RESULTS OF AMERICAN CRYSTAL'S 2007 OFFICIAL CODED VARIETY TRIALS

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American Crystal's coded variety trials are designed to provide an unbiased evaluation of the genetic 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 2007 American Crystal and Minn-Dak official trials and describes the procedures and cultural practices involved in the trials.

Table	Area	Information in the Table
1	ACSC	ACSC approved varieties for 2008.
2-3	ACSC	Multi-year performance of full market (Rhizomania) approved varieties under various disease levels.
4-5	ACSC	Multi-year performance of Roundup Ready (biotech) and conventional approved varieties under various disease levels.
6	ACSC	Multi-year performance of Aphanomyces specialty approved varieties.
7	ACSC	Multi-year performance of non Rhizomania approved varieties.
8	ACSC	Two-year performance of Roundup Ready approved varieties.
9-21	ACSC	2007 ACSC Commercial variety trials and combined by Rhizomania severity.
22-34	ACSC	2007 ACSC Biotech variety trials and combined by Rhizomania severity.
35	ACSC	2007 ACSC Aphanomyces specialty infected trial.
36	MD	Minn-Dak approved varieties for 2008.
37	MD	Minn-Dak variety approval calculations.
38	MD	Minn-Dak Roundup Ready variety approval calculations.
39	MD	Multi-year performance of approved varieties (sugar, yield, LTM, emergence) – Minn-Dak.
40	MD	Multi-year performance of Roundup Ready approved varieties (sugar, yield, LTM, emergence – Minn-Dak.
41-44	MD	2007 Minn-Dak Commercial variety trials and combined.
45-48	MD	2007 Minn-Dak Biotech variety trials and combined.
49	ACSC & MD	Aphanomyces disease nursery ratings.
50	ACSC & MD	Cercospora disease nursery ratings.
51	ACSC & MD	Rhizoctonia disease nursery ratings.
52	ACSC & MD	Fusarium disease nursery ratings.
53	ACSC & MD	Official trial sites, cooperators, plant and harvest dates, soil types and disease notes.
54	ACSC & MD	Herbicides applied to official trials.
55	ACSC & MD	Fungicides applied to official trials.
56	ACSC	Approval calculations for ACSC unlimited market (Rhizomania varieties).
57	ACSC	One-year status for ACSC unlimited market (Rhizomania varieties).
58	ACSC	Approval calculations for ACSC Roundup Ready varieties.
59	ACSC	One-year status for ACSC Roundup Ready varieties.
60	ACSC	Approval calculations for ACSC Aphanomyces specialty.
61	ACSC	Approval calculations for ACSC Rhizoctonia specialty.
62	ACSC	Approval calculations for ACSC established non-Rhizomania varieties.

Procedures and Cultural Practices

Seven sugarbeet seed company groups participated in the 2007 coded variety testing program. 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 at the NWROC under the direction of Dr. Larry Smith and Mr. Todd Cymbaluk. The seed then was sent to the American Crystal Technical Services Center at Moorhead for official testing.

Cooperators from the Crystal and Minn-Dak growing areas continue to be rotated for a wider testing base.

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

The number of official yield trial sites planted in the Crystal area was eleven with ten harvested. We continued plant-to-stand trials (4.5 inch spacing) to evaluate the commercial coded entries, in six replications. The biotech trials were plant-to-stand trials (4.5 inch spacing), with four replications. Two Aphanomyces yield trials were planted at locations with potential disease present. Three Minn-Dak area trials were harvested. Plots were planted crosswise (90°) to the cooperators' normal farming operations, where possible. Row spacing remained at 22 inches. Plot rows for all official trials were maintained at 44 feet with about 37 feet harvested. A lattice plot design was used for all coded trials. Planting was performed with two vacuum planters, which included a 12-row Hege plot planter and a modified 12-row Heath planter. These planters gave excellent single seed spacing which contributed to easier emergence counts and thinning. 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 inch apart) by hand but were not further reduced.

Micro rate herbicides, pre-emergence herbicides and full rates of fungicides were applied using a pickup sprayer driven down the alleys. Ground spraying was conducted by American Crystal Sugar technical staff.

All plot rows were measured for total length after approximately 2.5 feet at each end were rototilled off (about August 20-28) while skips greater than 60 inches were measured for adjustment purposes. Harvest was performed with two modified four-row harvesters and a modified two-row harvester (4310, 4310A and 231 John Deere). Typically, all plot rows were harvested. All harvested beets of each plot were used for yield determination while one sample for sugar and impurity analysis was obtained from each plot. Quality analysis was performed at the American Crystal Technical Services quality lab in Moorhead.

All coded herbicide resistant biotech trials were conducted as separate tests along side the regular coded trials. Entries were placed in two-row plots and replicated four times. A randomized nested block design was used for all of the biotech trials. Five conventional commercial checks were sprayed with conventional sugarbeet herbicides as needed. Two applications of Roundup were made: 1) before thinning in the 4-6 and 8-12 leaf stages. All biotech beets were destroyed following yield and quality evaluation.

Trials at Hillsboro and Fairmount were not harvested.

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. A special thanks also to Dr. Larry Smith and Mr. Todd Cymbaluk (NWROC, U of M – Crookston) for sampling and coding all variety entries.

Table 1.

Varieties Approved for Sale to ACSC Growers for the 2008 Sugarbeet Crop

(all varieties in the box are Rhizomania tolerant)

Full Market Approved Varieties

	Beta 1301R (+Aph +Rhc)		Hilleshög 3028Rz (+ Aph)		Holly 317
	Beta 1305R (+Aph)		Hilleshög 3031Rz (+ Aph)		Holly 556
	Beta 1772R (+Aph)		Hilleshög 3035Rz (+Aph+Rhc)	A	Holly 06HX629(Holly 629)
	Beta 4554R (+Aph)		Hilleshög 3036Rz (+Aph)		Seedex Alpine (+Aph)
A	BTS 85RR02 (B5802RR +Aph +RR)	A	Hilleshög 3050Rz (7250)		Seedex Rezult (+Aph)
	Crystal 539RR (+ Aph +RR)	A	Hilleshög 3051Rz (7251)		Seedex Sonic
	Crystal R308	A	Hilleshög 3052Rz (7252)	A	Seedex Triton (SX0835)
	Crystal R431	A	Hilleshög 4003RR (9003 +RR)		SESVanderhave H46519
	Crystal R434	A	Hilleshög 4010RR (9010 +RR)		SESVanderhave H46531
		A	Hilleshög 4012RR (9012 +RR)		SESVanderhave H46532
					SESVanderhave H46533
					SESVanderhave H46807
				A	SESVanderhave H48607

Aphanomyces Specialty Varieties (Aph)

A	Beta 1301R (+Rhc)		
	Beta 1305R	A	Hilleshög 3028Rz
A	Beta 1772R	A	Hilleshög 3031Rz
A	Beta 4554R	A	Hilleshög 3035Rz
A	BTS 85RR02 (B5802RR +RR)	A	Hilleshög 3036Rz
A	BTS 86RR44 (B6804RR)	*	Seedex Alpine
A	BTS 86RR66 (B6806RR +RR)		Seedex Rezult
A	BTS 86RR88 (B6808RR)	A	SESVanderhave H46911
	Crystal 539RR (+RR)		
A	Crystal 658RR (+RR)		

Rhizoctonia Specialty Varieties (Rhc)

Beta 1301R (+Aph)	Hilleshög 3035Rz (+Aph)

Approved varieties for 2008 that contain Roundup Ready ® biotechnology

BTS 85RR02 (B5802RR)	Crystal 539RR	Hilleshög 4003RR (9003)
BTS 86RR44 (B6804RR)	Crystal 658RR	Hilleshög 4010RR (9010)
BTS86RR66 (B6806RR)		Hilleshög 4012RR (9012)
BTS86RR88 (B6808RR)		

Non-Rhizomania Varieties

Crystal 727	Seedex Magnum	SESVanderhave H66855

A Newly Approved
* Final year of sale as Aph specialty variety.

(+Aph) additional Aph spec approval
(+Rhc) additional Rhizoctonia spec approval
(+RR) additional RR tolerance

(+RR) additional Roundup Ready developed using biotechnology (GMO)
Roundup Ready ® is a registered trademark of Monsanto Company.

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Table 2.
Performance Data of Non-Biotech Varieties Approved for Sale to ACSC Growers in 2008
Under Light Rhizomania Conditions During 2005, 2006 & 2007 Growing Seasons +++
(Biotech varieties are not included in this table)

		Years**		Rev/Ton			Rev/Acre			Rec/Ton		Rec/Acre		Sugar		Yield		Aph Root+		CR Rate +		Fusarium Rate++	
		Comm	Disease																				
Description	Ploidy	Seed	Category	2 Yr	3 Yr	%Bnch	2 Yr	3 Yr	%Bnch	2 Yr	3 Yr	2 Yr	3 Yr	2 Yr	3 Yr	2 Yr	3 Yr	2 Yr	3Yr	2 Yr	3 Yr	2006	2007
				10	17		10	17		10	17	10	17	10	17	10	17	2	3	3	4	2	2
Beta 1301R	2N	3	Aph, Rzm & Rhc	38.68	35.05	91	1044	927	94	309	294	8376	7826	16.8	16.1	27.3	26.7	4.2	4.0	4.8	4.7	6.4	5.6
Beta 1305R	2N	3	Aph & Rzm	41.03	37.67	98	1090	988	100	319	306	8502	8069	17.2	16.6	26.8	26.5	4.5	4.6	5.4	5.3	5.8	5.4
Beta 1772R	2N	1	Aph & Rzm	43.25	39.45	102	1091	955	97	328	314	8313	7616	17.7	17.0	25.5	24.4	4.6	4.3	4.9	4.7		
Beta 4554R	3N	2	Aph & Rzm	43.23	39.61	103	1105	982	99	328	315	8429	7827	17.7	17.0	25.8	25.0	4.6	4.5	5.1	5.0	2.8	3.8
Crystal R308	3N	3	Rzm	44.39	40.33	105	1104	984	99	333	318	8318	7778	17.9	17.1	25.1	24.6	4.3	4.4	4.9	4.9	3.1	3.9
Crystal R431	2N	2	Rzm	42.41	38.76	101	1108	989	100	325	311	8534	7967	17.5	16.8	26.5	25.8	4.8	4.3	5.3	5.3	3.9	3.8
Crystal R434	2N	2	Rzm	40.44	36.93	96	1103	992	100	316	303	8668	8179	17.2	16.5	27.6	27.2	4.0	4.1	5.3	5.2	3.6	3.7
Hilleshog 3028Rz	2N	1	Aph & Rzm	42.77	38.78	101	1113	995	101	326	311	8540	8030	17.5	16.8	26.4	26.1	4.6	4.2	5.1	5.0		
Hilleshog 3031Rz	2N	1	Aph & Rzm	45.46	41.70	108	1124	991	100	338	324	8381	7708	18.1	17.4	24.9	23.8	4.8	4.9	4.2	4.3		4.9
Hilleshog 3035Rz	2N	1	Aph, Rzm & Rhc	43.84	40.36	105	1152	1010	102	331	318	8715	7965	17.7	17.1	26.4	25.1	4.7	4.8	4.4	4.4		3.8
Hilleshog 3036Rz	2N	1	Aph & Rzm	44.38	40.79	106	1147	1021	103	333	320	8642	8024	17.8	17.2	26.1	25.2	4.9	4.8	5.1	5.0		5.3
Hilleshog 3050Rz(7250)	2N	NC	Rzm	43.54			1190			330		9030		17.6		27.5		4.7		5.1			4.4
Hilleshog 3051Rz(7251)	2N	NC	Rzm	41.92			1185			323		9147		17.3		28.5		5.2		5.2			
Hilleshog 3052Rz(7252)	2N	NC	Rzm	43.33			1195			329		9094		17.6		27.8		4.9		5.0			4.3
Holly 629 (06HX629)	2N	NC	Rzm	40.77			1157			318		9057		17.0		28.7		5.5		5.0			
Holly 317	2N	3	Rzm	41.96	38.70	101	1054	989	100	323	311	8142	7998	17.3	16.7	25.3	25.9	4.9	4.9	4.7	4.8		
Holly 556	2N	1	Rzm	40.52	38.00	99	1134	1023	103	317	308	8895	8313	17.0	16.5	28.2	27.1	4.5	4.3	4.7	4.8		
Seedex Alpine	2N	3	Aph & Rzm	41.90	38.31	99	1144	1027	104	322	309	8858	8329	17.3	16.6	27.7	27.1	6.3	5.6	4.7	4.5		
Seedex Rezult	2N	4	Aph & Rzm	42.85	39.37	102	1075	973	98	326	314	8233	7788	17.5	16.8	25.4	25.0	4.8	4.8	4.7	4.7		
Seedex Sonic	2N	1	Rzm	41.08	37.82	98	1199	1063	107	319	307	9344	8660	17.1	16.5	29.4	28.4	5.1	5.5	4.8	4.8		
Seedex Triton(SX0835)	2N	NC	Rzm	41.95			1167			323		9006		17.3		28.0		4.8		4.7			
SESVanderhave H46519	2N	3	Rzm	40.77	37.61	98	1158	1037	105	318	306	9072	8472	17.1	16.5	28.8	27.8	5.2	5.0	4.6	4.6		
SESVanderhave H46531	2N	2	Rzm	41.65	38.22	99	1190	1059	107	321	308	9230	8580	17.2	16.6	28.9	27.9	4.9	4.8	5.1	5.0	4.2	
SESVanderhave H46532	2N	2	Rzm	40.38	37.33	97	1117	1032	104	316	305	8786	8470	17.0	16.4	28.0	28.0	5.1	5.0	4.9	5.0		
SESVanderhave H46533	2N	NC	Rzm	40.39	36.87	96	1172	1045	106	316	303	9205	8614	17.0	16.3	29.3	28.6	5.6	6.0	5.3	5.3		
SESVanderhave H46807	2N	1	Rzm	41.26	37.68	98	1181	1073	108	320	306	9206	8763	17.1	16.5	29.0	28.8	5.7	5.7	5.2	5.2		
SESVanderhave H48607(46907)	2N	NC	Rzm	41.81			1125			322		8718		17.2		27.3		5.4		5.1			
Mean of Susceptible Check Varieties				45.53	41.99	109	1050	945	96	338	325	7833	7342	18.1	17.5	23.3	22.7						
Mean of benchmark varieties.				41.73	38.51	100	1103	989	100	322	310	8546	7993	17.3	16.7	26.7	25.9						

1st column for each trait is mean of 2006 and 2007 data. 2nd column for each trait is mean of 2005, 2006 and 2007 data. % Bnch column is 3-year mean as a % of 4 to 5 commercial benchmark varieties.

+++ Categorization of Rzm infection based upon performance ratios of tolerant vs susceptible varieties. Semi commercial data adjusted to commercial status.

++ 2007 Revenue estimates based on a $41.97 beet payment at 17.5% sugar and 1.5% loss to molasses. 2006 Revenue based on $40.38 and 2005 was $39.94. Revenue does not consider hauling costs.

** Varieties with 3 years may have been available as commercial seed for more than 3 years.

Created 11-09-2007.

+ Aph ratings are from Shakopee & Kindred (1=healthy, 9=dead). CR ratings from Rosemount & Michigan (1=healthy, 9=dead).

++ Fusarium ratings are average of 2 sites in 2006 and 2 RRV sites in 2007 (mod resist = 4.5, mod susc = 5.7)

Table 3.
Performance Data of Non-Biotech Varieties Approved for Sale to ACSC Growers in 2008
Under Moderate to Severe Rhizomania Conditions During 2005, 2006 & 2007 Growing Seasons +++
(Biotech varieties are not included in this table)

		Years**		Rev/Ton			Rev/Acre			Rec/Ton		Rec/Acre		Sugar		Yield		Aph Root+		CR +		Fusarium ++	
		Comm	Disease																				
Description	Ploidy	Seed	Category	2 Yr	3 Yr	%Bnch	2 Yr	3 Yr	%Bnch	2 Yr	3 Yr	2 Yr	3 Yr	2 Yr	3 Yr	2 Yr	3 Yr	2 Yr	3Yr	2 Yr	3 Yr	2006	2007
# of Locations				8	14		8	14		8	14	8	14	8	14	8	14	2	3	3	4	2	2
Beta 1301R	2N	3	Aph, Rzm & Rhc	37.89	36.45	90	1055	973	93	306	302	8556	8062	16.6	16.4	28.1	26.8	4.2	4.0	4.8	4.7	6.4	5.6
Beta 1305R	2N	3	Aph & Rzm	41.12	39.21	97	1139	1045	100	320	314	8886	8355	17.2	16.9	27.9	26.6	4.5	4.6	5.4	5.3	5.8	5.4
Beta 1772R	2N	1	Aph & Rzm	43.17	41.54	103	1104	1027	98	328	324	8448	8026	17.6	17.3	25.9	24.9	4.6	4.3	4.9	4.7		
Beta 4554R	3N	2	Aph & Rzm	41.71	40.26	100	1037	923	88	322	318	8034	7284	17.3	17.1	25.0	22.9	4.6	4.5	5.1	5.0	2.8	3.8
Crystal R308	3N	3	Rzm	42.39	41.22	102	1058	957	91	325	322	8139	7486	17.4	17.2	25.1	23.2	4.3	4.4	4.9	4.9	3.1	3.9
Crystal R431	2N	2	Rzm	42.24	40.48	100	1128	1044	100	324	319	8695	8229	17.5	17.2	26.9	25.8	4.8	4.3	5.3	5.3	3.9	3.8
Crystal R434	2N	2	Rzm	40.03	38.43	95	1115	1032	98	315	310	8811	8342	17.1	16.8	28.1	26.9	4.0	4.1	5.3	5.2	3.6	3.7
Hilleshog 3028Rz	2N	1	Aph & Rzm	42.60	40.83	101	1138	1039	99	326	321	8743	8161	17.5	17.2	27.0	25.5	4.6	4.2	5.1	5.0		
Hilleshog 3031Rz	2N	1	Aph & Rzm	45.84	44.16	109	1138	1059	101	340	335	8480	8044	18.1	17.9	25.0	24.0	4.8	4.9	4.2	4.3		4.9
Hilleshog 3035Rz	2N	1	Aph, Rzm & Rhc	43.52	42.18	104	1182	1108	106	330	327	9009	8603	17.6	17.4	27.5	26.4	4.7	4.8	4.4	4.4		3.8
Hilleshog 3036Rz	2N	1	Aph & Rzm	42.23	41.11	102	1147	1045	100	324	322	8841	8187	17.3	17.2	27.4	25.5	4.9	4.8	5.1	5.0		5.3
Hilleshog 3050Rz(7250)	2N	NC	Rzm	43.82			1225			331		9293		17.7		28.1		4.7		5.1			4.4
Hilleshog 3051Rz(7251)	2N	NC	Rzm	41.25			1215			320		9453		17.2		29.6		5.2		5.2			
Hilleshog 3052Rz(7252)	2N	NC	Rzm	42.75			1250			327		9574		17.4		29.4		4.9		5.0			4.3
Holly 629 (06HX629)	2N	NC	Rzm	40.35			1188			316		9331		16.9		29.5		5.5		5.0			
Holly 317	2N	3	Rzm	42.13	40.23	100	1091	1033	99	324	318	8440	8184	17.3	17.0	26.2	25.8	4.9	4.9	4.7	4.8		
Holly 556	2N	1	Rzm	40.11	38.85	96	1159	1074	102	315	312	9119	8618	16.9	16.7	28.9	27.6	4.5	4.3	4.7	4.8		
Seedex Alpine	2N	3	Aph & Rzm	40.38	39.20	97	1159	1080	103	316	314	9128	8655	17.0	16.8	29.0	27.7	6.3	5.6	4.7	4.5		
Seedex Rezult	2N	4	Aph & Rzm	44.14	41.87	104	1131	1038	99	333	325	8557	8066	17.7	17.3	25.8	24.8	4.8	4.8	4.7	4.7		
Seedex Sonic	2N	1	Rzm	40.47	39.19	97	1228	1134	108	317	314	9661	9092	17.0	16.8	30.7	29.1	5.1	5.5	4.8	4.8		
Seedex Triton(SX0835)	2N	NC	Rzm	41.05			1198			319		9360		17.0		29.4		4.8		4.7			
SESVanderhave H46519	2N	3	Rzm	40.96	39.39	98	1210	1112	106	319	314	9451	8880	17.1	16.8	29.7	28.3	5.2	5.0	4.6	4.6		
SESVanderhave H46531	2N	2	Rzm	41.30	39.80	99	1232	1126	107	320	316	9598	8957	17.1	16.9	30.1	28.4	4.9	4.8	5.1	5.0	4.2	
SESVanderhave H46532	2N	2	Rzm	40.76	39.09	97	1181	1105	105	318	313	9238	8862	17.0	16.7	29.1	28.3	5.1	5.0	4.9	5.0		
SESVanderhave H46533	2N	NC	Rzm	40.30	38.37	95	1212	1102	105	316	310	9533	8900	16.9	16.6	30.2	28.7	5.6	6.0	5.3	5.3		
SESVanderhave H46807	2N	1	Rzm	40.78	38.85	96	1226	1109	106	318	312	9622	8912	17.0	16.7	30.4	28.6	5.7	5.7	5.2	5.2		
SESVanderhave H48607(46907)	2N	NC	Rzm	40.28			1195			316		9410		16.9		29.9		5.4		5.1			
Mean of Several Susceptible Varieties				41.11	39.60	98	832	736	70	320	315	6459	5808	17.1	16.9	20.2	18.2						
Mean of benchmark varieties.				41.98	40.36	100	1136	1048	100	323	319	8778	8277	17.3	17.1	27.2	26.0						

1st column for each trait is mean of 2006 and 2007 data. 2nd column for each trait is mean of 2005, 2006 and 2007 data. % Bnch column is 3-year mean as a % of 4 to 5 commercial benchmark varieties.

+++ Categorization of Rzm infection based upon performance ratios of tolerant vs susceptible varieties. Semi commercial data adjusted to commercial status.

++ 2007 Revenue estimates based on a $41.97 beet payment at 17.5% sugar and 1.5% loss to molasses. 2006 Revenue based on $40.38 and 2005 was $39.94. Revenue does not consider hauling costs.

** Varieties with 3 years may have been available as commercial seed for more than 3 years.

Created 11-08-2007.

+ Aph ratings are from Shakopee & Kindred (1=healthy, 9=dead). CR ratings from Rosemount & Michigan (1=healthy, 9=dead).

++ Fusarium ratings are average of 2 sites in 2006 and 2 RRV sites in 2007 (mod resist = 4.5, mod susc = 5.7)

Table 4.
One-Year Performance Data of Biotech (Roundup Ready ®) & Non-Biotech Varieties Approved for Sale to ACSC Growers in 2008
Under Light or Moderate Rhizomania Conditions During the 2007 Growing Season +++

		Years**		Rev/Ton		Rev/Acre		Rev/Acre % Bnch +		Rec/Ton		Rec/Acre		Sugar		Yield		Aph Root+		CR +		Fusarium ++		Rhizoctonia ++	
		Comm	Disease																						
Description	Ploidy	Seed	Tolerance	Light	Mod	Light	Mod	Light	Mod	Light	Mod	Light	Mod	Light	Mod	Light	Mod	2 Yr	3Yr	2 Yr	3 Yr	2006	2007	2006	2007
# of Locations				6	4	6	4	6	4	6	4	6	4	6	4	6	4	2	3	3	4	2	2	1	2
Beta 1301R	2N	3	Aph, Rzm & Rhc	39.08	41.99	1040	1139	95	92	307.6	320.1	8215	8684	16.7	17.2	26.8	27.2	4.2	4.0	4.8	4.7	6.4	5.6	3.1	3.8
Beta 1305R	2N	3	Aph & Rzm	41.01	45.54	1066	1246	97	101	315.9	335.2	8230	9177	17.0	17.9	26.1	27.4	4.5	4.6	5.4	5.3	5.8	5.4		
Beta 1772R	2N	1	Aph & Rzm	43.27	47.30	1065	1170	97	95	325.5	342.7	8027	8487	17.5	18.3	24.7	24.8	4.6	4.3	4.9	4.7				
Beta 4554R	3N	2	Aph & Rzm	43.33	46.39	1086	1128	99	91	325.8	338.8	8183	8238	17.5	18.1	25.2	24.3	4.6	4.5	5.1	5.0	2.8	3.8		
BTS 85RR02(B5802RR)	2N	NC	Aph Rzm RR	42.54	45.34	1193	1280	109	103	322.5	334.3	9057	9428	17.4	17.9	28.2	28.2	4.2	4.3	4.6	4.6				
BTS 86RR44(B6804RR)	2N	NC	Aph RR	40.59	43.70	1110	1219	101	98	314.0	327.1	8580	9118	17.0	17.6	27.3	27.8	4.7		5.1					
BTS 86RR66(B6806RR)	2N	NC	Aph Rzm RR	41.63	44.58	1072	1304	98	105	318.6	331.0	8219	9661	17.1	17.7	25.9	29.1	4.7		4.9					
BTS 86RR88(B6808RR)	2N	NC	Aph RR	43.67	45.56	1103	1133	101	92	327.3	335.2	8308	8336	17.5	18.0	25.5	24.8	4.6		4.7			3.1		
Crystal 539RR	2N	NC	Aph Rzm RR	43.10	45.89	1139	1191	104	96	324.9	336.7	8604	8734	17.4	18.0	26.6	25.9	4.0	3.9	5.1	5.0		3.0		
Crystal 658RR	2N	NC	Aph RR	38.92	42.19	1088	1294	99	105	306.8	320.5	8602	9824	16.5	17.1	28.1	30.6	4.8		4.4			2.8		
Crystal R308	3N	3	Rzm	44.43	46.45	1082	1143	99	92	330.5	339.1	8067	8341	17.7	18.0	24.5	24.6	4.3	4.4	4.9	4.9	3.1	3.9		
Crystal R431	2N	2	Rzm	42.97	46.16	1092	1217	100	98	324.3	337.9	8269	8912	17.4	18.2	25.6	26.4	4.8	4.3	5.3	5.3	3.9	3.8		
Crystal R434	2N	2	Rzm	40.26	44.33	1097	1226	100	99	312.7	330.1	8535	9120	17.0	17.8	27.4	27.6	4.0	4.1	5.3	5.2	3.6	3.7		
Hilleshog 3028Rz	2N	1	Aph & Rzm	42.83	46.88	1097	1244	100	100	323.6	340.9	8319	9051	17.3	18.2	25.8	26.6	4.6	4.2	5.1	5.0				
Hilleshog 3031Rz	2N	1	Aph & Rzm	45.04	49.84	1064	1175	97	95	333.1	353.6	7873	8340	17.8	18.8	23.7	23.6	4.8	4.9	4.2	4.3		4.9		
Hilleshog 3035Rz	2N	1	Aph, Rzm & Rhc	44.11	47.19	1134	1239	104	100	329.1	342.3	8477	8997	17.6	18.2	25.8	26.3	4.7	4.8	4.4	4.4		3.8	2.6	2.8
Hilleshog 3036Rz	2N	1	Aph & Rzm	44.77	45.83	1150	1224	105	99	331.9	336.5	8561	8979	17.7	17.9	25.9	26.7	4.9	4.8	5.1	5.0		5.3		
Hilleshog 3050Rz(7250)	2N	NC	Rzm	43.01	47.31	1171	1304	107	105	324.4	342.8	8847	9449	17.3	18.2	27.3	27.6	4.7		5.1			4.4		4.6
Hilleshog 3051Rz(7251)	2N	NC	Rzm	41.53	44.64	1186	1316	108	106	318.1	331.4	9102	9767	17.1	17.7	28.7	29.5	5.2		5.2					
Hilleshog 3052Rz(7252)	2N	NC	Rzm	43.41	46.01	1184	1332	108	108	326.1	337.2	8916	9755	17.4	18.0	27.4	28.9	4.9		5.0			4.3		4.1
Hilleshog 4003RR(9003RR)	2N	NC	Rzm RR	42.16	46.70	1048	1258	96	102	320.8	340.3	8001	9151	17.2	18.2	25.0	26.8	6.1		5.1					
Hilleshog 4010RR(9010RR)	2N	NC	Rzm RR	43.24	46.19	1117	1155	102	93	325.5	338.0	8444	8449	17.4	18.1	26.1	25.0	5.4		5.1					
Hilleshog 4012RR(9012RR)	2N	NC	Rzm RR	41.12	45.49	1115	1294	102	105	316.3	334.9	8611	9517	17.0	17.9	27.4	28.4	5.3		5.1					
Holly 629 (06HX629)	2N	NC	Rzm	41.06	43.57	1154	1257	106	102	316.1	326.8	8907	9416	16.9	17.4	28.3	28.8	5.5		5.0					
Holly 317	2N	3	Rzm	42.20	45.78	1023	1128	94	91	321.0	336.2	7801	8291	17.2	17.9	24.4	24.7	4.9	4.9	4.7	4.8				
Holly 556	2N	1	Rzm	39.70	42.20	1116	1222	102	99	310.3	321.0	8745	9280	16.7	17.2	28.3	28.8	4.5	4.3	4.7	4.8				
Seedex Alpine	2N	3	Aph & Rzm	43.29	45.00	1131	1227	103	99	325.6	332.9	8539	9072	17.4	17.8	26.3	27.2	6.3	5.6	4.7	4.5				
Seedex Rezult	2N	4	Aph & Rzm	43.43	48.34	1077	1218	99	98	326.2	347.1	8101	8743	17.4	18.4	24.9	25.2	4.8	4.8	4.7	4.7				
Seedex Sonic	2N	1	Rzm	41.32	44.68	1189	1344	109	109	317.2	331.6	9166	9970	17.0	17.7	29.0	30.1	5.1	5.5	4.8	4.8				
Seedex Triton(SX0835)	2N	NC	Rzm	41.91	44.87	1171	1304	107	105	319.7	332.4	8949	9650	17.1	17.7	28.0	29.0	4.8		4.7					
SESVanderhave H46519	2N	3	Rzm	39.79	44.59	1121	1297	103	105	310.7	331.2	8787	9632	16.7	17.7	28.4	29.1	5.2	5.0	4.6	4.6				
SESVanderhave H46531	2N	2	Rzm	42.02	44.43	1198	1309	110	106	320.2	330.5	9158	9739	17.1	17.6	28.7	29.5	4.9	4.8	5.1	5.0	4.2			
SESVanderhave H46532	2N	2	Rzm	40.70	44.69	1112	1282	102	104	314.6	331.6	8626	9512	16.9	17.7	27.5	28.7	5.1	5.0	4.9	5.0				
SESVanderhave H46533	2N	NC	Rzm	40.65	44.65	1159	1320	106	107	314.4	331.4	8991	9787	16.8	17.6	28.7	29.5	5.6	6.0	5.3	5.3				
SESVanderhave H46807	2N	1	Rzm	42.32	45.25	1169	1314	107	106	321.5	334.0	8920	9685	17.2	17.8	27.9	29.0	5.7	5.7	5.2	5.2				
SESVanderhave H46911	2N	NC	Aph	42.54	46.00	1060	1159	97	94	322.4	337.2	8051	8493	17.2	17.9	25.0	25.2	4.5		4.8		3.1	4.0		
SESVanderhave H48607(46907)	2N	NC	Rzm	41.42	45.16	1141	1292	104	104	317.7	333.6	8773	9540	16.9	17.7	27.7	28.6	5.4		5.1					
Mean of benchmark varieties.				41.53	45.79	1093	1238	100	100	318.1	336.3	8397	9094	17.1	17.9	26.5	27.1								

+++ Categorization of Rzm infection based upon performance ratios of tolerant vs susceptible varieties. Biotech data adjusted to commercial status.

+ % Bnch column is a % of 5 commercial benchmark varieties.

++ 2007 Revenue estimates based on a $41.97 beet payment at 17.5% sugar and 1.5% loss to molasses. Revenue does not consider hauling costs.

+ Aph ratings are from Shakopee & Kindred (1=healthy, 9=dead). CR ratings from Rosemount & Michigan (1=healthy, 9=dead). Rhizoctonia rates are from Ft Collins and Moorhead (mod res=3, susc=5+).

++ Fusarium ratings are average of 2 sites in 2006 and 2 sites in 2007 (mod resist = 4.5, mod susc = 5.7)

Created 11-08-2007.

Table 5.
Performance Data of Biotech (Roundup Ready ®) & Non-Biotech Varieties Approved for Sale to ACSC Growers in 2008
During 2006 & 2007 Growing Seasons +++

		Years**		Rev/Ton			Rev/Acre			Rec/Ton		Rec/Acre		LTM		Sugar		Yield		Aph Root+		CR +		Fusarium ++		Rhizoctonia ++	
		Comm	Disease																								
Description	Ploidy	Seed	Tolerance	2007	2 Yr	%Bnch	2007	2 Yr	%Bnch	2007	2 Yr	2007	2 Yr	2007	2 Yr	2007	2 Yr	2007	2 Yr	2 Yr	3Yr	2 Yr	3 Yr	2006	2007	2006	2007
# of Locations				10	19		10	19		10	19	10	19	10	19	10	19	10	19	2	3	3	4	2	2	1	2
Beta 1301R	2N	3	Aph, Rzm & Rhc	40.25	37.96	91	1081	1040	94	313	306	8406	8432	1.26	1.32	16.90	16.63	26.9	27.7	4.2	4.0	4.8	4.7	6.4	5.6	3.1	3.8
Beta 1305R	2N	3	Aph & Rzm	42.85	40.78	98	1140	1105	100	324	318	8618	8656	1.22	1.26	17.41	17.18	26.7	27.3	4.5	4.6	5.4	5.3	5.8	5.4		
Beta 1772R (BX1572)	2N	1	Aph & Rzm	44.89	42.85	103	1107	1090	98	332	327	8212	8360	1.22	1.25	17.84	17.60	24.8	25.7	4.6	4.3	4.9	4.7				
Beta 4554R (BX1454)	3N	2	Aph & Rzm	44.53	42.28	102	1103	1069	96	331	325	8204	8240	1.18	1.22	17.73	17.45	24.8	25.5	4.6	4.5	5.1	5.0	2.8	3.8		
BTS 85RR02(B5802RR)	2N	NC	Aph Rzm RR	43.60	NA	NA	1226	NA	NA	327	NA	9196	NA	1.23	NA	17.56	NA	28.1	NA	4.2	4.3	4.6	4.6				
BTS 86RR44(B6804RR)	2N	NC	Aph RR	41.79	NA	NA	1152	NA	NA	319	NA	8792	NA	1.24	NA	17.19	NA	27.5	NA	4.7		5.1					
BTS 86RR66(B6806RR)	2N	NC	Aph Rzm RR	42.75	NA	NA	1169	NA	NA	323	NA	8820	NA	1.22	NA	17.38	NA	27.2	NA	4.7		4.9					
BTS 86RR88(B6808RR)	2N	NC	Aph RR	44.32	NA	NA	1112	NA	NA	330	NA	8302	NA	1.18	NA	17.68	NA	25.2	NA	4.6		4.7			3.1		
Crystal 539RR	2N	NC	Aph Rzm RR	44.14	NA	NA	1157	NA	NA	329	NA	8639	NA	1.15	NA	17.61	NA	26.3	NA	4.0	3.9	5.1	5.0		3.0		
Crystal 658RR	2N	NC	Aph RR	40.19	NA	NA	1172	NA	NA	312	NA	9107	NA	1.09	NA	16.69	NA	29.2	NA	4.8		4.4			2.8		
Crystal R308	3N	3	Rzm	45.26	43.22	104	1108	1076	97	334	329	8184	8209	1.13	1.18	17.83	17.62	24.5	25.1	4.3	4.4	4.9	4.9	3.1	3.9		
Crystal R431	2N	2	Rzm	44.29	42.04	101	1143	1109	100	330	324	8530	8579	1.24	1.28	17.74	17.47	25.9	26.7	4.8	4.3	5.3	5.3	3.9	3.8		
Crystal R434	2N	2	Rzm	41.89	39.92	96	1149	1100	99	320	315	8774	8703	1.34	1.38	17.32	17.11	27.5	27.8	4.0	4.1	5.3	5.2	3.6	3.7		
Hilleshog 3028Rz (7228)	2N	1	Aph & Rzm	44.48	42.40	102	1157	1116	101	331	325	8616	8598	1.16	1.21	17.70	17.47	26.1	26.6	4.6	4.2	5.1	5.0				
Hilleshog 3031Rz (7231)	2N	1	Aph & Rzm	47.00	45.41	109	1110	1126	102	342	338	8067	8418	1.12	1.16	18.20	18.07	23.6	25.0	4.8	4.9	4.2	4.3		4.9		
Hilleshog 3035Rz (7235)	2N	1	Aph, Rzm & Rhc	45.31	43.36	104	1175	1157	104	334	329	8685	8825	1.10	1.14	17.81	17.61	26.0	26.9	4.7	4.8	4.4	4.4		3.8	2.6	2.8
Hilleshog 3036Rz (7236)	2N	1	Aph & Rzm	45.17	43.07	104	1180	1139	103	334	328	8728	8707	1.09	1.13	17.77	17.53	26.2	26.7	4.9	4.8	5.1	5.0		5.3		
Hilleshog 3050Rz(7250)	2N	NC	Rzm	44.70	43.35	104	1223	1196	108	332	329	9080	9110	1.10	1.14	17.68	17.60	27.4	27.8	4.7		5.1			4.4		4.6
Hilleshog 3051Rz(7251)	2N	NC	Rzm	42.78	41.39	99	1238	1190	107	323	321	9366	9251	1.14	1.18	17.31	17.23	29.0	28.9	5.2		5.2					
Hilleshog 3052Rz(7252)	2N	NC	Rzm	44.45	42.71	103	1244	1210	109	331	327	9254	9273	1.09	1.14	17.62	17.48	28.0	28.5	4.9		5.0			4.3		4.1
Hilleshog 4003RR(9003RR)	2N	NC	Rzm RR	44.00	NA	NA	1135	NA	NA	329	NA	8478	NA	1.21	NA	17.64	NA	25.8	NA	6.1		5.1					
Hilleshog 4010RR(9010RR)	2N	NC	Rzm RR	44.36	NA	NA	1129	NA	NA	330	NA	8429	NA	1.18	NA	17.69	NA	25.6	NA	5.4		5.1					
Hilleshog 4012RR(9012RR)	2N	NC	Rzm RR	42.88	NA	NA	1188	NA	NA	324	NA	8982	NA	1.18	NA	17.37	NA	27.8	NA	5.3		5.1					
Holly 06HX629	2N	NC		42.08	40.35	97	1195	1164	105	321	316	9110	9159	1.06	1.12	17.08	16.93	28.5	29.0	5.5		5.0					
Holly 317	2N	3		43.70	41.83	101	1067	1068	96	327	323	8004	8281	1.09	1.13	17.46	17.27	24.5	25.8	4.9	4.9	4.7	4.8				
Holly 556 (05HX556)	2N	1		40.69	40.21	97	1158	1141	103	315	316	8954	8987	1.13	1.14	16.86	16.94	28.5	28.6	4.5	4.3	4.7	4.8				
Seedex Alpine	2N	3	Rzm	43.94	40.83	98	1168	1144	103	328	318	8745	8978	1.12	1.15	17.54	17.07	26.7	28.4	6.3	5.6	4.7	4.5				
Seedex Rezult	2N	4	Full Market	45.35	43.12	104	1132	1093	99	334	328	8350	8354	1.07	1.11	17.79	17.53	25.0	25.6	4.8	4.8	4.7	4.7				
Seedex Sonic	2N	1	Full Market	42.65	40.48	97	1250	1202	108	323	317	9483	9455	1.11	1.14	17.25	16.99	29.4	30.0	5.1	5.5	4.8	4.8				
Seedex SX0835	2N	NC	0	43.04	41.25	99	1222	1171	106	325	320	9217	9129	1.09	1.12	17.32	17.13	28.4	28.6	4.8		4.7					
SESVanderhave H46519	2N	3	Rzm & Rhc	41.69	40.63	98	1190	1174	106	319	318	9118	9221	1.12	1.15	17.06	17.03	28.7	29.2	5.2	5.0	4.6	4.6				
SESVanderhave H46531	2N	2	Rzm & Rhc	42.98	41.25	99	1242	1200	108	324	320	9388	9358	1.11	1.14	17.33	17.16	29.0	29.4	4.9	4.8	5.1	5.0	4.2			
SESVanderhave H46532	2N	2	Rzm	42.30	40.28	97	1180	1137	103	321	316	8979	8956	1.12	1.15	17.19	16.96	28.0	28.5	5.1	5.0	4.9	5.0				
SESVanderhave H46533	2N	NC	Rzm	42.25	40.00	96	1223	1181	107	321	315	9305	9330	1.08	1.11	17.14	16.86	29.0	29.7	5.6	6.0	5.3	5.3				
SESVanderhave H46807	2N	1	Rzm	43.52	40.63	98	1228	1196	108	327	318	9233	9402	1.09	1.12	17.42	17.00	28.4	29.8	5.7	5.7	5.2	5.2				
SESVanderhave H46911	2N	NC	Rzm	43.92	NA	NA	1099	NA	NA	328	NA	8223	NA	1.06	NA	17.47	NA	25.1	NA	4.5		4.8		3.1	4.0		
SESVanderhave H48607(46907)	2N	NC	Rzm	42.94	40.79	98	1203	1152	104	324	318	9088	9034	1.04	1.10	17.25	17.02	28.1	16.5	5.4		5.1					
Mean of benchmark varieties				43.22	41.60	100	1151	1109	100	325	322	8676	8615	1.17	1.21	17.43	17.29	26.71	26.91								

1st column for each trait is 2007 mean. 2nd column is mean of 2006 and 2007 data. % Bnch column is 2-year mean as a % of 4 to 5 commercial varieties.

NA = Data limited for 2006 and not included.

+++ Categorization of Rzm infection based upon performance ratios of tolerant vs susceptible varieties. Biotech and semi commercial data adjusted to commercial status.

++ 2007 Revenue estimates based on a $41.97 beet payment at 17.5% sugar and 1.5% loss to molasses. 2006 Revenue based on $40.38 and 2005 was $39.94. Revenue does not consider hauling costs.

** Varieties with 3 years may have been available as commercial seed for more than 3 years.

Created 11-09-2007.

+ Aph Ratings are from Shakopee & Kindred (1=healthy, 9=dead). CR ratings from Rosemount & Michigan (1=healthy, 9=dead). Rhizoctonia rates are from Ft Collins and Moorhead (mod res=3, susc=5+).

Updated 11-14-2007.

++ Fusarium ratings are average of 2 sites in 2006 and 2 sites in 2007 (mod resist = 4.5, mod susc = 5.7).

Table 6.

Performance Data of Aphanomyces Specialty Varieties Approved for Sale to ACSC Growers in 2008

Aphanomyces Conditions (2-year & 3-year data). Biotech varieties not tested in Aph yield trials.

	Disease		Rev/Ton		Rev/Acre		Rec/Ton		Rec/Acre		Sugar		Yield		CR Rating +		Aph Root +		Fusarium +		Rhizoctonia +	
Description **	Tolerance	Ploidy	2 Yr	3 Yr	2 Yr	3 Yr	2 Yr	3 Yr	2 Yr	3 Yr	2 Yr	3 Yr	2 Yr	3 Yr	2 Yr	3 Yr	2 Yr	3 Yr	2006	2007	2006	2007
# of Locations			3	5	3	5	3	5	3	5	3	5	3	5	3	4	3	4	2	2	1	2
Beta 1301R	Aph, Rzm & Rhc	2N	36.33	NA	840	NA	299.2	NA	7016	NA	16.28	NA	23.72	NA	4.78	4.70	4.2	4.0	6.4	5.6	3.1	3.8
Beta 1305R	Aph & Rzm	2N	38.33	35.69	820	816	307.7	297.6	6615	6855	16.69	16.21	21.55	23.11	5.36	5.27	4.5	4.6	5.8	5.4	--	--
Beta 1772R	Aph & Rzm	2N	40.34	NA	834	NA	316.4	NA	6589	NA	17.11	NA	20.95	NA	4.88	4.71	4.6	4.3	--	NA	--	--
Beta 4554R	Aph & Rzm	3N	40.12	37.39	801	761	315.4	305.0	6342	6210	17.07	16.57	20.20	20.30	5.10	5.01	4.6	4.5	2.8	3.8	--	--
BTS 85RR02(B5802RR)	Aph Rzm RR	2N	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.63	4.64	4.2	4.3	--	NA	--	--
BTS 86RR44(B6804RR)	Aph RR	2N	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.10	--	4.7	--	--	NA	--	--
BTS 86RR66(B6806RR)	Aph Rzm RR	2N	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.95	--	4.7	--	--	NA	--	--
BTS 86RR88(B6808RR)	Aph RR	2N	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.66	--	4.6	--	--	3.1	--	--
Crystal 539RR	Aph Rzm RR	2N	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.11	5.02	4.0	3.9	--	3.0	--	--
Crystal 658RR	Aph RR	2N	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.37	--	4.8	--	--	2.8	--	--
Hilleshog 3028Rz	Aph & Rzm	2N	40.23	NA	841	NA	315.9	NA	6690	NA	17.11	NA	21.40	NA	5.13	5.05	4.6	4.2	--	NA	--	--
Hilleshog 3031Rz	Aph & Rzm	2N	42.07	NA	811	NA	323.8	NA	6278	NA	17.44	NA	19.43	NA	4.22	4.25	4.8	4.9	--	4.9	--	--
Hilleshog 3035Rz	Aph, Rzm & Rhc	2N	39.83	37.79	823	820	314.2	306.8	6552	6702	16.90	16.55	21.02	21.94	4.43	4.45	4.7	4.8	--	3.8	2.6	2.8
Hilleshog 3036Rz	Aph & Rzm	2N	40.04	38.30	811	804	315.1	309.1	6447	6521	16.96	16.68	20.60	21.13	5.08	4.96	4.9	4.8	--	5.3	--	--
Seedex Alpine	Aph & Rzm	2N	37.00	34.81	799	774	302.0	293.9	6529	6526	16.34	15.98	21.55	22.10	4.71	4.55	6.3	5.6	--	NA	--	--
Seedex Rezult	Aph & Rzm	2N	40.26	38.07	830	808	316.1	308.1	6564	6567	16.94	16.56	20.89	21.39	4.68	4.65	4.8	4.8	--	NA	--	--
SESVanderhave H46911	Aph	2N	38.81	NA	665	NA	309.8	NA	5348	NA	16.73	NA	17.44	NA	4.80	--	4.5	--	3.1	4.0	--	--
Mean of Aph Specialty Varieties			39.85	37.54	802	786	314.3	305.8	6371	6428	16.95	16.54	20.38	21.06								

** **Roundup Ready** varieties were not entered into the Aph yield trials.

First column for each trait is mean of 2 years of data. Second column is mean of 3 years of data.

+ Aph ratings are from Shakopee & Kindred. CR ratings are from Rosemount & Michigan (1=healthy, 9=dead).

+ Fusarium ratings from Mhd (1=healthy, 9=dead). Rhizoctonia ratings from Ft Collins and Mhd (1=healthy, 7=dead).

Created 11-09-2007.

Table 7.
Performance Data of Non-Rhizomania Varieties Approved for Sale to ACSC Growers in 2008

	Rev/Ton				Rev/Acre				Rec. Sugar/Ton			Rec. Sugar/Acre			Sugar			Yield			Aph Root		Fusarium		
Description	2007	2 Yr Mean	3 Yr Mean	3 Yr % Bnch	2007	2 Yr Mean	3 Yr Mean	3 Yr % Bnch	2007	2 Yr Mean	3 Yr Mean	2007	2 Yr Mean	3 Yr Mean	2007	2 Yr Mean	3 Yr Mean	2007	2 Yr Mean	3 Yr Mean	2 Yr Mean	3 Yr Mean	2005	2006	2007
Crystal 727	45.78	45.78	42.83	107.2	1040	1041	972	96.2	336.20	339.76	328.7	7635	7792	7527	17.88	18.16	17.61	22.70	23.20	23.14	5.2	5.3		2.9	3.4
Seedex Magnum	44.36	44.27	41.12	102.9	991	988	920	91.0	330.20	333.31	321.3	7375	7517	7258	17.60	17.86	17.26	22.33	22.85	22.87	5.0	4.9	3.7		4.5
SESVanderhave H66855	44.59	45.24	42.39	106.1	1029	1078	991	98.0	331.20	337.51	326.9	7654	8111	7698	17.67	18.07	17.52	23.15	24.29	23.77	5.6	6.0			
Mean of Benchmark	43.22	42.96	39.94		1151	1070	1014		325.30	327.68	316.1	8676	8519	8081	17.43	17.63	17.04	26.71	26.27	25.79					

2007 performance data collected on 4 moderate Rzm sites and 6 light Rzm sites. 2005 and 2006 data from light Rzm sites.
Benchmark varieties include Beta 1305R, Crystal R431, SESVanderhave H46519 and Hilleshög 2423 in 2005 and 2006.
Benchmark varieties include Beta 1305R, Crystal R434, Hilleshög 2417, Seedex Rezult, SESVanderhave H46519 in 2007.

Created 11-9-2007.
Updated 11-27-2007.

Table 8.
Performance Data of Biotech (Roundup Ready ®) Varieties Approved for Sale to ACSC Growers in 2008
During 2006 (Felton only) & 2007 Growing Seasons +++

Description	Disease Tolerance	Rev/Ton				Rev/Acre				Rec/Ton			Rec/Acre			Sugar			Yield			Aph Root+		CR +		Fusarium ++	
		2006 Felton	2007	2 Yr	%Bnch	2006 Felton	2007	2 Yr	%Bnch	2006 Felton	2007	2 Yr	2006 Felton	2007	2 Yr	2006 Felton	2007	2 Yr	2006 Felton	2007	2 Yr	2006	2007	2006	2007	2006	2007
# of Locations		1	10	11		1	10	11		1	10	11	1	10	11	1	10	11	1	10	11	1	2	1	2	2	2
BTS 85RR02(B5802RR)	Aph Rzm RR	38.27	43.60	40.93	96	1060	1226	1143	104	310.8	326.9	318.9	8545	9196	8870	16.91	17.56	17.23	27.3	28.1	27.7	4.2	4.2	4.6	4.6	NA	NA
BTS 86RR44(B6804RR)	Aph RR	39.07	41.79	40.43	94	1103	1152	1128	102	314.3	319.0	316.6	8859	8792	8826	17.15	17.19	17.17	28.2	27.5	27.9	4.5	4.9	5.2	5.0	NA	NA
BTS 86RR66(B6806RR)	Aph Rzm RR	41.04	42.75	41.89	98	1068	1169	1118	101	322.8	323.2	323.0	8440	8820	8630	17.60	17.38	17.49	26.0	27.2	26.6	4.8	4.6	5.0	4.9	NA	NA
BTS 86RR88(B6808RR)	Aph RR	33.34	44.32	38.83	91	852	1112	982	89	289.4	330.0	309.7	7406	8302	7854	16.01	17.68	16.85	25.4	25.2	25.3	4.7	4.5	4.5	4.9	NA	3.1
Crystal 539RR	Aph Rzm RR	42.64	44.14	43.39	101	1122	1157	1139	103	329.8	329.3	329.5	8641	8639	8640	17.70	17.61	17.66	26.0	26.3	26.1	3.7	4.3	5.2	5.0	NA	3.0
Crystal 658RR	Aph RR	37.85	40.19	39.02	91	1138	1172	1155	105	309.0	312.1	310.5	9203	9107	9155	16.61	16.69	16.65	29.7	29.2	29.4	3.8	5.9	4.8	4.0	NA	2.8
Hilleshog 4003RR(9003RR)	Rzm RR	41.10	44.00	42.55	99	1130	1135	1133	103	323.1	328.7	325.9	8854	8478	8666	17.45	17.64	17.55	27.3	25.8	26.5	6.1	6.1	5.2	5.1	NA	NA
Hilleshog 4010RR(9010RR)	Rzm RR	41.47	44.36	42.92	100	1118	1129	1124	102	324.7	330.2	327.5	8729	8429	8579	17.51	17.69	17.60	26.9	25.6	26.2	5.5	5.3	5.1	5.0	NA	NA
Hilleshog 4012RR(9012RR)	Rzm RR	39.76	42.88	41.32	97	1172	1188	1180	107	317.3	323.8	320.5	9271	8982	9127	17.14	17.37	17.25	29.0	27.8	28.4	5.4	5.3	5.1	5.0	NA	NA
Mean of benchmark varieties		40.19	43.22	41.70	100	1052	1151	1102	100	319.1	325.3	322.2	8384	8676	8530	17.23	17.43	17.33	26.36	26.71	26.54						

1st column for each trait is from one 2006 site (Felton). 2nd column is mean of 10 sites in 2007. % Bnch column is 2-year mean as a % of 4 to 5 commercial varieties.

+++ Biotech data adjusted to commercial status.

++ 2007 Revenue estimates based on a $41.97 beet payment at 17.5% sugar and 1.5% loss to molasses. 2006 Revenue based on $40.38 and 2005 was $39.94. Revenue does not consider hauling costs.

+ Aph Ratings are from Shakopee & Kindred (1=healthy, 9=dead). CR ratings from Rosemount & Michigan (1=healthy, 9=dead).

Created 11-14-2007.

++ Fusarium ratings are average of 2 sites in 2006 and 2 sites in 2007 (mod resist = 4.5, mod susc = 5.7).

Table 9.

