

Screening Melon Germplasm for Tolerance to Cucurbit Yellowing Stunting Disorder Virus (CYSDV) Using RT-PCR. (C01-park163825-Poster)

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Abstract:

A yellowing disease of melon (*Cucumis melo* L.), caused by cucurbit yellowing stunting disorder virus (CYSDV) that is transmitted by *Bemisia tabaci* Gennadius, is increasingly severe in south Texas. TGR-1551 was reported to be resistant to this disease in Spain. However, it was not tested in environments of south Texas to evaluate it as a source of resistance to CYSDV in a melon breeding program. Our objectives were to screen melon breeding lines/cultivars as well as TGR-1551 for resistance to CYSDV in four different environments including a growth chamber, greenhouse, speedling house and field and to detect virus from dsRNA extracts of infected leaves of lines/cultivars using RT-PCR with the previously developed specific primer pair for CYSDV. Regardless of environments, TGR-1551 consistently showed slight yellowing symptoms on lower leaves, whereas it showed no disease symptoms on upper leaves. A PCR product was obtained from the lower leaves of TGR1551, but no PCR product was produced from the upper leaves, indicating its tolerance to CYSDV. Inheritance of a reaction to CYSDV in controlled and natural-inoculation conditions is currently being investigated in an F2 population from a cross of TGR1551 x Deltex.

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