

Characterisation of Nigerian Robusta Coffee (*Coffea canephora* Pierre ex. Froehner) Germplasm

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SUMMARY

Thirty-seven *Coffea canephora* clones were characterised using forty-eight agro-botanical characteristics. The planting design was the Fisher blocks, in which five plants of each clone were established in contiguous rows. Spacing was 3.1 m by 3.1 m. Data were collected in three replicates. Characterisation data were analysed using multivariate analyses. Differences among the *C. canephora* clones were significant ($P < 0.05$) for thirty-five out of forty-eight agro-botanical characters. The coefficient of variation for the characters ranged between 1.11 and 28.47. The major discriminating characters were berry yield (kg/ha), number of berries on five bearing secondary branches and number of flowers per axil. Numerical taxonomy and multivariate system (NTSYS) effectively grouped the clones into four major clusters. Similarity coefficients among the clones ranged between 32.6% and 80.0%. The most divergent pair showing 32.6% similarity was clones T921 and C36, while clones T164 and T116 exhibited high similarity of 80.0%. The low coefficients of variation among many of the characters, the high level of overlaps and the low genetic distances among many of the clones as revealed by the similarity co-efficients, indicated that the genetic base of the Nigerian *C. canephora* germplasm is very narrow. Therefore, while existing clones in different clusters may be used for subsequent hybridisation and selection programme; it is recommended that the crop's germplasm should be expanded by introduction from other coffee growing countries. This will facilitate effective coffee breeding programme in the future.