

## Pest caterpillars in New Zealand brassica crops

### Main pest species of caterpillars



Diamondback moth (DBM) (*Plutella xylostella*)



White butterfly (*Pieris rapae*)



Tomato fruitworm (*Helicoverpa armigera*) (*Heliothis*)



Soybean looper (*Thysanoplusia orichalcea*)

### Minor pest species of caterpillars



Tropical armyworm (*Spodoptera litura*)

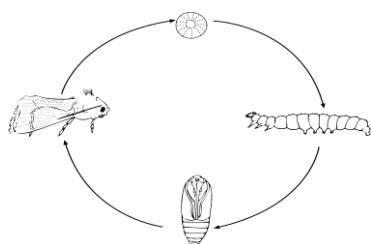


Green looper (*Chrysodeixis eriosoma*)



Greasy cutworm (*Agrotis ipsilon*)

## Life cycle of moths and butterflies



Tomato fruitworm egg

## Key beneficial insects

### Naturally occurring predators and parasitoids of caterpillars in brassica crops



Harvestmen adult



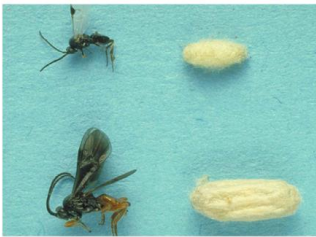
Sheetweb spider adult



*Cotesia ruficrus* cocoons



*Meteorus pulchricornis* adult (right)



Adult and cocoon forms of *Cotesia kazak* and *Microplitis croceipes*



Damsel bug adult



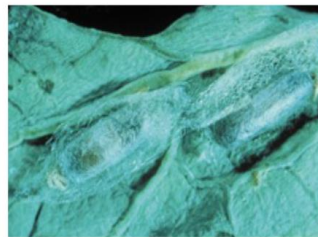
Tasmanian brown lacewing adult



Eleven-spotted ladybird adult



Hoverfly larva



*Diadegma semiclausum* pupae (DBM parasitoid)



*Cotesia rubecula* adults (White butterfly parasitoid)



*Cotesia rubecula* cocoon

## General information

- Four main pest species of caterpillar can be found in New Zealand brassica crops.
- Caterpillars are most numerous on brassicas during late spring, summer and autumn.
- There are many naturally occurring predators and parasitoids of caterpillars.
- Predators and parasitoids are most effective against egg and small caterpillar life stages.
- Use of selective/biological insecticides can be useful when enhancing beneficial insect populations.

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