SURVEY OF TOMATO BACTERIAL DISEASES GROWN UNDER GREENHOUSES IN MERSIN AND NEW EMERGING BACTERIAL DISEASE AGENTS

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ABSTRACT

Mersin is one of the important cities that grows tomatoes in Turkey. In this study, tomato bacterial disease surveys were conducted in 130 individual greenhouses located in Silifke, a county of Mersin, and prevalence of the bacterial diseases were evaluated. Among surveyed greenhouses, 31 were infected with bacterial disease symptoms like chlorosis and necrosis on leaves, wilt, stem rot and pith necrosis. A total of 317 putative bacterial strains were isolated from diseased plants. Amongst them, 109 plant pathogenic bacterial strains were identified using physiological and biochemical tests, MALDI-TOF MS, PCR and sequencing tools. The prevalence of bacterial diseases in tomato growing greenhouses in Silifke, Mersin was recorded as 23.8%. The pathogenic bacterium, *Pseudomonas syringae* pv. *tomato*, was widespread by 17.7% in the region followed by a prevalence 4.6% of *Stenotrophomonas* spp. and 1.5% prevalence of *Clavibacter michiganensis* subsp. *michiganensis* and *Pectobacterium carotovorum* subsp. *carotovorum*, respectively. The probable plant opportunistic bacteria from the genera *Stenotrophomonas Paenibacillus, Microbacterium* and *Arthrobacter* spp. were rarely isolated for the first time in Turkey. In the future, further tests should be conducted to verify their pathogenicity on tomatoes and other crops. This study was supported by Erciyes University Scientific Research Projects Unit (ID: FYL-2019-9570).

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