

Italy Biochar Study Tour

16-18 OCTOBER 2024

CHIANTI - TUSCANY



International
Biochar
Initiative



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biochar-international.org

The Program

16–18 OCTOBER 2024

The IBI Study Tour is an annual event welcoming biochar industry professionals to gain real-world experience through sightseeing some of the most innovative and versatile biochar projects in host locations across the globe.

Alongside a small group of peers, Study Tour participants experience networking opportunities, educational sessions, and site visits specific to the host location's region and partnering companies. Experts and international stakeholders on biochar lead the program, exploring topics from biochar production to implementation and carbon markets.

The aim of the Italy Study Tour is to show and discuss how biochar increases vineyard production without affecting the grape quality, while mitigating climate change effects and increasing soil fertility.

Questions? Contact info@biochar-international.org



THE REGION



Chianti Shire – Italy



The Chianti area is a fascinating place, rich with culture, nature, and typical products. The Study Tour will feature vineyards and agricultural sites to demonstrate biochar applications and innovation. The history of Chianti has always been deeply linked to the wines and other first-rate products, making it the perfect destination for a journey through traditional Tuscan food and wine: the towns in the area make up the production zone of world-renowned Chianti DOCG red wine.

DAY 1 – 16 OCTOBER

Morning Schedule

8:00–9:00

Departure from Florence (Villa Costanza) by Bus to Re-Cord Consortium

9:00–13:00

Re-CORD Consortium

[Renewable Energy Consortium for Research and Demonstration \(RE-CORD\)](#)

Renewable Energy Consortium for Research and Demonstration (RE-CORD) represents a well-established R&D center, with a chemical laboratory, pilot plants, an experimental area, and specialized human resources. Since 2010, RE-CORD not only mainstreams knowledge in the field, but also acts as a catalyst of cross-sectorial multi-actor competencies, from engineering to chemistry, and economy to physics. RE-CORD favors integration and a more effective use of human resources and infrastructures. In 2020, RE-CORD signed a Collaboration Agreement with the Polytechnic of Turin to further support and promote innovative activities in the field of chemical and energy engineering around the circular and bio-based economy.

Speakers:

- **David Chiamonti** is Mechanical Engineer, PhD in Energetics, Full Professor at the Polytechnic of Turin, "Galileo Ferraris" Energy Department (DENERG). In 2010 he was elected president of the RE-CORD.
- **Andrea Maria Rizzo** holds a Ph.D. in Industrial Engineering, a MEng (with honors) in Energy Engineering and a BEng in Mechanical Engineering from the University of Florence
- **Agro-Bio-Clima Business Unit:** Dr. David Casini, environmental engineer; Tommaso Barsali, Project Manager and Biomass Specialist for RE-CORD

13:00–15:00

Lunch at Fattoria il Palagio (Scarperia e San Piero – Mugello area – FI)

Afternoon / Evening Schedule

15:00–15:30

Departure from Fattoria il Palagio by Bus to Greve Pesa (San Casciano)

15:30–18:00

Visit Yanmar Consortium: GrevePesa

Driving Sustainability with the Farm Circular Solution

Yanmar's Farm Circular Solution (FCS) is a highly portable containerized biochar solution that turns farm waste into energy and useful agricultural products. Researchers at Yanmar R&D Europe have paired an efficient Yanmar-combined heat and power (CHP) generator with advanced gasifier technology to deliver a solution that solves the challenge of farm-waste on site. Farmers simply feed woody farm waste in one end to produce power, heat, and useful farm products. The whole system is portable and fits neatly in two standard-sized shipping containers. Two more valuable by-products of the gasification process are being evaluated: biochar and wood vinegar. By using biochar as a soil amendment to support plant growth, the carbon in the biochar is removed from the atmosphere. Wood vinegar is another by-product of FCS.

Speakers:

- **Roberto Mussi**, Group Leader of the Renewable Energy Group at Yanmar Research & Development Europe (YRE) in Florence
- **Valerio Magalotti**, Senior researcher specializing in Design & Testing at YRE
- **Lorenzo Pezzola**, Senior Researcher at Yanmar R&D Europe

18:00

Departure to GrevePesa to Radda in Chianti

18:30–19:30

Accommodation in hotels in Radda & Gaiole

20:00

Dinner at "La Loggia del Chianti" Restaurant in the center of Radda, walking distance from the hotels in Radda, by bus from Gaiole

21:30

Strolling through the magical and beautiful Historical center of Radda and back to the hotels (optional)

