

BOOK OF ABSTRACTS



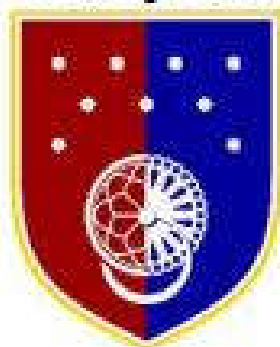
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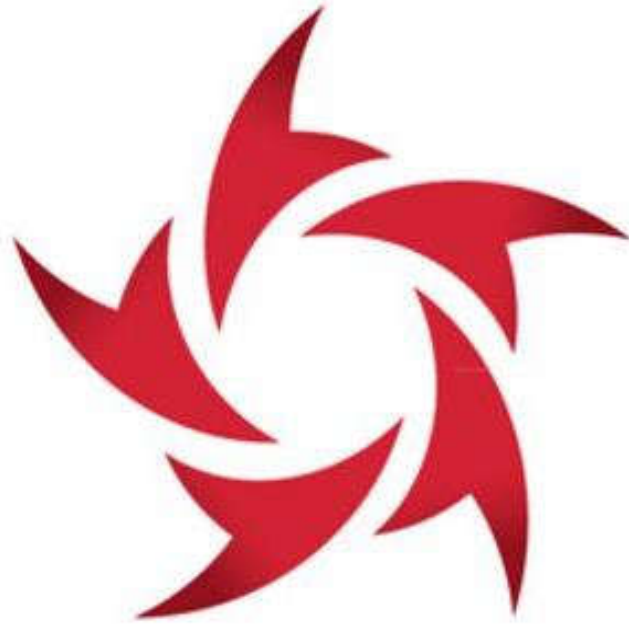
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G R O U P

TABLE OF CONTENTS

KEYNOTE SPEAKERS

- Renata Bažok
PEST MANAGEMENT CHALLENGES FOR LOCAL FOOD PRODUCTION SYSTEMS 2
- Joanna Harasym
THE BENEFITS OF LOCAL FOOD PRODUCTION SYSTEMS - CIRCULAR ECONOMY PERSPECTIVE 3
- Wolf Lorleberg, Bernd Pölling
PERSPECTIVES FOR WEST BALKAN AGRICULTURE: WHICH BUSINESS MODELS FOR A FUTURE INSIDE EU? 4

FOOD TECHNOLOGY (FOOD & NUTRITION)

- Amila Oras, Semir Ahmetpahić, Asima Akagić, Teofil Gavrić, Jasmina Tahmaz, Sanja Oručević Žuljević
IMPACT OF POTATO STORAGE CONDITIONS ON THE QUALITY OF STARCH 6
- Lejla Mujezin, Adna Salkić, Irzada Taljić
PLANT-BASED DIET AS A SUSTAINABLE DIET OR A NEW DIET TREND 7
- Pelin Özkaya, Müge Uyarcan, Seval Dağbağlı
USAGE OF BIOPLASTICS IN FOOD INDUSTRY 8
- Merima Miralem, Anesa Ahatović, Mujo Hasanović, Adaleta Durmić-Pašić
SCREENING BASED APPROACH TO RATIONAL UTILIZATION OF GMO TESTING RESOURCES: CASE OF DP305423 SOYBEAN 9
- Igor Antić, Jelena Živančev, Maja Buljovčić, Nataša Đurišić-Mladenović
DETERMINATION OF PATULIN CONTENT IN ALCOHOLIC BEVERAGES BY UHPLC-MS/MS 10
- Agnieszka Orkusz, Joanna Harasym
EDIBLE INSECTS AS INNOVATIVE FACTOR FOR LOCAL CIRCULAR ECONOMY APPROACH 11
- Biljana Rabrenović, Milica Mirković, Zlata Ratković, Katarina Topalović
APPLICATION OF OIL CAKES FOR PROTEIN SHAKES AND DETERMINATION OF THEIR ENERGY VALUE 12
- Jasmina Tahmaz, Sabina Operta, Amila Oras, Sanja Oručević Žuljević, Selma Bišćević
QUALITY PARAMETERS OF SOME COMMERCIAL SAUCES AND DRESSINGS 13
- Jasmina Tahmaz, Irma Velić, Amila Oras, Sabina Operta, Mersiha Alkić Subašić
QUALITY OF COMMERCIAL BLENDS FOR TARHANA, BEY'S AND SARAJEVSKA SOUPS 14
- Almir Toroman, Senita Isaković, Enver Karahmet
TESTING OF DEVIATIONS OF PATE FILLING SYSTEM USING PARETO METHOD 15
- Tarik Dizdarević, Amina Jašarspahić, Zlatan Sarić, Nedim Hadžiomerović, Adin Fakić, Mersiha Alkić-Subašić, Svijetlana Sakić-Dizdarević
STUDY OF THE INFLUENCE OF TECHNOLOGICAL PARAMETERS AND STARTER CULTURES ON THE QUALITY OF SAINT-PAULIN CHEESE 16

