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Minnesota and North Dakota produce 57% of the United States sugar beet, *Beta vulgaris*. The most devastating foliar disease for sugar beet is Cercospora leaf spot (CLS) caused by the fungus *Cercospora beticola*. The pathogen destroys the leaves and adversely impacts the photosynthetic capability of the plants. This disease results in significant reduction in root yield and increases concentration of impurities which results in reduced recoverable sucrose and higher processing costs. In 1998, American Crystal Sugar Company reportedly lost \$45 million because of a CLS epidemic. Since 1999, growers have adopted research based recommendations in using fungicides in rotation and in mixtures to control CLS and Manage fungicide resistance. Growers used an integrated approach of better CLS resistant varieties, crop rotation, planting away from previously infected fields and timely application of fungicides to manage CLS. Fungicide usage was reduced by 52% from an average of 3.74 applications in 1998 to 1.79 applications in 2014 resulting in an average saving of \$14 million annually. Growers who considered Cercospora leaf spot as their worst production problem decreased from 36% to less than 1% and 94% of growers reported excellent or good Cercospora leaf spot control with fungicides and growers surveyed that year indicated Cercospora leaf spot as their worst production problem. Then came 2016 with early planting and early row closure as a result of adequate moisture from rainfall and favorable growing degree days. Cercospora inoculum present from the 2015 crop quickly resulted in reported symptoms in late June with growers starting fungicide application in late June and early July. Most growers used demethylation inhibitors (DMI) and triphenyltin hydroxide (TPTH) early in the season quinone outside inhibitors (QoI) later in the season, typically in August. CLS field failures from using fungicides were reported in August from where a QoI was used in the first application. Laboratory testing confirmed *C. beticola* resistance to pyraclostrobin from the affected field. Many growers reported field failures after application of a QoI application in the latter part of August and many fields had brown, necrotic leaves in early September. Sampling and evaluation of *C. beticola* from fields sprayed with fungicides but with severe CLS indicated resistance to QoI fungicide. It was estimated that more than 80% of fields in southern and central Minnesota had severe CLS which would have adversely affect yield and reduced sucrose concentration. An integrated approach using more resistant varieties and a mixture of effective fungicide chemistries will be needed to significantly reduce overwintering populations of *C. beticola* resistant to fungicides for the economical production of sugar beet.