

**Goce Delcev University – Stip
Faculty of Agriculture**



**5th INTERNATIONAL MEETING
AGRISCIENCE & PRACTICE
(ASP 2026)**

BOOK OF ABSTRACTS

**16 APRIL 2026
Stip, Republic of North Macedonia**

BOOK OF ABSTRACTS
5th International Meeting AGRISCIENCE & PRACTICE
(ASP 2026)

Publisher:
Faculty of Agriculture, Goce Delcev University, Stip

Editor
Prof. Liljana Koleva Gudeva, PhD

Technical editors
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The abstracts are technically edited according to the 'Template for Abstracts', without additional editing of the abstract text. The results and writing style are presented in the original form provided by the authors.

CIP - Каталогизација во публикација

Национална и универзитетска библиотека "Св. Климент Охридски", Скопје

631/635(062)(084.3)

INTERNATIONAL meeting agriscience & practice (ASP 2026) (5 ; 2026 ;
Stip)

Book of abstracts : Електронски извор / 5th International meeting agriscience & practice (ASP 2026, Stip, Republic of North Macedonia) ; [editor Liljana Koleva Gudeva]. - Текст во PDF формат, содржи VI, 48, илустр. - Stip : Goce Delcev University, Faculty of agriculture, 2026

Начин на пристапување (URL): <https://zf.ugd.edu.mk/c/agronauka/> (Отворен пристап). -

Наслов преземен од екранот. - Опис на изворот на ден 13.05.2026. - Organizing committee Emilija Arsov, Biljana Balabanova, Biljana Kovacevik, Dimitar Nakov, Fidanka Trajkova, Natalija Markova Ruzdik, Elizabeta Davitkovska Barbareeva, Ivan Donev

ISBN 978-608-277-154-0

**5th INTERNATIONAL MEETING AGRISCIENCE & PRACTICE
ASP 2026**

**Organized by
FACULTY OF AGRICULTURE
GOCE DELCEV UNIVERSITY, STIP, REPUBLIC OF NORTH MACEDONIA
16 April 2026, Stip, Republic of North Macedonia**

The Faculty of Agriculture is organizing the 5th International Meeting *Agriscience & Practice (ASP 2026)*, providing participants with the opportunity to present and discuss original scientific and practical results in various fields of agriculture.

The 5th International Meeting *Agriscience & Practice (ASP 2026)* brings together agricultural stakeholders to share their knowledge, experience, and challenges. Its main goal is to connect research and fieldwork in the agricultural sector, both nationally and beyond, giving it an international dimension.

Over the past years, we have been fully committed to building exactly these kinds of bridges—bridges between science and practice, between institutions and producers, and between experience and innovation. Moreover, we strive to build bridges that transcend borders and connect us with the region and the world.

Scientific and applied presentations will be organized into the following sections:

1. Agricultural Economics
2. Animal Sciences
3. Plant Sciences
4. Food Science and Nutrition
5. Soil Science and Environment
6. Enology

Poster presentations will also be available. In addition, in response to the needs of the agricultural sector, panel discussions will be organized, where invited speakers and panelists will have the opportunity to share their experience with meeting participants.

Dear colleagues, partners, and friends, let us once again gather in one place, united by a common idea—to bring together agricultural science and practice in order to share information, knowledge, experiences, and solutions to overcome existing challenges. The main objective of this meeting is the successful establishment of continuous and meaningful communication and collaboration among scientific, research, and practical activities in the agricultural sector at the national, regional, and international levels. We will achieve this goal, as well as our shared objectives, through the synergy we have been actively building over the past years.

Every scientific field has its significance and value within a given social context, but agricultural production holds a particularly vital place.

Our shared task is not only to improve production, but also to strengthen the importance and dignity of agriculture in society. Above all, we must inspire young people to recognize their potential right here, because faculties and universities exist first and foremost for them—the younger generation. They are our future, but also our most important connection to society.

