

DIFFERENTIAL SENSITIVITY OF ELEVEN RICE VARIETIES TO LOW SOIL ZINC AND COPPER

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ABSTRACT

Eleven rice varieties were tested in a pot culture study for their sensitivity to low soil Zn and Cu. Absence of applied Zn or Cu delayed maturity of rice plants. Maximum delay occurred in variety NR-1 as it failed to mature without Zn or Cu application even after 6 weeks delay. In general, plants matured earlier where Cu was applied than that of control as well as the Zn treated plants. Mutant NR-1 was most sensitive to low Zn followed by NIAB-6 > DM-25 > Basmati-Super > Basmati-Pak = Basmati-198 = IR-6 > Basmati-385 > Basmati-370. Varieties Kashmir Basmati and KS-282 were not sensitive to Zn deficiency. In case of Cu stress also, NR-1 was most sensitive followed by NIAB-6 > IR-6 > DM-25 > Basmati Super > Basmati-Pak > Basmati-385 > Basmati-198. Varieties Basmati-370, Kashmir Basmati and KS-282 were not sensitive to Cu stress. In control, all the varieties contained similar, though statistically different, micronutrient concentrations i.e., 18-23 mg Zn kg⁻¹ and around 5 mg Cu kg⁻¹. Therefore, differential response of varieties to micronutrient fertilization could be attributed to their differential Zn and Cu requirement.