



Koppert Biological Systems. pioneered the development of natural enemies used for biological pest control of spider mite infestations, enabling growers to safely combat this devastating pest without the use of harsh chemicals. In the mid 1960's, Koppert released the first predatory mite, *Phytoseiulus persimilis*, for the control of spider mites on cucumber plants, and thus laid the foundation for the biological control of many plant pests on numerous plants in the horticultural and agricultural industries. To further support pest control programs, Koppert produces two additional predators for the control of spider mites. In addition to *Phytoseiulus persimilis*, Koppert produces the predatory mite, *Amblyseius californicus*, for added control with wide spread spider mite infestations, and the gall midge, *Feltiella acarisuga*, for intense control in concentrated populations.

Spidermite control

SPIDEX, SPICAL & SPIDEND

Spider mites are pests of many crops throughout the world. By far the most common species in greenhouses is the two-spotted spider mite, *Tetranychus urticae*. Their great reproductive capacity means that they are capable of destroying plants very rapidly. Additionally, the widespread use of chemical control agents has resulted in the spider mite developing resistance to a wide range of pesticides.

OVERVIEW OF SPIDER MITE PLANT DAMAGE

Larvae, nymphs and adults cause damage to the host plant by feeding on plant tissue and plant sap, primarily on the underside of leaves where they pierce the cells and suck out the contents. These dead cells become yellow. As damage increases whole leaves turn yellow, and as the chlorophyll is removed, the leaf, and eventually the whole plant, may die.

WE'RE HERE TO HELP!

Beneficial insects are susceptible to chemical treatments and varying environmental and biological conditions. Visit WWW.KOPPERT.CA for detailed release instructions and information of chemical side-effects and compatibility.

Know the pest!

Nymphs and adults produce webbing in which the mites swarm. With heavy infestations, plants may become completely covered with webs. The webbing affects the leaves appearance of the crops, which is a high concern in ornamental crops.





SPIDEX - *Phytoseiulus persimilis*

Unit of packaging

Phytoseiulus persimilis (predatory mite)

Pack size: (small) 100 ml bottle with dosage-plug

Pack size: (large) bottle of 500 ml

Contains: pupae on leaf, from which 250 gall-midges will emerge

Target

Two spotted spider mite (*Tetranychus urticae*). All stages, preferring younger stages. The predatory mite can only survive on two spotted spider mites (*Tetranychus* spp.)



SPIDEND - *Feltiella acarisuga*

Unit of packaging

Feltiella acarisuga (gall-midge)

Pack size: tub of 500 ml

Contains: pupae on leaf, from which 250 gall-midges will emerge

Target

Various species of spider mites. SPIDEND is recommended especially when spider mite occurs in colonies.



SPICAL - *Neoseiulus californicus*

(Formerly known as *Amblyseius californicus*)

Unit of packaging

Neoseiulus californicus (predatory mite)

Pack size (large): 500 ml bottle

Contains: 25,000 predatory mites (all mobile stages) mixed with inert carrier material

Pack size (small): 250 ml bottle with dosage-plug

Contains: 5,000 predatory mites (all mobile stages) mixed with inert carrier material

Target

Two spotted spider mite (*Tetranychus urticae*), fruit spider mite (*Panonychus ulmi*), citrus red mite (*Panonychus citri*), begonia mite (*Tarsonemus pallidus*) and broad mite (*Polyphagotarsonemus latus*). All stages, Predatory mites can also survive on other mites and live for a number of weeks without food.

PACKAGING AND METHODS OF DISPERSAL

SPIDEX

Predatory mite, *P. persimilis*, is packaged in bottles as adults mixed with wood-chips. The product material should either be applied directly on the plant foliage or with application boxes, DIBOX™.

SPICAL

Predatory mite, *A. californicus*, is packaged in bottles with all mobile stages mixed with corn-grits. The product material should be applied directly on the plant foliage or with application boxes, DIBOX™.

SPIDEND

Gall-midge, *F. acarisuga*, is packaged in tubs as pupae on cucumber leaves.

Telephone, fax, e- mail to place your order:

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