RESULTS OF AMERICAN CRYSTAL'S 2009 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 2009 American Crystal and Minn-Dak official trials and describes the procedures and cultural practices involved in the trials.

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Procedures and Cultural Practices

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

All Crystal and Minn-Dak entries were coded 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.

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.

Eleven official yield trial sites were planted in the Crystal area with six harvested. Four Minn-Dak official yield trial sites were planted with one harvested. We continued plant-to-stand trials (4.5 inch spacing) to evaluate the commercial RR , experimental RR varieties, and conventional varieties. Aphanomyces yield trials were planted at two locations with potential disease present. Plots were planted crosswise (90°) to the cooperators' normal farming operations, where possible. Row spacing was 22 inches. Plot rows for all official trials were maintained at 44 feet with about 37 feet harvested. An alpha lattice plot design was used for all 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. Emergence counts were taken on one 44 foot row of each plot to be harvested. Multiple seedlings were counted as a single plant if they emerged less than one inch apart. The stands in all of the plant-to-stand coded trials were refined by removing doubles (multiple seedlings less than 1.5 inches apart) by hand but were not further reduced.

Conventional entries (voluntarily entered by seed companies) were placed in two-row plots and replicated four times. Micro rate herbicides and full rates of fungicides were applied using a pickup sprayer driven down the alleys. Quadris was applied to all of the yield trials, as has been the practice since 2004. Ground spraying was conducted by American Crystal Sugar technical staff. Conventional entries were not tested in the MDFC area in 2009.

All RR trials were conducted as separate tests along side the conventional coded trials. Commercial RR entries were placed in four-row plots and replicated six times. Experimental RR entries were placed in two-row plots and replicated four times. Roundup Weathermax was applied two to three times as needed. Quadris was applied to all RR yield trials.

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 (4310 and 4310A John Deere). Typically, all plot rows were harvested. All harvested beets of each plot were used for yield determination while one sample (22-25 lbs) for sugar and impurity analysis was obtained from each plot. Quality analysis was performed at the American Crystal Technical Services quality lab in Moorhead.

Trials at Hendrum, Buxton, Scandia, Hamilton, Galchutt, Breckenridge, 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. Special thanks are extended to Dr. Carol Windels for producing Rhizoctonia inoculum and disease rating, Dr Mohamed Khan for Rhizoctonia inoculum production and CR nursery infection, Randy Nelson, Jason Brantner and Aaron Carlson for RRV disease ratings, USDA staff in Michigan for CR nursery ratings and the Betaseed staff for Aphanomyces and Cercospora ratings in the Shakopee area. 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 2010 Sugarbeet Crop

Full Market Approved Varieties

Roundup Ready ®

	Beta 85RR02 (+Aph)
	Beta 86RR44
	Beta 86RR66
	Beta 87RR38
	Beta 87RR58
	Beta 87RR68
A	Beta 88RR21 (+Aph)
A	Beta 88RR31 (+Aph)
A	Beta 88RR41
A	Beta 88RR61 (+Aph)
A	Beta 88RR71 (+Aph)
	Crystal 539RR (+Aph)
	Crystal 658RR (+Aph +Rhc)
	Crystal 765RR
	Crystal 768RR
A	Crystal 871RR (+Aph)
A	Crystal 875RR (+Aph)
A	Crystal 878RR
A	Crystal 879RR
A	Crystal 880RR
	Hilleshög 4000RR
	Hilleshög 4010RR
	Hilleshög 4012RR (+Aph)
	Hilleshög 4043RR (+Aph)
A	Hilleshög 4085RR (9085)
A	Hilleshög 4094RR (9094 +Rhc)
A	Hilleshög 4097RR (9097 +Rhc)
A	Hilleshög 4114RR
A	Seedex SX0881RR (Unicorn)
A	Seedex SX0883RR (Usher)
A	Seedex SX0884RR (Uplander)
	SESVanderhave H36711RR
A	SESVanderhave H36811RR (+Rhc)
A	SESVanderhave H36812RR
A	SESVanderhave H36813RR

Conventional

	Beta 1100R
S	Beta 1115R (+Aph)
S	Beta 1125R (+Aph)
S	Beta 1135R (+Rhc)
	Beta 1140R
	Beta 1301R (+Aph +Rhc)
	Beta 1305R (+Aph)
	Crystal R308
	Crystal R431
	Crystal R434
	Crystal R760
	Crystal R761 (+Aph)
S	Crystal R869
	Hilleshög 3035Rz (+Aph +Rhc)
	Hilleshög 3052Rz (+Aph +Rhc)
	Holly 317
	Holly 701
	Seedex Sonic
S	Seedex SX0873TT (Deuce)
	Seedex Triton
	Seedex Vault (SX0842)
	SESVanderhave H46519
	SESVanderhave H46531
	SESVanderhave H46711
	SESVanderhave H48607TT
	SESVanderhave H48716TT
	SESVanderhave H48717TT
S	SESVanderhave H46801
S	SESVanderhave H48810TT

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

Aphanomyces Specialty Approved Varieties (Aph)

Roundup Ready ®

	Beta 85RR02
A	Beta 88RR21
A	Beta 88RR31
A	Beta 88RR61
A	Beta 88RR71
	Crystal 539RR
	Crystal 658RR (+Rhc)
A	Crystal 871RR
A	Crystal 875RR
	Hilleshög 4012RR
A	Hilleshög 4022RR (+Rhc)
A	Hilleshög 4043RR

Conventional

S	Beta 1115R
S	Beta 1125R
	Beta 1301R (+Rhc)
	Beta 1305R
	Crystal R761
	Hilleshög 3035Rz (+Rhc)
	Hilleshög 3052Rz (+Rhc)

Conventional variety testing was voluntary in 2009.
Data for SOME conventional varieties are from 2008 only.
No conventional Aph yield trials were conducted in 2009.

Rhizoctonia Specialty Approved Varieties (Rhc)

Roundup Ready ®

A	Beta 88RR03
A	Beta 88RR13
A	Crystal 658RR (+Aph)
A	Hilleshög 4022RR (+Aph)
A	Hilleshög 4094RR (9094)
A	Hilleshög 4097RR (9097)
A	SESVanderhave H36811RR

Conventional

	Beta 1301R (+Aph)
S	Beta 1135R
S	Beta 1833R
	Hilleshög 3035Rz (+Aph)
	Hilleshög 3052Rz (+Aph)
	SESVanderhave H46714

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

A Newly Approved

S Approval granted after 1-year of testing.

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

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Table 2.

Performance Data of RR Varieties Approved for Sale to ACSC Growers in 2010

During 2007, 2008 & 2009 Growing Seasons (All Locations Combined) +++

	Yrs	Rev/Ton					Rev/Acre					Rec/Ton		Rec/Acre		Sugar		Yield		Molasses		Emergence		CR +		Aph Root+		Fusarium+		Rhizoc.++	
Description @	Com	2009	3 Yr#	3 Yr%	2 Yr	2 Yr%	2009	3 Yr#	3 Yr%	2 Yr	2 Yr%	2009	2 Yr	2009	2 Yr	2009	2 Yr	09	2 Yr	09	2 Yr	09	2 Yr	09	2 Yr	09	2 Yr	09	2 Yr	09	2 Yr
Roundup Ready # of locations →		6	22	22	12	12	6	22	22	12	12	6	12	6	12	6	12	6	12	6	12	6	12	4	7	2	3	2	4	1	2
Previously Approved																															
Beta 85RR02	2	35.96	40.41	104	38.82	105	858	1048	104	959	102	293	305	6994	7536	15.81	16.41	23.8	24.7	1.15	1.15	70	63	4.66	4.65	4.0	4.1	2.7	2.7	4.5	5.4
Beta 86RR44	2	34.11	38.90	100	37.46	101	871	1029	102	967	103	286	299	7297	7727	15.46	16.15	25.6	25.8	1.18	1.18	57	50	4.83	4.91	4.5	4.4	4.8	5.2	4.3	4.7
Beta 86RR66	2	35.57	39.56	101	37.97	103	914	1050	104	991	106	292	302	7494	7872	15.77	16.27	25.7	26.1	1.19	1.19	58	50	5.00	5.08	4.3	4.7	4.4	5.1	4.1	4.3
Beta 87RR38	1	36.34	39.53	101	38.02	103	930	1102	109	1040	111	295	302	7574	8274	15.88	16.25	25.8	27.4	1.14	1.16	66	68	4.73	4.53	4.8	4.9	3.8	4.3	3.8	4.1
Beta 87RR58	1	36.17	39.89	102	38.15	103	929	1097	109	1048	112	294	302	7539	8287	15.88	16.29	25.6	27.3	1.17	1.18	72	70	5.06	4.83	4.8	5.0	4.5	4.9	4.5	4.9
Beta 87RR68	1	37.65	42.98	110	41.28	112	997	1184	117	1146	122	300	315	7945	8734	16.09	16.84	26.4	27.6	1.08	1.07	65	67	4.66	4.49	6.2	6.8	4.0	4.0	4.6	5.9
Crystal 539RR	2	35.26	40.36	103	38.48	104	855	1028	102	964	103	290	304	7036	7597	15.67	16.33	24.2	25.0	1.16	1.15	71	70	5.25	5.08	4.2	4.4	1.8	2.0	4.4	5.8
Crystal 658RR	2	32.99	37.33	96	35.90	97	831	1025	102	952	102	281	293	7088	7767	15.09	15.67	25.3	26.5	1.05	1.02	72	68	4.63	4.44	3.9	4.4	2.4	2.4	3.7	3.3
Crystal 765RR	1	39.05	43.53	111	41.62	113	1022	1179	117	1135	121	306	317	8025	8632	16.38	16.90	26.3	27.2	1.07	1.06	74	74	4.89	4.43	5.6	6.4	3.9	4.0	4.7	5.9
Crystal 768RR	1	37.81	40.16	103	38.77	105	982	1133	112	1075	115	301	305	7816	8450	16.17	16.40	26.0	27.7	1.12	1.15	77	76	4.94	4.70	5.0	5.2	4.4	4.8	4.1	4.9
Hilleshög 4000RR	1	36.07	40.57	104	37.83	102	840	990	98	916	98	294	301	6844	7303	15.80	16.19	23.3	24.3	1.11	1.14	65	62	4.71	4.63	5.4	5.3	6.3	7.0	4.9	4.9
Hilleshög 4010RR	2	36.90	41.35	106	39.85	108	869	1031	102	982	105	297	309	7003	7621	15.92	16.54	23.6	24.6	1.06	1.07	75	69	5.51	5.16	4.1	4.5	6.0	6.4	5.0	4.7
Hilleshög 4012RR	2	35.33	39.58	101	37.93	103	892	1076	107	1020	109	291	301	7324	8086	15.61	16.15	25.1	26.7	1.08	1.08	72	71	5.29	5.14	4.5	4.4	5.3	5.8	4.8	5.1
Hilleshög 4043RR(9043)	1	36.12	40.86	105	39.08	106	893	1079	107	1033	110	294	306	7273	8083	15.71	16.31	24.7	26.3	1.00	0.99	74	70	4.69	4.59	4.9	4.7	6.0	6.7	4.5	4.9
SESVanderhave H36711RR	1	36.63	40.79	104	38.18	103	954	1075	107	1002	107	296	302	7703	7946	15.82	16.19	26.0	26.3	1.02	1.06	79	73	5.22	4.79	4.5	4.7	4.4	5.9	4.5	4.2
Newly Approved																															
Beta 88RR03	NC	33.98	--	--	35.80	97	822	--	--	929	99	285	293	6901	7601	15.35	15.72	24.3	26.0	1.10	1.10	68	67	4.65	4.27	4.2	4.4	2.4	2.6	3.5	3.1
Beta 88RR13	NC	32.96	--	--	35.55	96	801	--	--	931	99	281	291	6833	7629	15.15	15.68	24.4	26.2	1.13	1.10	65	67	4.55	4.32	3.9	4.4	2.6	2.6	3.4	2.7
Beta 88RR21	NC	33.72	--	--	36.75	99	840	--	--	972	104	284	297	7080	7832	15.27	15.86	25.0	26.4	1.07	1.03	74	69	4.33	4.26	4.1	4.3	2.8	2.6	3.8	--
Beta 88RR31	NC	35.88	--	--	38.27	104	894	--	--	1025	109	293	303	7339	8124	15.88	16.37	25.1	26.8	1.23	1.22	73	68	4.97	4.83	4.1	4.2	2.9	3.4	4.1	--
Beta 88RR41	NC	35.20	--	--	37.53	102	899	--	--	1044	111	290	300	7423	8321	15.62	16.10	25.7	27.7	1.13	1.11	77	73	4.87	4.72	4.7	5.1	3.1	3.2	4.3	--
Beta 88RR61	NC	37.38	--	--	39.35	106	952	--	--	1054	112	299	307	7635	8229	16.07	16.49	25.5	26.8	1.09	1.11	73	70	5.06	4.62	4.6	4.6	3.7	3.8	4.5	--
Beta 88RR71	NC	37.31	--	--	39.35	107	873	--	--	1003	107	299	308	7024	7829	16.08	16.51	23.6	25.4	1.13	1.13	79	76	4.67	4.56	3.9	4.2	5.2	--	4.4	--
Crystal 871RR	NC	34.34	--	--	37.02	100	881	--	--	1018	109	286	298	7354	8168	15.53	16.09	25.7	27.4	1.22	1.20	75	72	4.90	4.69	4.2	4.4	2.3	--	4.9	--
Crystal 875RR	NC	35.79	--	--	38.52	104	911	--	--	1036	111	293	304	7448	8167	15.79	16.34	25.4	26.8	1.16	1.14	76	72	4.56	4.41	3.0	3.4	4.1	--	4.2	--
Crystal 878RR	NC	35.97	--	--	38.93	105	948	--	--	1075	115	293	306	7721	8419	15.86	16.44	26.3	27.5	1.19	1.16	80	71	4.91	4.68	5.1	5.1	4.2	--	4.4	--
Crystal 879RR	NC	34.39	--	--	36.90	100	903	--	--	1046	112	287	297	7513	8396	15.45	15.96	26.2	28.2	1.13	1.11	74	71	5.13	4.83	5.0	5.3	3.3	--	4.1	--
Crystal 880RR	NC	36.09	--	--	38.75	105	875	--	--	1019	109	294	305	7135	8015	15.82	16.38	24.3	26.2	1.13	1.14	75	73	4.60	4.54	4.8	5.0	3.3	--	4.1	--
Hilleshög 4022RR	1	34.25	39.04	100	36.96	100	839	1005	100	938	100	286	297	6998	7541	15.48	16.04	24.4	25.3	1.18	1.17	64	67	4.53	4.16	4.8	4.8	4.4	4.9	3.1	2.4
Hilleshög 4085RR(9085)	NC	34.99	--	--	37.60	102	830	--	--	959	102	289	300	6876	7653	15.60	16.13	23.8	25.5	1.15	1.13	77	73	4.35	4.10	4.0	4.2	4.5	--	3.3	--
Hilleshög 4094RR(9094)	NC	35.87	--	--	37.49	101	869	--	--	960	102	293	300	7092	7672	15.82	16.14	24.1	25.6	1.17	1.15	77	73	4.42	4.10	4.0	4.4	4.3	--	3.2	2.6
Hilleshög 4097RR(9097)	NC	36.09	--	--	38.13	103	804	--	--	910	97	294	302	6521	7197	15.82	16.23	22.1	23.7	1.13	1.12	66	64	4.01	3.73	5.5	5.5	5.9	--	4.0	2.7
Hilleshög 4114RR(9114)	NC	37.86	--	--	41.25	112	837	--	--	970	104	301	315	6663	7403	16.09	16.78	22.1	23.4	1.01	1.00	60	57	3.88	3.51	4.6	5.0	6.4	--	4.2	--
Seedex SX0881RR (Unicorn)	NC	36.30	--	--	38.83	105	881	--	--	998	107	295	305	7165	7846	15.77	16.31	24.3	25.7	1.02	1.04	70	67	5.33	5.01	4.3	5.0	5.8	6.2	4.8	--
Seedex SX0883RR (Usher)	NC	35.85	--	--	37.01	100	903	--	--	1011	108	293	298	7400	8139	15.66	15.92	25.3	27.4	1.01	1.04	84	78	4.35	5.09	4.4	4.8	4.1	--	4.1	--
Seedex SX0884RR (Uplande	NC	38.92	--	--	40.21	109	920	--	--	996	106	306	311	7245	7708	16.29	16.53	23.7	24.8	0.98	0.97	85	78	4.94	4.87	4.3	4.4	4.9	--	4.7	--
SESVanderhave H36811RR	NC	39.11	--	--	40.11	109	862	--	--	955	102	307	311	6771	7401	16.33	16.50	22.1	23.8	0.99	0.97	84	81	5.10	4.71	4.4	4.7	3.3	--	4.3	3.7
SESVanderhave H36812RR	NC	35.98	--	--	37.69	102	924	--	--	1007	107	293	300	7551	8028	15.70	16.04	25.8	26.7	1.03	1.02	86	77	4.74	4.78	4.5	4.7	4.1	--	4.6	4.5
SESVanderhave H36813RR	NC	36.73	--	--	37.27	101	951	--	--	1036	110	297	299	7699	8310	15.86	15.98	26.0	27.9	1.01	1.03	87	78	4.55	5.15	4.4	4.9	4.4	--	4.6	4.1
Mean of benchmark varieties		34.89	39.04		36.95		859	1009		937		289	297	7111	7542	15.55	15.97	24.6	25.3	1.11	1.10	71	68								

Columns with % are the previous column expressed as % of several benchmark varieties.

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

++ 2009 Revenue estimates based on a $42.40 beet payment at 17.5% sugar and 1.5% loss to molasses. 2008 Revenue estimates based on a $42.38. Revenue does not consider hauling costs or production costs.

+ Aph Ratings from Shakopee & RRV (1=healthy, 9=dead). CR ratings from Rosemount, Michigan & Foxhome (1=healthy, 9=dead). Fusarium ratings from 2 MN sites (mod resist = 4.5, mod susc = 5.7).

Created 11-17-2009.

++ Rhizoctonia ratings from Ft Collins and Moorhead (res=3, susc=5+).

+++ Sites include Ada, Hillsboro, Crookston, Grand Forks, St Thomas & Hamilton in 2008.

@ All varieties are diploid unless noted.

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

Table 3.

Performance Data of Conventional Varieties Approved for Sale to ACSC Growers in 2010

During 2007, 2008 & 2009 Growing Seasons (All Locations Combined) +++

	Years	Rev/Ton							Rev/Acre							Rec/Ton		Rec/Acre		Sugar		Yield		Molasses		Emerg.		CR +			Aph Root+			Fusarium +			Rhizoctonia ++		
Description @	Comm	2008	08%	2009	3Yr#	3Yr%	2 Yr	2Yr%	2008	08%	2009	3Yr	3Yr%	2 Yr	2Yr%	2008	2009	2008	2009	2008	2009	2008	2009	2008	2009	08	09	07	08	09	07	08	09	07	08	09	07	08	09
Conventional # of locations →		6	6	6	22	22	12	12	6	6	6	22	22	12	12	6	6	6	6	6	6	6	6	6	6	6	6	2	3	4	2	1	2	2	2	2	1	1
Tested in 2009																																						
Seedex SX0873TT (Deuce	NC	38.79	99	37.47	--	--	38.13	103	1125	111	1017	--	--	1071	114	305	300	8842	8130	16.24	15.99	29.0	27.2	0.99	1.02	73	91	--	5.16	5.58	--	5.4	5.9	--	--	5.2	--	--	4.6
Seedex Sonic	3	39.74	102	38.74	40.38	103	39.24	106	1087	107	1002	1113	110	1045	111	309	305	8473	7914	16.48	16.30	27.5	26.1	1.03	1.06	72	85	4.57	4.95	5.07	4.9	6.1	5.9	--	5.0	4.8	--	4.8	4.8
SESVanderhave H46519	5	38.81	99	37.52	39.34	101	38.17	103	1076	106	949	1072	106	1013	108	305	300	8464	7592	16.27	16.04	27.8	25.4	1.01	1.06	70	82	4.57	4.21	4.76	5.3	4.7	5.7	--	4.7	4.7	--	3.7	4.3
SESVanderhave H46531	4	38.97	100	38.07	40.01	102	38.52	104	1061	104	921	1075	107	991	106	306	302	8333	7314	16.34	16.15	27.3	24.2	1.05	1.04	70	72	4.99	4.59	4.68	5.3	5.0	5.4	--	4.5	4.6	--	3.3	4.4
SESVanderhave H48607T	2	36.81	94	36.57	38.77	99	36.69	99	1131	111	1040	1125	111	1085	116	297	296	9120	8454	15.89	15.83	30.8	28.8	1.05	1.05	76	87	4.97	5.42	5.52	5.5	5.4	5.5	--	6.0	5.4	--	3.8	4.1
SESVanderhave H48716T	NC	39.48	101	37.32	40.72	104	38.40	104	1048	103	981	1072	106	1014	108	308	299	8168	7862	16.40	16.00	26.5	26.4	1.01	1.06	78	92	5.17	4.97	5.25	5.8	4.9	5.7	--	5.4	5.5	--	3.4	4.6
SESVanderhave H48717T	1	39.62	102	36.02	40.17	103	37.82	102	1071	105	987	1092	108	1029	110	308	294	8336	8064	16.46	15.75	27.0	27.5	1.03	1.08	78	88	5.20	4.58	5.39	5.7	4.8	4.9	--	4.6	5.1	--	4.4	4.3
NOT tested in 2009																																						
Beta 1100R	NC	39.28	101	--	--	--	--	--	1153	114	--	--	--	--	--	307	--	9012	--	16.35	--	29.4	--	0.99	--	72	--	5.40	4.25	--	6.1	5.9	--	--	4.9	--	--	3.3	
Beta 1115R	NC	43.10	110	--	--	--	--	--	1171	115	--	--	--	--	--	323	--	8759	--	17.10	--	27.1	--	0.96	--	74	--	--	4.48	--	--	4.3	--	--	5.7	--	--	4.4	
Beta 1125R	NC	38.15	98	--	--	--	--	--	1184	117	--	--	--	--	--	302	--	9386	--	16.33	--	31.1	--	1.21	--	78	--	--	4.22	--	--	4.3	--	--	2.7	--	--	4.8	
Beta 1135R	NC	39.21	101	--	--	--	--	--	1046	103	--	--	--	--	--	307	--	8186	--	16.48	--	26.7	--	1.14	--	70	--	--	4.03	--	--	4.9	--	--	3.5	--	--	2.4	
Beta 1140R	NC	42.63	109	--	--	--	--	--	1136	112	--	--	--	--	--	321	--	8546	--	17.06	--	26.6	--	1.00	--	75	--	4.83	4.06	--	5.8	4.8	--	--	5.9	--	--	5.4	
Beta 1301R	5	35.53	91	--	--	--	--	--	1013	100	--	--	--	--	--	291	--	8304	--	15.83	--	28.5	--	1.26	--	72	--	4.83	3.95	--	4.2	3.8	--	5.6	6.0	--	3.8	2.1	
Beta 1305R	5	38.02	97	--	--	--	--	--	1005	99	--	--	--	--	--	302	--	7969	--	16.30	--	26.4	--	1.21	--	55	--	5.21	5.23	--	4.8	4.7	--	5.4	5.8	--	--	3.8	
Beta 1833R	NC	39.41	101	--	--	--	--	--	977	96	--	--	--	--	--	308	--	7617	--	16.55	--	24.7	--	1.17	--	64	--	--	3.53	--	--	4.7	--	--	--	--	--	1.3	
Crystal R308 (3N)	5	41.68	107	--	--	--	--	--	1043	103	--	--	--	--	--	317	--	7940	--	16.97	--	25.1	--	1.11	--	65	--	5.01	3.98	--	4.9	4.2	--	3.9	2.9	--	--	--	
Crystal R431	4	39.71	102	--	--	--	--	--	1044	103	--	--	--	--	--	309	--	8112	--	16.63	--	26.3	--	1.18	--	72	--	5.11	4.31	--	4.7	4.2	--	3.8	3.3	--	--	--	
Crystal R434	4	38.41	98	--	--	--	--	--	1050	103	--	--	--	--	--	303	--	8305	--	16.41	--	27.4	--	1.24	--	73	--	5.32	4.74	--	3.9	4.3	--	3.7	2.8	--	--	4.6	
Crystal R760	NC	39.57	101	--	--	--	--	--	1170	115	--	--	--	--	--	308	--	9102	--	16.49	--	29.5	--	1.08	--	74	--	5.29	5.07	--	5.3	4.5	--	--	--	--	--	6.0	
Crystal R761	NC	38.22	98	--	--	--	--	--	1119	110	--	--	--	--	--	303	--	8856	--	16.39	--	29.3	--	1.25	--	72	--	4.79	4.03	--	4.6	4.0	--	--	2.3	--	--	4.7	
Crystal R869	NC	42.58	109	--	--	--	--	--	1144	113	--	--	--	--	--	321	--	8612	--	16.99	--	26.8	--	0.95	--	78	--	--	4.44	--	--	4.7	--	--	--	--	--	--	
Hilleshög 3035Rz	3	40.85	105	--	--	--	--	--	1083	107	--	--	--	--	--	314	--	8309	--	16.75	--	26.5	--	1.07	--	67	--	4.37	3.56	--	4.3	4.5	--	3.8	4.6	--	2.8	1.6	
Hilleshög 3052Rz	2	39.49	101	--	--	--	--	--	1104	109	--	--	--	--	--	308	--	8615	--	16.46	--	28.0	--	1.07	--	71	--	5.07	4.18	--	4.7	4.9	--	4.3	5.0	--	4.1	4.2	
Holly 317	5	38.39	98	--	--	--	--	--	935	92	--	--	--	--	--	303	--	7386	--	16.21	--	24.4	--	1.04	--	73	--	4.78	4.14	--	5.1	5.3	--	--	4.2	--	--	4.0	
Holly 701	NC	38.86	100	--	--	--	--	--	1037	102	--	--	--	--	--	305	--	8162	--	16.28	--	26.8	--	1.02	--	74	--	5.25	4.32	--	5.5	4.9	--	--	4.4	--	--	5.2	
Seedex Triton	2	39.18	100	--	--	--	--	--	988	97	--	--	--	--	--	307	--	7725	--	16.31	--	25.2	--	0.98	--	70	--	4.61	3.51	--	4.8	5.0	--	--	5.3	--	--	3.0	
Seedex Vault	NC	38.72	99	--	--	--	--	--	1028	101	--	--	--	--	--	305	--	8107	--	16.23	--	26.7	--	0.99	--	79	--	5.17	4.65	--	5.9	4.8	--	--	4.5	--	--	4.2	
SESVanderhave H46711	NC	41.10	105	--	--	--	--	--	1099	108	--	--	--	--	--	315	--	8426	--	16.70	--	26.8	--	0.97	--	77	--	4.71	3.82	--	5.7	4.4	--	--	4.2	--	--	5.3	
SESVanderhave H46714	NC	37.47	96	--	--	--	--	--	1022	101	--	--	--	--	--	300	--	8188	--	15.97	--	27.4	--	0.99	--	77	--	5.19	4.48	--	5.1	4.3	--	--	4.8	--	3.1	2.8	
SESVanderhave H46801	NC	41.27	106	--	--	--	--	--	1031	102	--	--	--	--	--	315	--	7871	--	16.73	--	24.9	--	0.96	--	77	--	--	3.44	--	--	4.4	--	--	--	--	--	--	
SESVanderhave H48810T	NC	39.38	101	--	--	--	--	--	1110	109	--	--	--	--	--	308	--	8662	--	16.40	--	28.2	--	1.02	--	78	--	--	4.91	--	--	5.2	--	--	--	--	--	--	
Mean of benchmark varieties		39.01		34.89	39.04		36.95		1016		859	1009		937		306	289	7973	7111	16.40	15.55	26.1	24.6	1.10	1.11	64	71												

Columns with % are the previous column expressed as % of several benchmark varieties.

++ 2009 Revenue estimates based on a $42.40 beet payment at 17.5% sugar and 1.5% loss to molasses. 2008 Revenue estimates based on a $42.38. Revenue does not consider hauling costs or production cc Emergence is % of planted seeds producing a 4 leaf beet.

+ Aph Ratings from Shakopee & RRV (1=healthy, 9=dead). CR ratings from Rosemount, Michigan & Foxhome (1=healthy, 9=dead). Fusarium ratings from 2 MN sites (mod resist = 4.5, mod susc = 5.7).

Conventional varieties were granted a special exemption from variety testing for 2009. Varieties in 2009 trials were submitted voluntarily by seed companies.

Created 11-17-2009.

++ Rhizoctonia ratings from Ft Collins and Moorhead (res=3, susc=5+).

+++ Sites include Ada, Hillsboro, Crookston, Grand Forks, St Thomas & Hamilton in 2008.

@ All varieties are diploid unless noted.

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

Table 4.

Performance Data of RR Varieties Approved for Sale to ACSC Growers in 2010

Under Light Rhizomania Conditions During 2007, 2008 & 2009 Growing Seasons +++

	Yrs	Rev/Ton ++					Rev/Acre ++					Rec/Ton		Rec/Acre		Sugar		Yield		CR +		Aph Root+		Fusarium +		Rhizoctonia +	
Description @	Com	2009	3 Yr#	3 Yr%	2 Yr	2 Yr%	2009	3 Yr	3 Yr%	2 Yr	2 Yr%	2009	2 Yr	2009	2 Yr	2009	2 Yr	2009	2 Yr	09	2 Yr	09	2 Yr	09	2 Yr	09	2 Yr
Roundup Ready	# of Locations ➤	3	14	14	8	8	3	14	14	8	8	3	8	3	8	3	8	3	8	4	7	2	3	2	4	1	2
Previously Approved																											
Beta 85RR02	2	34.12	39.33	104	37.73	104	739	1008	106	916	104	286	301	6178	7257	15.44	16.20	21.6	24.0	4.66	4.65	4.0	4.1	2.7	2.7	4.5	5.4
Beta 86RR44	2	33.78	38.27	101	37.11	103	787	995	104	937	106	284	298	6599	7493	15.36	16.08	23.2	25.0	4.83	4.91	4.5	4.4	4.8	5.2	4.3	4.7
Beta 86RR66	2	34.76	38.74	102	37.30	103	809	987	103	944	107	288	299	6674	7526	15.57	16.13	23.1	25.1	5.00	5.08	4.3	4.7	4.4	5.1	4.1	4.3
Beta 87RR38	1	35.04	38.64	102	37.24	103	811	1047	110	987	112	289	299	6727	7921	15.58	16.08	23.3	26.5	4.73	4.53	4.8	4.9	3.8	4.3	3.8	4.1
Beta 87RR58	1	34.59	38.86	102	37.04	102	785	1024	107	966	109	288	298	6521	7733	15.57	16.08	22.7	25.9	5.06	4.83	4.8	5.0	4.5	4.9	4.5	4.9
Beta 87RR68	1	36.27	41.93	110	40.51	112	889	1123	118	1101	125	295	312	7203	8432	15.79	16.69	24.4	26.8	4.66	4.49	6.2	6.8	4.0	4.0	4.6	5.9
Crystal 539RR	2	33.88	39.47	104	37.66	104	726	983	103	905	102	285	300	6094	7178	15.37	16.17	21.4	23.8	5.25	5.08	4.2	4.4	1.8	2.0	4.4	5.8
Crystal 658RR	2	32.77	36.60	96	35.44	98	726	970	102	911	103	280	291	6188	7436	15.03	15.58	22.0	25.4	4.63	4.44	3.9	4.4	2.4	2.4	3.7	3.3
Crystal 765RR	1	38.70	42.95	113	41.28	114	923	1131	119	1098	124	305	315	7268	8366	16.30	16.85	23.9	26.4	4.89	4.43	5.6	6.4	3.9	4.0	4.7	5.9
Crystal 768RR	1	36.62	39.26	103	38.04	105	866	1077	113	1022	116	296	302	6990	8091	15.90	16.25	23.6	26.7	4.94	4.70	5.0	5.2	4.4	4.8	4.1	4.9
Hilleshög 4000RR	1	35.75	39.88	105	37.35	103	736	955	100	877	99	292	299	6023	7029	15.71	16.10	20.6	23.5	4.71	4.63	5.4	5.3	6.3	7.0	4.9	4.9
Hilleshög 4010RR	2	35.63	40.41	106	39.00	108	766	1001	105	943	107	292	306	6261	7362	15.64	16.37	21.4	23.9	5.51	5.16	4.1	4.5	6.0	6.4	5.0	4.7
Hilleshög 4012RR	2	34.68	38.62	102	37.38	103	808	1032	108	990	112	288	299	6661	7866	15.45	16.04	23.0	26.1	5.29	5.14	4.5	4.4	5.3	5.8	4.8	5.1
Hilleshög 4043RR(9043)	1	35.85	40.37	106	38.72	107	804	1048	110	997	113	293	305	6564	7808	15.64	16.24	22.3	25.5	4.69	4.59	4.9	4.7	6.0	6.7	4.5	4.9
SESVanderhave H36711RR	1	35.98	39.86	105	37.61	104	845	1041	109	962	109	293	300	6860	7658	15.68	16.08	23.3	25.4	5.22	4.79	4.5	4.7	4.4	5.9	4.5	4.2
Newly Approved																											
Beta 88RR03	NC	33.95	--	--	35.36	98	758	--	--	910	103	285	291	6335	7459	15.32	15.64	22.1	25.6	4.65	4.27	4.2	4.4	2.4	2.6	3.5	3.1
Beta 88RR13	NC	33.23	--	--	35.45	98	714	--	--	908	103	282	291	6050	7420	15.17	15.65	21.4	25.4	4.55	4.32	3.9	4.4	2.6	2.6	3.4	2.7
Beta 88RR21	NC	33.03	--	--	35.98	99	742	--	--	927	105	281	293	6301	7507	15.14	15.71	22.4	25.5	4.33	4.26	4.1	4.3	2.8	2.6	3.8	--
Beta 88RR31	NC	35.26	--	--	37.67	104	802	--	--	994	113	290	300	6614	7901	15.74	16.26	22.7	26.2	4.97	4.83	4.1	4.2	2.9	3.4	4.1	--
Beta 88RR41	NC	34.12	--	--	36.67	101	773	--	--	987	112	286	296	6479	7925	15.40	15.93	22.7	26.6	4.87	4.72	4.7	5.1	3.1	3.2	4.3	--
Beta 88RR61	NC	37.03	--	--	38.87	107	851	--	--	1005	114	298	306	6846	7874	15.97	16.39	22.9	25.7	5.06	4.62	4.6	4.6	3.7	3.8	4.5	--
Beta 88RR71	NC	35.69	--	--	38.51	106	759	--	--	952	108	292	304	6241	7480	15.74	16.34	21.4	24.5	4.67	4.56	3.9	4.2	5.2	--	4.4	--
Crystal 871RR	NC	33.00	--	--	35.99	100	759	--	--	962	109	281	293	6452	7793	15.25	15.89	22.9	26.4	4.90	4.69	4.2	4.4	2.3	--	4.9	--
Crystal 875RR	NC	34.95	--	--	37.81	105	796	--	--	977	111	289	301	6570	7740	15.58	16.18	22.7	25.6	4.56	4.41	3.0	3.4	4.1	--	4.2	--
Crystal 878RR	NC	33.75	--	--	37.70	104	781	--	--	997	113	284	300	6526	7879	15.41	16.21	22.8	26.0	4.91	4.68	5.1	5.1	4.2	--	4.4	--
Crystal 879RR	NC	33.95	--	--	36.65	101	756	--	--	988	112	285	296	6319	7922	15.35	15.92	22.1	26.5	5.13	4.83	5.0	5.3	3.3	--	4.1	--
Crystal 880RR	NC	34.41	--	--	37.67	104	742	--	--	948	107	287	300	6179	7524	15.47	16.17	21.5	24.9	4.60	4.54	4.8	5.0	3.3	--	4.1	--
Hilleshög 4022RR	1	33.95	38.35	101	36.56	101	757	979	103	918	104	285	296	6320	7383	15.42	15.98	22.1	24.8	4.53	4.16	4.8	4.8	4.4	4.9	3.1	2.4
Hilleshög 4085RR(9085)	NC	34.31	--	--	37.07	103	733	--	--	945	107	286	298	6121	7556	15.44	16.03	21.3	25.2	4.35	4.10	4.0	4.2	4.5	--	3.3	--
Hilleshög 4094RR(9094)	NC	34.11	--	--	36.40	101	743	--	--	933	106	286	295	6182	7509	15.46	15.93	21.4	25.2	4.42	4.10	4.0	4.4	4.3	--	3.2	2.6
Hilleshög 4097RR(9097)	NC	35.01	--	--	37.45	104	664	--	--	871	99	289	299	5447	6911	15.61	16.12	18.6	22.8	4.01	3.73	5.5	5.5	5.9	--	4.0	2.7
Hilleshög 4114RR(9114)	NC	37.55	--	--	41.02	113	752	--	--	943	107	300	315	5983	7181	16.03	16.74	19.8	22.7	3.88	3.51	4.6	5.0	6.4	--	4.2	--
Seedex SX0881RR (Unicorn)	NC	35.21	--	--	38.08	105	762	--	--	945	107	290	302	6267	7464	15.52	16.15	21.5	24.6	5.33	5.01	4.3	5.0	5.8	6.2	4.8	--
Seedex SX0883RR (Usher)	NC	35.84	--	--	36.69	101	802	--	--	974	110	293	296	6547	7847	15.67	15.88	22.3	26.4	4.35	5.09	4.4	4.8	4.1	--	4.1	--
Seedex SX0884RR (Uplande	NC	37.83	--	--	39.62	110	793	--	--	942	107	301	309	6292	7302	16.09	16.43	20.8	23.5	4.94	4.87	4.3	4.4	4.9	--	4.7	--
SESVanderhave H36811RR	NC	38.31	--	--	39.69	110	759	--	--	914	104	303	309	5990	7087	16.18	16.43	19.6	22.8	5.10	4.71	4.4	4.7	3.3	--	4.3	3.7
SESVanderhave H36812RR	NC	35.10	--	--	36.88	102	809	--	--	958	108	290	297	6650	7682	15.54	15.90	22.8	25.7	4.74	4.78	4.5	4.7	4.1	--	4.6	4.5
SESVanderhave H36813RR	NC	35.73	--	--	36.48	101	822	--	--	983	111	292	295	6716	7944	15.64	15.82	22.9	26.8	4.55	5.15	4.4	4.9	4.4	--	4.6	4.1
Mean of benchmark varieties.		33.86	37.95		36.17		750	953		883		285	294	6280	7154	15.32	15.81	22.0	24.2								

Columns with % are the previous column expressed as % of several benchmark varieties.

Created 11-17-2009.

++ 2009 Revenue estimates based on a $42.40 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

+ Aph Ratings are from Shakopee & RRV (1=healthy, 9=dead). CR ratings from Rosemount, Michigan & Foxhome (1=healthy, 9=dead). Fusarium from 2 MN sites (mod resist=4.5, mod susc=5.7).

+ Rhizoctonia ratings from Ft Collins (2009) and Mhd (2008)(res=3, susc=5+).

+++ Light Rzm sites include Grand Forks, St Thomas & Humboldt in 2009.

@ All varieties are diploid unless noted.

+++ Light Rzm sites include Ada, Hillsboro, Crookston, Grand Forks & Hamilton in 2008.

+++ Categorization of Rzm infection based upon performance ratios of tolerant vs susceptible varieties.

Table 5.

Performance Data of RR Varieties Approved for Sale to ACSC Growers in 2010

Under Moderate Rhizomania Conditions During 2007, 2008 & 2009 Growing Seasons +++

	Years	Rev/Ton ++					Rev/Acre ++					Rec/Ton		Rec/Acre		Sugar		Yield		CR +		Aph Root+		Fusarium +		Rhizoctonia +	
Description @	Comm	2009	3 Yr#	3 Yr%	2 Yr	2 Yr%	2009	3 Yr	3 Yr%	2 Yr	2 Yr%	2009	2 Yr	2009	2 Yr	2009	2 Yr	2009	2 Yr	2009	2 Yr	09	2 Yr	09	2 Yr	09	2 Yr
Roundup Ready # of Locations →		3	8	8	4	4	3	8	8	4	4	3	4	3	4	3	4	3	4	4	7	2	3	2	4	1	2
Previously Approved																											
Beta 85RR02	2	37.77	42.16	102	40.57	104	977	1063	99	955	97	301	312	7810	7392	16.18	16.71	26.1	23.8	4.66	4.65	4.0	4.1	2.7	2.7	4.5	5.4
Beta 86RR44	2	34.41	40.25	98	38.53	99	955	1038	97	948	96	287	304	7994	7532	15.54	16.31	28.0	25.0	4.83	4.91	4.5	4.4	4.8	5.2	4.3	4.7
Beta 86RR66	2	36.39	41.32	100	39.70	102	1020	1116	104	1022	103	295	309	8318	8008	15.97	16.57	28.4	26.2	5.00	5.08	4.3	4.7	4.4	5.1	4.1	4.3
Beta 87RR38	1	37.65	41.01	100	39.34	101	1049	1148	107	1066	108	300	307	8426	8364	16.18	16.46	28.2	27.3	4.73	4.53	4.8	4.9	3.8	4.3	3.8	4.1
Beta 87RR58	1	37.83	42.00	102	40.54	104	1071	1194	111	1153	117	301	312	8548	8885	16.20	16.73	28.5	28.5	5.06	4.83	4.8	5.0	4.5	4.9	4.5	4.9
Beta 87RR68	1	39.00	44.47	108	42.31	109	1106	1233	115	1154	117	306	320	8688	8737	16.38	16.99	28.4	27.4	4.66	4.49	6.2	6.8	4.0	4.0	4.6	5.9
Crystal 539RR	2	36.65	41.86	102	39.85	103	982	1065	99	1002	101	296	309	7970	7838	15.97	16.55	27.0	25.5	5.25	5.08	4.2	4.4	1.8	2.0	4.4	5.8
Crystal 658RR	2	33.21	39.23	95	37.75	97	935	1062	99	946	96	282	301	7985	7610	15.15	15.98	28.5	25.6	4.63	4.44	3.9	4.4	2.4	2.4	3.7	3.3
Crystal 765RR	1	39.40	44.75	109	42.59	110	1123	1208	113	1126	114	308	321	8797	8531	16.45	17.03	28.8	26.8	4.89	4.43	5.6	6.4	3.9	4.0	4.7	5.9
Crystal 768RR	1	39.00	41.68	101	40.09	103	1099	1188	111	1111	112	306	310	8643	8619	16.43	16.65	28.4	27.8	4.94	4.70	5.0	5.2	4.4	4.8	4.1	4.9
Hilleshög 4000RR	1	36.38	42.32	103	39.56	102	943	984	92	882	89	295	308	7661	6905	15.89	16.49	26.0	22.5	4.71	4.63	5.4	5.3	6.3	7.0	4.9	4.9
Hilleshög 4010RR	2	38.16	43.09	105	41.54	107	973	1031	96	969	98	302	317	7747	7448	16.20	16.85	25.7	23.8	5.51	5.16	4.1	4.5	6.0	6.4	5.0	4.7
Hilleshög 4012RR	2	35.96	41.39	101	39.35	101	977	1108	103	1015	103	293	307	7989	7945	15.77	16.40	27.3	25.9	5.29	5.14	4.5	4.4	5.3	5.8	4.8	5.1
Hilleshög 4043RR(9043)	1	36.53	42.20	103	40.39	104	985	1090	102	1032	104	296	312	8013	8001	15.80	16.53	27.2	25.8	4.69	4.59	4.9	4.7	6.0	6.7	4.5	4.9
SESVanderhave H36711RR	1	37.33	42.68	104	39.77	102	1063	1077	100	986	100	299	309	8544	7709	15.98	16.46	28.7	25.1	5.22	4.79	4.5	4.7	4.4	5.9	4.5	4.2
Newly Approved																											
Beta 88RR03	NC	33.93	--	--	37.83	97	881	--	--	893	90	285	301	7440	7142	15.35	16.08	26.3	23.9	4.65	4.27	4.2	4.4	2.4	2.6	3.5	3.1
Beta 88RR13	NC	32.74	--	--	36.66	94	885	--	--	860	87	280	296	7592	7022	15.14	15.84	27.3	24.0	4.55	4.32	3.9	4.4	2.6	2.6	3.4	2.7
Beta 88RR21	NC	34.34	--	--	39.22	101	937	--	--	1002	101	286	307	7856	7894	15.38	16.31	27.6	25.9	4.33	4.26	4.1	4.3	2.8	2.6	3.8	--
Beta 88RR31	NC	36.54	--	--	39.99	103	985	--	--	997	101	296	310	8056	7792	16.01	16.64	27.5	25.4	4.97	4.83	4.1	4.2	2.9	3.4	4.1	--
Beta 88RR41	NC	36.21	--	--	39.62	102	1026	--	--	1081	109	294	308	8387	8442	15.83	16.46	28.7	27.5	4.87	4.72	4.7	5.1	3.1	3.2	4.3	--
Beta 88RR61	NC	37.73	--	--	40.95	105	1050	--	--	1096	111	301	314	8398	8431	16.16	16.76	28.0	26.9	5.06	4.62	4.6	4.6	3.7	3.8	4.5	--
Beta 88RR71	NC	39.02	--	--	40.45	104	988	--	--	1038	105	306	312	7818	8032	16.43	16.71	25.7	25.8	4.67	4.56	3.9	4.2	5.2	--	4.4	--
Crystal 871RR	NC	35.67	--	--	39.40	101	1006	--	--	1048	106	292	308	8273	8221	15.81	16.48	28.5	26.9	4.90	4.69	4.2	4.4	2.3	--	4.9	--
Crystal 875RR	NC	36.73	--	--	40.48	104	1026	--	--	1102	111	296	312	8316	8518	16.01	16.70	28.1	27.4	4.56	4.41	3.0	3.4	4.1	--	4.2	--
Crystal 878RR	NC	38.10	--	--	40.71	105	1120	--	--	1135	115	302	313	8956	8791	16.28	16.75	29.8	28.3	4.91	4.68	5.1	5.1	4.2	--	4.4	--
Crystal 879RR	NC	34.87	--	--	37.27	96	1051	--	--	1042	105	289	299	8721	8382	15.57	16.00	30.3	28.2	5.13	4.83	5.0	5.3	3.3	--	4.1	--
Crystal 880RR	NC	37.71	--	--	40.70	105	1010	--	--	1104	112	301	313	8101	8500	16.16	16.76	27.1	27.2	4.60	4.54	4.8	5.0	3.3	--	4.1	--
Hilleshög 4022RR	1	34.51	40.69	99	38.43	99	920	979	91	868	88	287	304	7672	6922	15.54	16.26	26.7	23.0	4.53	4.16	4.8	4.8	4.4	4.9	3.1	2.4
Hilleshög 4085RR(9085)	NC	35.72	--	--	38.87	100	928	--	--	842	85	292	305	7628	6655	15.78	16.32	26.2	21.9	4.35	4.10	4.0	4.2	4.5	--	3.3	--
Hilleshög 4094RR(9094)	NC	37.60	--	--	39.36	101	996	--	--	857	87	300	307	8005	6738	16.17	16.44	26.8	22.1	4.42	4.10	4.0	4.4	4.3	--	3.2	2.6
Hilleshög 4097RR(9097)	NC	37.18	--	--	39.38	101	945	--	--	825	83	298	308	7617	6479	16.03	16.39	25.6	21.2	4.01	3.73	5.5	5.5	5.9	--	4.0	2.7
Hilleshög 4114RR(9114)	NC	38.13	--	--	41.92	108	918	--	--	939	95	303	318	7313	7168	16.14	16.86	24.3	22.7	3.88	3.51	4.6	5.0	6.4	--	4.2	--
Seedex SX0881RR (Unicorn)	NC	37.44	--	--	40.45	104	1000	--	--	1023	103	300	312	8059	7924	16.02	16.61	27.1	25.5	5.33	5.01	4.3	5.0	5.8	6.2	4.8	--
Seedex SX0883RR (Usher)	NC	35.81	--	--	38.57	99	1002	--	--	988	100	293	304	8247	7843	15.64	16.17	28.4	26.0	4.35	5.09	4.4	4.8	4.1	--	4.1	--
Seedex SX0884RR (Uplander)	NC	40.08	--	--	41.01	106	1047	--	--	1010	102	311	315	8191	7780	16.50	16.65	26.6	24.9	4.94	4.87	4.3	4.4	4.9	--	4.7	--
SESVanderhave H36811RR	NC	39.91	--	--	40.69	105	965	--	--	949	96	310	313	7561	7333	16.49	16.56	24.6	23.5	5.10	4.71	4.4	4.7	3.3	--	4.3	3.7
SESVanderhave H36812RR	NC	36.83	--	--	39.92	103	1039	--	--	1015	103	297	310	8450	7935	15.87	16.41	28.7	25.8	4.74	4.78	4.5	4.7	4.1	--	4.6	4.5
SESVanderhave H36813RR	NC	37.79	--	--	39.25	101	1079	--	--	1041	105	301	307	8669	8196	16.08	16.31	29.1	26.9	4.55	5.15	4.4	4.9	4.4	--	4.6	4.1
Mean of benchmark varieties.		35.90	41.17		38.85		968	1072		989		293	305	7939	7811	15.77	16.33	27.2	25.7								

Columns with % are the previous column expressed as % of several benchmark varieties.

@ All varieties are diploid unless noted.

+++ Moderate Rzm sites include St Thomas in 2008.

+++ Moderate Rzm sites include Averill, Casselton, Argyle in 2009.

Created 11-16-2009.

++ 2009 Revenue estimates based on a $42.40 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling cos+++ Categorization of Rzm infection based upon performance ratios of tolerant vs susceptible varieties.

+ Aph Ratings are from Shakopee & RRV (1=healthy, 9=dead). CR ratings from Rosemount, Michigan & Foxhome (1=healthy, 9=dead). Fusarium from 2 MN sites (mod resist=4.5, mod susc=5.7).

+ Rhizoctonia ratings from Ft Collins (2009) and Mhd (2008)(res=3, susc=5+).

Table 6.

