

Effect of *Fusarium oxysporum* on the disease development, growth and fruit yield of tomato cv. K-25

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ABSTRACT: Studies were made to determine the effect of different initial inoculum levels (Pi) [0, 2.5×10^6 , 5.0×10^6 , 7.5×10^6 , 10^7 , 1.25×10^7 , 1.5×10^6 cfu/5 kg soil] of *Fusarium oxysporum* on the disease development, plant growth and fruit yield of tomato cv. K-25 under pot conditions. Results indicated that highest reduction in number of fruits, fruit yield, shoot-root fresh and dry weights was 39.6, 50.0, 37.1, 35.5, 40.3 and 38.3%, respectively at highest Pi of 1.5×10^7 cfu/5 kg soil as compared to uninoculated control. Analyses of data indicated that significant reduction ($P \leq 0.05$) in number of fruits, fruit yield, shoot-root fresh and dry weights was obtained at 5.0×10^6 cfu/5 kg soil. However, Fruit yield and plant dry weight was significantly ($P \leq 0.05$) reduced at lowest Pi (2.5×10^6 cfu/5 kg soil). Infection in roots was observed between 4.5% to 50.5% at Pi 2.5×10^6 to 1.5×10^7 cfu/5 kg.

Key Words: Initial inoculum level, pathogenicity, *Fusarium oxysporum*, tomato.