Characterization of morphophysiological responses of *Coffea arabica* L. genotypes from the germplasm bank in the dry season

Julieta Andrea Silva de ALMEIDA[1](julieta.almeida@sp.gov.br), Guilherme Amulssa Leite TORRES[2], Roberto MOREIRA[1], Angélica Prela PANTANO[3], Júlio César MISTRO[1], Elaine Mantovani SATORRES[1] - [1]*Centro de Café "Alcides Carvalho", Instituto Agronômico de Campinas, Campinas, SP, Brazil,* [2]*Pós-Graduação em Geografia, Universidade Estadual de Campinas, Campinas, SP, Brazil,* [3]*Centro de Biossistemas Agrícolas e Pós-Colheita, Instituto Agronômico de Campinas, SP, Brazil*

Introduction

The coffee culture represents a strong production system that can be threatened by drought [1]. Genotypes of the Coffee Germplasm from the Agronomic Institute are not known in terms of drought tolerance. This study aimed to characterize morphophysiological responses of *Coffea arabica* genotypes in the dry season.

Materials/Methods

Plants of 4,000 genotypes of *C. arabica* belonging to the Coffee Germplasm Bank were used. These plants are distributed in Field 1 and Field 2 at the Agronomic Institute in the city of Campinas, SP, Brazil, in 2021 (Figure 1). These were evaluated for height, canopy diameter, leaf wilting and vigor in the dry season.

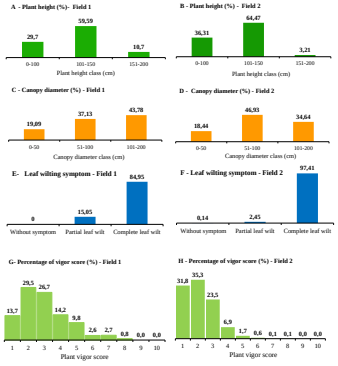

Figure 2: Morphological evaluation of *C. arabica* plants from of the Coffee Germplasm of the Instituto Agronômico.

Figure 1: Field 1 and Field 2.

Results/Discussion

The evaluations were carried out in the dry the year 2021.

Field 1 had a higher percentage of plants with a height greater than 1 m, stem diameter greater than 0.50 m and high vigor compared to those belonging to Field 2. However, the Field 2 showed a rate of 0.14% of plants without leaf wilting, while in Field 1 all plants had partial wilting, 15.05 %, or total wilting, 84.95%.

Conclusion/Perspectives

The results obtained indicate that there is the possibility of identifying genotypes with drought tolerance capacity. However, to achieve this identification there is a need for more evaluations of plants in the dry season.

References:

1. Torres et al. 2021. Arq. Inst. Biol., v.88, 1-12, e00602020, 2021.