

ABSTRACT

A study was conducted to determine the effectivity of Eleutherine palmifolia extract for inhibiting the growth of Fusarium spp. in vitro. The research was carried out at Agrobiotechnology Laboratory, Faculty of Agriculture, from March to June 2018. This research used an experimental method with a completely randomized design (CRD) with one factor and 3 replications. The treatment was extract of E. palmifolia which was extracted with 3 different types of solvents, they are methanol, ethyl acetate, n hexane. A concentration of each extract was 20%, 40%, 60% and 80%. Fungicides of mankozeb and control were used as control. To understand the antifungal activity, this research was carried out using two methods, they are poisoning media and disc paper. Observations were flavonoid phytochemical test, total reaction yield, macroscopic and microscopic characteristics of Fusarium spp., diameter colony, colony area, percentage of inhibition, inhibit zone and spore density. The results showed that the extract of E. palmifolia from various solvents of methanol, ethyl acetate and n hexane tested in poisoning media and disc paper methods could suppress the growth of pathogenic fungi Fusarium spp.. However, E. palmifolia of 80% concentration with n-hexane as solvent was the most effective in suppressing the growth of Fusarium spp.

Keywords: Eleutherine palmifolia, ethyl acetate, in vitro, metanol, n-hexane