

KAJIAN MEKANISME ANTAGONIS PSEUDOMONAS FLUORESCENS P60 TERHADAP FUSARIUM OXYSPORUM F.SP. LYCOPERSICI PADA TANAMAN TOMAT IN VIVO

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Abstract	<p>Antagonistic mechanisms study of <i>Pseudomonas fluorescens</i> P60 on <i>Fusarium oxysporum</i> f.sp. <i>lycopersici</i> of tomato in vivo. This research was conducted to evaluate the effect of <i>P. fluorescens</i> P60 in controlling <i>Fusarium</i> wilt on tomato and its inhibition mechanisms. Randomized Block Design was used with four replicates and each consisted of 12 crops. The treatments tested were combination between supernatant or suspension of <i>P. fluorescens</i> P60 and application time, i.e., 5 days before planting, in the same time with planting, and 5 days after planting. Variables observed were phenolic compound (tannin, saponin, and glycoside), disease intensity, infection rate, late pathogen and antagonist population density, crop height, stem diameter, fresh and dry weight of roots, and fresh weight of fruit. The result showed that the application of <i>P. fluorescens</i> P60 either in supernatant or suspension form, could increase phenolic compound in the crop tissue, decrease the <i>Fusarium</i> wilt intensity on tomato as 66.00-77.88%, suppress infection rate as 73.18-79.09%, decrease late <i>F. oxysporum</i> f.sp. <i>lycopersici</i> density as 35.71%, increase the antagonist as 10 fold, increase crop height as 26.50%, improve root dry weight as 55.69%, and increase fruit weight crop-1 as 59.79%. Mechanisms of the antagonist <i>P. fluorescens</i> P60 in order to control the disease in the field were induced resistance, antibiosis, and plant growth promoting rhizobacteria.</p>
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Author	Dr ENDANG MUGIASTUTI, S.P, M.P