

## *Short Report*

### **FIRST REPORT OF *Citrus Tristeza Virus* FROM GUILAN PROVINCE**

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#### **Abstract**

Tristeza caused by *Citrus tristeza virus* (CTV), is the most important viral disease of citrus worldwide. Serious damages of the disease have been reported from many citrus growing areas of the world. CTV particles are restricted to phloem and are transmitted by aphids in a semipersistent manner. CTV was introduced from Japan to Mahdasht orchards in Mazadaran province in 1969. Its natural spread with the vector *Aphis gossypii* was shown in the infected areas (Rahimian *et al.*, 2000). Following the transport of virus-infected scions or plants from the east of Mazandaran (infected area) to the western part of the province (Tarviji *et al.*, 2012), the risk of transmission was considered by a similar way in the nurseries of Guilan province. Preliminary survey of the disease was carried out in November 2012. Five of 20 Unshiu (*Citrus unshiu*) and Thomson navel (*C. sinencis*) plants on Citrange rootstock were found infected by serological direct tissue blot immunoassay using a commercial antiserum (Bioreba, Switzerland). Infection of the plants was confirmed by a two-step RT-PCR with T36cp+/T36cp- primers after nucleic acid extraction with Rneasy Plant Mini Kit (Qiagen). RT and PCR was carried out respectively according to manufacture protocols of Revert Aid and PCR Master Mix (Fermentas).

**Keywords:** Citrus, Guilan, Virus, Tristeza, RT-PCR.

## References

- RAHIMIAN, H., ALAVI, V., SHAYEGAN, H. 2000. Decline of sweet orange on sour orange rootstock, evidence for possible onset of natural transmission of citrus tristeza virus in Mazandaran. **Proc. 14<sup>th</sup> Iran. Plant Protec. Cong., Karaj, Iran.** 132(Abst.).
- TARVIJI, M., BANIHASHEMIAN, S. M., ELAHINIA, S. A., EBRAHIMI MOGHADAM, L. 2012. Biological and molecular characterization of two citrus tristeza virus isolates obtained from west part of Mazandaran Provice. **Proc. 20<sup>th</sup> Iran. Plant Protec. Cong., Shiraz, Iran.** 888(Abst.).