

ABSTRACT

Effects of Corncob Liquid Smoke on Black Rot Disease (*Rhizopus stolonifer*) in Papaya Fruit (*Carica papaya* L.)

By

Mochamad Rizki Maulidi
NIM 185001101

Under guidance of:

Budy Rahmat
Visi Tinta Manik

Papaya is a climacteric fruit which has a thin skin and high water content, so it is easily damaged due to mechanical factors and post-harvest pathogens, one of which is the fungus *Rhizopus stolonifer* which causes black rot. Corncob liquid smoke contains phenol and acid which can be used as a fungicide in the treatment of fungal diseases. This study aimed to determine the most effective concentration of corncob liquid smoke to inhibit the growth of the fungus *Rhizopus stolonifer*. This study used a completely randomized design with in vitro and in vivo experiment and was analyzed using an unpaired t-test. The research results indicate that the application of liquid smoke from corncobs could inhibit the growth of the fungus *Rhizopus stolonifer* with a 95% confidence level, as based by the mean diameter of the fruit wound, the intensity of disease attack and weight loss of the fruit. This research shows that liquid smoke from corncobs has potential as a fungicide for the fungus *Rhizopus stolonifer*.

Keywords: Liquid smoke, corncob, *Rhizopus stolonifer*, black rot, papaya fruit.