

## IWMI Pakistan Conducts Behavioral Study in Chakwal and Jhang

Six hundred farmers are being surveyed in three districts of Punjab, viz., Chakwal, Jhang and Rahim Yar Khan, under the SDC-SoLAR project in Pakistan. A behavioural study is being conducted in six tehsils across these three districts (two tehsils per district) to gauge the differences in cropping and irrigation patterns of SIP and non-SIP farmers.

The behavioural survey started in the second week of December 2021. IWMI Pakistan researcher Muhammad Zain Bin Akbar (Research Officer- Policy and Water Governance) spent three days in Chakwal and two days in Jhang. Fifteen farmers were interviewed in the Talagang tehsil of Chakwal district, who were small landholders and grew fruits and vegetables primarily. Peanut was one of the more common summer crops in the region. As Chakwal is a rainfed area, the growing of peanuts is feasible as it does not require any groundwater for irrigation. It was observed that a water storage tank was available in all these fields irrespective of SIP or non-SIP farmers, and water is discharged by the action of gravity. A Solar Irrigation Pump (SIP) farmer from Akwal village (Talagang Tehsil, Chakwal) mentioned replacing his electric pump with a SIP, as electric pumps are sensitive to fluctuations in electricity. At the same time, another farmer who uses an electric pump for irrigation expressed his inability to install SIP due to a lack of finances. However, people feel that if they get access to using SIP, they will be able to grow more crops in a year and earn greater profits.



*Data collection from a SIP farmer in Chakwal District  
Photo: Md Zain Akbar/IWMI*

Twelve farmers were interviewed in the Jhang district, covering the Athara Hazari and Jhang Tehsils. Farmers in this district cultivate wheat, rice and sugarcane. SIP farmers in Jhang had complaints that SIPs did not fulfil their irrigation needs and must supplement SIP with groundwater from a non-SIP source.

Two types of solar panels are used: A grade and B grade. A SIP farmer in Athara village mentioned that

he found no difference between A grade and B grade solar panels. The only major difference is that grade A panels last for about 25 years while grade B panels last for nearly ten years. He added that grade B solar panels are cheaper than grade A solar panels and can be easily replaced after ten years. Another SIP farmer in Athara Hazari tehsil mentioned that a 7.5 Hp SIP could grow wheat on a land size of 15-20 acres, but the same SIP is insufficient to grow paddy even on a 5-acre land. For paddy, SIP needs the support of non-SIP for irrigation.



*A SIP farmer is being interviewed in the Jhang district.  
Photo: Md Zain Akbar/IWMI*

Almost all the farmers believed that SIP would not result in water wastage due to excessive groundwater abstraction from SIP. SIPs will help farmers irrigate their crops on time with the optimal water requirement. At the end of each survey, a wall clock was gifted to every farmer as a token of appreciation for giving their time to the surveys.



*A clock being gifted to a non-SIP farmer in Chakwal district  
Photo: Md Zain Akbar/IWMI*