GMR Genetics and Molecular Research
Online Journal
ISSN:1676-5680

Adaptability and stability of conilon coffee in areas of high altitude

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Genet. Mol. Res. 13 (3): 7879-7888 (2014)
Received July 22, 2014
Accepted August 21, 2014
Published September 26, 2014
DOI http://dx.doi.org/10.4238/2014.September.26.26

ABSTRACT. In view of the predicted models of global climate change and differences in prices and production costs, there is increased interest in *Coffea canephora* cultivation in areas of high altitude. However, this species is sensitive to low temperatures, where genotypes vary regarding adaptation/tolerance mechanisms, demonstrating genotype x environment interaction. The aim of this study was to evaluate the stability and adaptability of *C. canephora* varieties in high-altitude areas. The experiments were carried out in February 2004, in Bom Jesus do Itabapoana, Rio de Janeiro State, Brazil, at an altitude of 725 m. Four clonal varieties (EMCAPA 8111, EMCAPA 8121, EMCAPA 8131, and EMCAPA 8151) and five harvests (2006 to 2010) were used. The experimental design was randomized blocks with four treatments and six plots, with 12 plants in each plot and spaced 2.5 x 1.2 m. Adaptability and stability parameters were determined using methods based on

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nonparametric analysis and analysis of variance. The results showed that the EMCAPA 8131 had the best performance according to stability and adaptability parameters and may be promising for high-altitude regions.

Key words: *Coffea canephora*; Low temperatures; Agronomic performance

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