

INTACT Project

Summer School

Innovation and Knowledge Transfer in the Truffles value chain Part II

10th - 14th June 2024 University of Perugia Department of Agricultural, Food and **Environmental Sciences** Aula D

Available on streaming





































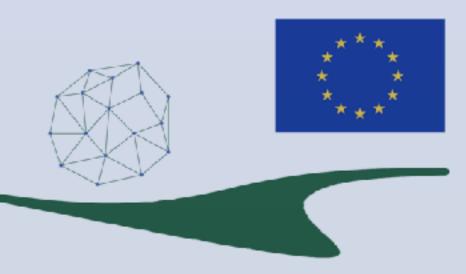












10th - 14th June 2024
University of Perugia Department of Agricultural, Food and Environmental Sciences - Room D

Opening Session: 10th of June h 9.00

MODULE A: Techniques and protocols for identification of ascocarps and mycorrhizae of Tuber species

Morphological characterization of truffle ascocarps and mycorrhizae: 10th of June h 10.00 - 18.00

Molecular typing of truffle ascocarps and mycorrhizae: 11th of June h 9.00 - 11.00

MODULE B: Truffle cultivation

Environmental conditions and selection of sites to cultivate truffles: 11th of June h 11.00 - 13.00

Production and certification of truffle plants: 11th of June h 14.00 - 12th of June h 10.00

Management of truffle plantations and wild truffle sites: 12th of June h 10.00 - 13th of June h 10.00

MODULE C: Post-Harvest

<u>aroma, detection of pests that affect postharvest management</u>: 13th of June h 10.00 - h18.00 <u>Control of truffle products, artificial flavour detection and species identification by DNA, Microscopic, Aromatic profile and sensory analysis</u>: 14th of June h 9.00 - h18.00





































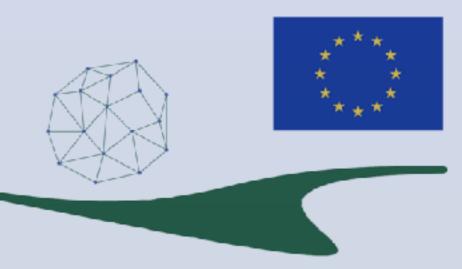












10th - 14th June 2024
University of Perugia Department of Agricultural, Food and
Environmental Sciences - Room D

10th of June

Opening session h 9.00

Prof. Maurizio Oliviero - University of Perugia Rector

Dr. Franco Garofalo - Autorità di gestione CSR Umbria

Prof. Gaetano Martino - Director of Department of Agricultural, Food and Environmental Sciences - University of Perugia

Dr. Marina Bufacchi - INTACT Project coordinator - CNR ISAFOM

<u>Module A - Techniques and protocols for identification of ascocarps and mycorrhizae of Tuber species</u> <u>Submodule Morphological characterization of truffle ascocarps and mycorrhizae (Chair Dr. Andrea Rubini)</u>

Morphological characterization of truffle ascocarps h 10.00 Prof. Domizia Donnini (University of Perugia)

Morphological characterization of truffles ectomycorrhizae h 11.30 Dr. Andrea Rubini (CNR IBBR)

Lunch h 13.00

<u>Laboratory - Individual study h 14.00 - 18.00</u>





































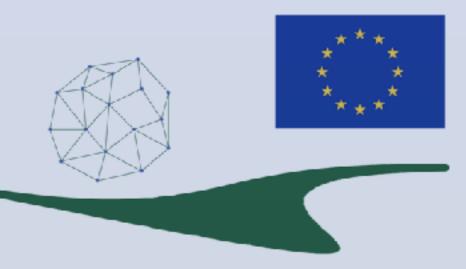












10th - 14th June 2024
University of Perugia Department of Agricultural, Food and
Environmental Sciences - Room D

11th of June

Submodule - Molecular typing of truffle ascocarps and mycorrhizae (Chair Dr. Andrea Rubini)

