	92	654	85	13.49	21.30	254	1840	451	0.00	91.4
BTS 8337	254	272.3	108	7186	123	1.37	38.64	118	1027	133	14.98	26.23	193	1795	511	0.00	78.5
BTS 8354	253	265.0	105	6854	117	1.35	36.50	111	949	123	14.59	25.74	165	1769	521	0.00	80.4
BTS 8363	232	240.5	95	5206	89	1.23	29.39	90	637	83	13.26	21.54	225	1857	382	0.00	86.5
BTS 8367	251	258.1	102	6402	109	1.33	34.48	105	869	113	14.24	24.42	191	1811	472	0.00	82.8
BTS 8390	209	241.2	96	6349	108	1.33	29.58	90	786	102	13.38	26.13	273	1904	421	0.00	88.2
BTS 83CN	239	248.7	99	6596	112	1.34	31.78	97	851	110	13.76	26.27	228	1826	468	0.00	88.3
Crystal 246RR	206	249.0	99	6192	106	1.28	31.85	97	799	104	13.73	24.64	212	1778	441	0.00	75.2
Crystal 247RR	250	248.8	99	5099	87	1.20	31.82	97	659	85	13.64	20.35	194	1863	372	0.00	72.5
Crystal 248RR	223	241.3	96	6183	105	1.35	29.61	90	777	101	13.41	25.07	212	1952	450	0.00	80.3
Crystal 354RR	244	258.4	102	6240	106	1.45	34.57	105	839	109	14.36	24.01	194	1822	570	0.00	75.0
Crystal 355RR	246	258.3	102	5811	99	1.43	34.55	105	779	101	14.34	22.45	194	1790	560	0.00	72.0
Crystal 356RR	212	220.0	87	4608	79	1.42	23.41	71	510	66	12.40	20.42	267	2109	443	0.00	76.4
Crystal 357RR	217	234.9	93	5089	87	1.40	27.74	84	626	81	13.12	20.98	237	2169	416	0.00	78.1
Crystal 358RR	230	249.4	99	6814	116	1.34	31.98	97	886	115	13.81	26.95	221	1901	449	0.00	75.6
Crystal 359RR	257	249.1	99	7421	127	1.38	31.87	97	958	124	13.83	29.52	218	1863	500	0.00	72.2
Crystal 981RR	237	247.1	98	7168	122	1.43	31.30	95	919	119	13.77	28.72	271	1892	503	0.00	70.0
Hilleshög 4302RR(9302)	249	266.0	105	5250	90	1.22	36.78	112	733	95	14.53	19.61	205	1700	418	0.00	75.9
Hilleshög 4303RR(9303)	226	258.2	102	5375	92	1.36	34.53	105	726	94	14.26	20.60	184	1816	503	0.00	84.6
Hilleshög 4448RR(9448)	258	269.9	107	6317	108	1.20	37.93	116	892	116	14.70	23.28	168	1577	447	0.00	82.1
Hilleshög 9513RR	221	248.3	98	5970	102	1.38	31.67	96	765	99	13.77	23.96	278	1869	471	0.00	82.3
Hilleshög 9514RR	255	240.0	95	4552	78	1.47	29.26	89	563	73	13.47	18.73	262	1940	533	0.00	92.6
Hilleshög 9516RR	245	266.2	105	7028	120	1.41	36.84	112	980	127	14.70	26.25	191	1842	530	0.00	92.4
Hilleshög 9517RR	211	265.8	105	6087	104	1.42	36.74	112	848	110	14.70	22.74	246	1869	510	0.00	78.9
Hilleshög 9521RR	219	245.4	97	6221	106	1.37	30.83	94	789	102	13.62	25.11	266	1828	472	0.00	88.7
Hilleshög 9522RR	203	246.9	98	4842	83	1.36	31.22	95	616	80	13.70	19.46	221	1936	452	0.00	76.1
Hilleshög 9525RR	227	271.5	108	4544	77	1.21	38.42	117	656	85	14.79	16.52	170	1685	427	0.00	73.0
Hilleshög 9528RR	247	264.7	105	6288	107	1.18	36.42	111	872	113	14.43	23.56	176	1690	400	0.00	91.1
Hilleshög 9531RR	248	236.2	94	4585	78	1.24	28.14	86	551	71	13.05	19.33	323	1652	406	0.00	73.2
Maribo 104RR	215	261.8	104	5048	86	1.28	35.58	108	694	90	14.37	19.14	207	1725	463	0.00	70.0
Maribo 305RR	233	259.6	103	6153	105	1.23	34.95	106	835	108	14.22	23.55	202	1575	465	0.00	81.7
Maribo 306RR	228	261.9	104	5966	102	1.26	35.60	108	814	106	14.36	22.72	199	1743	444	0.00	72.5
Maribo 307RR	202	242.4	96	4592	78	1.29	29.92	91	573	74	13.40	18.86	262	1932	395	0.00	80.1
Maribo 309RR	236	279.3	111	6837	117	1.08	40.67	124	999	130	15.07	24.39	153	1469	392	0.00	83.8
Maribo MA102RR	218	276.1	109	6737	115	1.10	39.73	121	973	126	14.92	24.36	147	1555	389	0.00	89.9
Seedex RR0831N	222	252.9	100	6115	104	1.22	32.99	100	801	104	13.87	24.11	233	1670	423	0.00	83.4
Seedex RR0832	205	255.6	101	6240	106	1.24	33.80	103	832	108	14.03	24.19	209	1821	400	0.00	79.6
Seedex RR0833	229	243.1	96	4845	83	1.28	30.13	92	596	77	13.44	20.01	224	1840	426	0.00	75.6
Seedex RR0834TT	234	228.8	91	5312	91	1.37	25.99	79	606	79	12.81	23.07	229	1923	465	0.00	82.4
Seedex RR0835	241	259.8	103	5576	95	1.23	35.01	107	758	98	14.23	21.26	215	1859	386	0.00	63.8
Seedex SX0828NRR	252	248.6	99	6567	112	1.22	31.75	97	840	109	13.65	26.36	224	1742	408	0.00	77.9
Seedex SX0829NRR	242	252.4	100	5270	90	1.32	32.85	100	699	91	13.93	20.59	210	1949	424	0.00	79.5
SESVdh 36271RR	204	247.6	98	5243	89	1.29	31.44	96	668	87	13.68	21.02	198	1918	421	0.00	71.0
SESVdh 36272RR	210	260.3	103	5893	100	1.17	35.15	107	806	105	14.19	22.36	195	1788	359	0.00	85.3
SESVdh 36273RR	224	257.5	102	6174	105	1.24	34.33	105	830	108	14.11	23.82	234	1758	407	0.00	71.9
SESVdh 36275RR	235	241.6	96	5567	95	1.25	29.70	90	696	90	13.33	22.72	235	1782	415	0.00	77.1
SESVdh 36277NRR	240	241.0	96	6489	111	1.25	29.53	90	805	104	13.29	26.66	224	1724	429	0.00	77.2
SESVdh 38219TT RR(36219)	238	231.7	92	3624	62	1.39	26.81	82	424	55	12.95	15.52	180	2009	477	0.00	78.5
SESVdh RR331	231	256.7	102	6379	109	1.22	34.10	104	850	110	14.06	24.79	204	1790	397	0.00	78.0
SESVdh RR332	216	261.4	104	6309	108	1.29	35.46	108	862	112	14.37	23.94	197	1878	435	0.00	78.5
SESVdh RR333	225	258.3	102	5235	89	1.22	34.54	105	711	92	14.13	19.99	183	1872	380	0.00	75.6
SESVdh RR334	207	254.8	101	5553	95	1.25	33.51	102	738	96	14.00	21.59	206	1810	417	0.00	71.9
SESVdh RR335	201	256.8	102	6237	106	1.26	34.14	104	836	108	14.10	24.15	200	1762	441	0.00	72.3
SESVdh RR336	214	248.5	98	6372	109	1.20	31.70	97	823	107	13.62	25.42	189	1741	400	0.00	79.1
RR Filler #02	259	249.0	99	5605	96	1.25	31.86	97	728	94	13.70	22.25	232	1865	388	0.00	80.6
RR Filler #05	260	246.4	98	5634	96	1.42	31.10	95	721	94	13.73	22.62	261	1877	506	0.00	69.5
BTS 80RR52(Check)	261	250.2	99	6362	108	1.48	32.20	98	823	107	13.98	25.32	172	1820	599	0.00	71.4
Crystal 875RR(Check)	262	246.7	98	7081	121	1.39	31.17	95	893	116	13.71	28.68	251	1795	506	0.00	76.3
Crystal 658RR(Check)	263	243.8	97	5763	98	1.28	30.35	92	723	94	13.47	23.43	204	1770	445	0.00	78.1
Hilleshög 4012RR(Check)	264	246.6	98	5786	99	1.34	31.16	95	742	96	13.66	23.14	278	1781	462	0.00	78.3
Trial Mean		252.3		5866		1.30	32.83		771		13.92	23.04	217	1817	449	0.00	79.1
Coeff. of Var. (%)		3.0		9.9		6.2	6.8		11.5		2.5	9.5	15.5	5.4	9.4		7.4
Mean LSD (0.05)		12.1		906		0.13	3.53		140		0.56	3.39	52	149	67		8.9
Mean LSD (0.01)		16.0		1196		0.17	4.66		185		0.74	4.47	69	197	88		11.8
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2013 Data from Climax MN (Heavy Aph pressure)

10/23/2013 10:02

Created 11-6-2013.

[^] Vigor not collected. Bolter & emergence not adjusted to commercial status.

Trial # = 138305

@ Some varieties not approved for sale. Refer to approval list for approval status.

++ Revenue estimates are based on a \$53.20 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 20. 2013 Performance of Varieties - ACSC Experimental RR Official Trial
Crookston MN (Sand Syndrome conditions) - All Characters

Adjusted to Comm. Trial Status Description @	Rec/T Code	Rec/T lbs.	Rec/T %Mean	Rec/A lbs.	Rec/A %Mean	Loss Mol %	Rev/T \$ ++	Rev/T %Mean	Rev/A \$ ++	Rev/A %Mean	Sugar %	Yield T/A	Na ppm	K ppm	AmN ppm	Bolter %^	Emerg. %^	S-Synd 1-9
BTS 82RR22	208	299.9	110	6477	109	1.15	47.57	123	1034	121	16.12	21.47	342	1369	410	0.00	74.9	2.79
BTS 82RR28	256	269.7	99	6325	106	1.26	38.17	99	903	105	14.75	23.25	416	1439	451	0.00	76.4	3.21
BTS 82RR33	213	277.7	102	3054	51	1.17	40.66	105	447	52	15.04	10.97	444	1266	414	0.00	74.6	5.63
BTS 82RR80	243	275.5	101	6464	109	1.54	39.94	103	940	110	15.34	23.42	395	1343	671	0.00	73.3	1.56
BTS 8325	220	257.6	95	4811	81	1.34	34.41	89	636	74	14.23	18.79	603	1298	473	0.00	71.4	3.59
BTS 8337	254	286.7	106	7580	127	1.37	43.45	112	1161	135	15.71	26.12	436	1439	520	0.00	74.1	1.96
BTS 8354	253	265.2	98	4349	73	1.43	36.74	95	608	71	14.71	16.25	330	1526	573	0.00	69.5	4.61
BTS 8363	232	260.5	96	4631	78	1.32	35.31	91	627	73	14.34	17.79	465	1426	475	0.00	67.3	3.66
BTS 8367	251	266.7	98	6228	105	1.34	37.22	96	873	102	14.69	23.18	446	1460	488	0.00	78.5	3.22
BTS 8390	209	256.5	94	5205	88	1.21	34.04	88	695	81	14.02	20.16	532	1421	376	0.00	76.8	3.98
BTS 83CN	239	272.9	100	7183	121	1.29	39.16	101	1038	121	14.93	26.05	437	1321	487	0.00	74.9	3.07
Crystal 246RR	206	262.6	97	4757	80	1.26	35.94	93	650	76	14.39	18.09	472	1447	427	0.00	65.4	3.73
Crystal 247RR	250	277.8	102	3378	57	1.21	40.68	105	505	59	15.09	12.01	444	1439	404	0.00	63.6	5.65
Crystal 248RR	223	269.8	99	4420	74	1.22	38.18	99	633	74	14.70	16.22	387	1505	414	0.00	66.5	4.15
Crystal 354RR	244	278.8	103	4633	78	1.34	40.99	106	691	80	15.28	16.42	323	1386	548	0.00	62.9	4.13
Crystal 355RR	246	268.5	99	4746	80	1.45	37.76	97	675	79	14.89	17.48	385	1483	583	0.00	62.9	4.83
Crystal 356RR	212	251.1	92	4365	73	1.37	32.36	84	582	68	13.93	16.87	496	1470	493	0.00	63.0	3.92
Crystal 357RR	217	262.6	97	3295	55	1.29	35.95	93	446	52	14.41	12.70	484	1552	418	0.00	67.7	5.31
Crystal 358RR	230	260.7	96	3974	67	1.25	35.36	91	544	63	14.30	15.08	433	1552	417	0.00	67.7	4.87
Crystal 359RR	257	263.2	97	6341	107	1.40	36.13	93	884	103	14.57	23.76	476	1589	495	0.00	62.2	3.20
Crystal 981RR	237	263.7	97	5239	88	1.40	36.30	94	733	85	14.60	19.63	443	1677	487	0.00	60.2	3.65
Hilleshög 4302RR(9302)	249	278.5	103	6044	102	1.15	40.89	106	897	105	15.06	21.42	386	1403	389	0.00	55.1	2.41
Hilleshög 4303RR(9303)	226	283.7	104	6500	109	1.27	42.52	110	992	116	15.44	22.54	367	1536	450	0.00	74.3	2.23
Hilleshög 4448RR(9448)	258	286.4	105	7137	120	1.14	43.35	112	1089	127	15.42	24.70	352	1231	425	0.00	64.1	2.61
Hilleshög 9513RR	221	259.9	96	5571	94	1.33	35.10	91	758	88	14.32	21.31	585	1429	443	0.00	77.9	2.98
Hilleshög 9514RR	255	259.5	96	4709	79	1.42	34.96	90	642	75	14.41	17.97	510	1501	519	0.00	74.4	3.23
Hilleshög 9516RR	245	269.0	99	8019	135	1.41	37.95	98	1137	132	14.85	29.72	524	1476	507	0.00	73.9	1.03
Hilleshög 9517RR	211	270.1	99	6926	116	1.50	38.29	99	987	115	15.04	25.58	580	1491	558	0.00	58.4	1.26
Hilleshög 9521RR	219	255.4	94	5444	92	1.33	33.71	87	724	84	14.11	21.23	599	1431	438	0.00	68.3	2.37
Hilleshög 9522RR	203	244.9	90	6018	101	1.34	30.44	79	746	87	13.59	24.64	602	1506	435	0.00	61.1	3.01
Hilleshög 9525RR	227	287.2	106	3794	64	1.17	43.61	113	581	68	15.51	13.14	350	1411	409	0.00	56.3	2.95
Hilleshög 9528RR	247	283.0	104	6425	108	1.01	42.30	109	968	113	15.12	22.58	322	1248	340	0.00	69.7	2.40
Hilleshög 9531RR	248	259.5	96	4477	75	1.21	34.98	90	617	72	14.17	16.97	520	1355	395	0.00	58.3	2.37
Maribo 104RR	215	272.7	100	4148	70	1.22	39.09	101	604	70	14.84	15.01	386	1463	420	0.00	57.8	2.42
Maribo 305RR	233	284.9	105	7629	128	1.10	42.90	111	1161	135	15.31	26.58	314	1249	409	0.00	73.6	1.98
Maribo 306RR	228	279.1	103	7207	121	1.25	41.09	106	1067	124	15.20	25.67	420	1388	454	0.00	59.0	1.28
Maribo 307RR	202	250.3	92	4333	73	1.15	32.12	83	552	64	13.66	17.37	524	1354	358	0.00	70.3	3.14
Maribo 309RR	236	291.2	107	7344	123	0.94	44.88	116	1141	133	15.45	25.04	314	1113	324	0.00	72.0	1.72
Maribo MA102RR	218	292.3	108	8242	139	1.06	45.17	117	1285	150	15.63	28.04	334	1229	381	0.00	72.2	1.37
Seedex RR0831N	222	282.7	104	7490	126	1.14	42.19	109	1130	132	15.25	26.16	419	1350	380	0.43	72.6	1.34
Seedex RR0832	205	284.4	105	7786	131	1.16	42.74	110	1180	137	15.35	27.10	405	1284	415	0.00	74.5	1.08
Seedex RR0833	229	262.6	97	5699	96	1.23	35.94	93	798	93	14.34	21.31	461	1408	418	0.00	48.0	1.98
Seedex RR0834TT	234	265.5	98	7315	123	1.13	36.83	95	1024	119	14.39	27.35	438	1341	368	0.00	64.7	1.09
Seedex RR0835	241	279.3	103	6829	115	1.14	41.15	106	1019	119	15.08	24.17	426	1374	372	0.00	55.0	1.61
Seedex SX0828NRR	252	276.5	102	8246	139	1.25	40.28	104	1217	142	15.06	29.40	460	1395	431	0.00	65.8	1.16
Seedex SX0829NRR	242	264.4	97	6443	108	1.26	36.51	94	897	105	14.49	24.23	488	1571	399	0.00	64.7	1.16
SESVdh 36271RR	204	266.1	98	6061	102	1.26	37.03	96	858	100	14.56	22.50	451	1489	428	0.00	54.7	2.00
SESVdh 36272RR	210	294.3	108	6501	109	1.14	45.83	118	1017	118	15.82	21.92	358	1316	404	0.00	64.0	2.12
SESVdh 36273RR	224	271.9	100	6307	106	1.13	38.83	100	913	106	14.70	22.95	473	1247	381	0.00	55.5	1.81
SESVdh 36275RR	235	268.8	99	7360	124	1.30	37.87	98	1045	122	14.73	27.17	490	1431	451	0.00	54.3	1.77
SESVdh 36277NRR	240	266.1	98	7883	133	1.24	37.04	96	1114	130	14.53	29.24	431	1508	410	0.00	59.1	1.52
SESVdh 38219TT RR(36219)	238	253.7	93	6919	116	1.32	33.19	86	915	107	14.02	26.99	408	1546	466	0.00	59.2	1.98
SESVdh RR331	231	279.4	103	6602	111	1.13	41.17	106	982	114	15.06	23.38	372	1326	388	0.00	74.1	2.11
SESVdh RR332	216	281.9	104	5973	100	1.13	41.94	108	901	105	15.19	20.91	397	1303	393	0.00	67.8	2.22
SESVdh RR333	225	276.0	102	6047	102	1.10	40.12	104	891	104	14.86	21.62	383	1312	372	0.00	59.1	2.93
SESVdh RR334	207	290.7	107	6684	112	1.14	44.71	115	1034	121	15.62	22.93	363	1397	382	0.00	58.9	2.27
SESVdh RR335	201	277.3	102	6907	116	1.12	40.53	105	1009	118	14.96	24.84	366	1351	379	0.00	59.8	1.92
SESVdh RR336	214	280.7	103	7209	121	1.06	41.59	107	1077	125	15.07	25.51	347	1303	361	0.00	65.2	1.55
RR Filler #02	259	272.2	100	3896	65	1.16	38.92	100	565	66	14.76	14.18	440	1396	384	0.00	60.1	5.09
RR Filler #05	260	274.3	101	7262	122	1.32	39.61	102	1056	123	15.03	26.18	513	1347	478	0.00	55.1	2.18
BTS 80RR52(Check)	261	259.0	95	4313	73	1.36	34.84	90	576	67	14.33	16.78	358	1358	558	0.00	60.7	3.83
Crystal 875RR(Check)	262	258.5	95	7334	123	1.41	34.64	89	999	116	14.34	27.99	527	1438	517	0.00	68.5	1.38
Crystal 658RR(Check)	263	271.7	100	4495	76	1.20	38.76	100	643	75	14.76	16.49	389	1294	442	0.00	68.7	3.82
Hilleshög 4012RR(Check)	264	266.3	98	5716	96	1.31	37.11	96	807	94	14.62	21.23	559	1381	448	0.00	67.3	2.98
Trial Mean		271.6		5948		1.25	38.74		858		14.81	21.69	436	1401	439	0.00	65.7	2.72
Coeff. of Var. (%)		3.1		9.2		6.3	6.8		10.3		2.7	9.3	13.4	7.4	8.8		9.8	19.88
Mean LSD (0.05)		13.1		866		0.13	4.09		141		0.62	3.19	92	164	61		9.6	0.85
Mean LSD (0.01)		17.3		1143		0.16	5.41		186		0.82	4.22	122	216	80		12.7	1.11
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**	**

* 2013 Data from Crookston MN (Sand Syndrome conditions)

11/06/2013 11:02

Created 11-6-2013.

^ Vigor not collected. Bolter & emergence

Table 21. 2013 Performance of Varieties - ACSC Experimental RR Official Trial
Alvarado MN - All Characters

Adjusted to Comm. Trial Status Description @	Rec/T Code	Rec/T lbs.	Rec/T %Mean	Rec/A lbs.	Rec/A %Mean	Loss Mol %	Rev/T \$++	Rev/T %Mean	Rev/A \$++	Rev/A %Mean	Sugar %	Yield T/A	Na ppm	K ppm	AmN ppm	Bolter %^	Emerg. %^
BTS 82RR22	208	332.8	107	8787	105	1.23	56.88	112	1502	110	17.89	26.34	185	1782	413	0.21	82.4
BTS 82RR28	256	311.1	100	9174	109	1.33	50.49	100	1491	109	16.88	29.43	212	1915	448	0.00	80.7
BTS 82RR33	213	310.6	100	9913	118	1.17	50.37	99	1607	118	16.70	31.97	233	1776	338	0.00	78.3
BTS 82RR80	243	322.0	103	8906	106	1.30	53.70	106	1489	109	17.42	27.62	164	1724	499	0.00	75.7
BTS 8325	220	316.9	102	9143	109	1.19	52.20	103	1510	111	17.05	28.72	215	1680	397	0.00	83.3
BTS 8337	254	327.9	105	8861	106	1.26	55.44	109	1501	110	17.65	26.98	155	1675	474	0.00	77.4
BTS 8354	253	323.7	104	7938	95	1.48	54.21	107	1332	98	17.66	24.47	187	1879	595	0.00	71.4
BTS 8363	232	313.5	101	9620	115	1.18	51.22	101	1570	115	16.87	30.38	201	1700	392	0.00	81.0
BTS 8367	251	315.7	101	8820	105	1.19	51.85	102	1457	107	16.98	27.90	148	1699	415	0.00	84.4
BTS 8390	209	297.1	95	9102	109	1.15	46.39	91	1409	103	15.99	30.89	265	1707	328	0.00	79.4
BTS 83CN	239	321.1	103	9345	112	1.15	53.44	105	1555	114	17.21	29.02	180	1705	370	0.00	85.3
Crystal 246RR	206	309.8	99	9332	111	1.27	50.12	99	1513	111	16.74	29.89	248	1764	424	0.00	74.6
Crystal 247RR	250	317.7	102	9271	111	1.21	52.45	103	1528	112	17.11	29.10	204	1826	379	0.00	61.9
Crystal 248RR	223	311.5	100	9143	109	1.32	50.62	100	1493	109	16.89	29.22	193	1935	441	0.00	72.5
Crystal 354RR	244	323.8	104	9011	108	1.33	54.24	107	1515	111	17.53	27.76	164	1816	503	0.00	71.1
Crystal 355RR	246	321.1	103	8755	104	1.40	53.45	105	1460	107	17.46	27.09	215	1926	508	0.00	69.7
Crystal 356RR	212	307.5	99	9776	117	1.21	49.44	98	1582	116	16.60	31.55	216	1719	411	0.00	70.0
Crystal 357RR	217	311.7	100	10185	122	1.21	50.69	100	1663	122	16.82	32.48	200	1797	389	0.00	71.8
Crystal 358RR	230	303.0	97	9048	108	1.35	48.13	95	1442	106	16.49	29.74	216	1957	444	0.00	69.3
Crystal 359RR	257	306.1	98	9537	114	1.42	49.05	97	1535	113	16.71	30.95	232	2009	486	0.00	64.8
Crystal 981RR	237	319.9	103	8860	106	1.38	53.08	105	1472	108	17.34	27.72	223	2012	452	0.00	68.8
Hilleshög 4302RR(9302)	249	318.4	102	7961	95	1.08	52.66	104	1319	97	17.05	24.86	186	1623	339	0.00	75.6
Hilleshög 4303RR(9303)	226	319.2	102	7860	94	1.12	52.87	104	1301	95	17.12	24.53	176	1614	380	0.00	72.0
Hilleshög 4448RR(9448)	258	307.0	98	8449	101	1.07	49.29	97	1354	99	16.43	27.66	192	1431	379	0.00	67.2
Hilleshög 9513RR	221	303.1	97	8015	96	1.25	48.16	95	1275	93	16.39	26.49	280	1797	379	0.00	80.4
Hilleshög 9514RR	255	318.8	102	8368	100	1.27	52.75	104	1391	102	17.21	26.18	210	1724	455	0.00	78.1
Hilleshög 9516RR	245	319.2	102	8794	105	1.12	52.88	104	1465	107	17.09	27.43	205	1641	355	0.00	85.0
Hilleshög 9517RR	211	321.3	103	7313	87	1.17	53.50	106	1218	89	17.25	22.70	279	1678	355	0.00	68.3
Hilleshög 9521RR	219	299.6	96	8171	97	1.25	47.14	93	1290	95	16.23	27.07	260	1733	415	0.00	78.3
Hilleshög 9522RR	203	307.8	99	8413	100	1.10	49.52	98	1362	100	16.53	27.17	201	1700	326	0.00	67.2
Hilleshög 9525RR	227	327.1	105	7223	86	1.10	55.21	109	1219	89	17.48	22.03	168	1575	374	0.00	67.0
Hilleshög 9528RR	247	313.7	101	8421	100	1.02	51.26	101	1378	101	16.74	26.68	172	1428	353	0.00	72.3
Hilleshög 9531RR	248	295.8	95	6912	82	1.20	46.03	91	1076	79	15.99	23.43	328	1604	381	0.00	65.2
Maribo 104RR	215	325.1	104	7153	85	1.16	54.61	108	1202	88	17.42	21.94	202	1530	419	0.00	60.1
Maribo 305RR	233	310.8	100	9169	109	0.99	50.42	99	1495	110	16.57	29.39	180	1374	341	0.00	79.1
Maribo 306RR	228	305.7	98	7758	93	1.16	48.94	97	1248	91	16.47	25.16	247	1589	393	0.64	62.3
Maribo 307RR	202	297.7	95	8322	99	1.27	46.56	92	1303	96	16.13	27.84	260	1698	439	0.00	73.9
Maribo 309RR	236	312.5	100	8910	106	1.01	50.90	100	1452	106	16.65	28.72	177	1418	348	0.00	77.5
Maribo MA102RR	218	314.9	101	8800	105	0.99	51.62	102	1437	105	16.76	27.76	188	1442	314	0.00	80.2
Seedex RR0831N	222	314.2	101	7269	87	1.09	51.40	101	1195	88	16.82	23.00	188	1658	329	0.00	70.6
Seedex RR0832	205	308.2	99	7823	93	1.06	49.66	98	1260	92	16.48	25.46	229	1620	299	0.00	72.6
Seedex RR0833	229	309.3	99	7319	87	1.06	49.96	99	1184	87	16.54	23.55	190	1619	317	0.00	61.0
Seedex RR0834TT	234	290.9	93	8080	96	1.17	44.58	88	1233	90	15.72	27.62	206	1635	399	0.00	67.7
Seedex RR0835	241	316.7	102	7413	88	1.03	52.15	103	1224	90	16.88	23.36	171	1594	309	0.00	59.0
Seedex SX0828NRR	252	312.2	100	8074	96	1.10	50.81	100	1318	97	16.74	25.78	182	1716	331	0.00	71.9
Seedex SX0829NRR	242	302.6	97	7242	86	1.26	48.02	95	1149	84	16.38	23.93	204	1794	423	0.00	64.9
SESVdh 36271RR	204	312.6	100	7387	88	1.18	50.93	100	1202	88	16.82	23.41	190	1838	353	0.00	61.9
SESVdh 36272RR	210	323.7	104	7979	95	1.05	54.21	107	1338	98	17.25	24.59	142	1618	321	0.00	73.7
SESVdh 36273RR	224	315.6	101	7757	93	1.11	51.81	102	1277	94	16.90	24.47	206	1675	336	0.00	57.6
SESVdh 36275RR	235	314.5	101	7735	92	1.11	51.49	102	1269	93	16.85	24.57	194	1720	330	0.00	61.7
SESVdh 36277NRR	240	294.7	95	7265	87	1.08	45.68	90	1132	83	15.82	24.56	238	1568	330	0.00	68.6
SESVdh 38219TT RR(36219)	238	290.9	93	8569	102	1.17	44.57	88	1322	97	15.71	29.21	192	1642	398	0.00	69.8
SESVdh RR331	231	315.6	101	7842	94	1.03	51.83	102	1290	95	16.84	24.76	169	1602	309	0.21	66.1
SESVdh RR332	216	318.4	102	8088	97	1.09	52.65	104	1341	98	17.04	25.39	197	1652	336	0.00	73.9
SESVdh RR333	225	308.6	99	8060	96	1.08	49.76	98	1300	95	16.52	26.09	173	1719	309	0.00	68.4
SESVdh RR334	207	314.8	101	7895	94	1.08	51.58	102	1296	95	16.83	25.04	190	1620	334	0.00	61.5
SESVdh RR335	201	301.6	97	7704	92	1.11	47.72	94	1223	90	16.20	25.43	193	1652	345	0.00	65.9
SESVdh RR336	214	307.5	99	8638	103	1.00	49.46	98	1385	101	16.40	28.03	179	1456	321	0.00	69.3
RR Filler #02	259	316.3	101	9550	114	1.20	52.02	103	1577	116	17.02	30.05	190	1843	367	0.00	65.9
RR Filler #05	260	300.4	96	7416	88	1.28	47.37	93	1167	86	16.30	24.76	364	1781	387	0.00	57.9
BTS 80RR52(Check)	261	313.8	101	8891	106	1.31	51.29	101	1456	107	16.99	28.17	179	1699	508	0.00	67.3
Crystal 875RR(Check)	262	301.7	97	8105	97	1.23	47.73	94	1280	94	16.29	26.96	251	1804	378	0.00	67.6
Crystal 658RR(Check)	263	302.9	97	7667	91	1.06	48.10	95	1218	89	16.21	25.30	219	1634	297	0.00	69.6
Hilleshög 4012RR(Check)	264	304.3	98	8041	96	1.15	48.50	96	1283	94	16.37	26.33	319	1558	356	0.00	76.0
Trial Mean		311.8		8381		1.18	50.70		1365		16.77	26.82	208	1693	384	0.00	71.2
Coeff. of Var. (%)		2.1		4.5		7.0	3.8		5.2		1.9	4.4	15.6	5.1	13.1		7.4
Mean LSD (0.05)		10.3		574		0.12	3.03		110		0.50	1.81	49	131	75		7.7
Mean LSD (0.01)		13.6		758		0.17	4.00		145		0.66	2.39	65	173	99		10.1
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2013 Data from Alvarado MN

10/23/2013 10:34

Created 11-6-2013.

^ Vigor not collected. Bolter & emergence not adjusted to commercial status.

Trial # = 138308

@ Some varieties not approved for sale. Refer to approval list for approval status.

