28th Conference Asic 2021
MONTPELLIER - FRANCE

Characterization of *Colletotrichum* species causing anthracnose in coffe (*Coffea arabica*) plantation in Costa Rica

Robles Alejandra (arobles@icafe.cr), Barquero Miguel, Méndez Erika, Molina Kenia.

S2-P-22

Icafe
Instituto del Café de Costa Rica

Introduction

Colletotrichum spp. infect coffee leaves, stems and berries. Several species of *Colletotrichum* have been identified in coffee crops worldwide, of which the specie of greatest concern is C. Kahawae that causes CBD. Recently, in Costa Rica a wide variability in symtoms and aggressivenes of anthracnose has been detected, affecting many of the coffee regions. Study was performed to identify and describe *Colletotrichum* species complex present in coffee crops

Materials/ Methods

Colletotrichum spp. was isolated from coffee leaves, branches and berries with anthracnose lesions collected at five coffee regions in Costa Rica. Single spore cultures of each isolate were obtained, and fifteen representative *Colletotrichum* strains were selected for molecular identification by partial sequencing of ACT, TUB2, GAPDH, GS, and ITS genes. Biochemical test was done for four isolates according to the method of Bridge et al. (2008) to discard CBD agent C. Kahawae. Also, morphologial description for the identified *Colletotrichum* species were performed.

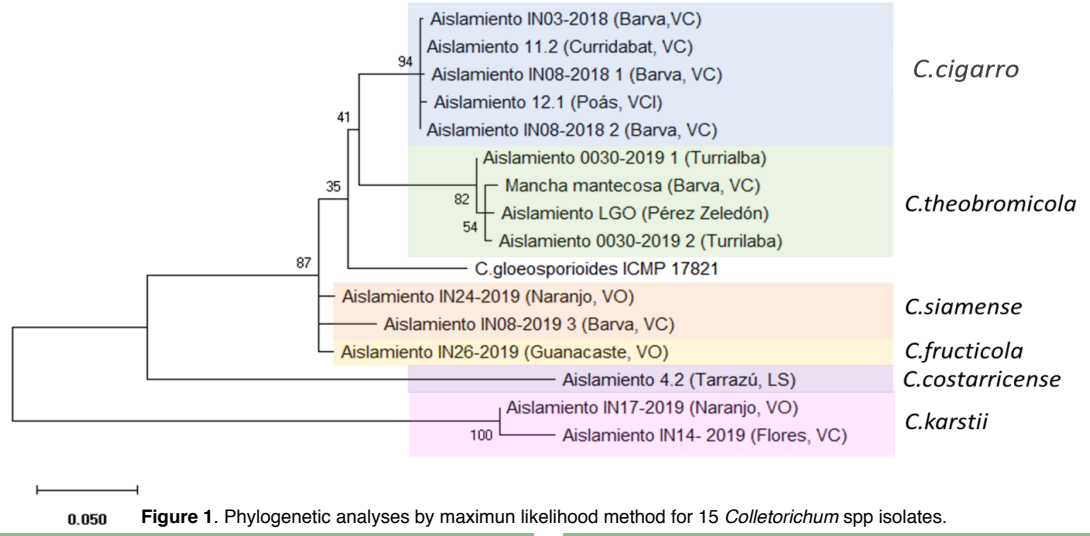

Figure 1. Phylogenetic analyses by maximun likelihood method for 15 *Colletorichum* spp isolates.

Results/ Discussion

Morphologial, biochemical and molecular analysis help us to identified six *Colletotrichum* species. We identified *C. fructicula, C. siamense, C. costarricense, C. karstii, C. theobromicola and C. cigarro*, being *C. theobromicula and C. cigarro* the frequent species identified.

Conclusion/ Perspective

This is the first report of the *Colletotrichum* species complex causing anthracnose in coffe crops in Costa Rica. These data will provide the basis for the study of the *Colletotrichum* species complex and its relation with the variability in the aggresiviness and symptomatology of anthracnose symtoms observed in coffee crops un Costa Rica in recent years.

References: *Bridge et al, 2018. Journal of Phytopathology, 2018,156, 274-80. / Weir, B.S., Johnson, P.R., & Damm, U. 2012. Studies in mycology, 73,115-180*