

Project Title : Investigations on Susceptibility of Grapevine Rootstocks and Standard Varieties to Crown Gall

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Supporting Body : GDAR

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Summary : A total of 118 isolates were obtained from 56 crown gall samples collected from grapevine nurseries and several grapevine plantations. Eighty-two strains obtained in this study were pathogen. Pathogen isolates were compared with the previously described type stains of *Agrobacterium vitis* and our results indicated that the grapevine isolates were identical with *A. vitis* stains and their host range was not limited to grapevines in most cases but includes a variety of dicotyledonous plants.

The ability of non-pathogen grapevine isolates to produce agrocin and *in vitro* agrocin sensitivity of pathogen strains were investigated. All pathogen strains that have been tested were resistant to agrocin 84. Some non-pathogen stains were effective to pathogenic strains *in vitro* but not *in vivo*.

In this study, we evaluated the resistance of different grapevine rootstocks and standard grapevine varieties to different *A. vitis* strains. Kober 5BB was the most resistant and Dodridge the most susceptible, regardless of strain of *A.vitis* used. Ramsey, 140 Ruggeri and Paulsen 1045 were also found to be among the genotypes most resistant to eight *A. vitis* strains.

Sixty-eight grapevine varieties were inoculated with seven strains of *A. vitis* in our experiment. Standard grapevine varieties like Pempe çekirdeksiz, Çekirdeksiz üzüm, Alphonse Lavella, Perlette, Kadın parmağı, Royal, Hamburg misketi and Italia which were grown widely in Turkey were susceptible to most of the strains whereas Cardinale, Pempe germe, Emir, Bornava misketi and Hafız Ali appeared to be resistant.