- Belmina Halilović, Selma Čorbo, Teofil Gavrić, Munevera Begić THE EFFECT OF ESSENTIAL OILS ON THE QUALITY AND OXIDATIVE STABILITY OF LINSEED OIL	17
- Mirela Lučan Čolić, Martina Antunović, Marko Mihalina CHARACTERISTICS OF FUNCTIONAL CHEESE SPREAD ENRICHED WITH PUMPKIN SEED OIL	18
- Adna Salkić, Lejla Mujezin, Sanja Oručević Žuljević STEVIOL GLYCOSIDE – PROPERTIES AND ROLE IN SUCROSE SUBSTITUTION	19
- Adela Milišić, Zlatan Sarić, Tarik Dizdarević, Svijetlana Sakić-Dizdarević QUALITY AND TECHNOLOGY OF WHITE SHEEP'S CHEESE FROM BJELAŠNICA	20
- Mojca Korošec, Jasna Bertoncelj, Evgen Benedik, Blaž Ferjančič, Neža Lipovec, Matej Gregorič, Lejla Biber, Almir Toroman, Irzada Taljić COMPARISON OF THE ORGANIZATION AND QUALITY OF NUTRITION IN KINDERGARTENS IN BOSNIA AND HERZEGOVINA AND SLOVENIA (KOKIV)	21
- Amila Oras, Aida Turbo, Asima Akagić, Jasmina Tahmaz, Sanja Oručević Žuljević EXAMINATION OF SWEETENERS ADDITION ON THE PROPERTIES OF STARCH GEL	22
- Asima Buljina, Amina Stambolić, Saud Hamidović, Enisa Omanović-Miklićanin GREEN SYNTHESIS OF SILVER NANOPARTICLES FROM <i>Mentha piperita</i> EXTRACT AND THEIR ANTIMICROBIAL ACTIVITY	23
- Lejla Čengić, Zilha Ašimović, Teofil Gavrić DETERMINATION OF ANTIOXIDANT ACTIVITY IN SELECTED HERBS USING DPPH AND pFRAP METHODS	24
- Zilha Ašimović, Semira Hasanović, Ševal Muminović, Nermina Spaho, Selma Čorbo, Lejla Čengić ANTIOXIDANT ACTIVITY AND TOTAL PHENOLIC CONTENT DETERMINING IN SAMPLES OF CELANDINE (<i>Chelidonium majus</i> L.) BY APPLYING DIFFERENT SOLVENTS	25
- Svijetlana Sakić-Dizdarević, Adin Fakić, Nedim Hadžiomerović, Vedad Falan, Zlatan Sarić, Mersiha Alkić-Subašić, Tarik Dizdarević ECONOMIC ANALYSIS OF SEMI-HARD CHEESE PRODUCTION DEPENDING ON THE APPLIED TECHNOLOGY	26
- Sara Uglješa, Selma Čorbo, Munevera Begić EFFECT OF ANTIOXIDANTS ON THE QUALITY AND STABILITY OF OLIVE OIL	27
- Adis Šator, Irzada Taljić, Maid Čibo, Amina Stambolić, Enisa Omanović-Miklićanin COMPARATIVE ANALYSIS OF THE DIET OF USERS OF TWO DIFFERENT FITNESS CENTERS	28
- Violeta Ivanova-Petropulos, Dragan Nikolić, Borimir Vojnoski, Isidro Hermosín-Gutiérrez IDENTIFICATION OF ANTHOCYANINS AND ANTHOCYANIN-DERIVATIVES IN VRANEC WINES DURING AGING	29
- Violeta Ivanova-Petropulos, Elena Bogeva, Katerina Bačeva Andonovska, Dragan Nikolic, Trajče Stafilov DETERMINATION OF ELEMENTS COMPOSITION IN VRANEC WINES PRODUCED WITH DIFFERENT MACERATION TIME	30