++ Revenue estimates are based on a \$53.20 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 22. 2013 Performance of Varieties - ACSC Experimental RR Official Trial

St Thomas ND - All Characters

Adjusted to Comm. Trial Status Description @	Code	Rec/T	Rec/T	Rec/A	Rec/A	Loss	Rev/T	Rev/T	Rev/A	Rev/A	Sugar	Yield	Na	K	AmN	Bolter	Emerg.
		lbs.	%Mean	lbs.	%Mean	Mol %	\$ ++	%Mean	\$ ++	%Mean	%	T/A	ppm	ppm	ppm	%^	%^
BTS 82RR22	208	347.7	106	7852	105	1.61	61.07	110	1375	109	19.01	22.80	428	2035	523	0.00	80.8
BTS 82RR28	256	326.3	99	7783	104	1.76	55.10	99	1305	103	18.06	24.13	562	2194	568	0.00	81.0
BTS 82RR33	213	331.3	101	7910	106	1.77	56.48	101	1342	106	18.31	24.15	691	2266	521	0.00	73.1
BTS 82RR80	243	327.5	100	7090	95	1.75	55.42	99	1196	95	18.12	21.57	449	2031	648	0.43	79.3
BTS 8325	220	329.6	100	7457	100	1.75	56.00	100	1267	100	18.19	22.72	664	2108	566	0.00	78.6
BTS 8337	254	344.1	105	7511	100	1.70	60.09	108	1300	103	18.90	22.15	406	1996	621	0.00	69.2
BTS 8354	253	330.5	101	6968	93	1.82	56.27	101	1177	93	18.30	21.43	484	2210	638	0.00	70.9
BTS 8363	232	321.6	98	7870	105	1.61	53.79	97	1310	104	17.72	24.52	629	2106	464	0.00	70.7
BTS 8367	251	327.4	100	7363	98	1.64	55.39	99	1239	98	18.02	22.64	528	2069	519	0.00	69.7
BTS 8390	209	318.3	97	8344	112	1.69	52.86	95	1378	109	17.61	26.36	630	2327	455	0.00	78.2
BTS 83CN	239	338.3	103	7313	98	1.47	58.43	105	1246	99	18.43	22.08	457	1920	441	0.00	87.0
Crystal 246RR	206	339.1	103	7896	106	1.67	58.67	105	1356	108	18.65	23.46	563	2115	526	0.00	68.2
Crystal 247RR	250	329.1	100	7757	104	1.67	55.88	100	1307	104	18.10	23.88	601	2269	462	0.00	65.4
Crystal 248RR	223	320.0	97	7699	103	1.69	53.33	96	1273	101	17.68	24.32	502	2302	493	0.00	63.3
Crystal 354RR	244	331.6	101	7211	96	1.82	56.58	102	1216	96	18.36	22.07	489	2155	654	0.00	70.1
Crystal 355RR	246	329.5	100	6844	92	1.75	55.96	100	1160	92	18.21	20.87	462	2190	582	0.00	64.1
Crystal 356RR	212	329.1	100	8418	113	1.64	55.89	100	1424	113	18.09	25.72	550	2189	474	0.00	64.1
Crystal 357RR	217	330.4	101	8063	108	1.61	56.23	101	1378	109	18.16	24.25	511	2226	449	0.00	63.7
Crystal 358RR	230	316.0	96	7619	102	1.92	52.19	94	1239	98	17.63	24.46	604	2472	603	0.00	66.0
Crystal 359RR	257	319.7	97	7990	107	1.90	53.25	96	1321	105	17.80	25.37	661	2401	586	0.00	69.2
Crystal 981RR	237	317.7	97	8181	109	1.97	52.68	95	1345	107	17.78	25.96	791	2496	593	0.00	63.9
Hilleshög 4302RR(9302)	249	338.6	103	7593	102	1.57	58.54	105	1310	104	18.55	22.57	524	2078	455	0.00	61.3
Hilleshög 4303RR(9303)	226	328.7	100	7512	100	1.75	55.77	100	1269	101	18.17	22.95	553	2023	616	0.00	74.6
Hilleshög 4448RR(9448)	258	347.4	106	7890	106	1.69	61.01	109	1374	109	19.09	22.84	432	2047	598	0.00	69.9
Hilleshög 9513RR	221	315.3	96	7359	98	1.89	52.03	93	1205	96	17.56	23.65	763	2246	610	0.00	71.4
Hilleshög 9514RR	255	334.6	102	7138	95	1.80	57.43	103	1218	97	18.49	21.43	629	2214	584	0.00	78.2
Hilleshög 9516RR	245	334.4	102	8005	107	1.80	57.34	103	1371	109	18.47	24.10	596	2163	609	0.00	75.4
Hilleshög 9517RR	211	336.1	102	6895	92	1.82	57.82	104	1172	93	18.58	20.90	756	2220	575	0.00	68.6
Hilleshög 9521RR	219	299.7	91	6865	92	1.87	47.63	85	1087	86	16.76	23.08	854	2309	560	0.00	72.4
Hilleshög 9522RR	203	321.0	98	7711	103	1.70	53.61	96	1278	101	17.73	24.28	481	2350	499	0.00	67.1
Hilleshög 9525RR	227	342.1	104	6013	80	1.70	59.52	107	1050	83	18.81	17.43	475	1987	609	0.00	54.5
Hilleshög 9528RR	247	332.5	101	7681	103	1.72	56.83	102	1308	104	18.33	23.42	541	2038	586	0.00	73.5
Hilleshög 9531RR	248	323.9	99	6389	85	1.65	54.40	98	1067	85	17.83	19.98	650	2044	506	0.00	62.0
Maribo 104RR	215	341.6	104	6242	83	1.55	59.37	107	1089	86	18.67	18.33	483	1955	488	0.00	54.5
Maribo 305RR	233	333.6	102	7639	102	1.53	57.14	103	1307	104	18.25	22.97	444	1808	540	0.00	74.4
Maribo 306RR	228	326.1	99	7542	101	1.75	55.04	99	1273	101	18.03	23.15	595	2064	599	0.21	62.8
Maribo 307RR	202	307.6	94	7433	99	1.75	49.85	89	1203	95	17.05	24.28	734	2253	506	0.00	69.4
Maribo 309RR	236	347.7	106	8323	111	1.51	61.07	110	1446	115	18.94	24.39	367	1905	510	0.00	76.1
Maribo MA102RR	218	332.6	101	7867	105	1.51	56.87	102	1355	107	18.20	23.51	461	1844	500	0.00	78.0
Seedex RR0831N	222	323.5	98	6719	90	1.58	54.32	97	1118	89	17.78	21.07	516	2101	466	0.00	71.6
Seedex RR0832	205	333.2	101	7785	104	1.66	57.03	102	1327	105	18.33	23.41	485	2257	493	0.00	60.9
Seedex RR0833	229	322.9	98	6864	92	1.71	54.13	97	1150	91	17.85	21.20	501	2282	518	0.21	59.0
Seedex RR0834TT	234	323.2	98	7946	106	1.71	54.24	97	1326	105	17.84	24.83	482	2201	546	0.00	64.5
Seedex RR0835	241	335.4	102	7066	95	1.64	57.67	103	1214	96	18.44	21.12	491	2202	491	0.00	47.7
Seedex SX0828NRR	252	322.3	98	7274	97	1.64	53.97	97	1207	96	17.73	22.93	607	2105	484	0.00	67.1
Seedex SX0829NRR	242	315.2	96	6524	87	1.81	51.98	93	1075	85	17.53	20.66	634	2245	587	0.00	61.8
SESVdh 36271RR	204	327.6	100	7410	99	1.69	55.46	100	1261	100	18.07	22.43	560	2202	511	0.00	54.9
SESVdh 36272RR	210	338.9	103	7780	104	1.55	58.62	105	1341	106	18.53	23.11	417	2024	484	0.00	68.8
SESVdh 36273RR	224	327.1	100	7614	102	1.70	55.31	99	1282	102	18.06	23.36	583	2140	532	0.00	56.2
SESVdh 36275RR	235	331.6	101	7443	100	1.56	56.55	101	1259	100	18.16	22.74	483	2110	463	0.00	60.9
SESVdh 36277NRR	240	312.5	95	7442	100	1.74	51.22	92	1209	96	17.33	23.99	561	2219	547	0.00	60.9
SESVdh 38219TT RR(36219)	238	316.0	96	7626	102	1.72	52.21	94	1252	99	17.51	24.31	473	2239	549	0.00	61.5
SESVdh RR331	231	331.1	101	7213	96	1.64	56.44	101	1235	98	18.21	21.75	495	2117	513	0.00	66.0
SESVdh RR332	216	326.5	99	7314	98	1.71	55.15	99	1231	98	18.03	22.62	564	2159	528	0.00	63.5
SESVdh RR333	225	333.9	102	7588	102	1.50	57.23	103	1295	103	18.23	22.98	366	2112	428	0.00	64.1
SESVdh RR334	207	334.5	102	7232	97	1.71	57.37	103	1238	98	18.41	21.87	570	2223	513	0.00	51.7
SESVdh RR335	201	328.4	100	7704	103	1.69	55.67	100	1299	103	18.08	23.73	590	2172	513	0.00	57.9
SESVdh RR336	214	328.5	100	8087	108	1.61	55.69	100	1366	108	18.05	24.80	536	2021	509	0.00	61.1
RR Filler #02	259	342.1	104	8398	112	1.62	59.51	107	1448	115	18.77	24.72	512	2290	447	0.00	70.7
RR Filler #05	260	322.1	98	6773	91	2.03	53.92	97	1119	89	18.04	21.23	841	2369	668	0.00	64.1
BTS 80RR52(Check)	261	335.6	102	7263	97	1.86	57.70	104	1240	98	18.58	21.92	473	2167	682	0.00	65.0
Crystal 875RR(Check)	262	322.7	98	7384	99	1.81	54.08	97	1238	98	17.91	22.90	668	2193	590	0.00	66.5
Crystal 658RR(Check)	263	324.1	99	7022	94	1.52	54.47	98	1175	93	17.78	21.71	485	2031	459	0.00	67.7
Hilleshög 4012RR(Check)	264	321.0	98	7758	104	1.64	53.59	96	1296	103	17.69	24.31	596	2089	487	0.00	75.6
Trial Mean		328.6		7476		1.70	55.73		1261		18.12	22.93	554	2155	537	0.00	67.3
Coef. of Var. (%)		2.9		5.9		8.9	4.7		6.9		2.4	5.4	22.9	4.3	16.0		8.6
Mean LSD (0.05)		14.9		703		0.24	4.17		138		0.70	2.00	196	149	131		8.1
Mean LSD (0.01)		19.7		929		0.31	5.51		182		0.92	2.65	259	197	173		10.7
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2013 Data from St Thomas ND

10/23/2013 13:48

Created 11-6-2013.

^ Vigor not collected. Bolter & emergence not adjusted to commercial status.

Trial # = 138309

@ Some varieties not approved for sale. Refer to approval list for approval status.

++ Revenue estimates are based on a \$53.20 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 23. 2013 Performance of Varieties - ACSC Experimental RR Official Trial

Grafton ND - All Characters

Adjusted to Comm. Trial Status Description @	Rec/T Code	Rec/T lbs.	Rec/T %Mean	Rec/A lbs.	Rec/A %Mean	Loss Mol %	Rev/T \$ ++	Rev/T %Mean	Rev/A \$ ++	Rev/A %Mean	Sugar %	Yield T/A	Na ppm	K ppm	AmN ppm	Bolter %^	Emerg. %^
BTS 82RR22	208	369.5	107	9187	99	1.04	68.19	111	1684	103	19.49	24.78	115	1832	281	0.00	79.1
BTS 82RR28	256	349.6	101	10839	117	1.21	62.10	101	1927	118	18.68	30.88	141	2002	348	0.00	83.1
BTS 82RR33	213	334.2	96	10056	108	1.14	57.44	94	1734	106	17.85	30.15	198	1939	293	0.00	77.4
BTS 82RR80	243	350.1	101	8407	91	1.21	62.27	102	1492	91	18.70	23.96	136	1818	390	0.00	77.4
BTS 8325	220	348.3	100	9858	106	1.00	61.75	101	1747	107	18.40	28.40	145	1731	264	0.00	83.1
BTS 8337	254	360.8	104	9589	103	1.14	65.54	107	1737	106	19.17	26.53	126	1911	327	0.00	73.5
BTS 8354	253	338.9	98	8883	96	1.32	58.85	96	1551	95	18.28	26.02	149	1980	428	0.00	75.9
BTS 8363	232	346.4	100	10354	111	1.03	61.14	100	1834	112	18.34	29.96	142	1829	269	0.00	79.9
BTS 8367	251	342.6	99	9492	102	1.01	59.99	98	1672	102	18.12	27.33	121	1690	284	0.00	75.4
BTS 8390	209	340.3	98	10888	117	1.16	59.28	97	1894	116	18.17	31.86	173	2076	291	0.00	79.7
BTS 83CN	239	349.1	101	8944	96	1.05	61.96	101	1588	97	18.49	25.33	142	1853	270	0.00	84.2
Crystal 246RR	206	347.2	100	10464	113	1.07	61.39	100	1848	113	18.42	30.10	159	1929	259	0.00	69.0
Crystal 247RR	250	345.5	100	9721	105	1.03	60.86	99	1702	104	18.27	28.19	148	1996	216	0.00	60.9
Crystal 248RR	223	339.9	98	9988	108	1.23	59.14	97	1733	106	18.22	29.66	115	2167	339	0.00	70.3
Crystal 354RR	244	354.4	102	8875	96	1.21	63.56	104	1583	97	18.92	25.35	110	1977	371	0.00	66.2
Crystal 355RR	246	354.5	102	9638	104	1.28	63.62	104	1732	106	19.01	27.11	158	2008	397	0.00	64.5
Crystal 356RR	212	343.8	99	11134	120	1.06	60.38	99	1946	119	18.24	32.38	137	1870	280	0.00	68.0
Crystal 357RR	217	345.9	100	10839	117	1.13	61.00	100	1909	117	18.42	31.08	149	2007	287	0.21	62.2
Crystal 358RR	230	342.6	99	9789	105	1.24	59.99	98	1716	105	18.38	28.70	165	2207	314	0.00	63.5
Crystal 359RR	257	341.8	99	10525	113	1.24	59.75	98	1840	112	18.33	30.79	171	2048	350	0.00	66.0
Crystal 981RR	237	337.7	97	9041	97	1.27	58.50	95	1555	95	18.17	26.81	171	2128	357	0.00	59.6
Hilleshög 4302RR(9302)	249	358.3	103	8910	96	1.07	64.78	106	1605	98	18.97	24.77	132	1760	311	0.00	62.2
Hilleshög 4303RR(9303)	226	354.7	102	9158	99	1.08	63.68	104	1644	100	18.80	25.75	120	1731	328	0.00	75.4
Hilleshög 4448RR(9448)	258	350.6	101	9636	104	1.07	62.42	102	1704	104	18.58	27.53	123	1694	327	0.00	66.2
Hilleshög 9513RR	221	335.9	97	9366	101	1.12	57.95	95	1607	98	17.91	27.77	173	1977	284	0.00	81.4
Hilleshög 9514RR	255	351.2	101	9307	100	1.24	62.62	102	1668	102	18.80	26.33	160	1903	387	0.00	84.2
Hilleshög 9516RR	245	346.6	100	9587	103	1.20	61.22	100	1677	102	18.53	27.99	158	1945	349	0.00	78.6
Hilleshög 9517RR	211	367.0	106	7737	83	1.07	67.45	110	1421	87	19.40	21.06	141	1866	285	0.00	72.7
Hilleshög 9521RR	219	332.5	96	9300	100	1.12	56.89	93	1579	97	17.74	28.29	168	2011	277	0.00	79.7
Hilleshög 9522RR	203	346.9	100	9315	100	1.09	61.29	100	1644	100	18.42	26.94	114	2032	271	0.00	70.5
Hilleshög 9525RR	227	367.7	106	7328	79	1.02	67.65	110	1339	82	19.37	19.75	109	1667	302	0.00	62.0
Hilleshög 9528RR	247	358.7	103	9168	99	0.97	64.87	106	1633	100	18.86	25.56	113	1623	276	0.00	68.8
Hilleshög 9531RR	248	333.5	96	7663	82	1.13	57.22	93	1302	80	17.80	22.86	224	1816	297	0.00	57.7
Maribo 104RR	215	357.9	103	8080	87	1.08	64.66	106	1456	89	18.95	22.66	156	1757	311	0.00	54.9
Maribo 305RR	233	343.5	99	9704	104	1.01	60.27	98	1695	104	18.15	28.38	125	1627	296	0.00	76.3
Maribo 306RR	228	353.6	102	9590	103	1.03	63.35	103	1714	105	18.70	27.01	141	1811	274	0.21	54.9
Maribo 307RR	202	328.7	95	9489	102	1.14	55.75	91	1610	98	17.56	28.94	161	1956	304	0.00	74.1
Maribo 309RR	236	361.7	104	10250	110	1.01	65.80	107	1852	113	19.06	28.22	116	1687	290	0.00	70.9
Maribo MA102RR	218	356.3	103	9989	108	1.06	64.15	105	1791	109	18.85	27.99	119	1686	326	0.00	69.0
Seedex RR0831N	222	337.3	97	8039	87	1.03	58.38	95	1391	85	17.89	24.02	171	1812	264	0.00	63.0
Seedex RR0832	205	353.3	102	9601	103	1.11	63.26	103	1727	106	18.76	26.81	162	1989	270	0.00	68.8
Seedex RR0833	229	351.4	101	8993	97	1.04	62.68	102	1607	98	18.60	25.53	109	2018	243	0.00	52.4
Seedex RR0834TT	234	333.3	96	8702	94	1.14	57.16	93	1497	91	17.81	26.10	124	1835	347	0.00	61.5
Seedex RR0835	241	336.7	97	7690	83	1.10	58.19	95	1316	80	17.92	22.99	176	1865	290	0.00	45.5
Seedex SX0828NRR	252	333.9	96	8398	90	1.07	57.36	94	1442	88	17.77	24.99	170	1845	279	0.00	69.0
Seedex SX0829NRR	242	343.7	99	8591	92	1.05	60.32	98	1510	92	18.22	24.92	118	1862	279	0.00	65.8
SESVdh 36271RR	204	344.8	99	8915	96	1.04	60.64	99	1562	95	18.26	26.01	115	1976	254	0.21	53.0
SESVdh 36272RR	210	347.4	100	8666	93	0.99	61.45	100	1542	94	18.33	25.17	116	1769	257	0.00	69.5
SESVdh 36273RR	224	347.2	100	8551	92	1.04	61.38	100	1500	92	18.39	24.38	139	1858	266	0.00	51.7
SESVdh 36275RR	235	350.9	101	9083	98	1.04	62.52	102	1608	98	18.57	25.74	124	1914	262	0.00	58.6
SESVdh 36277NRR	240	330.4	95	8513	92	1.14	56.25	92	1451	89	17.65	25.75	149	1981	299	0.00	59.4
SESVdh 38219TT RR(36219)	238	328.5	95	8966	97	1.07	55.69	91	1522	93	17.49	27.05	114	1848	296	0.00	68.4
SESVdh RR331	231	347.1	100	8340	90	1.01	61.37	100	1483	91	18.35	24.03	116	1869	248	0.00	62.0
SESVdh RR332	216	346.7	100	9088	98	1.05	61.24	100	1604	98	18.36	26.30	137	1867	271	0.00	66.7
SESVdh RR333	225	347.5	100	9686	104	1.05	61.50	100	1710	104	18.41	27.67	134	1915	262	0.00	51.7
SESVdh RR334	207	356.9	103	8356	90	1.00	64.37	105	1498	92	18.82	23.51	117	1940	229	0.00	53.9
SESVdh RR335	201	347.9	100	9771	105	1.03	61.61	101	1732	106	18.42	28.01	153	1807	269	0.00	52.4
SESVdh RR336	214	336.7	97	9483	102	1.03	58.18	95	1641	100	17.85	28.01	158	1710	281	0.21	54.3
RR Filler #02	259	354.0	102	10390	112	1.09	63.46	104	1856	113	18.77	29.35	141	2061	252	0.00	63.3
RR Filler #05	260	354.7	102	8916	96	1.14	63.66	104	1598	98	18.86	24.98	176	2012	284	0.00	63.5
BTS 80RR52(Check)	261	349.1	101	10739	116	1.24	61.95	101	1890	115	18.68	30.94	116	1990	383	0.00	63.0
Crystal 875RR(Check)	262	343.6	99	8807	95	1.25	60.30	98	1539	94	18.43	25.71	149	2119	349	0.21	61.3
Crystal 658RR(Check)	263	344.0	99	9058	98	0.97	60.43	99	1587	97	18.15	26.36	133	1767	244	0.00	62.4
Hilleshög 4012RR(Check)	264	340.1	98	9075	98	1.22	59.20	97	1578	96	18.22	26.84	234	1863	357	0.00	70.3
Trial Mean		346.8		9289		1.10	61.27		1636		18.43	26.78	143	1892	299	0.00	67.0
Coef. of Var. (%)		2.7		6.9		6.8	4.7		7.8		2.3	6.5	22.6	5.2	12.0		11.0
Mean LSD (0.05)		15.2		962		0.12	4.63		196		0.68	2.65	52	154	58		10.2
Mean LSD (0.01)		20.1		1269		0.16	6.12		259		0.89	3.48	69	204	76		13.5
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2013 Data from Grafton ND

10/24/2013 09:23

Created 11-6-2013.

^ Vigor not collected. Bolter & emergence not adjusted to commercial status.

Trial # = 138310

@ Some varieties not approved for sale. Refer to approval list for approval status.

++ Revenue estimates are based on a \$53.20 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 24. 2013 Performance of Varieties - ACSC Experimental RR Official Trial

Hallock MN - All Characters

Adjusted to Comm. Trial Status Description @	Rec/T Code	Rec/T lbs.	Rec/T %Mean	Rec/A lbs.	Rec/A %Mean	Loss Mol %	Rev/T \$ ++	Rev/T %Mean	Rev/A \$ ++	Rev/A %Mean	Sugar %	Yield T/A	Na ppm	K ppm	AmN ppm	Bolter %^	Emerg. %^
BTS 82RR22	208	374.2	108	8606	105	1.32	69.33	113	1594	110	20.05	23.00	250	2232	350	0.00	79.4
BTS 82RR28	256	354.1	102	8716	106	1.51	63.41	103	1560	108	19.25	24.60	282	2481	419	0.00	81.0
BTS 82RR33	213	374.2	108	9821	120	1.36	69.34	113	1820	126	20.08	26.23	244	2405	326	0.00	80.3
BTS 82RR80	243	372.8	107	7223	88	1.37	68.93	112	1341	93	19.96	19.34	145	2199	436	0.00	80.4
BTS 8325	220	375.1	108	8841	108	1.33	69.63	113	1639	113	20.10	23.60	287	2152	359	0.00	81.7
BTS 8337	254	368.3	106	8569	105	1.34	67.58	110	1572	109	19.78	23.25	223	2211	377	0.00	79.2
BTS 8354	253	356.3	103	7840	96	1.60	64.03	104	1409	98	19.35	22.07	243	2382	536	0.00	77.6
BTS 8363	232	354.8	102	9027	110	1.36	63.59	104	1617	112	19.10	25.48	275	2213	369	0.00	74.9
BTS 8367	251	372.5	107	8719	107	1.27	68.85	112	1611	112	19.92	23.37	211	2059	365	0.00	76.7
BTS 8390	209	340.3	98	9238	113	1.50	59.29	97	1611	112	18.52	27.11	366	2461	383	0.00	70.1
BTS 83CN	239	360.9	104	7779	95	1.34	65.40	107	1409	98	19.40	21.55	275	2223	360	0.00	83.3
Crystal 246RR	206	356.4	103	9579	117	1.39	64.08	104	1721	119	19.20	26.90	289	2342	354	0.00	73.9
Crystal 247RR	250	360.2	104	9117	111	1.48	65.19	106	1650	114	19.46	25.31	336	2540	344	0.00	70.3
Crystal 248RR	223	362.1	104	8851	108	1.38	65.76	107	1608	111	19.48	24.43	220	2396	356	0.00	78.1
Crystal 354RR	244	374.9	108	7817	96	1.47	69.56	113	1452	100	20.17	20.88	184	2343	448	0.00	72.3
Crystal 355RR	246	367.0	106	7695	94	1.40	67.20	109	1409	98	19.79	20.94	252	2310	389	0.00	70.8
Crystal 356RR	212	362.8	104	9261	113	1.36	65.97	107	1683	116	19.51	25.56	223	2360	360	0.00	73.3
Crystal 357RR	217	361.7	104	9371	114	1.37	65.63	107	1701	118	19.48	25.88	223	2495	323	0.00	70.7
Crystal 358RR	230	349.9	101	8498	104	1.46	62.14	101	1510	104	18.96	24.24	250	2545	364	0.00	76.2
Crystal 359RR	257	341.9	98	9248	113	1.56	59.77	97	1617	112	18.65	27.02	327	2461	446	0.21	72.3
Crystal 981RR	237	341.9	98	8849	108	1.64	59.78	97	1545	107	18.67	25.96	367	2554	466	0.00	67.6
Hilleshög 4302RR(9302)	249	340.4	98	8028	98	1.29	59.31	97	1399	97	18.26	23.64	310	2056	334	0.00	67.9
Hilleshög 4303RR(9303)	226	354.2	102	8112	99	1.23	63.42	103	1455	101	18.94	22.89	265	1943	357	0.00	74.9
Hilleshög 4448RR(9448)	258	334.9	96	8974	110	1.18	57.69	94	1545	107	17.93	26.84	268	1894	326	0.00	74.1
Hilleshög 9513RR	221	337.5	97	9351	114	1.48	58.49	95	1618	112	18.34	27.77	416	2344	379	0.00	86.1
Hilleshög 9514RR	255	355.9	102	7804	95	1.41	63.91	104	1399	97	19.22	21.96	283	2229	410	0.00	82.0
Hilleshög 9516RR	245	346.9	100	8753	107	1.40	61.23	100	1546	107	18.75	25.19	332	2216	382	0.00	82.5
Hilleshög 9517RR	211	349.4	101	7646	93	1.36	62.00	101	1359	94	18.82	21.84	342	2138	365	0.00	68.8
Hilleshög 9521RR	219	333.8	96	8493	104	1.46	57.36	93	1460	101	18.11	25.44	305	2480	363	0.00	82.6
Hilleshög 9522RR	203	336.7	97	8108	99	1.36	58.23	95	1402	97	18.18	24.11	286	2339	327	0.00	76.4
Hilleshög 9525RR	227	349.4	101	7239	88	1.37	61.99	101	1281	89	18.80	20.83	275	2055	403	0.00	64.7
Hilleshög 9528RR	247	331.9	96	8117	99	1.07	56.82	93	1385	96	17.63	24.62	271	1792	257	0.00	71.1
Hilleshög 9531RR	248	323.4	93	7428	91	1.37	54.27	88	1239	86	17.51	23.18	478	1977	363	0.00	68.1
Maribo 104RR	215	359.9	104	7322	89	1.27	65.13	106	1322	91	19.26	20.42	258	1989	360	0.00	64.5
Maribo 305RR	233	344.1	99	9175	112	1.24	60.44	98	1612	112	18.44	26.65	301	1907	351	0.00	82.1
Maribo 306RR	228	337.2	97	8236	101	1.41	58.39	95	1424	99	18.28	24.48	368	2156	403	0.86	56.8
Maribo 307RR	202	337.0	97	8618	105	1.28	58.33	95	1494	103	18.11	25.54	276	2220	303	0.00	68.3
Maribo 309RR	236	322.8	93	8378	102	1.15	54.12	88	1406	97	17.32	25.89	310	1796	305	0.00	79.4
Maribo MA102RR	218	323.5	93	8756	107	1.11	54.30	88	1469	102	17.30	27.10	289	1786	281	0.00	73.8
Seedex RR0831N	222	347.1	100	7096	87	1.23	61.29	100	1252	87	18.57	20.49	258	1972	338	0.00	77.0
Seedex RR0832	205	332.2	96	7344	90	1.22	56.91	93	1258	87	17.81	22.13	300	2147	269	0.00	61.0
Seedex RR0833	229	336.8	97	6724	82	1.32	58.27	95	1163	80	18.17	19.97	260	2227	344	0.00	53.5
Seedex RR0834TT	234	321.3	93	8326	102	1.33	53.66	87	1392	96	17.41	25.85	258	2159	362	0.00	68.2
Seedex RR0835	241	359.6	104	7372	90	1.22	65.04	106	1331	92	19.23	20.53	219	2133	304	0.00	45.2
Seedex SX0828NRR	252	352.8	102	7666	94	1.29	63.01	103	1369	95	18.91	21.76	215	2147	348	0.00	74.0
Seedex SX0829NRR	242	353.5	102	7981	98	1.35	63.21	103	1428	99	18.99	22.59	175	2317	369	0.00	69.8
SESVdh 36271RR	204	331.1	95	7001	86	1.28	56.59	92	1195	83	17.84	21.14	280	2176	300	0.00	51.7
SESVdh 36272RR	210	365.7	105	8310	102	1.15	66.85	109	1517	105	19.47	22.73	181	2046	292	0.00	74.0
SESVdh 36273RR	224	339.2	98	7442	91	1.20	58.96	96	1294	90	18.17	21.93	317	2111	265	0.00	46.6
SESVdh 36275RR	235	342.9	99	7699	94	1.32	60.06	98	1347	93	18.46	22.50	273	2223	338	0.21	59.7
SESVdh 36277NRR	240	318.4	92	6554	80	1.31	52.79	86	1088	75	17.22	20.53	373	2143	305	0.00	56.5
SESVdh 38219TT RR(36219)	238	317.0	91	8249	101	1.47	52.37	85	1362	94	17.25	26.10	294	2220	441	0.00	71.1
SESVdh RR331	231	326.6	94	7202	88	1.27	55.23	90	1228	85	17.54	21.87	292	2101	316	0.00	59.7
SESVdh RR332	216	336.8	97	7110	87	1.12	58.28	95	1229	85	17.92	21.19	250	1911	267	0.00	70.6
SESVdh RR333	225	359.0	103	8344	102	1.22	64.86	106	1508	104	19.18	23.23	206	2168	302	0.00	68.8
SESVdh RR334	207	347.4	100	7016	86	1.22	61.42	100	1239	86	18.62	20.20	247	2182	284	0.00	60.8
SESVdh RR335	201	346.8	100	7897	96	1.21	61.22	100	1392	96	18.55	22.84	250	2074	299	0.00	62.1
SESVdh RR336	214	326.0	94	8139	99	1.13	55.06	90	1375	95	17.39	24.99	250	1920	266	0.00	63.8
RR Filler #02	259	367.0	106	9588	117	1.39	67.22	110	1756	121	19.74	26.13	225	2492	342	0.43	69.8
RR Filler #05	260	339.1	98	7386	90	1.46	58.94	96	1280	89	18.40	21.89	373	2351	367	0.00	65.2
BTS 80RR52(Check)	261	362.6	104	8114	99	1.46	65.89	107	1471	102	19.55	22.50	220	2354	425	0.00	71.0
Crystal 875RR(Check)	262	338.5	97	8259	101	1.40	58.77	96	1438	99	18.34	24.29	288	2427	345	0.00	72.4
Crystal 658RR(Check)	263	326.5	94	7520	92	1.15	55.21	90	1275	88	17.50	22.90	300	1959	258	0.00	68.6
Hilleshög 4012RR(Check)	264	333.1	96	8266	101	1.35	57.17	93	1419	98	18.00	24.82	414	2149	325	0.00	72.2
Trial Mean		347.3		8185		1.33	61.38		1445		18.69	23.60	279	2199	351	0.00	70.7
Coeff. of Var. (%)		3.1		5.9		7.6	5.3		7.0		2.9	5.7	19.1	5.6	14.9		8.8
Mean LSD (0.05)		16.8		74.1		0.16	4.99		155		0.82	2.05	86	182	80		8.9
Mean LSD (0.01)		22.2		978		0.21	6.58		204		1.09	2.70	114	240	106		11.7
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2013 Data from Hallock MN

10/24/2013 09:39

Created 11-6-2013.

^ Vigor not collected. Bolter & emergence not adjusted to commercial status.

Trial # = 138311

@ Some varieties not approved for sale. Refer to approval list for approval status.