Molecular methods for Tuber spp. identification h 9.00

Dr. Beatrice Belfiori (CNR IBBR)

Exploring the intraspecific genetic variability and biogeography of Tuber spp. h 10.00

Dr. Claudia Riccioni (CNR IBBR)

<u>Module B - Truffle cultivation</u>

<u>Submodule - Environmental conditions and selection of sites to cultivate truffles (Chair Prof. Domizia Donnini)</u>

Watering management in truffle orchards h 11.00

Dr. Claude Murat (INRAE)

Biological and ecological basis of black truffle (T. melanosporum) cultivation h 12.00

Dr. Sergi Garcia Barreda (CITA)

Lunch h 13.00

Submodule - Production and certification of truffle plants (Chair Prof. Domizia Donnini)

Production of truffle seedlings in Spain h 14.00

Dr. Sergio Sánchez Dúran (CITA)

Control of black truffle mycorrhizal plants in Spain h 15.00

PhD student Eva Gomez Molina (CIET - DPH)

<u>Individual study h 16.00 - 18.00</u>



































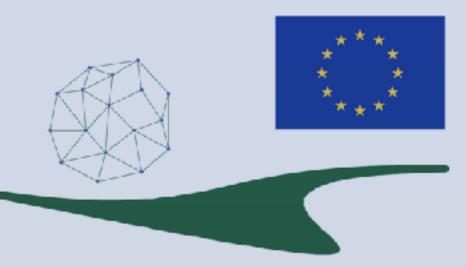












10th - 14th June 2024
University of Perugia Department of Agricultural, Food and
Environmental Sciences - Room D

12th of June

Assessment and certification of truffle plants in Italy h 9.00 Prof. Domizia Donnini (University of Perugia)

Submodule - Management of truffle plantations and wild truffle sites (Chair Prof. Domizia Donnini)

Current situation of the truffle sector and wild truffle production h 10.00 Dr. Josè Antonio Bonet (University of Lleida)

Truffle cultivation on Management of truffle plantations h 11.00 Dr. Daniel Oliach (CTFC)

Land suitability and implantation in Tuber melanosporum cultivation h 12.00 Dr. Carlos Colinas (University of Lleida)

Lunch h 13.00

Visit to Tuber Tiber
Truffle and truffle cultivation science Museum
Fratta Todina





































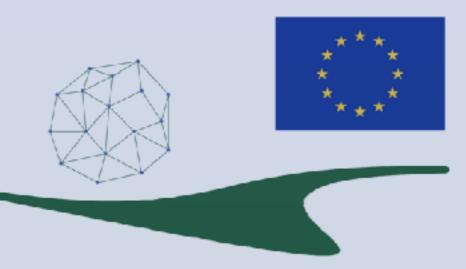












10th - 14th June 2024
University of Perugia Department of Agricultural, Food and
Environmental Sciences - Room D

13th of June

Exploring different strategies for natural truffle site management in Italy h 9.00

PhD student Mara Rondolini (University of Perugia)

Module C - Post-Harvest

<u>Submodule - Determining Truffle Quality: Control of truffle quality by its sensorial characteristics and instrumental aroma, detection of pests</u>
<u>that affect postharvest management (Chair Prof. Gulden Goksen)</u>

Factors Influencing Truffle Quality h 10.00

Dr. Pedro Marco Montori (CITA)

Post-harvest loss reduction strategies of fresh Truffles h 11.00

Prof. Gulden Goksen (Tarsus University)

Food safety in truffle and truffle products: Good Manufacture Practices (GMPs) and Prerequisite Programmes (PRPs) h 12.00

Dr. Diego Gomez (University of Zaragoza)

Dr. Daniel Berdejo (University of Zaragoza)

Lunch h 13.00

More than just truffle: an analisys of its qualitative aspects to discover refined flavors and new sensory frontiers h 14.00 Dr. Letizia Bellucci - New Flavours S.r.l.

