

OP296
Distribution of *Pythium* Species in Turkey

Gürsel KARACA¹, Meryem ATEŞ¹, Güliz TEPEDELEN AĞANER²

¹Plant Protection Department, Faculty of Agriculture, Süleyman Demirel University, Isparta,
Turkey,

² Directorate of Plant Protection Research Institute, Bornova, İzmir, Turkey
gurselkaraca@sdu.edu.tr

Aim of the study: *Pythium* species, belonging to Oomycetes, are ubiquitous organisms distributed worldwide. Most of them are saprobes living in soil and in water, while some others are significant plant pathogens causing pre- and post-emergence damping off, root rot or fruit rot on many agricultural crops. Since they infect their hosts by their motile zoospores, they prefer and can be found abundantly in soil with higher moisture. There are also some species having mycoparasitic activity and they can be used as biological control agents against plant pathogens. In this research, *Pythium* species in soils with different vegetation types in Turkey were determined.

Materials and Methods: Samples of different soil types were taken from irrigated fruit orchards and vegetable fields, non-irrigated cereal fields and forests in different regions of Turkey. Selective VP3 medium and surface soil dilution plate (SSDP) method were used for the isolation of the *Pythium* species. Morphological characteristics of the isolates were determined by water cultures and they were identified according to current keys. Molecular techniques were used to confirm the identifications. As a result, kinds and distribution of *Pythium* species in different soil and vegetation types in Turkey were given. In addition previous studies on *Pythium* species in Turkey were carefully reviewed and added to the species and hosts list.

Results: *Pythium* species were readily isolated from all soil types, while plant pathogenic species were more common in irrigated agricultural lands. Among them, *P. ultimum* was the most common species. *P. deliense* is another important pathogenic species causing damping off on plants such as vegetables and sugarbeets. *Pythium* isolates producing only hyphal swellings were frequently isolated from all soil and host types. Mycoparasitic species with ornamented oogonia were also widespread especially in vegetable and sugarbeet fields.

Acknowledgements: Supported by the Scientific Research Projects Coordination Unit of Süleyman Demirel University (Project No: 1511-YL-07, 2078-D-09)

Keywords: *Pythium* spp., soil-borne, pathogens, mycoparasites.