

## *Solar Water Pump Programme Provides More Avenue For Income*

**Category: - Horticulture**

### **Introduction:-**

Solar pump along with micro irrigation systems scheme was started in Rajasthan in the year 2010-11. Farmers who install micro irrigation system (Drip, Mini Sprinkler and Sprinkler) on their fields are only eligible for the solar pump subsidy.

### **Challenges**

The solar pumps should be installed at potential hi-tech horticulture/Agriculture places, where there is no electric connection. So Many farmers who do not have access to electric connection should adopt for these SPV pumps. Presently, they use diesel pump sets (in some cases taken on hire) for irrigating their crops. Most of the farmers of the state are not getting 24 hour un-interrupted power supply for hi-



tech Horticulture/ Agriculture and thus such areas are ideal locations for implementing a project based on use of Solar Water Pump sets. Further, at present, as the electricity connection is very difficult to get with a long queue for the farmers and the solar pumps with their very high initial cost may not be acceptable as such, hence, financial assistance for the same is needed.

In the state of Rajasthan, as enough sunlight is available along with clean sky almost throughout the year; there is a need to encourage the non-conventional energy systems like solar pumps in Horticulture/ Agriculture production. Therefore, it is proposed to promote these pumps on the farmer's field where hi-tech horticulture along with protected cultivation structures has been adopted. This will not only promote the hi-tech horticulture concept but also reduce the cost of cultivation in such conditions.

### **Initiatives**

Department of Horticulture is the Implementing agency and the Director, Horticulture is the Mission Director of the State. Applications from beneficiaries are received online through (e- Mitra portal) and applications are entertained on first come first basis.



### **Impact:-**

1. Solar pumps are linked with Hi-tech Horticulture/Agriculture.  
(a) Green houses; (b) MIS (Drip, Mini Sprinkler and Sprinkler) and (c) Diggi/Community ponds
2. Solar pumps are given to farmers who are engaged in production of Horticulture/Agriculture crops and getting benefits of different schemes of Horticulture/Agriculture under one umbrella.
3. Farmers who install micro irrigation system (Drip, Mini Sprinkler and Sprinkler) on their field are only eligible for solar pump subsidy. This scheme is very successful and significant area has been brought under micro irrigation system due to this scheme.

### **Vision:**

- Alternative for conventional energy in Horticulture & Agriculture sector.
- Long queues for new electric connections can be avoided.
- Large investment needed by farmers can be avoided.
- Boon for saving precious energy and water resources.
- No need for electric transmission/distribution arrangements, no transmission/distribution losses.
- Large scale adoption of technology will lead to cost cutting.

### **Objectives/goals:**

- Enhancing irrigated area in the State thereby increasing productivity by giving farmers an opportunity to diversify to remunerative high-value Horticulture crops.
- Conserving groundwater through utilization of efficient irrigation methods.

- Narrowing gap between power demand and supply of electricity and reducing queue for grid electricity connection for irrigation.
- Harnessing solar energy resources available in abundance in the State thereby replacing the expensive and polluting diesel pumps sets.
- Providing irrigation facility to farmers in remote locations where electricity grid unlikely in near future.
- Saving farmers of the drudgeries of irrigating during night or early morning hours, the time when the grid power is most often supplied to agriculture consumers.

### **Outcome:-**

1. Enhanced agriculture productivity by extending irrigation facility to additional terrains hitherto remained un- irrigated and where electric-grid is unlikely to be extended in near future.
2. Conservation of precious groundwater by making it mandatory for beneficiaries to adopt micro-irrigation systems. The drip irrigations systems have 90 percent water use efficiency compared with prevailing furrow/flood irrigation method with just 35-45 percent efficiency.
3. Shortened queues of farmers waiting for many years to get grid connections for energizing their pumps.
4. Reduced burden of electricity distribution companies in the State that often face shortage of power (and shortage of funds) in particular during peak crop seasons.
5. Replacement of expensive and polluting diesel pump sets with environment friendly solar pumps which operate during day hours that are most convenient to farmers.

### **Success Story - 1**

*Sh. Khemaram Mahria is a progressive farmer of Jaipur district. Solar water pumping system was installed at his field with the help of Horticulture Department under RKVY. He is adopting Hi-tech Agri-Horticultural practices including poly house cultivation in 4000 sq m, shed net in 4000 sq m, mulching practices in 2 ha. and low tunnels in 1.00 ha. land. At present, he is*



growing horticultural crops like cucumber, snake melon, water melon, bell pepper, chilly, strawberry, cabbage and peas successfully. He is earning Rs. 13 lakhs annually with the help of these advanced hi-tech farming technologies.

**Farmers Name : Sh. Khemaram Mahria**

**Village : Balolai, Tehsil : Phulera**

**District : Jaipur**

## **Success Story - 2**

Sh. KishanLal S/o Sh. Ugma Ram Ji is an innovative farmer of Ajmer district. Solar water pumping system was installed at his tube well with the help of Horticulture Department under RKVY. Initially, the farmer was having only diesel pump as a source of irrigation. But after the installation of solar water pump, he is able to grow horticultural/agricultural crops including cotton, vegetables & onion crops using drip irrigation and sprinkler system irrigation in wheat crop. He is earning a good income annually with the help of solar pumping system. .



**Farmers Name : Sh. Kishan Lal S/o Sh. Ugma Ram Ji**

**Village: Balapura**

**Tehsil : Kishangarh**

**District : Ajmer**

### Success Story - 3

Sh. Sawaram S/o Sh. Rawata Ji Kalbi is a progressive farmer of Sirohi district. Solar water pumping system of 5 HP was installed at his field with the



help of Horticulture Department under RKVY. Before installation of solar water pump, the farmer's expenses were around Rs. 1 to 1.5 lakhs on irrigation using diesel pump. Currently, he is irrigating his crops with the help of solar water pumps through which he is saving a net Rs. 1 to 1.5 lakhs and now he is

also growing vegetable crops like tomato, wheat and castor etc. The farmer stated that at present he is earning a handsome amount of income and his socio-economic level has become changed.

**Farmers Name : Sh. Sawaram S/o Sh. Rawata Ji Kalbi**

**Village : Neemtalai, Raipur**

**Tehsil : Reodar**

**District : Sirohi**

### Success Story - 4

Sh. Nathuram is a progressive farmer of Jaipur district. Solar water pumping system was installed at the farmer's field with the cooperation of Horticulture Department under RKVY. He is adopting hi-tech Agri-Horticultural practices including poly house cultivation in 4000 sq m, mulching practices in 2 ha. and low tunnels in 1.00 ha. land. At present he is growing horticultural crops like cucumber, water melon and peas successfully. He is earning around Rs.10.00 lakhs annually with the help of these hi-tech farming technologies.

**Farmers Name : Sh. Nathuram**

**Village: Balolai, Tehsil : Phulera**

**District : Jaipur**

