

Effective use in Commercial Cannabis Cultivation:

Rates with Andersoni 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

Fallacis is most effective when applied at the first sign of a mite infestation. They will usually become established in the crop after one introduction, where they remain if mites or pollen are available for food. When prey become scarce, fallacis moves to the top of the plant and usually disperses throughout the crop on air currents or the wind. When predators are found on each infested leaf, it usually means that the biological control program will be successful. It may take another 2-6 weeks for new plant growth to show improvement, depending on growth rates.

Release the mites the same day shipment is received. Rotate the bottle while releasing to keep the mites evenly distributed. Open the bottle, near infested plants and tap them out directly onto the foliage of plants. Leave the jar in the area up to 24 hours for the ones that are left in the bottle to leave the bottle. The mites that fall onto the ground will climb onto the plant nearest them.

Description

A native predatory mite that feeds on two-spotted spider mites and is known to feed on broad, russet and cyclamen mites, as well. Optimal environment is in a dense canopy and relative humidity of 50% or above. Fallacis is extremely effective across a wide range of temperatures and humidities. It is also resistant to low rates of several commonly used pesticides.

Fallacis is an extremely effective spider mite predator. It is the most effective preventer of spider mites available. In long term crops, usually one application, at a rate of 1 to 2 mites per square meter, is enough to achieve multi-year spider mite control. In starving conditions, fallacis is a generalist, capable of feeding on many other pests, especially their eggs. If no pest is present, fallacis will survive on wind-blown pollen.

In outdoor applications, it is best applied at the end of the summer, allowing it to build-up slightly, then over-wintering with the pest. We have not found a mite that fallacis will not control.

Biological Control

Fallacis is used to control two-spotted spider mites (and other mites) on Cannabis, greenhouse peppers, field strawberries, raspberries, currants and mint. In British Columbia, Washington, and Oregon, Integrated Pest Management (IPM) programs for field berry crops are based on using Fallacis as the primary control for spider mites. Fallacis is more resistant to pesticides

than most biological controls. Unlike other predatory mites, such as *Persimilis*, *Fallacis* can remain in areas with low levels of spider mites by feeding on other small arthropods and pollen. *Fallacis* feeds and reproduces over a wide range of temperatures (48-85°F). They do best where there is a dense plant canopy and when relative humidity is over 50%. *Fallacis* can reproduce at lower temperatures than other predatory mites and displaces them in cooler growing areas in the Northern United States.

Fallacis has been used as a successful base in marijuana cultivation for two spot spider mites as well as eriophyidae and tarsonemidae mites (broad, cyclamen, and rust mites). Again, preventative treatments have been the most effective, but curatives have been successful as well, with bi-weekly applications until achieved. *Fallacis* needs to be applied to every plant, as they search upwards.

Life Cycle

Development from egg to adult takes from 7-9 days at 70°F, to 3 days at 85°F. At 78°F, a fourfold increase in numbers can occur within 4 days. In the field, under optimal conditions, populations can increase from 10 predators per 100 leaves, to 200-500 predators per 100 leaves in just 2 weeks.

Adult females lay 1-5 eggs per day, for a total of 26-60 eggs over their lifetime (which could be between 14-62 days). The eggs hatch in 2-3 days, which are oval in shape and twice the size of the two-spotted mite eggs. Newly hatched predators do not eat, but later stages and adults feed on all stages of prey. Female *Fallacis* can eat 2-16 spider mites per day.

Adult females enter diapause in response to the short days in the fall (less than 14 hours of daylight). They stop reproducing and move into sheltered areas, such as under bark or ground cover. They do not enter diapause in greenhouses or interior plantscapes if the temperature is 64°F or above.

Introduction Rates

Apply 2-3 each per 10 square feet

In field crops, placing higher numbers of predators on the prevailing upwind side of the crop will increase their dispersal throughout the crop via wind. In greenhouses, *Persimilis* should always be applied along with *Fallacis*. *Fallacis* needs a relative humidity of over 50% to survive, particularly in the egg stage. In hot, dry conditions, raise the humidity by watering or misting plants. For two-spotted spider mites in greenhouses where temperature and humidity are consistently high (over 72°F and 70% respectively), release *Persimilis* as well as *Fallacis*. *Persimilis* works better in high density spider mite populations under these conditions. The mite eating lady beetle, *Stethorus punctillum*, is less affected by low humidity, and may be used along with *Fallacis* on greenhouse cucumber, pepper, and nursery crops. *Stethorus* is able to fly and can detect and control small colonies of mites before they become established.