

237- SCREENING OF POTENTIAL BIOLOGICAL CONTROL AGENTS WITH NEMATICIDE ACTION [SELEÇÃO DE AGENTES DE CONTROLE BIOLÓGICO POTENCIAL COM AÇÃO NEMATICIDA] Ornat, C.¹; Alcalà, S.¹; Lara, J.M.²; Sarro, A.²; Sorribas, F.J.¹; Fernández, C.² ¹DEAB-UPC; ²FUTURECO BIOSCIENCE S.L.; ^{1,2}Parc Mediterrani de la Tecnologia, c/ Esteve Terrades 8, Castelldefels 08860, Spain. E-mail: cesar.ornat@upc.edu

Soil micro-organisms with nematicidal activity are common in nematode infested soils. These Biological Control Agents (BCAs) share metabolic pathways and physiological traits, which can be used as selective tools to separate them from the whole soil microbial population. A survey was conducted in some agricultural areas in Spain infested with plant parasitic nematodes to determine the presence of potential BCA and their effectiveness on *Meloidogyne* eggs hatching in *in vitro* bioassays. In a first stage, soil and plant material were collected from agricultural fields at different locations in Spain. The samples were subjected to a standard extraction process that led to the identification of 12 species of plant parasitic nematodes. Then, serial dilutions of soil samples and aqueous suspensions from extraction fractions containing eggs or juveniles of *Meloidogyne* sp. and *Globodera* sp., were plated on Petri dishes with different media. A total of 328 micro-organisms were isolated. In a second stage, the isolates were inoculated on specific culture media (chitinolytic and proteolytic). Following incubation, 109 isolates were selected as potential BCA. From these 14 bacteria and 13 fungi were assessed for their ability to inhibit the hatching of *Meloidogyne incognita* eggs *in vitro* conditions. The egg masses were exposed to isolates of the selected BCAs in aqueous suspensions and hatching was measured after 1, 2, 7, 14, 21 and 28 days. Ten out of 27 isolates tested inhibited hatching of *Meloidogyne* eggs more than 75%. In an early stage of research, the 10 selected strains are promising candidates for the further development of bionematicides.