

**Solution:****Agri-Voltaic System/Solar Farming****Submitter: ICAR****Solution Overview**

What is it, and what problem does it solve? Brief 2–3 sentence description.

Agri-voltaic system is an integrated system where food production, PV generation and rain water harvesting have been combined together on a single land unit. The system improves the land productivity specially in arid and dry lands where there are several challenges specially in the context of climate change.

**Key Features & Benefits**

Main components and why it is useful? Bullet points summarizing methods, tools, and value added.

- Cultivation of crops in between PV arrays as well below panel areas
- Rainwater harvesting from the top of PV panel and recycling it
- Modification of microclimate and creates win-win situation for both agricultural production and PV generation

**Where It Works and Where**

It Can Work: Existing and potential target regions, agroecologies, or farming systems. Include examples if available.

- Drylands and arid region of the world
- Arable farming system with preference to short height crops
- Farming system involving shade tolerant crops

**Evidence & Impact**

What results has it shown? Stats, pilot outcomes, or testimonials.

Agri-voltaic system with different designs and with different crops have been tested and evaluated through conducting experiments during last 8 years. Experiment shows that double row PV model is the 60% PV density at the top row is the best design. Break even period of the system is formed 8-10 years. The system can reduce CO2 footprint by about 400-500 ton CO2eha-1y-1.

**Scalability & Adoption Support**

Why it can be scaled and what's needed to adopt it? Low-cost, adaptable, partner-ready, etc.

The Break-even period of the system is 8-10 years whereas its life cycle is 25 years and Thus may be a successful business model. The installation and management of the system is handled by multiple expertise e.g. PV and agricultural and Thus is partner-ready.

**Partners & Contact**

Info Who's involved and how to connect? List of key contact and partners + email / phone.

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