

عنوان مقاله:

The First Report of Tomato Yellow Leaf Curl Virus (TYLCV) Occurrence in Tomato Greenhouses of Lorestan Province

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نویسندگان:

Farzaneh Rostami - Department of Plant Protection, Faculty of Agriculture, Lorestan University, Lorestan, Iran

Samira Pakbaz - Department of Plant Protection, Faculty of Agriculture, Lorestan University, Lorestan, Iran

Mostafa Darvishnia - Department of Plant Protection, Faculty of Agriculture, Lorestan University, Lorestan, Iran

خلاصه مقاله:

Tomato yellow leaf curl virus (TYLCV) is one of the most important tomatoes (*Solanum lycopersicum* L.) viral diseases in tropical, subtropical, and temperate regions of the world. The amount of damage caused by this virus is severe and may reach 100%. Its natural vector is *Bemisia tabaci*. In order to detect and investigate the genetic diversity of TYLCV, suspected leaf samples were collected from tomato greenhouses in Khoramabad city. In the molecular evaluations, a 55-bp fragment was amplified using the specific degenerate primer pair of Begomoviruses transmitted by whiteflies, which indicates TYLCV infection in the investigated samples, and overall, 18 infected tomato samples were detected out of 30 samples suspected of TYLCV. Also, the comparison of the nucleotide sequences of Khoramabad isolates (Kh1 and Kh2) in NCBI confirmed the detection of TYLCV in the studied region. The determined nucleotide sequences showed 94.79-97.63% and 90.5-95.69% nucleotide and amino acid identities with other available sequences of TYLCV in NCBI, respectively. Pair-by-pair comparison matrix of nucleotide sequences of two Khoramabad isolates with 15 selected isolates from the gene bank using SDT v1.2 software showed the sequences of the two studied viral isolates are highly similar and the percentage of their nucleotide similarity is 95.60%. Also, Kh1 isolate had the most similarity (95.40%) with the Kuwait isolate and the Kh2 isolate showed the highest similarity (97.60%) with the Iraq isolate. These results were identical to what was seen in the drawn phylogeny tree using Mega11. This was the first report of widespread occurrence of TYLCV in tomato greenhouses of Lorestan province.

کلمات کلیدی:

Begomovirus, Detection, Genetic diversity, Khorramabad, TYLCV

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