



Congress Conferences
all over the world

BOOK OF ABSTRACTS

ICAFLS - 2019/1

2. International Conference on "Agriculture, Forestry & Life Sciences" April 18-20, 2019. Prague, Czech Republic.

ISBN: 978-605-81152-1-7

www.icafls.org



"COMMITTEES"

Chairman of the Conference

Dr. M.ATILLA ASKIN (European University of Lefke)

Co-chairman of the Conference

Dr. Otilia Bobis (Romania)

Organization staff of the Conference

Dr. Usha R Patar (Czech University of Life Sciences, Prague)

Dr. Jawad Ali Shah (Czech University of Life Sciences, Prague)

Dr. Shilka Kumari Mehta (Czech University of Life Sciences, Prague)

Scientific Board

- Octavio Paredes-Lopez, Center for Research and Advanced Studies of the National Polytechnic Institute, Mexico City, **Mexico**.
- Gulzar Ahmad NAYIK, Sant Longowal Institute of Engineering and Technology, Sangrūr, **India**.
- Otilia BOBIS, University of Agricultural Sciences and Veterinary Medicine, Cluj-Napoca, Cluj, **Romania**.
- Mirela Irina CORDEA, University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca **Romania**
- Adela Ramona MOISE, University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca **Romania**.
- John PICKETT, Rothamsted Research, Harpenden, **United Kingdom**.
- Mohammed Wasim SIDDIQUI, Bihar Agriculture University, Sabour, **India**.
- Faqir Muhammed ANJUM, Vice Chancellor University of the Gambia. **Gambia**.
- Khalid Ul Rehman Hakeem, Department of Biological Sciences, Faculty of Science, King Abdulaziz University, Jeddah, **Saudi Arabia**.
- Basharat Nabi DAR, Awantipora, JK, **India**.
- Ashok R. PATEL, International Iberian Nanotechnology Laboratory, **Portugal**.
- Vikas Nanda SLIET, Punjab, **India**.
- M Shafiur RAHMAN, Sultan Qaboos University, **Oman**.
- Muhammad Issa Khan, National Institute of Food Science and Technology, University of Agriculture, Faisalabad. **Pakistan**.
- Milica Fotiric Aksic, University of Belgrade, **Serbia**.
- Agnieszka Barbara Najda, University of Life Sciences in Lublin, **Poland**.
- Nadezhda Traycheva PETKOVA, University Of Food Technology, Plovdiv, **Bulgaria**.
- Imran PASHA, University of Agriculture, Faisalabad, **Pakistan**.
- Shabir Hassan, Harvard Medical School, Massachusetts, **USA**.
- Sezai Ercisli, Atatürk University, Erzurum, **Turkey**.
- Hakan Aktaş, Süleyman Demirel University, Isparta, **Turkey**.
- Mevlüt Gül, Suleyman Demirel University, Isparta, **Turkey**.
- Bozena Denisow, University of Life Sciences in Lublin, Lubelskie, **Poland**.
- Atanas Atanasov, Institute of Genetics and Animal Breeding, Warsaw, **Poland**.
- Violeta Nour, University of Craiova, Craiova, Dolj, **Romania**.
- Carlos Alberto Duque Echeverri, Universidad de Antioquia, Medellin, **Colombia**.
- Alvaro Luis Morales Aramburo, Universidad de Antioquia, Medellin, **Colombia**.
- Ricardo Leon Restrepo Arango, Universidad EIA, Envigado, Colombia
- Juan Carlos Martinez-Orozco, Universidad Autónoma de Zacatecas, Zacatecas, **Mexico**.
- Miguel Eduvardo Mora-Ramos, Universidad Autónoma del Estado de Morelos, Morelos, **Mexico**.
- Tomislav Tosti, University of Belgrade, Belgrade, **Serbia**.
- Halina Buczkowska, University of Life Sciences in Lublin, **Poland**.
- Renata Nurzyńska – Wierdak, University of Life Sciences in Lublin, **Poland**.
- Joanna Klepacka, University of Warmia and Mazury in Olsztyn, **Poland**.
- Muhammad Qaiser, Center of Plant Conservation, University of Karachi, Karachi, **Pakistan**.
- Khalid Javed, University of Veterinary & Animal Sciences, Lahore, **Pakistan**.
- Muhammad Abdullah, University of Veterinary & Animal Sciences, Lahore, **Pakistan**.
- Agnieszka Şekara, University of Agriculture in Krakow, Krakow **Poland**.
- Abdulrasoul M. Alomran, King Saud University, Riyadh, **Saudi Arabia**.
- Zeki Mut, Bilecik Şeyh Edebali University, Faculty of Agriculture and Natural Sciences, **Turkey**.
- Dan C. Vodnar, University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca, **Romania**.

