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Detection and molecular characterization of *Pasteuria penetrans* isolates parasitizing root-knot nematodes in Al-Qassim area, Saudi Arabia

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Pasteuria penetrans an endospore-forming bacterial parasite of *Meloidogynespp.* This organism is among the most promising agents for the biological control of root-knot nematodes. Universal primers for the 16S rDNA gene were used to amplify DNA from four isolates of *P. penetrans* infecting *M. incognita* in Al-Qassim area. The results indicated that the two Primers (617F/1166R and 27F/1388R) detected the four isolates of *Pasteuria* from *M. incognita* in Al-Qassim area. A nucleotide sequence was obtained for the gene encoding the 16S rDNA from each isolate. The sequences of 16S rDNA of four isolates showed that *P. penetrans* was found. Comparisons between isolates were investigated using ITS-RFLP. Polymorphic ITS-RFLP patters from the four restriction endonucleases allowed differentiation of the isolates of *P. penetrans*. Based on cluster analysis of the obtained fragments of ITS-RFLP, the isolates of *P. penetrans* fall into two distinct clusters. Because of the high specificity and sensitivity of ITS-RFLP, it was possible to discriminate between *P. penetrans* isolates.

Biography

Suloiman Al-Rehiyani is a professor at Plant Production and Protection Department, College of Agriculture and Veterinary Medicine, Qassim University, Saudi Arabia. His research interest includes: Design, development and evaluation of agricultural machinery, Mathematical analysis for predict the performance of agricultural machinery and Development of food processing equipment. He published more than 20 research article in repute journals.

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