November 2026

Dear ACSC Sugarbeet Grower:

The 2026 official coded variety performance trials included 12 yield trials and 11 disease nurseries planted at a total of 18 sites by American Crystal Sugar Company (ACSC). Six 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. Initial planting dates ranged from April 25 to May 11 for yield trial sites. Two sites were replanted on May 21 (Averill) and May 27 (Stephen) due to blowing of soil and seed. The Hillsboro site had very poor emergence due to crusting and was abandoned. Stand establishment in the rest of the trials was very good overall. Eleven of twelve planted yield trial sites were harvested. Data from eight of eleven harvested sites was used for approval numbers. The Northcote site had moderate disease pressure from Aphanomyces root rot. Data from the Northcote site was not used in approval numbers but is published in a separate site table as yield under Aphanomyces conditions. Significant harvest loss occurred at Stephen and Climax where there was a large proportion of smaller roots, so data from those two sites was not used in approval numbers or published. Rainfall amounts varied tremendously across the Red River Valley with few sites receiving ample rainfall for large yields and most sites being under significant drought stress through the majority of the growing season. For yield trial sites used for approval numbers, coefficients of variation (CVs) for yield ranged from 3.4 to 7.0 (mean = 5.3) for Commercial trials and from 3.2 to 7.2 (mean = 5.4) for the Experimental trials. Percent sugar CVs ranged from 1.5 to 2.2 (mean = 1.8) for the Commercial trials and from 1.5 to 3.4 (mean = 2.2) for the Experimental trials. Rhizoctonia crown and root rot was present at low levels at a few sites. Revenue calculations in 2026 are based on a hypothetical $66.66 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 (new field site for 2026), MN. Rhizoctonia crown and root rot ratings are from inoculated nurseries at the ACSC Technical Services Center in Moorhead, MN (TSC-S and TSC-N). Despite being inoculated two times, the Rhizoctonia nursery at Crookston (NWROC) did not develop good symptoms due to very dry conditions following inoculation. Data from the Saginaw, MI (BSDF) Rhizoctonia nursery was not used due to high variability resulting in no statistically significant differences among varieties. Aphanomyces root rot ratings are from naturally infested nurseries at Glyndon (UBS), and Shakopee (KWS), MN. Aphanomyces nurseries planted by ACSC at Perley and Comstock did not develop symptoms due to very dry conditions through most of the growing season. Cercospora leafspot ratings are from non-inoculated nurseries at Averill and Northcote, MN and Forest River, ND as well as an inoculated nursery at Saginaw, MI (BSDF). Root aphid ratings will be forthcoming from greenhouse assays at Moorhead (ACSC) and Shakopee, MN (KWS).

2026 harvest conditions were very good overall and sugarbeet roots at most sites lifted well. Two sites had a higher proportion of small roots that were difficult to get out of the ground due to tremendous drought stress throughout the growing season (Climax) or a combination of replanting and drought stress (Stephen).

The 2026 data have 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 2026 OVT trials. Conventional varieties approved for 2020-2026 sales are permitted to continue in 2027 sales.

These results and additional information for individual growing sites are available on the internet at www.crystalsugar.com. More detailed information will be available later in the Sugarbeet Research and Extension Reports (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 conventional varieties across three sites (2017-2019)
4. Disease ratings for approved varieties across all nurseries (2024-2026)
5. Aphanomyces ratings for all 2026 tested varieties by nursery location
6. Cercospora ratings for all 2026 tested varieties by nursery location
7. Fusarium ratings for all 2026 tested varieties by nursery location
8. Rhizoctonia ratings for all 2026 tested varieties by nursery location
9. Root Aphid ratings for 2026 Commercial and 2nd-year Experimental varieties
10. Trial sites, disease observations and agronomic information from all trial locations
11. 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. 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. 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 (alleys 50 ft on center) 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.

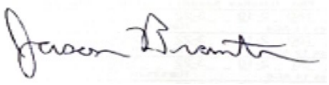
Roundup PowerMAX 3 with Class Act (surfactant) and full rates of fungicides were broadcast-applied using a pickup sprayer driven down the alleys. One or two applications of Roundup (25 oz) were made at the 2-4 and/or 6-10 leaf stages. Hand weeding was used where necessary. All yield trials were treated 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 2026 included Inspire XT+Manzate Max, Agri Tin+T-Methyl, Verpixo+Manzate Max, Proline+Manzate Max, and Priaxor+Agri Tin at all locations. Ground spraying was conducted by ACSC technical staff using 20 GPA and 75-80 psi.

Plot lengths were cut down to ~40 ft in late August/early September by rototilling alleys to 10 ft and hoeing out sliced edge beets. After alley widening, plot range length was measured to determine row footage for yield calculations. 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 2027 Sugarbeet Crop

Roundup Ready ®	Full Market	Aph Spec	Rhc Spec	Rhizomania
BTS 8018	Yes	Yes	Yes	MG
BTS 8226	Yes	Yes	Yes	MG
BTS 8440	Yes	Yes	Yes	MG
BTS 8457	Yes	New	Yes	MG
BTS 8509	New	New	New	MG
BTS 8520	New	New	New	MG
BTS 8598	New	New	New	MG
BTS 8927	Yes	Yes	Yes	MG
Crystal 130	Yes	Yes	Yes	MG
Crystal 361	Yes	Yes	Yes	MG
Crystal 369	Yes	Yes	--	MG
Crystal 471	Yes	Yes	Yes	MG
Crystal 581	New	New	New	MG
Crystal 584	New	New	--	MG
Crystal 591	New	New	--	MG
Crystal 594	New	New	New	MG
Crystal 793	Yes	Yes	--	MG
HIL 2389	Yes	Yes	--	MG
HIL 2479	Yes	--	New	MG
HIL 2480	No	--	Yes	MG
HIL 2493	No	--	Yes	MG
HIL 2532	No	New	New	MG
HIL 2533	No	--	New	MG
SX 1815	Yes	New	--	MG
SX 1835	No	New	Yes	MG
SV 231	Yes	New	Yes	MG
SV 345	No	New	Yes	MG
SV 347	New	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

2019 Conventional	Full Market	Rhizomania
Crystal R761	Yes	MG
Crystal 620	Yes	MG
Crystal 840	Yes	MG
Crystal 950	Yes	MG
Hilleshög HM3035Rz	Yes	SG
SX 8869 Cnv	Yes	MG
SV 48777	Yes	MG

Created 10/26/2026

++ 2nd Year of not meeting Specialty Approval of previously approved Specialty variety. According to Approval Policy, may be sold as Specialty in 2027
+ 1st Year of not meeting Specialty Approval of previously approved Specialty variety. According to Approval Policy, may be sold as Specialty in 2027
Roundup Ready ® is a registered trademark of Bayer Group.

