

# BOOK OF ABSTRACTS

XIII International Scientific Agriculture Symposium "AGROSYM 2022" October 6-9, 2022



## BOOK OF ABSTRACTS

XIII International Scientific Agriculture Symposium "AGROSYM 2022"



Jahorina, October 06 - 09, 2022

#### Impressum

XIII International Scientific Agriculture Symposium "AGROSYM 2022" **Book of Abstracts Published by** University of East Sarajevo, Faculty of Agriculture, Republic of Srpska, Bosnia University of Belgrade, Faculty of Agriculture, Serbia Mediterranean Agronomic Institute of Bari (CIHEAM - IAMB) Italy International Society of Environment and Rural Development, Japan Balkan Environmental Association (B.EN.A), Greece CDR, University of Natural Resources and Life Sciences (BOKU), Austria Perm State Agro-Technological University, Russia Voronezh State Agricultural University named after Peter The Great, Russia Tokyo University of Agriculture, Japan Faculty of Agriculture, University of Western Macedonia, Greece Chapingo Autonomous University, Mexico Selcuk University, Turkey University of Agronomic Sciences and Veterinary Medicine of Bucharest, Romania Slovak University of Agriculture in Nitra, Slovakia National University of Life and Environmental Sciences of Ukraine, Kyiv, Ukraine Saint Petersburg State Forest Technical University, Russia University of Valencia, Spain Tarbiat Modares University, Islamic Republic of Iran Valahia University of Targoviste, Romania Faculty of Bioeconomy Development, Vytautas Magnus University, Lithuania Faculty of Agriculture, University of Akdeniz - Antalya, Turkey Ukrainian Institute for Plant Variety Examination, Kyiv, Ukraine Institute of Animal Science- Kostinbrod, Bulgaria National Scientific Center "Institute of Agriculture of NAAS", Kyiv, Ukraine Department of Agricultural, Food and Environmental Sciences, University of Perugia, Italy Watershed Management Society of Iran Faculty of Agriculture, Cairo University, Egypt Higher Institute of Agronomy, Chott Mariem-Sousse, Tunisia SEASN - South Eastern Advisory Service Network, Croatia Faculty of Economics Brcko, University of East Sarajevo, Bosnia and Herzegovina Biotechnical Faculty, Montenegro Institute of Field and Vegetable Crops, Serbia Institute of Lowland Forestry and Environment, Serbia Institute for Applied Science in Agriculture, Serbia Agricultural Institute of Republic of Srpska - Banja Luka, Bosnia and Herzegovina Maize Research Institute "Zemun Polje", Serbia Faculty of Agriculture, University of Novi Sad, Serbia Institute for Animal Science, Ss. Cyril and Methodius University in Skopje, Macedonia Serbian Academy of Engineering Sciences, Serbia Balkan Scientific Association of Agricultural Economics, Serbia Institute of Agricultural Economics, Serbia **Editor in Chief** Dusan Kovacevic **Tehnical editors** Sinisa Berjan Milan Jugovic Noureddin Driouech Rosanna Ouagliariello Website: http://agrosym.ues.rs.ba

CIP - Каталогизација у публикацији Народна и универзитетска библиотека Републике Српске, Бања Лука

631(048.3)(0.034.4)

INTERNATIONAL Scientific Agricultural Symposium "Agrosym 2022" (13 ; Jahorina) Book of Abstracts [Електронски извор] / XIII International Scientific Agriculture Symposium "Agrosym 2022", Jahorina, October 06 - 09, 2022 ; [editor in chief Dušan Kovačević]. - East Sarajevo =Istočno Sarajevo : Faculty of Agriculture =Poljoprivredni fakultet, 2022. - 1 електронски оптички диск (CD-ROM) : текст, слика ; 12 cm

Системски захтеви: Нису наведени. - Насл. са насл. екрана. - Регистар.

