

# SMBSC OBSERVATIONS FOR 2021 VARIETIES

This document is a summary of field observations over the past few seasons, as well as Official Trial data, SMBSC Strip Trial data, and seed company information on the varieties approved for 2021. This summary was compiled to provide another tool to help your variety selection for the 2021 crop.

Cody Groen                      Mark Bloomquist  
Production Agronomist      Research Director

## 2021 Seed Selection Matrix

<u>Variety</u>	<u>% Revenue per Ton*</u>	<u>% Revenue per Acre*</u>	<u>Aphanomyces Root Rot</u>	<u>Cercospora</u>	<u>Rhizoctonia Root Rot</u>	<u>Rhizomania</u>	<u>Root Aphid</u>	<u>Fusarium</u>
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### Fully Approved Varieties

Beta 9780	103.8	103.8	4.1	4.1	5.3			
Beta 9810	100.4	100.1	3.4	4.1	4.2			
Crystal M821	100.7	97.0	3.7	3.8	5.4			
Crystal M837	103.5	100.4	4.1	4.0	4.9			
SV 881	97.2	98.1	4.4	4.0	3.8			
SV 883	97.6	98.5	4.4	4.2	3.6			
SV RR862	98.2	100.5	4.5	3.7	3.5			
SV RR863	98.4	101.4	4.4	3.9	3.7			

### Test Market Varieties

Beta 9935	107.3	103.1	4.4	3.9	4.6			
Crystal M977	98.5	105.7	3.9	4.3	3.2			
Hilleshog 2327	98.9	103.1	4.4	4.0	3.8			
SV 894	95.5	98.7	4.4	4.2	3.5			
Beta 9098	Data omitted due to having only one year of data. See Table 3 of the Official Trial Data							
Crystal M002	Data omitted due to having only one year of data. See Table 3 of the Official Trial Data							

### Cercospora and Rhizoctonia Specialty Varieties

Beta 9986	94.6	99.5	4.2	2.0	4.3			
Beta 9952	95.5	92.9	4.1	2.9	2.9			
Crystal M951	92.0	102.4	4.9	2.2	4.7			
Hilleshog 9739	92.7	85.9	4.9	4.1	3.0			
Hilleshog 2219	103.1	91.5	4.8	4.1	3.1			

### Varieties Not Meeting Approval and in Last Year of Sales

Crystal M509	89.8	102.4	4.3	4.2	4.7			
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Dark Green = Better than average
Lime Green= Slightly above average
Yellow = Near Average
Orange=Slightly below average
Red = Weaker than average

\*Calculations are done by averaging both revenue metrics of the 8 fully approved varieties and calculating the percent of the mean for each variety against the mean of the Fully Approved. Calculations were done using the November 25, 2020 payment estimate for the 2020 crop.

All data is from **TWO YEARS of testing: 2019 and 2020.** Varieties with omitted data have only one year of testing.

# **2021 FULL APPROVAL VARIETIES**

## **Beta 9780:**

Beta 9780 makes Full Approval again in 2021 after being Fully Approved in 2020. 9780 was planted on approximately 40,500 acres in 2020. 9780 has above average sugar per ton and sugar per acre in the Official Trials and also performed well in the SMBSC strip trials. 9780 has good CLS and Aphanomyces ratings. Rhizoctonia root rot tolerance is weaker than average and a foliar or in-furrow Rhizoctonia fungicide application is recommended with 9780. Betaseed reports that 9780 has very good root aphid and fusarium tolerance.

## **Beta 9810:**

Beta 9810 makes Full Approval in 2021 after being tested for three seasons in the SMBSC Official Variety Trials and being planted on 6,800 acres in 2020. Beta 9810 has average sugar per ton and slightly below average sugar per acre in the two year Official Trial data. Beta 9810 has a good CLS rating and has the best Aphanomyces rating of the approved varieties. Rhizoctonia ratings are average with 9810. Betaseed reports that 9810 has very good root aphid and fusarium tolerance.

## **Crystal M821:**

Crystal M821 makes Full Approval in 2021 after being a Test Market Approved Variety as well as a CLS Specialty Approved Variety in 2020. M821 was planted on about 700 acres in 2020. In the yield trials, M821 has average sugar per ton and slightly below average sugar per acre. M821 has an excellent Aphanomyces rating and also a good CLS rating that is better than the average of the Fully Approved Varieties. In the Rhizoctonia nursery, M821 has shown to be susceptible to Rhizoctonia. M821 has performed variably in the Agriculturalist Strip Trials, at times being a strong performer and at times performing poorly. Care should be taken in placing this variety. An in-furrow or post-emerge fungicide application for Rhizoctonia suppression would be recommended with M821. ACH reports that M821 has very good Fusarium and root aphid tolerance.

## **Crystal M837:**

Crystal M837 makes Full Approval in 2021 after being both a Test Market Approved Variety as well as a CLS Specialty Approved Variety for 2020. M837 was planted on about 8,300 acres in 2020. M837 has above average sugar per ton and slightly above average sugar per acre. M837 has a good CLS rating. M837 has average tolerance to Aphanomyces. Rhizoctonia ratings are weaker than average. M837 has had variable results in the Agriculturalists Strip Trials, at times being a strong performer and at times performing poorly. An in-furrow or post-emerge fungicide application for Rhizoctonia suppression would be recommended with M837. ACH reports that M837 has tolerance to Fusarium and is very tolerance to root aphid.

