

## ABSTRACT

### ANTIFUNGAL ACTIVITY OF PORANG EXTRACT (*Amorphophallus oncophyllus*) AGAINST *Ganoderma boninense* FUNGUS

By

Revi Dwi Amanda

The productivity of oil palm plants often declines, marked by the emergence of basal stem rot disease caused by the fungus *Ganoderma boninense*, which increases the percentage of plant mortality by 50-80%. The aim of this research is to determine the effect of the column chromatography fraction of porang chloroform extract and the concentration of the fraction on the growth of *G. boninense* fungus. This research was conducted using a Completely Randomized Design (CRD) with six levels and three replications. Five fractions were tested against the growth of *G. boninense* at a concentration of 1000 ppm, and the best fraction was further tested at various concentrations. The concentration of fraction-1 is 0.25 ppm (K1), 0.50 ppm (K2), 0.75 ppm (K3), 1 ppm (K4), 1.25 ppm (K5), and 1.50 ppm (K6). Data was tested for homogeneity using the Bartlett test and for data addition using the Tukey test. Next, the data were analyzed using variance analysis and significance tests, as well as further tests using the BNT test at a 5% level. Based on the test results, it was found that the chromatography column fraction of the chloroform extract of porang affected the growth inhibition of *G. boninense* in fraction 1 by 43.7%. The best concentration of the fraction produced in fraction 1, which was 1.50 ppm, achieved the highest inhibition rate of 61.54% and a slow growth rate of 0.24 cm/day, categorized as slightly harmful.

*Keywords: chloroform, Ganoderma boninense, oil palm, porang*

## ABSTRAK

### AKTIVITAS ANTIFUNGI EKSTRAK PORANG (*Amorphophallus oncophyllus*) TERHADAP JAMUR *Ganoderma boninense*

Oleh

Revi Dwi Amanda

Produktivitas tumbuhan kelapa sawit seringkali mengalami penurunan yang ditandai dengan munculnya penyakit busuk pangkal batang yang disebabkan oleh jamur *Ganoderma boninense* sehingga meningkatkan persentase kematian tanaman sebesar 50-80%. Tujuan dari penelitian ini untuk mengetahui pengaruh fraksi kolom kromatografi ekstrak kloroform porang serta konsentrasi fraksi terhadap pertumbuhan jamur *G. boninense*. Penelitian ini dilakukan menggunakan Rancangan Acak Lengkap (RAL) dengan enam taraf dan tiga kali ulangan. Lima fraksi diuji terhadap pertumbuhan *G. boninense* pada konsentrasi 1000 ppm dan fraksi terbaik dilakukan uji lanjut pada berbagai konsentrasi. Konsentrasi fraksi-1 yaitu 0,25 ppm (K1), 0,50 ppm (K2), 0,75 ppm (K3), 1 ppm (K4), 1,25 ppm (K5), dan 1,50 ppm (K6). Data diuji kehomogenan dengan uji Bartlett dan kementerian data dengan uji Tukey. Selanjutnya, data dianalisis ragam dan uji signifikan serta uji lanjut menggunakan uji BNT pada taraf 5%. Berdasarkan hasil uji didapati bahwa fraksi kolom kromatografi ekstrak kloroform porang berpengaruh terhadap daya hambat pertumbuhan *G. boninense* pada fraksi 1 sebesar 43,7%. Konsentrasi fraksi terbaik yang dihasilkan pada fraksi-1 yaitu 1,50 ppm memperoleh daya hambat tertinggi 61,54% dan laju pertumbuhan yang lambat 0,24 cm/hari dengan kategori sedikit berbahaya.

Kata kunci : *Ganoderma boninense*, kelapa sawit, kloroform, porang