ISBN 978-99976-987-2-8

COBISS.RS-ID 136884481

### XIII International Scientific Agricultural Symposium "Agrosym 2022" Jahorina, October 06-09, 2022, Bosnia and Herzegovina

#### HONORARY COMMITTEE

Prof. dr Boris Pasalic, Minister of Agriculture, Water Management and Forestry of Republic of Srpska, Bosnia and Herzegovina Mr Srdjan Rajcevic, Minister of Scientific-Technological Development, Higher Education and Information Society of Republic of Srpska, Bosnia and Herzegovina Prof. dr Mario T. Tabucanon, President of the International Society of Environment and Rural Development, Japan Prof. dr Milan Kulic, Rector of the University of East Sarajevo, Bosnia and Herzegovina Prof. dr Dusan Zivkovic, Dean of the Faculty of Agriculture, University of Belgrade, Serbia Dr. Maurizio Raeli, Director of the Mediterranean Agronomic Institute of Bari, Italy Prof. dr Metin Aksoy, Rector of the Selcuk University, Turkey Prof. dr Aleksey Andreev, Rector of the Perm State Agro-Technological University, Russia Prof. dr Antanas Maziliauskas, Rector of the Vytautas Magnus University Agriculture Academy, Lithuania Prof. dr Alexey Yu. Popov, Rector of the Voronezh State Agricultural University named after Peter The Great, Russia Prof. dr Barbara Hinterstoisser, Vice-Rector of the University of Natural Resources and Life Sciences (BOKU), Austria Prof. dr Sorin Mihai Cimpeanu, Rector of the University of Agronomic Sciences and Veterinary Medicine of Bucharest, Romania Doc. Ing. Klaudia Halászová, Rector of the Slovak University of Agriculture in Nitra, Slovakia Prof. dr Calin D. Oros, Rector of the Valahia University of Targoviste, Romania Prof. Dr Katerina Melfou, Dean of the Faculty of Agriculture, University of Western Macedonia, Greece Prof. dr Amr Ahmed Mostafa, Dean of the Faculty of Agriculture, Cairo University, Egypt Prof. dr José Sergio Barrales Domínguez, Rector of the Chapingo Autonomous University, Mexico Prof. dr Davut Karayel, Dean of Faculty of Agriculture, University of Akdeniz - Antalya, Turkey Prof. Dr EGUCHI Fumio, Rector of the Tokyo University of Agriculture, Japan Prof. Dr Zeki Bayramoğlu, Dean of Faculty of Agriculture, University of Selcuk- Konya, Turkey Dr Chokri Thabet, the General Director of the High Agronomic Institute of Chott Mariem, Sousse, Tunisia Prof. dr Ivan Yanchev, Director of the Institute of Animal Science- Kostinbrod, Bulgaria Prof. dr Seved Hamidreza Sadeghi, Professor at Tarbiat Modares University and the President of the Watershed Management Society of Iran, Iran Prof. dr Francesco Tei, Director of the Department of Agricultural, Food and Environmental Sciences, University of Perugia, Italy Prof. dr Viktor Kaminskyi, Director of National Scientific Center "Institute of Agriculture of NAAS", Kyiv, Ukraine Dr. Igor Hrovatič, President of South Eastern Advisory Service Network, Croatia Prof. dr Mirza Dautbasic, Dean of the Faculty of Forestry, University of Sarajevo, Bosnia and Herzegovina Prof. dr Bozidarka Markovic, Dean of the Biotechnical Faculty, University of Podgorica, Montenegro Prof. dr Rade Jovanovic, Director of the Institute for Science Application in Agriculture, Serbia Prof. dr Lazar Radovanovic, Dean of the Faculty of Economics Brcko, University of East Sarajevo, Bosnia and Herzegovina Prof. dr Vojislav Trkulja, Director of Agricultural Institute of Republic of Srpska - Banja Luka, Bosnia and Herzegovina Dr. Branka Kresovic, Director of the Maize Research Institute "Zemun Polje", Serbia Prof. Dr. Jegor Miladinović, Director of the Institute of Field and Vegetable Crops, Serbia Prof. dr Nedeljko Tica, Dean of the Faculty of Agriculture, University of Novi Sad, Serbia Prof. dr Rodne Nastova, Director of the Institute for Animal Science, Skoplje, Macedonia Prof. dr Sasa Orlovic, Director of the Institute of Lowland Forestry and Environment, Serbia Prof. dr Jonel Subic, Director of the Institute of Agricultural Economics, Serbia Prof. dr Branko Kovacevic, President of the Academy of Engineering Sciences of Serbia, Serbia Prof. dr Radovan Pejanovic, President of Balkan Scientific Association of Agricultural Economics, Serbia SCIENTIFIC COMMITTEE

