



# Cultural Practices to Reduce CLS Disease Pressure

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## Plant Tolerant Varieties

Planting varieties that are tolerant to cercospora leaf spot can positively impact our ability to adequately control this disease. This single technique alone does not provide control, but makes a difference when used in conjunction with other integrated pest management practices.



Variety	CLS Rating (1-9)
SV 863	3.7
Beta 9475	3.9
Beta 9505	4.0
Beta 9666	4.0
Hilleshog 9739	4.1
Crystal M623	4.1
Beta 9606	4.1
Maribo MA109RR	4.3
Crystal RR018	4.3
Hilleshog 9093RR	4.3
Crystal M579	4.3
Beta 92RR30	4.4
SV RR958	4.5
Beta 9661	4.5
Crystal M380	4.7
Crystal M375	4.8

**Fig. 1:** The pictures above were taken in 2016 from an OVT site on Sept. 15<sup>th</sup>. This site received 6 fungicide applications. A) A tolerant sugar beet variety showing minimal CLS damage. B) A susceptible variety producing regrowth after the original leaves burned down from CLS. Both varieties received the same treatments! C) Foliar ratings showing the different levels of disease resistance among tested varieties. The higher numbers (in red) indicate those varieties with less resistance. These varieties should be kept away from common lines to 2017 sugar beet fields and will require aggressive fungicide spray programs. The lower numbers (in green) indicate those varieties with more resistance to CLS. Varieties with a higher level of resistance could be used near common lines to 2017 sugar beet fields and other areas with higher anticipated disease potential to help slow and reduce the spread of CLS. These varieties could also be used in areas that are difficult to spray by air or with ground applicators, such as near high-line poles and protected building sites.

## Management of Common Lines

Proper management of common lines between old and new sugar beet fields can help reduce disease incidence and delay the spread of disease into the new field. This type of management has the potential to work well because CLS inoculum is commonly spread via wind and water from the previous sugar beet crop debris. To help reduce the spread of CLS:

- Bury sugar beet residue in the fall to decrease the survival rate of CLS spores. CLS spores can survive up to 22 months on the soil surface with decreasing survival rate with increased soil depth.
- Do not drag residue from the previous sugar beet field into the new sugar beet field with spring tillage passes (Fig. 2).
- Also be aware of any areas that may potentially have had CLS inoculum move into the field by means other than tillage (Fig. 3).
- Plant an alternative crop for 100 to 200 feet along the common line to the 2017 sugar beet field.
- Plant a variety with strong tolerance to CLS in the first 100 to 200 feet along the common line to the 2017 sugar beet field.
- Apply an early fungicide application (EBDC) along any common line to the 2017 sugar beet field 7-10 days prior to the start of the CLS fungicide program.



**Fig. 2:** This field was prepared for spring planting using a field cultivator. The tillage passes moved plant material containing inoculum from the 2015 field into the 2016 field.



**Fig. 3:** Water moved CLS inoculum from a 2016 sugar beet field into this 2017 sugar beet field.

### Information Credit:

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