



Sun'Agri



The Agrivoltaic Revolution



*Symbiosis of food and energy productions,
Agrivoltaism as a tool for territory cohesion*



- ▶ As an expert in solar energy, Sun'R has been dedicating since 2007 to the development of solutions accelerating the energy transition
- ▶ As a partner of the agriculture sector, Sun'R has provided to many farmers building especially designed for their usage & needs : stall, engine/fodder storage, horseback
- ▶ Strongly invested in research, Sun'R is pursuing an ambitious program in partnership with famous labs (INRA, IRSTEA and CIRAD) to initiate a new disciplin : **Sustainable Agrivoltaism**



Key figures :

- ▶ 125 built projects
- ▶ 25 employees, mostly engineers
- ▶ 20 partners, firms and labs, engaged in our programs
- ▶ 15% of revenue reinvested in R&D for 8 years



>>> A major challenge : feeding the world

▶ **Agriculture** for food purposes faces at least **3 major and pressing challenges**

- ↳ The planet must produce **2 times more** calories than today by 2050 while agricultural yields are already at their maximum

- ↳ With **less area** because of land use competition, due to :
 - Land artificialization
 - Competition with energy production : e.g. biofuels or photovoltaic projects

- ↳ While responding urgently to **climate change**





>>> And accelerate the energy transition

Land availability is a major challenge for PV Projects

- ▶ Ground photovoltaic projects are **limited because of land use conflicts**
 - ↳ Land without building authorization
 - ↳ Land unsuitable for agriculture : quarries, wasteland, flood zones, polluted areas ...

- ▶ The availability of land is progressively decreasing as projects are developed
 - ↳ The most obvious and simple land are already used for PV projects
 - ↳ The land being developed are more and more :
 - rugged, on slope, ...
 - remote from networks
 - problematic in general

- ▶ The future of PV largely lies in **the valuation of secondary uses**
 - ↳ Rooftops and parking lots : but the costs are still high



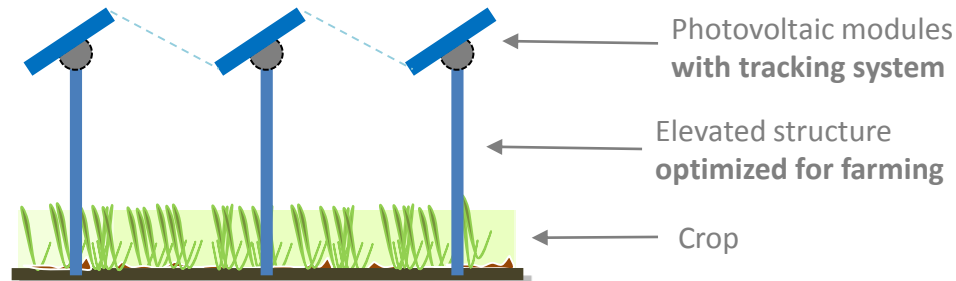


>>> These challenges lead to Agrivoltaism

- ▶ Thanks to Agrivoltaism the **microclimate** received by the crop can be modified, and therefore the yield or products quality can be maximised
- ▶ While generating a **clean, renewable and cost-effective** energy
- ▶ The panels are oriented according to the **crop requirement**

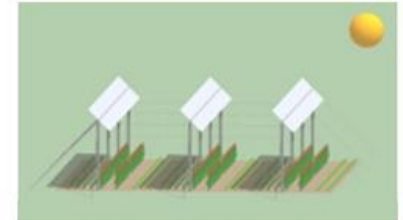
Upper level :
Power generation

Ground level :
Crop production

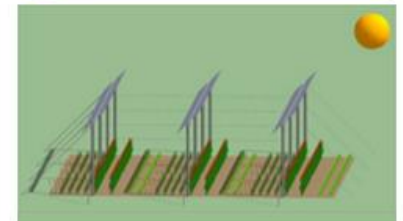


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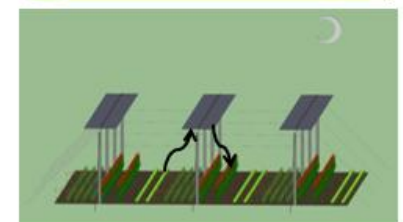
1 Protected



2 Favored



3 Preserved





>>> To whom is Sustainable Agrivoltaism intended for ?

- ▶ To the **farmers** all over the world that are subject to climate change and specialized in high added value crop:



Vegetable production



Vineyards



Fruit production

- ▶ To the **policy makers** wishing to strengthen their agriculture and to accelerate their energy transition
- ▶ To the **investors** in renewable energy infrastructures



>>> Benefits for the Farmers



1. **Revenue improvement** : higher yield or products quality ; favorable shift of the cropping periods
2. **Operating costs reduction** : drastic reduction of water consumption ; less handling, fewer crop losses, lower insurance fee
3. **Available structure** to fix every agricultural equipment : nets, tying, irrigation
4. **Farming valorisation** : modernized (intelligent piloting), durably continued (adaptation to climate changes), environmentally responsible





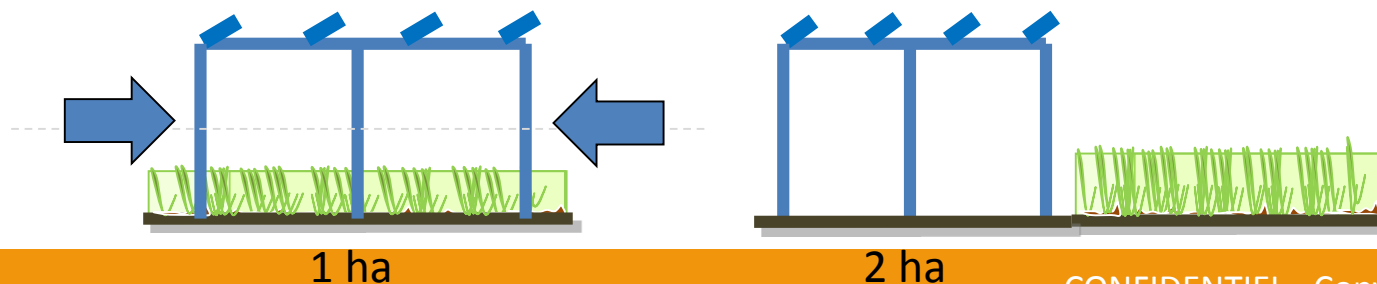
>>> Benefits for the Public Authorities

▶ Instrument for territory cohesion :

- ↳ Create a new chain of excellence
- ↳ Establishing links between rural and urban spaces
- ↳ Providing short food circuits, in quality
- ↳ Providing short energy circuits, clean & renewable
- ↳ Enhancing the utility of Farmers in the future

▶ Key to agricultural space sanctuarization :

- ↳ Usage synergy to avoid the soil artificialization
- ↳ Powerful tool to foster the adaptation to climate changes
- ↳ Securing for a while the agricultural purpose of land











>>> For further information...



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Partenaires de Sun'R :



Soutiens :



Pôles ayant labellisé le projet :