Chairman: Academician Prof. dr Dusan Kovacevic, Faculty of Agriculture, University of Belgrade, Serbia Prof. dr Machito Mihara, Tokyo University of Agriculture, Japan

Prof. dr John Brayden, Norwegian Agricultural Economics Research Institute (NILF), Norway

Prof. dr Steve Quarie, Visiting Professor, School of Biology, Newcastle University, United Kingdom

Prof. dr Andreas Melcher, CDR, University of Natural Resources and Life Sciences (BOKU), Vienna, Austria

Prof. dr Dieter Trautz, University of Applied Science, Germany

Prof. dr Sergei Eliseev, Vice-Rector for Research and Innovations, Perm State Agro-Technological University, Russia Prof. dr Dani Shtienberg, full professor, Department of Plant pathology and Weed Research, ARO, the Volcani Center, Bet Dagan, Israel

Prof. dr William Meyers, Howard Cowden Professor of Agricultural and Applied Economics, University of Missouri, USA Prof. dr Markus Schermer, Department of Sociology, University of Innsbruk, Austria

Academician Prof. dr Novo Przulj, Faculty of Agriculture, University of Banjaluka, Bosnia and Herzegovina

Prof. dr Thomas G. Johnson, University of Missouri - Columbia, USA

Prof. dr Fokion Papathanasiou, School of Agricultural Sciences, University of Western Macedonia, Greece

Prof. dr Sabahudin Bajramovic, Faculty of Agriculture and Food Sciences, University of Sarajevo, Bosnia and Herzegovina Prof. dr Hiromu Okazawa, Faculty of Regional Environment Science, Tokyo University of Agriculture, Japan

Prof. dr Tatiana Sivkova, Faculty for Veterinarian Medicine and Zootechny, Perm State Agro-Technological University, Russia Prof. dr Aleksej Lukin, Voronezh State Agricultural University named after Peter The Great, Russia

