

Plant Protection Society of Serbia (PPSS) Общество по защите растений Сербии (ОЗРС)



East Palearctic Regional Section (EPRS)
Восточно палеарктическая региональная секция (ВПРС)



West Palearctic Regional Section (WPRS) Западно палеарктическая региональная секция (ЗПРС)

## VII CONGRESS ON PLANT PROTECTION

"Integrated Plant Protection Knowledge - Based Step Towards Sustainable Agriculture, Forestry And Landscape Architecture"

# VII КОНГРЕСС ПО ЗАЩИТЕ РАСТЕНИЙ

"Интегрированная защита растений научно обоснованный шаг к устойчивому развитию сельского хозяйства, лесоводства и пейзажной архитектуры"

Book of Abstracts - Сборник резюме



24-28 November 2014, Zlatibor, Serbia 24-28 ноября 2014, Златибор, Сербиа







## PLANT PROTECTION SOCIETY OF SERBIA (PPSS)

Общество по защите растений Сербии (ОЗРС)

# IOBC-EPRS and IOBC-WPRS МОББ-ВПРС и МОББ-ЗПРС

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Integrated Plant Protection – a Knowledge-Based Step towards
Sustainable Agriculture, Forestry
and Landscape Architecture

#### VII КОНГРЕСС ПО ЗАЩИТЕ РАСТЕНИЙ:

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## ANTAGONISTIC EFFECT OF DIFFERENT Bacillus subtilis STRAINS ON Alternaria solani ISOLATES in vitro

Stojan Jevremović<sup>1</sup>, Emil Rekanović<sup>2</sup>, Milica Mihajlović<sup>2</sup>, Miloš Stepanović<sup>2</sup>, Milan Stević<sup>3</sup>, Marina Lazarević<sup>1</sup>, Vladimir Miladinović<sup>1</sup>

<sup>1</sup>Research-Development Center Institute Tamiš, Novoseljanski put 33, Pančevo, Serbia <sup>2</sup>Institute of Pesticides and Environmental Protection, Banatska 31b, Belgrade, Serbia <sup>3</sup>University of Belgrade, Faculty of Agriculture, Nemanjina 6, Belgrade, Serbia jevremovic.stojan@gmail.com

Early blight, caused by *Alternaria solani* Sorauer (Ellis), is one of the most economically important diseases of potato and tomato in the world. Use of conventional fungicides is unavoidable in controlling the early blight disease, but due to their main downside, fungal resistance, biofungicides are gaining increasing importance in crop production. The goal of this study was to evaluate *in vitro* sensitivity of five *A. solani* isolates originating from Serbia to biofungicides (F-stop and Serenade) containing different *Bacillus subtilis* strains.

A. solani isolates were grown on PDA medium at 20-24°C temperature for a period of two to seven days, and their fragments (5 x 5 mm) were then inserted into a liquid potato dextrose (PD) medium and grown for 48 hours on magnetic stirrer. Suspension of selected isolates mixed with 1.2% PDA medium was homogeneously distributed on hardened PDA medium in Petri dishes (90 mm in diameter). Afterwards, a 10 mm wide hole was made in the central part of the Petri dishes, in which 100 µl of the tested suspension of B. subtilis was poured. Suspension of fungicide was used in standard treatment and distilled water in control treatment. Evaluation of antagonistic activity of B. subtilis strains was performed 48 hours after incubation at 25°C temperature by measuring the diameter of inhibitory zone (mm).

Bacterial strain ST1/III (F-stop) exhibited the greatest antagonistic effect. It inhibited mycelial growth of the tested isolates from

1.67 (isolate KR) to 17.8% (isolate BC). QST 713 strain of *B. subtilis* (Serenade) managed to inhibit the growth of the isolates from 3.61 (isolate VP) to 10.28% (isolate BC). The greatest percentage of inhibition was achieved with standard fungicide difference which inhibited mycelial growth from 25.28 (isolate VP) to 88.9% (isolate ML). Compared to standard fungicide all tested bacterial strains exhibited low percentage of inhibition.

#### MORPHOLOGICAL AND MOLECULAR CHARACTERIZATION OF Eriophyid MITES ON RUSSIAN OLIVE, Elaeagnus angustifolia L.

Biljana Vidović<sup>1</sup>, Radmila Petanović<sup>1</sup>, Tatjana Crković<sup>2</sup>, Slavica Marinković<sup>3</sup>, Massimo Cristofaro<sup>4</sup>, Urs Schaffner<sup>5</sup>

<sup>1</sup>University of Belgrade, Faculty of Agriculture, Nemanjina 6, Belgrade, Serbia

<sup>2</sup>Institute for Plant Protection and Environment, Teodora Drajzera 9, Belgrade, Serbia

<sup>3</sup>University of Belgrade, Faculty of Biology, Studentski trg 16, Belgrade, Serbia

<sup>4</sup>ENEA C. R. Casaccia, UTAGRI-ECO, Rome, Italy <sup>5</sup>CABI, Delemont, Switzerland magud@agrif.bg.ac.rs

Russian olive, *Elaegnus angustifolia* L (Elaeagnaceae) is native to south-eastern Europe and Asia. This species was intentionally introduced to North America in 19<sup>th</sup> century as a nectar source for honey bees. But, in the past 50 years this plant has spread from its original planting area. Now it is widely established in North America and declared as noxious in four U.S. states.

Up to now eight eriophyid species associated with Elaeagnaceae, were described. Two of them were described from *E. angustifolia. Aceria eleagnicola* was described by Farkas 1963 in Hungary as vagrant on upper surface of leaves. This species was also reported in Iran, Turkey and Serbia.

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