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Soybean sudden death syndrome in cultivars inoculated with Fusarium tucumaniae or Fusarium virguliforme in field conditions

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Soybean sudden death syndrome (SDS) is caused by four members of the *Fusarium solani* species complex. *F. tucumaniae* (Ft) is the dominant SDS pathogen in Argentina followed by *F. virguliforme* (Fv). The use of soybean partially resistant cultivars is the most effective practice to manage SDS. There is limited information about cultivars response to both species. In this work, nine soybean cultivars were inoculated with Ft or Fv (F. species), by adding sorghum grain colonized with the pathogen in the planting line, during 2016/17 growing season. Experiments were conducted in two locations: Marcos Juarez (Córdoba, Argentina) and Pergamino (Buenos Aires, Argentina). In each location, treatments (F. species x cultivar) were arranged in complete blocks and sowed in plots of 2 rows and 3 m long, with three replications. SDS foliar symptoms were evaluated at R6 growth stage and treatments were compared by the disease index (DI= incidence x severity/5). Interaction between location x F. species x cultivar was detected. In Marcos Juárez, DI ranged from 0 to 8,4 in cultivars inoculated with Ft and from 0,5 to 7,5 in cultivars inoculated with Fv. There was not interaction F. species x cultivar, and differences between cultivars were detected but not between F. species. In Pergamino there was interaction F. species x cultivar; DI ranged from 0 to 21,8 in cultivars inoculated with Ft and from 0 to 59,4 in cultivars inoculated with Fv. These results indicate that different environmental conditions and F. species can cause differences in cultivars response to SDS.