ABSTRAK

ANALISIS RESISTENSI DAN KARAKTER TANAMAN CASSAVA HASIL INDUKSI ASAM SALISILAT TERHADAP PENYAKIT LAYU FUSARIUM SECARA *IN VIVO*

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Cassava (*Manihot esculenta* Crantz) merupakan sumber bahan makanan terbesar ketiga di Indonesia setelah padi dan jagung. Cassava merupakan komoditas terpenting di Indonesia, dan komoditas ini akan semakin strategis peranannya bagi kehidupan masyarakat dan perekonomian Indonesia. Seiring dengan perkembangannya, budidaya cassava menurun akibat penyakit layu fusarium pada tanaman cassava. Salah satu cara alternatif yang dapat dilakukan yaitu menggunakan varietas yang resisten terhadap *Fusarium oxysporum*, melalui penanaman dengan pengimbasan asam salisilat pada konsentrasi yang selektif. Tujuan dari penelitian ini adalah untuk mengetahui karakter tanaman cassava (*Manihot esculenta* Crantz) yang resisten terhadap infeksi *Fusarium oxysporum* hasil induksi asam salisilat secara *in vivo* dan mengetahui intensitas penyakit tanaman cassava terhadap infeksi *Fusarium oxysporum* hasil induksi asam salisilat. Penelitian ini menggunakan Rancangan Acak Lengkap (RAL) satu faktor dengan 5 taraf konsentrasi asam salisilat yaitu 0 ppm, 80 ppm, 100 ppm, 120 ppm, 140 ppm. Analisis data menggunakan Analisis Ragam (*Analysis of Varience)* atau uji ANNOVA pada taraf nyata 5% dan uji lanjut dengan uji BNJ (Beda Nyata Jujur). Hasil penelitian menunjukkan bahwa berdasarkan pengamatan terhadap tanaman cassava hasil induksi asam salisilat pada berbagai konsentrasi terhadap infeksi *Fusarium oxysporum* terdapat perubahan karakter morfologis pada tanaman cassava yaitu jumlah tanaman hidup, visualisasi tanaman, dan tinggi cabang batang cassava dan konsentrasi asam salisilat 100 ppm mampu menginduksi ketahanan paling baik, sehingga mampu menekan intensitas penyakit hingga 20% dengan kriteria tahan.

Kata kunci: Cassava, *Fusarium oxysporum*, Penyakit Layu Fusarium, Asam Salisilat

ABSTRACT

ANALYSIS OF RESISTANCE AND CHARACTER OF CASSAVA PLANTS RESULTING FROM SALICYLIC ACID INDUCTION ON FUSARIUM WILT DISEASE *IN VIVO*

By

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Cassava (*Manihot esculenta* Crantz) is the third largest source of food in Indonesia after rice and corn. Cassava is the most important commodity in Indonesia, and this commodity will play an increasingly strategic role in people's lives and the Indonesian economy. Along with its development, cassava cultivation declined due to fusarium wilt disease in cassava plants. One alternative way that can be done is to use varieties that are resistant to *Fusarium oxysporum*, through planting with salicylic acid at selective concentrations. The aim of this research was to determine the characteristics of cassava plants (*Manihot esculenta* Crantz) which are resistant to *Fusarium oxysporum* infection induced by salicylic acid *in vivo* and to determine the disease intensity of cassava plants against *Fusarium oxysporum* infection induced by salicylic acid. This research used a one-factor Completely Randomized Design (CRD) with 5 levels of salicylic acid concentration, namely 0 ppm, 80 ppm, 100 ppm, 120 ppm, 140 ppm. Data analysis used Analysis of Varience or ANNOVA test at a significance level of 5% and further testing with the BNJ (Honestly Significant Difference) test. The results of the study showed that based on observations of cassava plants resulting from salicylic acid induction at various concentrations against *Fusarium oxysporum* infection, there were changes in morphological characters in cassava plants, namely the number of live plants, plant visualization, and height of cassava stem branches and a salicylic acid concentration of 100 ppm was able to induce the most resistance. good, so it can reduce disease intensity by up to 20% with resistance criteria.

Kata kunci: Cassava, *Fusarium oxysporum*, Fusarium Wilt Disease, Salicylic Acid