

# AGRICULTURAL BEET

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Cercospora Leaf Spot Survey  
Results - Part 1

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## A Case Study of Successful Cercospora Management in 2018 – Part 1

The 2018 growing season was another season with high levels of Cercospora leaf spot. In part one of this three part series, we summarize the results of a survey the SMBSC Agronomists 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.

### Number of Applications

The number of fungicide applications for these operations ranged from 5 – 7 applications during the 2018 growing season. **The average number of applications of this group was 6.1 applications.** In a season with extremely favorable environmental conditions for the development of Cercospora, it was necessary to apply six applications to manage this disease. In areas of extreme pressure, seven applications were necessary. For 2019 we need to be prepared for another season with six or more applications to manage the disease.

### Number of Tank-mixed Applications

Successful management of Cercospora in a world of fungicide resistance requires the successful tank-mixing of two effective modes of action in every fungicide application. **The shareholder operations surveyed reported that 91.8% of the fungicide applications they made in 2018 were tank-mixed.** A part of the success of these operations was the high percentage of tank-mixing that occurred on their farms. There were still 8% of the applications that were not tank-mixed; however, in many of these cases the last fungicide application was not tank-mixed due to pre-harvest concerns. To successfully manage the fungicide resistance of Cercospora it is absolutely critical that a broad spectrum fungicide such as EBDC or copper be tank-mixed with every application.



## Spray Volume

Cercospora fungicides require excellent leaf coverage to be effective. Proper spray volume is critical for effective coverage of the leaf surface. 20 gallons of water per acre is the recommendation for Cercospora fungicide applications made by ground sprayers. **The survey of shareholder operations that were the most successful at managing Cercospora showed that 78% of these operations used 20 gallons of water or greater on every application. The average water volume of all these operations was 19.4 gallons of water per acre.** The water volume utilized by these operations is another reason they successfully managed Cercospora on their farms in 2018. Water volume is critical for effective Cercospora applications. Every operation in our Cooperative needs to evaluate the water volume they are currently using and make plans to apply at least 20 gallons of water per acre on every application.

## Spray Pressure

Spray pressure also influences the coverage of the leaf surface. It is important that the techniques utilized in Cercospora fungicide applications produce fine droplet sizes to help increase leaf coverage. **The average spray pressure utilized by the surveyed shareholders was 88.9 psi.** This type of spray pressure will help produce fine droplet sizes. All shareholders need to set up their sprayer to produce fine droplet size and should make plans to obtain 80-100 psi with their CLS fungicide applications.

## Spray Tips/Nozzles

The use of proper spray tips or nozzles in your sprayer is an important part of successful Cercospora management. The spray tips used should be able to produce fine sized droplets. The use of air induction tips or other nozzle types that are designed to produce large droplets will not be effective choices for the application of Cercospora fungicides. **The operations we surveyed utilized the following spray tips in their Cercospora applications.**

- Flat fan – 54.5%
- Twin fan, twin-jet, or twin tips – 27.3%
- Turbo Teejet – 9.1%
- Other – 9.1%

Be sure your sprayer is set up with the proper spray tips for effective fungicide application before the Cercospora season begins.

## Information in Next Edition

In the next edition of this series on the CLS survey, we will look at the survey results concerning spray timing, adjuvant use, variety use, and additional practices these shareholders used to manage Cercospora in 2018.

Contact your Agriculturist with any CLS questions.



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