DAY 1 – 16 OCT

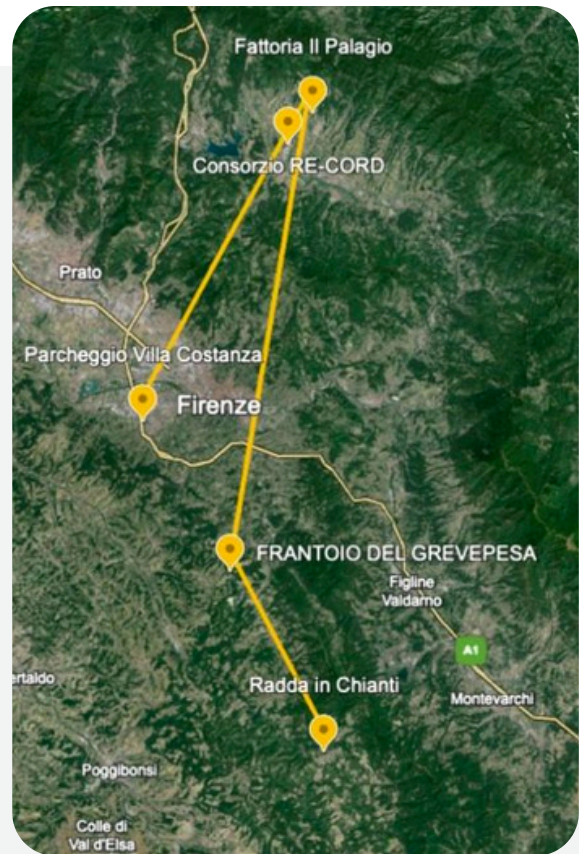
Itinerary

Production Plants of the Day

<https://www.re-cord.org/index.php>
<https://www.frantoiogrevesepesa.com>

Restaurants of the Day

Lunch:
<https://www.fattoriailpalagio.com>
Dinner:
<https://www.laloggiadelchianti.it>



Menus of the Day

Lunch at “Fattoria il Palagio”:

- Nice Tuscan appetizer with mixed cold cuts, mixed crostini and pecorino cheese
- Potato Tortelli with ragù
- Risotto with Parmigiano Reggiano cream, balsamic vinegar and almond petals
- Mascarpone cream
- Water, coffee and wine (one bottle every 3 people)

Dinner at “La Loggia del Chianti”:

- Pumpkin flan with pecorino fondue and parmesan chips
- Homemade lasagna
- Braised Cinta Senese with Chianti
- Including side, water, coffee, Cantuccini biscuits and 1 bottle of local wine every three people

DAY 2 – 17 OCTOBER

Morning Schedule

9:30–10:30

Departure from the Hotel by Bus to Felsina Farm (Castelnuovo Berardenga)

10:00–11:30

Felsina Farm: Demonstration of Drones in Agriculture

Precision viticulture aims to maximize the oenological potential of vineyards. This is especially true in regions where the high quality standards of wine production justify the adoption of site-specific management practices to simultaneously increase both quality and yield. The introduction of new technologies for supporting vineyard management allows the efficiency and quality of production to be improved and, at the same time, reduces the environmental impact.

Speakers

- **Salvatore Filippo Di Gennaro**, National Research Council- Institute of Bio-Economy PhD Researcher
- **Andrea Berton**, National Research Council- IGG , Researcher

11:30–11:45

Departure from Felsina farm to Felsina Cellars

11:45–13:00

Felsina Cellars Visit

13:00–14:30

Light Lunch and Wine Tasting at Felsina Farm

DAY 2 – 17 OCTOBER

Afternoon / Evening Schedule

14:30–15:00

Departure from Felsina Farm by bus to Badia a Coltibuono Farm (Gaiole in Chianti)

15:00–16:30

Badia a Coltibuono

Biochar Vineyard Visit and Modern Cellar Visit

Explore biochar-use on the vineyard with a tour and a deep-dive into soil science on site. To develop an understanding of biochar, soil, and viticulture, we will conduct activities including: a field description of soil profiles and discussion of its properties and functions in relation to vine ecophysiology and biochar application; in-situ measurement of soil infiltration and soil sampling; Soil Spectroscopy Field: Soil samples will be scanned in the field using portable spectroradiometers in the VNIR optical domain; Spectral shapes and diagnostic features related to the main soil properties will be observed and compared in relation to biochar applications.

Speakers

- **Fabio Castaldi**, PhD in Sciences and Technologies for forest and environmental management, full-time researcher at the Institute of BioEconomy of the National Research Council (Italy).
- **Fabrizio U.**, PhD in Soil Science and Climatology, researcher at the Institute of BioEconomy of the National Research Council (Italy).

