IMPACT STORY

SOLAR COUPLED DRIP IRRIGATION
IDEAL COMBINATION OF TWO CLIMATE SMART TECHNOLOGIES

It was 2011 when Mr. Mustafa Yousaf, a young man, working with a Dutch Bank in the UAE decided to quit his job and inspired himself of adopting agriculture as a business. On his return, he started exploring different feasible farming options at his agriculture land located at Saikhum, a village about an hour-and-a-half's drive from provincial headquarters Lahore. His first year of farming experience was not so encouraging because he had spent more money on growing spices and vegetables on flood irrigation than he had earned from their sale. This was the turning point when he stopped using conventional flood irrigation and switched to drip irrigation technology. He got installed drip irrigation system on six (6) acres for growing vegetables and spices under the World Bank funded PIPIP program during 2013-14 from On Farm Water Management (OFWM).

"Since we have shifted to precision irrigation, our input and labour costs have decreased dramatically by almost 50 percent and yield has increased upto 40 percent," Mustafa Yousaf says proudly. Currently, about 60 percent less water is required through drip irrigation as compared to flood irrigation. The water saved by drip irrigated vegetables has been used to irrigate additional area.

60% *Less Water*
50% *Less Fertilizers*
40% *More Yield*

He further explained that the vegetables grown with drip irrigation are less prone to fungal diseases and resultantly less use of pesticides. Another benefit is 35% less sprouting of weeds because required amount of water is applied directly to the crops roots with this pressurized irrigation system while most of the land remains un-irrigated leading to very less weeds infestation. Mr. Mustafa shared that drip irrigation technology enabled them to compete in the international market due to better quality produce of uniform size due to spoon-feed application of water and fertilizer to the plants as per their requirement.

Mr. Mustafa hasn't limited himself to drip irrigation technology, he has taken a step further by installing solar system, funded by the Punjab Government, for operating drip irrigation system to reduce the operational and labor costs Mr. Mustafa says that ***"solar power for operating drip irrigation system allows us to automate the entire system and further cut down labour cost"*** as they are no longer dependent on the unreliable and insufficient power supply from the grid in the area.

He acknowledged that recent increasing trend in adoption of drip irrigation by the famers, especially in canal irrigated areas of the Punjab is due to the strenuous efforts by the OFWM staff. Mr. Mustafa has also signed an agreement with international food firm to grow Chilies, Fenugreek (*Kasuri Methi*) and Coriander according to GAP (Good Agriculture Practices) standards. He has also grown gladiolus successfully on drip irrigation. ***Growing these crops according to international standards is only possible with drip irrigation technology***, he said.

While sharing his experience of adopting solar operated drip irrigation system, Mr. Mustafa told that this is an ideal combination of two climate smart technologies enabling the farmers to drastically cut down their input costs and at the same time enhance productivity. I am very happy the way I am doing innovative farming using these modern technologies, which is the future of Pakistan's agriculture.

Email: pipipwm@gmail.com
Website: www.ofwm.agripunjab.gov.pk