

PITBLADO, RON and IAN NICHOLS, Ridgetown College University of Guelph, 130 Main St. East, Ridgetown, Ontario, Canada, N0P 2C0. **The implementation of BEETCAST - a weather-timed fungicide spray program for the control of Cercospora Leafspot in Ontario and Michigan.**

One of the most significant foliar diseases of sugarbeets is caused by *Cercospora beticola*, commonly known as Cercospora Leafspot. Control of this disease has been focused on genetic resistance and the use of foliar applied fungicides. In regions where climatic conditions favour the development of this disease, growers are having to rely more and more on the use of fungicides. Effective control however is achieved only when and how often these fungicides are applied. A number of researchers have developed several spray models using weather parameters. BEETCAST was developed by the authors using hourly temperature and leafwetness values to determine daily disease severity values (DSV). The program advises the grower to consider spraying when the accumulation of each days values reach 55 DSV. Subsequent spray applications would again be recommended at the next 55 DSV interval and continued until early September in the Michigan and Ontario sugarbeet growing regions. The development and delivery using site specific integration is now feasible with the advancement of geographical information systems (GIS) and an improved agricultural microclimate network recently established in both Michigan and Ontario.

OBJECTIVE

- To determine efficacy of Quadris/Amitar on control of Cercospora Crown Rot (K. Solim-2-2)
- Determine best timing and placement of fungicide for optimum control under normal conditions
- Compare fungicidal control of Cercospora on susceptible and resistant varieties
- Determine economic impact of Control

MATERIALS AND METHODS

Field trials were conducted in 2002, 2003 and 2004 that have had a long history of both sugar beet production and heavy incidence of Cercospora Crown Rot (K. Solim-2-2). Trials were planted with a six row planter in a complete randomized block, replicated four times at each location. Rows were done with grower equipment and scale weights were taken during the trial. Rows were calibrated digital read out scales. Six row strips were harvested at each location. Row lengths varied by location but no row length was less than 250 feet. Two susceptibility samples were taken on each replication (eight total per treatment) in years 2002, 2003. Quadris fungicide was used and in 2004 a switch was made to Amitar. Quadris was applied at rate of 2 ounces per acre and Amitar was applied at 0.5 ounces per acre. Fungicides were applied in-furrow (1-band) with eight gallons of water in a six inch band. 2 days product were applied in a ten inch band with ten gallons of water. Low rate Amitar treatments