

# ANALYSIS OF RESISTANCE AND SPECIFIC CHARACTER PLANTLETS CASSAVA (*Manihot esculenta* Crantz.) RESULTS INDUCED RESISTANCE AGAINST FUSARIUM WILT

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Cassava (*Manihot esculenta* Crantz.) is a source of carbohydrates, and is widely used for food, as well as industrial raw materials. In Indonesia, cassava is the second largest agricultural food production after rice. Lampung is the largest cassava producing province in Indonesia. *Fusarium oxysporum* causes wilting disease in plants, one of which is cassava, so it is necessary to biologically control the disease by using superior varieties that are resistant to *Fusarium oxysporum*. Fusaric acid is a toxin produced by the fungus and is widely used in in vitro selection of plants. Resistance to disease can be obtained by Induced Resistance. The purpose of this study was to analyze the criteria for resistance of cassava plantlets to Fusarium wilt induced by fusaric acid in vitro and to determine the specific expression character of plantlets resulting from Induced resistance to *Fusarium oxysporum* based on peroxidase enzyme activity. Research using completely randomized design (CRD) with one factor, namely the concentration of fusaric acid consisting of five levels: 0 ppm, 20 ppm, 40 ppm, 60 ppm and 80 ppm added on Murashige and Skoog medium. The data for each parameter was analyzed using the Analysis of Variance, then the variance was analyzed at the 5% significance level and if it was significantly different, it was further tested using the Least Significant Difference (BNT) test. The results showed that: The resistance criteria for cassava plantlets treated with fusaric acid at 0 ppm (control) and 20 ppm were susceptible; concentrations of 40 ppm and 60 ppm were moderate; and treatment with a concentration of 80 ppm showed the criteria for resistance. There was an increase in the activity of the peroxidase enzyme in cassava plantlets along with the increase in the concentration of fusaric acid.

Keywords: fusaric acid, cassava, *Fusarium oxysporum*, induced resistance, in vitro.