++ Revenue estimates are based on a \$53.20 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 25. Calculation for Approval of Sugarbeet Varieties for ACSC Market for 2014

Description	Approval Status	Rec/Ton				Rev/Acre				R/T + \$/A	Cercospora Rating +				
		2012	2013	2 Yr	% Bench	2012	2013	2 Yr	% Bench		Bench	2011	2012	2013	2 Yr Mean
Previously Approved (3 Yr)															
BTS 80RR32	Approved	358.2	326.8	342.5	102.4	1813	1544	1678.5	110.6	212.9	5.18	4.66	4.81		4.88
BTS 80RR52	Approved	356.2	325.5	340.9	101.9	1772	1527	1649.5	108.6	210.5	4.61	4.40	4.52		4.51
BTS 81RR17	Approved	350.4	319.5	334.9	100.1	1736	1371	1553.5	102.3	202.4	4.68	4.36	4.45		4.50
BTS 81RR78	Approved	368.2	338.8	353.5	105.6	1761	1555	1658.0	109.2	214.8	4.88	4.51	4.86		4.75
BTS 89RR10	Approved	376.9	344.5	360.7	107.8	1699	1408	1553.5	102.3	210.1	5.08	5.10	4.96		5.05
BTS 89RR50	Approved	339.3	312.1	325.7	97.3	1670	1495	1582.5	104.2	201.6	5.01	5.30	4.83		5.05
BTS 89RR83	Approved	345.8	317.0	331.4	99.0	1776	1442	1609.0	106.0	205.0	4.81	4.89	4.91		4.87
Crystal 093RR	Approved	363.7	336.7	350.2	104.7	1754	1563	1658.3	109.2	213.9	5.16	4.82	5.20		5.06
Crystal 095RR	Approved	357.6	328.0	342.8	102.4	1720	1504	1612.0	106.2	208.6	4.88	4.83	4.75		4.82
Crystal 101RR	Approved	345.6	322.4	334.0	99.8	1752	1534	1642.9	108.2	208.0	4.72	4.71	4.63		4.68
Crystal 658RR	Approved	349.0	314.8	331.9	99.2	1693	1323	1508.0	99.3	198.5	4.47	4.28	4.52		4.42
Crystal 765RR	Approved	369.1	336.9	353.0	105.5	1848	1511	1679.5	110.6	216.1	4.70	4.70	4.82		4.74
Crystal 768RR	Approved	356.6	328.4	342.5	102.4	1826	1479	1652.5	108.8	211.2	5.09	5.37	5.05		5.17
Crystal 875RR	Approved	351.1	315.1	333.1	99.5	1642	1417	1529.5	100.7	200.3	4.24	4.26	4.77		4.42
Crystal 981RR	Approved	341.3	317.5	329.4	98.4	1778	1471	1624.2	107.0	205.4	5.21	5.15	5.09		5.15
Crystal 985RR	Approved	356.0	325.2	340.6	101.8	1666	1422	1544.0	101.7	203.5	4.37	4.41	4.49		4.42
Crystal 986RR	Approved	371.7	337.5	354.6	106.0	1841	1521	1681.0	110.7	216.7	5.14	4.78	4.80		4.91
Hilleshög 4012RR	Approved	344.9	318.0	331.5	99.1	1605	1366	1480.5	97.5	196.6	5.24	5.46	5.43		5.38
Hilleshög 4022RR	Approved	350.0	319.3	334.7	100.0	1632	1348	1490.0	98.1	198.1	4.26	4.36	4.33		4.32
Hilleshög 4094RR	Approved	348.1	315.6	331.9	99.2	1611	1318	1464.5	96.5	195.6	4.00	4.34	4.47		4.27
Hilleshög 4195RR	Approved	340.0	313.3	326.7	97.6	1650	1401	1525.5	100.5	198.1	4.60	4.65	4.87		4.71
Hilleshög 4236RR(9236)	Approved	366.9	339.5	353.2	105.6	1579	1348	1463.3	96.4	201.9	4.75	4.71	4.95		4.81
Hilleshög 4300RR(9300)	Approved	348.3	312.6	330.5	98.8	1701	1279	1489.9	98.1	196.9	4.71	4.82	4.74		4.76
Hilleshög 4302RR(9302)	Approved	362.8	328.0	345.4	103.2	1634	1401	1517.6	100.0	203.2	4.00	4.34	4.23		4.19
Hilleshög 4303RR(9303)	Approved	366.6	330.1	348.4	104.1	1666	1448	1556.9	102.5	206.7	4.22	4.62	4.85		4.57
Maribo MA102RR	Approved	364.2	325.4	344.8	103.0	1689	1564	1626.3	107.1	210.2	5.19	4.88	5.03		5.03
Maribo 104RR	Approved	363.1	335.9	349.5	104.4	1515	1272	1393.2	91.8	196.2	3.45	3.82	3.87		3.71
Seedex Victor RR	Approved	361.1	312.0	336.6	100.6	1715	1324	1519.5	100.1	200.7	4.33	4.41	4.51		4.42
Seedex Vision RR	Approved	366.0	327.1	346.6	103.6	1776	1360	1568.0	103.3	206.8	4.41	4.49	5.17		4.69
Seedex Xavier RR(0816)	Approved	360.4	321.5	340.9	101.9	1815	1306	1560.4	102.8	204.7	4.54	4.43	4.85		4.61
SESVdh 36175RR	Approved	349.6	326.7	338.1	101.1	1720	1342	1531.2	100.9	201.9	4.61	4.22	4.60		4.48
SESVdh 36812RR	Approved	347.1	305.6	326.4	97.5	1635	1358	1496.5	98.6	196.1	4.78	4.76	4.90		4.81
SESVdh 36917RR	Approved	363.1	327.8	345.5	103.2	1742	1399	1570.5	103.4	206.7	4.51	4.61	5.05		4.72
SESVdh 36918RR	Approved	363.0	323.0	343.0	102.5	1748	1306	1527.0	100.6	203.1	4.41	4.28	4.61		4.44
Candidates for Approval (2 Yr)															
BTS 82RR22	Approved	372.1	342.6	357.4	106.8	1813	1523	1668.0	109.9	216.7	--	4.65	4.77	4.71	--
BTS 82RR28	Approved	345.2	324.1	334.7	100.0	1800	1552	1676.0	110.4	210.4	--	4.66	4.52	4.59	--
BTS 82RR33	Approved	356.0	325.1	340.6	101.8	2057	1603	1830.0	120.5	222.3	--	4.74	4.68	4.71	--
BTS 82RR80	Approved	358.0	331.0	344.5	102.9	1767	1396	1581.1	104.1	207.1	--	4.77	4.62	4.69	--
Crystal 246RR	Approved	352.5	324.7	338.6	101.2	2017	1591	1803.8	118.8	220.0	--	4.49	4.48	4.48	--
Crystal 247RR	Approved	358.6	325.7	342.2	102.3	1932	1546	1739.0	114.5	216.8	--	4.68	4.57	4.62	--
Crystal 248RR	Approved	347.2	321.8	334.5	100.0	1822	1534	1678.1	110.5	210.5	--	4.94	5.15	5.05	--
Hilleshög 4448RR(9448)	Approved	366.7	326.3	346.5	103.5	1735	1516	1625.5	107.1	210.6	--	4.82	5.21	5.02	--
Seedex SX0828NRR	Approved	353.3	318.1	335.7	100.3	1718	1351	1534.9	101.1	201.4	--	4.72	4.69	4.71	--
Seedex SX0829NRR	Approved	356.9	318.4	337.6	100.9	1713	1306	1509.5	99.4	200.3	--	4.84	4.76	4.80	--
SESVdh 38219TT RR(36219)	Not Approved	349.7	301.9	325.8	97.4	1698	1349	1523.8	100.4	197.7	--	4.44	5.26	4.85	--
SESVdh 36271RR	Approved	355.7	319.3	337.5	100.9	1727	1337	1531.8	100.9	201.8	--	4.65	4.45	4.55	--
SESVdh 36272RR	Approved	361.4	332.3	346.8	103.6	1885	1454	1669.8	110.0	213.6	--	4.17	4.49	4.33	--
SESVdh 36273RR	Approved	355.3	324.7	340.0	101.6	1684	1376	1529.9	100.8	202.4	--	4.19	4.68	4.44	--
SESVdh 36275RR	Not Approved	341.1	322.4	331.7	99.1	1679	1381	1529.9	100.8	199.9	--	4.28	4.58	4.43	--
SESVdh 36277NRR	Not Approved	351.2	303.7	327.5	97.9	1626	1235	1430.2	94.2	192.1	--	5.15	4.88	5.02	--
Benchmark Varieties															
Beta 85RR02(Check)	Benchmark	2011	2012	2013		2011	2012	2013							
Crystal 539RR	Benchmark	302.2	358.6			944.7	1583.0								
Crystal 658RR	Benchmark	298.1				886.5									
Hilleshög 4012RR	Benchmark	285.6	349.0	314.8		930.3	1693.0	1323.0							
Crystal 875RR	Benchmark	302.8	344.9	318.0		998.0	1605.0	1356.0							
BTS 80RR52	Benchmark		351.1	315.1			1642.0	1417.0							
			325.5				1527.0								
Benchmark mean		297.18	350.90	318.35	334.6	942.4	1630.8	1405.8	1518.25						

+ All Cercospora readings 2011-2013 were adjusted to 1982 basis.

Variety approval criteria include: 1) 2 years of official trial data, 2) Cercospora rating must not exceed 5.20 (1982 adjusted data), 3a) R/T \geq 100% of Bench or 3b) R/T \geq 97% and R/T + \$/A \geq 202% of Bench. 3 yrs of data may be considered for initial approval.

Created 11-11-2013.

Bench for 2013 added Beta 80RR52 and dropped Beta 85RR02.

To maintain approval, the 3-year Cercospora rating must not exceed 5.40 (1982 adjusted data).

Table 26. Calculation for Approval of Sugarbeet Varieties for ACSC Aphanomyces Specialty Market for 2014

Yrs Aph Yld	Description	Approval Status	Root Aph. Rating					Cercospora Rating +				
			2011	2012	2013	2 Yr Mean	3 Yr Mean	2011	2012	2013	2 Yr Mean	3 Yr Mean
Previously Approved (3 Yrs)			<=4.70					<=5.40				
4	BTS 80RR52	Approved	4.93	4.04	4.01	4.02	4.33	4.61	4.40	4.52	4.46	4.51
3	BTS 81RR17	Approved	4.06	3.25	3.87	3.56	3.73	4.68	4.36	4.45	4.40	4.50
5	BTS 89RR50	Approved	4.07	4.80	3.97	4.38	4.28	5.01	5.30	4.83	5.07	5.05
6	Crystal 875RR	Approved	3.14	2.71	3.76	3.23	3.20	4.24	4.26	4.77	4.52	4.42
5	Crystal 981RR	Approved	4.03	3.08	3.55	3.31	3.55	5.21	5.15	5.09	5.12	5.15
5	Crystal 985RR	Approved	3.75	3.15	3.89	3.52	3.60	4.37	4.41	4.49	4.45	4.42
4	Seedex Victor RR	NO	4.71	4.68	4.90	4.79	4.76	4.33	4.41	4.51	4.46	4.42
3	Seedex Xavier RR(0816)	Approved	4.52	4.19	4.42	4.30	4.37	4.54	4.43	4.85	4.64	4.61
4	SESVdh 36918RR	NO	4.50	4.69	5.00	4.85	4.73	4.41	4.28	4.61	4.45	4.44
Candidates for Approval			<=4.40					<=5.20				
2	BTS 82RR22	Approved	--	3.95	4.41	4.18	--	--	4.65	4.77	4.71	--
2	BTS 82RR28	NO	--	4.51	4.62	4.56	--	--	4.66	4.52	4.59	--
2	BTS 82RR33	NO	--	5.11	5.40	5.25	--	--	4.74	4.68	4.71	--
2	BTS 82RR80	Approved	--	3.37	4.56	3.96	--	--	4.77	4.62	4.69	--
2	Crystal 101RR	Approved	--	2.97	3.80	3.38	--	--	4.71	4.63	4.67	--
2	Crystal 246RR	Approved	--	3.85	4.90	4.38	--	--	4.49	4.48	4.48	--
2	Crystal 247RR	NO	--	3.68	5.21	4.45	--	--	4.68	4.57	4.62	--
2	Crystal 248RR	Approved	--	3.59	4.74	4.17	--	--	4.94	5.15	5.05	--
2	Hilleshög 4448RR(9448)	NO	--	5.66	4.73	5.20	--	--	4.82	5.21	5.02	--
2	Maribo 104RR	NO	--	4.46	4.71	4.59	--	--	3.82	3.87	3.85	--
2	Maribo MA102RR	Approved	--	4.33	4.30	4.31	--	--	4.88	5.03	4.95	--
2	Seedex SX0828NRR	Approved	--	4.06	4.35	4.20	--	--	4.72	4.69	4.71	--
Approval Criteria new varieties						4.40	5.20					
Criteria to Maintain Approval						4.70	5.40					

+ All Cercospora readings 2011-2013 were adjusted to 1982 basis.

Aphanomyces approval criteria include: 1) 2 years of Aph official trial data, 2) Cercospora rating must not exceed 5.20 (1982 adjusted data),

3) Aph root rating <= 4.40 after 2 years. 3 yrs of data may be considered for initial approval.

To maintain Aphanomyces approval criteria include: 1) Cercospora 3 year mean must not exceed 5.40, 2) Aph root rating <= 4.70 after 3 years.

Table 27. Calculation for Approval of Sugarbeet Varieties for ACSC Rhizoctonia Specialty Market for 2014

Description	Approval		Disease Index +				Cercospora Rating **				
	Status	2011	2012	2013	2 Yr Mean	3 Yr Mean	2011	2012	2013	2 Yr Mean	3 Yr Mean
Previously Approved (3 Yr)											
BTS 89RR10	Approved	3.63	4.14	4.91	4.52	4.22	5.08	5.10	4.96	5.03	5.05
Crystal 658RR	Approved	3.78	4.09	3.99	4.04	3.95	4.47	4.28	4.52	4.40	4.42
Crystal 875RR	Approved	4.06	4.00	4.53	4.26	4.20	4.24	4.26	4.77	4.52	4.42
Hilleshög 4022RR	Approved	3.48	3.29	3.39	3.34	3.38	4.26	4.36	4.33	4.34	4.32
Hilleshög 4094RR	Approved	3.29	3.28	3.42	3.35	3.33	4.00	4.34	4.47	4.41	4.27
Hilleshög 4195RR	Approved	3.78	3.67	4.15	3.91	3.87	4.60	4.65	4.87	4.76	4.71
Hilleshög 4302RR(9302)	Approved	3.47	3.63	3.32	3.48	3.48	4.00	4.34	4.23	4.29	4.19
Maribo 104RR	Approved	3.36	3.98	3.99	3.99	3.78	3.45	3.82	3.87	3.85	3.71
RR Candidates for Approval (2 Yr)											
BTS 80RR32	Not Approved	4.23	3.88	4.28	4.08	4.13	5.18	4.66	4.81	4.73	4.88
BTS 80RR52	Approved	4.14	3.73	3.77	3.75	3.88	4.61	4.40	4.52	4.46	4.51
BTS 81RR17	Not Approved	4.09	4.00	4.10	4.05	4.07	4.68	4.36	4.45	4.40	4.50
BTS 81RR78	Not Approved	4.57	4.50	4.59	4.54	4.55	4.88	4.51	4.86	4.69	4.75
BTS 82RR22	Not Approved	--	4.61	5.19	4.90	--	--	4.65	4.77	4.71	--
BTS 82RR28	Not Approved	--	3.94	4.17	4.06	--	--	4.66	4.52	4.59	--
BTS 82RR33	Not Approved	--	4.09	4.36	4.23	--	--	4.74	4.68	4.71	--
BTS 82RR80	Not Approved	--	4.63	4.54	4.58	--	--	4.77	4.62	4.69	--
BTS 89RR50	Not Approved	5.30	4.88	5.31	5.09	5.16	5.01	5.30	4.83	5.07	5.05
BTS 89RR83	Approved	4.53	3.58	3.45	3.51	3.85	4.81	4.89	4.91	4.90	4.87
Crystal 093RR	Not Approved	4.43	4.43	4.39	4.41	4.41	5.16	4.82	5.20	5.01	5.06
Crystal 095RR	Not Approved	4.87	4.57	4.59	4.58	4.67	4.88	4.83	4.75	4.79	4.82
Crystal 101RR	Not Approved	4.67	4.75	4.74	4.74	4.72	4.72	4.71	4.63	4.67	4.68
Crystal 246RR	Not Approved	--	4.31	4.62	4.46	--	--	4.49	4.48	4.48	--
Crystal 247RR	Not Approved	--	4.48	4.58	4.53	--	--	4.68	4.57	4.62	--
Crystal 248RR	Not Approved	--	4.49	4.79	4.64	--	--	4.94	5.15	5.05	--
Crystal 765RR	Not Approved	4.58	3.87	4.88	4.38	4.44	4.70	4.70	4.82	4.76	4.74
Crystal 768RR	Not Approved	4.42	4.39	4.10	4.25	4.31	5.09	5.37	5.05	5.21	5.17
Crystal 981RR	Not Approved	4.93	4.45	3.75	4.10	4.38	5.21	5.15	5.09	5.12	5.15
Crystal 985RR	Not Approved	4.56	4.40	4.61	4.51	4.52	4.37	4.41	4.49	4.45	4.42
Crystal 986RR	Not Approved	4.00	4.31	4.54	4.43	4.29	5.14	4.78	4.80	4.79	4.91
Hilleshög 4012RR	Not Approved	5.02	4.80	4.91	4.86	4.91	5.24	5.46	5.43	5.44	5.38
Hilleshög 4236RR(9236)	Not Approved	5.86	5.23	4.97	5.10	5.35	4.75	4.71	4.95	4.83	4.81
Hilleshög 4300RR(9300)	Not Approved	4.32	4.56	4.12	4.34	4.33	4.71	4.82	4.74	4.78	4.76
Hilleshög 4303RR(9303)	Not Approved	--	5.20	5.24	5.22	--	4.22	4.62	4.85	4.74	4.57
Hilleshög 4448RR(9448)	<2 Yrs	--	--	5.42	--	--	--	4.82	5.21	5.02	--
Maribo MA102RR	Not Approved	--	4.70	5.53	5.11	--	5.19	4.88	5.03	4.95	5.03
Seedex SX0828NRR	Not Approved	--	4.25	4.84	4.55	--	--	4.72	4.69	4.71	--
Seedex SX0829NRR	<2 Yrs	--	--	NA	--	--	--	4.84	4.76	4.80	--
Seedex Victor RR	Not Approved	4.57	4.57	4.51	4.54	4.55	4.33	4.41	4.51	4.46	4.42
Seedex Vision RR	Not Approved	4.46	4.61	4.71	4.66	4.59	4.41	4.49	5.17	4.83	4.69
Seedex Xavier RR(0816)	Not Approved	4.55	4.71	4.60	4.65	4.62	4.54	4.43	4.85	4.64	4.61
SESVdh 36175RR	Not Approved	4.55	4.32	4.50	4.41	4.46	4.61	4.22	4.60	4.41	4.48
SESVdh 38219TT RR(36219)	<2 Yrs	--	--	3.40	--	--	--	4.44	5.26	4.85	--
SESVdh 36271RR	Not Approved	--	4.40	3.95	4.18	--	--	4.65	4.45	4.55	--
SESVdh 36272RR	<2 Yrs	--	--	4.61	--	--	--	4.17	4.49	4.33	--
SESVdh 36273RR	Not Approved	--	4.47	4.70	4.58	--	--	4.19	4.68	4.44	--
SESVdh 36275RR	Not Approved	--	3.94	4.27	4.11	--	--	4.28	4.58	4.43	--
SESVdh 36277NRR	<2 Yrs	--	--	4.49	--	--	--	5.15	4.88	5.02	--
SESVdh 36812RR	Not Approved	4.73	4.23	4.32	4.27	4.43	4.78	4.76	4.90	4.83	4.81
SESVdh 36917RR	Not Approved	4.80	4.38	4.19	4.29	4.46	4.51	4.61	5.05	4.83	4.72
SESVdh 36918RR	Not Approved	5.14	4.66	4.82	4.74	4.88	4.41	4.28	4.61	4.45	4.44
Susceptible Checks											
Rhiz Chk#08 CRY539RR	Susc Chk	5.03	5.06	5.09							
Rhiz Chk#11 BETA87RR68	Susc Chk	4.95	3.81								
Rhiz Chk#20 CRY5765RR	Susc Chk	4.50									
Rhiz Chk#21 CRY5768RR	Susc Chk	4.39									
Rhiz Chk#24 BETA86RR88	Susc Chk	4.83	4.75	4.82							
Rhiz Chk#25 HILL4043RR	Susc Chk	4.59	4.95	4.77							
Rhiz Chk#27 HILL4012RR	Susc Chk	4.76	4.69	5.12							
Rhiz Chk#29 BETA87RR58	Susc Chk	4.77	4.76	4.81							
Rhiz Chk#30 SES36711RR	Susc Chk	4.48	4.46	4.75							

Table 27. Calculation for Approval of Sugarbeet Varieties for ACSC Rhizoctonia Specialty Market for 2014

Description	Approval Status	Disease Index +					Cercospora Rating **				
		2011	2012	2013	2 Yr Mean	3 Yr Mean	2011	2012	2013	2 Yr Mean	3 Yr Mean
Rhiz Chk#31 HILL4000RR	Susc Chk	5.19	5.04	5.22							
Rhiz Chk#32 HILL4010RR	Susc Chk	4.46	4.99	4.44							
Rhiz Chk#34 BETA86RR66	Susc Chk	4.72	4.51	4.31							
Rhiz Chk#35 SES36812RR	Susc Chk	4.63	4.53	4.13							
Rhiz Chk#36 BETA85RR02	Susc Chk		4.76	4.27							
Rhiz Chk#37 SES36918RR	Susc Chk			4.75							
Susceptible Hybrid Mean		4.72	4.69	4.71	4.70	4.70			5.20	5.40	
Approval Criteria ++		5.03	3.82	3.82	3.82	4.23					

+ Disease Index is based on a scale of 0 (healthy) to 7 (plant dead). Rhc ratings were adjusted based on check performance.

+ 2013 data from Ft Collins and 1 Mhd site. 2012 data from 3 RRV sites. 2011 data from Ft Collins and 2 Mhd sites.

++ Candidates must have better tolerance than susc. check mean * 80%. To maintain approval, tolerance must be better than susc. check mean * 90%.

** All readings 2011-2013 were adjusted based on check performance.

Excluded from Susc Mean

One variety was omitted from the nursery in 2013 (SX0829NRR).

Table 28. Projected Calculation for Approval of Sugarbeet Varieties for ACSC Market

Description	Approval ^ Likely	Rec/Ton		Rev/Acre		R/T +	CR Rating ^
		%		%		\$/A	
		2013	Bench	2013	Bench	Bench	2013
Candidates for Retesting (1 Yr)							
BTS 8325	On Track	330.6	103.9	1509	107.3	211.2	4.60
BTS 8337	On Track	337.2	105.9	1535	109.2	215.1	4.75
BTS 8354	On Track	327.7	102.9	1387	98.7	201.6	4.80
BTS 8363	On Track	321.6	101.0	1571	111.8	212.8	3.92
BTS 8367	On Track	328.0	103.0	1454	103.5	206.5	4.73
BTS 8390	On Track	313.1	98.3	1564	111.2	209.6	4.43
BTS 83CN	On Track	329.1	103.4	1445	102.8	206.2	4.36
Crystal 354RR	On Track	334.2	105.0	1447	102.9	207.9	4.42
Crystal 355RR	On Track	331.6	104.2	1468	104.4	208.6	4.89
Crystal 356RR	On Track	320.1	100.6	1606	114.3	214.8	4.38
Crystal 357RR	On Track	323.4	101.6	1626	115.7	217.3	4.82
Crystal 358RR	Not On Track	317.1	99.6	1487	105.8	205.4	5.51
Crystal 359RR	Not On Track	316.7	99.5	1560	111.0	210.5	5.32
Hilleshög 9513RR	Not On Track	314.5	98.8	1420	101.0	199.8	5.13
Hilleshög 9514RR	On Track	325.8	102.3	1385	98.5	200.8	4.80
Hilleshög 9516RR	Not On Track	323.6	101.7	1519	108.0	209.7	5.90
Hilleshög 9517RR	On Track	333.7	104.8	1335	95.0	199.8	4.67
Hilleshög 9521RR	Not On Track	306.6	96.3	1370	97.5	193.8	4.72
Hilleshög 9522RR	Not On Track	317.5	99.7	1400	99.6	199.3	4.48
Hilleshög 9525RR	On Track	338.1	106.2	1259	89.6	195.8	4.06
Hilleshög 9528RR	On Track	327.0	102.7	1454	103.5	206.2	4.72
Hilleshög 9531RR	Not On Track	309.8	97.3	1179	83.8	181.1	3.65
Maribo 305RR	On Track	323.9	101.8	1529	108.7	210.5	4.63
Maribo 306RR	On Track	323.4	101.6	1430	101.7	203.3	4.98
Maribo 307RR	Not On Track	308.8	97.0	1399	99.5	196.5	4.79
Maribo 309RR	Not On Track	330.1	103.7	1586	112.9	216.6	5.39
Seedex RR0831N	On Track	319.9	100.5	1278	90.9	191.4	4.49
Seedex RR0832	On Track	325.0	102.1	1448	103.0	205.1	4.78
Seedex RR0833	On Track	318.5	100.0	1259	89.6	189.6	4.57
Seedex RR0834TT	Not On Track	305.8	96.1	1369	97.4	193.5	4.79
Seedex RR0835	On Track	326.6	102.6	1294	92.1	194.7	4.55
SESVdh RR331	On Track	319.8	100.4	1330	94.6	195.0	4.64
SESVdh RR332	On Track	323.1	101.5	1396	99.3	200.8	4.53
SESVdh RR333	On Track	324.5	101.9	1437	102.2	204.2	4.86
SESVdh RR334	On Track	327.1	102.8	1335	95.0	197.7	4.83
SESVdh RR335	On Track	320.9	100.8	1394	99.1	200.0	4.79
SESVdh RR336	On Track	313.0	98.3	1459	103.8	202.1	4.75
Benchmarks							
Beta 85RR02(Check)							
Crystal 539RR							
Crystal 658RR		314.8	98.9	1323	94.1	193.0	
Hilleshög 4012RR		318.0	99.9	1356	96.5	196.4	
Crystal 875RR		315.1	99.0	1417	100.8	199.8	
BTS 80RR52		325.5	102.2	1527	108.6	210.9	
Benchmark Mean		318.4		1406			

^ NOT = not on track for approval. On Track = data is tracking for potential approval.

Created 11-11-2013.

^^ All Cercospora readings were adjusted to 1982 basis.

Full market approval criteria include: 1) 2 years of official trial data, 2) Cercospora rating must not exceed 5.20 (1982 adjusted data),

3a) R/T >= 100% of Bench or 3b) R/T >= 97% and R/T + \$/A equal to 202 of Bench.

Table 29. Performance Data of Conventional and RR Varieties from 2008 Yield Trials - All Locations Combined

[Allows comparison between RR & Conventional varieties] #

Description	Rev/Ton		Rev/Acre		Rec/T	Rec/Ac	Sugar	Yield	LTM	Emerg %	CR +	Aph Rt+	Fus +	Rhc++
	08	08%	08	08%	08	08	08	08	08	08	08	08	08	08
Roundup Ready # of Locations →	6		6		6	6	6	6	6	6	3	1	2	1
BTS 87RR38	39.69	102	1151	113	308.8	8973	16.61	29.1	1.17	70	4.33	5.1	4.8	4.5
BTS 87RR58	40.13	103	1167	115	310.6	9034	16.70	29.1	1.18	68	4.60	5.2	5.3	5.4
BTS 87RR68	44.90	115	1294	127	330.5	9522	17.58	28.8	1.06	69	4.32	7.5	4.0	7.0
BTS 88RR31	40.66	104	1156	114	312.8	8909	16.86	28.5	1.22	64	4.70	4.3	3.9	--
BTS 88RR41	39.87	102	1189	117	309.5	9220	16.57	29.7	1.09	69	4.56	5.6	3.3	--
BTS 88RR61	41.31	106	1155	114	315.5	8823	16.90	28.0	1.12	66	4.18	4.6	3.8	--
Crystal 539RR	41.69	107	1073	106	317.1	8157	16.99	25.7	1.13	69	4.90	4.6	2.3	7.0
Crystal 658RR	38.81	99	1073	106	305.1	8445	16.24	27.7	0.98	63	4.24	4.8	2.4	2.9
Crystal 765RR	44.19	113	1247	123	327.6	9240	17.42	28.2	1.05	74	3.97	7.3	4.1	7.0
Crystal 768RR	39.73	102	1168	115	309.0	9084	16.63	29.4	1.18	75	4.45	5.4	5.2	5.7
Crystal 875RR	41.25	106	1162	114	315.3	8885	16.89	28.2	1.13	68	4.27	3.8	--	--
Crystal 878RR	41.89	107	1201	118	318.0	9116	17.03	28.7	1.14	63	4.44	5.1	--	--
Crystal 879RR	39.41	101	1189	117	307.6	9280	16.47	30.2	1.09	67	4.52	5.6	--	--
Hilleshög 4012RR	40.52	104	1148	113	312.2	8848	16.69	28.4	1.08	69	4.98	4.3	6.4	5.3
Hilleshög 4022RR	39.67	102	1036	102	308.7	8083	16.60	26.3	1.16	70	3.80	4.8	5.3	1.6
Hilleshög 4043RR	42.03	108	1174	116	318.6	8893	16.91	27.9	0.98	66	4.49	4.6	7.3	5.3
Hilleshög 4094RR	39.11	100	1051	104	306.4	8251	16.46	27.0	1.14	69	3.78	4.8	--	2.0
Seedex SX0883RR (Usher)	38.16	98	1119	110	302.4	8878	16.19	29.4	1.07	71	5.83	5.2	--	--
Seedex SX0884RR (Uplander)	41.50	106	1072	106	316.3	8170	16.77	25.8	0.96	72	4.80	4.5	--	--
SESVanderhave H36711RR	39.72	102	1051	103	308.9	8190	16.55	26.6	1.10	66	4.36	5.0	7.5	4.0
SESVanderhave H36811RR	41.11	105	1049	103	314.7	8031	16.67	25.5	0.94	78	4.32	5.1	--	3.2
SESVanderhave H36812RR	39.41	101	1090	107	307.6	8506	16.38	27.6	1.00	69	4.82	4.9	--	4.4
SESVanderhave H36813RR	37.82	97	1120	110	301.0	8922	16.10	29.7	1.05	69	5.75	5.5	--	3.5
Conventional														
Beta 1100R	39.28	101	1153	114	307.1	9012	16.35	29.4	0.99	72	4.25	5.9	4.9	3.3
Beta 1115R	43.10	110	1171	115	323.0	8759	17.10	27.1	0.96	74	4.48	4.3	5.7	4.4
Beta 1125R	38.15	98	1184	117	302.4	9386	16.33	31.1	1.21	78	4.22	4.3	2.7	4.8
Beta 1135R	39.21	101	1046	103	306.8	8186	16.48	26.7	1.14	70	4.03	4.9	3.5	2.4
Beta 1140R	42.63	109	1136	112	321.1	8546	17.06	26.6	1.00	75	4.06	4.8	5.9	5.4
Beta 1301R	35.53	91	1013	100	291.4	8304	15.83	28.5	1.26	72	3.95	3.8	6.0	2.1
Beta 1305R	38.02	97	1005	99	301.8	7969	16.30	26.4	1.21	55	5.23	4.7	5.8	3.8
Beta 1833R	39.41	101	977	96	307.6	7617	16.55	24.7	1.17	64	3.53	4.7	--	1.3
Crystal R308 (3N)	41.68	107	1043	103	317.1	7940	16.97	25.1	1.11	65	3.98	4.2	2.9	--
Crystal R431	39.71	102	1044	103	308.9	8112	16.63	26.3	1.18	72	4.31	4.2	3.3	--
Crystal R434	38.41	98	1050	103	303.4	8305	16.41	27.4	1.24	73	4.74	4.3	2.8	4.6
Crystal R760	39.57	101	1170	115	308.3	9102	16.49	29.5	1.08	74	5.07	4.5	--	6.0
Crystal R761	38.22	98	1119	110	302.6	8856	16.39	29.3	1.25	72	4.03	4.0	2.3	4.7
Crystal R869	42.58	109	1144	113	320.8	8612	16.99	26.8	0.95	78	4.44	4.7	--	--
Hilleshög 3035Rz	40.85	105	1083	107	313.6	8309	16.75	26.5	1.07	67	3.56	4.5	4.6	1.6
Hilleshög 3052Rz	39.49	101	1104	109	307.9	8615	16.46	28.0	1.07	71	4.18	4.9	5.0	4.2
Holly 317	38.39	98	935	92	303.4	7386	16.21	24.4	1.04	73	4.14	5.3	4.2	4.0
Holly 701	38.86	100	1037	102	305.3	8162	16.28	26.8	1.02	74	4.32	4.9	4.4	5.2
Seedex SX0873TT (Deuce)	38.79	99	1125	111	305.0	8842	16.24	29.0	0.99	73	5.16	5.4	--	--
Seedex Sonic	39.74	102	1087	107	309.0	8473	16.48	27.5	1.03	72	4.95	6.1	5.0	4.8
Seedex Triton	39.18	100	988	97	306.7	7725	16.31	25.2	0.98	70	3.51	5.0	5.3	3.0
Seedex Vault	38.72	99	1028	101	304.7	8107	16.23	26.7	0.99	79	4.65	4.8	4.5	4.2
SESVanderhave H46519	38.81	99	1076	106	305.1	8464	16.27	27.8	1.01	70	4.21	4.7	4.7	3.7
SESVanderhave H46531	38.97	100	1061	104	305.8	8333	16.34	27.3	1.05	70	4.59	5.0	4.5	3.3
SESVanderhave H46711	41.10	105	1099	108	314.7	8426	16.70	26.8	0.97	77	3.82	4.4	4.2	5.3
SESVanderhave H46714	37.47	96	1022	101	299.5	8188	15.97	27.4	0.99	77	4.48	4.3	4.8	2.8
SESVanderhave H46801	41.27	106	1031	102	315.4	7871	16.73	24.9	0.96	77	3.44	4.4	--	--
SESVanderhave H48607TT	36.81	94	1131	111	296.8	9120	15.89	30.8	1.05	76	5.42	5.4	6.0	3.8
SESVanderhave H48716TT	39.48	101	1048	103	307.9	8168	16.40	26.5	1.01	78	4.97	4.9	5.4	3.4
SESVanderhave H48717TT	39.62	102	1071	105	308.5	8336	16.46	27.0	1.03	78	4.58	4.8	4.6	4.4
SESVanderhave H48810TT	39.38	101	1110	109	307.5	8662	16.40	28.2	1.02	78	4.91	5.2	--	--
Mean of benchmark varieties	39.01		1016		306.0	7973	16.40	26.1	1.10	64				

08% is 2008-year mean as a % of several benchmark varieties.

