

EFFECTS OF CEREAL CYST NEMATODE ON GROWTH AND PHYSIOLOGICAL ASPECTS OF WHEAT UNDER FIELD CONDITIONS

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Abstract

Effect of *Heterodera avenae* the cereal cyst nematode (CCN) on growth and physiological aspects of wheat cv. Yecora Rojo were studied under field conditions at Al-Kharj, near Riyadh, Saudi Arabia. *H. avenae* at increasing initial population densities of 00, 75, 225 cysts / 250 cm³ soil, reduced the number of tillers / plant and suppressed the fresh and dry weight of shoot as well as leaf area but increased the water content of shoot at heading and dough stages. However, fresh and dry weight of root increased with nematode infection at heading stage and decreased at dough stage but an opposite trend was found with the water content of roots. Rot : shoot ratio increased with nematode infection at heading stage. At dough stage, plant height, total chlorophyll content and intercepted light by leaves were suppressed but temperature of plant canopy increased compared to the non-infected controls. Nematode infection caused a significant decrease in the concentrations of N, Fe, Mn, and Cu in shoots at dough stage but increased the concentration of Zn in the grains as compared to the control.