

# **Variability and Association of Agronomic Characters in the Hararge Coffee Germplasm Accessions**

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## **SUMMARY**

A field experiment was conducted at Awada Agricultural Research Sub-Center using one hundred Hararge coffee germplasm accessions for morphological characterization at pre-bearing stage. These coffee germplasm accessions representing 16 weredas of Hararge coffee growing areas and 4 standard checks from southwest Ethiopia were evaluated for 14 quantitative characters. A wide range of phenotypic variations was observed among accessions in respect of majority of the characters studied. Among the 14 characters, total number of internodes per plant, canopy diameter, leaf area and number of secondary branches are the most important ones. The differences between the minimum and maximum mean values for other characters were also high. The estimates of PCV and GCV for the 14 quantitative characters considered ranged from 5.9 to 54.8% and 3.2 to 37.5%, respectively. The phenotypic and genotypic correlation analyses for the 14 quantitative traits showed positive and significant associations in the majority of characters. Among the characters, plant height, length of the longest primary branch, average length of primary branches, number of internodes on the longest primary branch, total number of internodes per plant in particular showed positive and highly significant correlations with majority of the characters both at phenotypic and genotypic levels. High  $h_b^2$  values were also obtained for internode length of branches (90%), canopy diameter (51.9%) and plant height (50.8%). For the rest of the characters, moderate  $h_b^2$  values were obtained. The estimates of genetic advance for the 14 characters were also calculated. Relatively higher estimates were obtained for number of secondary branches, plant height and canopy diameter. In view of this, it may be surmised that the above-mentioned characters could be of potential importance to the improvement of Hararge coffee population through selection and hybridization