2007 Performance of Varieties - ACSC Commercial Official Trial

10 Trials - 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. %
Beta 1100R	48	322.3	98	9747	112	1.02	42.51	97	1285	111	17.13	30.25	215	1726	252	0.00	71.0
Beta 1120R	14	335.3	102	8628	99	1.07	45.56	104	1172	101	17.84	25.75	234	1736	286	0.01	65.8
Beta 1140R	2	340.4	104	9080	104	1.00	46.76	107	1246	107	18.02	26.71	234	1632	255	0.01	72.0
Beta 1160R	33	317.1	97	8830	101	1.16	41.30	94	1148	99	17.02	27.90	233	1882	314	0.01	64.3
Beta 1180R	25	328.1	100	7894	91	1.04	43.87	100	1057	91	17.45	24.03	276	1613	277	0.01	64.5
Beta 1301R	9	312.7	95	8406	96	1.26	40.25	92	1081	93	16.90	26.93	271	1968	357	0.01	62.4
Beta 1305R	21	323.7	99	8618	99	1.22	42.85	98	1140	98	17.41	26.65	261	1863	356	0.00	57.9
Beta 1683R (BX1683)	41	318.4	97	8962	103	1.19	41.60	95	1168	101	17.11	28.24	261	1903	320	0.01	67.1
Beta 1772R (BX1572)	39	332.4	101	8212	94	1.22	44.89	103	1107	95	17.84	24.76	281	1849	352	0.02	62.9
Beta 4554R (BX1454)	32	330.9	101	8204	94	1.18	44.53	102	1103	95	17.73	24.83	341	1935	279	0.01	54.5
Crystal 727	1	336.2	103	7635	88	1.07	45.78	105	1040	90	17.88	22.70	262	1808	253	0.00	61.5
Crystal R308	44	334.0	102	8184	94	1.13	45.26	103	1108	95	17.83	24.53	270	1874	283	0.01	64.1
Crystal R431	13	329.9	101	8530	98	1.24	44.29	101	1143	98	17.74	25.94	262	2063	320	0.00	65.4
Crystal R434	50	319.6	98	8774	101	1.34	41.89	96	1149	99	17.32	27.47	320	1944	403	0.00	67.8
Crystal R652	27	320.1	98	9481	109	1.20	42.00	96	1243	107	17.20	29.63	254	1889	332	0.04	67.2
Crystal R760	4	323.5	99	9524	109	1.13	42.79	98	1260	109	17.30	29.45	247	1815	301	0.01	71.9
Crystal R761	16	319.0	97	9415	108	1.35	41.73	95	1230	106	17.29	29.57	298	2139	366	0.01	71.2
Crystal R762	35	320.8	98	8921	102	1.13	42.17	96	1172	101	17.17	27.82	243	1810	306	0.01	63.5
Crystal R763	7	333.0	102	7663	88	1.06	45.01	103	1036	89	17.71	23.01	235	1754	271	0.01	68.5
Crystal R764	43	316.4	97	9140	105	1.10	41.12	94	1187	102	16.91	28.92	235	1750	299	0.00	74.6
Hilleshog 3028Rz (7228)	19	330.7	101	8616	99	1.16	44.48	102	1157	100	17.70	26.13	334	1839	292	0.01	65.6
Hilleshog 3031Rz (7231)	3	341.5	104	8067	93	1.12	47.00	107	1110	96	18.20	23.64	254	1693	328	0.00	55.0
Hilleshog 3035Rz (7235)	46	334.2	102	8685	100	1.10	45.31	104	1175	101	17.81	26.04	237	1761	301	0.03	61.4
Hilleshog 3036Rz (7236)	40	333.6	102	8728	100	1.09	45.17	103	1180	102	17.77	26.22	199	1721	312	0.00	62.3
Hilleshog 3050Rz(7250)	22	331.6	101	9080	104	1.10	44.70	102	1223	105	17.68	27.41	232	1753	303	0.02	65.7
Hilleshog 3051Rz(7251)	15	323.4	99	9366	108	1.14	42.78	98	1238	107	17.31	28.99	306	1784	294	0.00	69.8
Hilleshog 3052Rz(7252)	23	330.6	101	9254	106	1.09	44.45	102	1244	107	17.62	28.02	237	1760	292	0.01	67.3
Holly 317	52	327.3	100	8004	92	1.09	43.70	100	1067	92	17.46	24.50	268	1730	288	0.04	71.7
Holly 556 (05HX556)	12	314.5	96	8954	103	1.13	40.69	93	1158	100	16.86	28.49	232	1875	293	0.02	64.2
Holly 06HX629	29	320.5	98	9110	105	1.06	42.08	96	1195	103	17.08	28.46	288	1838	226	0.09	74.9
Holly 07HX701	34	342.4	104	8960	103	1.03	47.22	108	1235	106	18.15	26.19	213	1768	254	0.01	71.5
Holly 07HX702	6	331.2	101	8628	99	1.02	44.60	102	1161	100	17.58	26.07	225	1705	257	0.01	74.5
Seedex SX0835	37	324.5	99	9217	106	1.09	43.04	98	1222	105	17.32	28.40	294	1767	267	0.30	76.0
Seedex SX0841	45	321.3	98	9475	109	1.05	42.29	97	1247	107	17.12	29.48	269	1841	228	0.07	77.6
Seedex SX0842	24	325.9	99	9371	108	1.08	43.35	99	1245	107	17.37	28.80	273	1815	254	0.07	77.8
Seedex Alpine	8	328.4	100	8745	100	1.12	43.94	100	1168	101	17.54	26.69	220	1800	312	0.07	66.9
Seedex Magnum	42	330.2	101	7375	85	1.09	44.36	101	991	85	17.60	22.33	291	1762	269	0.01	60.7
Seedex Rezult	30	334.4	102	8350	96	1.07	45.35	104	1132	98	17.79	24.99	230	1818	264	0.04	60.2
Seedex Sonic	51	322.9	99	9483	109	1.11	42.65	97	1250	108	17.25	29.44	269	1737	299	0.02	69.6
SESVanderhave H46519	17	318.8	97	9118	105	1.12	41.69	95	1190	102	17.06	28.67	251	1801	299	0.03	63.7
SESVanderhave H46531	20	324.3	99	9388	108	1.11	42.98	98	1242	107	17.33	29.02	252	1793	294	0.06	66.7
SESVanderhave H46532	11	321.4	98	8979	103	1.12	42.30	97	1180	102	17.19	28.00	266	1795	292	0.11	65.4
SESVanderhave H46533	47	321.2	98	9305	107	1.08	42.25	97	1223	105	17.14	29.00	292	1867	233	0.12	75.4
SESVanderhave H46711	36	339.1	103	9176	105	1.01	46.45	106	1256	108	17.97	27.08	200	1707	257	0.01	71.7
SESVanderhave H46714	5	320.2	98	9239	106	1.06	42.02	96	1210	104	17.06	28.92	293	1840	223	0.01	70.3
SESVanderhave H46807	38	326.6	100	9233	106	1.09	43.52	99	1228	106	17.42	28.35	262	1825	262	0.03	68.0
SESVanderhave H46905	31	329.3	100	9058	104	1.04	44.14	101	1213	104	17.50	27.54	250	1812	234	0.13	75.5
SESVanderhave H48607(46907)	49	324.1	99	9088	104	1.04	42.94	98	1203	104	17.25	28.08	229	1789	250	0.00	75.5
SESVanderhave H46911	18	328.3	100	8223	94	1.06	43.92	100	1099	95	17.47	25.09	305	1735	247	0.01	70.0
SESVanderhave H48716	26	334.5	102	8751	100	1.01	45.37	104	1188	102	17.74	26.15	202	1668	267	0.00	73.1
SESVanderhave H48717	10	332.3	101	9022	104	1.09	44.86	102	1217	105	17.70	27.16	208	1736	305	0.02	72.1
SESVanderhave H66855	28	331.2	101	7654	88	1.12	44.59	102	1029	89	17.67	23.15	306	1834	267	0.00	60.5
Hilleshög 2417Rz(Check)	53	330.0	101	8518	98	1.08	44.33	101	1144	99	17.58	25.79	248	1764	274	0.00	55.7
Susc 3N - Mod Aph	54	337.9	103	7150	82	1.13	46.17	105	978	84	18.03	21.12	308	1855	272	0.00	58.4
Susc 3N - Aph Tol	55	330.8	101	7407	85	1.11	44.50	102	996	86	17.65	22.41	303	1800	269	0.01	62.1
Very Susc 3N - Aph Spc	56	335.9	103	7172	82	1.13	45.70	104	974	84	17.93	21.39	335	1824	272	0.01	59.7
Check Mean		327.7		8711		1.11	43.77		1161		17.49	26.65	261	1807	286	0.0	67.1
Coeff. of Var. (%)		3.1		5.8		7.1	5.5		7.3		2.7	5.2	23.9	5.5	12.1		10.6
F Value		16.84		28.07		28.43	16.84		16.38		15.63	52.93	13.98	26.57	29.33		30.26
Mean LSD (0.05)		4.9		339		0.04	1.14		54		0.24	0.88	26	50	19		3.0
Mean LSD (0.01)		6.4		446		0.05	1.50		72		0.31	1.16	34	66	25		3.9
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2007 Data from 10 Trials

Created 10-29-2007.

Vigor not collected.

Trial # = 07ACOVT

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

++ Revenue estimates are based on a $41.97 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 10.

2007 Performance of Varieties - ACSC Commercial Official Trial

6 Trials - Light Rzm - 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. %
Beta 1100R	48	316.4	98	9240	109	1.04	41.14	97	1200	107	16.87	29.23	255	1752	251	0.00	70.9
Beta 1120R	14	331.2	103	8309	98	1.09	44.60	105	1118	100	17.65	25.11	264	1759	281	0.01	63.6
Beta 1140R	2	334.7	104	8785	103	1.02	45.41	107	1188	106	17.75	26.36	270	1658	251	0.00	73.7
Beta 1160R	33	310.5	96	8396	99	1.18	39.74	93	1070	96	16.70	27.19	271	1904	309	0.01	63.6
Beta 1180R	25	324.5	101	7789	92	1.05	43.02	101	1033	92	17.27	24.01	295	1621	273	0.00	64.0
Beta 1301R	9	307.6	95	8215	97	1.28	39.08	92	1040	93	16.67	26.78	299	2005	351	0.01	62.9
Beta 1305R	21	315.9	98	8230	97	1.25	41.01	96	1066	95	17.04	26.13	303	1887	357	0.00	58.8
Beta 1683R (BX1683)	41	312.0	97	8548	101	1.21	40.10	94	1094	98	16.81	27.55	303	1927	317	0.00	67.9
Beta 1772R (BX1572)	39	325.5	101	8027	94	1.24	43.27	102	1065	95	17.51	24.74	322	1855	349	0.02	63.0
Beta 4554R (BX1454)	32	325.8	101	8183	96	1.23	43.33	102	1086	97	17.52	25.18	389	1968	286	0.00	55.4
Crystal 727	1	337.7	105	8025	94	1.12	46.12	108	1095	98	18.00	23.81	279	1844	276	0.00	61.8
Crystal R308	44	330.5	102	8067	95	1.18	44.43	104	1082	97	17.70	24.48	300	1918	295	0.00	64.6
Crystal R431	13	324.3	101	8269	97	1.21	42.97	101	1092	98	17.42	25.60	286	2034	293	0.00	66.8
Crystal R434	50	312.7	97	8535	100	1.37	40.26	95	1097	98	17.00	27.36	362	1964	404	0.00	69.0
Crystal R652	27	312.9	97	9030	106	1.22	40.31	95	1162	104	16.86	28.91	288	1928	325	0.01	68.7
Crystal R760	4	314.2	97	9011	106	1.15	40.61	95	1162	104	16.86	28.75	271	1871	299	0.02	71.3
Crystal R761	16	314.2	97	9193	108	1.36	40.62	95	1185	106	17.08	29.34	336	2167	359	0.01	71.7
Crystal R762	35	314.8	98	8606	101	1.16	40.75	96	1112	99	16.90	27.41	280	1847	309	0.01	63.3
Crystal R763	7	326.1	101	7350	86	1.08	43.39	102	976	87	17.38	22.60	269	1762	267	0.01	67.5
Crystal R764	43	310.2	96	8808	104	1.12	39.67	93	1123	100	16.63	28.50	268	1777	297	0.00	76.8
Hilleshog 3028Rz (7228)	19	323.6	100	8319	98	1.16	42.83	101	1097	98	17.34	25.83	369	1832	277	0.01	66.4
Hilleshog 3031Rz (7231)	3	333.1	103	7873	93	1.12	45.04	106	1064	95	17.78	23.66	281	1698	317	0.00	54.7
Hilleshog 3035Rz (7235)	46	329.1	102	8477	100	1.10	44.11	104	1134	101	17.56	25.84	263	1771	288	0.04	62.2
Hilleshog 3036Rz (7236)	40	331.9	103	8561	101	1.11	44.77	105	1150	103	17.71	25.93	216	1761	313	0.00	63.2
Hilleshog 3050Rz(7250)	22	324.4	101	8847	104	1.11	43.01	101	1171	105	17.33	27.33	264	1763	296	0.00	66.4
Hilleshog 3051Rz(7251)	15	318.1	99	9102	107	1.14	41.53	98	1186	106	17.05	28.67	340	1789	284	0.00	71.8
Hilleshog 3052Rz(7252)	23	326.1	101	8916	105	1.09	43.41	102	1184	106	17.39	27.42	259	1763	279	0.00	67.7
Holly 317	52	321.0	100	7801	92	1.12	42.20	99	1023	92	17.17	24.38	311	1748	288	0.06	72.7
Holly 556 (05HX556)	12	310.3	96	8745	103	1.14	39.70	93	1116	100	16.65	28.26	255	1892	288	0.02	64.8
Holly 06HX629	29	316.1	98	8907	105	1.06	41.06	96	1154	103	16.87	28.28	318	1830	222	0.09	78.1
Holly 07HX701	34	337.4	105	8762	103	1.04	46.04	108	1194	107	17.91	26.02	243	1775	249	0.00	72.3
Holly 07HX702	6	324.9	101	8388	99	1.02	43.12	101	1112	99	17.26	25.86	255	1682	250	0.01	78.3
Seedex SX0835	37	319.7	99	8949	105	1.11	41.91	98	1171	105	17.09	28.04	337	1776	263	0.32	76.5
Seedex SX0841	45	314.6	98	9041	106	1.08	40.72	96	1168	104	16.82	28.80	317	1856	232	0.11	78.3
Seedex SX0842	24	319.2	99	8995	106	1.09	41.79	98	1174	105	17.05	28.29	308	1815	249	0.09	81.1
Seedex Alpine	8	325.6	101	8539	100	1.12	43.29	102	1131	101	17.40	26.34	238	1820	299	0.06	65.8
Seedex Magnum	42	328.3	102	7596	89	1.15	43.91	103	1015	91	17.56	23.16	316	1809	292	0.01	61.0
Seedex Rezult	30	326.2	101	8101	95	1.10	43.43	102	1077	96	17.41	24.89	272	1843	266	0.04	60.7
Seedex Sonic	51	317.2	98	9166	108	1.11	41.32	97	1189	106	16.97	29.04	291	1765	286	0.00	70.7
SESVanderhave H46519	17	310.7	96	8787	103	1.14	39.79	93	1121	100	16.67	28.42	289	1806	297	0.01	63.2
SESVanderhave H46531	20	320.2	99	9158	108	1.11	42.02	99	1198	107	17.12	28.72	274	1796	281	0.04	68.1
SESVanderhave H46532	11	314.6	98	8626	101	1.14	40.70	96	1112	99	16.87	27.54	313	1814	288	0.11	65.2
SESVanderhave H46533	47	314.4	97	8991	106	1.10	40.65	96	1159	104	16.81	28.72	333	1864	232	0.12	76.8
SESVanderhave H46711	36	334.8	104	8940	105	1.02	45.43	107	1211	108	17.76	26.76	217	1740	250	0.01	73.3
SESVanderhave H46714	5	313.8	97	8910	105	1.06	40.53	95	1147	103	16.75	28.50	334	1846	211	0.01	71.5
SESVanderhave H46807	38	321.5	100	8920	105	1.10	42.32	99	1169	105	17.17	27.91	295	1848	256	0.04	68.3
SESVanderhave H46905	31	324.8	101	8747	103	1.04	43.09	101	1158	104	17.28	27.01	274	1813	226	0.14	76.2
SESVanderhave H48607(46907)	49	317.7	99	8773	103	1.05	41.42	97	1141	102	16.93	27.71	257	1786	247	0.00	76.4
SESVanderhave H46911	18	322.4	100	8051	95	1.07	42.54	100	1060	95	17.19	25.04	348	1739	241	0.00	71.3
SESVanderhave H48716	26	328.3	102	8448	99	1.03	43.92	103	1131	101	17.45	25.71	226	1703	265	0.00	73.3
SESVanderhave H48717	10	326.4	101	8749	103	1.09	43.46	102	1164	104	17.41	26.84	242	1730	297	0.02	72.4
SESVanderhave H66855	28	331.3	103	8035	95	1.16	44.61	105	1079	97	17.72	24.35	329	1847	287	0.00	60.9
Hilleshög 2417Rz(Check)	53	325.0	101	8334	98	1.08	43.14	101	1106	99	17.33	25.65	285	1778	264	0.00	54.2
Susc 3N - Mod Aph	54	339.9	105	7602	89	1.17	46.64	110	1042	93	18.17	22.39	328	1877	288	0.00	59.2
Susc 3N - Aph Tol	55	331.9	103	7724	91	1.15	44.76	105	1041	93	17.75	23.30	317	1827	294	0.01	62.5
Very Susc 3N - Aph Spc	56	335.0	104	7421	87	1.19	45.48	107	1005	90	17.94	22.24	378	1864	292	0.00	59.5
Check Mean		322.5		8499		1.13	42.56		1118		17.26	26.46	293	1823	284	0.0	67.7
Coeff. of Var. (%)		3.3		5.6		7.1	5.9		7.4		2.8	4.9	22.7	5.6	12.1		10.7
F Value		15.62		16.24		19.52	15.62		8.65		16.73	28.75	9.18	15.13	21.11		22.56
Mean LSD (0.05)		5.8		338		0.05	1.36		54		0.27	1.01	36	68	22		3.8
Mean LSD (0.01)		7.7		446		0.06	1.80		71		0.35	1.33	47	90	29		5.0
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2007 Data from 6 Trials

Created 10-29-2007.

Vigor not collected.

Trial # = 07AClight

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

++ Revenue estimates are based on a $41.97 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 11.

2007 Performance of Varieties - ACSC Commercial Official Trial

4 Trials - Moderate Rzm - 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. %
Beta 1100R	48	331.1	99	10510	116	0.98	44.57	98	1414	115	17.53	31.76	157	1684	254	0.00	71.2
Beta 1120R	14	341.4	102	9123	101	1.05	46.99	103	1254	102	18.12	26.76	192	1703	292	0.00	69.1
Beta 1140R	2	349.2	104	9525	105	0.97	48.81	107	1333	109	18.43	27.25	181	1596	262	0.04	69.4
Beta 1160R	33	326.9	97	9470	105	1.13	43.58	96	1264	103	17.47	28.94	176	1845	320	0.02	65.1
Beta 1180R	25	333.4	99	8042	89	1.03	45.11	99	1091	89	17.70	24.03	244	1602	284	0.02	65.3
Beta 1301R	9	320.1	95	8684	96	1.24	41.99	92	1139	93	17.24	27.15	233	1914	367	0.00	61.6
Beta 1305R	21	335.2	100	9177	102	1.18	45.54	100	1246	102	17.94	27.39	198	1827	354	0.00	56.6
Beta 1683R (BX1683)	41	328.0	98	9570	106	1.15	43.86	96	1277	104	17.55	29.23	197	1866	324	0.02	66.0
Beta 1772R (BX1572)	39	342.7	102	8487	94	1.19	47.30	104	1170	95	18.33	24.81	219	1842	356	0.02	62.6
Beta 4554R (BX1454)	32	338.8	101	8238	91	1.12	46.39	102	1128	92	18.06	24.31	267	1884	268	0.02	53.2
Crystal 727	1	334.4	100	7064	78	0.99	45.34	99	960	78	17.71	21.07	236	1753	218	0.00	60.9
Crystal R308	44	339.1	101	8341	92	1.07	46.45	102	1143	93	18.02	24.59	227	1808	265	0.02	63.4
Crystal R431	13	337.9	101	8912	99	1.29	46.16	101	1217	99	18.18	26.40	228	2103	358	0.00	63.7
Crystal R434	50	330.1	98	9120	101	1.30	44.33	97	1226	100	17.80	27.60	257	1916	402	0.00	66.2
Crystal R652	27	330.9	99	10142	112	1.16	44.53	98	1364	111	17.71	30.67	201	1832	343	0.07	65.2
Crystal R760	4	337.3	101	10289	114	1.08	46.03	101	1404	114	17.95	30.50	210	1733	303	0.00	72.7
Crystal R761	16	326.3	97	9765	108	1.32	43.46	95	1300	106	17.63	29.95	239	2096	376	0.00	70.2
Crystal R762	35	329.6	98	9386	104	1.08	44.23	97	1261	103	17.56	28.41	187	1753	300	0.00	63.8
Crystal R763	7	343.7	102	8149	90	1.04	47.52	104	1128	92	18.22	23.67	181	1742	278	0.02	69.9
Crystal R764	43	325.5	97	9619	107	1.06	43.26	95	1280	104	17.33	29.51	185	1708	299	0.00	71.2
Hilleshog 3028Rz (7228)	19	340.9	102	9051	100	1.17	46.88	103	1244	101	18.21	26.57	281	1849	311	0.00	64.4
Hilleshog 3031Rz (7231)	3	353.6	105	8340	92	1.12	49.84	109	1175	96	18.80	23.61	213	1684	344	0.00	55.4
Hilleshog 3035Rz (7235)	46	342.3	102	8997	100	1.10	47.19	104	1239	101	18.22	26.34	196	1748	320	0.02	60.0
Hilleshog 3036Rz (7236)	40	336.5	100	8979	99	1.05	45.83	101	1224	100	17.88	26.65	173	1665	312	0.00	61.2
Hilleshog 3050Rz(7250)	22	342.8	102	9449	105	1.08	47.31	104	1304	106	18.22	27.57	181	1738	313	0.05	64.6
Hilleshog 3051Rz(7251)	15	331.4	99	9767	108	1.13	44.64	98	1316	107	17.70	29.47	257	1776	309	0.00	66.7
Hilleshog 3052Rz(7252)	23	337.2	101	9755	108	1.10	46.01	101	1332	109	17.96	28.90	203	1754	310	0.02	66.7
Holly 317	52	336.2	100	8291	92	1.05	45.78	100	1128	92	17.86	24.67	205	1704	286	0.00	70.3
Holly 556 (05HX556)	12	321.0	96	9280	103	1.11	42.20	93	1222	100	17.16	28.84	195	1847	300	0.02	63.4
Holly 06HX629	29	326.8	97	9416	104	1.05	43.57	96	1257	102	17.39	28.76	243	1850	232	0.11	70.2
Holly 07HX701	34	350.0	104	9255	103	1.02	49.00	108	1297	106	18.52	26.42	169	1761	260	0.02	70.2
Holly 07HX702	6	341.0	102	9021	100	1.03	46.89	103	1240	101	18.08	26.46	181	1742	270	0.00	68.9
Seedex SX0835	37	332.4	99	9650	107	1.06	44.87	98	1304	106	17.68	29.00	227	1753	274	0.27	75.3
Seedex SX0841	45	331.4	99	10134	112	1.01	44.64	98	1367	111	17.57	30.52	199	1819	225	0.02	76.6
Seedex SX0842	24	336.1	100	9936	110	1.06	45.74	100	1352	110	17.87	29.58	223	1819	261	0.04	72.8
Seedex Alpine	8	332.9	99	9072	100	1.12	45.00	99	1227	100	17.77	27.23	192	1772	331	0.07	68.7
Seedex Magnum	42	332.9	99	7041	78	1.00	45.00	99	954	78	17.65	21.07	255	1693	235	0.00	60.1
Seedex Rezult	30	347.1	103	8743	97	1.03	48.34	106	1218	99	18.38	25.16	166	1784	262	0.04	59.6
Seedex Sonic	51	331.6	99	9970	110	1.10	44.68	98	1344	110	17.68	30.07	237	1697	318	0.05	67.6
SESVanderhave H46519	17	331.2	99	9632	107	1.09	44.59	98	1297	106	17.65	29.09	192	1790	301	0.05	64.2
SESVanderhave H46531	20	330.5	99	9739	108	1.12	44.43	97	1309	107	17.64	29.47	219	1785	312	0.09	65.0
SESVanderhave H46532	11	331.6	99	9512	105	1.08	44.69	98	1282	104	17.66	28.69	196	1771	297	0.11	66.0
SESVanderhave H46533	47	331.4	99	9787	108	1.05	44.65	98	1320	108	17.62	29.47	230	1871	236	0.13	73.7
SESVanderhave H46711	36	345.7	103	9514	105	0.99	48.00	105	1321	108	18.28	27.52	173	1657	266	0.02	69.4
SESVanderhave H46714	5	329.3	98	9720	108	1.05	44.14	97	1303	106	17.51	29.54	231	1830	240	0.00	68.7
SESVanderhave H46807	38	334.0	100	9685	107	1.06	45.25	99	1314	107	17.76	28.96	210	1794	270	0.02	67.4
SESVanderhave H46905	31	336.2	100	9516	105	1.04	45.77	100	1295	106	17.85	28.31	213	1811	245	0.13	74.4
SESVanderhave H48607(46907)	49	333.6	99	9540	106	1.03	45.16	99	1292	105	17.71	28.58	184	1793	254	0.00	74.3
SESVanderhave H46911	18	337.2	101	8493	94	1.04	46.00	101	1159	94	17.90	25.18	242	1730	256	0.02	68.2
SESVanderhave H48716	26	343.5	102	9193	102	0.98	47.48	104	1270	104	18.16	26.77	168	1615	270	0.00	73.0
SESVanderhave H48717	10	340.9	102	9417	104	1.08	46.87	103	1296	106	18.12	27.59	159	1744	316	0.02	71.6
SESVanderhave H66855	28	331.0	99	7096	79	1.05	44.54	98	957	78	17.60	21.39	271	1813	236	0.00	59.9
Hilleshög 2417Rz(Check)	53	337.8	101	8799	97	1.06	46.14	101	1203	98	17.95	26.03	193	1745	290	0.00	58.0
Susc 3N - Mod Aph	54	335.1	100	6481	72	1.07	45.52	100	884	72	17.83	19.24	278	1820	248	0.00	57.3
Susc 3N - Aph Tol	55	329.3	98	6938	77	1.03	44.15	97	930	76	17.50	21.07	283	1758	230	0.00	61.5
Very Susc 3N - Aph Spc	56	337.2	101	6786	75	1.04	46.01	101	927	76	17.91	20.10	271	1764	242	0.02	60.1
Check Mean		335.4		9029		1.08	45.58		1227		17.85	26.93	213	1781	289	0.0	66.1
Coeff. of Var. (%)		2.8		6.1		7.2	4.9		7.1		2.4	5.6	26.2	5.3	12.1		10.5
F Value		10.31		49.56		18.05	10.31		35.7		10.9	62.2	7.47	15.42	26.54		11.13
Mean LSD (0.05)		6.1		366		0.05	1.42		58		0.28	1.03	34	68	23		4.5
Mean LSD (0.01)		8.0		483		0.07	1.88		76		0.37	1.36	45	89	30		5.9
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2007 Data from 4 Trials

Created 10-29-2007.

Vigor not collected.

Trial # = 07ACmod

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

++ Revenue estimates are based on a $41.97 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 12.

2007 Performance of Varieties - ACSC Commercial Official Trial

Casselton - Light Rzm - 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. %
Beta 1100R	48	313.1	100	10512	109	1.04	40.36	100	1355	110	16.70	33.59	194	1616	306	0.00	57.6
Beta 1120R	14	323.8	104	9694	101	1.10	42.86	106	1283	104	17.29	29.98	194	1717	327	0.00	53.7
Beta 1140R	2	328.1	105	9916	103	1.02	43.88	109	1328	108	17.43	30.24	196	1523	314	0.00	63.0
Beta 1160R	33	297.6	95	9562	99	1.29	36.73	91	1177	95	16.17	32.18	266	1929	390	0.00	52.3
Beta 1180R	25	318.1	102	9039	94	1.08	41.53	103	1180	96	16.98	28.52	286	1547	323	0.00	48.4
Beta 1301R	9	289.7	93	8960	93	1.40	34.87	87	1076	87	15.89	30.86	239	2046	456	0.00	49.2
Beta 1305R	21	305.0	98	9410	98	1.32	38.46	96	1184	96	16.56	30.97	243	1814	448	0.00	44.9
Beta 1683R (BX1683)	41	297.1	95	9793	102	1.28	36.61	91	1201	97	16.13	33.08	254	1826	413	0.00	55.3
Beta 1772R (BX1572)	39	312.7	100	9108	95	1.27	40.25	100	1168	95	16.90	29.09	258	1734	432	0.07	44.7
Beta 4554R (BX1454)	32	320.2	102	8843	92	1.23	42.03	104	1158	94	17.25	27.75	314	1869	341	0.00	41.0
Crystal 727	1	329.1	105	8775	91	1.17	44.11	110	1172	95	17.63	26.70	257	1794	338	0.00	42.3
Crystal R308	44	320.1	102	8993	94	1.24	41.99	104	1179	95	17.24	28.03	229	1887	376	0.00	48.3
Crystal R431	13	309.3	99	8940	93	1.29	39.45	98	1141	92	16.75	28.87	242	1976	385	0.00	53.7
Crystal R434	50	301.0	96	9483	99	1.45	37.52	93	1180	96	16.50	31.65	316	1881	504	0.00	52.4
Crystal R652	27	311.7	100	10095	105	1.20	40.03	99	1298	105	16.79	32.45	198	1799	382	0.00	55.1
Crystal R760	4	309.5	99	10557	110	1.17	39.51	98	1347	109	16.65	34.14	194	1779	366	0.00	67.4
Crystal R761	16	311.3	100	10154	106	1.38	39.93	99	1294	105	16.93	32.90	219	2106	430	0.00	57.1
Crystal R762	35	307.9	98	9950	103	1.16	39.14	97	1266	103	16.56	32.38	196	1713	373	0.00	48.4
Crystal R763	7	323.4	103	8780	91	1.06	42.76	106	1158	94	17.22	27.16	191	1662	308	0.00	54.3
Crystal R764	43	299.2	96	10272	107	1.19	37.09	92	1270	103	16.14	34.52	238	1667	393	0.00	70.1
Hilleshog 3028Rz (7228)	19	307.5	98	9180	95	1.23	39.05	97	1166	94	16.60	29.74	341	1795	349	0.00	55.7
Hilleshog 3031Rz (7231)	3	322.2	103	8695	90	1.30	42.49	106	1143	93	17.41	27.07	272	1695	456	0.00	41.5
Hilleshog 3035Rz (7235)	46	318.5	102	9071	94	1.11	41.61	103	1182	96	17.03	28.45	209	1686	338	0.00	47.7
Hilleshog 3036Rz (7236)	40	316.6	101	9438	98	1.16	41.17	102	1229	100	16.99	29.85	169	1719	385	0.00	48.4
Hilleshog 3050Rz(7250)	22	314.4	101	9473	99	1.18	40.66	101	1220	99	16.90	29.92	207	1733	382	0.00	49.7
Hilleshog 3051Rz(7251)	15	306.9	98	10244	107	1.22	38.91	97	1300	105	16.57	33.39	315	1735	367	0.00	60.0
Hilleshog 3052Rz(7252)	23	315.8	101	9745	101	1.10	41.00	102	1265	102	16.89	30.94	179	1675	343	0.00	55.4
Holly 317	52	295.2	94	8559	89	1.24	36.16	90	1050	85	16.01	29.03	283	1721	402	0.00	58.4
Holly 556 (05HX556)	12	300.2	96	9568	100	1.11	37.33	93	1190	96	16.12	31.91	183	1805	315	0.07	49.3
Holly 06HX629	29	304.7	97	10237	106	1.06	38.39	95	1290	104	16.29	33.73	243	1767	263	0.07	66.8
Holly 07HX701	34	328.8	105	10061	105	1.08	44.03	109	1347	109	17.52	30.60	184	1737	307	0.00	62.1
Holly 07HX702	6	312.2	100	9652	100	1.03	40.13	100	1242	101	16.64	30.77	207	1600	295	0.00	70.9
Seedex SX0835	37	311.1	99	10231	106	1.10	39.88	99	1315	106	16.66	32.79	246	1719	308	0.57	63.1
Seedex SX0841	45	303.5	97	10492	109	1.08	38.10	95	1322	107	16.26	34.43	258	1783	270	0.28	65.4
Seedex SX0842	24	308.8	99	10507	109	1.05	39.36	98	1341	109	16.49	34.05	243	1648	283	0.14	67.4
Seedex Alpine	8	312.6	100	9573	100	1.14	40.24	100	1234	100	16.77	30.57	182	1676	370	0.00	47.4
Seedex Magnum	42	322.2	103	8582	89	1.13	42.49	106	1130	91	17.24	26.59	221	1741	335	0.00	43.3
Seedex Rezult	30	318.3	102	9600	100	1.12	41.57	103	1252	101	17.03	30.27	230	1770	314	0.00	46.9
Seedex Sonic	51	304.7	97	10424	108	1.13	38.39	95	1315	106	16.37	34.09	228	1685	343	0.00	60.3
SESVanderhave H46519	17	292.8	94	9661	100	1.24	35.61	88	1169	95	15.89	32.98	266	1794	389	0.00	53.3
SESVanderhave H46531	20	312.1	100	10507	109	1.10	40.12	100	1351	109	16.71	33.66	193	1683	337	0.07	55.7
SESVanderhave H46532	11	303.8	97	9773	102	1.16	38.17	95	1225	99	16.34	32.18	259	1726	344	0.07	49.3
SESVanderhave H46533	47	305.9	98	10665	111	1.06	38.66	96	1351	109	16.36	34.82	257	1760	260	0.07	64.5
SESVanderhave H46711	36	332.5	106	10604	110	0.92	44.91	112	1431	116	17.55	31.95	130	1528	267	0.00	63.7
SESVanderhave H46714	5	303.1	97	10160	106	1.07	38.02	94	1278	103	16.23	33.51	257	1836	250	0.00	63.2
SESVanderhave H46807	38	310.5	99	10228	106	1.07	39.74	99	1303	106	16.59	33.11	242	1735	285	0.07	50.7
SESVanderhave H46905	31	311.5	100	10058	105	1.04	39.97	99	1291	105	16.61	32.41	223	1761	253	0.07	65.5
SESVanderhave H48607(46907)	49	309.0	99	9908	103	1.05	39.41	98	1263	102	16.50	32.09	201	1678	299	0.00	65.5
SESVanderhave H46911	18	305.8	98	8965	93	1.11	38.65	96	1134	92	16.41	29.37	310	1723	290	0.00	61.5
SESVanderhave H48716	26	324.0	104	9607	100	0.99	42.90	107	1271	103	17.18	29.79	134	1535	308	0.00	60.7
SESVanderhave H48717	10	317.9	102	9926	103	1.09	41.47	103	1295	105	16.98	31.35	204	1629	335	0.00	56.7
SESVanderhave H66855	28	317.0	101	9108	95	1.16	41.27	103	1187	96	17.01	28.80	269	1743	332	0.00	46.9
Hilleshög 2417Rz(Check)	53	323.3	103	9499	99	1.08	42.74	106	1255	102	17.24	29.36	202	1729	307	0.00	41.5
Susc 3N - Mod Aph	54	336.1	107	8552	89	1.14	45.75	114	1163	94	17.94	25.39	258	1720	332	0.00	43.7
Susc 3N - Aph Tol	55	325.1	104	8787	91	1.18	43.17	107	1168	95	17.44	27.12	248	1702	373	0.00	50.6
Very Susc 3N - Aph Spc	56	327.1	105	8282	86	1.26	43.63	108	1104	89	17.62	25.23	360	1764	378	0.00	47.4
Check Mean		312.7		9615		1.15	40.25		1235		16.79	30.83	235	1743	346	0.0	54.6
Coeff. of Var. (%)		3.5		4.6		7.9	6.3		6.7		2.9	3.9	26.3	5.4	13.5		14.1
F Value		4.68		11.37		7.25	4.68		5.28		5.12	23.53	3.09	7.88	7.81		6.75
Mean LSD (0.05)		13.3		537		0.11	3.12		100		0.60	1.47	75	114	57		8.8
Mean LSD (0.01)		17.5		708		0.15	4.11		132		0.79	1.94	99	150	75		11.5
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2007 Data from Casselton

Created 10-29-2007.

Vigor not collected.

Trial # = 078601

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

++ Revenue estimates are based on a $41.97 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 13.

2007 Performance of Varieties - ACSC Commercial Official Trial

Averill - Moderate Rzm - 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. %
Beta 1100R	48	312.8	100	9662	118	0.99	40.28	99	1241	117	16.63	31.01	162	1701	260	0.00	83.2
Beta 1120R	14	321.9	102	8637	106	1.12	42.41	104	1137	108	17.22	26.88	200	1744	336	0.00	75.6
Beta 1140R	2	327.4	104	8604	105	1.01	43.70	108	1149	109	17.38	26.26	178	1677	276	0.00	81.8
Beta 1160R	33	313.9	100	8969	110	1.13	40.54	100	1160	110	16.82	28.52	158	1838	327	0.07	78.9
Beta 1180R	25	309.6	99	7190	88	1.13	39.53	97	920	87	16.61	23.19	283	1665	332	0.00	74.2
Beta 1301R	9	299.4	95	8170	100	1.31	37.15	91	1014	96	16.28	27.28	224	1990	403	0.00	73.4
Beta 1305R	21	321.9	102	8677	106	1.20	42.41	104	1142	108	17.29	26.98	203	1825	368	0.00	72.2
Beta 1683R (BX1683)	41	303.4	97	8587	105	1.28	38.09	94	1075	102	16.45	28.40	243	1958	386	0.00	75.6
Beta 1772R (BX1572)	39	316.0	101	8049	98	1.29	41.03	101	1041	98	17.09	25.60	257	1893	399	0.07	79.3
Beta 4554R (BX1454)	32	323.4	103	7303	89	1.13	42.77	105	964	91	17.30	22.62	233	2044	246	0.00	60.4
Crystal 727	1	308.5	98	6043	74	1.07	39.29	97	770	73	16.49	19.56	282	1853	232	0.00	73.8
Crystal R308	44	311.1	99	7282	89	1.15	39.88	98	933	88	16.71	23.41	270	1888	294	0.00	73.3
Crystal R431	13	315.0	100	8343	102	1.36	40.79	100	1081	102	17.11	26.47	261	2130	392	0.00	81.2
Crystal R434	50	309.3	98	8174	100	1.33	39.47	97	1043	99	16.79	26.41	253	1988	408	0.00	77.4
Crystal R652	27	310.1	99	9394	115	1.27	39.65	98	1200	114	16.77	30.35	229	1970	374	0.00	72.5
Crystal R760	4	321.0	102	9716	119	1.13	42.21	104	1277	121	17.18	30.29	227	1827	310	0.00	82.3
Crystal R761	16	307.7	98	9073	111	1.37	39.10	96	1152	109	16.75	29.48	240	2204	385	0.00	86.0
Crystal R762	35	312.1	99	8764	107	1.12	40.13	99	1127	107	16.73	28.08	174	1817	322	0.00	76.4
Crystal R763	7	329.2	105	6917	85	1.09	44.13	109	926	88	17.55	21.04	158	1803	306	0.00	81.0
Crystal R764	43	299.8	95	8521	104	1.17	37.24	92	1060	100	16.16	28.40	205	1821	349	0.00	86.7
Hilleshog 3028Rz (7228)	19	311.3	99	7946	97	1.30	39.94	98	1017	96	16.87	25.60	381	1882	368	0.00	77.9
Hilleshog 3031Rz (7231)	3	332.9	106	7797	95	1.13	44.99	111	1052	100	17.77	23.45	199	1696	348	0.00	66.5
Hilleshog 3035Rz (7235)	46	321.4	102	8615	105	1.23	42.31	104	1133	107	17.30	26.85	231	1876	373	0.00	74.9
Hilleshog 3036Rz (7236)	40	314.6	100	7859	96	1.18	40.72	100	1019	96	16.91	24.91	213	1806	355	0.00	73.9
Hilleshog 3050Rz(7250)	22	329.6	105	8711	106	1.14	44.22	109	1167	110	17.62	26.47	179	1853	326	0.07	75.5
Hilleshog 3051Rz(7251)	15	303.0	96	8721	107	1.23	38.00	94	1092	103	16.38	28.83	311	1869	346	0.00	78.3
Hilleshog 3052Rz(7252)	23	318.4	101	8759	107	1.21	41.61	102	1145	108	17.14	27.48	230	1899	352	0.00	78.4
Holly 317	52	319.2	102	7886	96	1.10	41.79	103	1032	98	17.06	24.70	236	1740	302	0.00	80.3
Holly 556 (05HX556)	12	296.0	94	8158	100	1.14	36.35	90	1003	95	15.94	27.53	188	1881	314	0.00	74.8
Holly 06HX629	29	302.9	96	8322	102	1.13	37.98	94	1044	99	16.27	27.45	279	1892	268	0.00	82.2
Holly 07HX701	34	330.6	105	8475	104	1.07	44.46	109	1139	108	17.60	25.67	170	1802	289	0.00	81.0
Holly 07HX702	6	323.5	103	8039	98	1.07	42.80	105	1061	100	17.25	24.91	196	1774	285	0.00	80.7
Seedex SX0835	37	310.2	99	8481	104	1.10	39.67	98	1084	103	16.61	27.35	241	1745	299	0.07	94.1
Seedex SX0841	45	309.2	98	9028	110	1.07	39.44	97	1151	109	16.52	29.24	234	1871	245	0.07	87.3
Seedex SX0842	24	312.2	99	8801	108	1.13	40.14	99	1132	107	16.74	28.19	255	1827	297	0.07	83.0
Seedex Alpine	8	302.1	96	7954	97	1.24	37.78	93	995	94	16.34	26.35	249	1799	389	0.07	80.9
Seedex Magnum	42	307.2	98	6072	74	1.07	38.98	96	769	73	16.44	19.80	288	1758	262	0.00	72.7
Seedex Rezult	30	331.1	105	7926	97	1.04	44.57	110	1066	101	17.60	23.97	159	1806	275	0.07	75.1
Seedex Sonic	51	314.4	100	9083	111	1.16	40.66	100	1175	111	16.88	28.85	267	1792	328	0.00	80.8
SESVanderhave H46519	17	312.2	99	8760	107	1.18	40.15	99	1125	106	16.79	28.12	196	1880	342	0.00	75.9
SESVanderhave H46531	20	305.4	97	8598	105	1.17	38.56	95	1082	102	16.44	28.26	255	1855	323	0.14	82.2
SESVanderhave H46532	11	311.2	99	8424	103	1.16	39.91	98	1079	102	16.72	27.08	214	1850	331	0.00	83.3
SESVanderhave H46533	47	308.4	98	8626	105	1.11	39.26	97	1098	104	16.53	27.98	239	1935	257	0.22	86.5
SESVanderhave H46711	36	325.0	103	8644	106	1.03	43.15	106	1148	109	17.28	26.58	181	1650	292	0.07	84.3
SESVanderhave H46714	5	307.7	98	9067	111	1.14	39.10	96	1153	109	16.53	29.43	288	1893	278	0.00	81.5
SESVanderhave H46807	38	312.7	100	8618	105	1.12	40.26	99	1111	105	16.76	27.52	223	1851	297	0.00	79.3
SESVanderhave H46905	31	320.0	102	8714	107	1.08	41.98	103	1142	108	17.08	27.28	211	1805	277	0.22	83.6
SESVanderhave H48607(46907)	49	313.9	100	8658	106	1.10	40.55	100	1118	106	16.79	27.60	208	1873	279	0.00	86.0
SESVanderhave H46911	18	322.1	103	8258	101	1.08	42.47	105	1090	103	17.19	25.61	225	1823	269	0.00	84.3
SESVanderhave H48716	26	325.0	103	8571	105	1.02	43.16	106	1138	108	17.28	26.39	198	1632	287	0.00	85.5
SESVanderhave H48717	10	322.2	103	8635	106	1.14	42.48	105	1138	108	17.25	26.84	158	1761	355	0.00	86.4
SESVanderhave H66855	28	305.9	97	6414	78	1.10	38.67	95	811	77	16.40	20.98	305	1851	250	0.00	72.3
Hilleshög 2417Rz(Check)	53	308.5	98	7957	97	1.14	39.29	97	1013	96	16.56	25.77	213	1831	315	0.00	71.1
Susc 3N - Mod Aph	54	312.6	99	5486	67	1.08	40.24	99	706	67	16.71	17.55	270	1826	255	0.00	69.4
Susc 3N - Aph Tol	55	308.9	98	6182	76	1.12	39.36	97	787	74	16.57	20.05	299	1871	266	0.00	72.7
Very Susc 3N - Aph Spc	56	307.9	98	5874	72	1.17	39.14	96	744	70	16.57	19.14	397	1881	261	0.00	77.8
Check Mean		314.2		8182		1.15	40.61		1057		16.86	26.07	233	1844	315	0.0	78.7
Coeff. of Var. (%)		3.6		6.1		7.7	6.6		8.1		3.1	5.2	29.8	5.3	12.6		9.1
F Value		3.3		18.34		5.12	3.3		11.28		3.48	26.6	2.88	6.38	7.36		3.85
Mean LSD (0.05)		13.9		609		0.11	3.26		104		0.63	1.63	83	118	48		8.5
Mean LSD (0.01)		18.3		803		0.14	4.30		137		0.83	2.15	110	156	64		11.1
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2007 Data from Averill

Created 10-29-2007.

Vigor not collected.

Trial # = 078602

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

++ Revenue estimates are based on a $41.97 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 14.

2007 Performance of Varieties - ACSC Commercial Official Trial

Halstad - Moderate Rzm - 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. %
Beta 1100R	48	331.8	98	10693	120	0.94	44.74	96	1440	118	17.53	32.27	102	1672	249	0.00	63.4
Beta 1120R	14	345.9	102	8785	98	1.02	48.04	103	1220	100	18.31	25.39	154	1714	280	0.00	60.5
Beta 1140R	2	349.6	103	9431	106	0.93	48.90	105	1319	108	18.42	27.00	133	1563	260	0.00	64.2
Beta 1160R	33	326.6	96	9136	102	1.10	43.52	93	1216	99	17.42	28.00	128	1819	321	0.00	59.3
Beta 1180R	25	336.1	99	7991	89	0.99	45.74	98	1089	89	17.79	23.75	188	1552	287	0.07	61.4
Beta 1301R	9	323.1	95	8402	94	1.21	42.70	92	1110	91	17.37	26.01	201	1851	374	0.00	60.4
Beta 1305R	21	335.9	99	8918	100	1.15	45.71	98	1211	99	17.95	26.61	168	1784	359	0.00	52.9
Beta 1683R (BX1683)	41	333.9	98	9342	105	1.05	45.23	97	1265	103	17.75	28.02	144	1770	292	0.00	58.9
Beta 1772R (BX1572)	39	346.6	102	8349	94	1.17	48.20	103	1161	95	18.50	24.12	151	1861	357	0.00	55.6
Beta 4554R (BX1454)	32	336.1	99	8150	91	1.09	45.76	98	1109	91	17.89	24.23	204	1842	278	0.00	49.1
Crystal 727	1	340.4	100	7029	79	0.95	46.76	100	964	79	17.98	20.70	166	1747	216	0.00	56.6
Crystal R308	44	347.6	102	8609	96	1.02	48.44	104	1198	98	18.40	24.79	149	1747	270	0.07	58.4
Crystal R431	13	352.0	104	8723	98	1.23	49.47	106	1226	100	18.83	24.78	155	2095	345	0.00	57.3
Crystal R434	50	334.8	99	9127	102	1.26	45.43	97	1237	101	18.00	27.30	200	1905	398	0.00	61.1
Crystal R652	27	340.8	100	10370	116	1.06	46.84	101	1425	116	18.10	30.44	129	1767	309	0.00	57.6
Crystal R760	4	334.9	99	10496	118	1.09	45.47	98	1423	116	17.84	31.38	192	1744	311	0.00	66.3
Crystal R761	16	329.9	97	9564	107	1.27	44.30	95	1283	105	17.76	29.03	203	2074	358	0.00	60.9
Crystal R762	35	332.8	98	9107	102	1.05	44.97	97	1231	101	17.69	27.35	155	1796	283	0.00	59.8
Crystal R763	7	343.8	101	8245	92	1.00	47.54	102	1139	93	18.19	24.02	104	1719	282	0.00	63.0
Crystal R764	43	329.7	97	9522	107	0.93	44.24	95	1279	104	17.42	28.86	112	1592	261	0.00	64.4
Hilleshog 3028Rz (7228)	19	354.1	104	9230	103	1.08	49.97	107	1302	106	18.78	26.06	199	1785	289	0.00	58.1
Hilleshog 3031Rz (7231)	3	363.4	107	8614	96	1.08	52.14	112	1235	101	19.25	23.77	160	1713	323	0.00	53.4
Hilleshog 3035Rz (7235)	46	351.6	104	8758	98	1.01	49.38	106	1229	100	18.59	24.93	109	1621	310	0.00	57.2
Hilleshog 3036Rz (7236)	40	342.1	101	8823	99	1.01	47.14	101	1216	99	18.11	25.77	109	1617	314	0.00	56.0
Hilleshog 3050Rz(7250)	22	340.2	100	9035	101	1.05	46.70	100	1240	101	18.06	26.58	134	1722	308	0.07	58.4
Hilleshog 3051Rz(7251)	15	338.8	100	9564	107	1.05	46.39	100	1309	107	18.00	28.23	175	1709	295	0.00	55.1
Hilleshog 3052Rz(7252)	23	338.2	100	9584	107	1.05	46.24	99	1310	107	17.96	28.37	176	1666	306	0.07	60.8
Holly 317	52	342.2	101	8168	91	1.01	47.17	101	1128	92	18.11	23.81	158	1631	290	0.00	62.9
Holly 556 (05HX556)	12	324.1	95	9066	102	1.09	42.94	92	1200	98	17.29	28.00	146	1839	304	0.00	62.7
Holly 06HX629	29	333.3	98	9501	106	0.99	45.08	97	1285	105	17.65	28.49	162	1871	209	0.14	69.5
Holly 07HX701	34	355.0	105	8966	100	0.95	50.17	108	1266	103	18.69	25.27	124	1685	243	0.00	65.6
Holly 07HX702	6	345.5	102	8809	99	0.98	47.96	103	1224	100	18.26	25.43	136	1672	267	0.00	61.4
Seedex SX0835	37	334.0	98	9401	105	1.00	45.26	97	1275	104	17.71	28.13	184	1702	259	0.21	65.8
Seedex SX0841	45	332.6	98	9800	110	0.97	44.93	96	1323	108	17.60	29.50	133	1817	221	0.00	70.7
Seedex SX0842	24	341.4	101	9752	109	1.00	46.99	101	1341	110	18.07	28.59	149	1784	249	0.00	65.5
Seedex Alpine	8	342.1	101	8909	100	1.04	47.16	101	1228	100	18.15	26.07	118	1737	303	0.07	64.3
Seedex Magnum	42	338.6	100	7297	82	0.98	46.33	99	1001	82	17.91	21.47	206	1728	227	0.00	56.6
Seedex Rezult	30	352.0	104	8767	98	0.97	49.47	106	1230	100	18.58	24.97	106	1759	252	0.00	54.4
Seedex Sonic	51	335.1	99	9673	108	1.04	45.52	98	1314	107	17.79	28.87	185	1625	303	0.00	59.9
SESVanderhave H46519	17	336.7	99	9557	107	1.01	45.89	98	1301	106	17.84	28.41	116	1712	285	0.14	56.9
SESVanderhave H46531	20	339.6	100	9826	110	1.02	46.57	100	1348	110	18.00	28.92	135	1688	295	0.07	57.1
SESVanderhave H46532	11	336.3	99	9151	102	1.01	45.80	98	1245	102	17.83	27.24	133	1742	275	0.22	59.2
SESVanderhave H46533	47	334.5	98	9468	106	0.99	45.37	97	1284	105	17.71	28.30	174	1803	225	0.22	69.6
SESVanderhave H46711	36	353.6	104	9355	105	0.95	49.84	107	1317	108	18.63	26.51	151	1615	254	0.00	61.5
SESVanderhave H46714	5	331.8	98	9607	108	1.00	44.74	96	1293	106	17.59	29.02	150	1804	240	0.00	62.7
SESVanderhave H46807	38	335.8	99	9426	106	1.03	45.69	98	1282	105	17.82	28.09	179	1745	271	0.00	60.0
SESVanderhave H46905	31	344.9	102	9679	108	1.00	47.80	103	1341	110	18.24	28.09	151	1807	239	0.07	65.3
SESVanderhave H48607(46907)	49	334.5	98	9609	108	0.98	45.37	97	1303	106	17.71	28.74	134	1761	249	0.00	68.1
SESVanderhave H46911	18	335.1	99	8196	92	1.00	45.51	98	1114	91	17.76	24.41	169	1696	265	0.07	60.2
SESVanderhave H48716	26	347.5	102	9147	102	0.94	48.43	104	1276	104	18.32	26.27	109	1618	261	0.00	64.0
SESVanderhave H48717	10	343.7	101	9310	104	1.07	47.52	102	1286	105	18.25	27.13	145	1753	310	0.07	68.8
SESVanderhave H66855	28	329.2	97	6868	77	1.09	44.13	95	921	75	17.55	20.88	258	1877	254	0.00	55.3
Hilleshög 2417Rz(Check)	53	346.4	102	8893	100	0.99	48.16	103	1235	101	18.31	25.70	147	1663	274	0.00	52.8
Susc 3N - Mod Aph	54	342.7	101	6500	73	1.06	47.28	101	901	74	18.19	18.84	185	1870	259	0.00	51.9
Susc 3N - Aph Tol	55	335.2	99	6822	76	0.99	45.55	98	927	76	17.75	20.35	216	1715	232	0.00	54.7
Very Susc 3N - Aph Spc	56	340.6	100	6905	77	1.03	46.81	100	950	78	18.07	20.23	198	1788	254	0.00	52.6
Check Mean		339.7		8929		1.04	46.60		1224		18.02	26.31	156	1749	282	0.0	60.2
Coeff. of Var. (%)		2.5		5.7		6.7	4.2		6.5		2.2	5.5	36.9	4.9	10.3		9.0
F Value		5.27		16.59		7	5.27		12.77		5.94	20.13	1.92	8.08	11.31		4.76
Mean LSD (0.05)		10.1		622		0.08	2.36		96		0.47	1.77	67	103	34		6.3
Mean LSD (0.01)		13.3		819		0.11	3.11		126		0.62	2.33	88	136	45		8.3
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2007 Data from Halstad

Created 10-29-2007.

Vigor not collected.

Trial # = 078603

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

++ Revenue estimates are based on a $41.97 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 15.

2007 Performance of Varieties - ACSC Commercial Official Trial

Climax - Light Rzm - 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. %
Beta 1100R	48	341.3	99	12392	114	1.07	46.97	98	1702	114	18.13	36.36	208	1751	284	0.00	70.4
Beta 1120R	14	348.1	101	11021	102	1.10	48.55	102	1538	103	18.50	31.65	248	1696	311	0.00	72.1
Beta 1140R	2	363.2	105	11687	108	0.97	52.10	109	1677	112	19.13	32.19	205	1552	264	0.07	66.6
Beta 1160R	33	334.7	97	11343	105	1.22	45.42	95	1539	103	17.96	33.91	229	1908	356	0.00	61.6
Beta 1180R	25	349.5	101	9934	92	1.03	48.88	102	1389	93	18.50	28.42	277	1561	279	0.00	66.5
Beta 1301R	9	324.8	94	10057	93	1.31	43.10	90	1334	89	17.55	30.96	293	1975	383	0.00	55.0
Beta 1305R	21	343.6	100	10798	100	1.27	47.51	100	1492	100	18.45	31.48	238	1921	385	0.00	52.4
Beta 1683R (BX1683)	41	335.3	97	11348	105	1.16	45.57	96	1540	103	17.92	33.89	213	1901	314	0.07	62.7
Beta 1772R (BX1572)	39	358.1	104	10053	93	1.25	50.90	107	1428	95	19.15	28.11	268	1852	379	0.00	55.3
Beta 4554R (BX1454)	32	344.6	100	9915	91	1.23	47.74	100	1374	92	18.47	28.78	373	1920	310	0.07	48.3
Crystal 727	1	346.6	101	8995	83	1.10	48.21	101	1252	84	18.43	25.95	298	1833	258	0.00	58.8
Crystal R308	44	352.6	102	9918	92	1.10	49.60	104	1395	93	18.73	28.17	257	1807	280	0.00	62.4
Crystal R431	13	339.5	99	10792	100	1.33	46.54	98	1479	99	18.30	31.81	278	2069	381	0.00	56.1
Crystal R434	50	338.3	98	11181	103	1.38	46.27	97	1529	102	18.30	33.08	324	1918	446	0.00	71.2
Crystal R652	27	337.1	98	11672	108	1.27	45.99	96	1591	106	18.13	34.62	265	1894	382	0.22	65.6
Crystal R760	4	351.7	102	11853	109	1.09	49.41	104	1667	111	18.68	33.66	231	1683	314	0.00	73.4
Crystal R761	16	331.3	96	11516	106	1.36	44.62	94	1551	103	17.93	34.79	296	2031	410	0.00	68.7
Crystal R762	35	343.6	100	11669	108	1.09	47.51	100	1614	108	18.27	33.95	241	1707	305	0.00	60.3
Crystal R763	7	355.2	103	9929	92	1.07	50.22	105	1403	94	18.83	27.97	231	1738	285	0.00	70.1
Crystal R764	43	336.7	98	11376	105	1.13	45.89	96	1552	104	17.97	33.76	246	1749	323	0.00	66.6
Hilleshog 3028Rz (7228)	19	348.3	101	11109	102	1.24	48.62	102	1551	103	18.66	31.87	321	1910	335	0.00	59.4
Hilleshog 3031Rz (7231)	3	359.9	105	9453	87	1.25	51.33	108	1348	90	19.25	26.29	289	1718	406	0.00	51.5
Hilleshog 3035Rz (7235)	46	343.6	100	10522	97	1.19	47.51	100	1455	97	18.37	30.62	255	1844	338	0.00	53.7
Hilleshog 3036Rz (7236)	40	340.0	99	10708	99	1.11	46.67	98	1468	98	18.12	31.53	216	1660	342	0.00	57.5
Hilleshog 3050Rz(7250)	22	347.6	101	11239	104	1.17	48.45	102	1567	105	18.55	32.32	236	1716	362	0.07	64.5
Hilleshog 3051Rz(7251)	15	339.4	99	11846	109	1.17	46.53	98	1623	108	18.14	34.89	289	1805	317	0.00	73.7
Hilleshog 3052Rz(7252)	23	346.8	101	11684	108	1.14	48.26	101	1626	108	18.48	33.71	230	1771	330	0.00	64.4
Holly 317	52	342.4	99	9907	91	1.10	47.21	99	1366	91	18.22	28.93	252	1761	296	0.00	72.5
Holly 556 (05HX556)	12	334.2	97	11347	105	1.15	45.31	95	1536	102	17.86	33.99	259	1871	298	0.07	58.6
Holly 06HX629	29	339.1	98	11331	105	1.11	46.46	97	1552	104	18.06	33.38	281	1879	258	0.07	62.7
Holly 07HX701	34	357.6	104	11235	104	1.07	50.78	106	1596	106	18.95	31.41	206	1789	279	0.07	68.0
Holly 07HX702	6	346.1	100	11029	102	1.08	48.10	101	1532	102	18.38	31.90	242	1747	281	0.00	68.8
Seedex SX0835	37	342.7	100	11648	107	1.11	47.29	99	1607	107	18.25	33.98	255	1813	288	0.43	76.1
Seedex SX0841	45	346.4	101	12265	113	1.03	48.16	101	1705	114	18.35	35.41	225	1822	230	0.00	79.5
Seedex SX0842	24	343.3	100	11729	108	1.14	47.43	99	1619	108	18.31	34.22	288	1916	273	0.00	76.3
Seedex Alpine	8	344.0	100	11060	102	1.17	47.59	100	1530	102	18.37	32.17	231	1811	340	0.14	64.4
Seedex Magnum	42	348.8	101	8787	81	1.04	48.73	102	1227	82	18.48	25.19	279	1716	246	0.00	57.6
Seedex Rezult	30	355.9	103	10709	99	1.09	50.38	106	1515	101	18.88	30.14	228	1793	286	0.07	55.4
Seedex Sonic	51	335.3	97	12111	112	1.19	45.57	96	1644	110	17.95	36.18	273	1715	365	0.14	70.4
SESVanderhave H46519	17	334.9	97	11172	103	1.15	45.47	95	1517	101	17.90	33.34	269	1854	300	0.07	66.5
SESVanderhave H46531	20	337.7	98	11796	109	1.22	46.12	97	1612	108	18.10	34.89	297	1846	344	0.14	61.1
SESVanderhave H46532	11	336.2	98	11581	107	1.14	45.78	96	1576	105	17.95	34.49	255	1775	319	0.14	65.1
SESVanderhave H46533	47	343.2	100	11678	108	1.12	47.40	99	1613	108	18.27	34.05	294	1921	248	0.07	73.8
SESVanderhave H46711	36	350.8	102	11491	106	1.06	49.19	103	1612	108	18.60	32.75	201	1711	292	0.00	70.4
SESVanderhave H46714	5	339.0	98	11220	104	1.09	46.43	97	1535	102	18.04	33.18	270	1854	257	0.00	68.9
SESVanderhave H46807	38	342.2	99	11882	110	1.12	47.18	99	1639	109	18.23	34.72	264	1802	294	0.07	66.6
SESVanderhave H46905	31	338.7	98	11534	106	1.09	46.35	97	1578	105	18.03	34.06	271	1859	254	0.22	81.3
SESVanderhave H48607(46907)	49	342.2	99	10858	100	1.04	47.18	99	1498	100	18.15	31.70	212	1787	255	0.00	76.0
SESVanderhave H46911	18	344.6	100	9882	91	1.11	47.74	100	1370	91	18.34	28.64	331	1729	282	0.00	66.1
SESVanderhave H48716	26	348.5	101	10840	100	1.05	48.65	102	1512	101	18.48	31.12	219	1668	295	0.00	74.8
SESVanderhave H48717	10	348.9	101	11232	104	1.10	48.74	102	1569	105	18.54	32.15	183	1756	319	0.00	72.1
SESVanderhave H66855	28	350.5	102	8716	80	1.02	49.12	103	1222	82	18.55	24.83	281	1751	226	0.00	56.7
Hilleshög 2417Rz(Check)	53	352.2	102	10697	99	1.08	49.51	104	1504	100	18.68	30.37	217	1728	295	0.00	52.9
Susc 3N - Mod Aph	54	347.5	101	8440	78	1.15	48.41	102	1174	78	18.53	24.35	358	1880	265	0.00	56.2
Susc 3N - Aph Tol	55	337.6	98	8369	77	1.09	46.09	97	1141	76	17.96	24.85	342	1842	229	0.00	63.2
Very Susc 3N - Aph Spc	56	352.9	102	8437	78	1.05	49.69	104	1187	79	18.70	23.94	244	1744	261	0.07	54.1
Check Mean		344.4		10839		1.14	47.69		1499		18.36	31.52	260	1804	308	0.0	64.7
Coeff. of Var. (%)		2.6		5.7		7.2	4.4		6.5		2.1	5.4	20.3	5.6	12.8		11.9
F Value		4.08		15.02		6.21	4.08		10.8		4.35	19.61	3.26	5.56	8.35		5.8
Mean LSD (0.05)		10.6		734		0.10	2.48		117		0.47	2.02	63	121	47		9.1
Mean LSD (0.01)		13.9		967		0.13	3.27		154		0.62	2.67	83	160	62		11.9
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2007 Data from Climax

Created 10-29-2007.

