

**POPULATION DYNAMICS OF *HIRSCHMANNIELLA ORYZAE*,  
THE RICE ROOT NEMATODE, IN RELATION TO  
RICE CULTIVAR, SOIL TEMPERATURE  
AND NEMATODE CONTROL**

**M.M.A. YOUSSEF**

*Department of Plant Pathology, Nematology Unit,  
National Research Centre, Dokki, Cairo, Egypt.*

**Abstract**

Six rice cultivars belonging to Japonica (Sakha 101, Sakha 102, Giza 176 and Giza 177), Indica-Japonica (Giza 178) and Indica (Yamani) groups were evaluated against infection by *Hirschmanniella oryzae*, the rice root nematode under field conditions. Rice cultivars belonging to Japonica group were more susceptible to *H. oryzae* than the other groups. There was a positive correlation ( $r = 0.9$ ) between the root population of *H. oryzae* and prevalent soil temperature, whereas, negative correlation ( $r = 0.07$ ) was observed for the soil population of this pest. The nematicidal activity of methanol extract of *Tagetes erecta* was more as compared to *T. patula*