Table 2. Performance Data of RR Varieties During 2025 & 2026 Growing Seasons (All Locations Combined) Approved for Sale to ACSC Growers in 2027 +++

Variety	Yrs	Rev/Ton ++			Rev/Acre ++			Rec/Ton		Rec/Acre		Yield		Sugar		Molasses		Emergence +		Cerc. *		Aphan. *		Rhizoc. *		Fusarium *		Rzm *
	Com	26	2 Yr	2Y%	26	2 Yr	2Y%	26	2 Yr	26	2 Yr	26	2 Yr	26	2 Yr	26	2 Yr	26	2 Yr	26	2 Yr	26	2 Yr	26	2 Yr	26	2 Yr	
Number of locations →		8	20		8	20		8	20	8	20	8	20	8	20	8	20	8	20	4	9	2	4	2	6	2	4	
Previous Approved																												
BTS 8018	5	71.13	66.85	99	2348	2264	104	331	328	11022	11185	33.6	34.4	17.57	17.40	1.01	1.01	81	78	4.7	4.3	4.1	3.8	3.7	3.8	2.8	2.6	MG
BTS 8226	3	76.54	71.69	106	2414	2335	108	345	340	10965	11169	32.2	33.1	18.13	17.94	0.89	0.92	80	76	4.9	4.5	3.7	3.5	3.4	3.5	3.4	3.1	MG
BTS 8440	1	77.15	72.50	107	2444	2367	109	346	342	11053	11261	32.2	33.1	18.20	18.03	0.89	0.90	81	77	3.7	3.4	3.6	3.6	3.6	3.7	3.1	2.8	MG
BTS 8457	1	74.76	70.25	104	2351	2290	106	340	337	10782	11063	32.0	33.1	17.89	17.72	0.88	0.89	81	77	4.6	4.4	3.6	3.8	3.4	3.6	3.1	2.9	MG
BTS 8927	6	74.24	70.00	103	2332	2274	105	339	336	10734	10998	32.0	33.0	17.90	17.77	0.95	0.97	79	76	4.3	4.3	4.1	3.9	3.6	3.7	3.1	2.7	MG
Crystal 130	4	73.14	69.04	102	2352	2283	105	336	334	10912	11112	32.8	33.6	17.78	17.66	0.97	0.99	82	76	5.3	4.8	3.5	3.5	3.7	3.7	3.2	2.9	MG
Crystal 361	2	74.05	70.69	104	2362	2322	107	339	338	10893	11174	32.5	33.3	17.87	17.84	0.95	0.95	83	78	4.3	4.0	3.5	3.3	3.4	3.7	2.9	2.6	MG
Crystal 369	2	72.56	67.99	100	2203	2209	102	335	331	10236	10841	30.8	33.0	17.89	17.66	1.15	1.13	74	71	3.9	3.9	3.5	3.4	4.7	4.5	3.3	2.8	MG
Crystal 471	1	76.82	71.82	106	2451	2351	108	345	341	11109	11240	32.5	33.3	18.18	17.96	0.91	0.93	79	74	4.6	4.4	3.8	3.7	3.4	3.6	2.9	2.6	MG
Crystal 793	8	73.55	68.78	101	2346	2283	105	337	333	10848	11138	32.5	33.7	17.83	17.62	0.97	0.98	81	78	4.2	4.1	3.3	3.2	4.0	4.1	2.9	2.7	MG
HIL 2389	4	71.74	67.47	99	2266	2191	101	333	329	10589	10767	32.1	32.9	17.65	17.48	1.01	1.01	79	73	4.8	4.7	3.4	3.6	4.3	4.1	5.6	5.5	MG
HIL 2479	2	71.58	67.15	99	2049	2058	95	332	329	9564	10158	29.0	31.1	17.69	17.50	1.08	1.07	74	73	4.3	4.3	4.5	4.3	3.4	3.4	4.9	4.7	MG
HIL 2480 **	2	68.26	64.58	95	1928	1990	92	324	322	9241	10030	28.8	31.4	17.49	17.34	1.29	1.25	75	72	4.5	4.4	4.5	4.3	3.1	3.2	3.5	3.0	MG
HIL 2493 **	1	71.35	65.75	97	2241	2203	102	332	325	10503	10994	32.0	34.1	17.60	17.27	1.01	1.04	80	77	4.6	4.6	3.9	4.1	4.2	3.9	4.9	4.7	MG
SX 1815	4	72.25	67.46	99	2259	2178	100	334	329	10538	10732	31.9	32.9	17.70	17.48	1.00	1.01	83	74	4.7	4.7	3.1	3.7	4.2	4.2	5.8	5.9	MG
SX 1835 **	2	70.52	65.23	96	2232	2196	101	330	323	10528	10999	32.3	34.3	17.54	17.25	1.06	1.08	81	77	4.8	4.7	3.2	3.8	4.3	4.1	4.7	4.7	MG
SV 231	2	69.53	65.17	96	2178	2179	100	327	323	10343	10917	32.0	34.0	17.37	17.20	1.01	1.03	75	75	4.6	4.7	3.8	4.0	3.8	3.8	4.2	4.6	MG
SV 345 **	1	68.34	64.37	95	2155	2151	99	324	321	10330	10848	32.2	34.0	17.23	17.11	1.02	1.05	76	73	4.6	4.7	3.7	3.9	4.0	3.8	4.3	4.6	MG
Newly Approved																												
BTS 8509	NC	73.85	70.08	103	2338	2291	106	338	336	10811	11083	32.4	33.2	17.82	17.73	0.91	0.90	76	73	3.7	3.7	4.2	3.9	3.6	3.7	3.3	2.8	MG
BTS 8520	NC	70.42	66.84	99	2279	2261	104	329	328	10770	11188	33.1	34.4	17.51	17.41	1.04	1.02	73	71	4.3	4.0	3.6	3.7	3.7	3.8	2.9	2.5	MG
BTS 8598	NC	76.88	72.13	106	2350	2306	106	346	341	10664	11021	31.2	32.6	18.23	18.03	0.94	0.95	77	75	3.9	3.7	4.0	3.7	3.7	3.8	3.9	3.2	MG
Crystal 581	NC	78.27	73.05	108	2436	2353	109	349	344	10962	11179	31.8	32.8	18.39	18.14	0.92	0.94	74	70	4.3	4.1	3.4	3.3	3.7	3.8	2.6	2.4	MG
Crystal 584	NC	76.99	72.50	107	2425	2339	108	346	343	10999	11139	32.2	32.8	18.30	18.12	1.00	0.99	81	77	3.9	3.9	3.7	3.5	4.0	3.9	2.7	2.3	MG
Crystal 591	NC	79.15	73.62	109	2502	2404	111	351	345	11227	11378	32.4	33.3	18.53	18.23	0.96	0.96	80	77	3.9	3.5	3.3	3.4	3.8	3.9	2.8	2.3	MG
Crystal 594	NC	74.97	70.95	105	2403	2357	109	341	339	11019	11341	32.7	33.8	18.04	17.89	0.99	0.96	78	75	4.7	4.7	3.4	3.7	3.5	3.5	2.7	2.5	MG
HIL 2532 **	NC	69.74	65.86	97	2191	2110	97	328	325	10387	10501	32.1	32.6	17.43	17.31	1.04	1.04	77	71	4.7	4.7	3.6	3.7	3.8	3.7	4.3	4.8	MG
HIL 2533 **	NC	66.39	63.30	93	2099	2129	98	319	319	10185	10824	32.2	34.2	17.05	17.00	1.09	1.06	76	75	5.1	4.9	3.8	4.3	3.5	3.6	3.9	4.1	MG
SV 347	NC	73.67	68.39	101	2290	2195	101	338	332	10595	10754	31.8	32.7	17.89	17.62	1.01	1.03	80	75	4.7	4.7	3.7	3.9	4.5	4.3	5.4	5.2	MG
Benchmark var. mean		71.54	67.85		2187	2169		332	330	10234	10641	31.1	32.4	17.65	17.55	1.04	1.03	73	72									

+++ 2026 Sites include Casselton, Averill, Ada, Scandia, Grand Forks, Forest River, St Thomas, and Neche

Created 10/27/2026

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

++ 2026 Revenue estimate based on a $66.66 beet payment (5-yr ave) at 17.5% crop with a 1.5% loss to molasses and 2025 Revenue estimate based on a $60.97 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 .

