



Inducing Systemic Resistance in Tomato Plants against *Fusarium* Wilt Disease using Salicylic Acid

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Abstract: This study was conducted to evaluate systemic resistance in tomato plants against wilt disease caused by *Fusarium oxysporum* under laboratory, greenhouse and field conditions with salicylic acid. The salicylic acid was evaluated at 50, 100 and 200 ppm on growth of *F. oxysporum* under laboratory condition showed significant variation in inhibition of the pathogen fungus, 200 ppm of salicylic acid used significantly higher inhibition than 50 and 100 ppm. The different concentrations of salicylic acid caused significant reducing in the number of spores produced on culture media (PDA), the treatment 200 ppm of SA was significantly superior the other treatments. The SA 200 ppm was significantly superior to other treatments on tomato plant growth parameters (plant height, root length, no. of leaves and flowers/plant, fresh and dry weight/plant) when artificially infected by *F. oxysporum* under greenhouse and also significantly reduced the percentage of plant wilt. The results of field experiment pointed that treatment with salicylic acid (200 ppm) significantly improved the improved growth parameters and significantly reduced incidence of wilt and increased the yield.

Keywords: Fusarium wilt, Systemic resistance, Salicylic acid, Tomato
