3rd INTERNATIONAL SYMPOSIUM FOR AGRICULTURE AND FOOD

ISAF 2017

Organized by
Faculty of Agricultural Sciences and Food-Skopje
Ss. Cyril and Methodius University in Skopje,
Republic of Macedonia

18-20 October 2017 Ohrid, Republic of Macedonia

EVENTS COVERED BY ISAF 2017

XXXIX FACULTY-ECONOMY MEETING
VI SYMPOSIUM OF VITICULTURE AND WINE PRODUCTION
IX SYMPOSIUM FOR VEGETABLE AND FLOWER PRODUCTION
XI INTERNATIONAL CONFERENCE OF THE ASSOCIATION OF AGRICULTURAL ECONOMISTS OF THE REPUBLIC OF MACEDONIA
XXXIX MEETING ON PLANT PROTECTION OF THE ASSOCIATION FOR PLANT PROTECTION OF THE REPUBLIC OF MACEDONIA

For the occasion of its 70 years anniversary, the Faculty of Agricultural Sciences and Food - Skopje organizes a 3rd International Symposium for Agriculture and Food (ISAF 2017), offering possibility for presenting novel and fundamental advances in the field of sustainable agriculture and food production. ISAF 2017 will bring together and foster the communication among leading researchers, engineers and practitioners with an aim to share their scientific ideas and experience with all actors in the agricultural sector. The 3rd International Symposium for Agriculture and Food (ISAF 2017) is intended to gather scientists and engineers in the area of agriculture and food production with imperative to improve and strengthen the cooperation between Universities, Institutes, Agribusiness and related companies.

It is a great pleasure to have a publication compiling over 400 abstracts, from over 20 countries, giving an overview of the scientific interests, contemporary techniques and achievements in different areas of agricultural sciences and food research.

President of Organizing Committee of the Symposium
Prof. Dragi Dimitrievski, PhD
ORGANIZING COMMITTEE
Dragi Dimitrievski, PhD - President
Vjekoslav Tanaskovikj, PhD
Kocho Porchu, PhD
Mirjana Jankulovska, PhD
Romina Kabranova, PhD
Zvonimir Bozinovic, PhD
Dragan Gjoshevska, PhD
Marijan Kiprijanovski, PhD
Tatjana Mitkova, PhD
Srecko Gjorgjevska, PhD
Dane Boshev, PhD
Ljubica Karakashova, PhD
Rade Rusevski, PhD
Rukie Agic, PhD
Slobodan Bandzo, PhD

PROFESSORS AND SCIENTISTS
Prof. Jan Horak, PhD
Prof. Valery Petukhov, PhD
Prof. Biljana Škrbić, PhD
Prof. Zsolt Eros-Honti, PhD
Prof. Zvonko Pacanoski, PhD
Prof. Biljana Petanovska Ilievkska, PhD
Prof. Evgeniy Kamaldinov, PhD
Prof. Öner ÇETIN, PhD
Prof. Zorica Srdjevic, PhD
Prof. Željka Zgorelec, PhD
Prof. Krasimira Gospodinova Georgieva, PhD
Prof. Zivko Davcev, PhD
Prof. Petar Hristov, PhD
Prof. Peter Raspor, PhD
Prof. Adrian Maci, PhD
Assist. Prof. Marko Petek, PhD
Prof. Ivana Stankovic, PhD
Habibah Al-Menai, PhD
Prof. Sonja Ivanovska
Prof. Darko Vonchina, PhD
Prof. Miho Jankov Mihov, PhD
Prof. Renata Kongoli, PhD
Assist. Prof. Simonida Djuric, PhD
Prof. Ivan Yancev, PhD
Prof. Henrietta Nagy, PhD
Prof. Gordana Popsimonova, PhD
Assist. Prof. Vedran Rubinić, PhD
Prof. Luz Gómez Pando, PhD
Prof. Ivan Simunic, PhD
Prof. Adriana F. Sestras, PhD
Prof. Marija Vukelic Shutovska, PhD
Assist. Prof. Alpay Balkan, PhD
Prof. Milena Moteva
Slobodan Lilic, PhD
Prof. Bojan Popovski, PhD

SECRETARIAT
Kocho Porchu, PhD
Krum Boshkov, PhD
Biljana Kuzmanovska, PhD
Tosho Arsov, PhD
Ile Canev, PhD
Romina Kabranova, PhD
Mile Markoski, PhD
Dimitar Nakov, PhD
Romina Kabranova, PhD
Marina Nacka, PhD
Lence Velkovska Markovska, PhD
Margarita Davitkovska, PhD
Ivana Janeska Stamenkovska, PhD
Igor Iljovski, MSc
SECTION 1. Agricultural Economics .......................................................... 7 – 52

SECTION 2. Agricultural Machinery .......................................................... 53 - 66

SECTION 3. Animal Biotechnology ............................................................. 67 - 100

SECTION 4. Field Crop Production ............................................................. 101 - 142

SECTION 5. Food Quality and Safety ......................................................... 143 - 184

