



November 2025

Dear ACSC Sugarbeet Grower:

The 2025 official coded variety performance trials included 13 yield trials and 10 disease nurseries planted at a total of 17 sites by American Crystal Sugar Company (ACSC). Seven additional disease/insect nurseries were planted by third party cooperators. Thanks are extended to the dedicated Technical Services staff involved in the official trial plot care, harvest, and data analysis.

## Results

Results from the Official Variety Trial sites were excellent overall. Planting dates ranged from April 25 to May 14 for yield trial sites. The Caledonia site was replanted on May 28. Stands in the trials varied from poor to excellent with most being good. Twelve of thirteen planted yield trial sites were harvested. Data from all twelve harvested sites was used for approval numbers. The East Grand Forks site was abandoned due to poor emergence. Sites targeting *Aphanomyces* were located at Perley and Alvarado, but moisture conditions were not favorable for *Aphanomyces* until later in the season when plants were not as susceptible. As a result, there is no data for yield under *Aphanomyces* conditions. Rainfall amount and timing were sporadic for sites across the Red River Valley with some sites receiving ample rainfall for large yields and others affected by moisture stress. Coefficients of variation (CVs) for yield ranged from 3.9 to 6.8 (mean = 5.3) for Commercial trials and from 3.8 to 6.0 (mean = 4.7) for the Experimental trials. Percent sugar CVs ranged from 1.2 to 3.0 (mean = 2.2) for the Commercial trials and from 1.7 to 3.9 (mean = 2.6) for the Experimental trials. *Rhizoctonia* crown and root rot was present at low levels at a few sites. Revenue calculations in 2025 are based on a hypothetical \$60.97 payment (5-year rolling average) assuming 17.5% sugar and 1.5% SLM not considering hauling or production costs.

*Fusarium* ratings are from naturally infested sites at Moorhead and Sabin, MN. *Rhizoctonia* crown and root rot ratings are from inoculated nurseries at Crookston, MN, TSC-S and TSC-N in Moorhead, MN and Saginaw, MI (BSDF). *Aphanomyces* root rot ratings are from naturally infested nurseries at Glyndon (UBS), and Shakopee (KWS), MN. *Cercospora* leafspot ratings are from inoculated nurseries at Randolph, MN (KWS) and Saginaw, MI (BSDF) as well as non-inoculated nurseries at Averill and Stephen, MN and Caledonia, ND. Root aphid ratings are from greenhouse assays at Moorhead (ACSC) and Shakopee, MN (KWS).

2025 harvest conditions were very good overall. Sites at Bathgate and Northcote with heavy soils were challenging to keep pinch wheels deep enough to dig smaller roots. Sugarbeet roots at most sites lifted very well.

The 2025 data has been combined with previous years' data and results are enclosed. Results for the yield trials from individual sites are available on the internet.

Conventional trials were not planted in the 2025 OVT trials. Conventional varieties approved for 2020-2025 sales are permitted to continue in 2026 sales.

These results and additional information for individual growing sites are available on the internet at [www.crystalsugar.com](http://www.crystalsugar.com). More detailed information will be available later in the Sugarbeet Research and Extension Reports ([www.sbreb.org](http://www.sbreb.org)). Additional data including individual yield trial results and agronomic procedures are also on the ACSC web site.

### Attached are the following pages of information:

1. List of varieties approved for sale to ACSC growers
2. Multi-year performance of RR varieties across all sites
3. Performance of RR varieties under *Aphanomyces* conditions (data from 2024)
4. Performance of conventional varieties across three sites (2017-2019)
5. Disease ratings for approved varieties across all nurseries (2023-2025)
6. *Aphanomyces* ratings for all 2025 tested varieties by nursery location
7. *Cercospora* ratings for all 2025 tested varieties by nursery location
8. *Fusarium* ratings for all 2025 tested varieties by nursery location
9. *Rhizoctonia* ratings for all 2025 tested varieties by nursery location
10. Root Aphid ratings for 2025 Commercial and 2<sup>nd</sup>-year Experimental varieties
11. Trial sites, disease observations and agronomic information from all trial locations
12. Seed treatments applied to seed used in the official coded variety trials

## Plot Procedures

Yield trials were planted with regular pellets to stand at 4.5-inch seed spacing. Starter fertilizer (10-34-0) was applied in-furrow (3 GPA in 6 GPA total volume) in all yield trials. Counter 20G (8.9 lb/A) was applied in a 7-inch band after planting at all yield trial sites. Plots were planted crosswise (90°) to the cooperators' normal farming operations, where possible. Plot row lengths for all official trials were maintained at 47 feet with about 40 feet harvested. Planting was performed with a 12-row SRES-controlled Monosem vacuum planter. The GPS controlled planter gave good single seed spacing which facilitated emergence counting. All seed provided by companies was primed. Seed companies had the option of treating seed with an Aphanomyces seed treatment, insecticide, and a Rhizoctonia seed treatment fungicide. Emergence counts were taken on 24 feet of each plot. Multiple seedlings were counted as a single plant if they emerged less than one inch apart.

Roundup PowerMAX 3 with Class Act (surfactant) and full rates of fungicides were broadcast-applied using a pickup sprayer driven down the alleys. One or two applications of Roundup (25 oz) were made at the 2-4 and/or 6-10 leaf stages. Hand weeding was used where necessary. All yield trials were treated with AZteroid in-furrow at planting (5.7 oz) and Quadris in a 7-inch band during the 6-10 leaf stage (10 oz) for Rhizoctonia control. Treatments applied for Cercospora control in 2025 included Inspire XT/Manzate Max, Agri Tin/T-Methyl, Manzate Max, Proline/Manzate Max, and Priaxor/Agri Tin at all locations but Ada. The Ada location received only the final two applications. Ground spraying was conducted by ACSC technical staff using 20 GPA and 75-80 psi.

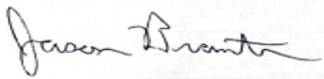
Roundup Ready (RR) varieties with commercial seed were planted in four-row plots with six replicates. The RR experimental entries were planted in two-row plots with four replicates.

All plot rows were measured for total length after approximately 3.5 feet at each end were removed at the end of August, with skips greater than 60 inches being measured for adjustment purposes. Plots were harvested using a custom six-row harvester with increased cleaning capacity. All harvested beets of each plot were used for yield determination while one sample (approximately 20 lbs) was obtained from each plot for sugar and impurity analysis. Quality analysis was performed at the ACSC Technical Services Quality Lab in Moorhead, MN.

Varieties were planted in nurseries in Minnesota, North Dakota, Michigan, and Colorado to evaluate varieties for disease and insect susceptibility. ACSC adjusts the Cercospora, Aphanomyces, Rhizoctonia and Fusarium nursery data each year to provide a consistent target for variety approval criteria.

*Before purchasing seed, please check to make sure the varieties you are buying are on the **current approved list**. In accordance with the grower contract, the cooperative has the option to refuse beets of a non-approved variety. If you have questions, please contact the ACSC Technical Services Center or your ACSC Agriculture Department.*

Sincerely,



Jason Brantner  
Official Trial Manager



Alec Deschene  
Beet Seed Analyst



Jon HICKEL  
Official Trial Supervisor



Nick Weller  
Official Trial Coordinator

Table 1.  
Varieties Meeting ACSC Approval Criteria for the 2026 Sugarbeet Crop

<b>Roundup Ready®</b>	<u>Full Market</u>	<u>Aph Spec</u>	<u>Rhc Spec</u>	<u>Rhizomania</u>	<b>2019 Conventional</b>	<u>Full Market</u>	<u>Rhizomania</u>
BTS 8018	Yes	Yes	New	MG	Crystal R761	Yes	MG
BTS 8034	Yes	Yes		MG	Crystal 620	Yes	MG
BTS 8156	Yes	Yes		MG	Crystal 840	Yes	MG
BTS 8226	Yes	Yes	Yes	MG	Crystal 950	Yes	MG
BTS 8270	Yes	Yes	Yes	MG	Hilleshög HM3035Rz	Yes	SG
BTS 8365	Yes	Yes	Yes	MG	SX 8869 Cnv	Yes	MG
BTS 8440	New	New	New	MG	SV 48777	Yes	MG
BTS 8457	New		New	MG			
BTS 8927	Yes	Yes	Yes	MG			
Crystal 022	Yes	Yes	Yes	MG			
Crystal 130	Yes	Yes	Yes	MG			
Crystal 138	Yes	Yes	Yes	MG			
Crystal 260	Yes	Yes	Yes	MG			
Crystal 269	Yes	Yes		MG			
Crystal 361	Yes	Yes	Yes	MG			
Crystal 364	Yes	Yes	Yes	MG			
Crystal 369	Yes	Yes		MG			
Crystal 470	New	New	New	MG			
Crystal 471	New	New	New	MG			
Crystal 793	Yes	Yes		MG			
Crystal 912	Yes	Yes	Yes	MG			
Hilleshög HIL2389	Yes	Yes		MG			
Hilleshög HIL2479	Yes			MG			
Hilleshög HIL2480	No		Yes	MG			
Hilleshög HIL2493	No		New	MG			
Maribo MA717	Yes			MG			
SX 1815	Yes			MG			
SX 1835	No		Yes	MG			
SV 231	Yes		Yes	MG			
SV 345	No		New	MG			

Aph Spec = variety meets Aphanomyces specialty requirements  
Rhc Spec = variety meets Rhizoctonia specialty requirements  
MG (Multigenic) = Contains multiple genes for Rhizomania resistance  
SG (Single gene) = Contains a single gene for Rhizomania resistance

Created 10/21/2025

++ 2nd Year of not meeting Specialty Approval of previously approved Specialty variety. According to Approval Policy, may be sold as Specialty in 2026  
+ 1st Year of not meeting Specialty Approval of previously approved Specialty variety. According to Approval Policy, may be sold as Specialty in 2026  
Roundup Ready® is a registered trademark of Bayer Group.