Prof. dr Matteo Vittuari, Faculty of Agriculture, University of Bologna, Italy

Prof. dr Seved Mohsen Hosseini, Faculty of Natural Resources, Tarbiat Modares University, Iran Prof. dr Ardian Maci, Faculty of Agriculture and Environment, Agricultural University of Tirana, Albania Prof. dr Regucivilla A. Pobar, Bohol Island State University, Philippines Prof. dr Sudheer Kundukulangara Pulissery, Kerala Agricultural University, India Prof. dr EPN Udayakumara, Faculty of Applied Sciences, Sabaragamuwa University, Sri Lanka Prof. dr Vladimir Smutný, full professor, Mendel University, Faculty of agronomy, Czech Republic Prof. dr Franc Bavec, full professor, Faculty of Agriculture and Life Sciences, Maribor, Slovenia Prof. dr Jan Moudrý, full professor, Faculty of Agriculture, South Bohemia University, Czech Republic Prof. dr Stefan Tyr, full professor, Faculty of Agro-biology and Food Resources, Slovakia Prof. dr Natalija Bogdanov, Faculty of Agriculture, University of Belgrade, Serbia Prof. dr Richard Barichello, Faculty of Land and Food Systems, University of British Columbia, Canada Prof. dr Francesco Porcelli, University of Bari Aldo Moro, Italy Prof. dr Vasilije Isajev, Faculty of Forestry, University of Belgrade, Serbia Prof. dr Elazar Fallik, Agricultural Research Organization (ARO), Volcani, Israel Prof. dr Junaid Alam Memon, Pakistan Institute of Development Economics, Pakistan Prof. dr. Jorge Batlle-Sales, Department of Biology, University of Valencia, Spain Prof. dr Pandi Zdruli, Land and Water Resources Department; IAMB, Italy Prof. dr Mladen Todorovic, Land and Water Resources Department; IAMB, Italy Dr. Hamid El Bilali, Mediterranean Agronomic Institute of Bari, Italy Prof. dr Maksym Melnychuk, National Academy of Agricultural Science of Ukraine, Ukraine Prof. dr Borys Sorochynskyi, Ukrainian Institute for Plant Variety Examination, Kviv, Ukraine Dr. Lorenz Probst, CDR, University of Natural Resources and Life Sciences (BOKU), Vienna, Austria Prof. dr Mohsen Boubaker, High Institute of Agronomy of Chott Meriem, Sousse, Tunisia Dr. Noureddin Driouech, Coordinator of MAIB Alumni Network (FTN), Mediterranean Agronomic Institute of Bari, Italy Prof. dr Ion Viorel, University of Agronomic Sciences and Veterinary Medicine of Bucharest, Romania Prof. dr. Chuleemas Boonthai Iwai, Faculty of Agriculture, Khon Kaen University, Thailand Prof. dr Wathuge T.P.S.K. Senarath, Department of Botany, University of Sri Jayewardenepura, Colombo, Sri Lanka Dr. Hamada Abdelrahman, Soil Science Dept., Faculty of Agriculture, Cairo University, Egypt Prof. dr Maya Ignatova, Agricultural Academy - Sofia, Bulgaria Prof. dr Ioannis N. Xynias, School of Agricultural Technology & Food Technology and Nutrition, Western Macedonia University of Applied Sciences, Greece PhD ing. Artur Rutkiewicz, Department of Forest Protection, Forest Research Institute - IBL, Poland Prof. dr Mohammad Sadegh Allahyari, Islamic Azad University, Rasht Branch, Iran Dr. Lalita Siriwattananon, Faculty of Agricultural Technology, Rajamangala University of Technology Thanyaburi (RMUTT), Thailand Prof. dr Konstantin Korlyakov, Perm Agricultural Research Institute, Russia Dr. Mohammad Farooque Hassan, Shaheed Benazir Bhutto University of Veterinary & Animal Sciences Sakrand, Sindh, Pakistan Dr. Larysa Prysiazhniuk, Ukrainian Institute for Plant Variety Examination, Kyiv, Ukraine Prof. dr Oksana Kliachenko, National University of Life and Environmental Science of Ukraine, Ukraine Prof. dr Ivan Simunic, Department of amelioration, Faculty of agriculture, University of Zagreb, Croatia Dr. Abid Hussain, International Centre for Integrated Mountain Development (ICIMOD), Nepal Dr. Amrita Ghatak, Gujarat Institute of Development Research (GIDR), India Prof. dr Naser Sabaghnia, University of Maragheh, Iran Dr. Karol Wajszczuk, Poznan University of Life Sciences, Poland Prof. dr Penka Moneva, Institute of Animal Science - Kostinbrod, Bulgaria Prof. dr Mostafa K. Nassar, Animal husbandry Dept., Faculty of Agriculture, Cairo University, Egypt Prof. dr Márta Birkás, full professor, St. Istvan University, Godollo - Hungary Prof. dr Andrzej Kowalski, Director of the Institute for Agricultural and Food Economy, Warzawa-Poland Prof. dr Yalcin Kaya, The Director of the Plant Breeding Research Center, University of Trakya, Turkey Prof. dr Sanja Radonjic, Biotechnical Faculty, University of Montenegro, Montenegro Prof. dr Ionela Dobrin, Department for Plant Protection, University of Agronomic Sciences and Veterinary Medicine of Bucharest, Romania Prof. dr Inocencio Buot Jr., Institute of Biological Sciences, College of Arts and Sciences, University of the Philippines Los Banos, Philippines Prof. dr Monica Paula Marin, Department for Animal Husbandry, University of Agronomic Sciences and Veterinary Medicine of Bucharest, Romania Prof. dr Nedeljka Nikolova, Institute for Animal Science, Ss. Cyril and Methodius University in Skopje, Republic of Macedonia Prof. dr Mohammad Al-Mamun, Department of Animal Nutrition, Bangladesh Agricultural University, Bangladesh Prof. dr Anucha Wittayakorn-Puripunpinyoo, School of Agriculture and Co-operatives, Sukhothai Thammathirat Open University, Nonthaburi, Thailand Dr. Redouane Choukr-Allah, International Center for Biosaline Agriculture (ICBA), United Arab Emirates Prof. dr Ignacio J. Díaz-Maroto, High School Polytechnic, University of Santiago de Compostela, Spain Prof. dr Nidal Shaban, University of Forestry Sofia, Bulgaria Prof. dr Mehdi Shafaghati, Faculty of Geography, Tarbiat Moalem (kharazmi) University, Iran Prof. dr Youssif Sassine, Lebanese University Beirut, Lebanon Prof. dr Cafer Topaloglu, Faculty of Tourism, Mugla Sitki Kocman University, Turkey Prof. dr Seyed Hamidreza Sadeghi, Faculty of Natural Resources, Tarbiat Modares University, Iran

