

Passalora Blight of Anise (*Pimpinella anisum*) and Its Control in Turkey

K. Erzurum,¹ F. Demirci,¹ A. Karakaya,¹ E. Çakır,² G. Tuncer²
and S. Maden^{1,*}

Passalora blight of anise, caused by *Passalora malkoffii* (Bubák) U. Braun, is an important disease of anise in Turkey. The disease affects all the aboveground parts of plants including flower clusters. Infected seeds have dark, linear stromata. Detection of the pathogen on seeds was studied by the blotter method, agar method, washing test and sowing infected seeds in disease-free soils. The pathogen was recovered only by the washing test and to a limited extent by water agar + seed decoction agar. Sixteen of 24 seed samples from diseased regions were found to be infected. The pathogen was not detected by any other methods. However, several indigenous fungi, *e.g.* *Alternaria alternata*, were isolated, which may have prevented the growth of the pathogen. Seed washings of infected seed samples had typical spores of the pathogen up to 10^6 conidia per gram of seed. Transmission of the pathogen was shown by sowing infected seeds in disease-free field soils in two locations where anise had not been grown previously. Azoxystrobin, chlorothalonil + carbendazim and flutriafol seed treatments at 0.04 g a.i. kg^{-1} seed, 1.0 g + 4.5 g a.i. kg^{-1} seed and 0.015 g a.i. kg^{-1} seed reduced the disease by 92.5%, 89.6% and 36.2% in 2002 and by 78.9%, 75.8% and 41.2% in 2003, respectively. Three foliar applications of azoxystrobin, chlorothalonil + carbendazim and flutriafol at the rates of 187.5 g a.i. ha^{-1} , 1500 g + 6750 g a.i. ha^{-1} and 31.3 g a.i. ha^{-1} reduced disease incidence by 92.5%, 86.0% and 96.8% in 2002 and by 97.5%, 90.8% and 97.0% in 2003, respectively.

KEY WORDS: Anise; *Passalora malkoffii*; control; Turkey.

Received Oct. 15, 2004; accepted Jan. 30, 2005; <http://www.phytoparasitica.org> posting May 17, 2005.

¹Dept. of Plant Protection, Faculty of Agriculture, Ankara University, 06110 Dışkapı, Ankara, Turkey.

*Corresponding author [Fax: +90-312-3187-029; e-mail: maden@agri.ankara.edu.tr].

²Plant Protection Central Research Institute, Yenimahalle, Ankara, Turkey.