



Evaluation of progenies from the fifth reciprocal recurrent selection cycle in maize

N.B. Alves, J.M.V. Pádua, K.O.G. Dias, R.P. Diniz, M.L. Guedes,
G.A. Cardoso and J.C. Souza

Department of Biology, Universidade Federal de Lavras, Lavras, MG, Brasil

Corresponding author: N.B. Alves
E-mail: natalia.b@hotmail.com

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ABSTRACT. The objective of this study was to evaluate the performance of 119 full sib progenies of the fifth cycle of reciprocal recurrent selection (RRS) derived from of Universidade Federal de Lavras maize breeding program. The experiment was carried out in an 11 x 11 triple lattice design at two locations (Lavras, Lambari). The plots consisted of two rows of 3 m, with four plants per 1 m and 0.60 meters of spacing between lines. The grain yield was obtained as kg/plot through weighing of husked ears. The contrast between progenies and controls was not significant, indicating there were no significant differences among the average grain yields of the progenies and controls. When considering the joint analysis, heritability was 64.2%; however, this estimate did not differ from the values estimated for each location separately. Estimates of genetic and phenotypic variance among progenies ranged from 0.21 to 0.28 and 0.30 to 0.47, respectively. Estimates of selection gain, for 10% selection intensity, indicated gains of 16% in the joint analysis of the two locations. The progenies of the fifth cycle of RRS had high average grain yield, associated with high variability. In comparison to the average grain yields exhibited by the controls, it was concluded that the progenies have the potential to be commercially exploited.

Key words: *Zea mays* L.; Reciprocal recurrent selection; Simple hybrid