



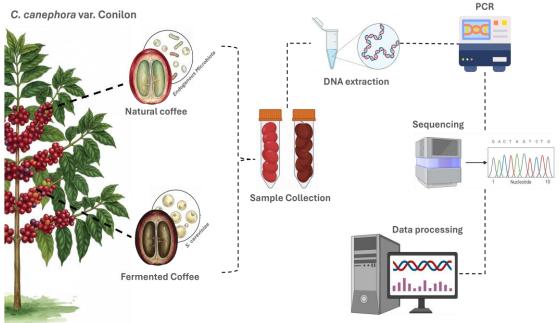


# Genetic diversity of *Coffea canephora* influences microbial dynamics during fermentation process

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### Introduction

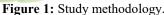
The growing demand for specialty coffees has expanded the opportunities for *Coffea canephora*. Fermentation can improve its sensory quality, but the genetic diversity of the plant affects microbial interactions and fermentation. This study evaluated microbial communities of different genotypes before and after fermentation.

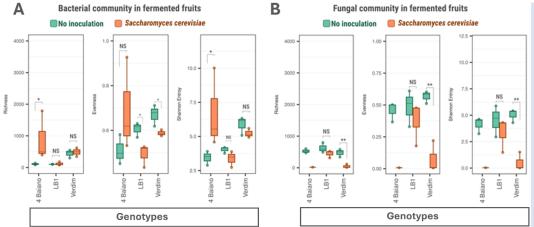


### Materials/Methods

Ripe fruits of three genotypes of *C. canephora* from the same farm were fermented with *S. cerevisiae* for 36 h.

Samples of fermented and unfermented fruits were subjected to metagenomic





# **Figure 2:** Alpha diversity metrics (richness, evenness, and Shannon entropy) of bacteria (A) and fungi (B) present in fruits in *C. canephora* genotypes.

### **Results/Discussion**

sequencing.

Yeast inoculation altered the microbial community. Bacterial richness and diversity increased in some genotypes, while remaining unchanged in others. Fungal richness and diversity decreased in all genotypes, indicating yeast dominance.

## **Conclusion/Perspectives**

Genotype-fermentation interactions shape the microbiota, highlighting genetic selection to optimize *C. canephora* fermentation.

### References:

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- 2. Trivedi, P., Batista, B. D., Bazany, K. E., & Singh, B. K. (2022). Plant–microbiome interactions under a changing world: responses, consequences and perspectives. *New Phytologist*, 234(6), 1951-1959.