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R-WGHFT- Response of wheat genotypes to heat stress in relation to fertility traits

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Eighteen common wheat genotypes were evaluated under four environmental conditions (two sowing dates and two years). Wheat genotypes were sown at two dates: December (favorable) and January (heat stress) during winter seasons of 2010-11 and 2011-12 at RajendraAgricultural University research field using randomized complete block design with three replications. The combined analysis of variance showed that number of spike per plant, number of spikelt fertility, harvest index and number of grains per ear head were significantly influenced by years, sowing dates, and genotypes. The results showed that sowing at the first date increased number of spike per plant, number of grains per ear head, and harvest index. Highly significant genotype differences were recorded for all characters. In general, genotypes AKAW-4008 and Kauz/AA/Kauz produced the highest number of grains per ear head in both seasons, while, genotypes F5-995 and Ipecarabe produced the lowest number of grains per ear head. Regarding the interaction effect between sowing dates and wheat genotypes on number of grains per ear head, AKAW-4008 produced the highest number of grains per ear head under the first sowing date. The stability analysis revealed that genotypes AKAW-4008 and Kauz/AA/Kauz showed high and stable yielding. On the other hand, F5-995 and Ipecarabe showed below-average stability (b = 1.553 & 1.560). Also, the genotypes AKAW-4008 and Kauz/AA/Kauz were relatively heat resistant (HIS values < 1), while F5-995 and Ipecarabe were relatively heat susceptible (HSI > 1).

Biography

Ram Chandra Choudhary is a student of M.Sc. Agriculture Biotechnology at Rajendra Agricultural University and my research work on "Response of wheat genotypes to high temperature with respect to fertility traits and their molecular characterization". I have published three papers in reputed journals.

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