GOVERNMENT OF THE PUNJAB
Agriculture Department

OFWM
PIPIP
PUNJAB IRRIGATED-AGRICULTURE PRODUCTIVITY IMPROVEMENT PROJECT

DRIP IMPACT STORY

Drip Irrigation for Rehabilitation of Waterlogged & Saline Soils in Faisalabad

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Freshwater resources are shrinking and groundwater quality is declining rapidly in Pakistan due to high load of salts, fertilizer and pesticide contents that leach down from the fields. Sediment load is also high due to runoff from traditional irrigation methods and poor soil management that causes erosion of upper fertile layer of the soil. More than ever before, it is imperative to use water-saving technologies in agriculture sector like drip irrigation that is one of the best ways to achieve more crop per drop and improve water quality and soil health.

The World Bank Assisted "Punjab Irrigated-Agriculture Productivity Improvement Project" being executed by On-Farm Water Management (OFWM) wing of Punjab Agriculture Department, is highly instrumental in popularizing drip irrigation technology in the Punjab since 2012. It has helped not only to save precious irrigation water, fertilizer and other farm inputs, but also increased quantity & quality of produce, farm profitability, etc. A case under discussion is a 75 acre farm (in a predominantly saline-waterlogged area) owned by Mr. Waseem Afzal of Tehsil Chak Jhumra Chak No.156RB, District Faisalabad.

Mr. Waseem, while expressing his views indicated that:

"The entire land was waterlogged & marginal-saline and it was not possible for me to grow crops on this land as the watertable was just below 2 feet from the surface, with soil ECe and pH ranging from 2.5 to 4 μS/cm and 7.9 to 8.7, respectively. Furrow/ flood irrigation further enhanced intensity of the issue. Fourth drainage project was launched by the Government of Pakistan, two decades ago but the area could not get rid of twin menace of water-logging and salinity due to ill-functioning of the system. About four years ago, the OFWM staff approached me and motivated to install drip irrigation system on 15 acres for raising vegetables."

Mr. Waseem Afzal is now a well-known, successful and progressive farmer of the area. He is growing almost all high value crops like cucumber, capsicum with drip irrigation in high tunnels, besides growing of potatoes, peas and carrots. He proudly says that:

"The water table was dropped to 5 feet within 6 months after irrigating the land with drip irrigation. Having impressed by the benefits, he brought 45 acres under drip irrigation with subsidy and remaining 30 acres with 100% payment on his own resources. He is fully satisfied with lush green landscape, uniform and healthy stand of all crops, grown with drip irrigation at his farm. He stated that better seed germination, uniform crop stand, and effective fertilizer use have been noted as hallmarks of drip irrigation technology since all the nutrients are directly applied within the plant root zone."

Mr. Waseem was well aware that furrow/flood irrigation can add more water to his already water-logged soil. Drip irrigation system was a real salvation and an answer to his problem and there is no comparison of growing crops with and without drip irrigation as there was almost no agriculture on his land before installation of this system.

While narrating his experience of growing crops with drip irrigation, he added that:

"Plants grow healthier due to better aeration and nutrition of soil. After installing drip irrigation system, I was not only become able to cultivate all of my land but also enjoyed reduced water and fertilizer consumption. The labor workload was reduced since there was no need to dig irrigation ditches and do hoeing. I also noticed that crops are not prone to fungal diseases under drip irrigation because water is directly delivered to the roots and the leaves and stems are not in contact with water. A lot of employment opportunities have also been provided in the area from increased farm production and profitability."

Success story of Mr. Waseem Afzal is a heartening example. He and his farm manager are now ambassador farmers of OFWM, in the area. They motivate the other farmers of area by narrating their story of adopting drip irrigation technology and its benefits.