



PRIMEIRA CARACTERIZAÇÃO MOLECULAR DE *Nothopassalora personata* NA ARGENTINA

First molecular characterization of *Nothopassalora personata* in
Argentina

RESUMO

Argentina is one of the world's leading peanut exporters. Peanut late leaf spot (LLS), caused by *Nothopassalora personata*, is the most important leaf disease worldwide and is responsible for important peanut yield losses. Symptoms are usually observed on the leaflets, and in severe cases on the petioles, stems, and pegs. The disease may produce an intense defoliation, responsible to the main yield losses (Giordano et.al, Tropical Plant Pathology, 46, 139-151, 2021). Taxonomically the pathogen is located within the Ascomycetes, class Dothideomycetes, order Capnodiales, family Mycosphaerellaceae. The aim of the present work was to carry out a molecular characterization of 3 isolates of *N. personata* obtained from the peanut growing region of Córdoba, Argentina in the 2018/2019 growing season. The genomic DNA was extracted from mycelium obtained in liquid medium using the CTAB protocol. For the molecular identification, three partial nuclear genes were used for PCR amplification and sequencing: 28S nrRNA gene (LSU), internal transcribed spacer regions and intervening 5.8S nrRNA gene (ITS) of the rDNA operon, RNA polymerase II second largest subunit (RPB2). The primers and PCR conditions used were those proposed by Videira et al., Studies in Mycolgy 87,257-421, 2017. Bayesian phylogenetic estimates were inferred with MrBayes 3.2.6 implemented on the CIPRES cluster (<https://www.phylo.org/portal2/home.action>) using the best-fit models of nucleotide substitution. Four parallel runs were conducted with one cold and three heated Markov chain Monte Carlo search chains per run for 5×10^6 generations. Posterior probabilities were calculated after discarding the first 25% of generations as burn-in. Phylogenetic analyses grouped the isolates from peanut with the type species of *N. personata* with a high posterior probability (1.0). This study represents the first characterization of *N. personata* in Argentina, using a molecular and phylogenetic approach, contributing to basic information for disease management and crop health. This study was financed by PICT-2018-04057, INTA

Palavra-chave: *Arachis hypogaea*, Late leaf spot (LLS), Molecular phylogeny