

*INFLUENCE of BACTERIAL ENDOPHYTE FILTRATE of HATCHING EGGS
YELLOW CYST NEMATODE (Globodera rostochiensis (Wollenweber))*

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Abstract

Potato (*Solanum tuberosum* L.) is the fourth most important food crop after corn, rice and wheat. The potato also includes the flagship national horticulture commodities as alternative feedstocks that can support the food and commodity diversification program the most likely for the development of agribusiness and agro-industries in Indonesia is still experiencing a decrease in the average rate of production. The main barriers are caused by organisms attacking plants of yellow cyst nematode (YCN) *Globodera rostochiensis* (Wollenweber). It first took place in March 2003 in the village of Tulung Rejo, Bumiaji, Batu City (East Java). On stadium dorman, nematodes are more resistant to nematocides. Biological control of bacterial endophyte is using alternative control of nematodes parasite of plants. The purpose of this study was to determine the influence of bacterial endophyte filtrate, filtrate prolonged submersion bacterial filtrate endophyte and the interaction of these two variables of hatching eggs of YCN (*G. rostochiensis* (Wollenweber)).

This research is a research experiment. This research was carried out in February 2012 to March 2013, in the laboratory of Microbiology and Optical Laboratory of Biology Department of the Faculty of Science and Technology Maulana Malik Ibrahim State Islamic University (UIN) of Malang. Technique of using SPSS 17.0 data analysis program. Using the test of normality, continued with a descriptive analysis and regression.

The results of this research show that all six isolates of bacterial endophyte filtrate provides no effect on hatching eggs of YCN (*G. rostochiensis* (Wollenweber)). Bacterial endophyte filtrate with long soaking up the 18th-day, not hatching eggs of YCN (*G. rostochiensis* (Wollenweber)). Interactions that occur between these two variables being tested is not the only factor that hampered hatching eggs, the influence exerted by both the variables tested, they have no relationship, because of the influence exerted by the variables tested only 5,2%.

The results of this research show that the bacterial filtrate endophyte provides no effect on hatching eggs of YCN (*G. rostochiensis* (Wollenweber)). Bacterial endophyte filtrate with long soaking up the 18th day, not hatching eggs of YCN (*G. rostochiensis* (Wollenweber)). Interactions between variable types of bacterial endophyte filtrate and long soaking, they have no relationship, because of the influence exerted by the variables tested only 5,2%.