* 2026 Cercospora from Saginaw MI, Averill MN, Forest River ND and Northcote MN (res.<4.4, susc>5.0). Aphanomyces ratings from Shakopee MN and Glyndon MN (res.<4.0, susc>4.8). Rhizoctonia from TSC-S and TSC-N at Moorhead 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.

* 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 muligenic resistance to Rhizomania.

Table 3. Performance Data of Conventional Varieties During 2017, 2018, 2019 Growing Seasons (All Locations Combined) +++

Variety	Yrs	Rev/Ton ++					Rev/Acre ++					Rec/Ton		Rec/Acre		Sugar		Yield		Molasses		Emergence *		Cerc. *		Aphan. *		Rhizoc. *		Fusarium *		Rzm *
	Com	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	
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	
Previous Approved																																
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
Newly Approved																																
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

Created 10/26/2026

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

+++ 2017 Sites incllude 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) contians 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).

Table 4. ACSC Official Trial Disease Nurseries 2024-2026 (Varieties tested in 2026)
Cercospora, Aphanomyces, Rhizoctonia & Fusarium

		< 4.5 Cercospora > 5.0					< 4.0 Aphanomyces > 4.8					< 3.82 Rhizoctonia > 5.0					< 3.0 Fusarium > 5.0					Rhizomania
		26	25	24	2 Yr	3 Yr	26	25	24	2 Yr	3 Yr	26	25	24	2 Yr	3 Yr	26	25	24	2 Yr	3 Yr	
Code	Description	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	
	Previously Approved																					
506	BTS 8018	4.66	3.88	3.35	4.27	3.97	4.12	3.51	3.73	3.82	3.79	3.74	3.83	3.68	3.78	3.75	2.84	2.42	2.19	2.63	2.49	MG
528	BTS 8226	4.85	4.05	3.52	4.45	4.14	3.66	3.43	3.81	3.55	3.63	3.37	3.64	3.46	3.51	3.49	3.38	2.91	2.64	3.14	2.97	MG
545	BTS 8440	3.68	3.18	2.90	3.43	3.25	3.56	3.61	4.03	3.58	3.73	3.59	3.82	3.68	3.71	3.70	3.06	2.49	2.97	2.77	2.84	MG
521	BTS 8457	4.65	4.07	3.55	4.36	4.09	3.62	3.96	4.33	3.79	3.97	3.37	3.76	3.71	3.57	3.61	3.10	2.69	2.35	2.89	2.71	MG
515	BTS 8927	4.29	4.22	4.45	4.25	4.32	4.05	3.67	4.41	3.86	4.04	3.59	3.87	3.57	3.73	3.67	3.15	2.18	2.10	2.66	2.47	MG
511	Crystal 130	5.28	4.27	3.56	4.77	4.37	3.49	3.46	3.72	3.48	3.56	3.65	3.79	3.54	3.72	3.66	3.15	2.58	2.76	2.87	2.83	MG
549	Crystal 361	4.32	3.71	3.33	4.01	3.79	3.50	3.13	3.80	3.31	3.48	3.36	3.99	3.78	3.68	3.71	2.92	2.31	2.02	2.61	2.41	MG
533	Crystal 369	3.88	3.88	4.03	3.88	3.93	3.52	3.35	3.45	3.44	3.44	4.71	4.27	4.72	4.49	4.56	3.30	2.28	2.25	2.79	2.61	MG
531	Crystal 471	4.64	4.10	3.49	4.37	4.08	3.76	3.62	3.99	3.69	3.79	3.39	3.86	3.69	3.62	3.64	2.86	2.40	2.10	2.63	2.45	MG
519	Crystal 793	4.16	3.98	4.28	4.07	4.14	3.28	3.17	3.72	3.22	3.39	4.04	4.18	3.89	4.11	4.04	2.94	2.46	2.40	2.70	2.60	MG
524	HIL 2389	4.81	4.53	4.57	4.67	4.64	3.42	3.80	3.56	3.61	3.59	4.27	4.01	4.08	4.14	4.12	5.59	5.44	5.49	5.52	5.51	MG
541	HIL 2479	4.33	4.21	4.25	4.27	4.26	4.51	4.18	4.76	4.35	4.48	3.38	3.50	4.24	3.44	3.71	4.85	4.46	4.59	4.65	4.63	MG
542	HIL 2480 **	4.50	4.24	4.08	4.37	4.27	4.53	4.06	4.43	4.30	4.34	3.10	3.37	3.65	3.24	3.37	3.47	2.62	3.06	3.05	3.05	MG
512	HIL 2493 **	4.64	4.65	4.82	4.65	4.70	3.86	4.27	4.15	4.06	4.09	4.19	3.56	3.83	3.88	3.86	4.92	4.38	4.72	4.65	4.68	MG
547	SX 1815	4.74	4.74	4.70	4.74	4.73	3.09	4.28	3.96	3.69	3.78	4.24	4.09	4.30	4.17	4.21	5.77	6.05	5.54	5.91	5.79	MG
551	SX 1835 **	4.78	4.60	4.66	4.69	4.68	3.23	4.43	4.31	3.83	3.99	4.33	3.79	4.07	4.06	4.06	4.67	4.69	3.52	4.68	4.29	MG
514	SV 231	4.58	4.73	4.77	4.66	4.69	3.79	4.11	4.43	3.95	4.11	3.75	3.81	3.71	3.78	3.76	4.17	5.06	4.62	4.62	4.62	MG
513	SV 345 **	4.61	4.84	4.93	4.72	4.79	3.70	4.12	4.20	3.91	4.01	3.97	3.59	3.48	3.78	3.68	4.27	4.94	4.35	4.60	4.52	MG
	Newly Approved																					
543	BTS 8509	3.72	3.73	--	3.73	--	4.21	3.68	--	3.94	--	3.59	3.84	--	3.72	--	3.28	2.30	--	2.79	--	MG
523	BTS 8520	4.30	3.71	--	4.01	--	3.61	3.86	--	3.74	--	3.68	3.92	--	3.80	--	2.86	2.23	--	2.54	--	MG
501	BTS 8598	3.87	3.54	--	3.71	--	4.03	3.34	--	3.68	--	3.67	3.85	--	3.76	--	3.86	2.53	--	3.20	--	MG
548	Crystal 581	4.26	3.86	--	4.06	--	3.43	3.20	--	3.31	--	3.70	3.89	--	3.80	--	2.64	2.09	--	2.37	--	MG
520	Crystal 584	3.85	3.85	--	3.85	--	3.71	3.35	--	3.53	--	4.04	3.85	--	3.95	--	2.68	1.96	--	2.32	--	MG
534	Crystal 591	3.85	3.24	--	3.54	--	3.29	3.42	--	3.36	--	3.85	3.95	--	3.90	--	2.76	1.87	--	2.31	--	MG
505	Crystal 594	4.68	4.75	--	4.72	--	3.40	4.03	--	3.72	--	3.48	3.53	--	3.51	--	2.71	2.24	--	2.47	--	MG
540	HIL 2532 **	4.72	4.67	--	4.70	--	3.61	3.74	--	3.68	--	3.78	3.61	--	3.69	--	4.32	5.31	--	4.81	--	MG
530	HIL 2533 **	5.08	4.80	--	4.94	--	3.82	4.70	--	4.26	--	3.47	3.79	--	3.63	--	3.91	4.39	--	4.15	--	MG
546	SV 347	4.70	4.73	4.81	4.71	4.74	3.73	4.13	4.22	3.93	4.03	4.53	4.02	4.28	4.28	4.28	5.38	4.98	4.50	5.18	4.95	MG