Table 2. Performance Data of RR Varieties During 2024 & 2025 Growing Seasons (All Locations Combined) Approved for Sale to ACSC Growers in 2026 +++

Variety	Yrs Com	Rev/Ton ++			Rev/Acre ++			Rec/Ton		Rec/Acre		Yield		Sugar		Molasses		Emergence +		Cerc. *		Aphan. *		Rhizoc. *		Fusarium *		Rzm *
		25	2 Yr	2Y%	25	2 Yr	2Y%	25	2 Yr	25	2 Yr	25	2 Yr	25	2 Yr	25	2 Yr	25	2 Yr	25	2 Yr	25	2 Yr	25	2 Yr	25	2 Yr	
Number of locations →		12	24		12	24		12	24	12	24	12	24	12	24	12	24	12	24	5	10	2	5	4	8	2	4	
<b>Previous Approved</b>																												
BTS 8018	4	62.57	61.20	99	2179	2140	103	324	330	11348	11576	35.2	35.1	17.23	17.52	1.01	1.01	75	79	3.9	3.6	3.5	3.6	3.8	3.8	2.4	2.3	MG
BTS 8034	4	58.73	57.30	93	2051	2015	97	314	319	11001	11239	35.2	35.3	16.83	17.09	1.14	1.15	67	76	4.3	4.0	3.5	4.0	4.2	4.3	2.3	2.1	MG
BTS 8156	3	62.42	60.42	98	2130	2073	99	324	328	11082	11260	34.3	34.4	17.27	17.47	1.07	1.07	70	76	4.4	4.1	3.6	3.9	4.4	4.3	2.4	2.3	MG
BTS 8226	2	66.83	65.01	105	2256	2201	106	336	341	11373	11568	34.0	34.0	17.74	18.01	0.95	0.96	73	77	4.1	3.8	3.4	3.6	3.6	3.5	2.9	2.8	MG
BTS 8270	2	65.80	63.06	102	2189	2127	102	333	335	11114	11340	33.5	33.9	17.64	17.78	0.99	1.02	65	72	3.6	3.4	3.6	3.7	3.9	3.9	2.3	2.3	MG
BTS 8365	1	67.89	66.20	107	2151	2120	102	339	344	10770	11051	31.9	32.1	17.91	18.19	0.98	0.96	64	72	4.0	4.1	3.7	3.8	3.7	3.7	2.6	2.4	MG
BTS 8927	5	65.76	64.27	104	2215	2170	104	333	339	11262	11471	34.0	33.9	17.63	17.93	0.98	0.98	73	79	4.2	4.3	3.7	4.0	3.9	3.7	2.2	2.1	MG
Crystal 022	4	67.03	64.74	105	2216	2130	102	336	340	11185	11219	33.4	33.1	17.80	18.00	0.98	0.99	74	77	4.8	4.7	3.3	3.6	3.9	3.7	2.3	2.5	MG
Crystal 130	3	64.94	62.63	101	2213	2145	103	331	334	11312	11464	34.4	34.4	17.54	17.72	1.00	1.02	71	76	4.3	3.9	3.5	3.6	3.8	3.7	2.6	2.7	MG
Crystal 138	2	65.28	62.18	100	2216	2120	102	332	333	11297	11361	34.2	34.2	17.59	17.68	1.00	1.04	68	73	4.5	4.6	3.6	3.7	3.8	3.7	2.6	2.8	MG
Crystal 260	2	64.91	63.05	102	2219	2172	104	331	335	11333	11571	34.4	34.6	17.48	17.74	0.95	0.97	70	78	3.6	3.4	3.6	3.8	3.8	3.8	2.6	2.5	MG
Crystal 269	2	65.76	64.28	104	2253	2196	105	333	339	11455	11612	34.5	34.3	17.74	18.04	1.09	1.09	69	73	4.4	4.5	3.1	3.3	4.1	4.2	2.3	2.4	MG
Crystal 361	1	67.32	64.21	104	2282	2200	106	337	339	11455	11623	34.1	34.4	17.80	17.90	0.94	0.98	74	77	3.7	3.5	3.1	3.5	4.0	3.9	2.3	2.2	MG
Crystal 364	NC	60.09	58.58	95	2162	2122	102	318	323	11497	11724	36.5	36.5	16.96	17.21	1.07	1.08	78	81	4.4	4.4	3.4	3.6	3.6	3.7	2.2	2.2	MG
Crystal 369	1	63.41	62.00	100	2214	2158	103	327	332	11445	11585	35.2	34.9	17.43	17.74	1.10	1.11	68	75	3.9	4.0	3.4	3.4	4.3	4.5	2.3	2.3	MG
Crystal 793	7	64.00	62.37	101	2220	2156	103	328	334	11427	11542	35.0	34.7	17.40	17.68	0.99	1.00	75	78	4.0	4.1	3.2	3.4	4.2	4.0	2.5	2.4	MG
Crystal 912	4	57.95	55.64	90	2174	2105	101	312	314	11742	11896	37.8	37.9	16.66	16.79	1.07	1.09	74	79	5.0	5.0	3.3	3.4	3.1	3.3	4.2	3.9	MG
Hilleshög HIL2389	3	63.20	61.65	100	2116	2089	100	326	331	10945	11243	33.7	34.0	17.31	17.58	1.01	1.01	67	76	4.5	4.6	3.8	3.7	4.0	4.0	5.4	5.5	MG
Hilleshög HIL2479	1	62.71	61.64	100	2067	1968	94	325	332	10751	10601	33.2	32.1	17.30	17.64	1.06	1.06	72	75	4.2	4.2	4.2	4.5	3.5	3.9	4.5	4.5	MG
Hilleshög HIL2480 **	1	60.90	59.58	96	2052	1969	94	320	326	10818	10772	34.0	33.2	17.19	17.48	1.20	1.20	69	74	4.2	4.2	4.1	4.2	3.4	3.5	2.6	2.8	MG
Maribo MA717	7	59.56	57.69	93	2065	2022	97	316	320	11043	11260	35.2	35.3	16.89	17.08	1.08	1.08	64	72	4.8	4.8	4.9	4.5	3.9	4.0	5.1	4.7	MG
SX 1815	3	62.66	61.52	99	2097	2084	100	325	331	10925	11244	33.9	34.0	17.25	17.58	1.02	1.02	65	74	4.7	4.7	4.3	4.1	4.1	4.2	6.1	5.8	MG
SX 1835 **	1	59.93	57.94	94	2160	2110	101	317	321	11469	11703	36.3	36.5	16.96	17.16	1.10	1.12	72	79	4.6	4.6	4.4	4.4	3.8	3.9	4.7	4.1	MG
SV 231	1	60.80	58.69	95	2179	2147	103	320	323	11491	11833	36.1	36.6	17.02	17.20	1.04	1.05	75	79	4.7	4.8	4.1	4.3	3.8	3.8	5.1	4.8	MG
<b>Newly Approved</b>																												
BTS 8440	NC	67.86	64.75	105	2290	2197	105	339	340	11469	11564	34.0	34.1	17.86	17.94	0.92	0.94	74	78	3.2	3.0	3.6	3.8	3.8	3.7	2.5	2.7	MG
BTS 8457	NC	65.74	63.75	103	2228	2194	105	333	337	11344	11646	34.3	34.6	17.54	17.78	0.90	0.92	73	76	4.1	3.8	4.0	4.1	3.8	3.7	2.7	2.5	MG
Crystal 470	NC	63.15	60.93	98	2247	2196	105	326	329	11623	11883	35.8	36.1	17.29	17.47	0.98	1.00	73	78	4.2	4.0	3.7	3.7	3.8	3.8	2.7	2.5	MG
Crystal 471	NC	66.82	64.59	104	2251	2204	106	336	340	11370	11631	34.0	34.3	17.74	17.96	0.95	0.97	69	75	4.1	3.8	3.6	3.8	3.9	3.8	2.4	2.3	MG
Hilleshög HIL2493 **	NC	60.14	58.67	95	2164	2157	103	318	323	11486	11910	36.3	37.0	16.95	17.21	1.06	1.06	73	77	4.6	4.7	4.3	4.2	3.6	3.7	4.4	4.6	MG
SV 345 **	NC	60.41	57.76	93	2147	2138	103	318	320	11366	11891	35.9	37.2	17.00	17.08	1.07	1.07	69	78	4.8	4.9	4.1	4.2	3.6	3.5	4.9	4.6	MG
Benchmark var. mean		64.15	61.90		2150	2085		329	332	11049	11201	33.8	33.8	17.44	17.64	1.01	1.03	71	78									

+++ 2025 Sites include Casselton, Averill, Perley, Ada, Caledonia, Scandia, Reynolds, Alvarado, Stephen, St Thomas, Northcote, and Bathgate

Created 10/22/2025

++ 2024 Sites include Casselton, Averill, Ada, Hillsboro, Climax, Grand Forks, Scandia, Forest River, Alvarado, St Thomas, Hallock, and Bathgate

+ 2025 Revenue estimate based on a \$60.97 beet payment (5-yr ave) at 17.5% crop with a 1.5% loss to molasses and 2024 Revenue estimate based on a \$54.53 beet payment (5-yr ave) at 17.5% crop with a 1.5% loss to molasses.

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

\*\* Does not meet Full Market Approval. Meets Aphanomyces and/or Rhizoctonia Specialty Approval.

\* 2025 Cercospora from Saginaw MI, Randolph MN, Averill MN, Caledonia ND and Stephen MN (res.<4.4, susc>5.0). Aphanomyces ratings from Shakopee MN and Glyndon MN (res.<4.0, susc>4.8).

Rhizoctonia from Saginaw MI, Moorhead MN and Crookston MN (res.<3.8, susc>5). Fusarium from Moorhead MN and Sabin MN (res.<3.0, susc>5.0). MG indicates multigenic resistance to Rhizomania.

\* 2024 Cercospora from Saginaw MI, Randolph MN, Foxhome MN, Averill MN and Forest River ND (res.<4.4, susc>5.0). Aphanomyces ratings from Shakopee MN, Glyndon MN, and Perley MN (res.<4.0, susc>4.8).

Rhizoctonia from Saginaw MI, Moorhead MN and Crookston MN (res.<3.8, susc>5). Fusarium from Moorhead MN and Sabin MN (res.<3.0, susc>5.0).

Table 3. Performance Data of RR 2025 Approved Varieties Under Aphanomyces Conditions +++

