

VARIATION FOR MAJOR PLANT NUTRIENT UPTAKE IN A SET OF WHEAT LINES AND THEIR CROSSES

S. K. Jain¹ and E.V. Divakara Sastry

Department of Plant Breeding and Genetics
S.K.N. College of Agriculture, (Rajasthan Agricultural University)
Jobner (Jaipur) 303329, Rajasthan, India

¹ Present Address: Sorghum Research Station, Sardarkrushinagar Dantiwada Agricultural University, Deesa 385535 (BK) Gujarat, India,
E mail: skjain_sdau@yahoo.co.in (For correspondence)

Abstract : An experiment was conducted in RBD design with three replications for study the variation for major plant nutrient uptake in a set of wheat lines and their crosses. The significant mean squares found for most of the nutrient content traits. The crosses were found superior in comparison to parents in relation to nutrient contents and the ranges of various nutrients were wider in crosses as comparison to parents. The association of N content (grain content) in testers as well as lines showed significant negative association with grain yield. In testers, the associations of N content in straw showed positive association with grain yield. Similarly N content in straw also exhibited strong association with P and K contents in both straw as well as grain in lines as well as in testers. In the lines however, the association of N content in grain with P in grain and K in straw were only found significant. The interrelationships among the nutrient traits in the crosses for these traits were however found non significant. In testers, the N content showed positive associations with p and K content in both straw as well as grain. In the lines however, the association of N content in grain with P in grain and K in straw were only found significant. The genotypes viz., UP-2338 followed by HD-2687 and Job 673 observed as nutrient efficient genotypes and they were also high yielder's. Thus this study indicates that it is possible to select genotypes which are high yielding as well as requires less applied fertilizers.

Keywords: Crosses, Correlation, Genotype, Nutrient index, Variability

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