

ORGANIC

CROP PROTECTANTS PTY LTD



TRICH-A-SOIL®

Bio-inoculant for Professional Turf & Intensive Horticultural Crops

TRICH-A-SOIL® contains several *Trichoderma spp.* including one selected by Dr. Percy Wong of the NSW Department of Agriculture. *Trichoderma spp.* are naturally occurring saprophytic fungi which feed on organic material excreted by plant roots as well as dead plant material.

When applied to turf or incorporated into growing media TRICH-A-SOIL® will colonise the root zone (Photo 1) to create a healthier growing environment for plant root growth, and a less favourable one for soil borne plant pathogens.

Research has proven that if plant roots are inoculated prior to being exposed to disease, they have a much greater chance of surviving in disease infected soil. Photos 2 and 3 show the difference between straw inoculated with TRICH-A-SOIL® and straw left untreated, buried and then removed after a period of seven days from *Fusarium* infected soil. The pre-inoculated straw in Photo 2 shows no signs of disease development, while the untreated straw in Photo 3 is completely infected with *Fusarium*.

Product Comparison

A major cause of product failure with bio-inoculant products is a lack of spore viability. TRICH-A-SOIL® was fully researched, developed and is manufactured locally in Australia. Local production guarantees product freshness and spore viability. Imported products generally do not have any guarantees of shelf life of spore viability.

Table 1. Product Comparison based on Spore counts.

Product	Organism	Spores/g	Rate/ha	Spores/m2
Trichoflow Turf® ¹	<i>T. viride</i> <i>T. harzianum</i>	1x10 ⁸	1.5kg	15 million
TRICH-A-SOIL®	<i>T. viride</i> <i>T. harzianum</i>	1x10 ⁹	2.5kg	250 million

¹ Registered Trademark of Agrimm Technologies Ltd Christchurch, NZ

The success of a bio-inoculant depends to a large extent on its ability to successfully colonise and survive in the soil. This depends on the number of spores being applied to the soil, the higher the numbers the greater the chance of successful colonisation. TRICH-A-SOIL® has a very high count of *Trichoderma viride* and *T. harzianum*. It is over 16x the spore count of other similar products based on colony forming units/gram of product and application rates.



Photo 1: TRICH-A-SOIL® colonising plant roots



Photo 2: Straw inoculated with TRICH-A-SOIL®



Photo 3: Straw left untreated shows mass of *Fusarium* infection

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Directions for Use:

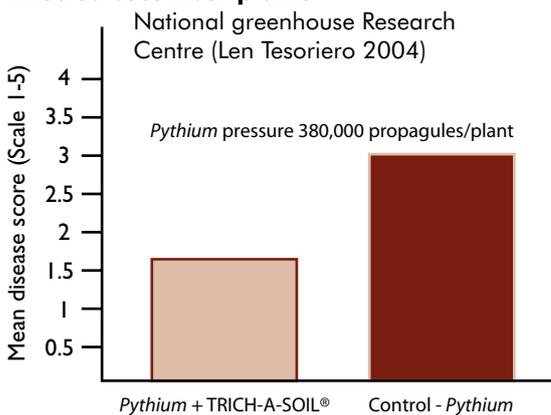
Mixing

Make sure all measuring equipment, containers, and tanks are free of chemicals and chlorine. Weigh out the required amount of TRICH-A-SOIL® and use a general household strainer or spray tank strainer to disperse the product through into the spray tank or container. Add the required amount of Acadian SSE and Aminogro, agitate and apply soon after. Filters less than 100 microns should be removed from nozzles or pump equipment to prevent blockages.

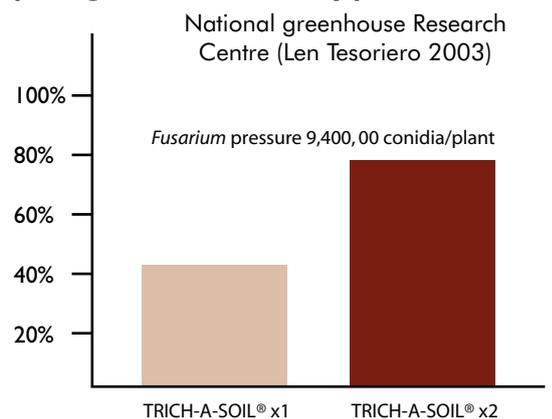
Compatibility

TRICH-A-SOIL® contains a living fungus that is sensitive to a number of fungicides including benomyl, imazilil, propiconazol, tebuconazole and triflumizole. Please read the front panel of fungicide labels to determine if the active ingredients are compatible. A full list of compatible fungicides is available from OCP if required. When an incompatible fungicide has to be used, re-apply TRICH-A-SOIL® 10-14 days later, then go back onto the program. For optimum results, the soil must remain moist and not too acidic (pH 6-7). In acid soils it is recommended that lime should be applied along with *Trichoderma*.

Mean disease score for *Pythium spinosum* infected cucumber plants



Percentage improvement in cucumber plant growth over a 36 day period.



Situation	Rate	Timing	Critical Comments
Professional Turf	1st application 5kg/ha then 2.5kg/ha monthly	Apply monthly August - April or while disease persists	Apply with fish mouth or boom sprayer either early morning or late afternoon and drench-in immediately with enough water to move the product into the thatch layer. Apply with Acadian SSE @ 1 kg/ha + Aminogro @ 20L/ha. Use with Hydretain @ 5L/ha or any other microbe-safe soil wetting agent. Use Acadian Kelp Meal at renovation as food source.
Polyhouse Glasshouse	1.25kg/5,000m ² or 1.25kg/10,000L	At planting then 2 apps 14 days apart	Run-to-Waste: Mix with Acadian @ 300gm/5,000m ² and Aminogro @ 1L/5,000m ² . Inject at the end of a watering cycle and flush through. NFT Hydroponic systems: Apply with Acadian SSE @ 1kg/10,000L every month if disease is a problem, otherwise at establishment and again 2 weeks later.
Nursey Irrigation	20g/100m ²	Every Month	Mix up enough product in a 20L bucket with Aminogro @ 100ml/100m ² + Acadian SSE @ 5gm/100m ² , filter and inject into irrigation line so that all plants receive a dose.
Seedlings	20g/100m ²	Treat seed before planting then at emergence & 1 week before transplanting	Apply to seedling trays through irrigation making sure to drench the trays. Apply with Aminogro and Acadian SSE as per nursery irrigation instructions.
Field Crops	1.25kg/ha	At planting	Apply to in-furrow or through Trickle tape at planting, and two follow-up applications 14 days apart if disease pressure is high.



Organic Crop Protectants Pty Ltd

42 Halloran Street, Lilyfield NSW 2040

A.C.N. 003 149 719

TOLL FREE 1800 634 204

www.ocp.com.au

Email: info@ocp.com.au

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