- Danijel D. Milinčić, Aleksandar Ž. Kostić, Uroš M. Gašić, Sladjana P. Stanojević, Živoslav Lj. Tešić, Mirjana B. Pešić
ANTHOCYANIN PROFILES OF POMACE SKINS OF INTERNATIONAL AND INDIGENOUS GRAPE VARIETETY DETERMINED BY UHPLC-MS/MS ORBITRAP 31
- Jasna Djinović-Stojanović, Milan Ristić, Klaus Troeger
ROLE OF SENSORY EVALUATION AND QUALITY IN CONSUMERS' ACCEPTANCE OF SMOKED MEAT PRODUCTS 32
- Maja Petričević, Tamara Stamenić, Nikola Stanišić, Veselin Petričević, Marija Gogić, Violeta Mandić, Slaviša Stajić
INULIN AS A FAT - REDUCTION INGREDIENT IN CHICKEN FRANKFURTERS - TECHNOLOGICAL PROPERTIES AND CONSUMER ACCEPTANCE 33
- Jelena Živančev, Igor Antić, Maja Buljovčić, Nataša Đurišić-Mladenović
ACRYLAMIDE CONTENT IN SALTY SNACKS AND COOKIES FROM THE SERBIAN MARKET 34
- Agnieszka Orkusz, Joanna Harasym
PRESCHOOL MENUS COMPOSITION AS INDICATOR OF LOCAL FOOD MARKET 35
- Arman Šekerić, Milenko Blesić, Pakeza Drkenda, Nermina Spaho
EFFECT OF THE ALCOHOL CONTENT ON SENSORY PERCEPTION OF THE FRUIT SPIRITS 36
- Azra Memišević, Doris Popić, Amila Oras, Sanja Oručević Žuljević, Nermina Spaho, Jasmina Tahmaz, Asima Akagić
CHEMICAL COMPOSITION OF APPLE PEKMEZ PRODUCED IN BOSNIA AND HERZEGOVINA 37
- Ceyda Söbeli, Emine Erdağ Akca, Aslı Akpınar
DETERMINATION OF PROBIOTIC VIABILITY IN HONEY ADDED YOGURTS ENRICHED WITH DIFFERENT PROBIOTICS AND PREBIOTICS 38
- Nela Nedić Tiban, Lana Dinić
SOME POMOLOGICAL AND PHYSICOCHEMICAL CHARACTERISTICS OF THE TRADITIONAL PEAR VARIETY LAZANKA 39
- Derya Saygılı, Asli Akpınar, Oktay Yerlikaya
THE INFLUENCE OF DIFFERENT YEAST SPECIES ON MICROBIOLOGICAL AND SENSORIAL PROPERTIES ON KEFIR 40
- Remigiusz Olędzki, Joanna Harasym
ASSESSMENT OF ANTIOXIDANT PROPERTIES IN THE FRUITS OF FIVE HYBRID GRAPE CULTIVARS FROM POLAND 41
- Lazar Pejić, Zvezdan Jovanović, Milica Stevanović, Ivana Aničić, Jovanka Laličić-Petronijević
DEVELOPMENT OF INNOVATIVE CONFECTIONERY PRODUCT USING FOOD INDUSTRY BY-PRODUCTS 42
- Sandra Vuković, Đorđe Moravčević, Ana Vujošević, Sofija Kilibarda, Danijel D. Milinčić, Lejla Biber, Aleksandar Ž. Kostić
NUTMEG SPICE – SOURCE OF NATURAL ANTIOXIDANTS 43
- Dilay Yildiz, Müge Uyarcan, Ceyda Söbeli, Emine Karakulak, Semra Kayaardi
THE UTILIZATION OF PECTIN EXTRACTED FROM WATERMELON SKIN AS AN EMULSIFIER IN HAMBURGER PATTIES 44
- Remigiusz Olędzki, Joanna Harasym
EFFECT OF MICROWAVE RADIATION ON ANTIOXIDANT ACTIVITY AND POLYPHENOL CONTENT IN PEPPER 45

- Amina Stambolić, Emina Drkić, Sabaheta Keser, Enisa Omanović-Miklićanin
DETERMINATION OF METHANOL CONTENT IN HOMEMADE BRANDY
USING RAMAN SPECTROSCOPY 46
- Mersiha Alkić-Subašić, Tarik Dizdarević, Svijetlana Sakić-Dizdarević,
Jasmina Tahmaz, Nermina Đulančić, Aleksandra Martinović, Judith Narvhus,
Roger Abrahamsen
GROWTH AND METABOLIC CHARACTERIZATION OF THREE LACTIC
ACID BACTERIA SPECIES 47
- Amina Stambolić, Selma Burović, Semira Galijašević, Enisa Omanović-Miklićanin
THE CHEMISTRY OF FERMENTED AND PICKLED FOOD 48
- Semira Galijašević, Selma Burović, Amina Stambolić, Enisa Omanović-Miklićanin
PHYTOMELATONIN: RECENT ADVANCES – SYSTEMATIC REVIEW 49

