

Project Title : Investigations on Etiology of Stunting and Wilting Observed in Second Maize Crops in Aegean Region

Start /End Date : 2001-2002

Supporting Body : GDAR

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Summary : Some symptoms which caused serious yield losses were observed after first irrigation in second crop maize production areas in 2001. Infected plants were stunted. Young leaves were yellow in color and with age they took on a reddish-purple color. Internodes were reduced in length, and infected stalks were sterile. Mentioned symptoms caused serious yield losses. The aim of the study was to determine the etiology of the disease resemble to be caused by spiroplasma and/or viruses. 72 second crop maize fields were surveyed for corn stunt-drying and virus diseases. ELISA method was used in determination of virus diseases. Detection of spiroplasma was done by using ELISA, histological staining and light microscopy. The stunt disease appearing after first irrigation in second crop maize production areas of Çukurova and Aegean Region in 2001, causing serious yield losses and put forward by commision report to be caused by *S. kunkelii* was not observed in 2002. In 29 samples Maize dwarf mosaic *potyvirus* (MDMV), in 11 samples Barley yellow dwarf *luteovirus – pav* (BYDV-PAV), in 3 samples Maize stripe *tenuivirus* (MSPV) were detected. In addition in 7 samples mixed infections of BYDV-PAV and MDMV and in 2 samples mixed infections of MSPV and BYDV-PAV were determined. However during the surveys it was observed that plants showing virus diseases symptoms spread at very low rate in the field and they did not cause serious losses.