

**THE TOXIC EFFECT OF MIXTURE CHILLI (*Capsicum annum*)
AND GINGER SOLUTION (*Zingiber officinale*) ON *Plutella xylostella***

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ABSTRACT

THE TOXIC EFFECT OF MIXTURE CHILLI (*Capsicum annum*) AND GINGER (*Zingiber officinale*) SOLUTION ON *Plutella xylostella*

The diamondback moth (DBM), or also known as *Plutella xylostella* (*Lepidoptera: Yponomeutidae*) is the main destructive pests of cruciferous crops worldwide. This pest shown significant resistance to almost chemical pesticides that was used in field. *Plutella xylostella* was the first crop insect that have facing a threat due to the emergence of resistance to synthetic pesticides. A study was conducted to evaluate the toxicity and antifeedant effect of mixture chili and ginger solution against *Plutella xylostella*. The toxic effect of the mixture two solutions was evaluated at three different ratios and two control treatments, as C1:G1, C1:G2, C2:G1, positive control (Malathion) and negative control (water) and observation were recorded. Among the three treatments tested for first instar larvae, the ratio C1:G1 show higher percentage mean mortality with (67.5%) than C1:G2 and C2:G1 respectively (60.0%) and (50.5%). But less effective when comparing with Malathion (92.5%) in mortality of larvae. For antifeedant effect also show the ratio for C1:G1 has the lowest surface area of feedings (0.34cm^2) compared to Ratio 2 and Ratio 3 with (0.52cm^2) and (0.67cm^2) but on the Malathion treatments still showed more effective than Ratio C1:G1 because have the less surface area is 0.31cm^2 after 48 h exposed first instar larvae on the treated mustard leaves. Eventhough, combination between chilli and ginger less effective when comparing with Malathion, but its still have the potential to kill the pest and then will reduce their feeding behaviour.