Granular Formulation Test of *Pseudomonas fluorescens* P60 for Controling Bacterial Wilt (*Ralstonia solanacearum*) of Tomato *In Planta*

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Abstract	Ralstonia solanacearum is the most devastating bacteria. Pseudomonas fluorescens P60 is a bacterial antagonist. This research aimed to study shelf life, antagonism and the effect of granular application of P. fluorescens P60 to control bacterial wilt and growth of tomato in planta. The research was conducted at the Plant Protection Laboratory and the screen house, Faculty of Agriculture, Jenderal Soedirman University, from October 2018 to March 2019. A randomized block design was used with six treatments and five replicates. The treatments were control, R. solanacearum + 1, 5, 10, and 15 g the granule, and bactericide (Agrimycine sulfate 20%). Variables observed were population density, clear zone, incubation period, disease incidence, disease intensity, area under disease progress curve (AUDPC), crop height, root length, crops fresh weights, and phenolic compound content qualitatively. Result showed that the formulation up to 10 weeks still performed a high P fluorescens P60 population and good activity. All the granular and the bactericide effectively suppressed the disease indicated by the lenghtening incubation period of 22.77-26.25%, reducing the disease incidence as 60-85%, decreasing disease intensity as 65-85%, and decreasing AUDPC as 75.69-86.11%-days, increasing phenolic compound content qualitatively, and increasing crop height between 24.85-36.17%, and fresh weight between 46.04-57.13%.
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