

SUMMARY

Dycka Dwi Saputra. 0610460014. Vinegar Addition to Increase Conidia Production, Conidia Germination, and Pathogenicity of *Beauveria bassiana* Balsamo (Deuteromycetes: Moniliales). Supervised By: Dr. Ir. Gatot Mudjiono, and Dr. Ir. Aminudin Afandhi, M.S.

Beauveria bassiana (Bals) (Vuill) (Deuteromycetes: Moniliales) is one of the entomopathogenic fungus. In the utilization of *B. bassiana* there are many problems that must be resolved, such as variation of isolates virulence. Variation of *B. bassiana* virulence can be influenced by several factors, those are medium for propagation of fungus, origin of isolates, and propagation techniques. The addition of vinegar on artificial medium manipulates pH to promote the growth of fungus. Vinegar on medium of *B. bassiana* can give effect on pH on medium. Dose of 1,5 ml vinegar of medium in 100 grams of rice increased production of conidia, germination and pathogenicity of *Verticillium tricorpus* toward *Conopomorpha cramerella*. The objective of this research was to determine the influence concentration of vinegar ranged between 0,5 ml, 1 ml, 1,5 ml, 2 ml, 2,5 ml/100 ml aquadest in 20 gram rice corn medium toward conidia production, conidia germination, and pathogenicity of the fungus *B. bassiana*.

The research was conducted at the Micology Laboratory, Department of Plant Pest and Diseases, Faculty of Agriculture, Brawijaya University, from January up to April 2012. This research used completely randomized design (CRD) repeated 4 times with the vinegar concentration treatments ranged between 0,5 ml, 1 ml, 1,5 ml, 2 ml, 2,5 ml/100 ml aquadest in 20 gram rice corn medium. The pathogenicity test using larvae immersion method, *B. bassiana* inoculum used were at 21 days old in the form of suspension by concentration about 10^8 conidia/ml. The observations of larva mortality due to infected were done every 24 hours for 20 days.

The results showed that vinegar at concentration 2 ml/100 ml aquadest in 20 grams of rice corn medium was able to increase conidia production up to 83,91%, conidia germination 38,19%, and pathogenicity of the fungus *B. bassiana* 23,12% compared to controls.