With great joyfulness we thank you for active participation in the Meeting

Prof. Emilija Arsov, PhD
Dean of Faculty of Agriculture
&
Chair of the Organizing Committee

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TABLE OF CONTENTS

PLENARY PRESENTATIONS.....	11
ANTIMICROBIAL RESISTANCE AS A GLOBAL CHALLENGE WITHIN THE ONE HEALTH FRAMEWORK Iskra Cvetkovikj.....	12
GRAPEVINE BREEDING AND ADAPTATION OF VITICULTURE TO CLIMATE CHANGE Dragan Nikolić.....	13
3D TECHNIQUES OF CELL CULTIVATION IN AGRICULTURE RESEARCH Petr Slama.....	14
PANEL DISCUSSIONS	15
PANEL DISCUSSION 1 LEADING THE FUTURE OF FOOD SAFETY: GLOBAL RISK AND FOOD INDUSTRY RESILIENCE IN THE 21ST CENTURY	16
PANEL DISCUSSION 2 CLIMATE CHANGE AND THE FUTURE OF VITICULTURE: CHALLENGES, INNOVATIONS, AND SUSTAINABLE SOLUTIONS	19
PLANT SCEINCES.....	22
EFFECT OF NUT WEIGHT ON KERNEL PERCENTAGE AND YIELD IN <i>Corylus avellana</i> L. cv. Ennis IN THE POLLOG REGION Alirami Saliji, Zejnedije Ademi, Bardhyl Limani, Hirijete Idrizi, Bardha Ibishi.....	23
PRECISION VITICULTURE PRACTICES FOR ADAPTATION TO CLIMATE CHANGE AND MAINTAINING GRAPE PRODUCTION AND QUALITY Riste Gjorgjiev.....	24
EFFECT OF BIOLOGICAL SEED TREATMENTS ON SEED ASSOCIATED MYCOBIOTA AND GERMINATION Slobodan Vlajić, Emil Rekanović, Ana Vlajić, Vukašin Popović.....	25
BIOMASS FROM VINEYARD OBTAINED BY WINTER PRUNING Violeta Dimovska, Fidanka Ilieva.....	26
EVALUATION OF GRAIN YIELD AND QUALITY TRAITS IN ADVANCED WINTER COMMON WHEAT LINES Zlatina Uhr, Violeta Bozhanova, Evgeniy Dimitrov, Teodora Angelova, Boryana Hadzhiivanova.....	27
RESISTANCE MANAGEMENT STRATEGIES FOR THE COLORADO POTATO BEETLE (<i>Leptinotarsa decemlineata</i>) IN POTATO PRODUCTION Biljana Kovacevik, Sasa Mitrev, Emilija Arsov, Dusan Spasov, Biljana Atanasova, Marija Taskova Kukutanov, Natalija Markova Ruzdik.....	28
EVALUATION OF OOMYCETE-TARGETED FUNGICIDES FOR CONTROLLING DOWNY MILDEW IN VEGETABLE CROPS Biljana Kovacevik, Sasa Mitrev, Emilija Arsov, Dusan Spasov, Biljana Atanasova ¹ , Marija Taskova Kukutanov, Natalija Markova Ruzdik.....	29
ASSESSMENT OF MORPHOLOGICAL VARIABILITY IN DIFFERENT DRIED PEPPER GENOTYPES Daniela Todevska, Natalija Atanasova-Pancevska, Pece Sherovski, Biljana Kovacevik, Natalija Markova Ruzdik, Mite Ilievski.....	30
IMPACT OF WEED FLORA ON APHID AND THRIPS OCCURRENCE IN PEPPER (<i>Capsicum annuum</i> L.) IN THE STRUMICA REGION Dusan Spasov, Dragica Spasova, Sasa Mitrev, Emilija Arsov, Biljana Atanasova, Biljana Kovacevik, Mite Ilievski.....	31
INTEGRATIVE STATISTICAL APPROACHES TO EVALUATE FUNGICIDE EFFICACY AGAINST BOTRYTIS CINEREA IN THE WHITE GRAPE VARIETY GRENACHE BLANC Gligor Bojkov, Emilia Arsov, Sasa Mitrev.....	32
THE EFFECT OF PLANT GROWTH REGULATORS ON <i>IN VITRO</i> CUCUMBER (<i>Cucumis sativus</i> L.) REGENERATION Izabela Andonova, Fidanka Trajkova, Liljana Koleva Gudeva.....	33
ROLE OF FOREST WINDBREAK SYSTEMS ON AGRICULTURAL PRODUCTION IN OVČHE POLE REGION Jordanco Dimitriev, Ljupco Mihajlov, Natalija Markova Ruzdik, Fidanka Trajkova.....	34
ORGAN SPECIFIC WILD YEAST POPULATIONS ON CEREAL CROPS IN NORTH MACEDONIA – VARIANCE AND CORRELATION Nikola Radmanovik, Sofija Kostandinovska, Natalija Atanasova - Pancevska.....	35
FOOD SCIENCE AND NUTRITION.....	36
SEASONAL VARIATIONS IN THE PHYSICO-CHEMICAL QUALITY OF WELL WATER IN THE PROBISTIP AND KOCANI REGION Ankica Anastasova, Dimitar Nakov, Elena Tortevska Danilov, Aleksandra Angjeleska, Aco Kuzelov, Fidanka Ilieva.....	37

