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PERFORMANCE OF LINES/CULTIVARS OF COMMON BEAN SELECTED FOR PARTIAL RESISTANCE TO WHITE MOLD IN THE FIELD. P. H. TEIXEIRA[1]; L. R. V. SOUSA[1]; A. F. F. SOUZA[1]; R. C. LIMA[2]; B. A. SOARES[1]; T. J. PAULA JÚNIOR[2]; J. E. S. CARNEIRO[1]; R. F. VIEIRA[3]. [1]Universidade Federal de Viçosa, Dep. de Fitotecnia, Viçosa, MG, 36570-000 Brazil/ [2]Epamig, Viçosa, MG/ [3]Embrapa-Epamig, Viçosa, MG. E-mail: pablo.teixeira@ufv.br

Genetic resistance is a key component of the white mold (WM) management, because it is easy for farmers to adopt and it is environmentally safe. Our objective was to evaluate under field conditions the lines/cultivars selected for resistance to WM in the Value for Cultivation and Use (VCU) trials carried out in previous years (since 2008). We used two sites with history of WM located in the districts of Viçosa and Oratórios, Zona da Mata region, Minas Gerais State, Brazil. Twelve genotypes screened from the VCU trials for partial resistance to WM and high yield were evaluated during the fall-winter season of 2016 with sprinkler irrigation. These genotypes were compared to five popular cultivars used in Brazil (Pérola, Estilo, Majestoso, Ouro Vermelho, and Ouro Negro) and to the international WM resistant controls A 195, G 122, and Cornell 605. A randomized complete block design with four replications was used. Each plot had two 3-m-long rows, spaced 0.50 m apart, with 15 seeds per meter. Matured plants in each plot were rated for WM incidence (WMI), WM severity index (WMSI), and seed yield. WMSI was assessed by mean of a "quarter scale", in which plants were rated from 0 (no symptoms) to 4 (76 to 100% of the plants with symptoms). On average, WMI was 14% or 51%; WMSI was 7% to 31%; and a yield of 3375 or 2353 kg/ha in Oratórios and Viçosa, respectively. In both trials, the elite lines VC 17, VC 26, VC 27, CNFC 10720, CNFC 10432 e CNFC MG11-08 were in the group (Scott- Knott, 5%) with higher yield, followed by the popular cultivars used in Brazil (group B) and other few lines. In the group of lowest yield (group D) were the international genotypes G122 and Cornell 605. In Oratórios, where WM pressure was low, the lines VC 17, VC 26, VC 27, CNFC 10720, CNFC 10432, and CNFC MG11-08 were in the group with lower WMI and WMSI. In this trial, these lines yielded between 3988 and 4371 kg/ha. In Viçosa, where WM pressure was moderate/high, only the line CNFC 10720, among those with the highest yield, had WMI (36%) and WMSI (20%) similar to those of the control A 195 (39% and 20%, respectively). A 195 yielded 2171 kg/ha in Viçosa (group B). In this trial, the international genotypes G122 (82%, 49%, 1271 kg/ha) and Cornell 605 (86%, 53%, 1754 kg/ha) were in the group with the highest WMI and WMSI and lowest yield, respectively. This study supports previously study that showed that the lines VC 17, CNFC 10720, and CNFC 10432 exhibit high yield under WM pressure. The present study reveals that new lines (VC 26, VC 27, and CNFC MG11-08) also exhibit partial resistance to WM and/or high yield, and deserve to be included in further studies.

Keywords: *Sclerotinia sclerotiorum*; *Phaseolus vulgaris*; Genetic resistance; Avoidance mechanism.

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