## **SV RR862 (Rhizoctonia Specialty):**

SV RR862 makes Full Approval and Rhizoctonia Specialty Approval for 2021 after being a Cercospora Specialty variety in 2020 planted on 4,500 acres. RR862 has near average sugar per ton and above average sugar per acre. RR862 has good CLS and Rhizoctonia scores that are better than the average of the Fully Approved varieties. RR862 has near average ratings for Aphanomyces.

## **SV RR863:**

SV RR863 makes Full Approval in 2021 after being a Cercospora Specialty Variety planted on 22,000 acres in 2020. RR863 has near average sugar per ton and average sugar per acre. RR863 has good CLS and Rhizoctonia scores with a near average Aphanomyces score.

## **SV 881:**

SV 881 makes Full Approval in 2021 after being both a Test Market Approved Variety and CLS Specialty Approved Variety planted on approximately 2,200 acres in 2020. Official Trial three year yield data show SV 881 to be slightly below average sugar per ton and near average sugar per acre compared to the mean of the Fully Approved varieties. 881 has a good CLS and Rhizoctonia scores with a near average Aphanomyces score.

## **SV 883 (Rhizoctonia Specialty):**

SV 883 makes Full Approval and Rhizoctonia Specialty Approval for 2021 after being a Test Market variety in 2020, planted on approximately 2,400 acres. SV 883 has slightly below average sugar per ton and near average sugar per acre. CLS and Aphanomyces ratings are near average with SV 883, while 883 has better than average ratings on Rhizoctonia root rot. 883 performed well in the 2020 Agriculturalist Variety Strip Trials.

# **2021 TEST MARKET VARIETIES**

Test Market Varieties usually possess one or two years of trial data and either have not been field-tested or require further observation. Varieties that have a Test Market designation may be planted on up to 10% of the Cooperative acreage. Test Market Status allows shareholders to get a look at new varieties on a limited acre basis as none of these varieties have been planted commercially in the SMBSC growing area.

## **Beta 9935:**

Beta 9935 has been tested for two years in the SMBSC Official Trials in 2020. Beta 9935 is approved as a Test Market Variety. In two years of testing, 9935 has had strong revenue characteristics and saw the highest revenue per ton of any variety for sale. Both revenue per acre and revenue per ton are better than average for 9935. 9935 also has a good CLS score, scoring at 3.9 in two years of testing. 9935 scores slightly weaker than average on Aphanomyces and Rhizoctonia. As such, agronomic management for Aphanomyces and Rhizoctonia will be recommended; an in-furrow or post-emerge application of fungicide to suppress Rhizoctonia would be a good program with 9935. Betaseed reports that 9935 has tolerance to fusarium and is very tolerant to root aphid.

## **Beta 9098:**

Beta 9098 was a first year tested variety in the SMBSC Official Trials in 2020. 9098 was approved as a Test Market Variety with only one year of data generated, so careful placement will be needed in 2021. Beta 9098 was near average in revenue per ton and above average in revenue per acre. 9098 scores better on CLS than our Fully Approved varieties at a 2.7. In one year of testing, 9098 scored weaker than average on Aphanomyces, so caution should be exercised when placing this variety and our Agronomic Best Management Practices should be followed to allow 9098 to be a success. Rhizoctonia scores are slightly weaker than average. Betaseed reports that 9098 is very tolerant to Fusarium and very tolerant to root aphid.

## **Crystal M977:**

Crystal M977 has been tested for two years in the SMBSC Official Trials in 2020. For 2021, M977 was given Test Market Approval. In two year data, M977 appears to perform below average on revenue per ton, but above average on revenue per acre and reports the highest revenue per acre of all varieties for sale. M977 also has an excellent Rhizoctonia score, scoring in a similar range as the 2021 Rhizoctonia specialty varieties. The Aphanomyces score for M977 is also better than average. M977's Cercospora score is near average. In two years of testing, M977 scored a 4.0 (2019) and a 4.6 (2020), with an average score of 4.3; it will be important to maintain a diligent spray program with M977 to manage CLS. ACH seeds reports that Fusarium tolerance for M977 is moderate and has very good tolerance to root aphid.

## **Crystal M002:**

Crystal M002 was a first year tested variety in the SMBSC Official Trials in 2020. M002 has only one year of data, but was approved as a Test Market variety for sale in 2021. M002 has a one year CLS score of 2.1. M002 saw below average revenue per ton, but above average revenue per acre. M002 score nears average for Aphanomyces and weaker than average on Rhizoctonia. An in-furrow or post-emerge application of fungicide for suppression of Rhizoctonia would be a good program with M002. ACH Seeds indicates that M002 is tolerant to Fusarium and is very tolerant to root aphid.