Performance Data of Conventional Varieties Approved for Sale to ACSC Growers in 2010

Under Light Rhizomania Conditions During 2007, 2008 & 2009 Growing Seasons +++

	Years	Rev/Ton ++						Rev/Acre ++						Rec/Ton		Rec/Acre		Sugar		Yield		CR +			Aph Root+			Fusarium +			Rhizoctonia +		
Description @	Comm	2008	08%	2009	3 Yr#	2 Yr	2 Yr%	2008	08%	2009	3 Yr	2 Yr	2 Yr%	2008	2009	2008	2009	2008	2009	2008	2009	07	08	09	07	08	09	07	08	09	07	08	09
Conventional # of Locations →		5	5	3	14	8	8	5	5	3	14	8	8	5	3	5	3	5	3	5	3	2	3	4	2	1	2	2	2	4	2	1	2
Tested in 2009																																	
Seedex SX0873TT (Deuce)	NC	37.87	98	36.26	--	37.07	102	1096	108	950	--	1023	116	301.2	294.5	8716	7726	16.07	15.72	28.9	26.2	--	5.16	5.58	--	5.4	5.9	--	--	5.2	--	--	4.6
Seedex Sonic	3	38.88	101	37.08	39.09	37.98	105	1083	107	943	1072	1013	115	305.4	297.9	8519	7576	16.33	15.92	27.9	25.4	4.57	4.95	5.07	4.9	6.1	5.9	--	5.0	4.8	--	4.8	4.8
SESVanderhave H46519	5	38.17	99	36.10	38.02	37.14	103	1081	106	872	1025	977	111	302.4	293.8	8557	7107	16.15	15.72	28.3	24.1	4.57	4.21	4.76	5.3	4.7	5.7	--	4.7	4.7	--	3.7	4.3
SESVanderhave H46531	4	38.44	100	37.42	39.29	37.93	105	1051	103	850	1033	951	108	303.6	299.3	8309	6789	16.25	15.97	27.4	22.6	4.99	4.59	4.68	5.3	5.0	5.4	--	4.5	4.6	--	3.3	4.4
SESVanderhave H48607TT	2	35.82	93	35.22	37.49	35.52	98	1115	110	993	1083	1054	119	292.6	290.2	9107	8211	15.71	15.53	31.1	28.4	4.97	5.42	5.52	5.5	5.4	5.5	--	6.0	5.4	--	3.8	4.1
SESVanderhave H48716TT	NC	38.86	101	36.52	39.77	37.69	104	1026	101	918	1025	972	110	305.3	295.6	8058	7447	16.28	15.78	26.4	25.2	5.17	4.97	5.25	5.8	4.9	5.7	--	5.4	5.5	--	3.4	4.6
SESVanderhave H48717TT	1	39.11	102	34.83	39.13	36.97	102	1063	105	975	1067	1019	115	306.3	288.5	8317	8099	16.37	15.44	27.1	28.1	5.20	4.58	5.39	5.7	4.8	4.9	--	4.6	5.1	--	4.4	4.3
NOT tested in 2009																																	
Beta 1100R	NC	38.36	100	--	--	--	--	1130	111	--	--	--	--	303.2	--	8927	--	16.18	--	29.4	--	5.40	4.25	--	6.1	5.9	--	--	4.9	--	--	3.3	--
Beta 1115R	NC	42.40	110	--	--	--	--	1149	113	--	--	--	--	320.1	--	8654	--	16.98	--	27.0	--	--	4.48	--	--	4.3	--	--	5.7	--	--	4.4	--
Beta 1125R	NC	37.61	98	--	--	--	--	1172	115	--	--	--	--	300.1	--	9352	--	16.23	--	31.2	--	--	4.22	--	--	4.3	--	--	2.7	--	--	4.8	--
Beta 1135R	NC	38.36	100	--	--	--	--	1039	102	--	--	--	--	303.2	--	8206	--	16.32	--	27.1	--	--	4.03	--	--	4.9	--	--	3.5	--	--	2.4	--
Beta 1140R	NC	42.15	110	--	--	--	--	1119	110	--	--	--	--	319.1	--	8457	--	16.97	--	26.5	--	4.83	4.06	--	5.8	4.8	--	--	5.9	--	--	5.4	--
Beta 1301R	5	34.82	91	--	--	--	--	999	98	--	--	--	--	288.4	--	8265	--	15.70	--	28.6	--	4.83	3.95	--	4.2	3.8	--	5.6	6.0	--	3.8	2.1	--
Beta 1305R	5	37.28	97	--	--	--	--	1002	99	--	--	--	--	298.7	--	8011	--	16.16	--	26.8	--	5.21	5.23	--	4.8	4.7	--	5.4	5.8	--	--	3.8	--
Beta 1833R	NC	38.70	101	--	--	--	--	979	96	--	--	--	--	304.6	--	7695	--	16.41	--	25.2	--	--	3.53	--	--	4.7	--	--	--	--	--	1.3	--
Crystal R308 (3N)	5	40.67	106	--	--	--	--	1043	103	--	--	--	--	312.9	--	8015	--	16.79	--	25.6	--	5.01	3.98	--	4.9	4.2	--	3.9	2.9	--	--	--	--
Crystal R431	4	38.79	101	--	--	--	--	1027	101	--	--	--	--	305.0	--	8067	--	16.46	--	26.4	--	5.11	4.31	--	4.7	4.2	--	3.8	3.3	--	--	--	--
Crystal R434	4	37.78	98	--	--	--	--	1042	103	--	--	--	--	300.8	--	8301	--	16.31	--	27.6	--	5.32	4.74	--	3.9	4.3	--	3.7	2.8	--	--	4.6	--
Crystal R760	NC	38.54	100	--	--	--	--	1151	113	--	--	--	--	304.0	--	9060	--	16.31	--	29.7	--	5.29	5.07	--	5.3	4.5	--	--	--	--	--	6.0	--
Crystal R761	NC	37.17	97	--	--	--	--	1099	108	--	--	--	--	298.2	--	8804	--	16.20	--	29.5	--	4.79	4.03	--	4.6	4.0	--	--	2.3	--	--	4.7	--
Crystal R869	NC	42.17	110	--	--	--	--	1129	111	--	--	--	--	319.1	--	8536	--	16.92	--	26.7	--	--	4.44	--	--	4.7	--	--	--	--	--	--	--
Hilleshög 3035Rz	3	40.55	105	--	--	--	--	1089	107	--	--	--	--	312.4	--	8387	--	16.72	--	26.9	--	4.37	3.56	--	4.3	4.5	--	3.8	4.6	--	2.8	1.6	--
Hilleshög 3052Rz	2	38.79	101	--	--	--	--	1105	109	--	--	--	--	305.0	--	8683	--	16.34	--	28.5	--	5.07	4.18	--	4.7	4.9	--	4.3	5.0	--	4.1	4.2	--
Holly 317	5	37.38	97	--	--	--	--	928	91	--	--	--	--	299.1	--	7415	--	16.03	--	24.8	--	4.78	4.14	--	5.1	5.3	--	--	4.2	--	--	4.0	--
Holly 701	NC	38.10	99	--	--	--	--	1031	101	--	--	--	--	302.1	--	8185	--	16.13	--	27.1	--	5.25	4.32	--	5.5	4.9	--	--	4.4	--	--	5.2	--
Seedex Triton	2	38.71	101	--	--	--	--	983	97	--	--	--	--	304.7	--	7727	--	16.22	--	25.3	--	4.61	3.51	--	4.8	5.0	--	--	5.3	--	--	3.0	--
Seedex Vault	NC	38.12	99	--	--	--	--	1026	101	--	--	--	--	302.2	--	8154	--	16.13	--	27.0	--	5.17	4.65	--	5.9	4.8	--	--	4.5	--	--	4.2	--
SESVanderhave H46711	NC	40.55	105	--	--	--	--	1096	108	--	--	--	--	312.4	--	8455	--	16.62	--	27.1	--	4.71	3.82	--	5.7	4.4	--	--	4.2	--	--	5.3	--
SESVanderhave H46714	NC	36.74	96	--	--	--	--	1034	102	--	--	--	--	296.5	--	8351	--	15.84	--	28.2	--	5.19	4.48	--	5.1	4.3	--	--	4.8	--	3.1	2.8	--
SESVanderhave H46801	NC	40.93	106	--	--	--	--	1051	103	--	--	--	--	314.0	--	8050	--	16.67	--	25.6	--	--	3.44	--	--	4.4	--	--	--	--	--	--	--
SESVanderhave H48810TT	NC	38.73	101	--	--	--	--	1097	108	--	--	--	--	304.8	--	8622	--	16.29	--	28.3	--	--	4.91	--	--	5.2	--	--	--	--	--	--	--
Mean of benchmark varieties.		38.47		33.86	37.95	36.17		1017		750	953	883		303.7	284.5	8027	6280	16.30	15.32	26.4	22.0												

Columns with % are the previous column expressed as % of several benchmark varieties.

++ 2009 Revenue estimates based on a $42.40 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs. Created 11-17-2009.

+ Aph Ratings are from Shakopee & RRV (1=healthy, 9=dead). CR ratings from Rosemount, Michigan & Foxhome (1=healthy, 9=dead). Fusarium from 2 MN sites (mod resist=4.5, mod susc=5.7).

+ Rhizoctonia ratings from Ft Collins (2009) and Mhd (2008)(res=3, susc=5+).

+++ Light Rzm sites include Ada, Hillsboro, Crookston, Grand Forks & Hamilton in 2008.

Conventional varieties were granted a special exemption from variety testing for 2009. Varieties in 2009 trials were submitted voluntarily by seed companies.

+++ Light Rzm sites include Grand Forks, St Thomas & Humboldt in 2009.

@ All varieties are diploid unless noted.

+++ Categorization of Rzm infection based upon performance ratios of tolerant vs susceptible varieties.

Table 7.

Performance Data of Conventional Varieties Approved for Sale to ACSC Growers in 2010

Under Moderate Rhizomania Conditions During 2007, 2008 & 2009 Growing Seasons +++

	Years	Rev/Ton ++						Rev/Acre ++						Rec/Ton		Rec/Acre		Sugar		Yield		CR +			Aph Root+			Fusarium +			Rhizoctonia +		
Description @	Comm	2008	08%	2009	3 Yr#	2 Yr	2 Yr%	2008	08%	2009	3 Yr	2 Yr	2Yr%	2008	2009	2008	2009	2008	2009	2008	2009	07	08	09	07	08	09	07	08	09	07	08	09
Conventional	# of Locations →	1	1	3	8	4	4	1	1	3	8	4	4	1	3	1	3	1	3	1	3	2	3	4	2	1	2	2	2	4	2	1	1
Tested in 2009																																	
Seedex SX0873TT (Deuce)	NC	43.36	104	38.50	--	40.93	105	1265	125	1082	--	1174	119	324.1	303.8	9463	8528	17.13	16.25	29.2	28.0	--	5.16	5.58	--	5.4	5.9	--	--	5.2	--	--	4.6
Seedex Sonic	3	44.03	105	39.97	42.89	42.00	108	1112	110	1059	1172	1086	110	326.9	309.9	8280	8250	17.20	16.61	25.4	26.7	4.57	4.95	5.07	4.9	6.1	5.9	--	5.0	4.8	--	4.8	4.8
SESVanderhave H46519	5	42.09	101	39.01	41.90	40.55	104	1054	104	1026	1126	1040	105	318.8	305.9	8011	8076	16.83	16.38	25.2	26.5	4.57	4.21	4.76	5.3	4.7	5.7	--	4.7	4.7	--	3.7	4.3
SESVanderhave H46531	4	41.54	99	38.78	41.58	40.16	103	1110	110	992	1137	1051	106	316.5	304.9	8454	7829	16.76	16.33	26.7	25.7	4.99	4.59	4.68	5.3	5.0	5.4	--	4.5	4.6	--	3.3	4.4
SESVanderhave H48607TT	2	41.78	100	37.87	41.60	39.83	102	1209	120	1089	1197	1149	116	317.5	301.2	9199	8706	16.77	16.13	29.0	29.1	4.97	5.42	5.52	5.5	5.4	5.5	--	6.0	5.4	--	3.8	4.1
SESVanderhave H48716TT	NC	42.74	102	38.19	42.80	40.47	104	1152	114	1043	1155	1098	111	321.5	302.5	8674	8274	17.03	16.23	27.0	27.4	5.17	4.97	5.25	5.8	4.9	5.7	--	5.4	5.5	--	3.4	4.6
SESVanderhave H48717TT	1	42.20	101	37.50	42.19	39.85	103	1108	110	1002	1135	1055	107	319.3	299.6	8369	8037	16.93	16.11	26.2	26.9	5.20	4.58	5.39	5.7	4.8	4.9	--	4.6	5.1	--	4.4	4.3
NOT tested in 2009																																	
Beta 1100R	NC	43.91	105	--	--	--	--	1272	126	--	--	--	--	326.4	--	9454	--	17.17	--	29.0	--	5.40	4.25	--	6.1	5.9	--	--	4.9	--	--	3.3	--
Beta 1115R	NC	46.41	111	--	--	--	--	1280	127	--	--	--	--	336.9	--	9282	--	17.71	--	27.5	--	--	4.48	--	--	4.3	--	--	5.7	--	--	4.4	--
Beta 1125R	NC	40.78	98	--	--	--	--	1242	123	--	--	--	--	313.3	--	9535	--	16.82	--	30.4	--	--	4.22	--	--	4.3	--	--	2.7	--	--	4.8	--
Beta 1135R	NC	43.47	104	--	--	--	--	1090	108	--	--	--	--	324.6	--	8130	--	17.28	--	25.0	--	--	4.03	--	--	4.9	--	--	3.5	--	--	2.4	--
Beta 1140R	NC	45.04	108	--	--	--	--	1222	121	--	--	--	--	331.1	--	8972	--	17.49	--	27.1	--	4.83	4.06	--	5.8	4.8	--	--	5.9	--	--	5.4	--
Beta 1301R	5	39.02	93	--	--	--	--	1089	108	--	--	--	--	306.0	--	8523	--	16.48	--	27.8	--	4.83	3.95	--	4.2	3.8	--	5.6	6.0	--	3.8	2.1	--
Beta 1305R	5	41.86	100	--	--	--	--	1020	101	--	--	--	--	317.8	--	7747	--	17.03	--	24.4	--	5.21	5.23	--	4.8	4.7	--	5.4	5.8	--	--	3.8	--
Beta 1833R	NC	42.86	103	--	--	--	--	965	96	--	--	--	--	322.0	--	7248	--	17.18	--	22.5	--	--	3.53	--	--	4.7	--	--	--	--	--	1.3	--
Crystal R308 (3N)	5	46.61	111	--	--	--	--	1046	104	--	--	--	--	337.7	--	7575	--	17.87	--	22.4	--	5.01	3.98	--	4.9	4.2	--	3.9	2.9	--	--	--	--
Crystal R431	4	44.40	106	--	--	--	--	1123	111	--	--	--	--	328.5	--	8313	--	17.48	--	25.3	--	5.11	4.31	--	4.7	4.2	--	3.8	3.3	--	--	--	--
Crystal R434	4	41.60	99	--	--	--	--	1093	108	--	--	--	--	316.8	--	8347	--	16.91	--	26.4	--	5.32	4.74	--	3.9	4.3	--	3.7	2.8	--	--	4.6	--
Crystal R760	NC	44.61	107	--	--	--	--	1262	125	--	--	--	--	329.3	--	9297	--	17.38	--	28.2	--	5.29	5.07	--	5.3	4.5	--	--	--	--	--	6.0	--
Crystal R761	NC	43.61	104	--	--	--	--	1225	121	--	--	--	--	325.2	--	9154	--	17.34	--	28.2	--	4.79	4.03	--	4.6	4.0	--	--	2.3	--	--	4.7	--
Crystal R869	NC	44.53	107	--	--	--	--	1217	121	--	--	--	--	329.0	--	8978	--	17.35	--	27.2	--	--	4.44	--	--	4.7	--	--	--	--	--	--	--
Hilleshög 3035Rz	3	42.33	101	--	--	--	--	1045	103	--	--	--	--	319.8	--	7882	--	16.91	--	24.6	--	4.37	3.56	--	4.3	4.5	--	3.8	4.6	--	2.8	1.6	--
Hilleshög 3052Rz	2	43.11	103	--	--	--	--	1103	109	--	--	--	--	323.1	--	8290	--	17.07	--	25.8	--	5.07	4.18	--	4.7	4.9	--	4.3	5.0	--	4.1	4.2	--
Holly 317	5	43.39	104	--	--	--	--	971	96	--	--	--	--	324.2	--	7278	--	17.10	--	22.5	--	4.78	4.14	--	5.1	5.3	--	--	4.2	--	--	4.0	--
Holly 701	NC	42.76	102	--	--	--	--	1075	106	--	--	--	--	321.6	--	8093	--	17.05	--	25.2	--	5.25	4.32	--	5.5	4.9	--	--	4.4	--	--	5.2	--
Seedex Triton	2	41.49	99	--	--	--	--	1013	100	--	--	--	--	316.3	--	7714	--	16.74	--	24.4	--	4.61	3.51	--	4.8	5.0	--	--	5.3	--	--	3.0	--
Seedex Vault	NC	41.78	100	--	--	--	--	1038	103	--	--	--	--	317.5	--	7901	--	16.77	--	24.9	--	5.17	4.65	--	5.9	4.8	--	--	4.5	--	--	4.2	--
SESVanderhave H46711	NC	43.72	105	--	--	--	--	1105	109	--	--	--	--	325.6	--	8232	--	17.13	--	25.3	--	4.71	3.82	--	5.7	4.4	--	--	4.2	--	--	5.3	--
SESVanderhave H46714	NC	41.17	98	--	--	--	--	966	96	--	--	--	--	314.9	--	7416	--	16.60	--	23.6	--	5.19	4.48	--	5.1	4.3	--	--	4.8	--	3.1	2.8	--
SESVanderhave H46801	NC	42.94	103	--	--	--	--	931	92	--	--	--	--	322.3	--	6972	--	17.06	--	21.6	--	--	3.44	--	--	4.4	--	--	--	--	--	--	--
SESVanderhave H48810TT	NC	42.72	102	--	--	--	--	1179	117	--	--	--	--	321.4	--	8879	--	16.94	--	27.6	--	--	4.91	--	--	5.2	--	--	--	--	--	--	--
Mean of benchmark varieties.		41.81		35.90	41.17	38.85		1010		968	1072	989		317.6	293.0	7683	7939	16.88	15.77	24.2	27.2												

++ 2009 Revenue estimates based on a $42.40 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling c

+++ Moderate Rzm sites include St Thomas in 2008.

@ All varieties are diploid unless noted.

+++ Moderate Rzm sites include Averill, Casselton, Argyle in 2009.

Created 11-16-2009.

+ Rhizoctonia ratings from Ft Collins (2009) and Mhd (2008)(res=3, susc=5+).

+++ Categorization of Rzm infection based upon performance ratios of tolerant vs susceptible varieties.

+ Aph Ratings are from Shakopee & RRV (1=healthy, 9=dead). CR ratings from Rosemount, Michigan & Foxhome (1=healthy, 9=dead). Fusarium from 2 MN sites (mod resist=4.5, mod susc=5.7).

Conventional varieties were granted a special exemption from variety testing for 2009. Varieties in 2009 trials were submitted voluntarily by seed companies.

Columns with % are the previous column expressed as % of several benchmark varieties.

Table 8.

Performance Data of Biotech Aphanomyces Specialty Varieties Approved for Sale to ACSC Growers in 2010

Aphanomyces Conditions

		Years	Rev/Ton			Rev/Acre			Rec/Ton		Rec/Acre		Sugar		Yield		CR Rating +		Aph Root +		Fusarium +		Rhizoctonia +	
Description **	Ploidy	Comm	2009	2 Yr	2 Yr%	2009	2 Yr	2 Yr%	2009	2 Yr	2009	2 Yr	2009	2 Yr	2009	2 Yr	2009	2 Yr	2009	2 Yr	2008	2009	2008	2009
	# of Locations →		2	3	3	2	3	3	2	3	2	3	2	3	2	3	4	7	2	4	2	2	1	1
Roundup Ready																								
Beta 85RR02	2N	2	38.58	36.84	103	1099	1064	109	304.1	296.9	8572	8534	16.32	16.08	27.8	28.6	4.66	4.65	4.0	4.1	2.8	2.7	6.4	4.5
Beta 88RR21	2N	NC	34.93	33.99	95	1026	1000	103	288.9	285.0	8440	8358	15.41	15.31	29.0	29.3	4.33	4.26	4.1	4.3	2.4	2.8		3.8
Beta 88RR31	2N	NC	35.95	34.07	95	1044	1048	108	293.2	285.4	8480	8759	15.80	15.60	28.8	30.7	4.97	4.83	4.1	4.2	3.9	2.9		4.1
Beta 88RR61	2N	NC	39.08	38.03	106	1145	1156	119	306.2	301.8	8890	9137	16.33	16.23	28.7	30.1	5.06	4.62	4.6	4.6	3.8	3.7		4.5
Beta 88RR71	2N	NC	37.99	35.94	101	1053	1047	107	301.7	293.1	8325	8530	16.17	15.88	27.5	29.1	4.67	4.56	3.9	4.2		5.2		4.4
Crystal 539RR	2N	2	37.73	36.19	101	1056	1044	107	300.6	294.2	8366	8462	16.11	15.89	27.7	28.7	5.25	5.08	4.2	4.4	2.3	1.8	7.1	4.4
Crystal 658RR	2N	2	33.57	32.57	91	1021	1009	104	283.3	279.1	8530	8604	15.15	15.02	29.8	30.7	4.63	4.44	3.9	4.4	2.4	2.4	2.9	3.7
Crystal 871RR	2N	NC	36.55	34.33	96	1120	1080	111	295.7	286.4	9036	9002	15.92	15.60	30.5	31.4	4.90	4.69	4.2	4.4		2.3		4.9
Crystal 875RR	2N	NC	37.44	36.39	102	1109	1097	113	299.4	295.0	8805	8867	16.07	15.97	29.2	30.0	4.56	4.41	3.0	3.4		4.1		4.2
Hilleshög 4012RR	2N	2	37.49	35.65	100	844	978	100	299.6	291.9	6686	8016	16.10	15.77	22.1	27.5	5.29	5.14	4.5	4.4	6.4	5.3	5.3	4.8
Hilleshög 4022RR	2N	1	37.16	34.81	97	1019	968	99	298.2	288.4	8119	7996	15.99	15.62	27.0	27.6	4.53	4.16	4.8	4.8	5.3	4.4	1.6	3.1
Hilleshög 4043RR(9043)	2N	1	38.19	37.05	104	997	1048	108	302.5	297.8	7790	8373	16.11	15.97	25.4	28.0	4.69	4.59	4.9	4.7	7.3	6.0	5.3	4.5
Aph Susc Checks			39.80	35.73		1002	974		309.2	292.2	7600	7918	16.46	15.69	23.9	26.9								
Mean of Aph Specialty Varieties			37.06	35.49		1044	1045		297.8	291.2	8337	8553	15.96	15.74	27.8	29.3								

2009 sites included Kindred & Hillsboro. 2008 site was Perley.

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

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

Created 11-16-2009.

Table 9.

Performance Data of Conventional and RR Varieties Approved for Sale to ACSC Growers in 2010

During 2008 Growing Season (All Locations Combined) [Allows comparison of all varieties approved for sale] #

	Rev/Ton		Rev/Acre		Rec/T	Rec/Ac	Sugar	Yield	LTM	Emerg %	CR +	Aph Rt+	Fusarium +		Rhizoct ++	
Description @	2008	08%	2008	08%	2008	2008	2008	2008	2008	2008	2008	2008	2008	2009#	2008	2009#
Roundup Ready # of Locations →	6		6		6	6	6	6	6	6	3	1	2	2	1	1
Beta 85RR02	41.67	107	1061	104	317.0	8079	17.00	25.5	1.15	55	4.64	4.2	2.8	2.7	6.4	4.5
Beta 86RR44	40.80	105	1063	105	313.4	8157	16.83	26.0	1.17	43	4.99	4.4	5.6	4.8	5.1	4.3
Beta 86RR66	40.36	103	1068	105	311.6	8249	16.76	26.5	1.18	43	5.15	5.0	5.8	4.4	4.5	4.1
Beta 87RR38	39.69	102	1151	113	308.8	8973	16.61	29.1	1.17	70	4.33	5.1	4.8	3.8	4.5	3.8
Beta 87RR58	40.13	103	1167	115	310.6	9034	16.70	29.1	1.18	68	4.60	5.2	5.3	4.5	5.4	4.5
Beta 87RR68	44.90	115	1294	127	330.5	9522	17.58	28.8	1.06	69	4.32	7.5	4.0	4.0	7.1	4.6
Beta 88RR03	37.62	96	1037	102	300.1	8300	16.10	27.8	1.09	66	3.89	4.6	2.9	2.4	2.8	3.5
Beta 88RR13	38.15	98	1061	104	302.4	8426	16.20	27.9	1.07	69	4.08	4.9	2.6	2.6	2.1	3.4
Beta 88RR21	39.79	102	1104	109	309.2	8585	16.45	27.8	0.99	64	4.19	4.5	2.4	2.8	--	3.8
Beta 88RR31	40.66	104	1156	114	312.8	8909	16.86	28.5	1.22	64	4.70	4.3	3.9	2.9	--	4.1
Beta 88RR41	39.87	102	1189	117	309.5	9220	16.57	29.7	1.09	69	4.56	5.6	3.3	3.1	--	4.3
Beta 88RR61	41.31	106	1155	114	315.5	8823	16.90	28.0	1.12	66	4.18	4.6	3.8	3.7	--	4.5
Beta 88RR71	41.40	106	1134	112	315.9	8634	16.93	27.3	1.14	73	4.45	4.4	--	5.2	--	4.4
Crystal 539RR	41.69	107	1073	106	317.1	8157	16.99	25.7	1.13	69	4.90	4.6	2.3	1.8	7.1	4.4
Crystal 658RR	38.81	99	1073	106	305.1	8445	16.24	27.7	0.98	63	4.24	4.8	2.4	2.4	2.9	3.7
Crystal 765RR	44.19	113	1247	123	327.6	9240	17.42	28.2	1.05	74	3.97	7.3	4.1	3.9	7.1	4.7
Crystal 768RR	39.73	102	1168	115	309.0	9084	16.63	29.4	1.18	75	4.45	5.4	5.2	4.4	5.7	4.1
Crystal 871RR	39.70	102	1154	114	308.8	8981	16.64	29.1	1.19	69	4.48	4.7	--	2.3	--	4.9
Crystal 873RR	37.24	95	1217	120	298.5	9751	15.99	32.7	1.06	69	4.58	5.5	--	3.0	--	3.6
Crystal 875RR	41.25	106	1162	114	315.3	8885	16.89	28.2	1.13	68	4.27	3.8	--	4.1	--	4.2
Crystal 878RR	41.89	107	1201	118	318.0	9116	17.03	28.7	1.14	63	4.44	5.1	--	4.2	--	4.4
Crystal 879RR	39.41	101	1189	117	307.6	9280	16.47	30.2	1.09	67	4.52	5.6	--	3.3	--	4.1
Hilleshög 4000RR	39.59	101	991	98	308.4	7761	16.58	25.3	1.17	58	4.55	5.2	7.6	6.3	5.0	4.9
Hilleshög 4010RR	42.80	110	1094	108	321.8	8238	17.16	25.7	1.07	62	4.81	4.9	6.9	6.0	4.4	5.0
Hilleshög 4012RR	40.52	104	1148	113	312.2	8848	16.69	28.4	1.08	69	4.98	4.3	6.4	5.3	5.3	4.8
Hilleshög 4022RR	39.67	102	1036	102	308.7	8083	16.60	26.3	1.16	70	3.80	4.8	5.3	4.4	1.6	3.1
Hilleshög 4043RR(9043)	42.03	108	1174	116	318.6	8893	16.91	27.9	0.98	66	4.49	4.6	7.3	6.0	5.3	4.5
Hilleshög 4085RR(9085)	40.22	103	1089	107	311.0	8431	16.65	27.1	1.11	69	3.84	4.3	--	4.5	--	3.3
Hilleshög 4094RR(9094)	39.11	100	1051	104	306.4	8251	16.46	27.0	1.14	69	3.78	4.8	--	4.3	2.0	3.2
Hilleshög 4097RR(9097)	40.17	103	1017	100	310.8	7873	16.65	25.4	1.11	62	3.45	5.4	--	5.9	1.4	4.0
Hilleshög 4114RR(9114)	44.65	114	1103	109	329.5	8144	17.46	24.7	0.98	53	3.14	5.4	--	6.4	--	4.2
Seedex SX0881RR (Unicorn)	41.36	106	1116	110	315.8	8528	16.85	27.0	1.06	64	4.69	5.6	6.7	5.8	--	4.8
Seedex SX0883RR (Usher)	38.16	98	1119	110	302.4	8878	16.19	29.4	1.07	71	5.83	5.2	--	4.1	--	4.1
Seedex SX0884RR (Uplander)	41.50	106	1072	106	316.3	8170	16.77	25.8	0.96	72	4.80	4.5	--	4.9	--	4.7
SESVanderhave H36711RR	39.72	102	1051	103	308.9	8190	16.55	26.6	1.10	66	4.36	5.0	7.5	4.4	4.0	4.5
SESVanderhave H36811RR	41.11	105	1049	103	314.7	8031	16.67	25.5	0.94	78	4.32	5.1	--	3.3	3.2	4.3
SESVanderhave H36812RR	39.41	101	1090	107	307.6	8506	16.38	27.6	1.00	69	4.82	4.9	--	4.1	4.4	4.6
SESVanderhave H36813RR	37.82	97	1120	110	301.0	8922	16.10	29.7	1.05	69	5.75	5.5	--	4.4	3.5	4.6
Conventional																
Beta 1100R	39.28	101	1153	114	307.1	9012	16.35	29.4	0.99	72	4.25	5.9	4.9	--	3.3	--
Beta 1115R	43.10	110	1171	115	323.0	8759	17.10	27.1	0.96	74	4.48	4.3	5.7	--	4.4	--
Beta 1125R	38.15	98	1184	117	302.4	9386	16.33	31.1	1.21	78	4.22	4.3	2.7	--	4.8	--
Beta 1135R	39.21	101	1046	103	306.8	8186	16.48	26.7	1.14	70	4.03	4.9	3.5	--	2.4	--
Beta 1140R	42.63	109	1136	112	321.1	8546	17.06	26.6	1.00	75	4.06	4.8	5.9	--	5.4	--
Beta 1301R	35.53	91	1013	100	291.4	8304	15.83	28.5	1.26	72	3.95	3.8	6.0	--	2.1	--
Beta 1305R	38.02	97	1005	99	301.8	7969	16.30	26.4	1.21	55	5.23	4.7	5.8	--	3.8	--
Beta 1833R	39.41	101	977	96	307.6	7617	16.55	24.7	1.17	64	3.53	4.7	--	--	1.3	--
Crystal R308 (3N)	41.68	107	1043	103	317.1	7940	16.97	25.1	1.11	65	3.98	4.2	2.9	--	--	--
Crystal R431	39.71	102	1044	103	308.9	8112	16.63	26.3	1.18	72	4.31	4.2	3.3	--	--	--
Crystal R434	38.41	98	1050	103	303.4	8305	16.41	27.4	1.24	73	4.74	4.3	2.8	--	4.6	--
Crystal R760	39.57	101	1170	115	308.3	9102	16.49	29.5	1.08	74	5.07	4.5	--	--	6.0	--
Crystal R761	38.22	98	1119	110	302.6	8856	16.39	29.3	1.25	72	4.03	4.0	2.3	--	4.7	--
Crystal R869	42.58	109	1144	113	320.8	8612	16.99	26.8	0.95	78	4.44	4.7	--	--	--	--
Hilleshög 3035Rz	40.85	105	1083	107	313.6	8309	16.75	26.5	1.07	67	3.56	4.5	4.6	--	1.6	--
Hilleshög 3052Rz	39.49	101	1104	109	307.9	8615	16.46	28.0	1.07	71	4.18	4.9	5.0	--	4.2	--
Holly 317	38.39	98	935	92	303.4	7386	16.21	24.4	1.04	73	4.14	5.3	4.2	--	4.0	--
Holly 701	38.86	100	1037	102	305.3	8162	16.28	26.8	1.02	74	4.32	4.9	4.4	--	5.2	--
Seedex SX0873TT (Deuce)	38.79	99	1125	111	305.0	8842	16.24	29.0	0.99	73	5.16	5.4	--	5.2	--	4.6
Seedex Sonic	39.74	102	1087	107	309.0	8473	16.48	27.5	1.03	72	4.95	6.1	5.0	4.8	4.8	4.8
Seedex Triton	39.18	100	988	97	306.7	7725	16.31	25.2	0.98	70	3.51	5.0	5.3	--	3.0	--
Seedex Vault	38.72	99	1028	101	304.7	8107	16.23	26.7	0.99	79	4.65	4.8	4.5	--	4.2	--
SESVanderhave H46519	38.81	99	1076	106	305.1	8464	16.27	27.8	1.01	70	4.21	4.7	4.7	4.7	3.7	4.3
SESVanderhave H46531	38.97	100	1061	104	305.8	8333	16.34	27.3	1.05	70	4.59	5.0	4.5	4.6	3.3	4.4
SESVanderhave H46711	41.10	105	1099	108	314.7	8426	16.70	26.8	0.97	77	3.82	4.4	4.2	--	5.3	--
SESVanderhave H46714	37.47	96	1022	101	299.5	8188	15.97	27.4	0.99	77	4.48	4.3	4.8	--	2.8	--
SESVanderhave H46801	41.27	106	1031	102	315.4	7871	16.73	24.9	0.96	77	3.44	4.4	--	--	--	--
SESVanderhave H48607TT	36.81	94	1131	111	296.8	9120	15.89	30.8	1.05	76	5.42	5.4	6.0	5.4	3.8	4.1
SESVanderhave H48716TT	39.48	101	1048	103	307.9	8168	16.40	26.5	1.01	78	4.97	4.9	5.4	5.5	3.4	4.6
SESVanderhave H48717TT	39.62	102	1071	105	308.5	8336	16.46	27.0	1.03	78	4.58	4.8	4.6	5.1	4.4	4.3
SESVanderhave H48810TT	39.38	101	1110	109	307.5	8662	16.40	28.2	1.02	78	4.91	5.2	--	--	--	--
Mean of benchmark varieties	39.01		1016		306.0	7973	16.40	26.1	1.10	64						

08% is 2008-year mean as a % of several benchmark varieties. Emergence is % of planted seeds producing a 4 leaf beet.

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

+ Aph Ratings from Shakopee & RRV (1=healthy, 9=dead). CR ratings from Rosemount & Michigan (1=healthy, 9=dead). Fusarium ratings from 2 MN sites (mod resist = 4, mod susc = 5).

++ Rhizoctonia ratings from Ft Collins and Moorhead (res=3, susc=5+).

Conventional varieties were granted a special exemption from variety testing for 2009. Varieties in 2009 trials were submitted voluntarily by seed companies.

@ All varieties are diploid unless noted. Created 11-18-2009.

Table 10.

2009 Performance of Varieties - ACSC Commercial RR Official Trial

ACS Six Sites - All Characters

Description @	Code	Rec/T lbs.	Rec/T %Mean	Rec/A lbs.	Rec/A %Mean	Loss Mol %	Rev/T $ ++	Rev/T %Mean	Rev/A $ ++	Rev/A %Mean	Sugar %	Yield T/A	Na ppm	K ppm	AmN ppm	Bolter %	Emerg. %
Beta 85RR02	106	293.2	100	6994	95	1.15	35.96	100	858	95	15.81	23.83	270	1870	298	0.00	69.8
Beta 86RR44	115	285.5	97	7297	99	1.18	34.11	95	871	96	15.46	25.61	258	1822	333	0.00	56.7
Beta 86RR66	112	291.6	99	7494	102	1.19	35.57	99	914	101	15.77	25.72	200	1874	350	0.00	57.7
Beta 87RR38	108	294.8	100	7574	103	1.14	36.34	101	930	103	15.88	25.78	189	1825	331	0.00	65.6
Beta 87RR58	101	294.1	100	7539	102	1.17	36.17	100	929	103	15.88	25.61	186	1851	348	0.00	71.8
Beta 87RR68	113	300.2	102	7945	108	1.08	37.65	105	997	110	16.09	26.43	210	1772	288	0.00	64.8
Crystal 539RR	109	290.3	99	7036	95	1.16	35.26	98	855	94	15.67	24.22	291	1869	292	0.00	70.9
Crystal 658RR	104	280.9	96	7088	96	1.05	32.99	92	831	92	15.09	25.28	207	1752	272	0.00	71.7
Crystal 765RR	107	306.1	104	8025	109	1.07	39.05	108	1022	113	16.38	26.29	222	1721	295	0.00	73.9
Crystal 768RR	103	300.9	103	7816	106	1.12	37.81	105	982	108	16.17	25.97	187	1824	316	0.00	76.6
Hilleshög 4000RR(9035RR)	111	293.7	100	6844	93	1.11	36.07	100	840	93	15.80	23.32	200	1769	320	0.00	65.1
Hilleshög 4010RR	105	297.2	101	7003	95	1.06	36.90	102	869	96	15.92	23.57	228	1708	288	0.00	75.2
Hilleshög 4012RR	114	290.6	99	7324	99	1.08	35.33	98	892	99	15.61	25.14	272	1735	277	0.00	72.5
Hilleshög 4022RR	102	286.1	98	6998	95	1.18	34.25	95	839	93	15.48	24.41	239	1885	325	0.00	64.0
SESVanderhave H36711RR	110	296.0	101	7703	104	1.02	36.63	102	954	105	15.82	25.99	197	1675	276	0.00	79.3
Trial Mean		293.4		7379		1.12	36.01		906		15.79	25.14	224	1797	307	0.0	69.0
Coeff. of Var. (%)		3.4		6.3		6.9	6.7		8.5		2.9	5.5	20.5	5.3	11.9		10.5
Mean LSD (0.05)		6.4		357		0.04	1.54		55		0.30	1.13	27	54	18		5.5
Mean LSD (0.01)		8.5		474		0.05	2.04		73		0.40	1.50	36	72	23		7.3
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2009 Data from ACS Six Sites

Analyzed 11/09/2009 14:59

Created 11-11-2009.

Vigor not collected.

Trial # = 09ARRcom

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

++ Revenue estimates are based on a $42.40 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 11.

2009 Performance of Varieties - ACSC Commercial RR Official Trial

ACS Three Light Rzm Sites - All Characters

Description @	Code	Rec/T lbs.	Rec/T %Mean	Rec/A lbs.	Rec/A %Mean	Loss Mol %	Rev/T $ ++	Rev/T %Mean	Rev/A $ ++	Rev/A %Mean	Sugar %	Yield T/A	Na ppm	K ppm	AmN ppm	Bolter %	Emerg. %
Beta 85RR02	106	285.6	99	6178	94	1.17	34.12	97	739	93	15.44	21.59	289	1905	293	0.00	68.0
Beta 86RR44	115	284.2	98	6599	100	1.15	33.78	96	787	99	15.36	23.16	253	1835	309	0.00	51.8
Beta 86RR66	112	288.2	99	6674	102	1.15	34.76	99	809	101	15.57	23.05	199	1874	324	0.00	53.0
Beta 87RR38	108	289.4	100	6727	102	1.12	35.04	100	811	102	15.58	23.33	190	1844	307	0.00	60.8
Beta 87RR58	101	287.6	99	6521	99	1.19	34.59	99	785	98	15.57	22.69	196	1926	340	0.00	70.2
Beta 87RR68	113	294.5	102	7203	110	1.07	36.27	103	889	111	15.79	24.40	222	1769	275	0.00	61.8
Crystal 539RR	109	284.6	98	6094	93	1.14	33.88	97	726	91	15.37	21.39	294	1916	271	0.00	68.2
Crystal 658RR	104	280.0	97	6188	94	1.03	32.77	93	726	91	15.03	22.04	201	1777	255	0.00	70.4
Crystal 765RR	107	304.6	105	7268	111	1.07	38.70	110	923	116	16.30	23.87	231	1757	282	0.00	69.0
Crystal 768RR	103	296.0	102	6990	106	1.10	36.62	104	866	109	15.90	23.58	191	1843	293	0.00	75.4
Hilleshög 4000RR(9035RR)	111	292.3	101	6023	92	1.09	35.75	102	736	92	15.71	20.64	201	1780	299	0.00	62.1
Hilleshög 4010RR	105	291.9	101	6261	95	1.05	35.63	102	766	96	15.64	21.39	238	1715	271	0.00	74.0
Hilleshög 4012RR	114	287.9	99	6661	101	1.05	34.68	99	808	101	15.45	22.95	272	1724	260	0.00	71.3
Hilleshög 4022RR	102	284.9	98	6320	96	1.18	33.95	97	757	95	15.42	22.08	230	1922	317	0.00	62.1
SESVanderhave H36711RR	110	293.3	101	6860	104	1.01	35.98	103	845	106	15.68	23.29	198	1686	263	0.00	76.4
Trial Mean		289.7		6571		1.10	35.10		798		15.59	22.63	227	1818	291	0.0	66.3
Coeff. of Var. (%)		3.2		7.6		7.0	6.4		9.4		2.7	6.9	21.1	5.4	12.4		12.0
Mean LSD (0.05)		9.3		683		0.05	2.25		97		0.45	2.12	41	83	25		8.5
Mean LSD (0.01)		12.6		922		0.07	3.03		131		0.61	2.86	56	111	33		11.5
Sig Lvl		**		*		**	**		**		**	*	**	**	**		**

* 2009 Data from ACS Three Light Rzm Sites Analyzed 11/09/2009 14:49 Created 11-11-2009.

Vigor not collected. Trial # = 09AcmLgt

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

++ Revenue estimates are based on a $42.40 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 12.

2009 Performance of Varieties - ACSC Commercial RR Official Trial

ACS Three Mod Rzm Sites - All Characters

Description @	Code	Rec/T lbs.	Rec/T %Mean	Rec/A lbs.	Rec/A %Mean	Loss Mol %	Rev/T $ ++	Rev/T %Mean	Rev/A $ ++	Rev/A %Mean	Sugar %	Yield T/A	Na ppm	K ppm	AmN ppm	Bolter %	Emerg. %
Beta 85RR02	106	300.7	101	7810	95	1.14	37.77	102	977	96	16.18	26.05	252	1839	304	0.00	71.6
Beta 86RR44	115	286.8	97	7994	98	1.21	34.41	93	955	94	15.54	28.04	262	1811	357	0.00	61.5
Beta 86RR66	112	295.0	99	8318	102	1.22	36.39	99	1020	101	15.97	28.41	200	1871	375	0.00	62.1
Beta 87RR38	108	300.2	101	8426	103	1.17	37.65	102	1049	104	16.18	28.23	188	1803	355	0.00	70.5
Beta 87RR58	101	301.0	101	8548	104	1.15	37.83	102	1071	106	16.20	28.52	176	1774	357	0.00	73.8
Beta 87RR68	113	305.9	103	8688	106	1.09	39.00	106	1106	109	16.38	28.44	198	1774	300	0.00	67.8
Crystal 539RR	109	296.1	100	7970	97	1.17	36.65	99	982	97	15.97	27.02	289	1822	313	0.00	73.8
Crystal 658RR	104	281.8	95	7985	98	1.06	33.21	90	935	92	15.15	28.52	212	1724	288	0.00	72.8
Crystal 765RR	107	307.5	103	8797	107	1.08	39.40	107	1123	111	16.45	28.75	213	1686	308	0.00	79.0
Crystal 768RR	103	305.9	103	8643	106	1.14	39.00	106	1099	108	16.43	28.38	183	1809	337	0.00	77.6
Hilleshög 4000RR(9035RR)	111	295.0	99	7661	94	1.14	36.38	99	943	93	15.89	25.98	200	1758	341	0.00	68.5
Hilleshög 4010RR	105	302.4	102	7747	95	1.08	38.16	103	973	96	16.20	25.74	217	1700	304	0.00	76.7
Hilleshög 4012RR	114	293.2	99	7989	98	1.11	35.96	97	977	96	15.77	27.34	272	1748	293	0.00	73.3
Hilleshög 4022RR	102	287.2	97	7672	94	1.18	34.51	93	920	91	15.54	26.74	247	1846	334	0.00	66.0
SESVanderhave H36711RR	110	298.9	101	8544	104	1.03	37.33	101	1063	105	15.98	28.68	196	1666	288	0.00	82.0
Trial Mean		297.2		8186		1.13	36.91		1013		15.99	27.66	220	1775	324	0.0	71.8
Coeff. of Var. (%)		3.6		5.2		6.6	7.0		7.8		3.1	4.2	19.8	5.2	11.2		9.1
Mean LSD (0.05)		9.3		361		0.06	2.22		64		0.42	1.18	41	68	27		8.1
Mean LSD (0.01)		12.5		488		0.08	3.00		86		0.57	1.59	55	91	37		10.9
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2009 Data from ACS Three Mod Rzm Sites Analyzed 11/09/2009 14:51 Created 11-11-2009.

Vigor not collected. Trial # = 09CmMod

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

++ Revenue estimates are based on a $42.40 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 13.

2009 Performance of Varieties - ACSC Commercial RR Official Trial

Casselton ND - All Characters - Moderate Rzm

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 85RR02	106	289.2	101	8850	93	1.12	35.00	102	1070	94	15.59	30.47	174	1906	300	0.00	68.6
Beta 86RR44	115	277.1	97	9592	100	1.18	32.08	94	1114	98	15.04	34.60	181	1869	355	0.00	70.1
Beta 86RR66	112	278.1	97	9667	101	1.22	32.31	94	1123	98	15.12	34.93	163	1901	383	0.00	63.1
Beta 87RR38	108	282.3	99	9640	101	1.20	33.34	97	1135	99	15.31	34.11	161	1881	372	0.00	75.6
Beta 87RR58	101	291.1	102	10024	105	1.17	35.45	104	1220	107	15.73	34.46	133	1854	371	0.00	73.3
Beta 87RR68	113	299.4	105	9909	104	1.03	37.44	109	1240	109	16.00	33.14	145	1752	277	0.00	69.6
Crystal 539RR	109	286.0	100	9398	98	1.14	34.21	100	1124	98	15.44	32.80	188	1851	320	0.00	68.0
Crystal 658RR	104	266.4	93	9289	97	1.07	29.51	86	1028	90	14.39	34.77	156	1793	294	0.00	67.7
Crystal 765RR	107	294.3	103	10124	106	1.08	36.21	106	1247	109	15.80	34.39	155	1725	321	0.00	78.5
Crystal 768RR	103	295.1	103	10370	109	1.10	36.41	106	1279	112	15.85	35.29	133	1843	317	0.00	76.2
Hilleshög 4000RR(9035RR)	111	293.6	103	9004	94	1.10	36.04	105	1102	96	15.78	30.60	132	1749	345	0.00	64.9
Hilleshög 4010RR	105	284.1	99	8822	92	1.08	33.77	99	1050	92	15.29	30.97	169	1764	309	0.00	72.6
Hilleshög 4012RR	114	281.9	99	9335	98	1.05	33.24	97	1102	96	15.14	33.13	207	1766	268	0.00	73.9
Hilleshög 4022RR	102	283.0	99	9074	95	1.12	33.50	98	1071	94	15.27	32.17	163	1898	307	0.00	69.0
SESVanderhave H36711RR	110	289.9	101	10135	106	1.01	35.15	103	1230	108	15.50	35.10	141	1728	272	0.00	77.0
Trial Mean		286.1		9549		1.11	34.24		1142		15.42	33.40	160	1819	321	0.0	71.2
Coeff. of Var. (%)		3.6		5.7		7.2	7.3		8.5		3.0	4.4	17.4	6.6	11.4		8.0
Mean LSD (0.05)		12.7		657		0.10	3.05		118		0.57	1.75	34	144	43		6.9
Mean LSD (0.01)		16.8		874		0.13	4.05		157		0.75	2.32	45	191	58		9.1
Sig Lvl		**		**		**	**		**		**	**	**	ns	**		**

* 2009 Data from Casselton ND Analyzed 10/26/2009 15:49 Created 11-11-2009.

Vigor not collected. Trial # = 098601

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

++ Revenue estimates are based on a $42.40 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 14.

2009 Performance of Varieties - ACSC Commercial RR Official Trial

Averill MN - All Characters - Severe Rzm

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 85RR02	106	312.9	102	7553	97	1.11	40.68	104	981	99	16.75	24.14	356	1689	282	0.00	68.7
Beta 86RR44	115	288.4	94	7500	96	1.23	34.81	89	905	91	15.65	26.04	393	1736	344	0.00	54.7
Beta 86RR66	112	299.1	98	7711	99	1.22	37.38	96	965	97	16.17	25.79	275	1831	361	0.00	54.6
Beta 87RR38	108	311.6	102	8045	103	1.12	40.38	104	1040	105	16.70	25.89	253	1713	313	0.00	60.7
Beta 87RR58	101	305.2	100	8093	104	1.14	38.84	100	1030	104	16.39	26.53	255	1705	335	0.00	65.4
Beta 87RR68	113	311.4	102	8491	109	1.08	40.34	104	1098	111	16.65	27.31	268	1727	282	0.00	66.2
Crystal 539RR	109	305.7	100	7675	99	1.18	38.95	100	978	99	16.47	25.13	408	1770	298	0.00	70.4
Crystal 658RR	104	290.7	95	7303	94	1.06	35.36	91	888	90	15.60	25.15	298	1651	272	0.00	66.7
Crystal 765RR	107	318.6	104	8372	108	1.03	42.06	108	1107	112	16.96	26.26	279	1595	272	0.00	75.6
Crystal 768RR	103	310.7	102	7877	101	1.13	40.16	103	1019	103	16.67	25.29	259	1718	329	0.00	68.5
Hilleshög 4000RR(9035RR)	111	298.8	98	7219	93	1.16	37.29	96	901	91	16.09	24.18	273	1777	324	0.00	66.4
Hilleshög 4010RR	105	317.5	104	7593	98	1.03	41.80	107	999	101	16.91	23.94	277	1601	272	0.00	70.9
Hilleshög 4012RR	114	308.4	101	7845	101	1.08	39.61	102	1007	102	16.50	25.41	334	1657	271	0.00	72.4
Hilleshög 4022RR	102	296.3	97	7470	96	1.19	36.69	94	923	93	16.00	25.23	338	1801	318	0.00	63.1
SESVanderhave H36711RR	110	310.4	102	8030	103	1.00	40.10	103	1034	104	16.53	25.94	245	1592	267	0.00	73.8
Trial Mean		305.7		7785		1.12	38.96		992		16.40	25.48	301	1704	303	0.0	66.5
Coeff. of Var. (%)		3.2		4.0		6.7	6.0		6.2		2.7	3.2	17.6	4.6	13.6		11.8
Mean LSD (0.05)		12.0		384		0.09	2.88		76		0.55	1.01	65	97	50		9.1
Mean LSD (0.01)		15.9		510		0.12	3.83		101		0.74	1.34	87	129	66		12.0
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2009 Data from Averill MN Analyzed 10/26/2009 15:48 Created 11-12-2009.

Vigor not collected. Trial # = 098602

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

++ Revenue estimates are based on a $42.40 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 15.

2009 Performance of Varieties - ACSC Commercial RR Official Trial

Grand Forks ND - All Characters - Light Rzm

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 85RR02	106	305.9	97	6762	87	1.13	39.02	95	869	86	16.43	21.88	301	1976	239	0.00	65.7
Beta 86RR44	115	310.0	98	8047	104	1.10	40.00	97	1038	102	16.60	25.99	265	1875	257	0.00	54.3
Beta 86RR66	112	313.3	99	7975	103	1.09	40.78	99	1039	103	16.75	25.42	188	1900	269	0.00	59.5
Beta 87RR38	108	313.0	99	7800	101	1.04	40.71	99	1015	100	16.69	24.86	170	1902	239	0.00	60.0
Beta 87RR58	101	308.1	98	7687	99	1.13	39.55	96	984	97	16.53	25.06	190	1976	287	0.00	65.5
Beta 87RR68	113	322.4	102	8253	107	1.03	42.97	104	1102	109	17.14	25.58	203	1851	230	0.00	62.6
Crystal 539RR	109	306.5	97	7013	91	1.15	39.15	95	894	88	16.47	22.92	307	2063	236	0.00	60.6
Crystal 658RR	104	308.0	98	7416	96	0.94	39.52	96	953	94	16.35	24.07	192	1757	187	0.00	66.1
Crystal 765RR	107	328.6	104	8536	110	1.02	44.48	108	1153	114	17.45	26.04	220	1847	226	0.00	68.0
Crystal 768RR	103	313.3	99	8034	104	1.10	40.78	99	1043	103	16.75	25.72	206	1976	255	0.00	63.5
Hilleshög 4000RR(9035RR)	111	319.6	101	6590	85	1.04	42.32	103	875	86	17.03	20.56	184	1882	242	0.00	62.1
Hilleshög 4010RR	105	316.5	101	7589	98	1.04	41.56	101	997	98	16.87	23.94	245	1845	227	0.00	71.1
Hilleshög 4012RR	114	320.1	102	8459	109	0.98	42.42	103	1120	111	16.99	26.42	235	1789	198	0.00	68.8
Hilleshög 4022RR	102	311.5	99	7582	98	1.16	40.36	98	984	97	16.74	24.33	237	2012	280	0.00	57.8
SESVanderhave H36711RR	110	326.5	104	8413	109	0.97	43.98	107	1131	112	17.30	25.81	175	1762	222	0.00	66.3
Trial Mean		314.9		7744		1.06	41.17		1013		16.81	24.57	221	1894	240	0.0	63.5
Coeff. of Var. (%)		3.1		7.5		6.8	5.6		8.8		2.6	6.9	23.0	5.9	13.4		10.2
Mean LSD (0.05)		11.4		719		0.09	2.75		110		0.52	2.09	61	131	39		7.8
Mean LSD (0.01)		15.2		956		0.11	3.65		147		0.69	2.79	81	174	52		10.3
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2009 Data from Grand Forks ND Analyzed 10/26/2009 15:47 Created 11-12-2009.

Vigor not collected. Trial # = 098607

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

++ Revenue estimates are based on a $42.40 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 16.

2009 Performance of Varieties - ACSC Commercial RR Official Trial

Argyle MN - All Characters - Moderate Rzm

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 85RR02	106	301.1	100	7021	97	1.18	37.86	101	883	98	16.24	23.33	222	1913	329	0.00	77.6
Beta 86RR44	115	295.4	99	6951	96	1.20	36.48	97	855	95	15.97	23.68	210	1832	370	0.00	59.8
Beta 86RR66	112	307.3	103	7553	105	1.21	39.34	105	965	107	16.57	24.61	160	1881	378	0.00	69.9
Beta 87RR38	108	306.5	102	7623	106	1.19	39.15	104	976	108	16.52	24.87	151	1823	384	0.00	75.6
Beta 87RR58	101	305.9	102	7514	104	1.15	39.02	104	958	106	16.45	24.56	149	1766	368	0.00	82.7
Beta 87RR68	113	307.1	102	7669	106	1.14	39.29	105	982	108	16.50	24.99	180	1825	337	0.00	67.1
Crystal 539RR	109	294.5	98	6835	95	1.19	36.26	97	842	93	15.91	23.09	277	1845	323	0.00	82.1
Crystal 658RR	104	288.8	96	7353	102	1.07	34.88	93	888	98	15.50	25.50	182	1723	303	0.00	84.3
Crystal 765RR	107	308.2	103	7855	109	1.12	39.56	105	1008	111	16.53	25.45	207	1745	328	0.00	82.8
Crystal 768RR	103	313.6	105	7721	107	1.17	40.86	109	1006	111	16.85	24.67	149	1858	365	0.00	88.4
Hilleshög 4000RR(9035RR)	111	294.3	98	6717	93	1.14	36.20	96	825	91	15.86	22.87	189	1756	353	0.00	73.2
Hilleshög 4010RR	105	304.0	101	6826	94	1.12	38.56	103	870	96	16.33	22.30	209	1735	332	0.00	86.1
Hilleshög 4012RR	114	288.9	96	6762	94	1.20	34.92	93	817	90	15.65	23.35	284	1825	342	0.00	74.1
Hilleshög 4022RR	102	283.6	95	6454	89	1.24	33.65	90	765	85	15.42	22.79	243	1839	382	0.00	66.0
SESVanderhave H36711RR	110	297.0	99	7514	104	1.08	36.87	98	932	103	15.93	25.29	198	1687	319	0.00	95.0
Trial Mean		299.7		7225		1.16	37.53		905		16.15	24.09	201	1804	347	0.0	77.6
Coeff. of Var. (%)		3.9		5.6		6.0	7.5		8.2		3.4	4.5	23.3	4.1	8.9		7.0
Mean LSD (0.05)		13.7		486		0.08	3.30		89		0.64	1.29	56	87	36		6.4
Mean LSD (0.01)		18.2		646		0.11	4.38		119		0.84	1.71	75	116	48		8.5
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2009 Data from Argyle MN Analyzed 10/26/2009 15:40 Created 11-11-2009.

Vigor not collected. Trial # = 098608

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

++ Revenue estimates are based on a $42.40 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 17.

