

RESEARCH ARTICLE

Effects of mercury and its antagonistic effect with magnesium and sucrose on growth and NR activity in wheat *Triticum aestivum*(L.)

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SUMMARY

The present investigation was designed to evaluate the effects of different doses of mercury (0.02, 0.04, 0.06, 0.08, 0.10 mM) and combined effect of different doses of mercury with magnesium and sucrose (0.02, 0.04, 0.06, 0.08, 0.10 mM) on growth and NR activity in two varieties of *Triticum aestivum* (L.) A concentration dependent decrease in growth parameters like seedling height, fresh weight of seedling chlorophyll content and carbohydrate content was observed under the influence of different doses of mercury in both the varieties. The lowest dose of mercury (0.02 mM) increased the NR activity and protein content while subsequent doses (0.02, 0.04, 0.06, 0.08, 0.10 mM) showed inhibitory effects. The lower doses of the combined treatment of mercury with magnesium and mercury with sucrose (0.02 and 0.04 mM) increased the growth parameters, NR activity and protein content of *Triticum aestivum* while subsequent concentrations (0.06, 0.08 and 0.10 mM) showed inhibitory effect. Thus, the recovery of inhibitory effects of mercury on growth parameters, NR activity and protein content was noticed in combination treatments of mercury with magnesium and mercury with sucrose treatments.

Key Words : Antagonism, Magnesium, Mercury, Phytotoxicity, Sucrose

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