

Pacific Pests, Pathogens and Weeds - Online edition

Diadegma species (285)

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 thuringiensis*).

Common Name

Parasitic wasp

Scientific Name

Diadegma semiclausum, an ichneumonid (previously known as *Diadegma euerophaga*, *Diadegma xylostellae*, *Angita cerophaga*). The wasps belong to the family Ichneumonidae.



Photo 1. *Diadegma* seeking its host.



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



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



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



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 of 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 elliptical (egg-shaped) not tapered, and the diamondback moth skin is at one end.

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Information from Biological Services, Loxton, Australia. (<https://biologicalservices.com.au/products/diadegma-20.html>); and CABI (2019) *Diadegma*. Crop Protection Compendium. (<https://www.cabi.org/cpc/datasheet/18644>); and from CABI (2019) *Diadegma semiclausum*. Crop Protection Compendium. (<https://www.cabi.org/cpc/datasheet/18678>).

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