2009 Performance of Varieties - ACSC Commercial RR Official Trial

St Thomas ND - All Characters - Light Rzm

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 85RR02	106	264.1	98	6215	98	1.07	28.95	96	683	96	14.27	23.47	322	1532	301	0.00	66.5
Beta 86RR44	115	264.7	98	6771	107	1.07	29.09	97	746	105	14.30	25.57	253	1507	342	0.00	43.6
Beta 86RR66	112	275.4	102	7082	112	1.10	31.68	105	816	115	14.88	25.70	199	1586	361	0.00	43.5
Beta 87RR38	108	262.2	98	6680	106	1.09	28.49	95	726	102	14.19	25.44	223	1573	335	0.00	54.7
Beta 87RR58	101	271.3	101	6167	98	1.10	30.67	102	696	98	14.67	22.78	178	1662	347	0.00	67.0
Beta 87RR68	113	272.7	101	7193	114	0.98	31.03	103	818	115	14.62	26.40	243	1482	281	0.00	57.4
Crystal 539RR	109	261.9	97	5540	88	1.05	28.42	94	600	85	14.14	21.18	328	1576	270	0.00	67.7
Crystal 658RR	104	257.0	96	5518	87	0.98	27.24	91	583	82	13.83	21.52	213	1536	275	0.00	70.9
Crystal 765RR	107	285.3	106	7025	111	0.97	34.06	113	839	118	15.24	24.61	237	1452	276	0.00	69.9
Crystal 768RR	103	281.5	105	6773	107	0.96	33.13	110	797	112	15.04	24.11	202	1464	293	0.00	78.4
Hilleshög 4000RR(9035RR)	111	274.9	102	6173	98	0.99	31.54	105	710	100	14.73	22.48	203	1450	310	0.00	53.6
Hilleshög 4010RR	105	263.6	98	5764	91	0.96	28.83	96	631	89	14.14	21.83	267	1408	269	0.00	76.5
Hilleshög 4012RR	114	259.1	96	5782	91	1.04	27.74	92	620	87	13.99	22.28	324	1470	294	0.00	70.2
Hilleshög 4022RR	102	267.4	99	5881	93	1.09	29.74	99	654	92	14.45	21.94	211	1611	335	0.00	66.1
SESVanderhave H36711RR	110	270.6	101	6317	100	0.94	30.52	101	711	100	14.47	23.39	228	1437	265	0.00	80.6
Trial Mean		268.8		6325		1.03	30.08		709		14.46	23.51	242	1517	303	0.0	64.4
Coeff. of Var. (%)		3.3		6.3		6.7	7.1		8.7		2.9	5.6	17.8	5.8	12.8		12.2
Mean LSD (0.05)		10.6		482		0.08	2.55		74		0.50	1.60	53	105	45		9.1
Mean LSD (0.01)		14.1		641		0.11	3.39		99		0.67	2.13	71	139	59		12.0
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2009 Data from St Thomas ND Analyzed 10/26/2009 15:43 Created 11-11-2009.

Vigor not collected. Trial # = 098609

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

++ Revenue estimates are based on a $42.40 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 18.

2009 Performance of Varieties - ACSC Commercial RR Official Trial

Humboldt MN - All Characters - Light Rzm

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 85RR02	106	286.0	100	5560	99	1.31	34.23	101	665	99	15.61	19.45	243	2197	348	0.00	70.9
Beta 86RR44	115	277.9	97	5010	89	1.28	32.27	95	580	86	15.17	18.08	243	2124	340	0.00	56.4
Beta 86RR66	112	276.8	97	4996	89	1.26	32.01	94	578	86	15.11	18.06	210	2125	338	0.00	56.2
Beta 87RR38	108	291.3	102	5678	101	1.25	35.50	104	685	102	15.82	19.67	181	2065	350	0.00	68.6
Beta 87RR58	101	283.1	99	5714	101	1.34	33.51	98	675	100	15.52	20.28	216	2143	390	0.00	76.8
Beta 87RR68	113	290.1	102	6160	109	1.17	35.20	103	748	111	15.65	21.18	212	1970	309	0.00	66.2
Crystal 539RR	109	285.8	100	5676	101	1.22	34.17	100	678	101	15.51	19.88	241	2109	301	0.00	76.5
Crystal 658RR	104	274.5	96	5645	100	1.19	31.45	92	644	96	14.92	20.63	207	2033	303	0.00	74.8
Crystal 765RR	107	299.9	105	6268	111	1.23	37.57	110	779	116	16.23	21.07	232	1978	343	0.00	69.7
Crystal 768RR	103	294.6	103	6170	109	1.22	36.29	107	762	113	15.93	20.88	160	2093	331	0.00	84.3
Hilleshög 4000RR(9035RR)	111	282.5	99	5358	95	1.24	33.37	98	631	94	15.37	19.03	225	2010	345	0.00	69.7
Hilleshög 4010RR	105	295.4	104	5409	96	1.14	36.49	107	668	99	15.90	18.30	200	1891	307	0.00	74.8
Hilleshög 4012RR	114	283.8	99	5711	101	1.15	33.69	99	682	101	15.35	20.04	261	1911	292	0.00	75.1
Hilleshög 4022RR	102	274.7	96	5455	97	1.29	31.50	93	623	93	15.03	19.95	247	2138	340	0.00	62.5
SESVanderhave H36711RR	110	283.2	99	5853	104	1.12	33.56	99	694	103	15.28	20.63	192	1869	301	0.00	82.2
Trial Mean		285.3		5644		1.23	34.05		673		15.49	19.81	218	2044	329	0.0	71.0
Coeff. of Var. (%)		3.3		8.8		7.3	6.6		10.5		2.7	8.3	22.2	4.7	11.3		13.3
Mean LSD (0.05)		11.3		616		0.11	2.73		87		0.51	2.03	60	115	46		11.5
Mean LSD (0.01)		15.1		820		0.15	3.63		116		0.68	2.71	80	153	61		15.2
Sig Lvl		**		**		**	**		**		**	*	ns	**	**		**

* 2009 Data from Humboldt MN

Analyzed 10/26/2009 15:17

Created 11-11-2009.

Vigor not collected.

Trial # = 098610

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

++ Revenue estimates are based on a $42.40 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 19.

2009 Performance of Varieties - ACSC Experimental RR Official Trial

ACSC Six Sites - All Characters

Adjusted to Comm. Trial Status		Rec/T	Rec/T	Rec/A	Rec/A	Loss	Rev/T	Rev/T	Rev/A	Rev/A	Sugar	Yield	Na	K	AmN	Bolter	Emerg.
Description @	Code	lbs.	%Mean	lbs.	%Mean	Mol %	$ ++	%Mean	$ ++	%Mean	%	T/A	ppm	ppm	ppm	%^	%^
Beta 88RR03	212	284.9	97	6901	96	1.10	33.98	95	822	94	15.35	24.27	209	1883	280	0.00	68.0
Beta 88RR13	234	280.5	96	6833	95	1.13	32.96	92	801	92	15.15	24.40	235	1884	285	0.00	65.3
Beta 88RR21	206	283.8	97	7080	99	1.07	33.72	94	840	96	15.27	24.97	217	1763	288	0.00	74.5
Beta 88RR31	220	293.0	100	7339	102	1.23	35.88	100	894	102	15.88	25.15	251	1901	357	0.00	72.8
Beta 88RR41	246	290.1	99	7423	103	1.13	35.20	99	899	103	15.62	25.66	172	1813	325	0.00	77.5
Beta 88RR61	263	299.4	102	7635	106	1.09	37.38	105	952	109	16.07	25.55	200	1801	299	0.00	73.4
Beta 88RR71	204	299.1	102	7024	98	1.13	37.31	104	873	100	16.08	23.56	205	1776	328	0.00	78.8
Beta 89RR10	250	308.7	106	7140	100	1.12	39.57	111	911	104	16.55	23.23	186	1824	311	0.00	73.9
Beta 89RR20	227	294.9	101	7237	101	1.18	36.35	102	891	102	15.91	24.57	167	1886	346	0.00	69.9
Beta 89RR23	260	284.0	97	6886	96	1.28	33.78	95	817	93	15.46	24.28	229	2087	352	0.00	59.6
Beta 89RR30	218	284.5	97	7771	108	1.06	33.89	95	924	106	15.29	27.35	255	1827	250	0.00	77.7
Beta 89RR40	255	299.7	103	7669	107	1.10	37.46	105	958	109	16.09	25.64	211	1730	320	0.00	68.7
Beta 89RR43	229	285.8	98	6722	94	1.25	34.19	96	805	92	15.52	23.50	223	2029	344	0.00	62.9
Beta 89RR50	211	290.1	99	7819	109	1.28	35.19	99	944	108	15.77	27.08	285	2037	345	0.00	78.7
Beta 89RR60	239	304.6	104	7136	99	0.99	38.61	108	901	103	16.23	23.54	212	1654	251	0.00	71.3
Beta 89RR63	257	299.0	102	6149	86	1.07	37.31	104	767	88	16.03	20.54	187	1717	309	0.00	66.4
Beta 89RR70	233	294.0	101	6892	96	1.21	36.11	101	843	96	15.89	23.55	254	1873	345	0.00	62.7
Beta 89RR83	252	284.7	97	7454	104	1.06	33.93	95	886	101	15.30	26.24	248	1757	269	0.00	76.7
Crystal 871RR	207	286.5	98	7354	102	1.22	34.34	96	881	101	15.53	25.67	291	1964	319	0.00	74.7
Crystal 873RR	226	274.3	94	7934	111	1.08	31.49	88	906	103	14.79	29.03	275	1736	279	0.00	74.2
Crystal 875RR	219	292.6	100	7448	104	1.16	35.79	100	911	104	15.79	25.45	231	1925	304	0.00	76.2
Crystal 878RR	236	293.4	100	7721	108	1.19	35.97	101	948	108	15.86	26.26	179	1859	362	0.00	79.9
Crystal 879RR	245	286.7	98	7513	105	1.13	34.39	96	903	103	15.45	26.19	176	1839	321	0.00	74.3
Crystal 880RR	228	293.9	101	7135	99	1.13	36.09	101	875	100	15.82	24.31	189	1803	324	0.00	75.2
Crystal 981RR	267	286.6	98	8206	114	1.23	34.36	96	979	112	15.54	28.76	310	1944	324	0.00	78.8
Crystal 982RR	205	289.7	99	7203	100	1.13	35.10	98	872	100	15.61	24.87	290	1741	305	0.00	73.1
Crystal 983RR	216	274.9	94	6829	95	1.07	31.62	89	786	90	14.81	24.85	254	1743	277	0.00	65.5
Crystal 984RR	264	298.5	102	7511	105	1.10	37.18	104	935	107	16.03	25.18	249	1850	272	0.00	76.8
Crystal 985RR	222	297.4	102	7570	105	1.08	36.91	103	939	107	15.95	25.47	179	1795	294	0.00	76.7
Crystal 986RR	247	300.8	103	7188	100	1.01	37.72	106	905	103	16.06	23.78	206	1668	269	0.00	63.1
Hilleshög 4043RR(9043RR)	256	294.1	101	7273	101	1.00	36.12	101	893	102	15.71	24.72	154	1664	279	0.00	73.8
Hilleshög 4085RR(9085RR)	214	289.2	99	6876	96	1.15	34.99	98	830	95	15.60	23.78	231	1818	320	0.00	77.4
Hilleshög 9086RR	243	285.0	98	6740	94	1.09	34.01	95	802	92	15.35	23.72	255	1792	279	0.00	67.1
Hilleshög 4094RR(9094RR)	231	293.0	100	7092	99	1.17	35.87	100	869	99	15.82	24.15	215	1884	330	0.00	76.6
Hilleshög 4097RR(9097RR)	265	293.9	101	6521	91	1.13	36.09	101	804	92	15.82	22.08	226	1809	309	0.00	66.4
Hilleshög 4114RR(9114RR)	224	301.5	103	6663	93	1.01	37.86	106	837	96	16.09	22.10	158	1630	294	0.00	60.3
Hilleshög 9160RR	235	290.6	99	6641	93	1.10	35.32	99	808	92	15.63	22.85	191	1890	282	0.00	67.7
Hilleshög 9161RR	217	291.9	100	6650	93	1.13	35.64	100	810	92	15.72	22.84	260	1772	306	0.00	62.1
Hilleshög 9162RR	259	284.3	97	6787	95	1.06	33.85	95	808	92	15.28	23.87	287	1716	263	0.00	78.2
Hilleshög 9163RR	201	286.3	98	7154	100	1.07	34.31	96	855	98	15.39	25.06	228	1780	274	0.00	75.4
Hilleshög 9189RR	244	274.6	94	6490	90	1.21	31.57	88	746	85	14.93	23.64	289	1898	322	0.00	58.7
Hilleshög 9194RR	213	283.6	97	7169	100	1.16	33.68	94	851	97	15.33	25.27	241	1819	324	0.00	44.8
Hilleshög 9195RR	261	287.7	98	7691	107	1.17	34.66	97	924	106	15.55	26.77	250	1924	304	0.00	66.1
Hilleshög 9197RR	240	291.0	100	6522	91	1.04	35.42	99	795	91	15.60	22.40	222	1733	269	0.00	64.1
Hilleshög 9198RR	253	277.4	95	5544	77	1.14	32.22	90	644	74	15.00	19.95	275	1815	298	0.00	71.5
Hilleshög 9199RR	209	295.9	101	7138	99	1.04	36.58	102	882	101	15.85	24.09	213	1751	271	0.00	45.3
Hilleshög 9216RR	254	288.0	99	7332	102	1.05	34.70	97	883	101	15.45	25.51	256	1744	261	0.00	84.2
Hilleshög 9218RR	237	273.3	94	6756	94	1.19	31.25	88	773	88	14.85	24.70	280	1864	321	0.00	65.9
Seedex SX0881RR (Unicorn)	225	294.7	101	7165	100	1.02	36.30	102	881	101	15.77	24.31	231	1686	261	0.00	70.4
Seedex SX0883RR (Usher)	251	292.9	100	7400	103	1.01	35.85	100	903	103	15.66	25.34	185	1716	260	0.00	84.3
Seedex SX0884RR (Uplander)	215	305.9	105	7245	101	0.98	38.92	109	920	105	16.29	23.72	180	1666	255	0.00	84.5
Seedex SX0891RR	248	304.8	104	7187	100	1.03	38.64	108	910	104	16.28	23.60	183	1671	291	0.00	81.1
Seedex SX0892RR	203	285.7	98	7753	108	1.07	34.16	96	927	106	15.36	27.16	205	1734	296	0.00	86.7
Seedex SX0893RR	230	302.5	104	7521	105	1.00	38.12	107	946	108	16.14	24.93	159	1676	273	0.00	77.2
Seedex SX0894RR	266	298.3	102	7205	100	1.01	37.14	104	896	102	15.93	24.19	176	1716	263	0.00	91.0
Seedex SX0895RR	221	297.1	102	7242	101	1.01	36.84	103	897	102	15.87	24.42	180	1707	261	0.00	88.7
SESVanderhave H36811RR	238	306.7	105	6771	94	0.99	39.11	110	862	98	16.33	22.11	153	1604	282	0.00	84.2
SESVanderhave H36812RR	262	293.4	100	7551	105	1.03	35.98	101	924	106	15.70	25.75	187	1725	274	0.00	85.8
SESVanderhave H36813RR	223	296.6	101	7699	107	1.01	36.73	103	951	109	15.86	26.04	169	1718	271	0.00	87.2
SESVanderhave H36911RR	241	299.2	102	6963	97	1.03	37.34	105	869	99	16.00	23.28	179	1681	290	0.00	75.7
SESVanderhave H36912RR	208	291.8	100	7241	101	1.04	35.60	100	880	101	15.63	24.88	208	1734	270	0.00	76.9
SESVanderhave H36913RR	249	298.7	102	7634	106	0.96	37.22	104	951	109	15.90	25.60	164	1620	255	0.00	78.7
SESVanderhave H36914RR	258	306.6	105	7094	99	1.01	39.07	109	902	103	16.34	23.22	184	1622	283	0.00	84.2
SESVanderhave H36915RR	232	297.0	102	7476	104	1.00	36.81	103	927	106	15.86	25.18	186	1664	264	0.00	79.9
SESVanderhave H36916RR	202	297.3	102	7427	104	1.03	36.88	103	920	105	15.90	24.99	201	1737	269	0.00	85.0
SESVanderhave H36917RR	210	305.1	104	7317	102	1.01	38.71	108	929	106	16.28	23.98	186	1677	273	0.00	81.1
SESVanderhave H36918RR	242	305.1	104	7402	103	0.99	38.72	108	937	107	16.25	24.34	178	1703	249	0.00	89.6
Beta 85RR02(Check)	268	293.0	100	7167	100	1.13	35.89	101	878	100	15.78	24.45	248	1916	276	0.00	71.2
Crystal 539RR(Check)	269	286.0	98	6883	96	1.21	34.24	96	825	94	15.50	24.04	326	1875	318	0.00	70.8
Crystal 658RR(Check)	270	281.5	96	7084	99	1.04	33.17	93	834	95	15.11	25.20	214	1724	269	0.00	69.7
Hilleshög 4012RR(Check)	271	294.5	101	7309	102	1.06	36.23	101	899	103	15.79	24.78	252	1711	275	0.00	72.6
Filler35	272	291.8	100	7122	99	1.17	35.61	100	870	99	15.76	24.37	287	1869	302	0.00	77.2
Trial Mean		292.3		7175		1.09	35.71		875		15.71	24.58	220	1786	294	0.0	73.7
Coeff. of Var. (%)		3.1		6.6		7.3	5.9		8.2		2.6	6.3	25.3	4.8	14.3		10.8
Mean LSD (0.05)		6.4		400		0.06	1.49		56		0.29	1.34	40	73	30		6.1
Mean LSD (0.01)		8.4		527		0.07	1.97		74		0.39	1.76	52	96	40		8.0
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2009 Data from ACS Six Sites

Analyzed 10/26/2009 14:24

Created 11-11-2009.

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

Trial # = 09ARRexp

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

++ Revenue estimates are based on a $42.40 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 20.

2009 Performance of Varieties - ACSC Experimental RR Official Trial

ACS Three Light Rzm Sites - All Characters

Adjusted to Comm. Trial Status		Rec/T	Rec/T	Rec/A	Rec/A	Loss	Rev/T	Rev/T	Rev/A	Rev/A	Sugar	Yield	Na	K	AmN	Bolter	Emerg.
Description @	Code	lbs.	%Mean	lbs.	%Mean	Mol %	$ ++	%Mean	$ ++	%Mean	%	T/A	ppm	ppm	ppm	%^	%^
Beta 88RR03	212	284.9	99	6335	100	1.07	33.95	98	758	99	15.32	22.12	188	1888	269	0.00	63.8
Beta 88RR13	234	281.8	98	6050	96	1.07	33.23	96	714	93	15.17	21.45	209	1879	262	0.00	57.6
Beta 88RR21	206	281.0	97	6301	100	1.08	33.03	95	742	97	15.14	22.39	219	1788	290	0.00	72.4
Beta 88RR31	220	290.4	101	6614	105	1.23	35.26	101	802	105	15.74	22.73	253	1947	344	0.00	68.8
Beta 88RR41	246	285.6	99	6479	102	1.13	34.12	98	773	101	15.40	22.71	174	1855	317	0.00	71.7
Beta 88RR61	263	298.1	103	6846	108	1.07	37.03	107	851	111	15.97	22.95	194	1780	290	0.00	69.8
Beta 88RR71	204	292.3	101	6241	99	1.14	35.69	103	759	99	15.74	21.36	220	1786	329	0.00	76.7
Beta 89RR10	250	306.7	106	6404	101	1.11	39.06	112	813	107	16.44	20.91	193	1852	299	0.00	68.8
Beta 89RR20	227	293.1	102	6491	103	1.15	35.87	103	798	104	15.80	22.05	176	1903	323	0.00	65.2
Beta 89RR23	260	275.1	95	6062	96	1.33	31.63	91	697	91	15.07	21.98	247	2185	366	0.00	55.4
Beta 89RR30	218	282.3	98	6811	108	1.07	33.34	96	804	105	15.19	24.12	251	1846	254	0.00	74.4
Beta 89RR40	255	297.0	103	6987	110	1.13	36.80	106	867	114	15.97	23.46	213	1730	334	0.00	64.8
Beta 89RR43	229	285.0	99	5981	95	1.26	33.97	98	718	94	15.51	20.84	227	2102	341	0.00	60.8
Beta 89RR50	211	287.3	100	6994	111	1.25	34.52	99	838	110	15.61	24.41	280	2041	328	0.00	75.9
Beta 89RR60	239	299.0	104	6578	104	0.99	37.27	107	818	107	15.95	22.04	236	1698	238	0.00	67.1
Beta 89RR63	257	295.2	102	5378	85	1.08	36.37	105	664	87	15.84	18.14	199	1722	310	0.00	62.1
Beta 89RR70	233	292.7	101	6116	97	1.22	35.78	103	747	98	15.84	20.95	257	1918	341	0.00	59.4
Beta 89RR83	252	284.4	99	6817	108	1.04	33.82	97	809	106	15.26	24.03	237	1766	254	0.00	68.9
Crystal 871RR	207	280.9	97	6452	102	1.22	33.00	95	759	99	15.25	22.87	312	1962	315	0.00	69.5
Crystal 873RR	226	269.4	93	6843	108	1.07	30.30	87	769	101	14.55	25.37	292	1740	268	0.00	68.0
Crystal 875RR	219	289.2	100	6570	104	1.13	34.95	101	796	104	15.58	22.68	224	1901	286	0.00	72.0
Crystal 878RR	236	284.1	99	6526	103	1.22	33.75	97	781	102	15.41	22.82	199	1938	359	0.00	77.4
Crystal 879RR	245	284.9	99	6319	100	1.11	33.95	98	756	99	15.35	22.09	170	1825	314	0.00	69.5
Crystal 880RR	228	286.8	99	6179	98	1.13	34.41	99	742	97	15.47	21.50	194	1846	316	0.00	71.9
Crystal 981RR	267	279.7	97	7176	113	1.27	32.72	94	837	110	15.23	25.73	352	1994	325	0.00	75.8
Crystal 982RR	205	283.8	98	6069	96	1.13	33.70	97	723	95	15.31	21.32	297	1773	295	0.00	67.8
Crystal 983RR	216	267.3	93	5790	92	1.06	29.81	86	647	85	14.43	21.63	271	1761	259	0.00	62.5
Crystal 984RR	264	298.2	103	6695	106	1.08	37.07	107	836	109	16.00	22.34	231	1877	261	0.00	75.9
Crystal 985RR	222	290.8	101	6574	104	1.07	35.35	102	803	105	15.62	22.49	186	1820	283	0.00	71.1
Crystal 986RR	247	295.4	102	6190	98	1.02	36.43	105	770	101	15.79	20.71	219	1677	266	0.00	60.7
Hilleshög 4043RR(9043RR)	256	293.0	102	6564	104	0.99	35.85	103	804	105	15.64	22.33	153	1687	265	0.00	66.2
Hilleshög 4085RR(9085RR)	214	286.4	99	6121	97	1.12	34.31	99	733	96	15.44	21.31	233	1826	299	0.00	73.8
Hilleshög 9086RR	243	281.2	98	5891	93	1.08	33.10	95	694	91	15.15	20.91	249	1785	278	0.00	64.5
Hilleshög 4094RR(9094RR)	231	285.6	99	6182	98	1.18	34.11	98	743	97	15.46	21.45	219	1923	329	0.00	72.5
Hilleshög 4097RR(9097RR)	265	289.4	100	5447	86	1.14	35.01	101	664	87	15.61	18.62	223	1806	323	0.00	62.1
Hilleshög 4114RR(9114RR)	224	300.2	104	5983	95	1.01	37.55	108	752	98	16.03	19.84	161	1621	300	0.00	57.6
Hilleshög 9160RR	235	284.9	99	5918	94	1.09	33.95	98	708	93	15.33	20.70	213	1917	261	0.00	62.1
Hilleshög 9161RR	217	286.8	99	6086	96	1.17	34.40	99	729	95	15.50	21.25	293	1773	325	0.00	58.0
Hilleshög 9162RR	259	281.5	98	5845	92	1.04	33.15	95	693	91	15.13	20.63	268	1714	256	0.00	74.4
Hilleshög 9163RR	201	284.2	99	6349	100	1.06	33.78	97	755	99	15.27	22.32	213	1781	277	0.00	71.5
Hilleshög 9189RR	244	266.9	93	5790	92	1.24	29.71	85	646	85	14.58	21.62	307	1945	335	0.00	56.4
Hilleshög 9194RR	213	281.2	97	6199	98	1.15	33.08	95	733	96	15.19	21.91	243	1821	314	0.00	42.9
Hilleshög 9195RR	261	280.7	97	6817	108	1.18	32.95	95	800	105	15.20	24.25	264	1943	303	0.00	59.3
Hilleshög 9197RR	240	290.2	101	5931	94	1.04	35.20	101	723	95	15.57	20.33	229	1727	271	0.00	59.7
Hilleshög 9198RR	253	274.0	95	4673	74	1.11	31.38	90	539	71	14.80	16.92	283	1804	277	0.00	68.2
Hilleshög 9199RR	209	289.4	100	6416	101	1.06	35.01	101	781	102	15.53	21.96	218	1771	274	0.00	39.1
Hilleshög 9216RR	254	283.1	98	6483	103	1.05	33.53	96	770	101	15.21	22.84	269	1736	257	0.00	79.2
Hilleshög 9218RR	237	268.9	93	5931	94	1.16	30.20	87	669	88	14.61	21.94	283	1885	296	0.00	62.3
Seedex SX0881RR (Unicorn)	225	290.2	101	6267	99	1.00	35.21	101	762	100	15.52	21.49	232	1687	246	0.00	67.5
Seedex SX0883RR (Usher)	251	293.0	102	6547	104	1.01	35.84	103	802	105	15.67	22.32	185	1731	256	0.00	82.1
Seedex SX0884RR (Uplander)	215	301.4	105	6292	100	1.01	37.83	109	793	104	16.09	20.79	183	1737	262	0.00	79.0
Seedex SX0891RR	248	299.6	104	6285	99	1.04	37.42	108	786	103	16.02	20.86	183	1680	295	0.00	78.6
Seedex SX0892RR	203	282.4	98	6906	109	1.07	33.38	96	819	107	15.20	24.35	214	1764	292	0.00	84.7
Seedex SX0893RR	230	300.3	104	6601	104	1.00	37.57	108	830	109	16.02	21.91	171	1687	265	0.00	75.7
Seedex SX0894RR	266	295.4	102	6374	101	0.99	36.43	105	788	103	15.77	21.53	182	1729	246	0.00	87.0
Seedex SX0895RR	221	291.2	101	6408	101	1.00	35.44	102	779	102	15.57	22.07	188	1745	247	0.00	86.6
SESVanderhave H36811RR	238	303.4	105	5990	95	1.00	38.31	110	759	99	16.18	19.64	161	1658	276	0.00	81.8
SESVanderhave H36812RR	262	289.9	101	6650	105	1.05	35.10	101	809	106	15.54	22.81	187	1757	282	0.00	83.5
SESVanderhave H36813RR	223	292.5	101	6716	106	1.00	35.73	103	822	108	15.64	22.93	171	1732	256	0.00	84.0
SESVanderhave H36911RR	241	295.6	103	6216	98	1.02	36.47	105	770	101	15.80	20.95	178	1681	281	0.00	70.0
SESVanderhave H36912RR	208	285.8	99	6247	99	1.02	34.18	98	748	98	15.32	21.79	219	1749	255	0.00	72.8
SESVanderhave H36913RR	249	295.4	102	6713	106	0.96	36.42	105	830	109	15.74	22.67	163	1668	246	0.00	77.7
SESVanderhave H36914RR	258	300.7	104	6277	99	1.04	37.67	108	786	103	16.09	20.89	200	1655	299	0.00	81.3
SESVanderhave H36915RR	232	293.0	102	6538	103	0.99	35.85	103	804	105	15.66	22.18	203	1676	256	0.00	77.6
SESVanderhave H36916RR	202	292.3	101	6667	105	1.04	35.70	103	816	107	15.67	22.74	201	1767	265	0.00	86.6
SESVanderhave H36917RR	210	299.8	104	6425	102	1.03	37.46	108	804	105	16.03	21.35	188	1692	287	0.00	76.9
SESVanderhave H36918RR	242	301.6	105	6429	102	1.01	37.89	109	808	106	16.11	21.33	191	1737	256	0.00	88.0
Beta 85RR02(Check)	268	285.8	99	6348	100	1.15	34.19	98	761	100	15.44	22.16	281	1949	272	0.00	68.4
Crystal 539RR(Check)	269	284.5	99	6266	99	1.15	33.84	97	751	98	15.37	21.89	316	1887	278	0.00	67.0
Crystal 658RR(Check)	270	276.0	96	6146	97	1.03	31.85	92	712	93	14.83	22.19	213	1749	257	0.00	67.9
Hilleshög 4012RR(Check)	271	291.8	101	6361	101	1.06	35.57	102	776	102	15.65	21.73	246	1737	271	0.00	70.6
Filler35	272	290.3	101	6135	97	1.17	35.23	101	746	98	15.68	21.04	294	1873	302	0.00	72.9
Trial Mean		288.4		6324		1.09	34.76		764		15.51	21.87	225	1805	288	0.0	70.1
Coeff. of Var. (%)		3.0		6.3		7.2	5.9		7.8		2.6	6.1	23.6	4.9	13.9		11.1
Mean LSD (0.05)		8.5		570		0.08	2.00		77		0.39	1.93	54	112	43		8.4
Mean LSD (0.01)		11.2		753		0.10	2.64		102		0.52	2.54	71	147	57		11.1
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2009 Data from ACS Three Light Rzm Sites Analyzed 11/09/2009 15:24 Created 11-11-2009.

^ Vigor not collected. Bolter & emergence not adjusted to commercial status. Trial # = 09AXlgt

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

++ Revenue estimates are based on a $42.40 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 21.

2009 Performance of Varieties - ACSC Experimental RR Official Trial

ACS Three Mod Rzm Sites - All Characters

Adjusted to Comm. Trial Status		Rec/T	Rec/T	Rec/A	Rec/A	Loss	Rev/T	Rev/T	Rev/A	Rev/A	Sugar	Yield	Na	K	AmN	Bolter	Emerg.
Description @	Code	lbs.	%Mean	lbs.	%Mean	Mol %	$ ++	%Mean	$ ++	%Mean	%	T/A	ppm	ppm	ppm	%^	%^
Beta 88RR03	212	284.6	96	7440	93	1.13	33.93	93	881	89	15.35	26.33	231	1881	290	0.00	72.2
Beta 88RR13	234	279.5	94	7592	95	1.16	32.74	89	885	90	15.14	27.30	261	1889	306	0.00	72.6
Beta 88RR21	206	286.3	97	7856	98	1.07	34.34	94	937	95	15.38	27.58	216	1737	287	0.00	76.7
Beta 88RR31	220	295.7	100	8056	100	1.24	36.54	100	985	100	16.01	27.50	245	1858	372	0.00	76.8
Beta 88RR41	246	294.3	99	8387	104	1.12	36.21	99	1026	104	15.83	28.67	170	1771	333	0.00	83.1
Beta 88RR61	263	300.8	102	8398	105	1.12	37.73	103	1050	106	16.16	28.03	206	1820	306	0.00	76.9
Beta 88RR71	204	306.3	103	7818	97	1.12	39.02	106	988	100	16.43	25.72	189	1768	327	0.00	80.5
Beta 89RR10	250	310.5	105	7889	98	1.11	40.00	109	1010	102	16.65	25.61	180	1798	321	0.00	78.4
Beta 89RR20	227	296.8	100	8001	100	1.19	36.79	100	984	100	16.02	27.18	157	1868	368	0.00	74.5
Beta 89RR23	260	293.1	99	7698	96	1.22	35.91	98	936	95	15.86	26.50	209	1987	334	0.00	63.7
Beta 89RR30	218	286.5	97	8731	109	1.06	34.38	94	1045	106	15.38	30.57	258	1805	245	0.00	80.9
Beta 89RR40	255	302.5	102	8312	104	1.08	38.13	104	1043	106	16.21	27.65	207	1732	306	0.00	72.7
Beta 89RR43	229	286.6	97	7453	93	1.23	34.40	94	891	90	15.55	26.15	218	1950	350	0.00	65.1
Beta 89RR50	211	292.3	99	8641	108	1.31	35.75	98	1050	106	15.91	29.75	292	2036	364	0.00	81.1
Beta 89RR60	239	310.3	105	7655	95	0.98	39.95	109	980	99	16.50	24.86	186	1612	263	0.00	75.6
Beta 89RR63	257	303.2	102	6904	86	1.06	38.28	104	868	88	16.23	22.87	173	1707	312	0.00	71.0
Beta 89RR70	233	295.0	100	7677	96	1.20	36.39	99	939	95	15.96	26.23	251	1830	354	0.00	66.2
Beta 89RR83	252	284.6	96	8078	101	1.09	33.96	93	960	97	15.32	28.46	258	1745	284	0.00	84.7
Crystal 871RR	207	292.0	99	8273	103	1.22	35.67	97	1006	102	15.81	28.48	269	1964	318	0.00	80.0
Crystal 873RR	226	278.8	94	9062	113	1.09	32.59	89	1047	106	15.03	32.84	252	1733	294	0.00	80.5
Crystal 875RR	219	296.5	100	8316	104	1.19	36.73	100	1026	104	16.01	28.15	234	1950	323	0.00	80.5
Crystal 878RR	236	302.4	102	8956	112	1.15	38.10	104	1120	113	16.28	29.85	156	1778	368	0.00	82.4
Crystal 879RR	245	288.5	97	8721	109	1.14	34.87	95	1051	107	15.57	30.35	183	1848	326	0.00	79.5
Crystal 880RR	228	300.8	102	8101	101	1.12	37.71	103	1010	102	16.16	27.11	183	1761	333	0.00	78.3
Crystal 981RR	267	292.9	99	9254	115	1.19	35.88	98	1124	114	15.84	31.86	265	1893	324	0.00	81.9
Crystal 982RR	205	296.0	100	8423	105	1.12	36.61	100	1033	105	15.93	28.69	278	1706	319	0.00	78.5
Crystal 983RR	216	281.9	95	7858	98	1.08	33.31	91	924	94	15.18	28.02	237	1726	292	0.00	68.8
Crystal 984RR	264	299.2	101	8327	104	1.12	37.35	102	1034	105	16.08	28.00	268	1820	285	0.00	77.9
Crystal 985RR	222	303.6	102	8559	107	1.08	38.39	105	1075	109	16.27	28.40	169	1769	305	0.00	82.9
Crystal 986RR	247	306.5	103	8170	102	1.01	39.07	107	1039	105	16.34	26.73	191	1659	274	0.00	65.5
Hilleshög 4043RR(9043RR)	256	295.7	100	8013	100	1.01	36.53	100	985	100	15.80	27.21	153	1639	293	0.00	81.4
Hilleshög 4085RR(9085RR)	214	292.2	99	7628	95	1.17	35.72	97	928	94	15.78	26.22	226	1807	341	0.00	81.2
Hilleshög 9086RR	243	288.8	98	7588	95	1.10	34.92	95	909	92	15.54	26.52	257	1803	278	0.00	69.5
Hilleshög 4094RR(9094RR)	231	300.3	101	8005	100	1.16	37.60	103	996	101	16.17	26.82	212	1840	333	0.00	80.7
Hilleshög 4097RR(9097RR)	265	298.4	101	7617	95	1.11	37.18	101	945	96	16.03	25.60	229	1813	294	0.00	70.7
Hilleshög 4114RR(9114RR)	224	302.5	102	7313	91	1.01	38.13	104	918	93	16.14	24.29	154	1637	293	0.00	62.9
Hilleshög 9160RR	235	296.3	100	7378	92	1.11	36.68	100	908	92	15.93	25.05	168	1862	304	0.00	73.2
Hilleshög 9161RR	217	297.0	100	7193	90	1.09	36.84	101	888	90	15.95	24.32	225	1770	288	0.00	66.1
Hilleshög 9162RR	259	286.8	97	7718	96	1.08	34.45	94	922	93	15.42	27.08	306	1716	271	0.00	82.0
Hilleshög 9163RR	201	288.4	97	7956	99	1.07	34.83	95	954	97	15.50	27.79	244	1780	276	0.00	79.1
Hilleshög 9189RR	244	282.7	95	7156	89	1.16	33.49	91	844	86	15.28	25.45	269	1849	307	0.00	61.3
Hilleshög 9194RR	213	286.3	97	8149	102	1.16	34.34	94	971	98	15.48	28.67	240	1810	336	0.00	46.6
Hilleshög 9195RR	261	295.3	100	8554	107	1.16	36.44	99	1050	106	15.92	29.16	234	1905	304	0.00	72.7
Hilleshög 9197RR	240	291.1	98	7081	88	1.05	35.46	97	860	87	15.60	24.39	217	1743	270	0.00	68.3
Hilleshög 9198RR	253	280.5	95	6439	80	1.16	32.99	90	752	76	15.19	23.08	266	1828	321	0.00	75.0
Hilleshög 9199RR	209	302.9	102	7792	97	1.03	38.22	104	978	99	16.18	25.90	206	1732	269	0.00	51.7
Hilleshög 9216RR	254	292.2	99	8163	102	1.06	35.73	98	993	101	15.67	28.10	246	1754	263	0.00	89.5
Hilleshög 9218RR	237	278.0	94	7574	94	1.22	32.40	88	878	89	15.11	27.39	275	1840	347	0.00	69.2
Seedex SX0881RR (Unicorn)	225	299.6	101	8059	100	1.04	37.44	102	1000	101	16.02	27.10	228	1685	274	0.00	73.5
Seedex SX0883RR (Usher)	251	292.6	99	8247	103	1.01	35.81	98	1002	102	15.64	28.39	183	1701	265	0.00	86.8
Seedex SX0884RR (Uplander)	215	310.9	105	8191	102	0.95	40.08	109	1047	106	16.50	26.60	175	1593	248	0.00	89.9
Seedex SX0891RR	248	309.7	105	8099	101	1.03	39.82	109	1036	105	16.52	26.31	181	1662	286	0.00	83.5
Seedex SX0892RR	203	289.1	98	8596	107	1.06	34.99	95	1035	105	15.51	29.91	191	1693	299	0.00	88.9
Seedex SX0893RR	230	304.7	103	8420	105	1.01	38.65	105	1060	107	16.25	27.87	143	1659	283	0.00	78.6
Seedex SX0894RR	266	301.2	102	8053	100	1.03	37.82	103	1004	102	16.09	26.93	166	1700	281	0.00	94.6
Seedex SX0895RR	221	303.1	102	8075	101	1.01	38.27	104	1015	103	16.17	26.76	174	1670	278	0.00	90.9
SESVanderhave H36811RR	238	310.1	105	7561	94	0.97	39.91	109	965	98	16.49	24.61	144	1551	288	0.00	86.3
SESVanderhave H36812RR	262	297.0	100	8450	105	1.01	36.83	100	1039	105	15.87	28.70	184	1692	267	0.00	88.2
SESVanderhave H36813RR	223	301.1	102	8669	108	1.03	37.79	103	1079	109	16.08	29.07	163	1700	284	0.00	90.2
SESVanderhave H36911RR	241	302.8	102	7706	96	1.05	38.20	104	967	98	16.19	25.61	180	1684	297	0.00	81.7
SESVanderhave H36912RR	208	297.2	100	8247	103	1.05	36.88	101	1013	103	15.92	28.05	197	1722	283	0.00	81.0
SESVanderhave H36913RR	249	302.1	102	8560	107	0.96	38.04	104	1072	109	16.06	28.51	165	1568	262	0.00	79.7
SESVanderhave H36914RR	258	312.1	105	7913	99	0.97	40.38	110	1019	103	16.59	25.51	169	1589	268	0.00	87.1
SESVanderhave H36915RR	232	301.3	102	8414	105	0.99	37.86	103	1051	107	16.06	28.11	166	1648	269	0.00	82.3
SESVanderhave H36916RR	202	302.2	102	8180	102	1.03	38.07	104	1024	104	16.15	27.21	200	1708	269	0.00	83.7
SESVanderhave H36917RR	210	310.1	105	8219	102	0.99	39.91	109	1054	107	16.50	26.61	187	1659	257	0.00	85.5
SESVanderhave H36918RR	242	308.2	104	8366	104	0.97	39.47	108	1063	108	16.38	27.37	165	1667	245	0.00	91.0
Beta 85RR02(Check)	268	300.2	101	7970	99	1.11	37.59	103	993	101	16.12	26.68	215	1887	280	0.00	73.8
Crystal 539RR(Check)	269	287.5	97	7458	93	1.26	34.60	94	894	91	15.62	26.04	335	1863	357	0.00	74.8
Crystal 658RR(Check)	270	286.9	97	8029	100	1.05	34.48	94	957	97	15.40	28.23	217	1700	281	0.00	71.2
Hilleshög 4012RR(Check)	271	297.3	100	8297	103	1.06	36.92	101	1026	104	15.93	27.98	258	1684	280	0.00	74.7
Filler35	272	293.7	99	8143	101	1.16	36.07	98	997	101	15.84	27.81	278	1865	307	0.00	81.6
Trial Mean		296.2		8025		1.09	36.65		986		15.91	27.29	214	1765	300	0.0	77.4
Coeff. of Var. (%)		3.2		6.9		7.5	6.0		8.4		2.7	6.5	27.1	4.8	14.8		10.5
Mean LSD (0.05)		9.6		561		0.08	2.26		82		0.45	1.85	64	99	42		9.7
Mean LSD (0.01)		12.7		741		0.11	2.97		109		0.59	2.44	84	131	55		12.9
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2009 Data from ACS Three Mod Rzm Sites Analyzed 11/09/2009 15:30 Created 11-11-2009.

^ Vigor not collected. Bolter & emergence not adjusted to commercial status. Trial # = 09AXmod

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

++ Revenue estimates are based on a $42.40 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 22.

2009 Performance of Varieties - ACSC Experimental RR Official Trial

Casselton ND - All Characters - Moderate Rzm

Adjusted to Comm. Trial Status		Rec/T	Rec/T	Rec/A	Rec/A	Loss	Rev/T	Rev/T	Rev/A	Rev/A	Sugar	Yield	Na	K	AmN	Bolter	Emerg.
Description @	Code	lbs.	%Mean	lbs.	%Mean	Mol %	$ ++	%Mean	$ ++	%Mean	%	T/A	ppm	ppm	ppm	%^	%^
Beta 88RR03	212	268.0	96	9337	99	1.08	30.11	92	1048	95	14.48	34.79	171	1886	276	0.00	67.5
Beta 88RR13	234	265.8	95	9506	100	1.08	29.61	91	1054	96	14.37	35.78	152	1865	281	0.00	78.3
Beta 88RR21	206	267.9	96	8913	94	1.02	30.07	92	1000	91	14.42	33.28	156	1775	260	0.00	76.1
Beta 88RR31	220	275.5	99	9628	102	1.22	31.78	97	1107	100	14.98	34.95	195	1943	360	0.00	74.6
Beta 88RR41	246	279.7	100	9783	103	1.14	32.72	100	1140	103	15.13	35.07	138	1816	354	0.00	81.3
Beta 88RR61	263	287.2	103	9753	103	1.10	34.40	105	1168	106	15.47	33.87	158	1856	294	0.00	79.3
Beta 88RR71	204	283.9	102	9305	98	1.20	33.67	103	1098	99	15.38	32.87	183	1869	361	0.00	76.7
Beta 89RR10	250	292.9	105	9554	101	1.14	35.69	109	1157	105	15.79	32.77	129	1908	332	0.00	81.2
Beta 89RR20	227	275.9	99	9343	99	1.19	31.87	97	1079	98	14.97	33.91	131	1889	366	0.00	74.1
Beta 89RR23	260	276.0	99	9166	97	1.21	31.89	98	1057	96	15.00	33.20	150	1995	348	0.00	65.6
Beta 89RR30	218	271.9	97	10238	108	0.99	30.98	95	1167	106	14.59	37.64	211	1814	211	0.00	78.8
Beta 89RR40	255	288.5	103	9912	105	1.10	34.69	106	1189	108	15.53	34.41	150	1773	325	0.00	73.6
Beta 89RR43	229	275.9	99	9350	99	1.18	31.87	97	1080	98	14.97	33.82	139	1910	360	0.00	73.3
Beta 89RR50	211	270.7	97	9781	103	1.34	30.70	94	1107	100	14.85	36.10	247	2216	362	0.00	77.4
Beta 89RR60	239	293.9	105	9543	101	1.00	35.91	110	1161	105	15.71	32.57	146	1683	267	0.00	72.2
Beta 89RR63	257	287.7	103	8400	89	1.05	34.50	106	1006	91	15.44	29.17	163	1692	305	0.00	82.6
Beta 89RR70	233	273.9	98	9030	95	1.26	31.43	96	1037	94	14.93	32.88	189	1911	394	0.00	66.7
Beta 89RR83	252	273.6	98	10344	109	0.99	31.37	96	1187	108	14.68	37.73	179	1745	237	0.00	85.5
Crystal 871RR	207	272.4	97	8843	93	1.23	31.09	95	1005	91	14.84	32.56	205	2058	336	0.00	76.7
Crystal 873RR	226	263.4	94	10595	112	1.09	29.08	89	1163	105	14.26	40.23	224	1723	311	0.00	84.4
Crystal 875RR	219	280.7	100	9430	100	1.21	32.96	101	1105	100	15.23	33.53	194	1977	336	0.00	74.4
Crystal 878RR	236	285.1	102	10847	115	1.13	33.94	104	1283	116	15.38	38.15	124	1781	353	0.00	86.2
Crystal 879RR	245	278.1	99	10776	114	1.11	32.36	99	1250	113	15.02	38.78	123	1868	322	0.00	75.3
Crystal 880RR	228	287.3	103	9851	104	1.16	34.43	105	1179	107	15.51	34.25	126	1849	353	0.00	69.5
Crystal 981RR	267	274.8	98	10686	113	1.20	31.64	97	1224	111	14.93	38.99	222	1946	331	0.00	81.3
Crystal 982RR	205	279.6	100	10125	107	1.10	32.69	100	1180	107	15.08	36.19	194	1770	310	0.00	70.8
Crystal 983RR	216	273.5	98	9522	101	1.06	31.35	96	1085	98	14.74	34.84	160	1779	287	0.00	64.9
Crystal 984RR	264	288.8	103	9634	102	1.09	34.76	106	1152	104	15.54	33.55	177	1904	275	0.00	73.1
Crystal 985RR	222	287.2	103	9780	103	1.06	34.41	105	1167	106	15.43	34.08	145	1796	290	0.00	81.0
Crystal 986RR	247	296.6	106	10231	108	0.93	36.50	112	1258	114	15.78	34.46	124	1646	238	0.00	70.6
Hilleshög 4043RR(9043RR)	256	279.7	100	9681	102	1.04	32.72	100	1135	103	15.03	34.47	118	1666	315	0.00	81.0
Hilleshög 4085RR(9085RR)	214	278.4	100	9003	95	1.12	32.42	99	1047	95	15.03	32.36	177	1792	327	0.00	78.0
Hilleshög 9086RR	243	263.4	94	9102	96	1.13	29.07	89	1005	91	14.29	34.45	237	1889	282	0.00	72.6
Hilleshög 4094RR(9094RR)	231	281.6	101	9292	98	1.09	33.15	101	1089	99	15.17	33.07	153	1849	297	0.00	80.9
Hilleshög 4097RR(9097RR)	265	282.8	101	8955	95	1.07	33.42	102	1058	96	15.21	31.52	180	1822	277	0.00	67.9
Hilleshög 4114RR(9114RR)	224	288.2	103	8602	91	0.96	34.63	106	1030	93	15.39	29.85	133	1631	262	0.00	63.3
Hilleshög 9160RR	235	279.5	100	8778	93	1.14	32.68	100	1024	93	15.12	31.44	147	1908	323	0.00	71.8
Hilleshög 9161RR	217	284.6	102	8289	88	1.11	33.81	103	983	89	15.34	29.07	200	1869	295	0.00	60.5
Hilleshög 9162RR	259	267.4	96	9354	99	1.09	29.98	92	1050	95	14.45	34.90	204	1790	292	0.00	83.5
Hilleshög 9163RR	201	270.0	97	9029	95	1.06	30.55	93	1020	92	14.56	33.32	179	1801	280	0.00	77.4
Hilleshög 9189RR	244	266.6	95	8723	92	1.13	29.79	91	969	88	14.45	32.81	188	1857	318	0.00	64.8
Hilleshög 9194RR	213	265.9	95	9737	103	1.16	29.65	91	1081	98	14.44	36.64	178	1802	353	0.00	55.9
Hilleshög 9195RR	261	271.0	97	9623	102	1.20	30.78	94	1091	99	14.73	35.49	214	2000	316	0.00	73.5
Hilleshög 9197RR	240	273.4	98	8351	88	1.06	31.30	96	961	87	14.73	30.37	196	1785	275	0.00	69.8
Hilleshög 9198RR	253	272.8	98	8042	85	1.10	31.19	95	917	83	14.74	29.41	196	1906	281	0.00	69.2
Hilleshög 9199RR	209	286.7	103	9180	97	1.00	34.31	105	1098	99	15.35	31.96	161	1745	251	0.00	54.5
Hilleshög 9216RR	254	277.3	99	10112	107	1.04	32.20	98	1166	106	14.91	36.63	176	1802	253	0.00	84.7
Hilleshög 9218RR	237	262.8	94	8365	88	1.23	28.94	89	918	83	14.35	31.86	172	1931	375	0.00	70.2
Seedex SX0881RR (Unicorn)	225	276.2	99	9346	99	1.05	31.94	98	1081	98	14.87	33.75	214	1806	257	0.00	75.6
Seedex SX0883RR (Usher)	251	274.1	98	10232	108	1.01	31.46	96	1171	106	14.72	37.32	155	1679	275	0.00	83.2
Seedex SX0884RR (Uplander)	215	298.2	107	9538	101	0.91	36.86	113	1175	107	15.85	31.96	126	1599	235	0.00	93.5
Seedex SX0891RR	248	295.5	106	9560	101	1.02	36.25	111	1167	106	15.81	32.47	128	1699	289	0.00	80.2
Seedex SX0892RR	203	268.9	96	9879	104	1.16	30.31	93	1115	101	14.59	36.70	161	1877	337	0.00	90.5
Seedex SX0893RR	230	287.7	103	9588	101	0.98	34.51	106	1144	104	15.38	33.51	130	1638	272	0.00	75.8
Seedex SX0894RR	266	281.2	101	9152	97	1.03	33.05	101	1076	98	15.10	32.51	150	1781	274	0.00	91.2
Seedex SX0895RR	221	286.4	102	9154	97	1.08	34.21	105	1094	99	15.40	31.83	141	1751	317	0.00	84.2
SESVanderhave H36811RR	238	283.2	101	9105	96	1.01	33.51	102	1073	97	15.18	32.20	144	1616	299	0.00	92.6
SESVanderhave H36812RR	262	276.3	99	9697	103	0.99	31.96	98	1119	101	14.81	35.09	138	1734	251	0.00	89.8
SESVanderhave H36813RR	223	282.1	101	9738	103	1.04	33.27	102	1145	104	15.15	34.53	143	1781	276	0.00	87.8
SESVanderhave H36911RR	241	286.4	102	9058	96	1.05	34.23	105	1075	97	15.38	31.66	139	1790	285	0.00	75.3
SESVanderhave H36912RR	208	277.9	99	9650	102	1.06	32.33	99	1117	101	14.96	34.82	168	1793	283	0.00	85.9
SESVanderhave H36913RR	249	283.9	102	10082	107	0.92	33.67	103	1191	108	15.14	35.55	138	1526	259	0.00	78.5
SESVanderhave H36914RR	258	298.2	107	9157	97	0.92	36.86	113	1125	102	15.86	30.90	124	1634	236	0.00	82.3
SESVanderhave H36915RR	232	284.8	102	9880	104	1.00	33.87	104	1169	106	15.25	34.78	144	1696	267	0.00	87.2
SESVanderhave H36916RR	202	282.4	101	9810	104	1.06	33.32	102	1157	105	15.18	34.65	146	1809	286	0.00	72.7
SESVanderhave H36917RR	210	294.0	105	9839	104	0.92	35.92	110	1205	109	15.65	33.37	144	1699	212	0.00	85.8
SESVanderhave H36918RR	242	285.2	102	9695	102	0.99	33.97	104	1149	104	15.27	34.07	140	1774	247	0.00	85.0
Beta 85RR02(Check)	268	288.0	103	8985	95	1.09	34.59	106	1075	97	15.49	31.21	164	1871	282	0.00	75.5
Crystal 539RR(Check)	269	273.5	98	8623	91	1.23	31.35	96	987	89	14.88	31.48	238	1974	341	0.00	77.2
Crystal 658RR(Check)	270	275.2	98	9151	97	1.04	31.72	97	1049	95	14.81	33.32	138	1764	287	0.00	74.0
Hilleshög 4012RR(Check)	271	286.7	103	10114	107	1.02	34.30	105	1212	110	15.37	35.16	183	1708	272	0.00	79.8
Filler35	272	274.6	98	8656	92	1.20	31.57	97	997	90	14.91	31.38	259	1992	310	0.00	75.5
Trial Mean		279.6		9460		1.08	32.70		1103		15.06	33.86	166	1812	298	0.0	76.8
Coeff. of Var. (%)		3.2		7.2		7.3	6.1		8.5		2.7	7.0	18.8	5.5	14.7		12.1
Mean LSD (0.05)		13.1		1015		0.12	2.94		139		0.59	3.59	45	152	63		13.5
Mean LSD (0.01)		17.3		1339		0.16	3.87		183		0.79	4.73	59	201	83		17.8
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2009 Data from Casselton ND Analyzed 10/26/2009 11:09 Created 11-11-2009.