Created 10/26/2026

** 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 5. 2026 Aphanomyces Ratings for Official Trial Entries
KWS (Shakopee, MN) - UBS (Glyndon, MN)

			Unadjusted		Adjusted++							
			Shak[yz]	Glyn[z]	Shak[yz]	Glyn[z]						Trial
Chk	Code	Description	8/18	8/28	8/18	8/28	2026	2 Yr	3 Yr	2025	2024	Yrs $$
	506	BTS 8018	3.34	3.68	3.34	4.90	4.12	3.82	3.79	3.51	3.73	7
	528	BTS 8226	2.92	3.31	2.92	4.41	3.66	3.55	3.63	3.43	3.81	5
	545	BTS 8440	3.36	2.82	3.36	3.75	3.56	3.58	3.73	3.61	4.03	3
	521	BTS 8457	3.32	2.94	3.32	3.91	3.62	3.79	3.97	3.96	4.33	3
	543	BTS 8509	3.70	3.55	3.70	4.72	4.21	3.94	--	3.68	--	2
	523	BTS 8520	3.45	2.84	3.45	3.78	3.61	3.74	--	3.86	--	2
	501	BTS 8598	2.98	3.82	2.98	5.08	4.03	3.68	--	3.34	--	2
	515	BTS 8927	3.39	3.54	3.39	4.71	4.05	3.86	4.04	3.67	4.41	8
	511	Crystal 130	2.52	3.35	2.52	4.46	3.49	3.48	3.56	3.46	3.72	6
	549	Crystal 361	2.80	3.15	2.80	4.19	3.50	3.31	3.48	3.13	3.80	4
	533	Crystal 369	2.99	3.05	2.99	4.06	3.52	3.44	3.44	3.35	3.45	4
	531	Crystal 471	3.15	3.29	3.15	4.38	3.76	3.69	3.79	3.62	3.99	3
	548	Crystal 581	3.21	2.74	3.21	3.65	3.43	3.31	--	3.20	--	2
	520	Crystal 584	3.26	3.12	3.26	4.15	3.71	3.53	--	3.35	--	2
	534	Crystal 591	2.62	2.98	2.62	3.97	3.29	3.36	--	3.42	--	2
	505	Crystal 594	3.14	2.75	3.14	3.66	3.40	3.72	--	4.03	--	2
	519	Crystal 793	2.84	2.79	2.84	3.71	3.28	3.22	3.39	3.17	3.72	10
	524	HIL 2389	3.51	2.50	3.51	3.33	3.42	3.61	3.59	3.80	3.56	6
	541	HIL 2479	4.40	3.48	4.40	4.63	4.51	4.35	4.48	4.18	4.76	4
	542	HIL 2480	5.17	2.93	5.17	3.90	4.53	4.30	4.34	4.06	4.43	4
	512	HIL 2493	4.02	2.78	4.02	3.70	3.86	4.06	4.09	4.27	4.15	3
	540	HIL 2532	3.49	2.81	3.49	3.74	3.61	3.68	--	3.74	--	2
	530	HIL 2533	3.23	3.31	3.23	4.41	3.82	4.26	--	4.70	--	2
	547	SX 1815	3.04	2.36	3.04	3.14	3.09	3.69	3.78	4.28	3.96	6
	551	SX 1835	3.15	2.49	3.15	3.31	3.23	3.83	3.99	4.43	4.31	4
	514	SV 231	3.47	3.09	3.47	4.11	3.79	3.95	4.11	4.11	4.43	4
	513	SV 345	3.27	3.11	3.27	4.14	3.70	3.91	4.01	4.12	4.20	3
	546	SV 347	3.94	2.64	3.94	3.51	3.73	3.93	4.03	4.13	4.22	3
1	1001	AP CK#32 CRYS981	2.39	3.37	2.39	4.49	3.44	3.46	3.59	3.49	3.84	18
1	1002	AP CK#43 BTS80RR32	5.12	3.74	5.12	4.98	5.05	4.79	4.85	4.53	4.97	17
1	1003	AP CK#45 CRYS986	3.99	2.95	3.99	3.93	3.96	4.34	4.26	4.72	4.09	18
1	1004	AP CK#51 CRYS246	3.94	3.40	3.94	4.53	4.23	4.74	4.77	5.25	4.82	15
1	1005	AP CK#55 CRYS247	3.81	3.37	3.81	4.49	4.15	4.27	4.49	4.39	4.93	15
1	1006	AP CK#57 CRYS578	3.80	3.21	3.80	4.27	4.04	3.92	4.09	3.80	4.45	12
1	1007	AP CK#58 CRYS572	3.53	3.02	3.53	4.02	3.77	4.02	4.13	4.27	4.36	12
1	1008	AP CK#59 BTS8606	5.63	4.21	5.63	5.60	5.62	4.99	4.86	4.37	4.59	11
1	1009	AP CK#61 HIL9708	3.98	4.30	3.98	5.72	4.85	4.46	4.55	4.07	4.73	12
1	1010	AP CK#63 HIL9920	3.59	2.50	3.59	3.33	3.46	3.93	--	4.39	--	10
1	1011	AP CK#64 SX1818	8.04	3.17	8.04	4.22	6.13	5.64	5.28	5.16	4.54	6
1	1012	AP CK#65 MARI717	6.29	3.40	6.29	4.53	5.41	5.14	4.82	4.88	4.18	10
12		Check Mean	4.51	3.39	4.51	4.51	4.51					
		Trial Mean	3.59	3.09	3.59	4.11	3.85					
		Coeff. of Var. (%)	12.9	11.8								
		Mean LSD (0.05)	0.57	0.63								
		Mean LSD (0.01)	0.75	0.83								
		Sig Lvl	**	**								
		Adjustment Factor			1.000	1.331						

++ 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.
[y] Trial mean and statistics for Shakopee include four extra filler entries (not shown)
[z] Trial mean and statistics inclde one extra filler entry and one omitted variety (not shown)
Chk = varieties used to adjust Aph readings to 2003 basis. Ratings * (Adj. factor) = Adj Rating.

