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# FRUIT DETACHMENT FORCE IN ETHIOPIAN ACESSIONS OF *COFFEA ARABICA*

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## Introduction

The fruit detachment force (FDF) is a relevant agronomic variable as it directly affects harvesting efficiency in *Coffea arabica*. This study aimed to characterize the FDF in 26 genetic accessions of Ethiopian origin and nine commercial cultivars.

## Material and methods

The experiment was conducted in a randomized block design with four replications. Thirty ripe fruits were collected per replication using a portable digital dynamometer (Instrutherm, model DD-2000). The data were subjected to analysis of variance, and means were compared using the Scott-Knott test (p-value = 0.002; CV = 14.95%).

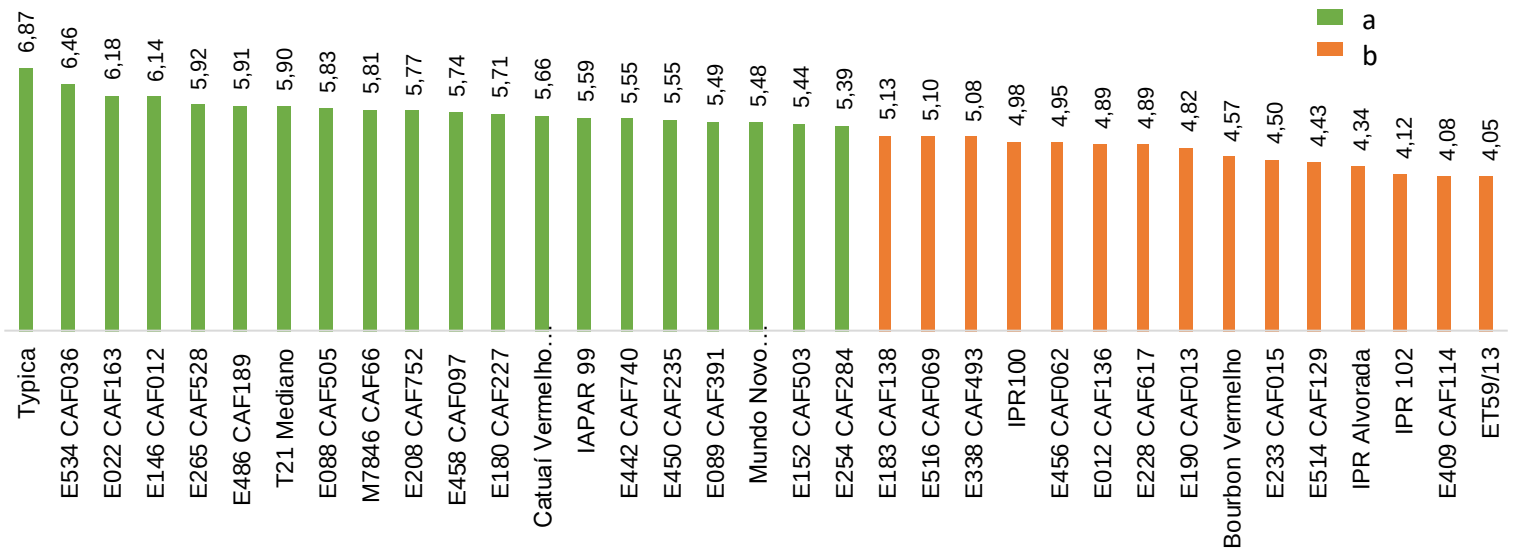


**Figure 1.** Mean fruit detachment force of coffee accessions of Ethiopian origin.
Letters a and b indicate significant differences by the Scott–Knott test at 5% probability.

## Results and discussion

FDF ranged from 4.05 to 6.87 N (Figure 1). Genotypes with FDF lower than 5.12 N formed a single similarity group, showing potential for selective harvesting, whereas the others are suitable for mechanical harvesting [1].

## Conclusion and perspectives

The variability in FDF can be explored to optimize the efficiency of Coffea arabica harvesting systems. FDF shows potential as a selection criterion for the development of cultivars better adapted to both selective and mechanical harvesting, thereby enhancing agricultural management.

**References:**
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