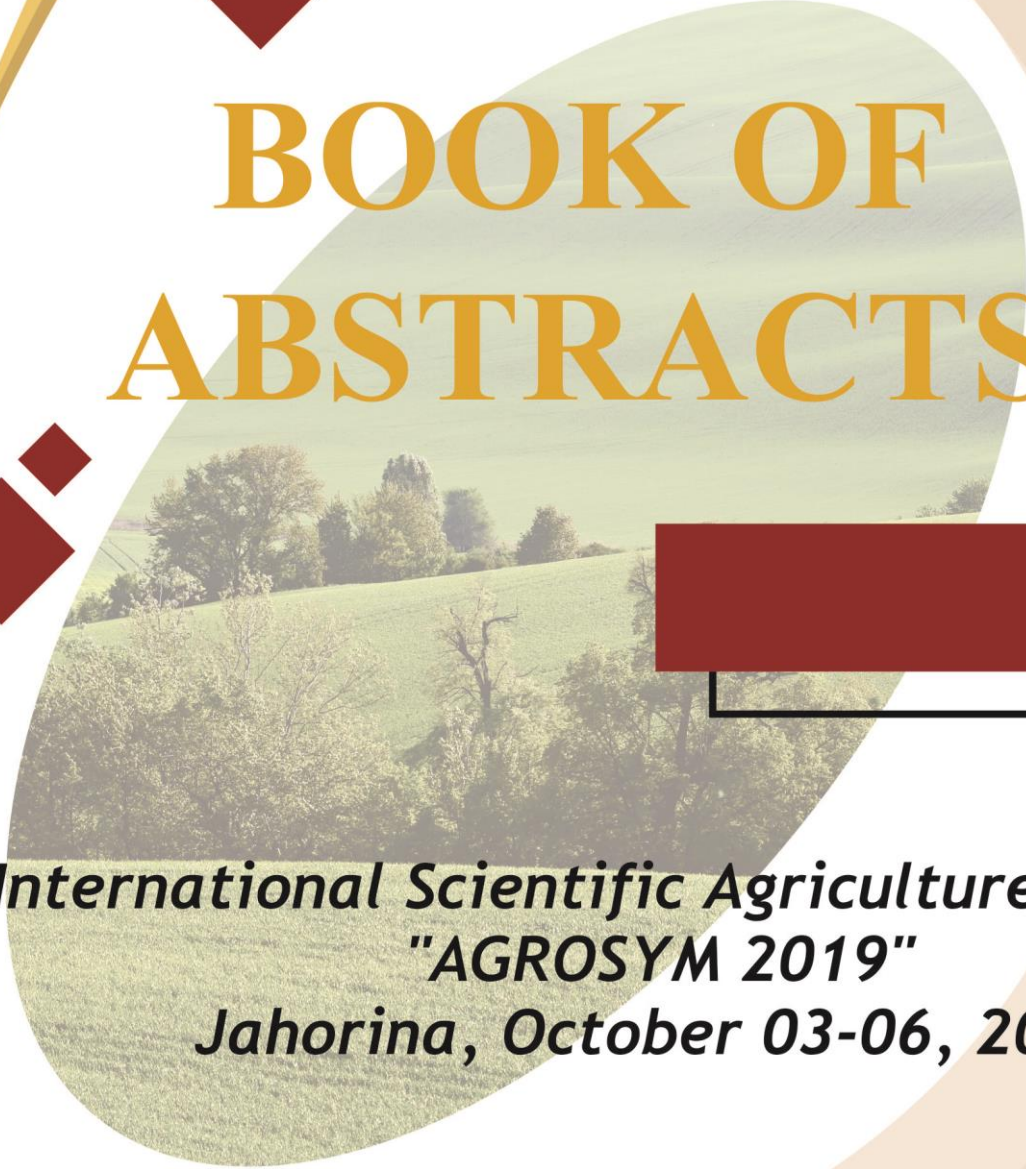






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2019



**BOOK OF
ABSTRACTS**



***X International Scientific Agriculture Symposium
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PREFACE

Dear colleagues,

In your hands is the Book of Abstracts of the 10th International Agricultural Symposium “AGROSYM 2019”, which I hope you will find useful in your work. Almost 1000 contributions were received and around 900 accepted for oral or poster presentations. Symposium themes cover all branches of agriculture and are divided into six sections: 1) Plant production, 2) Plant protection and food safety, 3) Organic agriculture, 4) Environmental protection and natural resources management, 5) Animal husbandry, 6) Rural development and agro-economy, and 7) Forestry and agroforestry.