^ Vigor not collected. Bolter & emergence not adjusted to commercial status. Trial # = 098301

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

++ Revenue estimates are based on a $42.40 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 23.

2009 Performance of Varieties - ACSC Experimental RR Official Trial

Averill MN - All Characters - Severe Rzm

Adjusted to Comm. Trial Status		Rec/T	Rec/T	Rec/A	Rec/A	Loss	Rev/T	Rev/T	Rev/A	Rev/A	Sugar	Yield	Na	K	AmN	Bolter	Emerg.
Description @	Code	lbs.	%Mean	lbs.	%Mean	Mol %	$ ++	%Mean	$ ++	%Mean	%	T/A	ppm	ppm	ppm	%^	%^
Beta 88RR03	212	293.2	93	6727	87	1.06	35.93	87	828	82	15.73	23.02	297	1784	243	0.00	85.4
Beta 88RR13	234	289.2	92	6775	88	1.17	34.92	85	825	82	15.61	23.33	374	1743	301	0.00	74.7
Beta 88RR21	206	304.0	96	7818	102	1.06	38.53	93	995	99	16.25	25.64	273	1694	270	0.00	74.0
Beta 88RR31	220	317.4	101	7733	101	1.18	41.79	101	1008	100	17.05	24.78	264	1743	355	0.00	76.1
Beta 88RR41	246	318.1	101	8253	107	1.07	41.96	102	1089	108	16.97	26.07	187	1737	301	0.00	79.3
Beta 88RR61	263	316.0	100	8198	107	1.12	41.47	101	1080	107	16.91	26.03	277	1756	293	0.00	76.7
Beta 88RR71	204	335.3	106	7113	93	1.05	46.17	112	987	98	17.81	20.90	212	1688	290	0.00	76.9
Beta 89RR10	250	339.5	108	7540	98	1.06	47.19	114	1047	104	18.03	22.27	229	1707	289	0.00	76.8
Beta 89RR20	227	318.8	101	7416	96	1.21	42.14	102	983	98	17.13	23.24	186	1866	370	0.00	70.2
Beta 89RR23	260	319.2	101	7492	97	1.19	42.25	102	993	99	17.14	23.64	258	1927	314	0.00	65.7
Beta 89RR30	218	306.5	97	8484	110	1.05	39.15	95	1085	108	16.37	27.65	286	1789	240	0.00	81.7
Beta 89RR40	255	319.5	101	7729	101	1.05	42.31	103	1027	102	17.02	24.29	241	1615	297	0.00	72.2
Beta 89RR43	229	294.5	93	6867	89	1.19	36.24	88	842	84	15.92	23.51	297	1844	323	0.00	72.5
Beta 89RR50	211	311.1	99	8370	109	1.23	40.27	98	1081	107	16.79	26.90	364	1859	330	0.00	83.4
Beta 89RR60	239	320.2	102	6774	88	0.92	42.50	103	902	90	16.92	21.10	215	1555	224	0.00	79.3
Beta 89RR63	257	327.9	104	6702	87	0.90	44.36	108	906	90	17.29	20.52	140	1580	236	0.00	72.5
Beta 89RR70	233	322.7	102	7432	97	1.12	43.11	105	990	98	17.25	23.15	291	1694	309	0.00	63.9
Beta 89RR83	252	298.4	95	6903	90	1.04	37.19	90	859	85	15.97	23.17	328	1670	244	0.00	86.7
Crystal 871RR	207	309.2	98	8369	109	1.17	39.82	97	1083	108	16.63	27.04	322	1829	299	0.00	76.4
Crystal 873RR	226	297.3	94	9069	118	1.07	36.91	89	1120	111	15.94	30.78	280	1714	269	0.00	82.3
Crystal 875RR	219	316.0	100	8443	110	1.13	41.48	101	1114	111	16.92	26.61	274	1835	285	0.00	74.6
Crystal 878RR	236	326.2	104	8440	110	1.10	43.96	107	1137	113	17.41	25.91	193	1740	319	0.00	76.5
Crystal 879RR	245	308.0	98	8232	107	1.15	39.53	96	1062	106	16.53	26.78	230	1782	328	0.00	77.6
Crystal 880RR	228	323.9	103	7446	97	1.06	43.40	105	998	99	17.25	23.18	243	1639	296	0.00	79.8
Crystal 981RR	267	319.1	101	8994	117	1.14	42.22	102	1182	117	17.10	28.53	286	1792	304	0.00	73.9
Crystal 982RR	205	308.8	98	7472	97	1.13	39.72	96	958	95	16.58	24.35	405	1665	280	0.00	76.5
Crystal 983RR	216	293.3	93	7556	98	1.06	35.94	87	924	92	15.74	25.88	311	1659	271	0.00	74.4
Crystal 984RR	264	316.3	100	8032	104	1.10	41.56	101	1053	105	16.92	25.53	365	1727	260	0.00	79.5
Crystal 985RR	222	317.4	101	8258	107	1.06	41.79	101	1089	108	16.92	26.06	213	1708	290	0.00	79.4
Crystal 986RR	247	324.9	103	7791	101	0.99	43.62	106	1053	105	17.22	23.94	240	1643	250	0.00	71.4
Hilleshög 4043RR(9043RR)	256	314.0	100	7584	99	1.01	41.00	99	994	99	16.71	24.14	192	1667	276	0.00	84.0
Hilleshög 4085RR(9085RR)	214	304.8	97	7239	94	1.15	38.73	94	917	91	16.39	23.80	286	1738	326	0.00	84.1
Hilleshög 9086RR	243	313.5	99	7125	93	1.11	40.86	99	931	93	16.78	22.78	307	1783	272	0.00	61.7
Hilleshög 4094RR(9094RR)	231	328.1	104	8108	105	1.06	44.42	108	1088	108	17.48	24.87	255	1776	267	0.00	83.1
Hilleshög 4097RR(9097RR)	265	317.6	101	7512	98	1.03	41.86	101	991	99	16.91	23.73	277	1693	252	0.00	79.2
Hilleshög 4114RR(9114RR)	224	320.4	102	7026	91	0.99	42.53	103	938	93	17.00	21.93	166	1636	281	0.00	67.8
Hilleshög 9160RR	235	312.6	99	7158	93	0.99	40.64	99	934	93	16.62	22.92	199	1793	227	0.00	75.2
Hilleshög 9161RR	217	316.3	100	7260	94	1.03	41.55	101	952	95	16.85	23.05	256	1724	250	0.00	70.7
Hilleshög 9162RR	259	300.5	95	7453	97	1.05	37.69	91	936	93	16.07	24.91	450	1579	226	0.00	77.8
Hilleshög 9163RR	201	297.2	94	7450	97	1.16	36.87	89	931	92	16.01	25.06	365	1829	276	0.00	79.1
Hilleshög 9189RR	244	292.2	93	6434	84	1.18	35.67	86	797	79	15.79	21.82	376	1763	304	0.00	62.5
Hilleshög 9194RR	213	308.4	98	7819	102	1.16	39.61	96	1009	100	16.57	25.31	301	1822	298	0.00	42.1
Hilleshög 9195RR	261	325.5	103	8684	113	1.07	43.78	106	1170	116	17.34	26.74	249	1841	257	0.00	73.8
Hilleshög 9197RR	240	310.9	99	6674	87	0.95	40.22	97	859	85	16.50	21.64	223	1676	225	0.00	70.5
Hilleshög 9198RR	253	291.2	92	6443	84	1.12	35.43	86	775	77	15.70	22.37	332	1758	279	0.00	76.6
Hilleshög 9199RR	209	323.0	103	7896	103	0.99	43.19	105	1054	105	17.13	24.75	239	1711	230	0.00	57.3
Hilleshög 9216RR	254	312.7	99	7979	104	0.98	40.67	99	1044	104	16.61	25.40	294	1676	212	0.00	83.7
Hilleshög 9218RR	237	287.1	91	7372	96	1.24	34.43	83	885	88	15.61	25.69	400	1829	333	0.00	67.1
Seedex SX0881RR (Unicorn)	225	314.0	100	8036	105	1.05	40.98	99	1050	104	16.74	25.67	299	1629	274	0.00	67.2
Seedex SX0883RR (Usher)	251	313.1	99	7566	98	1.03	40.75	99	984	98	16.69	24.28	215	1731	265	0.00	88.0
Seedex SX0884RR (Uplander)	215	338.8	107	8109	105	0.94	47.01	114	1116	111	17.87	24.28	200	1585	237	0.00	78.8
Seedex SX0891RR	248	332.6	106	7576	99	1.03	45.51	110	1040	103	17.65	22.79	239	1573	289	0.00	82.1
Seedex SX0892RR	203	303.1	96	7961	104	0.99	38.32	93	1008	100	16.14	26.37	223	1623	259	0.00	82.0
Seedex SX0893RR	230	328.8	104	8315	108	0.92	44.60	108	1121	111	17.36	25.58	139	1621	239	0.00	78.6
Seedex SX0894RR	266	328.6	104	7705	100	0.93	44.55	108	1039	103	17.36	23.58	174	1556	250	0.00	90.1
Seedex SX0895RR	221	323.6	103	7835	102	0.96	43.34	105	1058	105	17.12	24.19	210	1571	250	0.00	90.4
SESVanderhave H36811RR	238	339.0	108	6980	91	0.91	47.06	114	973	97	17.85	20.50	150	1445	269	0.00	86.5
SESVanderhave H36812RR	262	319.1	101	8108	105	1.02	42.21	102	1071	106	16.96	25.41	239	1685	253	0.00	81.9
SESVanderhave H36813RR	223	328.1	104	8628	112	0.93	44.41	108	1171	116	17.32	26.32	164	1581	249	0.00	85.8
SESVanderhave H36911RR	241	321.1	102	7571	98	1.02	42.71	104	1007	100	17.07	23.72	220	1562	297	0.00	86.3
SESVanderhave H36912RR	208	311.8	99	7842	102	1.05	40.45	98	1007	100	16.66	25.44	248	1682	284	0.00	78.9
SESVanderhave H36913RR	249	317.9	101	8157	106	0.95	41.93	102	1086	108	16.83	25.50	213	1617	230	0.00	72.5
SESVanderhave H36914RR	258	337.6	107	7867	102	0.93	46.74	113	1088	108	17.81	23.51	179	1459	271	0.00	81.3
SESVanderhave H36915RR	232	324.7	103	8236	107	0.89	43.59	106	1105	110	17.13	25.50	176	1541	227	0.00	78.8
SESVanderhave H36916RR	202	320.9	102	7681	100	0.96	42.66	103	1025	102	17.00	23.91	269	1591	228	0.00	86.3
SESVanderhave H36917RR	210	326.6	104	7296	95	1.01	44.04	107	989	98	17.32	22.42	233	1589	277	0.00	79.4
SESVanderhave H36918RR	242	335.8	107	7990	104	0.88	46.31	112	1104	110	17.67	23.71	208	1537	207	0.00	87.3
Beta 85RR02(Check)	268	315.2	100	7779	101	1.07	41.28	100	1020	101	16.83	24.65	259	1787	265	0.00	68.8
Crystal 539RR(Check)	269	300.2	95	7200	94	1.23	37.63	91	903	90	16.25	24.00	478	1736	315	0.00	75.4
Crystal 658RR(Check)	270	291.7	93	7517	98	1.08	35.54	86	918	91	15.65	25.80	316	1636	282	0.00	64.4
Hilleshög 4012RR(Check)	271	310.6	99	7880	102	1.05	40.14	97	1012	101	16.59	25.38	342	1608	262	0.00	72.6
Filler35	272	317.8	101	8140	106	1.11	41.91	102	1081	107	17.00	25.56	313	1752	284	0.00	80.5
Trial Mean		315.1		7689		1.06	41.25		1006		16.81	24.49	263	1694	274	0.0	76.5
Coeff. of Var. (%)		3.2		6.6		7.2	5.9		8.5		2.7	5.8	30.0	4.2	11.3		10.6
Mean LSD (0.05)		16.6		839		0.13	4.06		140		0.75	2.37	133	120	51		11.8
Mean LSD (0.01)		22.0		1108		0.17	5.35		185		0.99	3.13	175	159	68		15.5
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2009 Data from Averill MN Analyzed 10/26/2009 10:49 Created 11-11-2009.

^ Vigor not collected. Bolter & emergence not adjusted to commercial status. Trial # = 098302

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

++ Revenue estimates are based on a $42.40 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 24.

2009 Performance of Varieties - ACSC Experimental RR Official Trial

Grand Forks ND - All Characters - Light Rzm

Adjusted to Comm. Trial Status		Rec/T	Rec/T	Rec/A	Rec/A	Loss	Rev/T	Rev/T	Rev/A	Rev/A	Sugar	Yield	Na	K	AmN	Bolter	Emerg.
Description @	Code	lbs.	%Mean	lbs.	%Mean	Mol %	$ ++	%Mean	$ ++	%Mean	%	T/A	ppm	ppm	ppm	%^	%^
Beta 88RR03	212	308.1	98	7514	101	1.01	39.55	97	967	99	16.43	24.29	179	1971	205	0.00	69.0
Beta 88RR13	234	297.5	95	6957	93	0.99	37.05	90	869	89	15.86	23.24	206	1856	201	0.00	61.8
Beta 88RR21	206	306.8	98	7538	101	1.06	39.25	96	966	99	16.39	24.48	221	1767	259	0.00	67.5
Beta 88RR31	220	318.0	101	7547	101	1.11	41.88	102	992	102	17.02	23.69	234	1830	280	0.00	76.7
Beta 88RR41	246	309.2	98	7325	98	1.10	39.80	97	944	97	16.56	23.61	158	1904	286	0.00	72.0
Beta 88RR61	263	321.6	102	7954	107	1.09	42.74	104	1054	108	17.15	24.83	225	1846	259	0.00	73.4
Beta 88RR71	204	318.0	101	7088	95	1.11	41.87	102	936	96	17.01	22.10	218	1879	269	0.00	76.8
Beta 89RR10	250	328.1	104	7384	99	1.03	44.25	108	998	102	17.44	22.50	203	1861	234	0.00	73.7
Beta 89RR20	227	319.5	102	7679	103	1.07	42.23	103	1018	105	17.03	23.94	173	1910	252	0.00	67.4
Beta 89RR23	260	299.3	95	6977	93	1.22	37.46	92	875	90	16.19	23.29	250	2192	268	0.00	64.8
Beta 89RR30	218	307.3	98	7914	106	1.01	39.35	96	1015	104	16.37	25.67	217	1852	207	0.00	76.5
Beta 89RR40	255	325.4	104	8006	107	1.07	43.64	107	1074	110	17.35	24.55	227	1826	258	0.00	60.9
Beta 89RR43	229	313.2	100	7587	102	1.21	40.75	100	990	102	16.87	24.05	223	2131	280	0.00	72.1
Beta 89RR50	211	307.8	98	7963	107	1.19	39.48	96	1021	105	16.56	25.87	277	2048	269	0.00	75.6
Beta 89RR60	239	329.8	105	7458	100	0.94	44.67	109	1013	104	17.45	22.49	192	1671	218	0.00	67.5
Beta 89RR63	257	322.3	103	6184	83	0.99	42.90	105	825	85	17.12	19.10	217	1732	227	0.00	66.4
Beta 89RR70	233	311.3	99	7236	97	1.15	40.30	98	937	96	16.70	23.18	250	1967	271	0.00	65.4
Beta 89RR83	252	312.9	100	7951	107	0.95	40.69	99	1035	106	16.60	25.37	203	1736	201	0.00	71.2
Crystal 871RR	207	305.6	97	7590	102	1.19	38.95	95	968	99	16.48	24.69	340	2010	254	0.00	69.8
Crystal 873RR	226	286.8	91	8057	108	1.11	34.54	84	970	100	15.45	28.02	349	1860	227	0.00	70.0
Crystal 875RR	219	312.7	100	7670	103	1.09	40.64	99	998	102	16.72	24.46	224	1998	227	0.00	64.9
Crystal 878RR	236	316.0	101	8125	109	1.13	41.40	101	1066	109	16.93	25.63	181	1956	282	0.00	72.4
Crystal 879RR	245	305.3	97	7694	103	1.10	38.89	95	983	101	16.37	25.11	182	1910	274	0.00	67.3
Crystal 880RR	228	311.7	99	6984	94	1.07	40.39	99	906	93	16.65	22.37	187	1883	256	0.00	73.1
Crystal 981RR	267	308.4	98	8378	112	1.17	39.63	97	1077	111	16.57	27.10	303	2020	249	0.00	75.7
Crystal 982RR	205	306.8	98	7477	100	1.09	39.23	96	958	98	16.43	24.26	332	1744	249	0.00	71.2
Crystal 983RR	216	294.1	94	6878	92	1.04	36.24	89	848	87	15.76	23.30	282	1852	215	0.00	62.4
Crystal 984RR	264	315.0	100	7738	104	1.08	41.18	101	1014	104	16.83	24.39	267	1928	220	0.00	72.4
Crystal 985RR	222	317.8	101	7957	107	1.03	41.85	102	1047	108	16.94	24.97	175	1889	235	0.00	70.7
Crystal 986RR	247	329.2	105	7848	105	0.96	44.51	109	1066	109	17.43	23.69	194	1704	222	0.00	62.4
Hilleshög 4043RR(9043RR)	256	319.1	102	7528	101	0.99	42.15	103	996	102	16.96	23.47	139	1762	250	0.00	72.7
Hilleshög 4085RR(9085RR)	214	310.2	99	7219	97	1.11	40.05	98	934	96	16.63	23.07	246	1992	241	0.00	74.3
Hilleshög 9086RR	243	310.1	99	6740	90	1.01	40.03	98	870	89	16.55	21.70	245	1865	205	0.00	66.2
Hilleshög 4094RR(9094RR)	231	314.8	100	7653	103	1.19	41.13	100	1000	103	16.93	24.19	207	2049	286	0.00	68.6
Hilleshög 4097RR(9097RR)	265	317.3	101	6970	93	1.10	41.71	102	915	94	16.97	21.93	234	1839	263	0.00	69.0
Hilleshög 4114RR(9114RR)	224	326.8	104	7394	99	0.99	43.96	107	997	102	17.35	22.48	161	1644	271	0.00	65.4
Hilleshög 9160RR	235	311.1	99	7200	96	1.09	40.26	98	935	96	16.64	23.00	258	1973	225	0.00	60.0
Hilleshög 9161RR	217	308.2	98	6798	91	1.19	39.57	97	876	90	16.59	21.94	366	1874	280	0.00	61.6
Hilleshög 9162RR	259	308.6	98	7160	96	0.98	39.67	97	922	95	16.43	23.15	268	1778	197	0.00	72.5
Hilleshög 9163RR	201	309.2	98	7425	99	1.02	39.80	97	958	98	16.49	23.90	216	1837	219	0.00	73.0
Hilleshög 9189RR	244	285.8	91	7056	95	1.27	34.29	84	847	87	15.56	24.52	336	2085	300	0.00	61.8
Hilleshög 9194RR	213	312.9	100	7502	101	1.08	40.69	99	978	100	16.72	23.85	218	1913	244	0.00	42.7
Hilleshög 9195RR	261	318.0	101	8273	111	1.09	41.88	102	1090	112	17.00	25.96	229	2026	219	0.00	62.1
Hilleshög 9197RR	240	327.7	104	7085	95	0.91	44.16	108	957	98	17.32	21.54	189	1729	185	0.00	61.6
Hilleshög 9198RR	253	305.8	97	5830	78	1.06	39.00	95	744	76	16.37	18.97	261	1921	218	0.00	69.6
Hilleshög 9199RR	209	317.6	101	8000	107	1.07	41.79	102	1055	108	16.96	25.03	227	1955	224	0.00	41.6
Hilleshög 9216RR	254	315.3	100	7582	102	1.00	41.23	101	993	102	16.78	23.98	278	1891	178	0.00	72.0
Hilleshög 9218RR	237	288.2	92	7140	96	1.21	34.86	85	865	89	15.62	24.69	332	2002	268	0.00	63.2
Seedex SX0881RR (Unicorn)	225	309.0	98	7425	99	1.04	39.77	97	958	98	16.49	24.03	247	1821	228	0.00	71.6
Seedex SX0883RR (Usher)	251	318.0	101	7861	105	0.99	41.88	102	1036	106	16.91	24.64	192	1765	227	0.00	74.0
Seedex SX0884RR (Uplander)	215	326.2	104	7297	98	0.97	43.83	107	985	101	17.30	22.19	185	1742	227	0.00	77.5
Seedex SX0891RR	248	331.8	106	7342	98	0.94	45.13	110	1001	103	17.54	22.07	161	1690	221	0.00	79.5
Seedex SX0892RR	203	314.3	100	8040	108	0.98	41.01	100	1051	108	16.72	25.53	193	1737	227	0.00	84.5
Seedex SX0893RR	230	327.2	104	7800	104	0.94	44.06	108	1053	108	17.31	23.75	165	1710	209	0.00	78.3
Seedex SX0894RR	266	317.8	101	7281	98	0.99	41.84	102	960	99	16.90	22.88	205	1804	213	0.00	85.1
Seedex SX0895RR	221	315.1	100	6973	93	1.00	41.20	101	911	94	16.75	22.13	218	1821	209	0.00	88.4
SESVanderhave H36811RR	238	330.2	105	7212	97	0.93	44.77	109	978	100	17.47	21.68	136	1643	238	0.00	80.5
SESVanderhave H36812RR	262	311.8	99	7986	107	1.03	40.41	99	1036	106	16.61	25.52	190	1854	234	0.00	79.3
SESVanderhave H36813RR	223	314.9	100	7636	102	1.00	41.16	101	1002	103	16.75	24.07	178	1823	223	0.00	82.6
SESVanderhave H36911RR	241	319.2	102	7531	101	1.03	42.15	103	996	102	17.00	23.56	197	1815	240	0.00	68.7
SESVanderhave H36912RR	208	310.8	99	7491	100	1.00	40.18	98	968	99	16.56	24.07	210	1818	221	0.00	77.0
SESVanderhave H36913RR	249	320.4	102	7941	106	0.93	42.45	104	1053	108	16.97	24.75	183	1678	210	0.00	70.3
SESVanderhave H36914RR	258	322.9	103	7198	96	0.98	43.03	105	961	99	17.13	22.22	195	1752	222	0.00	79.9
SESVanderhave H36915RR	232	318.6	101	8094	108	0.97	42.02	103	1069	110	16.93	25.24	203	1762	214	0.00	70.9
SESVanderhave H36916RR	202	318.3	101	7610	102	0.98	41.96	103	1005	103	16.93	23.86	175	1829	219	0.00	81.8
SESVanderhave H36917RR	210	327.4	104	7597	102	0.95	44.10	108	1024	105	17.34	23.11	148	1676	237	0.00	76.9
SESVanderhave H36918RR	242	322.8	103	7106	95	0.97	43.00	105	951	98	17.12	21.91	200	1773	210	0.00	84.4
Beta 85RR02(Check)	268	315.6	100	7345	98	1.11	41.32	101	964	99	16.89	23.19	266	2027	220	0.00	72.3
Crystal 539RR(Check)	269	310.1	99	7498	100	1.08	40.02	98	970	100	16.58	24.09	283	1924	219	0.00	60.5
Crystal 658RR(Check)	270	301.4	96	7324	98	0.95	37.97	93	925	95	16.04	24.22	225	1810	180	0.00	66.2
Hilleshög 4012RR(Check)	271	313.4	100	7482	100	1.07	40.81	100	977	100	16.73	23.80	261	1824	241	0.00	66.8
Filler35	272	318.5	101	7151	96	1.12	42.01	103	943	97	17.03	22.42	281	1888	254	0.00	71.9
Trial Mean		314.0		7465		1.06	40.94		974		16.76	23.70	225	1859	236	0.0	70.5
Coeff. of Var. (%)		3.0		5.1		6.8	5.4		6.5		2.6	4.8	24.3	5.0	13.7		12.5
Mean LSD (0.05)		14.1		565		0.11	3.32		93		0.65	1.71	86	135	50		12.7
Mean LSD (0.01)		18.6		745		0.15	4.39		123		0.85	2.26	113	178	66		16.8
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2009 Data from Grand Forks ND

Analyzed 10/28/2009 09:04

Created 11-11-2009.

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

Trial # = 098307

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

++ Revenue estimates are based on a $42.40 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 25.

2009 Performance of Varieties - ACSC Experimental RR Official Trial

Argyle MN - All Characters - Moderate Rzm

Adjusted to Comm. Trial Status		Rec/T	Rec/T	Rec/A	Rec/A	Loss	Rev/T	Rev/T	Rev/A	Rev/A	Sugar	Yield	Na	K	AmN	Bolter	Emerg.
Description @	Code	lbs.	%Mean	lbs.	%Mean	Mol %	$ ++	%Mean	$ ++	%Mean	%	T/A	ppm	ppm	ppm	%^	%^
Beta 88RR03	212	289.6	98	6213	90	1.23	35.11	97	753	89	15.71	21.45	228	1960	353	0.00	62.9
Beta 88RR13	234	281.5	96	6459	94	1.27	33.21	92	761	90	15.32	23.02	239	2058	351	0.00	64.6
Beta 88RR21	206	286.8	98	6834	99	1.14	34.45	95	823	97	15.48	23.74	210	1752	342	0.00	80.1
Beta 88RR31	220	294.5	100	6805	99	1.28	36.25	100	841	99	16.00	23.02	280	1866	397	0.00	80.0
Beta 88RR41	246	286.4	97	7099	103	1.14	34.38	95	850	100	15.46	24.85	191	1754	348	0.00	88.9
Beta 88RR61	263	298.1	101	7369	107	1.17	37.10	103	918	108	16.08	24.61	188	1877	342	0.00	74.4
Beta 88RR71	204	302.4	103	6765	98	1.12	38.10	105	854	101	16.25	22.32	183	1742	342	0.00	88.3
Beta 89RR10	250	300.6	102	6426	93	1.16	37.67	104	805	95	16.19	21.44	187	1810	351	0.00	76.6
Beta 89RR20	227	296.4	101	7240	105	1.19	36.69	101	896	106	16.01	24.36	154	1853	374	0.00	79.6
Beta 89RR23	260	283.4	96	6453	94	1.23	33.66	93	765	90	15.40	22.80	218	2019	349	0.00	59.9
Beta 89RR30	218	283.6	96	7433	108	1.11	33.70	93	884	104	15.30	26.12	271	1815	285	0.00	82.2
Beta 89RR40	255	298.9	102	7216	105	1.11	37.28	103	899	106	16.05	24.13	216	1786	309	0.00	72.1
Beta 89RR43	229	290.7	99	6074	88	1.29	35.36	98	736	87	15.80	21.00	199	2089	370	0.00	49.4
Beta 89RR50	211	294.5	100	7691	111	1.35	36.24	100	947	112	16.05	26.13	279	2022	410	0.00	81.9
Beta 89RR60	239	313.9	107	6565	95	1.03	40.79	113	853	101	16.74	20.85	191	1596	310	0.00	75.5
Beta 89RR63	257	297.8	101	5712	83	1.25	37.01	102	706	83	16.11	19.34	218	1843	411	0.00	58.0
Beta 89RR70	233	288.5	98	6567	95	1.24	34.84	96	794	94	15.67	22.74	287	1876	365	0.00	67.8
Beta 89RR83	252	285.0	97	6930	100	1.19	34.02	94	826	97	15.44	24.37	245	1815	361	0.00	82.4
Crystal 871RR	207	294.9	100	7475	108	1.23	36.36	101	922	109	15.97	25.35	276	1998	326	0.00	87.4
Crystal 873RR	226	273.3	93	7637	111	1.15	31.31	87	878	103	14.82	27.70	283	1769	328	0.00	75.1
Crystal 875RR	219	291.7	99	7044	102	1.28	35.59	98	861	101	15.85	24.12	245	2027	364	0.00	92.7
Crystal 878RR	236	297.2	101	7525	109	1.28	36.88	102	935	110	16.13	25.26	153	1822	449	0.00	84.7
Crystal 879RR	245	279.7	95	7190	104	1.18	32.81	91	841	99	15.15	25.72	194	1892	347	0.00	86.0
Crystal 880RR	228	291.6	99	7047	102	1.14	35.57	98	858	101	15.72	24.11	172	1785	348	0.00	85.1
Crystal 981RR	267	287.3	98	7995	116	1.23	34.58	96	964	114	15.60	27.75	286	1936	350	0.00	90.4
Crystal 982RR	205	296.1	101	7322	106	1.17	36.64	101	907	107	15.97	24.60	266	1683	372	0.00	88.2
Crystal 983RR	216	278.0	95	6501	94	1.11	32.40	90	756	89	15.01	23.42	236	1741	316	0.00	67.2
Crystal 984RR	264	294.1	100	7311	106	1.13	36.15	100	897	106	15.84	24.88	247	1832	307	0.00	81.2
Crystal 985RR	222	306.1	104	7593	110	1.11	38.95	108	966	114	16.44	24.74	148	1788	337	0.00	88.8
Crystal 986RR	247	295.4	100	6440	93	1.13	36.46	101	798	94	15.90	21.69	227	1668	347	0.00	55.2
Hilleshög 4043RR(9043RR)	256	292.2	99	6787	98	1.00	35.72	99	832	98	15.63	23.17	154	1578	304	0.00	79.4
Hilleshög 4085RR(9085RR)	214	295.6	101	6680	97	1.18	36.51	101	826	97	15.98	22.60	200	1894	349	0.00	82.1
Hilleshög 9086RR	243	292.0	99	6453	94	1.08	35.67	99	787	93	15.68	22.10	212	1774	287	0.00	73.5
Hilleshög 4094RR(9094RR)	231	297.0	101	6660	97	1.28	36.82	102	825	97	16.12	22.43	212	1896	419	0.00	78.1
Hilleshög 4097RR(9097RR)	265	293.2	100	6386	93	1.21	35.95	99	783	92	15.88	21.82	222	1918	358	0.00	64.8
Hilleshög 4114RR(9114RR)	224	298.7	102	6251	91	1.09	37.25	103	778	92	16.01	20.95	168	1639	347	0.00	56.8
Hilleshög 9160RR	235	295.5	100	6254	91	1.19	36.50	101	777	92	15.98	20.97	165	1869	373	0.00	72.4
Hilleshög 9161RR	217	291.2	99	5922	86	1.10	35.46	98	722	85	15.67	20.34	238	1704	321	0.00	66.7
Hilleshög 9162RR	259	293.1	100	6397	93	1.10	35.92	99	782	92	15.75	21.89	229	1785	299	0.00	85.1
Hilleshög 9163RR	201	293.1	100	7260	105	1.07	35.93	99	889	105	15.72	24.77	190	1725	304	0.00	80.8
Hilleshög 9189RR	244	286.5	97	6285	91	1.15	34.38	95	754	89	15.49	21.93	245	1915	300	0.00	56.7
Hilleshög 9194RR	213	284.5	97	6810	99	1.20	33.92	94	813	96	15.43	23.86	243	1798	371	0.00	42.4
Hilleshög 9195RR	261	291.6	99	7308	106	1.17	35.55	98	889	105	15.76	25.12	237	1856	340	0.00	70.3
Hilleshög 9197RR	240	293.5	100	6185	90	1.10	36.01	100	755	89	15.76	21.22	213	1791	302	0.00	64.1
Hilleshög 9198RR	253	277.5	94	4797	70	1.24	32.28	89	560	66	15.13	17.17	265	1804	399	0.00	79.2
Hilleshög 9199RR	209	297.0	101	6515	94	1.16	36.83	102	809	95	15.98	21.88	222	1750	349	0.00	42.9
Hilleshög 9216RR	254	287.4	98	6345	92	1.15	34.59	96	763	90	15.53	22.05	268	1785	328	0.00	99.2
Hilleshög 9218RR	237	286.6	97	7011	102	1.11	34.40	95	843	99	15.45	24.37	228	1749	319	0.00	70.4
Seedex SX0881RR (Unicorn)	225	305.6	104	6935	101	1.03	38.84	107	885	104	16.32	22.63	176	1615	306	0.00	78.0
Seedex SX0883RR (Usher)	251	291.2	99	6937	101	1.01	35.46	98	847	100	15.57	23.75	183	1696	265	0.00	89.8
Seedex SX0884RR (Uplander)	215	296.4	101	7020	102	0.99	36.69	101	867	102	15.84	23.65	206	1599	274	0.00	97.4
Seedex SX0891RR	248	302.1	103	7168	104	1.03	38.03	105	905	107	16.15	23.58	168	1716	280	0.00	87.9
Seedex SX0892RR	203	295.2	100	7793	113	1.02	36.43	101	960	113	15.79	26.40	176	1604	305	0.00	94.3
Seedex SX0893RR	230	300.7	102	7304	106	1.10	37.70	104	918	108	16.15	24.15	173	1719	335	0.00	81.1
Seedex SX0894RR	266	296.4	101	7225	105	1.10	36.70	102	894	105	15.93	24.36	172	1763	319	0.00	102.1
Seedex SX0895RR	221	297.5	101	7228	105	1.01	36.95	102	897	106	15.90	24.25	178	1686	276	0.00	98.6
SESVanderhave H36811RR	238	308.8	105	6621	96	0.99	39.59	110	851	100	16.45	21.37	158	1560	300	0.00	90.6
SESVanderhave H36812RR	262	295.3	100	7498	109	1.04	36.46	101	927	109	15.85	25.22	177	1690	300	0.00	92.3
SESVanderhave H36813RR	223	293.8	100	7659	111	1.11	36.08	100	940	111	15.81	26.00	189	1731	333	0.00	96.6
SESVanderhave H36911RR	241	301.0	102	6390	93	1.05	37.76	104	799	94	16.12	21.40	169	1702	313	0.00	84.1
SESVanderhave H36912RR	208	303.9	103	7225	105	1.01	38.44	106	915	108	16.23	23.70	159	1699	273	0.00	77.9
SESVanderhave H36913RR	249	303.3	103	7270	105	1.00	38.30	106	917	108	16.19	23.97	150	1579	305	0.00	88.3
SESVanderhave H36914RR	258	302.5	103	6713	97	1.04	38.13	105	846	100	16.19	22.15	199	1653	304	0.00	98.0
SESVanderhave H36915RR	232	295.6	101	7025	102	1.05	36.51	101	868	102	15.86	23.70	192	1684	309	0.00	81.2
SESVanderhave H36916RR	202	303.0	103	7092	103	1.05	38.24	106	896	106	16.24	23.42	189	1719	299	0.00	92.3
SESVanderhave H36917RR	210	310.2	105	7310	106	1.03	39.92	110	940	111	16.54	23.62	164	1699	289	0.00	91.5
SESVanderhave H36918RR	242	305.9	104	7390	107	1.01	38.91	108	944	111	16.34	23.96	146	1686	288	0.00	100.6
Beta 85RR02(Check)	268	297.9	101	7109	103	1.17	37.05	102	883	104	16.07	23.85	233	2013	290	0.00	76.8
Crystal 539RR(Check)	269	290.4	99	6557	95	1.31	35.28	98	797	94	15.81	22.57	269	1888	413	0.00	71.3
Crystal 658RR(Check)	270	289.6	98	7368	107	1.05	35.11	97	891	105	15.53	25.44	215	1684	286	0.00	74.9
Hilleshög 4012RR(Check)	271	295.4	100	6938	101	1.11	36.48	101	858	101	15.89	23.42	249	1721	308	0.00	71.6
Filler35	272	289.1	98	7621	110	1.16	35.00	97	924	109	15.62	26.25	262	1832	329	0.00	89.5
Trial Mean		294.1		6898		1.14	36.16		848		15.85	23.44	211	1787	332	0.0	78.9
Coeff. of Var. (%)		3.1		6.2		7.8	5.9		7.7		2.8	5.8	21.3	4.3	17.2		9.3
Mean LSD (0.05)		13.7		657		0.13	3.21		101		0.65	2.08	67	115	81		10.5
Mean LSD (0.01)		18.1		867		0.17	4.24		133		0.87	2.74	88	152	107		13.8
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2009 Data from Argyle MN

Analyzed 10/26/2009 13:47

Created 11-11-2009.

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

Trial # = 098308

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

++ Revenue estimates are based on a $42.40 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 26.

2009 Performance of Varieties - ACSC Experimental RR Official Trial

St Thomas ND - All Characters - Light Rzm

Adjusted to Comm. Trial Status		Rec/T	Rec/T	Rec/A	Rec/A	Loss	Rev/T	Rev/T	Rev/A	Rev/A	Sugar	Yield	Na	K	AmN	Bolter	Emerg.
Description @	Code	lbs.	%Mean	lbs.	%Mean	Mol %	$ ++	%Mean	$ ++	%Mean	%	T/A	ppm	ppm	ppm	%^	%^
Beta 88RR03	212	264.9	101	6112	103	0.99	29.09	102	671	104	14.24	23.06	181	1669	264	0.00	61.2
Beta 88RR13	234	258.3	98	6003	101	1.08	27.57	96	642	99	13.98	23.16	242	1675	304	0.00	51.1
Beta 88RR21	206	248.9	95	5866	99	0.99	25.40	89	598	92	13.42	23.56	260	1511	283	0.00	73.1
Beta 88RR31	220	264.2	101	6624	111	1.22	28.91	101	726	112	14.39	25.03	311	1717	378	0.00	54.7
Beta 88RR41	246	261.6	100	6460	109	1.07	28.32	99	702	108	14.13	24.61	201	1615	337	0.00	62.7
Beta 88RR61	263	274.7	105	6906	116	1.05	31.34	110	787	122	14.78	25.15	218	1529	333	0.00	59.4
Beta 88RR71	204	266.1	101	6445	108	1.09	29.37	103	712	110	14.39	24.20	248	1498	364	0.00	70.0
Beta 89RR10	250	281.4	107	6334	106	1.07	32.88	115	739	114	15.14	22.54	225	1582	331	0.00	59.9
Beta 89RR20	227	273.0	104	6392	107	1.12	30.96	108	726	112	14.76	23.37	185	1714	365	0.00	53.0
Beta 89RR23	260	252.7	96	5908	99	1.25	26.28	92	614	95	13.86	23.39	278	1802	405	0.00	43.9
Beta 89RR30	218	257.4	98	7057	119	1.07	27.37	96	747	115	13.93	27.50	306	1528	308	0.00	61.3
Beta 89RR40	255	269.7	103	6864	115	1.15	30.20	106	767	119	14.63	25.46	240	1474	422	0.00	57.4
Beta 89RR43	229	259.7	99	6163	104	1.28	27.91	98	663	102	14.22	23.68	244	1903	395	0.00	48.5
Beta 89RR50	211	261.8	100	6916	116	1.25	28.36	99	750	116	14.31	26.38	348	1694	398	0.00	66.6
Beta 89RR60	239	270.4	103	6714	113	0.94	30.37	106	753	116	14.46	24.83	265	1485	228	0.00	57.2
Beta 89RR63	257	272.5	104	5633	95	0.99	30.86	108	637	98	14.63	20.65	212	1467	300	0.00	52.8
Beta 89RR70	233	267.9	102	5645	95	1.20	29.78	104	625	97	14.57	21.11	311	1550	408	0.00	46.9
Beta 89RR83	252	256.4	98	6823	115	0.99	27.14	95	721	111	13.81	26.62	250	1503	277	0.00	62.5
Crystal 871RR	207	259.7	99	6185	104	1.16	27.91	98	665	103	14.13	23.81	348	1532	366	0.00	59.7
Crystal 873RR	226	244.5	93	6348	107	1.01	24.40	85	632	98	13.24	26.00	312	1441	287	0.00	63.0
Crystal 875RR	219	263.5	100	6018	101	1.08	28.77	101	656	101	14.24	22.85	265	1610	315	0.00	73.5
Crystal 878RR	236	261.5	100	6133	103	1.22	28.30	99	664	103	14.26	23.44	199	1677	435	0.00	77.2
Crystal 879RR	245	261.6	100	5594	94	1.07	28.32	99	606	94	14.13	21.37	182	1632	340	0.00	64.7
Crystal 880RR	228	266.4	101	5821	98	1.07	29.42	103	643	99	14.38	21.85	191	1569	353	0.00	57.5
Crystal 981RR	267	254.8	97	6730	113	1.24	26.77	94	708	109	13.96	26.37	384	1598	395	0.00	69.1
Crystal 982RR	205	250.5	95	5282	89	1.06	25.78	90	543	84	13.56	21.08	363	1414	317	0.00	62.9
Crystal 983RR	216	241.2	92	5438	91	0.99	23.66	83	532	82	13.05	22.56	273	1475	287	0.00	58.7
Crystal 984RR	264	276.2	105	6049	102	1.02	31.68	111	695	107	14.81	21.86	232	1598	274	0.00	73.8
Crystal 985RR	222	267.7	102	6026	101	1.04	29.74	104	668	103	14.41	22.53	217	1554	320	0.00	61.5
Crystal 986RR	247	264.4	101	5598	94	0.96	28.98	101	616	95	14.18	21.08	229	1413	283	0.00	54.5
Hilleshög 4043RR(9043RR)	256	271.3	103	6540	110	0.88	30.57	107	737	114	14.46	24.08	166	1440	241	0.00	56.3
Hilleshög 4085RR(9085RR)	214	259.2	99	5915	99	1.09	27.77	97	633	98	14.06	22.83	240	1531	357	0.00	70.6
Hilleshög 9086RR	243	256.6	98	5766	97	1.01	27.17	95	610	94	13.83	22.48	280	1444	295	0.00	58.6
Hilleshög 4094RR(9094RR)	231	260.6	99	5316	89	1.06	28.09	98	574	89	14.07	20.37	258	1537	323	0.00	74.1
Hilleshög 4097RR(9097RR)	265	263.3	100	4604	77	1.05	28.73	101	503	78	14.21	17.45	258	1479	334	0.00	54.5
Hilleshög 4114RR(9114RR)	224	275.7	105	5984	101	0.95	31.57	110	685	106	14.73	21.69	180	1424	303	0.00	48.6
Hilleshög 9160RR	235	257.6	98	5186	87	1.04	27.40	96	553	85	13.91	20.11	219	1700	277	0.00	60.2
Hilleshög 9161RR	217	263.9	100	6276	105	1.10	28.86	101	686	106	14.29	23.78	286	1505	353	0.00	51.9
Hilleshög 9162RR	259	252.4	96	5444	91	0.98	26.22	92	565	87	13.59	21.55	300	1477	255	0.00	73.7
Hilleshög 9163RR	201	256.0	97	6271	105	0.98	27.04	95	663	102	13.77	24.45	250	1484	280	0.00	66.7
Hilleshög 9189RR	244	242.1	92	4972	84	1.18	23.84	83	486	75	13.25	20.63	332	1577	365	0.00	51.1
Hilleshög 9194RR	213	249.0	95	5485	92	1.12	25.43	89	559	86	13.56	22.04	334	1481	365	0.00	38.9
Hilleshög 9195RR	261	247.1	94	6167	104	1.19	24.99	87	621	96	13.52	25.02	367	1596	368	0.00	53.8
Hilleshög 9197RR	240	255.0	97	5220	88	0.99	26.82	94	549	85	13.74	20.45	273	1424	291	0.00	54.1
Hilleshög 9198RR	253	240.2	91	3903	66	1.10	23.40	82	382	59	13.09	16.20	348	1568	302	0.00	66.3
Hilleshög 9199RR	209	259.8	99	5575	94	0.99	27.92	98	600	93	13.99	21.42	253	1465	290	0.00	34.4
Hilleshög 9216RR	254	249.2	95	5903	99	1.01	25.49	89	604	93	13.46	23.64	310	1408	285	0.00	78.4
Hilleshög 9218RR	237	240.6	92	5120	86	1.09	23.49	82	502	78	13.10	21.22	344	1521	318	0.00	58.3
Seedex SX0881RR (Unicorn)	225	266.4	101	5738	96	0.93	29.44	103	633	98	14.25	21.57	284	1365	247	0.00	60.6
Seedex SX0883RR (Usher)	251	264.5	101	6176	104	0.96	29.00	101	678	105	14.18	23.30	208	1531	263	0.00	80.4
Seedex SX0884RR (Uplander)	215	279.7	106	5753	97	0.89	32.49	114	667	103	14.88	20.58	187	1500	222	0.00	76.0
Seedex SX0891RR	248	272.1	104	5840	98	0.92	30.74	108	656	101	14.54	21.57	199	1436	261	0.00	69.6
Seedex SX0892RR	203	259.9	99	6501	109	1.03	27.95	98	697	108	14.03	25.05	217	1513	316	0.00	86.7
Seedex SX0893RR	230	276.3	105	6015	101	0.92	31.70	111	690	107	14.72	21.76	177	1434	263	0.00	70.5
Seedex SX0894RR	266	269.5	103	5608	94	0.90	30.14	105	627	97	14.37	20.80	194	1428	246	0.00	82.0
Seedex SX0895RR	221	269.6	103	6345	107	0.81	30.19	106	710	110	14.32	23.54	180	1401	200	0.00	83.8
SESVanderhave H36811RR	238	278.1	106	5365	90	0.90	32.12	112	617	95	14.80	19.34	177	1395	255	0.00	74.5
SESVanderhave H36812RR	262	262.4	100	6146	103	0.99	28.54	100	668	103	14.12	23.39	198	1510	306	0.00	85.4
SESVanderhave H36813RR	223	267.8	102	6425	108	0.95	29.77	104	714	110	14.34	23.96	207	1489	273	0.00	79.8
SESVanderhave H36911RR	241	267.6	102	5574	94	0.95	29.72	104	619	96	14.34	20.79	195	1360	309	0.00	67.9
SESVanderhave H36912RR	208	262.1	100	5846	98	0.95	28.45	100	634	98	14.05	22.29	235	1482	252	0.00	69.6
SESVanderhave H36913RR	249	270.4	103	6239	105	0.93	30.37	106	700	108	14.46	23.07	175	1445	279	0.00	84.8
SESVanderhave H36914RR	258	271.7	103	5945	100	1.04	30.65	107	669	103	14.62	21.92	232	1398	351	0.00	70.0
SESVanderhave H36915RR	232	264.5	101	5848	98	0.93	29.01	101	642	99	14.16	22.08	237	1415	260	0.00	84.5
SESVanderhave H36916RR	202	272.0	104	6506	109	0.92	30.72	107	733	113	14.52	23.96	206	1466	248	0.00	91.2
SESVanderhave H36917RR	210	277.1	105	6085	102	0.97	31.89	112	701	108	14.83	21.94	202	1462	296	0.00	70.2
SESVanderhave H36918RR	242	280.8	107	6443	108	0.95	32.75	115	751	116	15.00	22.94	189	1495	269	0.00	80.2
Beta 85RR02(Check)	268	265.9	101	6391	107	1.07	29.32	103	703	109	14.37	24.07	322	1628	275	0.00	58.7
Crystal 539RR(Check)	269	263.1	100	5753	97	1.06	28.67	100	627	97	14.20	21.85	345	1545	278	0.00	60.8
Crystal 658RR(Check)	270	249.9	95	5320	89	1.02	25.66	90	546	84	13.50	21.28	233	1496	306	0.00	63.7
Hilleshög 4012RR(Check)	271	263.2	100	5591	94	0.99	28.70	100	609	94	14.16	21.25	288	1444	280	0.00	69.6
Filler35	272	266.5	101	5389	91	1.09	29.46	103	597	92	14.40	20.17	348	1563	308	0.00	67.7
Trial Mean		262.7		5952		1.04	28.58		647		14.16	22.65	252	1523	309	0.0	64.7
Coeff. of Var. (%)		3.0		6.1		6.9	6.3		8.0		2.6	5.7	16.6	5.4	14.7		10.8
Mean LSD (0.05)		12.1		559		0.11	2.79		80		0.57	1.97	67	133	68		10.1
Mean LSD (0.01)		16.0		738		0.14	3.68		106		0.76	2.60	88	175	90		13.3
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2009 Data from St Thomas ND Analyzed 10/26/2009 13:42 Created 11-11-2009.

^ Vigor not collected. Bolter & emergence not adjusted to commercial status. Trial # = 098309

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

++ Revenue estimates are based on a $42.40 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 27.

