



# Resistance of soybean genotypes to *Sclerotinia sclerotiorum* isolates in different incubation environments

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**ABSTRACT.** *Sclerotinia sclerotiorum* is an important soybean pathogen. The objectives of this study were to evaluate levels of resistance of soybean genotypes to the fungus, and to determine the effects of different incubation environments on host resistance and pathogen aggressiveness. Two experiments were conducted using 103 genotypes from the seed collection of Laboratório de Desenvolvimento de Germoplasma, Universidade Federal de Uberlândia (LAGER-UFU). The first experiment was conducted in a greenhouse, and the second in a growth chamber. Inoculations were performed by the straw test

method using two Brazilian isolates of the fungus, one from Uberaba, Minas Gerais, and the other from Jataí, Goiás. The average stem-lesion length (cm) at 5 days post-inoculation was used to determine levels of resistance. Overall, the most resistant genotype was EMGOPA-316, and the most susceptible genotype was LAGER-29. Incubation in a growth chamber and use of the Jataí isolate generated the most reliable data, and multivariate analysis indicated that the genotypes were divergent under the growth chamber conditions. Therefore, when studying host resistance of soybean genotypes to *S. sclerotiorum*, it is important to use environmental conditions favorable to the fungus and aggressive isolates.

**Key words:** White mold; Genetic variability; Plant breeding; Inoculation; Host resistance and pathogen aggression; Incubation environments