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 6. 2026 Cercospora Ratings for Official Trial Entries

BSDF (Saginaw, MI) - AC South (Averill, MN) - AC Middle (Forest River, ND) - AC North (Northcote, MN)

			Unadjusted				Adjusted ++									
Chk	Code	Description	BSDF[z] Avg 5 Dates+	Averill[z] Avg 5 Dates+	F. River[z] Avg 5 Dates+	N.cote[z] Avg 4 Dates+	BSDF[z] Avg 5 Dates+	Averill[z] Avg 5 Dates+	F. River[z] Avg 5 Dates+	N.cote[z] Avg 4 Dates+	2026 4 loc	2 Yr	3 Yr	2025	2024	Trial Yrs $$
	506	BTS 8018	4.45	4.18	3.85	3.86	4.45	5.00	4.60	4.61	4.66	4.27	3.97	3.88	3.35	7
	528	BTS 8226	4.52	4.31	4.17	3.98	4.52	5.16	4.98	4.76	4.85	4.45	4.14	4.05	3.52	5
	545	BTS 8440	3.81	3.27	3.10	2.75	3.81	3.91	3.70	3.29	3.68	3.43	3.25	3.18	2.90	3
	521	BTS 8457	4.50	4.29	3.80	3.70	4.50	5.13	4.54	4.42	4.65	4.36	4.09	4.07	3.55	3
	543	BTS 8509	3.72	3.33	3.09	2.93	3.72	3.98	3.69	3.50	3.72	3.73	--	3.73	--	2
	523	BTS 8520	4.30	3.87	3.54	3.40	4.30	4.63	4.23	4.06	4.30	4.01	--	3.71	--	2
	501	BTS 8598	3.74	3.70	3.14	3.00	3.74	4.43	3.75	3.58	3.87	3.71	--	3.54	--	2
	515	BTS 8927	3.90	3.98	3.47	3.64	3.90	4.76	4.14	4.35	4.29	4.25	4.32	4.22	4.45	8
	511	Crystal 130	4.90	4.55	4.23	4.79	4.90	5.44	5.05	5.72	5.28	4.77	4.37	4.27	3.56	6
	549	Crystal 361	3.98	4.07	3.58	3.48	3.98	4.87	4.27	4.16	4.32	4.01	3.79	3.71	3.33	4
	533	Crystal 369	3.83	3.34	3.34	3.10	3.83	4.00	3.99	3.70	3.88	3.88	3.93	3.88	4.03	4
	531	Crystal 471	4.39	4.30	3.85	3.71	4.39	5.14	4.60	4.43	4.64	4.37	4.08	4.10	3.49	3
	548	Crystal 581	3.88	4.03	3.50	3.50	3.88	4.82	4.18	4.18	4.26	4.06	--	3.86	--	2
	520	Crystal 584	3.88	3.46	3.18	3.01	3.88	4.14	3.80	3.60	3.85	3.85	--	3.85	--	2
	534	Crystal 591	3.78	3.52	3.18	3.04	3.78	4.21	3.80	3.63	3.85	3.54	--	3.24	--	2
	505	Crystal 594	4.18	4.35	3.86	3.95	4.18	5.20	4.61	4.72	4.68	4.72	--	4.75	--	2
	519	Crystal 793	4.16	3.52	3.38	3.53	4.16	4.21	4.03	4.22	4.16	4.07	4.14	3.98	4.28	10
	524	HIL 2389	4.77	4.07	3.94	4.11	4.77	4.87	4.70	4.91	4.81	4.67	4.64	4.53	4.57	6
	541	HIL 2479	4.42	3.38	3.61	3.81	4.42	4.04	4.31	4.55	4.33	4.27	4.26	4.21	4.25	4
	542	HIL 2480	4.81	3.46	3.64	3.94	4.81	4.14	4.34	4.71	4.50	4.37	4.27	4.24	4.08	4
	512	HIL 2493	4.71	4.03	3.75	3.82	4.71	4.82	4.48	4.56	4.64	4.65	4.70	4.65	4.82	3
	540	HIL 2532	4.60	4.13	3.96	3.86	4.60	4.94	4.73	4.61	4.72	4.70	--	4.67	--	2
	530	HIL 2533	5.16	4.30	4.27	4.13	5.16	5.14	5.10	4.93	5.08	4.94	--	4.80	--	2
	547	SX 1815	4.62	4.04	3.99	3.96	4.62	4.83	4.76	4.73	4.74	4.74	4.73	4.74	4.70	6
	551	SX 1835	4.77	4.25	3.70	4.06	4.77	5.08	4.42	4.85	4.78	4.69	4.68	4.60	4.66	4
	514	SV 231	4.61	4.07	3.78	3.62	4.61	4.87	4.51	4.33	4.58	4.66	4.69	4.73	4.77	4
	513	SV 345	4.24	4.10	3.98	3.79	4.24	4.91	4.75	4.53	4.61	4.72	4.79	4.84	4.93	3
	546	SV 347	4.41	4.04	4.05	3.95	4.41	4.83	4.83	4.72	4.70	4.71	4.74	4.73	4.81	3
1	1101	CR CK#41 CRYS981RR	5.33	4.09	4.40	4.31	5.33	4.89	5.25	5.15	5.16	5.28	5.26	5.41	5.23	18
1	1102	CR CK#43 CRYS246RR	4.47	3.89	4.06	3.72	4.47	4.65	4.85	4.44	4.60	4.68	4.69	4.76	4.70	15
1	1103	CR CK#44 BETA80RR32	5.03	4.04	3.80	3.94	5.03	4.83	4.54	4.71	4.78	4.83	4.90	4.89	5.03	17
1	1104	CR CK#45 HIL4448RR	5.46	4.90	4.54	4.76	5.46	5.86	5.42	5.69	5.61	5.52	5.54	5.42	5.57	15
1	1105	CR CK#48 MARI504	5.15	3.95	4.39	4.47	5.15	4.73	5.24	5.34	5.11	5.16	5.15	5.21	5.14	12
1	1106	CR CK#49 CRYS578RR	4.81	4.11	3.89	3.62	4.81	4.92	4.64	4.33	4.67	4.68	4.73	4.68	4.84	12
1	1107	CR CK#51 CRYS355RR	4.74	4.24	3.73	3.82	4.74	5.07	4.45	4.56	4.71	4.70	4.76	4.70	4.86	14
1	1108	CR CK#52 MARI717	4.96	3.91	4.10	4.47	4.96	4.68	4.89	5.34	4.97	4.95	4.91	4.93	4.84	10
1	1109	CR CK#53 CRYS684RR	3.98	3.61	3.59	3.53	3.98	4.32	4.28	4.22	4.20	4.19	4.25	4.18	4.37	11
1	1110	CR CK#54 CRYS912	4.84	4.31	4.47	4.38	4.84	5.16	5.34	5.23	5.14	5.03	4.95	4.93	4.77	8
1	1111	CR CK#55 HIL2366	5.39	4.20	4.39	4.29	5.39	5.03	5.24	5.13	5.19	5.10	5.05	5.01	4.93	7
11		Check Mean	4.92	4.11	4.12	4.12	4.92	4.92	4.92	4.92	4.92					
		Trial Mean	4.37	3.95	3.72	3.73	4.37	4.73	4.44	4.46	4.50					
		Coeff. of Var. (%)	4.88	4.7	7.3	7.0										
		Mean LSD (0.05)	0.33	0.23	0.35	0.30										
		Mean LSD (0.01)	0.44	0.30	0.46	0.39										
		Sig Mrk	**	**	**	**										
		Adj Factor					0.99963	1.19646	1.19356	1.19488						

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

[z] Trial mean and statistics include one filler variety, one omitted variety, and one check variety (not shown)

+ Average rating based upon multiple rating dates.

