KHAN JAHANGIR^{1*}, MOHAMED F. R KHAN², and RANDY NELSON³, ¹Department of Plant Pathology, North Dakota State University, Fargo, ND 58105, ²North Dakota State University and University of Minnesota, Soil Science Department, Fargo, ND 58105, ³Soil Science Department, Fargo, ND 58105. Using spore traps for Cercospora beticola in sugarbeet.

Cercospora leaf spot, caused by Cercospora beticola Sacc., is the most damaging foliar disease of sugarbeet worldwide. The disease is polycyclic in nature and the pathogen produces many generations of conidia during the growing season, which are disseminated mainly by wind and rain splash. Timely application of the first fungicide application is crucial in reducing the rate of infection, and contributes to effective season long Cercospora control. Spore traps may be useful to determine the timing of spore dispersal, and the number of spores dispersed. The objective of this study was to determine whether C. beticola spores could be trapped, and to compare the efficacy of different spore traps. Seven day volumetric spore traps (Burkard and Osborne) and hand made coffee can trap were evaluated for their utility in trapping conidia of C. beticola in sugarbeet fields. Hand made trap was constructed using an empty 1.1 kg 'coffee can' with the lid and bottom removed and attached to a 0.8 m long metal rod. A cut out portion of a hollow door handle was attached by a binder clip to the 'coffee can' and used to hold a wooden cloths pin for mounting a glass slide. A thin layer of petroleum jelly was placed in 2.5mm² area on one side at the end of a microscope slide. Traps were placed in a Cercospora disease nursery at Crookston, MN, and in a sugarbeet field in Breckenridge, MN, in 2002, and in Breckenridge, and St. Thomas, ND, in 2003. Traps were positioned 0.6 m above ground, recovered every 7 d, and examined microscopically for C. beticola. In both 2002 and 2003, C. beticola spores were successfully trapped and identified. At all locations, volumetric spore traps collected significantly higher number of C. beticola spores than the coffee can trap.

singht protection. In 2004 By pressure was 700 Biewing: Root damage in terbulos plots was a.s.d. from untreated, reflecting severity of attack. Only combination of *Metarhizium* MA1200 granities and sprity significantly reduced root damage, but yields were not significantly increased over control. Damage was too heavy, in both years, bioassays with 3rd instat (arvae, of soil samples from *Metarhizium* spring-treated plots, gave high nortalities from mycoais – there was enough fungue in the top can of tool for control. But plants were not protected from the heavy orestaught. The fungue did not work, at least by uself.

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