

Applications of Potassium Fertilizer and Bacillus Sp. Biopesticide for Increasing Tomato Resistance to Bacterial Wilt Disease

Title	Applications of Potassium Fertilizer and Bacillus Sp. Biopesticide for Increasing Tomato Resistance to Bacterial Wilt Disease
Author Order	1 of 3
Accreditation	
Abstract	Bacterial wilt on tomato caused by <i>Ralstonia solanacearum</i> is a crucial disease, because it can reduce yield until 50%. The aims of this research were: 1) to find out biopesticide formula for <i>Bacillus sp.</i> growth, 2) to test <i>Bacillus sp.</i> against <i>R. solanacearum</i> in vitro, 3) to test potassium fertilizer combined with <i>Bacillus sp.</i> for enhancing tomato resistance to the bacterial wilt disease. The research was conducted in 2 steps i.e to test the persistence of <i>Bacillus sp.</i> In biopesticide formula, and to test the best combination of both potassium and the <i>Bacillus sp.</i> biopesticide. The results showed that <i>Bacillus B298</i> was the best isolate in its persistence on the biopesticide formula of organic growth medium+CaCO ₃ +CMC 1%+mannitol 1%, and in inhibiting <i>R. solanacearum</i> . The best biopesticide formula for the <i>Bacillus sp.</i> persistence was growth organic media+ CaCO ₃ +CMC 1%+mannitol 1%. <i>Bacillus sp.</i> was able to increase tomato resistance to the bacterial wilt disease from the category of susceptible to be tolerant and becoming resistant. Keywords: tomato, <i>Ralstonia solanacearum</i> , potassium and <i>Bacillus sp.</i>
Publisher Name	Faculty of Agriculture University of Brawijaya in collaboration with PERAGI
Publish Date	2011-03-29
Publish Year	2011
Doi	DOI: 10.17503/agrivita.v33i1.33
Citation	
Source	AGRIVITA, Journal of Agricultural Science
Source Issue	Vol 33, No 1 (2011)
Source Page	pp. 8-14
Url	https://agrivita.ub.ac.id/index.php/agrivita/article/view/33/38
Author	Ir Dr NUR PRIHATININGSIH