Application of Biofungicide (*Trichoderma harzianum*) to Control Wilt Disease (*Fusarium* sp.) in Glutinous Maize (*Zea mays* var. ceratina)

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ABSTRACT

Fusarium sp. is a pathogenic fungus that attacks the vascular tissue and causes decay in the host plant. Biological control by utilizing microbes that are antagonistic to the fungus Fusarium sp. One of the antagonistic fungi that can be used is Trichoderma harzianum. This study aims to determine the effect of biofungicide Trichoderma harzianum and chemical pesticide (active ingredient mankozeb) against Fusarium wilt disease. This research was conducted from October to December 2023 at the Plant Protection Laboratory of Jember State Polytechnic and Cultivation Field, Antirogo District, Jember Regency. The research activities were carried out in two stages, the first in the laboratory and the second in the field by comparing the biofungicide treatment of Trichoderma harzianum and chemical pesticides (active ingredient mankozeb). Research activities in the laboratory are by conducting inhibition tests. The results showed that the Trichoderma harzianum biofungicide treatment gave an antagonistic effect against the fungus Fusarium sp. On the intensity of attack, the Trichoderma harzianum biofungicide treatment gave an effect that was not significantly different from the chemical pesticide (active ingredient mankozeb) at 28 HST, 34 HST, and gave a significantly different effect at 40 HST. In the yield parameter, the wet weight of the cob gave a significantly different effect compared to mankozeb at 142.98 g.

***Keyword**: Fusarium sp., Trichoderma harzianum, Antagonist, Glutinous Corn, Biofungicide*