PRACTICE ABSTRACT NO. 25

Agrivoltaics for open-field agriculture

Main results / outcomes

Agrivoltaics (APV), the integration of agriculture with solar PVs, emerges as a potential remedy, allowing dual land utilization by combining solar energy generation with crop cultivation. This promises a more sustainable approach to land use, ensuring food production is not compromised for energy needs. Based on research from the HyPErFarm H2020 project, the total EU's potential capacity for APV systems is estimated at 51 TW, potentially producing around 71,500 TWh of electricity each year.

Practical recommendations

Setting standards for what counts as an APV system is essential. Europe doesn't have a single definition for Agri-PV, so using ideas from German, French, and Italian rules could help set clear standards. For real APV systems, they need financial help for a while, similar to past support for new green technologies. APV requires a different setup, which means higher starting costs; so it's really important for public groups to help out. The rules need to be made faster, so we don't slow down APV projects, maybe by giving out ready-to-use designs and fixing issues with connecting to the electricity grid. Since APV works in a spread-out way, we need other options for expanding the grid and backing groups of users. Boosting APV work at the EU level, from research money to making things locally, is a must. Even though the Horizon Europe program doesn't focus much on APV, money for testing new setups is key for making rules and learning more. Getting the word out, from farmers to stores and customers, helps connect tech with what people want to buy. Stores can use ads to push APV items, teaching shoppers to look for green APV goods.

Figure 1: HyPErFarm Agrivoltaics Installations. Left) Krinner, Germany; center) Transfarm KUL, Belgium; right) Aarhus University, Denmark.

Further information

HyPErFarm Scientific publications;
HyPErFarm Practice Abstracts
AgriPV Tool

About this abstract

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AgroFossilFree is a H2020 multi-actor project that will evaluate the current status in EU agriculture regarding energy use and assess existing needs, allowing farmers to optimize agricultural production through more efficient energy use and reduced GHG emissions, resulting in economic, agronomic and environmental benefits. AgroFossilFree will create a framework under which critical stakeholders will cooperate to evaluate and promote the currently available Fossil-Energy-Free Technologies and Strategies (FEFTS) in EU agriculture. The project is running from October 2020 to September 2023.
Website: www.agrofossilfree.eu

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