DISEASE NOTE

# FIRST REPORT OF ALMOND LEAF SCORCH IN TURKEY

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In early June 2005, almond trees (*Prunus amygdalus* L.) with chlorosis of the tips and margins of the leaves, necrosis of the yellow areas, and rolling of the blades were observed in several orchards of Salinurfa (southern Turkey). Diseased plants had a scattered distribution. The symptoms observed resembled very much those of almond leaf scorch (Purcell, 2002) a disorder induced by the xylem-limited bacterium *Xylella fastidiosa* (Wells *et al.*, 1987). Symptomatic leaf samples were therefore tested by DAS-ELISA for the presence of *X. fastidiosa* and of a few common *Prunus* viruses, i.e. *Prunus necrotic ring spot virus* (PNRSV), *Prune dwarf virus* (PDV), and *Plum pox virus* (PPV), using commercial kits (Loewe Phytodiagnostica Biochemica, Germany). ELISA was done following the directions supplied with the kit, dispensing in each well 200 ml of extracts from leaf petioles. Negative controls (symptomless trees) were included. Of 27 symptomatic samples from seven different almond orchards, 23 gave a positive response to *X. fastidiosa* but none reacted with antisera to PNRSV, PDV and PPV. When tests were repeated from other diseased trees at the end of July, 12 of 30 samples were again ELISA-positive. When fragments from petioles and main veins of symptomatic leaves collected in July from ELISA-positive trees were processed for thin sectioning and observed under the electron microscope, bacterial cells *ca.* 2×0.3 mm in size were profusely present in xylem elements. No bacteria were seen in symptomless controls. These data seem to substantiate the likelihood that *X. fastidiosa* is associated with scorched almond trees in southern Turkey. The only extant record of *X. fastidiosa* in the Mediterranean area is from Kosovo, where the bacterium was found in grapevines (Berisha *et al.*, 1998).

Berisha B., Chen Y.D., Zhang G.I., XU B.Y. and Chen T.A., 1998. Isolation of Pierce's disease bacteria from grapevines in Europe. *European Journal of Plant Pathology* **104**: 427-433.

Purcell A.H., 2002. Almond leaf scorch. In: Teviotdale B.L., Michailides T.J., Pscheidt J.W. (eds.). Compendium of nut crop diseases in temperate zones, pp. 31-32. American Phytopathological Society Press, St. Paul, USA.

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