Pacific Pests, Pathogens & Weeds - Mini Fact Sheet Edition

https://apps.lucidcentral.org/ppp/

Diadegma species (285)

Relates to: Biocontrol

Photo 1. *Diadegma* seeking its host.

Photo 2. *Diadegma* has located a second stage diamondback moth caterpillar.

Photo 3. *Diadegma* laying an egg in a second stage diamondback moth caterpillar.

Photo 4. *Diadegma* wasp preening or cleaning its body after egg laying.

Photo 5. The pupa of diamondback moth, yellowish and about 8 mm long. It is blunt at one end and tapered at the other.

Photo 6. Pupa of *Diadegma*. The pupa if the diamondback moth is destroyed by *Diadegma*, except for the silken cocoon. The *Diadegma* cocoon is about the same size as that of the diamondback moth. They are pink/cream, then dark brown.

Photo 7. Pupa of *Diadegma* becomes dark before emergence of the adult. It is eliptical (egg-shaped) not tapered, and the diamondback moth skin is at one end.

Summary

- Worldwide distribution. *Diadegma semiclausum* is native to Europe, but introduced into many countries in Asia, Africa and Oceania. It is established in Australia and New Zealand but, not in other Pacific islands, with the exception of the highlands of Papua New Guinea.
- Common parasitising diamondback moth (DBM) caterpillars. Prefers young ones, laying one egg in each. Females lay many hundreds of eggs.
- Prefers cool temperature of 15-25°C. Look for small (6-7 mm) wasp searching on DBM-damaged leaves.
- The DBM caterpillar develops normally until it pupates, then *Diadegma* makes its own pupa. Look for oval pupa. 8-10 days later, adult hatches. Gives good control (if no broad-spectrum insecticides used): >90%. Do not use pyrethroids or organophosphates, as they will kill *Diadegma* and predators; use Bt *(Bacillus thiringiensis)*.

Common Name

Parasitic wasp

Scientific Name

Diadegma semiclausum, an ichneumonid (previously known as *Diadegma euerophaga, Diadegma xylostellae, Angita cerophaga*).

AUTHORS Mike Furlong and Grahame Jackson
Photos 1-6 Mike Furlong, University of Queensland, Brisbane, Queensland.

Produced with support from the Australian Centre for International Agricultural Research under project PC/2010/090: *Strengthening integrated crop management research in the Pacific Islands in support of sustainable intensification of high-value crop production*, implemented by the University of Queensland and the Secretariat of the Pacific Community.