

What are Tospoviruses?

Tospoviruses are RNA viruses that affect vegetables such as tomatoes, peppers, and potatoes, causing necrosis, deformities, and spots on leaves, thereby reducing the quality and yield of crops. These viruses evolve rapidly, often causing damaging epidemics. Well-known examples include the **Tomato spotted wilt virus (TSWV)**, as well as the **Tomato chlorotic spot virus (TCSV)** and the **Groundnut ringspot virus (GRSV)**. Vector insects like thrips play a crucial role in their spread. Once infected, they can transmit the virus from one plant to another. Due to their aggressiveness, tospoviruses pose a challenge to farmers and require innovative strategies such as genetic resistance.



TS-1 resistance

In recent years, the emergence of new viruses worldwide has been observed, causing losses despite an increase in the use of phytopharmaceuticals. In this scenario, genetic resistance to viruses stands out as the best solution, as it operates even when the virus is invisible, irrespective of climatic conditions. This allows to limit the use of phytopharmaceuticals, making the approach both ecological and economical.

The new tospoviruses have rapidly spread to areas far from their point of origin, surpassing traditional defenses and becoming the main threat to tomato crops. **TERA SEEDS** emphasizes the importance of genetic resistance, offering solutions like the **TS-1 gene** to effectively tackle these new challenges.

It's important to highlight that sometimes symptoms of the so-called "viral diseases" are caused by various types of tospoviruses, highlighting the crucial importance of **TS-1 resistance** in those areas where the **pressure of tospoviruses** is particularly **strong**.



Our research at **TERA SEEDS** has developed and patented a unique resistance to tospoviruses called **TS-1**. This resistance is highly effective in protecting tomato plants from **GRSV** and **TCSV** infections, preventing necrosis and the formation of defective fruits. Additionally, it helps limit the spread of viruses to neighboring fields and in future seasons, providing a wide range of advantages. Today, this innovation is present in the new Tera Seeds varieties and is available to all farming enterprises.

Prodest F1



Ciclo / Cycle: medio-tardivo / mid-late
Frutto / Fruit: allungata / elongated 75 - 80 g
Resistenze: **HR** Va.0, Vd.0 / Fol.0-1
Resistances: **IR** TCSV / GRSV / TSWV

Descrizione: Ibrido allungato con **resistenza TS-1**. Pianta vigorosa, sana ed estremamente produttiva. I frutti, di buona consistenza, sono caratterizzati da un elevato °brix e ottimo colore. Indicato negli areali dove la pressione dei tospovirus è forte.

Elongated hybrid with TS-1 resistance. The plant is vigorous, healthy, and extremely productive. The fruits, with good texture, are characterized by high °Brix levels and excellent color. Recommended in areas with strong tospovirus pressure.



Cannonao F1



Ciclo / Cycle: precoce / early
Frutto / Fruit: allungata / elongated 70 - 75 g
Resistenze: **HR** Va.0, Vd.0 / Fol.0-1
Resistances: **IR** Ma, Mi, Mj / TCSV / GRSV / TSWV

Descrizione: Varietà allungata con **resistenza TS-1**. Pianta compatta e precocissima, indicata nei trapianti medio-tardivi. Ottima la tenuta dei frutti alla sovra-maturazione, i frutti sono molto apprezzati per la trasformazione industriale. Consigliata negli areali del Sud Italia.

Elongated variety with TS-1 resistance. Compact and very early plant, recommended for medium-late transplanting. Excellent fruit resistance to over-ripening, highly valued for industrial processing. Recommended in Southern Italy regions.



Kerner F1



Ciclo / Cycle: precoce / early
Frutto / Fruit: prismatica / blocky 70 - 75 g
Resistenze: **HR** Va.0, Vd.0 / Fol.0-1
Resistances: **IR** TCSV / GRSV / TSWV

Descrizione: Ibrido prismatico con **resistenza TS-1**. Il frutto possiede un colore della polpa eccezionale, ottima concentrazione a maturazione e buona tenuta. Indicato negli areali del Sud Italia.

Prismatic hybrid with TS-1 resistance. The fruit has an exceptional pulp color, excellent concentration at ripening, and good firmness. Recommended in Southern Italy regions



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