



Review

PRODUCTION OF FUNGAL BIOLOGICAL CONTROL AGENTS THROUGH SOLID STATE FERMENTATION: A CASE STUDY ON *PAECILOMYCES LILACINUS* AGAINST ROOT-KNOT NEMATODES

D. BRAND^{1,2}, C. R. SOCCOL¹, A. SABU^{2,3} AND S. ROUSSOS²

¹ Universidade Federal do Paraná (UFPR), Laboratório de Processos Biotecnológicos, Departamento de Engenharia Química, 81531-970 Curitiba-PR, Brazil.

² IMEP-IRD UMR-193, Ecologie Microbienne et Biotechnologies, Boite-441, Université Paul Cézanne, Faculté des Sciences de St Jérôme, F-13397, Marseille Cedex 20, France. E-mail: s.roussos@univ-cezanne.fr

³ Kannur University, School of Life Sciences, Kannur 670661, Kerala, India.

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ABSTRACT

Root-knot nematodes cause annual losses of about USD \$100 billion worldwide. Development of natural resistance to nematicides by nematodes and the tendency to withdraw chemical pesticides/nematicides from the market led to the search for new methods of control. Biological control of root-knot nematodes with *Paecilomyces lilacinus* is being investigated thoroughly, but there is a lack of information on the production systems. Solid state fermentation is a suitable ecofriendly biological process for the mass production of biological control agents. Conidiospores produced are cost-effective and show good stability and viability for field applications on a commercial scale. Studies on bioreactor design are essential for scaling up solid-state fermentation processes, but they are scarce yet. We did an in-depth analysis on the production of fungal spores by solid state fermentation for commercial scale application against root-knot nematodes.

Key words: Biological control, *Meloidogyne incognita*, nematodes, *Paecilomyces lilacinus*, solid state fermentation.