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INVITED LECTURES/SMS BY PAOLO BARGE ON "Renewable energy"

Guest Lecturer: Dr. Paolo Barge, University of Turin_CISAO, Department of Agricultural, Forest and Food Sciences, L.go P. Braccini, 2 - 10095, Grugliasco (Italy).

Date: 27-30 January 2020 (SMS period, from 26 to 31 January, 2020).

Time: 27 January 9:00 - 16:00; 28 January 9:00 - 16:00; 29 January 9:00 - 16:00; 30 January 9:00 - 16:00; 31 January 9:00 - 12:00.

Venue: Ecole Supérieure des Ingénieurs de Medjez El Bab, 9070, Medjez El Bab (Tunisia).

Organizer: Dr. Khaled El Moueddeb, Professor in Mechanical and Agro-Industrial Engineering at the Higher School of Engineers of Medjez El Bab (ESIM).

Attending students: 25 PhD students of third year of "Génie Mécanique et Agro-Industriel (Options: Technologie des Véhicules et Technologie des procédés)"

ABOUT THE GUEST

Dr. Paolo Barge, graduated in Agricultural Sciences in 1998, PhD in Zootechnical Sciences in 2001 is a Research Technician at the University of Turin. His research activity concerns: Development and monitoring of systems for the production of energy from renewable sources; Radio frequency technologies (RFID) for traceability in the agricultural and agri-food sector; Innovative information systems for sharing traceability information through collaborative networks; Use of neural networks in computer vision for online measurement of food quality. Member of CISAO (Interdepartmental Center for Research and Technical Scientific Cooperation with the Sahel and West African countries), he deals with promotion and dissemination of the use of renewable energy sources in developing countries.
Author/co-author of 30 research products as scientific papers, review articles and conference proceedings.

ABOUT THE PROGRAM

Topic: Conversion and storage of renewable energy

Main learning objectives/contents:

Monday 27 January 2020 - Preliminary concepts of energy, energy supply, energy conversion and storage. The role of renewable energy sources exploitation to face the effects of climate change.

Tuesday 28 January 2020 - Solar energy exploitation by means of photovoltaic and solar thermal systems. Characteristics, energy potential and exploitation in the agro-food sector.

Wednesday 29 January 2020 - Practical session: Conception, development and fine-tuning of an experimental plan for the continuous measurement of the main operating parameters of a solar oven model. The use of temperature sensors and data loggers, wind speed sensor and solar radiation main components sensor. Measurement of solar radiation, atmospheric temperature and temperature reached inside the oven along the whole day. Download, processing and interpretation of the collected data. Drafting of a scientific report of the experimental activity.

Thursday 30 January 2020 - Exploitation of solar thermal system for agro-food production. The use of solar dryer for food storage and its advantages in terms of food quality, energy saving from fossil sources and economic implications. The experience of UNITO in the development of "Icaro" solar dryer and its use in sub-Saharan countries.

Friday 31 January 2020 - The use of biomass as an energy source. Biomass gasification of agricultural residues: The case of "Aaron" gasification stove and its advantages in terms of energy and firewood saving.

Brief summary/overview: All seminars were performed as per program; the interest shown by the participant students was satisfactory; the activities planned during the SMS were successfully carried out, including practical experimental activities which were particularly appreciated by the students.

RECEIVING UNIVERSITY LOGO:	

INVITED LECTURES/SMS BY DANIELE DE MENEGHI ON "Climate change and Livestock Production & Health

Guest Lecturer: Prof. Dr. Daniele De Meneghi, University of Turin_CISAO_UniTo, Department of Veterinary Science., L.go P. Braccini, 2 - 10095 Grugliasco-Turin (Italy)

Date: 18-19 February 2020 (SMS period, from 17 to 23 February, 2020, incl. travelling)

Time: 18 Feb.: 10:30-12:30 and 14:30-16:30; 19 Feb.: 10:30-12:30 and 14:30-16:30 (total: 8 hours)

Venue: University of Sousse, Higher Agronomic Institute of Chott Mariem (US-ISA-CM), BP 47, 4042 Chott Mariem, Sousse, Tunisie