Prof. dr Mohsen Mohseni Saravi, University of Teheran and Member of WMSI Management Board, Iran Prof. dr Branislav Draskovic, Faculty of Agriculture, University of East Sarajevo, Bosnia and Herzegovina Prof. dr Mahmood Arabkhedri, Soil Conservation and Watershed Management Research Institute and Member of WMSI Management Board, Iran Prof. dr Ataollah Kavian, Sari Agricultural Science and Natural Resources University and Member of WMSI Management Board, Iran Prof. dr Tugay Ayasan, Department of Organic Farming Business Management, Osmaniye, Applied Science School of Kadirli, Osmaniye Korkut Ata University, Turkey Prof. dr Sakine Özpınar, Department of Farm Machinery and Technologies Engineering, Faculty of Agriculture, Çanakkale Onsekiz Mart University, Canakkale, Turkey Prof. dr Sherein Saeide Abdelgayed, Faculty of Veterinary Medicine, Cairo University, Cairo, Egypt Prof. dr Zohreh Mashak, Islamic Azad University, Karaj Branch, Iran Dr. Khalid Azim, National Institute of Agriculture Research, Morocco Dr. Mario Licata, Department of Agricultural, Food and Forest Sciences, University of Palermo, Italy Prof. dr Srdjan Lalic, University of East Sarajevo, Bosnia and Herzegovina Prof. dr Zeljko Vasko, Faculty of Agriculture, University of Banja Luka, Bosnia and Herzegovina Prof. dr Muhammad Ovais Omer, Faculty of Bio-Sciences, University of Veterinary & Animal Sciences, Lahore, Pakistan Dr. Edouard Musabanganji, School of Economics/CBE, University of Rwanda, Rwanda Prof. dr Kubilay Bastas, Department of Plant Protection, Faculty of Agriculture, Selcuk University, Turkey Dr. Branka Kresovic, Director of the Maize Research Institute "Zemun Polje", Serbia Dr. Nenad Delic, Maize Research Institute "Zemun Polie", Serbia Dr. Milan Stevanovic, Maize Research Institute "Zemun Polje", Serbia Dr. Svetlana Balesevic-Tubic, Institute of Field and Vegetable Crops Novi Sad, Serbia Dr. Ana Marjanovic Jeromela, Institute of Field and Vegetable Crops Novi Sad, Serbia Prof. dr Tatjana Krajisnik, Faculty of Agriculture, University of East Sarajevo, Bosnia and Herzegovina Prof. dr Aleksandra Govedarica-Lucic, Faculty of Agriculture, University of East Sarajevo, Bosnia and Herzegovina Prof. dr Desimir Knezevic, University of Pristina, Faculty of Agriculture, Kosovska Mitrovica - Lesak, Kosovo i Metohija, Serbia Dr. Snezana Mladenovic-Drinic, Maize Research Institute "Zemun Polje", Serbia Prof. dr Nebojsa Momirovic, Faculty of Agriculture, University of Belgrade, Serbia Prof. dr Osman Mujezinovic, Faculty of Forestry, University of Sarajevo, Bosnia and Herzegovina Prof. dr Dalibor Ballian, Faculty of Forestry, University of Sarajevo, Bosnia and Herzegovina Prof. dr Zoran Jovovic, Biotechnical Faculty, University of Montenegro, Montenegro Prof. dr Danijel Jug, Faculty of Agriculture, University of Osijek, Croatia Prof. dr Milan Markovic, Biotechnical Faculty, University of Montenegro, Montenegro Prof. dr Zeljko Dolijanovic, Faculty of Agriculture, University of Belgrade, Serbia Prof. Mirjana Jovovic, Faculty of Agriculture, University of East Sarajevo, Bosnia and Herzegovina Prof. Goran Marinkovic, Faculty of Technical Sciences, University of Novi Sad, Serbia Dr Dejan Stojanovic, Institute of Lowland Forestry and Environment, Serbia Dr Dobrivoj Postic, Institute for plant protection and environment, Belgrade, Serbia Dr Srdjan Stojnic, Institute of Lowland Forestry and Environment, Serbia Dunja Demirović Bajrami, Research Associate, Geographical Institute "Jovan Cvijić," Serbian Academy of Sciences and Arts, Belgrade, Serbia **ORGANIZING COMMITTEE** Chairperson: Prof. dr Vesna Milic, Dean of the Faculty of Agriculture, University of East Sarajevo, Bosnia and Herzegovina Dr Marko Gutalj, Vice rector of the University of East Sarajevo, Bosnia and Herzegovina Dr Jelena Krunic, Vice rector of the University of East Sarajevo, Bosnia and Herzegovina Dr. Maroun El Moujabber, Mediterranean Agronomic Institute of Bari, Italy Mrs. Rosanna Quagliariello, Mediterranean Agronomic Institute of Bari, Italy Prof. dr Aleksandra Despotovic, Biotechnical Faculty Podgorica, University of Montenegro, Montenegro Dr. Noureddin Driouech, Coordinator of MAIB Alumni Network (FTN), Mediterranean Agronomic Institute of Bari, Italy Dr Milic Curovic, The journal "Agriculture and Forestry", Biotechnical Faculty Podgorica, University of Montenegro, Montenegro Dr. Tatiana Lysak, International Relations Office, Voronezh State Agricultural University named after Peter The Great, Russia Dr. Oksana Fotina, International Relations Center, Perm State Agro-Technological University, Russia Prof. dr Fokion Papathanasiou, School of Agricultural Sciences, University of Western Macedonia, Greece Dr Ana Marjanović Jeromela, Institute of Field and Vegetable Crops, Serbia Dr. Anastasija Novikova, Faculty of Bioeconomy Development, Vytautas Magnus University, Lithuania Prof. dr Engr. Teodora Popova, Institute of Animal Science - Kostinbrod, Bulgaria Prof. dr Mehmet Musa Ozcan, Faculty of Agriculture, Selçuk University, Turkey Dr. Abdulvahed Khaledi Darvishan, Faculty of Natural Resources, Tarbiat Modares University, Iran Prof. dr Nikola Pacinovski, Institute for Animal Science, Ss. Cyril and Methodius University in Skopje, N. Macedonia MSc. Erasmo Velázquez Cigarroa, Department of Rural Sociology, Chapingo Autonomous University, Mexico Dr. Ecaterina Stefan, University of Agronomic Sciences and Veterinary Medicine of Bucharest, Romania Dr. Jeeranuch Sakkhamduang, The International Society of Environmental and Rural Development, Japan Dr. Raoudha Khanfir Ben Jenana, High Institute of Agronomy of Chott Meriem, Sousse, Tunisia Dr. Hamada Abdelrahman, Soil Science Dept., Faculty of Agriculture, Cairo University, Egypt Dr. Dragana Sunjka, Faculty of Agriculture, University of Novi Sad, Serbia

