

INHIBITORY EFFECT OF ULIN WOOD LIQUID SMOKE AND GOGO RICE ENDOPHYTIC FUNGI AGAINST PATHOGEN *Pyricularia oryzae*

ABSTRACT

Diseases in rice plants (paddy) caused by microorganisms such as *Pyricularia oryzae* lead to a decrease in rice production. Therefore, it is essential to find out biological agents for protecting paddy and plants in general, against plant diseases. Liquid smoke and endophytic fungi have been known as biological agents to enhance the protection of plants against disease. The purpose of this study was to determine the ability of liquid smoke, endophytic fungi and combinations to suppress the growth of *P. oryzae*. The results showed that liquid smoke concentrations of 0.17% to 1.75% and endophytic fungifiltrate of 2% to 10% showed significant ability against pathogen *P. oryzae*. However, the combination of liquid smoke and endophytic fungi filtrate at selected concentrations (0.17% liquid smoke combined with 2% endophytic fungi filtrate and 0.34% liquid smoke combined with 2% endophytic fungi filtrate) showed no significant inhibition percentage against *P. oryzae* compared to control. In conclusion, this study showed that the respective applications of liquid smoke and endophytic fungi filtrate inhibit the growth of *P. oryzae*.

Keywords: endophytic fungi, inhibition ability, liquid smoke, *P. oryzae*