Cercospora leaf spot is a fungal disease caused by the pathogen Cercospora beticola. It is the most prevalent and most devastating disease of table beet in Wisconsin. In addition to affecting table beets, Cercospora leaf spot affects other plants in the beet family (Chenopodiaceae) including spinach, and Swiss chard. Closely related weed hosts that can be infected include lambquarters, goosefoot, and pigweed.

**Symptoms and effects**

The leaf spots begin as small brown flecks surrounded by a reddish-purple halo. As the spots enlarge, the center turns gray, cracks, and eventually falls out, although the purple halo remains around the lesion. Eventually, the numerous lesions affect the entire leaf causing the leaf to first turn yellow, then brown and necrotic. Lesions appear on petioles as well, but these lesions are elongated rather than circular.

**Life cycle**

The fungus overwinters in plant debris, weed hosts, and in seed produced by infected plants. It is capable of surviving on plant debris for as long as 18 months. In the spring, the fungus produces spores that will infect the current year’s crop. The spores are carried by wind and splashing rain. They enter susceptible plants through the stomata on the undersides of the leaves. The disease can also be spread from field to field on equipment.

Warm temperatures and high humidity favor infection. Any source of moisture that keeps leaves wet, such as irrigation, rain, fog, or dew, will also promote infection.

**Control**

**Cultural**

Currently, two sugar beet cultivars, Big Red and Red Ace, are resistant to Cercospora infection. Other cultural control options include rotating out of beets, chard, or spinach for at least 3 years. In addition, managing weed hosts during all years of the rotation—not just when susceptible crops are planted—will help reduce inoculum. Plow down or incorporate infected debris into the soil in the fall to hasten decomposition. Maintain balanced plant nutrition including the appropriate amounts of nitrogen, phosphorus, potassium, boron, and sodium to promote plant health and vigor.

**Chemical**

In years when the disease is severe, fungicides may be needed to slow disease spread. Recommended products include strobilurin fungicides and fixed copper. If you use the strobilurin fungicides, don’t make more than two consecutive applications before rotating to a copper-based product. Follow the resistance management information on the label to reduce the potential of fungicide resistance. Refer to Extension publication Commercial Vegetable Production in Wisconsin (A3422) for more information on chemical control.
A3806, Beet Disorder: Cercospora Leaf Spot