# Sweet potato planting under photovoltaic panels

Which crops can be grown under PV panels?
Tomato,lettuce,pepper,cucumbers and strawberriesare the most studied crops under PV panels (Fig. 5). The recent literatures for applications of selective shading systems on the aforementioned crops and others plants are reviewed in the following sections.

What plants grow under photovoltaic panels?
Kavga A, Trypanagnostopoulos G, Zervoudakis G, Tripanagnostopoulos Y (2018) Growth and physiological characteristics of lettuce (Lactuca sativa L.) and rocket (Eruca sativa Mill.) plants cultivated under photovoltaic panels.

Do solar panels affect tomato morphology and fruit quality?
The effect of 9.8% shading rate,by applying PV,on the morphology and fruit quality of tomato during two growing period (2010-11 and 2011-12) in south-eastern Spain has been studied recently by Ángel Jesús et al. The test results indicated that solar panels caused small reduction in PAR.

Can agrophotovoltaic systems help grow potatoes?
Based on the potato yield that has been cultivated in 2018 in Germany, the land use efficiency rose to 186 percent per hectare with the Agrophotovoltaic system (Fig. 1 b) (Trommsdorff et al. 2021). However, in these innovative systems, PV panels partially shelter the crop growing below (Marrou et al. 2013b).

Do solar panels affect crop yields & fruit quality?
The solar radiation received by the plants may decrease crop yieldsand reduce fruit sizes (Marrou et al. 2013a). Consequently,the impact that solar panels could have on crop yield and fruit quality has attracted great attention of researchers. Tomato,lettuce,pepper,cucumbers and strawberries are the most studied crops under PV panels (Fig. 5).

Why are solar panels better than open field plants?
The reduction in direct sunlight exposure beneath the PV panels led to cooler air temperature during the day and warmer temperatures at night,which allowed the plant under the solar arrays to retain more moisturethan the control crops that grew in open field planting area.

Impacts of colocation of agriculture and solar PV panels (agrivoltaic) over traditional (control) installations on irrigation resources, as indicated by soil moisture. a, b, ...

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PV projects linked to agriculture have thus far shown the highest potential when combined with leafy greens such as lettuce and spinach, as well as with root crops such as potatoes, radishes ...

A two-year field experiment was carried out, and three sweet potato cultivars of "Xinxiang" (Xx), "Zheshu 13" (ZS 13) and "Zheshu 77" (ZS 77) were planted under the PV panel shading and CK (without PV panels) treatments.

Over the past three years, farmers have used the fields to grow winter wheat, potatoes, celery, grass and clover leys under the steel structure. According to ISE, the participants were ...

Table 1 Leaf photosynthetic parameter analysis of different sweet potato cultivars under the photovoltaic panel shading treatment (23 October 2015) ... Fig. 5 Effects of photovoltaic panel ...

Recently, sweet potato is used in photovoltaic agriculture, and planted under photovoltaic panels [18]. ... Physiological, Photosynthetic, and Transcriptomics Insights into the Influence of ...

evapotranspiration (ET), soil nutrients, and the quality and yield of the sweet potato plant. 2 Spectrum Splitting and Concentrated APV (SCAPV) The SCAPV combines the idea of splitting ...

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