Vigor not collected.

Trial # = 078605

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

++ Revenue estimates are based on a $41.97 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 16.

2007 Performance of Varieties - ACSC Commercial Official Trial

Scandia - Moderate Rzm - 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. %
Beta 1100R	48	337.5	98	9272	114	0.93	46.09	97	1266	112	17.80	27.48	166	1615	227	0.00	68.1
Beta 1120R	14	349.4	102	7955	97	0.96	48.87	103	1109	98	18.43	22.85	168	1659	242	0.00	68.3
Beta 1140R	2	357.1	104	8357	102	0.96	50.67	107	1185	105	18.81	23.43	198	1605	245	0.07	65.2
Beta 1160R	33	333.0	97	8414	103	1.07	45.01	95	1137	101	17.72	25.28	193	1811	278	0.00	60.6
Beta 1180R	25	338.5	99	7080	87	0.98	46.32	98	970	86	17.91	20.88	230	1628	240	0.00	59.1
Beta 1301R	9	332.4	97	8166	100	1.13	44.87	95	1103	98	17.74	24.51	205	1852	313	0.00	58.3
Beta 1305R	21	338.4	99	8293	102	1.08	46.29	98	1134	101	18.00	24.51	184	1763	305	0.00	49.4
Beta 1683R (BX1683)	41	339.6	99	9030	111	1.11	46.58	98	1236	110	18.09	26.68	186	1839	302	0.00	67.3
Beta 1772R (BX1572)	39	350.2	102	7536	92	1.06	49.05	103	1057	94	18.57	21.46	194	1748	288	0.00	60.3
Beta 4554R (BX1454)	32	349.5	102	7580	93	1.03	48.89	103	1061	94	18.50	21.63	254	1745	244	0.00	55.0
Crystal 727	1	341.5	100	6152	75	0.85	47.01	99	848	75	17.93	17.99	201	1580	168	0.00	54.1
Crystal R308	44	346.3	101	7576	93	1.00	48.15	102	1052	93	18.33	21.93	232	1798	216	0.00	59.0
Crystal R431	13	344.4	100	7715	94	1.25	47.70	101	1066	95	18.48	22.49	229	2127	319	0.00	60.1
Crystal R434	50	337.6	98	7952	97	1.20	46.10	97	1087	96	18.09	23.52	243	1845	356	0.00	54.9
Crystal R652	27	334.2	97	9209	113	1.06	45.30	96	1248	111	17.76	27.53	188	1689	308	0.07	65.0
Crystal R760	4	342.1	100	9119	112	1.02	47.14	99	1258	112	18.12	26.64	197	1677	276	0.00	68.8
Crystal R761	16	336.5	98	8868	109	1.27	45.85	97	1207	107	18.09	26.40	226	2063	352	0.00	65.3
Crystal R762	35	331.7	97	7969	98	1.04	44.73	94	1073	95	17.63	24.08	190	1694	287	0.00	58.6
Crystal R763	7	345.3	101	7481	92	1.00	47.91	101	1040	92	18.26	21.60	223	1703	242	0.07	65.8
Crystal R764	43	336.3	98	9067	111	1.00	45.80	97	1234	109	17.82	27.01	180	1677	266	0.00	66.1
Hilleshog 3028Rz (7228)	19	349.5	102	7976	98	1.06	48.88	103	1116	99	18.53	22.81	228	1816	254	0.00	62.4
Hilleshog 3031Rz (7231)	3	358.9	105	7475	92	1.03	51.09	108	1065	94	18.97	20.78	192	1614	297	0.00	49.6
Hilleshog 3035Rz (7235)	46	351.9	103	8126	100	0.98	49.46	104	1141	101	18.58	23.12	179	1653	256	0.07	53.9
Hilleshog 3036Rz (7236)	40	349.5	102	8526	104	0.91	48.90	103	1192	106	18.40	24.45	152	1559	238	0.00	56.8
Hilleshog 3050Rz(7250)	22	352.7	103	8763	107	0.99	49.63	105	1232	109	18.62	24.88	172	1667	260	0.00	59.9
Hilleshog 3051Rz(7251)	15	343.8	100	8925	109	1.06	47.54	100	1234	109	18.25	25.98	244	1733	274	0.00	59.7
Hilleshog 3052Rz(7252)	23	344.8	100	8939	109	0.99	47.79	101	1239	110	18.24	25.93	188	1687	254	0.00	62.6
Holly 317	52	342.8	100	7192	88	0.99	47.32	100	990	88	18.13	21.07	178	1681	254	0.00	65.2
Holly 556 (05HX556)	12	329.2	96	8488	104	1.08	44.13	93	1138	101	17.53	25.77	188	1798	287	0.00	57.4
Holly 06HX629	29	332.9	97	8583	105	0.96	44.99	95	1160	103	17.60	25.76	240	1763	190	0.22	66.6
Holly 07HX701	34	355.7	104	8377	103	0.98	50.35	106	1188	105	18.77	23.47	175	1756	234	0.00	66.1
Holly 07HX702	6	348.5	102	8145	100	1.00	48.64	103	1135	101	18.42	23.42	155	1770	245	0.00	64.5
Seedex SX0835	37	342.0	100	9039	111	1.03	47.12	99	1244	110	18.13	26.48	235	1767	245	0.36	64.5
Seedex SX0841	45	338.6	99	9486	116	0.94	46.34	98	1298	115	17.87	28.02	195	1754	194	0.00	69.3
Seedex SX0842	24	347.2	101	9493	116	0.98	48.35	102	1320	117	18.34	27.39	197	1738	225	0.07	66.4
Seedex Alpine	8	343.3	100	8346	102	1.05	47.43	100	1152	102	18.22	24.36	166	1749	289	0.00	64.9
Seedex Magnum	42	337.6	98	6098	75	0.91	46.10	97	836	74	17.79	17.94	248	1565	204	0.00	54.4
Seedex Rezult	30	349.2	102	7473	92	1.00	48.81	103	1046	93	18.46	21.39	184	1780	233	0.00	53.7
Seedex Sonic	51	341.0	99	8944	110	1.03	46.89	99	1228	109	18.08	26.28	219	1662	274	0.07	60.3
SESVanderhave H46519	17	341.2	99	9069	111	1.03	46.95	99	1249	111	18.09	26.53	183	1726	277	0.00	57.8
SESVanderhave H46531	20	339.9	99	8756	107	1.06	46.63	98	1199	106	18.06	25.84	190	1752	289	0.00	59.6
SESVanderhave H46532	11	342.9	100	8891	109	1.00	47.34	100	1226	109	18.16	26.00	169	1714	263	0.07	56.8
SESVanderhave H46533	47	341.7	100	9408	115	0.99	47.06	99	1296	115	18.08	27.55	208	1821	206	0.00	64.7
SESVanderhave H46711	36	352.6	103	8585	105	0.94	49.62	105	1207	107	18.57	24.40	172	1646	228	0.00	61.2
SESVanderhave H46714	5	338.3	99	8957	110	0.95	46.27	98	1226	109	17.87	26.44	215	1774	191	0.00	61.8
SESVanderhave H46807	38	344.6	100	8828	108	0.98	47.73	101	1224	109	18.21	25.60	183	1782	221	0.00	64.3
SESVanderhave H46905	31	342.9	100	8230	101	0.98	47.34	100	1136	101	18.12	24.03	215	1771	209	0.00	67.2
SESVanderhave H48607(46907)	49	345.2	101	9116	112	0.97	47.89	101	1263	112	18.24	26.47	180	1726	228	0.00	66.9
SESVanderhave H46911	18	347.3	101	7628	93	0.95	48.37	102	1060	94	18.33	22.07	244	1673	207	0.00	61.7
SESVanderhave H48716	26	353.5	103	8226	101	0.91	49.83	105	1158	103	18.58	23.32	156	1548	236	0.00	67.4
SESVanderhave H48717	10	348.3	101	8489	104	1.01	48.62	103	1186	105	18.43	24.36	149	1705	279	0.00	58.5
SESVanderhave H66855	28	338.2	99	6352	78	0.99	46.25	98	870	77	17.90	18.72	238	1766	214	0.00	55.2
Hilleshög 2417Rz(Check)	53	343.8	100	7632	93	1.05	47.56	100	1055	94	18.25	22.24	188	1761	280	0.00	55.1
Susc 3N - Mod Aph	54	336.7	98	5521	68	1.00	45.89	97	758	67	17.82	16.20	301	1706	213	0.00	52.5
Susc 3N - Aph Tol	55	335.0	98	6307	77	0.93	45.49	96	856	76	17.68	18.83	281	1609	193	0.00	55.2
Very Susc 3N - Aph Spc	56	347.5	101	6038	74	0.92	48.41	102	843	75	18.29	17.32	241	1628	194	0.00	56.1
Check Mean		343.2		8165		1.01	47.42		1127		18.17	23.81	202	1727	252	0.0	60.9
Coeff. of Var. (%)		2.6		6.7		7.1	4.4		7.5		2.3	6.3	19.7	5.3	12.3		11.9
F Value		3.25		15.74		6.46	3.25		12.43		3.49	18.91	3.51	6.92	9.87		2.96
Mean LSD (0.05)		10.5		664		0.09	2.46		102		0.49	1.84	48	111	37		8.4
Mean LSD (0.01)		13.8		875		0.11	3.25		134		0.64	2.43	64	146	49		11.1
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2007 Data from Scandia

Created 10-29-2007.

Vigor not collected.

Trial # = 078606

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

++ Revenue estimates are based on a $41.97 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 17.

2007 Performance of Varieties - ACSC Commercial Official Trial

Crookston - Light Rzm - 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. %
Beta 1100R	48	299.0	101	8009	108	0.86	37.05	101	993	108	15.81	26.76	241	1308	229	0.00	74.1
Beta 1120R	14	304.6	103	6958	93	0.89	38.37	105	876	96	16.12	22.84	283	1296	240	0.00	70.1
Beta 1140R	2	310.6	105	7853	105	0.82	39.77	109	1006	110	16.36	25.26	253	1249	216	0.00	77.7
Beta 1160R	33	293.7	99	7404	99	0.89	35.81	98	904	99	15.57	25.18	246	1307	250	0.00	65.4
Beta 1180R	25	296.0	100	6122	82	0.88	36.35	99	752	82	15.68	20.67	332	1232	234	0.00	66.1
Beta 1301R	9	283.7	95	6996	94	1.08	33.46	91	825	90	15.26	24.69	404	1441	308	0.00	68.5
Beta 1305R	21	288.7	97	6755	91	1.02	34.64	95	812	89	15.46	23.36	355	1329	306	0.00	62.4
Beta 1683R (BX1683)	41	287.4	97	7568	102	0.97	34.33	94	904	99	15.33	26.32	333	1347	264	0.00	70.1
Beta 1772R (BX1572)	39	303.4	102	6976	94	1.00	38.09	104	876	96	16.17	22.98	327	1355	297	0.00	70.2
Beta 4554R (BX1454)	32	299.2	101	7376	99	1.02	37.10	101	914	100	15.99	24.66	449	1444	244	0.00	65.5
Crystal 727	1	306.8	103	6819	92	0.89	38.89	106	864	94	16.22	22.23	279	1347	224	0.00	69.3
Crystal R308	44	308.5	104	7119	96	0.92	39.28	107	907	99	16.34	23.05	281	1380	243	0.00	68.8
Crystal R431	13	303.9	102	7549	101	0.94	38.21	104	948	103	16.14	24.87	303	1459	229	0.00	72.0
Crystal R434	50	289.6	97	7589	102	1.14	34.86	95	913	100	15.63	26.22	420	1450	350	0.00	70.7
Crystal R652	27	285.1	96	7657	103	1.05	33.80	92	908	99	15.31	26.86	341	1454	305	0.00	70.4
Crystal R760	4	290.5	98	7756	104	0.97	35.06	96	935	102	15.50	26.72	313	1394	272	0.14	69.7
Crystal R761	16	290.7	98	7814	105	1.08	35.11	96	945	103	15.62	26.84	401	1483	296	0.00	74.8
Crystal R762	35	297.5	100	7697	103	0.91	36.69	100	949	104	15.79	25.88	277	1354	250	0.00	70.4
Crystal R763	7	294.8	99	6326	85	0.90	36.06	98	774	84	15.64	21.46	308	1301	242	0.00	67.0
Crystal R764	43	283.2	95	7485	101	0.93	33.34	91	882	96	15.09	26.40	282	1303	268	0.00	79.9
Hilleshog 3028Rz (7228)	19	300.2	101	7528	101	0.95	37.34	102	937	102	15.96	25.08	406	1297	241	0.00	70.6
Hilleshog 3031Rz (7231)	3	303.2	102	6688	90	0.87	38.03	104	840	92	16.04	22.02	287	1190	256	0.00	61.6
Hilleshog 3035Rz (7235)	46	296.7	100	7365	99	0.92	36.51	100	906	99	15.76	24.83	307	1306	253	0.07	68.0
Hilleshog 3036Rz (7236)	40	302.7	102	8261	111	0.89	37.92	104	1035	113	16.03	27.31	223	1299	264	0.00	67.2
Hilleshog 3050Rz(7250)	22	298.8	101	8213	110	0.92	37.01	101	1018	111	15.86	27.48	284	1292	264	0.00	69.0
Hilleshog 3051Rz(7251)	15	294.9	99	8470	114	0.95	36.08	99	1038	113	15.70	28.70	369	1335	250	0.00	75.0
Hilleshog 3052Rz(7252)	23	294.9	99	7959	107	0.90	36.09	99	974	106	15.64	26.97	315	1286	236	0.00	70.3
Holly 317	52	292.4	98	6437	86	0.92	35.49	97	782	85	15.54	22.01	367	1232	252	0.07	75.1
Holly 556 (05HX556)	12	284.6	96	7702	103	0.88	33.67	92	912	99	15.11	27.05	266	1294	244	0.00	73.7
Holly 06HX629	29	294.2	99	7813	105	0.84	35.92	98	954	104	15.55	26.53	354	1278	184	0.14	84.2
Holly 07HX701	34	312.1	105	7787	105	0.82	40.12	110	1002	109	16.43	24.94	249	1274	208	0.00	74.0
Holly 07HX702	6	298.1	100	6914	93	0.79	36.84	101	854	93	15.69	23.21	285	1132	202	0.00	75.0
Seedex SX0835	37	287.6	97	7209	97	0.91	34.37	94	860	94	15.29	25.12	393	1231	235	0.07	75.9
Seedex SX0841	45	291.2	98	8132	109	0.88	35.23	96	986	108	15.45	27.86	372	1310	203	0.14	84.2
Seedex SX0842	24	288.9	97	7445	100	0.91	34.69	95	894	98	15.35	25.75	364	1318	222	0.07	83.5
Seedex Alpine	8	300.9	101	7762	104	0.91	37.49	102	967	105	15.96	25.81	239	1332	269	0.00	68.6
Seedex Magnum	42	304.5	102	6793	91	0.92	38.33	105	855	93	16.14	22.34	348	1272	249	0.00	64.1
Seedex Rezult	30	304.2	102	7122	96	0.92	38.27	105	896	98	16.13	23.41	272	1425	233	0.07	61.6
Seedex Sonic	51	295.4	99	8482	114	0.88	36.20	99	1039	113	15.64	28.73	289	1208	251	0.00	71.3
SESVanderhave H46519	17	287.8	97	8044	108	0.91	34.42	94	962	105	15.30	27.96	332	1259	250	0.07	60.9
SESVanderhave H46531	20	297.4	100	8239	111	0.84	36.67	100	1016	111	15.71	27.71	277	1224	223	0.00	72.1
SESVanderhave H46532	11	283.4	95	7700	103	0.95	33.39	91	907	99	15.12	27.18	403	1227	259	0.07	67.3
SESVanderhave H46533	47	291.2	98	7856	106	0.88	35.23	96	950	104	15.44	26.99	345	1323	204	0.00	83.7
SESVanderhave H46711	36	310.2	104	7718	104	0.83	39.67	108	988	108	16.34	24.86	237	1281	220	0.00	81.0
SESVanderhave H46714	5	293.4	99	7772	104	0.84	35.73	98	947	103	15.50	26.49	377	1252	175	0.00	78.9
SESVanderhave H46807	38	297.6	100	7951	107	0.91	36.73	100	982	107	15.79	26.71	335	1297	236	0.00	74.7
SESVanderhave H46905	31	305.0	103	7736	104	0.83	38.45	105	975	106	16.08	25.36	280	1293	197	0.00	80.9
SESVanderhave H48607(46907)	49	289.3	97	7672	103	0.85	34.78	95	923	101	15.32	26.50	275	1346	206	0.00	77.3
SESVanderhave H46911	18	290.8	98	6652	89	0.85	35.14	96	803	88	15.40	22.90	429	1175	196	0.00	70.9
SESVanderhave H48716	26	302.2	102	6715	90	0.85	37.81	103	841	92	15.96	22.19	228	1277	237	0.00	75.1
SESVanderhave H48717	10	297.6	100	7755	104	0.94	36.73	100	957	104	15.82	26.04	300	1315	267	0.07	72.6
SESVanderhave H66855	28	308.2	104	7511	101	0.93	39.21	107	956	104	16.34	24.36	328	1348	235	0.00	68.2
Hilleshög 2417Rz(Check)	53	297.4	100	7496	101	0.92	36.68	100	924	101	15.79	25.22	338	1308	240	0.00	60.0
Susc 3N - Mod Aph	54	310.7	105	6790	91	0.95	39.78	109	871	95	16.48	21.83	378	1337	244	0.00	56.7
Susc 3N - Aph Tol	55	306.9	103	6860	92	0.93	38.89	106	871	95	16.27	22.32	351	1309	243	0.00	71.0
Very Susc 3N - Aph Spc	56	308.8	104	6547	88	0.95	39.34	107	833	91	16.39	21.26	429	1312	232	0.00	67.4
Check Mean		297.1		7445		0.92	36.62		917		15.77	25.08	323	1311	244	0.0	71.3
Coeff. of Var. (%)		2.7		4.5		6.1	5.1		6.0		2.3	4.0	18.0	6.2	8.8		10.9
F Value		5.4		15.5		8.31	5.4		8.47		5.72	24.57	5.01	4.43	12.59		3.76
Mean LSD (0.05)		9.6		402		0.07	2.24		66		0.44	1.20	71	99	25		9.0
Mean LSD (0.01)		12.6		530		0.09	2.95		87		0.59	1.59	93	130	33		11.8
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2007 Data from Crookston

Created 10-29-2007.

Vigor not collected.

Trial # = 078607

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

++ Revenue estimates are based on a $41.97 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 18.

2007 Performance of Varieties - ACSC Commercial Official Trial

Grand Forks - Light Rzm - 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. %
Beta 1100R	48	281.2	100	8905	112	1.25	32.88	100	1041	112	15.31	31.71	437	1927	300	0.00	55.8
Beta 1120R	14	289.9	103	7745	97	1.33	34.91	106	934	100	15.82	26.73	458	1933	346	0.00	45.9
Beta 1140R	2	294.9	105	8388	105	1.24	36.08	110	1024	110	15.98	28.44	499	1772	308	0.00	56.3
Beta 1160R	33	266.7	95	8066	101	1.44	29.47	90	891	96	14.78	30.19	450	2072	404	0.07	53.9
Beta 1180R	25	284.5	101	7516	94	1.25	33.66	102	891	96	15.48	26.39	455	1735	336	0.00	51.7
Beta 1301R	9	274.9	98	7735	97	1.42	31.41	95	882	95	15.16	28.18	419	2092	389	0.00	49.7
Beta 1305R	21	275.3	98	7517	94	1.55	31.50	96	857	92	15.31	27.37	544	2113	438	0.00	47.4
Beta 1683R (BX1683)	41	272.0	97	8051	101	1.51	30.71	93	907	98	15.11	29.60	533	2085	422	0.00	51.7
Beta 1772R (BX1572)	39	291.1	103	7614	96	1.45	35.20	107	920	99	16.00	26.21	518	1889	430	0.00	48.2
Beta 4554R (BX1454)	32	283.5	101	7482	94	1.42	33.41	101	882	95	15.59	26.59	566	2084	339	0.00	44.0
Crystal 727	1	297.1	106	7546	95	1.43	36.60	111	930	100	16.29	25.51	503	1936	412	0.00	51.1
Crystal R308	44	288.4	102	7599	95	1.47	34.56	105	910	98	15.88	26.38	587	1925	414	0.00	51.3
Crystal R431	13	282.2	100	8050	101	1.44	33.11	101	943	101	15.55	28.61	468	2215	359	0.00	49.9
Crystal R434	50	275.8	98	7820	98	1.62	31.61	96	893	96	15.41	28.48	533	2144	493	0.00	54.9
Crystal R652	27	266.2	95	8243	103	1.50	29.37	89	909	98	14.80	30.99	535	2095	408	0.07	62.8
Crystal R760	4	271.9	97	8448	106	1.43	30.70	93	956	103	15.02	31.00	470	2113	374	0.00	55.0
Crystal R761	16	270.0	96	8613	108	1.65	30.25	92	965	104	15.15	31.86	578	2353	443	0.00	60.4
Crystal R762	35	262.8	93	7759	97	1.47	28.58	87	844	91	14.61	29.51	541	1980	410	0.00	47.3
Crystal R763	7	288.4	102	6879	86	1.25	34.57	105	825	89	15.67	23.93	397	1901	321	0.00	49.9
Crystal R764	43	267.1	95	8160	102	1.39	29.56	90	902	97	14.74	30.73	441	2055	370	0.00	66.5
Hilleshog 3028Rz (7228)	19	280.1	100	7925	99	1.39	32.63	99	923	99	15.39	28.31	602	1935	339	0.00	49.7
Hilleshog 3031Rz (7231)	3	286.5	102	6814	86	1.39	34.13	104	810	87	15.71	23.98	498	1928	384	0.00	41.3
Hilleshog 3035Rz (7235)	46	289.8	103	8036	101	1.38	34.88	106	966	104	15.87	27.81	449	1989	375	0.07	44.7
Hilleshog 3036Rz (7236)	40	303.7	108	8257	104	1.32	38.14	116	1037	112	16.50	27.31	339	1894	393	0.00	51.1
Hilleshog 3050Rz(7250)	22	290.6	103	8305	104	1.31	35.09	107	1000	108	15.84	28.77	405	1895	365	0.00	59.0
Hilleshog 3051Rz(7251)	15	278.1	99	8452	106	1.35	32.15	98	978	105	15.26	30.45	517	1983	333	0.00	57.1
Hilleshog 3052Rz(7252)	23	293.9	104	8707	109	1.30	35.85	109	1062	114	15.99	29.72	412	1969	334	0.00	56.8
Holly 317	52	282.7	100	7285	91	1.27	33.23	101	857	92	15.41	25.66	468	1838	325	0.07	63.5
Holly 556 (05HX556)	12	265.7	94	8141	102	1.42	29.26	89	897	96	14.71	30.71	454	2103	376	0.00	47.0
Holly 06HX629	29	274.7	98	8330	105	1.30	31.35	95	950	102	15.04	30.24	501	2048	279	0.07	62.3
Holly 07HX701	34	297.0	106	8191	103	1.24	36.59	111	1007	108	16.09	27.72	390	1953	298	0.00	57.4
Holly 07HX702	6	289.1	103	8099	102	1.17	34.73	105	972	105	15.62	27.97	421	1709	304	0.07	66.7
Seedex SX0835	37	268.6	95	8301	104	1.38	29.94	91	927	100	14.82	30.86	590	1948	331	0.29	62.0
Seedex SX0841	45	278.3	99	8514	107	1.28	32.19	98	984	106	15.20	30.54	505	2002	277	0.14	67.5
Seedex SX0842	24	270.1	96	8354	105	1.31	30.28	92	937	101	14.81	30.84	517	1952	311	0.00	74.8
Seedex Alpine	8	287.8	102	8430	106	1.35	34.43	105	1009	109	15.74	29.30	385	2054	363	0.07	53.9
Seedex Magnum	42	284.3	101	7055	89	1.34	33.60	102	837	90	15.56	24.66	453	1913	363	0.00	52.3
Seedex Rezult	30	288.1	102	7425	93	1.29	34.48	105	888	95	15.70	25.79	441	2029	302	0.07	51.6
Seedex Sonic	51	278.6	99	8786	110	1.35	32.27	98	1017	109	15.28	31.46	462	1968	356	0.00	57.8
SESVanderhave H46519	17	267.9	95	8094	102	1.38	29.77	90	901	97	14.78	30.13	470	2010	367	0.00	51.9
SESVanderhave H46531	20	271.9	97	8348	105	1.36	30.69	93	941	101	14.95	30.74	463	2050	342	0.07	54.8
SESVanderhave H46532	11	276.2	98	8246	104	1.37	31.71	96	945	102	15.18	29.95	480	1963	366	0.14	48.2
SESVanderhave H46533	47	262.2	93	7999	100	1.42	28.43	86	868	93	14.54	30.47	649	2045	321	0.14	63.4
SESVanderhave H46711	36	287.2	102	8328	105	1.30	34.28	104	994	107	15.65	28.99	404	1985	331	0.00	61.5
SESVanderhave H46714	5	270.1	96	8568	108	1.31	30.27	92	960	103	14.82	31.80	555	1984	287	0.00	54.8
SESVanderhave H46807	38	272.0	97	8247	104	1.42	30.71	93	931	100	15.02	30.31	516	2076	362	0.00	54.8
SESVanderhave H46905	31	297.9	106	8653	109	1.21	36.80	112	1067	115	16.11	29.02	442	1845	287	0.22	64.5
SESVanderhave H48607(46907)	49	272.2	97	8100	102	1.31	30.77	93	915	98	14.92	29.64	481	1948	318	0.00	56.8
SESVanderhave H46911	18	282.3	100	7704	97	1.26	33.14	101	904	97	15.38	27.25	540	1854	289	0.00	57.3
SESVanderhave H48716	26	294.8	105	7989	100	1.22	36.08	110	977	105	15.96	26.95	384	1850	314	0.00	62.7
SESVanderhave H48717	10	290.4	103	8078	101	1.26	35.03	106	976	105	15.79	27.68	370	1845	352	0.00	63.7
SESVanderhave H66855	28	289.8	103	7422	93	1.36	34.89	106	894	96	15.85	25.51	513	1875	366	0.00	49.0
Hilleshög 2417Rz(Check)	53	278.8	99	7325	92	1.30	32.31	98	849	91	15.24	26.34	493	1924	316	0.00	41.9
Susc 3N - Mod Aph	54	291.9	104	7059	89	1.45	35.39	108	857	92	16.05	24.04	565	2024	375	0.00	45.3
Susc 3N - Aph Tol	55	293.1	104	7350	92	1.38	35.66	108	894	96	16.03	25.04	501	1974	363	0.07	45.9
Very Susc 3N - Aph Spc	56	286.1	102	7038	88	1.54	34.02	103	838	90	15.85	24.59	677	2047	399	0.00	44.6
Check Mean		281.4		7966		1.37	32.92		930		15.43	28.37	486	1979	355	0.0	54.5
Coeff. of Var. (%)		4.7		5.9		7.7	9.3		9.8		3.8	4.3	21.6	5.5	11.2		15.2
F Value		3.43		5.99		4.77	3.43		2.33		3.75	19.99	2.22	6.04	7.28		4.62
Mean LSD (0.05)		15.6		567		0.13	3.66		110		0.70	1.41	127	131	48		9.4
Mean LSD (0.01)		20.6		747		0.17	4.82		145		0.92	1.86	167	173	63		12.4
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2007 Data from Grand Forks

Created 10-29-2007.

Vigor not collected.

Trial # = 078608

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

++ Revenue estimates are based on a $41.97 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 19.

2007 Performance of Varieties - ACSC Commercial Official Trial

Grafton - Light Rzm - 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. %
Beta 1100R	48	350.6	97	10855	105	0.97	49.15	95	1520	103	18.51	30.97	185	1767	216	0.00	67.1
Beta 1120R	14	370.8	102	10196	98	1.02	53.87	104	1482	100	19.56	27.49	196	1763	251	0.07	62.6
Beta 1140R	2	364.9	101	9809	95	0.95	52.49	101	1412	95	19.19	26.88	206	1703	207	0.00	76.1
Beta 1160R	33	354.7	98	9859	95	1.04	50.11	97	1392	94	18.78	27.81	180	1890	241	0.00	61.1
Beta 1180R	25	364.7	101	9423	91	0.98	52.45	101	1358	92	19.21	25.77	204	1659	244	0.00	57.5
Beta 1301R	9	337.2	93	10041	97	1.27	46.00	89	1370	92	18.13	29.75	248	2101	337	0.00	61.6
Beta 1305R	21	352.5	97	10263	99	1.17	49.60	96	1443	97	18.80	29.11	196	1939	319	0.00	57.2
Beta 1683R (BX1683)	41	352.6	97	10481	101	1.09	49.62	96	1475	100	18.73	29.73	199	1969	253	0.00	71.2
Beta 1772R (BX1572)	39	364.4	101	9702	94	1.17	52.39	101	1393	94	19.39	26.69	260	1947	295	0.07	62.3
Beta 4554R (BX1454)	32	363.7	100	9971	96	1.25	52.22	101	1434	97	19.43	27.31	323	2107	289	0.00	55.8
Crystal 727	1	378.8	105	9932	96	1.04	55.77	108	1461	99	19.98	26.26	195	1958	214	0.00	63.2
Crystal R308	44	372.0	103	9622	93	1.07	54.16	105	1399	94	19.67	25.92	209	1946	238	0.00	63.5
Crystal R431	13	365.6	101	9991	96	1.10	52.66	102	1440	97	19.38	27.32	211	2005	242	0.00	67.5
Crystal R434	50	352.0	97	10623	102	1.20	49.47	96	1493	101	18.80	30.19	240	1937	329	0.00	67.7
Crystal R652	27	351.9	97	11421	110	1.13	49.45	95	1603	108	18.73	32.50	209	1958	283	0.00	64.4
Crystal R760	4	359.4	99	11062	107	1.02	51.21	99	1573	106	18.99	30.84	192	1810	240	0.00	71.5
Crystal R761	16	348.2	96	11145	107	1.29	48.58	94	1554	105	18.70	32.01	240	2217	321	0.07	72.7
Crystal R762	35	354.3	98	10378	100	1.07	50.01	97	1465	99	18.79	29.27	193	1850	272	0.00	57.0
Crystal R763	7	362.3	100	8774	85	1.05	51.90	100	1258	85	19.17	24.17	225	1872	237	0.00	66.9
Crystal R764	43	355.9	98	10977	106	0.96	50.39	97	1555	105	18.75	30.86	181	1700	225	0.00	73.9
Hilleshog 3028Rz (7228)	19	361.9	100	9934	96	1.08	51.81	100	1422	96	19.18	27.41	244	1946	234	0.07	72.7
Hilleshog 3031Rz (7231)	3	379.6	105	9970	96	1.00	55.95	108	1470	99	19.98	26.26	198	1714	246	0.00	56.3
Hilleshog 3035Rz (7235)	46	369.1	102	10213	98	0.98	53.49	103	1479	100	19.43	27.74	176	1736	233	0.00	61.5
Hilleshog 3036Rz (7236)	40	368.9	102	9838	95	1.00	53.44	103	1421	96	19.44	26.81	169	1733	253	0.00	61.8
Hilleshog 3050Rz(7250)	22	365.0	101	10795	104	1.03	52.52	101	1554	105	19.28	29.54	207	1829	236	0.00	66.0
Hilleshog 3051Rz(7251)	15	364.3	101	11180	108	1.01	52.36	101	1607	108	19.23	30.67	228	1756	233	0.00	74.7
Hilleshog 3052Rz(7252)	23	368.9	102	10947	106	1.00	53.44	103	1584	107	19.45	29.71	183	1757	243	0.00	70.2
Holly 317	52	365.1	101	9668	93	1.01	52.55	101	1391	94	19.27	26.51	205	1798	234	0.14	74.0
Holly 556 (05HX556)	12	348.2	96	10703	103	1.07	48.58	94	1493	101	18.48	30.71	171	1958	250	0.00	60.5
Holly 06HX629	29	353.3	98	10628	102	1.01	49.77	96	1498	101	18.67	30.04	233	1910	189	0.07	79.1
Holly 07HX701	34	375.5	104	10822	104	1.00	54.97	106	1584	107	19.78	28.81	190	1794	233	0.00	75.2
Holly 07HX702	6	357.2	99	10638	103	0.99	50.69	98	1510	102	18.85	29.77	188	1742	234	0.00	81.0
Seedex SX0835	37	364.1	101	11668	113	1.00	52.30	101	1677	113	19.20	32.04	213	1826	213	0.43	75.5
Seedex SX0841	45	350.6	97	10977	106	1.04	49.15	95	1538	104	18.57	31.36	244	1905	213	0.07	81.4
Seedex SX0842	24	357.4	99	11389	110	1.04	50.73	98	1615	109	18.91	31.94	229	1890	223	0.14	79.2
Seedex Alpine	8	363.6	100	10037	97	1.01	52.20	101	1441	97	19.19	27.63	191	1817	230	0.14	59.5
Seedex Magnum	42	370.1	102	9233	89	1.12	53.71	104	1342	91	19.62	24.89	223	1900	281	0.00	63.6
Seedex Rezult	30	363.1	100	10017	97	1.03	52.06	101	1435	97	19.18	27.65	197	1807	242	0.07	60.2
Seedex Sonic	51	356.7	99	10631	103	1.08	50.57	98	1506	102	18.91	29.85	251	1863	250	0.00	74.4
SESVanderhave H46519	17	358.1	99	10810	104	1.04	50.89	98	1535	104	18.95	30.21	185	1832	253	0.00	64.5
SESVanderhave H46531	20	365.6	101	11017	106	1.03	52.66	102	1584	107	19.31	30.20	201	1818	245	0.07	66.9
SESVanderhave H46532	11	358.3	99	10348	100	1.07	50.95	98	1472	99	18.98	28.89	202	1920	244	0.07	63.7
SESVanderhave H46533	47	351.3	97	11012	106	1.06	49.30	95	1545	104	18.62	31.39	223	1982	212	0.29	77.9
SESVanderhave H46711	36	369.2	102	11127	107	0.97	53.50	103	1609	109	19.43	30.22	171	1748	222	0.07	70.3
SESVanderhave H46714	5	354.2	98	10998	106	0.98	50.00	97	1553	105	18.69	31.03	240	1876	177	0.00	71.3
SESVanderhave H46807	38	356.9	99	10623	102	1.02	50.62	98	1509	102	18.86	29.73	203	1900	212	0.07	69.3
SESVanderhave H46905	31	361.1	100	10416	100	0.95	51.62	100	1487	100	19.00	28.91	175	1822	187	0.29	76.2
SESVanderhave H48607(46907)	49	357.9	99	10737	104	0.97	50.86	98	1524	103	18.86	30.07	186	1780	208	0.00	81.0
SESVanderhave H46911	18	364.0	101	9954	96	1.03	52.28	101	1429	96	19.23	27.40	226	1849	228	0.00	72.2
SESVanderhave H48716	26	356.8	99	10812	104	0.99	50.59	98	1532	103	18.82	30.34	180	1733	240	0.00	71.8
SESVanderhave H48717	10	361.9	100	10773	104	1.04	51.79	100	1542	104	19.14	29.81	177	1754	279	0.00	77.9
SESVanderhave H66855	28	378.1	104	10028	97	1.08	55.59	107	1475	100	19.98	26.52	225	1902	251	0.00	60.8
Hilleshög 2417Rz(Check)	53	367.7	102	10116	98	0.95	53.16	103	1462	99	19.34	27.50	167	1728	219	0.00	55.8
Susc 3N - Mod Aph	54	384.9	106	9698	94	1.13	57.19	110	1442	97	20.37	25.11	226	1970	269	0.00	63.7
Susc 3N - Aph Tol	55	371.4	103	9401	91	1.12	54.03	104	1367	92	19.69	25.33	223	1940	272	0.00	61.5
Very Susc 3N - Aph Spc	56	372.1	103	8965	86	1.09	54.17	105	1305	88	19.70	24.09	269	1867	252	0.00	58.6
Check Mean		361.9		10369		1.05	51.80		1482		19.15	28.70	209	1861	245	0.0	67.7
Coeff. of Var. (%)		2.6		5.2		7.0	4.3		6.0		2.3	4.8	17.4	5.8	13.1		9.9
F Value		5.22		7.33		6.04	5.22		4.56		5.82	12.88	3.55	5.5	5.9		6.81
Mean LSD (0.05)		11.3		652		0.09	2.66		108		0.52	1.69	43	130	38		7.8
Mean LSD (0.01)		15.0		859		0.12	3.50		142		0.69	2.23	57	171	50		10.3
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2007 Data from Grafton

Created 10-29-2007.

Vigor not collected.

Trial # = 078609

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

++ Revenue estimates are based on a $41.97 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 20.

2007 Performance of Varieties - ACSC Commercial Official Trial

Argyle - Light Rzm - 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. %
Beta 1100R	48	328.2	97	9198	112	0.96	43.91	94	1231	109	17.37	28.03	192	1703	224	0.00	85.8
Beta 1120R	14	352.2	104	8247	100	1.03	49.53	106	1160	103	18.64	23.40	204	1700	274	0.00	76.3
Beta 1140R	2	354.2	104	8680	106	0.94	50.00	107	1224	109	18.65	24.52	192	1619	231	0.00	86.7
Beta 1160R	33	322.8	95	8221	100	1.15	42.64	91	1083	96	17.29	25.59	198	1957	300	0.00	76.3
Beta 1180R	25	339.8	100	7502	91	1.00	46.62	100	1028	91	18.00	22.08	211	1659	263	0.00	82.9
Beta 1301R	9	326.2	96	8134	99	1.20	43.42	93	1083	96	17.51	24.92	213	1981	329	0.07	73.3
Beta 1305R	21	332.8	98	8116	99	1.19	44.97	96	1096	97	17.83	24.38	214	1881	350	0.00	67.2
Beta 1683R (BX1683)	41	329.8	97	8236	100	1.14	44.27	95	1105	98	17.63	24.95	204	1962	290	0.00	81.3
Beta 1772R (BX1572)	39	342.6	101	7780	95	1.21	47.26	101	1072	95	18.33	22.75	248	1951	327	0.00	78.9
Beta 4554R (BX1454)	32	340.2	100	8110	99	1.17	46.70	100	1111	99	18.18	23.94	327	1910	281	0.00	61.7
Crystal 727	1	356.1	105	7764	94	1.00	50.43	108	1101	98	18.80	21.80	171	1794	232	0.00	74.9
Crystal R308	44	349.4	103	8000	97	1.10	48.86	105	1119	99	18.56	22.92	193	1937	266	0.00	75.0
Crystal R431	13	344.1	101	7787	95	1.19	47.62	102	1077	96	18.39	22.62	187	2121	290	0.00	80.8
Crystal R434	50	327.6	96	8112	99	1.32	43.76	94	1084	96	17.70	24.73	300	1954	393	0.00	84.0
Crystal R652	27	323.9	95	8519	104	1.14	42.89	92	1127	100	17.34	26.30	208	1883	310	0.00	78.2
Crystal R760	4	324.3	95	8200	100	1.08	42.98	92	1088	97	17.30	25.22	194	1872	275	0.00	84.0
Crystal R761	16	334.8	98	8965	109	1.33	45.45	97	1216	108	18.07	26.84	240	2205	357	0.00	82.0
Crystal R762	35	336.8	99	8803	107	1.06	45.92	98	1201	107	17.90	26.04	186	1781	281	0.07	80.7
Crystal R763	7	342.4	101	6791	83	1.03	47.23	101	937	83	18.15	19.77	195	1767	257	0.00	84.3
Crystal R764	43	329.8	97	8669	105	1.05	44.26	95	1162	103	17.53	26.36	194	1736	278	0.00	86.9
Hilleshog 3028Rz (7228)	19	345.2	101	8004	97	1.11	47.87	103	1110	98	18.37	23.24	276	1841	271	0.00	73.0
Hilleshog 3031Rz (7231)	3	350.9	103	7624	93	1.04	49.22	105	1066	95	18.59	21.82	183	1650	300	0.00	62.8
Hilleshog 3035Rz (7235)	46	347.9	102	8490	103	1.02	48.50	104	1184	105	18.41	24.39	191	1673	273	0.00	79.3
Hilleshog 3036Rz (7236)	40	347.8	102	8215	100	1.08	48.50	104	1146	102	18.46	23.67	166	1763	302	0.00	74.0
Hilleshog 3050Rz(7250)	22	343.8	101	8752	106	1.03	47.55	102	1211	107	18.22	25.47	190	1727	268	0.00	77.1
Hilleshog 3051Rz(7251)	15	333.4	98	8547	104	1.08	45.12	97	1159	103	17.76	25.46	270	1782	270	0.00	85.0
Hilleshog 3052Rz(7252)	23	339.4	100	8609	105	1.05	46.51	100	1179	105	18.02	25.37	213	1739	272	0.00	81.2
Holly 317	52	346.2	102	7905	96	1.02	48.12	103	1098	97	18.33	22.80	207	1646	273	0.00	82.4
Holly 556 (05HX556)	12	328.1	96	8477	103	1.10	43.86	94	1133	101	17.50	25.84	204	1862	285	0.00	80.0
Holly 06HX629	29	327.3	96	8411	102	1.05	43.68	94	1121	99	17.41	25.78	310	1725	241	0.07	88.8
Holly 07HX701	34	362.5	107	8551	104	0.99	51.93	111	1226	109	19.12	23.60	166	1775	242	0.00	83.2
Holly 07HX702	6	346.4	102	8065	98	0.99	48.16	103	1121	99	18.31	23.34	187	1710	240	0.00	88.4
Seedex SX0835	37	342.5	101	8721	106	1.02	47.25	101	1203	107	18.15	25.48	229	1722	249	0.36	92.5
Seedex SX0841	45	333.6	98	8505	103	1.02	45.17	97	1150	102	17.70	25.50	215	1809	229	0.00	86.3
Seedex SX0842	24	349.6	103	8709	106	0.99	48.92	105	1220	108	18.47	24.86	191	1777	225	0.07	90.4
Seedex Alpine	8	343.4	101	8507	103	1.07	47.46	102	1177	104	18.24	24.80	182	1759	297	0.07	82.2
Seedex Magnum	42	340.4	100	7295	89	1.12	46.74	100	1006	89	18.14	21.23	332	1768	279	0.07	73.6
Seedex Rezult	30	344.0	101	7538	92	1.04	47.60	102	1041	92	18.24	22.02	188	1815	254	0.00	73.1
Seedex Sonic	51	335.2	99	8653	105	1.03	45.54	98	1177	104	17.79	25.76	190	1753	263	0.00	82.7
SESVanderhave H46519	17	322.5	95	8367	102	1.09	42.55	91	1104	98	17.22	25.96	233	1759	295	0.00	75.9
SESVanderhave H46531	20	334.5	98	8947	109	1.08	45.36	97	1214	108	17.80	26.71	233	1706	298	0.00	78.7
SESVanderhave H46532	11	333.2	98	8554	104	1.06	45.06	97	1156	103	17.72	25.72	224	1786	262	0.14	81.2
SESVanderhave H46533	47	334.2	98	8733	106	0.99	45.31	97	1184	105	17.71	26.12	227	1816	204	0.14	88.4
SESVanderhave H46711	36	352.7	104	7983	97	0.97	49.65	106	1127	100	18.61	22.61	134	1744	244	0.00	84.6
SESVanderhave H46714	5	325.2	96	8424	102	1.00	43.19	93	1120	99	17.26	25.83	267	1760	211	0.07	81.7
SESVanderhave H46807	38	343.1	101	8967	109	1.02	47.39	101	1240	110	18.17	26.15	212	1782	240	0.07	80.4
SESVanderhave H46905	31	332.9	98	7908	96	1.06	44.99	96	1069	95	17.71	23.73	242	1910	231	0.14	84.3
SESVanderhave H48607(46907)	49	335.7	99	8503	103	0.97	45.66	98	1157	103	17.76	25.31	148	1770	233	0.00	91.9
SESVanderhave H46911	18	346.6	102	8125	99	0.96	48.20	103	1131	100	18.29	23.39	245	1650	218	0.00	85.6
SESVanderhave H48716	26	341.6	100	8005	97	1.01	47.04	101	1102	98	18.10	23.39	203	1721	255	0.00	86.8
SESVanderhave H48717	10	351.1	103	8518	104	1.03	49.27	106	1194	106	18.59	24.29	152	1716	291	0.00	81.2
SESVanderhave H66855	28	339.3	100	7695	94	1.17	46.50	100	1053	93	18.14	22.73	312	1891	291	0.00	69.6
Hilleshög 2417Rz(Check)	53	344.8	101	8388	102	1.04	47.78	102	1163	103	18.28	24.31	207	1782	255	0.00	61.2
Susc 3N - Mod Aph	54	357.7	105	7250	88	1.14	50.81	109	1028	91	19.02	20.33	243	1932	284	0.00	70.8
Susc 3N - Aph Tol	55	351.4	103	7383	90	1.08	49.33	106	1039	92	18.65	20.96	231	1847	265	0.00	73.9
Very Susc 3N - Aph Spc	56	354.3	104	7233	88	1.07	50.01	107	1020	91	18.79	20.43	247	1841	254	0.00	71.0
Check Mean		340.1		8221		1.07	46.69		1127		18.08	24.21	216	1805	271	0.0	79.7
Coeff. of Var. (%)		2.7		5.8		6.0	4.7		6.7		2.4	5.6	26.2	5.5	11.0		7.2
F Value		6.14		6.25		8.98	6.14		4.16		6.51	10.55	3	7.41	8.36		8.97
Mean LSD (0.05)		11.3		571		0.08	2.64		91		0.52	1.59	68	121	36		6.7
Mean LSD (0.01)		14.9		752		0.10	3.48		120		0.69	2.10	90	159	47		8.8
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2007 Data from Argyle

Created 10-29-2007.

Vigor not collected.

Trial # = 078610

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

++ Revenue estimates are based on a $41.97 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 21.

2007 Performance of Varieties - ACSC Commercial Official Trial

Hallock - Light Rzm - 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. %
Beta 1100R	48	327.6	96	7942	108	1.18	43.76	93	1061	105	17.56	24.23	285	2194	230	0.00	85.3
Beta 1120R	14	343.8	101	6911	94	1.19	47.56	101	953	94	18.39	20.23	260	2161	255	0.00	73.2
Beta 1140R	2	354.1	104	8146	110	1.14	49.96	106	1149	113	18.84	23.02	274	2080	229	0.00	82.3
Beta 1160R	33	329.6	96	7312	99	1.27	44.23	94	982	97	17.75	22.17	287	2286	273	0.00	74.5
Beta 1180R	25	344.7	101	7053	96	1.09	47.76	101	979	96	18.32	20.44	286	1908	234	0.00	78.1
Beta 1301R	9	339.2	99	7582	103	1.30	46.46	99	1039	102	18.26	22.35	253	2374	285	0.00	74.8
Beta 1305R	21	342.0	100	7362	100	1.27	47.12	100	1011	100	18.37	21.63	281	2243	284	0.00	75.6
Beta 1683R (BX1683)	41	331.1	97	7088	96	1.27	44.56	95	954	94	17.83	21.43	282	2366	258	0.00	78.1
Beta 1772R (BX1572)	39	339.2	99	6928	94	1.33	46.47	99	949	93	18.28	20.49	329	2257	311	0.00	74.4
Beta 4554R (BX1454)	32	345.2	101	7448	101	1.27	47.87	102	1035	102	18.53	21.52	364	2370	223	0.00	64.0
Crystal 727	1	355.1	104	7302	99	1.20	50.20	107	1034	102	18.96	20.52	281	2234	233	0.00	70.0
Crystal R308	44	344.8	101	7163	97	1.28	47.79	101	992	98	18.52	20.84	299	2444	235	0.00	81.4
Crystal R431	13	344.8	101	7317	99	1.30	47.78	101	1014	100	18.53	21.25	294	2440	251	0.00	76.6
Crystal R434	50	330.5	97	7598	103	1.44	44.43	94	1021	101	17.97	23.01	367	2415	343	0.00	84.8
Crystal R652	27	338.8	99	8318	113	1.27	46.37	98	1140	112	18.20	24.58	244	2396	263	0.00	80.3
Crystal R760	4	329.0	96	8051	109	1.24	44.09	94	1077	106	17.69	24.59	264	2250	268	0.00	81.1
Crystal R761	16	332.9	97	8566	116	1.45	45.00	96	1157	114	18.10	25.70	338	2645	302	0.00	83.4
Crystal R762	35	328.9	96	7012	95	1.32	44.06	94	944	93	17.76	21.18	301	2421	271	0.00	76.3
Crystal R763	7	347.1	102	6586	89	1.15	48.33	103	916	90	18.50	19.02	293	2060	234	0.09	84.0
Crystal R764	43	324.6	95	7253	98	1.20	43.05	91	963	95	17.43	22.29	271	2200	250	0.00	83.7
Hilleshog 3028Rz (7228)	19	347.6	102	7379	100	1.21	48.45	103	1029	101	18.59	21.27	335	2180	240	0.00	76.6
Hilleshog 3031Rz (7231)	3	357.3	105	7658	104	1.12	50.71	108	1086	107	18.98	21.42	237	1975	259	0.00	64.1
Hilleshog 3035Rz (7235)	46	352.1	103	7671	104	1.21	49.50	105	1077	106	18.82	21.84	248	2229	255	0.09	74.6
Hilleshog 3036Rz (7236)	40	352.1	103	7460	101	1.19	49.49	105	1050	103	18.79	21.10	224	2123	273	0.00	76.6
Hilleshog 3050Rz(7250)	22	331.1	97	7561	103	1.20	44.56	95	1022	101	17.75	22.68	294	2104	261	0.00	76.2
Hilleshog 3051Rz(7251)	15	329.9	96	7679	104	1.21	44.29	94	1032	102	17.71	23.25	335	2150	247	0.00	79.8
Hilleshog 3052Rz(7252)	23	344.4	101	7622	103	1.14	47.68	101	1056	104	18.36	22.13	234	2131	237	0.00	72.1
Holly 317	52	346.2	101	7015	95	1.23	48.10	102	978	96	18.54	20.16	334	2228	243	0.09	80.8
Holly 556 (05HX556)	12	335.3	98	7805	106	1.26	45.55	97	1060	104	18.02	23.29	264	2342	257	0.09	79.3
Holly 06HX629	29	343.9	101	7999	109	1.12	47.57	101	1106	109	18.32	23.28	260	2259	176	0.09	87.6
Holly 07HX701	34	346.9	101	7122	97	1.15	48.27	102	991	98	18.49	20.55	282	2134	221	0.00	81.6
Holly 07HX702	6	346.5	101	6991	95	1.15	48.19	102	976	96	18.47	20.07	244	2188	223	0.00	87.6
Seedex SX0835	37	341.0	100	7461	101	1.24	46.90	100	1026	101	18.29	21.90	366	2196	242	0.17	90.5
Seedex SX0841	45	328.8	96	7545	102	1.20	44.04	94	1015	100	17.64	22.78	327	2315	197	0.00	83.5
Seedex SX0842	24	339.2	99	7528	102	1.23	46.46	99	1028	101	18.19	22.33	305	2294	235	0.09	91.5
Seedex Alpine	8	342.2	100	6742	91	1.25	47.17	100	929	92	18.37	19.69	249	2294	272	0.09	83.6
Seedex Magnum	42	348.3	102	6564	89	1.24	48.60	103	917	90	18.65	18.83	322	2269	242	0.00	68.0
Seedex Rezult	30	338.2	99	6831	93	1.21	46.25	98	934	92	18.13	20.18	299	2217	242	0.00	69.7
Seedex Sonic	51	331.9	97	8032	109	1.22	44.77	95	1082	107	17.82	24.23	320	2122	264	0.00	78.3
SESVanderhave H46519	17	332.6	97	7756	105	1.16	44.93	95	1051	104	17.79	23.23	259	2179	230	0.00	73.4
SESVanderhave H46531	20	340.4	100	7910	107	1.23	46.76	99	1087	107	18.25	23.22	265	2304	242	0.00	78.8
SESVanderhave H46532	11	333.2	97	7082	96	1.25	45.07	96	961	95	17.91	21.11	306	2279	254	0.17	81.1
SESVanderhave H46533	47	340.6	100	7636	104	1.17	46.80	99	1051	104	18.20	22.35	304	2260	198	0.09	79.6
SESVanderhave H46711	36	359.9	105	7994	108	1.11	51.32	109	1140	112	19.11	22.21	221	2155	213	0.00	79.3
SESVanderhave H46714	5	338.0	99	7521	102	1.17	46.19	98	1028	101	18.07	22.25	297	2354	173	0.00	78.8
SESVanderhave H46807	38	352.4	103	7478	101	1.16	49.57	105	1052	104	18.78	21.19	245	2320	198	0.00	79.4
SESVanderhave H46905	31	338.0	99	7660	104	1.16	46.19	98	1049	103	18.06	22.56	277	2245	205	0.09	84.4
SESVanderhave H48607(46907)	49	342.0	100	7636	104	1.15	47.12	100	1052	104	18.25	22.33	242	2226	214	0.00	86.0
SESVanderhave H46911	18	345.1	101	6858	93	1.20	47.85	102	954	94	18.45	19.78	340	2188	227	0.00	79.4
SESVanderhave H48716	26	352.0	103	7634	104	1.12	49.47	105	1075	106	18.72	21.61	227	2085	232	0.00	80.3
SESVanderhave H48717	10	340.0	99	7388	100	1.17	46.66	99	1013	100	18.17	21.75	246	2112	255	0.09	84.1
SESVanderhave H66855	28	353.4	103	6339	86	1.28	49.79	106	890	88	18.95	18.08	332	2316	253	0.00	72.2
Hilleshög 2417Rz(Check)	53	339.2	99	7174	97	1.21	46.48	99	985	97	18.17	21.07	299	2178	248	0.00	64.5
Susc 3N - Mod Aph	54	357.3	105	6224	84	1.23	50.71	108	881	87	19.10	17.48	313	2296	230	0.00	75.5
Susc 3N - Aph Tol	55	342.9	100	6501	88	1.23	47.33	100	899	89	18.37	18.89	347	2182	245	0.00	72.3
Very Susc 3N - Aph Spc	56	363.3	106	6438	87	1.24	52.12	111	922	91	19.41	17.78	281	2363	230	0.00	67.8
Check Mean		341.9		7372		1.22	47.10		1015		18.31	21.58	288	2242	244	0.0	78.2
Coeff. of Var. (%)		3.8		8.0		6.5	6.4		9.4		3.3	7.2	20.7	5.5	12.1		8.0
F Value		2.18		3.17		3.56	2.18		2.09		2.25	5.39	1.89	4.81	4.52		4.41
Mean LSD (0.05)		17.2		785		0.11	4.02		128		0.81	2.05	80	163	39		8.3
Mean LSD (0.01)		22.6		1036		0.14	5.30		169		1.06	2.70	105	216	52		10.9
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2007 Data from Hallock

Created 10-29-2007.

Vigor not collected.

Trial # = 078611

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

++ Revenue estimates are based on a $41.97 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 22.

