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Alternaria leaf spot of sugar beet: factors associated with risk

Recently, increased incidence and severity of *Alternaria* leaf spot has been observed in Michigan and other growing regions. In the past, *Alternaria* leaf spot in sugar beet has been a minor foliar disease issue in the United States and management of this disease usually has not been required. If severe, there is a potential to cause yield loss due to defoliation. The aim of this work was to examine disease management implications. Testing included screening *Alternaria* leaf spot susceptibility in sugar beet germplasm as well as testing the response of *Alternaria* spp. (all in the *A. alternata* species complex) from beet to foliar fungicides. Over 70% of the recent isolates (last two years) were resistant to quinone outside inhibitor (QoI) fungicides, with EC50 values greater than 60 ppm. Over 90% of the isolates showed tolerance to organotin, with EC50 values between 5 and 10 ppm. Sugar beet germplasm with differential reaction to *Alternaria* are being screened in the greenhouse, which includes a detached leaf assay and a mist chamber assay.