



ISBN 978-85-66836-16-5

METHODOLOGICAL ADEQUACY TO EVALUATE THE REACTION OF COMMON BEAN CULTIVARS TO *Pseudocercospora griseola*/Adequação metodológica da avaliação de cultivares de feijão comum a *Pseudocercospora griseola*. G. BONFANTE<sup>1</sup>; C. ALMEIDA<sup>1</sup>; B.C. DEUS<sup>2</sup>; A.F. CHIORATO<sup>3</sup>; L.L. BENCHIMOL-REIS<sup>1</sup>. <sup>1</sup>Agronomic Institute, Plant Genetic Research Centre, Campinas, SP, Brazil, 13012-970. <sup>2</sup>Biological Institute, Experimental Centre, Campinas, SP, Brazil, 13101-680; <sup>3</sup>Agronomic Institute, Grain and Fibre Centre, Campinas, SP, Brazil. E-mail: llasry@iac.sp.gov.br

The angular leaf spot, caused by *Pseudocercospora griseola*, is one of the most important diseases in common bean. This study was carried out aiming to adequate the methodology for selecting resistant genotypes. The experiment was performed in factorial design 2 (cultivars) x 2 (isolated) x 2 (concentrations), with 3 repetitions. The cultivars IAC-Milênio (susceptible) and AND 277 (resistant) were inoculated with the Psg 51 and Psg 99 isolates,  $2 \times 10^4$  and  $4 \times 10^4$  conidia mL<sup>-1</sup>, on the primary leaves, at the end of V2 phenological stage. The severity of the disease was evaluated at 11, 12, 13, 14 and 15 days after inoculation using a diagrammatic scale (1 to 9) that was first used for initial V2 stage, and the area below the disease severity progress curve was calculated (AACPD). The Leaf Doctor, a free iPhone app for pathometry (University of Hawaii, Mānoa), was used for the quantitative assessment of plant disease intensity and proved to be very suitable. It was verified that both genotypes and AACPD was mostly differentiated at the 15th day, corroborating with literature reports at initial V2 and/or V3 stages. There was a significant interaction between isolate and cultivar factors, and the AND 277 genotype was the most immune one, while the Psg 51 isolate provided the highest severity scores at the  $4 \times 10^4$  conidia mL<sup>-1</sup> concentration. This study allowed the adjustment of the evaluation method for angular leaf spot, in common beans, at the initial V2 phenological phase, with plants less affected by other diseases. Due to the evident parental contrasting feature, this approach may be used with superior efficiency to phenotype the AND 277 x IAC-Milênio F3RC2 mapping population.

**Key words:** Phytopathometry; Angular leaf spot; Leaf Doctor; *Phaseolus vulgaris*; Primary leaves.