AGRICULTURAL PLANT PRODUCTION

- Behçet Kir, Hakan Geren, Şükrü Sezgi Özkan, Bülent Budak, Ali Salman,
Gülcan Demiroğlu Topçu
EFFECTS OF MOWING HEIGHTS ON THE TURF PERFORMANCES OF
SOME TALL FESCUE (*Festuca arundinacea* Schreb.) CULTIVARS UNDER
MEDITERRANEAN ECOLOGICAL CONDITIONS 51
- Jasna Avdić, Edina Šabanović, Berina Bečić, Alka Turalija, Robert Kepić
THE LANDSCAPING OF THE GREEN AREA OF THE RAVNE VISOKO SITE 52
- Emina Vlahovljak, Merima Makaš, Sabrija Čadro
THE STATE OF PEOPLE'S AWARENESS ABOUT CLIMATE CHANGES AND
ENVIRONMENTAL PROTECTION IN BOSNIA AND HERZEGOVINA 53
- Jasna Avdić, Amina Kapidžić, Berina Bečić, Alka Turalija, Robert Kepić
AUTHENTIC BOSNIAN GARDEN THROUGH HISTORY 54
- Pakeza Drkenda, Osman Musić, Izudin Terzić, Fikreta Behmen
EFFECT OF THE HARVEST DATE AND 1-METHYLCYCLOPROPENE (MCP)
APPLICATION ON THE QUALITY AND STORAGE OF 'GRANNY SMITH'
APPLE FRUITS 55
- Sanel Haseljić, Snježana Hrnčić, Fejzo Bašić, Josip Jurković, Siniša Mitrić
EFFECTIVENESS OF THE INSECTICIDES CHLORANTRANILIPROLE,
METHOXYFENOZIDE AND EMAMECTIN BENZOATE IN CONTROLLING
THE TOMATO MOTH USING THE MODIFIED "LEAF-DEEP" METHOD 56
- Saud Hamidović, Amra Softić, Mirza Tvica, Nermin Rakita, Igor Kljujev,
Hamdija Čivić, Blažo Lalević
IMPACT OF MANAGEMENT PRACTICES ON SOIL MICROBIAL ACTIVITY 57
- Anamarija Matijević, Ajla Šakonjić, Drena Gadžo, Mirha Đikić, Teofil Gavrić
THE IMPACT OF MULCH TYPE ON BASIL YIELD AND ESSENTIAL OIL
CONTENT 58
- Miljan Cvetković, Saša Kalamanda
ASSESSMENT OF THE EFFICIENCY OF PLUM HARVESTING IN INTENSIVE
PLANTATIONS 59

