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The USDA program at Fort Collins has released sugarbeet germplasm with resistance to *Rhizoctonia* root and crown rot to the sugarbeet seed industry for over 30 years. Germplasm has been screened in the field by creating artificial epiphytotics with a pathogenic isolate of *Rhizoctonia solani* AG-2-2 (R-9). Isolates of *R. solani* AG-2-2 vary in virulence, and the concern has been raised whether *Rhizoctonia*-resistant germplasm withstands other highly virulent isolates. The objective of this study was to compare *Rhizoctonia*-resistant germplasm inoculated with *R. solani* AG-2-2 isolate R-9 (the Colorado standard) and four isolates of AG-2-2 that are very virulent on sugarbeet in Minnesota. In 1995, germplasm (six entries resistant to *Rhizoctonia* and a susceptible check) were evaluated in field trials at Fort Collins, CO and Crookston, MN. Crowns of 9- to 10-wk-old plants were inoculated with *R. solani* grown on barley grains that had been dried and ground. Roots were evaluated on a 0-7 scale (0=healthy, 7=plant dead) in September (CO) and October (MN). When the *Rhizoctonia*-susceptible entry was excluded from the ANOVA, there were no interactions among germplasm and isolates of *R. solani* AG-2-2 at either location. *Rhizoctonia*-resistant germplasm differed significantly ($P=0.05$) in severity of root rot, but followed the same trends at both locations. All isolates of *R. solani* AG-2-2 were equally virulent at both locations. Disease index values averaged across the germplasm entries were 1.4 (CO) and 2.3 (MN) and across isolates of *R. solani* were 1.4 (CO) and 2.5 (MN). Multigenic resistance of the USDA germplasm to *Rhizoctonia* root and crown rot of sugarbeet was stable against the highly virulent isolates of *R. solani* AG-2-2 in both locations.