عنوان مقاله:

Population Genetic Structure of Hishimonus phycitis (Hem.: Cicadellidae), Vector of Lime Witches' Broom Phytoplasma

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خلاصه مقاله:

Witches' broom disease of lime caused by 'Candidatus Phytoplasma aurantifolia' is considered as one of the most destructive disease of Mexican lime in southern Iran, Oman, and the United Arab Emirates. The causative phytoplasma is vectored by a leafhopper, Hishimonus phycitis (Distant, ۱۹۰۸). Six ISSR markers and mitochondorial Cytochrome c Oxidase I (COI) gene were used to unveil genetic variation of the leafhopper populations from thirteen different regions of Iran. Analysis of ISSR markers revealed that Forg (Fars) and Qale'e Qazi (Hormozgan) significantly diverged from the other populations. However, the COI sequences were highly conserved among all populations and resided all the populations in a single clade. Mantel test exhibited no correlation between genetic and geographical distances. Our results demonstrated genetic differentiations among the H. phycitis populations, which might have been induced by ecological or geographical isolation and may affect the vectoring capability of this insect.

کلمات کلیدی:

COI, Genetic differentiations, I SSR markers, Mitochondrial gene based marker, Vectoring capability, زنجرک Hishimonus phycitis, ساختار جمعیتی, نشانگر ISSR, ژن COI