- Josip Jurković, Elmedina Bistrić, Sanel Haseljić, Sabrija Čadro, Fejzo Bašić, Rasim Omanović, Jasmina Sulejmanović
DETERMINATION OF CHLORIDE CONTENT IN SOIL SAMPLES BY AUTOMATIC TITRATION, AND MINIMIZING INTERFERENCES CAUSED BY THE PRESENCE OF Fe IONS 60
- Muamer Bezdob, Nermin Rakita, Saud Hamidović, Teofil Gavrić, Aleksandar Simić, Admir Dokso
THE INFLUENCE OF THE VEGETATION CYCLE AND MIXTURE (GRASS AND LEGUMINUS) ON PLANT HEIGHT OF SOWED LAWNS 61
- Sezai Delibacak, Necla Dal
EFFECT OF VERMICOMPOST AND MINERAL FERTILIZER APPLICATIONS ON SOME PROPERTIES OF LOAM TEXTURE SOIL AND PEPPER YIELD 62
- Ajla Smajlović, Ahmed Gudić, Ajdin Avdović, Faruk Hadžić, Sara Tatarević, Vanesa Ibraković, Zejneba Kermo, Sabrija Čadro
IMPACT OF CLIMATE CHANGE ON THE ANNUAL AND SEASONAL SOIL WATER BALANCE IN THE MUNICIPALITY SANSKI MOST, BOSNIA AND HERZEGOVINA 63
- Saud Hamidović, Azra Dautović, Fejzo Bašić, Mirha Đikić, Sanel Haseljić, Berina Imamović, Blažo Lalević
THE INFLUENCE OF SELECTED HERBICIDES ON THE GROWTH OF BACTERIAL SPECIES *BACILLUS MYCOIDES* AND *ESCHERICHIA COLI* 64
- Ajla Šakonjić, Anamarija Marijević, Saud Hamidović, Lejla Čengić, Teofil Gavrić
EFFECTS OF MULCHING AND IRRIGATION ON ANTIOXIDANT ACTIVITY AND ANTIMICROBIAL PROPERTIES OF BASIL (*Ocimum basilicum* L.) 65
- Hakan Geren, Maryam Saberzadeh
ROLE OF DIFFERENT NITROGEN RATE AND CUTTING HEIGHTS ON THE YIELD AND SOME FORAGE QUALITY COMPONENTS OF GIANT KING GRASS 66
- Mersija Delić, Fikreta Behmen, Semira Sefo, Pakeza Drkenda, Saša Matijašević, Ana Mandić
EFFECT OF PRUNING ON MECHANICAL COMPOSITION OF CLUSTER OF TABLE GRAPE VARIETIES (*Vitis vinifera* L.) 67
- Darko Jevremović, Dejan Zejak, Bojana Vasiljević, Aleksandar Leposavić
DETECTION OF BLUEBERRY LATENT VIRUS ON HIGHBUSH BLUEBERRIES IN MONTENEGRO 68
- Emina Sijahović, Hamdija Čivić, Senad Murtić, Biljana Dojčinović
THE USE OF PYROPHYLLITE FOR THE PURPOSE OF REMEDIATION OF LAND CONTAMINATED WITH HEAVY METALS IN THE INDUSTRIALS ZONE OF KAKANJ 69
- Işıl Saraç Sivrikaya, Arzu Çelik Oğuz, Aziz Karakaya
LEAF DISEASES OF WILD BARLEY (*Hordeum spontaneum*) IN BİNGÖL UNIVERSITY CAMPUS, TURKEY 70
- Stefan Marković, Milan Blagojević, Ljiljana Tanasić, Nemanja Stošić, Milan Glišić, Jelena Robinić
EXAMINATION OF POMOLOGICAL AND TECHNOLOGICAL CHARACTERISTICS OF SOME CHERRY VARIETIES IN THE DISTRICT OF MAČVA 71
- Hamdija Čivić, Emina Sijahović, Senad Murtić, Nermina Sarajlić
SOIL POLLUTION BY HEAVY METALS NEAR THE LUKAVAC COKE INDUSTRY AND MODELS OF ITS PROTECTION AND REMEDIATION 72

- Teofil Gavrić, Emra Bašić, Drena Gadžo, Saud Hamidović, Mirha Đikić
THE EFFECT OF BIOFERTILIZATION ON POTATO YIELD COMPONENTS 73
- Zuhdija Omerović, Nermin Rakita, Muamer Bezdrob, Edin Omerhodžić
OFFER AND TECHNICAL CORRECTNESS OF SPRAYER NOZZLES FOR
PESTICIDES APPLICATION IN BOSNIA AND HERZEGOVINA 74
- Blažo Lalević, Teofil Gavrić, Amina Stambolić, Amer Sunulahpašić, Vedrana Komlen,
Enver Karahmet, Saud Hamidović
ANTIFUNGAL POTENTIAL OF PEPPERMINT, BASIL AND SAGE ESSENTIAL
OILS 75
- Amer Bošnjaković, Drena Gadžo, Mirha Đikić, Teofil Gavrić, Lejla Čengić
PRODUCTIVE CHARACTERISTICS OF A NEW VARIETY OF PURPLE
POTATO (*Solanum tuberosum* cv. Bergerac) 76
- Saud Hamidović, Amila Mekić, Muamer Bezdrob, Drena Gadžo, Almira Konjić,
Monika Stojanova, Blažo Lalević
SUPPRESSION OF PHYTOPATHOGENIC FUNGI BY GARLIC, HORSETAIL,
AND YARROW PLANT EXTRACTS 77
- Dženisa Zalihić, Mirha Đikić, Drena Gadžo, Teofil Gavrić
THE WEED SEED BANK 78
- Tamara Todorovska, Srekjko Gjorgjievski, Sreten Andonov, Vlado Vukovikj,
Zoran Popovski
IMPACT OF THE YEAR AND REGIONAL DISTRIBUTION ON THE QUALITY
OF WHEAT IN THE REPUBLIC OF NORTH MACEDONIA 79
- Melisa Ljuša, Slavko Dvoršak, Mirha Đikić, Hamid Čustović, Maid Hadžimujić
SAFE AND ENVIRONMENTALLY ACCEPTABLE MANAGEMENT OF
PESTICIDE'S PLASTIC PACKAGING WASTE IN BOSNIA AND HERZEGOVINA 80
- Mirza Tvica, Senad Murtić, Jordana Ninkov, Vesna Tunguz
POLLUTION OF PEATLAND ON ABANDONED RECLAMATION AREA AND
AFTER FIRE 81
- Nermina Sarajlić, Semir Maslo, Biljana Lubarda, Nejc Jogan, Šemso Šarić,
Borut Bosančić, Vladimir Ranđelović
VASCULAR FLORA OF MEDIEVAL FORTRESSES OF BOSNIA AND
HERZEGOVINA 82
- Lutvija Karić, Anita Udovičić, Čerima Zahirović Sinanović, Dragan Žnidarčić
THE GROWTH DYNAMICS AND YIELD COMPONENTS OF THE SELECTED
WATERMELON CULTIVARS 83
- Čerima Zahirović Sinanović, Lutvija Karić, Senad Murtić, Dragan Žnidarčić,
Fikreta Behmen, Admira Halilović
INFLUENCE OF PYROPHYLLITE AS A SOIL CONDITIONER ON
PRODUCTIVITY AND ACCUMULATION OF NITRATE IN LETTUCE
(*Lactuca sativa* L.) 84
- Nermina Sarajlić, Nejc Jogan, Vladimir Ranđelović
SPONTANEOUS FLORA OF URBAN DOMESTIC GARDENS OF THE CITY OF
SARAJEVO 85
- Marija Ćosić, Zorica Ranković Vasić, Mirjam Vujadinović Mandić, Dragan Nikolić,
Ana Vuković Vimić, Aleksa Lipovac, Aleksandar Simić
WATER DEFICIT IN ORCHARDS, VINEYARDS, MEADOWS AND PASTURES
IN CLIMATE CHANGE CONDITIONS 86