++ 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.

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 7. 2026 Fusarium Ratings for Official Trial Entries
ACSC (Moorhead, MN) - ACSC (Sabin, MN)

			Unadjusted		Adjusted ++							
			Mhd[z]	Sab[z]	Mhd[z]	Sab[z]						Trial
Chk	Code	Description	5 Dates+	4 Dates+	5 Dates+	4 Dates+	2026	2 Yr	3 Yr	2025	2024	Yrs $$
	506	BTS 8018	2.14	4.06	2.45	3.23	2.84	2.63	2.49	2.42	2.19	7
	528	BTS 8226	2.28	5.22	2.61	4.15	3.38	3.14	2.97	2.91	2.64	5
	545	BTS 8440	2.18	4.55	2.50	3.62	3.06	2.77	2.84	2.49	2.97	3
	521	BTS 8457	2.23	4.58	2.55	3.64	3.10	2.89	2.71	2.69	2.35	3
	543	BTS 8509	2.33	4.89	2.67	3.89	3.28	2.79	--	2.30	--	2
	523	BTS 8520	2.31	3.87	2.65	3.08	2.86	2.54	--	2.23	--	2
	501	BTS 8598	2.71	5.81	3.10	4.62	3.86	3.20	--	2.53	--	2
	515	BTS 8927	2.27	4.64	2.60	3.69	3.15	2.66	2.47	2.18	2.10	8
	511	Crystal 130	2.13	4.86	2.44	3.87	3.15	2.87	2.83	2.58	2.76	6
	549	Crystal 361	2.24	4.11	2.57	3.27	2.92	2.61	2.41	2.31	2.02	4
	533	Crystal 369	2.37	4.89	2.71	3.89	3.30	2.79	2.61	2.28	2.25	4
	531	Crystal 471	2.18	4.04	2.50	3.21	2.86	2.63	2.45	2.40	2.10	3
	548	Crystal 581	2.11	3.61	2.42	2.87	2.64	2.37	--	2.09	--	2
	520	Crystal 584	1.84	4.08	2.11	3.25	2.68	2.32	--	1.96	--	2
	534	Crystal 591	1.81	4.32	2.07	3.44	2.76	2.31	--	1.87	--	2
	505	Crystal 594	1.90	4.08	2.18	3.25	2.71	2.47	--	2.24	--	2
	519	Crystal 793	2.16	4.27	2.47	3.40	2.94	2.70	2.60	2.46	2.40	10
	524	HIL 2389	4.96	6.91	5.68	5.50	5.59	5.52	5.51	5.44	5.49	6
	541	HIL 2479	3.72	6.84	4.26	5.44	4.85	4.65	4.63	4.46	4.59	4
	542	HIL 2480	2.65	4.91	3.03	3.91	3.47	3.05	3.05	2.62	3.06	4
	512	HIL 2493	4.15	6.40	4.75	5.09	4.92	4.65	4.68	4.38	4.72	3
	540	HIL 2532	3.47	5.86	3.97	4.66	4.32	4.81	--	5.31	--	2
	530	HIL 2533	3.20	5.22	3.66	4.15	3.91	4.15	--	4.39	--	2
	547	SX 1815	5.09	7.17	5.83	5.70	5.77	5.91	5.79	6.05	5.54	6
	551	SX 1835	3.79	6.29	4.34	5.00	4.67	4.68	4.29	4.69	3.52	4
	514	SV 231	3.30	5.73	3.78	4.56	4.17	4.62	4.62	5.06	4.62	4
	513	SV 345	3.42	5.80	3.92	4.61	4.27	4.60	4.52	4.94	4.35	3
	546	SV 347	4.39	7.20	5.03	5.73	5.38	5.18	4.95	4.98	4.50	3
1	1201	FS CK #18 CRYS768RR	3.31	5.89	3.79	4.69	4.24	4.05	4.14	3.86	4.33	18
1	1202	FS CK #29 CRYS875RR	4.19	6.14	4.80	4.89	4.84	4.72	4.62	4.60	4.43	19
1	1203	FS CK #30 BTS8337	3.54	5.16	4.05	4.11	4.08	3.81	3.63	3.54	3.28	14
1	1204	FS CK #31 SXMarathon	5.15	7.08	5.90	5.63	5.77	5.38	5.20	5.00	4.85	12
1	1205	FS CK #32 CRYS574	1.74	3.05	1.99	2.43	2.21	2.19	2.26	2.17	2.41	12
1	1206	FS CK #33 SES375	4.77	7.10	5.46	5.65	5.56	5.68	5.44	5.81	4.95	10
1	1207	FS CK #34 SES265	5.04	6.94	5.77	5.52	5.65	5.44	5.47	5.24	5.53	11
1	1208	FS CK #35 SES203	5.65	7.02	6.47	5.59	6.03	6.42	6.45	6.81	6.50	7
1	1209	FS CK #36 SES285	4.46	6.42	5.11	5.11	5.11	5.57	5.92	6.04	6.63	9
1	1210	FS Ck#37 HIL2317	4.72	6.47	5.41	5.15	5.28	5.48	5.61	5.68	5.86	8
10		Check Mean	4.26	6.13	4.88	4.88	4.88					
		Trial Mean	3.07	5.34	3.52	4.25	3.88					
		Coeff. of Var. (%)	12.0	9.0								
		Mean LSD (0.05)	0.45	0.61								
		Mean LSD (0.01)	0.59	0.80								
		Sig Mrk	**	**								
		Adj Factor			1.1452	0.7957						

++ 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.
[z] Trial mean and statistics for Moorhead and Sabin include one filler variety and one omitted 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.