2009 Performance of Varieties - ACSC Experimental RR Official Trial

Humboldt MN - All Characters - Light Rzm

Adjusted to Comm. Trial Status		Rec/T	Rec/T	Rec/A	Rec/A	Loss	Rev/T	Rev/T	Rev/A	Rev/A	Sugar	Yield	Na	K	AmN	Bolter	Emerg.
Description @	Code	lbs.	%Mean	lbs.	%Mean	Mol %	$ ++	%Mean	$ ++	%Mean	%	T/A	ppm	ppm	ppm	%^	%^
Beta 88RR03	212	282.6	98	5463	98	1.23	33.41	96	646	97	15.37	19.33	200	2049	337	0.00	63.8
Beta 88RR13	234	289.0	100	5231	94	1.16	34.93	101	632	94	15.61	18.09	180	2087	275	0.00	60.8
Beta 88RR21	206	286.1	99	5438	98	1.22	34.25	99	652	97	15.53	19.00	186	2052	327	0.00	75.7
Beta 88RR31	220	290.1	101	5690	102	1.35	35.18	101	689	103	15.85	19.59	208	2285	369	0.00	74.5
Beta 88RR41	246	286.3	99	5668	102	1.22	34.30	99	673	101	15.53	19.93	178	2059	328	0.00	81.7
Beta 88RR61	263	296.2	103	5515	99	1.11	36.64	105	687	103	15.92	18.47	143	1973	285	0.00	75.6
Beta 88RR71	204	291.7	101	5322	96	1.24	35.56	102	646	97	15.82	18.29	211	1994	351	0.00	82.8
Beta 89RR10	250	313.4	109	5485	99	1.23	40.76	117	709	106	16.89	17.56	159	2104	337	0.00	72.5
Beta 89RR20	227	288.7	100	5439	98	1.24	34.84	100	655	98	15.67	18.83	157	2088	348	0.00	75.1
Beta 89RR23	260	273.7	95	5252	94	1.54	31.28	90	600	90	15.21	19.14	208	2558	437	0.00	55.3
Beta 89RR30	218	280.9	97	5382	97	1.17	33.00	95	634	95	15.22	19.13	235	2117	256	0.00	84.3
Beta 89RR40	255	296.8	103	6048	109	1.16	36.81	106	753	112	16.01	20.31	169	1932	321	0.00	73.6
Beta 89RR43	229	282.8	98	4072	73	1.32	33.45	96	481	72	15.46	14.41	214	2256	346	0.00	62.5
Beta 89RR50	211	293.4	102	6052	109	1.32	35.99	104	739	110	15.99	20.71	207	2367	318	0.00	84.9
Beta 89RR60	239	293.8	102	5542	100	1.13	36.09	104	678	101	15.83	18.91	284	1934	262	0.00	77.6
Beta 89RR63	257	290.9	101	4316	78	1.26	35.38	102	523	78	15.81	14.83	166	1977	398	0.00	68.0
Beta 89RR70	233	298.0	103	5501	99	1.30	37.08	107	679	102	16.20	18.64	202	2210	343	0.00	66.2
Beta 89RR83	252	283.2	98	5612	101	1.19	33.56	97	660	99	15.36	19.96	267	2049	283	0.00	72.0
Crystal 871RR	207	277.5	96	5652	102	1.33	32.17	93	652	97	15.19	20.41	259	2328	326	0.00	81.1
Crystal 873RR	226	278.5	97	6133	110	1.12	32.42	93	713	107	15.04	22.01	200	1922	280	0.00	72.2
Crystal 875RR	219	291.2	101	5951	107	1.21	35.43	102	725	108	15.77	20.43	177	2086	316	0.00	76.1
Crystal 878RR	236	273.7	95	5330	96	1.32	31.28	90	608	91	15.01	19.50	228	2159	364	0.00	84.2
Crystal 879RR	245	287.6	100	5731	103	1.15	34.60	100	688	103	15.54	19.94	137	1963	320	0.00	76.8
Crystal 880RR	228	281.9	98	5685	102	1.26	33.23	96	670	100	15.36	20.18	219	2076	343	0.00	83.0
Crystal 981RR	267	272.7	95	6329	114	1.38	31.05	89	709	106	15.02	23.51	387	2310	328	0.00	83.4
Crystal 982RR	205	292.6	101	5463	98	1.26	35.78	103	667	100	15.88	18.70	202	2146	327	0.00	70.0
Crystal 983RR	216	265.3	92	4988	90	1.17	29.25	84	549	82	14.44	18.87	272	1969	287	0.00	65.9
Crystal 984RR	264	303.7	105	6414	115	1.18	38.44	111	811	121	16.36	21.13	188	2106	282	0.00	80.7
Crystal 985RR	222	285.4	99	5732	103	1.16	34.08	98	685	102	15.45	20.08	174	2028	294	0.00	78.6
Crystal 986RR	247	294.5	102	5125	92	1.14	36.26	104	632	94	15.86	17.27	243	1912	291	0.00	65.2
Hilleshög 4043RR(9043RR)	256	287.8	100	5767	104	1.10	34.63	100	690	103	15.49	20.13	164	1869	293	0.00	69.4
Hilleshög 4085RR(9085RR)	214	291.8	101	5376	97	1.15	35.58	102	650	97	15.74	18.57	202	1982	292	0.00	78.0
Hilleshög 9086RR	243	275.4	96	5158	93	1.24	31.68	91	595	89	15.02	18.70	237	2038	333	0.00	69.1
Hilleshög 4094RR(9094RR)	231	281.2	98	5614	101	1.31	33.07	95	657	98	15.37	20.00	199	2177	376	0.00	77.1
Hilleshög 4097RR(9097RR)	265	287.5	100	4773	86	1.28	34.57	99	574	86	15.67	16.61	177	2061	376	0.00	62.0
Hilleshög 4114RR(9114RR)	224	296.7	103	4566	82	1.12	36.77	106	565	84	15.95	15.39	159	1822	316	0.00	59.4
Hilleshög 9160RR	235	283.8	98	5525	99	1.17	33.69	97	654	98	15.38	19.59	176	2079	288	0.00	68.3
Hilleshög 9161RR	217	288.2	100	5159	93	1.20	34.74	100	620	93	15.62	17.97	224	1925	339	0.00	62.3
Hilleshög 9162RR	259	286.7	99	4844	87	1.16	34.39	99	583	87	15.50	16.84	222	1910	307	0.00	77.4
Hilleshög 9163RR	201	287.2	100	5437	98	1.20	34.51	99	650	97	15.56	19.00	190	2007	326	0.00	73.6
Hilleshög 9189RR	244	271.5	94	5403	97	1.28	30.75	88	608	91	14.86	20.00	244	2158	334	0.00	56.6
Hilleshög 9194RR	213	280.5	97	5506	99	1.23	32.91	95	648	97	15.26	19.57	181	2062	336	0.00	48.1
Hilleshög 9195RR	261	276.2	96	6052	109	1.27	31.88	92	693	104	15.07	21.98	204	2202	330	0.00	63.7
Hilleshög 9197RR	240	288.9	100	5600	101	1.25	34.91	100	676	101	15.71	19.40	239	2032	342	0.00	61.8
Hilleshög 9198RR	253	276.2	96	4335	78	1.17	31.88	92	498	74	14.99	15.77	242	1943	304	0.00	68.0
Hilleshög 9199RR	209	291.6	101	5670	102	1.15	35.53	102	690	103	15.73	19.49	182	1896	316	0.00	42.8
Hilleshög 9216RR	254	285.0	99	5853	105	1.15	33.97	98	698	104	15.41	20.50	207	1917	308	0.00	87.8
Hilleshög 9218RR	237	279.7	97	5591	101	1.18	32.72	94	652	98	15.17	20.04	155	2104	296	0.00	64.3
Seedex SX0881RR (Unicorn)	225	296.4	103	5593	101	1.04	36.71	106	698	104	15.86	18.60	159	1875	255	0.00	70.2
Seedex SX0883RR (Usher)	251	295.3	102	5670	102	1.08	36.46	105	697	104	15.86	19.31	161	1898	269	0.00	94.3
Seedex SX0884RR (Uplander)	215	299.9	104	5963	107	1.19	37.53	108	745	111	16.18	19.89	177	1993	329	0.00	83.2
Seedex SX0891RR	248	295.7	103	5652	102	1.26	36.53	105	701	105	16.03	18.97	191	1920	397	0.00	87.7
Seedex SX0892RR	203	272.7	95	6146	111	1.22	31.03	89	699	104	14.86	22.57	235	2051	315	0.00	81.5
Seedex SX0893RR	230	297.6	103	6025	108	1.14	36.99	106	750	112	16.02	20.19	170	1892	314	0.00	78.3
Seedex SX0894RR	266	299.8	104	6346	114	1.10	37.51	108	794	119	16.10	21.19	161	1905	282	0.00	93.1
Seedex SX0895RR	221	287.0	100	5846	105	1.20	34.45	99	703	105	15.56	20.37	182	1983	330	0.00	87.7
SESVanderhave H36811RR	238	300.8	104	5492	99	1.18	37.75	109	688	103	16.22	18.32	192	1927	324	0.00	91.7
SESVanderhave H36812RR	262	292.7	102	5785	104	1.14	35.82	103	713	107	15.79	19.62	188	1904	309	0.00	85.8
SESVanderhave H36813RR	223	293.4	102	6189	111	1.05	35.99	104	760	114	15.74	21.08	125	1885	263	0.00	88.5
SESVanderhave H36911RR	241	298.9	104	5551	100	1.09	37.30	107	693	104	16.04	18.56	161	1860	287	0.00	73.9
SESVanderhave H36912RR	208	285.1	99	5368	97	1.15	33.99	98	634	95	15.40	18.95	224	1941	294	0.00	72.0
SESVanderhave H36913RR	249	295.2	102	5929	107	1.03	36.41	105	732	109	15.80	20.06	142	1881	244	0.00	76.9
SESVanderhave H36914RR	258	308.0	107	5709	103	1.12	39.47	114	732	109	16.53	18.55	163	1803	330	0.00	92.5
SESVanderhave H36915RR	232	295.6	103	5702	103	1.10	36.52	105	705	105	15.88	19.23	175	1878	289	0.00	77.9
SESVanderhave H36916RR	202	289.0	100	5868	106	1.20	34.92	100	708	106	15.65	20.30	221	2006	317	0.00	86.9
SESVanderhave H36917RR	210	294.3	102	5538	100	1.18	36.21	104	677	101	15.89	18.90	235	1925	324	0.00	85.0
SESVanderhave H36918RR	242	303.2	105	5804	104	1.12	38.33	110	729	109	16.28	19.28	177	1927	285	0.00	98.6
Beta 85RR02(Check)	268	274.6	95	5226	94	1.29	31.48	91	598	89	15.03	19.12	265	2173	325	0.00	73.3
Crystal 539RR(Check)	269	280.2	97	5498	99	1.32	32.84	94	647	97	15.35	19.56	317	2195	338	0.00	79.2
Crystal 658RR(Check)	270	276.6	96	5882	106	1.13	31.96	92	678	101	14.95	21.30	182	1932	290	0.00	72.7
Hilleshög 4012RR(Check)	271	298.7	104	5987	108	1.13	37.25	107	746	111	16.06	20.02	187	1950	289	0.00	74.3
Filler35	272	284.3	99	5830	105	1.29	33.81	97	692	103	15.51	20.52	262	2158	334	0.00	77.8
Trial Mean		288.3		5561		1.20	34.75		669		15.62	19.33	202	2029	317	0.0	74.9
Coeff. of Var. (%)		3.0		8.1		7.7	5.9		9.4		2.5	8.1	32.5	4.6	13.2		9.7
Mean LSD (0.05)		13.6		711		0.14	3.24		99		0.61	2.50	104	145	66		11.4
Mean LSD (0.01)		17.9		939		0.19	4.29		130		0.80	3.31	137	191	87		15.0
Sig Lvl		**		**		**	**		**		**	**	ns	**	**		**

* 2009 Data from Humboldt MN

Analyzed 10/26/2009 13:08

Created 11-11-2009.

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

Trial # = 098310

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

++ Revenue estimates are based on a $42.40 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 28.

2009 Performance of Varieties - ACSC Conventional Official Trial

ACS Six Sites - All Characters

Description @	Code	Rec/T lbs.	Rec/T %Mean	Rec/A lbs.	Rec/A %Mean	Loss Mol %	Rev/T $ ++	Rev/T %Mean	Rev/A $ ++	Rev/A %Mean	Sugar %	Yield T/A	Na ppm	K ppm	AmN ppm	Bolter %	Emerg. %
Seedex SX0873TT (Deuce)	6	299.5	100	8130	110	1.02	37.47	100	1017	110	15.99	27.16	162	1696	279	0.00	90.7
Seedex Sonic	3	304.8	102	7914	107	1.06	38.74	103	1002	108	16.30	26.06	180	1679	309	0.11	84.6
SESVanderhave H46519	7	299.7	100	7592	102	1.06	37.52	100	949	102	16.04	25.37	211	1762	279	0.04	81.7
SESVanderhave H46531	1	302.0	101	7314	99	1.04	38.07	101	921	99	16.15	24.22	195	1716	283	0.04	71.9
SESVanderhave H48607TT	5	295.8	99	8454	114	1.05	36.57	97	1040	112	15.83	28.75	170	1763	282	0.04	86.7
SESVanderhave H48716TT	2	298.9	100	7862	106	1.06	37.32	99	981	106	16.00	26.35	164	1716	303	0.00	92.2
SESVanderhave H48717TT	4	293.5	98	8064	109	1.08	36.02	96	987	106	15.75	27.52	168	1692	322	0.15	87.7
Hilleshög 2417Rz(Check)	8	306.1	102	6932	93	1.02	39.06	104	883	95	16.32	22.69	190	1682	275	0.07	69.0
Seedex Rezult(Check)	9	304.4	101	6558	88	1.04	38.65	103	832	90	16.26	21.57	179	1779	269	0.04	70.1
Crystal R434(Check)	10	293.3	98	7082	95	1.29	35.98	96	867	93	15.96	24.20	273	1930	387	0.00	81.4
Beta 1305R(Check)	11	296.8	99	7043	95	1.21	36.82	98	871	94	16.05	23.82	205	1874	367	0.00	72.3
Susc 3N - Aph Tol	12	302.9	101	6134	83	1.08	38.30	102	776	84	16.23	20.23	247	1760	278	0.00	76.5
Filler31	13	293.0	98	8060	109	1.32	35.91	95	986	106	15.97	27.58	252	2093	377	0.00	85.2
Check variety #15	14	296.4	99	6748	91	1.13	36.72	98	833	90	15.95	22.84	196	1778	328	0.00	77.9
Check variety #16	15	316.0	105	7451	100	1.01	41.44	110	978	105	16.81	23.58	202	1635	271	0.00	92.7
Trial Mean		300.2		7423		1.10	37.64		928		16.11	24.79	200	1770	307	0.0	81.4
Coeff. of Var. (%)		3.6		8.1		9.1	6.8		9.4		2.9	8.2	29.0	5.5	16.0		11.1
Mean LSD (0.05)		7.8		637		0.06	1.88		93		0.36	1.93	41	70	32		7.2
Mean LSD (0.01)		10.4		846		0.08	2.49		123		0.48	2.56	55	93	43		9.6
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2009 Data from ACS Six Sites Analyzed 10/21/2009 14:55 Created 11-11-2009.

Vigor not collected. Trial # = 09ACcnv

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

++ Revenue estimates are based on a $42.40 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 29.

2009 Performance of Varieties - ACSC Conventional Official Trial

ACS Three Lgt Rzm Sites - All Characters

Description @	Code	Rec/T lbs.	Rec/T %Mean	Rec/A lbs.	Rec/A %Mean	Loss Mol %	Rev/T $ ++	Rev/T %Mean	Rev/A $ ++	Rev/A %Mean	Sugar %	Yield T/A	Na ppm	K ppm	AmN ppm	Bolter %	Emerg. %
Seedex SX0873TT (Deuce)	6	294.5	100	7726	111	0.99	36.26	100	950	111	15.72	26.21	153	1720	259	0.00	83.9
Seedex Sonic	3	297.9	101	7576	109	1.01	37.08	102	943	110	15.92	25.35	178	1661	282	0.08	80.7
SESVanderhave H46519	7	293.8	100	7107	102	1.03	36.10	99	872	102	15.72	24.14	203	1757	259	0.00	75.8
SESVanderhave H46531	1	299.3	101	6789	97	1.01	37.42	103	850	99	15.97	22.59	186	1726	258	0.08	65.0
SESVanderhave H48607TT	5	290.2	98	8211	118	1.02	35.22	97	993	116	15.53	28.37	169	1736	268	0.00	81.7
SESVanderhave H48716TT	2	295.6	100	7447	107	1.01	36.52	100	918	107	15.78	25.21	140	1714	275	0.00	84.0
SESVanderhave H48717TT	4	288.5	98	8099	116	1.02	34.83	96	975	114	15.44	28.09	172	1660	286	0.15	81.5
Hilleshög 2417Rz(Check)	8	299.8	102	6473	93	0.97	37.54	103	815	95	15.97	21.42	168	1665	245	0.08	63.9
Seedex Rezult(Check)	9	299.6	102	6131	88	0.99	37.49	103	769	90	15.97	20.36	169	1747	246	0.08	66.0
Crystal R434(Check)	10	284.2	96	6471	93	1.26	33.79	93	770	90	15.48	22.67	282	1930	360	0.00	74.6
Beta 1305R(Check)	11	290.8	99	6112	88	1.16	35.38	97	744	87	15.70	21.02	184	1902	329	0.00	63.7
Susc 3N - Aph Tol	12	301.9	102	6198	89	1.06	38.06	105	781	91	16.17	20.49	210	1818	264	0.00	69.5
Filler31	13	287.3	97	7392	106	1.28	34.54	95	887	103	15.64	25.71	240	2137	340	0.00	80.6
Check variety #15	14	288.9	98	6198	89	1.09	34.92	96	748	87	15.53	21.47	197	1798	294	0.00	71.9
Check variety #16	15	312.1	106	6711	96	0.94	40.49	111	870	101	16.54	21.50	190	1605	237	0.00	85.7
Trial Mean		295.0		6976		1.06	36.38		859		15.81	23.64	189	1772	280	0.0	75.2
Coeff. of Var. (%)		3.4		7.8		8.4	6.7		9.0		2.9	8.0	24.9	5.4	16.9		13.3
Mean LSD (0.05)		9.6		837		0.08	2.30		118		0.44	2.64	40	100	40		10.4
Mean LSD (0.01)		12.9		1130		0.10	3.10		159		0.60	3.57	52	135	53		14.0
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2009 Data from ACS Three Lgt Rzm Sites Analyzed 11/09/2009 12:42 Created 11-11-2009.

Vigor not collected. Trial # = 09CvLgt

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

++ Revenue estimates are based on a $42.40 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 30.

2009 Performance of Varieties - ACSC Conventional Official Trial

ACS Three Mod Rzm Sites - All Characters

Description @	Code	Rec/T lbs.	Rec/T %Mean	Rec/A lbs.	Rec/A %Mean	Loss Mol %	Rev/T $ ++	Rev/T %Mean	Rev/A $ ++	Rev/A %Mean	Sugar %	Yield T/A	Na ppm	K ppm	AmN ppm	Bolter %	Emerg. %
Seedex SX0873TT (Deuce)	6	303.8	99	8528	108	1.06	38.50	99	1082	109	16.25	28.03	177	1673	308	0.00	100.7
Seedex Sonic	3	309.9	101	8250	105	1.12	39.97	103	1059	106	16.61	26.72	192	1697	342	0.14	90.6
SESVanderhave H46519	7	305.9	100	8076	103	1.08	39.01	100	1026	103	16.38	26.53	217	1767	295	0.07	90.6
SESVanderhave H46531	1	304.9	100	7829	100	1.08	38.78	100	992	99	16.33	25.72	203	1707	312	0.00	82.2
SESVanderhave H48607TT	5	301.2	99	8706	111	1.07	37.87	97	1089	109	16.13	29.12	170	1790	296	0.07	94.2
SESVanderhave H48716TT	2	302.5	99	8274	105	1.10	38.19	98	1043	105	16.23	27.41	183	1717	331	0.00	104.3
SESVanderhave H48717TT	4	299.6	98	8037	102	1.12	37.50	96	1002	100	16.11	26.92	163	1723	354	0.14	96.9
Hilleshög 2417Rz(Check)	8	310.9	102	7380	94	1.07	40.22	103	950	95	16.61	23.87	216	1698	298	0.07	76.6
Seedex Rezult(Check)	9	310.0	102	6983	89	1.07	39.98	103	896	90	16.57	22.69	183	1811	289	0.00	76.5
Crystal R434(Check)	10	300.7	98	7676	98	1.33	37.75	97	960	96	16.37	25.61	271	1931	419	0.00	91.4
Beta 1305R(Check)	11	302.9	99	7952	101	1.26	38.29	98	997	100	16.40	26.49	222	1848	402	0.00	85.0
Susc 3N - Aph Tol	12	304.0	100	6085	77	1.09	38.54	99	774	78	16.28	19.97	278	1707	288	0.00	86.8
Filler31	13	300.1	98	8723	111	1.36	37.60	97	1084	109	16.37	29.36	261	2052	415	0.00	92.2
Check variety #15	14	304.5	100	7296	93	1.16	38.68	99	921	92	16.39	24.16	197	1759	360	0.00	87.0
Check variety #16	15	320.6	105	8183	104	1.07	42.54	109	1085	109	17.10	25.56	214	1663	309	0.00	103.0
Trial Mean		305.4		7865		1.14	38.89		997		16.41	25.88	210	1769	335	0.0	90.5
Coeff. of Var. (%)		3.7		8.2		8.9	6.9		9.6		3.0	8.3	30.9	5.6	13.7		8.4
Mean LSD (0.05)		13.8		938		0.12	3.32		147		0.63	2.59	78	98	63		13.4
Mean LSD (0.01)		18.6		1267		0.16	4.48		198		0.84	3.50	105	133	85		18.5
Sig Lvl		ns		**		**	ns		**		ns	**	ns	**	**		**

* 2009 Data from ACS Three Mod Rzm Sites Analyzed 11/09/2009 12:35 Created 11-11-2009.

Vigor not collected. Trial # = 09CvMod

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

++ Revenue estimates are based on a $42.40 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 31.

2009 Performance of Varieties - ACSC Conventional Official Trial

Casselton - All Characters - Moderate Rzm

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. %
Seedex SX0873TT (Deuce)	6	293.8	101	9381	106	0.98	36.10	101	1148	106	15.68	32.01	149	1547	302	0.00	92.1
Seedex Sonic	3	290.6	99	8662	98	1.17	35.33	99	1051	97	15.70	30.09	172	1704	392	0.00	90.4
SESVanderhave H46519	7	290.1	99	8639	98	1.12	35.20	99	1049	97	15.63	29.71	178	1730	346	0.00	90.6
SESVanderhave H46531	1	295.7	101	8435	95	1.12	36.55	102	1040	96	15.90	28.70	173	1753	337	0.00	80.6
SESVanderhave H48607TT	5	283.0	97	9603	108	1.13	33.49	94	1131	105	15.28	33.86	186	1758	340	0.00	90.8
SESVanderhave H48716TT	2	286.5	98	9026	102	1.13	34.33	96	1080	100	15.45	31.42	162	1683	369	0.00	98.5
SESVanderhave H48717TT	4	281.6	96	8061	91	1.17	33.15	93	953	88	15.25	28.56	163	1701	394	0.21	91.0
Hilleshög 2417Rz(Check)	8	298.8	102	8235	93	1.09	37.29	104	1032	95	16.03	27.65	206	1664	325	0.00	83.8
Seedex Rezult(Check)	9	295.1	101	8849	100	1.12	36.41	102	1094	101	15.88	29.91	156	1738	346	0.00	76.7
Crystal R434(Check)	10	289.8	99	8929	101	1.34	35.12	98	1081	100	15.83	30.94	204	1898	458	0.00	88.3
Beta 1305R(Check)	11	288.7	99	9307	105	1.31	34.88	98	1125	104	15.75	32.36	192	1890	444	0.00	88.9
Susc 3N - Aph Tol	12	298.8	102	7692	87	1.11	37.31	104	961	89	16.05	25.54	199	1715	330	0.00	86.1
Filler31	13	283.5	97	9425	106	1.45	33.61	94	1115	103	15.63	33.36	249	2101	476	0.00	85.3
Check variety #15	14	298.3	102	8475	96	1.13	37.18	104	1053	97	16.05	28.52	138	1741	367	0.00	87.6
Check variety #16	15	309.9	106	10185	115	1.10	39.97	112	1314	121	16.60	32.66	196	1670	341	0.00	95.3
Trial Mean		292.3		8860		1.16	35.73		1082		15.78	30.35	182	1753	371	0.0	88.4
Coeff. of Var. (%)		3.6		8.8		8.5	7.2		10.1		2.9	9.3	29.6	5.8	12.1		7.9
Mean LSD (0.05)		15.1		1182		0.14	3.64		164		0.65	4.24	79	146	64		9.9
Mean LSD (0.01)		20.3		1583		0.19	4.87		219		0.87	5.67	106	195	85		13.3
Sig Lvl		*		*		**	*		*		*	*	ns	**	**		*

* 2009 Data from Casselton

Analyzed 10/19/2009 13:13

Created 10-10-2008.

Vigor not collected.

Trial # = 098201

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

++ Revenue estimates are based on a $42.40 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 32.

2009 Performance of Varieties - ACSC Conventional Official Trial

Averill MN - All Characters - Severe Rzm

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. %
Seedex SX0873TT (Deuce)	6	307.7	99	8359	113	1.24	39.43	99	1078	113	16.63	26.90	251	1879	364	0.00	69.8
Seedex Sonic	3	322.2	104	7939	107	1.22	42.92	108	1051	110	17.34	24.22	277	1782	372	0.00	66.4
SESVanderhave H46519	7	313.6	101	7994	108	1.20	40.86	102	1043	110	16.88	25.68	325	1920	304	0.00	64.5
SESVanderhave H46531	1	303.8	98	7655	104	1.21	38.49	96	967	102	16.40	25.15	293	1760	359	0.00	66.7
SESVanderhave H48607TT	5	319.2	103	8922	121	1.10	42.21	106	1180	124	17.05	28.34	177	1934	275	0.00	74.3
SESVanderhave H48716TT	2	313.2	101	8269	112	1.18	40.76	102	1077	113	16.84	26.33	242	1864	334	0.00	72.4
SESVanderhave H48717TT	4	315.7	102	7997	108	1.26	41.36	104	1043	110	17.05	25.63	196	1880	406	0.00	69.9
Hilleshög 2417Rz(Check)	8	318.8	103	7004	95	1.12	42.11	106	923	97	17.05	22.16	308	1765	288	0.00	54.7
Seedex Rezult(Check)	9	316.9	102	5942	80	1.12	41.65	104	786	83	16.96	18.64	273	1920	258	0.00	73.9
Crystal R434(Check)	10	288.3	93	6623	90	1.61	34.78	87	795	84	16.03	22.76	472	2121	511	0.00	68.9
Beta 1305R(Check)	11	310.6	100	7299	99	1.31	40.14	101	942	99	16.84	23.66	317	1879	404	0.00	64.3
Susc 3N - Aph Tol	12	296.1	96	4684	63	1.11	36.64	92	582	61	15.90	15.67	469	1690	241	0.00	60.2
Filler31	13	300.7	97	8560	116	1.53	37.75	95	1074	113	16.56	28.92	377	2137	477	0.00	73.7
Check variety #15	14	299.2	97	6402	87	1.37	37.39	94	792	83	16.32	21.98	337	1888	439	0.00	67.7
Check variety #16	15	318.6	103	7159	97	1.20	42.06	105	942	99	17.14	22.01	303	1774	347	0.00	84.2
Trial Mean		309.6		7387		1.25	39.90		952		16.73	23.87	308	1879	359	0.0	68.8
Coeff. of Var. (%)		4.1		8.2		10.0	7.7		9.9		3.2	7.9	30.3	6.1	15.9		17.5
Mean LSD (0.05)		19.7		896		0.19	4.75		144		0.84	2.81	143	172	88		17.8
Mean LSD (0.01)		26.5		1198		0.26	6.37		192		1.12	3.76	192	231	118		23.8
Sig Lvl		*		**		**	*		**		*	**	**	**	**		ns

* 2009 Data from Averill MN

Analyzed 10/16/2009 14:18

Created 11-12-2009.

Vigor not collected.

Trial # = 098202

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

++ Revenue estimates are based on a $42.40 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 33.

2009 Performance of Varieties - ACSC Conventional Official Trial

Grand Forks ND - All Characters - Light Rzm

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. %
Seedex SX0873TT (Deuce)	6	322.3	102	8399	115	1.01	42.96	104	1121	117	17.14	25.99	138	1776	257	0.00	60.9
Seedex Sonic	3	319.8	101	7719	106	1.04	42.35	102	1023	107	17.06	24.08	184	1666	296	0.21	71.4
SESVanderhave H46519	7	316.3	100	7320	100	1.06	41.52	100	958	100	16.87	23.22	208	1732	286	0.00	60.7
SESVanderhave H46531	1	318.5	101	7404	101	1.05	42.03	102	976	102	16.96	23.30	211	1755	269	0.00	57.7
SESVanderhave H48607TT	5	316.5	100	8558	117	1.00	41.55	100	1125	118	16.85	26.96	165	1669	270	0.00	68.0
SESVanderhave H48716TT	2	319.2	101	7998	109	1.02	42.20	102	1058	111	16.96	25.06	141	1739	276	0.00	71.8
SESVanderhave H48717TT	4	310.2	98	7919	108	1.06	40.05	97	1018	106	16.57	25.67	191	1710	302	0.21	63.9
Hilleshög 2417Rz(Check)	8	325.6	103	7149	98	1.02	43.75	106	958	100	17.33	22.00	199	1674	275	0.00	58.8
Seedex Rezult(Check)	9	323.4	102	6931	95	1.03	43.21	104	926	97	17.19	21.46	192	1777	258	0.00	64.7
Crystal R434(Check)	10	294.1	93	6320	86	1.34	36.18	87	781	82	16.08	21.34	326	2007	388	0.00	66.7
Beta 1305R(Check)	11	304.7	96	6332	87	1.24	38.72	94	803	84	16.46	20.85	216	1997	351	0.00	60.0
Susc 3N - Aph Tol	12	325.1	103	6262	86	1.05	43.63	105	838	87	17.29	19.34	215	1828	247	0.00	56.2
Filler31	13	306.1	97	7529	103	1.32	39.05	94	962	100	16.60	24.58	276	2209	338	0.00	68.0
Check variety #15	14	299.6	95	6306	86	1.17	37.49	91	790	83	16.17	21.01	247	1887	317	0.00	60.9
Check variety #16	15	336.1	106	7457	102	0.92	46.27	112	1024	107	17.67	22.32	184	1654	208	0.00	74.8
Trial Mean		315.8		7307		1.09	41.40		957		16.88	23.15	206	1805	289	0.0	64.3
Coeff. of Var. (%)		3.6		7.0		9.3	6.5		8.4		2.9	6.4	25.7	5.0	19.0		14.1
Mean LSD (0.05)		16.0		745		0.14	3.85		118		0.71	2.19	75	133	78		13.0
Mean LSD (0.01)		21.4		996		0.19	5.15		157		0.95	2.93	101	179	105		17.3
Sig Lvl		**		**		**	**		**		**	**	**	**	**		ns

* 2009 Data from Grand Forks ND Analyzed 10/19/2009 12:48 Created 11-12-2009.

Vigor not collected. Trial # = 098207

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

++ Revenue estimates are based on a $42.40 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 34.

2009 Performance of Varieties - ACSC Conventional Official Trial

Argyle MN - All Characters - Moderate Rzm

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. %
Seedex SX0873TT (Deuce)	6	310.7	99	7834	107	0.94	40.16	98	1013	106	16.47	25.29	122	1604	259	0.00	109.2
Seedex Sonic	3	314.8	100	8062	110	0.96	41.15	100	1053	110	16.70	25.60	136	1610	266	0.43	90.8
SESVanderhave H46519	7	313.5	100	7585	103	0.95	40.85	100	989	103	16.63	24.13	149	1648	240	0.21	90.6
SESVanderhave H46531	1	315.6	100	7431	101	0.94	41.33	101	977	102	16.71	23.37	148	1618	242	0.00	83.8
SESVanderhave H48607TT	5	303.1	96	7652	104	0.99	38.32	93	968	101	16.13	25.25	141	1674	269	0.21	97.7
SESVanderhave H48716TT	2	309.0	98	7562	103	0.97	39.75	97	970	101	16.41	24.65	131	1608	278	0.00	110.1
SESVanderhave H48717TT	4	302.1	96	8085	110	0.98	38.09	93	1022	107	16.08	26.69	139	1593	282	0.21	102.8
Hilleshög 2417Rz(Check)	8	316.0	101	6823	93	0.97	41.45	101	893	93	16.78	21.67	140	1645	265	0.21	69.5
Seedex Rezult(Check)	9	316.2	101	6174	84	1.01	41.49	101	811	85	16.82	19.44	130	1772	266	0.00	76.3
Crystal R434(Check)	10	323.1	103	7461	102	1.05	43.16	105	996	104	17.21	23.10	141	1783	295	0.00	94.4
Beta 1305R(Check)	11	308.4	98	7197	98	1.14	39.61	96	925	97	16.57	23.22	158	1779	354	0.00	81.2
Susc 3N - Aph Tol	12	319.8	102	5958	81	1.01	42.34	103	788	82	16.99	18.73	162	1692	279	0.00	87.4
Filler31	13	316.1	101	8157	111	1.11	41.46	101	1068	111	16.92	25.86	157	1919	294	0.00	99.2
Check variety #15	14	317.9	101	7016	95	0.94	41.89	102	924	96	16.84	22.06	102	1636	262	0.00	86.3
Check variety #16	15	329.7	105	7226	98	0.94	44.73	109	979	102	17.42	22.04	151	1561	260	0.00	110.7
Trial Mean		314.4		7348		0.99	41.05		958		16.71	23.41	140	1676	274	0.0	92.7
Coeff. of Var. (%)		3.0		6.3		5.7	5.4		7.9		2.5	5.4	23.6	3.9	8.1		8.8
Mean LSD (0.05)		13.5		678		0.08	3.25		110		0.62	1.91	48	93	34		11.6
Mean LSD (0.01)		18.1		907		0.11	4.34		147		0.83	2.55	65	124	45		15.5
Sig Lvl		*		**		**	*		**		**	**	ns	**	**		**

* 2009 Data from Argyle MN

Analyzed 10/19/2009 13:57

Created 11-12-2009.

Vigor not collected.

Trial # = 098208

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

++ Revenue estimates are based on a $42.40 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 35.

2009 Performance of Varieties - ACSC Conventional Official Trial

St Thomas ND - All Characters - Light Rzm

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. %
Seedex SX0873TT (Deuce)	6	272.0	98	7196	112	0.90	30.84	96	814	110	14.50	26.36	192	1433	249	0.00	97.3
Seedex Sonic	3	283.1	102	6656	103	0.92	33.51	105	792	107	15.08	23.42	198	1357	282	0.00	76.5
SESVanderhave H46519	7	274.2	99	6091	94	0.91	31.39	98	692	93	14.62	22.39	246	1491	223	0.00	79.6
SESVanderhave H46531	1	282.0	102	6172	96	0.90	33.26	104	727	98	15.00	21.83	203	1400	251	0.21	65.9
SESVanderhave H48607TT	5	270.2	98	7895	122	0.96	30.42	95	889	120	14.48	29.18	217	1556	256	0.00	84.7
SESVanderhave H48716TT	2	276.0	100	7419	115	0.93	31.81	99	855	115	14.72	26.85	168	1427	277	0.00	90.8
SESVanderhave H48717TT	4	262.8	95	6991	108	0.93	28.65	90	752	101	14.07	27.01	213	1397	274	0.21	84.8
Hilleshög 2417Rz(Check)	8	277.5	100	5250	81	0.85	32.17	101	615	83	14.73	18.84	179	1477	203	0.00	58.0
Seedex Rezult(Check)	9	280.9	102	5845	91	0.91	32.99	103	687	93	14.95	20.70	188	1485	239	0.00	58.9
Crystal R434(Check)	10	272.0	98	6288	98	1.15	30.86	97	718	97	14.76	22.89	308	1619	348	0.00	70.5
Beta 1305R(Check)	11	276.7	100	5820	90	1.06	31.99	100	673	91	14.90	21.19	190	1590	333	0.00	58.6
Susc 3N - Aph Tol	12	280.9	102	5724	89	0.95	33.00	103	682	92	15.01	20.12	252	1467	258	0.00	66.6
Filler31	13	271.1	98	7105	110	1.19	30.64	96	795	107	14.74	26.38	262	1782	357	0.00	80.4
Check variety #15	14	277.6	100	5608	87	0.97	32.20	101	640	86	14.84	20.65	219	1503	272	0.00	69.8
Check variety #16	15	292.4	106	6624	103	0.90	35.77	112	811	109	15.53	22.59	253	1299	262	0.00	85.7
Trial Mean		276.6		6446		0.96	31.97		743		14.80	23.36	219	1485	272	0.0	75.2
Coeff. of Var. (%)		3.9		6.6		8.8	8.0		8.2		3.3	7.3	23.7	5.4	17.9		15.4
Mean LSD (0.05)		15.2		655		0.12	3.65		94		0.70	2.59	74	115	69		16.6
Mean LSD (0.01)		20.3		877		0.16	4.87		126		0.93	3.46	99	153	93		22.1
Sig Lvl		ns		**		**	ns		**		ns	**	*	**	**		**

* 2009 Data from St Thomas ND Analyzed 10/19/2009 13:58 Created 11-12-2009.

Vigor not collected. Trial # = 098209

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

++ Revenue estimates are based on a $42.40 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 36.

2009 Performance of Varieties - ACSC Conventional Official Trial

Humboldt MN - All Characters - Light Rzm

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. %
Seedex SX0873TT (Deuce)	6	288.4	99	7695	107	1.08	34.79	97	926	106	15.50	26.75	135	1940	273	0.00	93.5
Seedex Sonic	3	289.5	99	8398	117	1.09	35.07	98	1017	116	15.57	29.02	156	1963	264	0.00	94.9
SESVanderhave H46519	7	290.8	99	7906	110	1.13	35.37	99	961	110	15.67	27.22	152	2066	270	0.00	87.5
SESVanderhave H46531	1	297.6	102	6917	96	1.09	37.01	103	861	98	15.97	23.21	143	2026	251	0.00	70.7
SESVanderhave H48607TT	5	282.8	97	8221	114	1.10	33.44	94	968	110	15.23	29.20	126	1989	282	0.00	92.3
SESVanderhave H48716TT	2	291.1	100	6823	95	1.08	35.45	99	831	95	15.63	23.44	117	2000	269	0.00	88.6
SESVanderhave H48717TT	4	294.3	101	9409	131	1.05	36.22	101	1157	132	15.77	32.00	108	1881	280	0.00	96.6
Hilleshög 2417Rz(Check)	8	296.0	101	6970	97	1.03	36.64	102	863	98	15.83	23.55	127	1813	263	0.28	74.9
Seedex Rezult(Check)	9	293.8	100	5633	78	1.04	36.09	101	692	79	15.73	19.18	128	1974	237	0.28	74.1
Crystal R434(Check)	10	287.9	98	6891	96	1.27	34.67	97	828	94	15.67	23.99	202	2152	339	0.00	87.2
Beta 1305R(Check)	11	291.9	100	6085	85	1.17	35.63	100	742	85	15.77	20.87	149	2081	292	0.00	71.8
Susc 3N - Aph Tol	12	299.9	103	6631	92	1.20	37.57	105	830	95	16.20	22.12	161	2190	296	0.00	86.9
Filler31	13	284.9	97	7632	106	1.32	33.95	95	909	104	15.57	26.81	176	2444	319	0.00	94.0
Check variety #15	14	290.4	99	6554	91	1.11	35.28	99	797	91	15.63	22.55	113	2017	295	0.00	85.5
Check variety #16	15	307.1	105	6013	84	1.01	39.30	110	770	88	16.37	19.56	126	1878	242	0.00	96.9
Trial Mean		292.4		7185		1.12	35.76		877		15.74	24.63	141	2027	278	0.0	86.3
Coeff. of Var. (%)		2.4		9.6		8.2	4.7		10.1		2.1	9.8	22.6	5.4	13.5		9.9
Mean LSD (0.05)		11.6		1157		0.15	2.79		148		0.55	4.05	53	193	63		14.3
Mean LSD (0.01)		15.7		1560		0.21	3.77		199		0.74	5.47	72	261	84		19.2
Sig Lvl		*		**		**	*		**		*	**	ns	**	ns		**

* 2009 Data from Humboldt MN Analyzed 10/19/2009 14:41 Created 11-12-2009.

Vigor not collected. Trial # = 098210

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

++ Revenue estimates are based on a $42.40 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 37.

2009 Performance of Varieties - ACSC RR Aph Spec Yield Trial

ACS Two Sites - All Characters

Description @	Code	Rec/T lbs.	Rec/T %Mean	Rec/A lbs.	Rec/A %Mean	Loss Mol %	Rev/T $ ++	Rev/T %Mean	Rev/A $ ++	Rev/A %Mean	Sugar %	Yield T/A	Na ppm	K ppm	AmN ppm	Bolter %	Emerg. %
Beta 85RR02	415	304.1	103	8572	107	1.11	38.58	107	1099	110	16.32	27.84	248	1885	272	0.00	56.7
Beta 88RR21	423	288.9	98	8440	105	0.96	34.93	96	1026	103	15.41	29.03	193	1663	231	0.00	60.2
Beta 88RR31	440	293.2	100	8480	106	1.14	35.95	99	1044	105	15.80	28.82	253	1822	306	0.00	54.7
Beta 88RR61	402	306.2	104	8890	111	1.02	39.08	108	1145	115	16.33	28.71	176	1716	275	0.00	62.3
Beta 88RR71	451	301.7	103	8325	104	1.08	37.99	105	1053	106	16.17	27.46	207	1792	284	0.00	64.5
Beta 89RR20	427	290.9	99	7726	96	1.18	35.39	98	963	97	15.72	25.91	179	1921	339	0.00	62.3
Beta 89RR30	404	288.5	98	8459	105	0.99	34.83	96	1041	104	15.41	28.77	243	1693	229	0.00	60.8
Beta 89RR40	432	299.3	102	7991	100	1.10	37.41	103	1013	102	16.06	26.27	209	1731	316	0.00	59.5
Beta 89RR50	416	296.6	101	9269	116	1.13	36.76	102	1156	116	15.96	31.02	241	1894	281	0.00	67.5
Crystal 539RR	434	300.6	102	8366	104	1.08	37.73	104	1056	106	16.11	27.65	265	1813	256	0.00	67.2
Crystal 658RR	413	283.3	96	8530	106	0.99	33.57	93	1021	102	15.15	29.79	198	1685	253	0.00	63.0
Crystal 871RR	448	295.7	100	9036	113	1.14	36.55	101	1120	112	15.92	30.46	268	1874	290	0.00	54.4
Crystal 875RR	426	299.4	102	8805	110	1.10	37.44	103	1109	111	16.07	29.23	202	1890	275	0.00	58.7
Crystal 981RR	442	288.1	98	9565	119	1.19	34.73	96	1161	116	15.59	32.94	297	1937	296	0.00	59.8
Crystal 982RR	405	296.0	101	8068	101	1.04	36.62	101	1010	101	15.84	26.95	286	1668	260	0.00	54.5
Crystal 983RR	418	280.2	95	8206	102	0.98	32.83	91	965	97	14.99	29.19	237	1662	233	0.00	56.7
Crystal 984RR	445	302.5	103	8656	108	1.02	38.20	106	1103	111	16.15	28.31	229	1748	241	0.00	59.7
Crystal 985RR	430	296.2	101	8366	104	1.04	36.67	101	1044	105	15.85	28.01	183	1785	267	0.00	52.3
Hilleshög 4000RR(9035RR)	421	292.9	100	8147	102	1.05	35.88	99	1009	101	15.70	27.49	267	1750	251	0.00	59.1
Hilleshög 4012RR	439	299.6	102	6686	83	1.12	37.49	104	844	85	16.10	22.09	205	1784	316	0.00	51.8
Hilleshög 4022RR	412	298.2	101	8119	101	1.08	37.16	103	1019	102	15.99	27.01	213	1841	268	0.00	61.1
Hilleshög 4043RR(9043RR)	435	302.5	103	7790	97	0.99	38.19	105	997	100	16.11	25.38	162	1679	260	0.00	53.7
Hilleshög 4062RR(9062RR)	447	293.1	100	8083	101	1.10	35.94	99	997	100	15.76	27.40	225	1817	292	0.00	62.0
Hilleshög 4083RR(9083RR)	414	295.3	100	7731	96	0.98	36.45	101	956	96	15.75	26.13	228	1665	232	0.00	57.7
Hilleshög 4094RR(9094RR)	436	296.9	101	8345	104	1.05	36.84	102	1043	105	15.90	27.89	201	1792	266	0.00	60.2
Hilleshög 4097RR(9097RR)	403	300.1	102	7580	95	1.06	37.60	104	959	96	16.06	25.04	233	1823	249	0.00	51.0
Hilleshög 9163RR	425	287.8	98	7952	99	1.05	34.66	96	968	97	15.45	27.32	271	1746	253	0.00	61.1
Hilleshög 9165RR	431	265.8	90	6422	80	1.14	29.37	81	721	72	14.43	23.85	268	1791	312	0.00	43.2
Hilleshög 9189RR	408	278.2	95	7160	89	1.14	32.35	89	848	85	15.04	25.24	276	1854	290	0.00	46.7
Hilleshög 9194RR	444	284.3	97	6281	78	1.14	33.81	93	767	77	15.35	21.53	249	1879	297	0.07	41.4
Hilleshög 9195RR	417	288.2	98	8054	100	1.12	34.74	96	984	99	15.53	27.56	283	1824	280	0.00	52.2
Hilleshög 9197RR	410	295.5	100	7824	98	0.99	36.51	101	972	97	15.76	26.29	214	1722	233	0.00	54.9
Hilleshög 9201RR	449	280.4	95	6706	84	1.15	32.87	91	804	81	15.17	23.43	281	1857	298	0.00	41.1
Hilleshög 9202RR	406	291.3	99	8155	102	1.02	35.49	98	1001	100	15.59	27.79	236	1738	242	0.00	66.7
Hilleshög 9203RR	441	281.6	96	6778	85	1.14	33.16	92	807	81	15.22	23.82	256	1879	292	0.00	42.0
Hilleshög 9204RR	437	290.7	99	7982	100	1.11	35.34	98	984	99	15.65	27.14	266	1816	284	0.00	57.7
Seedex SX0883RR (Usher)	424	294.0	100	8374	104	1.00	36.15	100	1038	104	15.71	28.25	187	1762	241	0.00	57.1
Seedex SX0892RR	401	289.8	98	8310	104	1.03	35.13	97	1022	102	15.53	28.25	213	1770	254	0.00	64.0
Seedex SX0895RR	446	302.5	103	8289	103	0.99	38.20	106	1060	106	16.11	26.99	181	1735	240	0.00	59.3
Seedex SX0981RR	428	297.6	101	7364	92	0.98	37.02	102	925	93	15.87	24.49	229	1702	228	0.00	50.1
Seedex SX0983RR	420	290.7	99	7754	97	1.08	35.35	98	956	96	15.62	26.27	229	1758	284	0.00	62.2
Seedex SX0995RR	443	293.7	100	8463	106	1.05	36.06	100	1055	106	15.73	28.39	190	1769	274	0.00	61.4
SESVanderhave H36711RR	407	298.8	102	6833	85	1.05	37.30	103	876	88	15.99	22.22	188	1790	272	0.00	42.6
SESVanderhave H36811RR	429	306.7	104	7755	97	0.98	39.21	108	1006	101	16.31	24.88	184	1602	266	0.00	58.2
SESVanderhave H36822RR	411	302.0	103	8067	101	0.98	38.06	105	1026	103	16.08	26.44	169	1650	258	0.00	61.8
SESVanderhave H36916RR	419	301.7	103	8346	104	0.98	38.01	105	1069	107	16.06	27.13	155	1721	249	0.00	63.2
SESVanderhave H36917RR	450	307.0	104	8187	102	0.99	39.28	109	1053	106	16.35	26.52	185	1702	253	0.00	60.4
SESVanderhave H36922RR	422	295.1	100	7480	93	1.00	36.40	101	933	93	15.76	25.09	242	1713	233	0.00	52.1
SESVanderhave H36923RR	433	293.1	100	8142	102	1.00	35.92	99	1007	101	15.65	27.50	193	1711	248	0.00	58.3
SESVanderhave H36925RR	409	292.2	99	7622	95	1.01	35.71	99	950	95	15.62	25.54	196	1727	256	0.00	52.8
SESVanderhave H36926RR	438	293.0	100	8844	110	1.05	35.91	99	1092	109	15.70	29.92	201	1780	262	0.00	62.4
RR Aph Susc 02	452	309.2	105	7600	95	1.00	39.80	110	1002	100	16.46	23.90	206	1726	241	0.00	63.6
Trial Mean		294.3		8019		1.06	36.20		998		15.77	26.93	223	1770	267	0.0	57.1
Coeff. of Var. (%)		2.9		8.4		6.2	5.7		9.2		2.5	8.5	18.3	5.3	11.3		13.9
Mean LSD (0.05)		9.6		1161		0.08	2.30		151		0.45	4.03	44	132	29		10.6
Mean LSD (0.01)		12.8		1548		0.10	3.07		202		0.60	5.38	59	175	39		14.2
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2009 Data from ACS Two Sites Analyzed 11/06/2009 15:06 Created 11-12-2009.

^ Vigor not collected. Bolter & emergence not adjusted to commercial status. Trial # = 09APyld

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

++ Revenue estimates are based on a $42.40 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 38.

2009 Performance of Varieties - ACSC RR Aph Spec Yield Trial

Kindred ND - All Characters - Severe Aph

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 85RR02	415	277.6	103	6861	109	1.21	32.21	106	800	113	15.10	24.59	291	1996	303	0.00	55.6
Beta 88RR21	423	267.2	99	7108	113	1.05	29.70	98	792	111	14.42	26.54	209	1804	259	0.00	53.2
Beta 88RR31	440	268.6	99	7705	122	1.23	30.03	99	866	122	14.67	28.57	287	1969	326	0.00	56.0
Beta 88RR61	402	276.4	102	6728	107	1.10	31.92	105	771	108	14.92	24.47	212	1789	301	0.00	58.5
Beta 88RR71	451	275.8	102	6928	110	1.16	31.77	105	796	112	14.95	25.16	231	1891	309	0.00	60.1
Beta 89RR20	427	261.5	97	5491	87	1.33	28.33	93	600	84	14.40	20.87	222	2127	386	0.00	64.0
Beta 89RR30	404	261.5	97	6261	99	1.09	28.34	93	686	96	14.17	23.74	288	1822	257	0.00	56.6
Beta 89RR40	432	278.8	103	5928	94	1.16	32.49	107	699	98	15.09	21.01	224	1820	333	0.00	56.0
Beta 89RR50	416	272.0	101	7663	122	1.25	30.84	102	871	123	14.86	28.09	267	2076	320	0.00	66.5
Crystal 539RR	434	275.4	102	6820	108	1.19	31.68	104	781	110	14.96	24.81	300	1972	285	0.00	65.8
Crystal 658RR	413	262.7	97	7052	112	1.06	28.60	94	774	109	14.18	26.63	208	1771	277	0.00	60.1
Crystal 871RR	448	268.7	100	7873	125	1.24	30.05	99	878	124	14.67	29.34	296	2028	314	0.00	58.8
Crystal 875RR	426	280.9	104	7585	120	1.16	32.99	109	896	126	15.20	26.90	206	1981	300	0.00	59.6
Crystal 981RR	442	260.7	97	7842	124	1.29	28.12	93	846	119	14.32	30.08	338	2131	312	0.00	59.4
Crystal 982RR	405	266.5	99	6328	100	1.15	29.52	97	703	99	14.47	23.72	346	1768	292	0.00	57.3
Crystal 983RR	418	257.5	95	7062	112	1.08	27.36	90	748	105	13.95	27.52	258	1825	257	0.00	60.5
Crystal 984RR	445	282.6	105	6955	110	1.07	33.40	110	829	117	15.19	24.42	256	1771	269	0.00	66.3
Crystal 985RR	430	272.3	101	6960	110	1.13	30.93	102	792	111	14.75	25.50	198	1876	302	0.00	56.0
Hilleshög 4000RR(9035RR)	421	269.1	100	6264	99	1.15	30.16	99	702	99	14.61	23.25	318	1848	284	0.00	62.7
Hilleshög 4012RR	439	280.8	104	5423	86	1.23	32.96	108	640	90	15.27	19.21	211	1960	358	0.00	57.3
Hilleshög 4022RR	412	268.7	100	6497	103	1.24	30.05	99	727	102	14.68	24.18	267	2022	327	0.00	57.2
Hilleshög 4043RR(9043RR)	435	280.1	104	5714	91	1.11	32.80	108	673	95	15.11	20.32	192	1858	296	0.00	53.7
Hilleshög 4062RR(9062RR)	447	273.9	101	7001	111	1.19	31.32	103	804	113	14.88	25.43	250	1975	310	0.00	58.3
Hilleshög 4083RR(9083RR)	414	272.5	101	6570	104	1.04	30.98	102	747	105	14.67	24.06	253	1735	255	0.00	63.0
Hilleshög 4094RR(9094RR)	436	268.5	99	7074	112	1.17	30.00	99	792	111	14.59	26.27	252	1950	298	0.00	64.9
Hilleshög 4097RR(9097RR)	403	276.9	103	6125	97	1.19	32.02	105	710	100	15.03	22.13	262	1994	296	0.00	52.1
Hilleshög 9163RR	425	264.6	98	6198	98	1.18	29.07	96	682	96	14.42	23.40	310	1941	289	0.00	62.5
Hilleshög 9165RR	431	245.7	91	4507	72	1.21	24.53	81	446	63	13.50	18.49	275	1918	330	0.00	46.7
Hilleshög 9189RR	408	251.3	93	5599	89	1.28	25.86	85	584	82	13.85	22.03	325	2002	343	0.00	52.4
Hilleshög 9194RR	444	257.4	95	3984	63	1.31	27.34	90	421	59	14.18	15.56	292	2117	352	0.00	41.4
Hilleshög 9195RR	417	259.8	96	6142	97	1.23	27.92	92	663	93	14.22	23.54	332	1969	308	0.00	51.4
Hilleshög 9197RR	410	273.3	101	6903	110	1.05	31.17	103	791	111	14.71	25.12	238	1780	254	0.00	58.6
Hilleshög 9201RR	449	262.1	97	4798	76	1.27	28.48	94	527	74	14.37	18.17	270	2052	338	0.00	45.4
Hilleshög 9202RR	406	265.3	98	6248	99	1.14	29.23	96	680	96	14.42	23.79	265	1896	281	0.00	71.6
Hilleshög 9203RR	441	253.4	94	5482	87	1.30	26.37	87	579	81	13.96	21.41	303	2088	344	0.00	45.9
Hilleshög 9204RR	437	263.6	98	5976	95	1.21	28.82	95	650	91	14.40	22.83	320	1947	303	0.00	59.7
Seedex SX0883RR (Usher)	424	273.0	101	6641	105	1.08	31.10	102	755	106	14.74	24.38	199	1892	260	0.00	55.9
Seedex SX0892RR	401	273.5	101	6420	102	1.13	31.21	103	744	105	14.80	23.15	223	1929	281	0.00	63.3
Seedex SX0895RR	446	279.9	104	6217	99	1.07	32.76	108	729	103	15.07	22.15	194	1840	271	0.00	55.6
Seedex SX0981RR	428	269.3	100	5759	91	1.09	30.20	99	644	91	14.56	21.44	290	1813	259	0.00	46.2
Seedex SX0983RR	420	267.0	99	5631	89	1.19	29.65	98	624	88	14.54	21.07	270	1946	310	0.00	59.0
Seedex SX0995RR	443	271.6	101	6514	103	1.15	30.75	101	745	105	14.72	23.80	209	1916	304	0.00	53.6
SESVanderhave H36711RR	407	273.5	101	4387	70	1.18	31.21	103	507	71	14.85	15.87	210	2001	312	0.00	40.2
SESVanderhave H36811RR	429	283.2	105	5595	89	1.09	33.54	110	664	93	15.24	19.75	218	1785	289	0.00	58.6
SESVanderhave H36822RR	411	271.6	101	6120	97	1.09	30.74	101	688	97	14.67	22.71	218	1841	277	0.00	68.6
SESVanderhave H36916RR	419	278.3	103	6406	102	1.10	32.36	107	753	106	15.01	22.80	172	1929	282	0.00	66.2
SESVanderhave H36917RR	450	281.4	104	6715	107	1.08	33.11	109	789	111	15.14	23.91	216	1901	254	0.00	63.3
SESVanderhave H36922RR	422	272.2	101	5784	92	1.10	30.91	102	660	93	14.70	21.17	270	1843	263	0.00	51.3
SESVanderhave H36923RR	433	271.7	101	6488	103	1.07	30.78	101	736	104	14.66	23.82	209	1813	275	0.00	56.7
SESVanderhave H36925RR	409	268.0	99	5581	89	1.13	29.90	98	631	89	14.53	20.58	235	1891	289	0.00	52.5
SESVanderhave H36926RR	438	272.9	101	7096	113	1.18	31.06	102	809	114	14.82	25.94	236	1972	300	0.00	54.0
RR Aph Susc 02	452	280.6	104	4609	73	1.12	32.91	108	541	76	15.16	16.42	261	1882	273	0.00	60.7
Trial Mean		270.0		6300		1.16	30.38		711		14.66	23.27	254	1917	297	0.0	57.3
Coeff. of Var. (%)		3.0		11.7		6.0	6.5		12.8		2.5	11.5	16.1	5.6	8.9		15.0
Mean LSD (0.05)		10.3		953		0.09	2.47		118		0.46	3.46	53	136	33		10.9
Mean LSD (0.01)		13.5		1257		0.12	3.26		156		0.60	4.57	70	180	44		14.4
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2009 Data from Kindred ND Analyzed 11/05/2009 15:13 Created 11-12-2009.

^ Vigor not collected. Bolter & emergence not adjusted to commercial status. Trial # = 098381

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

++ Revenue estimates are based on a $42.40 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 39.

