

## Effective use in Commercial Cannabis cultivation:

Rates with Colemani in cannabis seem to vary a little from what the traditional, registered rates would indicate. Instead of treating in meters, and as a row crop, we recommend that each plant have direct attention paid to them, for optimal results. The climate fluctuation and temperature and humidity variations, along with the plant's rapid growth pattern, necessity to ensure proper air movement, and hairiness/stickiness of the plant all combine to make cannabis a complex and difficult crop to treat.

For Commercial Cannabis Rates, please fill out our [Commercial Cultivation Inquiry](#) for a discrete, personalized Chemical-Free Pest Management plan.

## For Best Results:

During spring and summer, aphid populations grow too fast to be controlled by this parasite alone. Therefore, it is advisable to introduce additional aphid predators, such as Aphidoletes. In gardens, wash high populations of aphids from plants with a strong water spray before introducing the aphid parasite.

## Description

Aphidius species are a group of native parasitic wasps, frequently found parasitizing aphids in greenhouses and outdoor crops. Adults are tiny (2-3 mm long), dark colored wasps that do not sting humans. The larvae develop entirely inside the host aphid, which eventually become rigid mummies as the larvae pupate. Aphidius is an outstanding searcher, and can locate new aphid colonies even when aphid populations are low.

Available in 500 count 30ml vial, 1,000 count 30ml vial and 5,000 count 250ml bottle, and 10 x 100 blister packs.

## Use in Biological Control

When aphid populations are high, *Aphidius colemani* alone will not provide adequate control, but they work well in conjunction with *Aphidoletes* to provide control. Effectiveness may be reduced in late summer when the Colemani itself may be attacked by naturally occurring hyperparasites. These are even smaller parasitic wasps that will parasitize the Colemani as well as the aphid, and will emerge instead of the Colemani. While this can be damaging to a biocontrol program, modern processes can ensure that this is a rare situation.

## Life Cycle

A complete life cycle takes 10 days at 77°F and 2 weeks at 70°F. The sex ratio in the population is about equal, although there may be slightly more females than males (50-60% females). Each female lays about 100 eggs in aphids, but may attack 200-300 aphids in the process.

The larvae develop entirely inside the aphids, and do not kill their host until the wasp larva is ready to pupate. Once the larva pupates, the aphid's body will become a rigid, leathery, golden-brown mummy. Adults emerge from the mummies by cutting an exit hole in the top.

The empty mummy remains on the leaf surface. The size of the adult parasite and the number of eggs it can lay depends on the size of the aphid it came from.

## Introduction Rates

Apply 400 - 2,000 per acre weekly.

Aphidius is most effective when aphid populations are low. Parasites can be introduced at low rates before aphids are detected in greenhouses, or when aphids are likely to move onto crops outdoors. When aphids have been detected in a crop, higher release rates should be used over a period of at least 3 weeks. Because of the time it takes for larvae to develop inside aphid mummies, use at least 2 releases, 1 week apart, to establish overlapping generations of the parasite. Most of the parasitized aphids leave the plant before mummies are formed, and it has been found that if 10% of aphids found on leaves are mummies, then the population should soon collapse

**Note:** Yellow sticky traps used for monitoring pests will also trap Aphidius. If yellow traps are necessary for monitoring whitefly, do not release Aphidius near the yellow traps, and use no more than 1 yellow card per 100 plants. Aphidius are not attracted to blue sticky traps (which can be used for monitoring thrips where Aphidius is being released).

Release as soon as possible (better in the evening or cooler temperatures and low light) between infected plants. Do not place in direct sunlight or standing water, and do not store container for any period of time, as there is no food source packaged with them.