SECTION 6. Fruit Growing ................................................................. 185 - 226

SECTION 7. Genetics, Breeding and Genetic Resources ................................ 227 – 268

SECTION 8. Natural Resources Management and Environment Protection ... 269 - 328


SECTION 10. Vegetable, Flower and Decorative Plants Production ............ 389 – 416

SECTION 11. Viticulture and Wine Production ........................................... 417 - 444
EFFECTS OF DIFFERENT PRETREATMENT METHODS ON FIBER CONTENT OF SWEET SOGHUM BAGASSE FOR BIOETHANOL PRODUCTION
Nazli Recep Irfan, Guilnaz Osman, Tansi Veyis, Kusvuran Alpaslan ........................................ 113

CHARACTERISTICS OF THE FERTILITY OF WINTER BARLEY IN AGROECOLOGICAL CONDITIONS OF THE NIŠAVA DISTRICT
Stančić Ivica, Ţivić Jelica, Petrović Saša, Knežević Desimir, Stančić Nemanja ......................... 114

EFFECT OF BIOMASS AT DIFFERENT GROWTH STAGE ON GRAIN YIELD AND QUALITY IN BREAD WHEAT (TRITICUM AESTIVUM L.) GENOTYPES
Öztürk Irfan, Girgin Vedat Çağlar, Kahraman Turhan, Avcı Remzi, Çiftçigil Tuğba Hilal, Şen Ayşe, Tuna Bülent ........................................................................................................ 115

DIFFERING IN AGRONOMIC AND QUALITY CHARACTERS IN SOME BACKCROSS–DERIVED LINES IN BREAD WHEAT (TRITICUM AESTIVUM L.) GENOTYPES
Öztürk Irfan, Şen Ayşe, Kahraman Turhan, Avcı Remzi, Çiftçigil Tuğba Hilal, Girgin Vedat Çağlar, Tuna Bülent ........................................................................................................ 116

FIELD STUDIES OF NITROGEN APPLICATION ON YIELD OF İSTANBUL THYME
Biyikli Mustafa, Çelik Hakan ........................................................................................................ 117

IMPORTANCE OF CRAMBE SP. IN MEDICAL AND COSMETIC INDUSTRIES
Gedik Selin, Tansi Leyla Sezen ........................................................................................................ 118

QUANTITATIVE TRAITS OF SOME MAIZE HYBRIDS DEPENDENT OF FAO MATURITY GROUP
Boshev Dane, Ivanovska Sonja, Jankulovska Mirjana, Kabranova Romina, Rusevski Rade, Kuzmanovska Biljana ........................................................................................................ 119

INVESTIGATION OF WHEAT DEVELOPMENT AFTER BIOCHAR SOIL APPLICATION
Petrova Vera Zamfirova, Stoimenov Georgi, Kirkova Yordanka ................................................. 120

EFFECTS OF DIFFERENT PLANTING SYSTEMS ON SOME PRODUCTIVE AND QUALITY TRAITS OF RICE
Andreevska Danica, Andov Dobre, Simeonovska Emilija, Dimitrovski Trajche, Ibraim Jashka ......................................................................................................................... 121

INFLUENCE OF HARVESTING METHODS ON YIELD AND QUALITY OF RICE IN THE REPUBLIC OF MACEDONIA
Andov Dobre, Andreevska Danica, Simeonovska Emilija, Dimitrovski Trajche, Ibraim Jashka ......................................................................................................................... 122

RAPESEED (BRASSICA NAPUS L.) – BIOLOGICAL REQUIREMENTS, GROWING CONDITIONS AND NEED FOR IRRIGATION
Moteva Dimitrova Milena, Gigova Antoaneta, Tanaskovic Vjekoslav, Kabranova Romina, Dimov Zoran ......................................................................................................................... 123
IMPACT OF THE FERTILIZATION ON THE MAJOR TECHNOLOGICAL PROPERTIES IN SOME ORIENTAL VARIETIES OF PRILEP TOBACCO
Trajkoski Jordan, Mitreski Milan, Pelivanoska Valentina, Mavroski Robin, Trajkoski Marjan .......................... 124

ASSESSMENT OF EFFECTS OF DIFFERENT IRRIGATION WATER REGIME ON WHEAT YIELD AND WATER USE EFFICIENCY
Kale Celik Sema, Madenoglu Sevinc, Sonmez Bulent, Avag Kadri, Turker Ufuk, Cayci Gokhan, Kutuk Cihat, Heng Lee ............................................................... 125

STATUS AND MEASURE FOR IMPROVE PASTURE CONDITIONS IN THE EASTERN PLANNING REGION OF MACEDONIA
Dimov Zoran, Prentovic Tatjana, Hazievski Vasko ............................................................... 126

THE IMPACT OF USING COMBINATIONS OF N, S AND B IN OILSEED RAPE - <i>BRASSICA NAPUS</i> L. ON QUANTITATIVE PROPERTIES OF SEED
Iljovski Igor, Dimov Zoran, Kabranova Romina, Prentovic Tatjana, Arsov Zlatko, Canev Ile ..... 127