18:30–21:00

Wine Tasting aperitif and Dinner at Badia a Coltibuono (Gaiole in Chianti)

21:00

Back to the Hotels in Radda in Chianti and Gaiole in Chianti by Bus

DAY 2 – 17 OCT

Itinerary

Farms and Meals of the Day

<https://www.felsina.it>

<https://www.coltibuono.com>

Music Band “Pacman”

<https://www.youtube.com/watch?v=Kf3t7py4-WY>



Menus of the Day

Light Lunch and wine tasting at “Felsina”:

- Vegetable Pie
- Pappa al Pomodoro (delicious typical Tuscan dish made with bread and tomato)
- Homemade Jam Tart made with jam from the farm
- 4 Wines to Taste (Spumante metodo Classico, I Sistri Chardonnay, Chianti Classico Berardenga e Chianti Classico Riserva)

Aperitif and Dinner at “Badia a Coltibuono”:

Aperitif: Finger food and snacks; 2 Badia a Coltibuono wines

Dinner:

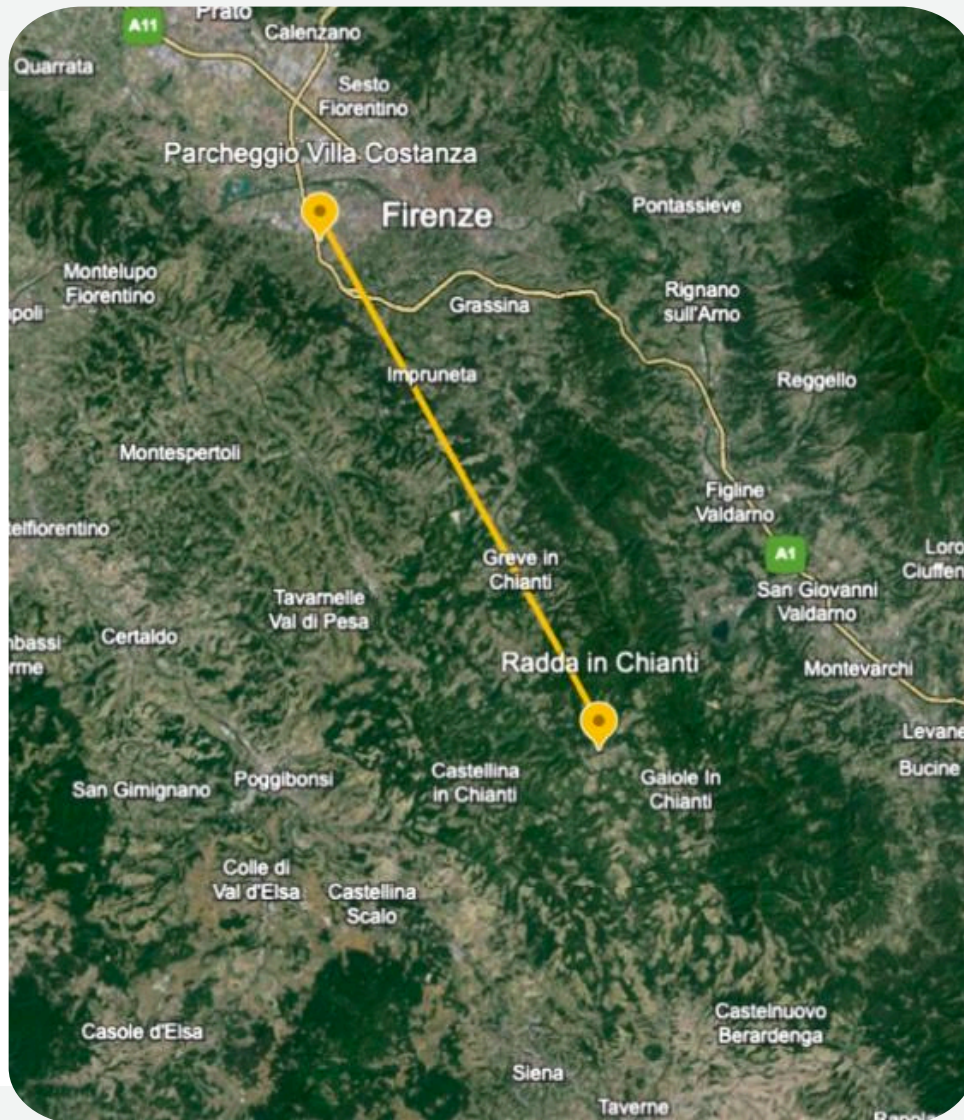
- Strozzapreti with game ragù (or Tuscan ragù)
- Sangiovese del Monastero stew with potato puree
- White chocolate cream, red fruits and cocoa wafers
- Including Colmaia wine, water and coffee