Emergence is % of planted seeds producing a 4 leaf beet.

++ 2008 Revenue estimates based on a \$42.38 beet payment at 17.5% sugar and 1.5% loss to molasses. Revenue does not consider hauling or production costs.

+ Aph Ratings from Shakopee & RRV (resist = 4.4, susc = 5.5). CR from Rosemount, Michigan & Foxhome (resist = 4.5, susc = 5.2). Fusarium from RRV (resist = 3.0, susc = 5.0).

++ Rhizoctonia ratings from Ft Collins & RRV (res=3.8, susc=5).

Conventional varieties were granted a special exemption from variety testing for 2009.

Table 30. Performance Data of Conventional Varieties During 2009, 2010 & 2011 Growing Seasons (All Locations Combined) +++
(Data expressed as % of benchmark for all agronomic characters. Disease ratings are not % of benchmark)

Description	Years Comm	Rev/Ton			Rev/Acre			Rec/Ton			Rec/Acre			Sugar			Yield			Molasses			Emergence			CR +			Aph Root+			Fusarium +			Rhizoctonia ++					
		11	10	09	11	10	09	11	10	09	11	10	09	11	10	09	11	10	09	11	10	09	11	10	09	11	10	09	11	10	09	11	10	09	11	10	09			
Conventional	# of locations	8	7	6	8	7	6	8	7	6	8	7	6	8	7	6	8	7	6	8	7	6	8	7	6	8	7	6	3	3	4	2	2	1	1	1	2	2	2	1
Crystal R434	8	100	--	--	101	--	--	100	--	--	101	--	--	101	--	--	101	--	--	102	--	--	116	--	--	96	--	--	4.96	--	--	4.6	--	--	4.8	--	--	4.4	--	--
Crystal R760	5	--	103	--	--	107	--	--	102	--	--	106	--	--	102	--	--	104	--	--	101	--	--	102	--	--	5.66	--	--	3.8	--	--	5.0	--	--	4.5	--			
Crystal R761	5	97	101	--	109	110	--	99	101	--	113	110	--	100	102	--	117	109	--	113	114	--	94	104	--	4.92	4.86	--	4.8	3.9	--	4.8	2.3	--	4.5	4.1	--			
Crystal R869	4	117	110	--	109	108	--	109	106	--	102	104	--	108	105	--	95	98	--	92	95	--	97	110	--	5.24	4.90	--	6.1	5.7	--	5.7	6.2	--	4.0	4.3	--			
Seedex Deuce (SX0873TT)	4	--	--	107	--	--	118	--	--	104	--	--	114	--	--	103	--	--	110	--	--	92	--	--	127	--	--	5.6	--	--	5.9	--	--	5.2	--	--	4.6			
Seedex Sonic	7	--	--	111	--	--	117	--	--	106	--	--	111	--	--	105	--	--	106	--	--	95	--	--	119	--	--	5.1	--	--	5.9	--	--	4.8	--	--	4.8			
SESVanderhave H46519	9	--	na	108	--	na	111	--	na	104	--	na	107	--	na	103	--	na	103	--	na	95	--	na	115	--	4.47	4.8	--	5.1	5.7	--	--	4.7	--	--	4.3			
SESVanderhave H46531	8	--	--	109	--	--	107	--	--	105	--	--	103	--	--	104	--	--	98	--	--	94	--	--	101	--	4.58	4.7	--	5.4	5.4	--	--	4.6	--	--	4.4			
SESVanderhave H48607TT	6	--	--	105	--	--	121	--	--	102	--	--	119	--	--	102	--	--	117	--	--	95	--	--	122	--	--	5.5	--	--	5.5	--	--	5.4	--	--	4.1			
SESVanderhave H48716TT	5	--	--	107	--	--	114	--	--	104	--	--	111	--	--	103	--	--	107	--	--	95	--	--	129	--	--	5.3	--	--	5.7	--	--	5.5	--	--	4.6			
SESVanderhave H48717TT	5	--	99	103	--	86	115	--	99	102	--	86	113	--	99	101	--	87	112	--	99	97	--	na	123	--	5.36	5.4	--	6.0	4.9	--	--	5.1	--	--	4.2			
Mean of benchmark varieties		41.65	46.00	34.89	942	1294	859	297	328	289	6748	9236	7111	16.10	17.40	15.55	22.8	28.2	24.6	1.25	1.00	1.11	65	77	71															

Emergence is % of planted seeds producing a 4 leaf beet.

++ 2011 Revenue estimates based on a \$47.65 beet payment at 17.5% sugar and 1.5% loss to molasses. 2010 Revenue estimates based on a \$44.01 and 2009 based on \$42.40. Revenue does not consider hauling or production costs.

Created 11-5-2012.

+ Aph Ratings from Shakopee & RRV (resist = 4.4, susc = 5.5). CR from Rosemount, Michigan & Foxhome (resist = 4.5, susc = 5.2). Fusarium from RRV (resist = 3.0, susc = 5.0). Rhizoc. From Ft Collins & Mhd (resist = 3.8, susc = 5).

+++ Sites include Argyle, Averill, Casselton, Grand Forks, Humboldt & St Thomas in 2009.

+++ Sites include Averill, Reynolds, Climax, Crookston, Grand Forks, Alvarado, St Thomas in 2010.

+++ Sites include Halstad, Buxton, Crookston East, Crookston, Grand Forks, Angus, Grafton, St Thomas in 2011.

na indicates data not collected due to seed spacing problems from smaller seed.

Fusarium and Rhizoctonia evaluation was voluntary for most of the conventional varieties in 2009 and 2010.

Table 31. Varieties Meeting MDFC Approval Criteria for the 2014 Sugarbeet Crop ++

Roundup Ready ®	Approval Status	Aph Spec	Rhc Spec
ACH RR830	Established		Rhc
ACH RR012	Established		Rhc
ACH RR228	Test Mrkt	Aph	
ACH RR260	Test Mrkt	Aph	
ACH RR299	Conditional		
BTS 70RR99	Established		
BTS 70RR70	Established		
BTS 72RR22	Test Mrkt	Aph	
BTS 72RR95	Test Mrkt	Aph	Rhc
HM 4022RR	Established		Rhc
HM 4062RR	Established		Rhc
HM 4303RR	Established		
HM 4448RR	Test Mrkt		
Seedex Ultra	Established		
Seedex Vapor	Established		
Seedex Yuma (0924RR)	Test Mrkt		
SESVanderhave 36926RR	Established		
SESVanderhave 36084RR	Established		
SESVanderhave 36187RR	Established		
SESVanderhave 36188RR	Specialty	Aph	

Aph Spec = variety meets Aphanomyces specialty requirements of 4.45 or less Aph root rating.

Rhc Spec = variety meets Rhizoctonia specialty requirements of 3.82 or less of Rhc root rating.

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Table 32. Three Year Performance Summary of Minn-Dak Entries in 2013 MDFC (All Locations). *

Description @	Years Comm Seed +	Rec. Sugar / Ton (pounds)			Rec. Sugar / Acre (pounds)			Sugar Content (%)			Root Yield (Tons / Acre)			Field Emergence (%)		Cercospora Rating** (1-9)		Aphanomyces Root Rating		Rhizoctonia (1=Ex.7=Poor)		Fusarium (1=Ex.9=Poor)		Bolters (%)	
		3 Yr	3 Yr %	3 Yr %	3 Yr	3 Yr %	3 Yr %	3 Yr	3 Yr %	3 Yr %	3 Yr	3 Yr %	3 Yr	3 Yr %	3 Yr	3 Yr %	2012	2013	2012	2013	2012	2013	2012	2013	
		2013	Mean	Est.	2013	Mean	Est.	2013	Mean	Est.	2013	Mean	App.	2013	Mean	2013	Mean	2013	Mean	2012	2013	2012	2013	2012	2013
Established Varieties																									
BTS 70RR70	2	304.7	332.8	100.7	8848	9322	103.4	16.5	17.9	100	29.0	27.7	102	69	65	4.32	4.68	4.88	5.15	3.7	4.6	2.6	3.8	0.00	0.00
BTS 70RR99	2	309.2	334.9	101.3	9353	9267	102.8	16.8	18.2	102	30.4	27.6	102	58	60	4.72	4.55	4.52	4.68	3.8	4.4	2.8	3.6	0.02	0.00
Crystal RR012	2	311.6	337.0	101.9	9124	9062	100.5	16.9	18.3	102	29.3	26.8	99	65	61	4.76	4.70	4.78	4.91	3.3	3.7	2.8	3.6	0.00	0.00
Crystal RR830	4	293.9	321.5	97.3	8985	9263	102.7	15.9	17.3	97	30.8	28.7	106	70	62	4.57	4.70	4.62	4.72	3.9	3.7	3.5	4.2	0.00	0.00
Hilleshög 4022RR	5	301.8	330.2	99.9	8395	8595	95.3	16.4	17.9	100	27.8	26.0	96	66	66	4.33	4.32	4.65	4.52	3.3	3.4	4.7	4.7	0.00	0.00
Hilleshög 4062RR	4	298.5	325.0	98.3	8551	8590	95.3	16.3	17.7	99	28.6	26.3	97	76	67	4.54	4.28	4.46	4.72	3.5	3.6	4.7	4.6	0.00	0.00
Seedex Ultra RR	4	298.4	323.3	97.8	8964	8989	99.7	16.2	17.5	98	30.0	27.5	101	65	59	4.98	4.70	5.36	5.20	4.2	4.3	5.0	4.7	0.00	0.00
Seedex Vapor RR(SX0995)	2	308.0	331.3	100.2	9192	9220	102.2	16.6	17.9	100	30.0	27.7	102	69	61	4.87	4.68	4.64	4.75	4.2	4.6	4.7	5.2	0.05	0.00
SESVdh 36084RR	1	302.0	335.2	101.4	9007	8844	98.1	16.3	18.0	101	29.8	26.2	97	61	57	5.32	4.90	5.36	5.06	4.5	4.8	5.3	5.4	0.00	0.00
SESVdh 36926RR	2	304.2	334.7	101.2	8854	9022	100.1	16.3	17.9	101	29.2	26.9	99	72	65	4.64	4.49	5.24	5.16	4.5	4.7	4.6	4.9	0.02	0.00
Specialty, Conditional & Candidates																									
Hilleshög 4303RR(9310)	NC	308.1	337.5	102.1	8944	8839	98.0	16.7	18.2	102	29.0	25.9	95	74	64	4.85	4.56	4.75	4.77	5.3	5.2	5.6	5.7	0.08	0.00
Maribo MA102RR(108)	NC	316.5	336.7	101.8	8828	9045	100.3	17.0	18.1	101	27.9	26.5	98	71	62	5.48	5.24	4.44	3.89	4.9	5.5	5.0	5.1	0.00	0.00
Seedex SX0903RR	NC	294.7	322.5	97.5	7691	8856	98.2	16.0	17.4	97	26.2	26.9	99	61	59	4.50	4.34	5.26	4.64	4.7	4.1	5.0	5.2	0.15	0.00
Seedex SX0904RR	NC	283.9	313.0	94.7	8629	8536	94.7	15.5	17.0	95	30.5	27.2	100	65	58	4.74	4.32	3.57	3.94	4.1	3.9	3.8	3.9	0.00	0.00
SESVdh 36187RR	1	306.9	333.9	101.0	8780	8971	99.5	16.6	17.9	100	28.8	26.9	99	70	62	4.60	4.57	5.44	4.93	4.5	4.4	5.0	5.1	0.00	0.00
SESVdh 36188RR	1	297.0	319.8	96.7	8419	8703	96.5	16.0	17.3	97	28.1	26.9	99	66	62	4.74	4.34	4.60	4.41	4.0	3.6	4.2	4.6	0.00	0.04
Test Market Candidates																									
BTS 72RR22	NC	305.6	332.1	100.5	9552	10610	117.7	16.6	18.0	101	31.2	31.7	117	71	67	4.18	4.24	3.21	3.20	4.5	4.7	--	4.3	0.08	0.00
BTS 72RR95	NC	296.8	320.8	97.0	8749	10118	112.2	16.3	17.5	98	29.3	31.3	115	73	69	4.37	4.47	3.80	3.86	3.0	3.8	--	2.7	0.00	0.00
Crystal RR228	NC	319.7	340.8	103.1	9526	10916	121.1	17.2	18.3	103	30.0	32.1	118	61	62	4.39	4.36	3.36	3.42	4.4	4.4	--	4.7	0.08	0.00
Crystal RR260	NC	301.4	323.2	97.8	9794	11723	130.0	16.3	17.5	98	32.3	36.1	133	73	71	4.34	4.46	4.28	4.32	4.6	3.7	--	3.3	0.00	0.00
Crystal RR299	NC	296.5	324.6	98.2	9144	11319	125.5	16.0	17.5	98	30.5	34.4	127	76	71	4.35	4.41	4.96	4.50	4.2	3.9	--	4.1	0.08	0.00
Hilleshög 4448RR(9449 MD)	NC	309.1	335.4	101.4	9204	10354	114.8	16.6	18.0	101	29.8	30.7	113	68	64	5.05	4.86	4.70	4.58	--	4.8	--	5.0	0.00	0.00
Hilleshög 9451RR	NC	303.6	330.5	100.0	8683	10278	114.0	16.3	17.7	99	29.0	31.2	115	74	68	5.09	5.24	4.72	4.71	--	5.1	--	5.4	0.08	0.00
Seedex SX0924RR	NC	310.8	331.1	100.2	8949	10425	115.6	16.7	17.8	100	28.8	31.3	115	65	59	4.46	4.60	4.46	4.54	4.2	4.6	--	--	0.00	0.00
Seedex SX0929RR	NC	303.7	328.2	99.3	9070	9875	109.5	16.4	17.7	99	30.2	30.2	111	70	64	4.58	4.30	5.46	4.63	3.8	4.6	4.1	5.7	0.00	0.00
SESVdh 36222RR	NC	291.0	322.9	97.7	8942	10776	119.5	15.8	17.4	98	30.6	33.0	122	57	55	4.43	4.38	5.16	5.10	4.6	3.7	--	--	0.15	0.00
SESVdh 36223RR	NC	306.0	324.5	98.2	8692	10304	114.3	16.5	17.5	98	28.3	31.4	116	70	62	4.36	4.30	5.22	4.59	4.0	4.8	3.7	5.5	0.00	0.00
SESVdh 36224RR	NC	295.5	328.6	99.4	7723	9820	108.9	16.0	17.7	99	26.2	29.4	108	53	53	4.53	4.40	5.06	4.79	--	4.1	--	--	0.00	0.00
First Year Varieties																									
BTS 7315	NC	298.2	315.1	98.4	8637	96.8	16.2	16.2	98	29.1	99	71	4.89	5.49	4.3	--	--	4.3	--	--	--	--	--	0.00	0.00
BTS 7335	NC	306.1	310.9	100.9	8349	93.5	16.6	101	27.0	91	66	4.70	4.28	3.4	--	--	4.28	--	--	--	--	--	--	0.00	0.00
BTS 7373	NC	313.1	310.2	95.40	9540	106.9	17.0	103	30.4	103	70	4.75	3.53	3.9	--	--	3.53	--	--	--	--	--	--	0.00	0.00
BTS 73MN	NC	298.1	98.3	9019	101.0	16.1	98	30.1	102	75	4.63	3.96	3.5	--	--	3.96	--	--	--	--	--	--	--	0.00	0.00
Crystal D303	NC	302.4	99.7	9150	102.5	16.5	101	30.5	103	68	5.19	4.46	4.0	--	--	4.46	--	--	--	--	--	--	--	0.00	0.00
Crystal D352NT	NC	297.6	98.1	8732	97.8	16.2	99	29.4	100	78	4.53	4.12	3.2	--	--	4.12	--	--	--	--	--	--	--	0.00	0.00
Crystal D396	NC	300.5	99.1	8685	97.3	16.3	99	29.0	98	73	4.61	4.22	3.9	--	--	4.22	--	--	--	--	--	--	--	0.00	0.00
Hilleshög 9513RR	NC	288.4	95.1	8604	96.4	15.8	96	30.1	102	64	5.13	4.62	--	--	--	4.62	--	--	--	--	--	--	--	0.00	0.00
Hilleshög 9514RR	NC	304.5	100.4	8826	98.9	16.7	102	28.8	98	68	4.80	5.21	--	--	--	5.21	--	--	--	--	--	--	--	0.00	0.00
Hilleshög 9516RR	NC	296.4	97.7	9679	108.4	16.2	99	33.1	112	75	5.90	4.05	--	--	--	4.05	--	--	--	--	--	--	--	0.00	0.00
Hilleshög 9517RR	NC	317.0	104.6	8973	100.5	17.2	105	28.4	96	66	4.67	3.66	3.6	--	--	3.66	--	--	3.6	3.8	--	--	--	0.00	0.00
Hilleshög 9521RR	NC	285.3	94.1	8363	93.7	15.7	95	29.1	99	70	4.72	4.54	3.6	--	--	4.54	--	--	3.6	--	--	--	--	0.00	0.00
Hilleshög 9524RR	NC	315.1	103.9	9278	103.9	17.0	103	29.4	100	72	5.30	4.80	--	--	--	4.80	--	--	--	--	--	--	--	0.00	0.00
Hilleshög 9525RR	NC	318.2	104.9	7421	83.1	17.1	104	23.4	79	61	4.06	4.56	--	--	--	4.56	--	--	--	--	--	--	--	0.00	0.00
Hilleshög 9530RR	NC	302.7	99.8	8488	95.1	16.5	101	28.1	95	73	5.35	5.75	--	--	--	5.75	--	--	--	--	--	--	--	0.00	0.00
Maribo 306RR	NC	303.8	100.2	8404	94.1	16.5	100	27.7	94	52	4.98	4.65	4.3	--	--	4.65	--	--	4.3	--	--	--	--	0.00	0.00
Maribo 307RR	NC	287.5	94.8	7293	81.7	15.7	95	25.3	86	66	4.79	5.93	--	--	--	5.93	--	--	--	--	--	--	--	0.00	0.00
Maribo 309RR	NC	309.4	102.0	9042	101.3	16.6	101	29.0	98	65	5.39	4.63	--	--	--	4.63	--	--	--	--	--	--	--	0.00	0.00
Seedex RR0935	NC	296.8	97.9	7875	88.2	16.1	98	26.2	89	58	4.74	5.35	4.6	--											

Table 33. 2013 Performance of Varieties - MDFC RR Commercial Yield Trial
2 sites - All Characters

Description @	Code	Rec/T lbs.	Rec/T %Mean	Rec/A lbs.	Rec/A %Mean	Loss Mol %	Sugar %	Yield T/A	Na ppm	K ppm	AmN ppm	Bolter %	Emerg. %	Tare %
BTS 70RR70	153	304.7	101	8848	100	1.25	16.48	29.04	323	1689	399	0.00	68.5	7.1
BTS 70RR99	159	309.2	102	9353	105	1.34	16.80	30.42	251	1703	492	0.00	58.1	8.7
Crystal RR012	155	311.6	103	9124	103	1.30	16.88	29.28	260	1698	464	0.00	65.2	10.3
Crystal RR830	161	293.9	97	8985	101	1.20	15.89	30.79	297	1629	388	0.00	69.9	8.0
Hilleshög 4022RR	162	301.8	100	8395	95	1.31	16.41	27.82	309	1758	439	0.00	66.1	9.4
Hilleshög 4062RR	154	298.5	99	8551	96	1.37	16.29	28.58	319	1787	468	0.00	75.6	8.3
Seedex Ultra RR	160	298.4	98	8964	101	1.23	16.15	30.01	285	1652	410	0.00	65.2	7.3
Seedex Vapor RR(SX0995)	152	308.0	102	9192	104	1.22	16.62	30.03	258	1646	412	0.00	69.2	7.4
SESVdh 36084RR	158	302.0	100	9007	102	1.23	16.33	29.77	275	1616	422	0.00	61.3	8.0
SESVdh 36187RR	157	306.9	101	8780	99	1.23	16.57	28.81	259	1708	401	0.00	70.4	7.9
SESVdh 36188RR	156	297.0	98	8419	95	1.17	16.03	28.13	286	1591	382	0.04	65.8	8.0
SESVdh 36926RR	151	304.2	100	8854	100	1.11	16.33	29.18	225	1617	352	0.00	71.5	7.7
Trial Mean		303.0		8873		1.25	16.40	29.32	279	1674	419	0.00	67.3	8.2
Coeff. of Var. (%)		4.2		5.6		7.8	3.7	4.6	19.3	5.2	13.1		11.7	26.7
Mean LSD (0.05)		15.9		738		0.10	0.76	1.91	63	112	65		9.1	2.1
Mean LSD (0.01)		22.4		1041		0.15	1.08	2.71	89	157	92		12.2	3.0
Sig Lvl		ns		ns		*	ns	ns	ns	ns	*		*	ns

* 2013 Data from 2 sites

10/31/2013 11:54

Created 10-31-2013.

^ Vigor not collected.

Trial # = 13MDCom

@ Some varieties not approved for sale. Refer to approval list for approval status.

**Table 34. 2013 Performance of Varieties - MDFC RR Commercial Yield Trial
Breckenridge MN - All Characters**

Description @	Code	Rec/T	Rec/T	Rec/A	Rec/A	Loss Mol %	Sugar %	Yield T/A	Na ppm	K ppm	AmN ppm	Bolter %	Emerg. %
		lbs.	%Mean	lbs.	%Mean								
BTS 70RR70	153	324.7	104	9441	107	1.12	17.35	29.05	239	1559	363	0.00	NA
BTS 70RR99	159	318.2	102	9037	102	1.24	17.15	28.45	224	1669	433	0.00	NA
Crystal RR012	155	318.1	102	8858	100	1.16	17.07	27.76	213	1668	377	0.00	NA
Crystal RR830	161	304.4	98	8929	101	1.13	16.35	29.53	254	1600	358	0.00	NA
Hilleshög 4022RR	162	308.0	99	8175	92	1.21	16.62	26.58	258	1749	382	0.00	NA
Hilleshög 4062RR	154	310.5	100	8498	96	1.29	16.82	27.30	265	1771	432	0.00	NA
Seedex Ultra RR	160	303.8	97	8929	101	1.16	16.35	29.23	248	1589	385	0.00	NA
Seedex Vapor RR(SX0995)	152	320.5	103	9335	106	1.16	17.18	29.10	208	1599	396	0.00	NA
SESVdh 36084RR	158	308.1	99	8786	99	1.19	16.58	28.49	250	1572	408	0.00	NA
SESVdh 36187RR	157	314.6	101	8999	102	1.19	16.92	28.83	231	1721	377	0.00	NA
SESVdh 36188RR	156	305.0	98	8296	94	1.06	16.32	26.87	220	1524	340	0.00	NA
SESVdh 36926RR	151	302.9	97	8786	99	1.05	16.20	29.14	215	1591	315	0.00	NA
Trial Mean		311.6		8839		1.16	16.74	28.36	235	1634	381	0.00	NA
Coeff. of Var. (%)		4.4		6.6		8.1	4.1	5.1	18.3	5.4	15.0		NA
Mean LSD (0.05)		15.9		718		0.11	0.80	1.82	50	101	67		NA
Mean LSD (0.01)		21.1		957		0.15	1.06	2.43	66	134	90		NA
Sig Lvl		ns		*		**	ns	*	ns	**	*		NA

* 2013 Data from Breckenridge MN

10/31/2013 12:01

Created 10-31-2013.

^ Vigor not collected.

Trial # = 136602

@ Some varieties not approved for sale. Refer to approval list for approval status.

**Table 35. 2013 Performance of Varieties - MDFC RR Commercial Yield Trial
Fairmount ND - All Characters**

Description @	Code	Rec/T	Rec/T	Rec/A	Rec/A	Loss Mol %	Sugar %	Yield T/A	Na ppm	K ppm	AmN ppm	Bolter %	Emerg. %
		lbs.	%Mean	lbs.	%Mean								
BTS 70RR70	153	284.6	97	8240	93	1.38	15.60	29.06	406	1818	436	0.00	68.5
BTS 70RR99	159	300.1	102	9675	109	1.44	16.44	32.37	278	1736	551	0.00	58.1
Crystal RR012	155	304.9	104	9353	105	1.45	16.69	30.75	309	1728	552	0.00	65.2
Crystal RR830	161	282.9	96	9040	102	1.27	15.42	32.09	339	1658	417	0.00	69.9
Hilleshög 4022RR	162	296.2	101	8660	97	1.42	16.22	29.18	360	1767	498	0.00	66.1
Hilleshög 4062RR	154	287.1	98	8653	97	1.45	15.80	29.98	372	1804	505	0.00	75.6
Seedex Ultra RR	160	292.7	99	8997	101	1.30	15.93	30.83	324	1716	433	0.00	65.2
Seedex Vapor RR(SX0995)	152	294.4	100	9028	101	1.28	16.00	30.92	307	1693	426	0.00	69.2
SESVdh 36084RR	158	296.6	101	9200	103	1.27	16.10	30.84	298	1661	435	0.00	61.3
SESVdh 36187RR	157	298.5	101	8517	96	1.26	16.19	28.64	285	1694	423	0.00	70.4
SESVdh 36188RR	156	289.4	98	8522	96	1.28	15.75	29.36	354	1657	425	0.07	65.8
SESVdh 36926RR	151	306.0	104	8986	101	1.18	16.48	29.33	235	1644	388	0.00	71.5
Trial Mean		294.4		8906		1.33	16.05	30.28	322	1714	457	0.00	67.3
Coeff. of Var. (%)		3.7		4.3		7.6	2.9	4.0	19.6	4.9	11.5		11.7
F Value		2.61	**	5.68		4.57	3.54	5.09	3.06	2.86	6.33		2.12
Mean LSD (0.05)		12.9		492		0.12	0.56	1.57	75	98	61		9.1
Mean LSD (0.01)		17.2		656		0.16	0.75	2.10	100	130	81		12.2
Sig Lvl		*		**		**	**	**	**	**	**		*

* 2013 Data from Fairmount ND

10/31/2013 11:52

Created 10-31-2013.

^ Vigor not collected.

Trial # = 136603

@ Some varieties not approved for sale. Refer to approval list for approval status.

Table 36. 2013 Performance of Varieties - MDFC Experimental RR Official Trial
2 sites - All Characters

Adjusted to Comm. Trial Status	Rec/T	Rec/T	Rec/A	Rec/A	Loss	Sugar	Yield	Na	K	AmN	Bolter	Emerg.	Tare	
Description @	Code	lbs.	%Mean	lbs.	%Mean	Mol %	%	T/A	ppm	ppm	ppm	%^	%^	%
BTS 72RR22	339	305.6	102	9552	109	1.37	16.64	31.17	286	1779	485	0.00	71.4	7.2
BTS 72RR95	326	296.8	99	8749	100	1.43	16.27	29.31	279	1815	522	0.00	73.2	8.3
BTS 7315	328	298.2	99	8637	99	1.27	16.17	29.12	348	1752	387	0.00	71.3	6.9
BTS 7335	313	306.1	102	8349	95	1.31	16.61	26.98	258	1654	483	0.00	65.7	8.6
BTS 7373	341	313.1	104	9540	109	1.31	16.97	30.39	278	1707	462	0.00	69.5	8.5
BTS 73MN	307	298.1	99	9019	103	1.23	16.14	30.11	275	1600	426	0.00	75.2	6.2
Crystal D303	325	302.4	101	9150	104	1.40	16.53	30.48	338	1905	461	0.00	68.4	5.9
Crystal D352NT	334	297.6	99	8732	100	1.33	16.19	29.41	263	1730	470	0.00	78.3	7.1
Crystal D396	302	300.5	100	8685	99	1.26	16.29	29.01	278	1660	429	0.00	73.1	7.8
Crystal RR228NT	303	319.7	106	9526	109	1.20	17.18	30.00	235	1606	413	0.00	60.9	9.4
Crystal RR260	338	301.4	100	9794	112	1.24	16.31	32.33	350	1726	376	0.00	73.5	6.7
Crystal RR299	305	296.5	99	9144	104	1.23	16.04	30.52	328	1670	389	0.00	75.9	7.1
Hilleshog 4303RR(9310)	340	308.1	102	8944	102	1.31	16.71	29.00	302	1685	452	0.00	74.2	6.8
Hilleshog 4448RR(9449 MD)	321	309.1	103	9204	105	1.18	16.64	29.79	232	1535	419	0.00	67.7	5.1
Hilleshog 9451RR	343	303.6	101	8683	99	1.16	16.35	29.00	271	1501	397	0.00	73.6	7.5
Hilleshog 9513RR	329	288.4	96	8604	98	1.37	15.80	30.09	425	1782	442	0.00	64.2	8.7
Hilleshog 9514RR	342	304.5	101	8826	101	1.43	16.68	28.76	339	1770	522	0.00	68.3	8.6
Hilleshog 9516RR	306	296.4	99	9679	110	1.37	16.20	33.15	365	1719	477	0.00	74.6	6.7
Hilleshog 9517RR	309	317.0	105	8973	102	1.33	17.17	28.43	323	1754	445	0.00	66.4	8.5
Hilleshog 9521RR	301	285.3	95	8363	95	1.38	15.65	29.06	357	1903	442	0.00	70.4	6.5
Hilleshog 9524RR	316	315.1	105	9278	106	1.20	16.96	29.38	214	1550	436	0.00	72.2	6.0
Hilleshog 9525RR	336	318.2	106	7421	85	1.20	17.11	23.44	244	1610	407	0.00	61.4	7.7
Hilleshog 9530RR	337	302.7	101	8488	97	1.41	16.53	28.06	327	1812	493	0.00	73.3	8.1
Maribo 306RR	318	303.8	101	8404	96	1.30	16.47	27.73	314	1638	454	0.00	52.1	6.1
Maribo 307RR	308	287.5	96	7293	83	1.29	15.66	25.28	370	1808	392	0.00	65.7	6.4
Maribo 309RR	333	309.4	103	9042	103	1.15	16.64	28.95	234	1558	389	0.00	65.5	4.9
Maribo MA102RR(108)	331	316.5	105	8828	101	1.16	17.00	27.87	249	1500	404	0.00	70.6	6.3
Seedex RR0935	312	296.8	99	7875	90	1.27	16.11	26.20	258	1836	405	0.00	57.7	5.3
Seedex RR0936	317	292.2	97	8873	101	1.20	15.79	30.09	285	1601	401	0.00	59.6	6.0
Seedex RR0937NTT	322	275.6	92	7798	89	1.30	15.09	28.02	249	1815	436	0.00	66.8	7.0
Seedex SX0903RR	320	294.7	98	7691	88	1.28	16.01	26.17	263	1806	411	0.00	61.2	5.8
Seedex SX0904RR	323	283.9	94	8629	98	1.29	15.48	30.55	327	1687	436	0.00	64.6	6.6
Seedex SX0924RR	304	310.8	103	8949	102	1.19	16.74	28.84	234	1725	372	0.00	64.8	6.0
Seedex SX0929RR	319	303.7	101	9070	104	1.22	16.40	30.20	276	1679	393	0.00	69.9	6.1
SESVdh 36222RR	314	291.0	97	8942	102	1.28	15.83	30.61	315	1771	407	0.00	56.9	7.1
SESVdh 36223RR	327	306.0	102	8692	99	1.22	16.52	28.34	260	1704	394	0.00	69.6	7.9
SESVdh 36224RR	324	295.5	98	7723	88	1.27	16.03	26.17	256	1811	403	0.00	53.2	6.5
SESVdh RR631	335	305.5	102	8732	100	1.24	16.51	28.98	293	1740	389	0.00	74.1	8.2
SESVdh RR632N	315	299.7	100	8818	101	1.23	16.22	29.17	312	1693	389	0.00	69.4	6.5
SESVdh RR633	311	301.2	100	8734	100	1.16	16.22	28.93	263	1613	373	0.00	61.1	5.1
SESVdh RR634	332	304.1	101	8501	97	1.22	16.41	27.99	292	1718	376	0.00	55.4	7.2
SESVdh RR635N	310	291.7	97	8699	99	1.22	15.81	29.98	324	1579	409	0.00	81.3	10.2
SESVdh RR636NTT	330	275.9	92	7818	89	1.35	15.14	28.39	268	1764	475	0.00	66.7	6.8
RR Filler #01	344	307.5	102	9469	108	1.38	16.76	30.67	318	1919	447	0.00	70.2	6.1
RR Filler #01b	345	301.9	100	9705	111	1.43	16.51	32.30	321	1923	477	0.00	73.1	6.9
Crystal RR830(Check)	346	293.6	98	8944	102	1.24	15.91	30.78	327	1656	399	0.00	70.0	4.2
Hilleshog 4062RR(Check)	347	301.1	100	8672	99	1.35	16.40	28.90	309	1768	461	0.00	71.6	7.1
BTS 70RR99(Check)	348	307.0	102	9273	106	1.32	16.67	30.11	231	1696	488	0.00	68.4	6.8
Trial Mean		300.9		8761		1.28	16.33	29.13	293	1713	429	0.00	68.0	6.93
Coeff. of Var. (%)		3.2		7.0		7.5	2.6	7.3	18.3	6	11.6		8.9	26.46
Mean LSD (0.05)		12.0		1114		0.12	0.53	3.71	76	119	60		6.2	2.20
Mean LSD (0.01)		16.1		1486		0.15	0.70	4.96	102	159	80		8.2	2.94
Sig Lvl		**		**		**	**	*	**	**	**		**	**

* 2013 Data from 2 sites

10/31/2013 11:14

Created 10/31/2013

^ Vigor not collected. Bolter & emergence not adjusted to commercial status.

