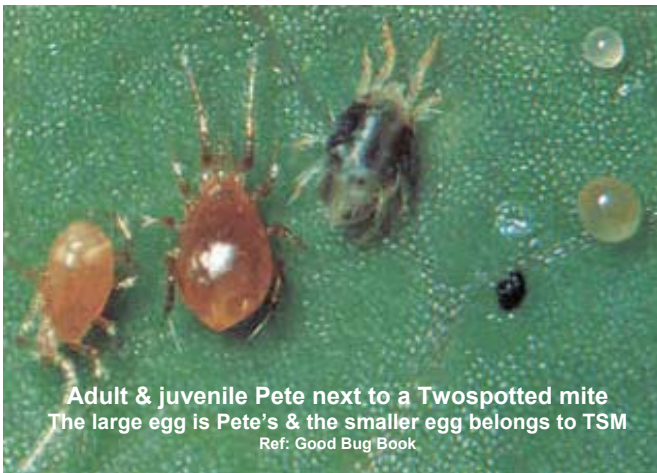
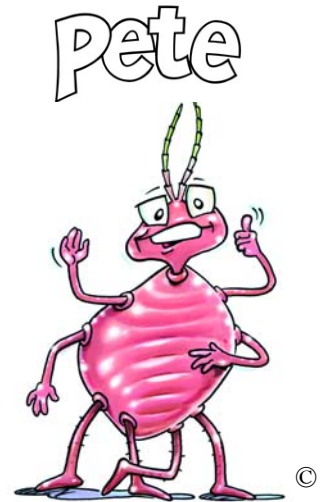


Predatory mites (*Phytoseiulus persimilis*) have been released in a variety of commercial horticultural crops for years; and have become an important part of the Integrated Pest Management (IPM) strategy for the control of Two-spotted mite (*Tetranychus urticae*), Bean spider mite (*Tetranychus ludeni*) and Bamboo mite (*Schizotetranychus celarias*). Two-spotted mite is effectively managed by *Phytoseiulus persimilis* in a number of crops including strawberries, cut flowers, hops, raspberries, capsicum, eggplant, tomatoes, greenhouse vegetables, ornamentals, blackcurrants, pawpaws, deciduous fruit, grapes and corn.

Predatory mites thrive in warm, humid, semi-shaded conditions and feed voraciously on all life stages of two-spotted mite (eggs, nymphs and adults). Adult predatory mites are fast moving, pear-shaped and orange in colour. The younger nymphal stages are clear. Predatory mite eggs are twice the size of two-spotted mite eggs and easily distinguished from two-spotted mites, which are pale green and have 2 large dark patches on their back.



Adult & juvenile Pete next to a Twospotted mite
The large egg is Pete's & the smaller egg belongs to TSM
Ref: Good Bug Book

Monitoring

Monitoring insects is a very important part of good gardening practice. Checking your plants weekly and/or taking leaf samples is essential when trying to determine pest and predator activity. This can save you spraying!

Spider Mite Levels

It is important to release predators when two spotted mite levels are low. If two spotted mite numbers are high, use eco-oil @ 5ml/L and target spray the underside of leaves using the eco-360 sprayer to reduce the population. If twospotted mites accumulate in specific areas only, "hot spots", target your spraying in those areas.

*Photo courtesy – Good Bug Book

INSTRUCTIONS FOR RELEASE

When to Release

- Monitor plants from early Spring to ensure the population of two-spotted mites is low.
- Release predators immediately (or as soon as possible) after receipt. They can be released any time of the day although morning and late afternoon are preferable.
- If the predators have to be stored, keep between 7°C and 10°C for no longer than two days. Do not keep in the refrigerator. This would be too cold for Pete.
- DO NOT open the container before actual release in the garden or crop.
- DO NOT release when heavy rain, a storm or hail is forecast (outdoor crops only).
- DO NOT release if hazardous chemicals have been used two weeks prior to release.
- DO NOT release if chemicals listed HIGH on our list have been used. Call 1800 634 204 for list.

How predators are supplied

Predators are reared on bean plants. On each leaf or trifoliolate there are more than 100 predators of all stages (eggs, nymphs and adults). Since predator numbers per leaf can vary, the number of leaves in each pack is adjusted appropriately per order. There are also two-spotted mites on the leaves received, which are needed as a food supply for the predatory mites while they come in the post.

How to release

- Secure each leaflet near a two-spotted mite infestation, in a sheltered location amongst foliage. Avoid exposure to direct sunlight.
- Place leaflets evenly throughout infested plants or crop.
- If patches of spider mite are present, “hot spots”, place extra leaflets in these areas.
- Be careful not to squash mites, handle the leaves with care.
- Some predators will have moved into the container. Place the container, material and lid in amongst foliage. This will avoid wastage.
- Do not irrigate plants overhead for the rest of the day once predatory mites have been released.

After Release

- It will take the predators 3-6 weeks to establish in your garden or crop. This will depend on factors such as the level of TSM infestation, predator release rate, spray program for other pests and climate. Check for predator establishment by looking at the underside of leaves with a 10x hand lens or an eco-oil magnifier.

Season long release

Where TSM numbers are high and climatic conditions are not favourable for predatory mites, a top up release may be needed 3 weeks after the initial release.

USE OF CHEMICALS WITH PREDATORY MITES

OCP can supply a list which rates various chemicals in their toxicity to the predator *Phytoseiulus persimilis*. Please call 1800 634 204 for a list. Do not use chemicals classed **hazardous** when predators are present. If you need to use a semi-hazardous chemical, use it once only and be aware that it may reduce your predator population. Monitor carefully for several weeks after using such a chemical to make sure there are enough predators still active in your garden or crop.

Since this is a general guideline, you are required to check chemical registration, compatibility and phytotoxicity before spray application.

Miticides (specific chemicals for TSM control)

It is important to alternate miticides and avoid overusing any particular one as this encourages resistance. **eco-oil is an excellent partner product that can be used safely with predatory mites.** Another point which cannot be over emphasised, is the need for complete spray coverage. Remember that most TSM activity occurs on the underside of the leaf, therefore it is essential to spray the back of foliage where TSM are, especially since most chemicals for TSM only kill on contact.

Fungicides

Most fungicides are safe or only semi-hazardous to predatory mites. Those known to be hazardous can be found on the list available from OCP.



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