

Exploring wild *Solanum* germplasm for resistance to ToBRFV (Tomato Brown Rugose Fruit Virus)



ToBRFV (Tomato Brown Rugose, Fruit Virus, Wild *Solanum* germplasm, Resistance, Tomato production



Netherlands



ToBRFV is a newly emerged virus that causes severe losses in tomato production. Within five years, **ToBRFV infections** have been reported in Asia, North America, and Europe. ToBRFV belongs to the tobamovirus genus; however, all the available tomato-resistant varieties used for tobamoviruses, such as TMV and ToMV, cannot halt infections caused by this new virus.

The severity of this disease, its rapid spread, and the scarcity of resistant cultivars make ToBRFV a global threat to tomato production. Our objective is to find **ToBRFV resistance** in wild *Solanum* accessions and introgress this trait into tomato cultivars, reaching the first step for creating modern resistant tomato varieties.

So far, we have screened 75 *Solanum* accessions, from which two ***S. pennellii*** were found resistant to ToBRFV. **Segregation populations** have been obtained from these two accessions, which is the first step for mapping the gene responsible for the resistance trait. The **identification** and **introgression** of the resistance gene are in progress.

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