

RESEARCH ARTICLE

Genetic correlation under diverse environments in bread wheat (*Triticum aestivum* L.)

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SUMMARY

F₂ generation of eight crosses of bread wheat were grown under timely and late sowing conditions to study the genetic correlation for grain yield and its components. Under timely sowing, negative and significant association with grain yield per plant was found in hybrid RWP 2002-2 x LOK-1 for days to heading, in GW 9715 x K 9102 for days to maturity and in AKAW 2862-2 x MACS 2496 for plant height. However, significant and positive relationship was displayed between grain yield per plant with number of effective tillers per plant in all the crosses except crosses CLN 5 x GW 322 and GW 9715 x K 9102. Positive and significant association of grain yield per plant with biological yield per plant and harvest index was observed in all the crosses except cross 3 and crosses 3 and 7, respectively. In case of late sowing, significant and negative genetic association for developmental traits was found for days to maturity in cross RWP 2002-2 x LOK 1 and for plant height in AKAW 2862-1 x MACS 2496, CLN 1 x GW 273 and P 11616 x PBW 524. While positive and significant association of grain yield per plant with number of effective tillers per plant, length of main spike, number of grains per spike, grain filling period and biological yield per plant was observed in all the crosses except cross 3 for length of main spike and cross 2 for number of grains per spike under late sowing. Above said yield contributing characters are useful for the indirect selection for the improvement of grain yield per plant under respective environment in bread wheat.

Key Words : Genetic correlation, Bread wheat, Diverse environment

How to cite this article : Vanpariya, L.G., Pithia, M.S., Javia, R.M. and Pansuriya, A.G. (2017). Genetic correlation under diverse environments in bread wheat (*Triticum aestivum* L.). *Internat. J. Plant Sci.*, 12 (2): 294-298, DOI: 10.15740/HAS/IJPS/12.2/294-298.

Article chronicle : Received : 07.05.2017; Revised : 10.06.2017; Accepted : 25.06.2017

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