AGRICULTURAL ANIMAL PRODUCTION

- Barbara Perica, Maja Gregić, Tina Bobić, Pero Mijić, Mirjana Baban
ANALYSIS OF THE BREEDING OF LIPIZZANER HORSES AT THE STATE
STUD FARM ĐAKOVO 88
- Dino Lepar, Irma Kapo, Samir Muhamedagić
SEASONAL IMPACT OF HARVESTING ON THE FRESHNESS AND QUALITY
OF EUROPEAN SEABASS MEAT (*Dicentrarchus labrax* Linnaeus, 1758) 89
- Irma Kapo, Samir Muhamedagić, Dino Lepar
INFLUENCE OF STUNNING METHODS ON THE FRESHNESS OF RAINBOW
TROUT MEAT (*Oncorhynchus mykiss* Walbaum, 1792) 90
- Kosta Šumar, Goran Mirjanić, Lejla Biber
INFLUENCE OF THE HONEYBEE COLONY STRENGTH ON COLLECTING
BEE VENOM BY ELECTRO STIMULATION METHOD 91
- Banu Yücel, Ekin Varol
INNOVATIVE USING FACILITIES OF BEE VENOM 92
- Dženan Hadžić, Emir Džomba, Senada Čengić Džomba, Zvonko Antunović, Zlatan Sarić
THE PHYSICALLY EFFECTIVNES OF DIETRY FIBERS ON THE BLOOD
METABOLIC PROFILE AND MILK PRODUCTION IN EARLY LACTATION
COWS 93
- Emir Džomba, Senada Čengić-Džomba, Dženan Hadžić
NEW APPROACH IN PREPARTUM FEEDING OF DAIRY COWS 94
- Božo Važić, Biljana Rogić, Ivan Pihler, Vesna Gantner
A STUDY OF SOME PRODUCTION CHARACTERISTICS OF DUPKA
PRAMENKA LAMBS WITH THE AIM OF GENETIC CHARACTERIZATION
OF THE BREED 95
- Marinko Đuzel, Dalida Galović, Danijela Samac, Jakov Jurčević, Vladimir Margeta
SUSTAINABLE PIG PRODUCTION IN BOSNIA AND HERZEGOVINA IN THE
CONTEXT OF THE GREEN DEAL 96
- Ivana Jožef, Marcela Šperanda, Mislav Đidara, Ranko Gantner, Muhamed Brka,
Vesna Gantner
THE VARIATIONS IN BIOCHEMICAL PARAMETERS IN BLOOD AND MILK
DUE TO MASTITIS INDICATION AND COW'S PARITY 97
- Franjo Poljak, Marcela Šperanda, Mislav Đidara, Ranko Gantner, Muhamed Brka,
Vesna Gantner
THE EFFECT OF METABOLIC DISORDER RISK ON THE VARIABILITY OF
BIOCHEMICAL PARAMETERS IN COWS' BLOOD AND MILK REGARDING
THE SAMPLING MONTH 98
- Zoran T. Popovski, Srečko Gjorgjievski, Aleksandar Chadikovski, Vesna Rafajlovska,
Muhamed Brka
CASE STUDIES ON THE USE OF BY-PRODUCTS FROM LIVESTOCK
PRODUCTION AND PROCESSING OF ANIMAL PRODUCTS 99
- Senada Čengić-Džomba, Emir Džomba, Dženan Hadžić
A REVIEW OF USING ALGAE MEAL IN FEEDING OF FRESHWATER
FISH SPECIES 100
- Ljiljana Samolovac, Dušica Ostojić Andrić, Dragan Nikšić, Marina Lazarević,
Vlada Pantelić, Nenad Mičić, Miloš Marinković
CONTEMPORARY CATTLE BREEDING AND CLIMATE CHANGE-CHALLENGES
AND RESPONSES 101

