

**EFFECT OF DIFFERENT CONCENTRATIONS OF FURFURAL  
AS A BOTANICAL NEMATICIDE AND THE APPLICATION  
METHODS IN CONTROLLING *MELOIDOGYNE INCOGNITA*  
AND *ROTYLENCHULUS RENIFORMIS* INFECTING**

**A.E. ISMAIL\* AND M.M. MOHAMED**

*Nematology Laboratory, Department of Plant Pathology,  
National Research Centre, Dokki, 12622, Giza, Egypt.*

\*E-mail: [iismail2002@yahoo.com.uk](mailto:iismail2002@yahoo.com.uk)

**Abstract**

Furfural at 0, 1000 and 4000 ppm concentrations were applied as i) soil drench, ii) soil drench and covering with black plastic and iii) foliar spray for controlling *Meloidogyne incognita* root-knot nematode and *Rotylenchulus reniformis* reniform nematode, and for the improvement of cv. Euroflor sunflower growth under greenhouse conditions at  $25 \pm 5^{\circ}$  C. All application methods of Furfural with two concentrations significantly ( $p \leq 0.05$  and / or 0.01) reduced number of larvae in soil, both females and egg-masses on roots, number of galls of *M. incognita* and number of both females and egg-masses of *R. reniformis* as compared to untreated control. The reductions in both nematodes were positively proportional to the tested concentrations. Using soil drench and covering with black plastic was most effective in reducing numbers of nematode stages and increase in sunflower growth as compared to other treatments. On the other hand, least reduction in the nematode population and increase in plant growth were observed by using foliar spray.