

Diversity in the Ethiopian Coffee (*Coffea arabica* L.) Germplasm

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SUMMARY

Eighty one accessions of the Ethiopian coffee germplasm (*Coffea arabica* L.) were evaluated for fifteen seedling parameters at Jimma Agricultural Research Center during the 2002/2003 cropping season with the objective of clustering the germplasm accessions into genetically diverse classes based on seedling parameters. Cluster analysis grouped the accessions in to six major groups consisting of one to fifty four accessions. No correspondence was observed between the geographic and genetic diversity. Of the eleven principal components involved in explaining the entire variation among the accessions, the first two that had eigen values of more than one explained about 83% of the variation. The first principal component that accounted for about 67% of the total Variance was due chiefly to seedling height (SH), leaf length (LL), leaf width (LW), stem diameter (SD), leaf area (LA), shoot fresh weight (SFW) and root fresh weight. Overall, the study confirmed the presence of trait diversity in the Ethiopian coffee germplasm and this could be exploited in the genetic improvement of the crop through hybridization and selection.