

## TrichoProtection™

TrichoProtection is a system developed in New Zealand in a co-operative venture between Agrimm Technologies Ltd. Christchurch and McHort. Selected strains of the beneficial fungus *Trichoderma* are formulated for strategic application during plant propagation and production.

**TrichoDry™ Nursery** is a fine granular format designed for incorporation into propagation and growing media.

This is followed-up with **TrichoFlow™ Nursery** a wettable powder format applied as a drench to the root zone of in situ crops. Rapid colonisation of the *Trichoderma* in the root zone helps exclude plant pathogens such as **root rots**. *Trichoderma* forms a living barrier around your plants' roots that can be sustained with regular monthly re-applications.

**TrichoSpray™ Nursery** is a wettable powder formulation of selected *Trichoderma* that can colonise leaves, stems and flowers. This surface colonisation then forms an inhibitive barrier against other fungal pathogens, principally **Botrytis**. Application as a foliar spray is targeted at crops in propagation and beyond. Initial experience combining TrichoSpray Nursery in a tank mix with Plant Soap PS1 looks very positive. Anecdotal information would seem to suggest that the combination application is effective against a broad range of pests & diseases.

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**TrichoDry™ Nursery**



**TrichoFlow™ Nursery**



**TrichoSpray™ Nursery**

## A Practical guide to Biological Pest & Disease Control

McHort have extensive practical experience controlling pest & disease in woody ornamental production. We offer training for you & your personnel in the art of integrated pest & disease management using cultural, biological & chemical methods. Our popular on-site training modules are tailored to suit your specific needs and capabilities. Proven systems for pest & disease identification & monitoring are complimented by top quality, locally produced, products that really work. If you would like to reduce chemical use without compromising crop health & quality, we need to talk. Contained in this brochure are some of the tools we have found to work for our clients.

This whole area of reduced, or chemical free, pest & disease control is evolving fast. We travel extensively, both locally & overseas, to bring to you the very latest products & techniques. McHort are the undisputed experts in this exciting field of crop husbandry in New Zealand today.



The **GOOD BUG BOOK**  
An essential reference for all those interested in an integrated pest management programme. Packed with color pictures of both plant pests and their natural enemies. Includes detailed diagrams of life cycles and chemical compatibility charts. Written for local conditions.



## Hypermites

*Hypoaspis sp.* Predator mites.

Are used for the suppression of harmful insects in the root zone of container grown crops during propagation and beyond. They are especially effective against Sciarid fly maggot, thrip pupae and root mealy bug. UK growers use *Hypoaspis* to control Black vine weevil.

*Hypoaspis* is native to NZ and well adapted to our production climate. The brown to orange coloured adult mites grow to about 1mm in length. See opposite. Development from egg to adult takes 17-18 days or somewhat longer in lower temperatures.

*Hypoaspis* has a varied diet consisting of soil borne pests but also mould mites which are found in great numbers in commercial potting mixes. This alternate food source ensures good colonization and survival rates of *Hypomites* in our growing system.

Essentially a below soil dweller *Hypomites* can occasionally be seen at the base of plants.

Many foliar applied insecticides can be used without harming the *Hypomites*. See the Good Bug Book for details of compatibility.

Apply the peat & vermiculite carrier containing *Hypomites* to propagation/growing media surface. A 1 ltr. pack will treat about 90 trays. Reduce Sciarid fly infestations with a knock-down sprays of Natural Pyrethrum, PS1 Plant Soap or *Bacillus thuringiensis* in advance of introducing *Hypermites*.



Hypermite



Sciarid fly maggot



Sciarid fly adult

## Plant Soap PS1

Simply, this high viscosity plant extract, when diluted in water & sprayed onto plant leaves & stems infested with crawling insects, covers and suffocates them. The most likely effected plant pests would be those that breathe through their exoskeletons and are less, rather than more, mobile. Whilst we make no specific claims as to controlling any specific pests, those that are less mobile would include **Scale, Mealy bug, Whitefly egg stage, Spider mite juveniles, Thrips, and Aphids.**

This methodology offers virtually no residual effect on the plant and little, if any, effect on highly mobile pollinating or predatory insects. Being a plant extract, the likelihood of toxicity to either mammals, or the environment, is considered to be very low.

Apply as a high volume spray to run-off to both sides of the leaves of infested plants @ 3-5ml per ltr. Ensure the longest possible interval between application and either overhead irrigation or rainfall.

We have not received any reports of burning, but please avoid spraying under high light intensity. Trial on a modest scale first. Repeat applications will most certainly be better than isolated use infrequently. Apply at 3-7 day intervals. Add Plant Soap to the nearly filled volume of diluting water to avoid foaming.