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 8. 2026 Rhizoctonia Ratings for Official Trial Entries
ACSC (TSC S) - ACSC (TSC N)

			Unadjusted		Adjusted++							
			TSC-S[z]	TSC-N[z]	TSC-S[z]	TSC-N[z]						Trial
Chk	Code	Description	7/28	8/5	7/28	8/5	2026	2 Yr	3 Yr	2025	2024	Yrs $$
	506	BTS 8018	3.33	3.53	3.85	3.62	3.74	3.78	3.75	3.83	3.68	7
	528	BTS 8226	3.09	3.09	3.57	3.17	3.37	3.51	3.49	3.64	3.46	5
	545	BTS 8440	3.20	3.39	3.70	3.48	3.59	3.71	3.70	3.82	3.68	3
	521	BTS 8457	3.08	3.09	3.56	3.17	3.37	3.57	3.61	3.76	3.71	3
	543	BTS 8509	3.20	3.40	3.70	3.49	3.59	3.72	--	3.84	--	2
	523	BTS 8520	3.11	3.67	3.60	3.77	3.68	3.80	--	3.92	--	2
	501	BTS 8598	3.13	3.63	3.62	3.72	3.67	3.76	--	3.85	--	2
	515	BTS 8927	3.20	3.39	3.70	3.48	3.59	3.73	3.67	3.87	3.57	8
	511	Crystal 130	3.23	3.48	3.74	3.57	3.65	3.72	3.66	3.79	3.54	6
	549	Crystal 361	3.10	3.06	3.58	3.14	3.36	3.68	3.71	3.99	3.78	4
	533	Crystal 369	4.26	4.37	4.93	4.48	4.71	4.49	4.56	4.27	4.72	4
	531	Crystal 471	3.16	3.05	3.65	3.13	3.39	3.62	3.64	3.86	3.69	3
	548	Crystal 581	3.28	3.52	3.79	3.61	3.70	3.80	--	3.89	--	2
	520	Crystal 584	3.43	4.01	3.97	4.11	4.04	3.95	--	3.85	--	2
	534	Crystal 591	3.36	3.71	3.89	3.81	3.85	3.90	--	3.95	--	2
	505	Crystal 594	3.10	3.29	3.58	3.38	3.48	3.51	--	3.53	--	2
	519	Crystal 793	3.44	4.00	3.98	4.10	4.04	4.11	4.04	4.18	3.89	10
	524	HIL 2389	3.66	4.19	4.23	4.30	4.27	4.14	4.12	4.01	4.08	6
	541	HIL 2479	3.05	3.16	3.53	3.24	3.38	3.44	3.71	3.50	4.24	4
	542	HIL 2480	2.91	2.77	3.37	2.84	3.10	3.24	3.37	3.37	3.65	4
	512	HIL 2493	3.71	3.99	4.29	4.09	4.19	3.88	3.86	3.56	3.83	3
	540	HIL 2532	3.39	3.55	3.92	3.64	3.78	3.69	--	3.61	--	2
	530	HIL 2533	3.14	3.23	3.63	3.31	3.47	3.63	--	3.79	--	2
	547	SX 1815	3.54	4.28	4.09	4.39	4.24	4.17	4.21	4.09	4.30	6
	551	SX 1835	3.75	4.22	4.34	4.33	4.33	4.06	4.06	3.79	4.07	4
	514	SV 231	3.37	3.52	3.90	3.61	3.75	3.78	3.76	3.81	3.71	4
	513	SV 345	3.52	3.77	4.07	3.87	3.97	3.78	3.68	3.59	3.48	3
	546	SV 347	4.06	4.26	4.70	4.37	4.53	4.28	4.28	4.02	4.28	3
1	1301	RH CK#49 CRYS247	3.60	3.93	4.16	4.03	4.10	4.18	4.27	4.27	4.45	15
1	1302	RH CK#52 CRYS573	3.56	4.04	4.12	4.15	4.13	4.29	4.34	4.44	4.43	12
1	1303	RH CK#53 BTS8500	3.69	4.31	4.27	4.42	4.34	4.30	4.26	4.26	4.19	12
1	1304	RH CK#54 CRYS574	3.83	3.75	4.43	3.85	4.14	4.21	4.23	4.29	4.26	12
1	1305	RH CK#55 CRYS803	3.85	4.50	4.45	4.62	4.53	4.58	4.55	4.63	4.49	9
1	1306	RH CK#56 MARI504	3.95	4.55	4.57	4.67	4.62	4.42	4.42	4.22	4.43	12
1	1307	RH CK#57 BTS8606	3.99	4.76	4.61	4.88	4.75	4.61	4.56	4.47	4.46	11
1	1308	RH CK#58 CRYS793	3.58	3.94	4.14	4.04	4.09	4.23	4.21	4.36	4.18	10
1	1309	RH CK#59 SEED1818	3.63	4.09	4.20	4.20	4.20	4.06	4.10	3.92	4.19	6
1	1310	RH CK#60 CRYS913	3.40	3.90	3.93	4.00	3.97	4.08	4.05	4.20	3.97	8
1	1311	RH CK#61 HIL2386	3.47	4.01	4.01	4.11	4.06	4.04	3.99	4.01	3.90	6
1	1312	RH CK#62 HIL9920	4.23	4.69	4.89	4.81	4.85	4.79	4.72	4.73	4.57	10
12		Mean of Check Varieties	3.73	4.21	4.32	4.32	4.32					
		Trial Mean	3.43	3.75	3.97	3.85	3.91					
		Coeff. of Var. (%)	8.8	8.6								
		Mean LSD (0.05)	0.36	0.42								
		Mean LSD (0.01)	0.47	0.56								
		Sig Lvl	**	**								
		Adjustment Factor			1.1564	1.0260						

Chk = varieties used to adjust Rhc readings to 2009 basis. Ratings * (Adj. factor) = Adj Rating.
++ 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.
[z] Trial mean and statistics include one extra filler entry and one omitted variety (not 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 9. Root Aphid Ratings for RR Varieties During 2024-2026 Growing Seasons (All Locations Combined)
Approved for Sale to ACSC Growers in 2027

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Table 10. Planting & Harvest Dates, Previous Crop and Disease Levels for 2026 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	4/25	9/11	Wheat	Medium	L-M	L	N	N	N	N	Very good overall
Averill MN	Mhd	Tang Farms	5/21	10/12	Oats	Medium/Light	N	L	N	N	N	N	Replanted, very good overall
Ada MN	Hill	Ruebke Bros.	5/11	10/10	Wheat	Medium/Light	N	N	N	N	N	L	Excellent overall but mid-season moisture stress
Hillsboro ND	Hill	Hong Farms	5/9	--	Wheat	Medium	N	N	N	N	N	N	Abandoned due to poor emergence/crusting
Climax MN	Crk	Evenson Farms	4/25	10/7	Wheat	Medium	N	L	N	N	N	N	Excellent overall but mid-season moisture stress and significant harvest loss from smaller roots
Scandia MN	Crk	Deboer Farms	5/3	10/8	Wheat	Medium	N	N	N	N	N	N	Very good overall but mid-season moisture stress
Grand Forks ND	EGF	Drees Farming Assc.	5/7	9/16	Wheat	Medium/Light	N	N	N	N	N	N	Excellent overall
Forest River ND	EGF	Blair Farm & Seed	5/2	9/22	Wheat	Medium	N	N	N	N	N	N	Excellent overall
Stephen MN	Dtn	Jensen Farms	5/27	10/6	Barley	Medium/Heavy	N	N	N	N	N	N	Replanted, some late emerged rows and harvest loss
St Thomas ND	Dtn	Baldwin Farms	5/6	9/24	Wheat	Light	N	N	N	N	M	N	Good overall, some root maggot feeding damage
Northcote MN	Dtn	Younggren Farms	5/1	10/5	Wheat	Heavy	M	L	N	N	N	N	Good but widespread Aphanomyces root rot
Neche ND	Dtn	McColl Farms	5/8	10/3	Wheat	Medium/Heavy	L	N	N	N	N	N	Good overall

