

Symptoms pattern of common bean genotypes inoculated with different isolates of *Curtobacterium flaccumfaciens* pv. *flaccumfaciens*

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Abstract:

Curtobacterium flaccumfaciens pv. *flaccumfaciens* (Cff), the causal agent of the bacterial wilt of common bean (*Phaseolus vulgaris*), is a vascular pathogen of difficult control, first detected in São Paulo State, Brazil in 1995. Due to the difficulty in controlling this disease, genetic resistance has been the best option for disease management. The aim of this study was to evaluate the differential interaction between isolates, the disease progress and difference in plant growth of two common bean genotypes considered resistant (Ouro Branco) and susceptible (LMRs 11997) to the bacterial wilt. The disease symptoms as wilt (M), flaccidity (F), yellowing (A), leaf burn (BQ) and wizen leaf board (BE) were assessed at 7, 11, 14 e 18 days after inoculation with inoculation of seven Cff isolates in plants at ten days after sowing. The plant height was measured at 14 days after inoculation. Ouro Branco showed lower intensity of the disease and the symptoms of wilt and flaccidity were more frequent. Plants inoculated with the isolate CffCNPAF 03 showed no symptoms of yellowing and wizened the board throughout the period of evaluation. There was variation in plant height according to the isolates used. Isolates UnB 1252, CffCNPAF 01, CffCNPAF 02, CffCNPAF 03 and CffCNPAF 04 were more aggressive, causing further reduction in height, differing from the control (non-inoculated plants) and isolates IAPAR 12771 and IAPAR 14305 were statistically equal to the control. In contrast, the LMRs 11997 showed higher intensity of disease and the plants showed all symptoms evaluated (M, F, A, BE and BQ). The amount of plants that showed yellowing, burning, and wizen leaf board was higher for all isolates and there was a similar reduction in plant height, where the isolates differed only from control. Therefore, it was possible to observe that the pattern of symptoms and plant growth (height) varied with the genotype and/or used alone.

Key words: common beans, curtobacterium, pathogen, plant disease