- Dr. Vedran Tomic, Institute for Science Application in Agriculture, Serbia
- Dr. Milan Stevanovic, Maize Research Institute "Zemun Polje", Serbia
- Dr. Andrej Pilipovic, Institute of Lowland Forestry and Environment, Serbia
- Dr. Sc. Morteza Behzadfar, Tarbiat Modares University, Tehran, Iran
- Dr. Larysa Prysiazhniuk, Ukrainian Institute for Plant Variety Examination, Kyiv, Ukraine
- Dr. Diana Bilić-Šobot, Faculty of Agriculture, University of Niš, Serbia
- Doc. dr Sead Ivojevic, Faculty of Forestry, University of Sarajevo, Bosnia and Herzegovina
- Dr. Nenad Markovic, Enterprise E. N. (EEN) Coordinator, University of East Sarajevo, Bosnia and Herzegovina
- Domagoj Group, SEASN South Eastern Advisory Service Network, Croatia
- Mrs Branislavka Boroja, Agricultural Institute of Republic of Srpska Banja Luka, Bosnia and Herzegovina
- MSc. Milan Jugovic, Faculty of Agriculture, University of East Sarajevo, Bosnia and Herzegovina
- Prof. dr Sinisa Berjan, Faculty of Agriculture, University of East Sarajevo, Bosnia and Herzegovina
- MSc. Milena Stankovic, Faculty of Agriculture, University of East Sarajevo, Bosnia and Herzegovina
- Dr. Stefan Stjepanovic, Faculty of Agriculture, University of East Sarajevo, Bosnia and Herzegovina Doc. dr Dejana Stanic, Faculty of Agriculture, University of East Sarajevo, Bosnia and Herzegovina
- MSc. Stefan Bojic, Faculty of Agriculture, University of East Sarajevo, Bosnia and Herzegovina
- MSc. Tanja Jakisic, Faculty of Agriculture, University of East Sarajevo, Bosnia and Herzegovina
- MSc. Tijana Banjanin, Faculty of Agriculture, University of East Sarajevo, Bosnia and Herzegovina
- MSc. Boban Miletic, Faculty of Agriculture, University of East Sarajevo, Bosnia and Herzegovina
- MSc. Todor Djorem, Faculty of Agriculture, University of East Sarajevo, Bosnia and Herzegovina
- Dr. Igor Djurdjic, Faculty of Agriculture, University of East Sarajevo, Bosnia and Herzegovina, General Secretary

