

SMP21.14

▶ Agrivoltaics in Mexico

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Agrivoltaics

Definition

- ▶ Agrivoltaics is the simultaneous use of areas of land for both solar photovoltaic power generation and agriculture



Agrivoltaics with strawberry in the Netherlands

Advantages

- ▶ Efficient use of land
- ▶ Protection for crops against heavy rain/hail, high irradiation, changes in temperatures
- ▶ Increased crop water use efficiency
- ▶ Possibility of collecting rainwater
- ▶ Providing electricity

SMP project objectives

Develop a Dutch-Mexican R&D cooperation project on agrivoltaics

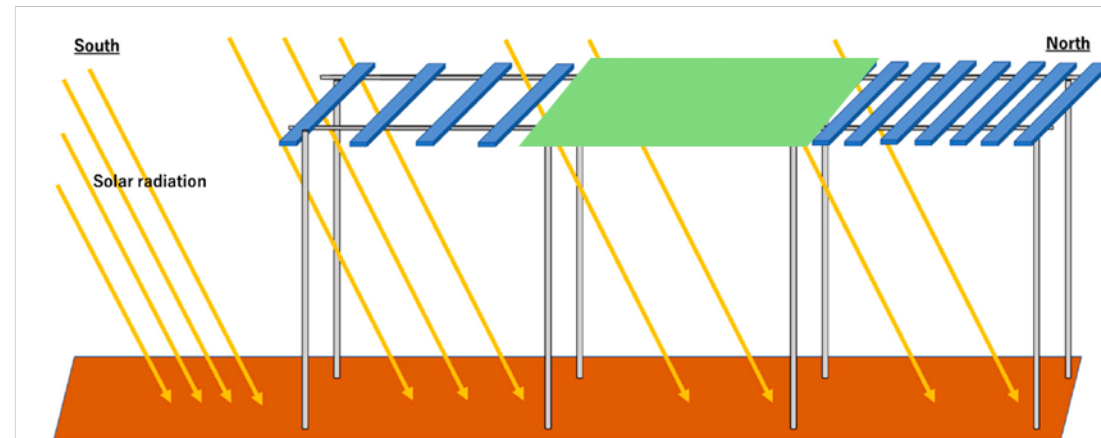
- ▶ Identification of opportunities for agrivoltaics in Mexico
- ▶ Contribute to a pilot experiment on agrivoltaics by Mexican universities
- ▶ Preparation of a PPP project proposal to implement, test, demonstrate and improve agrivoltaics at relevant farms

Pilot experiment 2021

- ▶ Potential pilot setup and crops discussed with UTSEM
- ▶ Project plan developed
- ▶ No actual realization because of lack of funding

Objects:

- no shade
- 30% shading by panels
- 30% shading by net
- 50% shading by panels



PPP project proposal, TKI subsidy granted

- ▶ The objective of this project is to test and develop agrivoltaics in Mexico to support crop production, produce renewable energy and contribute to a sustainable and climate resilient agriculture.
- ▶ Two pilot sites:
 - ▶ Horticultural agrivoltaics system (agriculture under panel rows)
 - ▶ Arable crops agrivoltaics system (agriculture between panel rows)
- ▶ Agronomic evaluation
- ▶ Business case analyses
- ▶ Dissemination

Project consortium

- ▶ GreenID NL
- ▶ WUR
- ▶ Gakon Horticultural Projects
- ▶ ProTerra Capital
- ▶ NL Embassy Mexico

Cooperation with Mexican universities UNAM-IER and UTSEM

Agrivoltaics in Mexico

- Mexico an agro-country
- +200 crops grown
- 11th Food producer in the world

- ▶ Very good conditions for renewable energy generation
- ▶ + 67 solar parks in Mexico
- ▶ The industry and communities are looking for own electricity generation alternatives.

- Mexico suffers from water scarcity in some regions of the country.
- The use of water pumps increase the CO₂ emissions
- A solution that needs to be tailored per country.

Agrivoltaics

Provide a new solution to the mexican agri-sector that helps them to reduce their CO₂ emissions, protect their crops, and be more resilient to climate change.

GreenID Learnings

- ▶ Agrivoltaics barriers
- ▶ Business modeling for agrivoltaics
- ▶ Literature review
- ▶ Understanding the different arrays of agrivoltacis



Thank you for your attention

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