

Stability of resistance to *Phytophthora infestans* (Mont.) de Bary in Brazilian potato cultivars

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Late blight caused by *Phytophthora infestans* (Mont.) de Bary is one of the most devastating potato disease worldwide. The resistance to late blight should be high and stable. The objective of this study was to assess phenotypic stability of foliar resistance to *P. infestans* of three Brazilian potato cultivars (BRS Eliza, Catucha, and BRS Clara). The three cultivars and two checks (CIP392-617-54, resistant; Agata, susceptible) were planted in autumn seasons of 2008, 2009, and 2010, in the experimental field of the Brazilian Agricultural Research Corporation (Embrapa), Pelotas-RS (31°42'S, 52°24'W). A randomized complete block design with three replications was used. Plots were inoculated about 30 days after planting with isolate BR-1 genotype, A2 mating type, which is the predominant genotype in Brazil. Foliage and stems disease evaluations started as soon as late blight symptoms were observed, at 3- 5-day intervals until 100% infection was recorded in the susceptible check. Area under the disease progress curve (AUDPC) was calculated for each cultivar. Stability was calculated by the Eberhart and Russell method. *Analysis of variance revealed significant differences among cultivars. G X E interaction was also significant.* Over the 3-year period the cultivars were grouped for AUDPC means, as: CIP392-617-54, resistant; Catucha, BRS Eliza, and BRS Clara, moderately resistant; Agata, susceptible. 'Catucha' and 'CIP392-617-54' were the most resistant and stable ($S^2 d$, close to 0) varieties.