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Effect of boron application on grain yield and grain density in rice

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A field experiment with two factorial RBD design replicated thrice was conducted in kharif, 2010 in DRR farm, Hyderabad to study the effect of B (boron) foliar application (four levels of B control, 0.2 ppm, 0.4 ppm & 0.8 ppm) on performance of ten genotypes includes seven varieties (IET 20979, IET 21007, IET 21106, IET 21114, IET 21519, IET 21540, Rasi) and three hybrids (PA 6201, PA 6444, PHB 71). Grains separately and assessed for specific gravity using NaCl solutions of different specific gravity levels (High-1.06, Low-1.20 (90 and 315 gm of NaCl in 1liter of water) and remaining grains are counted as chaff (Venkateswarlu et al., 1986). PHB 71 and IET 20979 genotypes gave maximum grain yield at 0.4 ppm B and genotype level as well as interaction also. Significant variation recorded for high density grains maximum recorded in 0.8 ppm B treatment (10.8 g) followed by control plot (9.3 g). Among different genotypes, Rasi (10.7 g) was on par with IET 21114, PHB 71 and IET 21106. Interaction showed significant maximum value at 0.8 ppm in IET 21106 and IET 21114 (16.2 and 14 g). B treatment improves high, low density grains and reduces the chaffy grains. Long duration genotypes (IET 20979, IET 21513, IET 21540, PA 6444 and PHB 71) are able to produce maximum number of low density grains genotypes. Short duration genotypes (Rasi and PA 6201) produce maximum number of high density grains.

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