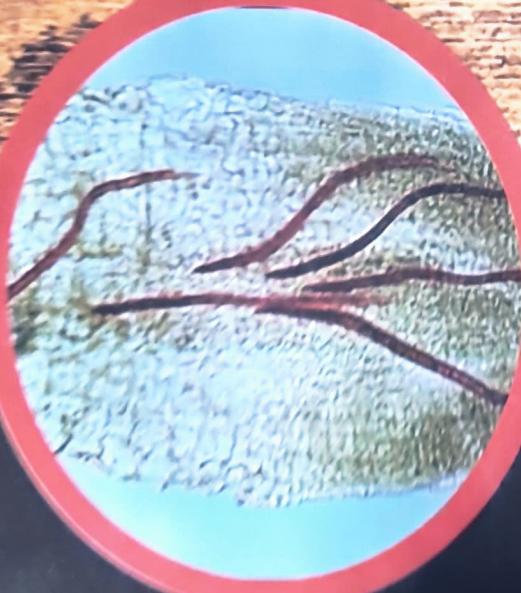


THE ORGANIZATION OF NEMATOLOGISTS OF



CAIRO, EGYPT
53rd ONTA ANNUAL MEETING
September 24-29, 2023

*"Nematodes and Food Security: Urgency,
Discovery and Global Exchange"*

<https://ontaweb.org/meeting2023/>



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PREVALENCE, MORPHO-TAXOMETRIC IDENTIFICATION AND PATHOGENICITY OF *Hemicriconemoides rosae* ON INDIAN VEGETABLE CROPS [PREVALENCIA, IDENTIFICACIÓN MORFOTAXOMÉTRICA Y PATOGENICIDAD DE *Hemicriconemoides rosae* EN CULTIVOS DE HORTALIZAS DE LA INDIA]. H. Sharma and A. K. Chaubey. Nematology Laboratory, Department of Zoology, Chaudhary Charan Singh University, Meerut, India. sharmahimani1995hariom@gmail.com

Nematodes belonging to Genus *Hemicriconemoides*, commonly known as sheathoid nematodes, damaged many fruits, vegetables and cash crops, worldwide. A survey has been conducted in the agricultural fields of Bulandshahr district to find out the plant parasitic nematode load. A total of 85 soil samples were collected from mustard fields of Bulandshahr district of Uttar Pradesh and processed for the presence of plant parasitic nematodes and they were isolated by "Cobb sieving method". Among all the collected soil samples, one soil sample found to be positive for the genus *Hemicriconemoides* and docketed as HCN. The earliest identification based on morphology revealed the species to be *Hemicriconemoides rosae* which was recovered from the mustard field for the first time. The morphology was found to be more consistent with rose population as compared to sugarcane population of the *H. rosae*. Further, the *H. rosae* identified on the basis of molecular and phylogenetic analysis. In addition, correlation analysis of the *H. rosae* based on morphometric parameters was done. The results revealed the importance of body length and its relation with other morphometric parameters and they were found significant. Besides this, the "Manian index a" showed the highest correlation with the body length in adult females. In all the studied ratios, 'a' is very important for the evaluation of the females of a specific species of genus *Hemicriconemoides*. The data from the principal component analysis (PCA) revealed the high intraspecific and interspecific variations between the species of genus *Hemicriconemoides*. However, less intraspecific variations were present between the rose population and mustard population of *H. rosae*. The study revealed the new host i.e., mustard crops, for *H. rosae* showing dissimilarity in morphology with the sugarcane population.

SEQUENCING OF ITS-rDNA REGION OF THE SUGAR BEET CYST NEMATODE (*Heterodera schachtii*) POPULATIONS FROM SYRIA [SECUENCIACIÓN DE LA REGIÓN DE ITS-rDNA DEL NEMATODO DEL QUISTE DE LA REMOLACHA AZUCARERA (*Heterodera schachtii*) DE POBLACIONES DE SIRIA]. A. M. Dawabah(1), A. M. Haidar(2) and Kh. M. Kh. Al-Assas(2). (1)Nematodal Diseases Research Department, Plant Pathology Research institute, Agricultural Research Center, Giza, Egypt, (2)Biological Control Research and Studies Centre, Agriculture College, Damascus University, Syria. dawabah@hotmail.com

Sugar beet is the only source of sugar production in Syria. The sugar beet cyst nematode, *Heterodera schachtii* Schmidt (1871), is one of the most important pathogens that attacks this crop in Syria causing serious yield losses. Molecular identification of ten *H. schachtii* populations collected from different Syrian governorates was performed herein. rDNA of the tested populations was extracted and ITS-rDNA gene was cut and amplified by using two specific primers, and sequenced. The results showed that the ITS gene lengths were alike in all the studied Syrian *H. schachtii* populations (approximately 900 base pairs). The bio-informatic analysis of the Syrian *H. schachtii* populations was compared with those of NCBI (National Center for Biotechnology Information) data. The results assured to be corresponding with 98-99% similarity between the Syrian nucleotide sequences of *H. schachtii* populations and those of NCBI data. Also, there was a big similarity between the studied *H. schachtii* populations, except Dair Azzor populations (two populations) which were somewhat different in certain places along the gene. The phylogenetic tree showed that Dair Azzor populations formed a separate cluster which is slightly different from the other populations.

PIN NEMATODE SPECIES INFESTING GRAPEVINE SOILS IN PORTUGAL [ESPECIES DE NEMATODOS DEL ALFILER QUE INFESTAN VIÑEDOS EN PORTUGAL]. C. Gutiérrez-Gutiérrez. NemaLab, Mediterranean Institute for Agriculture, Environment and Development and Change – Global Change and Sustainability Institute, Instituto de Investigação e Formação Avançada, Universidade de Évora, Évora, Portugal. carlosg@uevora.pt.

Pin nematodes (*Paratylenchus* spp.) currently comprise 132 species of polyphagous plant ectoparasites with at least seven species that are plant pathogenic emphasizing the need for correct identification to establish an appropriate management strategy. Sequences of ribosomal and mitochondrial RNA genes are a powerful species-level diagnostic tool within the genus *Paratylenchus*. Since 2019, nematological surveys are conducted in the main grapevine-growing areas of Central and South Portugal. Thus, the main aim is to evaluate the biodiversity, prevalence and distribution of *Paratylenchus* species from four major grapevine-growing areas of Central and South Portugal using an integrative approach. Contrasting morphological hypotheses with molecular data provided rapid detection of eight species, specifically *P. goodeyi*, *P. hamatus*, *P. holdemi*, *P. pedrami*, *P. tenicaudatus*, *P. projectus*, *P. variabilis*, and *P. veruculatus*. *Paratylenchus pedrami* and *P. goodeyi* are the most frequently pin nematodes found Portuguese vineyards. This work was funded by National Funds through the Foundation for Science and Technology under the Project UIDB/05183/2020.