PHOSPHORUS - MICRONUTRIENTS RELATIONSHIP STUDIES IN WHEAT CROP GROWN IN CALCAREOUS SOILS

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ABSTRACT

A pot experiment was conducted to study the phosphorus-micronutrients interaction in calcareous soils for two years. Four rates of phosphorus (0, 25, 50 and 75 mg P_2O_5 kg^{-1}) were applied to wheat crop grown in three types of soil containing 3, 7 and 11% lime contents. In the first year of experiment, phosphorus @ 25 mg P_2O_5 kg^{-1} in soil containing 3% lime and 50 mg P_2O_5 kg^{-1} in soil containing 7% lime increased zinc contents of soil but, beyond these rates, decreased zinc contents of soil. Phosphorus application upto 50 mg P_2O_5 kg^{-1} increased zinc concentration in plant and decreased zinc concentration of plant at 75 mg P_2O_5 kg^{-1} in all types of soil. In the second year of experiment, phosphorus application decreased zinc content of soil containing 3% lime. Increasing rates of phosphorus reduced zinc concentration in plants grown in soils containing 3 and 7% lime while in soil having 11% lime, last level of phosphorus (75 mg P_2O_5 kg^{-1}) decreased zinc concentration in plants. Addition of phosphorus depressed iron concentration in plants grown in soil containing 11% lime during first year of experiment. Application of phosphorus did not influence manganese concentration in plant during both the years of experiment.