Abstract Title	Page
METHODS, EFFECTIVENESS AND OPTIMIZATION OF ARTIFICIAL HONEY BEE INFECTION (APIS MELLIFERA) WITH NOSEMA SPP. FOR LABORATORY CAGE EXPERIENCES	1
MASH BEAN [VIGNA MUNGO (L.) HEPPER] GERMPLASM EVALUATION AT DIFFERENT ECOLOGICAL CONDITIONS OF PAKISTAN	2
ASSESSMENT OF THE DRIVERS OF DEFORESTATION IN THE FLOOD AFFECTED PUNJAB, PAKISTAN. <i>(Not presented on the Conference)</i>	3
IMPROVING THE QUALITY AND YIELD PERFORMANCE OF SAFFLOWER THROUGH FOLIAR APPLICATION OF SELENIUM	4
ISOLATION, STRUCTURAL CONFIRMATION AND BIOACTIVITIES OF TWO ISOMERIC XANTHONES FROM AQUEOUS FRACTION OF DRYOPTERIS RAMOSA L.	5
FORTY YEARS OF COMMUNITY FORESTRY IN NEPAL: WHAT NEXT? <i>(Not presented on the Conference)</i>	6
USE OF KAOLIN AS A REFLECTIVE CLAY IMPROVES OLIVE TREE PHYSIOLOGICAL AND YIELD RESPONSES UNDER DIFFERENT ENVIRONMENTAL CONDITIONS	7
DNA DAMAGE INDUCED BY COPPER TOXICITY IN FOUR VITIS VINIFERA L. VARIETIES DETECTED BY COMET ASSAY	8
DEFICIT IRRIGATION STRATEGIES IN OLIVE ORCHARDS: INFLUENCE ON FRUIT QUALITY	9
USER PARTICIPATION IN URBAN PARK DESIGN PROCESS	10
THE RELATIONSHIP BETWEEN PHYSICAL ACTIVITY AND PARKS	11
TRENDS IN POMEGRANATE SECTOR: PRODUCTION, POSTHARVEST HANDLING AND MARKETING	12
EFFECT OF CERTIFICATION ON TIMBER SALE PRICES*	13
THE USING OF SOME PLANTS IN THE HITTITE RITUALS	14
ENERGY INPUTS, GREENHOUSE STRUCTURES AND CROP YIELD RELATIONSHIP IN GREENHOUSE PEPPER PRODUCTION	15
A FRAMEWORK OF EXPORT SUPPLY CHAIN FOR FRESH FRUITS AND VEGETABLES	16
TRACEABILITY IN FRESH FRUITS AND VEGETABLES EXPORTS: CASE OF ANTALYA/TURKEY	17
INVESTIGATION OF THE SOCIO ECONOMIC STRUCTURES OF SOILLESS GREENHOUSES PRODUCING TOMATOES IN THE ANTALYA	18
DETERMINATION OF EFFECTS OF FERTILIZATION ON VEGETATIVE AND GENERATIVE PROPERTIES IN OLIVE GROWING	19
HEAVY METAL HAZARDS TO THE PLANT, ENVIRONMENT AND PEOPLE AND MEASURES TO BE TAKEN	20
COMPARATIVE EXPORT POTENTIAL OF TURKISH PISTACHIO	21
IMPACT OF SUPPORTING SYSTEM IN VEGETABLE PRODUCTION: A CASE OF ANTALYA, TURKEY	22
WILD OLIVE (OLEA EUROPAEA L. SSP. OLEASTER) SELECTION IN AYVACIK REGION	23
SUSTAINABLE USE OF BRACKISH WATER FOR COTTON –WHEAT ROTATION <i>(Not presented on the Conference)</i>	24
DOES CLIMATE CHANGE PLAY A VITAL ROLE IN CROP CHOICE? A MICRO LEVEL STUDY INTO SOUTHERN ZONE OF TAMIL NADU, INDIA	25
EXAMINATION OF HIGHWAY LANDSCAPE DESIGN IN MANAVGAT DISTRICT DEMOCRACY BOULEVARD OF ANTALYA PROVINCE IN TERMS OF LANDSCAPE ARCHITECTURE DESIGN CRITERIA <i>(Not presented on the Conference)</i>	26
MONITORING WORK THE NITRATE POLLUTION OF GROUNDWATER AND SURFACE WATERS IN ANKARA PROVINCE	27
EVALUATION OF PLANT WASTE MANAGEMENT IN TURKEY <i>(Not presented on the Conference)</i>	28
AREAS OF NATURE CONSERVATION PROTECTED IN THE VARIOUS STATUS IN CITY OF ERZINCAN	29
INCREASING AGROECOSYSTEM DIVERSITY: MALVA SILVESTRIS AS A NOVEL CROP FOR HUMAN FOOD	30
COAT PROTEIN VARIABILITY of Apple mosaic virus ISOLATES FROM DIFFERENT PLANT HOSTS	31

