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 Universityof 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 AlbertoDuqueEcheverri, 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, UniversidadAutónoma de Zacatecas, Zacatecas, **Mexico**.
• Miguel Eduvardo Mora-Ramos, UniversidadAutónoma 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 Sękara, 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**.

(Poster Presentation)

PHYSIOLOGICAL AND BIOCHEMICAL IMPACTS OF LEGUMINOUS COVER CROPS IN OLIVE RAINFED ORCHARDS

Sandra Martins[1], Ermelinda Silva[1], Alexandre Gonçalves[1], Cátia Brito[1], Luís Pinto[1], Manuel Ângelo Rodrigues[2], Fernando Nunes[3], Carlos Correia[1]

[1] CITAB - Centro de Investigação e de Tecnologias Agroambientais e Biológicas, Universidade de Trás-os-Montes e Alto Douro, 5000-801 Vila Real, Portugal

[2] CIMO - Centro de Investigação de Montanha – ESA, Instituto Politécnico de Bragança, 5300-253 Bragança, Portugal

[3] Chemistry Center – Vila Real (CQ-VR), Universidade de Trás-os-Montes e Alto Douro, 5000-801 Vila Real, Portugal

Corresponding author email: scpintomartins@gmail.com

Abstract

Leguminous cover crops have the potential to provide numerous ecosystem services, including improving soil quality, nutrient cycling, pest regulation, which in turn will contribute to crop productivity and quality. The objective of this study was to investigate during two years the effects of a cover crop of self-reseeding annual legumes of short growing cycle on physiological and biochemical responses of twenty-seven-year-old olive trees (Olea europaea L. cv. Cobrançosa) grown under rainfed conditions, in comparison with conventional tillage. The results showed that leguminous cover crop improved the physiological and biochemical performance of olive trees under drought conditions, considering the rise of net photosynthetic rate, transpiration rate and stomatal conductance, as well as higher concentration of total phenols and flavonoids and total antioxidant activity in leaves. In addition, implementation of leguminous cover crops resulted in an increase of the total production of olive fruits in both years. These results indicate that cover crop is a good soil conservation practice compared to conventional tillage. Thus, the incorporation of well-designed, locally-tailored leguminous cover crop, associated with an appropriate mowing time, is a very promising strategy to implement in olive orchards under drought conditions.

***Key words**: Soil management strategies, Leguminous cover crops, Olea europaea.*

***Acknowledgements:** Doctoral fellowship under the Doctoral Program "Agricultural Production Chains – from fork to farm" (PD/00122/2012) provided by the FCT-Portuguese Foundation for Science and Technology to S. Martins (PD/BD/135327/2017), and Project "Novas práticas em olivais de sequeiro: estratégias de mitigação e adaptação às alterações climáticas", PDR2020-101-032119, financed by the European Agricultural Fund for Rural Development (EAFRD) and Portuguese State under Ação 1.1 «Grupos Operacionais», integrada na Medida 1. «Inovação» do PDR 2020 – Programa de Desenvolvimento Rural do Continente.*