IOBC OILB

WPRS International Organisation for Biological and Integrated Control
West Plalaearctic Regional Section
SROP Organisation Internationale de Lutte Biologique et Integrée
Section Régionale Ouest Palaéarctique

IOBC-WPRS Working Group
"Integrated Plant Protection in Fruit Crops"
Sub Group "Pome Fruit Diseases"

11th International IOBC-WPRS Workshop on Pome Fruit Diseases

26-30 June 2017
Jūrmala, Latvia

Program and abstracts

Colletotrichum species causing the postharvest problem of bitter rot on apple in Belgium: from pathogen to host

A. Grammen[1], M. Wenneker[2], J. Van Campenhout[3], W. Van Hemelrijck[3], A. Geeraerd[4], W. Keulemans[1]

[1] *Laboratory for fruit breeding and biotechnology, Department of Biosystems, KU Leuven, Willem de Croylaan 42, B-3001, Heverlee, Belgium;*
[2] *Wageningen University & Research, Wageningen, P.O. Box 200, 6670 AE, Zetten, The Netherlands;*
[3] *Research Station of Fruit Cultivation, Fruittuinweg 1, 3800 Sint-Truiden, Belgium;*
[4] *Division of Mechatronics, Biostatistics and Sensors (MeBioS), Department of Biosystems, KU Leuven, Willem de Croylaan 42, P.O. Box 2428, B-3001, Heverlee, Belgium.*
amelie.grammen@kuleuven.be

Worldwide *Colletotrichum* spp. have been identified as a detrimental pathogen in the apple production, causing the postharvest disease bitter rot. However, until now, *Colletotrichum* spp. on apple were not yet known to be present and problematic in Belgium. Although, in surrounding European countries there are increasing numbers of first reports concerning problems of bitter rot on apple (United Kingdom, France, Slovenia, the Netherlands…). Since postharvest diseases can cause considerable fruit damage and fruit growers are continuously trying to reduce these losses during and after storage, a better knowledge on the presence of the pathogen, pathogenicity and the pathogen-fruit interactions is essential to assess the problem more in detail. In our research we assessed the presence and pathogenicity of *Colletotrichum* spp. in Belgium: seven different species were identified based on multigene sanger sequencing results. Some of them were found for the first time on apple. We also considered to focus towards a better understanding of the differences in susceptibility of apple fruits and cultivars for *Colletotrichum* species. Artificial inoculation experiments pointed out that 'Nicoter' apple fruits are less susceptible then 'Pinova' apple fruits and storage time of fruits (5 to 20 weeks) in a cold room (1°C) have an effect on the lesion development in time.

Keywords: postharvest, *Colletotrichum* species, bitter rot, apple fruit, pathogenicity, sanger sequencing