

TRANSMISSÃO DIFERENCIAL DE ESTIRPES DE CITRUS LEPROSIS VIRUS C POR SUBPOPULAÇÕES DE *BREVIPALPUS YOTHERSI*

DIFERENCIAL TRANSMISSION OF CITRUS LEPROSIS VIRUS C STRAINS BY *Brevipalpus yothersi* SUBPOPULATIONS

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Resumo:

Citrus leprosis is a serious disease affecting citrus crops from Mexico to Argentina and considered the main viral pathology affecting Brazilian citrus orchards. The disease is caused primarily by citrus leprosis virus C (CiLV-C, *Cilevirus*, *Kitaviridae*), whose infection produces localized chlorotic and necrotic lesions that lead to premature drops of fruits and leaves. The population of CiLV-C is subdivided into two unevenly distributed lineages: CRD and SJP. In orchards of the citrus belt, viruses of the strain SJP seem to spread faster and replace those of the strain CRD, suggesting that holds adaptative advantages over the CRD one. To shed light on the possible role of the mite vector on the differential distribution of the CiLV-C strains, we evaluated the transmission efficiency of five isoline populations of *Brevipalpus yothersi*, the main vector of the virus. Mites were collected in commercial and non-commercial citrus groves on Cordeirópolis-SP, Piracicaba-SP, Itapetininga-SP, Jaboticabal-SP, and Espírito Santo do Turvo-SP, and the colonies were reared on sweet orange fruits collected from healthy plants. Sweet orange fruits with typical symptoms of citrus leprosis were assayed by strain-specific RT-PCR assays. Mites were confined to fruits affected by one of the strains and left for virus acquisition during two days. Then, mites were individually transferred to leaves of common bean (*Phaseolus vulgaris*), a CiLV-C test plant. A total of 360 replicates for each viral strain per mite population were assayed. Seven days after infestation, the presence of localized necrotic lesions (LNL) on leaves, an indication of CiLV-C infection, was recorded. Total RNA of LNL was extracted to confirm the presence of the viral strains. Viruses of the strain SJP (45.9%) were more frequently transmitted than those of the strain CRD (34.5%). When data from each mites population were individually analyzed, the efficiency of transmission of the strain SJP ranged from 31.4 to 77.9%, whereas for the strain CRD, the values were comparatively lower, ranging from 18.6 to 56%. The populations from Cordeirópolis and Espírito Santo do Turvo were the most and least efficient on virus transmission, respectively. Our data indicates that the assayed mite populations show different CiLV-C transmission abilities, which seems to be linked to the CiLV-C strain involved. Ongoing experiments are intended to study the genetic variability of the assayed *B. yothersi* populations and reveal the putative contribution of CiLV-C loads on virus transmission efficiency.

Palavras-chave: *Brevipalpus*-transmitted viruses; *Kitaviridae*; CiLV-C; mites;

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