Organizer: Rajouene Majdoub, Ph.D., Ing. Professor of Hydrology, Department of Horticultural Systems and Natural Environment Engineering, (US-ISA-CM) + Linda Majdoub-Mathlouthi, Maitre de conférences habilitée en Production animale, Institut Supérieur Agronomique de Chott-Mariem

Attending students: 20 PhD students

ABOUT THE GUEST

Prof. Dr. Daniele De Meneghi, Graduated as veterinarian (DVM, 1984) and research doctorate at University of Turin_UniTo (PhD, 1994); diplomate European College Veterinary Public Health (2004).
From 1984 to 1997: i. wildlife veterinarian and consultant on game management (at various Regional/ National Parks in Italy and other European countries; at game reserve and game management areas); ii. expert/consultant in livestock production & health (mainly ticks and tick-borne diseases control), in integrated agriculture-livestock and natural resources management projects, within the framework of numerous development cooperation projects in Africa (Western, Eastern and Central-Southern Africa).
Since December 1997-present day: assistant professor at the Faculty of Veterinary Medicine/Dept. of Veterinary Sciences, University of Turin (habilitation ASN as Associate Professor of Infectious Diseases of Animals). Main teaching subjects and research topics: i. animal health & production in (sub-) tropical areas; ii. Veterinary Public Health-VPH; iii. One Health-OH (integrated approach to OH and evaluation of OH initiatives).
Co-ordinator and/or member of International projects (research, education, capacity building in VPH and OH) in Europe, Africa and Latin-America
Author/co-author of more than 140 research products/publications (original scientific papers, review articles, conference proceedings, technical reports, manuals, book chapter, etc.).

ABOUT THE PROGRAM

Topic: Climate change and Livestock Production & Health

Main learning objectives/contents: students are expected to:

i. acquire basic knowledge on International Animal Health and Veterinary Public Health (VPH) legislation;
ii. learn about the impact of climate change on vectors and vector borne diseases in livestock, and humans, and possible mitigation strategies;
iii. participate in simulation exercises/cases studies on transboundary livestock diseases, on public health implication of the use of acaricide to control ticks and tick-borne diseases;

An additional topic, specifically requested by the PhD students, was on the ethical approach and the current EU legislation, with reference to experimental research projects in animals (the example/case study presented was a research/study on retroviruses infection in small ruminants).

Brief summary/overview: all seminars/lectures were performed as per program; the interest shown by the participant students was satisfactory; the activities planned during the SMS were successfully carried out, including field activities at farms and breeding areas in arid-semiarid areas of Southern Tunisia (Touzer and Natfa districts) where additional seminars and meetings with the local staff of the veterinary and animal production offices were also held (on 20-21 Febr.2020).

RECEIVING UNIVERSITY LOGO:	

INVITED LECTURE BY IOSIF BIZELIS ON subject: "Animal biodiversity and climate change. Genetic resources and mitigation strategies"

Guest Lecturer: Prof. Dr. Iosif Bizelis , Agricultural University of Athens, Faculty of Animal Science, Department of Animal Breeding & Husbandry

Date: October 5th, 2021

Time: 10.00 am-1.00 pm

Venue: University of Sousse, Higher Agronomic Institute of Chott Mariem (US-ISA-CM), Department of Horticultural Systems and Natural Environment Engineering, BP 47, 4042 Chott Mariem, Sousse, Tunisie

Organizer: Rajouene Majdoub, Ph.D., Ing. Professor of Hydrology, Department of Horticultural Systems and Natural Environment Engineering, (US-ISA-CM). L'Ecole Doctorale « Agronomie et Environnement » & Le Laboratoire de Recherche « Gestion et maitrise des ressources animales et environnementales en milieu semi aride.

Attending students: 4th year, post-graduate and PhD students.

ABOUT THE GUEST

Prof. Iosif Bizelis studied Chemistry at the University of Athens and Animal Production at the Agricultural University of Athens, where he graduated in 1984 and received his Ph.D. in Animal Physiology in 1989. In 1993, he became Lecturer and in 2001 Assistant Professor at the Agricultural University of Athens. Since 2013, he is Professor at the Department of Animal Science. His research interests include among others: Physiology of productive traits in farm animals, Domestic animal ethology, Gene technology, organic animal farming, and production systems of farm animals, Organic farming of ruminants as well as Production systems of ruminants. He has participated in more than 30 national and EU programs and is author and co-author in more than 90 papers in peer review journals.

