Cultivar resistance to stem rot of rice in Uruguay

M.S. Avila, P.H. Blanco, and L.A. Casales

National Institute of Agricultural Research (INIA), Rice Program, Treinta y Tres, P.O. Box 42, Treinta y Tres 33000, Uruguay.
E-mail: savila@inia.or-g.uy

Stem rot of rice, caused by the fungus *Sclerotium oryzae* Cattaneo, is of high importance in Uruguay. A group of lines in the final steps of selection by the breeding program and checks were included in field work that consisted of three experiments with a different degree of infection by *S. oryzae* in the 1996-97 crop season.

Infection severity by stem rot, yield, and grain quality lost were compared in experiments with natural infection, artificial inoculation, and protected with fungicide. The levels of infection reached did not establish differences between natural and artificial infection, and then comparisons were made between protected and nonprotected plots.

In the 1996-97 crop season, the levels of stem rot infection were unusually high: all the cultivars showed a high degree of severity because of an early infection and the yield in all the experimental fields was 18% lower than in anterior crop seasons.

The stem rot degree of severity % was 74.4% of the average in the naturally infected experiments and 55.2% in the protected ones. Grain yield was 4.8 and 6.4 t ha^{-1}, respectively. Sterility averaged 28.7% in the nonprotected plots and 14.6% in the protected ones. The disease also affected grain weight and industrial yield negatively and increased the chalky grains.

The cultivars that showed a lower degree of severity in the nonprotected plots were El Paso 144, L 1435 (actually INIA Cuaró), and PI574487, which registered as resistant to *Rhizoctonia solani* in the United States. Among the nine lines and five checks evaluated, we could detect significant differences in disease incidence and in the reaction to fungicide application.