

## Screening of Bean (*Phaseolus vulgaris*) Breeding Lines against Fusarium Wilt Caused by *Fusarium oxysporum* f. sp. *Phaseoli*

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*Fusarium oxysporum* f. sp. *Phaseoli* (*Fop*) is an important pathogen that causes Fusarium wilt in common bean (*Phaseolus vulgaris* L.). This disease is one of the most harmful diseases of bean worldwide. Use of resistant cultivars is the most reliable method of fusarium wilt prevention. There are no resistant varieties found in Sri Lanka so far. Identification of resistant breeding lines will help breeders to develop resistant or moderately resistant bean varieties. The objective of this study is to identify resistant/moderately resistant bean breeding lines against *Fusarium oxysporum* f. sp. *Phaseoli* among 19 common bean breeding lines developed at RARDC Bandarawela, Sri Lanka. These lines were evaluated with 2 susceptible controls (Wade and Keppetipola Nil) under greenhouse condition. Screening of bean breeding lines was done by transplanting inoculated seven day old seedlings filled with pasteurized sand: soil medium (4:1) into in disposable plastic cups. After 10 days of inoculation the disease symptoms such as chlorosis, necrosis and wilting of leaves were started appearing including 2 susceptible controls. Observations were taken after 21 days of inoculation and Disease Severity Index (DSI) was used to calculate on a resistant to susceptible. Out of 19 bean breeding lines including two control varieties it was identified 9 resistant (DSI 1-3), 10 intermediate (DSI 3.1 -6.0) , 2 susceptible (DSI 6.1-9.0) breeding lines. These bean breeding lines can be classified into three groups as resistant, intermediate and susceptible.

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