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CORNCOB CHARACTERISTICS AND PRODUCTIVITY OF GENOTYPES SUBMITTED RAINFED CONDITIONS

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RESUMO

In the rainfed system, corn (*Zea mays* L.), represents approximately 1 /3 of the corn-growing area in Brazil. Due to the high demand, it is necessary to increase production and for this, breeders have breeding methods that allow them to select favorable genotypes for quantitative traits, such as productivity. Genetic improvement programs via recurrent selections have efficient results for agricultural production. Therefore, the objective of this work was to conduct a cycle of reciprocal recurrent selection (SRR) evaluating productivity and cob characters (length, diameter and mass) of 64 corn genotypes. The test was conducted in the experimental field of the IFES - Itapina Campus under rainfed system, in DBC with an 8x8 square lattice arrangement with 2 repetitions. After bulk harvesting of the cobs/plot, the same were measured and weighed with the assistance of a pachymeter and a semi-analytical balance, respectively. The obtained data were submitted to variance analysis by the F test and Scott-Knott test at the 5% level by the software R. There was a significant difference between the genotypes, demonstrating that there is genetic variability. The CV% values for the variables oscillated between 5.61% and 10.41%, demonstrating that the data are reliable and that there was experimental precision. For cob diameter and length, it was found an average of 4.69 and 14.98 cm respectively, and for mass 178g was found. The average productivity was 7,277.38 kg.ha⁻¹, a value already above the production of the state of Espírito Santo, which is approximately 2,896 kg.ha⁻¹. The integration of these genotypes in the agriculture of Espírito Santo can increase up to 72 sc.ha⁻¹ in the productivity of the small farmer. It was possible to conduct SRR of corn families under rainfed system and select 20 favorable genotypes.

PALAVRAS-CHAVE: drought tolerance, recurrent selection, yield gain

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