



XIIth EUCARPIA MEETING ON CUCURBIT GENETICS AND BREEDING

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Book of Abstracts



CUCURBITACEAE 2021

EUCARPIA CUCURBITACEAE 2021

Abstracts of the XII Eucarpia Meeting on Cucurbit Genetics and
Breeding

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Edited by

María Luisa Gómez-Guillamón¹, Manuel Jamilena², María Belén Picó³
and Ana M. Pérez-de-Castro³

¹IHSM La Mayora, UMA-CSIC

²Universidad de Almería

³Universitat Politècnica de València

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P6-6

Evidence of physiological races of *Podosphaera xhantii* in watermelon in Southern Europe

Juan A. Tores¹ (+), Dolores Fernández-Ortuño¹, Daniel Jimenez², Samantha Guiderdone², and Daniel Bellón-Doña²

¹Instituto de Hortofruticultura Subtropical y Mediterránea 'La Mayora' (UMA-CSIC), Algarrobo-Costa, 29760 Málaga, Spain, ²BASF, Finca Lo Ruiz S/30593 La Palma, Cartagena, Murcia, Spain.

Thirteen single-spore isolates of *Podosphaera xhantii* collected from the main commercial growing areas of watermelon in Italy, Spain and France, were characterized based on melon differential set. The differential set indicated that 7 of the 13 were belonging to race 1, whereas the remaining isolates were belonging to race 5 (one isolate) and race 3.5 (three isolates). Isolates most virulent were preferentially associated with race 1. Based on field observation and genetic information, we defined a differential set for watermelon, represented by one commercial F1 and six BASF breeding lines. The analysis of these watermelon genotypes over the thirteen *Podosphaera xhantii* isolates, indicated a possible host specialization in watermelon. Line X6 was susceptible to all isolates, whereas X1 showed resistance to all isolates. While X2, X3, X4 lines and the commercial F1 showed similar resistance to 7 isolates, they presented a different pattern for the remaining 6 isolates. This experiment was repeated twice in two different laboratories with consistent results. This is the first indication that physiological races are present in Europe in watermelon, two physiological races have been described previously in USA (1W and 2WF).

Keywords: Watermelon, Host range, *Podosphaera xhantii*, physiological races