Performance of Varieties -ACSC Biotech

10 Trials- All Characters - Commercial Status

Description @	Code	Rec/T lbs.	Rec/T % Mean	Rec/A lbs.	Rec/A % Mean	Rev/T $ ++	Rev/T % Mean	Rev/A $ ++	Rev/A % Mean	Loss Mol %	Sugar %	Yield T/A	Na ppm	K ppm	AmN ppm	Bolter %	Emerg %	Cerc.** Rating	Aph ** Root
BTS 85RR02(B5802RR)	220	326.9	100	9196	106	43.60	100	1226	106	1.23	17.56	28.14	358	1890	315	0.00	62.5	4.64	4.24
BTS 86RR44(B6804RR)	207	319.0	98	8792	101	41.79	96	1152	100	1.24	17.19	27.51	311	1871	348	0.00	57.0	5.02	4.93
BTS 86RR66(B6806RR)	212	323.2	99	8820	102	42.75	98	1169	101	1.22	17.38	27.22	306	1859	340	0.00	56.1	4.91	4.55
BTS 86RR88(B6808RR)	228	330.0	101	8302	96	44.32	102	1112	96	1.18	17.68	25.24	361	1841	296	0.00	50.5	4.86	4.46
BTS 87RR28	217	325.3	100	8321	96	43.23	99	1107	96	1.13	17.39	25.53	256	1791	303	0.00	60.7	4.76	6.30
BTS 87RR38	202	322.3	99	9276	107	42.55	98	1224	106	1.13	17.25	28.77	269	1830	293	0.00	61.3	3.83	5.37
BTS 87RR58	225	325.9	100	8990	104	43.38	100	1196	104	1.19	17.48	27.58	226	1844	346	0.00	62.3	5.06	5.54
BTS 87RR68	204	338.9	104	9212	106	46.38	106	1260	109	1.13	18.07	27.18	298	1777	291	0.00	64.8	4.64	7.07
BTS 87RR78	222	311.0	95	9004	104	39.94	92	1157	100	1.15	16.70	28.91	276	1827	306	0.00	65.9	4.08	6.12
Crystal 539RR	215	329.3	101	8639	100	44.14	101	1157	100	1.15	17.61	26.26	352	1816	280	0.00	66.7	5.02	4.28
Crystal 658RR	232	312.1	95	9107	105	40.19	92	1172	102	1.09	16.69	29.18	259	1750	281	0.00	67.1	3.96	5.87
Crystal 765RR	203	343.1	105	9183	106	47.34	109	1267	110	1.04	18.20	26.74	279	1661	263	0.00	67.1	4.85	6.57
Crystal 766RR	218	318.2	97	8681	100	41.61	95	1135	98	1.10	17.01	27.26	289	1738	281	0.00	69.4	4.01	4.97
Crystal 767RR	226	317.0	97	9337	108	41.33	95	1218	106	1.19	17.04	29.39	270	1845	331	0.00	65.1	4.25	5.83
Crystal 768RR	209	324.0	99	9429	109	42.93	99	1249	108	1.18	17.38	29.10	257	1829	330	0.00	70.0	4.80	5.60
Crystal 769RR	214	313.7	96	9527	110	40.57	93	1232	107	1.13	16.82	30.36	313	1801	283	0.00	67.7	4.20	5.67
Crystal 770RR	230	311.8	95	8897	103	40.10	92	1145	99	1.11	16.70	28.53	324	1791	267	0.00	61.0	4.45	4.44
Hilleshog 4003RR(9003RR)	233	328.7	101	8478	98	44.00	101	1135	98	1.21	17.64	25.79	325	1902	311	0.00	55.7	5.06	6.06
Hilleshog 4010RR(9010RR)	205	330.2	101	8429	97	44.36	102	1129	98	1.18	17.69	25.61	319	1885	297	0.03	52.9	5.01	5.30
Hilleshog 4012RR(9012RR)	231	323.8	99	8982	104	42.88	98	1188	103	1.18	17.37	27.79	347	1874	288	0.00	52.7	4.97	5.26
Hilleshog 4020RR(9020RR)	221	332.7	102	8371	97	44.93	103	1130	98	1.18	17.82	25.15	307	1878	303	0.00	53.9	5.16	5.84
Hilleshog 4022RR(9022RR)	216	325.2	100	8589	99	43.21	99	1141	99	1.16	17.41	26.40	350	1866	274	0.00	54.3	5.13	5.05
Hilleshog 9035RR	201	337.6	103	8362	96	46.04	106	1140	99	1.09	17.96	24.80	203	1738	304	1.87	57.4	4.74	5.32
Hilleshog 9043RR	227	330.5	101	8709	100	44.42	102	1170	101	1.03	17.56	26.35	193	1753	260	0.00	52.3	4.25	5.92
Hilleshog 9045RR	213	336.4	103	7239	84	45.78	105	982	85	1.23	18.05	21.61	352	1874	328	0.00	44.6	4.46	5.86
Hilleshog 9046RR	224	337.5	103	7918	91	46.03	106	1080	94	1.11	17.98	23.47	264	1753	296	0.00	52.6	3.50	4.75
Hilleshog 9049RR	211	332.9	102	7978	92	44.98	103	1078	93	1.14	17.79	23.97	284	1853	290	0.00	44.1	4.92	6.70
Hilleshog 9053RR	219	331.1	101	8314	96	44.57	102	1119	97	1.14	17.69	25.12	311	1832	279	0.00	51.8	4.47	5.35
Hilleshog 9054RR	206	315.3	96	8189	94	40.91	94	1057	92	1.17	16.92	26.16	362	1878	275	0.00	56.4	3.98	4.76
Seedex SX0851RR	210	323.2	99	8529	98	42.74	98	1129	98	1.09	17.25	26.33	307	1807	253	0.00	59.1	5.41	5.09
Hilleshög 90703RR	223	325.3	100	8440	97	43.25	99	1122	97	1.20	17.46	25.93	339	1884	303	0.00	52.0	5.24	5.53
SESVanderhave H36711RR	208	337.5	103	8952	103	46.03	106	1220	106	1.07	17.94	26.56	260	1610	302	0.00	70.5	4.73	5.71
SESVanderhave H36712RR	229	332.6	102	9361	108	44.91	103	1265	110	1.05	17.68	28.11	227	1620	298	0.00	67.1	5.75	5.10
Van der Have H46519(Check)	235	323.7	99	9112	105	42.86	98	1204	104	1.08	17.27	28.22	233	1772	282	0.00	65.4	NA	NA
Beta 1305R(Check)	240	324.5	99	8693	100	43.03	99	1153	100	1.22	17.44	26.79	246	1866	358	0.00	56.2	NA	NA
Crystal R431(Check)	237	330.2	101	8694	100	44.36	102	1166	101	1.26	17.78	26.39	264	2071	332	0.00	66.3	NA	NA
Seedex Rezult(Check)	239	331.5	101	8325	96	44.65	102	1122	97	1.08	17.66	25.11	231	1824	268	0.05	59.5	NA	NA
Van der Have H46519(Check)	234	318.1	97	9034	104	41.58	95	1179	102	1.11	17.01	28.44	259	1767	295	0.00	62.8	NA	NA
Beta 1305R(Check)	236	320.2	98	8557	99	42.05	96	1123	97	1.25	17.26	26.74	285	1871	364	0.00	59.2	NA	NA
Crystal R431(Check)	241	328.2	100	8560	99	43.89	101	1140	99	1.26	17.66	26.22	273	2074	323	0.00	65.5	NA	NA
Seedex Rezult(Check)	238	333.8	102	8184	94	45.18	104	1110	96	1.07	17.76	24.45	221	1840	256	0.08	57.4	NA	NA
Hilleshög 2417Rz(Check)	242	333.2	102	8530	98	45.04	103	1151	100	1.07	17.73	25.66	235	1759	272	0.00	54.5	NA	NA
Hilleshög 2417Rz(Check)	243	330.3	101	8580	99	44.38	102	1150	100	1.09	17.60	26.04	258	1773	276	0.00	53.7	NA	NA
Filler 1-0	244	331.4	101	8789	101	44.64	102	1180	102	1.25	17.82	26.63	269	2045	323	0.00	62.6	NA	NA
Filler 1-10	245	330.3	101	9036	104	44.38	102	1211	105	1.24	17.75	27.47	264	2058	314	0.00	65.6	NA	NA
Filler 1-1000	246	330.2	101	7938	92	44.36	102	1061	92	1.28	17.79	24.21	278	2103	330	0.00	43.7	NA	NA
Filler 4-0	247	318.7	98	9088	105	41.71	96	1187	103	1.35	17.28	28.61	339	1922	406	0.00	62.9	NA	NA
Filler 4-10	248	320.0	98	9251	107	42.00	96	1211	105	1.32	17.32	29.01	327	1901	394	0.00	63.9	NA	NA
Filler 4-1000	249	318.1	97	7655	88	41.58	95	998	86	1.37	17.27	24.15	342	1961	413	0.00	39.4	NA	NA
Filler 8-0	250	337.3	103	8164	94	45.98	106	1114	97	1.11	17.97	24.20	273	1818	274	0.00	61.4	NA	NA
Filler 8-10	251	335.6	103	8278	96	45.59	105	1124	97	1.11	17.89	24.68	260	1834	277	0.00	64.8	NA	NA
Check Mean		326.8		8667.4		43.58		1154		1.16	17.50	26.57	287	1843	305	0.0	59.2		
Coeff. of Var. (%)		2.8		7.0		4.8		7.8		6.9	2.4	6.8	23.7	5.1	11.6		13.2		
Mean LSD (0.05)		5.2		433.8		1.20		62		0.05	0.24	1.32	40	64	22		4.6		
Mean LSD (0.01)		6.9		571.0		1.58		82		0.07	0.31	1.74	53	85	29		6.1		
Sig Lvl		**		**		**		**		**	**	**	**	**	**		**		

Vigor not collected. RNBD = Randomized Nested Block statistical Design used.

Created 10-24-2007.

**Lower numbers indicate better resistance (1 = Ex, 9 = poor). Cerc. data from Rosemount, MN. Aph data from Shakopee, MN.

Trial # = 07ACbio

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

++ Revenue estimates are based on a $41.97 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 23.

Performance of Varieties -ACSC Biotech Light Rzm

6 Trials- All Characters - Commercial Status

Description @	Code	Rec/T lbs.	Rec/T % Mean	Rec/A lbs.	Rec/A % Mean	Rev/T $ ++	Rev/T % Mean	Rev/A $ ++	Rev/A % Mean	Loss Mol %	Sugar %	Yield T/A	Na ppm	K ppm	AmN ppm	Bolter %	Emerg %
BTS 85RR02(B5802RR)	220	322.5	100	9057	107	42.54	101	1193	108	1.25	17.36	28.15	419	1881	315	0.00	64.0
BTS 86RR44(B6804RR)	207	314.0	98	8580	102	40.59	96	1110	100	1.26	16.95	27.29	369	1848	346	0.00	61.6
BTS 86RR66(B6806RR)	212	318.6	99	8219	97	41.63	99	1072	97	1.23	17.15	25.85	354	1859	328	0.00	55.3
BTS 86RR88(B6808RR)	228	327.3	102	8308	99	43.67	103	1103	100	1.17	17.53	25.55	405	1811	279	0.00	54.7
BTS 87RR28	217	320.0	100	8069	96	41.99	99	1058	96	1.14	17.14	25.24	300	1826	290	0.00	59.7
BTS 87RR38	202	317.8	99	8961	106	41.45	98	1166	106	1.14	17.03	28.29	304	1856	282	0.00	63.4
BTS 87RR58	225	322.3	100	8682	103	42.51	101	1142	103	1.20	17.31	27.03	254	1868	334	0.00	60.7
BTS 87RR68	204	332.1	103	8695	103	44.77	106	1168	106	1.13	17.74	26.30	341	1781	281	0.00	66.9
BTS 87RR78	222	304.8	95	8546	101	38.46	91	1077	97	1.18	16.42	28.07	335	1867	299	0.00	63.8
Crystal 539RR	215	324.9	101	8604	102	43.10	102	1139	103	1.16	17.39	26.55	421	1803	269	0.00	69.4
Crystal 658RR	232	306.8	96	8602	102	38.92	92	1088	98	1.12	16.46	28.14	313	1777	284	0.00	65.8
Crystal 765RR	203	338.7	105	8769	104	46.29	110	1196	108	1.06	17.99	25.96	332	1665	256	0.00	68.7
Crystal 766RR	218	313.1	98	8165	97	40.37	96	1048	95	1.11	16.76	26.21	324	1757	274	0.00	69.3
Crystal 767RR	226	310.8	97	8846	105	39.84	94	1132	102	1.22	16.75	28.52	314	1905	324	0.00	64.4
Crystal 768RR	209	318.9	99	9098	108	41.72	99	1186	107	1.19	17.13	28.64	298	1847	320	0.00	72.3
Crystal 769RR	214	308.2	96	9151	109	39.25	93	1162	105	1.16	16.57	29.78	373	1829	278	0.00	70.1
Crystal 770RR	230	309.2	96	8346	99	39.48	94	1061	96	1.10	16.56	27.15	358	1800	250	0.00	62.4
Hilleshog 4003RR(9003RR)	233	320.8	100	8001	95	42.16	100	1048	95	1.21	17.25	25.02	390	1905	294	0.00	56.9
Hilleshog 4010RR(9010RR)	205	325.5	101	8444	100	43.24	102	1117	101	1.17	17.44	26.09	374	1874	277	0.00	54.6
Hilleshog 4012RR(9012RR)	231	316.3	99	8611	102	41.12	97	1115	101	1.18	16.99	27.36	417	1838	274	0.00	51.3
Hilleshog 4020RR(9020RR)	221	328.0	102	8097	96	43.84	104	1079	98	1.17	17.56	24.77	345	1871	281	0.00	54.5
Hilleshog 4022RR(9022RR)	216	319.9	100	8414	100	41.94	99	1102	100	1.16	17.15	26.33	407	1842	261	0.00	53.9
Hilleshog 9035RR	201	332.8	104	8251	98	44.93	106	1111	101	1.09	17.73	24.90	230	1758	291	1.85	56.4
Hilleshog 9043RR	227	327.3	102	8639	102	43.67	103	1151	104	1.04	17.40	26.45	219	1770	253	0.00	52.5
Hilleshog 9045RR	213	328.6	102	7313	87	43.98	104	975	88	1.22	17.65	22.34	406	1822	314	0.00	44.4
Hilleshog 9046RR	224	334.2	104	7803	93	45.26	107	1055	95	1.12	17.83	23.39	304	1772	285	0.00	53.9
Hilleshog 9049RR	211	325.1	101	7866	93	43.16	102	1044	95	1.16	17.41	24.19	328	1870	281	0.00	45.0
Hilleshog 9053RR	219	326.4	102	8239	98	43.47	103	1095	99	1.13	17.44	25.30	351	1822	263	0.00	51.1
Hilleshog 9054RR	206	308.0	96	8314	99	39.19	93	1049	95	1.18	16.58	27.28	439	1855	262	0.00	55.3
Seedex SX0851RR	210	319.3	99	8092	96	41.80	99	1057	96	1.09	17.05	25.42	342	1819	242	0.00	59.2
Hilleshög 90703RR	223	319.9	100	8010	95	41.94	99	1047	95	1.22	17.21	25.13	408	1894	293	0.00	51.0
SESVanderhave H36711RR	208	330.4	103	8943	106	44.38	105	1199	109	1.08	17.60	27.13	319	1594	293	0.00	72.9
SESVanderhave H36712RR	229	327.9	102	9061	107	43.82	104	1209	109	1.05	17.44	27.65	259	1630	284	0.00	68.0
Van der Have H46519(Check)	235	314.9	98	8767	104	40.81	97	1132	102	1.10	16.84	27.97	261	1788	277	0.00	67.4
Beta 1305R(Check)	240	317.7	99	8381	99	41.44	98	1092	99	1.26	17.14	26.42	283	1912	359	0.00	57.3
Crystal R431(Check)	237	325.2	101	8461	100	43.16	102	1118	101	1.24	17.48	26.17	287	2037	312	0.00	68.5
Seedex Rezult(Check)	239	325.6	101	8036	95	43.26	102	1066	97	1.09	17.36	24.72	256	1842	263	0.00	61.3
Van der Have H46519(Check)	234	310.2	97	8609	102	39.69	94	1098	99	1.14	16.64	27.86	306	1799	295	0.00	65.1
Beta 1305R(Check)	236	311.2	97	8180	97	39.93	95	1048	95	1.29	16.84	26.33	343	1900	366	0.00	61.7
Crystal R431(Check)	241	320.0	100	8421	100	41.98	99	1099	99	1.24	17.23	26.50	318	2042	300	0.00	68.6
Seedex Rezult(Check)	238	330.0	103	7832	93	44.30	105	1054	95	1.06	17.56	23.64	237	1820	253	0.05	60.2
Hilleshög 2417Rz(Check)	242	326.1	102	8372	99	43.36	103	1111	101	1.08	17.38	25.77	271	1778	267	0.00	53.9
Hilleshög 2417Rz(Check)	243	323.4	101	8383	99	42.76	101	1106	100	1.09	17.26	26.01	309	1778	261	0.00	53.1
Filler 1-0	244	322.5	100	8632	102	42.56	101	1134	103	1.24	17.36	26.90	329	2006	307	0.00	65.1
Filler 1-10	245	322.8	101	8900	106	42.63	101	1170	106	1.21	17.34	27.73	310	2020	292	0.00	69.9
Filler 1-1000	246	324.6	101	7985	95	43.03	102	1050	95	1.24	17.46	24.86	320	2036	303	0.00	44.2
Filler 4-0	247	310.9	97	9019	107	39.86	94	1152	104	1.37	16.91	29.15	405	1947	395	0.00	64.5
Filler 4-10	248	313.2	98	9274	110	40.39	96	1191	108	1.32	16.97	29.76	382	1885	376	0.00	66.4
Filler 4-1000	249	310.1	97	7582	90	39.67	94	968	88	1.41	16.91	24.53	407	1992	413	0.00	39.1
Filler 8-0	250	333.4	104	8095	96	45.08	107	1095	99	1.13	17.80	24.25	302	1859	276	0.00	61.2
Filler 8-10	251	331.3	103	8179	97	44.59	106	1099	99	1.15	17.71	24.74	290	1881	287	0.00	69.1
Check Mean		321.0		8429.8		42.21		1105		1.17	17.22	26.37	333	1848	295	0.0	60.2
Coeff. of Var. (%)		2.9		6.8		5.1		7.8		7.1	2.4	6.5	23.0	4.9	11.6		14.4
Mean LSD (0.05)		7.2		509.1		1.67		75		0.07	0.33	1.57	62	81	30		6.4
Mean LSD (0.01)		9.5		671.2		2.21		99		0.09	0.43	2.07	82	106	39		8.5
Sig Lvl		**		**		**		**		**	**	**	**	**	**		**

Vigor not collected. RNBD = Randomized Nested Block statistical Design used.

Created 10-24-2007.
Trial # = 07ACbiLt

@ Some varieties not approved for sale. Refer to approval list for approval status.
++ Revenue estimates are based on a $41.97 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.
No Aphanomyces present.

Table 24.

Performance of Varieties -ACSC Biotech Moderate Rzm

4 Trials- All Characters - Commercial Status

Description @	Code	Rec/T lbs.	Rec/T % Mean	Rec/A lbs.	Rec/A % Mean	Rev/T $ ++	Rev/T % Mean	Rev/A $ ++	Rev/A % Mean	Loss Mol %	Sugar %	Yield T/A	Na ppm	K ppm	AmN ppm	Bolter %	Emerg %
BTS 85RR02(B5802RR)	220	334.3	100	9428	104	45.34	99	1280	104	1.18	17.90	28.16	274	1903	315	0.00	60.3
BTS 86RR44(B6804RR)	207	327.1	97	9118	101	43.70	96	1219	99	1.21	17.56	27.84	230	1901	351	0.00	51.0
BTS 86RR66(B6806RR)	212	331.0	99	9661	107	44.58	98	1304	106	1.20	17.74	29.10	237	1861	356	0.00	57.0
BTS 86RR88(B6808RR)	228	335.2	100	8336	92	45.56	100	1133	92	1.19	17.96	24.85	296	1880	320	0.00	45.0
BTS 87RR28	217	333.7	99	8695	96	45.21	99	1181	96	1.10	17.78	25.94	192	1747	320	0.00	61.7
BTS 87RR38	202	329.9	98	9744	108	44.35	97	1312	107	1.11	17.61	29.46	217	1797	309	0.00	58.4
BTS 87RR58	225	332.4	99	9452	105	44.91	98	1278	104	1.17	17.78	28.39	182	1812	362	0.00	64.0
BTS 87RR68	204	349.4	104	9957	110	48.81	107	1393	113	1.11	18.58	28.46	235	1771	304	0.00	61.9
BTS 87RR78	222	320.6	95	9658	107	42.20	92	1272	104	1.10	17.12	30.09	194	1773	315	0.00	68.4
Crystal 539RR	215	336.7	100	8734	97	45.89	100	1191	97	1.13	17.96	25.92	259	1831	296	0.00	63.1
Crystal 658RR	232	320.5	95	9824	109	42.19	92	1294	105	1.03	17.06	30.60	184	1714	277	0.00	68.6
Crystal 765RR	203	350.6	104	9784	108	49.08	107	1372	112	1.01	18.55	27.86	205	1657	273	0.00	64.8
Crystal 766RR	218	326.6	97	9422	104	43.57	95	1260	103	1.07	17.39	28.74	234	1712	291	0.00	69.2
Crystal 767RR	226	326.7	97	10035	111	43.61	95	1343	109	1.14	17.47	30.60	207	1767	341	0.00	65.6
Crystal 768RR	209	332.2	99	9913	110	44.88	98	1341	109	1.15	17.75	29.76	196	1807	342	0.00	66.8
Crystal 769RR	214	322.5	96	10071	112	42.65	93	1333	108	1.08	17.21	31.19	229	1762	290	0.00	64.4
Crystal 770RR	230	316.8	94	9674	107	41.32	90	1265	103	1.11	16.95	30.44	272	1782	291	0.00	59.0
Hilleshog 4003RR(9003RR)	233	340.3	101	9151	101	46.70	102	1258	102	1.19	18.20	26.83	237	1896	334	0.00	54.1
Hilleshog 4010RR(9010RR)	205	338.0	101	8449	94	46.19	101	1155	94	1.18	18.07	24.97	242	1897	324	0.06	50.5
Hilleshog 4012RR(9012RR)	231	334.9	100	9517	105	45.49	100	1294	105	1.17	17.92	28.38	252	1918	307	0.00	54.1
Hilleshog 4020RR(9020RR)	221	340.4	101	8785	97	46.73	102	1209	98	1.19	18.21	25.72	250	1886	333	0.00	53.0
Hilleshog 4022RR(9022RR)	216	333.7	99	8861	98	45.21	99	1201	98	1.15	17.83	26.54	270	1898	291	0.00	54.6
Hilleshog 9035RR	201	345.3	103	8559	95	47.86	105	1189	97	1.07	18.33	24.74	161	1710	320	1.89	58.5
Hilleshog 9043RR	227	336.3	100	8849	98	45.80	100	1207	98	1.01	17.83	26.28	152	1732	270	0.00	51.8
Hilleshog 9045RR	213	347.8	104	7183	80	48.44	106	1001	81	1.24	18.63	20.65	277	1938	348	0.00	44.6
Hilleshog 9046RR	224	343.4	102	8116	90	47.44	104	1122	91	1.09	18.26	23.60	206	1729	311	0.00	50.9
Hilleshog 9049RR	211	344.5	103	8176	91	47.67	104	1132	92	1.12	18.33	23.72	220	1833	301	0.00	42.8
Hilleshog 9053RR	219	338.8	101	8459	94	46.37	101	1160	94	1.14	18.07	24.92	251	1844	301	0.00	52.4
Hilleshog 9054RR	206	326.1	97	8068	89	43.47	95	1076	88	1.15	17.45	24.72	257	1906	292	0.00	57.6
Seedex SX0851RR	210	330.0	98	9154	101	44.35	97	1234	100	1.08	17.57	27.60	253	1793	268	0.00	58.6
Hilleshög 90703RR	223	334.2	99	9064	100	45.31	99	1230	100	1.16	17.87	27.06	245	1868	317	0.00	53.2
SESVanderhave H36711RR	208	348.1	104	9009	100	48.51	106	1257	102	1.04	18.45	25.82	179	1632	313	0.00	67.3
SESVanderhave H36712RR	229	340.3	101	9806	109	46.70	102	1348	110	1.04	18.05	28.78	177	1609	316	0.00	65.6
Van der Have H46519(Check)	235	336.4	100	9618	107	45.81	100	1310	107	1.06	17.88	28.61	189	1750	288	0.00	62.7
Beta 1305R(Check)	240	334.6	100	9159	101	45.43	99	1244	101	1.17	17.90	27.34	191	1809	357	0.00	54.6
Crystal R431(Check)	237	338.4	101	9056	100	46.29	101	1239	101	1.29	18.21	26.76	224	2111	360	0.00	63.3
Seedex Rezult(Check)	239	340.7	101	8756	97	46.82	102	1204	98	1.06	18.10	25.67	190	1799	276	0.12	57.1
Van der Have H46519(Check)	234	329.9	98	9655	107	44.34	97	1297	106	1.06	17.56	29.27	192	1725	295	0.00	59.7
Beta 1305R(Check)	236	333.3	99	9102	101	45.10	99	1231	100	1.19	17.85	27.33	203	1829	363	0.00	55.7
Crystal R431(Check)	241	340.2	101	8795	97	46.68	102	1206	98	1.28	18.28	25.89	207	2113	354	0.00	61.3
Seedex Rezult(Check)	238	340.3	101	8704	96	46.71	102	1194	97	1.06	18.08	25.59	190	1863	262	0.12	53.6
Hilleshög 2417Rz(Check)	242	343.8	102	8785	97	47.53	104	1215	99	1.04	18.23	25.52	180	1733	279	0.00	54.9
Hilleshög 2417Rz(Check)	243	340.7	101	8896	99	46.81	102	1222	99	1.07	18.11	26.14	186	1767	296	0.00	54.0
Filler 1-0	244	344.3	103	9050	100	47.65	104	1251	102	1.25	18.46	26.33	185	2095	347	0.00	59.3
Filler 1-10	245	341.4	102	9263	103	46.98	103	1274	104	1.26	18.33	27.13	197	2106	344	0.00	59.8
Filler 1-1000	246	339.1	101	7921	88	46.44	102	1085	88	1.32	18.27	23.35	218	2185	367	0.00	42.8
Filler 4-0	247	330.3	98	9231	102	44.42	97	1243	101	1.30	17.81	27.91	247	1887	422	0.00	60.5
Filler 4-10	248	330.3	98	9267	103	44.41	97	1248	102	1.31	17.82	28.03	250	1919	420	0.00	60.5
Filler 4-1000	249	330.0	98	7806	86	44.37	97	1049	85	1.31	17.80	23.67	252	1919	413	0.00	39.4
Filler 8-0	250	343.8	102	8307	92	47.52	104	1149	94	1.06	18.26	24.14	226	1765	272	0.00	61.5
Filler 8-10	251	342.9	102	8451	94	47.31	104	1167	95	1.05	18.19	24.63	213	1773	265	0.00	59.1
Check Mean		335.9		9029.9		45.70		1229		1.14	17.94	26.88	220	1837	319	0.0	57.6
Coeff. of Var. (%)		2.6		7.1		4.3		7.6		6.7	2.3	7.1	25.3	5.2	11.6		11.7
Mean LSD (0.05)		7.7		670.2		1.76		95		0.07	0.35	2.02	46	89	32		6.2
Mean LSD (0.01)		10.2		885.0		2.32		126		0.09	0.47	2.67	60	117	43		8.2
Sig Lvl		**		**		**		**		**	**	**	**	**	**		**

Vigor not collected. RNBD = Randomized Nested Block statistical Design used.

Created 10-24-2007.
Trial # = 07ACbiMd

@ Some varieties not approved for sale. Refer to approval list for approval status.
++ Revenue estimates are based on a $41.97 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.
No Aphanomyces present.

Table 25.

Performance of Varieties -ACSC Biotech Trial

Casselton - Light Rzm - All Characters - Commercial Status

Description @	Code	Rec/T lbs.	Rec/T % Mean	Rec/A lbs.	Rec/A % Mean	Rev/T $ ++	Rev/T % Mean	Rev/A $ ++	Rev/A % Mean	Loss Mol %	Sugar %	Yield T/A	Na ppm	K ppm	AmN ppm	Bolter %	Emerg %
BTS 85RR02(B5802RR)	220	313.5	101	9907	105	40.45	101	1275	106	1.29	16.98	31.68	383	1776	400	0.00	56.4
BTS 86RR44(B6804RR)	207	309.8	99	9598	102	39.57	99	1226	102	1.26	16.74	30.97	296	1792	390	0.00	52.4
BTS 86RR66(B6806RR)	212	312.8	100	9199	98	40.27	101	1184	98	1.24	16.88	29.43	308	1755	384	0.00	51.6
BTS 86RR88(B6808RR)	228	324.6	104	8928	95	43.02	107	1182	98	1.18	17.40	27.53	331	1725	339	0.00	38.5
BTS 87RR28	217	313.5	101	9329	99	40.43	101	1202	100	1.07	16.74	29.81	293	1689	287	0.00	48.2
BTS 87RR38	202	312.8	100	9892	105	40.27	101	1273	106	1.17	16.81	31.65	226	1684	377	0.00	51.3
BTS 87RR58	225	314.6	101	9720	103	40.69	102	1256	104	1.22	16.94	30.93	200	1675	416	0.00	50.7
BTS 87RR68	204	320.8	103	10404	110	42.14	105	1363	113	1.14	17.18	32.53	332	1645	329	0.00	49.6
BTS 87RR78	222	297.5	95	9463	100	36.74	92	1168	97	1.14	16.02	31.80	274	1749	326	0.00	58.7
Crystal 539RR	215	316.8	102	9585	102	41.20	103	1246	103	1.14	16.98	30.27	414	1627	311	0.00	67.5
Crystal 658RR	232	306.0	98	9945	106	38.69	97	1257	104	1.12	16.41	32.54	292	1683	320	0.00	48.7
Crystal 765RR	203	333.2	107	9801	104	45.01	112	1323	110	1.05	17.70	29.45	372	1501	288	0.00	54.1
Crystal 766RR	218	293.7	94	9088	96	35.82	89	1108	92	1.24	15.92	30.97	346	1737	376	0.00	59.0
Crystal 767RR	226	296.8	95	9814	104	36.57	91	1209	100	1.28	16.12	33.07	341	1795	390	0.00	59.0
Crystal 768RR	209	306.1	98	10215	108	38.70	97	1291	107	1.34	16.64	33.40	345	1790	438	0.00	63.0
Crystal 769RR	214	296.6	95	10560	112	36.53	91	1298	108	1.15	15.99	35.68	310	1757	322	0.00	59.0
Crystal 770RR	230	292.0	94	8887	94	35.44	89	1079	89	1.16	15.75	30.43	329	1752	320	0.00	49.0
Hilleshog 4003RR(9003RR)	233	297.1	95	8387	89	36.65	92	1036	86	1.32	16.19	28.17	462	1937	357	0.00	46.2
Hilleshog 4010RR(9010RR)	205	319.9	103	9286	99	41.93	105	1216	101	1.18	17.18	29.06	335	1729	339	0.00	42.7
Hilleshog 4012RR(9012RR)	231	313.2	100	9744	103	40.36	101	1255	104	1.19	16.84	31.13	358	1740	335	0.00	35.3
Hilleshog 4020RR(9020RR)	221	317.2	102	9147	97	41.32	103	1191	99	1.18	17.04	28.84	304	1818	328	0.00	46.7
Hilleshog 4022RR(9022RR)	216	307.2	99	9294	99	38.98	97	1179	98	1.19	16.54	30.27	393	1727	327	0.00	43.9
Hilleshog 9035RR	201	320.7	103	8910	95	42.12	105	1172	97	1.11	17.14	27.73	248	1713	318	2.83	45.9
Hilleshog 9043RR	227	314.8	101	9859	105	40.74	102	1275	106	1.01	16.74	31.35	205	1621	282	0.00	41.3
Hilleshog 9045RR	213	326.9	105	8096	86	43.57	109	1078	89	1.19	17.53	24.78	349	1691	352	0.00	34.8
Hilleshog 9046RR	224	329.7	106	8678	92	44.21	110	1163	96	1.12	17.60	26.34	258	1635	342	0.00	42.5
Hilleshog 9049RR	211	327.7	105	8780	93	43.74	109	1170	97	1.12	17.50	26.85	247	1708	329	0.00	41.9
Hilleshog 9053RR	219	321.3	103	9670	103	42.24	106	1271	105	1.08	17.14	30.11	304	1625	303	0.00	41.6
Hilleshog 9054RR	206	288.3	93	9005	96	34.58	86	1079	89	1.28	15.69	31.27	554	1786	330	0.00	52.7
Seedex SX0851RR	210	315.5	101	9449	100	40.88	102	1223	101	1.11	16.88	30.00	299	1706	306	0.00	52.4
Hilleshög 90703RR	223	306.8	98	8980	95	38.89	97	1137	94	1.24	16.58	29.30	452	1762	340	0.00	44.4
SESVanderhave H36711RR	208	324.3	104	9736	103	42.94	107	1289	107	1.06	17.27	30.02	291	1422	340	0.00	61.8
SESVanderhave H36712RR	229	318.5	102	9881	105	41.61	104	1290	107	1.15	17.08	31.03	311	1483	382	0.00	57.3
Van der Have H46519(Check)	235	293.6	94	9517	101	35.80	89	1157	96	1.21	15.89	32.51	267	1774	370	0.00	56.1
Beta 1305R(Check)	240	305.0	98	9376	100	38.45	96	1180	98	1.36	16.61	30.79	221	1936	455	0.00	48.2
Crystal R431(Check)	237	311.4	100	9396	100	39.96	100	1203	100	1.28	16.84	30.24	237	2017	368	0.00	57.3
Seedex Rezult(Check)	239	322.1	103	9620	102	42.43	106	1265	105	1.11	17.21	29.90	195	1715	331	0.00	50.4
Van der Have H46519(Check)	234	308.2	99	9983	106	39.21	98	1267	105	1.11	16.51	32.45	187	1671	343	0.00	56.4
Beta 1305R(Check)	236	297.3	95	9004	96	36.70	92	1108	92	1.38	16.25	30.31	323	1841	457	0.00	49.0
Crystal R431(Check)	241	307.0	99	9376	100	38.95	97	1186	98	1.32	16.68	30.61	260	2040	392	0.00	52.7
Seedex Rezult(Check)	238	320.1	103	9142	97	41.98	105	1197	99	1.10	17.11	28.59	207	1729	324	0.00	51.0
Hilleshög 2417Rz(Check)	242	315.6	101	9355	99	40.91	102	1212	100	1.14	16.91	29.67	228	1732	339	0.00	39.3
Hilleshög 2417Rz(Check)	243	317.0	102	9451	100	41.27	103	1228	102	1.09	16.94	29.84	242	1712	308	0.00	43.0
Filler 1-0	244	309.8	99	9657	103	39.59	99	1232	102	1.31	16.81	31.18	315	1918	399	0.00	55.3
Filler 1-10	245	318.4	102	10043	107	41.59	104	1309	108	1.26	17.18	31.59	246	1959	363	0.00	55.3
Filler 1-1000	246	320.1	103	8913	95	41.97	105	1167	97	1.24	17.23	27.85	234	2024	340	0.00	38.5
Filler 4-0	247	302.0	97	10235	109	37.78	94	1278	106	1.47	16.58	33.92	381	1952	483	0.00	51.9
Filler 4-10	248	298.8	96	10342	110	37.03	93	1280	106	1.40	16.35	34.63	339	1894	458	0.00	54.4
Filler 4-1000	249	293.3	94	7656	81	35.73	89	931	77	1.62	16.29	26.12	399	2081	547	0.00	34.8
Filler 8-0	250	329.8	106	9053	96	44.24	111	1212	100	1.15	17.63	27.49	193	1835	332	0.00	47.0
Filler 8-10	251	316.7	102	8981	95	41.19	103	1166	97	1.15	16.98	28.42	266	1692	343	0.00	61.3
Check Mean		311.7		9418.0		40.03		1207		1.21	16.79	30.28	304	1760	358	0.1	50.0
Coeff. of Var. (%)		2.7		6.1		4.9		7.2		7.7	2.2	5.7	25.4	5.2	12.4		13.6
Mean LSD (0.05)		13.6		947.1		3.17		142		0.15	0.59	2.85	126	155	73		11.0
Mean LSD (0.01)		18.1		1255.1		4.19		189		0.19	0.79	3.78	167	206	97		14.6
Sig Lvl		**		**		**		*		**	**	**	ns	**	**		**

Vigor not collected. RNBD = Randomized Nested Block statistical Design used.

Created 10-24-2007.

**Lower numbers indicate better resistance (1 = Ex, 9 = poor). Cerc. data from Rosemount, MN. Aph data from Shakopee, MN.

Trial # = 078631

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

++ Revenue estimates are based on a $41.97 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

No Aphanomyces present.

Table 26.

Performance of Varieties -ACSC Biotech Trial

Averill - Moderate Rzm - All Characters - Commercial Status

Description @	Code	Rec/T lbs.	Rec/T % Mean	Rec/A lbs.	Rec/A % Mean	Rev/T $ ++	Rev/T % Mean	Rev/A $ ++	Rev/A % Mean	Loss Mol %	Sugar %	Yield T/A	Na ppm	K ppm	AmN ppm	Bolter %	Emerg %
BTS 85RR02(B5802RR)	220	318.6	100	8271	104	41.63	100	1079	103	1.28	17.20	26.00	338	1989	336	0.00	72.7
BTS 86RR44(B6804RR)	207	311.1	98	8325	104	39.94	96	1067	102	1.27	16.82	26.81	236	1925	385	0.00	62.4
BTS 86RR66(B6806RR)	212	315.3	99	8405	105	40.90	98	1090	104	1.27	17.03	26.67	252	1858	403	0.00	72.0
BTS 86RR88(B6808RR)	228	329.4	103	7207	90	44.10	106	963	92	1.21	17.68	21.92	260	1943	325	0.00	50.4
BTS 87RR28	217	318.9	100	7231	91	41.72	100	945	91	1.16	17.11	22.68	205	1742	361	0.00	78.9
BTS 87RR38	202	322.8	101	8341	104	42.60	102	1100	105	1.13	17.27	25.85	246	1757	318	0.00	74.2
BTS 87RR58	225	325.9	102	8469	106	43.29	104	1124	108	1.17	17.46	25.99	166	1817	366	0.00	82.9
BTS 87RR68	204	334.0	105	8591	108	45.14	108	1159	111	1.15	17.85	25.78	244	1826	314	0.00	75.6
BTS 87RR78	222	297.4	93	8455	106	36.81	88	1045	100	1.18	16.05	28.47	237	1771	360	0.00	86.1
Crystal 539RR	215	323.6	101	7717	97	42.76	103	1019	98	1.22	17.40	23.89	323	1896	319	0.00	70.3
Crystal 658RR	232	305.0	96	8636	108	38.57	93	1091	105	1.06	16.31	28.30	200	1667	302	0.00	79.3
Crystal 765RR	203	337.8	106	9056	113	45.99	110	1232	118	1.03	17.93	26.82	205	1597	297	0.00	80.8
Crystal 766RR	218	309.3	97	7779	97	39.51	95	993	95	1.14	16.60	25.15	270	1746	320	0.00	85.7
Crystal 767RR	226	314.1	98	7837	98	40.60	97	1013	97	1.19	16.89	24.97	227	1816	357	0.00	84.4
Crystal 768RR	209	315.6	99	8459	106	40.96	98	1097	105	1.18	16.96	26.81	190	1772	379	0.00	86.8
Crystal 769RR	214	304.1	95	8522	107	38.35	92	1072	103	1.13	16.34	28.09	250	1760	317	0.00	77.8
Crystal 770RR	230	295.7	93	8071	101	36.44	87	993	95	1.20	15.97	27.32	325	1869	307	0.00	81.4
Hilleshog 4003RR(9003RR)	233	324.7	102	7643	96	43.03	103	1013	97	1.16	17.40	23.54	249	1811	325	0.00	70.7
Hilleshog 4010RR(9010RR)	205	314.3	99	7317	92	40.67	98	946	91	1.23	16.93	23.31	284	1852	351	0.00	69.9
Hilleshog 4012RR(9012RR)	231	326.9	103	8210	103	43.53	104	1092	105	1.12	17.46	25.13	210	1855	294	0.00	70.1
Hilleshog 4020RR(9020RR)	221	320.2	100	6969	87	42.00	101	913	88	1.25	17.25	21.79	267	1891	364	0.00	68.4
Hilleshog 4022RR(9022RR)	216	315.6	99	7723	97	40.95	98	1001	96	1.16	16.93	24.48	308	1854	290	0.00	76.5
Hilleshog 9035RR	201	328.5	103	7415	93	43.89	105	990	95	1.16	17.59	22.60	221	1686	373	2.35	82.5
Hilleshog 9043RR	227	323.6	101	8032	101	42.76	103	1061	102	1.04	17.22	24.84	150	1745	288	0.00	70.7
Hilleshog 9045RR	213	339.2	106	6760	85	46.31	111	923	88	1.23	18.19	19.93	315	1841	347	0.00	60.7
Hilleshog 9046RR	224	325.0	102	6886	86	43.10	103	912	87	1.17	17.42	21.21	208	1743	366	0.00	68.0
Hilleshog 9049RR	211	327.7	103	7456	93	43.70	105	992	95	1.13	17.51	22.83	262	1811	294	0.00	56.4
Hilleshog 9053RR	219	328.0	103	7449	93	43.78	105	993	95	1.14	17.54	22.74	216	1823	316	0.00	69.2
Hilleshog 9054RR	206	302.0	95	7054	88	37.85	91	883	85	1.22	16.31	23.41	321	1936	310	0.00	72.9
Seedex SX0851RR	210	310.9	98	7398	93	39.89	96	949	91	1.20	16.74	23.79	304	1928	304	0.00	67.7
Hilleshög 90703RR	223	316.9	99	7599	95	41.27	99	988	95	1.19	17.03	24.00	257	1842	336	0.00	70.1
SESVanderhave H36711RR	208	338.3	106	8083	101	46.13	111	1101	106	1.07	17.99	23.91	200	1657	317	0.00	79.3
SESVanderhave H36712RR	229	328.0	103	8450	106	43.77	105	1127	108	1.04	17.44	25.80	171	1633	308	0.00	86.1
Van der Have H46519(Check)	235	317.1	99	8697	109	41.30	99	1131	108	1.11	16.96	27.45	198	1739	322	0.00	80.6
Beta 1305R(Check)	240	314.9	99	8406	105	40.81	98	1090	104	1.22	16.96	26.68	204	1829	384	0.00	68.8
Crystal R431(Check)	237	324.3	102	8814	110	42.93	103	1166	112	1.31	17.51	27.21	200	2137	369	0.00	83.8
Seedex Rezult(Check)	239	322.7	101	7894	99	42.58	102	1040	100	1.14	17.27	24.51	206	1921	292	0.21	69.0
Van der Have H46519(Check)	234	306.1	96	8550	107	38.79	93	1083	104	1.13	16.43	27.94	227	1756	325	0.00	75.9
Beta 1305R(Check)	236	311.2	98	8200	103	39.95	96	1051	101	1.27	16.82	26.40	207	1913	399	0.00	66.5
Crystal R431(Check)	241	322.5	101	8315	104	42.53	102	1095	105	1.32	17.44	25.83	216	2198	359	0.00	81.0
Seedex Rezult(Check)	238	315.7	99	7733	97	40.97	98	1002	96	1.13	16.92	24.53	210	1887	295	0.00	67.1
Hilleshög 2417Rz(Check)	242	325.7	102	8341	104	43.24	104	1107	106	1.09	17.37	25.62	171	1771	306	0.00	68.8
Hilleshög 2417Rz(Check)	243	317.2	99	8374	105	41.32	99	1090	104	1.15	17.01	26.44	224	1793	331	0.00	68.4
Filler 1-0	244	322.8	101	8230	103	42.59	102	1085	104	1.29	17.42	25.52	179	2146	358	0.00	71.6
Filler 1-10	245	320.3	100	8212	103	42.03	101	1077	103	1.29	17.30	25.65	229	2117	348	0.00	74.4
Filler 1-1000	246	323.1	101	7625	95	42.66	102	1006	97	1.32	17.46	23.62	242	2176	352	0.00	52.6
Filler 4-0	247	309.7	97	8166	102	39.62	95	1044	100	1.37	16.84	26.40	265	1853	473	0.00	73.5
Filler 4-10	248	308.6	97	8404	105	39.36	94	1071	103	1.35	16.77	27.24	265	1893	450	0.00	68.8
Filler 4-1000	249	314.0	98	7965	100	40.59	97	1029	99	1.32	17.01	25.38	280	1905	414	0.00	50.0
Filler 8-0	250	326.3	102	7910	99	43.39	104	1051	101	1.13	17.44	24.26	228	1822	302	0.00	77.6
Filler 8-10	251	310.5	97	7818	98	39.79	95	1002	96	1.20	16.72	25.17	288	1918	312	0.00	74.6
Check Mean		318.9		7990.1		41.70		1043		1.19	17.13	25.12	238	1851	340	0.1	72.8
Coeff. of Var. (%)		3.1		5.5		5.3		6.9		6.2	2.7	4.9	28.8	5.4	10.4		10.5
Mean LSD (0.05)		13.7		702.9		3.11		109		0.10	0.64	2.05	96	140	51		10.8
Mean LSD (0.01)		18.1		936.8		4.10		145		0.14	0.86	2.74	127	184	67		14.3
Sig Lvl		**		**		**		**		**	**	**	*	**	**		**

Vigor not collected. RNBD = Randomized Nested Block statistical Design used.

Created 10-24-2007.

**Lower numbers indicate better resistance (1 = Ex, 9 = poor). Cerc. data from Rosemount, MN. Aph data from Shakopee, MN.

Trial # = 078632

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

++ Revenue estimates are based on a $41.97 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

No Aphanomyces present.

Table 27.

Performance of Varieties -ACSC Biotech Trial

Halstad - Moderate Rzm - All Characters - Commercial Status

Description @	Code	Rec/T lbs.	Rec/T % Mean	Rec/A lbs.	Rec/A % Mean	Rev/T $ ++	Rev/T % Mean	Rev/A $ ++	Rev/A % Mean	Loss Mol %	Sugar %	Yield T/A	Na ppm	K ppm	AmN ppm	Bolter %	Emerg %
BTS 85RR02(B5802RR)	220	340.8	100	9113	102	46.87	101	1250	102	1.12	18.16	26.80	171	1906	298	0.00	49.8
BTS 86RR44(B6804RR)	207	331.8	98	8605	96	44.80	96	1160	95	1.13	17.72	25.97	167	1833	329	0.00	49.6
BTS 86RR66(B6806RR)	212	333.0	98	9070	102	45.05	97	1225	100	1.13	17.77	27.31	158	1829	328	0.00	52.6
BTS 86RR88(B6808RR)	228	338.3	100	7510	84	46.30	100	1026	84	1.20	18.11	22.23	249	1880	332	0.00	43.4
BTS 87RR28	217	334.9	99	7811	87	45.51	98	1059	87	1.05	17.79	23.38	125	1788	290	0.00	54.3
BTS 87RR38	202	325.0	96	9415	105	43.22	93	1249	102	1.09	17.33	29.05	169	1792	301	0.00	51.7
BTS 87RR58	225	328.2	97	9612	108	43.95	94	1286	105	1.20	17.60	29.32	163	1810	391	0.00	55.6
BTS 87RR68	204	353.0	104	10238	115	49.67	107	1439	118	1.07	18.72	29.05	209	1712	293	0.00	51.5
BTS 87RR78	222	326.6	96	9445	106	43.60	94	1258	103	1.05	17.37	28.98	134	1723	306	0.00	65.0
Crystal 539RR	215	338.1	100	9054	101	46.24	99	1237	101	1.06	17.96	26.82	181	1750	287	0.00	57.1
Crystal 658RR	232	323.2	95	9993	112	42.80	92	1322	108	0.99	17.16	30.96	152	1661	275	0.00	65.4
Crystal 765RR	203	344.6	102	9338	105	47.74	103	1292	106	1.05	18.28	27.14	186	1683	295	0.00	56.6
Crystal 766RR	218	326.8	96	9149	102	43.64	94	1220	100	1.04	17.37	28.03	166	1669	299	0.00	65.8
Crystal 767RR	226	327.6	97	10011	112	43.83	94	1338	110	1.09	17.46	30.60	170	1649	343	0.00	58.8
Crystal 768RR	209	331.7	98	9776	109	44.77	96	1317	108	1.12	17.70	29.52	146	1792	336	0.00	58.1
Crystal 769RR	214	329.3	97	9622	108	44.20	95	1290	106	1.01	17.47	29.28	165	1670	277	0.00	60.9
Crystal 770RR	230	324.3	96	9642	108	43.06	93	1278	105	0.99	17.21	29.79	161	1679	260	0.00	53.9
Hilleshog 4003RR(9003RR)	233	344.8	102	9011	101	47.79	103	1247	102	1.14	18.38	26.18	172	1876	323	0.00	49.4
Hilleshog 4010RR(9010RR)	205	346.8	102	8457	95	48.24	104	1175	96	1.09	18.43	24.43	159	1816	302	0.21	49.2
Hilleshog 4012RR(9012RR)	231	339.1	100	9531	107	46.47	100	1304	107	1.13	18.09	28.15	216	1877	295	0.00	50.9
Hilleshog 4020RR(9020RR)	221	347.1	102	9001	101	48.31	104	1251	102	1.13	18.48	25.95	171	1810	327	0.00	48.3
Hilleshog 4022RR(9022RR)	216	343.5	101	8665	97	47.49	102	1195	98	1.14	18.30	25.29	199	1884	302	0.00	51.3
Hilleshog 9035RR	201	347.8	102	8502	95	48.47	104	1183	97	1.01	18.40	24.49	93	1660	313	1.93	54.1
Hilleshog 9043RR	227	337.9	100	8580	96	46.18	99	1171	96	0.99	17.89	25.44	116	1721	274	0.00	45.1
Hilleshog 9045RR	213	342.4	101	7292	82	47.23	102	1001	82	1.27	18.38	21.42	243	1944	374	0.00	38.5
Hilleshog 9046RR	224	353.9	104	7646	86	49.90	107	1077	88	1.05	18.74	21.64	150	1692	305	0.00	48.1
Hilleshog 9049RR	211	343.8	101	8099	91	47.56	102	1117	91	1.12	18.30	23.64	164	1855	312	0.00	38.5
Hilleshog 9053RR	219	336.4	99	8508	95	45.85	99	1158	95	1.15	17.96	25.32	217	1858	313	0.00	48.9
Hilleshog 9054RR	206	336.8	99	8932	100	45.95	99	1217	100	1.05	17.89	26.56	143	1862	266	0.00	50.4
Seedex SX0851RR	210	336.4	99	9246	104	45.85	99	1258	103	0.96	17.79	27.53	150	1700	241	0.00	53.4
Hilleshög 90703RR	223	338.7	100	9225	103	46.38	100	1260	103	1.06	17.99	27.32	163	1770	284	0.00	49.4
SESVanderhave H36711RR	208	345.8	102	8442	95	48.00	103	1170	96	1.05	18.33	24.46	129	1592	341	0.00	58.6
SESVanderhave H36712RR	229	340.7	100	9426	106	46.83	101	1293	106	1.00	18.04	27.75	146	1591	301	0.00	60.9
Van der Have H46519(Check)	235	343.9	101	9488	106	47.57	102	1310	107	1.00	18.21	27.67	144	1715	274	0.00	54.5
Beta 1305R(Check)	240	342.2	101	9335	105	47.20	101	1286	105	1.12	18.23	27.32	120	1792	355	0.00	48.3
Crystal R431(Check)	237	343.5	101	8757	98	47.49	102	1209	99	1.23	18.40	25.53	179	2098	334	0.00	55.3
Seedex Rezult(Check)	239	344.9	102	8584	96	47.81	103	1189	97	1.00	18.25	24.92	133	1696	283	0.00	52.1
Van der Have H46519(Check)	234	336.2	99	9757	109	45.80	98	1327	109	0.97	17.79	29.08	116	1644	282	0.00	56.4
Beta 1305R(Check)	236	345.0	102	9301	104	47.82	103	1288	105	1.11	18.35	27.00	150	1724	347	0.00	48.9
Crystal R431(Check)	241	346.9	102	8879	99	48.28	104	1234	101	1.18	18.53	25.63	131	2064	322	0.00	58.1
Seedex Rezult(Check)	238	350.7	103	8826	99	49.15	106	1235	101	1.01	18.55	25.21	134	1828	248	0.21	48.9
Hilleshög 2417Rz(Check)	242	347.1	102	8214	92	48.31	104	1142	93	1.05	18.40	23.70	161	1700	300	0.00	51.1
Hilleshög 2417Rz(Check)	243	345.6	102	8574	96	47.96	103	1188	97	1.02	18.30	24.88	117	1766	284	0.00	49.6
Filler 1-0	244	341.9	101	9325	104	47.10	101	1283	105	1.25	18.33	27.34	148	2117	353	0.00	54.3
Filler 1-10	245	347.8	102	9314	104	48.47	104	1296	106	1.19	18.58	26.86	119	2118	320	0.00	53.6
Filler 1-1000	246	338.6	100	7623	85	46.36	100	1042	85	1.31	18.23	22.55	137	2258	372	0.00	33.8
Filler 4-0	247	335.9	99	9527	107	45.73	98	1294	106	1.20	17.99	28.46	147	1854	389	0.00	55.3
Filler 4-10	248	335.5	99	9431	106	45.64	98	1281	105	1.27	18.04	28.17	164	1904	425	0.00	50.9
Filler 4-1000	249	328.6	97	7697	86	44.04	95	1031	84	1.23	17.65	23.43	153	1927	387	0.00	33.1
Filler 8-0	250	344.9	102	8453	95	47.79	103	1170	96	1.07	18.30	24.54	173	1789	284	0.00	56.0
Filler 8-10	251	346.2	102	8410	94	48.11	103	1168	96	0.99	18.30	24.31	131	1722	263	0.00	51.1
Check Mean		339.3		8930.2		46.52		1221		1.10	18.06	26.40	158	1805	312	0.0	52.1
Coeff. of Var. (%)		2.3		6.6		3.8		6.9		6.7	2.0	6.8	26.2	4.8	12.6		11.0
Mean LSD (0.05)		10.9		830.7		2.51		120		0.10	0.50	2.51	60	124	56		8.1
Mean LSD (0.01)		14.4		1097.3		3.32		158		0.14	0.66	3.31	79	164	74		10.7
Sig Lvl		**		**		**		**		**	**	**	**	**	**		**

Vigor not collected. RNBD = Randomized Nested Block statistical Design used. Created 10-24-2007.

**Lower numbers indicate better resistance (1 = Ex, 9 = poor). Cerc. data from Rosemount, MN. Aph data from Shakopee, MN. Trial # = 078633

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

++ Revenue estimates are based on a $41.97 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

No Aphanomyces present.

Table 28.

