

Double harvest for a sustainable future

Innovative agrivoltaic solutions for agriculture



The production of agricultural products is land-intensive – just like the reliable supply of solar power.

Wouldn't it be ideal to simply

combine them with each other?

Secure supply – clean energy: Photovoltaics in agriculture

Climate change and its consequences are already being felt all over the world - especially in agriculture. Especially in the agricultural sector, where climatic changes and extreme weather conditions make it difficult to grow food in many places, while population growth is increasing demand. At the same time, the demand for renewable energy is rising.

This means that **agriculture** and **solar energy** are often **in competition with each other** – because in many regions of Germany and Europe the sites for open-space photovoltaics are exhausted.

Agrivoltaic systems from AgroSolar Europe are an innovative and practical solution to this problem. Because they intelligently **combine agriculture with renewable power generation.** At the same time, agricultural businesses profit from another lucrative source of income with a future!





Healthy growth for plants and farms

In AgroSolar Europe's agrivoltaic systems, solar modules are erected above and between agricultural land to generate electricity, so that they can continue to be farmed profitably.

The systems thus offer most fruit and vegetable plants the best conditions for healthy growth, as the partial roofing provides additional **protection against excessive heat** and solar radiation as well as hail, frost and drought damage. The soils can also store a larger amount of water, which has a positive effect on crop yields, especially for shade crops and in dry regions, and reduces the need for irrigation.



Couble harvest with agrivoltaics

The dual use of land for agriculture and energy production in Agri-PV eliminates the competition for land between food and energy harvests. This is a real win-win situation that benefits not only the climate and security of supply, but also farmers: this "double harvest" enables income diversification and thus contributes to the sustainable strengthening of farms and rural areas.

Individual like nature: Our system types

The requirements of farms are as varied as the needs of crops in terms of soil and microclimate: a vineyard or fruit orchard, for example, has different management requirements than a potato field measuring several hectares. That is why AgroSolar Europe has developed different agri-photovoltaic systems that can be optimally adapted to the respective conditions. **We advise farmers individually on which type of system is best suited for them.** Among other things, the size of the area, the crops grown and the geological conditions are taken into account.

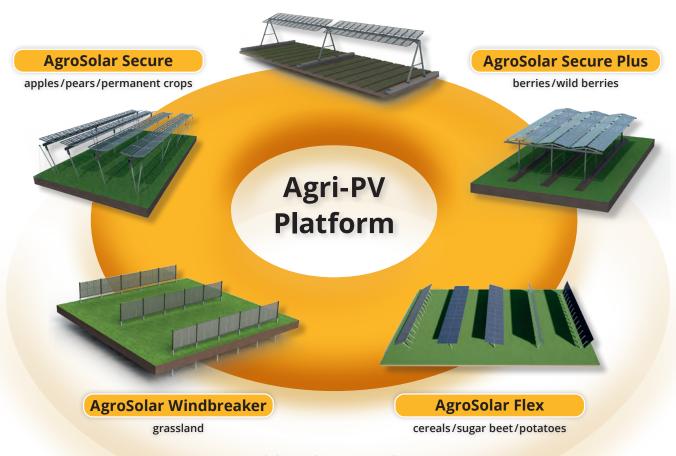


We currently offer five types of systems

High-level systems

AgroSolar Top

shade-tolerant plant crops/potatoes/beets

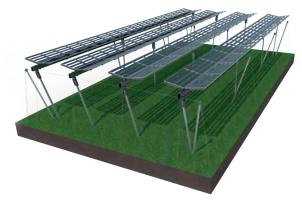


Ground level vertical systems



AgroSolar Top

is the largest agrivoltaic system and was developed for intensive, mechanised agriculture. The partial canopy can be up to 6 metres high and 18 metres wide and protects sensitive plants from environmental influences. It is particularly suitable for potatoes, beets and shade-tolerant plants.

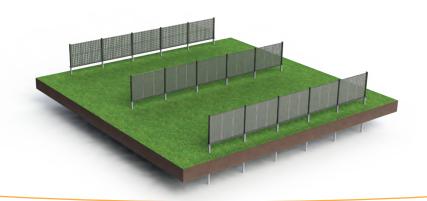


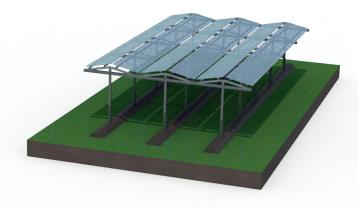
AgroSolar Secure

is characterised by a small span and height. The system can be combined with foils or nets. It is particularly suitable for special crops from fruit and vegetable growing, and permanent crops.

AgroSolar Windbreaker

has a vertical array of the photovoltaic modules and is therefore particularly suitable for agricultural areas where no shading is desired. These can be, for example, wheat or grassland.



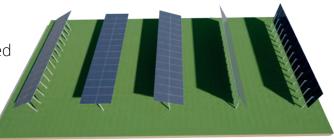


AgroSolar Secure Plus

has proven itself as a self-picking system, as there is a pleasant climate and good ventilation. It protects the plants from heavy rain and intense sunlight and is suitable, for example, for permanent crops such as berries or shade-tolerant plant cultures.

AgroSolar Flex

has a different angle of inclination for each season and can also be tilted vertically. The system is suitable for agricultural cultivations that are oriented from west to east. Possible crop rotations can be cereals, sugar beet or potatoes.



Advantages of agrivoltaics for agriculture



Each agrivoltaic system can be **individually and flexibly adapted** - among other things, to the size of the area, the types of crops being cultivated and the geological conditions.



Agri-PV **protects crops and harvests** from weather extremes such as heat, drought, heavy rain, hail and wind.



Agricultural machines in different sizes can be used as usual under the agrivoltaic systems.



Agricultural enterprises receive a **yield guarantee for electricity production** and a functional guarantee on selected components of the agrivoltaic system.



The **need for irrigation** of agricultural land is reduced by up to by up to **20 percent** and the water storage capacity of the soil is increased.



Carbon farming: With agrivoltaics, humus can be built up in a controlled way, which **reduces fertiliser consumption** and enables more CO₂ to be in the soil.



The use of agrivoltaics promotes crop harvests and thus **enables higher** income for the farm.



Flexible and profitable: In addition to investing in its own system, AgroSolar Europe also offers a **lease model**, so that the agricultural business has no expense whatsoever with the installation and distribution of electricity.

A secure and forward-looking technology

Optimal fruit and energy harvesting, soil-friendly installation and ensuring efficient management: all AgroSolar Europe system types are characterised by innovative technical features, which make them a future-proof investment.

Our concrete-free, patented spider anchor technology for the substructure
of the of the agrivoltaic system ensures very low soil compaction and is
completely deconstructible.



- Bifacial PV modules ensure light utilisation via the front and rear sides and thus generate up to 25 percent more electricity than conventional PV modules.
- In addition to the already existing trackers for the automatic adjustment of the Agri-PV modules, integrated systems for the use of storage technologies and irrigation techniques as well as the integration of robotics and automation processes are planned.



Full service with AgroSolar Europe

In individual consultation, we offer different agrivoltaic systems which can be adapted perfectly to the farmers' respective needs. However, advice is only one component of our offer - because at AgroSolar Europe you get everything from a single source!





We are experts in agriculture, solar energy and agrivoltaics

AgroSolar Europe GmbH is the European leader in the construction of large-scale agri-photovoltaic systems. The aim is to strengthen farms and give them security of supply by diversifying their income.

Are you interested and would like personal advice? Do you have questions about our products and techniques?

Then contact us!



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