

ABSTRACT

M.Sc. Thesis

DETERMINATION OF PREVALENCE, INCIDENCE AND SEVERITY OF PLUM RUST DISEASE CAUSED BY *Tranzschelia discolor* (Fuckel) Tranzschel and Litv. IN THE AYDIN PROVINCE AND INVESTIGATION OF CHEMICAL CONTROL POSSIBILITIES

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This study was conducted to determine prevalence, incidence and severity of plum rust disease caused by *Tranzschelia discolor* (Fuckel) Tranzschel and Litv. in the Aydın Province and efficiency and spray timing of certain foliar fungicides for control of this disease. In the growing season of 2007, surveys carried on in eight important plum producer area (Central Country, İncirlioiva, Köşk, Nazilli, Buharkent, Çine, and Bozdoğan) revealed that most of the plum orchards were contaminated with the disease. Of two plum varieties commonly grown in the Province, ‘Papaz’ was found to be heavily infected and exhibited severe premature defoliation, however ‘Bekiroğlu’ looked more tolerant and showed lower leaf fall. In 2007–2008, four fungicides, hexaconazole, azoxystrobin, thiophanate-methyl and chlorothalonil, were evaluated with two different application time (early season and late season) for control of the disease in both greenhouse and field trials. All fungicides were effective in various degrees in both spray timing and in both greenhouse and field trials. Hexaconazole was highly effective in most of the experiments. Late season (mid-june – late-june) fungicide applications protected trees through rest of the season. Monitoring changes of rust severity throughout the season revealed that the severity was low from mid-may to early-june and sharply increased in late-june, july and august. In conclusion, it has been suggested that; all fungicides might be used for control of plum rust but depends on their mode of action, late season application might provide better control since disease pressure become higher later in the season and harvest is completed in early-june.

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Key words:

Tranzschelia discolor, Plum rust, Rust disease, Plum, Chemical control