ANALYSIS OF ORGANIC MOLECULES AND PHYSICOCHEMICAL PARAMETERS AS INDICATORS OF AUTHENTICITY AND QUALITY OF FLOWER HONEY SAMPLES Ariona Lubishtani, Blerona Gavazi, Miribane Dërmaku-Sopjani, Arleta Rifati-Nixha.....	38
CHANGES OF ANTIOXIDANT POTENTIAL OF COLD-PRESSED EDIBLE OILS FROM SUNFLOWER AND SESAME DURING STORAGE Borjanka Veselinova, Sanja Kostadinović Veličkovska, Sasa Mitrev.....	39
QUALITY EVALUATION OF COLD-PRESSED EDIBLE OIL FROM PEANUT PRODUCED FROM MACEDONIAN “VIRGINIA” VARIETY Borjanka Veselinova, Sanja Kostadinović Veličkovska, Sasa Mitrev.....	40
ISOLATION OF ANTHOCYANINS BY HIGH-SPEED COUNTERCURRENT CHROMATOGRAPHY AND APPLICATION OF COLOR ACTIVITY CONCEPT TO DIFFERENT RED GRAPE POMACES Dejan Pljevlajkusić, Sanja Kostadinović Veličkovska.....	41
RESVERATOL IN WINES – POTENT ANTIOXIDANT RESPONSIBLE FOR “FRENCH PARADOX” Dejan Pljevlajkusić, Sanja Kostadinović Veličkovska.....	42
EFFECT OF FERMENTATION TIME ON THE SENSORY QUALITY OF COMPOSITE WHEAT BREAD Durim Alija, Viktorija Stamatovska, Vezirka Jankuloska ¹ Joanna Harasym, Gafur Xhabiri, Daniela Nikolovska Nedelkoska.....	43
DIETARY PATTERNS OF CEREAL CONSUMPTION AND THEIR ASSOCIATION WITH THE HOMA-IR INDEX AMONG ADULTS WITH HYPERINSULINEMIA Eleonora Delinikolova, Vezirka Jankuloska.....	44
LACTIC ACID BACTERIA COUNTS IN GOAT MILK AND TRADITIONAL GOAT MILK CHEESES Hava Miftari, Tatjana Kalevska, Tatjana Blazevska, Ismail Ferati, Vezirka Jankuloska, Daniela Nikolovska Nedelkoska.....	45
THE PRESENCE OF MYCOTOXINS IN VARIOUS DOMESTIC AND EXPORTED FOOD PRODUCTS Ismail Ferati, Daniela Nikolovska Nedelkoska, Hava Miftari, Durim Alija, Rejhana Luma, Mirsade Tairi.....	46
COMPARATIVE ANALYSIS OF NATURAL ANTIOXIDANTS ON THE OXIDATIVE STABILITY OF DIFFERENT COLD-PRESSED SUNFLOWER OILS UNDER VARYING FILL VOLUMES Katerina Temelkovska Ristevska, Vezirka Jankuloska, Valentina Velkovski, Viktorija Stamatovska, Tatjana Blazhevska, Tanja Stojanovska, Gorica Pavlovska.....	47
ADVANCED APPROACHES FOR DETECTION OF MYCOTOXINS IN FOODS Marija Taskova Kukutanov, Sasa Mitrev, Emilija Arsov, Biljana Kovacevik.....	48
CURRENT ANALYTICAL METHODS FOR MYCOTOXIN DETECTION IN FOODS AND FEEDS: A COMPARATIVE REVIEW Marija Taskova Kukutanov, Biljana Kovacevik, Emilija Arsov, Sasa Mitrev.....	49
SENSORY EVALUATION OF DIETARY SAUSAGES INTENDED FOR CHILDREN'S NUTRITION Nadica Bajraktarova, Dimitar Nakov, Aco Kuzelov.....	50
FATTY ACID PROFILE OF 16 COLD-PRESSED SUNFLOWER OILS FROM THE REGION OF NORTH MACEDONIA Sanja Kostadinović Veličkovska, Saša Mitrev.....	51
VOLATILE PROFILE AND SENSORY EVALUATION OF COLD-PRESSED SUNFLOWER OILS Sanja Kostadinović Veličkovska, Saša Mitrev.....	52
FORMULATION OF LIP BALMS FROM ESSENTIAL OILS Xheneta Gashi, Edona Ismajli, Miribane Dërmaku-Sopjani, Arleta Rifati-Nixha.....	53
FATTY ACID PROFILE AND QUALITY OF YOGURT FROM LOCAL SHEEP BREEDS RAISED IN THE SOUTHWESTERN RILA MOUNTAIN REGION Yuliya Koyundzhijaska, Silviya Ivanova, Vasil Nikolov.....	54
IMPLEMENTATION OF TRACEABILITY SYSTEMS IN THE IMPORT OF WHEAT FLOUR IN THE REPUBLIC OF KOSOVO Zenun Krasniqi, Biljana Trajkovska.....	55
SOIL SCIENCE AND ENVIRONMENT.....	56
DISTRIBUTION AND FACTOR ANALYSIS OF SOIL ORGANIC CARBON IN SOILS FOR GRAPEVINES FROM SELECTED MICROLOCATIONS IN THE OVCE POLE VINE DISTRICT Aleksandar Piperevski, Biljana Balabanova.....	57
SOIL CARBON DYNAMICS IN BARLEY AND CHICKPEA UNDER CARBON-FARMING AND CONVENTIONAL PRACTICES: EVIDENCE FROM PILOT SITES IN NORTH MACEDONIA Biljana	

