678

Production of hydrolases by the *Dicyma pulvinata* isolates, and partial characterization of a ß-glucanase. Agustinho, DP[1]; Silva, JBT[2]; Mello, SCM[2]; Carvalho, MA[1]; Peretti, B[1]; Felix, CR[1]. Universidade de Brasília/Departamento de Biologia Celular[1]/ Embrapa Recursos Genéticos e Biotecnologia[2], Brasília-DF. danielpaiva@unb.br. Produção de hidrolases por isolados de *Dycima pulvinata*, e caracterização parcial de uma ß-glucanase.

Production of chitinases, ß-1,3-glucanase (laminarinase) and ß-1,3-1,4-glucanase by two isolates of *Dycima pulvinata*, an efficient biocontrol agent of *Microcyclus ulei*, the causal agent of South America Leaf Blight (SALB), has been investigated. The isolate CEN93 produced chitinases, ß-1,3- and ß-1,3-1,4-glucanases. While the all the three enzymes were found associated with the mycelium, only the ß-1,3-glucanases were secreted into the medium. The CEN62 isolate produced only ß-1,3- and ß-1,3-1,4-glucanases which were found associated to the mycelia and into the medium. The CEN62 ß-1,3- and ß-1,3-1,4-glucanases were tested for the effects of temperature and pH on their activities. Maximal activities of ß-1,3- and ß-1,3-1,4-glucanases were determined at temperatures of 50°C and 60°C, respectively. The optimal pH values for these two enzymes were found in the pH ranges of 5.5-7.0 and 4.5-5.0, respectively. The ß-1,3-glucanase enzyme retained 100% of its original activity for 80 minutes at 60°C, but lost almost all of its activity at 70°C or higher.

679

Characterization of a new member of the *Fusarium solani* species complex causing peanut brown root rot. Casasnovas, F; Reynoso, MM; Palacios, S; Meza, L; Ramirez, ML; Chulze, SN; Torres, AM. Departamento de Microbiologia e Inmunologia, Facultad de Ciencias Exactas, Fco-Qcas y Naturales. Universidad Nacional de Rio Cuarto, Ruta 36 km 601 (5800) Rio Cuarto, Córdoba, Argentina. E-mail: fcasasnovas@exa.unrc.edu.ar.

Peanut is an important crop in Argentina, with a production reaching 300,000 tons during 2007/2008 harvest season. Peanut brown root rot (PBRR) was first described in Argentina in 1992, and the disease has been important in seasons with long drought-stress periods with high incidence in some fields, producing significant economical losses. The etiological agent was first reported as *Fusarium solani*, but the pathogen has not yet been well described. Our objective was to characterize morphological, physiological and genetically the etiological agents of PBRR. Strains isolated from symptomatic peanut plants showing brown root rot were evaluated. The physiological studies indicated that the etiological agent of PBRR could survive and grow effectively in soil and crop debris where matric stress is the major component of total water stress. Morphologically no differences were found between this pathogen and other species belonging to *Fusarium solani* species complex. AFLP analysis and phylogenetic analysis based on ITS region, a portion of translation elongation factor 1-α gene and, a portion of ß-tubulin gene, showed that the pathogen could be a new *formae specialis* among the *Fusarium solani* species complex. The molecular tools used to characterize the pathogen allowed develop single-step PCR specific primers that reliably discriminate *Fusarium solani* causing PBRR.

680

Atividade antagônica *in vitro* de isolados de *Trichoderma* spp. a *Sclerotium cepivorum*. Ferraz, DMM[1]; Monteiro, JMS[1]; Mello, SCM[2]; Blum, LEB[1]. [1]Dep. Fitopatologia, UnB, 70910-900, Brasília-DF. [2]Embrapa-Cenargen, Brasília, DF. E-mail: dinaunb@yahoo.com.br. *In vitro* antagonistic activity of *Trichoderma* spp. isolates to *Sclerotium cepivorum*.

A podridão branca é uma das mais importantes doenças do alho (*Allium sativum*) e outras espécies do gênero *Allium*. É causada por *Sclerotium cepivorum*, um típico patógeno habitante do solo, específico deste gênero de plantas, que sobrevive no solo na forma de escleródios. Essas estruturas atuam na sobrevivência do fungo na ausência da hospedeira, e também atuam como inóculo inicial da doença. Dentre os inúmeros métodos de controle que têm sido relatados para esta doença, destaca-se o controle biológico, principalmente com o uso do fungo *Trichoderma* spp. O objetivo deste trabalho foi avaliar *in vitro* a eficiência de 70 isolados de *Trichoderma* sp., no controle de *S. cepivorum*. Para isso, adotou-se a metodologia de cultivo pareado, onde discos de BDA, de 5mm de diâmetro contendo micélio do patógeno (14 dias) e de *Trichoderma* (7 dias), foram depositados a 0,5 cm da borda da placa de petri em lados opostos. Os ensaios foram conduzidos a temperatura de 23°C com fotoperíodo de 12/12 horas, em delineamento inteiramente casualizado com 5 repetições por tratamento. A avaliação foi realizada no 7° dia do experimento, pela determinação da porcentagem de redução do crescimento do patógeno, de acordo com a fórmula RC% = R1-R2/R1x100. Dos isolados testados, quatro, *T. harzianum* (2), *T. koningii* (1) e *Trichoderma* sp. (1) apresentaram RC de 100%. E 19 mostraram RC acima de 80%. Apoio financeiro: CNPq.

681

Occurrence of *Asterinella* sp. and *Schizothyrium* sp. (Fungi, Ascomycota) on leaves of *Phthirusa* sp. (Loranthaceae) and *Matayba guianensis* (Sapindaceae) respectively. Nóbrega, DS; Inácio, CA. Univ. de Brasília, 70910-900, Brasília, DF. E-mail: daiane_nobrega@hotmail.com. Ocorrência de *Asterinella* sp. e *Schizothyrium* sp. em folhas de *Phthirusa* sp.(Loranthaceae) e *Matayba guianensis* (Sapindaceae) respectivamente.

Species of *Asterinella* sp. and *Schizothyrium* sp. were found on leaves of *Phthirusa* sp., Loranthaceae (UB) and *Matayba guianensis*, Sapindaceae (UB) from material collected from Parque Nacional, located on northeastern of Brasília, Federal District. *Asterinella* sp. shows irregular colonies, up to 5mm diam., dark, amphigenous. Mycelia superficial, black, with hyphae up to 5 µm diam. Ascomata in upper side view: up to 320 µm diam., rather circular, superficial, dark-brown, wall with textura prismatica., with lisygenous ostiole Vertical transverse section: 235-62,5(27,5) X 50-12,5 (10) µm. Paraphyses up to 2 µm diam., colourless, septate. Asci 100-50 X 18-8 µm, cylindrical-clavate to long clavate. Ascospores 20-12 X 9-6 µm, colourless, becoming brown, 1-septate. Schizothyrium sp. Shows isolated fruity bodies on leaf. Ascomata on the upper side view: up tp 420 µm diam., circular, greyish-brown to black. On vertical transverse section: 575-200 (22,5) X 37,5-15 (5) µm, superficial. Paraphyses up to 1 µm diam. Asci 24-15 X 19-13 µm, globose, bitunicate. Ascospores 9-5 X 3-2 µm, hyaline, 1-septate. Both species will be illustrated and fully described and its taxonomy discussed.