

USAID project for drip irrigation and awareness programs brings about long term irrigation solutions to Jordan's most fertile but drought struck region

Challenges:

The *Ghor*, or the Jordan Rift Valley has a year-round growing season and extremely fertile soil, constituting 15% of Jordan's total cultivated area. About 70% of Jordan's total production of fruits and vegetables is from the *Ghor*, which makes this valley Jordan's food bowl.

People started to plant crops in the *Ghor* about 10,000 years ago. Villages were built, water-harnessing schemes were implemented, and as far back as about 3000 BCE, produce from the valley has been exported to neighboring regions. However, climate change and acute water shortages in the region are threatening the *Ghor's* viability as a farming center and the welfare of its residents.



Because of the acute water shortages facing Jordan, the Government is pumping less water to farms in favor of domestic use, with water shortage forecast until 2020. Farmers are looking for ways to make the scarce water go further.

Citrus and fruit trees in the area have shown alarming signs of stress from the lack of irrigation and high temperatures. Some of the larger farms had sprinkler and spray irrigation systems installed but their relative efficiency to high cost and wastage of water made them ineffective.

The local consulting firm installing the irrigation system at one of the pilot farms. Photo: Hassan Ayoub

Initiatives:

USAID's Economic Development Program (SABEQ) launched a two fold project – the first to install highly effective drip irrigation systems and the second to conduct awareness workshops that would respond to the fact that while each drop of water counts, management of the operation is just as vital.

The Program contracted a locally experienced firm in providing and installing drip irrigation systems. North Shouneh Association members were invited to participate in the project on shared cost basis with the aim of widening the base of beneficiaries. Expected duration of the project was set at three months, during which installation of the irrigation systems will be completed, capacity programs will be conducted to farmers, and awareness programs and lectures will be offered to ensure their understanding of efficient water irrigation, fertilization, how loss of water occurs, and pest control.



Ahmad Masaadeh briefing the USAID Jordan Mission Director Jay Knott on trees showing healthier trees. Photo: Hassan Ayoub

Results:

Farmers confirmed that water loss has been improved from 20 to 45%, fertilizer usage was reduced by 20 to 35%, tree and plant stress remarkably reduced. Figures showed that overall efficiencies have been improved by 90%,

"Improvement has been remarkable. With the same level of water allocation, I am able to water the trees, and plant vegetables between them. When you drive between farms in this heat you notice the difference," Said Ahmad Masaadeh, a farmer and owner of a citrus farm of 26 dunums (6.5 acres) in North Shouneh. *"I feel I am in control over ensuring each drop goes to the trees and none is wasted."*

The benefits of the new technique extended beyond the pilot of 15 farmers, to over 100 farmers in the region. *"Farmers learnt the real meaning of efficient irrigation systems', how to use fertilizers, how to eliminate waste and pest management,"* said Kifah Bani Hani, farmer and owner of one of the pilot farms. *"When an effective irrigation system is harnessed by an informed farmer, the results are beyond expectations."*