DEFICIT IRRIGATION STRATEGIES IN OLIVE ORCHARDS: INFLUENCE ON FRUIT QUALITY

Alexandre Gonçalves^{1*}, Ermelinda Silva¹, Cátia Brito¹, Sandra Martins¹, Luís Rocha¹, Ivo Pavia¹, Carlos Gomes², Anabela Fernandes-Silva¹, Carlos Ribeiro³, M. Ângelo Rodrigues⁴, José Moutinho-Pereira¹, Fernando M. Nunes², Carlos M. Correia¹

¹CITAB - Centre for the Research and Technology of Agro-Environmental and Biological Sciences

²CQVR – Chemistry Centre of Vila Real

³Agronomy Department, University of Trás-os-Montes and Alto Douro, Vila Real, Portugal

⁴Mountain Research Centre, Polytechnic Institute of Bragança, Bragança, Portugal

*Corresponding author email; afgoncalves@utad.pt

Abstract

In order to overcome constrains that affect olive groves and its socioeconomic value, new cropping practices focusing on water use efficiency were investigated. The study was conducted in Northeast Portugal and different deficit irrigation strategies (DIS) were investigated: regulated (RDI, 10% ET_c during pit hardening and 80% ET_c in the remaining stages), sustained (SDI, 27.5% ET_c), sustained usually applied by farmer (SDIAF, 21.2% ET_c) and fully irrigated (FI, 100% ET_c), as control treatment. The fruit metabolites fluctuations and quality parameters were evaluated. Using FI as reference, DIS treatments led to changes in the secondary metabolism in fruits with increased total phenolic compounds (+11% in SDIAF), ortho-diphenols (+25 in SDI and +44% in SDIAF), and flavonoids (+29% in RDI, +26% in SDI, +91% in SDIAF) concentrations, and higher total antioxidant capacity (+41% in SDI). DIS treatments influenced the profile of olive fruit phenolics with changes in oleuropein (-55% in SDIAF), chlorogenic acid and quercetin-3,4'-di-O-glucoside (non-detected in FI), eriodictyol-7-O-glucoside (+64% in RDI and +95% in SDI), and procyanidin A2 (+59% in RDI and -59% in SDIAF). Olive fruits from DIS treatments also showed higher fat content (22, 29 and 24 % in RDI, SDI and SDIAF, respectively). Fruits from RDI and SDI presented lower palmitoleic and linolenic acids, while no significant differences were observed in the concentrations of saturated, monounsaturated and polyunsaturated fatty acids. When subject to a puncture test in a texture analyser, all DIS fruits presented higher peel break force than FI control. This work show that DIS are essential for sustainable olive growing, as they do not compromise the competitiveness of the sector in terms of olive production and associated quality parameters.

Keywords: Antioxidant activity, climate change, *Olea europaea*, sustainability, water management.

Acknowledgements: This work was funded by the INTERACT project – “Integrative Research in Environment, Agro-Chains and Technology”, no. NORTE-01-0145-FEDER-000017, in its line of research entitled ISAC, co-financed by the European Regional Development Fund (ERDF) through NORTE 2020 (North Regional Operational Program 2014/2020).
