

KHAN, MOHAMED F. R.<sup>1,2\*</sup> and AARON L. CARLSON<sup>1</sup>, <sup>1</sup>Plant Pathology Department, North Dakota State University and <sup>2</sup>University of Minnesota, Fargo, ND 58108-6050. **Effect of Penthiopyrad as a seed treatment for controlling *Rhizoctonia solani* on sugar beet.**

#### ABSTRACT

Rhizoctonia root rot, caused by *Rhizoctonia solani*, is considered the worst production problem for growers in Minnesota and North Dakota. Varieties that have good resistance to Rhizoctonia root rot, coupled with high sugar yield, are limited. Most growers in Minnesota and North Dakota use Quadris or Proline as a foliar application to control Rhizoctonia root rot. It will be advantageous for growers if a seed treatment could be used to control this root disease. Penthiopyrad is a new class of chemistry. It was used at different rates as a seed treatment on a Rhizoctonia root rot susceptible and resistant variety. Treatments were evaluated for controlling Rhizoctonia root rot at Hickson, ND and Glyndon, MN. Stand counts were taken during the growing season and just prior to harvest. Disease severity was higher at the Hickson site. Samples were taken at harvest and analyzed at the American Crystal Sugar Company tare laboratory at East Grand Forks, MN. The results of this trial at multiple locations will be discussed.