Balabanova, Verica Ilieva, Sasa Mitrev, Blagoja Mukanov, Mario Petkovski, Jovana Milosavljeva	58
ASSESSMENT OF ORGANOCHLORINE PESTICIDE RESIDUES IN FISH FROM BATLLAVA LAKE Ilirjana Osmani, Anja Babić, Arben Haziri, Aurel Nuro	59
ATMOSPHERIC DEPOSITION OF NITROGEN AND SULFUR IN KOSOVO USING MOSSES AS BIOINDICATORS Musaj Paçarizi, Flamur Sopaj, Trajče Stafilov, Robert Šajn, Valon Sadiku, Riccardo Fedeli, Stefano Loppi.....	60
ENOLOGY.....	61
DETERMINATION OF ORGANIC SELENIUM COMPOUNDS IN KRATOSIJA WINE APPLYING HPLC- ESI-MS/MS Violeta Ivanova-Petropulos, Elena Bogeva, Aleksandra Sentkowska.....	62
MEETING SIDE EVENT.....	63
PRESENTATION OF AGRICULTURAL COMPANIES WITH EXHIBITION STANDS.....	64

BOOK OF ABSTRACTS
SECTION: PLANT SCIENCES

BOOK OF ABSTRACTS
SECTION: FOOD SCIENCE AND NUTRITION

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ISOLATION OF ANTHOCYANINS BY HIGH-SPEED COUNTERCURRENT CHROMATOGRAPHY AND APPLICATION OF COLOR ACTIVITY CONCEPT TO DIFFERENT RED GRAPE POMACES Dejan Pljevljakusić^{1*}, Sanja Kostadinović Veličkovića²

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Abstract

Anthocyanins are natural pigments responsible for orange, pink, red, violet and blue colours in the flowers and fruits of many plants which are used as colorants in food and beverages industry. Anthocyanins (of the Greek anthos=flower and kyanos=blue) are under huge investigation due to the growing interest of substitution of the potential cancerogenic synthetic colors which are still used in food industry. Anthocyanins of grape pomace from three varieties "Pinot noir", "Merlot" and "Vranec" were isolated by high-speed counter current chromatography. After purification of the fractions by means of preparative high performance liquid chromatography the structures of isolated pigments were elucidated by electrospray ionization multiple mass spectrometry (ESI-MSn) and nuclear magnetic resonance (NMR) spectroscopy. The major anthocyanin malvidin-3-glucoside and the minor pigments delphinidin-3-glucoside, cyanidin-3-glucoside, petunidin-3-glucoside, and malvidin-3-p-coumaroyl-glucoside were isolated. NMR structure elucidation confirmed the most abundant anthocyanins responsible for the color of the grape pomace. Furthermore, the color activity concept of isolated anthocyanins was performed for investigation of particular contribution of isolated pigments to the color of three different varieties of grape pomace. The "Color activity concept" was applied and visual detection thresholds of isolated anthocyanins were determined. The results of the "color activity value" of the isolated pigments and their detection thresholds were in good agreement with the color shade of the different varieties of red grape pomace.

Key words: *grape pomace, HS-CCC, anthocyanins, HPLC-MS, NMR, colour activity concept*

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