

# Agricultural Beet

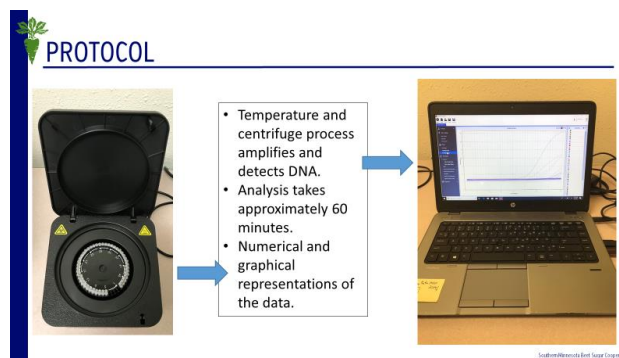
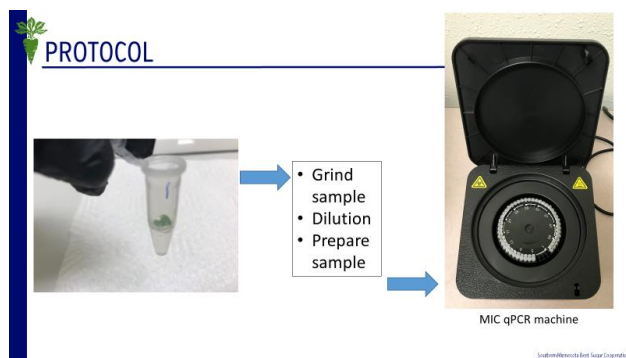
June 21, 2021  
Cercospora Detection in  
Asymptomatic Sugar Beet Plants

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## Cercospora Detection in Sugar Beet Leaves without Visual Symptoms

In the 2020 season, SMBSC partnered with Dr. Melvin Bolton and Jon Neubauer at the USDA in Fargo to attempt the identification of Cercospora in sugar beet plants prior to visual symptoms. This is done utilizing qPCR technology that can detect the DNA of the Cercospora fungus in samples of sugar beet leaves. During the 2020 growing season, a text alert was sent to shareholders on June 20 when Cercospora was detected along common line fields using this technology.

This process involves taking leaf samples from fields and then multiple leaf punches are obtained from these leaves. A DNA extraction procedure is performed on these leaves to prepare the samples. Each field sample is then run through a qPCR DNA analysis to specifically look for Cercospora DNA in the sample. Below are a few slides illustrating the process.



For the 2021 season, SMBSC Agricultural Staff have been collecting samples from 25 fields located on common line to 2020 sugar beet fields. ***On three of these fields, we have detected Cercospora from successive samples*** taken from the field. Despite the dry environment so far in 2021, Cercospora is present in our growing area, and you should consider making an EBDC-Application 0 on your fields when the sugar beet canopy is 3-4" away from closing.

Contact your Agriculturist with any questions on Cercospora Leaf Spot. There are also CLS management videos and Quick Reference Sheets located on the SMBSC website [www.smbc.com](http://www.smbc.com) under the Agronomic Sustainability tab.

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