

INTISARI

Penelitian tentang dampak penggunaan fungisida sistemik dan kontak pada *Phytophthora palmivora* belum banyak dilakukan terutama dalam hal timbulnya strain patogen yang tahan terhadap fungisida. Penelitian ini bertujuan mengetahui ketahanan *P. palmivora* terhadap beberapa fungisida dengan bahan aktif berbeda yaitu mankozeb, campuran mankozeb dan mefenoksam, azoksistrobin, dimetomorf, dan metalaksil. Uji daya racun secara *in vitro* dilakukan untuk menentukan LC 50 masing-masing jenis fungisida. Teknik yang digunakan adalah *Poisoned Food Technique*. Pengujian ketahanan *P. palmivora* terhadap fungisida diujikan secara tunggal pada konsentrasi sublethal yang disubkulturkan berulang hingga subkultur ke empat dan subkultur ke lima dengan konsentrasi 4 LC 50. Nilai LC 50 yang didapat dengan analisis regresi yaitu 7,3 ppm untuk dimetomorf, 14,4 ppm untuk metalaksil, 28,3 ppm untuk azoksistrobin, 900,3 ppm untuk mankozeb dan 13,6 untuk fungisida campuran mankozeb dan mefenoksam. Hasil penelitian menunjukkan bahwa perlakuan fungisida bahan aktif metalaksil dan azoksistrobin dapat menyebabkan ketahanan *P. palmivora*. Perlakuan fungisida bahan aktif mankozeb pada konsentrasi tinggi 4000 ppm dapat menghambat terjadinya ketahanan *P. palmivora*. Fungisida campuran mankozeb dan mefenoksam pada pengujian ketahanan dengan peningkatan konsentrasi 4 LC 50 dapat menghambat terjadinya ketahanan *P. palmivora*. Perlakuan fungisida bahan aktif dimetomorf belum menyebabkan ketahanan *P. palmivora*. Isolat *P. palmivora* yang diperlakukan fungisida metalaksil, azoksistrobin serta fungisida campuran mankozeb dan mefenoksam tidak menurunkan virulensi.

Kata kunci : Kakao, *P. palmivora*, fungisida, ketahanan

ABSTRACT

Study on the impact of the use of systemic and contact fungicides on *Phytophthora palmivora* has not much been done, especially in the occurrence of pathogenic strains that are resistant to fungicides. This research aimed to know the resistance of *P. palmivora* to several fungicides with different active ingredients such as mancozeb, mixture of mancozeb and mefenoxam, azoxystrobin, dimetomorph, and metalaxyl. In vitro toxicity test was performed to determine LC 50 of each fungicide by using poisoned food technique. The resistance test of *P. palmivora* to fungicide was tested singly at sublethal concentration that repeatedly subcultured up to fourth subculture and fifth subculture with concentration 4 LC 50. The value of LC 50 obtained by regression analysis were 7,3 ppm for dimethomorph, 14,4 ppm for metalaxyl, 28,3 ppm for azoxystrobin, 900,3 ppm for mancozeb, and 13.6 for mancozeb and mefenoxam mixed fungicide. The result of this research showed that treatment of fungicide with metalaxyl and azoxystrobin active ingredient could cause the resistance of *P. palmivora*. The treatment of fungicide with mancozeb active ingredient at high concentration 4000 ppm could inhibit the resistance of *P. palmivora*. Mixture fungicide of mancozeb and mefenoxam in resistance testing with increasing concentration 4 LC 50 could inhibiting occurrence of resistance *P. palmivora*. The treatment of fungicide with dimethomorph active ingredient had not been caused resistance of *P. palmivora*. *P. palmivora* isolate which have been treated with metalaxyl, azoxystrobin, and mixture of mancozeb and mefenoxam did not decrease the virulence.

Keywords: Cocoa, *P. palmivora*, fungicide, resistance