Variety	Yrs Com	Aph SpC +	Rev/Ton++				Rev/Acre++				Rec/Ton		Rec/Acre		Sugar		Yield		Cerc. *		Aphan. *		Rhizoc. *		Fusarium *		
			2024	%Mn	2020	%Mn^	2024	%Mn	2020	%Mn^	2024	2020	2024	2020	2024	2020	2024	2020	25	2Yr	25	2Yr	25	2Yr	25	2Yr	
Number of locations →			1	3	1	3	1	3	1	3	1	3	1	3	1	3	5	9	2	5	4	8	2	4			
<b>Previous Approved</b>																											
BTS 8018	4	Yes	59.33	98	40.59	107	1396	111	982	112	334.6	303.9	7861	7256	17.81	16.22	23.43	23.62	3.88	3.62	3.51	3.62	3.83	3.75	2.42	2.31	
BTS 8034	4	Yes	59.65	99	35.57	94	1446	115	887	102	335.5	286.7	8117	7046	17.89	15.53	24.14	24.32	4.28	3.99	3.52	4.00	4.20	4.29	2.31	2.10	
BTS 8156	3	Yes	61.11	101	--	--	1379	110	--	--	339.9	--	7678	--	18.06	--	22.60	--	4.38	4.12	3.59	3.93	4.38	4.33	2.36	2.25	
BTS 8226	2	Yes	64.54	107	--	--	1409	112	--	--	350.3	--	7641	--	18.48	--	21.79	--	4.05	3.79	3.43	3.62	3.64	3.55	2.91	2.77	
BTS 8270	2	Yes	62.52	103	--	--	1371	109	--	--	344.2	--	7542	--	18.23	--	21.89	--	3.56	3.44	3.61	3.69	3.85	3.85	2.28	2.34	
BTS 8365	1	Yes	65.38	108	--	--	1387	111	--	--	353.0	--	7498	--	18.66	--	20.96	--	3.95	4.07	3.69	3.78	3.73	3.67	2.56	2.35	
BTS 8927	5	Yes	63.12	104	43.12	114	1298	103	985	113	346.0	312.6	7102	7070	18.33	16.58	20.46	22.44	4.22	4.34	3.67	4.04	3.87	3.72	2.18	2.14	
Crystal 022	4	Yes	66.63	110	44.07	117	1453	116	1047	120	356.6	315.8	7782	7422	18.81	16.80	21.85	23.24	4.78	4.72	3.33	3.64	3.87	3.75	2.33	2.54	
Crystal 130	3	Yes	58.82	97	--	--	1385	110	--	--	333.0	--	7839	--	17.72	--	23.53	--	4.27	3.92	3.46	3.59	3.79	3.67	2.58	2.67	
Crystal 138	2	Yes	64.24	106	--	--	1391	111	--	--	349.4	--	7576	--	18.50	--	21.77	--	4.47	4.60	3.56	3.70	3.77	3.73	2.60	2.79	
Crystal 260	2	Yes	60.37	100	--	--	1364	109	--	--	337.7	--	7634	--	17.94	--	22.61	--	3.60	3.37	3.58	3.83	3.80	3.75	2.64	2.51	
Crystal 269	2	Yes	61.85	102	--	--	1405	112	--	--	342.2	--	7758	--	18.14	--	22.61	--	4.42	4.48	3.07	3.29	4.06	4.18	2.28	2.41	
Crystal 361	1	Yes	60.40	100	--	--	1262	101	--	--	337.9	--	7080	--	18.03	--	21.01	--	3.71	3.52	3.13	3.47	3.99	3.88	2.31	2.16	
Crystal 364	NC	Yes	55.79	92	--	--	1293	103	--	--	323.7	--	7556	--	17.23	--	23.38	--	4.37	4.41	3.38	3.58	3.60	3.69	2.23	2.18	
Crystal 369	1	Yes	60.53	100	--	--	1272	101	--	--	338.3	--	7128	--	18.01	--	21.06	--	3.88	3.96	3.35	3.40	4.27	4.49	2.28	2.27	
Crystal 793	7	Yes	61.18	101	37.97	101	1316	105	886	101	340.1	294.9	7324	6732	18.02	15.80	21.56	22.43	3.98	4.13	3.17	3.45	4.18	4.04	2.46	2.43	
Crystal 912	4	Yes	53.61	89	35.21	93	1207	96	886	101	317.3	285.5	7142	7041	16.92	15.44	22.52	24.35	5.04	5.05	3.27	3.42	3.12	3.29	4.25	3.86	
Hilleshög HIL2389	3	Yes	60.04	99	--	--	1301	104	--	--	336.7	--	7312	--	17.86	--	21.77	--	4.53	4.55	3.80	3.68	4.01	4.04	5.44	5.46	
Hilleshög HIL2479	1	No	58.75	97	--	--	729	58	--	--	332.8	--	4074	--	17.82	--	11.93	--	4.21	4.23	4.18	4.47	3.50	3.87	4.46	4.53	
Hilleshög HIL2480 **	1	No	60.05	99	--	--	963	77	--	--	336.8	--	5435	--	18.02	--	16.33	--	4.24	4.16	4.06	4.25	3.37	3.51	2.62	2.84	
Maribo MA717	7	No	55.88	92	34.86	92	976	78	731	84	324.1	284.0	5649	5834	17.30	15.24	17.42	20.22	4.82	4.83	4.88	4.53	3.90	4.05	5.06	4.71	
SX 1815	3	No	62.01	103	--	--	1353	108	--	--	342.6	--	7471	--	18.16	--	21.78	--	4.74	4.72	4.28	4.12	4.09	4.20	6.05	5.80	
SX 1835 **	1	No	58.83	97	--	--	1124	90	--	--	333.0	--	6430	--	17.70	--	19.45	--	4.60	4.63	4.43	4.37	3.79	3.93	4.69	4.10	
SV 231	1	No	59.63	99	--	--	1191	95	--	--	335.5	--	6783	--	17.73	--	20.45	--	4.73	4.75	4.11	4.27	3.81	3.76	5.06	4.84	
<b>Newly Approved</b>																											
BTS 8440	NC	Yes	64.45	107	--	--	1310	104	--	--	350.2	--	7132	--	18.50	--	20.44	--	3.18	3.04	3.61	3.82	3.82	3.75	2.49	2.73	
BTS 8457	NC	No	61.39	102	--	--	1259	100	--	--	340.8	--	7039	--	17.99	--	20.82	--	4.07	3.81	3.96	4.15	3.76	3.74	2.69	2.52	
Crystal 470	NC	Yes	58.51	97	--	--	1186	95	--	--	332.0	--	6662	--	17.62	--	19.64	--	4.21	3.96	3.74	3.71	3.78	3.82	2.73	2.49	
Crystal 471	NC	Yes	63.47	105	--	--	1274	102	--	--	347.1	--	6988	--	18.37	--	20.00	--	4.10	3.79	3.62	3.81	3.86	3.77	2.40	2.25	
Hilleshög HIL2493 **	NC	No	59.64	99	--	--	1226	98	--	--	335.5	--	6915	--	17.75	--	20.68	--	4.65	4.74	4.27	4.21	3.56	3.69	4.38	4.55	
SV 345 **	NC	No	58.74	97	--	--	1046	83	--	--	332.7	--	5920	--	17.63	--	17.70	--	4.84	4.89	4.12	4.16	3.59	3.54	4.94	4.65	
AP CK SUS RR#2			56.88	94	--	--	687	55	--	--	327.1	--	3975	--	17.45	--	12.40	--									
Trial mean (includes AP CK SUS RR#2)			60.45	100	--	--	1254	100	--	--	337.9	--	7016	--	17.95	--	20.75	--									
AP SUS RR#5			--	--	30.80	82	--	--	590	67	--	269.8	--	4984	--	14.75	--	18.00									
Trial mean (includes AP SUS RR#5)			--	--	37.77	100	--	--	874	100	--	294.1	--	6673	--	15.79	--	22.33									
Mean of specialty varieties			61.1	101	39.42	104	1352	108	946	108	339.8	299.9	7532	7095	18.04	16.06	22.16	23.40									

+++ 2024 Sites include Perley

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+++ 2020 Data from Climax, Perley, and Grandin

++ 2024 Revenue estimate based on a \$54.53 beet payment (5-yr ave) at 17.5% crop with a 1.5% loss to molasses. 2020 Revenue estimate based on \$45.12 beet payment. Revenue does not consider hauling or production costs.

+ Yes indicates varieties that have met the current Aphanomyces Specialty requirement for 2025 with a 2 yr rating ≤ 4.0 or previously met Aphanomyces Specialty requirement maintaining a 3 year rating ≤ 4.3.

%Mn = Percent of 2024 trial mean (includes previously approved varieties and susceptible check AP SUS RR#2)

%Mn^ = Percent of 2020 trial mean (including susceptible check AP SUS RR#5)

\*\* Does not meet Full Market Approval. Meets Aphanomyces and/or Rhizoctonia Specialty Approval.

\* 2025 Cercospora from Saginaw MI, Randolph MN, Averill MN, Caledonia ND and Stephen MN (res.<4.4, susc>5.0). Aphanomyces ratings from Shakopee MN and Glyndon MN (res.<4.0, susc>4.8).

Rhizoctonia from Saginaw MI, Moorhead MN (two sites) and Crookston MN (res.<3.8, susc>5). Fusarium from Moorhead MN and Sabin MN (res.<3.0, susc>5.0). MG indicates muligenic resistance to Rhizomania.

\* 2024 Cercospora from Saginaw MI, Randolph MN, Foxhome MN, Averill MN and Forest River ND (res.<4.4, susc>5.0). Aphanomyces ratings from Shakopee MN, Glyndon MN, and Perley MN (res.<4.0, susc>4.8).

Rhizoctonia from Saginaw MI, Moorhead MN (two sites) and Crookston MN (res.<3.8, susc>5). Fusarium from Moorhead MN and Sabin MN (res.<3.0, susc>5.0).

Table 4. Performance Data of Conventional Varieties During 2017, 2018, 2019 Growing Seasons (All Locations Combined) +++

Variety	Yrs Com	Rev/Ton ++					Rev/Acre ++					Rec/Ton		Rec/Acre		Sugar		Yield		Molasses		Emergence *		Cerc. *		Aphan. *		Rhizoc. *		Fusarium *		Rzm *	
		19	2 Yr	2Y%	3Yr	3Y%	19	2 Yr	2Y%	3Yr	3Yr%	19	2 Yr	19	2 Yr	19	2 Yr	19	2 Yr	19	2 Yr	19	2 Yr	19	2 Yr	19	2 Yr	19	2 Yr	19	2 Yr	19	2 Yr
Number of locations →		3	8	14			3	8	14			3	8	3	8	3	8	3	8	3	8	3	8	3	6	2	3	3	6	2	4		
<b>Previous Approved</b>																																	
Crystal 620	NC	41.74	47.24	97	49.48	99	1394	1631	118	1656	104	311	326	10403	11312	16.59	17.38	33.7	34.9	1.07	1.06	54	67	3.95	4.13	4.7	4.2	5.1	4.6	2.5	3.0	MG	
Crystal R761	10	38.62	43.53	89	46.06	92	1375	1582	115	1618	101	299	313	10742	11457	16.18	16.86	36.0	36.7	1.21	1.19	61	72	4.98	4.85	4.4	4.3	4.9	4.6	3.0	3.6	MG	
Crystal 840	NC	39.30	45.48	93	30.32	60	1288	1585	115	NA	--	302	320	9916	11173	16.23	17.10	33.1	35.1	1.15	1.10	52	65	4.18	4.25	4.0	3.9	4.7	4.4	2.7	3.1	MG	
Hilleshög HM3035Rz	13	43.77	49.17	101	50.89	101	1294	1379	100	1405	88	318	333	9439	9422	16.91	17.65	29.9	28.5	1.02	1.00	72	71	4.42	4.32	5.1	5.2	4.4	4.2	4.1	4.3	SG	
Seedex 8869 Cnv	NC	40.88	45.47	93	48.33	96	1374	1617	117	1658	104	307	320	10388	11418	16.40	17.00	33.9	35.8	1.02	1.00	64	74	4.52	4.59	4.8	4.8	5.1	4.9	3.5	3.7	MG	
SV 48777	NC	45.18	50.25	103	52.63	105	1452	1634	118	1656	104	323	337	10342	10954	17.08	17.78	31.8	32.5	0.94	0.93	63	73	4.10	4.33	4.9	5.0	5.0	4.7	4.3	4.4	MG	
<b>Newly Approved</b>																																	
Crystal 950	NC	41.21	--	--	--	--	1430	--	--	--	--	309	--	10719	--	16.49	--	34.7	--	1.06	--	62	--	4.72	--	4.8	--	4.8	--	2.9	--	MG	
Benchmark var. mean		44.35	48.87	50.20			1427	1381	1595			320	332	10330	10887	17.07	17.68	32.4	33.0	1.08	1.09	66	75										

+++ 2019 Sites include Grand Forks, Scandia, and Bathgate

+++ 2018 Sites include Casselton, Ada, Grand Forks, Scandia, and St. Thomas

+++ 2017 Sites include Casselton, Hendrum, Grand Forks, Scandia, St. Thomas, and Humboldt

++ 2019 Revenue estimate is based on a \$44.38 beet payment (5-yr ave) at 17.5% sugar and 1.5% loss to molasses. 2018 Revenue estimate is based on a \$46.40 beet payment and 2017 Revenue estimate is based on a \$48.49 beet payment.

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

\* 2019 Aphanomyces ratings from Shakopee MN (res<4.4, susc>5.0). Cercospora ratings from Randolph MN, Foxhome MN & Saginaw MI (res<4.5, susc>5.0). Fusarium ratings from Moorhead MN (res<3.0, susc>5.0).

