

RESEARCH ARTICLE

Influence of fungicides on the bio-efficacy of insecticides against diamondback moth, *Plutella xylostella* L.

■ K.N. SREEDHAR¹, C.T. ASHOK KUMAR¹, K. PADMANABHA^{2*} AND S. SUDHIRKUMAR¹

¹Department of Agricultural Entomology, University of Agricultural Sciences, G.K.V.K., BENGALURU (KARNATAKA) INDIA

²Department of Horticulture, University of Agricultural Sciences, G.K.V.K., BENGALURU (KARNATAKA) INDIA

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ABSTRACT

All the fungicides tested at four concentrations (25, 50, 100 and 200 ppm) against *Plutella xylostella* (L.) possessed insecticidal properties. Among the fungicides, clorothalonil at 200 ppm concentration caused highest mortality of 18.51 per cent while, mancozeb and quintal caused 12.59 and 10.37 per cent mortality at the same concentration. The insecticides viz., endosulfan, fipronil, profenophos, indoxacarb and spinosad were compatible with the fungicide clorothalonil where its efficacy was increased considerably with co-toxicity co-efficient (CC) values of 1.32, 1.31, 1.26, 1.17 and 1.14, respectively. However, novaluron and thiodicarb were incompatible with clorothalonil with CC values of 0.81 and 0.97, respectively. Regarding the compatibility of insecticides with mancozeb; endosulfan, spinosad, profenophos, novaluron and fipronil were clearly compatible with mancozeb with CC values of 1.39, 1.14, 1.12, and 1.10, respectively. However, incompatibility was noticed between indoxacarb+mancozeb and thiodicarb+mancozeb combinations with CC values of 0.82 and 0.73, respectively. The insecticides viz., profenophos, novaluron, indoxacarb, fipronil and endosulfan were compatible with quintal with CC values of 1.67, 1.42, 1.30, 1.21 and 1.18, respectively. However, spinosad+quintal and thiodicarb+quintal combinations exhibited antagonistic effect with CC values of 0.88 and 0.84, respectively indicating incompatibility.

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*Corresponding author:

Email: padduhort@gmail.com