

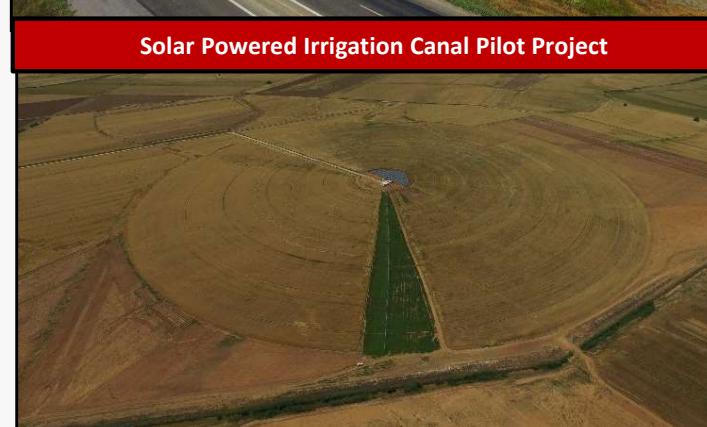
## VISUALS OF PROJECTS



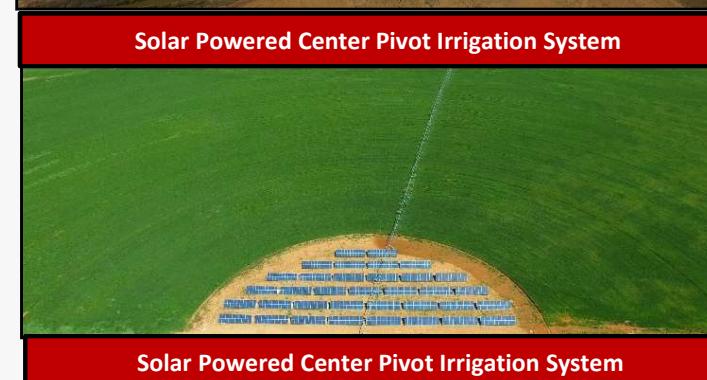
Mobile Solar Powered Irrigation Machine



Solar Powered Irrigation Canal Pilot Project



Solar Powered Center Pivot Irrigation System



Solar Powered Center Pivot Irrigation System

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Some of the awards received

## VISUALS OF PROJECTS



General Directorate of Agricultural Research and Policies  
GAP Agricultural Research Institute

## SOLAR ENERGY INNOVATION PROJECTS

1. MOBILE SOLAR POWERED IRRIGATION MACHINE
2. SOLAR POWERED CENTER PIVOT IRRIGATION SYSTEM
3. SOLAR POWERED IRRIGATION CHANNEL PILOT PROJECT



YERLİ  
ÜRETİM

Sanliurfa-Türkiye

## 1-MOBILE SOLAR POWERED IRRIGATION MACHINE

It is a mobile energy source for both agricultural irrigation and other agricultural activities by producing energy thanks to the solar cells and solar tracking system on it. The machine can be mounted on the back of the tractor and can work mobile in many different locations without the need for an extra energy source.



Mobile Solar Powered Irrigation Machine

The differences of our solar-powered system from other solar-powered irrigation systems are that it is mobile, follows the sun on two axes using hydraulic power, has a PV washing unit, and is the first in the world in that all panels can work on a single plane and without battery, directly with solar cells.



Mobile Solar Powered Irrigation Machine

This machine uses solar cells up to 40% more effectively than standard systems due to the above-mentioned features. It can work

## 2-SOLAR POWERED CENTER PIVOT IRRIGATION SYSTEM

With this project, a modern center pivot irrigation system that can operate the deep well pumping system has been designed for the first time in the world by integrating the solar energy system with a hybrid variable frequency pump driver, remote control and monitoring system.



Solar Powered Center Pivot Irrigation System

An exemplary system has been installed that can irrigate 100 ha of land with 200 m<sup>3</sup> per hour and 4 bar pressure from a 100 m deep well. With its 160 kWp panel power, it can easily operate a 150 HP submersible pump.



Solar Powered Center Pivot Irrigation System

The Solar Powered Center Pivot System has been established to operate both with and without grid

## 3-SOLAR POWERED IRRIGATION CANAL PILOT PROJECT

For the first time in Turkey, a hybrid system was established to cover the irrigation canals with solar panels and to irrigate 50 hectares of area with modern irrigation systems by operating 2 pumps.



Solar Powered Irrigation Canal Pilot Project

50 ha of land can be irrigated with 250 m<sup>3</sup> of water per hour from a depth of 100 meters. This 160 kWp system has been set up to operate separately as off grid, on grid and on-off grid at the same time.



Solar Powered Irrigation Canal Pilot Project

With the expansion of this project in the areas where irrigation canals pass, an energy corridor will be created, the evaporation of the canal water