Trial # = 13MDExp

@ Some varieties not approved for sale. Refer to approval list for approval status.

Table 37. 2013 Performance of Varieties - MDFC Experimental RR Official Trial
Breckenridge MN - All Characters

Adjusted to Comm. Trial Status Description @	Rec/T		Rec/A		Loss Mol %	Sugar %	Yield T/A	Na ppm	K ppm	AmN ppm	Bolter %^	Emerg. %^	
	Code	lbs.	%Mean	lbs.									%Mean
BTS 72RR22	339	313.2	102	8893	105	1.27	16.92	28.33	243	1767	428	0.00	NA
BTS 72RR95	326	304.4	99	7978	94	1.36	16.59	25.84	261	1789	482	0.00	NA
BTS 7315	328	302.9	98	9058	107	1.25	16.39	30.05	319	1719	398	0.00	NA
BTS 7335	313	313.0	102	8061	95	1.25	16.90	25.51	220	1640	455	0.00	NA
BTS 7373	341	325.8	106	8886	105	1.21	17.51	27.09	240	1642	415	0.00	NA
BTS 73MN	307	307.9	100	8780	103	1.18	16.58	28.12	236	1579	407	0.00	NA
Crystal D303	325	305.0	99	8943	105	1.38	16.62	29.60	326	1872	451	0.00	NA
Crystal D352NT	334	302.8	98	8469	100	1.27	16.40	28.13	239	1691	450	0.00	NA
Crystal D396	302	311.4	101	8438	99	1.14	16.69	27.35	229	1547	387	0.00	NA
Crystal RR228NT	303	333.3	108	8943	105	1.10	17.76	26.95	178	1581	369	0.00	NA
Crystal RR260	338	311.0	101	9775	115	1.15	16.70	31.24	310	1696	335	0.00	NA
Crystal RR299	305	311.2	101	9063	107	1.11	16.65	28.88	269	1596	337	0.00	NA
Hilleshög 4303RR(9310)	340	311.3	101	8414	99	1.24	16.80	26.98	286	1633	423	0.00	NA
Hilleshög 4448RR(9449 MD)	321	311.8	101	8762	103	1.13	16.71	28.06	244	1546	374	0.00	NA
Hilleshög 9451RR	343	307.1	100	8031	95	1.12	16.46	26.50	268	1477	372	0.00	NA
Hilleshög 9513RR	329	287.3	93	8151	96	1.38	15.74	28.61	431	1787	429	0.00	NA
Hilleshög 9514RR	342	307.5	100	8123	96	1.39	16.78	26.29	320	1747	492	0.00	NA
Hilleshög 9516RR	306	301.1	98	8845	104	1.30	16.36	30.02	359	1649	433	0.00	NA
Hilleshög 9517RR	309	334.2	108	8491	100	1.21	17.92	25.55	295	1675	390	0.00	NA
Hilleshög 9521RR	301	286.8	93	7687	91	1.31	15.65	26.78	338	1870	398	0.00	NA
Hilleshög 9524RR	316	320.3	104	8916	105	1.14	17.16	27.70	225	1545	399	0.00	NA
Hilleshög 9525RR	336	322.9	105	7086	83	1.17	17.32	21.92	220	1616	395	0.00	NA
Hilleshög 9530RR	337	303.5	99	8217	97	1.38	16.54	26.94	337	1828	458	0.00	NA
Maribo 306RR	318	308.1	100	8049	95	1.30	16.69	26.09	314	1656	451	0.00	NA
Maribo 307RR	308	301.6	98	7760	91	1.17	16.26	25.81	336	1695	342	0.00	NA
Maribo 309RR	333	317.5	103	9107	107	1.08	16.97	28.35	211	1467	370	0.00	NA
Maribo MA102RR(108)	331	323.1	105	8599	101	1.09	17.24	26.58	240	1489	359	0.00	NA
Seedex RR0935	312	305.4	99	8123	96	1.18	16.45	26.38	229	1763	367	0.00	NA
Seedex RR0936	317	298.3	97	8696	102	1.14	16.04	28.69	271	1594	364	0.00	NA
Seedex RR0937NTT	322	284.6	92	8523	100	1.17	15.41	29.61	220	1645	394	0.00	NA
Seedex SX0903RR	320	301.8	98	7467	88	1.16	16.23	24.88	236	1726	358	0.00	NA
Seedex SX0904RR	323	293.2	95	8040	95	1.15	15.80	27.29	290	1601	368	0.00	NA
Seedex SX0924RR	304	316.1	103	8819	104	1.11	16.90	27.96	218	1680	331	0.00	NA
Seedex SX0929RR	319	309.6	101	8328	98	1.13	16.61	27.11	254	1672	334	0.00	NA
SESVdh 36222RR	314	298.6	97	8528	100	1.18	16.10	28.50	240	1746	359	0.00	NA
SESVdh 36223RR	327	308.6	100	8175	96	1.20	16.63	26.49	242	1770	378	0.00	NA
SESVdh 36224RR	324	305.3	99	7858	93	1.13	16.38	25.70	210	1776	331	0.00	NA
SESVdh RR631	335	314.0	102	8450	100	1.10	16.78	27.33	217	1686	322	0.00	NA
SESVdh RR632N	315	314.6	102	8494	100	1.08	16.80	26.91	225	1649	317	0.00	NA
SESVdh RR633	311	301.6	98	8565	101	1.10	16.17	28.17	232	1554	356	0.00	NA
SESVdh RR634	332	315.1	102	8347	98	1.12	16.86	26.59	267	1656	335	0.00	NA
SESVdh RR635N	310	295.5	96	7652	90	1.18	15.96	25.90	290	1589	388	0.00	NA
SESVdh RR636NTT	330	284.5	92	8714	103	1.27	15.49	30.76	226	1670	456	0.00	NA
RR Filler #01	344	311.6	101	9203	108	1.39	16.96	29.38	314	1896	458	0.00	NA
RR Filler #01b	345	312.1	101	9501	112	1.33	16.92	30.58	262	1880	434	0.00	NA
Crystal RR830(Check)	346	306.0	99	8949	105	1.12	16.43	29.42	253	1619	346	0.00	NA
Hilleshög 4062RR(Check)	347	305.3	99	8353	98	1.34	16.60	27.74	285	1784	458	0.00	NA
BTS 70RR99(Check)	348	321.7	104	9163	108	1.20	17.29	28.12	205	1637	419	0.00	NA
Trial Mean		308.1		8489		1.21	16.61	27.56	264	1675	393	0.00	NA
Coeff. of Var. (%)		3.1		6.6		6.5	2.7	6.8	16.2	4.5	10.8		NA
Mean LSD (0.05)		15.5		832		0.12	0.72	2.84	67	107	65		NA
Mean LSD (0.01)		20.5		1099		0.16	0.96	3.75	89	142	86		NA
Sig Lvl		**		**		**	**	**	**	**	**		NA

* 2013 Data from Breckenridge MN

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Created 10/31/2013

^ Vigor not collected. Bolter & emergence not adjusted to commercial status.

Trial # = 136302

@ Some varieties not approved for sale. Refer to approval list for approval status.

Table 38. 2013 Performance of Varieties - MDFC Experimental RR Official Trial
Fairmount ND - All Characters

Adjusted to Comm. Trial Status	Rec/T	Rec/T	Rec/A	Rec/A	Loss	Sugar	Yield	Na	K	AmN	Bolter	Emerg.	
Description @	Code	lbs.	%Mean	lbs.	%Mean	Mol %	%	T/A	ppm	ppm	ppm	%^	%^
BTS 72RR22	339	298.5	101	10321	114	1.47	16.38	34.43	329	1796	544	0.00	67.4
BTS 72RR95	326	288.2	98	9504	105	1.52	15.91	32.91	308	1840	569	0.00	68.8
BTS 7315	328	293.4	100	8199	90	1.27	15.95	27.97	378	1783	372	0.00	66.2
BTS 7335	313	299.7	102	8694	96	1.39	16.36	28.91	316	1670	512	0.00	60.8
BTS 7373	341	301.0	102	10316	114	1.42	16.47	34.14	321	1772	511	0.00	61.9
BTS 73MN	307	286.3	97	9207	102	1.28	15.61	32.29	323	1616	441	0.00	74.7
Crystal D303	325	299.9	102	9433	104	1.43	16.43	31.45	348	1938	464	0.00	62.4
Crystal D352NT	334	292.8	100	9105	100	1.38	16.01	31.04	286	1778	487	0.00	74.7
Crystal D396	302	292.0	99	8970	99	1.35	15.96	30.58	322	1781	457	0.00	68.0
Crystal RR228NT	303	307.3	104	10248	113	1.29	16.67	33.28	294	1632	450	0.00	54.9
Crystal RR260	338	292.2	99	9807	108	1.31	15.94	33.49	377	1759	410	0.00	71.0
Crystal RR299	305	285.3	97	9229	102	1.34	15.59	32.20	392	1753	433	0.00	70.6
Hilleshög 4303RR(9310)	340	307.3	104	9456	104	1.35	16.73	30.61	308	1742	474	0.00	69.3
Hilleshög 4448RR(9449 MD)	321	305.7	104	9810	108	1.23	16.52	32.07	205	1523	457	0.00	63.0
Hilleshög 9451RR	343	299.5	102	9365	103	1.18	16.20	31.35	251	1533	411	0.00	72.1
Hilleshög 9513RR	329	290.7	99	9031	100	1.37	15.91	30.97	383	1779	451	0.00	60.7
Hilleshög 9514RR	342	303.5	103	9641	106	1.48	16.66	31.53	349	1792	545	0.00	65.0
Hilleshög 9516RR	306	292.9	100	10630	117	1.44	16.09	36.19	350	1795	513	0.00	67.5
Hilleshög 9517RR	309	303.3	103	9477	105	1.44	16.58	31.15	353	1830	495	0.00	62.7
Hilleshög 9521RR	301	286.3	97	9191	101	1.45	15.75	31.73	362	1938	473	0.00	67.9
Hilleshög 9524RR	316	308.8	105	9670	107	1.26	16.72	31.28	203	1560	476	0.00	71.7
Hilleshög 9525RR	336	315.5	107	7797	86	1.23	17.01	24.56	261	1608	422	0.00	53.7
Hilleshög 9530RR	337	299.5	102	8720	96	1.45	16.43	29.21	313	1796	530	0.00	67.1
Maribo 306RR	318	299.3	102	8750	96	1.29	16.27	29.24	311	1619	454	0.00	48.3
Maribo 307RR	308	273.9	93	6898	76	1.43	15.10	25.13	403	1921	448	0.00	60.7
Maribo 309RR	333	302.4	103	9021	99	1.21	16.35	29.71	246	1655	406	0.00	59.1
Maribo MA102RR(108)	331	310.8	106	9087	100	1.20	16.78	29.23	247	1511	440	0.00	64.7
Seedex RR0935	312	290.6	99	7661	84	1.35	15.89	26.25	282	1910	430	0.00	50.7
Seedex RR0936	317	284.4	97	9124	101	1.26	15.49	32.21	306	1610	429	0.00	56.7
Seedex RR0937NTT	322	267.2	91	7032	78	1.43	14.79	26.31	273	1986	469	0.00	62.7
Seedex SX0903RR	320	290.3	99	7987	88	1.38	15.90	27.45	281	1894	453	0.00	55.3
Seedex SX0904RR	323	272.4	93	9241	102	1.44	15.07	34.19	373	1781	505	0.00	58.4
Seedex SX0924RR	304	306.3	104	8995	99	1.27	16.61	29.34	250	1769	414	0.00	58.7
Seedex SX0929RR	319	296.5	101	9792	108	1.31	16.14	33.16	295	1685	457	0.00	65.2
SESVdh 36222RR	314	286.7	97	9332	103	1.38	15.69	32.41	404	1789	442	0.00	57.2
SESVdh 36223RR	327	303.8	103	9262	102	1.23	16.44	30.43	290	1642	406	0.00	68.9
SESVdh 36224RR	324	285.9	97	7570	83	1.39	15.68	26.51	295	1850	472	0.00	49.3
SESVdh RR631	335	297.9	101	9115	101	1.38	16.28	30.59	378	1795	454	0.00	70.6
SESVdh RR632N	315	289.3	98	9249	102	1.35	15.82	31.60	388	1743	450	0.00	66.5
SESVdh RR633	311	299.6	102	8952	99	1.21	16.22	29.90	287	1681	385	0.00	58.1
SESVdh RR634	332	294.3	100	8640	95	1.30	16.02	29.33	327	1780	412	0.00	53.2
SESVdh RR635N	310	286.2	97	9830	108	1.26	15.60	34.58	358	1574	430	0.00	78.4
SESVdh RR636NTT	330	268.3	91	6875	76	1.41	14.82	25.47	302	1865	482	0.00	63.7
RR Filler #01	344	305.0	104	9817	108	1.38	16.61	31.96	290	1944	433	0.00	67.6
RR Filler #01b	345	291.6	99	9880	109	1.54	16.10	33.85	389	1969	523	0.00	71.7
Crystal RR830(Check)	346	279.1	95	8940	99	1.35	15.32	32.38	415	1688	454	0.00	67.3
Hilleshög 4062RR(Check)	347	300.4	102	9061	100	1.33	16.35	29.80	315	1755	453	0.00	70.2
BTS 70RR99(Check)	348	290.6	99	9367	103	1.47	15.99	32.26	260	1755	566	0.00	64.6
Trial Mean		294.3		9068		1.35	16.06	30.76	319	1754	462	0.00	64.0
Coeff. of Var. (%)		3.3		7.4		8.2	2.6	7.3	20.7	6.3	12.1		9.5
Mean LSD (0.05)		14.3		933		0.16	0.62	3.13	93	163	80		9.1
Mean LSD (0.01)		18.9		1232		0.21	0.82	4.13	123	215	106		12.0
Sig Lvl		**		**		**	**	**	**	**	**		**

* 2013 Data from Fairmount ND

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^ Vigor not collected. Bolter & emergence not adjusted to commercial status.

Trial # = 136303

@ Some varieties not approved for sale. Refer to approval list for approval status.

Table 39. Disease Ratings for ACSC Approved Varieties from Official Trial Disease Nurseries 2011 - 2013 (Varieties tested in 2013)
Cercospora, Aphanomyces, Rhizoctonia & Fusarium

Code	Description +	CR					Aph					Rhizoctonia					Fusarium				
		13 Mean	12 Mean	11 Mean	2 Yr Mean	3 Yr Mean	13 Mean	12 Mean	11 Mean	2 Yr Mean	3 Yr Mean	13 Mean	12 Mean	11 Mean	2 Yr Mean	3 Yr Mean	13 Mean	12 Mean	11 Mean	2 Yr Mean	3 Yr Mean
Previously Approved																					
556	BTS 80RR32	4.81	4.66	5.18	4.73	4.88	5.04	4.43	5.33	4.74	4.94	4.28	3.88	4.23	4.08	4.13	3.87	2.46	4.22	3.16	3.51
528	BTS 80RR52	4.52	4.40	4.61	4.46	4.51	4.01	4.04	4.93	4.02	4.33	3.77	3.73	4.14	3.75	3.88	3.64	2.77	3.93	3.21	3.45
587	BTS 81RR17	4.45	4.36	4.68	4.40	4.50	3.87	3.25	4.06	3.56	3.73	4.10	4.00	4.09	4.05	4.07	3.23	2.50	3.47	2.86	3.07
621	BTS 81RR78	4.86	4.51	4.88	4.69	4.75	4.90	4.87	4.83	4.89	4.87	4.59	4.50	4.57	4.54	4.55	3.93	3.41	3.93	3.67	3.76
543	BTS 89RR10	4.96	5.10	5.08	5.03	5.05	4.52	2.32	4.13	3.42	3.65	4.91	4.14	3.63	4.52	4.22	5.34	4.62	4.74	4.98	4.90
601	BTS 89RR50	4.83	5.30	5.01	5.07	5.05	3.97	4.80	4.07	4.38	4.28	5.31	4.88	5.30	5.09	5.16	3.82	3.02	3.77	3.42	3.54
619	BTS 89RR83	4.91	4.89	4.81	4.90	4.87	4.04	3.62	5.05	3.83	4.24	3.45	3.58	4.53	3.51	3.85	4.39	3.39	4.42	3.89	4.06
552	Crystal 093RR	5.20	4.82	5.16	5.01	5.06	4.54	4.19	5.08	4.36	4.60	4.39	4.43	4.43	4.41	4.41	4.01	3.45	4.26	3.73	3.91
533	Crystal 095RR	4.75	4.83	4.88	4.79	4.82	5.05	4.63	4.62	4.84	4.77	4.59	4.57	4.87	4.58	4.67	5.20	4.06	4.44	4.63	4.56
569	Crystal 101RR	4.63	4.71	4.72	4.67	4.68	3.80	2.97	4.14	3.38	3.63	4.74	4.75	4.67	4.74	4.72	3.27	2.95	3.00	3.11	3.07
563	Crystal 658RR	4.52	4.28	4.47	4.40	4.42	4.41	3.42	4.52	3.91	4.12	3.99	4.09	3.78	4.04	3.95	2.87	2.39	3.16	2.63	2.80
570	Crystal 986RR	4.82	4.70	4.70	4.76	4.74	5.79	5.69	6.12	5.74	5.87	4.88	3.87	4.58	4.38	4.44	4.75	4.10	4.49	4.43	4.45
505	Crystal 768RR	5.05	5.37	5.09	5.21	5.17	4.80	3.91	4.83	4.36	4.52	4.10	4.39	4.42	4.25	4.31	4.84	4.20	4.50	4.52	4.51
517	Crystal 875RR	4.77	4.26	4.24	4.52	4.42	3.76	2.71	3.14	3.23	3.20	4.53	4.00	4.06	4.26	4.20	4.79	4.45	4.12	4.62	4.45
622	Crystal 981RR	5.09	5.15	5.21	5.12	5.15	3.55	3.08	4.03	3.31	3.55	3.75	4.45	4.93	4.10	4.38	3.80	2.87	3.54	3.33	3.40
604	Crystal 985RR	4.49	4.41	4.37	4.45	4.42	3.89	3.15	3.75	3.52	3.60	4.61	4.40	4.56	4.51	4.52	4.42	3.51	4.24	3.96	4.06
572	Hilleshög 4012RR	4.80	4.78	5.14	4.79	4.91	4.67	4.41	5.21	4.54	4.76	4.54	4.31	4.00	4.43	4.29	5.20	4.30	5.52	4.75	5.00
585	Hilleshög 4022RR	5.43	5.46	5.24	5.44	5.38	5.06	4.03	4.64	4.55	4.58	4.91	4.80	5.02	4.86	4.91	5.63	6.13	5.16	5.88	5.64
535	Hilleshög 4094RR	4.33	4.36	4.26	4.34	4.32	4.65	4.11	4.80	4.38	4.52	3.39	3.29	3.48	3.34	3.38	4.67	4.71	4.06	4.69	4.48
581	Hilleshög 4195RR	4.47	4.34	4.00	4.41	4.27	4.73	3.72	5.16	4.22	4.54	3.42	3.28	3.29	3.35	3.33	4.57	4.47	4.44	4.52	4.49
546	Hilleshög 4236RR(9236)	4.87	4.65	4.60	4.76	4.71	4.78	4.20	5.21	4.49	4.73	4.15	3.67	3.78	3.91	3.87	5.54	5.60	5.02	5.57	5.39
504	Hilleshög 4300RR(9300)	4.95	4.71	4.75	4.83	4.81	5.36	5.37	4.88	5.36	5.20	4.97	5.23	5.86	5.10	5.35	5.73	5.84	4.75	5.79	5.44
512	Hilleshög 4302RR(9302)	4.74	4.82	4.71	4.78	4.76	4.23	4.16	4.72	4.19	4.37	4.12	4.56	4.32	4.34	4.33	3.76	3.59	3.98	3.67	3.78
579	Hilleshög 4303RR(9303)	4.23	4.34	4.00	4.29	4.19	4.82	4.20	4.88	4.51	4.63	3.32	3.63	3.47	3.48	3.48	5.11	4.33	-	4.72	-
605	Maribo MA102RR	4.85	4.62	4.22	4.74	4.57	4.75	4.00	4.87	4.38	4.54	5.24	5.20	-	5.22	-	5.70	5.44	-	5.57	-
509	Maribo 104RR	5.03	4.88	5.19	4.95	5.03	4.30	4.33	3.95	4.31	4.19	5.53	4.70	-	5.11	-	5.21	5.19	-	5.20	-
516	Seedex Victor RR	3.87	3.82	3.45	3.85	3.71	4.71	4.46	4.73	4.59	4.63	3.99	3.98	3.36	3.99	3.78	5.60	4.75	4.96	5.18	5.10
603	Seedex Vision RR	4.51	4.41	4.33	4.46	4.42	4.90	4.68	4.71	4.79	4.76	4.51	4.57	4.57	4.54	4.55	4.94	4.21	4.22	4.58	4.46
544	Seedex Xavier RR(0816)	5.17	4.49	4.41	4.83	4.69	5.41	5.17	4.73	5.29	5.10	4.71	4.61	4.46	4.66	4.59	5.21	5.05	4.63	5.13	4.96
611	SESvch 36175RR	4.85	4.43	4.54	4.64	4.61	4.42	4.19	4.52	4.30	4.37	4.60	4.71	4.55	4.65	4.62	5.52	5.27	-	5.39	-
593	SESvch 36812RR	4.60	4.22	4.61	4.41	4.48	4.29	4.10	4.55	4.19	4.31	4.50	4.32	4.55	4.41	4.46	4.45	4.65	-	4.55	-
559	SESvch 36917RR	4.90	4.76	4.78	4.83	4.81	5.11	4.73	5.19	4.92	5.01	4.32	4.23	4.73	4.27	4.43	4.87	4.73	4.22	4.80	4.61
618	SESvch 36918RR	5.05	4.61	4.51	4.83	4.72	4.71	4.68	4.68	4.69	4.69	4.19	4.38	4.80	4.29	4.46	5.48	4.86	4.81	5.17	5.05
Newly Approved																					
515	BTS 82RR22	4.61	4.28	4.41	4.45	4.44	5.00	4.69	4.50	4.85	4.73	4.82	4.66	5.14	4.74	4.88	5.56	5.00	5.06	5.28	5.21
628	BTS 82RR28	4.77	4.65	-	4.71	-	4.41	3.95	-	4.18	-	5.19	4.61	-	4.90	-	5.52	4.79	-	5.15	-
629	BTS 82RR33	4.52	4.66	-	4.59	-	4.62	4.51	-	4.56	-	4.17	3.94	-	4.06	-	2.85	2.00	-	2.42	-
606	BTS 82RR80	4.68	4.74	-	4.71	-	5.40	5.11	-	5.25	-	4.36	4.09	-	4.23	-	3.05	2.27	-	2.66	-
565	Crystal 246RR	4.62	4.77	-	4.69	-	4.56	3.37	-	3.96	-	4.54	4.63	-	4.58	-	4.29	3.12	-	3.71	-
537	Crystal 247RR	4.48	4.49	-	4.48	-	4.90	3.85	-	4.38	-	4.62	4.31	-	4.46	-	4.17	3.30	-	3.74	-
589	Crystal 248RR	4.57	4.68	-	4.62	-	5.21	3.68	-	4.45	-	4.58	4.48	-	4.53	-	3.79	2.32	-	3.05	-
626	Hilleshög 4448RR(9448)	5.15	4.94	-	5.05	-	4.74	3.59	-	4.17	-	4.79	4.49	-	4.64	-	4.15	3.25	-	3.70	-
551	Seedex SX0828NRR	5.21	4.82	-	5.02	-	4.73	5.66	-	5.20	-	5.42	-	-	-	-	5.22	-	-	-	-
583	Seedex SX0829NRR	4.69	4.72	-	4.71	-	4.35	4.06	-	4.20	-	4.84	4.25	-	4.55	-	3.54	4.14	-	3.84	-
586	SESvch 36271RR	4.76	4.84	-	4.80	-	5.42	3.90	-	4.66	-	NE	-	-	-	-	4.27	3.38	-	3.82	-
568	SESvch 36272RR	4.45	4.65	-	4.55	-	5.55	4.85	-	5.20	-	3.95	4.40	-	4.18	-	NE	-	-	-	-
590	SESvch 36273RR	4.49	4.17	-	4.33	-	5.01	5.15	-	5.08	-	4.61	-	-	-	-	NE	-	-	-	-
590	SESvch 36273RR	4.68	4.19	-	4.44	-	5.31	3.10	-	4.21	-	4.70	4.47	-	4.58	-	NE	-	-	-	-

CR ratings on a scale of 1-9. Good < 4.5, Poor > 5.2

Aph root ratings on a scale of 1-9. Good < 4.4, Poor > 5.5. Specialty level is 4.4.

Rhizoctonia ratings on a scale of 1-7. Good < 3.8, Poor > 5.0. Specialty level is 3.82.

Fusarium ratings on a scale of 1-9. Good < 3.0, Poor > 5.0

Good highlighted ratings indicate specialty or good resistance.

Poor highlighted ratings indicate level of concern for some fields.

+ Rhizoctonia and Fusarium ratings are optional in first year of testing.

NE indicates variety was not entered into disease nursery.

Created 11-6-2013.

Table 40. Disease Ratings for MDFC Official Trial Entries in Official Trial Disease Nurseries 2011 - 2013 (Varieties tested in 2013)
Cercospora, Aphanomyces, Rhizoctonia & Fusarium

Code	Description +	CR					Aph					Rhizoctonia					Fusarium				
		13	12	11	2 Yr	3 Yr	13	12	11	2 Yr	3 Yr	13	12	11	2 Yr	3 Yr	13	12	11	2 Yr	3 Yr
		Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean
Commercial Seed																					
561	BTS 70RR70	4.32	4.62	5.11	4.47	4.68	4.88	NR	5.41	NA	NA	4.57	3.75	3.83	4.16	4.05	3.78	2.63	3.93	3.20	3.45
609	BTS 70RR99	4.72	4.33	4.59	4.53	4.55	4.52	NR	4.85	NA	NA	4.38	3.85	3.94	4.11	4.06	3.58	2.78	3.99	3.18	3.45
602	Crystal RR012	4.76	4.54	4.79	4.65	4.70	4.78	NR	5.04	NA	NA	3.69	3.27	4.12	3.48	3.69	3.63	2.85	4.55	3.24	3.68
555	Crystal RR830	4.57	4.60	4.92	4.58	4.70	4.62	NR	4.81	NA	NA	3.66	3.91	3.36	3.78	3.64	4.23	3.45	3.63	3.84	3.77
585	Hilleshög 4022RR	4.33	4.36	4.26	4.34	4.32	4.65	4.11	4.80	4.38	4.52	3.39	3.29	3.48	3.34	3.38	4.67	4.71	4.06	4.69	4.48
590	Hilleshög 4062RR	4.54	4.38	3.91	4.46	4.28	4.46	NR	4.98	NA	NA	3.63	3.54	2.87	3.59	3.35	4.64	4.73	4.72	4.69	4.70
598	Seedex Ultra RR	4.98	4.64	4.49	4.81	4.70	5.36	NR	5.05	NA	NA	4.27	4.18	4.56	4.22	4.34	4.71	4.97	3.74	4.84	4.47
560	Seedex Vapor RR(SX0995)	4.87	4.48	4.68	4.68	4.68	4.64	NR	4.86	NA	NA	4.65	4.25	4.54	4.45	4.48	5.19	4.68	5.26	4.93	5.04
591	SESVdh 36084RR	5.32	4.70	4.69	5.01	4.90	5.36	5.05	4.76	5.21	5.06	4.85	4.48	4.43	4.66	4.59	5.38	5.29	5.04	5.33	5.23
539	SESVdh 36187RR	4.60	4.58	4.52	4.59	4.57	5.44	4.47	4.88	4.95	4.93	4.39	4.53	4.90	4.46	4.61	5.05	5.01	5.17	5.03	5.08
542	SESVdh 36188RR	4.74	4.05	4.23	4.40	4.34	4.60	4.10	4.53	4.35	4.41	3.65	3.96	3.88	3.80	3.83	4.58	4.16	4.02	4.37	4.25
631	SESVdh 36926RR	4.64	4.38	4.45	4.51	4.49	5.24	NR	5.09	NA	NA	4.71	4.54	4.41	4.63	4.56	4.95	4.56	4.99	4.76	4.84
Experimental Seed																					
513	BTS 72RR22	4.18	4.31	--	4.24	--	3.21	3.19	--	3.20	--	4.72	4.50	--	4.61	--	4.26	--	--	--	--
623	BTS 72RR95	4.37	4.57	--	4.47	--	3.80	3.93	--	3.86	--	3.77	3.02	--	3.39	--	2.67	--	--	--	--
518	Crystal RR228	4.39	4.33	--	4.36	--	3.36	3.49	--	3.42	--	4.40	4.41	--	4.40	--	4.69	--	--	--	--
531	Crystal RR260	4.34	4.58	--	4.46	--	4.28	4.37	--	4.32	--	3.71	4.60	--	4.16	--	3.27	--	--	--	--
548	Crystal RR299	4.35	4.48	--	4.41	--	4.96	4.04	--	4.50	--	3.85	4.22	--	4.04	--	4.06	--	--	--	--
579	Hilleshög 4303RR(9310)	4.85	4.40	4.43	4.62	4.56	4.75	4.72	4.84	4.73	4.77	5.24	5.32	--	5.28	--	5.70	5.63	--	5.66	--
530	Hilleshög 4448RR(9449 MD)	5.05	4.66	--	4.86	--	4.70	4.46	--	4.58	--	4.81	--	--	--	--	4.98	--	--	--	--
616	Hilleshög 9451RR	5.09	5.38	--	5.24	--	4.72	4.69	--	4.71	--	5.11	--	--	--	--	5.44	--	--	--	--
617	Manibo MA102RR(108)	5.48	5.12	5.13	5.30	5.24	4.44	3.18	4.06	3.81	3.89	5.48	4.86	--	5.17	--	5.10	5.05	--	5.07	--
525	Seedex SX0903RR	4.50	4.23	4.27	4.37	4.34	5.26	4.22	4.44	4.74	4.64	4.08	4.68	4.38	4.38	4.38	5.18	5.01	4.56	5.10	4.92
562	Seedex SX0904RR	4.74	4.17	4.06	4.46	4.32	3.57	3.84	4.41	3.70	3.94	3.90	4.12	3.77	4.01	3.93	3.89	3.82	4.02	3.85	3.91
615	Seedex SX0924RR	4.46	4.74	--	4.60	--	4.46	4.63	--	4.54	--	4.63	4.16	--	4.40	--	--	--	--	--	--
503	Seedex SX0929RR	4.58	4.02	--	4.30	--	5.46	3.80	--	4.63	--	4.65	3.82	--	4.23	--	5.73	4.09	--	4.91	--
627	SESVdh 36222RR	4.43	4.32	--	4.38	--	5.16	5.03	--	5.10	--	3.70	4.62	--	4.16	--	--	--	--	--	--
506	SESVdh 36223RR	4.36	4.25	--	4.30	--	5.22	3.95	--	4.59	--	4.82	4.04	--	4.43	--	5.47	3.71	--	4.59	--
566	SESVdh 36224RR	4.53	4.27	--	4.40	--	5.06	4.52	--	4.79	--	4.11	--	--	--	--	--	--	--	--	--

CR ratings on a scale of 1-9. Good < 4.5, Poor > 5.2

Aph root ratings on a scale of 1-9. Good < 4.45, Poor > 5.5. Specialty level is 4.45.