2009 Performance of Varieties - ACSC RR Aph Spec Yield Trial

Hillsboro ND - All Characters

Description @	Code	Rec/T lbs.	Rec/T %Mean	Rec/A lbs.	Rec/A %Mean	Loss Mol %	Rev/T $ ++	Rev/T %Mean	Rev/A $ ++	Rev/A %Mean	Sugar %	Yield T/A	Na ppm	K ppm	AmN ppm	Bolter %	Emerg. %
Beta 85RR02	415	330.3	104	10173	104	1.02	44.87	107	1382	108	17.53	30.85	205	1769	255	0.00	57.9
Beta 88RR21	423	310.4	97	9766	100	0.88	40.09	95	1262	98	16.39	31.44	176	1528	205	0.00	66.5
Beta 88RR31	440	318.3	100	9272	95	1.05	41.99	100	1221	95	16.95	29.20	218	1669	285	0.00	52.8
Beta 88RR61	402	335.4	105	11025	113	0.95	46.11	110	1514	118	17.72	32.94	145	1647	248	0.00	67.2
Beta 88RR71	451	328.0	103	9781	100	0.99	44.32	105	1321	103	17.40	29.81	177	1695	252	0.00	68.7
Beta 89RR20	427	320.1	101	9913	102	1.04	42.43	101	1315	102	17.04	30.97	138	1721	296	0.00	60.7
Beta 89RR30	404	315.5	99	10717	110	0.87	41.32	98	1403	109	16.65	33.98	198	1560	202	0.00	65.2
Beta 89RR40	432	319.9	100	10019	103	1.04	42.38	101	1324	103	17.03	31.44	193	1635	297	0.00	62.5
Beta 89RR50	416	320.9	101	10770	111	1.00	42.62	101	1430	111	17.06	33.58	216	1714	244	0.00	68.8
Crystal 539RR	434	325.2	102	9926	102	0.99	43.65	104	1330	104	17.24	30.61	244	1657	232	0.00	68.3
Crystal 658RR	413	304.1	95	10157	104	0.93	38.57	92	1284	100	16.13	33.55	186	1600	230	0.00	66.8
Crystal 871RR	448	322.9	101	10196	105	1.04	43.10	103	1359	106	17.19	31.65	235	1723	269	0.00	49.8
Crystal 875RR	426	318.1	100	10013	103	1.02	41.94	100	1320	103	16.93	31.46	195	1798	245	0.00	57.4
Crystal 981RR	442	315.9	99	11151	115	1.09	41.40	99	1462	114	16.88	35.31	255	1749	286	0.00	59.7
Crystal 982RR	405	325.2	102	9800	101	0.94	43.65	104	1314	102	17.20	30.16	231	1570	228	0.00	52.6
Crystal 983RR	418	303.2	95	9336	96	0.89	38.36	91	1183	92	16.05	30.74	215	1503	211	0.00	53.0
Crystal 984RR	445	323.3	102	10351	106	0.96	43.19	103	1383	108	17.12	32.00	196	1725	211	0.00	54.1
Crystal 985RR	430	320.1	101	9773	100	0.96	42.43	101	1293	101	16.96	30.62	169	1691	231	0.00	47.0
Hilleshög 4000RR(9035RR)	421	316.3	99	10034	103	0.94	41.50	99	1318	103	16.76	31.68	216	1650	216	0.00	56.5
Hilleshög 4012RR	439	318.4	100	8024	82	1.00	42.03	100	1059	82	16.92	25.18	197	1609	276	0.00	46.7
Hilleshög 4022RR	412	327.5	103	9591	99	0.93	44.21	105	1293	101	17.30	29.34	163	1660	213	0.00	64.2
Hilleshög 4043RR(9043RR)	435	324.8	102	9827	101	0.86	43.55	104	1316	102	17.10	30.29	131	1501	223	0.00	53.2
Hilleshög 4062RR(9062RR)	447	312.3	98	9310	96	1.02	40.54	96	1206	94	16.63	29.88	197	1663	275	0.00	65.8
Hilleshög 4083RR(9083RR)	414	318.3	100	9028	93	0.91	42.00	100	1188	93	16.83	28.39	204	1595	204	0.00	52.2
Hilleshög 4094RR(9094RR)	436	325.3	102	9719	100	0.93	43.68	104	1305	102	17.19	29.87	148	1631	232	0.00	56.5
Hilleshög 4097RR(9097RR)	403	323.3	102	8960	92	0.93	43.20	103	1198	93	17.10	27.70	207	1650	200	0.00	50.0
Hilleshög 9163RR	425	311.9	98	9777	100	0.92	40.46	96	1267	99	16.52	31.37	228	1552	210	0.00	60.6
Hilleshög 9165RR	431	285.8	90	8255	85	1.07	34.17	81	984	77	15.36	28.96	260	1666	291	0.00	39.4
Hilleshög 9189RR	408	305.0	96	8668	89	0.99	38.79	92	1104	86	16.25	28.41	226	1707	238	0.00	41.0
Hilleshög 9194RR	444	310.9	98	8520	88	0.96	40.20	96	1103	86	16.52	27.40	208	1639	241	0.14	41.3
Hilleshög 9195RR	417	315.7	99	10009	103	1.01	41.37	98	1310	102	16.80	31.73	235	1681	249	0.00	52.9
Hilleshög 9197RR	410	318.1	100	8730	90	0.94	41.95	100	1152	90	16.84	27.43	188	1669	219	0.00	51.1
Hilleshög 9201RR	449	299.0	94	8645	89	1.04	37.35	89	1083	84	15.99	28.84	294	1665	257	0.00	37.0
Hilleshög 9202RR	406	317.2	100	10091	104	0.90	41.72	99	1326	103	16.76	31.83	205	1576	208	0.00	62.0
Hilleshög 9203RR	441	310.1	97	8135	84	0.98	40.03	95	1048	82	16.48	26.25	205	1669	246	0.00	39.1
Hilleshög 9204RR	437	316.9	99	9997	103	1.01	41.66	99	1313	102	16.86	31.56	215	1684	264	0.00	55.3
Seedex SX0883RR (Usher)	424	314.9	99	10154	104	0.92	41.18	98	1328	103	16.68	32.23	171	1635	225	0.00	58.3
Seedex SX0892RR	401	306.0	96	10182	105	0.95	39.03	93	1299	101	16.24	33.27	206	1613	228	0.00	64.6
Seedex SX0895RR	446	325.2	102	10451	107	0.90	43.65	104	1402	109	17.16	32.17	168	1625	209	0.00	63.5
Seedex SX0981RR	428	326.0	102	9041	93	0.88	43.85	104	1215	95	17.18	27.74	171	1590	199	0.00	53.7
Seedex SX0983RR	420	315.2	99	9949	102	0.95	41.25	98	1301	101	16.71	31.57	187	1566	254	0.00	66.1
Seedex SX0995RR	443	316.2	99	10423	107	0.95	41.49	99	1369	107	16.76	32.91	170	1626	240	0.00	68.8
SESVanderhave H36711RR	407	324.0	102	9270	95	0.91	43.37	103	1240	97	17.12	28.64	169	1573	234	0.00	45.3
SESVanderhave H36811RR	429	330.1	104	9920	102	0.87	44.84	107	1347	105	17.37	30.04	149	1414	237	0.00	58.1
SESVanderhave H36822RR	411	331.8	104	9884	102	0.86	45.25	108	1347	105	17.46	29.80	122	1457	232	0.00	54.7
SESVanderhave H36916RR	419	325.4	102	10293	106	0.86	43.69	104	1382	108	17.13	31.69	141	1511	210	0.00	59.1
SESVanderhave H36917RR	450	332.9	105	9635	99	0.91	45.51	108	1317	103	17.56	28.94	152	1505	244	0.00	57.3
SESVanderhave H36922RR	422	318.7	100	9162	94	0.90	42.08	100	1209	94	16.83	28.75	209	1586	206	0.00	52.6
SESVanderhave H36923RR	433	313.9	99	9802	101	0.93	40.94	97	1278	100	16.62	31.26	181	1613	226	0.00	60.4
SESVanderhave H36925RR	409	316.4	99	9693	100	0.89	41.52	99	1268	99	16.72	30.82	155	1558	220	0.00	53.1
SESVanderhave H36926RR	438	313.0	98	10562	108	0.92	40.71	97	1374	107	16.57	33.73	164	1593	227	0.00	71.5
RR Aph Susc 02	452	337.4	106	10455	107	0.89	46.59	111	1444	112	17.75	31.00	155	1566	213	0.00	65.2
Trial Mean		318.5		9737		0.95	42.03		1284		16.88	30.59	192	1624	236	0.0	56.8
Coeff. of Var. (%)		2.8		6.1		6.5	5.0		7.1		2.5	6.0	21.1	4.8	14.1		12.7
Mean LSD (0.05)		10.9		735		0.07	2.62		113		0.51	2.23	50	98	38		8.8
Mean LSD (0.01)		14.4		969		0.10	3.45		149		0.68	2.94	66	130	50		11.5
Sig Lvl		**		**		**	**		**		**	**	**	**	**		**

* 2009 Data from Hillsboro ND Analyzed 10/27/2009 15:49 Created 11-12-2009.

^ Vigor not collected. Bolter & emergence not adjusted to commercial status. Trial # = 098382

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

++ Revenue estimates are based on a $42.40 beet payment at 17.5 % sugar and 1.5 % loss to molasses. Revenue does not consider hauling costs.

Table 40.
Calculation for Approval of Sugarbeet Varieties for ACSC Market for 2010

Description	Approval Status	Rec/Ton 2008	Rec/Ton 2009	Rec/Ton 2 Yr	Rec/Ton % Bench	Rev/Acre 2008	Rev/Acre 2009	Rev/Acre 2 Yr	Rev/Acre % Bench	R/T + $/A Bench	Cercospora Rating + 2007	2008	2009	2 Yr Mean	3 Yr Mean
Previously Approved (3 Yr)															***<=5.40***
Roundup Ready															
Beta 85RR02	Approved	317.04	293.20	305.1	102.3	1060.5	858.1	959.3	102.8	205.1	4.64	4.64	4.66		4.65
Beta 86RR44	Approved	313.43	285.50	299.5	100.4	1062.5	870.8	966.7	103.6	204.0	5.02	4.99	4.83		4.94
Beta 86RR66	Approved	311.59	291.60	302	101.1	1068.1	913.6	990.8	106.2	207.3	4.91	5.15	5.00		5.02
Beta 87RR38	Approved	308.80	294.80	301.8	101.2	1151.2	929.5	1040.4	111.5	212.6	3.83	4.33	4.73		4.30
Beta 87RR58	Approved	310.60	294.10	302.4	101.4	1166.9	928.6	1047.7	112.3	213.6	5.06	4.60	5.06		4.91
Beta 87RR68	Approved	330.54	300.20	315	105.7	1294.4	997.4	1145.9	122.8	228.5	4.64	4.32	4.66		4.54
Crystal 539RR	Approved	317.12	290.30	303.7	101.8	1072.7	854.9	963.8	103.3	205.1	5.02	4.90	5.25		5.06
Crystal 658RR	Approved	305.10	280.90	293.0	98.2	1072.9	830.7	951.8	102.0	200.2	3.96	4.24	4.63		4.28
Crystal 765RR	Approved	327.56	306.10	317	106.2	1247.1	1022.0	1134.5	121.6	227.8	4.85	3.97	4.89		4.57
Crystal 768RR	Approved	308.96	300.90	304.9	102.2	1168.2	982.4	1075.3	115.2	217.4	4.80	4.45	4.94		4.73
Hilleshög 4000RR(9035RR)	Approved	308.36	293.70	301.0	100.9	991.4	840.0	915.7	98.1	199.0	4.74	4.55	4.71		4.67
Hilleshög 4010RR	Approved	321.75	297.20	309	103.7	1094.2	869.3	981.8	105.2	208.9	5.01	4.81	5.51		5.11
Hilleshög 4012RR	Approved	312.24	290.60	301.4	101.0	1147.6	892.4	1020.0	109.3	210.3	4.97	4.98	5.29		5.08
Hilleshög 4043RR(9043RR)	Approved	318.57	294.06	306.3	102.7	1173.6	893.2	1033.4	110.7	213.4	4.25	4.49	4.69		4.48
SESVanderhave H36711RR	Approved	308.90	296.00	302.5	101.4	1050.7	953.7	1002.2	107.4	208.8	4.73	4.36	5.22		4.77
Conventional															
Seedex SX0873TT (Deuce)	Approved	305.02	299.50	302.3	101.3	1124.5	1017.0	1070.8	114.7	216.0	--	5.16	5.58	5.37	--
Seedex Sonic	Approved	309.00	304.80	307	102.9	1087.2	1002.0	1044.6	111.9	214.8	4.57	4.95	5.07		4.86
SESVanderhave H46519	Approved	305.12	299.70	302.4	101.4	1076.4	949.3	1012.9	108.5	209.9	4.57	4.21	4.76		4.52
SESVanderhave H46531	Approved	305.78	302.00	303.9	101.9	1060.9	921.3	991.1	106.2	208.1	4.99	4.59	4.68		4.75
SESVanderhave H48607TT	Approved	296.77	295.80	296	99.3	1130.8	1040.0	1085.4	116.3	215.6	4.97	5.42	5.52		5.30
SESVanderhave H48716TT	Approved	307.91	298.90	303.4	101.7	1047.7	980.8	1014.3	108.7	210.4	5.17	4.97	5.25		5.13
SESVanderhave H48717TT	Approved	308.47	293.50	301.0	100.9	1071.4	987.2	1029.3	110.3	211.2	5.20	4.58	5.39		5.06
Candidates for Approval (2 Yr)														<=5.20	
Roundup Ready															
Beta 88RR03	Not Approved	300.13	284.90	293	98.1	1036.6	821.9	929.2	99.6	197.6		3.89	4.65	4.27	--
Beta 88RR13	Not Approved	302.36	280.52	291.4	97.7	1061.2	801.2	931.2	99.8	197.5		4.08	4.55	4.32	--
Beta 88RR21	Approved	309.19	283.83	296.5	99.4	1103.9	840.5	972.2	104.2	203.6		4.19	4.33	4.26	--
Beta 88RR31	Approved	312.82	292.99	303	101.5	1156.1	894.3	1025.2	109.8	211.4		4.70	4.97	4.83	--
Beta 88RR41	Approved	309.51	290.07	299.8	100.5	1189.1	898.7	1043.9	111.8	212.3		4.56	4.87	4.72	--
Beta 88RR61	Approved	315.53	299.42	307.5	103.1	1155.2	952.0	1053.6	112.9	216.0		4.18	5.06	4.62	--
Beta 88RR71	Approved	315.90	299.13	308	103.1	1133.5	873.1	1003.3	107.5	210.6		4.45	4.67	4.56	--
Crystal 871RR	Approved	308.83	286.46	297.6	99.8	1154.3	880.9	1017.6	109.0	208.8		4.48	4.90	4.69	--
Crystal 873RR	Not Approved	298.54	274.28	286.4	96.0	1216.7	905.6	1061.1	113.7	209.7		4.58	5.37	4.98	--
Crystal 875RR	Approved	315.28	292.60	304	101.9	1161.5	911.3	1036.4	111.0	212.9		4.27	4.56	4.41	--
Crystal 878RR	Approved	317.96	293.38	305.7	102.5	1201.4	948.2	1074.8	115.2	217.6		4.44	4.91	4.68	--
Crystal 879RR	Approved	307.61	286.66	297.1	99.6	1188.6	902.9	1045.7	112.0	211.6		4.52	5.13	4.83	--
Crystal 880RR	Approved	315.92	293.87	305	102.2	1163.9	874.8	1019.4	109.2	211.4		4.49	4.60	4.54	--
Hilleshög 4022RR	Not Approved	308.70	286.10	297.4	99.7	1036.3	839.1	937.7	100.5	200.2		3.80	4.53	4.16	--
Hilleshög 4085RR(9085RR)	Approved	311.00	289.19	300.1	100.6	1088.5	830.1	959.3	102.8	203.4		3.84	4.35	4.10	--
Hilleshög 9086RR	Not Approved	306.79	285.00	296	99.2	1045.1	801.9	923.5	98.9	198.1		3.78	4.26	4.02	--
Hilleshög 4094RR(9094RR)	Approved	306.36	292.99	299.7	100.5	1051.4	869.2	960.3	102.9	203.3		3.78	4.42	4.10	--
Hilleshög 4097RR(9097RR)	Approved	310.76	293.87	302.3	101.3	1016.6	803.5	910.0	97.5	198.8		3.45	4.01	3.73	--
Hilleshög 4114RR(9114RR)	Approved	329.49	301.47	315	105.8	1103.4	837.3	970.4	104.0	209.7		3.14	3.88	3.51	--
Seedex SX0881RR (Unicorn)	Approved	315.75	294.74	305.2	102.3	1116.1	880.8	998.4	107.0	209.3		4.69	5.33	5.01	--
Seedex SX0883RR (Usher)	Approved	302.40	292.89	297.6	99.8	1119.4	903.3	1011.3	108.4	208.1		5.83	4.35	5.09	--
Seedex SX0884RR (Uplander)	Approved	316.34	305.95	311	104.3	1072.1	919.6	995.9	106.7	211.0		4.80	4.94	4.87	--
SESVanderhave H36811RR	Approved	314.72	306.73	310.7	104.2	1049.2	861.6	955.4	102.4	206.5		4.32	5.10	4.71	--
SESVanderhave H36812RR	Approved	307.59	293.38	300.5	100.7	1089.7	923.9	1006.8	107.9	208.6		4.82	4.74	4.78	--
SESVanderhave H36813RR	Approved	300.95	296.59	299	100.2	1120.4	951.0	1035.7	111.0	211.1		5.75	4.55	5.15	--
Candidates for Approval (2 Yr)															
Conventional															
No Conventional varieties are candidates for approval.															
Benchmark Varieties															
Beta 1305R	Benchmark	301.80				1004.8									
Crystal R434	Benchmark	303.44				1050.2									
Hilleshög 2417Rz(Check)	Benchmark	309.49				997.4									
Seedex Rezult(Check)	Benchmark	309.96				950.1									
SESVanderhave H46519	Benchmark	305.12				1076.4									
Beta 85RR02	Benchmark		293.20				858.1								
Crystal 539RR	Benchmark		290.30				854.9								
Crystal 658RR	Benchmark		280.90				830.7								
Hilleshög 4012RR	Benchmark		290.60				892.4								
	Adj. Factor	1.0062	1.000			0.9921	1.000								
Benchmark mean (adjusted)		307.86	288.75	298		1008	859.0	933.4							

+ All Cercospora readings 2007-2009 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 Benc 11-13-2009.
3b) R/T >= 97% and R/T + $/A >= 202% of Bench.

Bench for 2008 is mean of 5 varieties (Beta 1305R, Crystal R434, Hilleshög 2417, Seedex Rezult, SESVanderhave H46519) times R/T adj 1.00621 & $/A adj 0.992(
Bench for 2009 is mean of 4 varieties (Beta 85RR02, Crystal 539RR, Crystal 658RR, Hilleshög 4012RR) with no adjustment factors.
To maintain approval, the 3-year Cercospora rating must not exceed 5.40 (1982 adjusted data).

Table 41.
Projected Calculation for Approval of Sugarbeet Varieties for ACSC Market

Description	Approval ^ Likely	Rec/Ton 2009	Rec/Ton % Bench	Rev/Acre 2009	Rev/Acre % Bench	R/T + $/A Bench	CR Rating ^^ 2009
Candidates for Retesting (1 Yr)							***<=5.20***
Roundup Ready							
Beta 89RR10	On Track	308.7	106.9	911	106.1	213.0	4.48
Beta 89RR20	On Track	294.9	102.1	891	103.7	205.8	4.89
Beta 89RR23	NOT	284.0	98.4	817	95.1	193.4	5.09
Beta 89RR30	On Track	284.5	98.5	924	107.6	206.1	5.08
Beta 89RR40	On Track	299.7	103.8	958	111.5	215.3	4.83
Beta 89RR43	NOT	285.8	99.0	805	93.7	192.7	4.76
Beta 89RR50	On Track	290.1	100.5	944	109.9	210.4	4.84
Beta 89RR60	On Track	304.6	105.5	901	104.9	210.3	4.57
Beta 89RR63	On Track	299.0	103.6	767	89.2	192.8	4.09
Beta 89RR70	On Track	294.0	101.8	843	98.2	200.0	4.86
Beta 89RR83	On Track	284.7	98.6	886	103.2	201.8	4.53
Crystal 981RR	On Track	286.6	99.2	979	114.0	213.2	5.19
Crystal 982RR	On Track	289.7	100.3	872	101.6	201.9	4.92
Crystal 983RR	NOT	274.9	95.2	786	91.4	186.6	4.28
Crystal 984RR	On Track	298.5	103.4	935	108.8	212.2	4.84
Crystal 985RR	On Track	297.4	103.0	939	109.3	212.3	4.18
Crystal 986RR	On Track	300.8	104.2	905	105.3	209.5	4.53
Hilleshög 9160RR	On Track	290.6	100.7	808	94.0	194.7	4.34
Hilleshög 9161RR	On Track	291.9	101.1	810	94.3	195.3	4.07
Hilleshög 9162RR	NOT	284.3	98.5	808	94.1	192.6	4.27
Hilleshög 9163RR	NOT	286.3	99.1	855	99.5	198.6	4.58
Hilleshög 9189RR	NOT	274.6	95.1	746	86.8	181.9	3.84
Hilleshög 9194RR	NOT	283.6	98.2	851	99.1	197.3	4.88
Hilleshög 9195RR	On Track	287.7	99.6	924	107.6	207.2	4.56
Hilleshög 9197RR	On Track	291.0	100.8	795	92.5	193.3	4.20
Hilleshög 9198RR	NOT	277.4	96.1	644	75.0	171.1	4.17
Hilleshög 9199RR	On Track	295.9	102.5	882	102.7	205.2	4.64
Hilleshög 9216RR	On Track	288.0	99.7	883	102.7	202.5	4.16
Hilleshög 9218RR	NOT	273.3	94.7	773	90.0	184.7	3.97
Seedex SX0891RR	On Track	304.8	105.6	910	105.9	211.5	5.17
Seedex SX0892RR	On Track	285.7	98.9	927	107.9	206.8	4.79
Seedex SX0893RR	On Track	302.5	104.8	946	110.2	214.9	4.94
Seedex SX0894RR	On Track	298.3	103.3	896	104.3	207.6	4.38
Seedex SX0895RR	On Track	297.1	102.9	897	104.4	207.3	4.64
SESVanderhave H36911RR	NOT	299.2	103.6	869	101.1	204.8	5.25
SESVanderhave H36912RR	On Track	291.8	101.1	880	102.4	203.5	4.93
SESVanderhave H36913RR	On Track	298.7	103.5	951	110.7	214.2	5.16
SESVanderhave H36914RR	NOT	306.6	106.2	902	105.0	211.2	5.27
SESVanderhave H36915RR	On Track	297.0	102.9	927	107.9	210.7	5.05
SESVanderhave H36916RR	On Track	297.3	103.0	920	107.1	210.1	4.91
SESVanderhave H36917RR	On Track	305.1	105.7	929	108.2	213.9	5.01
SESVanderhave H36918RR	On Track	305.1	105.7	937	109.0	214.7	4.36
Beta 85RR02(Check)	NOT	293.0	101.5	878	102.2	203.7	--
Crystal 539RR(Check)	NOT	286.0	99.0	825	96.1	195.1	--
Crystal 658RR(Check)	NOT	281.5	97.5	834	97.1	194.6	--
Hilleshög 4012RR(Check)	NOT	294.5	102.0	899	104.7	206.7	--
Filler35	NOT	291.8	101.1	870	101.2	202.3	--
Benchmark Mean		288.8		859			

^ NOT = not on track for approval. On Track = data is tracking for potential approval. Created 11-13-2009.
^^ All Cercospora readings 2009 were adjusted to 1982 basis.

Full market approval criteria include: 1) 2 years of official trial data, 2) Cercospora rating must not exceed 5.20 (1982 adjusted data), 3a) R/T >= 100% of Bench or 3b) R/T >= 97% and R/T + $/A equal to 202 of Bench.

Bench for 2009 is mean of 4 varieties (Beta 85RR02, Crystal 539RR, Crystal 658RR, Hilleshög 4012RR) with no adjustment factors.

Table 42.

Calculation for Approval of Sugarbeet Varieties for ACSC Aphanomyces Specialty Market for 2010

Yrs Aph Yld	Description	Approval Status	Root Aph. Rating 2007	2008	2009	2 Yr Mean	3 Yr Mean	Cercospora Rating + 2007	2008	2009	2 Yr Mean	3 Yr Mean
	Previously Approved (3 Yrs)						***<=5.20***					***<=5.40***
	Roundup Ready											
2	Beta 85RR02	Approved	4.24	4.16	4.02	4.09	4.14	4.64	4.64	4.66	4.65	4.65
2	Crystal 539RR	Approved	4.28	4.55	4.19	4.37	4.34	5.02	4.90	5.25	5.08	5.06
2	Crystal 658RR	Approved	5.87	4.78	3.95	4.36	4.86	3.96	4.24	4.63	4.44	4.28
2	Hilleshög 4012RR	Approved	5.26	4.32	4.47	4.40	4.68	4.97	4.98	5.29	5.14	5.08
	Candidates for Approval					***<=4.90***						***<=5.20***
	Roundup Ready											
2	Beta 88RR21	Approved		4.52	4.08	4.30			4.19	4.33	4.26	
2	Beta 88RR31	Approved		4.35	4.10	4.23			4.70	4.97	4.83	
2	Beta 88RR61	Approved		4.55	4.57	4.56			4.18	5.06	4.62	
2	Beta 88RR71	Approved		4.40	3.93	4.17			4.45	4.67	4.56	
2	Crystal 871RR	Approved		4.73	4.17	4.45			4.48	4.90	4.69	
2	Crystal 875RR	Approved		3.79	3.00	3.39			4.27	4.56	4.41	
2	Hilleshög 4000RR(9035/9060RR)	NO		5.20	5.38	5.29			4.55	4.71	4.63	
2	Hilleshög 4022RR	Approved		4.84	4.80	4.82			3.80	4.53	4.16	
2	Hilleshög 4043RR(9043RR)	Approved		4.55	4.91	4.73			4.49	4.69	4.59	
	Approval Criteria new varieties					4.90					5.20	
	Criteria to Maintain Approval						5.20					5.40

+ All Cercospora readings 2006-2008 were adjusted to 1982 basis.

Aphanomyces approval criteria include: 1) 2 years of Aph official trial data (exception for RR varieties), 2) Cercospora rating must not exceed 5.20 (1982 adjusted data), 3) Aph root rating <= 4.90 after 2 years.

To maintain Aphanomyces approval criteria include: 1) Cercospora 3 year mean must not exceed 5.40, 2) Aph root rating <= 5.20 after 3 years.

Table 43.

Calculation for Approval of Sugarbeet Varieties for ACSC Rhizoctonia Specialty Market for 2010

Description	Approval Status	Disease Index + 2007	2008	2009	2 Yr Mean	3 Yr Mean	Cercospora Rating ** 2007	2008	2009	2 Yr Mean	3 Yr Mean
Previously Approved (3 Yr)											
No RR varieties previous approved											
RR Candidates for Approval (2 Yr)											
Beta 85RR02	Not Approved	6.36	4.48		5.42		4.64	4.66		4.65	
Beta 86RR44	Not Approved	5.11	4.26		4.69		4.99	4.83		4.91	
Beta 86RR66	Not Approved	4.47	4.11		4.29		5.15	5.00		5.08	
Beta 87RR38	Not Approved	4.50	3.79		4.14		4.33	4.73		4.53	
Beta 87RR58	Not Approved	5.42	4.46		4.94		4.60	5.06		4.83	
Beta 87RR68	Not Approved	7.12	4.64		5.88		4.32	4.66		4.49	
Beta 88RR03	Approved	2.80	3.48		3.14		3.89	4.65		4.27	
Beta 88RR13	Approved	2.08	3.40		2.74		4.08	4.55		4.32	
Beta 88RR21	<2 Yrs	--	3.82		--		4.19	4.33		4.26	
Beta 88RR31	<2 Yrs	--	4.07		--		4.70	4.97		4.83	
Beta 88RR41	<2 Yrs	--	4.26		--		4.56	4.87		4.72	
Beta 88RR61	<2 Yrs	--	4.50		--		4.18	5.06		4.62	
Beta 88RR71	<2 Yrs	--	4.43		--		4.45	4.67		4.56	
Crystal 539RR	Not Approved	7.14	4.38		5.76		4.90	5.25		5.08	
Crystal 658RR	Approved	2.88	3.74		3.31		4.24	4.63		4.44	
Crystal 765RR	Not Approved	7.07	4.68		5.88		3.97	4.89		4.43	
Crystal 768RR	Not Approved	5.69	4.06		4.87		4.45	4.94		4.70	
Crystal 871RR	<2 Yrs	--	4.91		--		4.48	4.90		4.69	
Crystal 873RR	<2 Yrs	--	3.58		--		4.58	5.37		4.98	
Crystal 875RR	<2 Yrs	--	4.16		--		4.27	4.56		4.41	
Crystal 878RR	<2 Yrs	--	4.39		--		4.44	4.91		4.68	
Crystal 879RR	<2 Yrs	--	4.13		--		4.52	5.13		4.83	
Crystal 880RR	<2 Yrs	--	4.10		--		4.49	4.60		4.54	
Hilleshög 4000RR(9035RR)	Not Approved	4.96	4.86		4.91		4.55	4.71		4.63	
Hilleshög 4010RR	Not Approved	4.40	4.96		4.68		4.81	5.51		5.16	
Hilleshög 4012RR	Not Approved	5.29	4.84		5.07		4.98	5.29		5.14	
Hilleshög 4022RR	Approved	1.60	3.10		2.35		3.80	4.53		4.16	
Hilleshög 4043RR(9043RR)	Not Approved	5.29	4.54		4.92		4.49	4.69		4.59	
Hilleshög 4085RR(9085RR)	<2 Yrs	--	3.27		--		3.84	4.35		4.10	
Hilleshög 4094RR(9094RR)	Approved	1.98	3.22		2.60		3.78	4.42		4.10	
Hilleshög 4097RR(9097RR)	Approved	1.43	3.99		2.71		3.45	4.01		3.73	
Hilleshög 4114RR(9114RR)	<2 Yrs	--	4.25		--		3.14	3.88		3.51	
Hilleshög 9086RR	<2 Yrs	--	4.90		--		3.78	4.26		4.02	
Seedex SX0881RR (Unicorn)	<2 Yrs	--	4.79		--		4.69	5.33		5.01	
Seedex SX0883RR (Usher)	<2 Yrs	--	4.13		--		5.83	4.35		5.09	
Seedex SX0884RR (Uplander)	<2 Yrs	--	4.73		--		4.80	4.94		4.87	
SESVanderhave H36711RR	Not Approved	3.99	4.50		4.24		4.36	5.22		4.79	
SESVanderhave H36811RR	Approved	3.20	4.28		3.74		4.32	5.10		4.71	
SESVanderhave H36812RR	Not Approved	4.43	4.57		4.50		4.82	4.74		4.78	
SESVanderhave H36813RR	Not Approved	3.48	4.63		4.05		5.75	4.55		5.15	
Conventional Candidates for Approval (2 Yr)											
Seedex SX0873TT (Deuce)	<2 Yrs	--	4.57		--		5.16	5.58		5.37	
Seedex Sonic	Not Approved	4.83	4.76		4.80		4.95	5.07		5.01	
SESVanderhave H46519	Not Approved	3.66	4.31		3.99		4.21	4.76		4.49	
SESVanderhave H46531	Not Approved	3.28	4.42		3.85		4.59	4.68		4.64	
SESVanderhave H48607TT	Not Approved	3.79	4.10		3.95		5.42	5.52		5.47	
SESVanderhave H48716TT	Not Approved	3.40	4.59		3.99		4.97	5.25		5.11	
SESVanderhave H48717TT	Not Approved	4.37	4.28		4.32		4.58	5.39		4.99	
Susceptible Checks											
ACSC Rhiz Chk#01 SEEDEXMONOHIKARI	Susc Chk	4.17	4.72		4.45						
ACSC Rhiz Chk#02 HILLE17	Susc Chk	3.33	4.49		3.91						
Filler25	Susc Chk	3.84	4.22		4.03						
ACSC Rhiz Chk#09 CRYSR431	Susc Chk	5.57	4.55		5.06						
ACSC Rhiz Chk#08 CRYS539RR	Susc Chk	7.14	4.53		5.83						
ACSC Rhiz Chk#11 BETA87RR68	Susc Chk	7.12	4.88		6.00						
ACSC Rhiz Chk#15 CRYSR760	Susc Chk	6.03	4.51		5.27						
ACSC Rhiz Chk#21 CRYS768RR	Susc Chk	5.69	4.05		4.87						
ACSC Rhiz Chk#26 BETA86RR44	Susc Chk	5.11	4.37		4.74						
USDA Susceptible Check #1 FC901/C8	Susc Chk	2.57	4.66		3.61						
Susceptible Hybrid Mean		5.06	4.50		4.78					5.20	5.40
Approval Criteria (Susc Hybrid * 0.80) ++		4.05	3.60		**3.82**						

+ Disease Index is based on a scale of 0 (healthy) to 7 (plant dead). All readings were adjusted based on check performance in 2007-2009.

+ 2009 data from Ft Collins, 2008 data from Moorhead & 2007 data from Ft Collins & Moorhead.

++ Candidates must have better tolerance than susceptible hybrid mean * 80%.

** All readings 2007-2009 were adjusted based on check performance.

Table 44.

Varieties Approved for Sale to Minn-Dak Growers for the 2010 Sugarbeet Crop

Established Varieties Roundup Ready ®		
ACH RR539 (Aph)	Beta 85RR02 (Aph)	HM 4012RR (Aph)
ACH RR610	Beta 77RR54 (Aph)	HM 4022RR (Aph, Rhc)
ACH RR632 (Aph)		
ACH RR643 (Aph)		

Specialty Approved Varieties Roundup Ready ®	
ACH RR658 (Aph, Rhc)	Beta 77RR74 (Aph, Rhc)
ACH RR811 (Aph, Rhc)	Beta 78RR03 (Aph)

** Aphanomyces 3-year root rating of 4.90 or better must be obtained to be considered "Aphanomyces Specialty".
** Rhc indicates that the variety has Rhizoctonia tolerance (based on a Rhizoctonia rating of 3.8 or lower).

Test Market Varieties Approved for Limited Sales Roundup Ready ®				
ACH RR806 (Aph)	Beta 78RR10	HM 4062RR (Aph, Rhc)	SESVDH H36821RR	SDX Ultra
ACH RR830 (Aph, Rhc)	Beta 78RR20 (Aph)	HM 4083RR (Aph)	SESVDH H36822RR (Aph)	
			SESVDH H36921RR (Aph)	
			SESVDH H36927RR (Aph)	

ACH varieties are labeled as Crystal in the data tables.
HM varieties are labeled as Hilleshög in the data tables.
SDX varieties are labeled as Seedex in the data tables.
VDH varieties are labeled as SESVanderhave in the data tables.
Roundup Ready ® is a registered trademark of Monsanto Company.

Aph indicates variety has Aphanomyces tolerance
Rhc indicates variety has Rhizoctonia tolerance

Created 12-09-2009.

Table 45.

2009 Performance of Varieties - MDFC Commercial RR Official Trial

Norcross MN - 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 77RR54	156	309.7	104	10286	102	1.29	16.77	33.48	324	1866	397	0.00	67.7
Beta 77RR74	152	280.4	94	10242	101	1.24	15.28	36.40	426	1765	340	0.00	53.3
Beta 85RR02	155	313.3	106	10210	101	1.34	16.98	32.62	357	1849	419	0.00	63.4
Crystal RR539	158	296.4	100	10015	99	1.37	16.20	33.64	433	1822	411	0.00	56.4
Crystal RR610	151	290.6	98	10259	101	1.38	15.92	35.39	288	1916	451	0.00	65.4
Crystal RR632	159	300.0	101	10183	101	1.28	16.27	34.09	338	1789	391	0.00	49.0
Crystal RR658	153	288.2	97	9996	99	1.12	15.54	34.15	295	1677	308	0.00	64.0
Hilleshög 4012RR	157	292.7	99	9642	95	1.27	15.90	33.45	526	1771	327	0.00	66.5
Hilleshög 4022RR	154	300.5	101	10295	102	1.29	16.32	34.32	317	1912	374	0.00	62.7
Trial Mean		296.9		10125		1.29	16.13	34.17	367	1819	380	0.0	60.9
Coeff. of Var. (%)		3.0		6.8		6.4	2.7	6.3	21.4	5.1	13.1		17.2
Mean LSD (0.05)		11.8		856		0.11	0.56	2.50	103	108	66		12.2
Mean LSD (0.01)		15.9		1147		0.15	0.75	3.35	139	144	88		16.4
Sig Lvl		**		ns		**	**	ns	**	**	**		*

* 2009 Data from Norcross MN Other sites were not harvested. Analyzed 11/10/2009 08:17 Created 11-11-2009.

Vigor not collected. Trial # = 096604

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

Table 46.

2009 Performance of Varieties - ACSC Experimental RR Official Trial

Norcross MN - All Characters

Adjusted to Comm Trial Status		Rec/T	Rec/T	Rec/A	Rec/A	Loss	Sugar	Yield	Na	K	AmN	Bolter	Emerg.
Description @	Code	lbs.	%Mean	lbs.	%Mean	Mol %	%	T/A	ppm	ppm	ppm	%^	%^
Beta 78RR03	321	293.6	100	9174	90	1.20	15.87	31.44	337	1756	330	0.00	47.9
Beta 78RR10	309	298.5	101	11342	111	1.35	16.26	37.99	303	1947	411	0.00	61.1
Beta 78RR20	305	305.0	104	10857	106	1.27	16.50	36.13	491	1679	362	0.00	60.2
Beta 79RR12	302	284.8	97	10572	103	1.26	15.49	36.97	457	1809	327	0.00	65.4
Beta 79RR32	344	314.8	107	9982	97	1.16	16.90	31.92	292	1613	358	0.00	63.6
Beta 79RR33	330	289.5	98	10218	100	1.32	15.79	35.15	426	1864	372	0.00	32.1
Beta 79RR53	319	274.0	93	9357	91	1.50	15.19	33.85	444	2140	431	0.00	50.0
Beta 79RR73	307	280.6	95	9111	89	1.48	15.49	32.74	353	2030	472	0.00	61.0
Crystal RR643	313	307.5	105	10567	103	1.36	16.73	34.39	365	1840	423	0.00	68.3
Crystal RR792	335	277.4	94	11141	109	1.52	15.36	40.56	610	1872	460	0.00	76.2
Crystal RR793	317	288.9	98	11227	110	1.18	15.62	38.97	340	1662	343	0.00	66.7
Crystal RR794	328	317.0	108	11826	115	1.16	17.02	37.26	304	1767	312	0.00	66.5
Crystal RR796	312	288.2	98	10590	103	1.35	15.75	36.88	312	1933	416	0.00	57.4
Crystal RR798	340	288.4	98	9560	93	1.19	15.61	33.22	317	1766	331	0.00	57.9
Crystal RR806	346	294.1	100	11221	110	1.27	15.97	37.90	369	1841	359	0.00	67.7
Crystal RR811	314	283.1	96	9753	95	1.25	15.41	34.03	384	1789	341	0.00	64.9
Crystal RR830	329	291.6	99	11036	108	1.19	15.78	37.33	372	1709	326	0.00	72.6
Hilleshög 4062RR(9062RR)	306	295.0	100	10679	104	1.31	16.05	36.11	301	1917	384	0.00	76.3
Hilleshög 4083RR(9083RR)	333	298.8	102	9824	96	1.24	16.17	33.42	444	1732	335	0.00	53.6
Hilleshög 9165RR	331	281.7	96	8495	83	1.40	15.46	30.47	365	1891	437	0.00	38.1
Hilleshög 9200RR	320	288.2	98	10795	105	1.38	15.78	37.77	507	1913	380	0.00	59.0
Hilleshög 9201RR	342	279.4	95	8656	84	1.44	15.39	31.28	447	1875	450	0.00	37.5
Hilleshög 9202RR	308	297.6	101	10269	100	1.31	16.18	34.58	333	1886	384	0.00	61.5
Hilleshög 9203RR	301	306.5	104	8088	79	1.24	16.55	26.45	281	1835	363	1.50	40.7
Hilleshög 9204RR	336	291.4	99	10274	100	1.37	15.93	35.11	502	1817	396	0.00	51.1
Hilleshög 9206RR	311	281.8	96	10147	99	1.31	15.39	36.02	460	1671	406	0.00	58.1
Hilleshög 9207RR	327	296.5	101	10534	103	1.23	16.04	36.02	263	1758	375	0.00	50.2
Hilleshög 9208RR	318	309.0	105	9025	88	1.26	16.71	29.37	230	1766	411	0.00	68.3
Hilleshög 9209RR	332	296.7	101	8875	87	1.27	16.10	30.32	404	1686	390	0.00	47.0
Hilleshög 9219RR	343	291.5	99	8542	83	1.31	15.87	29.53	349	1882	381	1.29	50.2
Seedex SX0981RR (Ulmer)	304	302.4	103	10344	101	1.23	16.34	34.52	434	1661	347	0.00	61.9
Seedex SX0983RR (Ultra)	338	278.9	95	10224	100	1.26	15.19	36.80	356	1768	370	0.00	76.7
Seedex SX0995RR	316	290.3	99	11334	111	1.22	15.73	38.91	329	1773	345	0.00	88.7
Seedex SX0996RR	341	295.4	100	11555	113	1.15	15.91	39.46	262	1719	325	0.00	78.3
Seedex SX0997RR	325	292.9	100	10625	104	1.19	15.82	36.55	294	1717	345	0.00	63.7
SESVanderhave H36821RR	322	304.1	103	9564	93	1.32	16.52	31.50	292	1849	418	0.00	57.2
SESVanderhave H36822RR	324	300.1	102	10525	103	1.14	16.15	35.09	247	1694	332	0.21	70.7
SESVanderhave H36921RR	310	291.2	99	10485	102	1.16	15.70	36.35	278	1710	333	0.00	78.5
SESVanderhave H36922RR	337	300.3	102	9551	93	1.25	16.25	32.09	448	1719	349	0.00	58.2
SESVanderhave H36923RR	326	298.7	102	10456	102	1.15	16.08	35.39	298	1709	327	0.00	82.8
SESVanderhave H36924RR	334	293.0	100	10435	102	1.17	15.81	36.01	255	1778	329	0.00	66.0
SESVanderhave H36925RR	303	282.8	96	9773	95	1.26	15.39	34.78	377	1726	369	0.00	69.2
SESVanderhave H36926RR	345	301.2	102	11907	116	1.14	16.21	39.52	258	1776	307	0.00	86.7
SESVanderhave H36927RR	315	291.8	99	11490	112	1.22	15.80	39.86	279	1860	346	0.00	74.9
SESVanderhave H36928RR	339	286.1	97	10571	103	1.22	15.50	37.54	326	1834	330	0.00	68.1
SESVanderhave H36929RR	323	289.3	98	11498	112	1.17	15.64	39.59	331	1724	323	0.00	84.0
Crystal RR539(Check)	347	300.8	102	9394	92	1.37	16.40	31.30	428	1837	413	0.00	54.8
Beta 85RR02(Check)	348	310.7	106	10400	102	1.25	16.79	33.45	369	1787	360	0.00	67.2
Hilleshög 4012RR(Check)	349	290.9	99	10073	98	1.36	15.89	34.96	519	1818	384	0.00	70.2
Filler36	350	313.5	107	10304	101	1.30	16.98	32.84	374	1794	384	0.00	55.2
Trial Mean		294.1		10245		1.27	15.97	34.99	362	1798	370	0.0	62.9
Coeff. of Var. (%)		3.5		8.5		8.3	2.9	7.8	21.7	5.2	13.2		15.0
Mean LSD (0.05)		15.9		1291		0.16	0.71	4.03	123	140	76		13.3
Mean LSD (0.01)		21.0		1705		0.21	0.94	5.32	162	185	100		17.6
Sig Lvl		**		**		**	**	**	**	**	**		**

* 2009 Data from Norcross MN. Other sites were harvested. Analyzed 11/10/2009 09:00 Created 11-11-2009.

^ Vigor not collected. Bolter & emergence not adjusted to commercial status. Trial # = 096304

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

Table. 47.

Calculation for Approval of Sugarbeet Varieties for Minn-Dak Market for 2010.

		Cercospora Leaf Spot Ratings					Recoverable Sugar / Acre						Cercospora Leaf Spot Ratings				Aphanomyces Root Ratings				
Description	Yrs Comm	2007	2008	2009	3 Yr Mean	3 Yr % App	2007	2008	2009	3 Yr Mean	3 Yr % App	R/T+ R/A	2007	2008	2009	3 Yr Mean	2007	2008	2009	3 Yr Mean	3 Yr % Limit
Previously Approved																					
Roundup Ready					**3 Yr**	**3 Yr**				**3 Yr**	**3 Yr**	**3 Yr**				**3 Yr**				**3 Yr**	**3 Yr**
Beta 85RR02	2	320.6	306.2	313.3	313.4	103.0	8067	10029	10210	9435	100.5	203.4	4.64	4.64	4.66	4.65	4.24	4.16	4.02	4.14	84.6
Crystal RR539	2	319.6	296.6	296.4	304.2	100.0	7915	9740	10015	9223	98.2	198.2	5.02	4.90	5.25	5.06	4.28	4.55	4.19	4.34	88.7
Hilleshög 4012RR	2	312.1	301.3	292.7	302.0	99.2	8299	11382	9642	9775	104.1	203.3	4.97	4.98	5.29	5.08	5.26	4.32	4.47	4.68	95.6
Full Market Candidates																					
Roundup Ready					**3 Yr**	**3 Yr**				**3 Yr**	**3 Yr**	**3 Yr**				**3 Yr**				**3 Yr**	**3 Yr**
Beta 77RR54	NC	317.2	301.9	309.7	309.6	101.7	7689	11277	10286	9751	103.8	205.6	4.80	4.50	4.50	4.60	5.30	4.49	4.50	4.76	97.2
Beta 77RR74	NC	302.1	272.1	280.4	284.9	93.6	7809	9947	10242	9333	99.4	193.0	4.42	4.56	5.01	4.66	4.45	4.69	3.97	4.37	89.3
Crystal RR610	NC	309.7	306.9	290.6	302.4	99.4	8682	10998	10259	9980	106.2	205.6	4.31	4.14	4.74	4.40	5.78	5.08	4.91	5.26	107.5
Crystal RR632	NC	316.4	301.0	300.0	305.8	100.5	8556	11275	10183	10005	106.5	207.0	4.19	4.10	4.50	4.26	5.21	4.60	4.57	4.79	97.9
Crystal RR643	NC	302.6	302.0	307.5	304.0	99.9	7892	11554	10567	10004	106.5	206.4	4.93	4.69	4.98	4.86	4.50	3.85	3.76	4.04	82.5
Crystal RR658	2	313.2	286.7	288.2	296.0	97.3	7840	10572	9996	9469	100.8	198.1	3.96	4.24	4.63	4.28	5.87	4.78	3.95	4.86	99.3
Hilleshög 4022RR	NC	316.5	287.7	300.5	301.6	99.1	8087	10016	10295	9466	100.8	199.9	5.13	3.80	4.53	4.48	5.05	4.84	4.80	4.90	100.1
Test Market																					
Roundup Ready					**2 Yr**	**2 Yr**				**2 Yr**	**2 Yr**	**2 Yr**				**2 Yr**				**2 Yr**	**2 Yr**
Beta 78RR03	NC		293.9	293.6	293.7	97.8		10690	9174	9932	97.6	195.4		4.05	4.62	4.33		4.50	4.34	4.42	90.3
Beta 78RR10	NC		306.8	298.5	302.6	100.8		11546	11342	11444	112.5	213.2		4.67	4.81	4.74		5.12	5.20	5.16	105.4
Beta 78RR20	NC		297.2	305.0	301.1	100.3		10558	10857	10707	105.2	205.5		4.66	4.82	4.74		3.84	3.71	3.78	77.2
Crystal RR806	NC		301.4	294.1	297.8	99.2		11099	11221	11160	109.7	208.9		4.73	4.75	4.74		4.39	3.86	4.12	84.2
Crystal RR811	NC		285.7	283.1	284.4	94.7		10268	9753	10011	98.4	193.1		4.42	4.92	4.67		4.84	3.87	4.36	89.1
Crystal RR830	NC		294.1	291.6	292.8	97.5		11234	11036	11135	109.4	206.9		4.61	4.57	4.59		5.51	4.23	4.87	99.5
Hilleshög 4062RR(9062)	NC		291.2	295.0	293.1	97.6		10646	10679	10663	104.8	202.4		4.01	4.35	4.18		4.85	4.09	4.47	91.3
Hilleshög 4083RR(9083)	NC		286.7	298.8	292.8	97.5		10682	9824	10253	100.8	198.3		3.85	4.06	3.95		5.06	4.33	4.69	95.8
Seedex SX0981RR (Ulmer)	NC		300.4	302.4	301.4	100.4		10682	10344	10513	103.3	203.7		4.48	4.19	4.33		5.02	4.83	4.92	100.5
Seedex SX0983RR (Ultra)	NC		312.1	278.9	295.5	98.4		10353	10224	10289	101.1	199.5		4.85	5.30	5.07		4.94	4.98	4.96	101.3
SESVanderhave H36821RR	NC		293.5	304.1	298.8	99.5		10926	9564	10245	100.7	200.2		4.63	4.93	4.78		5.94	5.49	5.72	116.9
SESVanderhave H36822RR	NC		297.0	300.1	298.5	99.4		10244	10525	10385	102.1	201.5		5.17	4.85	5.01		5.08	4.24	4.66	95.2
One Year Status																					
Roundup Ready					**1 Yr**	**1 Yr**				**1 Yr**	**1 Yr**	**1 Yr**				**1 Yr**				**1 Yr**	**1 Yr**
Beta 79RR12	NC			284.8	284.8	94.7			10572	10572	106.2	200.9			5.14	5.14			3.95	3.95	80.8
Beta 79RR32	NC			314.8	314.8	104.6			9982	9982	100.3	204.9			4.47	4.47			4.57	4.57	93.3
Beta 79RR33	NC			289.5	289.5	96.3			10218	10218	102.6	198.9			4.03	4.03			3.76	3.76	76.8
Beta 79RR53	NC			274.0	274.0	91.1			9357	9357	94.0	185.1			5.00	5.00			5.29	5.29	108.1
Beta 79RR73	NC			280.6	280.6	93.3			9111	9111	91.5	184.8			4.88	4.88			4.74	4.74	96.9
Crystal RR792	NC			277.4	277.4	92.2			11141	11141	111.9	204.1			4.97	4.97			3.93	3.93	80.2
Crystal RR793	NC			288.9	288.9	96.0			11227	11227	112.8	208.8			4.47	4.47			4.28	4.28	87.4
Crystal RR794	NC			317.0	317.0	105.4			11826	11826	118.8	224.2			4.69	4.69			3.94	3.94	80.6
Crystal RR796	NC			288.2	288.2	95.8			10590	10590	106.4	202.2			4.95	4.95			5.11	5.11	104.4
Crystal RR798	NC			288.4	288.4	95.9			9560	9560	96.0	191.9			4.65	4.65			3.83	3.83	78.3
Hilleshög 9165RR	NC			281.7	281.7	93.6			8495	8495	85.3	179.0			5.11	5.11			5.76	5.76	117.6
Hilleshög 9200RR	NC			288.2	288.2	95.8			10795	10795	108.4	204.2			5.26	5.26			3.88	3.88	79.2
Hilleshög 9201RR	NC			279.4	279.4	92.9			8656	8656	86.9	179.8			4.88	4.88			6.48	6.48	132.5
Hilleshög 9202RR	NC			297.6	297.6	98.9			10269	10269	103.1	202.1			4.49	4.49			4.57	4.57	93.4
Hilleshög 9203RR	NC			306.5	306.5	101.9			8088	8088	81.2	183.1			3.98	3.98			4.93	4.93	100.7
Hilleshög 9204RR	NC			291.4	291.4	96.9			10274	10274	103.2	200.1			4.76	4.76			4.79	4.79	97.8
Hilleshög 9206RR	NC			281.8	281.8	93.7			10147	10147	101.9	195.6			4.84	4.84			4.51	4.51	92.1
Hilleshög 9207RR	NC			296.5	296.5	98.6			10534	10534	105.8	204.4			4.35	4.35			6.37	6.37	130.1
Hilleshög 9208RR	NC			309.0	309.0	102.7			9025	9025	90.7	193.4			4.59	4.59			6.14	6.14	125.5
Hilleshög 9209RR	NC			296.7	296.7	98.6			8875	8875	89.1	187.8			4.21	4.21			5.79	5.79	118.2
Hilleshög 9219RR	NC			291.5	291.5	96.9			8542	8542	85.8	182.7			4.01	4.01			4.42	4.42	90.4
Seedex SX0995RR	NC			290.3	290.3	96.5			11334	11334	113.8	210.4			4.74	4.74			4.67	4.67	95.4
Seedex SX0996RR	NC			295.4	295.4	98.2			11555	11555	116.1	214.3			4.51	4.51			4.52	4.52	92.4
Seedex SX0997RR	NC			292.9	292.9	97.4			10625	10625	106.7	204.1			5.12	5.12			5.47	5.47	111.7
SESVanderhave H36921RR	NC			291.2	291.2	96.8			10485	10485	105.3	202.1			4.78	4.78			4.77	4.77	97.4
SESVanderhave H36922RR	NC			300.3	300.3	99.8			9551	9551	95.9	195.8			5.18	5.18			4.85	4.85	99.1
SESVanderhave H36923RR	NC			298.7	298.7	99.3			10456	10456	105.0	204.3			4.42	4.42			4.36	4.36	89.2
SESVanderhave H36924RR	NC			293.0	293.0	97.4			10435	10435	104.8	202.2			5.14	5.14			5.04	5.04	102.9
SESVanderhave H36925RR	NC			282.8	282.8	94.0			9773	9773	98.2	192.2			4.75	4.75			4.43	4.43	90.5
SESVanderhave H36926RR	NC			301.2	301.2	100.1			11907	11907	119.6	219.7			4.41	4.41			4.44	4.44	90.8
SESVanderhave H36927RR	NC			291.8	291.8	97.0			11490	11490	115.4	212.4			4.64	4.64			4.34	4.34	88.7
SESVanderhave H36928RR	NC			286.1	286.1	95.1			10571	10571	106.2	201.3			4.84	4.84			4.80	4.80	98.0
SESVanderhave H36929RR	NC			289.3	289.3	96.2			11498	11498	115.5	211.7			4.67	4.67			4.50	4.50	91.9
Mean of Approved Comm Seed^		312.3	299.8	300.8	304.3		7828.4	10394	9956	9392.6											
Disease Approval Criteria				**2 Yr =**	300.3				**2 Yr =**	10175						5.363				4.895	

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

^2009 approval variety mean is from 3 entries, 2008 is from 12 entries, 2007 is from 14 entries.

