

STUDIES ON ROOT-KNOT NEMATODES IN WHEAT

Y.C. PATEL AND D.J. PATEL

*Department of Nematology, B.A. College of Agriculture,
Gujrat Agriculture University, Anand Campus,
Anand-388110 (G.S.), India.*

Abstract

Experiments on the effect of root-knot nematodes in wheat were conducted to evaluate i) inoculum potential in relation to growth and development of wheat plants, ii) effect of root-knot nematodes infection on biochemical changes and iii) histopathology. Inoculum level of 1,000 nematodes/plant or greater were detrimental to the growth and development of wheat variety Sonalika. Due to root-knot infection, peroxidase and polyphenol oxidase increased significantly but total phenol contents did not change. Histopathological studies of infected tissues indicated that nematode larvae entered intracellularly to stellar region of root. Cells surrounding nematode head increased in size and number, finally forming galls wherein nematode reproduced by laying eggs in gelatinous matrix. Severe damage to the vascular tissues disrupted the continuity of xylem tissues. Cells surrounding the nematode feeding site were darkened and thickened compared to healthy tissues.