

BOOK OF ABSTRACTS



CONGRESS

OF THE SERBIAN GENETIC SOCIETY

2019 | October
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VRNJAČKA BANJA • SERBIA





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Abstracts of the 6th CONGRESS OF THE SERBIAN GENETIC SOCIETY



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VRNJAČKA BANJA • SERBIA

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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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SEED QUALITY OF SOYBEAN CULTIVARS SUITABLE FOR GROWING IN EUROPE

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Given the potential of soybean (*Glycine max* L. Merr.) as a staple crop for food, feed and pharmaceutical industry, improving the genetic basis of seed quality is one of the main breeding aims on a global scale. The aim of this three-year trial (2010-2012) was to give insight into the soybean seed quality parameters of 22 cultivars suitable for growing in Europe. Field trials were set up as a randomised complete block design with two replicates at the Agricultural Institute Osijek (Osijek, Croatia). The determined seed quality parameters were: protein and oil content, saturated fatty acid content, monounsaturated fatty acid content, polyunsaturated fatty acid content, total saccharide content, total oligosaccharide content, total isoflavone content. Soybean oil and protein contents are the most important seed quality parameters. The usage and value of oil are mainly determined by its fatty acid composition, which affects physical, chemical and nutritional properties. Saccharide composition affects digestibility and nutritional value of soybean seed, affecting the taste and usability while isoflavones are nutraceuticals with many different medical benefits, important for the functional food market and pharmaceutical industry. The results indicate the variability between genotypes for all tested parameters while the influence of environmental conditions was not significant only for total saccharides. The obtained results should be beneficial in determining and planning future breeding strategies, thus enhancing the added value properties of final soybean products for industry and end consumers, making it an integral part of sustainable production.

SOYBEAN, SEED QUALITY, BREEDING, VARIABILITY

06 – 54 Poster

MULTIVARIATE ANALYSIS OF TOMATO GENOTYPES BASED ON MORPHOLOGICAL AND CHEMICAL FRUIT PROPERTIES

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In recent decades the importance of tomato considered as “functional food” is reflected in the rising trend of harvested areas and consumption per capita. During three consecutive years (2010-2012) at experimental fields in Rimski Šančevi near Novi Sad, five landraces, four old varieties, eight breeding lines and three commercial cultivars were chosen for the investigation. Following fruit characteristics were analyzed: average weight (g), length (cm), width (cm), pericarp thickness (mm), locule number, moisture content (%), total soluble solids (°Brix), ash content (%), total acidity (%) and pH value. For the most fruit characteristics high variability was determined. Four principal components explained 90,6% of total variance or 36.5%, 24.2%, 19.8% and 10.1, respectively. Along the axis of the first main component, genotypes were classified into three groups. The objective of this study was to classify 20 tomato genotypes based on physical and chemical traits and to segregate perspective genotypes for improvement of tomato quality by breeding programs.

PRINCIPAL COMPONENT ANALYSIS, QUALITY, TOMATO