Table 48.

Three Year Performance Summary of Minn-Dak Entries in 2009

Minn-Dak Farmers Cooperative (All Location)*

Description @	Years Comm Seed +	Rec. Sugar / Ton (pounds) 2009	3 Yr Mean	3 Yr % App	Rec. Sugar / Acre (pounds) 2009	3 Yr Mean	3 Yr % App	Cercospora Rating** (1-9) 2009	3 Yr Mean	Aphanomyces Root Rating 2009	3 Yr Mean	Rhizoctonia (1=Ex,7=Poor) 2008	2009	Fusarium (1=Ex,9=Poor 2008	2009
Previously Approved															
Beta 85RR02	2	313.3	313.4	103.0	10210	9435	100.5	4.66	4.65	4.02	4.14	6.4	4.5	2.8	2.7
Crystal RR539	2	296.4	304.2	100.0	10015	9223	98.2	5.25	5.06	4.19	4.34	7.1	4.4	2.3	1.8
Hilleshög 4012RR	2	292.7	302.0	99.2	9642	9774	104.1	5.29	5.08	4.47	4.68	5.3	4.8	6.4	5.3
Candidates for Full Approval															
Roundup Ready															
Beta 77RR54	NC	309.7	309.6	101.7	10286	9751	103.8	4.50	4.60	4.50	4.76	--	4.9	3.3	3.3
Beta 77RR74	NC	280.4	284.9	93.6	10242	9333	99.4	5.01	4.66	3.97	4.37	1.9	3.5	1.8	2.0
Crystal RR610	NC	290.6	302.4	99.4	10259	9980	106.2	4.74	4.40	4.91	5.26	--	4.2	4.4	3.7
Crystal RR632	NC	300.0	305.8	100.5	10183	10005	106.5	4.50	4.26	4.57	4.79	--	4.1	2.8	2.2
Crystal RR643	NC	307.5	304.0	99.9	10567	10004	106.5	4.98	4.86	3.76	4.04	--	4.4	3.7	2.7
Crystal RR658	2	288.2	296.0	97.3	9996	9469	100.8	4.63	4.28	3.95	4.86	2.9	3.7	2.4	2.4
Hilleshög 4022RR	NC	300.5	301.6	99.1	10295	9466	100.8	4.53	4.48	4.80	4.90	1.6	3.1	5.3	4.4
Test Market			**2 Yr**	**2 Yr %**		**2 Yr**	**2 Yr %**		**2 Yr**		**2 Yr**				
Roundup Ready			**Mean**	**App**		**Mean**	**App**		**Mean**		**Mean**				
Beta 78RR03	NC	293.6	293.7	97.8	9174	9932	97.6	4.62	4.33	4.34	4.42	2.3	3.8	--	2.5
Beta 78RR10	NC	298.5	302.6	100.8	11342	11444	112.5	4.81	4.74	5.20	5.16	--	4.4	--	4.5
Beta 78RR20	NC	305.0	301.1	100.3	10857	10707	105.2	4.82	4.74	3.71	3.78	--	4.2	--	2.1
Crystal RR806	NC	294.1	297.8	99.2	11221	11160	109.7	4.75	4.74	3.86	4.12	--	4.7	--	2.3
Crystal RR811	NC	283.1	284.4	94.7	9753	10011	98.4	4.92	4.67	3.87	4.36	2.0	3.2	1.9	1.7
Crystal RR830	NC	291.6	292.8	97.5	11036	11135	109.4	4.57	4.59	4.23	4.87	--	3.4	--	3.1
Hilleshög 4062RR(9062)	NC	295.0	293.1	97.6	10679	10663	104.8	4.35	4.18	4.09	4.47	--	3.4	--	4.3
Hilleshög 4083RR(9083)	NC	298.8	292.8	97.5	9824	10253	100.8	4.06	3.95	4.33	4.69	--	4.4	--	5.0
Seedex SX0981RR (Ulmer)	NC	302.4	301.4	100.4	10344	10513	103.3	4.19	4.33	4.83	4.92	--	4.3	--	5.4
Seedex SX0983RR (Ultra)	NC	278.9	295.5	98.4	10224	10289	101.1	5.30	5.07	4.98	4.96	--	4.1	--	3.9
SESVanderhave H36821RR	NC	304.1	298.8	99.5	9564	10245	100.7	4.93	4.78	5.49	5.72	--	4.7	--	7.0
SESVanderhave H36822RR	NC	300.1	298.5	99.4	10525	10385	102.1	4.85	5.01	4.24	4.66	--	4.2	--	3.9
One Year Status				**1 Yr %**			**1 Yr %**								
Roundup Ready				**App**			**App**								
Beta 79RR12	NC	284.8		94.7	10572		106.2	5.14		3.95		--	--	--	--
Beta 79RR32	NC	314.8		104.6	9982		100.3	4.47		4.57		--	--	--	--
Beta 79RR33	NC	289.5		96.3	10218		102.6	4.03		3.76		--	4.0	--	--
Beta 79RR53	NC	274.0		91.1	9357		94.0	5.00		5.29		--	3.9	--	--
Beta 79RR73	NC	280.6		93.3	9111		91.5	4.88		4.74		--	3.6	--	--
Crystal RR792	NC	277.4		92.2	11141		111.9	4.97		3.93		--	--	--	--
Crystal RR793	NC	288.9		96.0	11227		112.8	4.47		4.28		--	3.8	--	--
Crystal RR794	NC	317.0		105.4	11826		118.8	4.69		3.94		--	--	--	--
Crystal RR796	NC	288.2		95.8	10590		106.4	4.95		5.11		--	--	--	--
Crystal RR798	NC	288.4		95.9	9560		96.0	4.65		3.83		--	3.2	--	--
Hilleshög 9165RR	NC	281.7		93.6	8495		85.3	5.11		5.76		--	--	--	2.8
Hilleshög 9200RR	NC	288.2		95.8	10795		108.4	5.26		3.88		--	--	--	--
Hilleshög 9201RR	NC	279.4		92.9	8656		86.9	4.88		6.48		--	--	--	--
Hilleshög 9202RR	NC	297.6		98.9	10269		103.1	4.49		4.57		--	4.2	--	--
Hilleshög 9203RR	NC	306.5		101.9	8088		81.2	3.98		4.93		--	4.2	--	--
Hilleshög 9204RR	NC	291.4		96.9	10274		103.2	4.76		4.79		--	3.7	--	--
Hilleshög 9206RR	NC	281.8		93.7	10147		101.9	4.84		4.51		--	--	--	2.9
Hilleshög 9207RR	NC	296.5		98.6	10534		105.8	4.35		6.37		--	--	--	--
Hilleshög 9208RR	NC	309.0		102.7	9025		90.7	4.59		6.14		--	--	--	--
Hilleshög 9209RR	NC	296.7		98.6	8875		89.1	4.21		5.79		--	--	--	--
Hilleshög 9219RR	NC	291.5		96.9	8542		85.8	4.01		4.42		--	4.0	--	--
Seedex SX0995RR	NC	290.3		96.5	11334		113.8	4.74		4.67		--	--	--	--
Seedex SX0996RR	NC	295.4		98.2	11555		116.1	4.51		4.52		--	--	--	--
Seedex SX0997RR	NC	292.9		97.4	10625		106.7	5.12		5.47		--	--	--	--
SESVanderhave H36921RR	NC	291.2		96.8	10485		105.3	4.78		4.77		--	4.2	--	--
SESVanderhave H36922RR	NC	300.3		99.8	9551		95.9	5.18		4.85		--	--	--	--
SESVanderhave H36923RR	NC	298.7		99.3	10456		105.0	4.42		4.36		--	4.5	--	3.3
SESVanderhave H36924RR	NC	293.0		97.4	10435		104.8	5.14		5.04		--	--	--	--
SESVanderhave H36925RR	NC	282.8		94.0	9773		98.2	4.75		4.43		--	--	--	--
SESVanderhave H36926RR	NC	301.2		100.1	11907		119.6	4.41		4.44		--	--	--	--
SESVanderhave H36927RR	NC	291.8		97.0	11490		115.4	4.64		4.34		--	--	--	--
SESVanderhave H36928RR	NC	286.1		95.1	10571		106.2	4.84		4.80		--	--	--	--
SESVanderhave H36929RR	NC	289.3		96.2	11498		115.5	4.67		4.50		--	--	--	--
2009 Approved Mean^^		300.8	306.5		9956	9478									

* 2007 Breckenridge, Charlesville & Colfax. 2008 Foxhome & Fairmount. 2009 Norcross.

Lower numbers indicate better Cercospora and Aphanomyces tolerance (1=Healthy, 9=Poor).

+ Years Comm Seed indicates how long commercial seed has been planted in the official trials.

Created 11-19-2009.

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

^^Approved Mean based upon set of 3 established varieties tested in 2009

Table 49.

Three Year Performance Summary of Minn-Dak Entries in 2009

Minn-Dak Farmers Cooperative (All Location)*

	Sugar Content (%)			Root Yield (Tons / Acre)			Loss to Molasses (%)			Field Emergence (%)	
Description @	2009	3 Yr Mean	3 Yr % App	2009	3 Yr Mean	3 Yr % App	2009	3 Yr Mean	3 Yr % App	2009	3 Yr Mean
Previously Approved											
Beta 85RR02	17.0	17.1	102	32.6	30.2	97	1.34	1.42	101	63	51
Crystal RR539	16.2	16.7	100	33.6	30.5	98	1.37	1.44	103	56	51
Hilleshög 4012RR	15.9	16.4	98	33.5	32.6	105	1.27	1.35	96	67	53
Full Market Candidates Roundup Ready											
Beta 77RR54	16.8	16.9	101	33.5	31.8	102	1.29	1.40	100	68	55
Beta 77RR74	15.3	15.6	93	36.4	32.9	106	1.24	1.35	96	53	46
Crystal RR610	15.9	16.5	99	35.4	33.2	107	1.38	1.38	98	65	61
Crystal RR632	16.3	16.6	99	34.1	32.9	106	1.28	1.29	92	49	55
Crystal RR643	16.7	16.7	100	34.4	33.0	106	1.36	1.51	108	68	53
Crystal RR658	15.5	16.0	96	34.2	32.0	103	1.12	1.22	87	64	50
Hilleshög 4022RR	16.3	16.5	98	34.3	31.6	102	1.29	1.38	98	63	52
Test Market Roundup Ready		**2 Yr Mean**	**2 Yr % App**		**2 Yr Mean**	**2 Yr % App**		**2 Yr Mean**	**2 Yr % App**		**2 Yr Mean**
Beta 78RR03	15.9	15.9	97	31.4	33.9	100	1.20	1.26	92	48	49
Beta 78RR10	16.3	16.5	100	38.0	37.7	112	1.35	1.34	98	61	62
Beta 78RR20	16.5	16.3	99	36.1	35.8	106	1.27	1.28	93	60	58
Crystal RR806	16.0	16.3	99	37.9	37.3	110	1.27	1.36	99	68	65
Crystal RR811	15.4	15.5	94	34.0	35.1	104	1.25	1.28	93	65	54
Crystal RR830	15.8	15.9	97	37.3	37.8	112	1.19	1.22	89	73	65
Hilleshög 4062RR(9062)	16.1	16.0	98	36.1	36.2	107	1.31	1.36	99	76	67
Hilleshög 4083RR(9083)	16.2	15.9	97	33.4	35.3	104	1.24	1.31	96	54	56
Seedex SX0981RR (Ulmer)	16.3	16.3	99	34.5	35.0	104	1.23	1.28	93	62	59
Seedex SX0983RR (Ultra)	15.2	16.0	97	36.8	35.0	104	1.26	1.21	89	77	69
SESVanderhave H36821RR	16.5	16.3	99	31.5	34.3	102	1.32	1.33	97	57	60
SESVanderhave H36822RR	16.1	16.1	98	35.1	34.8	103	1.14	1.19	87	71	60
One Year Status Roundup Ready											
Beta 79RR12	15.5			37.0			1.26			65	
Beta 79RR32	16.9			31.9			1.16			64	
Beta 79RR33	15.8			35.1			1.32			32	
Beta 79RR53	15.2			33.8			1.50			50	
Beta 79RR73	15.5			32.7			1.48			61	
Crystal RR792	15.4			40.6			1.52			76	
Crystal RR793	15.6			39.0			1.18			67	
Crystal RR794	17.0			37.3			1.16			66	
Crystal RR796	15.8			36.9			1.35			57	
Crystal RR798	15.6			33.2			1.19			58	
Hilleshög 9165RR	15.5			30.5			1.40			38	
Hilleshög 9200RR	15.8			37.8			1.38			59	
Hilleshög 9201RR	15.4			31.3			1.44			38	
Hilleshög 9202RR	16.2			34.6			1.31			62	
Hilleshög 9203RR	16.6			26.4			1.24			41	
Hilleshög 9204RR	15.9			35.1			1.37			51	
Hilleshög 9206RR	15.4			36.0			1.31			58	
Hilleshög 9207RR	16.0			36.0			1.23			50	
Hilleshög 9208RR	16.7			29.4			1.26			68	
Hilleshög 9209RR	16.1			30.3			1.27			47	
Hilleshög 9219RR	15.9			29.5			1.31			50	
Seedex SX0995RR	15.7			38.9			1.22			89	
Seedex SX0996RR	15.9			39.5			1.15			78	
Seedex SX0997RR	15.8			36.5			1.19			64	
SESVanderhave H36921RR	15.7			36.4			1.16			78	
SESVanderhave H36922RR	16.3			32.1			1.25			58	
SESVanderhave H36923RR	16.1			35.4			1.15			83	
SESVanderhave H36924RR	15.8			36.0			1.17			66	
SESVanderhave H36925RR	15.4			34.8			1.26			69	
SESVanderhave H36926RR	16.2			39.5			1.14			87	
SESVanderhave H36927RR	15.8			39.9			1.22			75	
SESVanderhave H36928RR	15.5			37.5			1.22			68	
SESVanderhave H36929RR	15.6			39.6			1.17			84	
2009 Approved Mean^^	16.4	16.7	100.0	33.2	31.1	100.0	1.33	1.40	100.0	62.1	51.6

* 2007 Breckenridge, Charlesville & Colfax. 2008 Foxhome & Fairmount. 2009 Norcross.

All varieties are diploid unless noted.

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

^^Approved Mean based upon set of 3 established varieties tested in 2009

Created 11-19-2009.

Table 50.

2009 Aphanomyces Ratings for Coded Test Entries

ACSC Nursery - Kindred, ND & Betaseed Nursery - Shakopee, MN

All Ratings Adjusted ++		Kindred +		Shakopee +		All Location Mean			Multi-Year Average							
2009		Foliar	Root	Foliar	Root	Foliar	Root ^^		Foliar		Root		2008		2007	
Chk Code	Description	8/12	9/2	7/22	8/26	Mean	Mean	% Spec	2 Yr	3 Yr	2 Yr	3 Yr	Foliar^	Rt.Indx^^	Foliar^	Rt.Indx^^
620	Beta 77RR54	3.22	5.23	2.40	3.77	2.81	4.50	92	2.69	2.73	4.49	4.76	2.57	4.49	2.82	5.30
539	Beta 77RR74	2.26	3.66	2.65	4.28	2.46	3.97	81	2.80	2.95	4.33	4.37	3.15	4.69	3.24	4.45
544	Beta 78RR03	2.81	4.32	2.54	4.36	2.67	4.34	89	2.80	--	4.42	--	2.93	4.50	--	--
511	Beta 78RR10	3.40	5.26	2.87	5.15	3.14	5.20	106	3.31	--	5.16	--	3.49	5.12	--	--
587	Beta 78RR20	2.21	3.65	2.65	3.77	2.43	3.71	76	2.38	--	3.78	--	2.33	3.84	--	--
502	Beta 79RR12	2.07	3.51	2.47	4.40	2.27	3.95	81	--	--	--	--	--	--	--	--
567	Beta 79RR32	2.35	4.24	2.42	4.90	2.39	4.57	93	--	--	--	--	--	--	--	--
531	Beta 79RR33	1.94	3.91	2.33	3.60	2.13	3.76	77	--	--	--	--	--	--	--	--
599	Beta 79RR53	3.16	5.09	2.72	5.50	2.94	5.29	108	--	--	--	--	--	--	--	--
604	Beta 79RR73	3.36	5.07	2.49	4.42	2.93	4.74	97	--	--	--	--	--	--	--	--
522	Beta 85RR02	2.58	4.44	2.42	3.60	2.50	4.02	82	2.63	2.72	4.09	4.14	2.77	4.16	2.90	4.24
613	Beta 86RR44	2.91	5.18	2.35	3.77	2.63	4.48	91	2.56	2.77	4.42	4.59	2.48	4.36	3.21	4.93
561	Beta 86RR66	2.60	4.46	2.26	4.23	2.43	4.35	89	2.93	2.76	4.65	4.62	3.42	4.96	2.43	4.55
593	Beta 87RR38	3.59	5.22	2.87	4.39	3.23	4.80	98	3.43	3.51	4.94	5.08	3.62	5.07	3.68	5.37
552	Beta 87RR58	2.51	4.84	2.22	4.75	2.36	4.79	98	3.06	3.34	5.02	5.19	3.76	5.25	3.89	5.54
520	Beta 87RR68	3.15	5.33	4.48	7.01	3.82	6.17	126	4.69	5.05	6.84	6.92	5.57	7.52	5.77	7.07
579	Beta 88RR03	2.03	3.99	2.22	4.51	2.12	4.25	87	2.44	--	4.42	--	2.77	4.59	--	--
625	Beta 88RR13	2.87	3.90	2.44	3.95	2.66	3.93	80	2.94	--	4.41	--	3.22	4.89	--	--
543	Beta 88RR21	2.69	4.01	2.29	4.14	2.49	4.08	83	2.82	--	4.30	--	3.15	4.52	--	--
622	Beta 88RR31	2.03	4.03	2.51	4.17	2.27	4.10	84	2.38	--	4.23	--	2.50	4.35	--	--
530	Beta 88RR41	2.86	5.02	2.67	4.33	2.77	4.67	95	3.57	--	5.12	--	4.38	5.56	--	--
631	Beta 88RR61	2.55	4.84	2.31	4.31	2.43	4.57	93	2.60	--	4.56	--	2.77	4.55	--	--
583	Beta 88RR71	1.84	3.73	2.51	4.13	2.18	3.93	80	2.65	--	4.17	--	3.13	4.40	--	--
611	Beta 89RR10	1.93	3.59	2.29	4.13	2.11	3.86	79	--	--	--	--	--	--	--	--
550	Beta 89RR20	3.52	4.96	2.69	4.85	3.11	4.90	100	--	--	--	--	--	--	--	--
575	Beta 89RR23	3.63	5.36	2.85	5.42	3.24	5.39	110	--	--	--	--	--	--	--	--
637	Beta 89RR30	2.51	3.50	2.65	4.70	2.58	4.10	84	--	--	--	--	--	--	--	--
512	Beta 89RR40	2.99	5.06	2.42	3.93	2.71	4.49	92	--	--	--	--	--	--	--	--
603	Beta 89RR43	3.27	4.70	2.26	3.95	2.76	4.32	88	--	--	--	--	--	--	--	--
626	Beta 89RR50	1.87	3.47	2.33	3.74	2.10	3.60	74	--	--	--	--	--	--	--	--
507	Beta 89RR60	2.50	3.47	3.64	4.63	3.07	4.05	83	--	--	--	--	--	--	--	--
606	Beta 89RR63	2.65	4.54	2.11	4.26	2.38	4.40	90	--	--	--	--	--	--	--	--
614	Beta 89RR70	1.94	4.24	2.42	4.72	2.18	4.48	91	--	--	--	--	--	--	--	--
556	Beta 89RR83	2.32	3.87	2.94	4.49	2.63	4.18	85	--	--	--	--	--	--	--	--
592	Crystal 539RR	2.76	4.54	2.63	3.84	2.69	4.19	86	2.74	2.72	4.37	4.34	2.79	4.55	2.69	4.28
621	Crystal 658RR	1.99	3.43	3.01	4.46	2.50	3.95	81	2.77	3.15	4.36	4.86	3.04	4.78	3.93	5.87
510	Crystal 765RR	3.37	5.18	3.98	5.98	3.68	5.58	114	4.25	4.38	6.41	6.47	4.83	7.25	4.64	6.57
616	Crystal 768RR	3.54	5.31	2.97	4.63	3.25	4.97	101	3.79	3.81	5.17	5.31	4.32	5.37	3.86	5.60
574	Crystal 871RR	2.38	4.20	2.65	4.13	2.51	4.17	85	2.88	--	4.45	--	3.26	4.73	--	--
542	Crystal 873RR	2.21	3.48	3.19	5.06	2.70	4.27	87	3.88	--	4.88	--	5.06	5.49	--	--
566	Crystal 875RR	1.63	2.72	2.26	3.27	1.95	3.00	61	2.10	--	3.39	--	2.24	3.79	--	--
591	Crystal 878RR	3.06	5.36	3.51	4.76	3.28	5.06	103	3.42	--	5.08	--	3.56	5.11	--	--
598	Crystal 879RR	3.03	4.67	2.72	5.30	2.87	4.99	102	3.31	--	5.29	--	3.74	5.59	--	--
535	Crystal 880RR	3.19	5.18	2.47	4.37	2.83	4.77	97	3.39	--	5.03	--	3.94	5.29	--	--
612	Crystal 981RR	2.02	3.48	3.67	4.67	2.84	4.07	83	--	--	--	--	--	--	--	--
577	Crystal 982RR	2.22	3.57	3.64	4.73	2.93	4.15	85	--	--	--	--	--	--	--	--
624	Crystal 983RR	2.26	4.00	2.74	4.72	2.50	4.36	89	--	--	--	--	--	--	--	--
501	Crystal 984RR	2.54	4.42	3.37	4.51	2.96	4.46	91	--	--	--	--	--	--	--	--
562	Crystal 985RR	2.88	4.25	2.56	4.05	2.72	4.15	85	--	--	--	--	--	--	--	--
633	Crystal 986RR	2.02	4.08	4.93	6.07	3.48	5.08	104	--	--	--	--	--	--	--	--
588	Crystal RR610	3.17	5.32	2.87	4.51	3.02	4.91	100	3.21	3.42	5.00	5.26	3.40	5.08	3.85	5.78
538	Crystal RR632	1.92	4.76	2.76	4.39	2.34	4.57	93	3.12	3.33	4.59	4.79	3.91	4.60	3.76	5.21
580	Crystal RR643	1.73	3.70	2.22	3.81	1.97	3.76	77	2.10	2.42	3.81	4.04	2.22	3.85	3.07	4.50
605	Crystal RR792	1.94	4.03	2.26	3.83	2.10	3.93	80	--	--	--	--	--	--	--	--
557	Crystal RR793	2.42	4.42	2.35	4.14	2.39	4.28	87	--	--	--	--	--	--	--	--
509	Crystal RR794	2.74	3.83	2.97	4.05	2.85	3.94	80	--	--	--	--	--	--	--	--
639	Crystal RR796	3.04	4.86	3.33	5.36	3.19	5.11	104	--	--	--	--	--	--	--	--
551	Crystal RR798	2.06	3.74	2.33	3.92	2.20	3.83	78	--	--	--	--	--	--	--	--
584	Crystal RR806	1.97	4.03	2.38	3.69	2.17	3.86	79	2.52	--	4.12	--	2.88	4.39	--	--
524	Crystal RR811	3.06	3.94	2.26	3.80	2.66	3.87	79	3.04	--	4.36	--	3.42	4.84	--	--
559	Crystal RR830	2.15	4.03	2.26	4.43	2.21	4.23	86	3.23	--	4.87	--	4.25	5.51	--	--
636	Hilleshög 4000RR(9035RR)	2.76	4.69	4.28	6.07	3.52	5.38	110	3.31	3.43	5.29	5.30	3.09	5.20	3.68	5.32
586	Hilleshög 4010RR	3.01	3.86	2.83	4.36	2.92	4.11	84	3.04	3.21	4.52	4.78	3.17	4.94	3.54	5.30
540	Hilleshög 4012RR	2.95	4.76	2.56	4.19	2.75	4.47	91	2.41	2.84	4.40	4.68	2.06	4.32	3.69	5.26
576	Hilleshög 4022RR	2.62	3.87	4.19	5.72	3.40	4.80	98	3.42	3.45	4.82	4.90	3.44	4.84	3.52	5.05
517	Hilleshög 4043RR(9043RR)	3.14	4.36	3.78	5.47	3.46	4.91	100	3.18	3.65	4.73	5.13	2.89	4.55	4.61	5.92

Table 50.

2009 Aphanomyces Ratings for Coded Test Entries

ACSC Nursery - Kindred, ND & Betaseed Nursery - Shakopee, MN

All Ratings Adjusted ++		Kindred +		Shakopee +		All Location Mean			Multi-Year Average							
2009		Foliar	Root	Foliar	Root	Foliar	Root ^^		Foliar		Root		2008		2007	
Chk Code	Description	8/12	9/2	7/22	8/26	Mean	Mean	% Spec	2 Yr	3 Yr	2 Yr	3 Yr	Foliar^	Rt.Indx^^	Foliar^	Rt.Indx^^
590	Hilleshög 4062RR(9062RR)	1.94	3.52	3.10	4.66	2.52	4.09	83	3.18	--	4.47	--	3.83	4.85	--	--
549	Hilleshög 4083RR(9083RR)	2.07	3.92	2.67	4.73	2.37	4.33	88	2.88	--	4.69	--	3.40	5.06	--	--
601	Hilleshög 4085RR(9085RR)	2.77	3.63	2.85	4.43	2.81	4.03	82	2.72	--	4.16	--	2.62	4.28	--	--
610	Hilleshög 4094RR(9094RR)	1.74	3.79	2.47	4.11	2.10	3.95	81	2.67	--	4.39	--	3.24	4.83	--	--
514	Hilleshög 4097RR(9097RR)	2.73	4.87	3.87	6.13	3.30	5.50	112	3.45	--	5.46	--	3.60	5.42	--	--
608	Hilleshög 4114RR(9114RR)	2.58	4.33	2.76	4.96	2.67	4.65	95	3.09	--	5.02	--	3.51	5.39	--	--
528	Hilleshög 9086RR	2.27	3.95	3.24	4.57	2.75	4.26	87	3.13	--	4.59	--	3.51	4.92	--	--
565	Hilleshög 9160RR	3.73	4.94	4.57	7.66	4.15	6.30	129	--	--	--	--	--	--	--	--
570	Hilleshög 9161RR	4.03	5.09	3.98	5.26	4.01	5.17	106	--	--	--	--	--	--	--	--
523	Hilleshög 9162RR	1.94	3.58	3.40	4.70	2.67	4.14	85	--	--	--	--	--	--	--	--
638	Hilleshög 9163RR	2.44	3.93	3.37	5.36	2.91	4.65	95	--	--	--	--	--	--	--	--
597	Hilleshög 9165RR	2.93	4.76	4.84	6.76	3.89	5.76	117	--	--	--	--	--	--	--	--
558	Hilleshög 9189RR	2.63	3.65	4.44	5.42	3.54	4.54	93	--	--	--	--	--	--	--	--
627	Hilleshög 9194RR	4.18	5.96	6.11	7.52	5.15	6.74	138	--	--	--	--	--	--	--	--
513	Hilleshög 9195RR	2.50	4.18	3.76	5.50	3.13	4.84	99	--	--	--	--	--	--	--	--
600	Hilleshög 9197RR	2.29	3.83	3.37	4.81	2.83	4.32	88	--	--	--	--	--	--	--	--
563	Hilleshög 9198RR	2.51	4.14	3.55	5.02	3.03	4.58	93	--	--	--	--	--	--	--	--
615	Hilleshög 9199RR	3.40	5.37	3.71	5.36	3.55	5.37	110	--	--	--	--	--	--	--	--
553	Hilleshög 9200RR	2.05	3.53	3.08	4.22	2.56	3.88	79	--	--	--	--	--	--	--	--
521	Hilleshög 9201RR	4.04	5.67	5.30	7.30	4.67	6.48	132	--	--	--	--	--	--	--	--
508	Hilleshög 9202RR	2.71	4.26	3.64	4.88	3.18	4.57	93	--	--	--	--	--	--	--	--
594	Hilleshög 9203RR	3.26	4.02	4.26	5.84	3.76	4.93	101	--	--	--	--	--	--	--	--
548	Hilleshög 9204RR	3.36	4.69	3.33	4.88	3.35	4.79	98	--	--	--	--	--	--	--	--
569	Hilleshög 9206RR	2.67	4.13	3.12	4.88	2.90	4.51	92	--	--	--	--	--	--	--	--
578	Hilleshög 9207RR	3.80	5.31	4.55	7.42	4.17	6.37	130	--	--	--	--	--	--	--	--
506	Hilleshög 9208RR	3.47	5.15	5.30	7.13	4.38	6.14	125	--	--	--	--	--	--	--	--
630	Hilleshög 9209RR	3.31	5.18	4.78	6.40	4.04	5.79	118	--	--	--	--	--	--	--	--
532	Hilleshög 9216RR	2.21	3.25	3.58	5.14	2.90	4.19	86	--	--	--	--	--	--	--	--
596	Hilleshög 9218RR	1.99	3.78	3.30	5.29	2.65	4.53	93	--	--	--	--	--	--	--	--
518	Hilleshög 9219RR	2.85	3.83	3.98	5.02	3.42	4.42	90	--	--	--	--	--	--	--	--
536	Seedex Sonic	5.33	5.78	4.17	6.02	4.75	5.90	120	4.60	4.23	6.02	5.66	4.45	6.13	3.48	4.94
623	Seedex SX0873TT (Deuce)	4.62	5.66	4.17	6.05	4.39	5.86	120	3.89	--	5.64	--	3.38	5.42	--	--
545	Seedex SX0881RR (Unicorn)	2.85	4.07	3.12	4.63	2.99	4.35	89	3.49	--	4.98	--	4.00	5.62	--	--
607	Seedex SX0883RR (Usher)	3.02	4.24	3.40	4.64	3.21	4.44	91	3.46	--	4.82	--	3.71	5.21	--	--
529	Seedex SX0884RR (Uplander)	3.00	4.77	2.49	3.78	2.75	4.28	87	2.71	--	4.38	--	2.68	4.49	--	--
581	Seedex SX0891RR	2.83	4.83	2.51	5.24	2.67	5.03	103	--	--	--	--	--	--	--	--
555	Seedex SX0892RR	3.27	4.55	2.29	4.01	2.78	4.28	87	--	--	--	--	--	--	--	--
568	Seedex SX0893RR	3.20	4.78	2.94	4.39	3.07	4.58	94	--	--	--	--	--	--	--	--
560	Seedex SX0894RR	2.56	4.20	2.38	4.13	2.47	4.16	85	--	--	--	--	--	--	--	--
525	Seedex SX0895RR	2.03	4.57	2.99	4.34	2.51	4.45	91	--	--	--	--	--	--	--	--
619	Seedex SX0981RR (Ulmer)	2.25	3.96	4.28	5.69	3.26	4.83	99	3.40	--	4.92	--	3.53	5.02	--	--
541	Seedex SX0983RR (Ultra)	3.21	5.05	2.35	4.91	2.78	4.98	102	3.38	--	4.96	--	3.98	4.94	--	--
634	Seedex SX0995RR	3.26	4.66	2.97	4.69	3.11	4.67	95	--	--	--	--	--	--	--	--
515	Seedex SX0996RR	2.32	4.25	3.33	4.79	2.82	4.52	92	--	--	--	--	--	--	--	--
628	Seedex SX0997RR	3.47	5.38	3.78	5.56	3.63	5.47	112	--	--	--	--	--	--	--	--
589	SESVanderhave H36711RR	2.75	4.36	3.19	4.63	2.97	4.49	92	3.37	3.68	4.74	5.06	3.76	4.98	4.32	5.71
504	SESVanderhave H36811RR	2.80	4.61	2.83	4.23	2.81	4.42	90	3.23	--	4.75	--	3.65	5.07	--	--
547	SESVanderhave H36812RR	2.74	4.45	3.03	4.60	2.89	4.52	92	3.17	--	4.73	--	3.45	4.94	--	--
573	SESVanderhave H36813RR	3.26	4.64	2.24	4.11	2.75	4.38	89	3.23	--	4.93	--	3.71	5.48	--	--
602	SESVanderhave H36821RR	3.51	5.01	4.05	5.98	3.78	5.49	112	4.35	--	5.72	--	4.92	5.94	--	--
527	SESVanderhave H36822RR	3.15	4.12	3.01	4.36	3.08	4.24	86	3.04	--	4.66	--	3.00	5.08	--	--
609	SESVanderhave H36911RR	3.45	5.56	2.69	4.52	3.07	5.04	103	--	--	--	--	--	--	--	--
582	SESVanderhave H36912RR	2.99	4.79	2.97	4.25	2.98	4.52	92	--	--	--	--	--	--	--	--
546	SESVanderhave H36913RR	3.16	5.10	3.87	4.88	3.51	4.99	102	--	--	--	--	--	--	--	--
618	SESVanderhave H36914RR	2.60	4.19	2.72	3.84	2.66	4.02	82	--	--	--	--	--	--	--	--
595	SESVanderhave H36915RR	2.86	4.35	2.72	4.49	2.79	4.42	90	--	--	--	--	--	--	--	--
537	SESVanderhave H36916RR	3.02	4.79	2.42	3.99	2.72	4.39	90	--	--	--	--	--	--	--	--
585	SESVanderhave H36917RR	2.82	4.47	2.51	4.08	2.67	4.28	87	--	--	--	--	--	--	--	--
571	SESVanderhave H36918RR	2.66	5.02	2.24	3.99	2.45	4.51	92	--	--	--	--	--	--	--	--
519	SESVanderhave H36921RR	3.08	4.93	2.54	4.61	2.81	4.77	97	--	--	--	--	--	--	--	--
632	SESVanderhave H36922RR	2.49	4.73	3.28	4.97	2.89	4.85	99	--	--	--	--	--	--	--	--
534	SESVanderhave H36923RR	2.27	4.25	3.24	4.48	2.75	4.36	89	--	--	--	--	--	--	--	--
629	SESVanderhave H36924RR	3.26	4.82	3.92	5.26	3.59	5.04	103	--	--	--	--	--	--	--	--
503	SESVanderhave H36925RR	2.85	4.54	2.81	4.33	2.83	4.43	90	--	--	--	--	--	--	--	--
635	SESVanderhave H36926RR	2.47	4.29	2.74	4.60	2.60	4.44	91	--	--	--	--	--	--	--	--
572	SESVanderhave H36927RR	2.49	4.45	2.22	4.23	2.36	4.34	89	--	--	--	--	--	--	--	--

Table 50.

2009 Aphanomyces Ratings for Coded Test Entries

ACSC Nursery - Kindred, ND & Betaseed Nursery - Shakopee, MN

	All Ratings Adjusted ++	Kindred +		Shakopee +		All Location Mean			Multi-Year Average							
2009		Foliar	Root	Foliar	Root	Foliar	Root ^^		Foliar		Root		2008		2007	
Chk	Code Description	8/12	9/2	7/22	8/26	Mean	Mean	% Spec	2 Yr	3 Yr	2 Yr	3 Yr	Foliar^	Rt.Indx^^	Foliar^	Rt.Indx^^
	526 SESVanderhave H36928RR	3.10	4.79	2.94	4.81	3.02	4.80	98	--	--	--	--	--	--	--	--
	564 SESVanderhave H36929RR	2.91	4.68	2.69	4.31	2.80	4.50	92	--	--	--	--	--	--	--	--
	617 SESVanderhave H46519	4.75	6.02	3.89	5.45	4.32	5.74	117	3.92	3.94	5.22	5.24	3.53	4.70	3.98	5.30
	516 SESVanderhave H46531	3.49	5.31	4.23	5.42	3.86	5.37	110	3.64	3.57	5.21	5.24	3.42	5.04	3.43	5.31
	554 SESVanderhave H48607TT	4.26	5.57	2.72	5.51	3.49	5.54	113	3.47	3.67	5.45	5.48	3.45	5.36	4.06	5.54
	505 SESVanderhave H48716TT	5.08	5.57	3.17	5.87	4.12	5.72	117	3.75	3.81	5.32	5.48	3.38	4.92	3.91	5.82
	533 SESVanderhave H48717TT	3.47	4.33	3.60	5.39	3.53	4.86	99	3.30	3.45	4.84	5.13	3.06	4.82	3.76	5.70
1	1001 Aph Chk-15 BETA1305R	4.49	5.44	2.22	4.31	3.35	4.87	99	3.37	3.22	4.68	4.66	3.39	4.49	2.90	4.61
1	1002 Aph Chk-12 CRYSR434	3.09	4.63	2.44	3.95	2.77	4.29	88	2.59	2.67	4.31	4.35	2.41	4.33	2.82	4.43
1	1003 Aph Chk-16 SES46519	3.75	5.27	4.32	5.78	4.04	5.53	113	3.90	4.30	5.35	5.80	3.76	5.17	5.11	6.71
1	1004 Aph Chk-25 BETA1584R	3.86	5.69	2.72	4.01	3.29	4.85	99	2.96	3.16	4.59	4.67	2.63	4.34	3.56	4.83
1	1005 Aph Chk-20 HILL3035	2.57	4.19	2.42	4.37	2.49	4.28	87	3.15	3.14	4.74	4.60	3.81	5.20	3.10	4.31
1	1006 Aph Chk-19 HOLL317	3.81	5.10	3.58	4.96	3.69	5.03	103	3.42	3.58	5.07	5.07	3.16	5.11	3.89	5.08
1	1007 Aph Chk-21 SES46532	3.76	5.16	3.83	5.86	3.79	5.51	112	3.57	3.46	5.15	5.08	3.35	4.78	3.25	4.93
1	1008 Aph Chk-24 SES46807	4.02	5.29	5.12	6.20	4.57	5.75	117	4.36	4.37	5.82	5.79	4.15	5.89	4.38	5.74
1	1009 Aph Chk-22 CRYS539RR	2.31	4.25	2.17	3.62	2.24	3.94	80	2.41	2.50	4.02	4.10	2.58	4.09	2.69	4.28
1	1010 Aph Chk-18 BETA85RR02	2.71	4.86	2.67	3.87	2.69	4.37	89	2.41	2.57	4.20	4.22	2.13	4.04	2.90	4.24
1	1011 Aph Chk-29 BETA86RR44	3.17	4.94	2.67	4.25	2.92	4.60	94	2.70	2.87	4.48	4.63	2.48	4.36	3.21	4.93
1	1012 Aph Chk-31 BETA86RR88	2.40	4.54	2.29	4.10	2.34	4.32	88	2.96	2.94	4.76	4.66	3.58	5.21	2.90	4.46
1	1013 Aph Chk-30 BETA86RR66	2.63	4.57	2.33	3.51	2.48	4.04	82	2.95	2.77	4.50	4.52	3.42	4.96	2.43	4.55
1	1014 Aph Chk-28 HILL4010RR	2.44	4.14	3.12	4.69	2.78	4.41	90	2.97	3.16	4.68	4.88	3.17	4.94	3.54	5.30
1	1015 Aph Chk-26 HILL4022RR	2.88	4.39	2.65	4.36	2.76	4.37	89	3.10	3.24	4.61	4.75	3.44	4.84	3.52	5.05
1	1016 Aph Chk-33 CRYS768RR	2.40	4.50	3.15	4.96	2.78	4.73	96	3.55	3.65	5.05	5.23	4.32	5.37	3.86	5.60
1	1017 Aph Chk-34 HILL4000RR	3.20	4.64	4.53	5.95	3.86	5.29	108	3.48	3.55	5.25	5.27	3.09	5.20	3.68	5.32
1	1018 Aph Chk-35 BETA87RR58	2.72	5.10	2.72	4.81	2.72	4.95	101	3.24	3.46	5.10	5.25	3.76	5.25	3.89	5.54
1	1019 Aph Chk-36 BETA87RR68	4.57	6.21	5.82	9.36	5.19	7.78	159	5.38	5.51	7.65	7.45	5.57	7.52	5.77	7.07
	1025 AP CHECK MOD HYBRID#2	4.18	6.21	6.38	9.09	5.28	7.65	156	5.51	5.44	7.40	7.29	5.73	7.14	5.31	7.09
	1029 AP CHECK MOD HYBRID#2	4.70	6.55	6.00	8.95	5.35	7.75	158	5.54	5.47	7.45	7.33	5.73	7.14	5.31	7.09
	1033 AP CHECK MOD HYBRID#2	4.64	6.38	6.02	8.70	5.33	7.54	154	5.53	5.46	7.34	7.26	5.73	7.14	5.31	7.09
	1026 AP CHECK RES HYBRID-1	2.84	4.63	2.31	3.93	2.57	4.28	87	2.55	2.69	4.17	4.28	2.52	4.05	2.98	4.49
	1030 AP CHECK RES HYBRID-1	3.29	4.86	2.38	3.93	2.83	4.40	90	2.68	2.78	4.22	4.31	2.52	4.05	2.98	4.49
	1034 AP CHECK RES HYBRID-1	3.07	4.73	2.26	3.89	2.67	4.31	88	2.59	2.72	4.18	4.28	2.52	4.05	2.98	4.49
	1028 AP CHECK RES HYBRID-2	2.97	5.07	2.47	4.46	2.72	4.77	97	2.47	2.70	4.55	4.60	2.22	4.33	3.15	4.71
	1032 AP CHECK RES HYBRID-2	2.67	4.76	2.51	4.66	2.59	4.71	96	2.41	2.66	4.52	4.58	2.22	4.33	3.15	4.71
	1036 AP CHECK RES HYBRID-2	3.22	5.03	2.74	4.97	2.98	5.00	102	2.60	2.78	4.67	4.68	2.22	4.33	3.15	4.71
	1027 AP CHECK SUS HYBRID (AD)	5.65	6.90	6.97	9.31	6.31	8.11	165	6.51	6.85	8.49	8.39	6.71	8.87	7.54	8.19
	1031 AP CHECK SUS HYBRID (AD)	5.94	6.74	7.24	9.37	6.59	8.06	164	6.65	6.95	8.46	8.37	6.71	8.87	7.54	8.19
	1035 AP CHECK SUS HYBRID (AD)	6.29	6.93	7.11	9.87	6.70	8.40	171	6.71	6.98	8.63	8.48	6.71	8.87	7.54	8.19
19	19 Chk Mean	3.20	4.89	3.20	4.89											
	Trial Mean	2.95	4.60	3.21	4.94	3.06	4.75						3.48	5.09	3.80	5.38
	Coeff. of Var. (%)	28.59	14.63	25.40	13.29											
	F Value	4.63	6.10	9.11	18.84											
	Mean LSD (0.05)	1.06	0.84	0.95	0.78											
	Mean LSD (0.01)	1.39	1.11	1.27	1.04											
	Sig Lvl	**	**	**	**											
	Adjustment Factor	0.8204	0.8101	2.2636	1.5018											
	Approval Criteria	NA	4.90	NA	4.90	NA	4.90	4.90	NA	NA	4.90		NA	4.90	NA	4.90
	Disapproval Criteria	NA		NA			NA		NA	NA		5.20	NA	5.20	NA	5.20

\+ Approval is based upon the two year root rating 4.90 or less and entry into the Aph specialty yield trials and commercial or experimental yield trials.

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

2008 & 2007 data adjusted based upon 10 check varieties, 2009 adjusted based upon 19 checks. Check varieties are labeled "Aph Chk". %Spec is a percentage of the Aph Spec approval threshold.

++ Adjustment made to minimize yearly fluctuation for disease levels in disease nursery. Data adjusted to 2000-2002 nursery levels.

^ Foliar Aph Rating was taken during summer to fall (1=healthy, 9+=severe damage). ^^ Root Rating was taken in early fall (1=healthy, 9+=severe damage).

Lower numbers indicate greater Aphanomyces tolerance. 2007 and 2009 data from Shakopee & Kindred. 2008 data from Shakopee.

Created 11-06-2009

Table 51.

2009 Cercospora Ratings for Coded Test Entries

Betaseed (Rosemount MN), BSDF (Frankenmuth MI) & NDSU (Foxhome MN)

			Adjusted to 1982 Basis ++			All Data Adjusted to '1982 Basis'					
Chk	Code	Description	Rosemt.+ Ave	BSDF Ave	Foxhome Ave	2009+++ Mean	2 Yr Mean	3 Yr Mean	2008 Mean	2007 Mean	Trial Yrs $$
	620	Beta 77RR54	4.44	4.69	4.46	4.50	4.50	4.60	4.50	4.80	3
	539	Beta 77RR74	5.22	4.64	4.97	5.01	4.79	4.66	4.56	4.42	3
	544	Beta 78RR03	4.70	4.28	4.80	4.62	4.33		4.05		2
	511	Beta 78RR10	4.83	4.72	4.88	4.81	4.74		4.67		2
	587	Beta 78RR20	4.98	4.37	4.95	4.82	4.74		4.66		2
	502	Beta 79RR12	4.99	5.34	5.23	5.14					1
	567	Beta 79RR32	4.32	4.76	4.48	4.47					1
	531	Beta 79RR33	4.04	4.04	3.99	4.03					1
	599	Beta 79RR53	5.11	5.01	4.77	5.00					1
	604	Beta 79RR73	4.99	4.87	4.67	4.88					1
	522	Beta 85RR02	4.83	4.63	4.34	4.66	4.65	4.65	4.64	4.64	5
	613	Beta 86RR44	4.90	4.73	4.79	4.83	4.91	4.94	4.99	5.02	4
	561	Beta 86RR66	5.02	5.09	4.86	5.00	5.08	5.02	5.15	4.91	4
	593	Beta 87RR38	4.78	4.57	4.80	4.73	4.53	4.30	4.33	3.83	3
	552	Beta 87RR58	5.07	5.11	4.98	5.06	4.83	4.91	4.60	5.06	3
	520	Beta 87RR68	4.59	4.50	4.98	4.66	4.49	4.54	4.32	4.64	3
	579	Beta 88RR03	4.71	4.55	4.61	4.65	4.27		3.89		2
	625	Beta 88RR13	4.67	4.23	4.65	4.55	4.32		4.08		2
	543	Beta 88RR21	4.31	4.36	4.33	4.33	4.26		4.19		2
	622	Beta 88RR31	5.02	4.99	4.85	4.97	4.83		4.70		2
	530	Beta 88RR41	4.77	4.73	5.21	4.87	4.72		4.56		2
	631	Beta 88RR61	4.99	5.32	4.96	5.06	4.62		4.18		2
	583	Beta 88RR71	4.55	4.58	5.00	4.67	4.56		4.45		2
	611	Beta 89RR10	4.32	4.58	4.71	4.48					1
	550	Beta 89RR20	4.95	4.69	4.98	4.89					1
	575	Beta 89RR23	5.22	5.11	4.83	5.09					1
	637	Beta 89RR30	4.93	5.32	5.14	5.08					1
	512	Beta 89RR40	4.87	4.88	4.69	4.83					1
	603	Beta 89RR43	4.93	4.63	4.55	4.76					1
	626	Beta 89RR50	4.76	4.86	5.00	4.84					1
	507	Beta 89RR60	4.40	4.74	4.72	4.57					1
	606	Beta 89RR63	4.12	3.92	4.22	4.09					1
	614	Beta 89RR70	5.01	4.52	4.92	4.86					1
	556	Beta 89RR83	4.54	4.61	4.45	4.53					1
	592	Crystal 539RR	5.36	5.01	5.25	5.25	5.08	5.06	4.90	5.02	5
	621	Crystal 658RR	4.53	4.64	4.81	4.63	4.44	4.28	4.24	3.96	4
	510	Crystal 765RR	4.91	4.89	4.84	4.89	4.43	4.57	3.97	4.85	3
	616	Crystal 768RR	4.74	5.11	5.19	4.94	4.70	4.73	4.45	4.80	3
	574	Crystal 871RR	4.83	5.03	4.90	4.90	4.69		4.48		2
	542	Crystal 873RR	5.47	5.36	5.20	5.37	4.98		4.58		2
	566	Crystal 875RR	4.62	4.76	4.22	4.56	4.41		4.27		2
	591	Crystal 878RR	5.11	4.66	4.76	4.91	4.68		4.44		2
	598	Crystal 879RR	5.14	4.94	5.32	5.13	4.83		4.52		2
	535	Crystal 880RR	4.59	4.61	4.62	4.60	4.54		4.49		2
	612	Crystal 981RR	5.15	5.51	4.94	5.19					1
	577	Crystal 982RR	4.86	5.14	4.81	4.92					1
	624	Crystal 983RR	4.18	4.45	4.33	4.28					1
	501	Crystal 984RR	4.79	4.98	4.80	4.84					1
	562	Crystal 985RR	3.96	4.70	4.11	4.18					1
	633	Crystal 986RR	4.48	4.76	4.41	4.53					1
	588	Crystal RR610	4.74	4.77	4.71	4.74	4.44	4.40	4.14	4.31	3
	538	Crystal RR632	4.42	4.75	4.41	4.50	4.30	4.26	4.10	4.19	3
	580	Crystal RR643	4.98	5.29	4.68	4.98	4.83	4.86	4.69	4.93	3
	605	Crystal RR792	4.95	5.08	4.91	4.97					1
	557	Crystal RR793	4.48	4.38	4.55	4.47					1
	509	Crystal RR794	4.70	4.58	4.79	4.69					1
	639	Crystal RR796	4.94	4.83	5.10	4.95					1
	551	Crystal RR798	4.80	4.18	4.81	4.65					1
	584	Crystal RR806	4.71	5.01	4.57	4.75	4.74		4.73		2
	524	Crystal RR811	4.91	4.93	4.95	4.92	4.67		4.42		2
	559	Crystal RR830	4.56	4.49	4.68	4.57	4.59		4.61		2
	636	Hilleshög 4000RR(9035RR)	4.79	4.46	4.81	4.71	4.63	4.67	4.55	4.74	3
	586	Hilleshög 4010RR	5.51	5.35	5.68	5.51	5.16	5.11	4.81	5.01	4
	540	Hilleshög 4012RR	5.30	5.18	5.41	5.29	5.14	5.08	4.98	4.97	4
	576	Hilleshög 4022RR	4.53	4.64	4.41	4.53	4.16	4.48	3.80	5.13	4
	517	Hilleshög 4043RR(9043RR)	4.74	4.51	4.77	4.69	4.59	4.48	4.49	4.25	3
	590	Hilleshög 4062RR(9062RR)	4.39	4.22	4.38	4.35	4.18		4.01		2
	549	Hilleshög 4083RR(9083RR)	4.12	3.77	4.24	4.06	3.95		3.85		2
	601	Hilleshög 4085RR(9085RR)	4.40	4.10	4.51	4.35	4.10		3.84		2
	610	Hilleshög 4094RR(9094RR)	4.53	4.04	4.59	4.42	4.10		3.78		2
	514	Hilleshög 4097RR(9097RR)	4.13	3.60	4.19	4.01	3.73		3.45		2
	608	Hilleshög 4114RR(9114RR)	3.81	3.91	4.01	3.88	3.51		3.14		2

Table 51.