Rhizoctonia ratings on a scale of 1-7. Good < 3.8, Poor > 5.0. Specialty level is 3.82.

Fusarium ratings on a scale of 1-9. Good < 3.0, Poor > 5.0

Good ratings indicate specialty or good resistance.

Poor ratings indicate level of concern for some fields.

+ Some varieties are not approved for sale in 2014. Please check variety approval list.

+ Rhizoctonia and Fusarium ratings are optional in first year of testing.

Table 41. Official Trial Disease Nurseries 2011 - 2013 - Cercospora, Aphanomyces, Rhizoctonia & Fusarium

Trial Yrs	All Ratings Adjusted		CR			Aph			Rhizoctonia			Fusarium		
	Code	Description +	13 Mean	12 Mean	11 Mean	13 Mean	12 Mean	11 Mean	13 Mean	12 Mean	11 Mean	13 Mean	12 Mean	11 Mean
6	1114	CR CHK MOD RES HYB#4	4.48	4.28	4.37	--	--	--	--	--	--	--	--	--
9	1115	CR CHK MOD SUS HYB#3	4.83	4.96	5.25	--	--	--	--	--	--	--	--	--
9	1001	Aph Chk-22 CRY539RR	--	--	--	4.24	2.75	4.06	--	--	--	--	--	--
8	1002	Aph Chk-29 BETA86RR44	--	--	--	5.36	5.47	4.97	--	--	--	--	--	--
8	1003	Aph Chk-30 BETA86RR66	--	--	--	4.51	5.02	4.45	--	--	--	--	--	--
8	1004	Aph Chk-26 HILL4022RR	--	--	--	4.73	4.21	4.96	--	--	--	--	--	--
7	1005	Aph Chk-35 BETA87RR58	--	--	--	5.17	5.49	5.50	--	--	--	--	--	--
3	1006	Aph Chk-39 CRY5879RR	--	--	--	6.24	6.38	6.14	--	--	--	--	--	--
3	1007	Aph Chk-42 BETA78RR10	--	--	--	5.30	3.38	5.09	--	--	--	--	--	--
7	1008	Aph Chk-33 CRY5768RR	--	--	--	5.29	3.75	5.00	--	--	--	--	--	--
8	1009	Aph Chk-31 BETA86RR88	--	--	--	4.99	4.55	4.39	--	--	--	--	--	--
9	1010	Aph Chk-18 BETA85RR02	--	--	--	3.50	4.04	4.09	--	--	--	--	--	--
7	1011	Aph Chk-34 HILL4000RR	--	--	--	5.18	5.83	5.24	--	--	--	--	--	--
3	1012	Aph Chk-41 CRY5765RR	--	--	--	6.01	6.07	6.11	--	--	--	--	--	--
7	1013	Aph Chk-36 BETA87RR68	--	--	--	5.92	5.15	6.31	--	--	--	--	--	--
8	1014	Aph Chk-28 HILL4010RR	--	--	--	5.31	NR	5.13	--	--	--	--	--	--
3	1015	Aph Chk-40 CRY5878RR	--	--	--	5.74	4.13	5.47	--	--	--	--	--	--
7	1016	ACAPMODRR	--	--	--	5.22	4.21	4.97	--	--	--	--	--	--
8	1017	ACAPRESRR	--	--	--	4.14	3.25	4.61	--	--	--	--	--	--
7	1018	AP CHK SUS HYB#3	--	--	--	5.67	5.79	6.15	--	--	--	--	--	--
7	1019	AP CHK SUS HYB#4	--	--	--	5.54	5.29	6.51	--	--	--	--	--	--
7	1020	AP CHK MOD RES RR#2	--	--	--	4.90	5.92	4.60	--	--	--	--	--	--
7	1021	ACAPMODRR	--	--	--	5.22	4.21	4.97	--	--	--	--	--	--
8	1022	ACAPRESRR	--	--	--	4.14	3.25	4.61	--	--	--	--	--	--
7	1023	AP CHK SUS HYB#3	--	--	--	5.67	5.79	6.15	--	--	--	--	--	--
8	1201	Fus Chk #07 CRY5658RR	--	--	--	--	--	--	--	--	--	3.13	2.68	3.53
7	1202	Fus Chk #08 HILL4000RR	--	--	--	--	--	--	--	--	--	5.95	6.62	5.76
8	1203	Fus Chk #09 HILL4010RR	--	--	--	--	--	--	--	--	--	5.70	6.14	5.57
8	1204	Fus Chk #12 HILL4012RR	--	--	--	--	--	--	--	--	--	5.69	5.72	5.69
7	1205	Fus Chk #13 HILL4043RR	--	--	--	--	--	--	--	--	--	5.48	6.70	5.23
8	1206	Fus Chk #14 BETA86RR44	--	--	--	--	--	--	--	--	--	5.68	5.30	5.62
5	1207	Fus Chk #16 BETA87RR58	--	--	--	--	--	--	--	--	--	5.18	4.79	4.86
5	1208	Fus Chk #17 CRY5765RR	--	--	--	--	--	--	--	--	--	4.49	4.54	3.94
5	1209	Fus Chk #18 CRY5768RR	--	--	--	--	--	--	--	--	--	4.94	4.13	4.87
4	1210	Fus Chk #26 BETA87RR68	--	--	--	--	--	--	--	--	--	4.92	4.54	4.98
3	1211	FS CHECK RES RR #1	--	--	--	--	--	--	--	--	--	2.95	2.39	3.15
3	1212	FS CHECK SUS RR #2	--	--	--	--	--	--	--	--	--	5.63	6.70	5.29
7	1213	FS CHK MOD RR RES #2	--	--	--	--	--	--	--	--	--	4.54	4.54	4.72
7	1214	FS CHK MOD RR SUS #1	--	--	--	--	--	--	--	--	--	5.11	4.79	5.34
3	1215	FS CHECK SUS RR #2	--	--	--	--	--	--	--	--	--	5.63	6.70	5.29
5	1301	Rhiz Chk#08 CRY539RR	--	--	--	--	--	--	5.09	5.06	5.03	--	--	--
5	1302	Rhiz Chk#17 HILL4022RR	--	--	--	--	--	--	2.85	3.27	3.09	--	--	--
5	1303	Rhiz Chk#20 CRY5765RR	--	--	--	--	--	--	4.35	3.87	4.50	--	--	--
5	1304	Rhiz Chk#21 CRY5768RR	--	--	--	--	--	--	4.50	4.28	4.39	--	--	--
5	1305	Rhiz Chk#24 BETA86RR88	--	--	--	--	--	--	4.82	4.75	4.83	--	--	--
5	1306	Rhiz Chk#25 HILL4043RR	--	--	--	--	--	--	4.77	4.95	4.59	--	--	--
5	1307	Rhiz Chk#26 BETA86RR44	--	--	--	--	--	--	4.29	4.78	4.35	--	--	--
5	1308	Rhiz Chk#27 HILL4012RR	--	--	--	--	--	--	5.12	4.69	4.76	--	--	--
8	1309	Rhiz Chk#28 CRY5658RR	--	--	--	--	--	--	4.21	4.12	3.95	--	--	--
7	1310	Rhiz Chk#29 BETA87RR58	--	--	--	--	--	--	4.81	4.76	4.77	--	--	--
7	1311	Rhiz Chk#30 SES36711RR	--	--	--	--	--	--	4.75	4.46	4.48	--	--	--
7	1312	Rhiz Chk#31 HILL4000RR	--	--	--	--	--	--	5.22	5.04	5.19	--	--	--
8	1313	Rhiz Chk#32 HILL4010RR	--	--	--	--	--	--	4.44	4.99	4.46	--	--	--
7	1314	Rhiz Chk#33 BETA77RR74	--	--	--	--	--	--	3.66	3.50	3.26	--	--	--
8	1315	Rhiz Chk#34 BETA86RR66	--	--	--	--	--	--	4.31	4.51	4.72	--	--	--
6	1316	Rhiz Chk#35 SES36812RR	--	--	--	--	--	--	4.13	4.53	4.63	--	--	--
9	1317	Rhiz Chk#36 BETA85RR02	--	--	--	--	--	--	4.27	4.76	4.78	--	--	--
5	1318	Rhiz Chk#37 SES36918RR	--	--	--	--	--	--	4.75	4.66	5.14	--	--	--
4	1319	Rhiz Chk#38 SEED0904RR	--	--	--	--	--	--	3.83	4.12	3.77	--	--	--
8	1320	RES RHC #1	--	--	--	--	--	--	2.91	3.38	2.79	--	--	--
8	1321	MOD RHC #6	--	--	--	--	--	--	3.97	3.97	3.78	--	--	--
9	1322	SUS RHC #3	--	--	--	--	--	--	5.85	4.86	4.70	--	--	--
5	1323	SUS RHC #9	--	--	--	--	--	--	5.15	4.66	5.14	--	--	--
8	1324	MOD RHC #5	--	--	--	--	--	--	4.55	4.63	4.43	--	--	--

CR ratings on a scale of 1-9. Good < 4.5, Poor > 5.2

Aph root ratings on a scale of 1-9. Good < 4.4, Poor > 5.5

Rhizoctonia ratings on a scale of 1-7. Good < 3.8, Poor > 5.0

Fusarium ratings on a scale of 1-9. Green < 3.0, Red > 5.0

Some Aph ratings in 2012 were likely elevated (9 and higher) due to lack of Tach seed treatment.

Good ratings indicate specialty or good resistance.

Poor ratings indicate level of concern for some fields.

+ Some varieties are not approved for sale in 2014. Please check variety approval list.

+ Rhizoctonia and Fusarium ratings are optional in first year of testing.

Created 11-6-2013.

Table 42. 2013 Aphanomyces Readings for Official Trial Entries
Shakopee, MN & Kindred, ND

2013 Chk+++ Code	Description	Foliar [^] Unadjusted		Root ^{^^} Unadjusted		Foliar [^] Adjusted		Root ^{^^} Adjusted		2013 Average		Multi-Year Average				2012		2011		Trial Yrs \$\$\$
		Kind 8/14	Shak 7/18	Kind 8/16	Shak 8/27	Kind 8/14	Shak 7/18	Kind 8/16	Shak 8/27	Foliar Root	Foliar Root	2 Yr	3 Yr	2 Yr	3 Yr	Foliar [^]		Rt.Indx ^{^^}		
																2 Yr	3 Yr	2 Yr	3 Yr	
561	BTS 70RR70	2.87	5.87	4.52	7.03	2.66	3.31	4.42	5.34	2.98	4.88	NR	NR	NR	NR	NR	NR	4.04	5.41	4
609	BTS 70RR99	2.95	5.19	4.74	5.79	2.73	2.93	4.63	4.40	2.83	4.52	NR	NR	NR	NR	NR	NR	2.46	4.85	4
513	BTS 72RR22	2.81	3.10	3.80	3.57	2.60	1.75	3.72	2.71	2.17	3.21	2.14	--	3.20	--	2.10	3.19	--	--	2
623	BTS 72RR95	2.92	3.51	4.30	4.47	2.70	1.98	4.20	3.40	2.34	3.80	2.31	--	3.86	--	2.27	3.93	--	--	2
532	BTS 7315	4.19	5.73	5.87	6.89	3.88	3.23	5.74	5.24	3.56	5.49	--	--	--	--	--	--	--	--	1
545	BTS 7335	2.49	4.74	4.22	5.83	2.30	2.67	4.13	4.43	2.49	4.28	--	--	--	--	--	--	--	--	1
612	BTS 7373	2.32	3.15	3.91	4.26	2.15	1.78	3.82	3.24	1.96	3.53	--	--	--	--	--	--	--	--	1
567	BTS 73MN	2.50	3.81	3.96	5.32	2.31	2.15	3.87	4.04	2.23	3.96	--	--	--	--	--	--	--	--	1
556	BTS 80RR32	3.05	6.57	4.66	7.28	2.82	3.71	4.56	5.53	3.26	5.04	2.98	3.20	4.74	4.94	2.69	4.43	3.66	5.33	4
528	BTS 80RR52	2.45	4.29	3.98	5.42	2.27	2.42	3.89	4.12	2.34	4.01	2.38	2.52	4.02	4.33	2.41	4.04	2.80	4.93	4
587	BTS 81RR17	1.91	4.53	3.86	5.23	1.77	2.56	3.77	3.98	2.16	3.87	1.90	2.11	3.56	3.73	1.65	3.25	2.52	4.06	3
621	BTS 81RR78	3.44	5.95	4.66	6.90	3.18	3.36	4.56	5.25	3.27	4.90	3.24	3.20	4.89	4.87	3.21	4.87	3.12	4.83	3
515	BTS 82RR22	3.09	4.82	4.45	5.88	2.86	2.72	4.35	4.47	2.79	4.41	2.25	--	4.18	--	1.71	3.95	--	--	2
628	BTS 82RR28	2.73	4.69	4.25	6.68	2.53	2.65	4.15	5.08	2.59	4.62	2.73	--	4.56	--	2.87	4.51	--	--	2
629	BTS 82RR33	2.63	5.92	5.24	7.46	2.43	3.34	5.12	5.67	2.89	5.40	2.90	--	5.25	--	2.92	5.11	--	--	2
606	BTS 82RR80	2.60	4.56	4.60	6.08	2.41	2.57	4.50	4.62	2.49	4.56	2.10	--	3.96	--	1.72	3.37	--	--	2
571	BTS 8325	2.57	5.11	4.35	6.93	2.38	2.88	4.25	5.27	2.63	4.76	--	--	--	--	--	--	--	--	1
613	BTS 8337	3.07	3.15	4.32	4.14	2.84	1.78	4.22	3.15	2.31	3.69	--	--	--	--	--	--	--	--	1
501	BTS 8354	2.16	5.18	3.75	6.48	2.00	2.92	3.67	4.93	2.46	4.30	--	--	--	--	--	--	--	--	1
523	BTS 8363	3.46	5.19	4.82	6.71	3.20	2.93	4.71	5.10	3.07	4.91	--	--	--	--	--	--	--	--	1
526	BTS 8367	3.68	4.99	5.09	6.37	3.41	2.82	4.98	4.84	3.11	4.91	--	--	--	--	--	--	--	--	1
541	BTS 8390	3.67	4.80	5.24	5.76	3.40	2.71	5.12	4.38	3.05	4.75	--	--	--	--	--	--	--	--	1
520	BTS 83CN	3.75	4.29	4.72	5.35	3.47	2.42	4.61	4.07	2.95	4.34	--	--	--	--	--	--	--	--	1
543	BTS 89RR10	3.20	3.95	4.91	5.57	2.96	2.23	4.80	4.23	2.60	4.52	1.97	2.02	3.42	3.65	1.35	2.32	2.12	4.13	5
601	BTS 89RR50	2.47	4.48	4.15	5.11	2.29	2.53	4.06	3.88	2.41	3.97	2.95	2.76	4.38	4.28	3.50	4.80	2.38	4.07	5
619	BTS 89RR83	2.46	4.85	3.82	5.72	2.28	2.74	3.73	4.35	2.51	4.04	2.22	2.57	3.83	4.24	1.94	3.62	3.25	5.05	5
552	Crystal 093RR	2.40	4.99	4.30	6.41	2.22	2.82	4.20	4.87	2.52	4.54	2.57	2.82	4.36	4.60	2.62	4.19	3.32	5.08	4
533	Crystal 095RR	3.42	5.55	5.20	6.60	3.16	3.13	5.08	5.02	3.15	5.05	2.88	2.92	4.84	4.77	2.62	4.63	2.99	4.62	4
569	Crystal 101RR	3.06	3.21	4.38	4.36	2.83	1.81	4.28	3.31	2.32	3.80	2.10	2.09	3.38	3.63	1.88	2.97	2.06	4.14	3
565	Crystal 246RR	3.66	4.95	5.21	6.20	3.39	2.79	5.09	4.71	3.09	4.90	2.73	--	4.38	--	2.37	3.85	--	--	2
537	Crystal 247RR	2.99	6.10	5.33	6.86	2.77	3.44	5.21	5.21	3.10	5.21	2.59	--	4.45	--	2.07	3.68	--	--	2
589	Crystal 248RR	3.66	4.41	5.18	5.81	3.39	2.49	5.06	4.42	2.94	4.74	2.61	--	4.17	--	2.28	3.59	--	--	2
502	Crystal 354RR	2.98	4.66	4.48	5.86	2.76	2.63	4.38	4.45	2.69	4.42	--	--	--	--	--	--	--	--	1
597	Crystal 355RR	2.53	4.70	4.87	5.61	2.34	2.65	4.76	4.26	2.50	4.51	--	--	--	--	--	--	--	--	1
594	Crystal 356RR	4.07	6.12	5.74	7.58	3.77	3.45	5.61	5.76	3.61	5.69	--	--	--	--	--	--	--	--	1
582	Crystal 357RR	2.92	7.14	5.50	8.02	2.70	4.03	5.38	6.10	3.37	5.74	--	--	--	--	--	--	--	--	1
519	Crystal 358RR	3.64	4.45	5.11	5.58	3.37	2.51	5.00	4.24	2.94	4.62	--	--	--	--	--	--	--	--	1
575	Crystal 359RR	2.16	4.39	4.20	6.29	2.00	2.48	4.11	4.78	2.24	4.44	--	--	--	--	--	--	--	--	1
563	Crystal 658RR	2.23	4.64	4.22	6.17	2.06	2.62	4.13	4.69	2.34	4.41	2.02	2.09	3.91	4.12	1.71	3.42	2.22	4.52	8
595	Crystal 765RR	4.04	7.15	5.57	8.06	3.74	4.03	5.45	6.13	3.89	5.79	3.65	3.89	5.74	5.87	3.42	5.69	4.37	6.12	7
505	Crystal 768RR	2.41	5.46	4.61	6.71	2.23	3.08	4.51	5.10	2.66	4.80	2.19	2.44	4.36	4.52	1.73	3.91	2.94	4.83	7
517	Crystal 875RR	3.00	2.66	4.85	3.65	2.78	1.50	4.74	2.77	2.14	3.76	1.98	1.91	3.23	3.20	1.81	2.71	1.78	3.14	6
622	Crystal 981RR	3.00	3.01	4.50	3.54	2.78	1.70	4.40	2.69	2.24	3.55	1.97	2.01	3.31	3.55	1.70	3.08	2.09	4.03	5
604	Crystal 985RR	2.99	3.16	4.38	4.61	2.77	1.78	4.28	3.50	2.27	3.89	1.98	1.91	3.52	3.60	1.69	3.15	1.77	3.75	5
570	Crystal 986RR	2.75	4.29	4.63	6.33	2.54	2.42	4.53	4.81	2.48	4.67	2.41	2.61	4.54	4.76	2.34	4.41	3.03	5.21	5
547	Crystal D303	2.09	4.81	4.15	6.40	1.93	2.71	4.06	4.87	2.32	4.46	--	--	--	--	--	--	--	--	1
564	Crystal D352NT	1.93	4.95	3.62	6.19	1.79	2.79	3.54	4.71	2.29	4.12	--	--	--	--	--	--	--	--	1
527	Crystal D396	2.36	4.43	4.10	5.83	2.18	2.50	4.01	4.43	2.34	4.22	--	--	--	--	--	--	--	--	1
602	Crystal RR012	2.77	5.46	4.71	6.52	2.56	3.08	4.60	4.96	2.82	4.78	NR	NR	NR	NR	NR	NR	3.16	5.04	4
518	Crystal RR228NT	2.48	3.15	3.94	3.78	2.29	1.78	3.85	2.87	2.04	3.36	2.11	--	3.42	--	2.18	3.49	--	--	2
531	Crystal RR260	3.24	4.25	4.62	5.32	3.00	2.40	4.52	4.04	2.70	4.28	2.78	--	4.32	--	2.87	4.37	--	--	2
548	Crystal RR299	3.58	5.10	5.09	6.50	3.31	2.88	4.98	4.94	3.10	4.96	2.67	--	4.50	--	2.24	4.04	--	--	2
555	Crystal RR830	2.50	5.09	4.70	6.12	2.31	2.87	4.59	4.65	2.59	4.62	NR	NR	NR	NR	NR	NR	3.52	4.81	6
572	Hilleshög 4012RR	3.37	5.52	5.08	6.78	3.12	3.11	4.97	5.15	3.12	5.06	2.87	3.03	4.55	4.58	2.62	4.03	3.35	4.64	8
585	Hilleshög 4022RR	2.78	5.37	4.36	6.62	2.57	3.03	4.26	5.03	2.80	4.65	2.81	2.94	4.38	4.52	2.81	4.11	3.20	4.80	8
580	Hilleshög 4062RR	2.11	5.99	3.57	7.14	1.95	3.38	3.49	5.43	2.67	4.46	NR	NR	NR	NR	NR	NR	3.13	4.98	6
535	Hilleshög 4094RR	2.40	6.01	4.00	7.29	2.22	3.39	3.91	5.54	2.81	4.73	2.64	2.81	4.22	4.54	2.48	3.72	3.13	5.16	6
581	Hilleshög 4195RR	3.08	5.25	4.43	6.88	2.85	2.96	4.33	5.23	2.91	4.78	2.88	2.99	4.49	4.73	2.86	4.20	3.21	5.21	5
546	Hilleshög 4236RR(9236)	4.85	4.79	5.91	6.49	4.49	2.70	5.78	4.93	3.60	5.36	3.49	3.34	5.36	5.20	3.38	5.37	3.06	4.88	4
504	Hilleshög 4300RR(9300)	1.85	5.57	3.62	6.47	1.71	3.14	3.54	4.92	2.43	4.23	2.64	2.79	4.19	4.37	2.86	4.16	3.09	4.72	3
512	Hilleshög 4302RR(9302)	2.89	4.16	4.94	6.33	2.67	2.35	4.83	4.81	2.51	4.82	2.47	2.63	4.51	4.63	2.43	4.20	2.95	4.88	3
579	Hilleshög 4303RR(9303)	2.70	5.54	4.15	7.15	2.50	3.13	4.06	5.44	2.81	4.75	2.71	2.88	4.38	4.54	2.61	4.00	3.22	4.87	3
579	Hilleshög 4303RR(9303)	2.70	5.54	4.15	7.15	2.50	3.13	4.06	5.44	2.81	4.75	2.92	2.94	4.73	4.77	3.02	4.72	3.00	4.84	3
626	Hilleshög 4448RR(9448)	3.57	5.57	4.43	6.76	3.30	3.14	4.33	5.14	3.22	4.73	3.63	--	5.20	--	4.03	5.66	--	--	2
530	Hilleshög 4448RR(9449)	3.09	6.62	4.02	7.20	2.86	3.74	3.93	5.47	3.30	4.70	3.37	--	4.58	--	3.45	4.46	--	--	2
616	Hilleshög 9451RR	3.65	5.55	4.52	6.61	3.38	3.13	4.42	5.02	3.25	4.72	3.24	--	4.71	--	3.22	4.69	--	--	2

Table 42. 2013 Aphanomyces Readings for Official Trial Entries
Shakopee, MN & Kindred, ND

2013 Chk+++ Code	Description	Foliar [^] Unadjusted		Root ^{**} Unadjusted		Foliar [^] Adjusted		Root ^{**} Adjusted		2013 Average		Multi-Year Average				Trial Yrs \$\$\$				
		Kind 8/14	Shak 7/18	Kind 8/16	Shak 8/27	Kind 8/14	Shak 7/18	Kind 8/16	Shak 8/27	Foliar Foliar	Root Root	2 Yr		3 Yr						
												Foliar [^]	Rt.Indx ^{**}	Foliar [^]	Rt.Indx ^{**}					
583	Seedex SX0829NRR	4.43	6.39	5.46	7.25	4.10	3.61	5.34	5.51	3.85	5.42	3.05	--	4.66	--	2.25	3.90	--	--	2
525	Seedex SX0903RR	3.27	6.65	4.88	7.57	3.03	3.75	4.77	5.75	3.39	5.26	2.99	2.98	4.74	4.64	2.59	4.22	2.97	4.44	4
562	Seedex SX0904RR	2.80	3.50	3.51	4.87	2.59	1.98	3.43	3.70	2.28	3.57	2.21	2.44	3.70	3.94	2.14	3.84	2.88	4.41	4
615	Seedex SX0924RR	2.94	5.71	4.02	6.57	2.72	3.22	3.93	4.99	2.97	4.46	2.96	--	4.54	--	2.94	4.63	--	--	2
503	Seedex SX0929RR	4.67	6.35	5.62	7.14	4.32	3.58	5.49	5.43	3.95	5.46	3.10	--	4.63	--	2.25	3.80	--	--	2
598	Seedex Ultra RR	3.92	5.98	5.29	7.30	3.63	3.37	5.17	5.55	3.50	5.36	NR	NR	NR	NR	NR	NR	NR	NR	6
560	Seedex Vapor RR(SX0995)	2.08	5.31	4.33	6.65	1.92	3.00	4.23	5.06	2.46	4.64	NR	NR	NR	NR	NR	NR	3.10	4.86	5
516	Seedex Victor RR	3.48	5.56	4.74	6.80	3.22	3.14	4.63	5.17	3.18	4.90	3.21	3.13	4.79	4.76	3.25	4.68	2.96	4.71	5
603	Seedex Vision RR	3.90	6.35	5.43	7.25	3.61	3.58	5.31	5.51	3.60	5.41	3.40	3.29	5.29	5.10	3.21	5.17	3.08	4.73	5
544	Seedex Xavier RR(0816)	2.09	5.60	3.99	6.50	1.93	3.16	3.90	4.94	2.55	4.42	2.43	2.50	4.30	4.37	2.31	4.19	2.62	4.52	3
591	SESvdh 36084RR	3.48	6.46	5.15	7.49	3.22	3.65	5.03	5.69	3.43	5.36	3.42	3.20	5.21	5.06	3.41	5.05	2.75	4.76	4
611	SESvdh 36175RR	3.38	3.71	4.83	5.08	3.13	2.09	4.72	3.86	2.61	4.29	2.41	2.52	4.19	4.31	2.22	4.10	2.74	4.55	3
539	SESvdh 36187RR	3.01	6.47	5.29	7.50	2.79	3.65	5.17	5.70	3.22	5.44	2.88	2.85	4.95	4.93	2.55	4.47	2.80	4.88	3
542	SESvdh 36188RR	2.63	5.39	4.34	6.52	2.43	3.04	4.24	4.96	2.74	4.60	2.48	2.58	4.35	4.41	2.22	4.10	2.78	4.53	3
627	SESvdh 36222RR	2.37	7.14	4.51	7.78	2.19	4.03	4.41	5.91	3.11	5.16	3.11	--	5.10	--	3.11	5.03	--	--	2
506	SESvdh 36223RR	3.81	6.86	4.84	7.52	3.53	3.87	4.73	5.72	3.70	5.22	2.92	--	4.59	--	2.14	3.95	--	--	2
566	SESvdh 36224RR	2.77	6.80	4.39	7.68	2.56	3.84	4.29	5.84	3.20	5.06	2.76	--	4.79	--	2.31	4.52	--	--	2
586	SESvdh 36271RR	3.09	7.66	4.84	8.38	2.86	4.32	4.73	6.37	3.59	5.55	3.29	--	5.20	--	2.98	4.85	--	--	2
568	SESvdh 36272RR	3.32	5.91	4.65	7.19	3.07	3.34	4.55	5.47	3.20	5.01	3.21	--	5.08	--	3.22	5.15	--	--	2
590	SESvdh 36273RR	3.23	6.49	5.13	7.38	2.99	3.66	5.02	5.61	3.33	5.31	2.27	--	4.21	--	1.21	3.10	--	--	2
521	SESvdh 36275RR	2.68	4.87	4.29	5.67	2.48	2.75	4.19	4.31	2.61	4.25	2.80	--	4.48	--	2.99	4.72	--	--	2
534	SESvdh 36277NRR	2.29	3.35	3.81	4.85	2.12	1.89	3.72	3.69	2.00	3.71	1.96	--	3.52	--	1.92	3.33	--	--	2
593	SESvdh 36812RR	4.52	5.90	4.97	7.06	4.18	3.33	4.86	5.37	3.76	5.11	3.34	3.41	4.92	5.01	2.93	4.73	3.54	5.19	6
559	SESvdh 36917RR	2.93	5.37	4.50	6.60	2.71	3.03	4.40	5.02	2.87	4.71	2.88	2.87	4.69	4.69	2.90	4.68	2.84	4.68	5
618	SESvdh 36918RR	3.68	5.92	5.01	6.72	3.41	3.34	4.90	5.11	3.37	5.00	2.84	2.85	4.85	4.73	2.30	4.69	2.87	4.50	5
631	SESvdh 36926RR	3.77	6.00	5.50	6.70	3.49	3.39	5.38	5.09	3.44	5.24	NR	NR	NR	NR	NR	NR	2.87	5.09	5
554	SESvdh 38219TT RR(36219)	3.34	7.33	5.31	8.05	3.09	4.14	5.19	6.12	3.61	5.66	3.21	--	5.16	--	2.80	4.67	--	--	2
514	SESvdh RR331	3.90	5.90	5.38	7.24	3.61	3.33	5.26	5.50	3.47	5.38	--	--	--	--	--	--	--	--	1
599	SESvdh RR332	4.27	6.02	5.71	7.12	3.95	3.40	5.58	5.41	3.67	5.50	--	--	--	--	--	--	--	--	1
624	SESvdh RR333	3.48	6.64	5.25	7.67	3.22	3.75	5.13	5.83	3.48	5.48	--	--	--	--	--	--	--	--	1
610	SESvdh RR334	4.36	5.41	5.52	6.20	4.03	3.05	5.40	4.71	3.54	5.05	--	--	--	--	--	--	--	--	1
553	SESvdh RR335	2.71	5.25	3.69	6.37	2.51	2.96	3.61	4.84	2.74	4.22	--	--	--	--	--	--	--	--	1
588	SESvdh RR336	2.34	5.59	4.01	6.75	2.17	3.15	3.92	5.13	2.66	4.53	--	--	--	--	--	--	--	--	1
522	SESvdh RR631	3.51	5.44	5.20	6.56	3.25	3.07	5.08	4.99	3.16	5.04	--	--	--	--	--	--	--	--	1
577	SESvdh RR632N	3.08	5.26	4.58	6.46	2.85	2.97	4.48	4.91	2.91	4.69	--	--	--	--	--	--	--	--	1
557	SESvdh RR633	3.20	4.70	4.86	6.10	2.96	2.65	4.75	4.64	2.81	4.69	--	--	--	--	--	--	--	--	1
584	SESvdh RR634	2.79	6.45	4.47	7.20	2.58	3.64	4.37	5.47	3.11	4.92	--	--	--	--	--	--	--	--	1
596	SESvdh RR635N	4.37	2.37	5.10	3.43	4.04	1.34	4.99	2.61	2.69	3.80	--	--	--	--	--	--	--	--	1
608	SESvdh RR636NTT	3.32	7.17	5.23	7.70	3.07	4.05	5.11	5.85	3.56	5.48	--	--	--	--	--	--	--	--	1
1	1001 Aph Chk-22 CRY5539RR	3.56	5.10	3.97	6.05	3.29	2.88	3.88	4.60	3.09	4.24	2.34	2.37	3.49	3.68	1.59	2.75	2.44	4.06	9
1	1002 Aph Chk-29 BETA86RR44	3.14	6.66	5.25	7.34	2.91	3.76	5.13	5.58	3.33	5.36	3.57	3.33	5.41	5.26	3.81	5.47	2.85	4.97	8
1	1003 Aph Chk-30 BETA86RR66	3.30	4.51	4.84	5.65	3.05	2.55	4.73	4.29	2.80	4.51	3.18	2.96	4.76	4.66	3.57	5.02	2.51	4.45	8
1	1004 Aph Chk-26 HILL4022RR	1.82	6.60	3.91	7.42	1.68	3.72	3.82	5.64	2.70	4.73	2.58	2.80	4.47	4.63	2.45	4.21	3.26	4.96	8
1	1005 Aph Chk-35 BETA87RR58	3.02	5.32	5.21	6.91	2.79	3.00	5.09	5.25	2.90	5.17	2.98	3.17	5.33	5.39	3.07	5.49	3.55	5.50	7
1	1006 Aph Chk-39 CRY5879RR	3.97	6.77	6.46	8.10	3.67	3.82	6.32	6.16	3.75	6.24	3.55	3.76	6.31	6.25	3.34	6.38	4.20	6.14	3
1	1007 Aph Chk-42 BETA78RR10	4.33	5.34	5.55	6.80	4.01	3.01	5.43	5.17	3.51	5.30	2.73	2.86	4.34	4.59	1.95	3.38	3.11	5.09	3
1	1008 Aph Chk-33 CRY5768RR	3.79	4.88	5.82	6.43	3.51	2.75	5.69	4.89	3.13	5.29	2.44	2.55	4.52	4.68	1.75	3.75	2.78	5.00	7
1	1009 Aph Chk-31 BETA86RR88	3.69	4.86	5.08	6.59	3.41	2.74	4.97	5.01	3.08	4.99	2.91	2.85	4.77	4.64	2.74	4.55	2.74	4.39	8
1	1010 Aph Chk-18 BETA85RR02	2.90	3.09	4.24	3.76	2.68	1.74	4.15	2.86	2.21	3.50	2.50	2.45	3.77	3.88	2.79	4.04	2.34	4.09	9
1	1011 Aph Chk-34 HILL4000RR	3.51	6.44	4.79	7.46	3.25	3.63	4.68	5.67	3.44	5.18	3.91	3.68	5.50	5.42	4.37	5.83	3.22	5.24	7
1	1012 Aph Chk-41 CRY5765RR	4.34	6.42	6.57	7.35	4.02	3.62	6.42	5.59	3.82	6.01	3.63	3.79	6.04	6.06	3.44	6.07	4.11	6.11	3
1	1013 Aph Chk-36 BETA87RR68	3.45	6.63	6.07	7.77	3.19	3.74	5.93	5.91	3.47	5.92	3.17	3.56	5.53	5.79	2.88	5.15	4.33	6.31	7
1	1014 Aph Chk-28 HILL4010RR	2.92	7.15	4.63	8.01	2.70	4.03	4.53	6.09	3.37	5.31	NR	NR	NR	NR	NR	NR	3.71	5.13	8
1	1015 Aph Chk-40 CRY5878RR	4.92	5.03	6.26	7.06	4.55	2.84	6.12	5.37	3.70	5.74	2.98	3.18	4.94	5.12	2.26	4.13	3.57	5.47	3
1016	ACAPMODRR	3.78	5.25	5.64	6.49	3.50	2.96	5.51	4.93	3.23	5.22	2.79	2.81	4.72	4.80	2.36	4.21	2.85	4.97	7
1017	ACAPRESRR	2.23	4.59	3.71	6.12	2.06	2.59	3.63	4.65	2.33	4.14	2.11	2.24	3.70	4.00	1.89	3.25	2.52	4.61	8
1018	AP CHK SUS HYB#3	3.62	6.65	5.69	7.60	3.35	3.75	5.56	5.78	3.55	5.67	3.49	3.66	5.73	5.87	3.42	5.79	4.00	6.15	7
1019	AP CHK SUS HYB#4	4.14	5.91	5.50	7.51	3.83	3.34	5.38	5.71	3.58	5.54	3.38	3.68	5.42	5.78	3.18	5.29	4.28	6.51	7
1020	AP CHK MOD RES RR#2	3.94	4.96	4.90	6.60	3.65	2.80	4.79	5.02	3.22	4.90	3.78	3.48	5.41	5.14	4.33	5.92	2.90	4.60	7
1021	ACAPMODRR	2.58	4.53	4.49	6.32	2.39	2.56	4.39	4.80	2.47	4.60	2.41	2.56	4.40	4.59	2.36	4.21	2.85	4.97	7
1022	ACAPRESRR	2.75	4.74	4.38	6.25	2.54	2.67	4.28	4.75	2.61	4.52	2.25	2.34	3.88	4.13	1.89	3.25	2.52	4.61	8
1023	AP CHK SUS HYB#3	4.39	6.77	6.53	7.87	4.06	3.82	6.38	5.98	3.94	6.18	3.68	3.79	5.99	6.04	3.42	5.79	4.00	6.15	7
1024	AP CHK SUS HYB#4	2.88	6.06	5.29	7.65	2.66	3.42	5.17	5.82	3.04	5.49	3.11	3.50	5.39	5.77	3.18	5.29	4.28	6.51	7
1025	AP CHK MOD RES RR#2	3.33	4.76	4.87	6.83	3.08	2.69	4.76	5.19	2.88	4.98	3.61	3.37	5.45	5.17	4.33	5.9			

