

TOMATO TORRADO VIRUS AND TOMATO MARCHITEZ VIRUS

Over the past years tomato plants with strong necrotic leaf symptoms have been observed in the area of Murcia in the South-East of Spain and in the Sinaloa region in Mexico. The symptoms of these new emerging diseases consisted initially of necrotic spots, surrounded by a light green or yellow area beginning at the base of leaflets (Figures 1 and 2). This syndrome developed into a severe necrosis of leaves (Figure 3) and fruits (Figure 4) and overall growth reduction of the plant, resulting in severe economic damage. The disease was named 'Torrado' by the local Spanish farmers and 'Marchitez' by local Mexican farmers, meaning burned or roasted. So far, the causal agents were unknown.

De Ruiters Seeds is the first company which identified two new viruses associated with 'Torrado' and 'Marchitez'. We proposed the names 'Tomato torrado virus' (ToTV) for the virus from Spain (see Verbeek *et al.*, 2007) and 'Tomato marchitez virus' (ToMarV) for the virus from Mexico. Both viruses are closely related and most likely belong to a new genus of plant viruses. The identification of the viruses was done in collaboration with Plant Research International (Wageningen, the Netherlands).

Since July 2006, De Ruiters Seeds markets tomato hybrids that are resistant to Tomato torrado virus and Tomato marchitez virus.

Reference:

* Verbeek M., Dullemans A.M., Van den Heuvel J.F.J.M., Maris P.C., Van der Vlugt R.A.A., 2007. Identification and characterisation of tomato torrado virus, a new plant picorna-like virus from tomato. Archives of Virology, 152: 881-890.



Figure 1



Figure 2



Figure 3



Figure 4