Rhizoctonia from Moorhead MN, Crookston MN, and Saginaw MI (res<3.8, susc>5). MG (Multigenic) contains multiple genes for Rhizomania resistance. SG (Single gene) contains a single gene for Rhizomania resistance.

\* 2018 Aphanomyces ratings from Shakopee MN and Georgetown MN (res<4.4, susc>5.0). Cercospora ratings from Randolph MN, Foxhome MN & Saginaw MI (res<4.5, susc>5.0). Fusarium ratings from Moorhead MN (res<3.0, susc>5.0).

Rhizoctonia from Moorhead MN and Saginaw MI (res<3.8, susc>5).

Created 10/21/2025

Table 5. ACSC Official Trial Disease Nurseries 2023-2025 (Varieties tested in 2025)

Cercospora, Aphanomyces, Rhizoctonia & Fusarium

Code	Description	< 4.5 Cercospora > 5.0					< 4.0 Aphanomyces > 4.8					< 3.82 Rhizoctonia > 5.0					< 3.0 Fusarium > 5.0					Rhizomania
		25 Mean	24 Mean	23 Mean	2 Yr Mean	3 Yr Mean	25 Mean	24 Mean	23 Mean	2 Yr Mean	3 Yr Mean	25 Mean	24 Mean	23 Mean	2 Yr Mean	3 Yr Mean	25 Mean	24 Mean	23 Mean	2 Yr Mean	3 Yr Mean	
<b>Previously Approved</b>																						
534	BTS 8018	3.88	3.35	2.42	3.62	3.22	3.51	3.73	3.95	3.62	3.73	3.83	3.68	4.06	3.75	3.86	2.42	2.19	3.20	2.31	2.61	MG
506	BTS 8034	4.28	3.69	2.54	3.99	3.51	3.52	4.48	3.80	4.00	3.93	4.20	4.38	4.09	4.29	4.22	2.31	1.89	2.72	2.10	2.31	MG
529	BTS 8156	4.38	3.87	2.53	4.12	3.59	3.59	4.27	3.97	3.93	3.94	4.38	4.28	3.93	4.33	4.20	2.36	2.15	2.80	2.25	2.44	MG
504	BTS 8226	4.05	3.52	2.33	3.79	3.30	3.43	3.81	3.72	3.62	3.65	3.64	3.46	3.78	3.55	3.62	2.91	2.64	3.85	2.77	3.13	MG
549	BTS 8270	3.56	3.32	2.43	3.44	3.10	3.61	3.76	3.90	3.69	3.76	3.85	3.86	3.67	3.85	3.79	2.28	2.41	3.46	2.34	2.71	MG
505	BTS 8365	3.95	4.18	4.15	4.07	4.10	3.69	3.87	3.62	3.78	3.73	3.73	3.60	3.69	3.67	3.67	2.56	2.15	3.43	2.35	2.71	MG
512	BTS 8927	4.22	4.45	4.38	4.34	4.35	3.67	4.41	3.26	4.04	3.78	3.87	3.57	3.98	3.72	3.81	2.18	2.10	3.08	2.14	2.45	MG
537	Crystal 022	4.78	4.66	4.97	4.72	4.81	3.33	3.95	3.66	3.64	3.65	3.87	3.63	3.85	3.75	3.78	2.33	2.75	3.43	2.54	2.84	MG
525	Crystal 130	4.27	3.56	2.60	3.92	3.48	3.46	3.72	4.00	3.59	3.73	3.79	3.54	3.69	3.67	3.67	2.58	2.76	3.55	2.67	2.96	MG
545	Crystal 138	4.47	4.73	4.77	4.60	4.66	3.56	3.84	4.06	3.70	3.82	3.77	3.68	3.81	3.73	3.76	2.60	2.98	3.76	2.79	3.11	MG
517	Crystal 260	3.60	3.13	2.15	3.37	2.96	3.58	4.08	3.84	3.83	3.83	3.80	3.70	3.46	3.75	3.65	2.64	2.38	3.38	2.51	2.80	MG
503	Crystal 269	4.42	4.54	4.38	4.48	4.45	3.07	3.50	3.62	3.29	3.40	4.06	4.30	3.90	4.18	4.09	2.28	2.54	4.11	2.41	2.98	MG
546	Crystal 361	3.71	3.33	2.24	3.52	3.09	3.13	3.80	3.45	3.47	3.46	3.99	3.78	3.54	3.88	3.77	2.31	2.02	3.24	2.16	2.52	MG
539	Crystal 364	4.37	4.46	4.26	4.41	4.36	3.38	3.78	3.79	3.58	3.65	3.60	3.77	3.79	3.69	3.72	2.23	2.12	3.12	2.18	2.49	MG
542	Crystal 369	3.88	4.03	3.78	3.96	3.90	3.35	3.45	4.02	3.40	3.61	4.27	4.72	3.98	4.49	4.32	2.28	2.25	3.24	2.27	2.59	MG
516	Crystal 793	3.98	4.28	4.20	4.13	4.15	3.17	3.72	4.31	3.45	3.73	4.18	3.89	4.35	4.04	4.14	2.46	2.40	3.40	2.43	2.76	MG
536	Crystal 912	5.04	5.06	5.00	5.05	5.03	3.27	3.57	3.41	3.42	3.42	3.12	3.45	3.50	3.29	3.36	4.25	3.46	3.82	3.86	3.84	MG
532	Hilleshög HIL2389	4.53	4.57	4.51	4.55	4.54	3.80	3.56	5.42	3.68	4.26	4.01	4.08	4.45	4.04	4.18	5.44	5.49	5.50	5.46	5.47	MG
538	Hilleshög HIL2479	4.21	4.25	4.09	4.23	4.18	4.18	4.76	4.38	4.47	4.44	3.50	4.24	3.43	3.87	3.72	4.46	4.59	4.43	4.53	4.50	MG
524	Hilleshög HIL2480 **	4.24	4.08	4.00	4.16	4.11	4.06	4.43	4.30	4.25	4.26	3.37	3.65	3.70	3.51	3.57	2.62	3.06	3.30	2.84	2.99	MG
527	Maribo MA717	4.82	4.85	5.04	4.83	4.90	4.88	4.18	4.61	4.53	4.55	3.90	4.19	4.10	4.05	4.07	5.06	4.36	4.53	4.71	4.65	MG
533	SX 1815	4.74	4.70	4.74	4.72	4.73	4.28	3.96	6.15	4.12	4.80	4.09	4.30	4.35	4.20	4.25	6.05	5.54	5.60	5.80	5.73	MG
530	SX 1835 **	4.60	4.66	4.55	4.63	4.60	4.43	4.31	5.99	4.37	4.91	3.79	4.07	3.55	3.93	3.80	4.69	3.52	3.92	4.10	4.04	MG
526	SV 231	4.73	4.77	4.83	4.75	4.78	4.11	4.43	6.25	4.27	4.93	3.81	3.71	3.69	3.76	3.74	5.06	4.62	4.21	4.84	4.63	MG
<b>Newly Approved</b>																						
511	BTS 8440	3.18	2.90	--	3.04	--	3.61	4.03	--	3.82	--	3.82	3.68	--	3.75	--	2.49	2.97	--	2.73	--	MG
518	BTS 8457	4.07	3.55	--	3.81	--	3.96	4.33	--	4.15	--	3.76	3.71	--	3.74	--	2.69	2.35	--	2.52	--	MG
522	Crystal 470	4.21	3.71	--	3.96	--	3.74	3.67	--	3.71	--	3.78	3.85	--	3.82	--	2.73	2.25	--	2.49	--	MG
548	Crystal 471	4.10	3.49	--	3.79	--	3.62	3.99	--	3.81	--	3.86	3.69	--	3.77	--	2.40	2.10	--	2.25	--	MG
553	Hilleshög HIL2493 **	4.65	4.82	--	4.74	--	4.27	4.15	--	4.21	--	3.56	3.83	--	3.69	--	4.38	4.72	--	4.55	--	MG
535	SV 345 **	4.84	4.93	--	4.89	--	4.12	4.20	--	4.16	--	3.59	3.48	--	3.54	--	4.94	4.35	--	4.65	--	MG

Created 10/21/2025

\*\* Does not meet full market approval. Meets Aphanomyces and/or Rhizoctonia Specialty approval.

Green font ratings indicate specialty or good resistance.

Red font ratings indicate level of concern for some fields.

-- indicates data not available

MG (Multigenic) = Contains multiple genes for Rhizomania resistance

Table 6. 2025 Aphanomyces Ratings for Official Trial Entries  
KWS (Shakopee, MN) - UBS (Glyndon, MN)