Table 43. 2013 Cercospora Ratings for Official Trial Entries

BSDF (Frankenmuth MI) & NDSU (Foxhome MN)

Chk	Code	Description	Adjusted to 1982 Basis ++		Foxhome		All Data Adjusted to '1982 Basis'					Trial Yrs \$
			BSDF Avg 5 Dates+	BSDF Avg 8 Dates+	2013*** Mean	2 Yr Mean	3 Yr Mean	2012 Mean	2011 Mean	Trial Yrs \$		
	561	BTS 70RR70	4.37	4.27	4.32	4.47	4.68	4.62	5.11	4		
	609	BTS 70RR99	4.58	4.86	4.72	4.53	4.55	4.33	4.59	4		
	513	BTS 72RR22	4.06	4.30	4.18	4.24		4.31		2		
	623	BTS 72RR95	4.30	4.43	4.37	4.47		4.57		2		
	532	BTS 7315	5.16	4.62	4.89					1		
	545	BTS 7335	4.69	4.71	4.70					1		
	612	BTS 7373	4.76	4.75	4.75					1		
	567	BTS 73MN	4.55	4.71	4.63					1		
	556	BTS 80RR32	4.85	4.76	4.81	4.73	4.88	4.66	5.18	4		
	528	BTS 80RR52	4.55	4.49	4.52	4.46	4.51	4.40	4.61	4		
	587	BTS 81RR17	4.48	4.42	4.45	4.40	4.50	4.36	4.68	3		
	621	BTS 81RR78	4.80	4.92	4.86	4.69	4.75	4.51	4.88	3		
	515	BTS 82RR22	4.83	4.72	4.77	4.71		4.65		2		
	628	BTS 82RR28	4.58	4.45	4.52	4.59		4.66		2		
	629	BTS 82RR33	4.65	4.70	4.68	4.71		4.74		2		
	606	BTS 82RR80	4.62	4.63	4.62	4.69		4.77		2		
	571	BTS 8325	4.52	4.67	4.60					1		
	613	BTS 8337	4.69	4.81	4.75					1		
	501	BTS 8354	4.88	4.71	4.80					1		
	523	BTS 8363	3.91	3.92	3.92					1		
	526	BTS 8367	4.71	4.75	4.73					1		
	541	BTS 8390	4.65	4.22	4.43					1		
	520	BTS 83CN	4.29	4.44	4.36					1		
	543	BTS 89RR10	5.05	4.88	4.96	5.03	5.05	5.10	5.08	5		
	601	BTS 89RR50	4.84	4.82	4.83	5.07	5.05	5.30	5.01	5		
	619	BTS 89RR83	4.95	4.87	4.91	4.90	4.87	4.89	4.81	5		
	552	Crystal 093RR	5.27	5.14	5.20	5.01	5.06	4.82	5.16	4		
	533	Crystal 095RR	4.61	4.90	4.75	4.79	4.82	4.83	4.88	4		
	569	Crystal 101RR	4.98	4.28	4.63	4.67	4.68	4.71	4.72	3		
	565	Crystal 246RR	4.63	4.32	4.48	4.48		4.49		2		
	537	Crystal 247RR	4.68	4.47	4.57	4.62		4.68		2		
	589	Crystal 248RR	5.27	5.04	5.15	5.05		4.94		2		
	502	Crystal 354RR	4.30	4.54	4.42					1		
	597	Crystal 355RR	4.97	4.81	4.89					1		
	594	Crystal 356RR	4.26	4.50	4.38					1		
	582	Crystal 357RR	5.06	4.57	4.82					1		
	519	Crystal 358RR	5.75	5.26	5.51					1		
	575	Crystal 359RR	5.89	4.74	5.32					1		
	563	Crystal 658RR	4.62	4.43	4.52	4.40	4.42	4.28	4.47	8		
	585	Crystal 765RR	4.92	4.72	4.82	4.76	4.74	4.70	4.70	7		
	505	Crystal 768RR	5.28	4.83	5.05	5.21	5.17	5.37	5.09	7		
	517	Crystal 875RR	4.97	4.58	4.77	4.52	4.42	4.26	4.24	6		
	622	Crystal 981RR	5.21	4.97	5.09	5.12	5.15	5.15	5.21	5		
	604	Crystal 985RR	4.55	4.44	4.49	4.45	4.42	4.41	4.37	5		
	570	Crystal 986RR	4.64	4.95	4.80	4.79	4.91	4.78	5.14	5		
	547	Crystal D303	5.46	4.91	5.19					1		
	564	Crystal D362NT	4.44	4.63	4.53					1		
	527	Crystal D396	4.65	4.57	4.61					1		
	602	Crystal RR012	4.74	4.77	4.76	4.65	4.70	4.54	4.79	4		
	518	Crystal RR228NT	4.49	4.29	4.39	4.36		4.33		2		
	531	Crystal RR260	4.27	4.41	4.34	4.46		4.58		2		
	548	Crystal RR299	4.34	4.35	4.35	4.41		4.48		2		
	555	Crystal RR830	4.42	4.71	4.57	4.58	4.70	4.60	4.92	6		
	572	Hillesög 4012RR	5.34	5.52	5.43	5.44	5.38	5.46	5.24	8		
	585	Hillesög 4022RR	4.41	4.25	4.33	4.34	4.32	4.36	4.26	8		
	580	Hillesög 4062RR	4.50	4.58	4.54	4.46	4.28	4.38	3.91	6		
	535	Hillesög 4094RR	4.58	4.36	4.47	4.41	4.27	4.34	4.00	6		
	581	Hillesög 4195RR	5.13	4.62	4.87	4.76	4.71	4.65	4.60	5		
	546	Hillesög 4236RR(9236)	4.90	5.01	4.95	4.83	4.81	4.71	4.75	4		
	504	Hillesög 4300RR(9300)	4.57	4.91	4.74	4.78	4.76	4.82	4.71	3		
	512	Hillesög 4302RR(9302)	4.27	4.20	4.23	4.29	4.19	4.34	4.00	3		
	579	Hillesög 4303RR(9303)	4.79	4.91	4.85	4.74	4.57	4.62	4.22	3		
	626	Hillesög 4448RR(9448)	5.58	4.85	5.21	5.02		4.82		2		
	530	Hillesög 4448RR(9449 MD)	5.10	5.01	5.05	4.86		4.66		2		
	616	Hillesög 9451RR	4.93	5.26	5.09	5.24		5.38		2		
	592	Hillesög 9513RR	5.08	5.18	5.13					1		
	574	Hillesög 9514RR	5.03	4.57	4.80					1		
	578	Hillesög 9516RR	6.26	5.53	5.90					1		
	573	Hillesög 9517RR	4.91	4.43	4.67					1		
	529	Hillesög 9521RR	4.76	4.69	4.72					1		
	576	Hillesög 9522RR	4.51	4.44	4.48					1		
	614	Hillesög 9524RR	5.45	5.15	5.30					1		
	607	Hillesög 9525RR	4.16	3.96	4.06					1		
	630	Hillesög 9528RR	4.74	4.70	4.72					1		
	549	Hillesög 9530RR	5.51	5.19	5.35					1		
	524	Hillesög 9531RR	3.67	3.63	3.65					1		
	509	Maribo 104RR	3.97	3.77	3.87	3.85	3.71	3.82	3.45	3		
	511	Maribo 305RR	4.65	4.61	4.63					1		
	625	Maribo 306RR	5.00	4.96	4.98					1		
	620	Maribo 307RR	4.91	4.68	4.79					1		

Table 43. 2013 Cercospora Ratings for Official Trial Entries
BSDL (Frankenmuth MI) & NDSU (Foxhome MN)

Chk	Code	Description	Adjusted to 1982 Basis ++		BSDL		Foxhome		All Data Adjusted to '1982 Basis'					
			5 Dates+	8 Dates+	Avg	Avg	2013***	2 Yr	3 Yr	2012	2011	Trial		
								Mean	Mean	Mean	Mean	Mean	Yrs	Yrs \$
	536	Maribo 309RR	5.55	5.24	5.39								1	
	605	Maribo MA102RR	5.05	5.01	5.03	4.95	5.03	4.88	5.19				3	
	617	Maribo MA102RR(108)	5.75	5.22	5.48	5.30	5.24	5.12	5.13				3	
	507	Seedex RR0831N	4.35	4.63	4.49								1	
	510	Seedex RR0832	4.86	4.69	4.78								1	
	508	Seedex RR0833	4.72	4.42	4.57								1	
	538	Seedex RR0834TT	4.83	4.76	4.79								1	
	600	Seedex RR0835	4.56	4.54	4.55								1	
	558	Seedex RR0935	4.78	4.70	4.74								1	
	540	Seedex RR0936	5.23	4.98	5.11								1	
	550	Seedex RR0937NIT	5.19	4.90	5.04								1	
	551	Seedex SX0828NRR	4.79	4.60	4.69	4.71		4.72					2	
	583	Seedex SX0829NRR	5.08	4.45	4.76	4.80		4.84					2	
	525	Seedex SX0903RR	4.70	4.30	4.50	4.37	4.34	4.23	4.27	4			4	
	562	Seedex SX0904RR	4.71	4.77	4.74	4.46	4.32	4.17	4.06	4			4	
	615	Seedex SX0924RR	4.70	4.22	4.46	4.60		4.74					2	
	503	Seedex SX0929RR	4.64	4.52	4.58	4.30		4.02					2	
	588	Seedex Ultra RR	5.03	4.92	4.98	4.81	4.70	4.64	4.49	6			6	
	560	Seedex Vapor RR(SX0995)	5.08	4.66	4.87	4.68	4.68	4.48	4.68	5			5	
	516	Seedex Victor RR	4.65	4.36	4.51	4.46	4.42	4.41	4.33	5			5	
	603	Seedex Vision RR	5.30	5.05	5.17	4.83	4.69	4.49	4.41	5			5	
	544	Seedex Xavier RR(0816)	5.02	4.68	4.85	4.64	4.61	4.43	4.54	3			3	
	591	SESV/oh 36084RR	5.71	4.94	5.32	5.01	4.90	4.70	4.69	4			4	
	611	SESV/oh 36175RR	4.72	4.47	4.60	4.41	4.48	4.22	4.61	3			3	
	539	SESV/oh 36187RR	4.65	4.55	4.60	4.59	4.57	4.58	4.52	3			3	
	542	SESV/oh 36188RR	4.84	4.65	4.74	4.40	4.34	4.05	4.23	3			3	
	627	SESV/oh 36222RR	4.54	4.33	4.43	4.38		4.32		2			2	
	506	SESV/oh 36223RR	4.30	4.42	4.36	4.30		4.25		2			2	
	566	SESV/oh 36224RR	4.47	4.58	4.53	4.40		4.27		2			2	
	586	SESV/oh 36271RR	4.35	4.55	4.45	4.55		4.65		2			2	
	568	SESV/oh 36272RR	4.64	4.34	4.49	4.33		4.17		2			2	
	590	SESV/oh 36273RR	4.64	4.72	4.68	4.44		4.19		2			2	
	521	SESV/oh 36275RR	4.78	4.38	4.58	4.43		4.28		2			2	
	534	SESV/oh 36277NRR	4.90	4.87	4.88	5.02		5.15		2			2	
	593	SESV/oh 36812RR	4.90	4.91	4.90	4.83	4.81	4.76	4.78	6			6	
	559	SESV/oh 36917RR	5.26	4.84	5.05	4.83	4.72	4.61	4.51	5			5	
	618	SESV/oh 36918RR	4.74	4.48	4.61	4.45	4.44	4.28	4.41	5			5	
	631	SESV/oh 36926RR	4.74	4.53	4.64	4.51	4.49	4.38	4.45	5			5	
	554	SESV/oh 38219TT RR(36219)	5.51	5.02	5.26	4.85		4.44		2			2	
	514	SESV/oh RR331	4.72	4.56	4.64					1			1	
	599	SESV/oh RR332	4.48	4.57	4.53					1			1	
	624	SESV/oh RR333	5.02	4.70	4.86					1			1	
	610	SESV/oh RR334	5.16	4.49	4.83					1			1	
	553	SESV/oh RR335	4.93	4.65	4.79					1			1	
	588	SESV/oh RR336	4.69	4.81	4.75					1			1	
	522	SESV/oh RR631	4.84	4.73	4.78					1			1	
	577	SESV/oh RR632N	4.92	4.67	4.79					1			1	
	567	SESV/oh RR633	5.01	4.65	4.83					1			1	
	584	SESV/oh RR634	4.88	4.44	4.66					1			1	
	596	SESV/oh RR635N	4.14	4.41	4.27					1			1	
	608	SESV/oh RR636NIT	4.58	5.06	4.82					1			1	
1	1101	CR Chk-19 CRYSE39RR	5.03	5.03	5.03	5.15	5.20	5.27	5.30	9			9	
1	1102	CR Chk-31 BETA86RR28	4.48	4.62	4.55	4.68	4.72	4.82	4.80	8			8	
1	1103	CR Chk-37 SES36711RR	5.08	5.05	5.06	4.94	4.90	4.82	4.80	7			7	
1	1104	CR Chk-30 BETA86RR66	5.24	4.96	5.10	5.04	5.07	4.98	5.13	8			8	
1	1105	CR Chk-34 HILL400RR	4.80	4.84	4.82	4.77	4.68	4.71	4.52	7			7	
1	1106	CR Chk-36 BETA87RR68	4.57	4.77	4.67	4.64	4.70	4.61	4.81	7			7	
1	1107	CR Chk-24 HILL4012RR	5.49	5.35	5.42	5.38	5.34	5.33	5.27	8			8	
1	1108	CR Chk-35 BETA87RR58	5.34	5.23	5.28	5.30	5.29	5.32	5.25	7			7	
1	1109	CR Chk-33 HILL4043RR	4.55	4.85	4.70	4.67	4.70	4.64	4.77	7			7	
1	1110	CR Chk-17 BETA85RR02	4.49	4.82	4.65	4.86	4.96	5.07	5.17	9			9	
1	1111	CR Chk-28 HILL4010RR	5.52	5.33	5.43	5.34	5.24	5.24	5.04	8			8	
1	1112	CR Chk-29 BETA86RR44	5.15	4.91	5.03	4.98	4.95	4.93	4.90	8			8	
	1113	CR CHK MOD SUS HYB#3	4.63	5.04	4.83	4.89	5.01	4.96	5.25	9			9	
	1114	CR CHK MOD RES HYB#4	4.36	4.61	4.48	4.38	4.38	4.28	4.37	6			6	
	1115	CR CHK MOD SUS HYB#3	4.99	4.98	4.99	4.97	5.07	4.96	5.25	9			9	
	1116	CR CHK MOD RES HYB#4	4.80	4.61	4.70	4.49	4.45	4.28	4.37	6			6	
	1117	CR CHK MOD SUS HYB#3	5.17	4.96	5.07	5.01	5.09	4.96	5.25	9			9	
12		Check Mean	4.98	4.98	2.49									
		Trial Mean	4.81	4.69										
		Coeff. of Var. (%)	9.14	4.73										
		F Value	2.99	9.69										
		Mean LSD (0.05)	0.65	0.27										
		Mean LSD (0.01)	0.86	0.37										
		Sg Lvl	**	**										

* Lower numbers indicate better Cercospora resistance (Good < 4.5, Poor > 5.2).

++ Ratings adjusted to 1982 basis (5.5 equivalent in 1978-81 CR nurseries). Ratings adjusted on the basis of checks.

Chk = varieties used to adjust CR readings to 1982 basis. Ratings * (factor) = Adj Rating.

\$\$ Trial years indicates how many years the entry has been in the official trials.

Created 11-6-2013.

Table 44. Rhizoctonia Ratings for OVT Entries
Rhizoctonia Nursery - BSDF & ACSC Site

Sus Chk	Chk @	Code	Description	Unadjusted		Adjusted		Adj	2 Yr Mean	3 Yr Mean	Adj	Adj	Years
				BSDF 10/16	TSC-W 8/28	BSDF 10/16	TSC-W 8/28	2013 Mean			2012 Mean	2011 Mean	
		561	BTS 70RR70	4.79	3.04	4.73	4.42	4.57	4.16	4.05	3.75	3.83	4
		609	BTS 70RR99	4.04	3.28	3.99	4.77	4.38	4.11	4.06	3.85	3.94	4
		513	BTS 72RR22	4.22	3.63	4.16	5.28	4.72	4.61	--	4.50	--	2
		623	BTS 72RR95	3.63	2.72	3.58	3.95	3.77	3.39	--	3.02	--	2
		532	BTS 7315	4.67	2.81	4.61	4.09	4.35	--	--	--	--	1
		545	BTS 7335	3.11	2.60	3.07	3.78	3.42	--	--	--	--	1
		612	BTS 7373	3.51	2.96	3.46	4.30	3.88	--	--	--	--	1
		567	BTS 73MN	3.96	2.17	3.91	3.16	3.53	--	--	--	--	1
		556	BTS 80RR32	4.13	3.08	4.08	4.48	4.28	4.08	4.13	3.88	4.23	4
		528	BTS 80RR52	3.22	3.00	3.18	4.36	3.77	3.75	3.88	3.73	4.14	4
		587	BTS 81RR17	4.35	2.69	4.29	3.91	4.10	4.05	4.07	4.00	4.09	3
		621	BTS 81RR78	4.52	3.24	4.46	4.71	4.59	4.54	4.55	4.50	4.57	3
		515	BTS 82RR22	5.04	3.72	4.97	5.41	5.19	4.90	--	4.61	--	2
		628	BTS 82RR28	4.45	2.72	4.39	3.95	4.17	4.06	--	3.94	--	2
		629	BTS 82RR33	4.49	2.95	4.43	4.29	4.36	4.23	--	4.09	--	2
		606	BTS 82RR80	4.89	2.93	4.83	4.26	4.54	4.58	--	4.63	--	2
		571	BTS 8325	4.46	2.78	4.40	4.04	4.22	--	--	--	--	1
		613	BTS 8337	4.53	3.18	4.47	4.62	4.55	--	--	--	--	1
		501	BTS 8354	3.10	2.69	3.06	3.91	3.49	--	--	--	--	1
		523	BTS 8363	3.81	2.75	3.76	4.00	3.88	--	--	--	--	1
		526	BTS 8367	4.15	3.01	4.10	4.38	4.24	--	--	--	--	1
		541	BTS 8390	4.69	2.84	4.63	4.13	4.38	--	--	--	--	1
		520	BTS 83CN	3.08	2.43	3.04	3.53	3.29	--	--	--	--	1
		543	BTS 89RR10	4.91	3.42	4.85	4.97	4.91	4.52	4.22	4.14	3.63	5
		601	BTS 89RR50	5.33	3.68	5.26	5.35	5.31	5.09	5.16	4.88	5.30	5
		619	BTS 89RR83	3.30	2.50	3.26	3.64	3.45	3.51	3.85	3.58	4.53	5
		552	Crystal 093RR	4.69	2.85	4.63	4.14	4.39	4.41	4.41	4.43	4.43	4
		533	Crystal 095RR	4.21	3.45	4.15	5.02	4.59	4.58	4.67	4.57	4.87	4
		569	Crystal 101RR	5.09	3.06	5.02	4.45	4.74	4.74	4.72	4.75	4.67	3
		565	Crystal 246RR	4.72	3.15	4.66	4.58	4.62	4.46	--	4.31	--	2
		537	Crystal 247RR	4.67	3.13	4.61	4.55	4.58	4.53	--	4.48	--	2
		589	Crystal 248RR	4.88	3.28	4.82	4.77	4.79	4.64	--	4.49	--	2
		502	Crystal 354RR	4.19	2.19	4.14	3.18	3.66	--	--	--	--	1
		597	Crystal 355RR	3.45	2.54	3.40	3.69	3.55	--	--	--	--	1
		594	Crystal 356RR	4.90	2.93	4.84	4.26	4.55	--	--	--	--	1
		582	Crystal 357RR	4.85	3.00	4.79	4.36	4.57	--	--	--	--	1
		519	Crystal 358RR	4.09	2.60	4.04	3.78	3.91	--	--	--	--	1
		575	Crystal 359RR	3.60	3.12	3.55	4.54	4.04	--	--	--	--	1
		563	Crystal 658RR	3.55	3.08	3.50	4.48	3.99	4.04	3.95	4.09	3.78	8
		595	Crystal 765RR	5.34	3.09	5.27	4.49	4.88	4.38	4.44	3.87	4.58	7
		505	Crystal 768RR	4.53	2.57	4.47	3.74	4.10	4.25	4.31	4.39	4.42	7
		517	Crystal 875RR	4.78	2.99	4.72	4.35	4.53	4.26	4.20	4.00	4.06	6
		622	Crystal 981RR	3.25	2.95	3.21	4.29	3.75	4.10	4.38	4.45	4.93	5
		604	Crystal 985RR	4.44	3.33	4.38	4.84	4.61	4.51	4.52	4.40	4.56	5
		570	Crystal 986RR	4.97	2.87	4.91	4.17	4.54	4.43	4.29	4.31	4.00	5
		547	Crystal D303	4.03	2.70	3.98	3.93	3.95	--	--	--	--	1
		564	Crystal D352NT	2.97	2.35	2.93	3.42	3.17	--	--	--	--	1
		527	Crystal D396	3.48	2.96	3.43	4.30	3.87	--	--	--	--	1
		602	Crystal RR012	3.41	2.76	3.37	4.01	3.69	3.48	3.69	3.27	4.12	4
		518	Crystal RR228NT	3.78	3.49	3.73	5.07	4.40	4.40	--	4.41	--	2
		531	Crystal RR260	3.74	2.57	3.69	3.74	3.71	4.16	--	4.60	--	2
		548	Crystal RR299	4.51	2.24	4.45	3.26	3.85	4.04	--	4.22	--	2
		555	Crystal RR830	3.28	2.81	3.24	4.09	3.66	3.78	3.64	3.91	3.36	6
		572	Hilleshög 4012RR	5.26	3.18	5.19	4.62	4.91	4.86	4.91	4.80	5.02	8
		585	Hilleshög 4022RR	3.03	2.60	2.99	3.78	3.39	3.34	3.38	3.29	3.48	8
		580	Hilleshög 4062RR	3.41	2.68	3.37	3.90	3.63	3.59	3.35	3.54	2.87	6
		535	Hilleshög 4094RR	3.29	2.47	3.25	3.59	3.42	3.35	3.33	3.28	3.29	6

Table 44. Rhizoctonia Ratings for OVT Entries
Rhizoctonia Nursery - BSDF & ACSC Site