Individual study h 16.30 - 18.00





































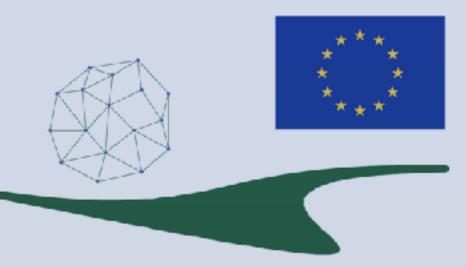












10th - 14th June 2024
University of Perugia Department of Agricultural, Food and
Environmental Sciences - Room D

14th of June

<u>Submodule - Control of truffle products, artificial flavour detection and species identification by DNA, Microscopic, Aromatic profile and sensory analysis (Chair Prof. Domizia Donnini)</u>

Introduction to truffled products, a case of study h 9.00

Dr. Pedro Marco Montori (CITA)
Dr. Eva Tejedor (University of Zaragoza)

Volatilome and metabolome study to detect frauds in truffle species and truffle products h 10.00

Dr. Eva Tejedor (University of Zaragoza)

Food safety in truffle and truffle products: HACCP and Certifications h 11.00

Dr. Diego Gomez (University of Zaragoza)
Dr. Daniel Berdejo (University of Zaragoza)

Evaluation test h 12.00

Lunch h 13.00

Visit to Passeri tartufi farm and concluding remarks
Assisi





































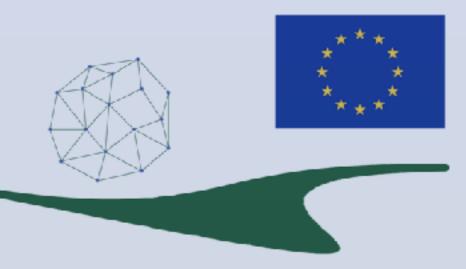












10th - 14th June 2024

University of Perugia Department of Agricultural, Food and **Environmental Sciences - Room D**

Speakers

Dr. Marina Bufacchi - INTACT Project coordinator - Consiglio Nazionale delle ricerche - ISAFOM Prof. Maurizio Oliviero - Rector Università degli studi di Perugia Prof. Gaetano Martino - Director of Department of Agricultural, Food and Environmental Sciences - Università degli studi di Perugia Dr. Franco Garofalo - Autorità di gestione CSR Umbria

Prof. Domizia Donnini - Department of Agricultural, Food and Environmental Sciences - Università degli studi di Perugia

Dr. Andrea Rubini - Consiglio Nazionale delle ricerche - IBBR

Dr. Claudia Riccioni - Consiglio Nazionale delle ricerche - IBBR

Dr. Beatrice Belfiori - Consiglio Nazionale delle ricerche - IBBR

Dr. Claude Murat - Institut national de la recherche pour l'agriculture, l'alimentation et l'environnement (INRAE)

Dr Sergi Garcia Barreda - Centro de Investigación y Tecnología Agroalimentaria de Aragón (CITA)

Dr. Sergio Sánchez Dúran - Centro de Investigación y Tecnología Agroalimentaria de Aragón (CITA) PhD student Eva Gomez Molina - PhD student - Centro de Investigación y Experimentación en Truficultura (CIET - DPH)

Dr. Josè Antonio Bonet - Universidad de Lleida

Dr. Daniel Oliach - Centre de Ciència i Tecnologia Forestal de Catalunya (CTFC)

Dr. Carlos Colinas - Universidad de Lleida

PhD student Mara Rondolini - PhD student - Università degli studi di Perugia

Dr. Pedro Marco Montori - Centro de Investigación y Tecnología Agroalimentaria de Aragón (CITA)

Prof. Gulden Goksen - Tarsus Üniversitesi

Dr. Diego Gomez - Universidad de Zaragoza

Dr. Daniel Berdejo - Universidad de Zaragoza

Dr. Letizia Bellucci - New Flavours S.R.L.

Dr. Eva Tejedor Calvo - Universidad de Zaragoza











































