Eleonora Potenza

KEY-WORDS:
AGRIVOLTAIC · PHOTOVOLTAIC ENERGY· MODELLING

PROFILE

I am a second-year PhD student in Sustainable Crop production. My research field is the Agrivoltaic system focused on water-energy-food nexus.

AFFILIATION

Department of Sustainable Crop Production (DI.PRO.VE.S)
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LANGUAGES

Mother tongue

Level B2

HOW TO REACH ME

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PROJECT TITLE

AGRIVOLTAIC – An Integrated solution to combine agricultural and electricity production

Steps of the research

- Experimental trials in agrivoltaic system;
- Physiological and morphological response of plants under different levels of shading;
- Use of models to simulate the crop cycle and response under the agrivoltaic system;
- Study on crop yield and quality;

Main Results

- Increase the resilience of the agricultural sector against the threat of climate change by lowering the heat and radiation stress impact on crops;
- Stabilise and increase crop production;
- Maximise land use efficiency and energy gain from high solar radiation;

Research Contribution

When validated, this information would permit to select crops that are suitable to grow under agrivoltaic systems and agrivoltaic system will play a pivotal role in the transition toward renewable energies.

Collaborations

REM TEC (https://remtec.energy/agrovoltaico)
ENEL GREEN POWER (https://www.enelgreenpower.com/)

Why should you care?

Because of the urgent need for transitioning to renewable energy sources, AV systems appear to be a valid contender within the renewable sector by combining energy and food production. It is essential that the research validate the agrivoltaic potential to support multiple Sustainable Development Goals (SDGs) and the future challenges of humanity.