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	5/13	6/11 to 7/23	Wheat	Medium/Heavy	N	N	N	M-V	N	N	Moderate Fusarium pressure, rated 5 times
Sabin Fus-S MN	Fus Nurs	James Nelson	5/13	6/11 to 7/1	Soybean	Medium/Light	N	N	N	V	N	N	Severe Fusarium pressure, rated 4 times
Mhd Rhc-N MN	Rhc Nurs	Jon Hickel, ACSC	5/15	8/5	Soybean	Heavy	N	M-V	N	N	N	N	Moderate to heavy Rhizoctonia pressure
Mhd Rhc-S MN	Rhc Nurs	Jon Hickel, ACSC	5/15	7/28	Soybean	Heavy	N	M	N	N	N	N	Moderate Rhizoctonia pressure
NWROC MN	Rhc Nurs	Michael Leiseth, U of MN	5/27	--	Wheat	Medium/Heavy	N	L	N	N	N	N	Very dry leading to low Rhizoctonia pressure
Saginaw MI	Rhc Nurs	Linda Hanson, USDA & BSDF	5/7	8/13 & 8/14	--	--	L	V	N	N	N	N	High variability with no significant differences
Shakopee MN	Aphanomyces	Patrick O'Boyle, KWS		8/18 to 8/19	--	--	M-V	N	N	N	N	N	Nice range of moderate Aphanomyces symptoms
Glyndon MN	Aphanomyces	Ryan Brady, Magno Seed		8/26 to 8/27	--	Light	L	N	N	N	N	N	Low to moderate variable Aphanomyces symptoms
Perley MN	Aphanomyces	Dyrdahl Farms	5/5	--	Wheat	Heavy	N	L	N	N	N	N	Not rated due to low Aphanomyces pressure
Comstock MN	Aphanomyces	Brakke Farms	5/13	--	Sugarbeet	Light	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	M	Greenhouse trial
Moorhead MN TSC	Root Aphid	ACSC	--	--	--	--	NA	NA	NA	NA	NA	M	Growth chamber trial
Longmont CO	Root Aphid	Ryan Brady, Magno Seed	--	--	--	--	NA	NA	NA	NA	NA	NA	Not rated due to lack of root aphid pressure
Saginaw MI	Cercospora	Linda Hanson, USDA & BSDF	5/2	7/28 to 8/25	--	--	N	N	N	N	N	N	Severe Cercospora pressure, inoculated
Averill MN	Cercospora	Tang Farms	5/21	8/18 to 9/17	Oats	Medium/Light	N	N	N	N	N	N	Severe Cercospora pressure, non-inoculated
Hillsboro ND	Cercospora	Hong Farms	5/9	--	Wheat	Medium	N	N	N	N	N	N	Site abandoned due to poor emergence/crusting
Forest River ND	Cercospora	Blair Farm & Seed	5/2	8/18 to 9/17	Wheat	Medium	N	N	N	N	N	N	Severe Cercospora pressure, non-inoculated
Northcote MN	Cercospora	Younggren Farms	5/1	9/16 to 10/5	Wheat	Heavy	M	L	N	N	N	N	Moderate Cercospora pressure, non-inoculated

Created 8/20/2026

* 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 11. Seed Treatments Used on Approved Varieties in Official Variety Trials in 2026

Description	Years in Trial	Years Comm.	Fungicide Seed Treatment (Damping-off)	(Rhizoctonia)	(Aphanomyces)	Insecticide (Springtails & Maggots)	Priming (Emergence)
Previous Approved							
BTS 8018	7	5	Allegiance/Thiram	Kabina	Tach 35	Poncho Beta	Ultipro
BTS 8226	5	3	Allegiance/Thiram	Kabina	Tach 35	Poncho Beta	Ultipro
BTS 8440	3	1	Allegiance/Thiram	Kabina	Tach 35	Poncho Beta	Ultipro
BTS 8457	3	1	Allegiance/Thiram	Kabina	Tach 35	Poncho Beta	Ultipro
BTS 8927	8	6	Allegiance/Thiram	Kabina	Tach 35	Poncho Beta	Ultipro
Crystal 130	6	4	Allegiance/Thiram	Kabina	Tach 45	Poncho Beta	Xbeet ®
Crystal 361	4	2	Allegiance/Thiram	Kabina	Tach 45	Poncho Beta	Xbeet ®
Crystal 369	4	2	Allegiance/Thiram	Kabina	Tach 45	Poncho Beta	Xbeet ®
Crystal 471	3	1	Allegiance/Thiram	Kabina	Tach 45	Poncho Beta	Xbeet ®
Crystal 793	10	8	Allegiance/Thiram	Kabina	Tach 45	Poncho Beta	Xbeet ®
HIL 2389	6	4	Apron XL/Thiram/Maxim	Vibrance	Tach 45	Cruiser	Xbeet ®
HIL 2479	4	2	Apron XL/Thiram/Maxim	Vibrance	Tach 45	Cruiser	Xbeet ®
HIL 2480 **	4	2	Apron XL/Thiram/Maxim	Vibrance	Tach 45	Cruiser	Xbeet ®
HIL 2493 **	3	1	Apron XL/Thiram/Maxim	Vibrance	Tach 45	Cruiser	Xbeet ®
SX 1815	6	4	Apron XL/Thiram	Zeltera	Tach 45	NipsIt	Xbeet ®
SX 1835 **	4	2	Apron XL/Thiram	Zeltera	Tach 45	NipsIt	Xbeet ®
SV 231	4	2	Apron XL/Thiram	Zeltera	Tach 45	NipsIt	Xbeet ®
SV 345 **	3	1	Apron XL/Thiram	Zeltera	Tach 45	NipsIt	Xbeet ®
Newly Approved							
BTS 8509	2	NC	Allegiance/Thiram	Kabina	Tach 35	Poncho Beta	Ultipro
BTS 8520	2	NC	Allegiance/Thiram	Kabina	Tach 35	Poncho Beta	Ultipro
BTS 8598	2	NC	Allegiance/Thiram	Kabina	Tach 35	Poncho Beta	Ultipro
Crystal 581	2	NC	Allegiance/Thiram	Kabina	Tach 45	Poncho Beta	Xbeet ®
Crystal 584	2	NC	Allegiance/Thiram	Kabina	Tach 45	Poncho Beta	Xbeet ®
Crystal 591	2	NC	Allegiance/Thiram	Kabina	Tach 45	Poncho Beta	Xbeet ®
Crystal 594	2	NC	Allegiance/Thiram	Kabina	Tach 45	Poncho Beta	Xbeet ®
HIL 2532 **	2	NC	Apron XL/Thiram/Maxim	Vibrance	Tach 45	Cruiser	Xbeet ®
HIL 2533 **	2	NC	Apron XL/Thiram/Maxim	Vibrance	Tach 45	Cruiser	Xbeet ®
SV 347	3	NC	Apron XL/Thiram	Zeltera	Tach 45	NipsIt	Xbeet ®

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