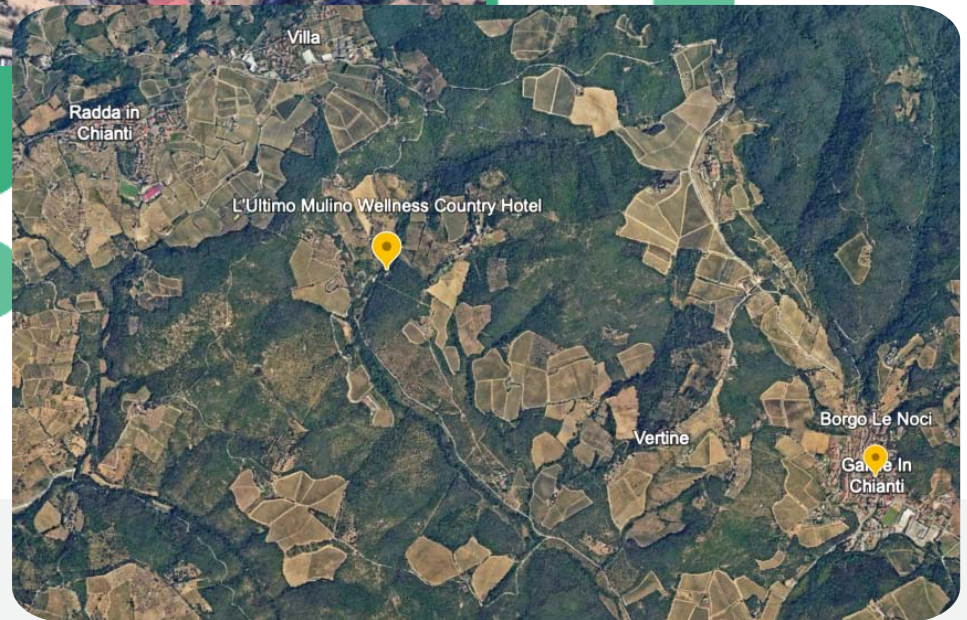
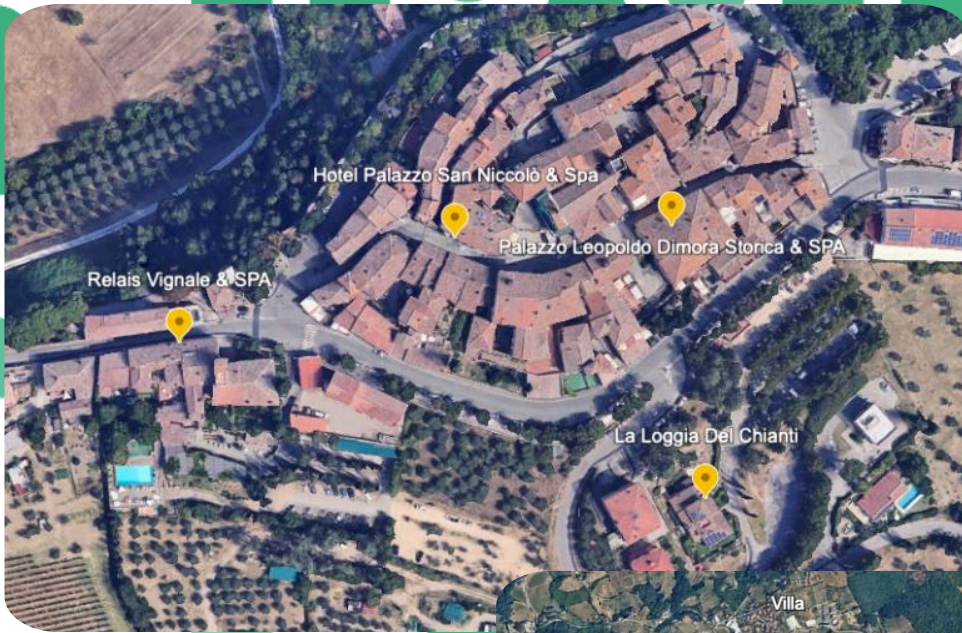
DAY 3 – 18 OCTOBER

Morning Schedule

10:00–11:30

Departure (after breakfast) from Hotels in Radda in Chianti and Gaiole in Chianti by bus and back to Villa Costanza (Florence)





Hotels

<https://www.vignale.it/it/residenza-epoca-chianti/>

<https://www.palazzoleopoldo.it/>

<https://www.hotelsanniccolo.com>

<https://www.rosshotels.it/borgo-le-noci/index>

<https://www.rosshotels.it/ultimo-mulino/index>