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Heritability and heterosis analysis for different crosses in *Brassica juncea* (L.) Czern & Coss. with inheritance of white rust resistance

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ABSTRACT : For estimation of heritability, mid and better parent heterosis among the various traits of Indian mustard [*Brassica juncea* (L) Czern & Coss.] was carried out at N.D. University of Agriculture and Technology, Faizabad during 2004-2006. High heritability coupled with high genetic advance % of mean was observed for number of siliquae on main raceme, 1000-seed weight, seed yield per plant and plant height. The magnitude of high heritability and genetic advance % of mean indicated that improvement in this trait could be done through selection feasible. Significant positive heterosis over mid parent was registered for plant height, secondary branches per plant, seed yield per plant in all crosses and for number of siliquae on main raceme, and length of main raceme in cross-II and III. However, significant positive heterobeltiosis was observed for seed yield per plant, number of siliquae on main raceme, and length of main raceme in all crosses except cross-I and plant height and number of secondary branches per plant in crosses-I, II and III showed significant heterobeltiosis and it ranged from 1.01% in cross-I to 24.77% in cross-III. On the basis of ratio obtained in F_2 (3R:1S) and BC_1 (1R:1S) it is concluded that the white rust resistance in WRR-9801 is governed by single dominant gene.

Key Words: Mustard, heritability, heterosis, white rust.