## **Hilleshog 2327:**

Hilleshog 2327 has been tested for two years in the SMBSC Official Trials and was approved for sale as a Test Market Variety in 2020. 2327 was planted on approximately 2,400 acres in 2020. 2327 has near average revenue per ton but above average revenue per acre. In the 2020 Agriculturalist Strip Trials, 2327 performed well with better than average revenue per acre. The Aphanomyces score for 2327 is weaker than average, but the Rhizoctonia score is better than average. 2327 performs near average on CLS.

## **SV894:**

SV894 has been tested for two years in the SMBSC Official Trials and makes Test Market Approval for 2021. In two years of testing, 894 has shown near average revenue per acre with slightly below average revenue per ton. In the 2020 Agriculturalist Strip Trials, 894 performed above average on revenue per acre. 894 has a near average CLS score, a weaker than average Aphanomyces score, and a better than average Rhizoctonia score.

# **2021 Specialty Approved Varieties:**

These varieties do not make the requirements for Full Approval; however, Aphanomyces, Rhizoctonia, or Cercospora nursery testing and field observations indicate these varieties possess better than average tolerance to these diseases.

## **Beta 9986 (Cercospora Specialty):**

Beta 9986 has been tested for two years and is given CLS Specialty approval for the 2021 crop. In two years of testing 9986 has had near average revenue per acre, but below average revenue per ton. 9986 was entered into the 2020 Agriculturalist Strip trials where it performed well with above average revenue per acre. 9986 has near average Aphanomyces and Rhizoctonia scores, but a better than average CLS score of 2.0 in two years of testing. Betaseed reports that 9986 has tolerance to Fusarium and has very good tolerance to root aphid.

## **Beta 9952 (Cercospora Specialty):**

Beta 9952 has been tested for two years and is given CLS Specialty approval for the 2021 crop. 9952 has strong defensive characteristics, with a Rhizoctonia and CLS score of 2.9, both of which are respectable scores. SMBSC would recommend a normal CLS fungicide program with varieties scoring at the 2.9 level for CLS. This is a low testing score, but one that is recommended to have the normal SMBSC CLS Fungicide program maintained. Additionally, 9952 has been observed to drop leaves later in the growing season. Betaseed reports that Fusarium tolerance for 9952 is moderate but that it is very tolerant to root aphid.

## **Crystal M951 (Cercospora Specialty):**

Crystal M951 has been tested for two years and is given CLS Specialty approval for the 2021 crop. M951 has an excellent CLS score of 2.2 on two year data. M951 has above average revenue per acre, but it is important to know that M951 has the lowest revenue per ton of any variety marketed in 2021 at SMBSC. Further, with an Aphanomyces score of 4.9 and Rhizoctonia score of 4.7, it is important to place M951 on ground that has lower pressure for Aphanomyces, and that you consider an in-furrow fungicide, post-emerge fungicide for suppression of Rhizoctonia, or both an in-furrow and post-emerge application. Because of M951's root disease ratings, caution should be exercised so this variety is placed and managed for success. ACH Seeds reports that 951 is very tolerant to Fusarium and has good tolerance to root aphid.

## **Hilleshog 9739 (Rhizoctonia Specialty):**

Hilleshog 9739 has a strong Rhizoctonia root rot rating and is a Rhizoctonia Specialty Approval for 2021. 9739 also has average Cercospora leaf spot tolerance. 9739 is a good defensive variety for these diseases. 2018-2020 Official Trial yield results for 9739 have been below average for recoverable sugar per ton and recoverable sugar per acre. 9739 has the lowest score on revenue per acre of all varieties marketed in the SMBSC market in 2021. Low revenue per acre is a trade-off for the disease package of this variety, but Aphanomyces ratings are weaker than average for 9739.

**Hilleshog 2219 (Rhizoctonia Specialty Variety):** Hilleshog 2219 was a CLS Specialty variety in 2019 planted on 200 acres. 2219 performs well on revenue per ton, with above average revenue on two year data. However, revenue per acre is weaker than average. With a Rhizoctonia rating of 3.1, 2219 is one of the strongest Rhizoctonia varieties available in 2021. Aphanomyces ratings are weaker than average, so careful placement of this variety is needed to optimize revenue. When placed on farms with the potential for strong Rhizoctonia pressure, this variety may out-perform other varieties with higher revenue potential and weaker Rhizoctonia scores. CLS scores for 2219 are near average.

# **2021 Varieties Not Meeting Sales Criteria and Entering Last Year of Sales at SMBSC:**

### **Crystal M509:**

Crystal M509 was a CLS Specialty Approved variety for 2020 planted on approximately 18,000 acres. It does not meet the approval criteria for CLS Specialty Approval again in 2021 and does not have sufficient sugar per ton to become Fully Approved; as such M509 is entering into the last year of sales. M509 is above average in sugar per acre due to its high tonnage potential, but M509 has the lowest sugar per ton of all varieties for sale in 2021. M509 also has average Rhizoctonia root rot scores and average Aphanomyces scores. An in-furrow or post-emerge fungicide application for Rhizoctonia suppression would be a good program with M509. ACH Seeds reports that M509 has very good Fusarium and root aphid tolerance.