



Typhlodromus occidentalis Two-spotted mite predator

T. occidentalis is a predatory mite which attacks spider mites, including the two-spotted mite and red spider mite. Adult *T. occidentalis* are similar in size to two-spotted mites. They are pear shaped with no spots or markings, and usually off-white, but their colour may vary with the type of prey they are consuming. Immature stages are mostly pale and translucent.

Description & Life Cycle:

An adult *T. occidentalis* consumes 5–15 spider mites per day, and can complete a generation in 7–8 days under ideal conditions, whereas spider mites will take 14–17 days. The optimum temperature for development is 27–32°C, but they can tolerate temperatures of over 40°C. They can tolerate low temperatures, but become less active and may enter diapause (hibernate). This sometimes allows the *T. occidentalis* mites to remain established in the release area for many years.

Target Pests:

Two spotted mite - *Tetranychus urticae*; Web-spinning spider mites – *Tetranychus spp.*

Two spotted mites attack over 200 species of plants. Its extensive host range, short generation time, continuous reproduction and resistance to many miticides often make long term control frustrating. Adult mites are very small and yellowish green in colour with two dark spots on their abdomen.

Pest mites damage plants by puncturing the cells of leaves and suck up plant fluids, causing speckling on the leaves. In severe cases the leaves are fully blanched, dry out and they become covered with fine spider-like webbing.

Suitable Crops:

T. occidentalis is well suited to crops in hot dry climates and is commonly used in apples and stonefruit. They are also tolerant to OP and Carbanate insecticides.

Ordering & Accounts:

Orders can be placed by telephone, fax, post or Email, and are sent via Express Post on a Monday or Tuesday of each week and usually arrive within a couple of days. Orders received after noon on Tuesday are sent the following Monday. Postage and handling costs are additional. Accounts are sent out at the end of each month, and can be paid by EFT, postal order, cheque or BPay.

For further enquiries please telephone our office between 8am and 4-30pm, Mon – Fri.

When to release

The first introduction of *T. occidentalis* should be made at the first sign of spider mite activity. If the levels of spider mite are already high and there are no predators present a selective miticide may be required to reduce the pests prior to introduction.

How to Release

T. occidentalis are delivered on bean leaves. There will be approximately 100 predators in active and egg stages on each trifoliolate leaf. A second release is recommended approximately 4 weeks after the first release to ensure good establishment. Where predators establish readily and pest mite infestation is not heavy, good control can be achieved within 6 – 8 weeks. Releases over several seasons to ensure establishment may be required.

Chemical Use

Do not use pesticides toxic to the predators for at least two weeks after the release date. A ratio of one predator to every twenty pest mite is recommended early in the season, and one predator per ten pest mite's mid-season. If predators are present but the ratio is out of balance, use IPM rates of selective miticides to reduce pest mites and preserve your predators.

T. occidentalis tolerates many organophosphate chemicals and is resistant to azinphos-methyl. Miticides such as Apollo, Omite, Unimite, Torque and Pyranica are relatively safe to use, especially at IPM rates. Refer to the Chemical Toxicity table in The Good Bug Book #2 or consult your supplier for more information.

Other Predators

Stethorus ladybirds and Six Spotted Thrip also feed on mites, and may show up naturally in your crop. Phytoseiulus persimilis can also be used especially in greenhouse crops and strawberries and is produced by several insectaries in Australia.