

# Growing tomatoes under photovoltaic panels



## Overview

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At the University of Arizona's Biosphere 2, cherry tomatoes doubled their yield when grown under solar panels, as noted in a 2019 study published in Nature Sustainability. Researchers at the National Renewable Energy Laboratory wanted to find out whether tomatoes would grow better using a specifically designed light filter that leverages a rapidly emerging photovoltaic cell technology that's more flexible, lightweight, and inexpensive. Image by Wayne Hicks, NREL. Recent research has revealed an innovative approach that enhances the growth of tomatoes cultivated beneath solar panels. From pv magazine USA Researchers at the U. tomato industry in increasingly hot and dry regions, research suggests. Brittany Staie picks tomatoes at Jack's Solar Garden in Longmont, Colorado. The experiment was meant to.

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### Using solar panels to aid in tomato growth

Now in the second year of the multi-disciplinary project known as "No Photon Left Behind," the researchers determined limiting the spectrum made the tomatoes grow faster and ...

### Effects of the Agrivoltaic System on Crop Production: The Case of

The aim of this work was to investigate the impact of environmental conditions generated by photovoltaic (PV) panels for sustaining open-field tomato (*Solanum lycopersicum* L.) fruit production under ...



### Agri-Photovoltaic technology allows dual use of land for tomato

This study evaluated the impact of APV shading on tomato physiology and productivity through two field experiments conducted in 2022 and 2023 at Bar Ilan University, Israel.



### Solar Panels Give Edge to Tomatoes

## Grown Underneath - National

Photovoltaics capture sunlight and convert it to electricity. The OPV filters for the algae and the tomatoes do not generate electricity, but the eventual goal would be to incorporate BioMatched ...



## Growing Under Solar Panels: How Agrivoltaics Boost Crop Yields

Imagine using the shaded spaces beneath solar panels to cultivate crops, transforming solar farms into dual-purpose lands that produce both energy and food. In this context, recent studies reveal that ...

## Tomatoes and solar panels could go well together

Researchers said that growing tomatoes under solar panels could mimic the conditions of a greenhouse in some climates, and energy from solar panels could also power on-site greenhouses.



## Solar panels boost tomato growth beneath them

The intriguing intersection of agriculture and renewable energy is coming to life as researchers experiment with growing

tomatoes under solar panels. At NREL, scientists meticulously ...



## Solar Panels Give Edge to Tomatoes Grown Underneath , NLR

Researchers at the National Renewable Energy Laboratory wanted to find out whether tomatoes would grow better using a specifically designed light filter that leverages a rapidly emerging ...



## NREL develops translucent solar panels for bigger, better crops - pv

Researchers at the National Renewable Energy Laboratory grew tomatoes under translucent solar panels, which could play a promising role in agrivoltaics.



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