Chk	Code	Description	Unadjusted				Adjusted ++					Trial Yrs ss		
			Perl NA	Alva NA	Shak <sup>z</sup> 8/26	Glyn 8/28	Perl NA	Alva NA	Shak <sup>z</sup> 8/26	Glyn 8/28	2025		2 Yr	3 Yr
534	BTS 8018	-- --	3.25	2.90	-- --	3.25	3.78	3.51	3.62	3.73	3.73	3.95	6	
506	BTS 8034	-- --	2.67	3.35	-- --	2.67	4.37	3.52	4.00	3.93	4.48	3.80	6	
529	BTS 8156	-- --	3.14	3.10	-- --	3.14	4.04	3.59	3.93	3.94	4.27	3.97	5	
504	BTS 8226	-- --	2.69	3.20	-- --	2.69	4.17	3.43	3.62	3.65	3.81	3.72	4	
549	BTS 8270	-- --	3.28	3.03	-- --	3.28	3.95	3.61	3.69	3.76	3.76	3.90	4	
505	BTS 8365	-- --	3.18	3.22	-- --	3.18	4.20	3.69	3.78	3.73	3.87	3.62	3	
511	BTS 8440	-- --	3.27	3.03	-- --	3.27	3.95	3.61	3.82	--	4.03	--	2	
518	BTS 8457	-- --	3.83	3.14	-- --	3.83	4.09	3.96	4.15	--	4.33	--	2	
512	BTS 8927	-- --	3.35	3.06	-- --	3.35	3.99	3.67	4.04	3.78	4.41	3.26	7	
537	Crystal 022	-- --	3.16	2.69	-- --	3.16	3.51	3.33	3.64	3.65	3.95	3.66	6	
525	Crystal 130	-- --	2.95	3.05	-- --	2.95	3.98	3.46	3.59	3.73	3.72	4.00	5	
545	Crystal 138	-- --	3.50	2.78	-- --	3.50	3.62	3.56	3.70	3.82	3.84	4.06	5	
517	Crystal 260	-- --	3.19	3.05	-- --	3.19	3.98	3.58	3.83	3.83	4.08	3.84	4	
503	Crystal 269	-- --	2.67	2.67	-- --	2.67	3.48	3.07	3.29	3.40	3.50	3.62	4	
546	Crystal 361	-- --	3.05	2.47	-- --	3.05	3.22	3.13	3.47	3.46	3.80	3.45	3	
539	Crystal 364	-- --	3.52	2.49	-- --	3.52	3.25	3.38	3.58	3.65	3.78	3.79	3	
542	Crystal 369	-- --	2.86	2.95	-- --	2.86	3.84	3.35	3.40	3.61	3.45	4.02	3	
522	Crystal 470	-- --	3.75	2.87	-- --	3.75	3.74	3.74	3.71	--	3.67	--	2	
548	Crystal 471	-- --	3.46	2.91	-- --	3.46	3.79	3.62	3.81	--	3.99	--	2	
516	Crystal 793	-- --	2.83	2.70	-- --	2.83	3.52	3.17	3.45	3.73	3.72	4.31	9	
536	Crystal 912	-- --	3.21	2.55	-- --	3.21	3.32	3.27	3.42	3.42	3.57	3.41	7	
532	Hilleshög HIL2389	-- --	3.65	3.03	-- --	3.65	3.95	3.80	3.68	4.26	3.56	5.42	5	
538	Hilleshög HIL2479	-- --	4.64	2.85	-- --	4.64	3.71	4.18	4.47	4.44	4.76	4.38	3	
524	Hilleshög HIL2480	-- --	4.49	2.79	-- --	4.49	3.64	4.06	4.25	4.26	4.43	4.30	3	
553	Hilleshög HIL2493	-- --	4.59	3.03	-- --	4.59	3.95	4.27	4.21	--	4.15	--	2	
527	Maribo MA717	-- --	5.05	3.61	-- --	5.05	4.71	4.88	4.53	4.55	4.18	4.61	9	
533	SX 1815	-- --	3.73	3.71	-- --	3.73	4.84	4.28	4.12	4.80	3.96	6.15	5	
530	SX 1835	-- --	4.09	3.67	-- --	4.09	4.78	4.43	4.37	4.91	4.31	5.99	3	
526	SV 231	-- --	4.43	2.91	-- --	4.43	3.79	4.11	4.27	4.93	4.43	6.25	3	
535	SV 345	-- --	4.56	2.82	-- --	4.56	3.68	4.12	4.16	--	4.20	--	2	
1	1001	AP CK#32 CRY5981	-- --	2.57	3.38	-- --	2.57	4.41	3.49	3.66	3.81	3.84	4.10	17
1	1002	AP CK#43 BTS80RR32	-- --	4.87	3.22	-- --	4.87	4.20	4.53	4.75	4.89	4.97	5.17	16
1	1003	AP CK#45 CRY5986	-- --	4.60	3.72	-- --	4.60	4.85	4.72	4.41	4.28	4.09	4.01	17
1	1004	AP CK#51 CRY5246	-- --	4.80	4.38	-- --	4.80	5.71	5.25	5.04	4.88	4.82	4.58	14
1	1005	AP CK#55 CRY5247	-- --	4.53	3.27	-- --	4.53	4.26	4.39	4.66	4.59	4.93	4.46	14
1	1006	AP CK#56 BTS8363	-- --	6.90	5.70	-- --	6.89	7.43	7.16	6.43	5.96	5.69	5.03	13
1	1007	AP CK#57 CRY5578	-- --	3.94	2.81	-- --	3.94	3.66	3.80	4.12	4.19	4.45	4.33	11
1	1008	AP CK#58 CRY5572	-- --	4.48	3.12	-- --	4.48	4.07	4.27	4.31	4.42	4.36	4.63	11
1	1009	AP CK#59 BTS8606	-- --	4.19	3.49	-- --	4.19	4.55	4.37	4.48	4.46	4.59	4.43	10
1	1010	AP CK#61 HIL9708	-- --	4.79	2.58	-- --	4.79	3.36	4.07	4.40	4.58	4.73	4.93	11
1	1011	AP CK#63 HIL9920	-- --	4.10	3.60	-- --	4.10	4.69	4.39	4.25	4.66	4.11	5.49	9
1	1012	AP CK#64 SX1818	-- --	5.89	3.40	-- --	5.89	4.43	5.16	4.85	5.60	4.54	7.09	5
12	Check Mean	-- --	4.64	3.56	-- --	4.63	4.63	4.63						
	Trial Mean <sup>Y</sup>	-- --	3.87	3.08	-- --	3.87	4.01	3.94						
	Coeff. of Var. (%)	-- --	10.1	17.2										
	Mean LSD (0.05)	-- --	0.47	0.78										
	Mean LSD (0.01)	-- --	0.62	1.03										
	Sig Lvl	-- --	**	**										
	Adjustment Factor				NA	NA	0.999	1.303						

++ Ratings adjusted to 2003 basis. (2000-2002 Aph nurseries). Ratings adjusted on the basis of checks.

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

<sup>Z</sup> Trial mean and statistics for Shakopee include five extra filler entries (not shown)

Chk = varieties used to adjust Aph readings to 2003 basis. Ratings \* (Adj. factor) = Adj Rating.

<sup>Y</sup> Trial mean and statistics include all commercial and experimental entries (only approved varieties shown)

Perley (Perl) and Alvarado (Alva) not rated due to lack of Aphanomyces pressure

Lower numbers indicate better Aphanomyces resistance (1=Ex, 9=Poor)

Ratings in green font indicate good resistance.

Ratings in red font indicate a level of concern.

Table 7. 2025 Cercospora Ratings for Official Trial Entries  
 KWS (Randolph, MN) - BSDF (Saginaw, MI) - AC South (Averill, MN) - AC Middle (Caledonia, ND) - AC North (Stephen, MN)

Chk	Code	Description	Unadjusted					Adjusted ++					2025 5 loc	2 Yr	3 Yr	2024++	2023++	Trial Yrs \$\$
			KWS <sup>2</sup> Avg 10 Dates+	BSDF Avg 4 Dates+	Averill Avg 6 Dates+	Caledonia Avg 6 Dates+	Stephen Avg 6 Dates+	KWS <sup>2</sup> Avg 10 Dates+	BSDF Avg 4 Dates+	Averill Avg 6 Dates+	Caledonia Avg 6 Dates+	Stephen Avg 6 Dates+						
534	BTS 8018		2.20	4.14	4.43	3.34	3.13	2.03	4.32	4.53	4.33	4.17	3.88	3.62	3.22	3.35	2.42	6
506	BTS 8034		2.97	4.77	4.40	3.96	3.04	2.74	4.98	4.50	5.14	4.05	4.28	3.99	3.51	3.69	2.54	6
529	BTS 8156		3.05	4.97	4.66	3.95	2.99	2.81	5.18	4.77	5.13	3.99	4.38	4.12	3.59	3.87	2.53	5
504	BTS 8226		2.52	4.20	4.57	3.63	3.12	2.33	4.38	4.68	4.71	4.16	4.05	3.79	3.30	3.52	2.33	4
549	BTS 8270		2.21	3.72	4.18	3.14	2.65	2.04	3.88	4.28	4.07	3.53	3.56	3.44	3.10	3.32	2.43	4
505	BTS 8365		4.55	3.76	3.72	2.99	2.97	4.20	3.92	3.81	3.88	3.96	3.95	4.07	4.10	4.18	4.15	3
511	BTS 8440		1.91	3.68	3.77	2.78	2.14	1.76	3.84	3.86	3.61	2.85	3.18	3.04	--	2.90	--	2
518	BTS 8457		2.46	4.57	4.33	3.61	3.14	2.27	4.77	4.43	4.68	4.19	4.07	3.81	--	3.55	--	2
512	BTS 8927		4.61	4.03	3.95	3.17	3.35	4.25	4.20	4.04	4.11	4.47	4.22	4.34	4.35	4.45	4.38	7
537	Crystal 022		4.69	4.55	4.68	3.77	3.86	4.33	4.75	4.79	4.89	5.15	4.78	4.72	4.81	4.66	4.97	6
525	Crystal 130		2.62	4.55	4.75	3.78	3.30	2.42	4.75	4.86	4.91	4.40	4.27	3.92	3.48	3.56	2.60	5
545	Crystal 138		4.53	4.47	4.21	3.53	3.47	4.18	4.66	4.31	4.58	4.63	4.47	4.60	4.66	4.73	4.77	5
517	Crystal 260		2.07	4.22	4.01	3.25	2.54	1.91	4.40	4.10	4.22	3.39	3.60	3.37	2.96	3.13	2.15	4
503	Crystal 269		4.99	4.20	4.36	3.34	3.22	4.60	4.38	4.46	4.33	4.29	4.42	4.48	4.45	4.54	4.38	4
546	Crystal 361		2.37	3.91	4.05	3.36	2.83	2.19	4.08	4.14	4.36	3.77	3.71	3.52	3.09	3.33	2.24	3
539	Crystal 364		4.93	3.69	4.21	3.64	3.30	4.55	3.85	4.31	4.72	4.40	4.37	4.41	4.36	4.46	4.26	3
542	Crystal 369		4.20	3.63	3.96	2.98	2.88	3.88	3.79	4.05	3.87	3.84	3.88	3.96	3.90	4.03	3.78	3
522	Crystal 470		2.63	4.42	4.75	3.71	3.25	2.43	4.61	4.86	4.81	4.33	4.21	3.96	--	3.71	--	2
548	Crystal 471		2.56	4.31	4.75	3.73	2.96	2.36	4.50	4.86	4.84	3.95	4.10	3.79	--	3.49	--	2
516	Crystal 793		4.45	3.55	4.02	3.11	2.97	4.11	3.70	4.11	4.04	3.96	3.98	4.13	4.15	4.28	4.20	9
536	Crystal 912		5.08	4.96	4.82	3.91	4.00	4.69	5.17	4.93	5.07	5.33	5.04	5.05	5.03	5.06	5.00	7
532	Hilleshög HIL2389		5.27	3.82	4.63	3.55	3.36	4.86	3.99	4.74	4.61	4.48	4.53	4.55	4.54	4.57	4.51	5
538	Hilleshög HIL2479		4.29	4.53	4.29	3.21	2.86	3.96	4.73	4.39	4.17	3.81	4.21	4.23	4.18	4.25	4.09	3
524	Hilleshög HIL2480		4.66	4.53	4.04	3.30	2.80	4.30	4.73	4.13	4.28	3.73	4.24	4.16	4.11	4.08	4.00	3
553	Hilleshög HIL2493		5.20	4.31	4.65	3.64	3.35	4.80	4.50	4.76	4.72	4.47	4.65	4.74	--	4.82	--	2
527	Maribo MA717		5.40	4.53	4.81	3.81	3.38	4.98	4.73	4.92	4.94	4.51	4.82	4.83	4.90	4.85	5.04	9
533	SX 1815		5.09	4.64	4.67	3.78	3.35	4.70	4.84	4.78	4.91	4.47	4.74	4.72	4.73	4.70	4.74	5
530	SX 1835		5.06	4.00	4.64	3.58	3.57	4.67	4.17	4.75	4.65	4.76	4.60	4.63	4.60	4.66	4.55	3
526	SV 231		5.26	4.14	4.82	3.77	3.50	4.85	4.32	4.93	4.89	4.67	4.73	4.75	4.78	4.77	4.83	3
535	SV 345		5.16	4.71	4.82	3.79	3.52	4.76	4.91	4.93	4.92	4.69	4.84	4.89	--	4.93	--	2
1	1101 CR CK#41 CRY5981RR		5.73	5.40	5.51	3.83	4.13	5.29	5.63	5.64	4.97	5.51	5.41	5.32	5.22	5.23	5.04	17
1	1102 CR CK#43 CRY5246RR		5.29	4.49	4.46	3.69	3.67	4.88	4.68	4.56	4.79	4.89	4.76	4.73	4.69	4.70	4.62	14
1	1103 CR CK#44 BETA80RR32		5.88	4.77	4.53	3.88	3.41	5.24	4.98	4.64	5.03	4.55	4.89	4.96	5.01	5.03	5.10	16
1	1104 CR CK#45 HIL4448RR		5.63	5.07	5.41	4.22	4.22	5.20	5.29	5.54	5.48	5.63	5.42	5.50	5.53	5.57	5.58	14
1	1105 CR CK#48 MARI504		5.30	5.32	5.11	3.82	4.05	4.89	5.55	5.23	4.96	5.40	5.21	5.17	5.07	5.14	4.87	11
1	1106 CR CK#49 CRY5578RR		5.24	4.22	4.81	3.40	3.61	4.84	4.40	4.92	4.41	4.81	4.68	4.76	4.76	4.84	4.77	11
1	1107 CR CK#51 CRY5355RR		4.94	4.70	4.77	3.44	3.52	4.56	4.90	4.88	4.46	4.69	4.70	4.78	4.78	4.86	4.77	13
1	1108 CR CK#52 MARI717		5.22	5.14	4.46	4.02	3.51	4.82	5.36	4.56	5.22	4.68	4.93	4.88	4.82	4.84	4.70	9
1	1109 CR CK#53 CRY5684RR		4.79	3.74	3.91	3.40	3.14	4.42	3.90	4.00	4.41	4.19	4.18	4.28	4.30	4.37	4.34	10
1	1110 CR CK#54 CRY5912		5.07	4.79	4.97	3.82	3.68	4.68	5.00	5.09	4.96	4.91	4.93	4.85	4.90	4.77	5.00	7
1	1111 CR CK#55 HIL2366		5.38	4.67	4.91	4.03	3.73	4.96	4.87	5.02	5.23	4.97	5.01	4.97	4.99	4.93	5.02	6
1	1112 CR CK#56 SES203		5.56	4.15	4.71	3.84	3.50	5.13	4.33	4.82	4.98	4.67	4.79	4.69	4.72	4.60	4.78	6
12	Check Mean		5.32	4.71	4.80	3.78	3.68	4.91	4.91	4.91	4.91	4.91	4.91					
	Trial Mean <sup>Y</sup>		4.16	4.29	4.43	3.51	3.25	3.84	4.48	4.53	4.55	4.33	4.35					
	Coeff. of Var. (%)		4.9	7.90	7.5	6.5	11.3											
	Mean LSD (0.05)		0.27	0.52	0.39	0.27	0.43											
	Mean LSD (0.01)		0.35	0.69	0.52	0.35	0.56											
	Sig Mrk		**	**	**	**	**											
	Adj Factor							0.92275	1.04321	1.02327	1.29763	1.33347						

