

# AGRICULTURAL BEET

March 4, 2019  
Cercospora Leaf Spot Survey  
Results - Part 2

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## A Case Study of Successful Cercospora Management in 2018 – Part 2

The 2018 growing season was another season with high levels of Cercospora leaf spot. In part two of this three part series, we summarize the results of a survey the SMBSC Agriculturists conducted with the shareholders in their district that were the most successful at managing Cercospora leaf spot in 2018. The shareholders surveyed were from every growing district in the Cooperative. These operations were located in the following counties: Chippewa, Kandiyohi, Pope, Redwood, Renville, Stearns, Stevens, and Swift.

### Spray Intervals

The targeted spray intervals for these operations ranged from 10-14 days between applications. **The majority of operations were targeting a 10-12 day spray interval.** Proper spray intervals are dependent on environmental conditions. 70% of surveyed operations reported experiencing a rainfall event within 24 hours of one or more of their CLS applications. 60% of operations utilized an aerial fungicide application due to wet field conditions. These are both situations to consider reducing the spray interval on the next fungicide application. **82% of the operations surveyed reported reducing a spray interval on one or more of the applications.** The decisions to move up a spray application can be based on environmental conditions since the last application, Cercospora Disease Index Values, weather forecasts, and previous applications. A 10-14 day interval is not always appropriate and should be modified as conditions change.

### Starting Date and Final Spray Date

The date of the first spray needs to be based on each individual field situation. Weather conditions, crop stage, proximity to last year's sugar beet fields, and variety all should be considered in the date of first fungicide application. **The date of first application of the surveyed shareholders ranged from June 27 to July 12. On average the first application went on these fields on July 3.** If you start your applications too late and disease gets started, you will not be able to catch up. **There will be a large level of CLS inoculum present in 2019 which will likely lead to early infection. Plan to start your CLS program early.**

The final application of the season is also important. **87% of the surveyed operations made their final CLS application in September.** Stopping your CLS program too early can result in disease rapidly increasing in September. Recent weather trends for warmer September weather require protecting the sugar beet leaves into September to prevent additional infection.



## Adjuvant Use

The EBDC, copper, and select triazole fungicides recommend the addition of an adjuvant when applying. There are many different adjuvants available on the market and using the incorrect type of adjuvant can reduce spray coverage and potentially the effectiveness of the application. 74% of the surveyed operations used a spray adjuvant for one or more CLS applications. Masterlock was used on the most acres followed by Reguard, Cerium Elite, and non-ionic surfactant. It is important to use the correct adjuvant for the application you are making. **An Agricultural Beet article will be developed prior to the CLS spray season to discuss adjuvant use.**

## Varieties

Varieties differ in their genetic resistance to Cercospora leaf spot. The SMBSC Official Variety Trials test the CLS resistance level of all varieties submitted to the Official Variety Trials through two Cercospora leaf spot disease nurseries. This information can be found on the SMBSC website at <https://www.smbc.com/Agronomy/VarietyInfo.aspx>. **The surveyed shareholders were asked which varieties had the best CLS control in their fields in 2018. Beta 9475 and SV 863 were the most common answers.** Variety placement needs to be an important tool for CLS management in 2019. **Plant varieties with the most CLS resistance along common lines to 2018 fields, protected areas around building sites, and other areas with micro-climates that favor early CLS infection.** Know the characteristics of all the varieties you plant and plan for additional management practices such as rhizoctonia fungicide applications for varieties that are weak rhizoctonia.

## Other Practices

A practice mentioned by several shareholders in the survey was the window-framing of fields with fungicide in addition to the normal application timings. There were several timings mentioned by the shareholders surveyed including:

1. Window-framing fields one week prior to the first fungicide application across the field.
2. Window-framing 2018 fields bordering 2017 sugar beet fields.
3. Spraying the borders around building sites and power poles after an aerial application.

**These borders are the battle lines for CLS to start in your field and extra efforts on these battle lines will help reduce CLS pressure across the field.**

Additional practices included regular scouting of fields to monitor infection levels and burying the residue in 2017 fields with tillage. 26% of the shareholders surveyed reported they added a nutrient product to the application. These products included individual micronutrients, micronutrient mixes, and nitrogen based products. Before adding any product to your application, be sure it is compatible with the fungicides in the application.

## Information in Next Edition

In the next edition of this series on the CLS survey, we will summarize the results of the survey.

Contact your Agriculturist with any questions regarding CLS.



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