Performance of Varieties - ACSC Biotech Trial

Climax - Moderate Rzm - All Characters - Commercial Status

Description @	Code	Rec/T lbs.	Rec/T % Mean	Rec/A lbs.	Rec/A % Mean	Rev/T $ ++	Rev/T % Mean	Rev/A $ ++	Rev/A % Mean	Loss Mol %	Sugar %	Yield T/A	Na ppm	K ppm	AmN ppm	Bolter %	Emerg %
BTS 85RR02(B5802RR)	220	350.8	101	12054	112	49.16	101	1690	112	1.16	18.70	34.38	270	1815	326	0.00	59.7
BTS 86RR44(B6804RR)	207	340.8	98	10506	97	46.84	96	1445	96	1.32	18.34	30.84	239	2109	369	0.00	43.5
BTS 86RR66(B6806RR)	212	347.8	100	11939	111	48.49	100	1665	111	1.25	18.64	34.29	241	1978	355	0.00	54.3
BTS 86RR88(B6808RR)	228	339.6	97	10513	98	46.57	96	1442	96	1.31	18.27	30.97	380	1973	355	0.00	41.5
BTS 87RR28	217	353.4	101	11144	103	49.76	102	1570	104	1.17	18.83	31.52	186	1880	336	0.00	64.0
BTS 87RR38	202	347.5	100	11279	105	48.39	99	1572	105	1.20	18.57	32.45	206	1918	347	0.00	57.5
BTS 87RR58	225	344.3	99	10122	94	47.67	98	1402	93	1.23	18.44	29.41	208	1865	379	0.00	64.0
BTS 87RR68	204	361.5	104	11078	103	51.66	106	1582	105	1.15	19.23	30.65	192	1967	299	0.00	64.0
BTS 87RR78	222	337.3	97	11660	108	46.06	95	1591	106	1.15	18.01	34.57	194	1941	302	0.00	60.3
Crystal 539RR	215	345.1	99	9523	88	47.84	98	1321	88	1.22	18.47	27.58	266	1971	330	0.00	67.4
Crystal 658RR	232	329.2	94	11517	107	44.16	91	1546	103	1.13	17.58	34.97	200	1914	294	0.00	60.6
Crystal 765RR	203	370.5	106	10760	100	53.72	110	1560	104	1.06	19.59	29.06	208	1802	271	0.00	60.6
Crystal 766RR	218	345.2	99	11406	106	47.88	98	1582	105	1.11	18.37	33.04	226	1862	287	0.00	60.6
Crystal 767RR	226	344.7	99	12287	114	47.77	98	1703	113	1.17	18.41	35.64	186	1855	345	0.00	58.3
Crystal 768RR	209	347.2	99	12064	112	48.32	99	1680	112	1.21	18.57	34.75	218	1926	352	0.00	60.0
Crystal 769RR	214	333.2	95	12456	116	45.09	93	1686	112	1.27	17.92	37.37	267	2067	333	0.00	58.0
Crystal 770RR	230	340.1	97	11743	109	46.69	96	1613	107	1.07	18.07	34.52	215	1866	260	0.00	52.6
Hilleshog 4003RR(9003RR)	233	350.6	100	11556	107	49.14	101	1619	108	1.28	18.80	32.96	241	2095	344	0.00	49.5
Hilleshog 4010RR(9010RR)	205	352.0	101	10565	98	49.45	101	1485	99	1.28	18.86	30.03	229	2145	334	0.00	40.1
Hilleshog 4012RR(9012RR)	231	345.0	99	11547	107	47.83	98	1601	106	1.33	18.57	33.46	242	2209	354	0.00	45.8
Hilleshog 4020RR(9020RR)	221	358.5	103	10998	102	50.96	105	1564	104	1.17	19.10	30.66	222	1964	306	0.00	48.6
Hilleshog 4022RR(9022RR)	216	340.6	98	10313	96	46.80	96	1417	94	1.25	18.27	30.30	251	2162	307	0.00	43.2
Hilleshog 9035RR	201	366.0	105	9426	87	52.70	108	1357	90	1.09	19.39	25.76	154	1835	298	1.70	42.9
Hilleshog 9043RR	227	343.2	98	10189	95	47.42	97	1408	94	1.08	18.24	29.69	186	1810	288	0.00	40.4
Hilleshog 9045RR	213	359.1	103	8242	76	51.09	105	1172	78	1.35	19.30	22.98	252	2156	379	0.00	38.9
Hilleshog 9046RR	224	349.6	100	10321	96	48.90	100	1444	96	1.12	18.61	29.51	259	1789	303	0.00	44.9
Hilleshog 9049RR	211	367.0	105	9663	90	52.93	109	1392	93	1.14	19.49	26.40	195	1912	303	0.00	37.8
Hilleshog 9053RR	219	357.7	103	9958	92	50.76	104	1414	94	1.15	19.03	27.85	228	1966	286	0.00	45.5
Hilleshog 9054RR	206	342.7	98	9463	88	47.31	97	1303	87	1.24	18.37	27.70	295	1991	329	0.00	55.2
Seedex SX0851RR	210	353.8	101	11563	107	49.89	102	1630	108	1.07	18.76	32.66	196	1873	263	0.00	64.6
Hilleshög 90703RR	223	348.6	100	11356	105	48.67	100	1585	105	1.24	18.66	32.58	250	1989	344	0.00	49.8
SESVanderhave H36711RR	208	359.2	103	11084	103	51.10	105	1577	105	1.04	19.00	30.87	167	1713	287	0.00	77.1
SESVanderhave H36712RR	229	359.8	103	10778	100	51.28	105	1535	102	1.07	19.06	29.98	162	1712	311	0.00	51.5
Van der Have H46519(Check)	235	339.1	97	11445	106	46.45	95	1568	104	1.12	18.07	33.74	243	1783	309	0.00	60.5
Beta 1305R(Check)	240	342.7	98	10506	97	47.31	97	1450	96	1.24	18.37	30.67	268	1844	372	0.00	50.8
Crystal R431(Check)	237	351.6	101	10472	97	49.36	101	1470	98	1.36	18.93	29.80	264	2148	386	0.00	61.4
Seedex Rezult(Check)	239	350.1	100	10983	102	49.01	101	1537	102	1.10	18.61	31.41	230	1804	287	0.28	58.8
Van der Have H46519(Check)	234	336.0	96	11546	107	45.75	94	1570	104	1.14	17.95	34.42	261	1792	318	0.00	52.8
Beta 1305R(Check)	236	336.9	97	10559	98	45.97	94	1440	96	1.27	18.11	31.37	265	1857	392	0.00	60.5
Crystal R431(Check)	241	341.5	98	10409	97	47.01	96	1432	95	1.35	18.41	30.54	258	2135	379	0.00	52.0
Seedex Rezult(Check)	238	347.9	100	11119	103	48.51	100	1549	103	1.11	18.51	32.01	241	1910	266	0.00	50.2
Hilleshög 2417Rz(Check)	242	353.6	101	10385	96	49.84	102	1464	97	1.05	18.73	29.36	206	1742	275	0.00	49.7
Hilleshög 2417Rz(Check)	243	352.7	101	10913	101	49.61	102	1535	102	1.10	18.73	30.97	223	1714	313	0.00	52.2
Filler 1-0	244	355.8	102	11135	103	50.34	103	1572	105	1.28	19.06	31.39	206	2111	350	0.00	57.9
Filler 1-10	245	349.8	100	11587	108	48.94	100	1620	108	1.32	18.80	33.17	241	2135	364	0.00	63.6
Filler 1-1000	246	350.3	100	9618	89	49.07	101	1346	90	1.33	18.83	27.49	247	2169	359	0.00	46.0
Filler 4-0	247	343.2	98	10662	99	47.43	97	1474	98	1.32	18.47	31.05	262	1940	408	0.00	56.8
Filler 4-10	248	344.8	99	11277	105	47.79	98	1562	104	1.34	18.57	32.72	282	2014	399	0.00	63.9
Filler 4-1000	249	341.0	98	8962	83	46.89	96	1231	82	1.44	18.47	26.34	354	2028	446	0.00	42.0
Filler 8-0	250	356.5	102	8876	82	50.50	104	1256	84	1.07	18.90	24.93	232	1798	269	0.00	54.5
Filler 8-10	251	368.8	106	10025	93	53.35	109	1452	97	0.99	19.44	27.13	186	1715	242	0.00	62.8
Check Mean		348.9		10776.0		48.73		1504		1.19	18.64	30.94	233	1935	328	0.0	54.1
Coeff. of Var. (%)		2.3		7.7		3.8		8.1		6.2	2.0	7.6	15.7	5.8	10.2		11.2
Mean LSD (0.05)		12.9		1363.8		2.99		202		0.12	0.61	3.82	60	186	55		10.2
Mean LSD (0.01)		17.1		1805.6		3.97		268		0.16	0.81	5.05	79	247	72		13.6
Sig Lvl		**		**		**		**		**	**	**	**	**	**		**

Vigor not collected. RNBD = Randomized Nested Block statistical Design used.

Created 10-24-2007.

**Lower numbers indicate better resistance (1 = Ex, 9 = poor). Cerc. data from Rosemount, MN. Aph data from Shakopee, MN.

Trial # = 078635

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

++ Revenue estimates are based on a $41.97 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

No Aphanomyces present.

Table 29

Performance of Varieties -ACSC Biotech Trial

Scandia - Moderate Rzm - All Characters - Commercial Status

Description @	Code	Rec/T lbs.	Rec/T % Mean	Rec/A lbs.	Rec/A % Mean	Rev/T $ ++	Rev/T % Mean	Rev/A $ ++	Rev/A % Mean	Loss Mol %	Sugar %	Yield T/A	Na ppm	K ppm	AmN ppm	Bolter %	Emerg %
BTS 85RR02(B5802RR)	220	326.5	97	8447	99	43.65	95	1125	97	1.17	17.50	25.99	303	1860	302	0.00	61.0
BTS 86RR44(B6804RR)	207	324.6	96	9126	107	43.21	94	1215	105	1.14	17.38	28.10	273	1736	323	0.00	48.4
BTS 86RR66(B6806RR)	212	328.2	98	9475	111	44.02	96	1271	110	1.19	17.60	28.86	294	1776	336	0.00	49.0
BTS 86RR88(B6808RR)	228	331.1	98	8387	98	44.68	97	1131	98	1.07	17.62	25.35	300	1701	267	0.00	45.9
BTS 87RR28	217	328.0	97	8978	105	43.99	96	1204	104	1.03	17.43	27.36	248	1566	292	0.00	49.6
BTS 87RR38	202	324.6	96	10181	120	43.21	94	1355	117	1.04	17.28	31.36	225	1719	272	0.00	50.7
BTS 87RR58	225	330.8	98	9629	113	44.60	97	1298	112	1.08	17.62	29.12	180	1739	314	0.00	53.3
BTS 87RR68	204	349.0	104	10035	118	48.73	106	1401	121	1.06	18.52	28.75	259	1572	309	0.00	57.8
BTS 87RR78	222	322.2	96	9235	108	42.68	93	1223	106	1.03	17.15	28.66	197	1659	290	0.00	61.3
Crystal 539RR	215	339.6	101	8664	102	46.62	102	1187	103	1.02	18.00	25.57	248	1703	249	0.00	59.5
Crystal 658RR	232	324.7	96	9238	108	43.23	94	1230	106	0.95	17.19	28.44	171	1632	237	0.00	69.5
Crystal 765RR	203	351.3	104	10027	118	49.27	107	1405	121	0.91	18.48	28.55	200	1544	224	0.00	61.8
Crystal 766RR	218	326.3	97	9665	114	43.60	95	1290	111	0.98	17.31	29.67	260	1567	254	0.00	64.1
Crystal 767RR	226	320.6	95	10440	123	42.31	92	1376	119	1.12	17.15	32.61	221	1744	321	0.00	60.7
Crystal 768RR	209	335.7	100	9577	112	45.72	100	1303	113	1.09	17.88	28.54	229	1737	302	0.00	62.1
Crystal 769RR	214	323.4	96	9995	117	42.93	93	1326	114	0.95	17.12	30.95	230	1568	234	0.00	61.0
Crystal 770RR	230	307.6	91	9498	112	39.36	86	1215	105	1.19	16.58	30.88	367	1701	339	0.00	46.7
Hilleshog 4003RR(9003RR)	233	340.5	101	8654	102	46.81	102	1189	103	1.20	18.23	25.43	277	1818	347	0.00	46.4
Hilleshog 4010RR(9010RR)	205	339.5	101	7582	89	46.60	101	1039	90	1.15	18.14	22.38	282	1797	313	0.00	41.0
Hilleshog 4012RR(9012RR)	231	326.7	97	8944	105	43.69	95	1194	103	1.13	17.47	27.44	327	1751	289	0.00	49.3
Hilleshog 4020RR(9020RR)	221	336.1	100	8470	99	45.82	100	1151	99	1.23	18.04	25.33	329	1879	333	0.00	46.7
Hilleshog 4022RR(9022RR)	216	334.3	99	8897	104	45.40	99	1208	104	1.07	17.79	26.63	298	1705	266	0.00	45.3
Hilleshog 9035RR	201	339.5	101	9024	106	46.60	101	1239	107	1.02	18.00	26.56	162	1667	294	1.42	52.4
Hilleshog 9043RR	227	340.2	101	8656	102	46.74	102	1188	103	0.93	17.95	25.45	154	1641	229	0.00	50.7
Hilleshog 9045RR	213	350.9	104	6344	75	49.17	107	888	77	1.12	18.67	18.09	259	1826	292	0.00	40.2
Hilleshog 9046RR	224	344.1	102	7858	92	47.63	104	1088	94	1.02	18.23	22.83	210	1685	268	0.00	41.9
Hilleshog 9049RR	211	340.8	101	7499	88	46.87	102	1032	89	1.09	18.14	22.00	236	1747	296	0.00	38.8
Hilleshog 9053RR	219	333.3	99	7996	94	45.17	98	1081	93	1.12	17.79	24.06	324	1725	289	0.00	45.3
Hilleshog 9054RR	206	323.6	96	6765	79	42.97	94	898	78	1.10	17.28	20.92	273	1825	267	0.00	52.1
Seedex SX0851RR	210	319.2	95	8704	102	41.97	91	1144	99	1.06	17.03	27.28	341	1644	262	0.00	49.9
Hilleshög 90703RR	223	332.6	99	8270	97	45.02	98	1118	96	1.19	17.81	24.90	305	1885	306	0.00	42.7
SESVanderhave H36711RR	208	349.0	104	8579	101	48.75	106	1198	103	1.02	18.48	24.56	208	1554	306	0.00	55.6
SESVanderhave H36712RR	229	332.6	99	10800	127	45.02	98	1461	126	1.06	17.69	32.48	213	1487	346	0.00	62.7
Van der Have H46519(Check)	235	344.4	102	8865	104	47.69	104	1227	106	1.00	18.23	25.77	171	1776	248	0.00	54.7
Beta 1305R(Check)	240	338.0	100	8311	98	46.24	101	1137	98	1.11	18.00	24.58	188	1771	318	0.00	50.7
Crystal R431(Check)	237	333.2	99	8030	94	45.14	98	1084	94	1.28	17.95	24.25	255	2061	357	0.00	51.9
Seedex Rezult(Check)	239	345.1	103	7594	89	47.84	104	1053	91	1.00	18.26	22.02	192	1768	242	0.00	48.7
Van der Have H46519(Check)	234	341.9	102	8807	103	47.13	103	1214	105	1.00	18.10	25.76	174	1722	257	0.00	52.4
Beta 1305R(Check)	236	338.9	101	8319	98	46.43	101	1139	98	1.13	18.07	24.59	196	1829	316	0.00	47.9
Crystal R431(Check)	241	348.5	104	7439	87	48.61	106	1040	90	1.28	18.71	21.30	232	2046	364	0.00	52.1
Seedex Rezult(Check)	238	346.8	103	7157	84	48.22	105	996	86	1.01	18.36	20.62	177	1832	237	0.28	48.2
Hilleshög 2417Rz(Check)	242	349.0	104	8171	96	48.73	106	1140	98	0.97	18.42	23.43	171	1720	232	0.00	49.6
Hilleshög 2417Rz(Check)	243	348.4	104	7673	90	48.59	106	1070	92	1.03	18.45	22.01	181	1789	258	0.00	45.3
Filler 1-0	244	358.9	107	7447	87	50.98	111	1058	91	1.19	19.15	20.74	203	1991	328	0.00	53.6
Filler 1-10	245	347.9	103	7984	94	48.47	106	1112	96	1.24	18.64	22.97	204	2053	347	0.00	47.6
Filler 1-1000	246	344.6	102	6710	79	47.74	104	930	80	1.35	18.58	19.47	247	2128	389	0.00	40.5
Filler 4-0	247	332.4	99	8565	101	44.98	98	1158	100	1.35	17.98	25.77	320	1920	420	0.00	56.4
Filler 4-10	248	332.7	99	7920	93	45.04	98	1071	92	1.31	17.95	23.81	292	1881	406	0.00	60.7
Filler 4-1000	249	337.2	100	6317	74	46.06	100	863	74	1.27	18.14	18.73	240	1827	412	0.00	33.3
Filler 8-0	250	348.0	103	7823	92	48.52	106	1091	94	0.98	18.39	22.47	263	1637	230	0.00	57.3
Filler 8-10	251	350.8	104	7473	88	49.13	107	1047	90	1.00	18.55	21.29	220	1736	239	0.00	47.3
Check Mean		336.6		8514.8		45.92		1158		1.10	17.93	25.39	242	1758	297	0.0	51.4
Coeff. of Var. (%)		2.7		8.9		4.5		8.7		7.7	2.3	9.8	23.7	4.7	13.2		14.1
Mean LSD (0.05)		14.8		1225.0		3.36		164		0.13	0.68	4.05	93	135	63		12.0
Mean LSD (0.01)		19.7		1621.0		4.46		217		0.18	0.89	5.35	123	179	84		15.9
Sig Lvl		**		**		**		**		**	**	**	**	**	**		**

Vigor not collected. RNBD = Randomized Nested Block statistical Design used.

Created 10-24-2007.

**Lower numbers indicate better resistance (1 = Ex, 9 = poor). Cerc. data from Rosemount, MN. Aph data from Shakopee, MN.

Trial # = 078636

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

++ Revenue estimates are based on a $41.97 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

No Aphanomyces present.

Table 30.

Performance of Varieties -ACSC Biotech Trial

Crookston - Light Rzm - All Characters - Commercial Status

Description @	Code	Rec/T lbs.	Rec/T % Mean	Rec/A lbs.	Rec/A % Mean	Rev/T $ ++	Rev/T % Mean	Rev/A $ ++	Rev/A % Mean	Loss Mol %	Sugar %	Yield T/A	Na ppm	K ppm	AmN ppm	Bolter %	Emerg %
BTS 85RR02(B5802RR)	220	301.8	101	8196	111	37.72	103	1021	112	1.00	16.10	27.24	406	1480	239	0.00	68.6
BTS 86RR44(B6804RR)	207	289.8	97	6991	94	34.89	95	840	92	1.05	15.55	24.20	388	1452	290	0.00	52.1
BTS 86RR66(B6806RR)	212	293.0	98	6967	94	35.64	97	846	93	1.05	15.70	23.81	385	1448	285	0.00	49.4
BTS 86RR88(B6808RR)	228	303.8	102	8029	108	38.18	104	1008	110	0.95	16.15	26.45	466	1359	214	0.00	57.3
BTS 87RR28	217	299.8	101	6661	90	37.23	101	826	90	0.91	15.90	22.27	287	1329	245	0.00	60.9
BTS 87RR38	202	288.8	97	8057	109	34.65	94	966	106	1.01	15.45	27.93	396	1427	258	0.00	68.8
BTS 87RR58	225	304.4	102	7867	106	38.33	104	990	108	0.94	16.17	25.85	254	1367	275	0.00	55.3
BTS 87RR68	204	306.0	103	7534	102	38.69	105	952	104	0.90	16.20	24.61	344	1312	222	0.00	70.9
BTS 87RR78	222	275.7	93	7042	95	31.59	86	807	88	1.04	14.83	25.57	417	1405	279	0.00	59.0
Crystal 539RR	215	302.5	102	7675	104	37.88	103	961	105	0.94	16.07	25.36	456	1359	210	0.00	65.4
Crystal 658RR	232	290.5	98	7445	101	35.04	95	897	98	0.93	15.45	25.66	301	1428	231	0.00	69.4
Crystal 765RR	203	312.6	105	7718	104	40.24	109	992	109	0.89	16.52	24.71	339	1284	225	0.00	76.1
Crystal 766RR	218	291.7	98	7300	99	35.34	96	884	97	0.92	15.50	25.04	383	1287	227	0.00	66.7
Crystal 767RR	226	287.8	97	7568	102	34.42	94	905	99	1.03	15.42	26.33	350	1474	281	0.00	65.4
Crystal 768RR	209	301.4	101	7680	104	37.62	102	956	105	0.97	16.05	25.57	335	1391	262	0.00	80.6
Crystal 769RR	214	284.8	96	7730	104	33.72	92	916	100	0.96	15.20	27.12	399	1350	242	0.00	71.6
Crystal 770RR	230	290.9	98	7314	99	35.14	96	882	97	0.89	15.42	25.21	394	1333	191	0.00	64.1
Hilleshog 4003RR(9003RR)	233	300.6	101	6710	91	37.42	102	834	91	0.94	15.97	22.35	365	1367	235	0.00	61.3
Hilleshog 4010RR(9010RR)	205	300.4	101	7079	96	37.36	102	880	96	0.94	15.95	23.60	370	1413	214	0.00	57.5
Hilleshog 4012RR(9012RR)	231	290.8	98	7309	99	35.12	96	883	97	0.89	15.42	25.14	375	1361	194	0.00	51.9
Hilleshog 4020RR(9020RR)	221	303.3	102	7381	100	38.06	104	927	102	0.91	16.07	24.28	320	1389	219	0.00	59.6
Hilleshog 4022RR(9022RR)	216	291.8	98	7065	95	35.36	96	856	94	0.94	15.52	24.22	422	1425	198	0.00	50.6
Hilleshog 9035RR	201	305.4	103	8125	110	38.56	105	1024	112	0.88	16.15	26.64	223	1382	230	0.85	57.5
Hilleshog 9043RR	227	300.1	101	7770	105	37.30	101	965	106	0.87	15.87	25.90	247	1407	212	0.00	53.6
Hilleshog 9045RR	213	301.7	101	5869	79	37.69	103	732	80	1.00	16.10	19.48	449	1395	248	0.00	41.7
Hilleshog 9046RR	224	316.8	106	6794	92	41.21	112	882	97	0.88	16.72	21.49	292	1353	217	0.00	64.3
Hilleshog 9049RR	211	293.9	99	6587	89	35.86	98	803	88	0.95	15.65	22.44	360	1442	227	0.00	43.0
Hilleshog 9053RR	219	305.6	103	6895	93	38.61	105	870	95	0.87	16.15	22.58	314	1341	202	0.00	58.8
Hilleshog 9054RR	206	290.5	98	7720	104	35.06	95	929	102	0.97	15.50	26.66	452	1426	214	0.00	39.5
Seedex SX0851RR	210	295.9	99	6461	87	36.32	99	792	87	0.88	15.67	21.87	374	1345	193	0.00	48.3
Hilleshög 90703RR	223	296.4	100	7414	100	36.43	99	910	100	0.95	15.77	25.06	405	1406	223	0.00	47.9
SESVanderhave H36711RR	208	304.9	102	7849	106	38.45	105	989	108	0.85	16.10	25.76	286	1165	242	0.00	79.9
SESVanderhave H36712RR	229	302.4	102	8168	110	37.86	103	1021	112	0.85	15.97	27.05	264	1229	234	0.00	66.9
Van der Have H46519(Check)	235	287.3	96	7765	105	34.32	93	926	101	0.91	15.27	27.07	324	1271	247	0.00	65.6
Beta 1305R(Check)	240	293.0	98	7483	101	35.65	97	912	100	1.04	15.70	25.49	299	1467	306	0.00	60.9
Crystal R431(Check)	237	301.7	101	7689	104	37.69	103	960	105	0.98	16.07	25.50	352	1432	253	0.00	72.7
Seedex Rezult(Check)	239	301.7	101	6856	93	37.70	103	856	94	0.89	15.97	22.72	314	1323	221	0.00	63.7
Van der Have H46519(Check)	234	290.4	98	7984	108	35.03	95	964	106	0.91	15.42	27.46	305	1277	250	0.00	70.3
Beta 1305R(Check)	236	289.3	97	6834	92	34.77	95	821	90	1.05	15.52	23.63	368	1376	314	0.00	64.1
Crystal R431(Check)	241	302.3	102	7734	104	37.84	103	967	106	0.95	16.07	25.60	322	1454	236	0.00	76.7
Seedex Rezult(Check)	238	303.4	102	6485	88	38.08	104	814	89	0.86	16.02	21.37	265	1327	213	0.21	60.1
Hilleshög 2417Rz(Check)	242	299.3	101	7440	100	37.10	101	924	101	0.89	15.85	24.83	311	1283	231	0.00	47.9
Hilleshög 2417Rz(Check)	243	295.6	99	7662	103	36.26	99	938	103	0.94	15.72	25.96	341	1351	247	0.00	48.3
Filler 1-0	244	299.2	100	7726	104	37.09	101	958	105	0.98	15.95	25.82	384	1512	227	0.00	67.3
Filler 1-10	245	306.8	103	8090	109	38.87	106	1025	112	0.95	16.30	26.38	328	1470	232	0.00	74.8
Filler 1-1000	246	304.9	102	7273	98	38.44	105	917	100	0.93	16.17	23.85	323	1443	219	0.00	47.0
Filler 4-0	247	289.9	97	8172	110	34.91	95	985	108	1.15	15.65	28.18	449	1440	340	0.00	63.3
Filler 4-10	248	292.1	98	8206	111	35.42	96	995	109	1.09	15.70	28.11	437	1380	316	0.00	70.1
Filler 4-1000	249	284.8	96	7211	97	33.72	92	854	94	1.18	15.42	25.32	469	1483	345	0.00	38.7
Filler 8-0	250	309.1	104	7024	95	39.41	107	895	98	0.90	16.35	22.73	290	1322	234	0.00	68.0
Filler 8-10	251	308.0	103	7114	96	39.15	107	903	99	0.93	16.32	23.14	316	1364	237	0.00	70.3
Check Mean		297.8		7406.3		36.75		913		0.95	15.84	24.91	353	1379	242	0.0	61.0
Coeff. of Var. (%)		2.6		8.4		4.9		9.4		6.5	2.2	7.9	16.2	5.6	8.9		18.9
Mean LSD (0.05)		10.8		963.7		2.54		131		0.09	0.49	3.08	80	109	31		16.1
Mean LSD (0.01)		14.3		1288.4		3.34		175		0.12	0.65	4.13	106	143	41		21.3
Sig Lvl		**		**		**		**		**	**	**	**	**	**		**

Vigor not collected. RNBD = Randomized Nested Block statistical Design used.

Created 10-24-2007.

**Lower numbers indicate better resistance (1 = Ex, 9 = poor). Cerc. data from Rosemount, MN. Aph data from Shakopee, MN.

Trial # = 078637

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

++ Revenue estimates are based on a $41.97 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

No Aphanomyces present.

Table 31.

Performance of Varieties -ACSC Biotech Trial

Grand Forks - Light Rzm - All Characters - Commercial Status

Description @	Code	Rec/T lbs.	Rec/T % Mean	Rec/A lbs.	Rec/A % Mean	Rev/T $ ++	Rev/T % Mean	Rev/A $ ++	Rev/A % Mean	Loss Mol %	Sugar %	Yield T/A	Na ppm	K ppm	AmN ppm	Bolter %	Emerg %
BTS 85RR02(B5802RR)	220	265.3	97	7654	97	29.23	95	842	95	1.78	14.98	28.91	966	2041	494	0.00	49.6
BTS 86RR44(B6804RR)	207	259.3	95	7640	97	27.90	90	822	93	1.65	14.57	29.46	789	1929	485	0.00	53.4
BTS 86RR66(B6806RR)	212	281.2	103	8285	106	32.84	106	968	109	1.41	15.47	29.45	503	2000	380	0.00	45.3
BTS 86RR88(B6808RR)	228	264.5	97	7433	95	29.06	94	816	92	1.59	14.78	28.13	752	2055	421	0.00	43.2
BTS 87RR28	217	271.9	100	7404	94	30.72	100	837	94	1.44	15.03	27.24	460	2135	385	0.00	51.3
BTS 87RR38	202	269.0	99	8323	106	30.08	97	931	105	1.27	14.73	30.95	463	1942	298	0.00	45.3
BTS 87RR58	225	283.7	104	8657	110	33.44	108	1020	115	1.32	15.52	30.51	308	2079	352	0.00	53.4
BTS 87RR68	204	291.9	107	8873	113	35.30	114	1073	121	1.35	15.96	30.40	547	1981	320	0.00	62.4
BTS 87RR78	222	251.7	92	8145	104	26.14	85	848	96	1.55	14.09	32.30	619	2071	427	0.00	59.0
Crystal 539RR	215	272.2	100	7955	101	30.82	100	901	102	1.48	15.07	29.19	760	1961	354	0.00	51.3
Crystal 658RR	232	254.9	94	8251	105	26.88	87	870	98	1.41	14.14	32.36	526	1944	387	0.00	44.4
Crystal 765RR	203	295.8	109	8563	109	36.19	117	1047	118	1.34	16.16	28.97	543	1874	347	0.00	63.3
Crystal 766RR	218	269.9	99	7767	99	30.29	98	871	98	1.21	14.73	28.78	384	1916	289	0.00	48.3
Crystal 767RR	226	260.8	96	7966	101	28.22	91	862	97	1.47	14.48	30.55	477	2008	429	0.00	53.0
Crystal 768RR	209	276.6	102	8991	115	31.81	103	1035	117	1.34	15.17	32.49	421	1959	360	0.00	44.4
Crystal 769RR	214	242.6	89	7645	97	24.09	78	758	85	1.57	13.65	31.53	812	2043	383	0.00	53.0
Crystal 770RR	230	254.5	93	7876	100	26.79	87	823	93	1.39	14.09	31.12	708	1837	328	0.00	44.9
Hilleshog 4003RR(9003RR)	233	267.5	98	7647	97	29.75	96	852	96	1.58	14.93	28.53	752	2065	411	0.00	41.5
Hilleshog 4010RR(9010RR)	205	269.5	99	8298	106	30.21	98	934	105	1.41	14.88	30.65	618	2096	313	0.00	48.3
Hilleshog 4012RR(9012RR)	231	257.2	94	8113	103	27.41	89	865	97	1.50	14.34	31.52	804	2025	342	0.00	32.5
Hilleshog 4020RR(9020RR)	221	273.0	100	7148	91	31.01	100	810	91	1.43	15.07	26.22	654	1988	345	0.00	35.0
Hilleshog 4022RR(9022RR)	216	281.8	103	8181	104	32.98	107	958	108	1.32	15.42	29.00	541	1970	302	0.00	45.7
Hilleshog 9035RR	201	294.9	108	7520	96	35.98	117	916	103	1.28	16.06	25.54	316	1959	357	3.40	47.4
Hilleshog 9043RR	227	285.8	105	7769	99	33.92	110	922	104	1.19	15.52	27.17	269	2021	282	0.00	34.2
Hilleshog 9045RR	213	268.8	99	7237	92	30.03	97	808	91	1.63	15.03	26.93	756	1997	461	0.00	38.5
Hilleshog 9046RR	224	276.3	101	6751	86	31.75	103	776	87	1.47	15.27	24.41	582	1957	407	0.00	29.9
Hilleshog 9049RR	211	263.9	97	6563	84	28.93	94	717	81	1.45	14.63	24.95	612	2099	347	0.00	25.2
Hilleshog 9053RR	219	281.4	103	7865	100	32.90	107	920	104	1.40	15.47	27.94	548	2041	342	0.00	36.8
Hilleshog 9054RR	206	258.7	95	8513	108	27.72	90	913	103	1.42	14.34	32.91	721	2017	309	0.00	45.7
Seedex SX0851RR	210	268.9	99	7837	100	30.06	97	875	99	1.34	14.78	29.16	626	1919	299	0.00	59.4
Hilleshög 90703RR	223	276.1	101	7011	89	31.70	103	804	91	1.48	15.27	25.40	659	2101	353	0.00	37.6
SESVanderhave H36711RR	208	269.6	99	8005	102	30.22	98	897	101	1.47	14.93	29.70	741	1700	416	0.00	58.1
SESVanderhave H36712RR	229	288.8	106	8479	108	34.61	112	1016	115	1.18	15.67	29.32	313	1865	303	0.00	58.1
Van der Have H46519(Check)	235	278.9	102	8780	112	32.34	105	1017	115	1.20	15.17	31.50	375	1914	280	0.00	60.3
Beta 1305R(Check)	240	280.9	103	7522	96	32.79	106	878	99	1.55	15.57	26.76	465	2105	467	0.00	42.3
Crystal R431(Check)	237	279.0	102	7950	101	32.38	105	920	104	1.48	15.42	28.55	444	2318	366	0.00	57.7
Seedex Rezult(Check)	239	294.3	108	7616	97	35.83	116	928	105	1.21	15.96	25.87	325	2012	280	0.00	49.6
Van der Have H46519(Check)	234	252.0	92	7149	91	26.21	85	744	84	1.52	14.09	28.36	696	1921	425	0.00	44.0
Beta 1305R(Check)	236	270.9	99	7486	95	30.51	99	841	95	1.62	15.12	27.68	569	2105	488	0.00	55.6
Crystal R431(Check)	241	277.1	102	8488	108	31.92	103	978	110	1.48	15.32	30.62	546	2228	357	0.00	56.0
Seedex Rezult(Check)	238	295.2	108	6349	81	36.05	117	776	87	1.21	16.01	21.50	303	2074	272	0.00	41.5
Hilleshög 2417Rz(Check)	242	290.7	107	8251	105	35.01	113	993	112	1.25	15.81	28.40	380	1946	311	0.00	60.7
Hilleshög 2417Rz(Check)	243	265.6	97	7231	92	29.30	95	797	90	1.41	14.68	27.25	725	1958	317	0.00	49.6
Filler 1-0	244	271.3	100	8243	105	30.59	99	931	105	1.54	15.07	30.37	590	2189	398	0.00	47.4
Filler 1-10	245	264.7	97	8253	105	29.10	94	907	102	1.58	14.78	31.20	637	2248	399	0.00	71.8
Filler 1-1000	246	264.8	97	8127	104	29.11	94	894	101	1.70	14.88	30.69	725	2304	441	0.00	47.9
Filler 4-0	247	257.4	94	8060	103	27.44	89	856	96	1.85	14.63	31.44	796	2177	566	0.00	47.9
Filler 4-10	248	259.9	95	8577	109	28.03	91	926	104	1.75	14.68	32.95	810	1973	541	0.00	53.0
Filler 4-1000	249	278.9	102	7399	94	32.34	105	858	97	1.78	15.67	26.52	634	2122	582	0.00	35.9
Filler 8-0	250	273.7	100	6826	87	31.17	101	780	88	1.50	15.17	24.83	636	2147	368	0.00	38.5
Filler 8-10	251	290.7	107	7709	98	35.01	113	930	105	1.36	15.91	26.49	480	2021	346	0.00	65.0
Check Mean		272.4		7850.7		30.86		887		1.45	15.06	28.88	582	2027	377	0.1	48.3
Coeff. of Var. (%)		5.0		6.5		10.1		10.1		9.8	4.0	5.9	29.3	4.4	14.1		15.1
Mean LSD (0.05)		27.6		1059.9		6.29		186		0.29	1.21	3.43	342	177	107		14.7
Mean LSD (0.01)		36.9		1420.3		8.39		249		0.38	1.62	4.57	457	236	143		19.6
Sig Lvl		*		**		*		*		**	*	**	*	**	**		**

Vigor not collected. RNBD = Randomized Nested Block statistical Design used.

Created 10-24-2007.

**Lower numbers indicate better resistance (1 = Ex, 9 = poor). Cerc. data from Rosemount, MN. Aph data from Shakopee, MN.

Trial # = 078638

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

++ Revenue estimates are based on a $41.97 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

No Aphanomyces present.

Table 32.

Performance of Varieties -ACSC Biotech Trial

Grafton- All Characters - Commercial Status

Description @	Code	Rec/T lbs.	Rec/T % Mean	Rec/A lbs.	Rec/A % Mean	Rev/T $ ++	Rev/T % Mean	Rev/A $ ++	Rev/A % Mean	Loss Mol %	Sugar %	Yield T/A	Na ppm	K ppm	AmN ppm	Bolter %	Emerg %
BTS 85RR02(B5802RR)	220	360.6	100	11882	111	51.49	100	1696	111	1.17	19.20	32.97	304	1958	277	0.00	62.9
BTS 86RR44(B6804RR)	207	359.0	100	11989	112	51.12	100	1707	112	1.15	19.11	33.42	218	1883	311	0.00	62.4
BTS 86RR66(B6806RR)	212	351.0	98	10018	93	49.28	96	1407	92	1.17	18.72	28.55	263	1917	299	0.00	57.2
BTS 86RR88(B6808RR)	228	362.5	101	9938	93	51.94	101	1421	93	1.13	19.26	27.49	298	1906	266	0.00	57.2
BTS 87RR28	217	360.1	100	10487	98	51.38	100	1495	98	1.16	19.17	29.15	240	1889	309	0.00	51.8
BTS 87RR38	202	358.1	100	11337	106	50.91	99	1611	105	1.03	18.94	31.70	245	1839	224	0.00	64.9
BTS 87RR58	225	355.7	99	10815	101	50.35	98	1531	100	1.06	18.85	30.43	200	1778	274	0.00	54.7
BTS 87RR68	204	366.4	102	11948	111	52.80	103	1722	113	1.14	19.46	32.63	270	1815	301	0.00	63.2
BTS 87RR78	222	350.3	97	11775	110	49.13	96	1651	108	1.07	18.59	33.63	196	1869	257	0.00	56.1
Crystal 539RR	215	360.2	100	11415	106	51.39	100	1628	106	1.12	19.14	31.73	293	1919	257	0.00	77.2
Crystal 658RR	232	339.0	94	10752	100	46.54	91	1477	97	1.09	18.04	31.69	246	1854	261	0.00	59.0
Crystal 765RR	203	376.2	105	11301	105	55.06	107	1653	108	0.96	19.79	30.09	197	1651	233	0.00	66.6
Crystal 766RR	218	346.0	96	10736	100	48.13	94	1495	98	1.09	18.39	30.99	271	1845	259	0.00	68.9
Crystal 767RR	226	348.7	97	11642	109	48.76	95	1628	106	1.12	18.56	33.41	229	1909	276	0.00	56.1
Crystal 768RR	209	346.8	96	11740	109	48.32	94	1635	107	1.15	18.49	33.87	223	1948	293	0.00	69.7
Crystal 769RR	214	354.8	99	11921	111	50.15	98	1684	110	1.04	18.78	33.63	241	1836	229	0.00	64.1
Crystal 770RR	230	348.6	97	10930	102	48.74	95	1528	100	0.99	18.43	31.37	220	1810	207	0.00	62.7
Hilleshog 4003RR(9003RR)	233	365.9	102	10449	97	52.70	103	1505	98	1.13	19.43	28.58	242	1996	257	0.00	60.7
Hilleshog 4010RR(9010RR)	205	358.3	100	11006	103	50.95	99	1558	102	1.19	19.11	30.96	378	2003	258	0.00	50.1
Hilleshog 4012RR(9012RR)	231	362.0	101	11015	103	51.80	101	1576	103	1.16	19.26	30.45	291	2008	265	0.00	57.8
Hilleshog 4020RR(9020RR)	221	370.4	103	10060	94	53.74	105	1459	95	1.16	19.69	27.17	263	2008	271	0.00	55.3
Hilleshog 4022RR(9022RR)	216	354.1	98	10836	101	50.00	97	1530	100	1.21	18.91	30.63	337	2024	278	0.00	54.7
Hilleshog 9035RR	201	374.8	104	9986	93	54.75	107	1457	95	1.03	19.79	26.70	185	1725	271	1.43	49.8
Hilleshog 9043RR	227	364.1	101	10669	99	52.29	102	1532	100	1.05	19.26	29.32	199	1787	267	0.00	52.7
Hilleshog 9045RR	213	374.3	104	9636	90	54.62	106	1406	92	1.13	19.84	25.75	246	1913	277	0.00	47.8
Hilleshog 9046RR	224	365.9	102	10318	96	52.69	103	1486	97	1.06	19.36	28.21	243	1828	249	0.00	56.4
Hilleshog 9049RR	211	364.6	101	10353	96	52.41	102	1488	97	1.16	19.40	28.40	246	2017	275	0.00	47.6
Hilleshog 9053RR	219	363.0	101	10668	99	52.04	101	1528	100	1.11	19.26	29.43	265	1943	250	0.00	45.8
Hilleshog 9054RR	206	343.9	96	9818	92	47.65	93	1361	89	1.14	18.33	28.56	277	2030	243	0.00	62.4
Seedex SX0851RR	210	351.5	98	10470	98	49.41	96	1471	96	1.07	18.65	29.81	251	1935	228	0.00	59.5
Hilleshög 90703RR	223	347.5	97	10288	96	48.50	95	1435	94	1.31	18.68	29.62	344	2099	337	0.00	50.4
SESVanderhave H36711RR	208	374.0	104	11961	111	54.56	106	1743	114	1.01	19.72	32.02	202	1653	264	0.00	69.8
SESVanderhave H36712RR	229	367.8	102	11659	109	53.14	104	1684	110	0.96	19.36	31.73	167	1628	247	0.00	65.8
Van der Have H46519(Check)	235	362.1	101	10938	102	51.84	101	1565	102	0.95	19.07	30.21	160	1684	231	0.00	75.2
Beta 1305R(Check)	240	358.2	100	10196	95	50.94	99	1450	95	1.09	19.00	28.48	197	1854	281	0.00	57.0
Crystal R431(Check)	237	365.6	102	10587	99	52.64	103	1522	100	1.14	19.42	29.02	198	1995	281	0.00	73.0
Seedex Rezult(Check)	239	350.1	97	9382	87	49.08	96	1313	86	1.08	18.59	26.88	200	1945	247	0.00	58.4
Van der Have H46519(Check)	234	360.5	100	10490	98	51.46	100	1496	98	1.01	19.03	29.13	173	1770	246	0.00	66.4
Beta 1305R(Check)	236	353.2	98	10269	96	49.79	97	1447	95	1.15	18.81	29.09	200	1937	302	0.00	59.9
Crystal R431(Check)	241	363.6	101	9903	92	52.16	102	1420	93	1.18	19.36	27.25	219	2096	280	0.00	71.0
Seedex Rezult(Check)	238	366.4	102	10284	96	52.80	103	1482	97	1.00	19.32	28.08	186	1777	236	0.00	63.8
Hilleshög 2417Rz(Check)	242	365.8	102	9713	91	52.68	103	1398	91	1.00	19.29	26.57	197	1799	223	0.00	55.3
Hilleshög 2417Rz(Check)	243	368.7	102	10632	99	53.34	104	1537	101	0.98	19.42	28.89	180	1763	224	0.00	48.7
Filler 1-0	244	366.0	102	11037	103	52.72	103	1590	104	1.12	19.42	30.16	211	1960	272	0.00	69.8
Filler 1-10	245	362.4	101	11032	103	51.91	101	1580	103	1.07	19.19	30.44	180	1931	252	0.00	73.5
Filler 1-1000	246	357.2	99	9134	85	50.70	99	1296	85	1.24	19.10	25.59	241	2153	307	0.00	43.6
Filler 4-0	247	351.6	98	11423	106	49.43	96	1605	105	1.16	18.74	32.52	235	1898	314	0.00	65.0
Filler 4-10	248	354.7	99	11527	107	50.14	98	1629	107	1.17	18.90	32.52	235	1926	311	0.00	66.1
Filler 4-1000	249	350.3	97	9145	85	49.12	96	1281	84	1.20	18.71	26.15	262	1968	314	0.00	41.9
Filler 8-0	250	379.0	105	10841	101	55.70	109	1593	104	1.05	20.00	28.61	227	1839	242	0.00	65.6
Filler 8-10	251	365.8	102	10836	101	52.68	103	1561	102	1.15	19.44	29.62	236	1944	289	0.00	71.0
Check Mean		359.7		10729.1		51.29		1529		1.10	19.10	29.87	236	1891	267	0.0	60.1
Coeff. of Var. (%)		2.6		6.1		4.2		6.7		7.6	2.2	6.1	22.9	5.5	11.5		15.0
Mean LSD (0.05)		15.5		1061.5		3.55		165		0.13	0.69	2.97	88	169	51		14.7
Mean LSD (0.01)		20.5		1404.5		4.70		218		0.18	0.91	3.92	116	224	67		19.4
Sig Lvl		*		**		*		**		ns	**	**	ns	**	**		*

Vigor not collected. RNBD = Randomized Nested Block statistical Design used.

Created 10-24-2007.

**Lower numbers indicate better resistance (1 = Ex, 9 = poor). Cerc. data from Rosemount, MN. Aph data from Shakopee, MN.

Trial # = 078639

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

++ Revenue estimates are based on a $41.97 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

No Aphanomyces present.

Table 33.

Performance of Varieties -ACSC Biotech Trial

Argyle - Light Rzm - All Characters - Commercial Status

Description @	Code	Rec/T lbs.	Rec/T % Mean	Rec/A lbs.	Rec/A % Mean	Rev/T $ ++	Rev/T % Mean	Rev/A $ ++	Rev/A % Mean	Loss Mol %	Sugar %	Yield T/A	Na ppm	K ppm	AmN ppm	Bolter %	Emerg %
BTS 85RR02(B5802RR)	220	344.0	102	7639	99	47.58	103	1056	100	1.11	18.31	22.23	249	1815	282	0.00	74.9
BTS 86RR44(B6804RR)	207	329.5	97	7497	97	44.22	96	1004	95	1.16	17.65	22.82	249	1770	335	0.00	86.3
BTS 86RR66(B6806RR)	212	329.8	97	7312	95	44.28	96	981	93	1.19	17.68	22.21	298	1806	323	0.00	72.1
BTS 86RR88(B6808RR)	228	345.7	102	7273	94	47.97	104	1009	96	1.02	18.31	21.06	263	1645	258	0.00	63.3
BTS 87RR28	217	329.0	97	7139	92	44.08	95	956	91	1.11	17.55	21.71	242	1781	289	0.00	76.6
BTS 87RR38	202	330.6	98	8622	112	44.46	96	1159	110	1.05	17.58	26.11	194	1826	263	0.00	77.8
BTS 87RR58	225	332.6	98	8182	106	44.92	97	1105	105	1.21	17.85	24.61	233	1798	365	0.00	84.3
BTS 87RR68	204	348.5	103	7833	101	48.63	105	1093	104	1.02	18.44	22.48	236	1637	264	0.00	84.9
BTS 87RR78	222	316.5	94	7619	99	41.18	89	990	94	1.10	16.93	24.11	249	1772	287	0.00	85.2
Crystal 539RR	215	343.3	101	7372	95	47.41	103	1017	96	1.08	18.24	21.50	282	1774	259	0.00	80.6
Crystal 658RR	232	313.2	93	7189	93	40.42	87	928	88	1.07	16.73	22.97	242	1655	292	0.00	87.8
Crystal 765RR	203	344.7	102	8079	105	47.75	103	1118	106	1.01	18.24	23.46	273	1622	248	0.00	76.4
Crystal 766RR	218	330.1	98	7978	103	44.36	96	1071	102	1.01	17.52	24.20	218	1652	264	0.00	84.3
Crystal 767RR	226	332.9	98	8141	105	44.99	97	1099	104	1.07	17.72	24.49	185	1807	282	0.00	79.2
Crystal 768RR	209	334.5	99	8219	106	45.35	98	1114	106	1.12	17.85	24.59	193	1809	315	0.00	83.8
Crystal 769RR	214	328.8	97	8485	110	44.03	95	1136	108	1.05	17.48	25.83	233	1785	255	0.00	87.5
Crystal 770RR	230	327.5	97	7455	97	43.73	95	995	94	1.01	17.38	22.79	230	1732	244	0.00	77.8
Hilleshog 4003RR(9003RR)	233	340.8	101	7248	94	46.85	101	996	95	1.10	18.14	21.28	231	1848	278	0.00	64.4
Hilleshog 4010RR(9010RR)	205	345.1	102	7274	94	47.84	103	1008	96	1.11	18.37	21.09	244	1849	284	0.00	63.5
Hilleshog 4012RR(9012RR)	231	338.5	100	7191	93	46.32	100	980	93	1.09	18.01	21.35	312	1679	273	0.00	69.2
Hilleshog 4020RR(9020RR)	221	343.1	101	7415	96	47.36	102	1023	97	1.11	18.27	21.62	261	1830	284	0.00	63.3
Hilleshog 4022RR(9022RR)	216	345.4	102	7550	98	47.90	104	1047	99	0.97	18.24	21.85	247	1648	230	0.00	72.4
Hilleshog 9035RR	201	353.8	105	7426	96	49.84	108	1046	99	1.02	18.70	21.00	137	1662	297	1.98	73.8
Hilleshog 9043RR	227	341.4	101	7545	98	46.97	102	1039	99	0.94	18.01	22.09	143	1622	252	0.00	69.0
Hilleshog 9045RR	213	343.4	101	6700	87	47.44	103	925	88	1.13	18.31	19.54	312	1723	299	0.00	58.7
Hilleshog 9046RR	224	355.0	105	7215	93	50.12	108	1016	96	1.02	18.76	20.40	185	1745	264	0.00	62.1
Hilleshog 9049RR	211	342.8	101	7494	97	47.29	102	1032	98	1.07	18.21	21.91	233	1768	274	0.00	60.4
Hilleshog 9053RR	219	337.3	100	7196	93	46.01	99	981	93	1.09	17.94	21.35	305	1766	256	0.00	63.8
Hilleshog 9054RR	206	329.2	97	7397	96	44.15	95	992	94	1.06	17.52	22.48	288	1761	245	0.00	76.1
Seedex SX0851RR	210	336.1	99	7438	96	45.74	99	1012	96	0.98	17.78	22.15	209	1751	224	0.00	75.5
Hilleshög 90703RR	223	339.6	100	7136	92	46.55	101	977	93	1.07	18.04	21.04	259	1740	266	0.00	65.2
SESVanderhave H36711RR	208	346.2	102	7878	102	48.08	104	1094	104	1.00	18.31	22.78	211	1614	268	0.00	83.5
SESVanderhave H36712RR	229	345.4	102	8288	107	47.88	104	1149	109	0.94	18.21	24.02	164	1494	274	0.00	81.8
Van der Have H46519(Check)	235	334.3	99	8281	107	45.33	98	1122	106	1.03	17.75	24.79	152	1822	266	0.00	77.5
Beta 1305R(Check)	240	329.6	97	8223	107	44.23	96	1103	105	1.20	17.68	24.96	211	1876	346	0.00	75.2
Crystal R431(Check)	237	342.9	101	8153	106	47.32	102	1123	107	1.19	18.34	23.84	199	2005	319	0.00	74.4
Seedex Rezult(Check)	239	346.3	102	7752	100	48.11	104	1077	102	1.06	18.37	22.38	192	1830	268	0.00	77.5
Van der Have H46519(Check)	234	316.8	94	8322	108	41.27	89	1083	103	1.14	16.99	26.29	250	1852	301	0.00	75.8
Beta 1305R(Check)	236	325.0	96	7765	101	43.16	93	1031	98	1.26	17.52	23.91	282	1915	355	0.00	74.4
Crystal R431(Check)	241	338.3	100	8014	104	46.27	100	1096	104	1.19	18.11	23.69	249	2030	291	0.00	76.6
Seedex Rezult(Check)	238	353.1	104	7766	101	49.70	107	1093	104	1.02	18.66	22.01	152	1872	243	0.00	80.1
Hilleshög 2417Rz(Check)	242	340.2	101	8012	104	46.71	101	1099	104	1.03	18.04	23.57	209	1757	260	0.00	67.5
Hilleshög 2417Rz(Check)	243	349.9	103	8104	105	48.96	106	1135	108	0.98	18.47	23.14	162	1758	239	0.00	69.2
Filler 1-0	244	343.1	101	7947	103	47.36	102	1097	104	1.18	18.34	23.19	200	2075	295	0.00	81.8
Filler 1-10	245	338.6	100	8044	104	46.34	100	1099	104	1.14	18.07	23.79	189	2106	266	0.00	71.5
Filler 1-1000	246	347.5	103	7757	100	48.40	105	1080	102	1.15	18.54	22.33	202	2032	287	0.00	49.0
Filler 4-0	247	334.6	99	8146	106	45.39	98	1105	105	1.28	18.01	24.37	253	1945	369	0.00	83.8
Filler 4-10	248	336.9	100	8608	112	45.91	99	1173	111	1.23	18.07	25.58	221	1926	354	0.00	78.9
Filler 4-1000	249	332.9	98	7620	99	44.99	97	1030	98	1.29	17.94	22.90	259	1955	377	0.00	41.3
Filler 8-0	250	353.6	105	7476	97	49.82	108	1053	100	1.09	18.76	21.15	212	1953	253	0.00	68.7
Filler 8-10	251	347.2	103	7294	94	48.34	104	1015	96	1.11	18.47	21.01	185	1976	272	0.00	79.5
Check Mean		338.3		7719.9		46.26		1054		1.10	18.00	22.87	227	1801	283	0.0	73.9
Coeff. of Var. (%)		2.2		6.1		3.7		6.6		6.5	1.8	6.0	23.3	4.4	11.3		8.6
Mean LSD (0.05)		13.5		800.3		3.13		116		0.13	0.58	2.42	96	127	64		10.6
Mean LSD (0.01)		18.2		1065.0		4.23		154		0.18	0.77	3.21	130	169	89		14.0
Sig Lvl		**		**		**		*		**	**	**	*	**	**		**

Vigor not collected. RNBD = Randomized Nested Block statistical Design used.

Created 10-24-2007.

**Lower numbers indicate better resistance (1 = Ex, 9 = poor). Cerc. data from Rosemount, MN. Aph data from Shakopee, MN.

Trial # = 078640

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

++ Revenue estimates are based on a $41.97 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

No Aphanomyces present.

Table 34.

Performance of Varieties -ACSC Biotech Trial

Hallock - Light Rzm - All Characters - Commercial Status

Description @	Code	Rec/T lbs.	Rec/T % Mean	Rec/A lbs.	Rec/A % Mean	Rev/T $ ++	Rev/T % Mean	Rev/A $ ++	Rev/A % Mean	Loss Mol %	Sugar %	Yield T/A	Na ppm	K ppm	AmN ppm	Bolter %	Emerg %
BTS 85RR02(B5802RR)	220	346.4	100	9376	124	48.16	100	1305	124	1.23	18.54	27.03	325	2148	262	0.00	69.2
BTS 86RR44(B6804RR)	207	333.7	96	7972	105	45.18	94	1080	102	1.31	17.99	23.87	349	2177	311	0.00	65.4
BTS 86RR66(B6806RR)	212	348.9	101	7933	105	48.74	101	1110	105	1.30	18.74	22.71	331	2165	313	0.00	56.4
BTS 86RR88(B6808RR)	228	362.2	104	8514	112	51.84	107	1221	116	1.19	19.29	23.44	350	2160	220	0.00	70.9
BTS 87RR28	217	346.0	100	7658	101	48.07	100	1066	101	1.19	18.49	22.08	264	2144	260	0.00	71.8
BTS 87RR38	202	351.2	101	7511	99	49.27	102	1055	100	1.29	18.84	21.35	268	2376	266	0.00	68.8
BTS 87RR58	225	343.1	99	6850	90	47.39	98	947	90	1.43	18.59	19.92	287	2557	325	0.00	68.8
BTS 87RR68	204	364.1	105	5344	71	52.29	108	769	73	1.29	19.49	14.64	328	2299	269	0.00	70.2
BTS 87RR78	222	340.1	98	7398	98	46.69	97	1017	97	1.24	18.24	21.72	247	2332	248	0.00	67.1
Crystal 539RR	215	354.3	102	7792	103	50.00	104	1101	105	1.23	18.94	21.96	348	2129	263	0.00	72.5
Crystal 658RR	232	336.1	97	8437	111	45.75	95	1149	109	1.14	17.94	25.09	277	2021	248	0.00	85.5
Crystal 765RR	203	375.0	108	7208	95	54.86	114	1057	100	1.09	19.84	19.17	252	2023	219	0.00	75.6
Crystal 766RR	218	352.4	102	5909	78	49.57	103	832	79	1.12	18.74	16.73	287	2060	221	0.00	90.6
Crystal 767RR	226	338.1	98	8078	107	46.22	96	1104	105	1.38	18.29	23.90	298	2397	329	0.00	74.8
Crystal 768RR	209	350.8	101	7977	105	49.18	102	1119	106	1.16	18.69	22.74	241	2113	247	0.00	88.5
Crystal 769RR	214	338.7	98	8694	115	46.36	96	1191	113	1.26	18.19	25.63	323	2191	277	0.00	86.3
Crystal 770RR	230	341.1	98	7859	104	46.93	97	1083	103	1.24	18.29	22.99	309	2275	242	0.00	75.6
Hilleshog 4003RR(9003RR)	233	352.6	102	7913	104	49.61	103	1114	106	1.26	18.89	22.44	361	2179	271	0.00	65.4
Hilleshog 4010RR(9010RR)	205	361.6	104	8114	107	51.71	107	1159	110	1.22	19.29	22.49	315	2109	269	0.00	68.4
Hilleshog 4012RR(9012RR)	231	330.9	95	8756	116	44.53	92	1180	112	1.30	17.84	26.41	442	2181	269	0.00	59.4
Hilleshog 4020RR(9020RR)	221	362.5	105	7518	99	51.93	108	1078	102	1.22	19.34	20.69	309	2123	270	0.00	64.1
Hilleshog 4022RR(9022RR)	216	342.4	99	7863	104	47.22	98	1086	103	1.32	18.44	22.93	518	2200	257	0.00	56.8
Hilleshog 9035RR	201	348.1	100	7618	101	48.56	101	1061	101	1.24	18.64	21.91	269	2060	316	1.28	65.0
Hilleshog 9043RR	227	364.2	105	8487	112	52.32	108	1221	116	1.14	19.34	23.27	217	2135	234	0.00	62.8
Hilleshog 9045RR	213	354.9	102	6575	87	50.14	104	930	88	1.30	19.04	18.51	344	2169	307	0.00	46.2
Hilleshog 9046RR	224	357.4	103	7113	94	50.73	105	1011	96	1.23	19.09	19.87	316	2066	288	0.00	62.0
Hilleshog 9049RR	211	358.8	103	7499	99	51.06	106	1068	101	1.20	19.14	20.89	292	2145	258	0.00	49.6
Hilleshog 9053RR	219	350.4	101	7365	97	49.09	102	1028	98	1.27	18.79	21.14	381	2202	265	0.00	56.8
Hilleshog 9054RR	206	337.1	97	7737	102	45.98	95	1058	100	1.19	18.04	22.89	361	2037	253	0.00	59.4
Seedex SX0851RR	210	348.8	101	7097	94	48.71	101	992	94	1.21	18.64	20.33	327	2205	230	0.00	66.7
Hilleshög 90703RR	223	358.2	103	7277	96	50.92	106	1034	98	1.28	19.19	20.33	354	2237	272	0.00	61.6
SESVanderhave H36711RR	208	362.9	105	8419	111	52.02	108	1206	114	1.15	19.29	23.25	269	1949	279	0.00	82.1
SESVanderhave H36712RR	229	345.8	100	7993	105	48.02	100	1111	105	1.21	18.49	23.09	324	2067	270	0.00	81.1
Van der Have H46519(Check)	235	337.5	97	7398	98	46.08	96	1012	96	1.22	18.09	21.86	264	2257	247	0.00	70.5
Beta 1305R(Check)	240	343.7	99	7467	99	47.52	99	1034	98	1.31	18.49	21.68	308	2202	319	0.00	55.6
Crystal R431(Check)	237	351.5	101	6889	91	49.35	102	968	92	1.36	18.94	19.56	266	2517	291	0.00	74.8
Seedex Rezult(Check)	239	341.7	99	7072	93	47.06	98	975	93	1.16	18.24	20.66	264	2218	213	0.00	67.1
Van der Have H46519(Check)	234	327.7	95	7568	100	43.77	91	1009	96	1.21	17.59	23.14	281	2297	224	0.00	74.4
Beta 1305R(Check)	236	332.3	96	7930	105	44.86	93	1070	102	1.28	17.89	23.86	306	2224	289	0.00	68.4
Crystal R431(Check)	241	326.9	94	7057	93	43.58	90	941	89	1.30	17.64	21.59	326	2414	246	0.00	76.5
Seedex Rezult(Check)	238	343.8	99	6829	90	47.55	99	947	90	1.16	18.34	19.79	291	2152	219	0.00	60.7
Hilleshög 2417Rz(Check)	242	348.8	101	7621	101	48.71	101	1065	101	1.16	18.59	21.84	265	2139	232	0.00	59.4
Hilleshög 2417Rz(Check)	243	339.9	98	7048	93	46.64	97	967	92	1.15	18.14	20.72	291	2094	230	0.00	65.0
Filler 1-0	244	344.8	99	7173	95	47.79	99	993	94	1.30	18.54	20.86	287	2369	274	0.00	64.1
Filler 1-10	245	339.9	98	8037	106	46.64	97	1103	105	1.34	18.34	23.63	346	2422	273	0.00	74.8
Filler 1-1000	246	349.7	101	6776	89	48.93	101	949	90	1.26	18.74	19.34	267	2272	274	0.00	39.8
Filler 4-0	247	325.2	94	8126	107	43.18	90	1080	102	1.38	17.64	24.97	372	2269	336	0.00	75.2
Filler 4-10	248	334.2	96	8517	112	45.30	94	1155	110	1.28	17.99	25.46	313	2156	310	0.00	74.4
Filler 4-1000	249	322.1	93	6391	84	42.45	88	841	80	1.43	17.55	19.90	427	2309	349	0.00	44.0
Filler 8-0	250	350.6	101	7325	97	49.12	102	1028	98	1.17	18.69	20.84	318	2063	243	0.00	77.4
Filler 8-10	251	364.9	105	7390	98	52.48	109	1064	101	1.20	19.44	20.21	265	2268	231	0.00	66.7
Check Mean		346.7		7577.6		48.24		1054		1.25	18.58	21.86	313	2201	267	0.0	67.7
Coeff. of Var. (%)		3.3		7.2		5.6		8.2		5.0	3.0	7.1	16.6	4.6	8.8		8.7
Mean LSD (0.05)		23.1		1099.5		5.41		174		0.15	1.11	3.11	106	229	56		11.9
Mean LSD (0.01)		30.8		1465.7		7.22		232		0.22	1.48	4.14	142	314	79		15.9
Sig Lvl		**		**		**		**		**	*	**	**	**	**		**

Vigor not collected. RNBD = Randomized Nested Block statistical Design used.

