Participatory Water Management in a Tank Command Area: A Case Study from India

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Abstract

Indian Agricultural Extension has been modeled on the Training & Visit (T&V) system that follows a top-down approach. It is transitioning towards the bottom-up approach. The Andhra Pradesh Water Management (APWAM) project of the Acharya N. G. Ranga Agricultural University in India adopted a bottom-up approach in reducing water conveyance losses and thereby increasing the Water Use Efficiency (WUE) in the farmers’ fields of a tank command area.

The purpose of this poster is to present the experiences of APWAM project that undertook construction of water diversion structures and lining of irrigation channels to a length of 950 m in a tank command area with the participation and support from the local community. The poster will present information to support the success of the participatory approach taken to construct the diversion structures and lining the irrigation channels.

Methodology

A tank command area of 466 acres was selected as the pilot area where the project implemented various interventions with participation of the farmers; the construction of diversion structures and lining of irrigation channels being a couple examples. The predominant crops grown in the project area are rice and groundnut. Educational workshops were conducted to educate farmers about the importance of their participation in these two interventions. The members of the Water Users Association (WUA) of the village were entrusted with the responsibility of undertaking these works. Overall, the farmers contributed 10% of the construction costs.
The construction of the diversion structure and lining of irrigation channels were taken up in the summers of 2005 and 2006. The two years of experience indicates that farmers were taking more care in cleaning the channels and in proper protection of the irrigation channels. The water conveyance losses were reduced and the WUE was increased in the crops as the lining of the channels reduced water logging in the fields, and the field to field water flow facilitated a good crop stand and yield in rice. Because of these tangible benefits the farmers were approaching the project personnel for activities of this kind.

The success of these interventions shows the usefulness of a participatory approach in implementing interventions in farmers’ fields. It is recommended that future research projects and extension activities of universities adopt this approach. The experience gained in this project suggests that involving the local community in planning and implementing agricultural technologies will contribute to effective extension work. Also, a participatory approach will help identify the talents in the farmers that can be harnessed for implementing future educational and transfer of technology efforts by extension. Also, the participatory approach builds a sense of ownership in the farmers. The concept of participatory management is equally applicable to the technology transfer activities outside of agriculture, also.

**Keywords:** Participatory management, Tank command, Farmers, Surface irrigation, Water conveyance losses