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Developing approaches to enhance farmer water management skills in Balochistan, Punjab and Sindh in Pakistan

Overview

Irrigation is critical to Pakistan's food security, poverty reduction and economic development, yet irrigation profitability in Pakistan is amongst the lowest in the world.

This project aims to develop and scale out tools and approaches for increasing farmers' irrigation management skills on small- and middle-sized irrigated farms.

There are strong links between irrigation, crop productivity and poverty alleviation. The use of conventional irrigation methods and poor agronomic practices often leads to overuse of water with farmers believe that using more water on their crops will result in higher yields. Farmers with small to medium holdings have had little access to technologies for irrigation, as affordable and accessible tools are neither produced nor widely distributed in Pakistan. Several studies have found improved irrigation profitability through improved irrigation systems and management practices.

The main extension challenge is how to scale out existing and new technologies over the vast irrigated areas of Pakistan and the development of skills and capacity among farmers to manage and maintain profitable irrigation systems.

Extension approaches to farming in Pakistan occur in two ways: the traditional top-down, expert-to-farmer approach; and the interactive Farmer Field School (FFS) approach. FFS programs are used to transfer specialist knowledge, promote skills and empower

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Start date and duration	December 2016 4 years
Location	Pakistan
Budget	\$2,275,000
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farmers. To date water and irrigation management has not been a specific focus of either extension services or FFS.

Research

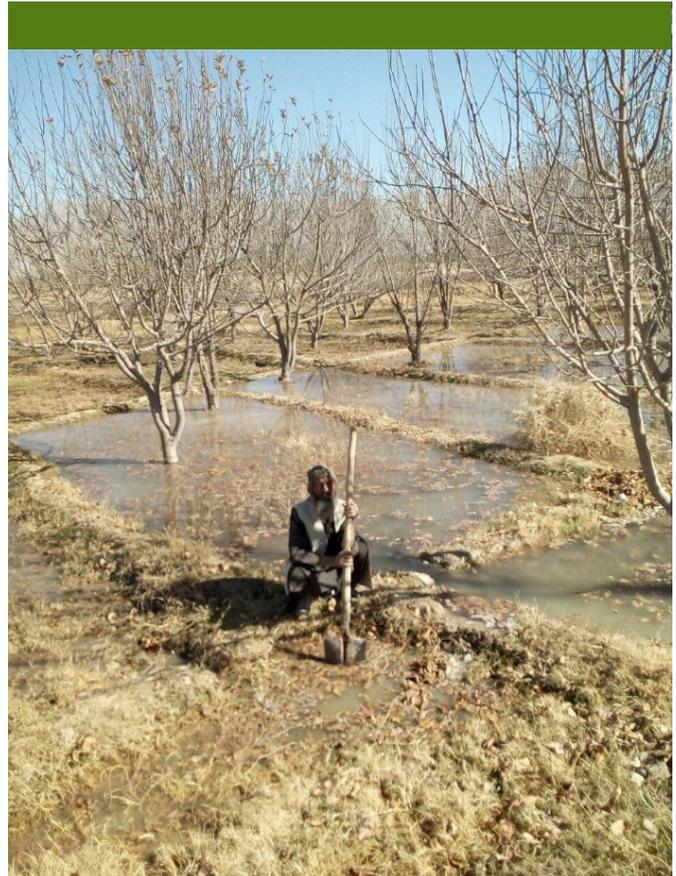
The objectives are to:

1. Determine the successful elements of existing on-farm irrigation water management initiatives and farmer training models in Pakistan (10%)
2. Develop and test farmer tools for on-farm soil water, nutrient-monitoring and supply chains, together with a system for collecting and collating the data for collaborative, problem-based learning (35%)
3. Develop and test effective, efficient and scalable approaches to improving farmers' irrigation water and nutrient management skills (35%)
4. Identify the effects of improving farmers' irrigation skills on irrigation profitability, labour, water and energy efficiency and social capital of farming households (20%)

Achievements

Preliminary research into current water and irrigation management practices, current farmer in field practices and farmer extension services has been conducted.

Focus groups have been held with a variety of key stakeholders including water professionals, extension agents, agriculture service providers and NGOs working in the ecology and environmental space.



This image demonstrates the lot of the small farmer in Balochistan and how farms are currently irrigated.