

COPPER AND BORON NUTRITION OF THREE RICE VARIETIES ON ALKALINE CALCAREOUS SOILS

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ABSTRACT

Two pot experiments employing three rice varieties viz., Basmati-385, Basmati-Pak and a mutant DM-25 were conducted on a Hafizabad series soil containing 0.4 and 0.7 mg kg⁻¹ B and Cu, respectively. In addition to basal dressing, B was applied @ 0, 1, 2 and 5 mg kg⁻¹; while Cu @ 0, 2.5, 5 and 10 mg kg⁻¹. Whole shoot sampling of one plant was done at midtillering stage (45 DAT), while grain yield of two plants was recorded at maturity. All the three varieties responded to Cu and B application substantially. Copper concentrations of 5.0, 6.0 and 6.5 mg kg⁻¹ in the whole shoot of the three varieties, respectively were associated with near maximum grain yield obtained at 4 mg kg⁻¹ soil applied Cu. Boron concentrations of 35, 40 and 29 mg kg⁻¹ in the whole shoot of the three varieties, respectively were associated with the near maximum grain yield obtained at 1.7 mg kg⁻¹ B application to this soil.