

TECHNOLOGYPROFILE

Triva™

Triva is a biofungicide based on *Trichoderma harzianum* strain T-22 for the biological protection of developing roots. The documented scope of this strain covers root diseases in vegetable, berry and other crop systems.

1 Product identification

Field	Detail
Product name	Triva™
Category	Biological crop protection
Principal components	T. harzianum Rifai T-22
Target crops	Tomato · Pepper · Cucumber · Lettuce · Strawberry · Blueberry · Grapes · Soybean · Common bean · Peanut · Alfalfa
Agricultural purpose	Root-zone health

2 Product role and biological basis

Protection around growing roots

T-22 associates with roots as they develop. This places the strain within a preventive root-zone strategy, where root growth and the condition of the surrounding soil or substrate are considered together.

Competition in the root environment

T-22 competes with soilborne pathogens for space and nutrients. This explains a biological protective role at the root interface, with performance depending on the particular formulation and growing environment.

Defined root-pathogen scope

The documented scope of T-22 covers root pathogens in *Pythium*, *Rhizoctonia* and *Fusarium*; granular formulations also cover *Sclerotinia*. Each scope belongs to a specific formulation, and a pathogen genus does not establish activity against every species or specialised form.

3 Composition and material characteristics

Trichoderma harzianum T-22

The biological identity is *Trichoderma harzianum* Rifai strain T-22 (also designated KRL-AG2). The strain designation connects the organism to its supporting documents; the species name alone does not define the same disease spectrum.

Living fungal component

T-22 biological fungicides contain living fungal spores. Biological activity is therefore described through organism identity and viable activity, together with the physical properties of the formulation.

Powder and carrier

The wettable-powder format combines the biological component with formulation materials that support wetting and dispersion. Carrier composition and biological content are separate specification fields. Water-dispersible granules have their own formulation records.

4 Biological targets and application evidence

5 Crop programmes and application context

Select biological protection for the identified disease, strain, formulation and growing system. Review the crop information below for the target, treatment and study conditions, then consider the product alongside the existing crop-protection programme.

Tomato and cucumber root health

T-22 is documented for tomato and cucumber, with *Pythium*, *Rhizoctonia* and *Fusarium* as root-pathogen targets. The relevant decision is preventive root protection within the nursery or production system, supported by a diagnosis of the actual root problem.

Lettuce and berry root environments

Lettuce, strawberry and blueberry are also among the documented T-22 crops, and granular formulations cover lettuce *Sclerotinia*. Root-zone evidence should be interpreted separately from fruit or leaf disease claims.

Perennial and field crop systems

Documented T-22 crops also include grapes, selected citrus, soybean, beans, peanut and alfalfa, providing a root-protection reference for these crops. Citrus coverage has exclusions, including lemon, and individual bean species need separate confirmation.

Soilborne & root diseases

Tomato · Pepper · Cucumber · Lettuce · Strawberry · Blueberry · Grapes · Soybean · Common bean · Peanut · Alfalfa

T-22 · Preventive root protection against *Pythium*, *Rhizoctonia* and *Fusarium*. Genus-level data do not establish control of every wilt disease.

6 Quality and compatibility

Strain and document traceability

A technical specification should connect the T-22 or KRL-AG2 identity with the batch record and supporting formulation documents. Single-strain material and multi-strain formulations require separate identification.

Viable activity and product life

Read the declared viable activity with its analytical method, unit and point in product life. A release result and an end-of-shelf-life specification describe different conditions and should remain identifiable in the technical record.

Physical formulation quality

Wetting, dispersion, suspension behaviour and packaging condition complement biological quality. Storage and compatibility information should correspond to the exact powder formulation and its documented shelf life.

This scope describes the documented uses of strain T-22 in specific formulations. Crop uses in each target market are confirmed for the exact product and market.

The single-strain T-22 evidence presented here does not establish Phytophthora control. A Fusarium genus-level root claim also does not establish control of a particular vascular-wilt pathogen.

7 Product questions

Does the T-22 root-disease scope include every root pathogen?

No. The documented uses of single-strain T-22 cover named root diseases. They do not establish Phytophthora control, and a genus-level Fusarium root claim does not establish control of a specific vascular-wilt pathogen.

Can T-22 results be transferred to a different Trichoderma mixture?

The strain and formulation composition matter. A single-strain T-22 record describes that biological material and use context; a mixture containing other organisms requires its own supporting evidence.

8 References and technical documents

Product specifications and application guidance are provided in the applicable technical data sheet and market label.

Product information and technical support

Contact Huasheng