Created 10-24-2007.

**Lower numbers indicate better resistance (1 = Ex, 9 = poor). Cerc. data from Rosemount, MN. Aph data from Shakopee, MN.

Trial # = 078641

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

++ Revenue estimates are based on a $41.97 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

No Aphanomyces present.

Table 35.

2007 Performance of Varieties - ACSC Aph Specialty Trial

Kindred - 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. %	Hrv Std %	Fol.Aph. (1-9)
Beta 1100R	322	309.0	99	6591	119	1.06	39.40	99	841	118	16.52	21.26	172	1876	264	0.00	51.7	41.1	2.8
Beta 1140R	307	324.3	104	6185	112	1.14	42.97	108	821	116	17.36	18.99	199	1965	293	0.00	48.1	35.1	2.5
Beta 1160R	330	287.6	93	5143	93	1.33	34.37	86	616	87	15.71	17.85	212	2236	356	0.00	46.9	27.4	3.9
Beta 1180R	314	316.2	102	5665	102	1.04	41.08	103	734	103	16.85	18.05	192	1722	279	0.00	43.2	33.1	3.1
Beta 1301R	302	307.1	99	5861	106	1.25	38.94	98	741	104	16.60	19.18	188	2136	334	0.00	41.9	30.3	3.6
Beta 1305R	326	314.1	101	5932	107	1.24	40.60	102	770	108	16.95	18.76	166	2109	344	0.00	41.8	33.1	2.8
Beta 1317R	320	309.9	100	5767	104	1.29	39.61	100	739	104	16.79	18.51	201	2105	370	0.00	42.0	32.3	2.5
Beta 1683R (BX1683)	313	291.1	94	5351	96	1.33	35.20	89	650	91	15.89	18.24	203	2273	354	0.00	40.6	34.5	4.2
Beta 1772R (BX1572)	308	319.9	103	5498	99	1.30	41.94	105	720	101	17.29	17.24	199	2087	378	0.07	40.0	34.6	3.3
Beta 4554R (BX1454)	332	323.9	104	5648	102	1.31	42.88	108	747	105	17.50	17.45	208	2299	328	0.00	33.4	25.4	3.7
Crystal R357	301	317.0	102	6288	113	1.23	41.26	104	819	115	17.08	19.80	233	2119	303	0.00	37.3	32.7	3.4
Crystal R431	333	307.8	99	5297	95	1.44	39.12	98	674	95	16.83	17.17	196	2458	389	0.00	40.6	33.2	3.7
Crystal R434	315	307.1	99	5767	104	1.41	38.94	98	733	103	16.76	18.72	212	2238	419	0.00	24.9	20.1	4.0
Crystal R454 (R468)	306	302.9	98	5893	106	1.38	37.97	95	738	104	16.52	19.52	235	2228	389	0.00	41.8	31.2	2.7
Crystal R652	324	288.9	93	5340	96	1.34	34.68	87	642	90	15.78	18.50	221	2238	361	0.00	24.5	19.5	5.5
Crystal R760	331	301.8	97	5584	101	1.24	37.71	95	697	98	16.34	18.59	214	2044	344	0.00	28.9	24.1	5.2
Crystal R761	304	295.6	95	5401	97	1.56	36.25	91	665	94	16.33	18.20	225	2549	451	0.00	27.5	27.9	5.0
Crystal R764	327	282.2	91	5182	93	1.31	33.11	83	611	86	15.42	18.29	213	2128	373	0.00	22.7	23.0	5.5
Hilleshog 2415Rz (7215)	311	322.5	104	5926	107	1.23	42.57	107	782	110	17.36	18.35	236	2075	317	0.00	51.1	42.5	3.0
Hilleshog 3028Rz (7228)	323	319.6	103	5476	99	1.35	41.89	105	720	101	17.33	17.05	241	2173	382	0.00	37.9	28.2	3.7
Hilleshog 3031Rz (7231)	317	327.3	105	5336	96	1.22	43.68	110	714	100	17.59	16.19	202	1908	366	0.00	32.0	19.1	4.6
Hilleshog 3035Rz (7235)	305	318.7	103	5414	98	1.14	41.67	105	709	100	17.07	17.03	202	1903	307	0.00	38.4	27.8	4.2
Hilleshog 3036Rz (7236)	321	319.0	103	5360	97	1.21	41.74	105	703	99	17.15	16.71	193	1910	361	0.00	37.1	30.0	4.0
Hilleshog 3050Rz(7250)	329	315.9	102	5358	97	1.20	41.01	103	698	98	16.99	16.84	183	1963	339	0.00	36.6	31.5	4.2
Hilleshog 3052Rz(7252)	310	310.1	100	5619	101	1.21	39.66	100	720	101	16.71	18.04	198	2013	327	0.00	41.8	33.3	3.8
Hilleshog 3063Rz(7263)	319	318.0	102	5617	101	1.28	41.51	104	735	103	17.17	17.67	253	2061	350	0.00	43.1	31.0	3.0
Hilleshog 3064Rz(7264)	312	323.8	104	5400	97	1.21	42.87	108	717	101	17.40	16.60	161	2009	343	0.00	39.1	31.5	4.0
Holly 556 (05HX556)	318	319.6	103	5922	107	1.19	41.89	105	776	109	17.18	18.48	181	2051	311	0.00	35.2	29.2	4.4
Holly 07HX701	303	324.7	105	5357	97	1.23	43.08	108	713	100	17.47	16.42	162	2207	310	0.00	35.3	24.6	5.0
Seedex Alpine	316	301.2	97	5576	101	1.23	37.57	94	697	98	16.29	18.45	196	2163	312	0.00	35.3	31.4	4.6
Seedex Rezult	328	315.6	102	5564	100	1.14	40.94	103	721	101	16.91	17.71	158	2002	292	0.00	32.4	30.6	4.2
SESVanderhave H46531	325	299.7	96	5690	103	1.27	37.22	94	705	99	16.26	19.06	215	2218	319	0.07	35.2	31.1	4.2
SESVanderhave H46911	309	312.4	101	5084	92	1.20	40.19	101	652	92	16.81	16.42	228	2040	303	0.00	36.5	25.2	4.7
RZ Very Susc 2N - Aph Tol	334	304.4	98	5185	93	1.27	38.31	96	654	92	16.48	17.01	201	2158	336	0.00	36.4	28.2	4.0
Crystal 817(Aph Std-16)	335	312.8	101	5265	95	1.37	40.28	101	681	96	17.01	16.70	213	2300	370	0.00	19.4	17.9	5.8
Crystal 955(Aph Chk)	336	308.8	99	4165	75	1.40	39.34	99	532	75	16.84	13.46	258	2322	376	0.00	25.3	17.6	5.5
Check Mean		310.6		5547		1.26	39.76		711		16.79	17.85	205	2119	343	0.0	36.8	29.1	4.0
Coeff. of Var. (%)		3.1		8.2		6.6	5.6		9.8		2.5	7.1	15.0	5.2	10.8		16.5	21.0	18.5
Mean LSD (0.05)		11.5		545		0.10	2.71		84		0.52	1.47	36	132	44		7.3	7.4	0.9
Mean LSD (0.01)		15.2		719		0.13	3.57		111		0.68	1.94	48	174	58		9.7	9.8	1.2
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**	**	**

* 2007 Data from Kindred

Created 10-29-2007.

Vigor not collected.

Trial # = 078681

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

++ Revenue estimates are based on a $41.97 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 36.

Varieties Approved for Sale to Minn-Dak Growers for the 2008 Sugarbeet Crop

Established Varieties

ACH R357 (Aph)
ACH R454 (Aph)
Beta 1317R (Aph)
HM 2415Rz (Aph)
HM 3028Rz (Aph)
HM 3035Rz (Aph)
SDX Sonic
SDX Alpine
Holly 448 (Aph)
Holly 567 (Aph)
VDH H46519
VDH H46531 (Aph)
VDH H46807

Specialty Varieties **

Beta 1584R (Aph)

Test Market Varieties Approved for Limited Sales

HM 3064Rz (Aph)
Holly 631 (06HX631 Aph)

** Aphanomyces 3-year root rating of 4.90 or better must be obtained to be considered "Aphanomyces Specialty".

Roundup Ready Sugarbeet Varieties

ACH RR539 (Aph)
ACH RR658
Beta 85RR02 (Aph)
Beta 86RR44
Beta 86RR66 (Aph)
Beta 86RR77 (Aph)
HM 4012RR
HM 4022RR

ACH varieties are labeled as Crystal in the data tables.

Table 37.

MDFC Variety Approval Calculations - 2007

Description	Yrs Comm Seed	Approval Status	Recoverable Sugar / Ton					Recoverable Sugar / Acre					2Yr Rec/T + Rec/A %	**3Yr** Rec/T + Rec/A %	Cercospora Ratings *				Aph Root Ratings			
			2005	2006	2007	3 Yr Mean	3 Yr % App	2005	2006	2007	3 Yr Mean	3 Yr % App			2005	2006	2007	3 Yr Mean	2005	2006	2007	3 Yr Mean
Previously Approved Varieties																						
Beta 1317R	3	Approved	277.7	311.1	318.3	302.4	100.0	7661	9326	7938	8308	109.6	211.3	209.6	4.90	5.35	5.18	5.14	3.57	4.17	4.67	4.14
Crystal R357	2	Approved	286.3	315.0	313.5	304.9	100.8	6974	8397	7682	7684	101.4	203.6	202.2	4.83	5.10	5.11	5.02	3.24	3.81	4.76	3.94
Crystal R454 (R468)	2	Approved	274.2	302.9	314.7	297.3	98.3	8044	9014	8262	8440	111.4	209.5	209.7	4.75	5.01	5.28	5.02	4.03	4.31	4.53	4.29
Hilleshog 2415Rz (7215)	2	Approved	280.7	308.8	315.8	301.8	99.8	7266	9037	8345	8216	108.4	211.3	208.2	5.37	5.39	5.27	5.34	3.22	4.25	4.55	4.01
Hilleshog 3028Rz	1	Approved	283.8	314.9	316.5	305.1	100.9	7751	9284	7615	8217	108.4	209.3	209.3	4.89	5.22	5.03	5.05	3.48	4.19	5.06	4.24
Hilleshog 3031Rz	1	Dropped	299.4	328.5	328.3	318.7	105.3	7048	9005	7346	7800	102.9	209.9	208.3	4.32	4.37	4.06	4.25	4.99	4.35	5.31	4.88
Hilleshog 3035Rz	1	Approved	300.1	320.0	321.7	313.9	103.8	8304	9102	7716	8374	110.5	210.4	214.3	4.49	4.49	4.37	4.45	4.83	5.16	4.31	4.76
Holly 448	2	Approved	280.3	302.8	307.1	296.7	98.1	7936	9395	8059	8463	111.7	209.4	209.8	4.59	4.64	4.46	4.56	4.20	5.00	4.88	4.69
Holly 567 (05HX567)	1	Approved	279.1	302.4	311.2	297.6	98.4	8167	9309	8241	8573	113.1	210.6	211.5	4.35	4.74	4.75	4.61	4.57	4.40	4.71	4.56
Seedex Alpine	3	Approved	284.1	292.8	306.2	294.4	97.3	8119	9106	7197	8141	107.4	200.3	204.7	4.23	4.82	4.60	4.55	3.97	7.12	5.57	5.55
Seedex Sonic	1	Approved	273.7	305.9	306.1	295.2	97.6	8208	9968	7968	8715	115.0	212.8	212.6	4.93	4.94	4.57	4.81	6.32	5.33	4.94	5.53
SESVanderhave H46519	3	Approved	282.3	304.1	299.4	295.3	97.6	8142	9485	7456	8361	110.3	205.1	207.9	4.53	4.67	4.57	4.59	4.79	5.06	5.30	5.05
SESVanderhave H46531	2	Approved	282.8	310.2	307.4	300.1	99.2	8177	9495	8190	8621	113.8	212.1	213.0	4.72	5.22	4.99	4.98	4.44	4.56	5.31	4.77
SESVanderhave H46807	1	Approved	277.3	301.0	306.6	295.0	97.5	8155	9961	7582	8566	113.0	209.6	210.6	5.13	5.12	5.20	5.15	5.75	5.73	5.74	5.74
Candidates for Approval																						
Beta 1584R (BX1584)	NC	Approved	290.6	302.1	310.4	301.0	99.5	8158	9288	8416	8621	113.8	211.4	213.3	5.00	5.47	5.57	5.35	5.07	4.55	4.83	4.81
Holly 05HX565	NC	NOT Approved	278.3	301.8	306.7	295.6	97.7	7960	9761	8206	8642	114.0	212.5	211.8	5.09	5.02	4.83	4.98	6.43	5.17	5.30	5.63
SESVanderhave H66857	NC	NOT Approved	293.8	314.9	304.5	304.4	100.6	7621	8135	6668	7475	98.6	194.0	199.3	5.16	5.02	5.00	5.06	6.14	4.97	5.57	5.56
Test Market Varieties						**2 Yr**	**2 Yr**				**2 Yr**	**2 Yr**						**2 Yr**				**2 Yr**
Hilleshog 3063Rz(7263)	NC	NOT Approved		314.8	305.6	310.2	99.5		9061	7812	8437	107.9	207.4			4.67	5.09	4.88		4.90	4.94	4.92
Hilleshog 3064Rz(7264)	NC	Approved		312.5	315.3	313.9	100.7		9189	8068	8629	110.3	211.0			4.93	5.18	5.05		4.43	5.02	4.73
Hilleshog 3065Rz(7265)	NC	NOT Approved		310.5	308.3	309.4	99.3		9371	8202	8786	112.3	211.6			5.02	5.25	5.14		5.27	5.17	5.22
Holly 06HX630	NC	NOT Approved		303.6	307.3	305.4	98.0		9716	7992	8854	113.2	211.2			5.15	5.28	5.22		5.85	5.32	5.58
Holly 06HX631	NC	Approved		303.7	311.2	307.5	98.6		9621	8896	9258	118.4	217.0			4.58	3.96	4.27		5.08	4.65	4.86
Seedex SX0936	NC	NOT Approved		303.9	309.2	306.6	98.4		9642	8108	8875	113.5	211.8			5.18	5.44	5.31		5.82	5.50	5.66
SESVanderhave H46909	NC	NOT Approved		301.7	310.5	306.1	98.2		9125	8031	8578	109.7	207.9			4.71	4.83	4.77		4.67	6.03	5.35
SESVanderhave H48607(46907)	NC	NOT Approved		301.4	305.0	303.2	97.3		9725	7843	8784	112.3	209.6			5.20	4.97	5.09		5.35	5.54	5.45
One Year Varieties					**1 Yr**		**1 Yr**			**1 Yr**		**1 Yr**	**1 Yr**				**1 Yr**				**1 Yr**	
Beta 1210R	NC	Only 1 Year			303.0	NA	97.0			7049	NA	90.0	187.1				5.00				6.34	
Beta 1230R	NC	Only 1 Year			312.9	NA	100.2			8270	NA	105.6	205.8				5.51				5.91	
Beta 1250R	NC	Only 1 Year			322.1	NA	103.1			6878	NA	87.9	191.0				5.42				7.38	
Beta 1270R	NC	Only 1 Year			328.4	NA	105.1			8472	NA	108.2	213.4				4.59				6.01	
Crystal 492	NC	Only 1 Year			293.7	NA	94.0			8283	NA	105.8	199.8				4.72				4.42	
Crystal 494	NC	Only 1 Year			301.0	NA	96.4			6319	NA	80.7	177.1				5.05				6.82	
Crystal 496	NC	Only 1 Year			309.8	NA	99.2			7851	NA	100.3	199.5				4.87				6.09	
Holly 07HX703	NC	Only 1 Year			302.1	NA	96.7			6628	NA	84.7	181.4				5.16				6.13	
Holly 07HX704	NC	Only 1 Year			315.1	NA	100.9			7894	NA	100.8	201.7				4.51				5.11	
Seedex SX0944	NC	Only 1 Year			314.1	NA	100.6			8148	NA	104.1	204.6				5.29				6.19	
Seedex SX0945	NC	Only 1 Year			310.6	NA	99.4			7946	NA	101.5	200.9				4.77				5.96	
SESVanderhave H46722	NC	Only 1 Year			332.2	NA	106.4			8188	NA	104.6	211.0				5.00				4.79	
SESVanderhave H46724	NC	Only 1 Year			300.9	NA	96.3			7379	NA	94.3	190.6				5.09				5.39	
SESVanderhave H48726	NC	Only 1 Year			322.9	NA	103.4			7508	NA	95.9	199.3				5.37				5.99	
SESVanderhave H48727	NC	Only 1 Year			312.5	NA	100.1			7509	NA	95.9	196.0				5.01				5.71	
Mean of Approved Comm Seed^			284.2	311.0	312.3	302.5		7090.2	7815.5	7828.4	7578.0											

* Lower numbers indicate better Cerc. resistance (1=Ex,9=Poor). Cercospora cutoff is 97.5% of 5.50 rating or 5.36.

^2005 approval variety mean is from 12 entries, 2006 is from 10 entries & 2007 is from 14 entries. 2005 & 2006 Biotech data from ACSC area.

Table 38.

MDFC Variety Approval Calculations - 2007

Description	Yrs Comm Seed	Approval Status	Recoverable Sugar / Ton 2005	2006	2007	3 Yr Mean	3 Yr % App	Recoverable Sugar / Acre 2005	2006	2007	3 Yr Mean	3 Yr % App	2Yr Rec/T + Rec/A %	**3Yr** Rec/T + Rec/A %	Cercospora Ratings * 2005	2006	2007	3 Yr Mean	Aph Root Ratings 2005	2006	2007	3 Yr Mean
Roundup Ready Varieties					**1 Yr**		**1 Yr**			**1 Yr**		**1 Yr**	**1 Yr**					**2 Yr**				**2 Yr**
BTS 77RR24	NC	Only 1 Year			309.8	NA	99.2			8326	NA	106.4	205.5				4.00				5.54	
BTS 77RR34	NC	Only 1 Year			323.0	NA	103.4			7529	NA	96.2	199.6				4.79				6.23	
BTS 77RR54	NC	Only 1 Year			317.2	NA	101.6			7689	NA	98.2	199.8				4.80				5.30	
BTS 77RR64	NC	Only 1 Year			332.8	NA	106.5			7017	NA	89.6	196.2				4.86				7.14	
BTS 77RR74	NC	Only 1 Year			302.1	NA	96.7			7809	NA	99.7	196.5				4.42				4.45	
BTS 85RR02(B5802RR)	NC	Approved	300.4	310.8	320.6	310.6	102.6	7323	8545	8067	7978	103.0	205.7	208.0	4.66	4.62	4.64	4.63	4.49	4.20	4.24	4.22
BTS 86RR44(B6804RR)	NC	Approved		314.3	305.6	NA	97.8		8859	7722	NA	98.6	196.5			5.19	5.02			4.47	4.93	
BTS 86RR66(B6806RR)	NC	Approved		322.8	306.1	NA	98.0		8440	7202	NA	92.0	190.0			4.99	4.91			4.83	4.55	
BTS 86RR77(B6807RR)	NC	Approved		302.8	318.2	NA	101.9		8382	6970	NA	89.0	190.9			5.31	4.10			5.69	4.81	
Crystal RR539	NC	Approved	290.9	329.8	319.6	313.4	102.3	7301	8641	7915	7953	101.1	203.4	208.5	4.84	5.19	5.02	5.11	3.59	3.71	4.28	4.00
Crystal RR610	NC	Only 1 Year			309.7	NA	99.1			8682	NA	110.9	210.0				4.31				5.78	
Crystal RR621	NC	Only 1 Year			308.5	NA	98.8			8163	NA	104.3	203.1				4.11				5.37	
Crystal RR632	NC	Only 1 Year			316.4	NA	101.3			8556	NA	109.3	210.6				4.19				5.21	
Crystal RR643	NC	Only 1 Year			302.6	NA	96.9			7892	NA	100.8	197.7				4.93				4.50	
Crystal RR658	NC	Approved		309.0	313.2	NA	100.3		9203	7840	NA	100.2	200.4			4.79	3.96	4.37		3.79	5.87	4.83
Hilleshog 4003RR(9003RR)	NC	NOT Approved		323.1	321.5	NA	102.9		8854	7121	NA	91.0	193.9			5.23	5.06	5.14		6.06	6.06	6.06
Hilleshog 4010RR(9010RR)	NC	NOT Approved		324.7	320.6	NA	102.6		8729	6867	NA	87.7	190.4			5.14	5.01	5.08		5.54	5.30	5.42
Hilleshog 4012RR(9012RR)	NC	Approved		317.3	312.1	NA	99.9		9271	8299	NA	106.0	205.9			5.13	4.97	5.05		5.37	5.26	5.32
Hilleshog 4020RR(9020RR)	NC	NOT Approved		324.9	317.3	NA	101.6		9379	7146	NA	91.3	192.9			5.27	5.16	5.22		6.47	5.84	6.16
Hilleshog 4022RR(9022RR)	NC	Approved		318.6	316.5	NA	101.3		9110	8087	NA	103.3	204.6			5.36	5.13	5.25		5.28	5.05	5.16
Hilleshog 9060RR	NC	Only 1 Year			324.3	NA	103.8			7912	NA	101.1	204.9				4.95				5.76	
Hilleshog 9068RR	NC	Only 1 Year			318.8	NA	102.1			5802	NA	74.1	176.2				4.63				5.91	
Hilleshog 9070RR	NC	Only 1 Year			325.5	NA	104.2			7628	NA	97.4	201.7				4.75				5.43	
Hilleshog 9072RR	NC	Only 1 Year			324.2	NA	103.8			7125	NA	91.0	194.8				4.42				6.03	
Hilleshög 90704RR	NC	Only 1 Year			311.3	NA	99.7			7658	NA	97.8	197.5				5.06				5.60	
SESVanderhave H36721RR	NC	Only 1 Year			321.0	NA	102.8			6894	NA	88.1	190.8				5.10				4.98	
SESVanderhave H36722RR	NC	Only 1 Year			319.2	NA	102.2			7651	NA	97.7	199.9				6.29				5.53	
Mean of Approved Comm Seed^			284.2	311.0	312.3	302.5		7090.2	7815.5	7828.4	7578.0											

* Lower numbers indicate better Cerc. resistance (1=Ex,9=Poor). Cercospora cutoff is 97.5% of 5.50 rating or 5.36.

^2005 approval variety mean is from 12 entries, 2006 is from 10 entries & 2007 is from 14 entries. 2005 & 2006 Biotech data from ACSC area.

Table 39.

Three Year Performance Summary of Minn-Dak Non-Biotech Entries in 2007

Minn-Dak Farmers Cooperative (All Location)*

	Sugar Content (%)			Root Yield (Tons / Acre)			Loss to Molasses (%)				Field Emergence (%)	
Description @	2007	3 Yr Mean	3 Yr % App	2007	3 Yr Mean	3 Yr % App	2007	3 Yr Mean	3 Yr % App	Ploidy @	2007	3 Yr Mean
Previously Approved												
Beta 1317R	17.4	16.5	100.7	25.2	27.6	99.3	1.51	1.40	105.8	2N	46.0	66.1
Crystal R357	17.1	16.6	101.1	24.7	25.2	90.8	1.46	1.31	99.5	3N	47.3	61.7
Crystal R454 (R468)	17.3	16.4	100.0	26.6	28.6	103.0	1.59	1.51	114.4	2N	47.4	62.4
Hilleshog 2415Rz (7215)	17.3	16.5	100.5	26.6	27.3	98.2	1.50	1.38	104.3	2N	55.0	73.6
Hilleshog 3028Rz	17.4	16.6	101.5	24.2	27.0	97.2	1.53	1.38	104.6	2N	56.1	71.0
Hilleshog 3031Rz	17.9	17.2	105.0	22.5	24.5	88.3	1.45	1.27	96.2	2N	42.9	66.8
Hilleshog 3035Rz	17.5	16.9	103.4	24.1	26.8	96.4	1.38	1.25	94.5	2N	44.2	68.5
Holly 448	16.7	16.1	98.2	26.4	28.6	102.8	1.36	1.25	94.7	2N	54.8	70.5
Holly 567 (05HX567)	17.0	16.2	98.7	26.6	28.9	104.0	1.43	1.29	97.8	2N	55.5	72.7
Seedex Alpine	16.8	16.0	97.8	23.5	27.8	99.8	1.48	1.31	99.3	2N	54.0	72.5
Seedex Sonic	16.7	16.0	97.8	26.1	29.6	106.4	1.42	1.26	95.7	2N	54.4	72.7
SESVanderhave H46519	16.4	16.1	98.0	24.9	28.4	102.1	1.44	1.29	97.8	2N	50.2	71.1
SESVanderhave H46531	16.8	16.3	99.3	26.8	28.8	103.6	1.44	1.27	96.2	2N	56.3	72.5
SESVanderhave H46807	16.8	16.0	97.8	24.8	29.1	104.5	1.46	1.27	96.5	2N	51.8	74.7
Candidates for Full Approval												
Beta 1584R (BX1584)	17.0	16.4	100.1	27.3	28.8	103.5	1.43	1.35	102.6	2N	56.7	55.9
Holly 05HX565	16.7	16.0	97.9	26.9	29.3	105.4	1.40	1.25	95.0	2N	62.4	76.1
SESVanderhave H66857	16.7	16.5	100.9	21.9	24.5	88.2	1.50	1.31	99.3	3N	54.7	67.6
Test Market Candidates												
Hilleshog 3063Rz(7263)	16.8	16.9	100.3	25.5	27.1	97.7	1.55	1.37	103.7	2N	59.0	NA
Hilleshog 3064Rz(7264)	17.2	17.0	100.9	25.9	27.7	99.6	1.43	1.29	98.0	2N	50.8	NA
Hilleshog 3065Rz(7265)	16.9	16.8	99.7	26.7	28.5	102.5	1.44	1.30	98.7	2N	57.6	NA
Holly 06HX630	16.7	16.5	98.1	26.1	29.1	104.6	1.38	1.23	93.4	2N	63.2	NA
Holly 06HX631	16.9	16.6	98.6	28.7	30.2	108.7	1.37	1.22	92.7	2N	65.1	NA
Seedex SX0936	16.8	16.6	98.4	26.2	28.9	104.2	1.37	1.23	93.4	2N	64.6	NA
SESVanderhave H46909	16.9	16.6	98.5	25.9	28.1	101.1	1.39	1.27	96.5	2N	65.2	NA
SESVanderhave H48607(46907)	16.7	16.4	97.6	25.7	29.0	104.4	1.39	1.26	95.3	2N	59.9	NA
One Year Varieties												
Beta 1210R	16.7	NA	NA	23.4	NA	NA	1.56			2N	50.4	NA
Beta 1230R	16.9	NA	NA	26.6	NA	NA	1.30			2N	51.7	NA
Beta 1250R	17.5	NA	NA	21.2	NA	NA	1.41			2N	50.3	NA
Beta 1270R	17.7	NA	NA	26.0	NA	NA	1.32			2N	51.1	NA
Crystal 492	16.4	NA	NA	28.2	NA	NA	1.74			2N	53.3	NA
Crystal 494	16.6	NA	NA	21.1	NA	NA	1.52			2N	39.2	NA
Crystal 496	17.0	NA	NA	25.4	NA	NA	1.50			2N	51.5	NA
Holly 07HX703	16.6	NA	NA	21.8	NA	NA	1.52			2N	50.8	NA
Holly 07HX704	17.2	NA	NA	25.1	NA	NA	1.41			2N	66.3	NA
Seedex SX0944	17.0	NA	NA	26.0	NA	NA	1.32			2N	62.4	NA
Seedex SX0945	16.9	NA	NA	25.7	NA	NA	1.38			2N	63.3	NA
SESVanderhave H46722	17.9	NA	NA	24.8	NA	NA	1.31			2N	59.6	NA
SESVanderhave H46724	16.5	NA	NA	24.6	NA	NA	1.44			2N	55.5	NA
SESVanderhave H48726	17.5	NA	NA	23.4	NA	NA	1.32			2N	59.2	NA
SESVanderhave H48727	17.1	NA	NA	24.1	NA	NA	1.46			2N	56.6	NA
2007 Approved Mean^^	17.1	16.4	100.0	25.4	27.8	100.0	1.46	1.32	100.0		51.5	68.8

* 2005 Colfax, Brekenridge & Fairmount, 2006 Barnesville, Colfax, Foxhome & Fairmount, 2007 Breckenridge, Charlesville & Colfax.

@ Ploidy indicates number of chromosomes (2N = diploid, 3N=triploid). Diploids can be smaller seedlings, while triploids can be larger. Diploids can have higher emergence.

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

^^Approved Mean based upon set of 14 established varieties tested in 2007

Created 11-9-2007.

Table 40.

Three Year Performance Summary of Minn-Dak Biotech (Roundup Ready ®) Entries in 2007

Minn-Dak Farmers Cooperative (All Location)*

Description @	Sugar Content (%) 2007	Sugar Content (%) 3 Yr Mean	Sugar Content (%) 3 Yr % App	Root Yield (Tons / Acre) 2007	Root Yield (Tons / Acre) 3 Yr Mean	Root Yield (Tons / Acre) 3 Yr % App	Loss to Molasses (%) 2007	Loss to Molasses (%) 3 Yr Mean	Loss to Molasses (%) 3 Yr % App	Ploidy @	Field Emergence (%) 2007	Field Emergence (%) 3 Yr Mean
Roundup Ready Varieties												
BTS 77RR24	16.9	NA	NA	27.1	NA	NA	1.39			2N	40.0	NA
BTS 77RR34	17.4	NA	NA	23.5	NA	NA	1.30			2N	45.1	NA
BTS 77RR54	17.4	NA	NA	24.5	NA	NA	1.52			2N	41.1	NA
BTS 77RR64	18.0	NA	NA	21.2	NA	NA	1.36			2N	41.7	NA
BTS 77RR74	16.5	NA	NA	26.0	NA	NA	1.39			2N	38.6	NA
BTS 85RR02(B5802RR)	17.5	16.9	103.0	25.3	25.7	92.4	1.47	1.35	102.4	2N	43.8	NA
BTS 86RR44(B6804RR)	16.8	NA	NA	25.4	NA	NA	1.53			2N	38.7	NA
BTS 86RR66(B6806RR)	16.9	NA	NA	23.7	NA	NA	1.57			2N	31.8	NA
BTS 86RR77(B6807RR)	17.5	NA	NA	22.1	NA	NA	1.59			2N	33.3	NA
Crystal RR539	17.4	17.0	103.8	24.9	25.4	91.3	1.48	1.34	101.2	2N	48.8	NA
Crystal RR610	16.9	NA	NA	28.4	NA	NA	1.43			2N	47.2	NA
Crystal RR621	16.7	NA	NA	26.7	NA	NA	1.33			2N	42.6	NA
Crystal RR632	17.1	NA	NA	27.2	NA	NA	1.32			2N	50.7	NA
Crystal RR643	16.8	NA	NA	26.2	NA	NA	1.68			2N	35.4	NA
Crystal RR658	16.9	NA	NA	25.2	NA	NA	1.26			2N	43.6	NA
Hilleshog 4003RR(9003RR)	17.5	NA	NA	22.4	NA	NA	1.45			2N	37.4	NA
Hilleshog 4010RR(9010RR)	17.5	NA	NA	21.7	NA	NA	1.46			2N	35.6	NA
Hilleshog 4012RR(9012RR)	17.0	NA	NA	26.7	NA	NA	1.44			2N	34.7	NA
Hilleshog 4020RR(9020RR)	17.3	NA	NA	22.6	NA	NA	1.49			2N	38.8	NA
Hilleshog 4022RR(9022RR)	17.2	NA	NA	25.7	NA	NA	1.39			2N	38.0	NA
Hilleshog 9060RR	17.5	NA	NA	24.4	NA	NA	1.33			2N	38.0	NA
Hilleshog 9068RR	17.4	NA	NA	18.3	NA	NA	1.49			2N	28.2	NA
Hilleshog 9070RR	17.7	NA	NA	23.7	NA	NA	1.39			2N	37.6	NA
Hilleshog 9072RR	17.5	NA	NA	22.1	NA	NA	1.28			2N	34.5	NA
Hilleshög 90704RR	17.0	NA	NA	25.0	NA	NA	1.45			2N	33.1	NA
SESVanderhave H36721RR	17.3	NA	NA	21.7	NA	NA	1.30			2N	47.9	NA
SESVanderhave H36722RR	17.2	NA	NA	24.1	NA	NA	1.30			2N	33.1	NA
2007 Approved Mean^^	17.1	16.4	100.0	25.4	27.8	100.0	1.46	1.32	100.0		51.5	68.8

* 2005 Colfax, Brekenridge & Fairmount, 2006 Barnesville, Colfax, Foxhome & Fairmount, 2007 Breckenridge, Charlesville & Colfax. 2005 & 2006 Biotech data from ACSC area.

@ Ploidy indicates number of chromosomes (2N = diploid, 3N=triploid). Diploids can be smaller seedlings, while triploids can be larger. Diploids can have higher emergence.

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

^^Approved Mean based upon set of 14 established varieties tested in 2007

Created 11-9-2007.

Table 41.

2007 Performance of Varieties - MDFC Commercial Official Trial

3 Trials - 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. %
Beta 1210R	109	303.0	97	7049	91	1.56	16.71	23.38	315	2356	466	0.03	50.4
Beta 1230R	123	312.9	100	8270	107	1.30	16.94	26.58	272	2040	368	0.00	51.7
Beta 1250R	138	322.1	103	6878	89	1.41	17.51	21.18	304	2127	416	0.00	50.3
Beta 1270R	104	328.4	105	8472	109	1.32	17.74	25.99	314	2012	375	0.00	51.1
Beta 1317R	136	318.3	102	7938	102	1.51	17.41	25.17	339	2175	465	0.00	46.0
Beta 1584R (BX1584)	115	310.4	100	8416	109	1.43	16.95	27.34	321	2217	402	0.00	56.7
Crystal 492	119	293.7	94	8283	107	1.74	16.42	28.23	462	2538	502	0.00	53.3
Crystal 494	128	301.0	97	6319	82	1.52	16.57	21.10	349	2327	434	0.00	39.2
Crystal 496	106	309.8	99	7851	101	1.50	16.99	25.42	378	2156	450	0.00	51.5
Crystal R357	133	313.5	101	7682	99	1.46	17.13	24.68	402	2135	416	0.00	47.3
Crystal R454 (R468)	124	314.7	101	8262	107	1.59	17.32	26.60	390	2258	489	0.00	47.4
Hilleshog 2415Rz (7215)	102	315.8	101	8345	108	1.50	17.29	26.58	445	2268	395	0.00	55.0
Hilleshog 3028Rz (7228)	118	316.5	102	7615	98	1.53	17.36	24.18	411	2239	439	0.00	56.1
Hilleshog 3031Rz (7231)	137	328.3	105	7346	95	1.45	17.86	22.53	356	2047	447	0.03	42.9
Hilleshog 3035Rz (7235)	132	321.7	103	7716	100	1.38	17.46	24.14	322	2072	403	0.00	44.2
Hilleshog 3063Rz(7263)	108	305.6	98	7812	101	1.55	16.83	25.51	515	2145	445	0.00	59.0
Hilleshog 3064Rz(7264)	122	315.3	101	8068	104	1.43	17.18	25.88	323	2128	425	0.00	50.8
Hilleshog 3065Rz(7265)	125	308.3	99	8202	106	1.44	16.85	26.65	388	2100	417	0.00	57.6
Holly 448	105	307.1	98	8059	104	1.36	16.71	26.36	258	2197	375	0.00	54.8
Holly 05HX565	113	306.7	98	8206	106	1.40	16.73	26.87	337	2216	373	0.03	62.4
Holly 567 (05HX567)	127	311.2	100	8241	106	1.43	16.99	26.58	328	2136	419	0.00	55.5
Holly 06HX630	117	307.3	99	7992	103	1.38	16.74	26.09	327	2236	357	0.00	63.2
Holly 06HX631	135	311.2	100	8896	115	1.37	16.93	28.71	306	2182	372	0.03	65.1
Holly 07HX703	110	302.1	97	6628	86	1.52	16.62	21.77	401	2328	411	0.00	50.8
Holly 07HX704	139	315.1	101	7894	102	1.41	17.17	25.12	333	2154	398	0.00	66.3
Seedex SX0936	101	309.2	99	8108	105	1.37	16.83	26.17	338	2202	356	0.00	64.6
Seedex SX0944	130	314.1	101	8148	105	1.32	17.02	26.02	338	2179	320	0.03	62.4
Seedex SX0945	107	310.6	100	7946	103	1.38	16.91	25.67	363	2166	361	0.00	63.3
Seedex Alpine	120	306.2	98	7197	93	1.48	16.79	23.53	329	2224	435	0.00	54.0
Seedex Sonic	134	306.1	98	7968	103	1.42	16.73	26.08	367	2137	402	0.00	54.4
SESVanderhave H46519	112	299.4	96	7456	96	1.44	16.41	24.94	363	2166	406	0.00	50.2
SESVanderhave H46531	131	307.4	99	8190	106	1.44	16.80	26.82	336	2184	409	0.05	56.3
SESVanderhave H46722	126	332.2	107	8188	106	1.31	17.92	24.76	245	2195	347	0.00	59.6
SESVanderhave H46724	114	300.9	97	7379	95	1.44	16.48	24.64	455	2195	366	0.00	55.5
SESVanderhave H46807	121	306.6	98	7582	98	1.46	16.79	24.78	390	2203	404	0.05	51.8
SESVanderhave H48607(46907)	140	305.0	98	7843	101	1.39	16.65	25.68	344	2230	362	0.00	59.9
SESVanderhave H46909	103	310.5	100	8031	104	1.39	16.91	25.85	340	2177	374	0.03	65.2
SESVanderhave H48726	116	322.9	104	7508	97	1.32	17.46	23.40	258	2013	392	0.00	59.2
SESVanderhave H48727	111	312.5	100	7509	97	1.46	17.08	24.08	293	2115	460	0.00	56.6
SESVanderhave H66857	129	304.5	98	6668	86	1.50	16.73	21.88	442	2190	422	0.00	54.7
Susc 3N - Mod Aph	141	319.9	103	6097	79	1.50	17.50	19.26	430	2251	408	0.00	45.0
Susc 3N - Aph Tol	142	325.2	104	7338	95	1.38	17.64	22.70	392	2076	375	0.00	50.9
Check Mean		311.8		7752		1.44	17.02	24.97	355	2183	406		54.6
Coeff. of Var. (%)		4.5		9.1		7.6	3.7	7.7	20.7	5.7	12.3		13.2
Mean LSD (0.05)		11.0		593		0.09	0.50	1.77	60	114	43		5.6
Mean LSD (0.01)		14.5		785		0.12	0.67	2.34	80	151	57		7.4
Sig Lvl		**		**		**	**	**	**	**	**		**

* 2007 Data from 3 Trials

Created 10-07-2007.

Trial # = 07MDovt

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

Table 42.

2007 Performance of Varieties - MDFC Commercial Official Trial

Colfax ND - 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. %	Foliar Dis Rate 1-9
Beta 1210R	109	283.1	96	8014	91	1.39	15.55	28.03	311	2157	389	0.00	60.2	4.8
Beta 1230R	123	291.3	99	8982	103	1.21	15.76	30.88	294	1874	339	0.00	48.8	4.1
Beta 1250R	138	315.9	108	7950	91	1.27	17.06	24.92	245	2003	366	0.00	56.2	4.5
Beta 1270R	104	315.8	108	10020	114	1.20	16.99	31.75	314	1866	324	0.00	55.0	3.9
Beta 1317R	136	296.3	101	9218	105	1.48	16.30	30.96	338	2241	435	0.00	53.1	3.6
Beta 1584R (BX1584)	115	283.8	97	9359	107	1.43	15.62	32.90	341	2097	418	0.00	70.3	3.0
Crystal 492	119	275.6	94	9451	108	1.61	15.40	34.14	392	2295	481	0.00	64.5	3.7
Crystal 494	128	279.5	95	7338	84	1.50	15.48	26.18	339	2336	416	0.00	42.2	5.6
Crystal 496	106	296.9	101	8791	100	1.37	16.22	29.76	365	1989	391	0.00	60.8	3.7
Crystal R357	133	297.6	101	8742	100	1.38	16.27	29.40	361	2045	395	0.00	55.1	3.8
Crystal R454 (R468)	124	287.2	98	9217	105	1.57	15.93	32.24	441	2085	503	0.00	55.6	3.6
Hilleshog 2415Rz (7215)	102	292.8	100	8811	101	1.41	16.05	30.10	472	2090	370	0.00	67.1	3.5
Hilleshog 3028Rz (7228)	118	307.3	105	9211	105	1.31	16.69	30.02	356	1941	368	0.00	70.9	3.6
Hilleshog 3031Rz (7231)	137	315.8	108	8468	97	1.33	17.12	26.78	305	1968	394	0.00	51.7	4.4
Hilleshog 3035Rz (7235)	132	306.3	104	8823	101	1.32	16.64	28.84	292	1957	391	0.00	53.2	4.2
Hilleshog 3063Rz(7263)	108	291.9	99	8719	100	1.37	15.96	29.74	442	2034	363	0.00	69.4	3.7
Hilleshog 3064Rz(7264)	122	292.3	100	9434	108	1.36	15.97	32.64	349	1958	407	0.00	60.8	4.0
Hilleshog 3065Rz(7265)	125	290.5	99	9065	103	1.34	15.87	31.10	408	1939	384	0.00	64.2	4.2
Holly 448	105	282.2	96	8580	98	1.32	15.42	30.32	292	2065	375	0.00	55.4	4.1
Holly 05HX565	113	283.3	96	9155	104	1.36	15.53	32.31	337	2133	359	0.11	81.0	2.9
Holly 567 (05HX567)	127	301.2	103	9785	112	1.31	16.37	32.43	269	2057	362	0.00	64.2	3.4
Holly 06HX630	117	285.1	97	9097	104	1.36	15.62	31.70	302	2212	354	0.00	73.6	3.2
Holly 06HX631	135	298.3	102	9906	113	1.27	16.19	33.27	286	1998	351	0.11	74.0	2.9
Holly 07HX703	110	275.7	94	6501	74	1.46	15.23	23.12	377	2335	379	0.00	57.2	4.5
Holly 07HX704	139	295.2	101	8743	100	1.34	16.11	29.59	317	2038	374	0.00	82.0	3.5
Seedex SX0936	101	296.5	101	8852	101	1.31	16.13	29.71	326	2109	340	0.00	80.2	3.7
Seedex SX0944	130	296.5	101	9724	111	1.27	16.10	32.72	308	2053	324	0.00	72.7	2.5
Seedex SX0945	107	296.7	101	9279	106	1.24	16.08	31.31	330	1929	333	0.00	80.7	2.4
Seedex Alpine	120	291.3	99	8557	98	1.36	15.93	29.16	272	2075	398	0.00	61.8	4.1
Seedex Sonic	134	285.7	97	9244	106	1.38	15.67	32.05	377	2011	393	0.00	62.7	4.0
SESVanderhave H46519	112	278.3	95	8712	99	1.37	15.28	31.14	339	2103	377	0.00	57.7	3.8
SESVanderhave H46531	131	282.3	96	9318	106	1.44	15.55	33.03	366	2101	420	0.11	67.4	3.5
SESVanderhave H46722	126	311.8	106	8465	97	1.23	16.82	27.06	246	1999	340	0.00	69.5	3.8
SESVanderhave H46724	114	268.7	91	7892	90	1.44	14.86	29.27	603	2048	353	0.00	62.2	4.2
SESVanderhave H46807	121	282.0	96	8649	99	1.44	15.55	30.41	412	2116	400	0.11	62.5	4.2
SESVanderhave H48607(46907)	140	289.0	98	8773	100	1.34	15.79	30.12	327	2073	363	0.00	71.7	3.3
SESVanderhave H46909	103	304.6	104	9144	104	1.30	16.52	29.93	300	2038	357	0.00	82.2	2.9
SESVanderhave H48726	116	303.1	103	8516	97	1.25	16.40	28.14	233	1852	391	0.00	76.7	2.5
SESVanderhave H48727	111	292.9	100	8572	98	1.38	16.02	28.99	309	1959	440	0.00	65.7	3.7
SESVanderhave H66857	129	301.8	103	7963	91	1.43	16.52	26.37	324	2210	391	0.00	61.3	4.1
Susc 3N - Mod Aph	141	304.5	104	6724	77	1.50	16.73	22.24	386	2311	412	0.00	52.6	4.8
Susc 3N - Aph Tol	142	310.5	106	8197	94	1.36	16.88	26.33	360	2008	393	0.00	64.1	3.8
Check Mean		293.7		8761		1.36	16.05	29.79	342	2064	384		64.2	3.8
Coeff. of Var. (%)		4.9		8.2		6.9	4.0	7.0	23.7	6.3	9.8		11.2	16.8
Mean LSD (0.05)		21.8		1095		0.14	0.98	3.19	122	192	57		10.3	1.0
Mean LSD (0.01)		28.8		1448		0.19	1.30	4.22	162	254	76		13.7	1.3
Sig Lvl		**		**		**	**	**	**	**	**		**	**

* 2007 Data from Colfax ND

Created 10-23-2007.

Trial # = 076601

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

Table 43.

2007 Performance of Varieties - MDFC Commercial Official Trial

BreckenridgeMN - 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. %
Beta 1210R	109	322.7	96	6663	85	1.66	17.79	20.54	342	2350	533	0.07	50.2
Beta 1230R	123	346.1	103	8344	106	1.34	18.64	24.19	294	2031	394	0.00	56.7
Beta 1250R	138	346.5	103	7287	93	1.44	18.78	20.95	347	2034	448	0.00	54.1
Beta 1270R	104	354.8	105	8181	104	1.31	19.05	23.11	326	1910	388	0.00	53.7
Beta 1317R	136	340.5	101	7982	101	1.50	18.52	23.49	360	2025	493	0.00	49.0
Beta 1584R (BX1584)	115	342.7	102	8206	104	1.45	18.59	24.00	342	2147	427	0.00	57.0
Crystal 492	119	323.5	96	8678	110	1.80	17.98	26.91	524	2496	542	0.00	55.7
Crystal 494	128	321.9	95	6275	80	1.61	17.71	19.46	420	2287	487	0.00	40.8
Crystal 496	106	333.2	99	8052	102	1.53	18.19	24.10	386	2099	486	0.00	53.0
Crystal R357	133	342.4	101	7874	100	1.45	18.57	23.06	412	2088	419	0.00	50.3
Crystal R454 (R468)	124	335.3	99	8410	107	1.63	18.40	25.01	412	2222	515	0.00	53.7
Hilleshog 2415Rz (7215)	102	343.2	102	8375	106	1.49	18.66	24.36	432	2202	410	0.00	57.4
Hilleshog 3028Rz (7228)	118	329.9	98	7493	95	1.59	18.08	22.65	474	2248	457	0.00	59.4
Hilleshog 3031Rz (7231)	137	350.8	104	6943	88	1.54	19.08	19.91	413	1987	518	0.07	44.1
Hilleshog 3035Rz (7235)	132	346.2	103	7567	96	1.41	18.72	21.93	335	2030	434	0.00	47.8
Hilleshog 3063Rz(7263)	108	331.9	98	8180	104	1.53	18.12	24.55	537	2039	444	0.00	62.8
Hilleshog 3064Rz(7264)	122	346.2	103	8266	105	1.43	18.74	23.95	322	2105	437	0.00	55.6
Hilleshog 3065Rz(7265)	125	340.4	101	8672	110	1.45	18.47	25.48	408	2027	431	0.00	64.3
Holly 448	105	329.9	98	8177	104	1.38	17.88	24.60	283	2126	403	0.00	60.8
Holly 05HX565	113	334.6	99	8560	109	1.41	18.13	25.66	363	2099	404	0.00	63.7
Holly 567 (05HX567)	127	332.5	99	8241	105	1.48	18.11	24.71	359	2089	458	0.00	57.8
Holly 06HX630	117	333.6	99	8267	105	1.41	18.09	24.86	383	2130	384	0.00	68.5
Holly 06HX631	135	338.3	100	8990	114	1.34	18.25	26.80	330	2096	361	0.00	67.4
Holly 07HX703	110	333.9	99	7391	94	1.50	18.20	22.03	414	2177	429	0.00	54.2
Holly 07HX704	139	338.8	100	8046	102	1.41	18.35	23.76	365	2085	404	0.00	66.3
Seedex SX0936	101	325.0	96	8297	105	1.40	17.65	25.40	371	2182	368	0.00	63.8
Seedex SX0944	130	334.1	99	8153	104	1.35	18.05	24.38	404	2088	344	0.00	65.9
Seedex SX0945	107	341.1	101	8167	104	1.35	18.40	24.12	352	2115	356	0.00	67.6
Seedex Alpine	120	323.7	96	7449	95	1.51	17.69	23.02	372	2169	457	0.00	57.6
Seedex Sonic	134	340.9	101	8585	109	1.36	18.41	25.21	346	1985	404	0.00	60.2
SESVanderhave H46519	112	328.2	97	7488	95	1.46	17.87	22.66	395	2092	427	0.00	55.0
SESVanderhave H46531	131	333.9	99	8560	109	1.39	18.09	25.60	341	2024	415	0.07	62.7
SESVanderhave H46722	126	359.0	106	8541	108	1.30	19.25	23.99	242	2141	355	0.00	59.6
SESVanderhave H46724	114	340.5	101	7814	99	1.37	18.40	22.97	388	2105	365	0.00	58.3
SESVanderhave H46807	121	328.0	97	7260	92	1.47	17.87	22.14	417	2081	438	0.07	52.3
SESVanderhave H48607(46907)	140	326.7	97	7763	99	1.42	17.75	23.67	396	2161	379	0.00	60.5
SESVanderhave H46909	103	334.5	99	8302	105	1.42	18.14	24.89	394	2103	398	0.07	69.1
SESVanderhave H48726	116	355.9	105	7679	98	1.30	19.10	21.46	265	1949	392	0.00	59.6
SESVanderhave H48727	111	341.3	101	7801	99	1.44	18.51	22.78	329	1947	475	0.00	59.8
SESVanderhave H66857	129	326.5	97	6688	85	1.57	17.89	20.53	533	2069	471	0.00	56.8
Susc 3N - Mod Aph	141	343.6	102	5905	75	1.51	18.69	17.20	452	2175	429	0.00	48.1
Susc 3N - Aph Tol	142	347.0	103	7199	91	1.43	18.78	20.68	435	2053	402	0.00	50.4
Check Mean		337.4		7875		1.46	18.32	23.35	381	2109	428		57.4
Coeff. of Var. (%)		3.9		9.1		7.7	3.2	7.8	19.5	5.6	12.3		11.8
Mean LSD (0.05)		16.5		871		0.14	0.74	2.22	90	145	64		7.9
Mean LSD (0.05)		21.7		1149		0.18	0.97	2.93	118	191	85		10.5
Sig Lvl		**		**		**	**	**	**	**	**		**

* 2007 Data from BreckenridgeMN

Created 10-07-2007.

Trial # = 076602

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

Table 44.

2007 Performance of Varieties - MDFC Commercial Official Trial

CharlesvilleMN - 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. %	Foliar Dis Rate 1-9
Beta 1210R	109	302.4	100	6512	98	1.60	16.72	21.59	292	2547	458	0.00	41.2	4.9
Beta 1230R	123	298.6	98	7396	111	1.35	16.26	24.58	243	2202	365	0.00	44.7	3.6
Beta 1250R	138	306.5	101	5450	82	1.50	16.82	17.36	302	2343	426	0.00	39.6	6.0
Beta 1270R	104	315.9	104	7417	112	1.44	17.23	23.44	307	2260	403	0.00	42.9	4.3
Beta 1317R	136	316.4	104	6757	102	1.55	17.35	21.37	321	2309	465	0.00	35.6	5.4
Beta 1584R (BX1584)	115	302.2	99	7733	117	1.42	16.55	25.42	284	2389	366	0.00	44.9	4.4
Crystal 492	119	283.3	93	6780	102	1.78	15.95	23.97	446	2783	482	0.00	39.7	4.4
Crystal 494	128	301.4	99	5377	81	1.46	16.53	17.81	285	2391	398	0.00	32.2	6.2
Crystal 496	106	300.1	99	6728	101	1.58	16.59	22.42	379	2356	463	0.00	41.4	5.3
Crystal R357	133	301.6	99	6482	98	1.54	16.62	21.63	423	2285	428	0.00	36.5	4.4
Crystal R454 (R468)	124	318.4	105	7192	108	1.58	17.50	22.66	329	2448	456	0.00	32.2	4.4
Hilleshog 2415Rz (7215)	102	309.4	102	7708	116	1.58	17.05	24.90	437	2504	403	0.00	42.2	4.4
Hilleshog 3028Rz (7228)	118	314.9	104	6344	96	1.64	17.39	20.19	388	2471	477	0.00	40.2	5.2
Hilleshog 3031Rz (7231)	137	320.0	105	6616	100	1.45	17.45	20.63	337	2193	418	0.00	33.4	5.3
Hilleshog 3035Rz (7235)	132	313.6	103	6790	102	1.41	17.09	21.69	331	2230	386	0.00	31.4	4.6
Hilleshog 3063Rz(7263)	108	293.7	97	6517	98	1.73	16.41	22.00	545	2365	512	0.00	45.6	4.6
Hilleshog 3064Rz(7264)	122	304.4	100	6562	99	1.50	16.71	21.49	316	2302	427	0.00	35.1	5.3
Hilleshog 3065Rz(7265)	125	292.3	96	6852	103	1.52	16.14	23.34	360	2323	430	0.00	42.8	4.6
Holly 448	105	305.3	100	7331	110	1.38	16.63	23.98	213	2399	351	0.00	44.5	4.6
Holly 05HX565	113	300.4	99	6881	104	1.43	16.46	22.87	315	2410	354	0.00	45.7	5.2
Holly 567 (05HX567)	127	302.5	100	6899	104	1.49	16.60	22.92	332	2274	430	0.00	44.2	4.6
Holly 06HX630	117	301.3	99	6630	100	1.38	16.46	22.00	291	2389	334	0.00	48.3	5.1
Holly 06HX631	135	297.9	98	7777	117	1.49	16.39	26.10	298	2444	400	0.00	53.9	4.4
Holly 07HX703	110	293.9	97	5716	86	1.60	16.29	19.28	407	2505	421	0.00	39.7	5.8
Holly 07HX704	139	311.7	103	6875	104	1.48	17.07	21.98	310	2336	416	0.00	52.6	4.3
Seedex SX0936	101	307.2	101	7087	107	1.41	16.77	22.99	313	2330	360	0.00	52.2	4.4
Seedex SX0944	130	311.9	103	6732	101	1.33	16.93	21.52	293	2390	294	0.07	49.0	5.2
Seedex SX0945	107	295.1	97	6483	98	1.51	16.28	21.92	396	2436	385	0.00	44.5	4.8
Seedex Alpine	120	304.6	100	5702	86	1.55	16.79	18.71	328	2409	442	0.00	41.8	5.3
Seedex Sonic	134	291.1	96	6177	93	1.54	16.09	21.29	383	2414	409	0.00	39.9	5.6
SESVanderhave H46519	112	290.4	96	6292	95	1.48	16.01	21.50	346	2324	410	0.00	37.8	5.0
SESVanderhave H46531	131	303.4	100	6798	102	1.49	16.66	22.29	311	2428	398	0.00	40.1	5.0
SESVanderhave H46722	126	324.8	107	7299	110	1.40	17.64	22.48	251	2432	347	0.00	49.7	4.2
SESVanderhave H46724	114	287.6	95	6268	94	1.52	15.90	21.65	426	2421	377	0.00	44.0	4.7
SESVanderhave H46807	121	308.0	101	6828	103	1.47	16.88	22.08	350	2415	374	0.00	41.0	4.8
SESVanderhave H48607(46907)	140	300.4	99	6913	104	1.43	16.45	23.01	306	2444	346	0.00	48.5	4.3
SESVanderhave H46909	103	295.5	97	6659	100	1.44	16.21	22.47	317	2390	363	0.00	46.2	5.2
SESVanderhave H48726	116	309.2	102	6348	96	1.40	16.86	20.51	271	2223	393	0.00	43.7	5.6
SESVanderhave H48727	111	301.2	99	6188	93	1.55	16.61	20.50	253	2417	461	0.00	43.5	5.2
SESVanderhave H66857	129	290.7	96	5447	82	1.51	16.05	18.71	436	2316	401	0.00	45.1	5.1
Susc 3N - Mod Aph	141	312.5	103	5614	85	1.50	17.13	18.00	442	2321	387	0.00	34.5	6.1
Susc 3N - Aph Tol	142	319.0	105	6605	100	1.36	17.30	20.73	371	2178	339	0.00	38.8	5.2
Check Mean		303.8		6637		1.49	16.69	21.81	340	2375	404		42.2	4.9
Coeff. of Var. (%)		4.8		10.7		7.8	4.0	9.0	20.2	5.4	13.3		18.4	17.2
Mean LSD (0.05)		18.2		876		0.14	0.83	2.40	84	157	65		9.3	1.0
Mean LSD (0.05)		24.0		1156		0.18	1.10	3.16	111	207	86		12.2	1.4
Sig Lvl		**		**		**	**	**	**	**	**		**	**

* 2007 Data from CharlesvilleMN

Created 10-23-2007.