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

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

<sup>2</sup> Trial mean and statistics for Randolph include four extra filler varieties (not shown)

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

+ Average rating based upon multiple rating dates.

<sup>Y</sup> Trial mean and statistics include all commercial and experimental entries (only approved varieties shown)

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

Ratings in green font indicate good resistance.

Ratings in red font indicate a level of concern.

Table 8. 2025 Fusarium Ratings for Official Trial Entries  
ACSC (Moorhead, MN) - ACSC (Sabin, MN)

Chk	Code	Description	Unadjusted		Mhd <sup>z</sup>		Sab <sup>z</sup>		Adjusted ++					Trial Yrs \$\$
			Mhd <sup>z</sup>	Sab <sup>z</sup>	Mhd <sup>z</sup>	Sab <sup>z</sup>	2025	2 Yr	3 Yr	2024	2023			
			4 Dates+	4 Dates+	4 Dates+	4 Dates+								
	534	BTS 8018	1.81	1.10	2.37	2.48	2.42	2.31	2.61	2.19	3.20	6		
	506	BTS 8034	1.52	1.17	1.99	2.64	2.31	2.10	2.31	1.89	2.72	6		
	529	BTS 8156	1.67	1.12	2.19	2.53	2.36	2.25	2.44	2.15	2.80	5		
	504	BTS 8226	2.08	1.37	2.72	3.09	2.91	2.77	3.13	2.64	3.85	4		
	549	BTS 8270	1.55	1.12	2.03	2.53	2.28	2.34	2.71	2.41	3.46	4		
	505	BTS 8365	1.81	1.22	2.37	2.75	2.56	2.35	2.71	2.15	3.43	3		
	511	BTS 8440	1.80	1.16	2.36	2.62	2.49	2.73	--	2.97	--	2		
	518	BTS 8457	1.99	1.23	2.60	2.77	2.69	2.52	--	2.35	--	2		
	512	BTS 8927	1.51	1.06	1.98	2.39	2.18	2.14	2.45	2.10	3.08	7		
	537	Crystal 022	1.69	1.09	2.21	2.46	2.33	2.54	2.84	2.75	3.43	6		
	525	Crystal 130	1.77	1.26	2.32	2.84	2.58	2.67	2.96	2.76	3.55	5		
	545	Crystal 138	2.03	1.13	2.66	2.55	2.60	2.79	3.11	2.98	3.76	5		
	517	Crystal 260	2.15	1.09	2.81	2.46	2.64	2.51	2.80	2.38	3.38	4		
	503	Crystal 269	1.63	1.08	2.13	2.44	2.28	2.41	2.98	2.54	4.11	4		
	546	Crystal 361	1.56	1.14	2.04	2.57	2.31	2.16	2.52	2.02	3.24	3		
	539	Crystal 364	1.52	1.10	1.99	2.48	2.23	2.18	2.49	2.12	3.12	3		
	542	Crystal 369	1.73	1.02	2.26	2.30	2.28	2.27	2.59	2.25	3.24	3		
	522	Crystal 470	2.00	1.26	2.62	2.84	2.73	2.49	--	2.25	--	2		
	548	Crystal 471	1.79	1.09	2.34	2.46	2.40	2.25	--	2.10	--	2		
	516	Crystal 793	1.69	1.20	2.21	2.71	2.46	2.43	2.76	2.40	3.40	9		
	536	Crystal 912	3.18	1.92	4.16	4.33	4.25	3.86	3.84	3.46	3.82	7		
	532	Hilleshög HIL2389	4.01	2.50	5.25	5.64	5.44	5.46	5.47	5.49	5.50	5		
	538	Hilleshög HIL2479	3.78	1.76	4.95	3.97	4.46	4.53	4.50	4.59	4.43	3		
	524	Hilleshög HIL2480	2.08	1.12	2.72	2.53	2.62	2.84	2.99	3.06	3.30	3		
	553	Hilleshög HIL2493	2.96	2.17	3.87	4.89	4.38	4.55	--	4.72	--	2		
	527	Maribo MA717	3.87	2.24	5.06	5.05	5.06	4.71	4.65	4.36	4.53	9		
	533	SX 1815	4.51	2.75	5.90	6.20	6.05	5.80	5.73	5.54	5.60	5		
	530	SX 1835	3.55	2.10	4.64	4.74	4.69	4.10	4.04	3.52	3.92	3		
	526	SV 231	3.62	2.39	4.74	5.39	5.06	4.84	4.63	4.62	4.21	3		
	535	SV 345	3.68	2.25	4.81	5.07	4.94	4.65	--	4.35	--	2		
1	1201	FS CK #18 CRY5768RR	3.09	1.63	4.04	3.68	3.86	4.10	4.13	4.33	4.19	17		
1	1202	FS CK #29 CRY5875RR	3.47	2.07	4.54	4.67	4.60	4.51	4.60	4.43	4.76	18		
1	1203	FS CK #30 BTS8337	2.93	1.44	3.83	3.25	3.54	3.41	3.51	3.28	3.71	13		
1	1204	FS CK #31 SXMarathon	4.28	1.95	5.60	4.40	5.00	4.92	4.99	4.85	5.13	11		
1	1205	FS CK #32 CRY5574	1.38	1.12	1.81	2.53	2.17	2.29	2.51	2.41	2.96	11		
1	1206	FS CK #33 SES375	4.11	2.77	5.38	6.25	5.81	5.38	5.34	4.95	5.25	9		
1	1207	FS CK #34 SES265	4.39	2.10	5.74	4.74	5.24	5.38	5.46	5.53	5.62	10		
1	1208	FS CK #35 SES203	4.81	3.25	6.29	7.33	6.81	6.66	6.30	6.50	5.59	6		
1	1209	FS CK #36 SES285	4.37	2.82	5.72	6.36	6.04	6.33	6.06	6.63	5.51	8		
1	1210	FS Ck#37 HIL2317	4.43	2.47	5.80	5.57	5.68	5.77	5.79	5.86	5.83	7		
10		Check Mean	3.73	2.16	4.88	4.88	4.88							
		Trial Mean <sup>Y</sup>	2.56	1.61	3.35	3.63	3.49							
		Coeff. of Var. (%)	17.3	15.7										
		Mean LSD (0.05)	0.55	0.30										
		Mean LSD (0.01)	0.72	0.39										
		Sig Mrk	**	**										
		Adj Factor			1.3084	2.2549								

++ Ratings adjusted to 2007 basis. (2005-2006 Fus Nurseries). Ratings adjusted on the basis of checks.

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

<sup>z</sup> Trial mean and statistics for Moorhead and Sabin include one extra filler variety (not shown)

Chk = varieties used to adjust Fus readings to 2007 basis. Ratings \* (Adj. factor) = Adj Rating.

+ Average rating based upon multiple rating dates.

<sup>Y</sup> Trial mean and statistics include all commercial and experimental entries (only approved varieties shown)

Lower numbers indicate better Fusarium resistance (1=Ex, 9=Poor).

Ratings in green font indicate good resistance.

Ratings in red font indicate a level of concern.

Table 9. 2025 Rhizoctonia Ratings for Official Trial Entries  
 BSDF (Saginaw, MI) - ACSC (TSC S) - ACSC (TSC N) - ACSC (NWROC)

