# Lumbung : Jurnal penelitian politeknik pertanian negeri payakumbuh



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Abstrak

The objective of this study is to know effectiveness of various antagonist microorganism (Streptomyces sp., Bacillus subtilis, Pseudomonas fluorescens and Trichoderma sp.) for controlling leaf spot that caused by Phaeotrichocornis crotalariae on seedling of Acacia Crassicarpa. This study wwas caried out in two phases, they are in vitro antagonistic test and in vivo antagonistic test In Vitro antagonistic test was carried out according to multiple test method, a part of filterpaper 0,5 cm in diameter was dipped on to suspension of each microorganism that would be tested and then dried to be put in to a petridish that contain P.crotalariae 0,5 cm in diameter was dipped on to suspension of each microorganism that would be tested and then dried to be put in to a petridish that contain P. crotalariae 0,5 cm in diameter at PDA medium. Obeservation was carried out to know inhibiting capacity of antagonist microorganism. In the mean time, in vivo antagonistic test was carried out with spraying a suspension of each microorganism to seedling of A. crassicarpa and inoculate pathogen fungi. Observation was carried out according to multiple test method, a part of filterpaper 0,5 cm in diameter was dipped on to suspension of each microorganism that would be tested and then dried to be put in to a petridish that contain P.crotalariae 0,5 cm in diameter at PDA medium. Observaton was carried out to know inhibiting capacity of antagonist microorganism. In the mean time, in vivo antagonistic test was carried out with spraying a suspension of each microorganism to seedling of A. crassicarpa and inoculate pathogen fungi. Observation was carried out to know pathogen incubation periode, disease intensity and disease percentage. Result of in vitro antagonistic test showed that isolates of Streptomyces sp., B. subtilis, P.fluorescens and Trichoderma sp able to inhibit pathogen growth with capacity inhibiting 43.07%, 44.03%, 32.03% dan 53.23% by successively. In the mean time, in vivo antagonistic test showed that each of the microorganism antagonist able to lenghten incubation periode of control treatment is 4.1 days. Treatment of each application of the antagonist microorganism unable to depress disease intensity and disease percentage of P.crotalariae on seedling of A.crassicarpa.