

***Application of Bacillus subtilis Biobactericide to Control Bacterial Leaf Blight
(Xanthomonas oryzae pv oryzae) in Rice Crops***
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ABSTRACT

Agricultural problems, especially rice cultivation, are increasingly complex and can threaten national food security. The decline in rice production in Indonesia is caused by bacterial leaf blight (HDB) caused by the bacterium Xanthomonas oryzae pv.oryzae (Xoo). Bacterial leaf blight is an important disease of rice plants. One of the potential biological agents for disease control is Bacillus subtilis. The purpose of this study was to determine the effect of B. subtilis bacteria in reducing the intensity of the Xoo attack by comparing the use of citronella vegetable pesticides and its impact on the amount of production and yield of rice plants. This experiment was designed using a comparison of 2 plots with different treatments, namely plot one citronella vegetable pesticide treatment with 75% concentration as a control and plot two biobactericide treatment of B. subtilis with a suspension density of 33×10^4 cfu/ml antagonistic bacteria. Variables observed were inhibition, disease intensity, and dry rice grain weight (RGW)/plot. The results stated that the treatment of biobactericide B. subtilis had a significant effect on the development of bacterial leaf blight up to an intensity of 14.72% and the development of bacterial leaf blight with citronella vegetable pesticide treatment decreased to 28.97%, dry rice grain weight (RGW)/shrub.

Keywords: Rice, Bacillus subtilis, bacterial leaf blight (Xanthomonas oryzae pv.oryzae), citronella vegetable pesticide