

ABSTRACT

Trichoderma spp. is a saprophytic fungus found in soil with an inherent capacity to combat pathogenic fungi in plants. *G. boninense* can attack oil palm both at the nursery and production stages. This study aims to determine the effectiveness of the antagonist fungus *Trichoderma* spp. from various isolates in inhibiting the growth of the fungus *Ganoderma boninense*. This research was conducted at the Plant Pest and Disease Laboratory, Agroecotechnology study program, Faculty of Agriculture, Malikussaleh University. The research was carried out from December 2023 to February 2024. The study used a non-factorial completely randomized design (CRD) with 3 replications. The isolates used were: Without *Trichoderma* spp + *G. boninense*, *Trichoderma* spp. Cot Girek + *G. boninense*, *Trichoderma* spp. Nisam + *G. boninense*, *Trichoderma* spp. Bireuen, Subdistrict Juli, Regency Bireuen + *G. boninense*, *Trichoderma* spp. Kota Binjai + *G. boninense*, *Trichoderma* spp. Subdistrict Selesai, Regency Langkat + *G. boninense*, *Trichoderma* spp. Subdistrict Rantau, Regency Aceh Tamiang + *G. boninense*. Each treatment was repeated three times, resulting in 21 experimental units. Observation data were analyzed with variance analysis. To compare treatment means, DMRT at the 0.05 level was used. The results showed that the *Trichoderma* spp. isolates tested had the highest inhibition percentage in the Bireuen, Kecamatan Juli isolate, which was 55.51%. The lower inhibition percentage was found in the Aceh Tamiang isolate, which was 45.47%.

Keywords: *Ganoderma boninense*, *Trichoderma* spp.