

XII International Symposium on Plum and Prune Genetics, Breeding and Pomology

PROGRAMME AND BOOK OF ABSTRACTS

September 14–17, 2021 Zlatibor, Serbia

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Publisher: Fruit Research Institute, Čačak

For Publisher: Darko Jevremović, director

> *Editors*: Darko Jevremović Nebojša Milošević Ivana S. Glišić

Technical editor: Ivana S. Glišić

Printed by Trigon dizajn studio, Čačak, Serbia

Circulation 50

ISBN 978-86-920869-2-2

Čačak, 2021

Supported by: Ministry of Education, Science and Technological Development of the Republic of Serbia

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OV-02

MORPHOLOGICAL AND PATHOGENIC CHARACTERISTICS OF Alternaria alternata ISOLATES FROM PLUM (Prunus domestica L.)

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During June and July 2020, numerous 'Stanley' plants were observed with small, brown spots on leaves in the plum orchard in locality Bačka Topola. Later on, leaf lesions became dark brown and irregular, resulting in necrosis that was followed by defoliation. Collected samples were analyzed using standard mycological procedures. Ten fungal isolates from leaves and branches were obtained from infected plums. Two isolates originating from branches (ŠG) and leaves (ŠL), were selected for further studies. The pathogenicity test was performed on five plum cultivars: 'Stenley', 'Čačanska Lepotica', 'Čačanska Rodna', 'Čačanska Najbolja' and 'Požegača'. Morphological characteristics of two selected isolates were studied on three nutrient media: cornmeal agar (CMA), carnation leaf agar (CLA) and potato dextrose agar (PDA). Both tested isolates formed airy, dark olive-green colonies on PDA medium. The colonies were light olive-green in all tested isolates on CMA. On CLA, all studied isolates formed olive-green substrate mycelium. Conidia size for tested isolate ŠG on PDA medium ranged from 19.20-46.24 × 7.95-12.88 µm (mean 25.85 × 10.42 μm), and for isolate ŠL from 18.17–36.16 × 8.09–12.59 μm, (mean 24.98 × 11.10 µm). Both studied isolates on all tested plant organs (leaf, branch and fruit) in all plum cultivars caused symptoms typical for fungi of the genus Alternaria, the appearance of dark brown necrotic lesions on leaves, branches and fruits. Based on preliminary research of morphological characteristics and pathogenic tests, analyzed isolates were identified as belonging to the species Alternaria alternata.

Keywords: plum, Alternaria alternata, morphology, pathogenicity.