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Potential for Biocontrol of the Diamondback Moth in Myanmar by Using a Predatory Bug

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Abstract

The Diamondback Moth (DBM) is most damaging vegetable pest not only in Myanmar than also in most tropical countries, where cabbage plants and ideal temperatures for high DBM populations prevail throughout the year. Due to frequent insecticide applications development of resistance towards specific compounds, including *Bacillus thuringiensis*, has been reported in several regions. We tested a predatory bug (*Eocanthecona furcellata* — EO), native to Myanmar and commonly found in the field, for its effectiveness to prey on DBM.

We used 2nd instars of EO nymphs and 5 different DBM larval densities. DBM larvae were placed in 9 cm Ø plastic petri dishes and one EO nymph was placed in the centre of each arena; these were then kept at a constant temperature (30° C, 75% RH and 12:12 L:D) photoperiod in climate cabinets. Larvae consumed per day, larvae still alive and molting date were recorded to adult stage of EO.

The maximum prey consumption per day per EO larvae was surprisingly high and exceeded 9.65 (± 0.29) larvae at 30°C in the 5th instar of EO. During the whole lifecycle (2ndN instars to adult), EO was able to consume between 25.50 ± 2.89 (minimum) and 70.5 ± 6.35 (maximum) DBM larvae. EO larvae did feed on different lepidopteran species; however, they refused to feed on aphids.

Base on these preliminary data we recommend that the predatory bug *Eocanthecona furcellata* should be tested under field conditions as a biocontrol agent for controlling diamondback moth in Myanmar. Additional research is now done to understand the host spectrum and the ecology of this species.

Keywords: Biological control, *Eocanthecona furcellata*, Diamondback Moth, Myanmar, predatory bug