



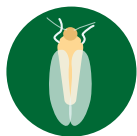
ToLCNDV
NewDelhi
& PERFORMANCE

When Resistance meets Performance

Gautier
SEMENCES

How does the virus spread?

TRANSMISSION METHODS:



By whiteflies: *Bemisia tabaci*.



Through human activity, such as contaminated cutting tools used for fruit harvesting.

The virus symptoms typically appear 10 to 15 days after contamination.

AGGRAVATING FACTORS:



High temperatures, especially in summer condition, which encourage whitefly proliferation.



Successive squash production without crop rotation.

RESERVOIR PLANTS:

Certain weed species harbor ToLCNDV over winter.

Eliminating them is essential to sanitize fields. Examples include:



● *Black nightshade*

● *Datura*

● *Ecballium elaterium*

● *Bryony*

● *Sow thistle*

Risks for your production:

- Rapid virus propagation within the current crop
- Complete cessation of fruit production in infected plants
- Long-term establishment of the virus in the field
- Significant economic losses

There is no curative treatment for infected plants. **Preventive measures** are the only way to combat the virus, including using **resistant varieties** and controlling its vector.



DELHIRIUM N163 HF1



For a safe growing season



Edouard ELIZAROV,
Sales Representative

DELHIRIUM N163 has demonstrated excellent performance under high viral pressure. Trials conducted this summer in Southern Europe confirmed its ability to maintain quality production and high yields in the presence of ToLCNDV. It's also resistant to other zucchini viruses and Powdery Mildew, ensuring protected crops and secure harvests. Ideal for high-risk periods from mid-July in open fields or greenhouse cultivation in autumn.

IR ToLCNDV/ZYMV/WMV/CMV/Px

- Resistance to 4 viruses (ToLCNDV, ZYMV, WMV, CMV) and Powdery Mildew
- Consistent yield security under high viral pressure
- High fruit quality and uniformity
- Short internodes
- Upright and open plant habit
- Compact plants suitable for open-field and greenhouse cultivation



This variety will also be available in organic seeds.

A constant commitment to R&D to counter ToLCNDV

A CONTINUOUS FLOW OF IMPROVEMENT ON RESISTANCES

At Gautier Semences, we maintain an ongoing research program to offer resistant varieties that provide reliable solutions. This work on the Tomato Leaf Curl New Delhi Virus (ToLCNDV) is part of a larger resistance breeding program, in which our teams strive every day to provide answers to constantly evolving pathogen threats. An essential issue to ensure the long-term success of our varieties.

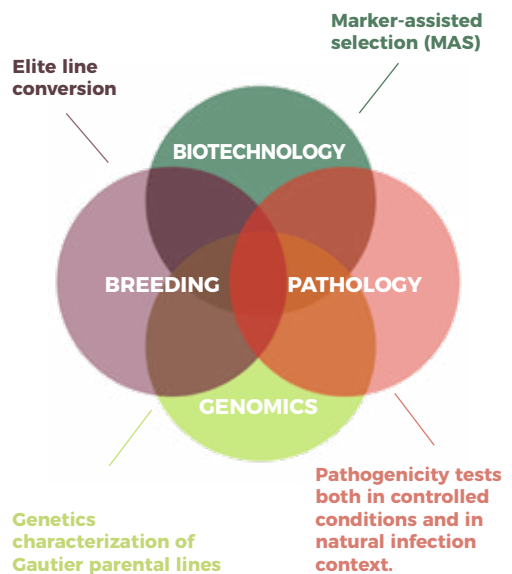
CONFIRMED POSITIVE RESULTS



For years, we have rigorously tested thousands of plants each season, selecting only those that show no symptoms after being inoculated with ToLCNDV under maximum viral pressure. These rigorous evaluations, conducted under maximum viral pressure, ensure remarkable resistance. Our field trials, carried out in greenhouses or in open fields, are conducted in key production areas in France, Spain, Italy, Morocco, and Turkey, ensuring performance adapted to diverse production conditions.

A MULTIDISCIPLINARY EXPERTISE

We have cultivated a robust multidisciplinary expertise by bringing together specialists in biotechnology, pathology, genomics, and breeding, including Ph.D. scientists with expertise in genetics and fruit quality. This synergy of technologies and skills enables us to develop resilient varieties that combine genetic quality with taste excellence.



**Marion
CORDIER DEMISSY,**
Phytopathology
Project Manager

"Collaboration between our Research and Breeding teams is essential. Our experts in biotechnology, pathology, genomics, and breeding unite to tackle ToLCNDV and other emerging pathogens. Our new quarantine lab keeps us at the forefront of resistance research. These efforts are motivated by our ambition: to remain a key player, combining genetic and agronomic excellence in the creation of resistant varieties."



For more details, contact our experts



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