ABOUT THE PROGRAM

Topic: Animal biodiversity and climate change. Genetic resources and mitigation strategies.

Main learning objectives/contents: Biodiversity in livestock production. Climate change and its impact on animal biodiversity. Genetic approaches in ruminants farming. Animal genetic resources faces climate change. Local breeds and their adaptive traits. Genetic tools to address climate change in livestock (Genetic tools in cattle, small ruminants and in poultry).

Brief summary/overview: The lecture focused on the main characteristics of diversity referred for domesticated avian and mammalian species used by humanity in agriculture. Biodiversity of Mediterranean countries was discussed as the result of factors, such as the biogeographic position, the topographical diversity, the geological and ecological history, and the human interference. Protection measures and the importance of agriculture biodiversity were reported, as well as, how we study genetic variation, for example by molecular markers. It was also developed introductory elements related to adaptation to heat stress and the available genetic tools to manage response of farm animals in the new conditions from climate change. A small reference will be given for parasite resistance.

RECEIVING UNIVERSITY LOGO:	

INVITED LECTURE BY GEORGE LALIOTIS ON subject: "Livestock production in front of climate change and population growth"

Guest Lecturer: Ass. Prof. Dr. George Laliotis , Agricultural University of Athens, Faculty of Animal Science, Department of Animal Breeding & Husbandry

Date: October 4th, 2021

Time: 10.00 am-1.00 pm

Venue: University of Sousse, Higher Agronomic Institute of Chott Mariem (US-ISA-CM), Department of Horticultural Systems and Natural Environment Engineering, BP 47, 4042 Chott Mariem, Sousse, Tunisie

Organizer: Rajouene Majdoub, Ph.D., Ing. Professor of Hydrology, Department of Horticultural Systems and Natural Environment Engineering, (US-ISA-CM). L'Ecole Doctorale « Agronomie et Environnement » & Le Laboratoire de Recherche « Gestion et maitrise des ressources animales et environnementales en milieu semi aride.

Attending students: 4th year, post-graduate and PhD students.

ABOUT THE GUEST

Dr. George P. Laliotis was born in Athens, Greece. He graduated (B.Sc.) from the Department of Animal Production of the Agricultural University of Athens (2002). He also holds a postgraduate diploma (M.Sc, 2004), while in 2007, he completed his doctoral studies focusing on the study and molecular cloning of ovine G6PD gene, a gene involved in the process of lipogenesis. Having gained a post-doc grant (2009), he continued his research at the same department and he was focused on investigating the physiological role of a new transcript of ovine G6PD gene. He had worked as an application specialist and at posts of the Greek Public Administration. From December 2017 until June 2019 he was a junior researcher at the Research Institute of Animal Science of the Hellenic Agricultural Organization-"Demeter". From July 2019 till now is an Assistant Professor at the Department of Animal Science (Agricultural University of Athens). He had participated in 6 projects and he is author and co-author of 26 scientific publications. His research interests are mainly focused on: i) animal husbandry, ii) the genetic variation of animal populations and its association with productive traits, iii) gene technology, iv) DNA polymorphisms and v) molecular physiology of productive traits.

ABOUT THE PROGRAM

Topic: Livestock production in front of climate change and population growth

Main learning objectives/contents: Animal Production and Population growth; Animal production towards climate change; Impact of CC on livestock systems; Adaptation measures; Impact of animal production on CC; Main sources of GHG emissions from a livestock; Livestock production systems and their impact; Methods of estimating GHG emissions; Mitigation strategies for lowering GHG emissions; Intensive and extensive systems towards CC and future demands.

Brief summary/overview: The lecture focused on the main impacts that population growth and CC will have on livestock production systems. Adaptation measures were also reported. It was also developed the impact of livestock on CC, the main sources of GHG emissions and the methodologies that exists to estimate these emissions on a livestock unit. Mitigation strategies were also developed for eliminating these emissions. Moreover, the environmental impact of different production systems was discussed and the pros and cons of the intensive and extensive systems were developed. Finally, the future of these systems was discussed towards the both challenge of population growth and CC.

Attachments: Photos from lecture and Students' participation list