Chk Code	Description	Unadjusted				Adjusted ++				2025	2 Yr	3 Yr	2024++	2023++	Trial Yrs \$\$
		BSDF 8/8	TSC-S <sup>2</sup> 7/31	TSC-N <sup>2</sup> 8/19	NWROC <sup>2</sup> 8/13	BSDF 8/8	TSC-S <sup>2</sup> 7/31	TSC-N <sup>2</sup> 8/19	NWROC <sup>2</sup> 8/13						
534	BTS 8018	4.89	3.70	4.13	3.30	3.84	3.81	4.05	3.61	3.83	3.75	3.86	3.68	4.06	6
506	BTS 8034	5.27	4.09	4.54	3.63	4.14	4.22	4.46	3.97	4.20	4.29	4.22	4.38	4.09	6
529	BTS 8156	5.84	4.11	4.50	3.92	4.59	4.24	4.42	4.28	4.38	4.33	4.20	4.28	3.93	5
504	BTS 8226	5.03	3.48	3.66	3.13	3.95	3.59	3.59	3.42	3.64	3.55	3.62	3.46	3.78	4
549	BTS 8270	4.90	3.76	4.20	3.26	3.85	3.88	4.12	3.56	3.85	3.85	3.79	3.86	3.67	4
505	BTS 8365	4.84	3.79	3.54	3.41	3.81	3.91	3.48	3.73	3.73	3.67	3.67	3.60	3.69	3
511	BTS 8440	5.31	3.84	3.57	3.35	4.17	3.96	3.50	3.66	3.82	3.75	--	3.68	--	2
518	BTS 8457	5.11	3.74	3.68	3.27	4.02	3.85	3.61	3.57	3.76	3.74	--	3.71	--	2
512	BTS 8927	4.86	3.79	3.85	3.62	3.82	3.91	3.78	3.95	3.87	3.72	3.81	3.57	3.98	7
537	Crystal 022	5.00	3.83	3.83	3.50	3.93	3.95	3.76	3.82	3.87	3.75	3.78	3.63	3.85	6
525	Crystal 130	4.70	3.76	4.01	3.36	3.69	3.88	3.94	3.67	3.79	3.67	3.67	3.54	3.69	5
545	Crystal 138	5.07	3.65	3.70	3.40	3.99	3.76	3.63	3.71	3.77	3.73	3.76	3.68	3.81	5
517	Crystal 260	5.31	3.72	3.80	3.18	4.17	3.83	3.73	3.47	3.80	3.75	3.65	3.70	3.46	4
503	Crystal 269	5.28	3.80	4.46	3.49	4.15	3.92	4.38	3.81	4.06	4.18	4.09	4.30	3.90	4
546	Crystal 361	5.32	3.81	4.08	3.52	4.18	3.93	4.01	3.85	3.99	3.88	3.77	3.78	3.54	3
539	Crystal 364	4.83	3.52	3.64	3.10	3.80	3.63	3.57	3.39	3.60	3.69	3.72	3.77	3.79	3
542	Crystal 369	5.32	4.23	4.36	3.90	4.18	4.36	4.28	4.26	4.27	4.49	4.32	4.72	3.98	3
522	Crystal 470	4.98	3.75	3.74	3.36	3.92	3.87	3.67	3.67	3.78	3.82	--	3.85	--	2
548	Crystal 471	4.98	3.62	4.25	3.30	3.92	3.73	4.17	3.61	3.86	3.77	--	3.69	--	2
516	Crystal 793	5.25	3.99	4.31	3.90	4.13	4.11	4.23	4.26	4.18	4.04	4.14	3.89	4.35	9
536	Crystal 912	4.08	2.87	3.26	2.86	3.21	2.96	3.20	3.12	3.12	3.29	3.36	3.45	3.50	7
532	Hilleshög HIL2389	4.87	4.06	4.20	3.56	3.83	4.18	4.12	3.89	4.01	4.04	4.18	4.08	4.45	5
538	Hilleshög HIL2479	4.81	3.22	3.43	3.23	3.78	3.32	3.37	3.53	3.50	3.87	3.72	4.24	3.43	3
524	Hilleshög HIL2480	3.94	3.21	3.55	3.28	3.10	3.31	3.49	3.58	3.37	3.51	3.57	3.65	3.70	3
553	Hilleshög HIL2493	4.67	3.38	3.64	3.22	3.67	3.48	3.57	3.52	3.56	3.69	--	3.83	--	2
527	Maribo MA717	4.78	3.58	4.16	3.71	3.76	3.69	4.08	4.05	3.90	4.05	4.07	4.19	4.10	9
533	SX 1815	5.26	3.74	4.61	3.53	4.14	3.85	4.53	3.86	4.09	4.20	4.25	4.30	4.35	5
530	SX 1835	5.29	3.76	3.66	3.22	4.16	3.88	3.59	3.52	3.79	3.93	3.80	4.07	3.55	3
526	SV 231	4.79	3.90	3.98	3.26	3.77	4.02	3.91	3.56	3.81	3.76	3.74	3.71	3.69	3
535	SV 345	5.06	3.58	3.43	3.05	3.98	3.69	3.37	3.33	3.59	3.54	--	3.48	--	2
1	1301 RH CK#49 CRY5247	5.35	4.39	4.19	3.87	4.21	4.52	4.11	4.23	4.27	4.36	4.34	4.45	4.31	14
1	1302 RH CK#52 CRY5573	5.80	4.16	4.64	4.00	4.56	4.29	4.56	4.37	4.44	4.44	4.37	4.43	4.22	11
1	1303 RH CK#53 BTS8500	5.60	4.21	4.21	3.80	4.40	4.34	4.13	4.15	4.26	4.22	4.23	4.19	4.24	11
1	1304 RH CK#54 CRY5574	5.47	4.02	4.50	3.94	4.30	4.14	4.42	4.30	4.29	4.27	4.32	4.26	4.40	11
1	1305 RH CK#55 CRY5803	5.75	4.45	4.65	4.44	4.52	4.59	4.56	4.85	4.63	4.56	4.53	4.49	4.47	8
1	1306 RH CK#56 MARI504	5.46	3.66	4.30	4.21	4.29	3.77	4.22	4.60	4.22	4.32	4.36	4.43	4.44	11
1	1307 RH CK#57 BTS8606	5.47	4.39	4.74	4.02	4.30	4.52	4.65	4.39	4.47	4.46	4.56	4.46	4.75	10
1	1308 RH CK#58 CRY5793	5.69	4.31	4.38	3.87	4.47	4.44	4.30	4.23	4.36	4.27	4.24	4.18	4.17	9
1	1309 RH CK#59 SEED1818	4.88	3.79	4.12	3.56	3.84	3.91	4.04	3.89	3.92	4.05	4.05	4.19	4.06	5
1	1310 RH CK#60 CRY5913	5.67	3.96	4.18	3.79	4.46	4.08	4.10	4.14	4.20	4.08	4.12	3.97	4.19	7
1	1311 RH CK#61 HIL2386	5.23	3.88	4.10	3.57	4.11	4.00	4.02	3.90	4.01	3.95	3.94	3.90	3.91	5
1	1312 RH CK#62 HIL9920	5.53	5.02	4.74	4.33	4.35	5.17	4.65	4.73	4.73	4.65	4.57	4.57	4.42	9
12	Mean of Check Varieties	5.49	4.19	4.40	3.95	4.32	4.32	4.32	4.32	4.32					
	Trial Mean <sup>Y</sup>	5.12	3.83	4.02	3.52	4.03	3.95	3.95	3.85	3.94					
	Coeff. of Var. (%)	10.5	9.2	8.4	8.8										
	Mean LSD (0.05)	0.69	0.45	0.45	0.37										
	Mean LSD (0.01)	0.92	0.59	0.59	0.49										
	Sig Lvl	**	**	**	**										
	Adjustment Factor					0.7862	1.0307	0.9817	1.0925						

++ Ratings adjusted to 2009 basis (2007-2009) RH nurseries. Ratings adjusted on the basis of checks

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

<sup>Z</sup> Trial mean and statistics for TSC-S, TSC-N and NWROC include one extra filler entry (not shown)

Chk = varieties used to adjust Rhc readings to 2009 basis. Ratings \* (Adj. factor) = Adj Rating.

<sup>Y</sup> Trial mean and statistics include all commercial and experimental entries (only approved varieties shown)

Lower numbers indicate better Rhizoctonia resistance (0=Ex, 7=Poor).

Ratings in green font indicate good resistance.

Ratings in red font indicate a level of concern.

Table 10. Root Aphid Ratings for RR Varieties During 2023-2025 Growing Seasons (All Locations Combined)  
Approved for Sale to ACSC Growers in 2026

Code	Variety	Moorhead, MN <sup>X</sup>					Shakopee, MN <sup>Y</sup>					Longmont, CO <sup>Z</sup>				
		(1=Exc - 4=Poor)					(1=Exc - 4=Poor)					(% Infested Plants)				
		2023*	2024	2025	2 Yr	3 Yr	2023	2024	2025	2 Yr	3 Yr	2023**	2024	2025**	2 Yr	3 Yr
721	BTS 8018	--	1.17	1.33	1.25	--	1.16	1.00	1.00	1.00	1.05	--	5.00	--	--	--
716	BTS 8034	--	1.00	1.33	1.17	--	1.28	1.00	1.00	1.00	1.09	--	7.86	--	--	--
712	BTS 8156	--	1.00	1.33	1.17	--	1.20	1.04	1.04	1.04	1.09	--	3.00	--	--	--
714	BTS 8226	--	1.00	1.17	1.08	--	1.00	1.04	1.08	1.06	1.04	--	2.91	--	--	--
729	BTS 8270	--	1.00	1.17	1.08	--	1.08	1.04	1.12	1.08	1.08	--	4.79	--	--	--
732	BTS 8365	--	1.00	1.33	1.17	--	--	1.12	1.00	1.06	--	--	1.35	--	--	--
724	BTS 8440	--	--	1.17	--	--	--	--	1.04	--	--	--	--	--	--	--
706	BTS 8457	--	--	1.33	--	--	--	--	1.00	--	--	--	--	--	--	--
731	BTS 8927	--	1.00	1.50	1.25	--	1.12	1.08	1.00	1.04	1.07	--	3.97	--	--	--
708	Crystal 022	--	1.00	1.00	1.00	--	1.04	1.00	1.08	1.04	1.04	--	1.92	--	--	--
710	Crystal 130	--	1.00	1.17	1.08	--	1.00	1.12	1.04	1.08	1.05	--	5.10	--	--	--
701	Crystal 138	--	1.00	1.17	1.08	--	1.04	1.00	1.00	1.00	1.01	--	2.45	--	--	--
730	Crystal 260	--	1.00	1.00	1.00	--	1.12	1.04	1.00	1.02	1.05	--	1.04	--	--	--
719	Crystal 269	--	1.00	1.00	1.00	--	1.04	1.04	1.00	1.02	1.03	--	8.60	--	--	--
722	Crystal 361	--	1.00	1.17	1.08	--	--	1.04	1.00	1.02	--	--	2.16	--	--	--
707	Crystal 364	--	1.00	1.50	1.25	--	--	1.08	1.04	1.06	--	--	3.58	--	--	--
702	Crystal 369	--	1.00	1.00	1.00	--	--	1.04	1.08	1.06	--	--	7.20	--	--	--
718	Crystal 470	--	--	1.17	--	--	--	--	1.04	--	--	--	--	--	--	--
720	Crystal 471	--	--	1.17	--	--	--	--	1.00	--	--	--	--	--	--	--
728	Crystal 793	--	1.00	1.33	1.17	--	1.08	1.12	1.00	1.06	1.07	--	5.00	--	--	--
715	Crystal 912	--	1.00	1.50	1.25	--	1.04	1.04	1.00	1.02	1.03	--	10.92	--	--	--
711	Hilleshög HIL2389	--	1.67	2.50	2.08	--	2.04	2.04	2.32	2.18	2.13	--	11.03	--	--	--
709	Hilleshög HIL2479	--	1.00	1.50	1.25	--	--	PE	1.16	--	--	--	1.52	--	--	--
726	Hilleshög HIL2480	--	1.00	1.33	1.17	--	--	1.20	1.08	1.14	--	--	3.33	--	--	--
703	Hilleshög HIL2493	--	--	2.00	--	--	--	--	1.88	--	--	--	--	--	--	--
704	Maribo MA717	--	1.67	3.17	2.42	--	3.40	3.12	2.40	2.76	2.97	--	5.86	--	--	--
705	SX 1815	--	1.00	2.00	1.50	--	2.36	1.76	1.48	1.62	1.87	--	3.01	--	--	--
723	SX 1835	--	1.83	1.83	1.83	--	--	1.64	1.76	1.70	--	--	2.78	--	--	--
727	SV 231	--	1.67	2.50	2.08	--	--	2.04	1.56	1.80	--	--	0.00	--	--	--
717	SV 345	--	--	1.67	--	--	--	--	2.04	--	--	--	--	--	--	--
733	Root Aphid Res CK#3	--	1.00	1.33	1.17	--	1.08	1.00	1.00	1.00	1.03	--	5.27	--	--	--
734	Root Aphid Susc CK#6	--	2.33	3.33	2.83	--	3.20	2.48	2.21	2.35	2.63	--	4.20	--	--	--
735	Root Aphid Susc CK#8	--	2.17	3.33	2.75	--	--	3.76	2.60	3.18	--	--	3.75	--	--	--
736	Root Aphid Res CK#4	--	--	1.67	--	--	--	--	1.00	--	--	--	--	--	--	--
	Trial Mean			1.63					1.34							
	Sus. Check Mean			3.33					2.41							
	Mean LSD (0.05)			0.69					0.37							

Trial mean and statistics include two varieties not approved for sale in 2026.