Sus Chk	Chk @	Code	Description	Unadjusted		Adjusted		Adj	2 Yr Mean	3 Yr Mean	Adj	Adj	Years
				BSDF 10/16	TSC-W 8/28	BSDF 10/16	TSC-W 8/28	2013 Mean			2012 Mean	2011 Mean	
		581	Hilleshog 4195RR	4.49	2.66	4.43	3.87	4.15	3.91	3.87	3.67	3.78	5
		546	Hilleshog 4236RR(9236)	4.60	3.71	4.54	5.39	4.97	5.10	5.35	5.23	5.86	4
		504	Hilleshog 4300RR(9300)	3.61	3.21	3.56	4.67	4.12	4.34	4.33	4.56	4.32	3
		512	Hilleshog 4302RR(9302)	3.34	2.30	3.30	3.34	3.32	3.48	3.48	3.63	3.47	3
		579	Hilleshog 4303RR(9303)	4.98	3.83	4.91	5.57	5.24	5.22	--	5.20	--	3
		626	Hilleshog 4448RR(9448)	5.67	3.60	5.60	5.23	5.42	--	--	--	--	2
		530	Hilleshog 4448RR(9449 MD)	5.26	3.04	5.19	4.42	4.81	--	--	--	--	2
		616	Hilleshog 9451RR	5.36	3.39	5.29	4.93	5.11	--	--	--	--	2
		573	Hilleshog 9517RR	3.91	2.33	3.86	3.39	3.62	--	--	--	--	1
		529	Hilleshog 9521RR	3.53	2.52	3.48	3.66	3.57	--	--	--	--	1
		630	Hilleshog 9528RR	4.02	3.01	3.97	4.38	4.17	--	--	--	--	1
		524	Hilleshog 9531RR	3.11	2.28	3.07	3.32	3.19	--	--	--	--	1
		509	Maribo 104RR	4.80	2.23	4.74	3.24	3.99	3.99	3.78	3.98	3.36	3
		625	Maribo 306RR	4.04	3.13	3.99	4.55	4.27	--	--	--	--	1
		605	Maribo MA102RR	5.51	3.86	5.44	5.61	5.53	5.11	--	4.70	--	3
		617	Maribo MA102RR(108)	5.32	3.93	5.25	5.71	5.48	5.17	--	4.86	--	3
		507	Seedex RR0831N	4.13	3.02	4.08	4.39	4.23	--	--	--	--	1
		510	Seedex RR0832	4.50	3.04	4.44	4.42	4.43	--	--	--	--	1
		508	Seedex RR0833	4.56	3.03	4.50	4.41	4.45	--	--	--	--	1
		600	Seedex RR0835	3.37	2.85	3.33	4.14	3.73	--	--	--	--	1
		558	Seedex RR0935	4.67	3.16	4.61	4.59	4.60	--	--	--	--	1
		540	Seedex RR0936	3.70	2.65	3.65	3.85	3.75	--	--	--	--	1
		550	Seedex RR0937NTT	4.38	3.03	4.32	4.41	4.36	--	--	--	--	1
		551	Seedex SX0828NRR	4.86	3.36	4.80	4.89	4.84	4.55	--	4.25	--	2
		525	Seedex SX0903RR	4.59	2.49	4.53	3.62	4.08	4.38	4.38	4.68	4.38	4
		562	Seedex SX0904RR	4.02	2.64	3.97	3.84	3.90	4.01	3.93	4.12	3.77	4
		615	Seedex SX0924RR	4.78	3.12	4.72	4.54	4.63	4.40	--	4.16	--	2
		503	Seedex SX0929RR	5.00	3.00	4.93	4.36	4.65	4.23	--	3.82	--	2
		598	Seedex Ultra RR	4.45	2.85	4.39	4.14	4.27	4.22	4.34	4.18	4.56	6
		560	Seedex Vapor RR(SX0995)	4.72	3.19	4.66	4.64	4.65	4.45	4.48	4.25	4.54	5
		516	Seedex Victor RR	5.09	2.75	5.02	4.00	4.51	4.54	4.55	4.57	4.57	5
		603	Seedex Vision RR	4.86	3.18	4.80	4.62	4.71	4.66	4.59	4.61	4.46	5
		544	Seedex Xavier RR(0816)	4.64	3.18	4.58	4.62	4.60	4.65	4.62	4.71	4.55	3
		591	SESVdh 36084RR	4.34	3.72	4.28	5.41	4.85	4.66	4.59	4.48	4.43	4
		611	SESVdh 36175RR	4.66	3.02	4.60	4.39	4.50	4.41	4.46	4.32	4.55	3
		539	SESVdh 36187RR	4.53	2.96	4.47	4.30	4.39	4.46	4.61	4.53	4.90	3
		542	SESVdh 36188RR	3.44	2.68	3.40	3.90	3.65	3.80	3.83	3.96	3.88	3
		627	SESVdh 36222RR	3.70	2.58	3.65	3.75	3.70	4.16	--	4.62	--	2
		506	SESVdh 36223RR	5.28	3.05	5.21	4.43	4.82	4.43	--	4.04	--	2
		566	SESVdh 36224RR	3.90	3.01	3.85	4.38	4.11	--	--	--	--	2
		586	SESVdh 36271RR	4.02	2.71	3.97	3.94	3.95	4.18	--	4.40	--	2
		568	SESVdh 36272RR	4.90	3.02	4.84	4.39	4.61	--	--	--	--	2
		590	SESVdh 36273RR	4.70	3.27	4.64	4.75	4.70	4.58	--	4.47	--	2
		521	SESVdh 36275RR	4.43	2.87	4.37	4.17	4.27	4.11	--	3.94	--	2
		534	SESVdh 36277NRR	4.54	3.10	4.48	4.51	4.49	--	--	--	--	2
		593	SESVdh 36812RR	4.37	2.98	4.31	4.33	4.32	4.27	4.43	4.23	4.73	6
		559	SESVdh 36917RR	4.24	2.89	4.18	4.20	4.19	4.29	4.46	4.38	4.80	5
		618	SESVdh 36918RR	5.28	3.05	5.21	4.43	4.82	4.74	4.88	4.66	5.14	5
		631	SESVdh 36926RR	4.53	3.41	4.47	4.96	4.71	4.63	4.56	4.54	4.41	5
		554	SESVdh 38219TT RR(36219)	3.57	2.26	3.52	3.29	3.40	--	--	--	--	2
		514	SESVdh RR331	5.06	2.60	4.99	3.78	4.39	--	--	--	--	1
		599	SESVdh RR332	3.33	2.79	3.29	4.06	3.67	--	--	--	--	1
		624	SESVdh RR333	4.14	3.13	4.09	4.55	4.32	--	--	--	--	1
		588	SESVdh RR336	4.10	2.62	4.05	3.81	3.93	--	--	--	--	1
		522	SESVdh RR631	4.49	2.97	4.43	4.32	4.37	--	--	--	--	1
		577	SESVdh RR632N	5.16	2.83	5.09	4.11	4.60	--	--	--	--	1
		557	SESVdh RR633	3.68	2.23	3.63	3.24	3.44	--	--	--	--	1

Table 44. Rhizoctonia Ratings for OVT Entries
Rhizoctonia Nursery - BSDF & ACSC Site

Sus Chk	Chk @	Code	Description	Unadjusted		Adjusted		Adj	2 Yr Mean	3 Yr Mean	Adj	Adj	Years
				BSDF 10/16	TSC-W 8/28	BSDF 10/16	TSC-W 8/28	2013 Mean			2012 Mean	2011 Mean	
		584	SESvdh RR634	5.10	2.88	5.03	4.19	4.61	--	--	--	--	1
		596	SESvdh RR635N	4.15	3.24	4.10	4.71	4.40	--	--	--	--	1
		608	SESvdh RR636NTT	3.32	2.59	3.28	3.77	3.52	--	--	--	--	1
1	1	1301	Rhiz Chk#08 CRY553RR	4.98	3.62	4.91	5.26	5.09	5.07	5.06	5.06	5.03	5
	1	1302	Rhiz Chk#17 HILL4022RR	2.45	2.26	2.42	3.29	2.85	3.06	3.07	3.27	3.09	5
		1303	Rhiz Chk#20 CRY5765RR	4.48	2.94	4.42	4.27	4.35	4.11	4.24	3.87	4.50	5
	1	1304	Rhiz Chk#21 CRY5768RR	4.68	3.01	4.62	4.38	4.50	4.39	4.39	4.28	4.39	5
1	1	1305	Rhiz Chk#24 BETA86RR88	5.16	3.13	5.09	4.55	4.82	4.79	4.80	4.75	4.83	5
1	1	1306	Rhiz Chk#25 HILL4043RR	5.20	3.03	5.13	4.41	4.77	4.86	4.77	4.95	4.59	5
	1	1307	Rhiz Chk#26 BETA86RR44	4.70	2.71	4.64	3.94	4.29	4.54	4.48	4.78	4.35	5
1	1	1308	Rhiz Chk#27 HILL4012RR	5.42	3.36	5.35	4.89	5.12	4.90	4.86	4.69	4.76	5
	1	1309	Rhiz Chk#28 CRY5658RR	4.19	2.94	4.14	4.27	4.21	4.16	4.09	4.12	3.95	8
1	1	1310	Rhiz Chk#29 BETA87RR58	4.52	3.55	4.46	5.16	4.81	4.79	4.78	4.76	4.77	7
1	1	1311	Rhiz Chk#30 SES36711RR	4.64	3.38	4.58	4.91	4.75	4.60	4.56	4.46	4.48	7
1	1	1312	Rhiz Chk#31 HILL4000RR	5.49	3.45	5.42	5.02	5.22	5.13	5.15	5.04	5.19	7
1	1	1313	Rhiz Chk#32 HILL4010RR	4.20	3.25	4.15	4.73	4.44	4.71	4.63	4.99	4.46	8
	1	1314	Rhiz Chk#33 BETA77RR74	3.83	2.43	3.78	3.53	3.66	3.58	3.47	3.50	3.26	7
1	1	1315	Rhiz Chk#34 BETA86RR66	3.88	3.29	3.83	4.78	4.31	4.41	4.51	4.51	4.72	8
1	1	1316	Rhiz Chk#35 SES36812RR	4.57	2.58	4.51	3.75	4.13	4.33	4.43	4.53	4.63	6
1	1	1317	Rhiz Chk#36 BETA85RR02	4.58	2.77	4.52	4.03	4.27	4.52	4.60	4.76	4.78	9
1	1	1318	Rhiz Chk#37 SES36918RR	4.49	3.49	4.43	5.07	4.75	4.71	4.85	4.66	5.14	5
		1319	Rhiz Chk#38 SEED0904RR	3.92	2.61	3.87	3.80	3.83	3.97	3.91	4.12	3.77	4
		1320	RES RHC #1	2.50	2.30	2.47	3.34	2.91	3.14	3.02	3.38	2.79	8
		1321	MOD RHC #6	4.17	2.63	4.12	3.82	3.97	3.97	3.90	3.97	3.78	8
		1322	SUS RHC #3	5.71	4.17	5.64	6.06	5.85	5.35	5.13	4.86	4.70	9
		1323	SUS RHC #9	5.02	3.67	4.95	5.34	5.15	4.90	4.98	4.66	5.14	5
		1324	MOD RHC #5	4.55	3.17	4.49	4.61	4.55	4.59	4.54	4.63	4.43	8
		1325	RES RHC #2	2.84	2.40	2.80	3.49	3.15	3.36	3.19	3.56	2.87	6
		1326	SUS RHC #3	6.10	3.77	6.02	5.48	5.75	5.30	5.10	4.86	4.70	9
		1327	SUS RHC #9	5.58	3.19	5.51	4.64	5.07	4.87	4.96	4.66	5.14	5
		1328	MOD RHC #6	4.43	--	4.37	--	4.37	4.17	4.04	3.97	3.78	8
		1329	USDA Susceptible Check #1 FC901/C817	3.32	--	3.28	--	3.28	--	--	--	--	12
		1330	USDA Highly Resistant Check FC705/1	1.41	--	1.39	--	1.39	--	--	--	--	12
		1331	USDA Resistant Check FC703	1.78	--	1.76	--	1.76	--	--	--	--	12
		1332	USDA Highly Resistant Check FC709-2	2.59	--	2.56	--	2.56	--	--	--	--	7
		1333	USDA Comm Sus Hyb	3.56	--	3.51	--	3.51	--	--	--	--	2
		1334	USDA Comm Res Hyb	2.73	--	2.69	--	2.69	--	--	--	--	2
		1335	USDA Comm Mod Hyb	3.18	--	3.14	--	3.14	--	--	--	--	2
12	17		Mean of Check Varieties	4.528	3.074	4.469	4.469	4.469	4.502	4.500	4.536	4.496	
			Mean of Susc Checks	4.761	3.242	4.699	4.714	4.706	4.735	4.751	4.763	4.782	
			Trial Mean	4.25	2.96	4.19	4.30						
			Coeff. of Var. (%)	19.19	14.98	19.19	14.98						
			F Value	4.13	3.96	4.13	3.96						
			Mean LSD (0.05)	1.09	0.57	1.08	0.83						
			Mean LSD (0.01)	1.44	0.75	1.42	1.09						
			Sig Lvl	**	**	**	**						
			Adjustment Factor	0.9869	1.4540								

++ Adjustment is based upon check varieties.

Rhizoctonia ratings on a scale of 1-7. Good < 3.8, Poor > 5.0. Specialty level is 3.82.

Table 45. 2013 Fusarium Readings for Official Trial Entries
ACSC Nurseries - (Moorhead, MN Area)

Chk @	Code	Description	Unadjusted		Adjusted		Adj			Adj	
			N Mhd	SE Mhd	N Mhd	SE Mhd	2013	2 Yr	3 Yr	2012	2011
			4 Dates+	5 Dates+	4 Dates+	5 Dates+	Mean	Mean	Mean	Mean	Mean
561	BTS 70RR70	4.65	5.09	3.92	3.64	3.78	3.20	3.45	2.63	3.93	4
609	BTS 70RR99	4.01	5.29	3.38	3.78	3.58	3.18	3.45	2.78	3.99	4
513	BTS 72RR22	4.74	6.33	3.99	4.52	4.26	--	--	--	--	2
623	BTS 72RR95	2.76	4.22	2.33	3.02	2.67	--	--	--	--	2
556	BTS 80RR32	4.49	5.53	3.78	3.95	3.87	3.16	3.51	2.46	4.22	4
528	BTS 80RR52	4.18	5.26	3.52	3.76	3.64	3.21	3.45	2.77	3.93	4
587	BTS 81RR17	3.70	4.69	3.12	3.35	3.23	2.86	3.07	2.50	3.47	3
621	BTS 81RR78	4.58	5.59	3.86	3.99	3.93	3.67	3.76	3.41	3.93	3
515	BTS 82RR22	6.38	7.92	5.37	5.66	5.52	5.15	--	4.79	--	2
628	BTS 82RR28	3.27	4.12	2.75	2.94	2.85	2.42	--	2.00	--	2
629	BTS 82RR33	3.49	4.41	2.94	3.15	3.05	2.66	--	2.27	--	2
606	BTS 82RR80	4.91	6.23	4.14	4.45	4.29	3.71	--	3.12	--	2
571	BTS 8325	5.91	7.06	4.98	5.04	5.01	--	--	--	--	1
613	BTS 8337	4.91	6.46	4.14	4.62	4.38	--	--	--	--	1
501	BTS 8354	4.14	5.15	3.49	3.68	3.58	--	--	--	--	1
523	BTS 8363	5.10	6.14	4.30	4.39	4.34	--	--	--	--	1
526	BTS 8367	3.56	5.65	3.00	4.04	3.52	--	--	--	--	1
541	BTS 8390	3.58	4.58	3.02	3.27	3.14	--	--	--	--	1
520	BTS 83CN	3.73	4.59	3.14	3.28	3.21	--	--	--	--	1
543	BTS 89RR10	6.10	7.75	5.14	5.54	5.34	4.98	4.90	4.62	4.74	5
601	BTS 89RR50	4.52	5.36	3.81	3.83	3.82	3.42	3.54	3.02	3.77	5
619	BTS 89RR83	5.03	6.35	4.24	4.54	4.39	3.89	4.06	3.39	4.42	5
552	Crystal 093RR	4.49	5.94	3.78	4.24	4.01	3.73	3.91	3.45	4.26	4
533	Crystal 095RR	6.15	7.30	5.18	5.22	5.20	4.63	4.56	4.06	4.44	4
569	Crystal 101RR	3.72	4.77	3.13	3.41	3.27	3.11	3.07	2.95	3.00	3
565	Crystal 246RR	4.60	6.24	3.88	4.46	4.17	3.74	--	3.30	--	2
537	Crystal 247RR	4.02	5.87	3.39	4.19	3.79	3.05	--	2.32	--	2
589	Crystal 248RR	4.76	6.01	4.01	4.29	4.15	3.70	--	3.25	--	2
502	Crystal 354RR	3.93	4.71	3.31	3.37	3.34	--	--	--	--	1
597	Crystal 355RR	3.66	5.29	3.08	3.78	3.43	--	--	--	--	1
594	Crystal 356RR	4.96	6.32	4.18	4.52	4.35	--	--	--	--	1
582	Crystal 357RR	5.06	6.57	4.26	4.69	4.48	--	--	--	--	1
519	Crystal 358RR	4.34	5.49	3.66	3.92	3.79	--	--	--	--	1
575	Crystal 359RR	3.06	3.67	2.58	2.62	2.60	--	--	--	--	1
563	Crystal 658RR	3.39	4.03	2.86	2.88	2.87	2.63	2.80	2.39	3.16	8
595	Crystal 765RR	5.77	6.49	4.86	4.64	4.75	4.43	4.45	4.10	4.49	7
505	Crystal 768RR	5.67	6.87	4.78	4.91	4.84	4.52	4.51	4.20	4.50	7
517	Crystal 875RR	5.90	6.44	4.97	4.60	4.79	4.62	4.45	4.45	4.12	6
622	Crystal 981RR	4.69	5.10	3.95	3.64	3.80	3.33	3.40	2.87	3.54	5
604	Crystal 985RR	5.39	6.01	4.54	4.29	4.42	3.96	4.06	3.51	4.24	5
570	Crystal 986RR	5.81	7.70	4.89	5.50	5.20	4.75	5.00	4.30	5.52	5
602	Crystal RR012	3.85	5.61	3.24	4.01	3.63	3.24	3.68	2.85	4.55	4
518	Crystal RR228NT	5.22	6.98	4.40	4.99	4.69	--	--	--	--	2
531	Crystal RR260	3.70	4.78	3.12	3.42	3.27	--	--	--	--	2
548	Crystal RR299	4.42	6.15	3.72	4.39	4.06	--	--	--	--	2
555	Crystal RR830	4.79	6.19	4.04	4.42	4.23	3.84	3.77	3.45	3.63	6
572	Hilleshög 4012RR	6.75	7.80	5.69	5.57	5.63	5.88	5.64	6.13	5.16	8
585	Hilleshög 4022RR	5.27	6.86	4.44	4.90	4.67	4.69	4.48	4.71	4.06	8
580	Hilleshög 4062RR	5.40	6.62	4.55	4.73	4.64	4.69	4.70	4.73	4.72	6
535	Hilleshög 4094RR	5.30	6.54	4.46	4.67	4.57	4.52	4.49	4.47	4.44	6
581	Hilleshög 4195RR	6.53	7.81	5.50	5.58	5.54	5.57	5.39	5.60	5.02	5
546	Hilleshög 4236RR(9236)	7.01	7.77	5.91	5.55	5.73	5.79	5.44	5.84	4.75	4
504	Hilleshög 4300RR(9300)	4.51	5.20	3.80	3.72	3.76	3.67	3.78	3.59	3.98	3
512	Hilleshög 4302RR(9302)	5.94	7.31	5.00	5.22	5.11	4.72	--	4.33	--	3
579	Hilleshög 4303RR(9303)	6.66	8.10	5.61	5.79	5.70	5.57	--	5.44	--	3
626	Hilleshög 4448RR(9448)	6.12	7.40	5.16	5.29	5.22	--	--	--	--	2
530	Hilleshög 4448RR(9449 MD)	5.66	7.26	4.77	5.19	4.98	--	--	--	--	2
616	Hilleshög 9451RR	6.26	7.85	5.27	5.61	5.44	--	--	--	--	2
573	Hilleshög 9517RR	4.67	5.05	3.93	3.61	3.77	--	--	--	--	1
509	Maribo 104RR	6.78	7.69	5.71	5.49	5.60	5.18	5.10	4.75	4.96	3
605	Maribo MA102RR	6.13	7.36	5.16	5.26	5.21	5.20	--	5.19	--	3
617	Maribo MA102RR(108)	6.22	6.93	5.24	4.95	5.10	5.07	--	5.05	--	3
507	Seedex RR0831N	3.84	5.26	3.23	3.76	3.50	--	--	--	--	1

Table 45. 2013 Fusarium Readings for Official Trial Entries
ACSC Nurseries - (Moorhead, MN Area)

Chk @	Code	Description	Unadjusted		Adjusted		Adj			Adj		Years
			N Mhd 4 Dates+	SE Mhd 5 Dates+	N Mhd 4 Dates+	SE Mhd 5 Dates+	2013 Mean	2 Yr Mean	3 Yr Mean	2012 Mean	2011 Mean	
	538	Seedex RR0834TT	4.33	5.81	3.65	4.15	3.90	--	--	--	--	1
	600	Seedex RR0835	5.85	6.66	4.93	4.76	4.84	--	--	--	--	1
	540	Seedex RR0936	6.04	7.65	5.09	5.47	5.28	--	--	--	--	1
	550	Seedex RR0937NITT	4.96	5.49	4.18	3.92	4.05	--	--	--	--	1
	551	Seedex SX0828NRR	4.17	4.98	3.51	3.56	3.54	3.84	--	4.14	--	2
	583	Seedex SX0829NRR	5.03	6.02	4.24	4.30	4.27	3.82	--	3.38	--	2
	525	Seedex SX0903RR	6.03	7.39	5.08	5.28	5.18	5.10	4.92	5.01	4.56	4
	562	Seedex SX0904RR	4.33	5.79	3.65	4.14	3.89	3.85	3.91	3.82	4.02	4
	503	Seedex SX0929RR	6.84	7.97	5.76	5.69	5.73	4.91	--	4.09	--	2
	598	Seedex Ultra RR	5.37	6.85	4.52	4.89	4.71	4.84	4.47	4.97	3.74	6
	560	Seedex Vapor RR(SX0995)	6.13	7.30	5.16	5.22	5.19	4.93	5.04	4.68	5.26	5
	516	Seedex Victor RR	5.56	7.28	4.68	5.20	4.94	4.58	4.46	4.21	4.22	5
	603	Seedex Vision RR	6.16	7.32	5.19	5.23	5.21	5.13	4.96	5.05	4.63	5
	544	Seedex Xavier RR(0816)	6.73	7.53	5.67	5.38	5.52	5.39	--	5.27	--	3
	591	SESVdh 36084RR	6.29	7.64	5.30	5.46	5.38	5.33	5.23	5.29	5.04	4
	611	SESVdh 36175RR	5.02	6.55	4.23	4.68	4.45	4.55	--	4.65	--	3
	539	SESVdh 36187RR	5.92	7.16	4.99	5.12	5.05	5.03	5.08	5.01	5.17	3
	542	SESVdh 36188RR	5.36	6.50	4.52	4.64	4.58	4.37	4.25	4.16	4.02	3
	506	SESVdh 36223RR	6.35	7.83	5.35	5.59	5.47	4.59	--	3.71	--	2
	534	SESVdh 36277NRR	4.82	6.07	4.06	4.34	4.20	3.87	--	3.54	--	2
	593	SESVdh 36812RR	5.73	6.87	4.83	4.91	4.87	4.80	4.61	4.73	4.22	6
	559	SESVdh 36917RR	6.33	7.87	5.33	5.62	5.48	5.17	5.05	4.86	4.81	5
	618	SESVdh 36918RR	6.61	7.77	5.57	5.55	5.56	5.28	5.21	5.00	5.06	5
	631	SESVdh 36926RR	5.61	7.24	4.73	5.17	4.95	4.76	4.84	4.56	4.99	5
	554	SESVdh 38219TT RR(36219)	4.57	5.16	3.85	3.69	3.77	--	--	--	--	2
	610	SESVdh RR334	5.59	6.87	4.71	4.91	4.81	--	--	--	--	1
	553	SESVdh RR335	6.19	7.32	5.21	5.23	5.22	--	--	--	--	1
	577	SESVdh RR632N	4.80	6.32	4.04	4.52	4.28	--	--	--	--	1
	596	SESVdh RR635N	4.04	4.89	3.40	3.49	3.45	--	--	--	--	1
	608	SESVdh RR636NITT	4.95	5.75	4.17	4.11	4.14	--	--	--	--	1
1	1201	Fus Chk #07 CRY5658RR	3.59	4.53	3.02	3.24	3.13	2.91	3.11	2.68	3.53	8
1	1202	Fus Chk #08 HILL4000RR	7.31	8.04	6.16	5.74	5.95	6.29	6.11	6.62	5.76	7
1	1203	Fus Chk #09 HILL4010RR	6.89	7.82	5.80	5.59	5.70	5.92	5.80	6.14	5.57	8
1	1204	Fus Chk #12 HILL4012RR	6.90	7.80	5.81	5.57	5.69	5.71	5.70	5.72	5.69	8
1	1205	Fus Chk #13 HILL4043RR	6.40	7.79	5.39	5.57	5.48	6.09	5.80	6.70	5.23	7
1	1206	Fus Chk #14 BETA86RR44	6.87	7.81	5.79	5.58	5.68	5.49	5.53	5.30	5.62	8
1	1207	Fus Chk #16 BETA87RR58	6.03	7.40	5.08	5.29	5.18	4.99	4.95	4.79	4.86	5
1	1208	Fus Chk #17 CRY5765RR	5.18	6.46	4.36	4.62	4.49	4.51	4.32	4.54	3.94	5
1	1209	Fus Chk #18 CRY5768RR	5.70	7.11	4.80	5.08	4.94	4.54	4.65	4.13	4.87	5
1	1210	Fus Chk #26 BETA87RR68	5.87	6.86	4.95	4.90	4.92	4.73	4.82	4.54	4.98	4
	1211	FS CHECK RES RR #1	3.55	4.06	2.99	2.90	2.95	2.67	2.83	2.39	3.15	3
	1212	FS CHECK SUS RR #2	6.93	7.58	5.84	5.42	5.63	6.16	5.87	6.70	5.29	3
	1213	FS CHK MOD RR RES #2	5.44	6.30	4.58	4.50	4.54	4.54	4.60	4.54	4.72	7
	1214	FS CHK MOD RR SUS #1	5.81	7.44	4.89	5.32	5.11	4.95	5.08	4.79	5.34	7
	1215	FS CHECK SUS RR #2	7.36	7.70	6.20	5.50	5.85	6.27	5.95	6.70	5.29	3
10		Mean of 10 Check Varieties	6.07	7.16	5.12	5.12	5.12	5.12	5.08	5.12	5.00	
		Trial Mean	5.22	6.39	4.40	4.57	4.48					
		Coeff. of Var. (%)	10.94	8.13	10.94	8.13						
		F Value	18.03	26.00	18.03	26.00						
		Mean LSD (0.05)	0.72	0.63	0.61	0.45						
		Mean LSD (0.01)	0.95	0.83	0.80	0.59						
		Sig Lvl	**	**								
		Adjustment Factor	0.8424	0.7145								

@ Adjustment is based upon 10 RR varieties.

Fusarium ratings on a scale of 1-9. Good < 3.0, Poor > 5.0

+ Average rating based upon multiple rating dates.

Table 46. Planting & Harvest Dates, Previous Crop and Disease Levels for 2013 ACSC Official Trial Sites *

Location	District / Trial Type	Cooperator	Planting Date	Harvest Date	Preceding Crop	Soil Type	Diseases Present @						Comments
							Aph	Rhc	Rzm	Fus	Maggot	Rt Aphid	
Casselton	Mhd/Hlb	Howe Farms	5/15	10/26	Barley	Medium Light	M-V	M	L	N	N	L-M	
Felton	Mhd/Hlb	Oberg Farms	5/15	Abandoned	Soybeans	Medium Light	N	N	M	N	N	L	Water damage
Hendrum	Mhd/Hlb	Mark Maring	5/10	10/27	Wheat	Medium Heavy	N	L-M	N	N	N	M-V	Drought areas
Reynolds	Mhd/Hlb	Mark Osland	6/7	10/10	Wheat	Medium	N	M	N	N	N	N	
Climax	EGF/Crk	Todd Evenson	5/12	9/17	Wheat	Medium Light	V	N	N	N	N	M	Severe Aph
Crookston	EGF/Crk	Michael Gasper	5/13	9/19	Wheat	Medium Light	L-M	L	L	N	N	M	Sand syndrome
Grand Forks	EGF/Crk	Drees Farming Assc.	5/17	Abandoned	Wheat	Medium	N	L-M	N	N	L-M	NA	Uneven growth, Rhizoc.
Alvarado	EGF/Crk	Jared Sands	5/15	9/24	Wheat	Medium Heavy	N	N	N	N	N	M	
Grafton	Dtn	Scott LeClerc	5/16	10/9	Soybeans	Medium Heavy	L	N	N	N	L	N	
St Thomas	Dtn	Tom Kennelly	5/27	10/1	Wheat	Medium Light	N	N	N	N	L	N	
Hallock	Dtn	Matt Kuznia	5/17	9/26	Wheat	Heavy	N	N	N	N	N	L-M	
Kindred Aph	Specialty Aph	Nipstad Farms	5/24	10/28	Soybeans	Medium Heavy	L-V	L	N	N	N	M	
Hillsboro Aph	Specialty Aph	Jason Lovas	5/17	Abandoned	Soybeans	Medium	L	L-M	N	N	N	L-M	Light disease pressure
Mhd Fus-N	Fusarium	Nelson Farms	5/27	8/24	Wheat	Medium	NA	L	N	V	N	NA	
Mhd Fus-SW	Fusarium	Kevin Martin	5/27	Abandoned	Soybeans	Medium	NA	L	N	L-M	N	NA	Light disease pressure
Mhd Fus-SE	Fusarium	Oberg Farms	5/27	8/19	Corn	Medium	L	L	N	V	N	NA	
Mhd Rhc-E	Rhc Nurs	ACSC Tech Services Ctr	5/26	Abandoned	Soybeans	Heavy	L	L	N	N	N	L	Light disease pressure
Mhd Rhc-W	Rhc Nurs	ACSC Tech Services Ctr	5/26	8/28	Soybeans	Heavy	L	M-V	N	N	N	N	
NWROC Rhc	Rhc Nurs	Albert Sims	5/24	Abandoned	Wheat	Medium Heavy	NA	L	N	N	N	L	Light disease pressure
Foxhome CR	Cercospora	Kevin Etzler	5/27	10/7	Corn	Medium	NA	N	N	N	N	L	
Barnesville	Minn-Dak	Maier Farms	6/12	Abandoned	Wheat	Medium	N	N	N	N	N	M	Water damage
Breckenridge	Minn-Dak	Jeremy Tischer	5/12	10/23	Wheat	Medium Light	L-M	L	N	N	N	M	
Fairmount	Minn-Dak	Wayne Miller	5/25	10/24	Wheat	Medium Light	M-V	L	N	N	N	N	
Norcross	Minn-Dak	Vipond Grain Farms	5/10	Abandoned	Corn	Medium	N	N	N	N	N	NA	Uneven growth

* Fertilizer applied in accordance to ACSC recommendations.

@ Disease notes for Aph., Rhizoc., Rhizomania, Fusarium, Root Maggot and Root Aphids were based upon visual evaluations (N=none, L=light, M=moderate, V=severe, NA=not observed)

Created 12-9-2013

Table 47. Herbicides and Fungicides Applied to ACSC & MDFC Official Trials

Area	Location	Herbicide			Fungicide		
		Spray Dates	Herbicide & Rate	Water Used/Method	Spray Dates	Fungicide Used	Water Used/Method
ASCS	Casselton	6/15,7/10	RU1,RU2	10 gal. (Ground)	* , 6/18 7/23, 8/12 8/26	Quadris App. 1/ App. 2 Headline	18.5/ gal. (Banded) 15 gal. (Ground) "
ACSC	Hendrum	6/13,7/10	RU1,RU2	10 gal. (Ground)	5/10, 7/2 7/24, 8/13 8/27	Quadris App. 1/ App. 2 Headline	18.5/ gal. (Banded) 15 gal. (Ground) "
ACSC	Reynolds	7/1,7/18	RU1,RU2	10 gal. (Ground)	6/7, 7/3 7/25, 8/13 8/28	Quadris App. 1/ App. 2 Headline	18.5/ gal. (Banded) 15 gal. (Ground) "
ACSC	Climax	6/13,7/10	RU1,RU2	10 gal. (Ground)	5/12, 7/3 7/24, 8/13 8/27	Quadris App. 1/ App. 2 Headline	18.5/ gal. (Banded) 15 gal. (Ground) "
ACSC	Crookston	6/13,7/10	RU1,RU2	10 gal. (Ground)	5/13, 6/17 7/25, 8/13 8/28	Quadris App. 1/ App. 2 Headline	18.5/ gal. (Banded) 15 gal. (Ground) "
ACSC	Alvarado	6/17,7/15	RU1,RU2	10 gal. (Ground)	5/15, 6/17 7/25, 8/13 8/28	Quadris App. 1/ App. 2 Headline	18.5/ gal. (Banded) 15 gal. (Ground) "
ACSC	St. Thomas	6/17,7/15	RU1,RU2	10 gal. (Ground)	5/27, 6/25 7/29, 8/14 8/28	Quadris App. 1/ App. 2 Headline	18.5/ gal. (Banded) 15 gal. (Ground) "
ACSC	Grafton	6/17,7/15	RU1,RU2	10 gal. (Ground)	5/16, 6/25 7/29, 8/14 8/28	Quadris App. 1/ App. 2 Headline	18.5/ gal. (Banded) 15 gal. (Ground) "
ACSC	Hallock	6/17,7/15	RU1,RU2	10 gal. (Ground)	5/17, 6/25 7/29, 8/14 9/3	Quadris App. 1/ App. 2 Headline	18.5/ gal. (Banded) 15 gal. (Ground) "
ACSC	Kindred Aph.	6/13,7/10	RU1,RU2	10 gal. (Ground)	5/24, 7/3 7/23, 8/12 8/26	Quadris App. 1/ App. 2 Headline	18.5/ gal. (Banded) 15 gal. (Ground) "
MDAK	Breckenridge	6/15,7/10	RU1,RU2	10 gal. (Ground)	* , 6/13 7/23, 8/12 8/26	Quadris App. 1/ App. 2 Headline	18.5/ gal. (Banded) 15 gal. (Ground) "
MDAK	Fairmount	6/15,7/10	RU1,RU2	10 gal. (Ground)	5/25, 7/8 7/23, 8/12 8/26	Quadris App. 1/ App. 2 Headline	18.5/ gal. (Banded) 15 gal. (Ground) "

Ground applications made by beet seed personnel from ACSC Technical Services Center.

RU1 = Roundup Powermax (32 oz./A), Event (1 gal./100 gal water).

RU2 = Roundup Powermax (22 oz./A), Event (1 gal./100 gal water).

Counter 20G was banded premerge at 9.0 lbs./A at St.Thomas, Grafton & Fairmount

App.1=Proline(5oz./A), Agritin(6oz./A)

Headline (12oz./A)

Quadris applied at 9 oz. infurrow & 14oz./A banded

*= Not applied at planting

App. 2 = Agritin (6oz./A), Topsin(7.5oz./A)