- Tomislav Šarić, Ivica Zdrilić, Fiona Dadić, Ivan Župan THE ASPECTS OF THE PROTECTION OF AQUATIC PRODUCTS WITH PDO LABEL: THE EXAMPLE OF THE NOVIGRAD MUSSEL	102
- Mirna Gavran, Vesna Gantner THE METABOLISM OF AMINO ACIDS	103
- Maja Gregić, Mirjana Baban, Pero Mijić, Vesna Gantner, Tina Bobić CHANGES IN THE COMPOSITION OF MARE'S MILK THROUGH THE ORDINAL NUMBER OF LACTATION	104
- Denis Kučević, Muhamed Brka, Miroslav Plavšić, Ksenija Čobanović, Tamara Papović, Stevan Stankovski, Vesna Gantner ORGANIC BEEF PRODUCTION AS A SUSTAINABLE SOLUTION FOR THE EU MARKET – A CASE STUDY OF THE REPUBLIC OF SERBIA	105
- Husein Vilić, Emir Mujić, Refik Šahinović INFLUENCE OF SEASON ON SHEEP UTERINE MORPHOMETRY	106
- Husein Vilić, Emir Mujić, Refik Šahinović INFLUENCE OF PROLACTIN UDDER DEVELOPMENT IN PREPUBERTAL SHEEP	107

AGRICULTURAL ECONOMICS

- Merima Makaš, Sabahudin Bajramović, Željko Vaško, Emir Bećirović, Vedad Falan, Alejna Krilić GREEN AGENDA AS A NEW PARADIGM OF AGRICULTURE IN BOSNIA AND HERZEGOVINA	109
- Lazo Dimitrov, Viktor Gjamovski, Despina Popovska Stojanov, Marija Gjosheva Kovachevikj IMPACT OF THE ECONOMIC CRISIS TO THE APPLES PRODUCTION PRICE IN THE REPUBLIC OF NORTH MACEDONIA	110
- Lazo Dimitrov, Marija Gjosheva Kovachevikj, Saso Kjosev INTERNATIONAL MARKETS IMPACT ON WHEAT PRICES IN THE REPUBLIC OF NORTH MACEDONIA	111
- Adela Mujić, Melisa Ljuša AGRO-ECOLOGICAL ZONING AS THE BASIS FOR PLANNING AGRICULTURAL PRODUCTION IN THE AREA OF THE CITY OF TUZLA	112
- Alejna Krilić, Aleksandra Nikolić, Vedad Falan, Đani Đorđević, Merima Makaš CONSUMER PURCHASING BEHAVIOR TOWARDS THE DAIRY PRODUCTS IN BOSNIA AND HERZEGOVINA	113
- Dragan Dokić, Ranko Gantner, Muhamed Brka, Vesna Gantner DECENTRALIZATION OF AUTHORITY, POSSIBILITIES AND OBSTACLES TO ATTRACTING INVESTMENTS IN AGRICULTURAL PRODUCTION IN THE EXAMPLE OF SERBIA, BOSNIA AND HERZEGOVINA AND CROATIA	114
- Jelena Ignjatović, Ivana Vladimirović, Stefan Marković, Suzana Knežević IMPORTANCE OF DEFINING MARKETING MIX INSTRUMENTS FOR BLUEBERRY EXPORT IN SERBIA QUALITY, MECHANIZATION, PRICE, DISTRIBUTION, PROMOTION	115

