KHAN, MOHAMED F. R.[1,2], SOMWATTIE P. DeSOUZA[1], JACOB L. WILDMAN[1*] and AARON L. CARLSON[1]. [1]Plant Pathology Department, North Dakota State University and [2]University of Minnesota, Fargo, ND 58108-6050. **Effect of depth of inoculum placement on development of *Rhizoctonia solani* on sugar beet.**

ABSTRACT

The worst production problem for growers in Minnesota and North Dakota is Rhizoctonia root rot caused by *Rhizoctonia solani*. Mature sugar beet roots with *R. solani* infection starting towards the tip of the tap roots have been observed. Growers are concerned that infection starting deep in the soil may not be effectively controlled by fungicides. Therefore, the depth at which *R. solani* caused root rot infection of sugar beet was studied by burying *R. solani* AG 2-2 IIIB inoculum at depths of 2.54, 7.62, and 12.7cm in cones with sugar beet plants at the 4 leaf stage. Root rot infections occurred at all depths. Inoculum buried at the lowest depth had the highest root rot severity and was significantly different from the highest depth with the least root rot severity. Root rot symptoms were prevalent on the upper portion of the sugar beet root just below the soil line irrespective of the depth of placement. Consequently, fungicide application should be directed to protect the upper parts of the root area where *Rhizoctonia* is most active.