PLANT HEALTH PRODUCTS (PTY) LTD 2003/007987/07

Eco-T

Reg No. L6938

Eco-T is a fungal inoculant for the control of crop root diseases and for enhanced plant growth. The active ingredient, *Trichoderma harzianum,* is a cosmopolitan fungus, commonly found in all soils and on dead organic matter.

What does Eco-T do?

Eco-T controls most soil borne plant pathogens e.g. *Rhizoctonia, Pythium, Fusarium* and *Phytophthora* in virtually any crop from seedlings to field crops, to turf and forestry

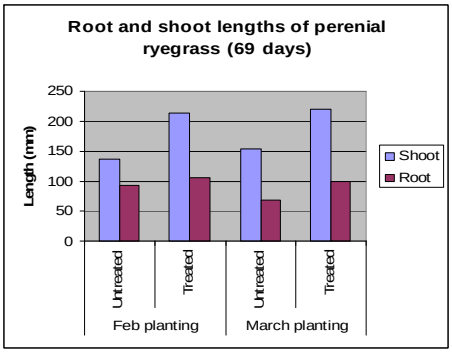
Biocontrolof *Rhizoctonia* in cucumber seedlings

Eco-T treatment results in larger, healthier root systems with more lateral roots and root hairs

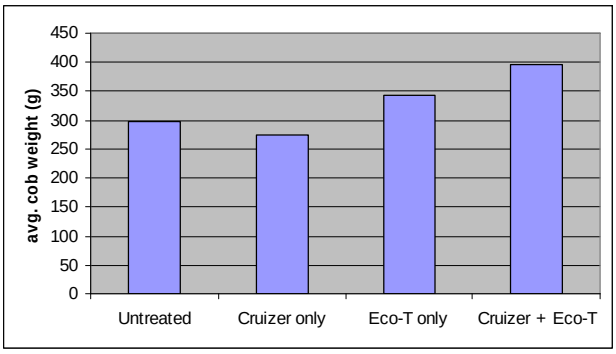
Effect of Eco-T seed treatment on maize roots

More root hairs on treated maize roots (left) are invaluable in stress conditions such as drought.

The control of root diseases and formation of healthier root systems results in greater yields!



Growth stimulation in perenial ryegrass



Effect of Eco-T seed treatment on maize yield (harvested as green millies)

Healthier roots with more root hairs also help buffer the plant against stresses resulting from extremes in soil moisture, temperature, nutrition etc.

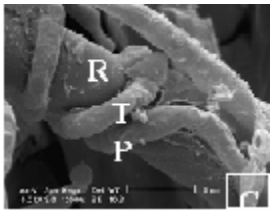
Eco-T treatment of cabbage seedlings (left) resulted in greater survival when transplanted under high temperature and drought stress conditions compared with untreated seedlings

How does it work?

Trichoderma conidia germinate and colonize the soil immediately surrounding plant roots, living off the nutrients that all plants naturally

exude from their roots.

Root diseases are then controlled by the following mechanisms:



Trichoderma (T) coiling around and penetrating Rhizoctonia (R)

Trichoderma coils around, penetrates,and kills other fungi that are pathogenic to crops. It can digest their cell walls

Trichoderma is fast growing and out-competes and displaces crop pathogens

Trichoderma forms various compounds that are inhibitory to the growth of crop pathogens

Trichoderma stimulates the plants natural immune system, making the plant more resistant to infection by disease causing organisms

Plant growth promotion is achieved by:

Trichoderma controls sub-lethal pathogens that reduce the growth of a crop without showing any disease symptoms

Trichoderma assists in mineralization and the uptake of nutrients by plants

Trichoderma produces several of the natural plant hormones such as gibberellins and cytokinins, thus enhancing the growth of plants and even the rooting of cuttings. Seed germination is often more rapid after *Trichoderma* treatment

How to use Eco-T

Eco-T can be applied as either a seed treatment or a drench, depending on the crop.
Drenching can be done using a watering can, knap sack sprayer, tractor boom sprayer, or through the irrigation system. It is important to irrigate directly after application. **Spores that are left on the soil surface are killed by the sun.**

Seed treatment is the most economic method for treatment of extensive crops such as wheat and maize. A solution of 1% CMC or 2g/l flavorless gelatine (or alternate sticker) is prepared. This is added to the seeds until all seeds are damp. NB there should not be lots of excess water! Eco-T powder can then be added to the damp seeds and thoroughly mixed. Some seeds with rough seed coats can be treated dry. Discuss application rates for seed of different crops with your Eco-T distributor.