

Biocontrol of plant parasitic nematodes by fungi: efficacy and control strategies

ABSTRACT

Increasing knowledge and growing concern about the elevated cost of inorganic fertilizers or chemical pesticides with their vast applications on various crop plants has raised interest in the alternative method of plant disease protection caused by plant parasitic nematodes. These alternative methods are not only cost-effective but also eco-friendly to the environment and human health. Among the various rhizospheric microorganisms, opportunistic fungi like *Paecilomyces lilacinus*, *Pochonia chlamydosporia*, and arbuscular mycorrhizal (AM) fungi have the potential to reduce the severity of diseases caused by plant parasitic nematodes and also improved the plant growth and biomass production. This chapter provides an overview on the biocontrol potential of opportunistic as well as AM fungi on the growth and development of various crop plants. The details about the interactions between these fungi and plant parasitic nematodes have been discussed. An overview of the recent cost-effective technologies used for the mass propagation of these beneficial rhizospheric microorganisms is also discussed.

Keyword: Inorganic fertilizers; Pesticides; Crop plants; Plant disease