Gives soil-borne diseases no chance!
A healthy plant starts with a healthy root system

*Trianum* is a non-toxic biological product from Koppert that protects crops from soil-borne diseases such as Fusarium, Pythium, Rhizoctonia and Sclerotinia. Unlike many conventional root fungicides which have growth retarding effects, *Trianum* allows crops to grow healthily, resulting in increased uniformity and reduced wastage from sub-standard plants.

The unique mode of action means there is no chance of pathogens developing resistance to *Trianum*. It has been used in the US for over ten years, and continues to give excellent results. Growers in Europe have reported consistent performance to the same high standard.

As with all Koppert products, *Trianum* is safe for people and the environment, and is suitable for use in organic systems. If you want to ensure soil-borne diseases stand no chance in your crops, choose *Trianum*.

How *Trianum* works

*Trianum* contains the patented hybrid T-22 strain of the beneficial fungus Trichoderma harzianum. Following application, the fungus grows very aggressively along the roots, protecting the plant by four mechanisms:

1. **Competition for space**
   *Trianum* rapidly forms a physical barrier along the surface of the roots, giving soil pathogens no room to establish.

2. **Competition for nutrients**
   *Trianum* and soil-borne plant pathogens both feed on the nutrients contained within the waste products exuded by plant roots during normal growth. *Trianum* uses these nutrients far more effectively than the pathogens, thus out-competing them at the root zone.

3. **Mycoparasitism**
   *Trianum* grows around pathogens and produces enzymes which break down their cell walls, deactivating them in the process.

4. **Strengthening the plant**
   *Trianum* promotes a healthier root system with more root hairs, thus improving the uptake of water and nutrients. The result is a stronger and more uniform crop, particularly where plants are grown under sub-optimal conditions, or where fungicides are normally needed to control root disease.
Proven by research

Since its development at Cornell University, Trianum has been tested extensively throughout Europe and the US in both scientific and commercial situations. This research has shown that Trianum offers the best protection against Pythium, Fusarium, Rhizoctonia and Sclerotinia, with the improved plant strength also helping crops resist other soil-borne diseases. Extensive research has shown that early application of Trianum gives other soil fungi no opportunity to establish on the roots.

A versatile product

Trianum is suitable for use in many field and glasshouse crops, such as vegetable and salad crops, herbs, soft fruit, pot plants, cut flowers, bulbs, trees and shrubs. It can also be used in amenity turf such as golf courses and sports pitches.

The effect of Trianum on the presence of soil-borne diseases

The average result of three trials in cucumber crops in The Netherlands.

Reduced plant losses due to Pythium in Impatiens

Impatiens, France
Long lasting protection

*Trianum* works preventatively and needs to be applied to the crop as early as possible, preferably during propagation. With three formulations to choose from, applying the product could not be easier. There is a powder formulation for spray application, together with a new formulation for use in overhead and drip irrigation systems. There is also a granular formulation for your compost supplier to incorporate into your mix, making it the most ergonomic method of preventing root disease.

Safe for the crop

*Trianum* is hard on root diseases, but gentle on your plants. The patented hybrid strain of *Trichoderma harzianum* forms a physical barrier on the outside of the roots, without penetrating the plant tissue.

Over time, the substrate will become populated by a wide variety of micro-organisms, all challenging *Trianum* for space on the roots. For this reason, a half-dose ‘booster shot’ should be applied every three months to maintain full protection.
10 reasons to choose Trianum

1. Proven efficacy. *Trianum* is a reliable, well-researched product, and its quality is guaranteed.
2. Long-lasting protection. Each application protects plants from root diseases for three months.
3. Reliable results. No resistance is possible due to the unique mode of action of the patented hybrid strain.
5. Compatibility. *Trianum* is compatible with all insecticides and feeds, and with most fungicides.
7. Robust performance. The patented hybrid strain is effective in most substrates between pH 4 and 8.5, and at temperatures from 10ºC to 34ºC.
8. Reduced wastage. Growers who use *Trianum* produce significantly fewer sub-standard plants.
9. Versatility. *Trianum* is available in three formulations. In addition to two formulations for spray application, there is also a granular product for incorporation into growing media.
10. Environmental safety. *Trianum* is non-toxic, and is completely safe to people, wildlife and the environment. It is also acceptable for use in organic systems.
Trianum is produced by BioWorks Inc., Fairport, NY, USA.

Your distributor: WWW.KOPPERT.COM

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