

Occurrence & Etiology of Decline & Death of Almond Trees in Central Area Iran

A. Heidarian

Plant Pests & Diseases Research Department, Agricultural Research Center of Shahr-e-Kord,Iran

Most of almond trees in central areas of Iran are being severely affected by wilt or die-back & death. To determine the etiology of this problem, a study was carried out in samples of affected trees collected during a four year period (1996-1999). Besides some insects damage & agronomic problems the decline & death was associated with *Verticillium* wilt; root and crown rot fungi. *Verticillium* wilt symptoms were specific & *Verticillium dahliae* could be always isolated in the diagnostic work. Root & crown rot fungi were very frequent in the samples of diseased almond trees of field or nursery origin, & they were the main cause of "decline & death". Pathogenicity tests showed that three fungal species (*Rosselinia necatrix*, *Phytophthora cactorum* & *Armillaria mellea*) were pathogenic to almond trees & reproduced symptoms decline & death in roots of cultivar Mamai. Other fungal species associated with root rot of almond trees in the field or in the nurseries, including *Fusarium* spp., *Tiarosporella phaseolina* & *Rhizoctonia solani* were weakly pathogenic. Pathogenicity of *Fusarium* spp. depend on soil water content, since isolates tested caused extensive root rot only when the soil was low humidity.