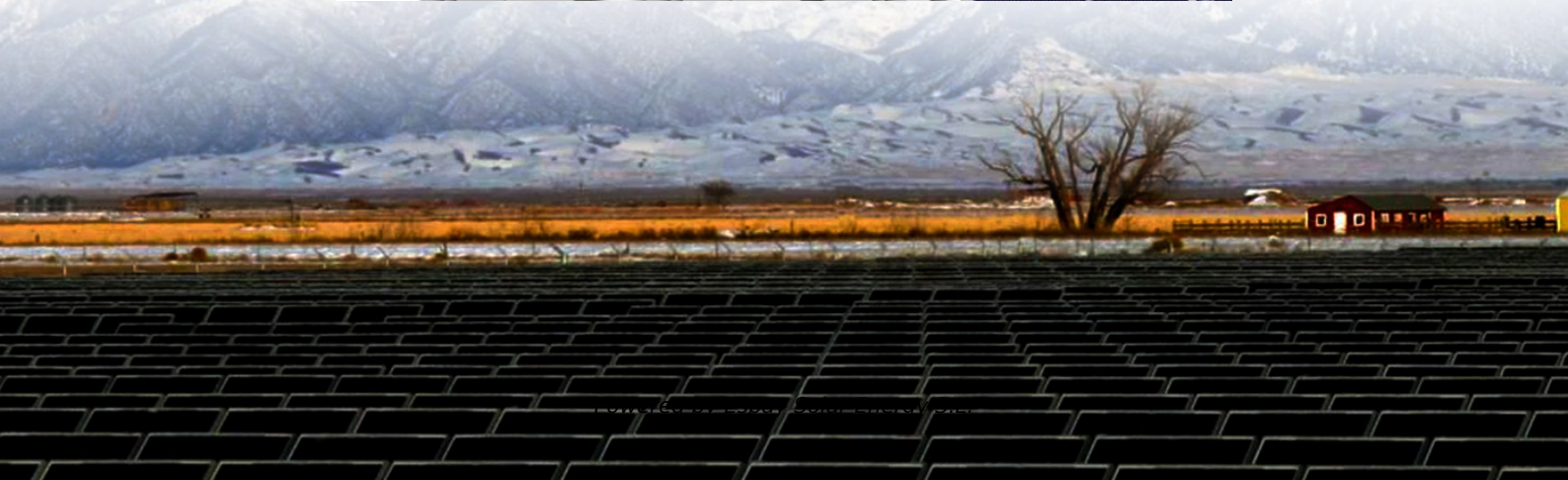


**Espay Solar Energy S.L.**

# **The current situation of alfalfa planting under photovoltaic panels**



## Overview

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A farmer harvests alfalfa beneath a row of solar panels in a dual-use field. The agrivoltaics system allows for both crop production and renewable energy generation. Researchers are studying whether solar energy systems can operate alongside farming without removing land from agricultural. This study investigated how shading from solar panels (agrivoltaics concept) can mitigate the impacts of fall heatwaves on the germination and early growth of alfalfa. This was accompanied by a morphological adaptation of the alfalfa to shading, with elongation of the stems and enlargement of the leaflets. Can. What is the current status of Alfalfa hay stocks?

Other uses on the horizon?

How might climate change impact alfalfa?

Acknowledgment to USDA NASS -- Visual maps and data presented in the following slides are from the USDA NASS website unless noted otherwise.

## The current situation of alfalfa planting under photovoltaic panels

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### Is it suitable to grow alfalfa under photovoltaic panels

Not all crops grow well under solar panels. The combination works very well for plants that like partial shade, such as leafy greens, root vegetables, and alfalfa.

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### Planting alfalfa under desert photovoltaic panels

Baofeng Group has been managing this desertified patch of 107 square kilometers by planting alfalfa and goji to improve the soil. Since 2016, Huawei and Baofeng Group have jointly built large PV ...



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### How to Harvest Alfalfa Under Photovoltaic Panels: A Farmer's Guide ...

Recent studies from the National Renewable Energy Laboratory show alfalfa thrives under partial shade - we're talking 15-30% yield increases compared to full sun exposure in arid regions.

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## Increasing land productivity with

## agriphotovoltaics: Application to an

Over a period of two years, this research has been investigating an agriphotovoltaic (APV) system with mobile panels along two axes of rotation. The studied crop is alfalfa, a grassland species ...



## Farming under solar panels?

A farmer harvests alfalfa beneath a row of solar panels in a dual-use field. The agrivoltaics system allows for both crop production and renewable energy generation.

## Alfalfa & Forage Dynamics in the Current Agricultural Landscape

Increase alfalfa forage and seed yields and forage quality through improved management practices, plant breeding, and other strategies to reduce biotic and abiotic stresses and costs of production.



## Empowering the Future of Agriculture: Energizing Crops with Solar-Panel

This study investigated how shading from solar panels (agrivoltaics concept) can mitigate the impacts of fall

heatwaves on the germination and early growth of alfalfa.



### **Farming under solar panels? Midwest growers test agrivoltaics**

A farmer harvests alfalfa beneath a row of solar panels in a dual-use field. The agrivoltaics system allows for both crop production and renewable energy generation.



### **Integrated modelling of shading effects on alfalfa growth across**

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 ...

### **Best Crops for Agrivoltaics: Growing Food & Harvesting Solar Energy**

Solar panels don't just produce electricity--they create shade, reduce temperature fluctuations, and shield crops from extreme weather. Some

plants actually grow better in partial ...



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