BOOK OF ABSTRACTS

6. CONGRESS
OF THE SERBIAN GENETIC SOCIETY

2019 | October 13–17

VRNJAČKA BANJA • SERBIA

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Abstracts of the 6th CONGRESS OF THE SERBIAN GENETIC SOCIETY

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WELCOME TO VI CONGRESS OF THE SERBIAN GENETIC SOCIETY!

Dear colleagues,

Welcome to the 6th Congress of the Serbian Genetic Society. The Serbian Genetic Society (SGS) has been founded in 1968 and the first Congress organized by the SGS was held in 1994 in Vrnjacka Banja. Since then, the Congress of Serbian Genetic Society is held every five years. Over the past years, the Congress has grown from a national to an international meeting.

The experience of the past meetings motivated our efforts to continue with this series with a clear tendency to strengthen the scientific connections among researchers from different European countries.

The Congress will focus on the most recent advances in genetics and on wide range of topics organized in 9 sessions and two workshops. Many of the presentations will be in lecture-like settings, but we hope that there will also be ample opportunities for informal interaction outside the scheduled sessions.

The successful organization of the Congress has required the talents, dedication and time of many members of the Scientific and Organizing committees and strong support from our sponsors. I hope that you will find the Congress both pleasant and valuable, and also enjoy the cultural and natural beauty of Vrnjacka Banja.

Yours sincerely,

Branka Vasiljevic
President of the Serbian Genetic Society

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ASSESSMENT OF METHOD EFFICIENCY FOR SUNFLOWER INOCULATION WITH *MACROPHMINA PHASEOLINA*: IMPORTANT STEP IN SUNFLOWER TOLERANCE TESTING

Nemanja Ćuk [1], Sandra Cvejić [1], Velimir Mladenov [2], Boško Dedić [1], Brankica Babec [1], Sonja Gvozdenac [1], Siniša Jocić [1]

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The fungal disease, Charcoal rot, caused by *Macrophomina phaseolina* is becoming one of important pathogen in sunflower production, mostly expressed in areas with high temperatures and dry conditions. Development of tolerant sunflower genotypes is the most reliable way to control this disease. It is important to find proper evaluation method which can provide accurate insight in potential genetic control of tolerance in sunflower. The aim of this work is: to compare two inoculation methods of sunflower with *M. phaseolina*, to compare the tolerance of inbred lines to this pathogen and to determine which method gives better insight into the inheritance of tolerance in sunflower. The experiment was determined under greenhouse conditions and two methods were used. The Unwounded stem base infection method (USBI), is less aggressive approach where the infection is similar to natural conditions. While for the toothpick method (TM) inoculation it is necessary to puncturing the tissue with the toothpick and create the entrance for pathogen infection. Four inbred lines were used in research which was created at the Institute of Field and Vegetable Crops, Novi Sad (IFVCNS). The inoculation method efficacy and sensitivity of inbred lines, was evaluated based on the length of rotted area covered with microsclerotia, after the sunflower stalks were split longitudinally. The results in USBI and TM showed that, USBI successfully infected one inbred line L4 (5.0 cm), while the TM method was more efficient infesting two inbred lines (L1 and L4). Line L4 (5.5 cm) had statistically significantly higher length of rotted area covered with microsclerotia than L1 (1.3 cm). Inbred lines L2 and L3 did not showed any symptoms. It can be concluded that although USBI method is more similar to natural infection, TM is more suitable for giving an insight to tolerance of sunflower inbred lines for Charcoal rot.

CHARCOAL ROT, INBRED LINES, USBI, TOOTHPICK METHOD, FUNGAL DISEASE