Created 11/17/2025

<sup>X</sup> Growth room assay based on a 1-4 rating scale (1 = no aphids, 4 = very susceptible), Moorhead, MN, ACSC

<sup>Y</sup> Greenhouse assay based on a 1-4 rating scale (1 = no aphids, 4 = very susceptible), Shakopee, MN, KWS

<sup>Z</sup> Field trial based on incidence (% infested plants), Longmont, CO, Magno Seed, LLC

\* Growth room assay not conducted

\*\* No data available due to low root aphid levels

PE = not evaluated due to poor emergence

Table 11. Planting & Harvest Dates, Previous Crop and Disease Levels for 2025 ACSC Official Trial Sites \*

Yield Trials Location	District / Trial Type	Cooperator	Planting Date	Harvest Date	Preceding Crop	Soil Type	Diseases Present @						Comments
							Aph	Rhc	Rzm	Fus	Maggot	Rt Aphid	
Casselton ND	Mhd	Todd Weber Farms	5/6	10/4	Wheat	Medium	L-M	L	N	N	N	N	Very good overall
Averill MN	Mhd	Tang Farms	5/10	9/8	Wheat	Medium/Light	N	N	N	N	N	N	Very good overall
Perley MN	Mhd/Aph	TD Hoff Partnership	5/7	10/3	Wheat	Heavy	L	L	N	N	N	N	Lower and variable stands
Ada MN	Hill	Mark Maring	4/25	9/9	Wheat	Medium	N	N	N	N	N	N	Very good overall, Cerc. developing prior to harvest
Caledonia ND	Hill	Cotton Farms	5/28	10/2	Wheat	Medium/Light	N	N	N	N	N	N	Replanted with excellent uniformity
Scandia MN	Crk	Deboer Farms	4/25	9/29	Wheat	Medium	N	N	N	N	N	N	Early nurse crop competition, some rows dropped due to row 7 planter issue
Reynolds ND	EGF	Drees Farming Association	5/8	9/10	Wheat	Medium/Light	N	N	N	N	N	N	Excellent overall
East Grand Forks MN	EGF	Mark Holy	5/14	--	Wheat	Medium	N	N	N	N	N	N	Abandoned due to poor emergence
Alvarado MN	EGF	Nordling Farms	5/9	9/24	Wheat	Heavy	L	N	N	N	N	N	Some gappy stands but uniform canopy
Stephen MN	Dtn	Brent Riopelle	4/26	9/23	Wheat	Heavy	N	N	N	N	N	L	Excellent overall, late moisture stress
St Thomas ND	Dtn	Baldwin Farms	5/4	9/16	Wheat	Light	N	N	N	N	L-M	N	Very good overall, Verticillium wilt present
Northcote MN	Dtn	Younggren Farms	4/26	9/18	Wheat	Heavy	N	L	N	N	N	N	Some rows dropped due to tillage wheel track effects
Bathgate ND	Dtn	McColl Farms	5/3	9/26	Wheat	Medium/Heavy	N	L	N	N	N	N	Lower and variable stands

Disease Trials Location	District / Trial Type	Cooperator	Planting Date	Rating Date	Preceding Crop	Soil Type	Diseases Present @						Comments
							Aph	Rhc	Rzm	Fus	Maggot	Rt Aphid	
Moorhead Fus-N MN	Fus Nurs	Nelson Farms	5/7	6/26 to 7/15	Wheat	Medium/Heavy	N	N	N	M	N	N	Moderate Fusarium pressure, rated 4 times
Sabin Fus-S MN	Fus Nurs	Krabbenhoft & Sons Farm	5/7	7/2 to 7/25	Wheat	Medium/Light	N	N	N	L-M	N	N	Later onset of light to moderate Fusarium pressure, rated 4 times
Mhd Rhc-N MN	Rhc Nurs	Jon Hickel, ACSC	5/13	8/19	Soybean	Heavy	N	M-V	N	L	N	N	Moderate to heavy Rhizoctonia pressure
Mhd Rhc-S MN	Rhc Nurs	Jon Hickel, ACSC	5/13	7/31	Soybean	Heavy	N	M	N	L	N	N	Moderate Rhizoctonia pressure
NWROC MN	Rhc Nurs	Maureen Aubol, U of MN	5/9	8/13	Soybean	Medium/Heavy	N	M	N	N	N	N	Moderate Rhizoctonia pressure
Saginaw MI	Rhc Nurs	Linda Hanson, USDA & BSDF	5/12	8/7 to 8/8	--	--	L	V	N	N	N	N	Severe Rhizoctonia pressure
Shakopee MN	Aphanomyces	Patrick O'Boyle, KWS	5/12	8/26	--	--	M-V	L	N	N	N	N	Nice range of moderate Aphanomyces symptoms
Glyndon MN	Aphanomyces	Ryan Brady, Magno Seed	5/27	8/28	--	Light	L-M	N	N	L	N	N	Light to moderate Aphanomyces pressure
Perley MN	Aphanomyces	TD Hoff Partnership	5/7	--	Wheat	Heavy	L	L	N	N	N	N	Not rated due to low Aphanomyces pressure
Alvarado MN	Aphanomyces	Nordling Farms	5/9	--	Wheat	Heavy	L	N	N	N	N	N	Not rated due to low Aphanomyces pressure
Shakopee MN	Root Aphid	Patrick O'Boyle, KWS	--	--	--	--	NA	NA	NA	NA	NA	NA	Greenhouse trial
Moorhead MN TSC	Root Aphid	ACSC	--	--	--	--	NA	NA	NA	NA	NA	NA	Growth chamber trial
Longmont CO	Root Aphid	Ryan Brady, Magno Seed	5/6	--	--	--	NA	NA	NA	NA	NA	L	Not rated due to low root aphid pressure
Saginaw MI	Cercospora	Linda Hanson, USDA & BSDF	4/30	7/30 to 8/20	--	--	N	N	N	N	N	N	Very nice Cercospora pressure, inoculated
Randolph MN	Cercospora	Patrick O'Boyle, KWS	5/30	7/28 to 8/28	--	--	N	N	N	N	N	N	Severe Cercospora pressure, inoculated
Averill MN	Cercospora	Tang Farms	5/10	8/12 to 9/17	Wheat	Medium/Light	N	N	N	N	N	N	Severe Cercospora pressure, non-inoculated
Caledonia ND	Cercospora	Cotton Farms	5/28	8/28 to 9/30	Wheat	Medium/Light	N	N	N	N	N	N	Moderate Cercospora pressure, non-inoculated
Stephen MN	Cercospora	Brent Riopelle	4/26	8/21 to 9/25	Wheat	Heavy	N	N	N	N	N	N	Moderate Cercospora pressure, non-inoculated

Created 10/03/2024

\* Fertilizer applied in accordance with cooperative recommendations.

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

Table 12. Seed Treatments Used on Approved Varieties in Official Variety Trials in 2025

Description	Years in Trial	Years Comm.	Fungicide Seed Treatment			Insecticide (Springtails & Maggots)	Priming (Emergence)
			(Damping-off)	(Rhizoctonia)	(Aphanomyces)		
<b>Previous Approved</b>							
BTS 8018	6	4	Allegiance/Thiram	Kabina	Tach 35	Poncho Beta	Ultipro
BTS 8034	6	4	Allegiance/Thiram	Kabina	Tach 35	Poncho Beta	Ultipro
BTS 8156	5	3	Allegiance/Thiram	Kabina	Tach 35	Poncho Beta	Ultipro
BTS 8226	4	2	Allegiance/Thiram	Kabina	Tach 35	Poncho Beta	Ultipro
BTS 8270	4	2	Allegiance/Thiram	Kabina	Tach 35	Poncho Beta	Ultipro
BTS 8365	3	1	Allegiance/Thiram	Kabina	Tach 35	Poncho Beta	Ultipro
BTS 8927	7	5	Allegiance/Thiram	Kabina	Tach 35	Poncho Beta	Ultipro
Crystal 022	6	4	Allegiance/Thiram	Kabina	Tach 45	Poncho Beta	Xbeet ®
Crystal 130	5	3	Allegiance/Thiram	Kabina	Tach 45	Poncho Beta	Xbeet ®
Crystal 138	5	2	Allegiance/Thiram	Kabina	Tach 45	Poncho Beta	Xbeet ®
Crystal 260	4	2	Allegiance/Thiram	Kabina	Tach 45	Poncho Beta	Xbeet ®
Crystal 269	4	2	Allegiance/Thiram	Kabina	Tach 45	Poncho Beta	Xbeet ®
Crystal 361	3	1	Allegiance/Thiram	Kabina	Tach 45	Poncho Beta	Xbeet ®
Crystal 364	3	NC	Allegiance/Thiram	Kabina	Tach 45	Poncho Beta	Xbeet ®
Crystal 369	3	1	Allegiance/Thiram	Kabina	Tach 45	Poncho Beta	Xbeet ®
Crystal 793	9	7	Allegiance/Thiram	Kabina	Tach 45	Poncho Beta	Xbeet ®
Crystal 912	7	4	Allegiance/Thiram	Kabina	Tach 45	Poncho Beta	Xbeet ®
Hilleshög HIL2389	5	3	Apron XL/Thiram/Maxim	Vibrance	Tach 45	Cruiser	Xbeet ®
Hilleshög HIL2479	3	1	Apron XL/Thiram/Maxim	Vibrance	Tach 45	Cruiser	Xbeet ®
Hilleshög HIL2480 **	3	1	Apron XL/Thiram/Maxim	Vibrance	Tach 45	Cruiser	Xbeet ®
Maribo MA717	9	7	Apron XL/Thiram/Maxim	Vibrance	Tach 45	Cruiser	Xbeet ®
SX 1815	5	3	Apron XL/Thiram	Zeltera	Tach 45	NipsIt	Xbeet ®
SX 1835 **	3	1	Apron XL/Thiram	Zeltera	Tach 45	NipsIt	Xbeet ®
SV 231	3	1	Apron XL/Thiram	Zeltera	Tach 45	NipsIt	Xbeet ®
<b>Newly Approved</b>							
BTS 8440	2	NC	Allegiance/Thiram	Kabina	Tach 35	Poncho Beta	Ultipro
BTS 8457	2	NC	Allegiance/Thiram	Kabina	Tach 35	Poncho Beta	Ultipro
Crystal 470	2	NC	Allegiance/Thiram	Kabina	Tach 45	Poncho Beta	Xbeet ®
Crystal 471	2	NC	Allegiance/Thiram	Kabina	Tach 45	Poncho Beta	Xbeet ®
Hilleshög HIL2493 **	2	NC	Apron XL/Thiram/Maxim	Vibrance	Tach 45	Cruiser	Xbeet ®
SV 345 **	2	NC	Apron XL/Thiram	Zeltera	Tach 45	NipsIt	Xbeet ®

\*\* Does not meet Full Market Approval. Meets Aphanomyces and/or Rhizoctonia Specialty Approval.