THE EFFECT OF COVER CROPS ON THE CONTENT OF PROTEIN IN GRAIN OF SWEET MAIZE
Dolijanović Željko Krsto, Simić Milena, Dragičević Vesna, Oljača Snežana, Kovačević Dušan, Janošević Biljana ............................................................... 128

ENERGY CROPS AS ALTERNATIVE AGRICULTURE CROPS FOR BIOMASS PRODUCTION IN MACEDONIA AND BULGARIA
Dimov Zoran, Prentovic Tatjana, Modeva Milena, Gigova Antoaneta ............................................................... 129

COMPARISON OF SUNN PEST DAMAGE AND GENOTYPIC DIFFERENCES BY SDS-PAGE ANALYSIS IN BREAD WHEAT VARIETIES
Başer İsmet, Akyürek Seval ............................................................... 130

DETERMINATION OF THE HIGH TEMPERATURE STRESS TOLERANCES OF BREAD WHEAT GENOTYPES
Balkan Alpay, Korkut Kayıhan Z., Başer İsmet, Bilgin Oğuz ............................................................... 131

EFFECT OF DIFFERENT SOWING METHODS ON FORAGE YIELD OF WOOLY POD VETCH (<i>VICIA DASYCARPA</i> TEN.) AND BARLEY (<i>HORDEUM VULGARE</i> L.) MIXTURES
Dogan Hulya, Sevimay Cafer Sirri ............................................................... 132

THE EFFECT OF SOWING DATE AND VARIETY ON YIELD AND OIL CONTENT OF WINTER OILSEED RAPE
Crnobarac Jovan, Marjanović-Jeromela Ana, Balalić Igor, Latković Dragana,Jaćimović Goran, Visković Jelena ............................................................... 133

EFFECT OF HUMIC ACID SEED TREATMENT TO SOME YIELD AND YIELD CHARACTERISTIC OF CORN PLANT (<i>ZE A MAYS</i> L. <i>INDENTATA</i>)
Öktem Abdullah, Çelik Abdurrahman, Öktem Ayşe Gülgün ............................................................... 134
DETERMINATION OF YIELD AND YIELD CHARACTERISTICS OF SOME EARLIER RED LENTIL LINES (*Lens culinaris* Medic) IN F7 AND F8 LEVEL
Öktem Ayşe Gülgün ................................................................. 135

PREFERENCE PROPER MANAGEMENT ACTIVITIES BASED ON BEST PRACTICES TOBACCO AGRICULTURE
Pasovska Silvana, Miceski Trajko .................................................. 136

VARIABILITY OF THE MORE IMPORTANT QUANTITATIVE TRAITS IN SOME BURLEY TOBACCO VARIETIES
Mitreski Milan, Korubin - Alekososka Ana, Aleksoski Jane, Trajkoski Jordan, Tashkoski Petre, Mavroski Robin .......................................................... 137

EFFECT OF DIFFERENT SOWING DATES AT SOME COTTON CULTIVARS ON FIBER COLOR AT DOUBLE CROP GROWING CONDITIONS
Copur Osman, Polat Davut, Odabaşıoğlu Ceren .................................. 138

EFFECTS OF DEFICIT IRRIGATIONS ON QUALITY OF SILAGE MAIZE
Ucak Ali Beyhan, Gencoglan Cafer ................................................. 139

THE EFFECTS OF USING DIFFERENT SYSTEMS OF PRODUCTION OF TOBACCO SEEDLINGS
Kabranova Romina, Arsov Zlatko, Kochoska Karolina, Mavroski Robin ......... 140

BARLEY EXHIBITS PROMISING YIELD UNDER ALTERNATIVE WATER RESOURCES IN KUWAIT
Al-Menaie Habibah, Al-Shatti Abdullah, Babu Merlene .......................... 141

EVALUATION OF COLD TOLERANCE AT GERMINATION STAGE IN RICE
Rasim Unan, Temel Genctan .......................................................... 142
Abstract
Today, more and more demanding of professionals and researchers in the fields of biotechnology, natural and social sciences through a multidisciplinary approach to contribute to policy and strategy to improve the development of agriculture, especially to highlight the objectives, benefits, limitations and problems related to the development of tobacco production. In the context of such research is derived management concept of good agriculture practices (GAP), which aims to enable economically feasible and viable quality production of agricultural products which includes tobacco. Tobacco production in the country is around 30.000-35.000 tons for which the amount of special importance is the application of the concept of good agriculture practices. This concept in recent years have developed as a result of rapid change and globalization in agricultural production. Recommendations and information offered GAP relating to the environment, economic and social security of production. Use of widely accepted principles of GAP, general indicators and the practical application and help national policy in the development of strategies to ensure that all producers, consumers, traders etc., participate and the benefits of its application. This paper attempts to show part of the principles of management concept of good agriculture practices (GAP) in tobacco production.

Keywords: management concept, organizational behavior, tobacco production, farming strategy, good agriculture practices.