#### ATTITUDES OF LOCAL PEOPLE TOWARD ALLIUM URSINUM L. CONSERVATION

Marija MARKOVIĆ<sup>1\*</sup>, Milan UGRINOVIĆ<sup>2</sup>

<sup>1</sup>Faculty of Forestry, University of Belgrade, Serbia <sup>2</sup>Institute for Vegetable Crops, Smederevska Palanka, Serbia \*Corresponding author: marija.markovic@sfb.bg.ac.rs

#### Abstract

Bear garlic (Allium ursinum L.) is an edible and medicinal plant, widely used in Serbia, and it has been collected by local people for consumption and sale. Bear garlic is not an endangered plant in Serbia, but it is included in the Rulebook on the proclamation and protection of strictly protected and protected wild species of plants, animals and fungi, as an economically significant species that could be endangered by an uncontrolled exploitation or destruction of habitats. The aim of this study was to investigate attitude of villagers (potential producers) towards wild bear garlic conservation and potential production on their farms. The survey was conducted in the villages surrounding mountains Kosmaj, Avala and Suvobor, total 127 persons from 52 households were interviewed from May to September 2021. The majority of people interviewed (85.0%) use bear garlic only for consumption in their households. If the collection of bear garlic becomes restricted in their area according to the Decree on putting under control the use and trade of wild flora and fauna, 73.2% respondents would stop collecting, mainly because of high fines. However, 67.3% of households are ready to grow bear garlic if planting material and appropriate production technology are provided. Even 45.7% respondents do not care if bear garlic becomes an endangered species and 27.5% respondents do not trust official institutions dealing with the protection of biodiversity. Conducted research showed that technology for production of bear garlic should be established in order to reduce its gathering from natural habitats.

**Keywords:** *bear garlic, wild plants conservation, plant production.*