Technology and innovation have clearly been important in the development of agriculture, which is a prerequisite to achieve sustainable food security. Most of the important gains in agriculture have been achieved through selective breeding, domestication and the appropriate and timely delivery of water and other inputs (e.g. fertilizers). Technology has been particularly important for improving production in field crops. Today, it is obvious that conventional methods of agricultural production in addition to providing sufficient food and various other products (e.g. feed, fibre, fuel) have led to a number of negative environmental, social and economic impacts in rural areas. Agriculture, like any other user of natural resources, has many environmental impacts. Moreover, many agricultural practices carry high costs both to society and producers, and affect the long-term viability of agriculture. The negative impacts and externalities of agriculture raise serious questions about the long-term sustainability of high-input agriculture. One of the goals of the sustainable agriculture movement is to create farming systems that mitigate or eliminate environmental harms associated with industrial agriculture. Globally, consumers are sending clearer signals than ever before about what they want in their plates; higher quality as well as healthier, safer and testier agro-food products. Therefore, organic food is the fastest growing food sector.

AGROSYM 2019 should help, of course, to identify some measures by which we can decide on a course of action. Such evidence-based actions should foster transition towards sustainable, efficient, inclusive and smart agro-food systems. Furthermore, the results reported here will be also significant in the dissemination of knowledge to the wider audience about the importance of agriculture and food science, one of the most important strategic areas of many national research strategies. Finally, they should inform policies in agriculture, food, environment and rural development fields.

Full texts of the submitted communications will be available on the website (<http://agrosym.ues.rs.ba>). Each contribution included in the present Book of Abstracts was reviewed by referees.

Many thanks to all the authors, reviewers and colleagues for their help in editing the Book of Abstracts. Special thanks go to all co-organizers, organising partners and sponsors for their unselfish collaboration and comprehensive support.

East Sarajevo, 20th September 2019

Prof. dr Dusan Kovacevic

President of the Scientific Committee of AGROSYM 2019

Editor in Chief



THE COMPOSITION OF POLLENIZERS FOR SWEET CHERRY (*Prunus avium* L.) CULTIVARS RELEASED IN THE REPUBLIC OF SERBIA

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Abstract

As the result of national breeding programmes, three sweet cherry cultivars have been named and released so far in the Republic of Serbia – ‘Asenova Rana’ and ‘Čarna’, developed by planned hybridization at Fruit Research Institute (FRI), Čačak, and ‘Canetova’, selected from natural cherry population at Faculty of Agriculture, University of Belgrade. In addition to the inadequate assortment structure, lacking in well-adapted domestic and introduced cultivars, sweet cherry production in Balkan region is generally accompanied by insufficient knowledge on gametophytic self-incompatibility, the fertilization relationship among the cultivars belonging to certain incompatibility groups, as well as phenological characteristics and synchronization during the flowering phenophase of the main cultivars and pollenizers. The assessment of an adequate pollenizer composition for ‘Asenova Rana’, ‘Čarna’ and ‘Canetova’ in this research is based on determined *S*-allele constitution, parameters of pollen tube growth *in vivo* in the pistils of these cultivars, and their perennial average flowering characteristics in relation to the introduced cultivars – potential pollenizers. The research was conducted in the main sweet cherry growing regions in the Republic of Serbia (West Serbia/Šumadija and region of Belgrade). It resulted in the development of a pollination scheme for in total 28 national and introduced cultivars, its application in the plant material production, and dissemination of quality national sweet cherry cultivars with adequate pollenizers. The results could also influence sweet cherry breeding work on development of genotypes with improved biological and productive characteristics, and application of modern molecular and reproductive biology methods in this research area.

Keywords: *sweet cherry, cultivars, S-allele constitution, flowering, pollination scheme.*