- Alen Mujčinović, Aleksandra Nikolić, Anela Dervić, Hasija Dubičić, Amra Dedić, Selma Genjac
LOCAL AND SUSTAINABLE FOOD CONSUMPTION IN B&H – MISSING OR LONG-AWAITED OPPORTUNITY? 116
- Ivana Vladimirović, Jelena Ignjatović, Stefan Marković, Suzana Knežević, Milan Blagojević
CREATION OF A MARKETING STRATEGY FOR THE EXPORT OF RASPBERRIES WITH SPECIAL REFERENCE TO THE IMPORTANCE OF MECHANIZATION - A CASE STUDY FOR SERBIA 117
- Sokol Sallahu
AGRICULTURE AS A POTENTIAL OF THE ECONOMY DEVELOPMENT IN KOSOVO 118
- Aleksandra Nikolić, Alen Mujčinović
UNLEASHING THE POWER OF RURAL-URBAN CONTINUUM - APPLICATION OF S3 POLICY APPROACH 119

INNOVATIVE TECHNOLOGIES IN AGRICULTURE AND FOOD INDUSTRY

- Suzana Knežević, Stefan Marković, Milan Blagojević
APPLICATION OF AGRICULTURAL MACHINERY IN BERRY HARVESTING 121
- Maid Ćibo, Adis Šator, Amina Stambolić, Enisa Omanović-Miklićanin
NANOTOXICOLOGY IN FOOD TECHNOLOGY 122
- İpek Karaali, Ebru Ersoy Tonyaloğlu, Engin Nurlu
SPATIO-TEMPORAL ANALYSIS OF AGRICULTURAL LANDSCAPE DYNAMICS IN EFELER, AYDIN / TURKEY USING MOVING WINDOW ANALYSIS 123
- Seval Dağbağlı, Aslı Akpınar, Ceyda Söbeli, Müge Uyarcan, Semra Kayaardi
EFFECTS OF ELECTROSPINNING PARAMETERS ON PRODUCTION OF POLY(VINYL ALCOHOL)/PULLULAN BLEND NANOFIBRES 124
- Kübra Kurtşan, Diba Şenay, Engin Nurlu
ANALYSIS OF AGRICULTURAL LANDSCAPE CHANGE USING LANDSCAPE METRICS: THE CASE OF MENEMEN, IZMIR 125
- Almira Konjić, Vlad Gheorghe, Fuad Gaši, Jasmin Grahić
SNP2STR: A USER FRIENDLY SOFTWARE FOR CREATING INPUT FILES FOR STRUCTURE SOFTWARE FROM SNP DATA 126
- Matko Bošnjaković, Vesna Gantner, Sanja Antunović, Davor Kralik
PRODUCTION OF BIOGAS FROM ORGANIC WASTE FROM SOYBEAN CLEANING 127
- İlker Bülbül, Bülent Çakmak
DEVELOPING SIMPLE AND CHEAP MEASUREMENT SYSTEM AND LOGGING BOX FOR OBTAINING CULTIVATOR LEGS DRAFT FORCE USING ARDUINO BOARD 128
- Jasmina Tahmaz
ENCAPSULATION AND ITS POSSIBLE APPLICATION IN THE TECHNOLOGY OF READY-MADE FOOD – A REVIEW 129

DETERMINATION OF ELEMENTS COMPOSITION IN VRANEC WINES PRODUCED WITH DIFFERENT MACERATION TIME

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Vranec is one of the most important red grape varieties in Republic of N. Macedonia, grown in all vineyards, mostly in the Tikveš wine region. In this study, Vranec wines were produced with different maceration times (4, 7, 14 and 30 days) in order to determine the influence of vinification conditions on the elements profile. Analysis was performed with inductively coupled plasma – optical emission spectrometry (ICP-AES) for accurate determination of the concentration of 18 elements (Al, Ba, Bi, Ca, Cr, Cu, Fe, K, Li, Mg, Mn, Na, Ni, P, S, Sr, V, Zn). The results demonstrate that K, P, Mg and Ca were the dominant elements in the wines, regardless the maceration time. Most of the elements, such as Al, Ba, Bi, Mg, Mn, Na, Ni, P, Sr, P and Zn increased during maceration. Copper was present in highest concentration in the wine macerated for 4 days (average value: 0,026 mg/L), followed by decreasing of the content during maceration, as it was expected. In general, the content of toxic elements Cu and Fe was lower than maximal allowed concentrations, concluding that studied Vranec wines did not contain heavy hazard metals and confirming their nutritional value with high level of macroelements such as K, P, Mg and Ca.

Keywords: elements, Vranec wine, maceration, ICP-AES