

## Pasture Pests:

# Brassica Aphid

### Information Sheet

#### Key Characteristics:

- Found throughout New Zealand
- Pest of all brassica types
- Colonies occur on underside of leaves
- Aphids appear greyish/white due to protective waxy powder
- Stunt plant growth
- Transmit plant viruses.



#### Biology

Scientific name: *Brevicoryne brassicae*

Cabbage aphid is present throughout New Zealand wherever brassica crops are grown but occurs more frequently in the South Island.

There are several stages and forms of cabbage aphids. Adults may have wings or they may be wingless. Immature aphids have a very similar appearance to the larger adults. All stages in the life cycle are present throughout the year but vary with season. Female aphids are parthenogenic and viviparous, that is they produce live young without mating. Males rarely occur but are similar in form to the winged female. Winged aphids fly throughout the year but large numbers are produced in spring (October/November) and autumn (February/March) when the main dispersal flights occur and new infestations arise. Established aphid colonies are made up of individuals of several generations of wingless aphids which remain on the plant they started life on. A single adult produces about 25 nymphs. The rate of growth of these is dependent mainly on temperature. During summer development to reproducing adult takes 7-16 days and populations can consequently build up rapidly. In cooler winter conditions development takes up to 60 days and populations do not reach such high levels. There are at least 15 generations per year

Mature wingless adults are about 2.0mm long and 1.0mm wide, dull green to grey in colour and covered with a whitish waxy powder. There are several small black markings on the back, and at the rear of the body are two small upright projections called siphunculi. The head is small and dark with red eyes and a pair of short slender antennae. Winged adults have two pairs of strongly veined wings which, when at rest, extend well beyond the rear of the body. In contrast to the wingless form, the whitish mealy powder is virtually absent. The black markings on the back are large and clearly visible giving the winged insect a striped appearance. The immature stages (nymphs) resemble the wingless form but are much smaller being about 0.5mm at birth. They pass through four moults before becoming adults and are found together with wingless adults in colonies on plants

Cabbage aphids are found on all plants in the cruciferous family: cabbage, rape, swedes, turnips, broccoli, brussels sprouts, cauliflower, kale, mustard and some weed species. It is the most common aphid found on these plants and usually the most abundant.

#### Impact:

Aphids feed by sucking plant juices, causing yellowing and curling of leaves and seed heads, and wilting and stunting of plants, particularly during hot dry weather. Colonies of aphids can severely reduce the vigour and yield potential of a crop especially if it is being grown for seed production.



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Heavily infected forage crops such as turnips and rape may also be unpalatable to stock. Cabbage aphids transmit a number of viruses within and between brassica crops e.g. cauliflower mosaic and turnip mosaic viruses which in turn cause reductions in crop yield, and often death of plants. Symptoms of infection include crinkling and distortion of foliage and stunted plants.

### Control:

Several insecticides are registered for use against aphids in forage brassica crops. If using a spray these should be applied as early as possible to prevent aphid build up.

Insecticide	Application	Time of application
Imidacloprid	Seed coating	At sowing
Chlorpyrifos	Spray	As required
Dimethoate	Spray	As required
Fenitrothion	Spray	As required
Lambda-cyhalothrin	Spray	As required
Maldison	Spray	As required
Perimicarb	Spray	As required
Terbufos	Granule	Drill with seed
Phorate	Granule	Drill with seed

- Consult your farm consultant, industry representative or the New Zealand Agricultural Manual for more information about chemical control
- The removal of weeds (e.g. wild turnip) that act as hosts for cabbage aphid can assist in limiting damage
- Populations can be affected, sometimes dramatically, by an *Entomophora* fungus especially during autumn and periods of high humidity. This fungus kills the aphids and leaves their mummified bodies on the plant. On close inspection these appear as “brown furry” non-responsive aphids. A parasitic wasp (*Diaeretus rapae*) can also kill a large number of aphids but is not usually sufficient to suppress populations
- Some brassica varieties offer increased tolerance to aphid attack. Consult your farm consultant or industry representative about these.

*Information prepared by AgResearch*



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