

MARK BREDEHOEFT. Southern Minnesota Beet Sugar Cooperative, P.O. Box 500, Renville, MN 56284. - Evaluation of Sugarbeet Seed Treatments on Seedlings Diseases.

Seedling diseases are considered the most important sugarbeet production problem in Southern Minnesota. The primary seedling diseases present in Southern Minnesota are Pythium spp., Aphanomyces cochloides and Rhizoctonia solani. The purpose of this investigation was to determine the effectiveness of fumigation and seed treatments on the control of seedling diseases. Field trials were implemented in 1991 with the application of Sodium Methylthiocarbamate (Vapam) at 0, 50, 60 and 75 gallons per acre (gpa) as the main plots. Subplots were seed treatments with effectiveness on one or all of above mentioned seedling diseases. The primary seed treatments were fungicides Tachigaren at 15, 30 and 45 g/kg, Maxim at 50 g ai/kg, Blue Circle Inoculant (microbial fungicide), Ridomil at 2.25 lb/A, standard Apron/Thiram seed treatment and ACH 205 (tolerant variety). Seed was planted on April 30 (date 1) and June 8 (date 2). Plant stands were collected at 4, 8, and 12 weeks after emergence. The main plots was non significant for plant stand and recoverable sugar per acre. These data indicate the fumigation treatments were not effective against seedling diseases within the parameters of this test. Plant stands at planting date 1 were significantly higher than the check only with Tachigaren at all rates and Maxim. However, higher plant stands did not relate into higher yields since yield data for recoverable sugar per acre was nonsignificant for planting date 1. Plant stands at planting date 2 were significantly higher than the check only with Tachigaren at 30 and 45 g/kg. This did relate into a significant increase in recoverable sugar per acre. Check, or the standard Apron/Thiram seed treatment presently found on seed was as good or better than the remaining treatments. These data indicate that under various planting dates only Tachigaren at 30 and 45 g/kg showed an advantage over the present treatment of Apron/Thiram.