Trial # = 076604

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

Table 45.

Performance of Varieties -Minn-Dak Biotech

3 Trials- All Characters - Commercial Status

Upgraded to OVT Status 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 %	Cerc.** Rating	Aph ** Root
BTS 77RR24	271	309.8	98	8326	108	1.39	16.86	27.09	391	2106	372	0.00	40.0	4.00	5.54
BTS 77RR34	279	323.0	103	7529	98	1.30	17.43	23.47	296	1989	369	0.00	45.1	4.79	6.23
BTS 77RR54	267	317.2	101	7689	100	1.52	17.36	24.45	491	2115	432	0.00	41.1	4.80	5.30
BTS 77RR64	287	332.8	106	7017	91	1.36	17.99	21.22	387	2072	366	0.00	41.7	4.86	7.14
BTS 77RR74	268	302.1	96	7809	101	1.39	16.49	25.98	455	2030	376	0.00	38.6	4.42	4.45
BTS 85RR02(B5802RR)	273	320.6	102	8067	105	1.47	17.48	25.30	422	2116	416	0.00	43.8	4.64	4.24
BTS 86RR44(B6804RR)	263	305.6	97	7722	100	1.53	16.80	25.36	428	2164	448	0.00	38.7	5.02	4.93
BTS 86RR66(B6806RR)	280	306.1	97	7202	94	1.57	16.86	23.65	485	2185	452	0.00	31.8	4.91	4.55
BTS 86RR77(B6807RR)	277	318.2	101	6970	91	1.59	17.49	22.05	471	2319	440	0.00	33.3	4.10	4.81
Crystal RR539	272	319.6	102	7915	103	1.48	17.44	24.93	475	2049	423	0.00	48.8	5.02	4.28
Crystal RR610	266	309.7	98	8682	113	1.43	16.90	28.39	347	2150	407	0.00	47.2	4.31	5.78
Crystal RR621	283	308.5	98	8163	106	1.33	16.75	26.69	334	2056	365	0.00	42.6	4.11	5.37
Crystal RR632	285	316.4	101	8556	111	1.32	17.13	27.22	369	2013	357	0.00	50.7	4.19	5.21
Crystal RR643	269	302.6	96	7892	103	1.68	16.81	26.18	562	2245	499	0.00	35.4	4.93	4.50
Crystal RR658	264	313.2	99	7840	102	1.26	16.91	25.18	261	2027	344	0.00	43.6	3.96	5.87
Hilleshog 4003RR(9003RR)	275	321.5	102	7121	93	1.45	17.51	22.40	414	2181	395	0.00	37.4	5.06	6.06
Hilleshog 4010RR(9010RR)	281	320.6	102	6867	89	1.46	17.47	21.71	420	2184	397	0.00	35.6	5.01	5.30
Hilleshog 4012RR(9012RR)	262	312.1	99	8299	108	1.44	17.03	26.70	526	2128	360	0.00	34.7	4.97	5.26
Hilleshog 4020RR(9020RR)	284	317.3	101	7146	93	1.49	17.34	22.58	441	2222	403	0.00	38.8	5.16	5.84
Hilleshog 4022RR(9022RR)	278	316.5	101	8087	105	1.39	17.20	25.69	436	2144	349	0.00	38.0	5.13	5.05
Hilleshog 9060RR	261	324.3	103	7912	103	1.33	17.53	24.44	271	1977	405	0.51	38.0	4.95	5.76
Hilleshog 9068RR	286	318.8	101	5802	75	1.49	17.41	18.27	422	2165	423	0.00	28.2	4.63	5.91
Hilleshog 9070RR	274	325.5	103	7628	99	1.39	17.65	23.71	405	2091	375	0.00	37.6	4.75	5.43
Hilleshog 9072RR	270	324.2	103	7125	93	1.28	17.47	22.14	240	2008	368	0.00	34.5	4.42	6.03
Hilleshög 90704RR	265	311.3	99	7658	100	1.45	17.00	24.99	451	2166	382	0.00	33.1	5.06	5.60
SESVanderhave H36721RR	282	321.0	102	6894	90	1.30	17.33	21.70	315	1893	386	0.00	47.9	5.10	4.98
SESVanderhave H36722RR	276	319.2	101	7651	99	1.30	17.24	24.08	383	2023	332	0.00	33.1	6.29	5.53
Beta 1317(Check)	291	320.9	102	8050	105	1.46	17.49	25.44	319	2070	459	0.00	35.0	NA	NA
Beta 1317(Check)	292	317.7	101	8558	111	1.49	17.36	27.32	324	2159	458	0.00	42.3	NA	NA
Crystal R454(Check)	288	313.4	100	8711	113	1.62	17.29	27.93	418	2278	498	0.00	45.3	NA	NA
Crystal R454(Check)	295	304.9	97	8421	109	1.65	16.90	27.84	446	2330	500	0.00	37.4	NA	NA
Van der Have H46519(Check)	289	306.8	97	7524	98	1.39	16.72	24.68	307	2176	383	0.00	44.8	NA	NA
Van der Have H46519(Check)	294	303.1	96	7606	99	1.43	16.58	25.10	310	2161	420	0.00	46.3	NA	NA
Van der Have H46531(Check)	290	308.2	98	7309	95	1.47	16.87	23.86	372	2227	406	0.09	45.8	NA	NA
Van der Have H46531(Check)	293	304.5	97	7513	98	1.45	16.67	24.90	362	2164	415	0.00	45.5	NA	NA
Check Mean		314.8		7693.5		1.44	17.17	24.65	393	2125	405	0.0	40.1		
Coeff. of Var. (%)		4.9		10.0		8.3	4.0	9.2	24.9	5.5	12.7		22.5		
Mean LSD (0.05)		14.7		911.2		0.12	0.66	2.52	91	136	56		8.7		
Mean LSD (0.01)		19.4		1212.8		0.17	0.88	3.37	120	180	74		11.5		
Sig Lvl		**		**		**	**	**	**	**	**		**		

Vigor not collected.

Created 10-24-2007.

**Lower numbers indicate better resistance (1 = Ex, 9 = poor). Cerc. data from Rosemount, MN. Aph data from Shakopee, MN.

Trial # = 07MDBio

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

Table 46.

2007 MDFC Biotech Trial

Colfax - All Characters

Upgraded to OVT 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 77RR24	271	300.5	99	9903	108	1.39	16.39	32.98	359	2119	381	0.00	50.2
BTS 77RR34	279	313.0	104	8921	97	1.25	16.87	28.52	288	1982	342	0.00	51.6
BTS 77RR54	267	307.8	102	9341	101	1.40	16.76	30.36	384	2091	387	0.00	63.7
BTS 77RR64	287	317.5	105	7863	85	1.33	17.17	24.59	411	2002	349	0.00	57.5
BTS 77RR74	268	288.5	96	8572	93	1.29	15.71	29.79	426	1937	336	0.00	48.4
BTS 85RR02(B5802RR)	273	315.5	104	9510	103	1.40	17.14	30.15	396	2036	394	0.00	55.5
BTS 86RR44(B6804RR)	263	303.8	101	9619	104	1.39	16.56	31.70	354	2080	396	0.00	53.4
BTS 86RR66(B6806RR)	280	294.2	97	8812	96	1.60	16.32	29.82	406	2332	473	0.00	41.7
BTS 86RR77(B6807RR)	277	310.6	103	8996	98	1.58	17.11	29.15	461	2336	440	0.00	38.9
Crystal RR539	272	311.4	103	9497	103	1.36	16.91	30.57	449	1989	358	0.00	74.6
Crystal RR610	266	282.0	93	9753	106	1.47	15.57	34.70	393	2058	446	0.00	61.4
Crystal RR621	283	298.1	99	9579	104	1.27	16.15	32.21	315	2015	339	0.00	50.7
Crystal RR632	285	303.2	100	9574	104	1.35	16.50	31.69	404	1997	369	0.00	59.0
Crystal RR643	269	297.2	98	9401	102	1.59	16.46	31.63	479	2210	469	0.00	49.3
Crystal RR658	264	309.3	102	9701	105	1.17	16.60	31.40	242	1918	315	0.00	58.4
Hilleshog 4003RR(9003RR)	275	306.8	102	9165	100	1.38	16.70	29.90	415	2154	348	0.00	50.7
Hilleshog 4010RR(9010RR)	281	306.1	101	8509	92	1.38	16.66	28.00	458	2052	355	0.00	50.7
Hilleshog 4012RR(9012RR)	262	304.7	101	10199	111	1.32	16.53	33.50	488	1985	318	0.00	44.8
Hilleshog 4020RR(9020RR)	284	314.4	104	8889	97	1.38	17.07	28.34	426	2015	374	0.00	54.6
Hilleshog 4022RR(9022RR)	278	309.8	103	9717	106	1.30	16.76	31.43	448	1995	322	0.00	47.5
Hilleshog 9060RR	261	327.4	108	9476	103	1.23	17.55	29.04	269	1865	358	0.57	44.8
Hilleshog 9068RR	286	316.7	105	7532	82	1.40	17.21	23.84	338	2166	388	0.00	36.9
Hilleshög 90704RR	265	287.4	95	9161	100	1.38	15.74	32.00	452	2073	356	0.00	42.2
Hilleshog 9070RR	274	312.2	103	9492	103	1.29	16.87	30.60	444	1992	315	0.00	49.6
Hilleshog 9072RR	270	314.1	104	8820	96	1.23	16.91	28.09	224	2015	341	0.00	45.7
SESVanderhave H36721RR	282	314.7	104	9381	102	1.27	16.97	29.90	320	1872	370	0.00	66.1
SESVanderhave H36722RR	276	314.4	104	9947	108	1.22	16.91	31.69	321	2026	295	0.00	46.0
Beta 1317(Check)	291	295.8	98	9863	107	1.43	16.22	33.39	352	1983	455	0.00	41.3
Beta 1317(Check)	292	283.5	94	8940	97	1.59	15.78	31.56	364	2247	500	0.00	37.8
Crystal R454(Check)	288	304.8	101	10435	113	1.53	16.76	34.31	398	2140	470	0.00	46.3
Crystal R454(Check)	295	275.6	91	9302	101	1.63	15.43	33.72	450	2207	510	0.00	42.2
Van der Have H46519(Check)	289	282.0	93	8049	87	1.34	15.43	28.70	315	2130	365	0.00	46.0
Van der Have H46519(Check)	294	285.8	95	9150	99	1.33	15.60	31.56	306	2057	372	0.00	46.9
Van der Have H46531(Check)	290	277.0	92	7717	84	1.41	15.26	28.05	396	2144	383	0.00	45.4
Van der Have H46531(Check)	293	283.7	94	9475	103	1.45	15.63	33.44	389	2152	414	0.00	49.3
Check Mean		302.0		9207		1.38	16.47	30.58	381	2068	383	0.0	50.0
Coeff. of Var. (%)		5.3		10.3		7.8	4.3	9.2	23.3	6.8	11.0		16.0
Mean LSD (0.05)		26.2		1863		0.18	1.15	5.62	146	229	69		14.0
Mean LSD (0.01)		34.8		2587		0.24	1.53	7.86	194	304	91		18.8
Sig Lvl		*		ns		**	*	*	*	**	**		**

* 2007 Data from Colfax

Created 10-23-2007.

Trial # = 076631

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

Table 47.

2007 MDFC Biotech Trial

BreckenridgeMN - All Characters

Upgraded to OVT 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 77RR24	271	317.7	98	7870	109	1.42	17.31	24.74	455	2145	370	0.00	35.7
BTS 77RR34	279	333.7	103	7455	103	1.34	18.03	22.32	343	1927	401	0.00	44.5
BTS 77RR54	267	323.0	100	6809	95	1.55	17.70	21.15	587	2073	445	0.00	29.5
BTS 77RR64	287	343.1	106	6324	88	1.37	18.52	18.40	404	2038	373	0.00	38.3
BTS 77RR74	268	314.3	97	7496	104	1.37	17.09	23.67	502	1960	367	0.00	37.2
BTS 85RR02(B5802RR)	273	322.7	100	7630	106	1.54	17.68	23.63	469	2140	457	0.00	41.9
BTS 86RR44(B6804RR)	263	304.3	94	6778	94	1.67	16.89	22.18	540	2220	511	0.00	31.8
BTS 86RR66(B6806RR)	280	309.5	96	6445	89	1.59	17.06	20.77	573	2083	471	0.00	24.4
BTS 86RR77(B6807RR)	277	315.7	97	6064	84	1.70	17.48	19.01	588	2343	482	0.00	32.9
Crystal RR539	272	311.2	96	7029	98	1.63	17.19	22.52	591	2043	506	0.00	38.9
Crystal RR610	266	325.5	101	8339	116	1.38	17.65	25.53	374	2063	386	0.00	44.7
Crystal RR621	283	316.5	98	7937	110	1.36	17.19	25.07	378	2050	371	0.00	46.6
Crystal RR632	285	329.6	102	8388	116	1.30	17.78	25.38	379	1989	341	0.00	50.6
Crystal RR643	269	302.3	93	6856	95	1.79	16.91	22.65	710	2173	563	0.00	27.6
Crystal RR658	264	312.5	97	7012	97	1.31	16.94	22.41	340	2017	357	0.00	41.5
Hilleshog 4003RR(9003RR)	275	325.3	100	6119	85	1.44	17.70	18.77	474	2069	399	0.00	31.6
Hilleshog 4010RR(9010RR)	281	326.2	101	5645	78	1.52	17.83	17.31	488	2184	422	0.00	26.5
Hilleshog 4012RR(9012RR)	262	318.3	98	7702	107	1.44	17.36	24.01	584	2119	349	0.00	32.5
Hilleshog 4020RR(9020RR)	284	325.7	101	6405	89	1.42	17.70	19.45	420	2159	376	0.00	30.8
Hilleshog 4022RR(9022RR)	278	315.0	97	7462	104	1.51	17.26	23.60	505	2214	401	0.00	38.3
Hilleshog 9060RR	261	330.2	102	7950	110	1.39	17.90	24.00	298	1960	442	0.64	36.1
Hilleshog 9068RR	286	316.7	98	4784	66	1.57	17.41	14.98	562	2126	450	0.00	25.6
Hilleshög 90704RR	265	321.8	99	7049	98	1.49	17.58	21.87	478	2206	396	0.00	27.6
Hilleshog 9070RR	274	327.8	101	6993	97	1.49	17.88	21.27	461	2139	417	0.00	31.6
Hilleshog 9072RR	270	328.1	101	6275	87	1.34	17.75	19.09	282	1983	408	0.00	29.3
SESVanderhave H36721RR	282	326.6	101	5930	82	1.30	17.63	18.12	350	1885	381	0.00	41.5
SESVanderhave H36722RR	276	313.6	97	6499	90	1.40	17.09	20.61	527	1993	374	0.00	29.1
Beta 1317(Check)	291	341.3	105	7527	104	1.48	18.54	22.02	331	2029	480	0.00	37.0
Beta 1317(Check)	292	357.1	110	8571	119	1.38	19.24	23.97	282	1954	445	0.00	49.6
Crystal R454(Check)	288	329.9	102	8268	115	1.68	18.18	25.01	439	2241	542	0.00	54.3
Crystal R454(Check)	295	334.8	103	8752	121	1.64	18.38	26.08	454	2234	506	0.00	41.2
Van der Have H46519(Check)	289	327.9	101	8265	115	1.43	17.83	25.17	349	2069	430	0.00	51.7
Van der Have H46519(Check)	294	324.9	100	7675	107	1.39	17.63	23.52	315	2010	423	0.00	56.2
Van der Have H46531(Check)	290	332.7	103	8250	115	1.49	18.13	24.67	434	2120	434	0.21	58.8
Van der Have H46531(Check)	293	327.2	101	7573	105	1.47	17.83	23.09	411	2070	440	0.00	49.4
Check Mean		323.8		7204		1.47	17.66	22.17	448	2087	426	0.0	38.4
Coeff. of Var. (%)		5.1		10.0		8.1	4.2	9.3	24.9	4.5	13.2		28.9
Mean LSD (0.05)		23.5		1043		0.18	1.04	2.89	170	144	81		15.6
Mean LSD (0.01)		31.1		1380		0.24	1.38	3.83	226	193	108		20.7
Sig Lvl		ns		**		**	*	**	**	**	**		**

* 2007 Data from BreckenridgeMN

Created 10-23-2007.

Trial # = 076632

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

Table 48.

2007 MDFC Biotech Trial

Charlesville - All Characters

Upgraded to OVT Status 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. %	Foliar Dis Rate 1-9
BTS 77RR24	271	315.1	98	7611	108	1.33	17.09	24.21	358	2018	367	0.00	35.9	4.0
BTS 77RR34	279	325.4	101	6479	92	1.29	17.55	19.82	255	2050	361	0.00	39.9	3.7
BTS 77RR54	267	325.6	101	7453	106	1.58	17.85	22.79	508	2164	469	0.00	34.2	3.3
BTS 77RR64	287	340.9	106	7303	104	1.39	18.43	21.40	347	2163	382	0.00	30.8	5.3
BTS 77RR74	268	305.9	95	7692	109	1.51	16.81	25.07	441	2192	436	0.00	31.1	3.7
BTS 85RR02(B5802RR)	273	330.0	102	7454	106	1.43	17.93	22.52	406	2140	395	0.00	35.0	4.3
BTS 86RR44(B6804RR)	263	316.3	98	7326	104	1.47	17.29	23.08	385	2152	431	0.00	33.3	4.7
BTS 86RR66(B6806RR)	280	320.2	99	6835	97	1.48	17.49	21.18	479	2136	412	0.00	31.9	4.7
BTS 86RR77(B6807RR)	277	336.6	104	6388	91	1.43	18.26	18.85	345	2243	395	0.00	28.5	5.0
Crystal RR539	272	346.2	107	7758	110	1.40	18.71	22.33	368	2095	397	0.00	36.5	4.0
Crystal RR610	266	322.4	100	8318	118	1.43	17.55	25.78	269	2332	394	0.00	36.8	4.3
Crystal RR621	283	315.1	98	7301	104	1.36	17.12	23.20	310	2079	391	0.00	29.4	3.7
Crystal RR632	285	318.7	99	8014	114	1.32	17.25	25.06	326	2034	368	0.00	42.7	2.3
Crystal RR643	269	315.4	98	8001	113	1.61	17.39	25.27	485	2347	457	0.00	32.2	4.7
Crystal RR658	264	325.4	101	7330	104	1.29	17.55	22.47	189	2131	365	0.00	31.9	4.0
Hilleshog 4003RR(9003RR)	275	338.0	105	6648	94	1.53	18.43	19.57	349	2328	445	0.00	32.2	5.0
Hilleshog 4010RR(9010RR)	281	334.1	104	7074	100	1.46	18.16	21.08	300	2292	415	0.00	32.8	4.3
Hilleshog 4012RR(9012RR)	262	318.1	99	7459	106	1.55	17.45	23.34	510	2263	423	0.00	27.9	5.0
Hilleshog 4020RR(9020RR)	284	316.0	98	6628	94	1.69	17.49	20.85	499	2489	472	0.00	33.9	4.7
Hilleshog 4022RR(9022RR)	278	332.3	103	7539	107	1.31	17.93	22.59	347	2183	318	0.00	28.5	4.7
Hilleshog 9060RR	261	320.3	99	6553	93	1.37	17.39	20.34	249	2089	416	0.28	33.9	4.7
Hilleshog 9068RR	286	330.5	103	5634	80	1.47	18.00	16.90	353	2188	432	0.00	23.4	6.0
Hilleshög 90704RR	265	327.5	102	7206	102	1.45	17.82	21.97	426	2186	395	0.00	31.6	5.3
Hilleshog 9070RR	274	342.7	106	6856	97	1.37	18.50	19.90	300	2107	393	0.00	33.9	4.3
Hilleshog 9072RR	270	335.7	104	6792	96	1.24	18.03	20.09	213	2006	353	0.00	30.5	4.0
SESVanderhave H36721RR	282	326.9	101	5939	84	1.31	17.65	18.10	272	1900	414	0.00	38.8	5.0
SESVanderhave H36722RR	276	338.3	105	7142	101	1.25	18.16	20.95	282	2037	326	0.00	25.9	5.0
Beta 1317(Check)	291	324.8	101	7090	101	1.45	17.69	21.77	275	2196	443	0.00	26.5	5.0
Beta 1317(Check)	292	304.7	95	8302	118	1.51	16.74	27.28	343	2312	432	0.00	37.3	3.3
Crystal R454(Check)	288	306.5	95	7748	110	1.65	16.98	25.20	425	2449	480	0.00	32.8	4.0
Crystal R454(Check)	295	300.0	93	7254	103	1.71	16.71	24.09	443	2562	487	0.00	27.6	5.0
Van der Have H46519(Check)	289	309.6	96	6149	87	1.37	16.84	19.80	254	2342	350	0.00	34.8	5.0
Van der Have H46519(Check)	294	297.5	92	6124	87	1.60	16.48	20.51	319	2444	473	0.00	32.8	5.3
Van der Have H46531(Check)	290	312.8	97	5779	82	1.48	17.12	18.43	274	2434	401	0.00	29.1	4.7
Van der Have H46531(Check)	293	301.3	93	5632	80	1.41	16.48	18.56	279	2279	390	0.00	37.0	5.0
Check Mean		322.2		7051		1.44	17.55	21.83	348	2211	408	0.0	32.6	4.5
Coeff. of Var. (%)		4.3		9.1		9.1	3.6	9.3	29.7	5.5	13.4		20.2	18.2
Mean LSD (0.05)		23.4		1059		0.21	1.06	3.37	179	210	90		10.8	1.4
Mean LSD (0.01)		31.1		1410		0.28	1.43	4.47	240	280	119		14.3	1.8
Sig Lvl		*		**		**	*	**	**	**	ns		ns	*

* 2007 Data from Charlesville

Created 10-23-2007.

Trial # = 076634

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

Table 49.
2007 Aphanomyces Ratings for Coded Test Entries
Betaseed Nursery - Shakopee, MN & ACSC Nursery - Kindred, ND

		2007 Ratings (Unadjusted)				2007 Ratings(Adjusted)				2 Yr (Adj)		3 Yr (Adj)						
		Kindred		Shakopee		Foliar ^		Root ^^		Foliar^	Root^^	Foliar^	Root^^	2006	2006	2005	2005	Trial
Code	Description	Foliar	Root	Foliar	Root	Rating	%AphChk	Rating	%App+	Rating	Rating	Rating	Rating	Foliar^	Root^^	Foliar^	Root^^	Yrs $$
425	Beta 1100R	2.67	4.12	5.15	5.38	5.15	141	6.06	124									1
462	Beta 1120R	4.57	6.02	4.46	5.15	6.00	164	7.38	151									1
406	Beta 1140R	2.36	4.80	3.79	4.16	4.04	111	5.84	119									1
530	Beta 1160R	3.49	5.35	4.14	4.60	5.01	137	6.55	134									1
450	Beta 1180R	2.36	4.23	3.22	3.69	3.59	98	5.10	104									1
442	Beta 1210R	3.96	5.47	3.78	4.42	5.01	137	6.34	129									1
491	Beta 1230R	2.49	4.07	4.51	4.97	4.62	126	5.91	121									1
472	Beta 1250R	4.55	5.92	4.72	5.42	6.21	170	7.38	151									1
415	Beta 1270R	2.44	5.00	4.11	4.35	4.25	116	6.01	123									1
470	Beta 1301R	1.46	3.49	2.21	3.00	2.36	65	4.18	85	2.73	4.16	2.78	4.02	3.10	4.15	2.87	3.73	5
504	Beta 1305R	2.62	3.97	2.63	3.31	3.57	98	4.83	99	3.05	4.48	2.99	4.57	2.52	4.13	2.89	4.75	5
445	Beta 1317R	2.07	4.16	1.85	3.02	2.83	77	4.67	95	2.79	4.42	2.53	4.14	2.74	4.17	2.01	3.57	5
486	Beta 1584R (BX1584)	2.38	3.92	3.16	3.69	3.56	97	4.83	99	3.47	4.69	3.52	4.81	3.38	4.55	3.63	5.07	3
507	Beta 1683R (BX1683)	2.94	5.22	3.93	4.58	4.55	125	6.29	128	4.04	5.80			3.52	5.31			2
455	Beta 1772R (BX1572)	2.83	3.85	2.08	3.01	3.01	82	4.52	92	3.07	4.57	2.66	4.28	3.13	4.63	1.84	3.70	3
418	Beta 4554R (BX1454)	2.94	4.52	2.64	3.16	3.77	103	4.88	100	3.58	4.57	3.41	4.46	3.38	4.27	3.07	4.23	4
521	BTS 77RR24	2.25	4.58	3.14	4.16	3.72	102	5.54	113									1
459	BTS 77RR34	3.58	5.23	3.79	4.41	4.68	128	6.23	127									1
516	BTS 77RR54	2.49	4.42	1.77	2.95	2.82	77	5.30	108									1
435	BTS 77RR64	5.07	6.26	3.61	4.63	5.77	158	7.14	146									1
478	BTS 77RR74	1.84	3.71	2.95	3.22	3.24	89	4.45	91									1
437	BTS 85RR02(B5802RR)	2.25	3.46	2.41	3.05	2.90	79	4.24	87	2.88	4.22	2.75	4.31	2.85	4.20	2.49	4.49	3
461	BTS 86RR44(B6804RR)	2.95	4.33	2.14	3.09	3.21	88	4.93	101	3.04	4.70			2.87	4.47			2
475	BTS 86RR66(B6806RR)	1.47	4.29	2.07	2.89	2.43	66	4.55	93	2.95	4.69			3.47	4.83			2
448	BTS 86RR77(B6807RR)	2.26	3.82	3.56	3.60	3.80	104	4.81	98	3.96	5.25			4.12	5.69			2
403	BTS 86RR88(B6808RR)	2.82	3.92	1.42	2.80	2.90	79	4.46	91	3.36	4.57			3.83	4.67			2
513	BTS 87RR28	3.04	5.71	3.40	4.18	4.19	115	6.30	129									1
446	BTS 87RR38	2.41	4.44	3.01	3.77	3.68	101	5.37	110									1
503	BTS 87RR58	2.31	4.37	3.88	4.23	3.89	106	5.54	113									1
405	BTS 87RR68	5.00	6.06	3.71	4.76	5.77	158	7.07	144									1
506	BTS 87RR78	3.30	5.24	3.69	4.15	4.54	124	6.12	125									1
484	Crystal 492	2.16	3.04	3.57	3.66	3.78	104	4.42	90									1
451	Crystal 494	4.03	5.90	4.35	4.82	5.45	149	6.82	139									1
417	Crystal 496	2.74	4.82	3.87	4.65	4.50	123	6.09	124									1
453	Crystal 539RR	2.41	3.77	1.87	2.84	2.69	74	4.28	87	2.36	4.00	2.49	3.86	2.03	3.71	2.77	3.59	3
474	Crystal 658RR	2.51	4.56	3.32	4.10	3.93	107	5.87	120	3.01	4.83			2.10	3.79			2
413	Crystal 727	2.83	4.85	2.37	3.36	3.84	105	5.86	120	3.55	5.19	3.47	5.27	3.27	4.52	3.31	5.44	6
526	Crystal 765RR	2.94	5.37	3.92	4.63	4.64	127	6.57	134									1
426	Crystal 766RR	1.88	4.13	2.52	3.41	2.91	80	4.97	101									1
471	Crystal 767RR	2.70	4.91	3.28	4.27	3.77	103	5.83	119									1
404	Crystal 768RR	2.27	4.58	3.79	4.30	3.86	106	5.60	114									1
481	Crystal 769RR	2.37	4.74	4.10	4.25	4.20	115	5.67	116									1
490	Crystal 770RR	1.90	3.41	2.74	3.33	3.08	84	4.44	91									1
497	Crystal R308	2.79	4.47	2.03	3.05	3.07	84	4.87	99	3.05	4.31	3.16	4.36	3.03	3.75	3.37	4.46	5
517	Crystal R357	3.35	4.44	2.01	2.98	3.55	97	4.76	97	3.21	4.29	2.96	3.94	2.88	3.81	2.45	3.24	5
460	Crystal R431	2.36	3.83	2.47	3.17	3.43	94	4.66	95	3.55	4.75	3.33	4.27	3.67	4.85	2.90	3.29	4
416	Crystal R434	2.12	3.02	2.21	3.11	3.05	84	3.94	80	2.90	4.04	2.84	4.11	2.74	4.15	2.74	4.25	4
468	Crystal R454 (R468)	2.41	3.55	2.37	3.13	3.01	82	4.53	92	2.89	4.42	3.13	4.29	2.76	4.31	3.60	4.03	4
499	Crystal R652	2.72	4.43	2.45	2.98	3.31	91	4.83	99	3.45	4.84			3.58	4.85			2
433	Crystal R760	2.57	4.04	3.89	4.00	4.58	125	5.32	109									1
519	Crystal R761	2.44	3.50	3.11	3.78	3.61	99	4.61	94									1
528	Crystal R762	4.13	5.51	3.88	4.62	5.04	138	6.71	137									1
533	Crystal R763	2.10	4.23	2.93	3.43	3.12	85	4.89	100									1
456	Crystal R764	2.15	4.89	3.12	4.18	3.47	95	5.82	119									1
508	Crystal RR610	2.80	4.89	3.37	4.05	3.85	105	5.78	118									1
501	Crystal RR621	3.12	4.40	3.27	3.90	4.06	111	5.37	110									1
424	Crystal RR632	2.83	4.51	2.89	3.53	3.76	103	5.21	106									1
452	Crystal RR643	2.31	3.91	2.52	3.06	3.07	84	4.50	92									1
514	Hilleshog 2415Rz (7215)	1.64	4.17	2.19	2.98	2.54	70	4.55	93	2.67	4.40	2.59	4.01	2.80	4.25	2.43	3.22	4
447	Hilleshog 3028Rz (7228)	2.81	4.08	2.58	3.44	3.54	97	5.06	103	3.18	4.62	2.90	4.24	2.83	4.19	2.32	3.48	3
436	Hilleshog 3031Rz (7231)	3.22	4.40	2.94	3.87	4.08	112	5.31	108	3.25	4.83	3.13	4.88	2.41	4.35	2.89	4.99	3
412	Hilleshog 3035Rz (7235)	2.43	3.32	2.04	3.32	3.10	85	4.31	88	3.45	4.73	3.33	4.76	3.79	5.16	3.10	4.83	3
522	Hilleshog 3036Rz (7236)	2.45	4.40	2.77	3.53	3.52	96	5.06	103	3.23	4.89	3.13	4.79	2.95	4.73	2.93	4.59	3
494	Hilleshog 3050Rz(7250)	2.75	4.28	2.66	3.37	3.51	96	4.98	102	3.23	4.72			2.96	4.46			2
449	Hilleshog 3051Rz(7251)	3.02	4.53	2.78	3.43	3.76	103	5.18	106	3.79	5.24			3.83	5.31			2
524	Hilleshog 3052Rz(7252)	3.12	4.50	2.80	3.21	3.82	105	4.75	97	3.62	4.91			3.43	5.08			2
444	Hilleshog 3063Rz(7263)	2.57	4.18	2.83	3.16	3.74	102	4.94	101	3.72	4.92			3.70	4.90			2
469	Hilleshog 3064Rz(7264)	2.40	4.36	2.60	3.31	3.34	91	5.02	103	3.33	4.73			3.32	4.43			2
488	Hilleshog 3065Rz(7265)	3.34	4.58	2.89	3.49	3.97	109	5.17	105	3.98	5.22			3.99	5.27			2
527	Hilleshog 4003RR(9003RR)	3.02	5.66	2.95	3.69	3.98	109	6.06	124	4.02	6.06			4.06	6.06			2

Table 49.
2007 Aphanomyces Ratings for Coded Test Entries
Betaseed Nursery - Shakopee, MN & ACSC Nursery - Kindred, ND

		2007 Ratings (Unadjusted)				2007 Ratings(Adjusted)				2 Yr (Adj)		3 Yr (Adj)						
		Kindred		Shakopee		Foliar ^		Root ^^		Foliar^	Root^^	Foliar^	Root^^	2006	2006	2005	2005	Trial
Code	Description	Foliar	Root	Foliar	Root	Rating	%AphChk	Rating	%App+	Rating	Rating	Rating	Rating	Foliar^	Root^^	Foliar^	Root^^	Yrs $$
432	Hilleshog 4010RR(9010RR)	2.35	4.45	2.91	3.80	3.54	97	5.30	108	3.61	5.42			3.68	5.54			2
465	Hilleshog 4012RR(9012RR)	2.89	4.58	2.80	3.59	3.69	101	5.26	107	3.49	5.32			3.28	5.37			2
502	Hilleshog 4020RR(9020RR)	2.29	5.00	3.11	3.82	3.73	102	5.84	119	3.76	6.16			3.78	6.47			2
408	Hilleshog 4022RR(9022RR)	2.34	4.09	2.68	3.52	3.52	96	5.05	103	3.50	5.16			3.48	5.28			2
485	Hilleshog 9035RR	2.64	4.32	2.90	3.79	3.68	101	5.32	109									1
428	Hilleshog 9043RR	3.17	5.43	3.51	3.89	4.61	126	5.92	121									1
515	Hilleshog 9045RR	3.20	5.09	2.93	3.66	4.49	123	5.86	120									1
402	Hilleshog 9046RR	3.19	3.84	2.88	3.58	3.91	107	4.75	97									1
495	Hilleshog 9049RR	2.89	5.08	4.06	4.55	4.87	133	6.70	137									1
421	Hilleshog 9053RR	2.62	4.34	3.15	3.81	3.72	102	5.35	109									1
467	Hilleshog 9054RR	2.53	3.93	2.50	3.17	3.21	88	4.76	97									1
443	Hilleshog 9060RR	3.05	5.49	2.87	3.60	3.85	105	5.76	118									1
414	Hilleshog 9068RR	3.40	5.53	2.63	3.65	3.98	109	5.91	121									1
427	Hilleshög 90703RR	2.89	4.84	3.02	3.65	4.07	111	5.53	113									1
523	Hilleshög 90704RR	2.68	4.50	2.62	3.56	3.71	101	5.60	114									1
505	Hilleshog 9070RR	2.33	4.64	3.34	3.91	3.76	103	5.43	111									1
463	Hilleshog 9072RR	3.15	5.24	3.69	4.09	4.62	126	6.03	123									1
479	Holly 05HX565	2.82	4.41	3.02	3.76	3.67	100	5.30	108	3.47	5.23	3.79	5.63	3.27	5.17	4.45	6.43	3
512	Holly 06HX629	3.73	4.71	2.86	3.39	4.17	114	5.27	108	4.01	5.50			3.84	5.74			2
532	Holly 06HX630	2.84	4.71	2.44	3.43	3.43	94	5.32	109	3.74	5.58			4.06	5.85			2
489	Holly 06HX631	3.04	4.05	2.23	3.02	3.35	92	4.65	95	3.48	4.86			3.60	5.08			2
482	Holly 07HX701	3.80	4.75	2.71	3.67	4.33	119	5.50	112									1
407	Holly 07HX702	2.59	4.87	2.21	3.13	3.22	88	5.34	109									1
464	Holly 07HX703	4.04	5.82	3.00	3.70	4.66	127	6.13	125									1
509	Holly 07HX704	2.61	4.53	3.01	3.52	3.65	100	5.11	104									1
492	Holly 317	3.52	4.30	2.91	3.63	3.89	106	5.08	104	3.63	4.88	3.50	4.86	3.37	4.69	3.25	4.83	5
430	Holly 448	2.57	3.82	2.97	3.49	3.73	102	4.88	100	3.76	4.94	3.58	4.69	3.78	5.00	3.22	4.20	4
500	Holly 556 (05HX556)	2.67	4.31	3.03	3.54	3.73	102	5.00	102	3.26	4.46	3.19	4.28	2.80	3.92	3.05	3.94	3
419	Holly 567 (05HX567)	3.12	4.17	2.44	3.09	3.44	94	4.71	96	3.21	4.56	3.29	4.56	2.98	4.40	3.45	4.57	3
431	Seedex Alpine	3.47	5.03	2.94	3.72	4.29	117	5.57	114	4.56	6.34	4.08	5.55	4.84	7.12	3.11	3.97	5
510	Seedex Magnum	3.00	4.70	2.23	3.49	3.26	89	5.23	107	3.38	4.99	3.49	4.94	3.50	4.74	3.72	4.84	8
487	Seedex Rezult	3.57	4.75	2.67	3.62	4.19	115	5.54	113	3.57	4.84	3.88	4.83	2.95	4.13	4.51	4.83	6
420	Seedex Sonic	2.66	4.49	2.60	3.25	3.48	95	4.94	101	3.54	5.14	3.76	5.53	3.61	5.33	4.18	6.32	3
529	Seedex SX0835	2.64	4.41	2.60	3.16	3.46	95	4.80	98	3.49	4.78			3.52	4.77			2
496	Seedex SX0841	3.57	5.73	3.81	4.23	4.98	136	6.47	132									1
441	Seedex SX0842	3.61	5.34	2.99	3.82	3.99	109	5.87	120									1
480	Seedex SX0851RR	2.56	4.39	3.24	3.53	4.01	110	5.09	104									1
520	Seedex SX0936	3.56	5.05	3.02	3.48	4.17	114	5.50	112	4.04	5.66			3.90	5.82			2
410	Seedex SX0944	4.10	5.46	3.59	4.18	5.06	139	6.19	126									1
439	Seedex SX0945	3.60	5.33	3.14	3.91	4.32	118	5.96	122									1
476	SESVanderhave H36711RR	3.45	5.14	3.28	3.87	4.32	118	5.71	117									1
518	SESVanderhave H36712RR	2.93	4.65	3.03	3.26	3.86	106	5.10	104									1
454	SESVanderhave H36721RR	2.51	4.29	2.95	3.45	3.64	100	4.98	102									1
423	SESVanderhave H36722RR	2.86	4.92	3.07	3.63	3.78	104	5.53	113									1
457	SESVanderhave H46519	3.09	4.71	2.95	3.53	3.98	109	5.30	108	3.82	5.18	3.66	5.05	3.67	5.06	3.33	4.79	5
493	SESVanderhave H46531	2.81	4.90	2.32	3.31	3.43	94	5.31	108	3.33	4.94	3.15	4.77	3.22	4.56	2.81	4.44	4
531	SESVanderhave H46532	2.41	4.05	2.55	3.31	3.25	89	4.93	101	3.42	5.07	3.68	5.00	3.60	5.20	4.19	4.86	4
473	SESVanderhave H46533	3.82	5.13	3.17	3.83	4.51	124	5.88	120	4.19	5.57	4.19	5.99	3.86	5.25	4.19	6.82	4
466	SESVanderhave H46711	4.41	5.44	2.03	3.34	4.04	111	5.70	116									1
434	SESVanderhave H46714	2.80	4.77	2.36	3.27	3.35	92	5.13	105									1
498	SESVanderhave H46722	3.05	4.33	2.51	3.31	3.67	100	4.79	98									1
483	SESVanderhave H46724	3.36	4.88	2.74	3.43	4.12	113	5.39	110									1
401	SESVanderhave H46807	3.09	4.97	3.12	3.94	4.38	120	5.74	117	4.12	5.73	4.23	5.74	3.86	5.73	4.44	5.75	3
511	SESVanderhave H46905	2.44	4.87	2.93	3.78	3.67	100	5.54	113	3.63	5.44			3.59	5.33			2
477	SESVanderhave H46909	4.12	5.81	2.86	3.63	4.41	121	6.03	123	4.01	5.35			3.61	4.67			2
411	SESVanderhave H46911	2.49	4.50	2.42	3.37	3.14	86	5.02	103	2.74	4.46			2.33	3.90			2
438	SESVanderhave H48607(46907)	3.06	4.86	3.04	3.63	4.06	111	5.54	113	3.78	5.45			3.51	5.35			2
525	SESVanderhave H48716	3.07	5.04	3.03	3.85	3.91	107	5.82	119									1
440	SESVanderhave H48717	3.25	5.54	2.22	3.35	3.76	103	5.70	116									1
422	SESVanderhave H48726	3.15	5.20	3.62	4.05	4.53	124	5.99	122									1
409	SESVanderhave H48727	2.91	5.36	2.80	3.42	3.81	104	5.71	117									1
458	SESVanderhave H66855	2.89	4.84	3.36	3.87	4.06	111	5.76	118	3.88	5.60	4.10	6.05	3.70	5.43	4.53	6.95	4
429	SESVanderhave H66857	3.25	4.78	3.42	3.94	4.27	117	5.57	114	4.10	5.27	4.08	5.56	3.94	4.97	4.04	6.14	4
540	Beta 1305R(Aph Chk)	2.43	3.82	2.52	3.35	3.16	86	4.62	94	2.84	4.38	2.86	4.50	2.52	4.13	2.89	4.75	5
548	Beta 1305R(Aph Chk)	1.85	3.83	2.25	3.34	2.65	72	4.61	94	2.59	4.37	2.69	4.50	2.52	4.13	2.89	4.75	5
539	Beta 6447(Aph Chk)	2.90	5.17	3.00	3.90	3.73	102	5.83	119	3.57	5.47	3.73	5.74	3.42	5.12	4.04	6.29	11
544	Beta 6447(Aph Chk)	3.16	5.19	2.67	3.33	3.84	105	5.52	113	3.63	5.32	3.76	5.64	3.42	5.12	4.04	6.29	11
536	Crystal 955(Aph Chk)	3.46	5.49	3.23	4.20	4.29	117	6.26	128	4.15	6.16	4.28	6.46	4.02	6.06	4.53	7.07	9
549	Crystal 955(Aph Chk)	3.34	4.90	3.85	4.22	4.84	132	5.93	121	4.43	6.00	4.46	6.36	4.02	6.06	4.53	7.07	9
542	Crystal 999(Aph Chk)	2.78	4.39	2.25	3.17	3.34	91	4.83	99	3.34	4.76	3.20	4.56	3.35	4.69	2.93	4.18	9

Table 49.
2007 Aphanomyces Ratings for Coded Test Entries
Betaseed Nursery - Shakopee, MN & ACSC Nursery - Kindred, ND

		2007 Ratings (Unadjusted)				2007 Ratings(Adjusted)				2 Yr (Adj)		3 Yr (Adj)						
		Kindred		Shakopee		Foliar ^		Root ^^		Foliar^	Root^^	Foliar^	Root^^	2006	2006	2005	2005	Trial
Code	Description	Foliar	Root	Foliar	Root	Rating	%AphChk	Rating	%App+	Rating	Rating	Rating	Rating	Foliar^	Root^^	Foliar^	Root^^	Yrs $$
546	Crystal 999(Aph Chk)	2.87	4.37	2.42	3.40	3.43	94	4.98	102	3.39	4.83	3.23	4.62	3.35	4.69	2.93	4.18	9
534	Crystal R434(Aph Chk)	1.88	3.78	1.74	2.86	2.40	66	4.22	86	2.57	4.18	2.63	4.20	2.74	4.15	2.74	4.25	4
545	Crystal R434(Aph Chk)	2.63	3.99	2.34	3.17	3.24	89	4.65	95	2.99	4.40	2.90	4.35	2.74	4.15	2.74	4.25	4
538	Seedex Monarch(Aph Chk)	3.06	5.42	2.47	3.50	3.86	106	5.75	117	4.22	6.19	4.24	6.21	4.58	6.62	4.28	6.25	16
550	Seedex Monarch(Aph Chk)	3.78	5.23	2.78	3.74	4.11	112	5.89	120	4.34	6.26	4.32	6.26	4.58	6.62	4.28	6.25	16
543	Seedex Rezult(Aph Chk)	1.83	4.19	2.30	3.04	2.70	74	4.66	95	2.82	4.40	3.39	4.54	2.95	4.13	4.51	4.83	6
552	Seedex Rezult(Aph Chk)	3.04	4.29	2.53	3.22	3.47	95	4.70	96	3.21	4.41	3.64	4.55	2.95	4.13	4.51	4.83	6
537	SESVanderhave H46519(Aph Chk)	3.32	5.64	3.68	4.49	4.83	132	6.69	137	4.25	5.88	3.94	5.51	3.67	5.06	3.33	4.79	5
547	SESVanderhave H46519(Aph Chk)	4.12	5.75	3.94	4.84	5.40	148	6.74	138	4.53	5.90	4.13	5.53	3.67	5.06	3.33	4.79	5
535	SESVanderhave H66561(Aph Chk)	2.53	4.75	2.65	3.36	3.33	91	5.18	106	3.54	5.14	3.93	5.66	3.75	5.09	4.71	6.71	8
553	SESVanderhave H66561(Aph Chk)	2.60	4.41	2.91	3.45	3.52	96	5.13	105	3.64	5.11	3.99	5.64	3.75	5.09	4.71	6.71	8
541	Van der Have H66453(Aph Chk)	2.45	3.67	2.55	3.40	3.22	88	4.67	95	3.60	5.23	3.73	5.35	3.98	5.79	4.00	5.58	9
551	Van der Have H66453(Aph Chk)	2.97	3.97	2.65	3.49	3.72	102	4.96	101	3.85	5.38	3.90	5.44	3.98	5.79	4.00	5.58	9
554	Aph Susc(AD-Aph Std15)	5.20	5.90	3.43	4.69	5.77	158	6.91	141	5.99	8.42	7.47	10.47	6.22	9.94	10.42	14.56	3
556	Aph Susc(AD-Aph Std15)	4.54	5.77	3.44	4.83	5.22	143	6.98	142	5.72	8.46	7.28	10.49	6.22	9.94	10.42	14.56	3
555	Crystal 817(Aph Std-16)	3.15	5.73	3.92	4.65	4.93	135	6.77	138	4.80	7.02	4.85	7.80	4.68	7.28	4.94	9.35	10
557	Crystal 817(Aph Std-16)	3.48	5.82	3.38	4.39	4.75	130	6.66	136	4.71	6.97	4.79	7.77	4.68	7.28	4.94	9.35	10
558	AP CHECK MOD HYBRID#2	3.67	6.06	4.00	4.82	4.97	136	7.05	144	4.84	7.12	4.80	7.29	4.71	7.19	4.71	7.63	4
562	AP CHECK MOD HYBRID#2	4.53	6.18	4.56	4.97	5.99	164	7.22	147	5.35	7.21	5.13	7.35	4.71	7.19	4.71	7.63	4
566	AP CHECK MOD HYBRID#2	3.12	5.81	4.35	4.95	4.98	136	6.99	143	4.85	7.09	4.80	7.27	4.71	7.19	4.71	7.63	4
563	AP CHECK RES HYBRID-1	2.39	4.36	2.60	3.27	3.27	90	4.88	100	3.20	4.58	3.00	4.20	3.13	4.27	2.59	3.45	6
567	AP CHECK RES HYBRID-1	2.04	3.84	1.84	2.80	2.56	70	4.22	86	2.84	4.25	2.76	3.98	3.13	4.27	2.59	3.45	6
559	AP CHECK RES HYBRID-1	2.70	3.57	1.99	3.11	3.12	85	4.37	89	3.12	4.32	2.94	4.03	3.13	4.27	2.59	3.45	6
569	AP CHECK RES HYBRID-2	2.61	3.81	2.24	3.40	3.18	87	4.68	96	2.82	4.40	2.67	4.26	2.45	4.12	2.39	3.98	3
565	AP CHECK RES HYBRID-2	2.71	3.63	2.18	3.38	3.18	87	4.72	96	2.82	4.42	2.67	4.27	2.45	4.12	2.39	3.98	3
561	AP CHECK RES HYBRID-2	2.12	4.13	2.47	3.15	3.09	85	4.72	96	2.77	4.42	2.64	4.27	2.45	4.12	2.39	3.98	3
560	AP CHECK SUS HYBRID (AD)	6.08	7.62	4.67	5.20	7.23	198	8.52	174	6.48	8.94	7.57	10.77	5.72	9.36	9.75	14.42	3
568	AP CHECK SUS HYBRID (AD)	6.83	7.00	5.16	5.72	7.87	215	8.32	170	6.80	8.84	7.78	10.70	5.72	9.36	9.75	14.42	3
564	AP CHECK SUS HYBRID (AD)	6.46	6.49	4.87	5.42	7.51	206	7.72	157	6.62	8.54	7.66	10.50	5.72	9.36	9.75	14.42	3
	Check Mean	2.85	4.61	2.74	3.57	3.65		5.29		3.57	5.19	3.65	5.28	3.50	5.08	3.79	5.47	
	Coeff. of Var. (%)	27.95	12.76	18.89	10.31	24.70		13.07										
	Mean LSD (0.05)	1.06	0.77	0.66	0.45	1.38		1.03										
	Mean LSD (0.01)	1.40	1.01	0.87	0.59	1.83		1.35										
	Sig Lvl	0.01	0.01	0.01	0.01	0.01		0.01										
	Approval Criteria					NA		4.90		NA	4.90	NA		NA	4.90	NA	4.90	
	Disapproval Criteria					NA				NA		NA	5.20	NA	5.20	NA	5.20	

+ Aph Spec Approval is based upon the three year root rating 4.90 or less and entry into the Aph specialty yield trials and commercial or biotech trials.

++ Aph Spec Disapproval (continued approval) is based upon the three year root rating 5.20 or less (approval policy change 1-14-02).

2007, 2006 & 2005 data adjusted based upon 10 check varieties. Check varieties are labeled "Aph Chk". %AphChk is a percentage of the 10 Aph Chk varieties.

^ Foliar Aph Rating was taken during summer to fall (1=healthy, 9+=severe damage). Adjusted by multiplying 2007 by 1.30459, 2006 by 1.1463, 2005 by 1.5195.

^^ 2007 Root Rating was taken in early fall (1=healthy, 9+=severe damage). Adjusted by multiplying 2007 by 1.30131, 2006 by 1.3504, 2005 by 1.8488.

$$ Trial years indicates how many years the entry has been in the official trials (not Aph Nursery years). Created 9-28-2007

Lower numbers indicate greater Aphanomyces tolerance. 2005 and 2006 data from Shakopee. 2007 data from Shakopee & Kindred. 2007 Individual trials were not adjusted for infection level. Updated 11-29-07.

Table 50.

2007 Cercospora Readings for Coded Test Entries

Rosemount, MN & Blumfield, MI (only biotech at MI)

Code	Description	Adjusted to 1982 Basis 2007 MN	2007 MI	All Data Adjusted to '1982 Basis' 2007 Ave	2 Yr Mean	3 Yr Mean	2006 Mean	2005 Mean	Trial Yrs $$
648	Beta 1100R	5.40		5.40					1
612	Beta 1120R	5.20		5.20					1
651	Beta 1140R	4.83		4.83					1
675	Beta 1160R	4.64		4.64					1
603	Beta 1180R	4.68		4.68					1
716	Beta 1210R	5.00		5.00					1
641	Beta 1230R	5.51		5.51					1
688	Beta 1250R	5.42		5.42					1
620	Beta 1270R	4.59		4.59					1
718	Beta 1301R	4.83		4.83	4.78	4.70	4.73	4.56	5
606	Beta 1305R	5.21		5.21	5.36	5.27	5.51	5.07	5
697	Beta 1317R	5.18		5.18	5.27	5.14	5.35	4.90	5
656	Beta 1584R (BX1584)	5.57		5.57	5.52	5.35	5.47	5.00	3
667	Beta 1683R (BX1683)	5.17		5.17	5.04		4.91		2
634	Beta 1772R (BX1572)	4.75		4.75	4.88	4.71	5.01	4.37	3
674	Beta 4554R (BX1454)	5.14		5.14	5.10	5.01	5.06	4.81	4
628	BTS 77RR24	4.70	3.31	4.00					1
723	BTS 77RR34	5.03	4.56	4.79					1
654	BTS 77RR54	5.29	4.30	4.80					1
705	BTS 77RR64	5.12	4.59	4.86					1
611	BTS 77RR74	4.76	4.07	4.42					1
683	BTS 85RR02(B5802RR)	4.93	4.36	4.64	4.63	4.64	4.62	4.66	3
703	BTS 86RR44(B6804RR)	5.18	4.85	5.02	5.10		5.19		2
638	BTS 86RR66(B6806RR)	5.10	4.71	4.91	4.95		4.99		2
663	BTS 86RR77(B6807RR)	4.65	3.55	4.10	4.71		5.31		2
707	BTS 86RR88(B6808RR)	5.05	4.66	4.86	4.66		4.47		2
665	BTS 87RR28	4.84	4.69	4.76					1
715	BTS 87RR38	4.64	3.01	3.83					1
622	BTS 87RR58	5.64	4.48	5.06					1
710	BTS 87RR68	5.29	3.99	4.64					1
681	BTS 87RR78	4.73	3.42	4.08					1
717	Crystal 492	4.72		4.72					1
633	Crystal 494	5.05		5.05					1
704	Crystal 496	4.87		4.87					1
676	Crystal 539RR	5.54	4.50	5.02	5.11	5.02	5.19	4.84	3
649	Crystal 658RR	4.70	3.22	3.96	4.37		4.79		2
721	Crystal 727	4.41		4.41	4.43	4.37	4.45	4.25	6
605	Crystal 765RR	5.28	4.42	4.85					1
687	Crystal 766RR	4.19	3.83	4.01					1
673	Crystal 767RR	4.92	3.58	4.25					1
728	Crystal 768RR	5.54	4.05	4.80					1
639	Crystal 769RR	4.76	3.65	4.20					1
624	Crystal 770RR	4.88	4.02	4.45					1
732	Crystal R308	5.01		5.01	4.91	4.89	4.82	4.84	5
689	Crystal R357	5.11		5.11	5.11	5.02	5.10	4.83	5
610	Crystal R431	5.11		5.11	5.29	5.26	5.47	5.18	4
666	Crystal R434	5.32		5.32	5.34	5.21	5.37	4.94	4
722	Crystal R454 (R468)	5.28		5.28	5.15	5.02	5.01	4.75	4
650	Crystal R652	5.43		5.43	5.33		5.22		2
724	Crystal R760	5.29		5.29					1
617	Crystal R761	4.79		4.79					1
731	Crystal R762	5.35		5.35					1
640	Crystal R763	4.64		4.64					1
629	Crystal R764	5.19		5.19					1
701	Crystal RR610	4.86	3.76	4.31					1
699	Crystal RR621	4.68	3.54	4.11					1
614	Crystal RR632	4.65	3.73	4.19					1
646	Crystal RR643	5.21	4.64	4.93					1
671	Hilleshog 2415Rz (7215)	5.27		5.27	5.33	5.34	5.39	5.37	4
698	Hilleshog 3028Rz (7228)	5.03		5.03	5.13	5.05	5.22	4.89	3
623	Hilleshog 3031Rz (7231)	4.06		4.06	4.22	4.25	4.37	4.32	3
709	Hilleshog 3035Rz (7235)	4.37		4.37	4.43	4.45	4.49	4.49	3
655	Hilleshog 3036Rz (7236)	5.14		5.14	5.08	4.96	5.01	4.73	3
713	Hilleshog 3050Rz(7250)	5.02		5.02	5.05		5.08		2

Table 50.

