30 CONGRESO SOCIEDAD CHILENA DE FITOPATOLOGÍA

Hotel Santa Cruz Plaza

13 al 15 de diciembre, 2023.

Santa Cruz, Chile

Organizan

Universidad de O'Higgins

Sociedad Chilena de Fitopatología 1958

Edición y Diseño:

Cristóbal Merchan Farfán

Juan Vásquez Lara

Nicolas Quiroga Barrera

Set Pérez Fuentealba

52. *Colletotrichum scovillei*: a new record of pepper anthracnose in Europe and evaluation of Actinomycetes as potential biocontrol microorganisms.

Xhemali, B.[1,2] , Cortiello, M.[1] , Modica, F.[1], Bellameche, F.[1] , Stefani, E.[1] & Giovanardi, D.[1]

1 Department of Life Sciences, University of Modena and Reggio Emilia, 42122 Reggio Emilia, Italy.
2 Laboratory of Plant Protection, Kosovo Institute of Agriculture, 30000 Pejë, Kosovo.

E-mail: davide.giovanardi@unimore.it

Pepper (*Capsicum annuum* L.) is one of the most important vegetables cultivated in Kosovo, as in several countries in the Mediterranean. In September 2022, two commercial fields in the municipalities of Peja and Rahovec (Kosovo) showed typical symptoms of anthracnose. In both affected fields, disease incidence was approximately 40% and yield losses were estimated to be above 30%. Dark lesions developed on fruits, which later appeared sunken, necrotic and surrounded by brown haloes. After isolation onto PDA, morphological characteristics of colonies and single spores of both isolates revealed to be consistent with the description of *Colletotrichum scovillei*. Phylotyping of ITS, GAPDH and TUB2 sequences of the two isolates was performed. To confirm Koch's postulates, a conidial suspension for both isolates was inoculated into healthy pepper fruits and incubated in humid chamber. Ten days after the pathogen's inoculation, typical anthracnose symptoms developed, from which the fungus was successfully reisolated. No symptom was ever observed in fruits inoculated with sterile water. To the best of our knowledge, this is the first report of anthracnose caused by *C. scovillei* in Europe. Given the economically importance of the crop and the significant quality and yield losses observed, measures are urgently needed aiming to pathogen eradication or, alternatively, to ensure an efficient disease control to avoid pathogen's spread to other geographical areas. Therefore, four Actinomyces isolates from the UNIMORE collection were tested in vitro against *C. scovillei* through both dual and double culture assays: preliminary data showed their effectiveness in reducing mycelium growth. For searching sustainable alternatives to the extensive use of fungicides, further studies are ongoing to assess their antagonistic activities in planta and to identify the Volatile Organic Compounds (VOCs) responsible for the mycelial growth inhibition by GC-MS analysis.

KEYWORDS: *Capsicum annuum*, *Colletotrichum scovillei*, biological control.