

POLYPHENOLOXIDASES AND CYSTATINS IN PEANUT PLANTS INOCULATED WITH *MELOIDOGYNE MAYAGUENSIS*

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In several areas of Brazil, including the San Francisco River Valley, *Meloidogyne mayaguensis* has been the main responsible for guava death, resulting in significant losses in the production of this fruit crop. Up to now, chemical products experimentally tested have not been efficient and there are no nematicides registered in the Ministry of Agriculture, Livestock and Food Supply for use in guava. Based on the difficulties, search for resistance factors to this nematode in immune plants, like peanuts, would be of great importance for the biotechnology area, seeking for immunity in susceptible plants. In this context, the objective of the present study was to look for factors related to resistance to *M. mayaguensis* in peanut plants by means of analysis of the activity of polyphenoloxidases and cystatins. Seedlings aging 15 days were inoculated with 10,000 eggs of the pathogen and evaluated after 30 days of inoculation. Activity assays of polyphenoloxidases, by means of calculation of activity unit (AU)/mg of protein, and of cystatins, by means of calculation of inhibition unit (IU)/mg of protein, were done because these proteins are directly involved in the defense of the plants against the nematode attack. The results showed a significant increase in the activity of the polyphenoloxidases in the roots when compared to that in the stems, however, with no significant differences in the activity between plants inoculated and not inoculated with the nematode. The presence of cystatins was observed in roots and stems of inoculated and non-inoculated peanut plants, occurring, however, a significant increase of this protein in roots which were inoculated with the pathogen.

Key words: proteic expression, enzymatic activity, nematode resistance factors.

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