عنوان مقاله:

Genetic Variability of Access of the Active Germplasm Bank of Coffea canephora of Incaper in Southern Espírito Santo

محل انتشار:

مجله منابع ژنتیک, دوره 6, شماره 2 (سال: 1399)

تعداد صفحات اصل مقاله: 13

نویسندگان:

Joao Felipe de Brites Senra - *Development and Innovation Institute, Technical Assistance and Rural Extension of Espírito Santo, Rodovia Joao Domingo Zago, Brazil*

Maria Amélia Gava Ferrao - *Brazilian Agricultural Research Corporation Institute, Technical Assistance and Rural Extension of Espírito Santo, Brazil*

Rodolfo Ferreira de Mendonça - *Itapemirim City Hall, ES. Former Pos Doctor Junior CNPq fellow and Consorcio Pesquisa Café in INCAPER*

Aymbiré Francisco Almeida da Fonseca - *Brazilian Agricultural Research Corporation Institute, Technical Assistance and Rural Extension of Espírito Santo, Brazil*

Romário Gava Ferrao - *Technical Assistance and Rural Extension of Espírito Santo and research coordinator of Brazilian College Multivix*

Paulo Sérgio Volpi - *Development and Innovation Institute, Technical Assistance and Rural Extension of Espírito Santo, Rodovia Joao Domingo Zago, Brazil*

Abraão Carlos Verdin Filho - *Development and Innovation Institute, Technical Assistance and Rural Extension of Espírito Santo, Rodovia Joao Domingo Zago, Brazil*

Marcone Comério - *Development and Innovation Institute, Technical Assistance and Rural Extension of Espírito Santo, Rodovia Joao Domingo Zago, Brazil*

Matheus Wandermurem da Silva - *Research Coffee Consortium Scholarship of Southern Center, Development and Innovation Institute, Technical Assistance, and Rural Extension of Espírito Santo*

خلاصه مقاله:

This study aimed to analyze the genetic variability of ۳۲۳ accessions of the Active Germplasm Bank (BAG) of Coffea canephora of the Institute for Research, Technical Assistance and Rural Extension of Espírito Santo (Incaper) using ۳۸ quantitative phenotypic characters. The standardized average Euclidean distance between the accessions was estimated to generate a statistical distance matrix and, from this, the groupings were performed using the Tocher and UPGMA. Concerning the studied accessions, the amplitude of the data set for each characteristic, and the possibility of selection were visualized. The accuracy of data collection was verified by the Variation Index with values below ۱۰%

for most of the characters, except for characters such as number of rosettes in the upper plagiotropic branch, number of grains in the smallest orthotropic branch, and number of grains per rosette on the upper plagiotropic branch. Using the Tocher method, ۲۵ groups were recognized, ۱۰ of which were formed by only one accession. The hierarchical grouping highlighted the lack of duplicates and accessions ۱۷۳ (ES ۱-B) as the most genetically distant. The analysis of the relative contribution of each character distinguished fresh matter and dry matter of orthotropic branches thrown by plants susceptible to pruning as fundamental for the differentiation of accessions and important in future studies of diversity as they are responsible for about ۸۳% of the phenotypic variability of the study. There were no duplicates among the evaluated accessions and there are heterotic groups and distinct accessions in the BAG that can be used in hybridization programs or per se to obtain new cultivars. The pairs of the most similar and dissimilar accessions were ۴۵ (۱۴۸/۸۶) and ۳۲۰ (IAC۳۷) with a statistical distance of ۰.۰۷۱۳ and ۱۷۳ (ES ۱-B) and ۲۷۰ (۴۰۳-Marilândia) with a distance of ۰.۴۷۶۵, respectively.

کلمات کلیدی:
Conilon Coffee, Diversity, Multivariate Analysis, Cluster