2007 Cercospora Readings for Coded Test Entries

Rosemount, MN & Blumfield, MI (only biotech at MI)

Code	Description	Adjusted to 1982 Basis 2007 MN	2007 MI	All Data Adjusted to '1982 Basis' 2007 Ave	2 Yr Mean	3 Yr Mean	2006 Mean	2005 Mean	Trial Yrs $$
601	Hilleshog 3051Rz(7251)	5.37		5.37	5.17		4.98		2
636	Hilleshog 3052Rz(7252)	5.07		5.07	5.04		5.02		2
720	Hilleshog 3063Rz(7263)	5.09		5.09	4.88		4.67		2
682	Hilleshog 3064Rz(7264)	5.18		5.18	5.05		4.93		2
642	Hilleshog 3065Rz(7265)	5.25		5.25	5.14		5.02		2
608	Hilleshog 4003RR(9003RR)	5.24	4.88	5.06	5.14		5.23		2
695	Hilleshog 4010RR(9010RR)	5.18	4.84	5.01	5.08		5.14		2
661	Hilleshog 4012RR(9012RR)	5.24	4.71	4.97	5.05		5.13		2
714	Hilleshog 4020RR(9020RR)	5.28	5.04	5.16	5.22		5.27		2
626	Hilleshog 4022RR(9022RR)	5.34	4.92	5.13	5.25		5.36		2
706	Hilleshog 9035RR	5.21	4.28	4.74					1
631	Hilleshog 9043RR	4.76	3.74	4.25					1
726	Hilleshog 9045RR	5.03	3.90	4.46					1
664	Hilleshog 9046RR	4.36	2.63	3.50					1
729	Hilleshog 9049RR	5.34	4.50	4.92					1
619	Hilleshog 9053RR	5.16	3.79	4.47					1
708	Hilleshog 9054RR	3.91	4.05	3.98					1
662	Hilleshog 9060RR	5.28	4.62	4.95					1
696	Hilleshog 9068RR	5.19	4.06	4.63					1
652	Hilleshög 90703RR	5.38	5.10	5.24					1
657	Hilleshög 90704RR	5.26	4.85	5.06					1
653	Hilleshog 9070RR	5.14	4.36	4.75					1
702	Hilleshog 9072RR	4.80	4.04	4.42					1
604	Holly 05HX565	4.83		4.83	4.93	4.98	5.02	5.09	3
669	Holly 06HX629	4.97		4.97	4.98		5.00		2
672	Holly 06HX630	5.28		5.28	5.22		5.15		2
635	Holly 06HX631	3.96		3.96	4.27		4.58		2
660	Holly 07HX701	5.25		5.25					1
684	Holly 07HX702	4.51		4.51					1
618	Holly 07HX703	5.16		5.16					1
725	Holly 07HX704	4.51		4.51					1
615	Holly 317	4.78		4.78	4.73	4.78	4.69	4.86	5
678	Holly 448	4.46		4.46	4.55	4.56	4.64	4.59	4
691	Holly 556 (05HX556)	4.32		4.32	4.70	4.78	5.07	4.95	3
644	Holly 567 (05HX567)	4.75		4.75	4.74	4.61	4.74	4.35	3
719	Seedex Alpine	4.60		4.60	4.71	4.55	4.82	4.23	5
677	Seedex Magnum	5.02		5.02	5.01	5.01	5.00	5.00	8
625	Seedex Rezult	4.49		4.49	4.68	4.65	4.87	4.59	6
727	Seedex Sonic	4.57		4.57	4.76	4.81	4.94	4.93	3
647	Seedex SX0835	4.61		4.61	4.72		4.83		2
712	Seedex SX0841	4.96		4.96					1
621	Seedex SX0842	5.17		5.17					1
733	Seedex SX0851RR	5.49	5.34	5.41					1
693	Seedex SX0936	5.44		5.44	5.31		5.18		2
602	Seedex SX0944	5.29		5.29					1
685	Seedex SX0945	4.77		4.77					1
616	SESVanderhave H36711RR	5.18	4.28	4.73					1
694	SESVanderhave H36712RR	6.02	5.48	5.75					1
637	SESVanderhave H36721RR	5.40	4.81	5.10					1
680	SESVanderhave H36722RR	6.08	6.51	6.29					1
690	SESVanderhave H46519	4.57		4.57	4.62	4.59	4.67	4.53	5
613	SESVanderhave H46531	4.99		4.99	5.10	4.98	5.22	4.72	4
659	SESVanderhave H46532	4.87		4.87	4.88	4.97	4.90	5.15	4
711	SESVanderhave H46533	5.45		5.45	5.28	5.26	5.10	5.22	4
643	SESVanderhave H46711	4.71		4.71					1
630	SESVanderhave H46714	5.19		5.19					1
692	SESVanderhave H46722	5.00		5.00					1
668	SESVanderhave H46724	5.09		5.09					1
609	SESVanderhave H46807	5.20		5.20	5.16	5.15	5.12	5.13	3
686	SESVanderhave H46905	5.37		5.37	5.42		5.46		2
700	SESVanderhave H46909	4.83		4.83	4.77		4.71		2
679	SESVanderhave H46911	4.96		4.96	4.80		4.64		2
658	SESVanderhave H48607(46907)	4.97		4.97	5.09		5.20		2
632	SESVanderhave H48716	5.17		5.17					1

Table 50.

2007 Cercospora Readings for Coded Test Entries

Rosemount, MN & Blumfield, MI (only biotech at MI)

Code	Description	Adjusted to 1982 Basis 2007 MN	2007 MI	All Data Adjusted to '1982 Basis' 2007 Ave	2 Yr Mean	3 Yr Mean	2006 Mean	2005 Mean	Trial Yrs $$
730	SESVanderhave H48717	5.20		5.20					1
607	SESVanderhave H48726	5.37		5.37					1
645	SESVanderhave H48727	5.01		5.01					1
627	SESVanderhave H66855	5.05		5.05	4.74	4.75	4.42	4.76	4
670	SESVanderhave H66857	5.00		5.00	5.01	5.06	5.02	5.16	4
739	Beta 2084 Chk	4.81	4.58	4.70	4.85	4.86	5.01	4.87	14
749	Beta 2084 Chk	4.69	4.74	4.71	4.86	4.86	5.01	4.87	14
735	Beta 3843 Chk	4.80	4.48	4.64	4.78	4.78	4.92	4.80	15
748	Beta 3843 Chk	4.54	4.63	4.59	4.75	4.77	4.92	4.80	15
736	Hilleshog Valley Chk	5.53	5.81	5.67	5.71	5.59	5.75	5.36	14
750	Hilleshog Valley Chk	5.43	5.36	5.40	5.57	5.50	5.75	5.36	14
740	KW 3580 Chk	4.79	4.76	4.78	4.80	4.91	4.82	5.12	14
751	KW 3580 Chk	5.07	5.30	5.18	5.00	5.04	4.82	5.12	14
741	Seedex Gladiator Chk	5.13	4.68	4.91	4.94	4.94	4.98	4.94	14
744	Seedex Gladiator Chk	4.69	4.85	4.77	4.87	4.90	4.98	4.94	14
742	Seedex Magnum Chk	5.33	4.83	5.08	5.04	5.03	5.00	5.00	8
753	Seedex Magnum Chk	5.09	5.68	5.38	5.19	5.13	5.00	5.00	8
737	Seedex Monarch Chk	4.91	4.85	4.88	4.82	4.84	4.75	4.88	14
745	Seedex Monarch Chk	4.99	4.51	4.75	4.75	4.79	4.75	4.88	14
743	Van der Have H66156 Chk	4.72	5.16	4.94	4.99	5.01	5.03	5.06	14
752	Van der Have H66156 Chk	4.72	4.52	4.62	4.83	4.90	5.03	5.06	14
738	Van der Have H66168 Chk	4.70	4.78	4.74	4.78	4.84	4.82	4.96	14
746	Van der Have H66168 Chk	5.04	4.98	5.01	4.91	4.93	4.82	4.96	14
734	Van der Have H66561 Chk	4.99	5.41	5.20	5.11	5.19	5.02	5.35	8
747	Van der Have H66561 Chk	5.12	5.16	5.14	5.08	5.17	5.02	5.35	8
754	Crystal 14 Std	2.51		2.51	3.01	2.76	3.52	2.25	32
755	Crystal 17 Std	3.46		3.46	3.61	3.50	3.77	3.27	32
756	Crystal 30 Std	4.06		4.06	4.36	4.23	4.66	3.98	32
757	Maribo Monova Std	4.99		4.99	5.09	5.12	5.19	5.18	28
758	Maribo Unica Std	5.16		5.16	5.28	5.25	5.41	5.17	28
759	Bush Johnson 19 Std	5.03		5.03	4.91	4.84	4.79	4.70	28
760	CR CHECK MOD SUSC HYBRID-1	5.40		5.40	5.13	5.04	4.87	4.85	8
761	CR CHECK RES HYBRID	3.03		3.03	3.21	3.05	3.40	2.73	8
762	CR CHECK RES SOURCE	2.09		2.09	2.18	2.00	2.27	1.66	8
763	CR CHECK SUSC HYBRID	5.52		5.52	5.74	5.74	5.96	5.74	4
764	CR CHECK MOD SUSC HYBRID-2	4.30		4.30	4.82	4.85	5.34	4.92	4
765	CR CHECK MOD SUSC HYBRID-1	5.37		5.37	5.12	5.03	4.87	4.85	8
766	CR CHECK RES HYBRID	2.94		2.94	3.17	3.02	3.40	2.73	8
767	CR CHECK RES SOURCE	2.05		2.05	2.16	1.99	2.27	1.66	8
768	CR CHECK SUSC HYBRID	5.34		5.34	5.65	5.68	5.96	5.74	4
769	CR CHECK MOD SUSC HYBRID-2	4.59		4.59	4.96	4.95	5.34	4.92	4
	Check Mean	4.95	4.95						
	Coeff. of Var. (%)	6.73	8.38						
	Mean LSD (0.05)	0.39	0.53						
	Mean LSD (0.01)	0.51	0.71						

* Lower numbers indicate better Cercospora resistance (1-Ex,9=Poor).

* Ratings adjusted to 1982 basis (5.5 equivalent). MN 2007 rating * 1.1408(factor) = Adj Rating. MI 2007 rating * 1.1810(factor) = Adj Rating.

Ratings adjusted on the basis of 10 checks (Beta2084, Beta3843, KW3580, Hill Valley, Seedex Gladiator, Seedex Monarch, Seedex Magnum, SESvdH 66156, SESvdH 66168, SESvdH 66561).

Std = varieties entered for comparison purposes. StdB = Standards from Betaseed.

Chk = varieties used to adjust CR readings to 1982 basis.

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

Table 51.

2007 Rhizoctonia Ratings for Coded Test Entries
ACSC (Moorhead) & USDA (Ft. Collins)

2007 Susc Chk	Description @		Code	Mhd Ratings Foliar 9/17	Mhd Ratings Root 9/19	USDA DI 10/5	All Rate Ave	DI 2 Yr	DI 2006
	Beta 1301R		1012	3.0	3.8	3.8	3.8	3.5	3.1
	BTS 77RR74		1004	2.0	2.0	3.3	2.7		
	Crystal 770RR		1010	2.0	2.6	2.9	2.7		
	Hilleshog 3035Rz (7235)		1008	1.3	2.0	3.7	2.8	2.7	2.6
	Hilleshog 3050Rz(7250)		1005	3.5	4.4	4.7	4.6		
	Hilleshog 3052Rz(7252)		1002	2.4	3.4	4.8	4.1		
	Hilleshog 3064Rz(7264)		1009	4.0	5.0	4.8	4.9		
	Holly 07HX702		1006	1.8	2.3	4.0	3.2		
	Holly 07HX704		1001	1.7	2.7	4.6	3.7		
	Seedex Magnum		1011	7.2	6.1	5.0	5.5		
	SESVanderhave H36711RR		1013	4.2	4.5	5.4	4.9		
	SESVanderhave H46714		1003	2.2	1.9	4.3	3.1		
	SESVanderhave H46724		1007	1.7	2.3	4.2	3.3		
1	ACSC Susc Rhizoctonia #1		1014	6.8	5.7	5.1	5.4	4.4	3.4
1	ACSC Susc Rhizoctonia #2		1015	5.5	5.1	4.8	4.9	4.6	4.3
	ACSC Res Rhizoctonia #3		1016	2.2	2.2	3.3	2.8	2.5	2.2
1	Filler25		1017	2.8	4.1	4.8	4.5		
	Filler26		1018	6.8	6.0	5.9	5.9		
	Filler27		1019	1.5	2.5	4.6	3.6		
	Resistant Check	FC703	1020	3.2	2.6	2.9	2.7	2.3	1.8
1	Very Susc Check	FC607	1021	4.5	5.0	4.6	4.8		
	Highly Resistant Check	FC705/1	1022	2.9	1.6	1.7	1.6	1.7	1.8
1	Susceptible Check	FC901/C817	1023	6.0	5.0	5.3	5.1	4.2	3.3
	Highly Resistant Check	FC709-2		NA	NA	2.2	NA		
	ACSC Res Rhizoctonia #1	FC708	1024	2.8	2.3	NA	NA		
	ACSC Susc Rhizoctonia #3	FC609	1025	4.3	4.3	NA	NA		
	Susc Check Mean			5.1	5.0	4.9	4.9	4.4	3.7
	Trial Mean			3.5	3.6	4.2			
	Coeff. of Var. (%)			33.3	30.77	18.5			
	Mean LSD (0.05)			1.3	1.28	1.0			
	Mean LSD (0.01)			1.7	1.70	NA			
	Sig Lvl			**	**	**			

* Lower numbers indicate better resistance (1-Ex,7+=Poor). Foliar ratings on a 1-9 scale (1=Ex,9=Poor).

DI = Disease Index from Ft Collins or Root Rating from ACSC.

Table 52.

2007 Fusarium Readings for Coded Test Entries

ACSC Nurseries - Moorhead and Sabin, MN

			Average Rating at Each Date (unadjusted)*										Raw	Adj				
			Sabin Site					Moorhead Site					2007	2007	2 Yr	2006	2005	
Chk	Code	Description	6/27	7/19	8/10	9/6	Mean	6/27	7/19	8/9	9/6	Mean	Mean	Mean	Mean	Mean	Mean	Years
	915	Beta 1120R	3.72	3.33	2.99	3.14	3.29	4.19	4.06	3.17	3.08	3.63	3.46	3.90				1
	931	Beta 1160R	2.99	2.50	2.72	2.77	2.75	3.83	3.21	1.91	2.41	2.85	2.79	3.14				1
	905	Beta 1180R	2.94	2.88	2.74	2.51	2.77	4.16	4.35	3.48	2.61	3.66	3.22	3.63				1
	919	Beta 1301R	3.96	4.09	4.68	4.99	4.43	4.53	5.86	6.10	5.80	5.57	5.00	5.64	6.03	6.43		5
1	908	Beta 1305R	3.96	4.14	4.98	4.74	4.44	4.25	5.58	5.58	5.53	5.21	4.83	5.44	5.63	5.81	5.33	5
	922	Beta 1683R (BX1683)	2.89	2.96	2.88	2.86	2.90	3.66	2.87	2.29	2.27	2.75	2.85	3.21				2
	925	Beta 4554R (BX1454)	3.44	2.73	3.12	2.65	2.98	3.91	4.29	4.04	2.99	3.81	3.39	3.82	3.31	2.80	3.82	4
	901	BTS 86RR88(B6808RR)	2.93	2.29	2.08	2.10	2.35	3.44	3.51	3.04	2.70	3.15	2.74	3.09				2
	933	BTS 87RR28	3.99	4.72	5.37	5.26	4.84	4.03	6.06	6.20	5.65	5.50	5.16	5.82				1
	914	BTS 87RR38	3.21	2.91	3.04	3.07	3.06	3.54	3.53	2.69	2.54	3.07	3.06	3.45				1
	927	BTS 87RR58	3.23	3.37	3.31	3.15	3.28	4.02	4.63	4.61	4.06	4.32	3.82	4.31				1
	921	BTS 87RR68	3.82	3.68	4.09	3.47	3.78	3.82	4.76	4.93	4.95	4.63	4.20	4.73				1
	903	BTS 87RR78	3.00	2.42	2.94	2.72	2.75	3.16	2.57	2.72	2.79	2.81	2.78	3.13				1
	930	Crystal 539RR	2.41	2.11	2.16	2.21	2.23	3.11	3.54	2.87	2.56	3.02	2.62	2.95				3
	910	Crystal 658RR	2.95	2.54	2.51	2.22	2.55	3.01	2.24	2.07	2.22	2.38	2.47	2.78				2
	934	Crystal 727	2.84	2.64	2.81	2.70	2.75	3.22	3.39	3.23	3.09	3.24	2.99	3.37	3.15	2.94		6
	917	Crystal R308	3.84	3.20	3.27	3.09	3.35	3.25	4.01	3.87	2.92	3.50	3.43	3.87	3.50	3.13	4.08	5
	909	Crystal R357	3.53	3.30	3.63	3.01	3.38	3.81	4.21	4.49	4.03	4.14	3.76	4.24				5
	926	Crystal R431	3.40	2.67	2.81	2.63	2.88	3.99	4.35	3.84	2.88	3.78	3.33	3.75	3.84	3.93		4
1	923	Crystal R434	2.81	2.85	3.32	3.26	3.05	3.64	3.95	3.17	3.45	3.57	3.29	3.71	3.65	3.59	3.74	4
	904	Crystal R454 (R468)	2.61	2.99	3.36	3.56	3.12	3.64	3.98	2.98	3.49	3.52	3.32	3.74				4
	918	Crystal R652	4.35	4.44	4.71	4.36	4.46	4.16	6.18	5.96	5.48	5.44	4.95	5.58				2
	912	Crystal R764	2.83	2.46	2.75	2.78	2.71	3.86	3.30	2.73	3.23	3.25	2.99	3.37				1
	907	Hilleshog 3031Rz (7231)	4.83	4.04	3.85	3.52	4.06	4.35	4.79	4.71	4.48	4.59	4.32	4.87				3
	932	Hilleshog 3035Rz (7235)	3.46	2.99	2.81	2.75	3.00	3.60	4.19	3.59	3.34	3.68	3.33	3.75				3
	913	Hilleshog 3036Rz (7236)	4.20	4.05	4.31	4.04	4.14	4.35	5.28	5.79	5.69	5.28	4.71	5.31				3
	924	Hilleshog 3050Rz(7250)	3.48	3.26	3.30	2.77	3.20	4.18	4.79	5.11	4.29	4.61	3.90	4.40				2
	906	Hilleshog 3052Rz(7252)	3.31	3.19	3.18	2.90	3.16	4.00	4.87	4.81	4.40	4.51	3.84	4.33				2
	928	Hilleshog 3064Rz(7264)	3.72	3.37	3.60	3.21	3.48	3.87	4.37	4.79	4.40	4.36	3.92	4.42				2
	916	Hilleshog 9054RR	3.01	2.90	3.12	3.39	3.10	4.34	4.10	3.82	3.87	4.03	3.56	4.01				1
	902	Seedex Magnum	3.74	3.39	3.38	3.16	3.41	4.25	4.97	4.96	4.35	4.63	4.03	4.54			3.71	8
	920	SESVanderhave H36711RR	3.43	3.58	2.92	2.88	3.21	3.88	4.85	4.92	4.49	4.54	3.87	4.36				1
	911	SESVanderhave H36712RR	3.47	3.09	2.93	2.71	3.05	3.85	4.01	4.92	4.71	4.38	3.72	4.19				1
	929	SESVanderhave H46911	3.38	2.94	3.20	3.31	3.22	3.63	3.89	4.21	3.93	3.90	3.57	4.02	3.55	3.07		2
1	935	Monohikari	3.52	3.60	3.94	4.35	3.84	3.66	4.21	3.92	3.98	3.92	3.87	4.36	4.68	5.00	5.33	NA
1	936	Crystal 184	3.61	3.06	2.97	2.55	3.06	4.31	4.72	4.25	3.30	4.15	3.62	4.08	3.98	3.88	3.38	NA
1	937	Fusarium Res Hybrid #2	3.22	2.52	2.80	2.93	2.86	3.58	4.06	3.97	3.40	3.74	3.30	3.72	3.41	3.10	3.42	7
1	938	Fusarium Susceptible # 2	5.02	5.48	5.81	5.51	5.46	5.36	7.50	7.60	7.14	6.91	6.19	6.98	7.28	7.58	7.28	0
	939	SYNFR1-2007A071	3.07	2.36	2.72	2.80	2.73	3.50	3.47	3.14	3.18	3.34	3.02	3.40				0
	940	SYNFR2-2007A072	3.06	1.95	2.30	2.48	2.45	3.54	2.83	2.36	2.79	2.86	2.67	3.01				0
	941	SYNFUS-2007A073	4.45	4.52	5.00	5.23	4.80	4.31	5.79	6.01	5.98	5.50	5.16	5.82				0
	942	BetaFus1-2007A074	2.73	2.79	2.63	2.20	2.59	3.15	2.64	2.72	2.55	2.77	2.69	3.03				0
	943	BetaFus2-2007A075	2.95	2.13	2.29	1.79	2.29	3.27	2.61	2.19	1.71	2.47	2.39	2.69				0
	944	SV0701-2007A077	3.66	3.07	2.50	2.94	3.05	3.68	3.26	3.03	3.26	3.30	3.18	3.58				0
	945	SV0702-2007A078	3.22	2.94	3.23	3.26	3.15	3.79	4.46	3.92	3.87	4.01	3.57	4.02				0
1	946	FS CHECK MOD RES HYBRID	3.94	3.32	3.55	3.89	3.66	4.98	5.45	5.06	4.86	5.08	4.36	4.91	4.77	4.62	4.23	3
1	947	FS CHECK MOD SUSC HYBRID	4.26	4.42	4.59	3.94	4.32	3.64	5.35	5.10	4.37	4.66	4.49	5.06	5.32	5.58	5.30	3
1	948	FS CHECK RES HYBRID	2.93	2.36	2.13	2.17	2.40	3.64	3.00	2.88	2.57	3.02	2.72	3.07	2.49	1.91	2.33	3
1	949	FS CHECK SUSC HYBRID#1	4.94	5.11	6.69	6.71	5.86	4.33	7.05	7.26	7.52	6.56	6.20	6.99	7.65	8.31	7.06	3
10		Mean of 10 Check Varieties	3.82	3.69	4.08	4.01	3.90	4.14	5.09	4.88	4.61	4.68	4.287	4.832	4.885	4.938	4.741	
		Coeff. of Var. (%)	19.17	19.75	18.29	19.68	13.79	19.13	17.12	19.23	18.62	13.48	13.70					
		F Value	9.10	17.03	27.92	22.06	33.89	3.31	16.89	32.31	23.22	34.81	34.14					
		Mean LSD (0.05)	0.56	0.55	0.53	0.60	0.39	0.73	0.79	0.66	0.76	0.49	0.43					
		Mean LSD (0.01)	0.73	0.73	0.71	0.80	0.51	0.98	1.05	0.87	1.01	0.66	0.56					
		Sig Lvl	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
		Sig Mrk	**	**	**	**	**	**	**	**	**	**	**					
		Adjustment Factor 1.127 (adjust to 4.8318, the mean of 10 checks in 2005 & 2006).												1.127		1.08	0.93	

^2007 Adjustment (1.127) is based upon the mean of 10 varieties (Beta1305, Crystal 820, Crystal R434, Crystal 184, Monohikari, Fus Susc #2 & 4 Beta Checks) in 2005 & 2006 (4.8318).

Table 53.

Planting & Harvest Dates, Previous Crop and Disease Levels for 2007 ACSC & MDFC Official Trial Sites *

Location	District / Trial Type	Cooperator	Planting Date	Harvest Date	Preceding Crop	Soil Type	Diseases Present @		
							Aph	Rzm	Maggot
Casselton	Mhd/Hlb	Howe Seed Farm	4/30	10/2	Barley	Medium Light	L	L	N
Averill	Mhd/Hlb	Oberg Farms	5/14	10/3, 4	Wheat	Light	L	M-V	N
Halstad	Mhd/Hlb	Peter Steen	5/2	10/4, 5	Wheat	Medium	M	M	N
Hillsboro	Mhd/Hlb	Brent Freeland	5/3	Abandon	Wheat	Light	NA	NA	NA
Climax	EGF/Crk	Arlan Larson & Sons	4/27	10/24	Wheat	Medium	L	M	N
Scandia	EGF/Crk	Christian Kiel	4/29	10/15	Wheat	Medium	M	M-V	N
Crookston	EGF/Crk	Bruce Erdmann	4/27	9/18, 19	Wheat	Medium	L	L	N
Grand Forks	EGF/Crk	Drees Farming Assc.	4/28	9/4 to 10	Wheat	Medium	N	L	N
Argyle	EGF/Crk	Brent Riopelle	5/1	9/13 to 17	Wheat	Medium/Heavy	L	L	N
Grafton	Dtn	Olson Brothers LLP	4/27	10/23	Wheat	Medium Light	L	L	N
Hallock	Dtn	Prosser/Kuznia Beets	4/28	9/11, 12	Wheat	Heavy	V	L	N
Kindred Aph	Specialty Aph	Jeff Kub	4/30	9/28	Soybeans	Medium	V	L	N
Perley Aph	Specialty Aph	Mark Hoff	5/16	9/24, 28	Corn	Medium Heavy	M	L	N
Sabin Fsm	Fusarium	Orlan Valan Jr.	5/1	NA	Soybeans	Medium	M	N	N
Moorhead Fsm	Fusarium	Nelson Farms	5/12	NA	Wheat	Medium	M	N	N
Rhizoctonia	Specialty Rhc	ACSC Tech Services Ctr	5/17	NA	Fallow	Heavy	M	M	N
Colfax	Minn-Dak	Brad Hage	4/29	9/29	Wheat	Medium Light	V	L	N
Breckenridge	Minn-Dak	Dennis & Jerry Hasbargen	5/2	9/26	Wheat	Medium	V	M	N
Fairmount	Minn-Dak	Wayne Miller	5/14	Abandon	Wheat	Heavy	M-V	N	NA
Charlesville	Minn-Dak	Chadd Berger	5/3	9/27	Wheat	Medium Heavy	V	M-V	N

* Fertilizer applied in accordance to ACSC recommendations.

@ Disease notes were based upon visual evaluations (N=none, L=light, M=moderate, V=severe, NA=not available)

Created 11-09-2007

Updated 12-10-07.

Table 54.

2007 Herbicides Applied to ACSC & MDFC Official Trials

AREA	LOCATION	SPRAY DATES	HERBICIDE & RATE(prod)/Ac.	WATER USED/METHOD
ACSC	**Casselton**	5/17,6/5	MR[1]	10 gal. (Ground)
		6/21	MR[2]	"
		6/5	RU[1]	"
		6/28	RU[2]	"
ACSC	**Averill**	5/30,6/5	MR[1]	10 gal. (Ground)
		6/5	RU[1]	"
		6/28	RU[2]	"
ACSC	**Halstad**	5/29,6/5	MR[1]	10 gal. (Ground)
		6/5	RU[1]	"
		6/28	RU[2]	"
ACSC	**Climax**	5/25,6/5	MR[1]	10 gal. (Ground)
		6/20	MR[2]	"
		6/5	RU[1]	"
		6/28	RU[2]	"
ACSC	**Scandia**	5/29,6/5	MR[1]	10 gal. (Ground)
		6/22	MR[2]	"
		6/5	RU[1]	"
		6/28	RU[2]	"
ACSC	**Crookston**	5/16	MR[3]	10 gal. (Ground)
		5/30,6/5	MR[1]	"
		6/21	MR[2]	"
		6/5	RU[1]	"
		6/28	RU[2]	"
ACSC	**Grand Forks**	5/16	MR[4]	10 gal. (Ground)
		6/5	MR[1]	"
		6/20	MR[2]	"
		6/5	RU[1]	"
		6/28	RU[2]	"
ACSC	**Grafton**	5/17,6/5	MR[1]	10 gal. (Ground)
		6/21	MR[2]	"
		6/5	RU[1]	"
		6/28	RU[2]	"
ACSC	**Argyle**	5/25,6/5	MR[1]	10 gal. (Ground)
		6/5	RU[1]	"
		6/28	RU[2]	"
ACSC	**Hallock**	5/16,6/5	MR[1]	10 gal. (Ground)
		6/16	MR[2]	"
		6/5	RU[1]	"
		7/2	RU[2]	"
ACSC	**Kindred**	5/17,6/9	MR[1]	10 gal. (Ground)
	(Aphanomyces)	6/22	MR[2]	"
MDAK	**Breckenridge**	5/27	MR[5]	Air
		6/20	MR[2]	10 gal. (Ground)
		6/20	RU[1]	"
		7/13	RU[2]	"
MDAK	**Charlesville**	5/25,6/9	MR[1]	10 gal. (Ground)
		6/23	MR[2]	"
		6/22	RU[1]	"
		7/19	RU[2]	"
MDAK	**Colfax**	5/17	MR[1]	10 gal. (Ground)
		6/5	RU[1]	"
		6/28	RU[2]	"

Ground herbicide applications made by beet seed personel from Crystal Technical Services Center.

[1]

Progress	5.8 fl. oz./A
Nortron	3 fl. oz./A
Upbeet	1/8 oz./A
Arrow	2 fl. oz./A
Stinger	1.3 fl. oz./A
Quad 7	1 gal./100 gal. H_2O
Scoil	1 gal./100 gal. H_2O

[2]MR + Outlook at 18 fl.oz./A

[3]MR without Arrow

[4] 6oz./A Arrow + Scoil only

[5] 12oz./A Betamix +
1/8 oz./A Upbeet +
1.3 oz./A Stinger +
1 pt./A MSO

RU[1] 32oz./A Roundup Weathermax + 2 qt. WG(Weather Gard) /100gal H_2O

RU2 22oz./A Roundup Weathermax + 2 qts. WG/100gal H_2O

Table 55.

2007 Rhizoctonia and Cercospora Fungicides Applied to ACSC & MDFC Official Trials

AREA	LOCATION	SPRAY DATES	FUNGICIDE	RATE(PROD./AC.)	WATER USED/METHOD
ACSC	**Casselton**	6/27	Quadris	9.0 Oz.(Liq.)	10 gal. (Ground)
		7/27	Supertin	5.0 Oz.(Dry)	15 gal. (Ground)
		8/17	Eminent	13.0 Oz.(Liq.)	"
		8/31	Headline	9.0 Oz.(Liq.)	"
ACSC	**Averill**	6/28	Quadris	9.0 Oz.(Liq.)	10 gal. (Ground)
		7/30	Supertin	5.0 Oz.(Dry)	15 gal. (Ground)
		8/17	Eminent	13.0 Oz.(Liq.)	"
		8/31	Headline	9.0 Oz.(Liq.)	"
ACSC	**Halstad**	6/27	Quadris	9.0 Oz.(Liq.)	10 gal. (Ground)
		7/30	Supertin	5.0 Oz.(Dry)	15 gal. (Ground)
		8/17	Eminent	13.0 Oz.(Liq.)	"
		8/31	Headline	9.0 Oz.(Liq.)	"
ACSC	**Climax**	6/27	Quadris	9.0 Oz.(Liq.)	10 gal. (Ground)
		7/30	Supertin	5.0 Oz.(Dry)	15 gal. (Ground)
		8/17	Eminent	13.0 Oz.(Liq.)	"
		8/30	Headline	9.0 Oz.(Liq.)	"
ACSC	**Scandia**	6/27	Quadris	9.0 Oz.(Liq.)	10 gal. (Ground)
		7/30	Supertin	5.0 Oz.(Dry)	15 gal. (Ground)
		8/17	Eminent	13.0 Oz.(Liq.)	"
		9/4	Headline	9.0 Oz.(Liq.)	"
ACSC	**Crookston**	7/2	Quadris	9.0 Oz.(Liq.)	10 gal. (Ground)
		7/30	Supertin	5.0 Oz.(Dry)	15 gal. (Ground)
		8/17	Eminent	13.0 Oz.(Liq.)	"
		8/30	Headline	9.0 Oz.(Liq.)	"
ACSC	**Grand Forks**	6/28	Quadris	9.0 Oz.(Liq.)	10 gal. (Ground)
		7/27	Supertin	5.0 Oz.(Dry)	15 gal. (Ground)
		8/16	Headline	9.0 Oz.(Liq.)	"
ACSC	**Grafton**	6/28	Quadris	9.0 Oz.(Liq.)	10 gal. (Ground)
		7/30	Supertin	5.0 Oz.(Dry)	15 gal. (Ground)
		8/17	Eminent	13.0 Oz.(Liq.)	"
		8/30	Headline	9.0 Oz.(Liq.)	"
ACSC	**Argyle**	6/28	Quadris	9.0 Oz.(Liq.)	10 gal. (Ground)
		8/1	Supertin	5.0 Oz.(Dry)	15 gal. (Ground)
		8/16	Headline	9.0 Oz.(Liq.)	"
ACSC	**Hallock**	7/2	Quadris	9.0 Oz.(Liq.)	10 gal. (Ground)
		8/1	Supertin	5.0 Oz.(Dry)	15 gal. (Ground)
		8/17	Eminent	13.0 Oz.(Liq.)	"
		8/30	Headline	9.0 Oz.(Liq.)	"
ACSC	**Kindred**	6/27	Quadris	9.0 Oz.(Liq.)	10 gal. (Ground)
	(Aphanomyces	7/27	Supertin	5.0 Oz.(Dry)	15 gal. (Ground)
		8/17	Eminent	13.0 Oz.(Liq.)	"
		8/29	Headline	9.0 Oz.(Liq.)	"
MDAK	**Breckenridge**	6/27	Quadris	9.0 Oz.(Liq.)	10 gal. (Ground)
		7/31	Supertin	5.0 Oz.(Dry)	15 gal. (Ground)
		8/16	Supertin	5.0 Oz.(Dry)	"
		8/29	Headline	9.0 Oz.(Liq.)	"
MDAK	**Charlesville**	6/27	Quadris	9.0 Oz.(Liq.)	10 gal. (Ground)
		8/2	Supertin	5.0 Oz.(Dry)	(Air)
		NA	Headline	NA	(Air)
MDAK	**Colfax**	6/27	Quadris	9.0 Oz.(Liq.)	10 gal. (Ground)
		7/30	Supertin	5.0 Oz.(Dry)	(Air)
		8/29	Headline	9.0 Oz.(Liq.)	15 gal. (Ground)

All applications made with ground sprayer by Crystal Technical Services personnel except where noted.

Table 56.
Calculation for Approval of Sugarbeet Varieties for ACSC Rhizomania Market for 2008

Description	Approval Status	Rec/Ton 2006	Rec/Ton 2007	Rec/Ton 2 Yr	Rec/Ton % Bench	Rev/Acre 2006	Rev/Acre 2007	Rev/Acre 2 Yr	Rev/Acre % Bench	R/T + $/A Bench	Cercospora Rating + 2005	2006	2007	2 Yr Mean	3 Yr Mean
Previously Approved (3 Yr)															**<=5.40**
Beta 1301R	Approved	299.7	312.7	306.2	94.9	1000	1081	1040	94.2	189.1	4.56	4.73	4.83		4.70
Beta 1305R	Approved	312.8	323.7	318.2	98.6	1070	1140	1105	100.1	198.6	5.07	5.51	5.21		5.27
Beta 1772R	Approved	321.9	332.4	327.1	101.3	1073	1107	1090	98.7	200.1	4.37	5.01	4.75		4.71
Beta 4554R	Approved	318.4	330.9	324.7	100.6	1035	1103	1069	96.8	197.4	4.81	5.06	5.14		5.01
Crystal R308	Approved	323.4	334.0	328.7	101.8	1044	1108	1076	97.4	199.2	4.84	4.82	5.01		4.89
Crystal R431	Approved	317.5	329.9	323.7	100.3	1075	1143	1109	100.4	200.7	5.18	5.47	5.11		5.26
Crystal R434	Approved	309.5	319.6	314.6	97.4	1051	1149	1100	99.6	197.0	4.94	5.37	5.32		5.21
Hilleshog 3028Rz	Approved	319.7	330.7	325.2	100.8	1074	1157	1116	101.0	201.8	4.89	5.22	5.03		5.05
Hilleshog 3031Rz	Approved	334.9	341.5	338.2	104.8	1142	1110	1126	101.9	206.7	4.32	4.37	4.06		4.25
Hilleshog 3035Rz	Approved	324.4	334.2	329.3	102.0	1138	1175	1157	104.7	206.8	4.49	4.49	4.37		4.45
Hilleshog 3036Rz	Approved	322.5	333.6	328.1	101.6	1097	1180	1139	103.1	204.7	4.73	5.01	5.14		4.96
Holly 317	Approved	318.2	327.3	322.8	100.0	1069	1067	1068	96.7	196.7	4.86	4.69	4.78		4.78
Holly 556	Approved	317.2	314.5	315.9	97.8	1124	1158	1141	103.3	201.2	4.95	5.07	4.32		4.78
Seedex Alpine	Approved	308.5	328.4	318.5	98.7	1120	1168	1144	103.6	202.2	4.23	4.82	4.60		4.55
Seedex Rezult	Approved	322.2	334.4	328.3	101.7	1054	1132	1093	99.0	200.7	4.59	4.87	4.49		4.65
Seedex Sonic	Approved	311.1	322.9	317.0	98.2	1154	1250	1202	108.9	207.1	4.93	4.94	4.57		4.81
SESVanderhave H46519	Approved	316.5	318.8	317.6	98.4	1159	1190	1174	106.3	204.7	4.53	4.67	4.57		4.59
SESVanderhave H46531	Approved	316.3	324.3	320.3	99.2	1158	1242	1200	108.6	207.9	4.72	5.22	4.99		4.98
SESVanderhave H46532	Approved	310.8	321.4	316.1	97.9	1094	1180	1137	102.9	200.9	5.15	4.90	4.87		4.97
SESVanderhave H46533	Approved	308.7	321.2	314.9	97.6	1139	1223	1181	106.9	204.5	5.22	5.10	5.45		5.26
SESVanderhave H46807	Approved	308.6	326.6	317.6	98.4	1164	1228	1196	108.3	206.7	5.13	5.12	5.20		5.15
Candidates for Approval (2 Yr)														**<=5.20**	
Beta 1683R (BX1683)	Not Approved	309.4	318.40	313.9	97.2	1143	1168	1156	104.6	201.9		4.91	5.17	5.04	
Crystal R652	Not Approved	312.7	320.1	316.4	98.0	1136	1243	1190	107.7	205.7		5.22	5.43	5.33	
Hilleshog 3050Rz(7250)	Approved	327.1	331.6	329.3	102.0	1168	1223	1196	108.2	210.3		5.08	5.02	5.05	
Hilleshog 3051Rz(7251)	Approved	318.3	323.4	320.9	99.4	1141	1238	1190	107.7	207.1		4.98	5.37	5.17	
Hilleshog 3052Rz(7252)	Approved	322.6	330.6	326.6	101.2	1175	1244	1210	109.5	210.7		5.02	5.07	5.04	
Holly 629 (06HX629)	Approved	312.3	320.5	316.4	98.0	1133	1195	1164	105.4	203.4		5.00	4.97	4.98	
Seedex Triton(SX0835)	Approved	316.0	324.5	320.2	99.2	1120	1222	1171	106.0	205.2		4.83	4.61	4.72	
SESVanderhave H46905	Not Approved	322.7	329.3	326.0	101.0	1173	1213	1193	108.0	209.0		5.46	5.37	5.42	
SESVanderhave H48607(46907)	Approved	312.5	324.1	318.3	98.6	1100	1203	1152	104.3	202.9		5.20	4.97	5.09	
Beta 1305R	Benchmark	312.8	323.7			1070	1140								
Crystal R431	Benchmark	317.5				1075									
Crystal R434	Benchmark		319.6				1149								
Hilleshog 2423Rz	Benchmark	326.4				964									
Seedex Rezult	Benchmark		334.4				1132								
SESVanderhave H46519	Benchmark	316.5	318.8			1159	1190								
Hilleshög 2417Rz(Check)	Benchmark		330.0				1144								
	Adj. Factor		1.00621				0.99207								
Benchmark mean		**318.3**	**327.3**	**322.8**		**1067.0**	**1141.9**	**1104.5**							

+ All Cercospora readings 2005-2007 were adjusted to 1982 basis. Created 11-08-2007.

Rhizomania approval criteria include: 1) 2 years of Rzm 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 >= 202% of Bench.

Bench for 2006 is the mean of 4 varieties (Beta 1305, Crystal R431, Hilleshög 2423 Rz, SESVanderhave H46519).

Bench for 2007 is mean of 5 varieties (Beta 1305R, Crystal R434, Hilleshög 2417, Seedex Rezult, SESVanderhave H46519) times R/T adj 1.00621 & $/A adj 0.99207.

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

Table 57.
Projected Calculation for Approval of Sugarbeet Varieties for ACSC Rhizomania Market

Description	Approval ^ Likely	Rec/Ton 2007	Rec/Ton % Bench	Rev/Acre 2007	Rev/Acre % Bench	R/T + $/A Bench	CR Rating ^^ 2007
Candidates for Retesting (1 Yr)							**<=5.20**
Beta 1100R	NOT	322.3	98.5	1285	112.5	211.0	5.40
Beta 1120R	On Track	335.3	102.4	1172	102.6	205.1	5.20
Beta 1140R	On Track	340.4	104.0	1246	109.1	213.1	4.83
Beta 1160R	NOT	317.1	96.9	1148	100.5	197.4	4.64
Beta 1180R	On Track	328.1	100.2	1057	92.6	192.8	4.68
Crystal R760	NOT	323.5	98.8	1260	110.3	209.2	5.29
Crystal R761	On Track	319.0	97.5	1230	107.7	205.2	4.79
Crystal R762	NOT	320.8	98.0	1172	102.6	200.6	5.35
Crystal R763	On Track	333.0	101.7	1036	90.7	192.5	4.64
Crystal R764	NOT	316.4	96.7	1187	104.0	200.6	5.19
Holly 07HX701	NOT	342.4	104.6	1235	108.2	212.8	5.25
Holly 07HX702	On Track	331.2	101.2	1161	101.7	202.9	4.51
Seedex SX0841	On Track	321.3	98.2	1247	109.2	207.4	4.96
Seedex SX0842	On Track	325.9	99.6	1245	109.0	208.6	5.17
SESVanderhave H46711	On Track	339.1	103.6	1256	110.0	213.6	4.71
SESVanderhave H46714	On Track	320.2	97.8	1210	106.0	203.8	5.19
SESVanderhave H46911	On Track	328.3	100.3	1099	96.2	196.5	4.96
SESVanderhave H48716	On Track	334.5	102.2	1188	104.0	206.2	5.17
SESVanderhave H48717	On Track	332.3	101.5	1217	106.6	208.1	5.20
Benchmark Mean		327.3		1142			

^ NOT = not on track for approval. On Track = data is tracking for potential approval. Created 11-08-2007.
^^ All Cercospora readings 2007 were adjusted to 1982 basis.

Rhizomania approval criteria include: 1) 2 years of Rzm 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.

Bench for 2007 is mean of 5 varieties (Beta 1305R, Crystal R434, Hilleshög 2417, Seedex Rezult, SESVanderhave H46519). Adjustment factors are R/T adj 1.00621 & $/A adj 0.99207.

Table 58.
Calculation for Approval of Biotech Sugarbeet Varieties for ACSC Rhizomania Market for 2008

Description	Approval Status	Rec/Ton Felton 2006	Rec/Ton 2007	Rec/Ton 2 Yr	Rec/Ton % Bench	Rev/Acre Felton 2006	Rev/Acre 2007	Rev/Acre 2 Yr	Rev/Acre % Bench	R/T + $/A Bench	Cercospora Rating + 2005	2006	2007	2 Yr Mean	3 Yr Mean
Previously Approved (3 Yr)															**<=5.40**
Crystal 539RR	Approved	329.8	329.3	329.5	101.9	1122	1157	1139	103.9	205.8	4.84	5.19	5.02		5.02
Candidates for Approval (2 Yr)														**<=5.20**	
BTS 85RR02(B5802RR)	Approved	310.8	326.9	318.9	98.6	1060	1226	1143	104.2	202.8		4.62	4.64	4.63	
BTS 86RR44(B6804RR)	Not Approved	314.3	319.0	316.6	98.0	1103	1152	1128	102.8	200.7		5.19	5.02	5.10	
BTS 86RR66(B6806RR)	Not Approved	322.8	323.2	323.0	99.9	1068	1169	1118	101.9	201.9		4.99	4.91	4.95	
BTS 86RR88(B6808RR)	Not Approved	289.4	330.0	309.7	95.8	852	1112	982	89.5	185.4		4.47	4.86	4.66	
Crystal 658RR	Not Approved	309.0	312.1	310.5	96.1	1138	1172	1155	105.3	201.4		4.79	3.96	4.37	
Hilleshog 4003RR(9003RR)	Approved	323.1	328.7	325.9	100.8	1130	1135	1133	103.2	204.0		5.23	5.06	5.14	
Hilleshog 4010RR(9010RR)	Approved	324.7	330.2	327.5	101.3	1118	1129	1124	102.4	203.7		5.14	5.01	5.08	
Hilleshog 4012RR(9012RR)	Approved	317.3	323.8	320.5	99.2	1172	1188	1180	107.5	206.7		5.13	4.97	5.05	
Hilleshog 4020RR(9020RR)	Not Approved	324.9	332.7	328.8	101.7	1212	1130	1171	106.7	208.4		5.27	5.16	5.22	
Hilleshog 4022RR(9022RR)	Not Approved	318.6	325.2	321.9	99.6	1140	1141	1140	103.9	203.5		5.36	5.13	5.25	
Beta 1305R	Benchmark	310.6	323.7			1056	1140								
Crystal R431	Benchmark	318.3				1072									
Crystal R434	Benchmark		319.6				1149								
Hilleshog 2423Rz	Benchmark	329.3				910									
Seedex Rezult	Benchmark		334.4				1132								
SESVanderhave H46519	Benchmark	318.4	318.8			1172	1190								
Hilleshög 2417Rz(Check)	Benchmark		330.0				1144								
	Adj. Factor		1.00621				0.9921								
Benchmark Mean (4 varieties-2006, 5 varieties-2007)		**319.1**	**327.3**	**323.2**		**1052.5**	**1141.9**	**1097.2**							

+ All Cercospora readings 2005-2007 were adjusted to 1982 basis.

Created 11-02-07.
Updated 11-13-07.

Rhizomania approval criteria include: 1) 2 years of Rzm 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 >= 202% of Bench.

Bench for 2006 is the mean of 4 varieties (Beta 1305, Crystal R431, Hilleshög 2423 Rz, SESVanderhave H46519).

Bench for 2007 is mean of 5 varieties (Beta 1305R, Crystal R434, Hilleshög 2417, Seedex Rezult, SESVanderhave H46519) times R/T adj 1.00621 & $/A adj 0.99207.

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

Table 59.
Projected Calculation for Approval of Biotech Sugarbeet Varieties for ACSC Rhizomania Specialty Market.

Description	Approval ^ Likely	Rec/Ton 2007	Rec/Ton % Bench	Rev/Acre 2007	Rev/Acre % Bench	R/T + $/A Bench	CR Rating ^^ 2007
Candidates for Retesting (1 Yr)							**<=5.20**
BTS 87RR28	NOT	325.3	99.4	1107	97.0	196.4	4.76
BTS 87RR38	On Track	322.3	98.5	1224	107.2	205.7	3.83
BTS 87RR58	On Track	325.9	99.6	1196	104.8	204.3	5.06
BTS 87RR68	On Track	338.9	103.5	1260	110.4	213.9	4.64
BTS 87RR78	NOT	311.0	95.0	1157	101.3	196.3	4.08
Crystal 765RR	On Track	343.1	104.8	1267	111.0	215.8	4.85
Crystal 766RR	NOT	318.2	97.2	1135	99.4	196.6	4.01
Crystal 767RR	NOT	317.0	96.9	1218	106.7	203.6	4.25
Crystal 768RR	On Track	324.0	99.0	1249	109.4	208.3	4.80
Crystal 769RR	NOT	313.7	95.8	1232	107.9	203.7	4.20
Crystal 770RR	NOT	311.8	95.2	1145	100.2	195.5	4.45
Hilleshog 9035RR	On Track	337.6	103.1	1140	99.8	203.0	4.74
Hilleshog 9043RR	On Track	330.5	101.0	1170	102.5	203.5	4.25
Hilleshog 9045RR	On Track	336.4	102.8	982	86.0	188.8	4.46
Hilleshog 9046RR	On Track	337.5	103.1	1080	94.5	197.6	3.50
Hilleshog 9049RR	On Track	332.9	101.7	1078	94.4	196.1	4.92
Hilleshog 9053RR	On Track	331.1	101.2	1119	98.0	199.1	4.47
Hilleshog 9054RR	NOT	315.3	96.3	1057	92.5	188.9	3.98
Hilleshög 90703RR	NOT	325.3	99.4	1122	98.2	197.6	5.24
Seedex SX0851RR	NOT	323.2	98.7	1129	98.9	197.6	5.41
SESVanderhave H36711RR	On Track	337.5	103.1	1220	106.9	210.0	4.73
SESVanderhave H36712RR	NOT	332.6	101.6	1265	110.8	212.4	5.75
Benchmark Mean		327.3		1142			

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

^^ All Cercospora readings 2007 were adjusted to 1982 basis.

Created 11-02-07.
Updated 11-13-07.

Rhizomania approval criteria include: 1) 2 years of Rzm 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.

Bench for 2007 is mean of 5 varieties (Beta 1305R, Crystal R434, Hilleshög 2417, Seedex Rezult, SESVanderhave H46519) times R/T adj 1.00621 & $/A adj 0.

Table 60.
Calculation for Approval of Sugarbeet Varieties for ACSC Aphanomyces Specialty Market for 2008

Chk	Description	Approval Status	Root Aph. Rating 2005	2006	2007	2 Yr Mean	3 Yr Mean	Cercospora Rating ** 2005	2006	2007	2 Yr Mean	3 Yr Mean
	Previously Approved (3 Yrs)						**<=5.20**					**<=5.40**
	Beta 1305R	Approved	4.75	4.13	4.83	4.48	4.57	5.07	5.51	5.21	5.36	5.27
	Seedex Rezult	Approved	4.83	4.13	5.54	4.84	4.83	4.59	4.87	4.49	4.68	4.65
	Seedex Alpine was previously approved. It was disapproved in 2006. Last year of sales as Aph Spec variety is 2008.											
	Candidates for Approval					**<=4.90**						**<=5.20**
	Beta 1301R	Approved		4.15	4.18	4.16			4.73	4.83	4.78	
	Beta 1772R	Approved		4.63	4.52	4.57			5.01	4.75	4.88	
	Beta 4554R	Approved		4.27	4.88	4.57			5.06	5.14	5.10	
	BTS 85RR02(B5802RR)	Approved		4.20	4.24	4.22			4.62	4.64	4.63	
	BTS 86RR44(B6804RR)	Approved		4.47	4.93	4.70			5.19	5.02	5.10	
	BTS 86RR66(B6806RR)	Approved		4.83	4.55	4.69			4.99	4.91	4.95	
	BTS 86RR88(B6808RR)	Approved		4.67	4.46	4.57			4.47	4.86	4.66	
	Crystal 539RR	Approved		3.71	4.28	4.00			5.19	5.02	5.11	
	Crystal 658RR	Approved		3.79	5.87	4.83			4.79	3.96	4.37	
	Crystal R431	NO		4.85	4.66	4.75			5.47	5.11	5.29	
	Crystal R434	NO		4.15	3.94	4.04			5.37	5.32	5.34	
	Crystal R652	NO		4.85	4.83	4.84			5.22	5.43	5.33	
	Hilleshog 2415Rz (7215)	NO		4.25	4.55	4.40			5.39	5.27	5.33	
	Hilleshog 3028Rz	Approved		4.19	5.06	4.62			5.22	5.03	5.13	
	Hilleshog 3031Rz	Approved		4.35	5.31	4.83			4.37	4.06	4.22	
	Hilleshog 3035Rz	Approved		5.16	4.31	4.73			4.49	4.37	4.43	
	Hilleshog 3036Rz	Approved		4.73	5.06	4.89			5.01	5.14	5.08	
	Hilleshog 4003RR(9003RR)	NO		6.06	6.06	6.06			5.23	5.06	5.14	
	Hilleshog 4010RR(9010RR)	NO		5.54	5.30	5.42			5.14	5.01	5.08	
	Hilleshog 4012RR(9012RR)	NO		5.37	5.26	5.32			5.13	4.97	5.05	
	Hilleshog 4020RR(9020RR)	NO		6.47	5.84	6.16			5.27	5.16	5.22	
	Hilleshog 4022RR(9022RR)	NO		5.28	5.05	5.16			5.36	5.13	5.25	
	SESVanderhave H46531	NO		4.56	5.31	4.94			5.22	4.99	5.10	
	SESVanderhave H46911	Approved		3.90	5.02	4.46			4.64	4.96	4.80	
	Aph Check Varieties											
1	Beta 1305R(Aph Chk)				4.61							
1	Beta 3800(Aph Chk)		3.61	4.06								
1	Beta 6447(Aph Chk)		6.29	5.12	5.67							
1	Crystal 817(Aph Chk)		9.35	7.28								
1	Crystal 955(Aph Chk)				6.10							
1	Crystal 960(Aph Chk)		4.11	3.79								
1	Crystal 999(Aph Chk)		4.18	4.69	4.91							
1	Crystal R434(Aph Chk)				4.43							
1	Hilleshog 2093(Aph Chk)		4.49	6.40								
1	Hilleshog Resist(Aph Chk)		4.52	4.48								
1	Seedex Monarch(Aph Chk)		6.25	6.62	5.82							
1	Seedex Rezult(Aph Chk)				4.68							
1	Van der Have H46140(Aph Chk)		4.22	4.37								
1	SESVanderhave H46519(Aph Chk)				6.71							
1	Van der Have H66453(Aph Chk)		5.58	5.79	4.81							
1	SESVanderhave H66561(Aph Chk)				5.15							
	Check Mean		3.29	3.29	3.31	3.30	3.29					
	Approval Criteria for new varieties					4.90					5.20	
	Approval Criteria for continued approval						5.20					5.40

** All Cercospora readings 2005-2007 were adjusted to 1982 basis.

Aphanomyces and Cercospora data adjusted for variation in nursery infection level.

Aphanomyces new variety approval criteria: 2 years of official trial data, Aphanomyces rating must not exceed 4.90 and CR rating must not exceed 5.20.

Aphanomyces continued approval criteria: 3 years of official trial data, Aphanomyces rating must not exceed 5.20 and CR rating must not exceed 5.40.

Aph specialty approval rules are specified in the ACSC variety approval policy. CR must be <= 5.20, Aph must be <= 4.90 and variety must be tested in Aph yield trials as well as the ACSC OVT or biotech trials.

Table 61.

Calculation for Approval of Sugarbeet Varieties for ACSC Rhizoctonia Specialty Market for 2008

Description	Approval Status	Code	Disease Index + 2005	2006	2007	2 Yr Mean	3 Yr Mean	Cercospora Rating ** 2005	2006	2007	2 Yr Mean	3 Yr Mean
Candidates for Approval (2 Yrs)												
Beta 1301R	Approved	1012	4.4	3.1	3.8	3.5	3.8	4.56	4.73	4.83	4.78	4.70
BTS 77RR74	<2 Yrs	1004			2.7					4.42		
Crystal 770RR	<2 Yrs	1010			2.7					4.45		
Hilleshog 3035Rz	Approved	1008	4.5	3.5	2.8	3.2	3.6	4.49	4.49	4.37	4.43	4.45
Hilleshog 3050Rz(7250)	<2 Yrs	1005			4.6				5.08	5.02	5.05	
Hilleshog 3052Rz(7252)	<2 Yrs	1002			4.1				5.02	5.07	5.04	
Hilleshog 3064Rz(7264)	<2 Yrs	1009			4.9				4.93	5.18	5.05	
Holly 07HX702	<2 Yrs	1006			3.2					4.51		
Holly 07HX704	<2 Yrs	1001			3.7					4.51		
Seedex Magnum	<2 Yrs	1011			5.5				5.00	5.02	5.01	
SESVanderhave H36711RR	<2 Yrs	1013			4.9					4.73		
SESVanderhave H46714	<2 Yrs	1003			3.1					5.19		
SESVanderhave H46724	<2 Yrs	1007			3.3					5.09		
ACSC Susc Rhizoctonia #1	Susc Chk	1014		3.0	5.4	4.2						
ACSC Susc Rhizoctonia #2	Susc Chk	1015		3.4	4.9	4.2						
USDA Susceptible Check #1	Susc Chk	1023	4.7	2.2	5.1	3.7	4.0					
Approval Criteria (Susceptible Hybrid Mean)++			4.70	2.87	5.16	4.01	4.24				5.20	5.40

+ Disease Index is based on a scale of 0 (=healthy) to 7 (= plant dead).

++ Candidates must have better tolerance than susceptible hybrid mean. Susceptible hybrids were Mitsui Monohikari, Hilleshög E17 and USDA hybrid FC901/C817

** All Cercospora readings 2006-2007 were adjusted to 1982 basis.

Table 62.

Calculation for Full Market Approval of Sugarbeet Varieties for ACSC for 2008

Previously Approved Varieties	Approval Status	Rec. Sugar/Ton 2005	2006	2007	3 Yr Mean	3 Yr % Bench	Revenue/Acre 2005	2006	2007	3 Yr Mean	3 Yr % Bench	R/T + $/A Bnch	Cercospora Ratings 2005	2006	2007	3 Yr Mean	< 5.40 *
Crystal 727	Approved	306.6	343.3	336.2	328.7	103.5	836	1041	1040	972	96.2	199.7	4.25	4.45	4.41	4.37	Yes
Seedex Magnum	Approved	297.2	336.4	330.2	321.3	101.2	782	986	991	920	91.0	192.2	5.00	5.00	5.02	5.01	Yes
SESVanderhave H66855	Approved	305.7	343.8	331.2	326.9	103.0	817	1126	1029	991	98.0	201.0	4.76	4.42	5.05	4.75	Yes
Benchmark Varieties (non-Rzm sites)																	
Beta 1305R		288.5	326.6	323.7			841	1072	1140								
Crystal R431		291.1	327.1	329.9			818	1054	1143								
Hilleshög 2417Rz(Check)				330.0					1144								
Hilleshog 2423Rz		302.8	334.8				781	969									
Seedex Rezult				334.4					1132								
SESVanderhave H46519		289.5	331.8	318.8			864	1167	1190								
Adjustment factor (2006 Benchmark vs 2007 Benchmark)		1.0	1.0	1.0062			1.0	1.0	0.9921								
Mean of benchmark varieties for each year		292.96	330.06	329.39	317.47		826.08	1065.41	1140.68	1010.72							

* All Cercospora readings 2005-2007 were adjusted to 1982 basis.

Continued variety approval is based upon maintaining Cercospora rating of 5.40 or lower.