2009 Cercospora Ratings for Coded Test Entries

Betaseed (Rosemount MN), BSDF (Frankenmuth MI) & NDSU (Foxhome MN)

		Adjusted to 1982 Basis ++				All Data Adjusted to '1982 Basis'					
			Rosemt.+	BSDF	Foxhome	2009+++	2 Yr	3 Yr	2008	2007	Trial
Chk	Code	Description	Ave	Ave	Ave	Mean	Mean	Mean	Mean	Mean	Yrs $$
	528	Hilleshög 9086RR	4.16	4.21	4.51	4.26	4.02		3.78		2
	565	Hilleshög 9160RR	4.44	4.10	4.37	4.34					1
	570	Hilleshög 9161RR	4.26	3.96	3.82	4.07					1
	523	Hilleshög 9162RR	4.35	4.09	4.29	4.27					1
	638	Hilleshög 9163RR	4.62	4.14	4.93	4.58					1
	597	Hilleshög 9165RR	5.08	5.05	5.24	5.11					1
	558	Hilleshög 9189RR	3.65	3.86	4.20	3.84					1
	627	Hilleshög 9194RR	4.92	4.76	4.92	4.88					1
	513	Hilleshög 9195RR	4.61	4.29	4.71	4.56					1
	600	Hilleshög 9197RR	4.37	4.03	4.04	4.20					1
	563	Hilleshög 9198RR	4.08	3.85	4.67	4.17					1
	615	Hilleshög 9199RR	4.92	4.16	4.57	4.64					1
	553	Hilleshög 9200RR	5.38	5.42	4.88	5.26					1
	521	Hilleshög 9201RR	4.92	4.83	4.85	4.88					1
	508	Hilleshög 9202RR	4.50	4.28	4.69	4.49					1
	594	Hilleshög 9203RR	3.90	3.89	4.23	3.98					1
	548	Hilleshög 9204RR	4.76	4.63	4.88	4.76					1
	569	Hilleshög 9206RR	4.96	4.79	4.66	4.84					1
	578	Hilleshög 9207RR	4.52	3.80	4.54	4.35					1
	506	Hilleshög 9208RR	4.63	4.46	4.66	4.59					1
	630	Hilleshög 9209RR	4.43	3.51	4.49	4.21					1
	532	Hilleshög 9216RR	4.14	4.03	4.33	4.16					1
	596	Hilleshög 9218RR	3.90	4.06	4.03	3.97					1
	518	Hilleshög 9219RR	4.09	3.67	4.19	4.01					1
	536	Seedex Sonic	5.17	4.95	4.98	5.07	5.01	4.86	4.95	4.57	5
	623	Seedex SX0873TT	5.65	5.44	5.57	5.58	5.37		5.16		2
	545	Seedex SX0881RR	5.28	5.27	5.48	5.33	5.01		4.69		2
	607	Seedex SX0883RR	4.38	4.33	4.32	4.35	5.09		5.83		2
	529	Seedex SX0884RR	4.87	5.02	5.01	4.94	4.87		4.80		2
	581	Seedex SX0891RR	5.16	5.17	5.19	5.17					1
	555	Seedex SX0892RR	4.77	4.93	4.70	4.79					1
	568	Seedex SX0893RR	4.93	4.97	4.94	4.94					1
	560	Seedex SX0894RR	4.18	4.62	4.56	4.38					1
	525	Seedex SX0895RR	4.58	4.48	4.94	4.64					1
	619	Seedex SX0981RR	4.31	3.91	4.21	4.19	4.33		4.48		2
	541	Seedex SX0983RR	5.33	5.12	5.42	5.30	5.07		4.85		2
	634	Seedex SX0995RR	4.77	4.63	4.77	4.74					1
	515	Seedex SX0996RR	4.50	4.26	4.77	4.51					1
	628	Seedex SX0997RR	5.41	4.71	4.95	5.12					1
	589	SESVanderhave H36711RR	5.20	5.37	5.08	5.22	4.79	4.77	4.36	4.73	3
	504	SESVanderhave H36811RR	5.15	4.89	5.20	5.10	4.71		4.32		2
	547	SESVanderhave H36812RR	4.70	4.63	4.92	4.74	4.78		4.82		2
	573	SESVanderhave H36813RR	4.56	4.30	4.75	4.55	5.15		5.75		2
	602	SESVanderhave H36821RR	4.88	4.82	5.13	4.93	4.78		4.63		2
	527	SESVanderhave H36822RR	4.88	4.95	4.67	4.85	5.01		5.17		2
	609	SESVanderhave H36911RR	5.22	5.31	5.25	5.25					1
	582	SESVanderhave H36912RR	4.87	4.81	5.18	4.93					1
	546	SESVanderhave H36913RR	5.04	5.46	5.09	5.16					1
	618	SESVanderhave H36914RR	5.38	5.05	5.27	5.27					1
	595	SESVanderhave H36915RR	4.98	5.21	5.04	5.05					1
	537	SESVanderhave H36916RR	4.96	4.95	4.78	4.91					1
	585	SESVanderhave H36917RR	5.04	4.85	5.08	5.01					1
	571	SESVanderhave H36918RR	4.45	4.16	4.36	4.36					1
	519	SESVanderhave H36921RR	4.75	4.86	4.76	4.78					1
	632	SESVanderhave H36922RR	5.23	5.09	5.16	5.18					1
	534	SESVanderhave H36923RR	4.53	4.08	4.54	4.42					1
	629	SESVanderhave H36924RR	5.12	5.26	5.05	5.14					1
	503	SESVanderhave H36925RR	4.67	4.82	4.83	4.75					1
	635	SESVanderhave H36926RR	4.40	4.60	4.24	4.41					1
	572	SESVanderhave H36927RR	4.70	4.55	4.60	4.64					1
	526	SESVanderhave H36928RR	4.88	4.76	4.83	4.84					1
	564	SESVanderhave H36929RR	4.71	4.57	4.70	4.67					1
	617	SESVanderhave H46519	4.75	4.81	4.73	4.76	4.49	4.52	4.21	4.57	7
	516	SESVanderhave H46531	4.76	4.59	4.64	4.68	4.64	4.75	4.59	4.99	6
	554	SESVanderhave H48607TT	5.85	5.01	5.38	5.52	5.47	5.30	5.42	4.97	4
	505	SESVanderhave H48716TT	5.50	4.72	5.29	5.25	5.11	5.13	4.97	5.17	3
	533	SESVanderhave H48717TT	5.62	4.77	5.56	5.39	4.99	5.06	4.58	5.20	3
Chk	1101	ACSC CR Chk-01 BETA2084	4.51	4.55	4.74	4.58	4.57	4.62	4.57	4.71	16
Chk	1102	ACSC CR Chk-02 BETA3843	4.47	5.40	4.61	4.74	4.67	4.65	4.61	4.61	17
Chk	1103	ACSC CR Chk-05 HILLVALLEY	5.43	5.36	5.51	5.43	5.39	5.44	5.35	5.53	16
Chk	1104	ACSC CR Chk-06 KW3580	4.82	4.94	4.92	4.87	4.87	4.90	4.86	4.98	16
Chk	1105	ACSC CR Chk-07 SEEDGLADIATOR	4.77	5.06	5.00	4.90	4.91	4.88	4.92	4.84	16

Table 51.
2009 Cercospora Ratings for Coded Test Entries
Betaseed (Rosemount MN), BSDF (Frankenmuth MI) & NDSU (Foxhome MN)

		Adjusted to 1982 Basis ++				All Data Adjusted to '1982 Basis'					
			Rosemt.+	BSDF	Foxhome	2009+++	2 Yr	3 Yr	2008	2007	Trial
Chk	Code	Description	Ave	Ave	Ave	Mean	Mean	Mean	Mean	Mean	Yrs $$
Chk	1106	ACSC CR Chk-08 SEEDMONARCH	4.72	4.91	4.99	4.84	4.92	4.89	5.01	4.81	16
Chk	1107	ACSC CR Chk-09 SES66156	4.91	5.01	5.13	4.99	5.08	4.98	5.17	4.78	16
Chk	1108	ACSC CR Chk-10 SES66168	4.75	5.52	4.91	4.98	5.10	5.03	5.22	4.88	16
Chk	1109	ACSC CR Chk-12 SEEDMAGNUM	5.11	5.11	4.81	5.04	4.89	5.01	4.75	5.23	10
Chk	1110	ACSC CR Chk-13 SES66561	4.96	5.50	4.93	5.09	5.07	5.10	5.05	5.17	10
Chk	1111	ACSC CR Rz Chk-14 SES46532	4.70	4.55	4.66	4.65	4.58	4.68	4.51	4.87	6
Chk	1112	ACSC CR Rz Chk-15 SES46807	4.96	4.65	4.76	4.84	4.79	4.93	4.75	5.20	5
Chk	1113	ACSC CR Rz Chk-18 HILL2415	5.09	4.90	5.18	5.07	4.94	5.05	4.82	5.27	6
Chk	1114	ACSC CR Rz Chk-20 HOLL317	4.69	4.66	4.57	4.65	4.46	4.57	4.27	4.78	7
Chk	1115	ACSC CR Rz Chk-21 HILL3035	4.46	4.08	4.46	4.36	4.15	4.23	3.94	4.37	5
Chk	1116	ACSC CR Rz Chk-22 SES46519	4.59	4.51	4.64	4.58	4.51	4.53	4.44	4.57	7
Chk	1117	ACSC CR Rz Chk-23 BETA1301R	4.79	3.74	4.37	4.42	4.28	4.46	4.14	4.83	7
Chk	1118	ACSC CR Rz Chk-26 CRYSR431	4.86	4.85	4.64	4.80	4.81	4.91	4.81	5.11	6
Chk	1119	ACSC CR Rz Chk-17 BETA85RR02	5.10	5.20	4.88	5.07	4.79	4.74	4.51	4.64	5
Chk	1120	ACSC CR RR Chk-19 CRYS539RR	5.19	5.06	4.92	5.09	4.87	4.92	4.65	5.02	5
Chk	1121	ACSC CR RR Chk-29 BETA86RR44	5.11	5.17	5.07	5.12	5.05	5.04	4.99	5.02	4
Chk	1122	ACSC CR RR Chk-30 BETA86RR66	5.11	5.20	4.94	5.09	5.12	5.05	5.15	4.91	4
Chk	1123	ACSC CR RR Chk-31 BETA86RR88	4.18	4.34	4.61	4.33	4.38	4.54	4.44	4.86	4
Chk	1124	ACSC CR RR Chk-28 HILL4010RR	5.34	5.66	5.28	5.41	5.11	5.08	4.81	5.01	4
Chk	1125	ACSC CR RR Chk-24 HILL4012RR	5.24	5.58	5.17	5.31	5.14	5.09	4.98	4.97	4
Chk	1126	ACSC CR RR Chk-37 SES36711RR	5.16	5.00	5.00	5.08	4.72	4.72	4.36	4.73	3
Chk	1127	ACSC CR RR Chk-33 HILL4043RR	4.80	3.85	4.88	4.58	4.54	4.44	4.49	4.25	3
Chk	1128	ACSC CR RR Chk-34 HILL4000RR	4.75	4.57	4.77	4.71	4.63	4.67	4.55	4.74	3
Chk	1129	ACSC CR RR Chk-35 BETA87RR58	4.93	4.70	4.97	4.88	4.74	4.85	4.60	5.06	3
Chk	1130	ACSC CR RR Chk-36 BETA87RR68	4.64	4.53	4.86	4.67	4.50	4.55	4.32	4.64	3
	1135	Crystal 30 Std	3.89	4.59	4.44	4.20	3.74	3.85	3.28	4.06	34
	1136	Maribo Monova Std	4.93	5.76	4.85	5.12	5.17	5.11	5.23	4.99	30
	1137	Maribo Unica Std	4.82	5.17	4.65	4.86	4.72	4.86	4.57	5.16	30
	1138	Bush Johnson 19 Std	4.34	4.53	4.45	4.41	4.58	4.73	4.74	5.03	30
	1139	Crystal Mustang Std	5.32	5.93	4.91	5.37	5.25		5.12		2
	1140	Filler30	5.33	5.13	4.91	5.17	5.04	5.03	4.90	5.02	3
StdB	1150	CR CHECK MOD SUSC HYBRID-1	4.86	4.98	5.28	5.00	5.18	5.25	5.37	5.38	10
StdB	1151	CR CHECK MOD SUSC HYBRID-1	5.02	5.29	4.92	5.06	5.21	5.27	5.37	5.38	10
StdB	1152	CR CHECK MOD SUSC HYBRID-2	4.52	4.44	4.46	4.48	4.34	4.38	4.20	4.44	6
StdB	1153	CR CHECK MOD SUSC HYBRID-2	4.43	4.55	4.45	4.46	4.33	4.37	4.20	4.44	6
StdB	1154	CR CHECK RES HYBRID	3.01	3.08	3.64	3.19	2.75	2.83	2.32	2.99	10
StdB	1155	CR CHECK RES HYBRID	3.00	3.18	3.66	3.21	2.77	2.84	2.32	2.99	10
StdB	1156	CR CHECK RES SOURCE	2.07	2.68	2.47	2.32	1.98	2.01	1.64	2.07	10
StdB	1157	CR CHECK RES SOURCE	2.07	2.08	2.87	2.27	1.96	1.99	1.64	2.07	10
StdB	1158	CR CHECK SUSC HYBRID	5.67	5.97	5.48	5.70	4.95	5.11	4.20	5.43	6
StdB	1159	CR CHECK SUSC HYBRID	5.55	5.74	5.38	5.55	4.88	5.06	4.20	5.43	6
30		Trial Mean	4.74	4.69	4.75	4.73					
		Coeff. of Var. (%)	6.21	8.08	6.96						
		F Value	11.55	8.22	7.68						
		Mean LSD (0.05)	0.42	0.54	0.43						
		Mean LSD (0.01)	0.56	0.72	0.55						
		Sig Lvl	**	**	**						
		Adj Factor	1.14384	1.08969	1.04393						

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

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

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

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

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

\+ Rosemount is average of two Betaseed trials.

+++ Weighted average with Rosemount comprising 50% of the mean.

Created 11-6-2009.

Table 52.

2009 Rhizoctonia Ratings for OVT Entries

Rhizoctonia Nursery - USDA Ft Collins

Chk	Code	Adjusted ++ Description	Ft Collins 9/23	Adj 2009 Mean	2 Yr Mean	3 Yr Mean	Adj 2008 Mean	Unadj 2008	Adj 2007	Unadj 2007
	620	Beta 77RR54	6.04	4.87	--	--	--	--	--	--
1	539	Beta 77RR74	4.39	3.54	2.71	2.58	1.89	1.15	2.32	2.67
	544	Beta 78RR03	4.67	3.76	3.05	--	2.34	1.42	--	--
	511	Beta 78RR10	5.51	4.44	--	--	--	--	--	--
	587	Beta 78RR20	5.27	4.25	--	--	--	--	--	--
	531	Beta 79RR33	4.99	4.02	--	--	--	--	--	--
	599	Beta 79RR53	4.87	3.92	--	--	--	--	--	--
	604	Beta 79RR73	4.52	3.64	--	--	--	--	--	--
	522	Beta 85RR02	5.56	4.48	5.42	--	6.36	3.86	--	--
	613	Beta 86RR44	5.29	4.26	4.69	--	5.11	3.10	--	--
	561	Beta 86RR66	5.10	4.11	4.29	--	4.47	2.71	--	--
	593	Beta 87RR38	4.70	3.79	4.14	--	4.50	2.73	--	--
	552	Beta 87RR58	5.53	4.46	4.94	--	5.42	3.29	--	--
	520	Beta 87RR68	5.76	4.64	5.88	--	7.12	4.32	--	--
	579	Beta 88RR03	4.32	3.48	3.14	--	2.80	1.70	--	--
	625	Beta 88RR13	4.22	3.40	2.74	--	2.08	1.26	--	--
	543	Beta 88RR21	4.74	3.82	--	--	--	--	--	--
	622	Beta 88RR31	5.05	4.07	--	--	--	--	--	--
	530	Beta 88RR41	5.29	4.26	--	--	--	--	--	--
	631	Beta 88RR61	5.58	4.50	--	--	--	--	--	--
	583	Beta 88RR71	5.50	4.43	--	--	--	--	--	--
	611	Beta 89RR10	5.63	4.54	--	--	--	--	--	--
	550	Beta 89RR20	6.02	4.85	--	--	--	--	--	--
	575	Beta 89RR23	5.87	4.73	--	--	--	--	--	--
	637	Beta 89RR30	4.85	3.91	--	--	--	--	--	--
	512	Beta 89RR40	5.58	4.50	--	--	--	--	--	--
	603	Beta 89RR43	4.57	3.68	--	--	--	--	--	--
	626	Beta 89RR50	5.89	4.75	--	--	--	--	--	--
	507	Beta 89RR60	5.63	4.54	--	--	--	--	--	--
	606	Beta 89RR63	5.92	4.77	--	--	--	--	--	--
	614	Beta 89RR70	5.39	4.34	--	--	--	--	--	--
	556	Beta 89RR83	4.46	3.59	--	--	--	--	--	--
	592	Crystal 539RR	5.43	4.38	5.76	--	7.14	4.33	--	--
1	621	Crystal 658RR	4.64	3.74	3.31	3.24	2.88	1.75	3.10	3.57
	510	Crystal 765RR	5.81	4.68	5.88	--	7.07	4.29	--	--
	616	Crystal 768RR	5.04	4.06	4.87	--	5.69	3.45	--	--
	574	Crystal 871RR	6.09	4.91	--	--	--	--	--	--
	542	Crystal 873RR	4.44	3.58	--	--	--	--	--	--
	566	Crystal 875RR	5.16	4.16	--	--	--	--	--	--
	591	Crystal 878RR	5.45	4.39	--	--	--	--	--	--
	598	Crystal 879RR	5.12	4.13	--	--	--	--	--	--
	535	Crystal 880RR	5.09	4.10	--	--	--	--	--	--
	624	Crystal 983RR	4.09	3.30	--	--	--	--	--	--
	633	Crystal 986RR	5.69	4.59	--	--	--	--	--	--
	588	Crystal RR610	5.22	4.21	--	--	--	--	--	--
	538	Crystal RR632	5.13	4.13	--	--	--	--	--	--
	580	Crystal RR643	5.47	4.41	--	--	--	--	--	--
	557	Crystal RR793	4.69	3.78	--	--	--	--	--	--
	551	Crystal RR798	3.97	3.20	--	--	--	--	--	--
	584	Crystal RR806	5.89	4.75	--	--	--	--	--	--

Table 52.

2009 Rhizoctonia Ratings for OVT Entries

Rhizoctonia Nursery - USDA Ft Collins

Chk	Code	Description	Adjusted ++ Ft Collins 9/23	Adj 2009 Mean	2 Yr Mean	3 Yr Mean	Adj 2008 Mean	Unadj 2008	Adj 2007	Unadj 2007
	524	Crystal RR811	3.94	3.18	2.57	--	1.96	1.19	--	--
	559	Crystal RR830	4.24	3.42	--	--	--	--	--	--
	636	Hilleshög 4000RR(9035RR)	6.03	4.86	4.91	--	4.96	3.01	--	--
	586	Hilleshög 4010RR	6.16	4.96	4.68	--	4.40	2.67	--	--
	540	Hilleshög 4012RR	6.01	4.84	5.07	--	5.29	3.21	--	--
	576	Hilleshög 4022RR	3.85	3.10	2.35	--	1.60	0.97	--	--
	517	Hilleshög 4043RR(9043RR)	5.64	4.54	4.92	--	5.29	3.21	--	--
	590	Hilleshög 4062RR(9062RR)	4.24	3.42	--	--	--	--	--	--
	549	Hilleshög 4083RR(9083RR)	5.43	4.38	--	--	--	--	--	--
	601	Hilleshög 4085RR(9085RR)	4.06	3.27	--	--	--	--	--	--
	610	Hilleshög 4094RR(9094RR)	3.99	3.22	2.60	--	1.98	1.20	--	--
	514	Hilleshög 4097RR(9097RR)	4.95	3.99	2.71	--	1.43	0.87	--	--
	608	Hilleshög 4114RR(9114RR)	5.27	4.25	--	--	--	--	--	--
	528	Hilleshög 9086RR	6.08	4.90	--	--	--	--	--	--
	523	Hilleshög 9162RR	5.73	4.62	--	--	--	--	--	--
	638	Hilleshög 9163RR	5.13	4.13	--	--	--	--	--	--
	558	Hilleshög 9189RR	4.77	3.84	--	--	--	--	--	--
	513	Hilleshög 9195RR	4.56	3.67	--	--	--	--	--	--
	600	Hilleshög 9197RR	5.57	4.49	--	--	--	--	--	--
	508	Hilleshög 9202RR	5.17	4.17	--	--	--	--	--	--
	594	Hilleshög 9203RR	5.22	4.21	--	--	--	--	--	--
	548	Hilleshög 9204RR	4.63	3.73	--	--	--	--	--	--
	532	Hilleshög 9216RR	5.66	4.56	--	--	--	--	--	--
	596	Hilleshög 9218RR	4.79	3.86	--	--	--	--	--	--
	518	Hilleshög 9219RR	5.02	4.05	--	--	--	--	--	--
	536	Seedex Sonic	5.91	4.76	4.80	--	4.83	2.93	--	--
	623	Seedex SX0873TT	5.67	4.57	--	--	--	--	--	--
	545	Seedex SX0881RR	5.94	4.79	--	--	--	--	--	--
	607	Seedex SX0883RR	5.12	4.13	--	--	--	--	--	--
	529	Seedex SX0884RR	5.87	4.73	--	--	--	--	--	--
	525	Seedex SX0895RR	5.66	4.56	--	--	--	--	--	--
	619	Seedex SX0981RR	5.31	4.28	--	--	--	--	--	--
	541	Seedex SX0983RR	5.13	4.13	--	--	--	--	--	--
1	589	SESVanderhave H36711RR	5.58	4.50	4.24	4.25	3.99	2.42	4.28	4.93
	504	SESVanderhave H36811RR	5.31	4.28	3.74	--	3.20	1.94	--	--
	547	SESVanderhave H36812RR	5.67	4.57	4.50	--	4.43	2.69	--	--
	573	SESVanderhave H36813RR	5.74	4.63	4.05	--	3.48	2.11	--	--
	602	SESVanderhave H36821RR	5.89	4.75	--	--	--	--	--	--
	527	SESVanderhave H36822RR	5.23	4.21	--	--	--	--	--	--
	519	SESVanderhave H36921RR	5.26	4.24	--	--	--	--	--	--
	534	SESVanderhave H36923RR	5.60	4.51	--	--	--	--	--	--
	617	SESVanderhave H46519	5.35	4.31	3.99	--	3.66	2.22	--	--
	516	SESVanderhave H46531	5.49	4.42	3.85	--	3.28	1.99	--	--
	554	SESVanderhave H48607TT	5.09	4.10	3.95	--	3.79	2.30	--	--
	505	SESVanderhave H48716TT	5.70	4.59	3.99	--	3.40	2.06	--	--
	533	SESVanderhave H48717TT	5.31	4.28	4.32	--	4.37	2.65	--	--
1	1301	ACSC Rhiz Chk#01 SEEDEXMONOHIKARI	5.86	4.72	4.45	4.53	4.17	2.53	4.69	5.41
1	1302	ACSC Rhiz Chk#02 HILLE17	5.57	4.49	3.91	4.03	3.33	2.02	4.28	4.93
1	1303	Filler25	5.24	4.22	4.03	3.98	3.84	2.33	3.87	4.46
	1304	ACSC Rhiz Chk#04 FC708	3.65	2.94	2.66	--	2.37	1.44	--	--

Table 52.

2009 Rhizoctonia Ratings for OVT Entries

Rhizoctonia Nursery - USDA Ft Collins

Chk	Code	Description	Adjusted ++ Ft Collins 9/23	Adj 2009 Mean	2 Yr Mean	3 Yr Mean	Adj 2008 Mean	Unadj 2008	Adj 2007	Unadj 2007
1	1305	ACSC Rhiz Chk#09 CRYSR431	5.65	4.55	5.06	5.25	5.57	3.38	5.64	6.50
1	1306	ACSC Rhiz Chk#08 CRYS539RR	5.62	4.53	5.83	5.60	7.14	4.33	5.15	5.93
	1307	ACSC Rhiz Chk#11 BETA87RR68	6.06	4.88	6.00	--	7.12	4.32	--	--
	1308	ACSC Rhiz Chk#12 HILL3028	6.36	5.13	--	--	--	--	--	--
	1309	ACSC Rhiz Chk#13 MARIMAGNAMONO	5.47	4.41	--	--	--	--	--	--
	1310	ACSC Rhiz Chk#14 CRYSR308	5.38	4.34	--	--	--	--	--	--
1	1311	ACSC Rhiz Chk#15 CRYSR760	5.60	4.51	5.27	5.11	6.03	3.66	4.77	5.50
1	1312	ACSC Rhiz Chk#16 HILL3035	4.13	3.33	2.49	2.48	1.65	1.00	2.46	2.83
	1313	ACSC Rhiz Chk#17 HILL4022RR	4.01	3.23	2.42	--	1.60	0.97	--	--
	1314	ACSC Rhiz Chk#18 SES46519	5.35	4.31	3.99	--	3.66	2.22	--	--
	1315	ACSC Rhiz Chk#19 CRYSR652	5.63	4.54	--	--	--	--	--	--
	1316	ACSC Rhiz Chk#20 CRYS765RR	5.28	4.25	5.66	--	7.07	4.29	--	--
1	1317	ACSC Rhiz Chk#21 CRYS768RR	5.03	4.05	4.87	5.13	5.69	3.45	5.64	6.50
	1318	ACSC Rhiz Chk#22 SES46531	5.23	4.21	3.75	--	3.28	1.99	--	--
	1319	ACSC Rhiz Chk#23 BETA85RR02	5.39	4.34	5.35	--	6.36	3.86	--	--
	1320	ACSC Rhiz Chk#24 BETA86RR88	5.79	4.67	5.15	--	5.64	3.42	--	--
	1321	ACSC Rhiz Chk#25 HILL4043RR	5.78	4.66	4.97	--	5.29	3.21	--	--
	1322	ACSC Rhiz Chk#26 BETA86RR44	5.42	4.37	4.74	--	5.11	3.10	--	--
	1323	ACSC Rhiz Chk#27 HILL4012RR	5.82	4.69	4.99	--	5.29	3.21	--	--
	1324	Red Beet Hybrid	5.08	4.09	--	--	--	--	--	--
	1325	19941025 SUSC FC901/C817	5.78	4.66	3.61	3.90	2.57	1.56	4.46	5.14
	1326	20041005 RES FC703	3.75	3.02	2.35	2.36	1.68	1.02	2.37	2.73
	1327	20051020 HI RES FC709-2	2.08	1.68	--	--	--	--	--	--
	1328	19851032H HI RES FC705/1	3.14	2.53	2.50	2.14	2.47	1.50	1.43	1.65
	1329	2009A011 SUSC COMM	6.26	5.04	--	--	--	--	--	--
	1330	2009A012 RES COMM	5.89	4.75	--	--	--	--	--	--
	1331	2009A013 RES COMM	4.70	3.79	--	--	--	--	--	--
11		Mean of Check Varieties	5.17	4.16			4.06	2.46	4.05	4.67
		Mean of Susc Checks		4.116			3.442	2.216	4.051	4.946
		Approval Target (susc chk mean * 80%)		3.293			2.753		3.241	
		Trial Mean	5.21	4.20						
		Coeff. of Var. (%)	10.79	10.79						
		F Value	7.53	7.53						
		Mean LSD (0.05)	0.70	0.56						
		Mean LSD (0.01)	0.92	0.74						
		Sig Lvl	**	**						
		Adjustment Factor	NA	0.8059			1.6482		0.8678	

++ Adjustment is based upon check varieties.

++Adjusted to average infection level of 2007-2009 Rhizoctonia nurseries. 2007 & 2008 ratings were retroactively adjusted.

2007 ratings mulitplied by 86.8%, 2008 muliplied by 164.8% and 2009 multiplied by 80.6%.

Table 53.
2009 Fusarium Readings for Coded Test Entries
ACSC Nurseries - Two Sites (Moorhead, MN)

Chk	Code	Description	Adjusted Average Rating at Each Date (unadjusted)* S. Mhd Site 7/14	8/7	8/26	Mean	Moorhead Site 7/13	8/6	8/26	Mean	Raw 2009 Mean	Adj+ 2009 Mean	2 Yr + Mean	3 Yr + Mean	Adj 2008 Mean	Adj 2007 Mean
	620	Beta 77RR54	3.39	3.39	3.67	3.48	3.74	3.33	3.05	3.37	3.43	3.25	3.29	--	3.33	--
	539	Beta 77RR74	1.82	2.56	2.90	2.44	2.30	1.57	1.66	1.82	2.10	1.99	1.87	--	1.76	--
	544	Beta 78RR03	2.39	2.61	3.25	2.75	2.76	2.61	2.30	2.55	2.65	2.51	--	--	--	--
	511	Beta 78RR10	4.43	4.34	4.41	4.38	5.03	5.30	5.17	5.18	4.80	4.55	--	--	--	--
	587	Beta 78RR20	2.02	2.28	2.34	2.22	2.40	1.96	2.18	2.18	2.20	2.09	--	--	--	--
	522	Beta 85RR02	2.45	2.66	3.05	2.74	3.35	2.80	2.67	2.94	2.81	2.66	2.71	--	2.75	--
	613	Beta 86RR44	4.78	4.92	5.00	4.90	5.11	5.31	5.06	5.16	5.04	4.78	5.20	--	5.61	--
	561	Beta 86RR66	4.56	4.89	5.08	4.82	4.45	4.49	4.29	4.43	4.65	4.41	5.09	--	5.77	--
	593	Beta 87RR38	4.16	4.16	4.20	4.19	4.07	3.87	3.62	3.84	4.00	3.79	4.30	4.02	4.82	3.45
	552	Beta 87RR58	3.96	4.52	4.72	4.40	5.23	4.91	4.87	5.02	4.73	4.48	4.88	4.69	5.29	4.31
	520	Beta 87RR68	4.10	3.79	4.41	4.10	4.14	4.52	4.40	4.34	4.22	4.00	4.02	4.26	4.04	4.73
	579	Beta 88RR03	2.23	2.06	2.43	2.25	2.79	2.87	2.53	2.72	2.48	2.35	2.62	--	2.89	--
	625	Beta 88RR13	2.24	2.89	3.38	2.85	2.98	2.78	2.26	2.66	2.75	2.61	2.58	--	2.56	--
	543	Beta 88RR21	2.89	3.12	3.69	3.23	3.12	2.53	2.33	2.65	2.94	2.79	2.59	--	2.40	--
	622	Beta 88RR31	2.95	3.19	3.63	3.26	3.13	2.82	2.74	2.89	3.07	2.91	3.42	--	3.94	--
	530	Beta 88RR41	3.02	2.89	3.38	3.11	3.79	3.54	3.13	3.48	3.27	3.10	3.18	--	3.25	--
	631	Beta 88RR61	4.08	3.79	3.59	3.82	4.23	4.16	3.85	4.09	3.93	3.72	3.77	--	3.82	--
	583	Beta 88RR71	5.51	5.10	5.18	5.25	5.49	6.02	5.71	5.74	5.50	5.21	--	--	--	--
	611	Beta 89RR10	4.25	4.20	4.24	4.23	4.73	5.14	4.75	4.88	4.56	4.32	--	--	--	--
	550	Beta 89RR20	5.36	5.05	4.92	5.09	5.66	5.90	5.40	5.66	5.40	5.12	--	--	--	--
	575	Beta 89RR23	4.07	3.77	4.44	4.10	4.48	4.62	6.35	5.14	4.60	4.36	--	--	--	--
	637	Beta 89RR30	1.76	2.05	2.11	1.96	2.20	1.96	1.95	2.03	2.01	1.91	--	--	--	--
	512	Beta 89RR40	4.22	3.99	4.27	4.16	4.57	3.95	3.63	4.05	4.10	3.89	--	--	--	--
	603	Beta 89RR43	4.44	4.48	4.42	4.46	4.32	4.71	4.40	4.48	4.44	4.21	--	--	--	--
	626	Beta 89RR50	1.82	2.35	2.55	2.25	2.07	2.59	2.26	2.30	2.28	2.16	--	--	--	--
	507	Beta 89RR60	2.80	2.78	2.91	2.82	3.95	3.19	2.86	3.33	3.08	2.92	--	--	--	--
	606	Beta 89RR63	1.18	1.93	1.96	1.67	2.21	2.10	1.92	2.06	1.89	1.79	--	--	--	--
	614	Beta 89RR70	2.96	2.85	3.52	3.12	3.41	3.64	3.41	3.48	3.29	3.12	--	--	--	--
	556	Beta 89RR83	3.05	2.97	3.40	3.15	3.68	2.54	2.29	2.83	3.00	2.84	--	--	--	--
	592	Crystal 539RR	1.67	1.93	2.57	2.07	1.50	1.85	1.68	1.68	1.85	1.75	2.05	2.35	2.34	2.95
	621	Crystal 658RR	2.34	2.91	2.93	2.72	2.57	2.16	2.12	2.29	2.52	2.39	2.39	2.52	2.39	2.78
	510	Crystal 765RR	3.59	3.85	4.10	3.86	4.47	4.57	4.42	4.47	4.13	3.91	4.01	--	4.11	--
	616	Crystal 768RR	4.36	4.27	4.45	4.34	4.83	5.17	4.69	4.92	4.64	4.40	4.81	--	5.23	--
	574	Crystal 871RR	2.39	2.48	3.29	2.72	2.55	2.04	1.70	2.08	2.39	2.27	--	--	--	--
	542	Crystal 873RR	2.97	2.85	3.55	3.13	4.11	3.24	2.47	3.27	3.19	3.02	--	--	--	--
	566	Crystal 875RR	4.40	4.39	4.22	4.35	4.81	4.27	3.81	4.29	4.31	4.09	--	--	--	--
	591	Crystal 878RR	4.19	4.43	4.61	4.41	4.36	4.56	4.22	4.38	4.40	4.17	--	--	--	--
	598	Crystal 879RR	2.99	2.82	3.56	3.11	3.86	3.97	3.65	3.84	3.48	3.30	--	--	--	--
	535	Crystal 880RR	3.56	3.36	3.66	3.53	3.89	3.67	3.03	3.52	3.52	3.34	--	--	--	--
	588	Crystal RR610	3.85	4.02	4.05	3.95	4.25	3.65	3.43	3.77	3.87	3.67	4.06	--	4.45	--
	538	Crystal RR632	2.20	2.41	2.60	2.41	3.02	1.79	1.63	2.14	2.27	2.15	2.50	--	2.84	--
	580	Crystal RR643	2.62	2.70	3.01	2.77	3.45	3.03	2.51	2.98	2.88	2.73	3.20	--	3.67	--
	584	Crystal RR806	2.22	2.65	2.83	2.55	2.50	2.32	2.01	2.25	2.41	2.28	--	--	--	--
	524	Crystal RR811	2.00	2.29	2.40	2.24	1.52	1.42	1.25	1.36	1.79	1.70	1.78	--	1.86	--
	559	Crystal RR830	2.71	3.00	3.34	3.01	3.55	3.41	3.14	3.38	3.22	3.05	--	--	--	--
	636	Hilleshög 4000RR(9035RR)	6.16	6.63	6.74	6.51	5.58	7.28	7.68	6.85	6.66	6.31	6.96	--	7.60	--
	586	Hilleshög 4010RR	5.79	6.18	6.46	6.13	5.85	6.89	6.53	6.43	6.31	5.98	6.45	--	6.91	--
	540	Hilleshög 4012RR	5.43	5.13	5.53	5.37	5.37	6.18	5.94	5.84	5.60	5.31	5.84	--	6.36	--
	576	Hilleshög 4022RR	4.27	4.15	3.99	4.14	4.83	5.49	5.22	5.16	4.65	4.41	4.87	--	5.34	--
	517	Hilleshög 4043RR(9043RR)	5.63	6.15	6.63	6.13	5.65	7.21	7.16	6.67	6.38	6.05	6.65	--	7.26	--
	590	Hilleshög 4062RR(9062RR)	4.22	4.07	4.01	4.11	4.38	5.16	5.12	4.89	4.50	4.27	--	--	--	--
	549	Hilleshög 4083RR(9083RR)	5.56	5.10	5.54	5.40	5.05	5.70	4.94	5.23	5.32	5.04	--	--	--	--
	601	Hilleshög 4085RR(9085RR)	4.69	4.48	4.51	4.58	4.37	5.28	4.95	4.87	4.70	4.45	--	--	--	--
	610	Hilleshög 4094RR(9094RR)	4.54	4.13	4.19	4.28	4.45	5.31	4.66	4.81	4.56	4.32	--	--	--	--
	514	Hilleshög 4097RR(9097RR)	6.26	5.80	6.00	6.02	5.64	6.74	6.62	6.34	6.18	5.86	--	--	--	--
	608	Hilleshög 4114RR(9114RR)	6.43	5.91	6.17	6.17	7.02	7.30	7.57	7.29	6.71	6.36	--	--	--	--
	528	Hilleshög 9086RR	2.60	2.66	3.09	2.78	3.94	3.42	3.13	3.50	3.12	2.96	3.38	--	3.80	--
	597	Hilleshög 9165RR	2.63	2.42	2.87	2.63	3.46	3.66	2.91	3.32	3.00	2.84	--	--	--	--
	563	Hilleshög 9198RR	3.11	3.27	3.82	3.42	3.72	2.86	2.30	2.96	3.17	3.00	--	--	--	--
	569	Hilleshög 9206RR	2.45	2.84	3.54	2.94	3.36	3.04	3.29	3.21	3.08	2.92	--	--	--	--
	536	Seedex Sonic	4.12	4.23	4.38	4.23	5.78	6.11	5.93	5.94	5.09	4.82	4.91	--	5.00	--
	623	Seedex SX0873TT	4.53	4.74	5.18	4.82	5.91	6.24	6.05	6.07	5.45	5.17	--	--	--	--
	545	Seedex SX0881RR	5.60	5.45	5.75	5.61	6.05	6.93	6.74	6.57	6.09	5.77	6.22	--	6.67	--
	607	Seedex SX0883RR	4.27	4.29	4.18	4.23	4.56	4.44	4.37	4.46	4.34	4.11	--	--	--	--
	529	Seedex SX0884RR	4.84	4.48	4.75	4.67	5.91	5.63	5.45	5.67	5.19	4.92	--	--	--	--
	525	Seedex SX0895RR	4.04	3.70	3.88	3.88	4.16	3.64	3.26	3.69	3.79	3.59	--	--	--	--
	619	Seedex SX0981RR	5.56	5.58	5.77	5.63	5.47	6.25	5.91	5.88	5.75	5.45	--	--	--	--
	541	Seedex SX0983RR	3.70	3.50	3.89	3.70	4.66	4.76	4.17	4.53	4.13	3.91	--	--	--	--
	589	SESVanderhave H36711RR	4.33	4.02	4.37	4.24	4.81	5.29	5.02	5.04	4.65	4.41	5.94	5.41	7.47	4.36
	504	SESVanderhave H36811RR	3.02	2.73	3.56	3.11	4.30	3.49	3.45	3.75	3.43	3.25	--	--	--	--
	547	SESVanderhave H36812RR	3.88	3.58	3.84	3.75	4.97	5.08	4.66	4.91	4.33	4.10	--	--	--	--
	573	SESVanderhave H36813RR	4.56	4.11	4.36	4.34	4.80	5.29	4.87	4.98	4.66	4.42	--	--	--	--
	602	SESVanderhave H36821RR	7.00	7.28	7.71	7.34	6.28	7.90	7.92	7.38	7.35	6.97	--	--	--	--

Table 53.

2009 Fusarium Readings for Coded Test Entries

ACSC Nurseries - Two Sites (Moorhead, MN)

Chk	Code	Description	Average Rating at Each Date (unadjusted)* S. Mhd Site 7/14	8/7	8/26	Mean	Moorhead Site 7/13	8/6	8/26	Mean	Raw 2009 Mean	Adj+ 2009 Mean	2 Yr + Mean	3 Yr + Mean	Adj 2008 Mean	Adj 2007 Mean
	527	SESVanderhave H36822RR	3.69	3.44	4.16	3.76	4.58	4.61	3.97	4.38	4.07	3.86	--	--	--	--
	582	SESVanderhave H36912RR	3.56	3.63	3.84	3.67	4.39	5.14	4.68	4.74	4.22	4.00	--	--	--	--
	534	SESVanderhave H36923RR	3.49	3.42	3.50	3.48	3.74	3.59	3.18	3.50	3.46	3.28	--	--	--	--
	617	SESVanderhave H46519	3.64	3.99	4.32	3.98	5.83	5.88	5.76	5.82	4.91	4.65	4.68	--	4.71	--
	516	SESVanderhave H46531	3.72	3.75	4.33	3.94	5.56	5.76	5.94	5.74	4.85	4.60	4.53	--	4.46	--
	554	SESVanderhave H48607TT	4.89	4.84	4.82	4.85	6.63	6.56	6.49	6.57	5.71	5.41	5.71	--	6.01	--
	505	SESVanderhave H48716TT	5.04	5.30	5.81	5.39	6.26	6.29	6.10	6.24	5.82	5.52	5.44	--	5.36	--
	533	SESVanderhave H48717TT	4.88	4.84	5.32	5.00	5.86	5.90	5.87	5.85	5.43	5.15	4.90	--	4.65	--
1	1201	Fusarium Chk #19 SEEDMONOHIKARI	3.42	3.60	4.37	3.80	5.76	5.93	5.74	5.82	4.81	4.56	4.25	4.29	3.95	4.36
1	1202	Fusarium Chk #21 CRYS184	2.96	3.10	3.46	3.17	5.50	4.89	4.87	5.09	4.15	3.93	3.97	4.00	4.00	4.08
1	1203	Fusarium Chk #02 CRYS820	2.61	3.27	3.78	3.22	5.01	4.80	4.73	4.85	4.07	3.86	3.49	3.57	3.12	3.72
1	1204	Fusarium Chk #20 SES46177	7.20	7.21	7.35	7.27	7.51	7.64	7.40	7.54	7.38	6.99	7.24	7.15	7.49	6.98
	1205	Fusarium Chk #22 BETA1772	6.21	6.31	6.54	6.36	7.07	7.22	6.95	7.08	6.71	6.36	6.87	--	7.39	--
	1206	Fusarium Chk #23 HILL3028	6.48	6.08	5.99	6.18	6.93	7.33	7.49	7.26	6.73	6.38	6.80	--	7.22	--
	1207	Fusarium Chk #24 SES46531	3.28	3.48	3.76	3.50	5.52	5.44	5.43	5.47	4.49	4.26	4.36	--	4.46	--
	1208	Fusarium Chk #03 BETA1301R	4.79	4.98	5.04	4.94	6.10	6.49	6.26	6.29	5.61	5.32	5.65	--	5.98	--
1	1209	Fusarium Chk #04 CRYSR434	2.89	3.44	4.10	3.49	5.56	5.00	4.73	5.07	4.28	4.06	3.43	3.52	2.80	3.71
	1210	Fusarium Chk #05 BETA86RR66	4.46	4.32	4.29	4.35	4.25	4.33	3.99	4.18	4.27	4.05	4.91	--	5.77	--
	1211	Fusarium Chk #08 HILL4000RR	6.47	6.87	6.86	6.71	5.62	7.51	7.62	6.90	6.80	6.45	7.02	--	7.60	--
	1212	Fusarium Chk #09 HILL4010RR	5.97	5.70	5.92	5.86	5.96	6.72	6.51	6.40	6.14	5.82	6.37	--	6.91	--
	1213	Fusarium Chk #07 CRYS658RR	2.20	2.54	2.91	2.56	2.69	2.18	2.23	2.37	2.46	2.33	2.36	--	2.39	--
	1214	Fusarium Chk #06 BETA86RR88	3.64	3.49	3.71	3.62	4.15	3.39	2.99	3.50	3.55	3.36	3.80	--	4.24	--
	1215	Fusarium Chk #10 HILL4053RR	6.19	6.07	6.46	6.25	6.31	6.97	7.01	6.75	6.49	6.15	6.74	--	7.32	--
	1216	Fusarium Chk #01 CRYSR652	5.10	4.75	5.21	5.03	6.17	6.60	6.26	6.36	5.68	5.38	--	--	--	--
	1217	Fusarium Chk #11 BETA1140R	4.97	4.43	4.73	4.72	6.30	7.02	6.52	6.61	5.66	5.36	5.65	--	5.93	--
	1218	Fusarium Chk #12 HILL4012RR	5.30	5.22	5.31	5.27	5.69	6.32	6.25	6.07	5.68	5.38	5.87	--	6.36	--
	1219	Fusarium Chk #13 HILL4043RR	6.41	6.80	7.05	6.76	6.31	7.38	7.32	7.01	6.86	6.50	6.88	--	7.26	--
	1220	Fusarium Chk #14 BETA86RR44	5.52	5.35	5.43	5.44	4.64	5.13	4.92	4.92	5.18	4.91	5.26	--	5.61	--
1	1221	Fusarium Chk #15 BETA1305	4.80	4.73	4.57	4.71	6.15	6.11	6.24	6.19	5.47	5.18	5.50	5.48	5.81	5.44
	1222	Fusarium Chk #16 BETA87RR58	4.61	4.86	4.78	4.75	4.62	4.75	4.51	4.62	4.68	4.44	4.86	--	5.29	--
	1223	Fusarium Chk #17 CRYS765RR	4.22	4.00	4.14	4.12	4.23	4.96	4.95	4.74	4.44	4.21	4.16	--	4.11	--
	1224	Fusarium Chk #18 CRYS768RR	4.42	4.44	4.89	4.58	4.24	5.01	4.72	4.68	4.63	4.39	4.81	--	5.23	--
1	1230	FS CHECK MOD RES HYBRID	2.20	2.61	3.15	2.65	5.25	4.93	4.64	4.96	3.79	3.59	4.27	4.48	4.95	4.91
1	1231	FS CHECK MOD SUSC HYBRID	5.10	5.06	5.05	5.07	5.92	6.25	5.82	5.97	5.51	5.22	5.78	5.54	6.34	5.06
1	1232	FS CHECK RES HYBRID	2.88	3.07	3.38	3.11	5.52	4.73	4.27	4.84	3.99	3.78	2.96	2.99	2.13	3.07
1	1233	FS CHECK SUSC HYBRID#1	6.50	8.67	8.73	7.97	6.36	6.94	7.54	7.12	7.52	7.13	7.34	7.22	7.55	6.99
	1234	FC709-2	4.11	4.49	4.91	4.52	5.95	5.05	5.02	5.34	4.92	4.66	--	--	--	--
	1251	SYNFR1-2009A002	1.87	2.35	3.25	2.49	5.17	4.68	4.55	4.79	3.64	3.45	2.86	3.04	2.27	3.40
	1252	SYNFR2-2009A003	1.53	1.90	3.15	2.19	4.63	3.71	3.71	4.02	3.12	2.96	2.65	2.77	2.34	3.01
	1253	SYNFUS-2009A001	5.92	6.12	6.31	6.12	6.78	7.38	7.54	7.24	6.68	6.33	6.68	6.39	7.03	5.82
	1254	BetaFus1-2009A009	1.66	1.89	2.66	2.07	5.16	4.86	4.21	4.74	3.44	3.26	--	--	--	--
	1255	BetaFus2-2009A010	1.59	2.00	2.03	1.88	4.83	5.01	4.82	4.88	3.39	3.21	--	--	--	--
	1256	SV0701-2009A004	2.58	2.46	3.23	2.74	5.49	5.79	5.55	5.61	4.18	3.96	3.89	3.79	3.81	3.58
	1257	SV0702-2009A005	1.42	2.14	2.53	2.00	5.58	6.15	5.75	5.84	3.94	3.73	3.74	3.83	3.74	4.02
	1258	FC716	4.32	4.89	5.07	4.76	6.78	6.43	6.15	6.47	5.62	5.33	5.28	--	5.23	--
	1259	FC702/2	6.17	7.11	7.23	6.83	5.94	6.49	6.95	6.47	6.65	6.30	5.46	--	4.61	--
	1260	FC708CMS	5.28	6.07	6.14	5.84	6.14	5.75	5.90	5.95	5.88	5.57	6.16	--	6.74	--
10	5001	Mean of 10 Check Varieties	4.06	4.48	4.79	4.45	5.85	5.72	5.60	5.75	5.10	4.83	4.82		4.81	4.83
	5002	Trial Mean	3.95	4.05	4.34	4.11	4.71	4.80	4.61	4.71	4.41					
	5003	Coeff. of Var. (%)	17.27	17.47	15.48	14.37	13.53	14.50	19.47	13.00	13.74					
	5004	F Value	22.88	19.79	19.21	26.81	21.50	29.01	19.65	32.81	10.45					
	5005	Mean LSD (0.05)	0.84	0.88	0.84	0.74	0.78	0.84	1.07	0.74	1.19					
	5006	Mean LSD (0.01)	1.10	1.16	1.11	0.97	1.03	1.11	1.40	0.98	1.58					
	5007	Sig Lvl	**	**	**	**	**	**	**	**	**					
		Adjustment Factor	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.9478			0.9970	1.1270

^2009 Adjustment (0.9478) is based upon 10 varieties (Beta1305, Crystal 820, Crystal R434, Crystal 184, Monohikari, SES46177 & 4 Beta Checks) in 2005 & 2006.

+ Data used for grower packet information.

Table 54.

Planting & Harvest Dates, Previous Crop and Disease Levels for 2009 ACSC & MDFC Official Trial Sites

Location	District / Trial Type	Cooperator	Planting Date	Harvest Date	Preceding Crop	Soil Type	Diseases Present @			
							Aph	Rhc	Rzm	Maggot
Casselton	Mhd/Hlb	Howe Farms	5/21	10/14	Wheat	Medium Light	M-L	L	M	N
Averill	Mhd/Hlb	Oberg Farms	5/29	10/12	Wheat	Light	M	L	M-V	N
Hendrum	Mhd/Hlb	Mark Maring	5/22	Abandon	Wheat	Medium Heavy	M	L	M	N
Buxton	Mhd/Hlb	Corey Moen	5/6	Abandon	Wheat	Medium Light	NA	M-V	NA	NA
Scandia	EGF/Crk	Christian Kiel	5/18	Abandon	Wheat	Medium	NA	N	M-V	N
Crookston	EGF/Crk	Bruce Erdmann	5/20	Abandon	Wheat	Medium Light	M-V	L	M	N
Grand Forks	EGF/Crk	Drees Farming Assc.	5/30	10/9	Wheat	Medium	L	L	L	N
Argyle	EGF/Crk	Brent Riopelle	5/24	9/26	Wheat	Medium Heavy	L	L	M	N
St Thomas	Dtn	Kennelly Farms	5/19	9/23	Potatoes	Medium Light	M	N	L	M
Humboldt	Dtn	Vernon Bahr	5/24	9/24	Wheat	Heavy	L	L	L	N
Hamilton	Dtn	Vivatson Farms	6/1	Abandon	Wheat	Heavy	NA	NA	NA	NA
Kindred Aph	Specialty Aph	Craig & John Hertsgaard	5/22	10/28	Soybeans	Medium	V	N	L	N
Hillsboro Aph	Specialty Aph	Pete Kritzberger	5/19	10/11	Soybeans	Medium	M-V	N	NA	N
S. Moorhead	Fusarium	Dan Rosenfeldt	5/19	NA	Wheat	Medium	L	L	N	N
Moorhead	Fusarium	Nelson Farms	5/29	NA	Corn	Medium	M	N	N	N
Glyndon Aph	Aph Nursery	Oberg Farms	5/23	Abandon	Corn	Medium Light	M	M	V	N
Moorhead Rhc	Rhc Nurs	ACSC Tech Services Ctr	5/30	NA	Soybeans	Heavy	M	L-M	L	N
Hickson Rhc	Rhc Nurs	Vince Ulstad	5/21	NA	Soybeans	Medium Heavy	M	L-M	N	N
Foxhome CR	Cercospora	Kevin Etzler	5/21	NA	Wheat	Medium	NA	N	M	N
Galchutt	Minn-Dak	M & W Farms	5/9	Abandon	Wheat	Medium	V	N	NA	N
Breckenridge	Minn-Dak	Dennis & Jerry Hasbarger	5/17	Abandon	Wheat	Medium	M-V	N	NA	N
Fairmount	Minn-Dak	Wayne Miller	5/24	Abandon	Wheat	Medium Light	L	M	NA	N
Norcross	Minn-Dak	Chadd Berger	5/4	10/27	Wheat	Medium Light	L	N	NA	N

Fertilizer applied in accordance to ACSC recommendations.

Created 10-29-2009

@ Disease notes for Aph., Rhizoc., Rhizomania and Root Maggot were based upon visual evaluations (N=none, L=light, M=moderate, V=severe, NA=not o
Rhizomania severity also is estimated by calculating the relative performance of susceptible varieties in the trials.

Table 55.

Herbicides and Fungicides Applied to Official Trials

		Herbicide			Fungicide		
Area	Location	Spray Dates	Herbicide & Rate(prod)/Ac.	Water Used/Method	Spray Dates	Fungicide Used	Water Used/Method
ASCS	Argyle	6/11,6/16,6/26	MR1	10 gal. (Ground)	6/18	Quadris (RR)	10 gal. (Ground)
		6/18,7/8	RU1,RU2	"	7/13	Quadris	"
					8/25	Headline	15 gal. (Ground)
ACSC	Averill	6/26,7/1	MR1	10 gal. (Ground)	7/13	Quadris	10 gal. (Ground)
		6/3,6/24,7/13	RU2,RU1,RU2	"	8/26	Headline	15 gal. (Ground)
ACSC	Casselton	6/10,6/15,6/24,7/1	MR1	10 gal. (Ground)	6/16	Quadris (RR)	10 gal. (Ground)
		6/11,7/2	RU1,RU2	"	7/13	Quadris	"
					8/26	Headline	15 gal. (Ground)
ACSC	Grand Forks	6/16,6/25	MR1	10 gal. (Ground)	7/13	Quadris	10 gal. (Ground)
		6/26,7/13	RU1,RU2	"	8/26	Headline	15 gal. (Ground)
ACSC	Hillsboro Aph	6/16,6/26	MR1	10 gal. (Ground)	6/15	Quadris	10 gal. (Ground)
		6/10,7/7,8/4	RU1,RU3,RU2	"	8/25	Headline	15 gal. (Ground)
ACSC	Humbolt	6/11,6/17,6/25	MR1	10 gal. (Ground)	6/18	Quadris (RR)	10 gal. (Ground)
		6/18,7/8	RU1,RU2	"	7/13	Quadris	"
					8/23	Headline	15 gal. (Ground)
ACSC	Kindred Aph.	6/25,7/13,8/4	RU1,RU2,RU2	10 gal. (Ground)	7/13	Quadris	10 gal. (Ground)
					8/26	Headline	15 gal. (Ground)
ACSC	St. Thomas	6/10,6/15,6/24	MR1	10 gal. (Ground)	6/16	Quadris (RR)	10 gal. (Ground)
		6/10,7/8	RU1,RU2	"	7/13	Quadris	"
		6/25,7/23	L1,L1	"	8/25	Headline	15 gal. (Ground)
MDFC	Norcross	6/3,6/25	RU2,RU1	10 gal. (Ground)	6/15	Quadris	10 gal. (Ground)
					8/26	Headline	15 gal. (Ground)

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

MR1 = Progress (5.8 fl.oz./A), Nortron (3 fl.oz./A), Upbeet (1/8 oz./A), Select Max (3 fl.oz./A), Stinger (1.3 fl.oz./A), Quad7 (1 gal./100 gal. water), Scoil (1 gal./1

RU1 = Roundup Weathermax (32 oz./A), Weather Gard (2 qts./100 gal water).

RU2 = Roundup Weathermax (22 oz./A), Weather Gard (2 qts./100 gal water).

RU3 = Roundup Weathermax (22oz./A), Weather Gard (2qts./100 gal./A), Stinger (1.5 oz./A)

Counter 15G ws applied at 11.9 lbs./A on all ACSC sites.

L1 = Lorsban 1 pt./A

Quadris applied at 9 oz./A

Headline applied at 9 oz./A