Participatory Water Management in Rice Crop: A Case Study From India

Vikram Koundinya
Ph.D Candidate
206 C Curtiss Hall
Department of Agricultural Education and Studies
Iowa State University of Science and Technology
Ames, IA – 50011
Phone: (515)294-4875
Fax: (515)294-0530
E-mail: vikram@iastate.edu

Dr. Ch. Sreenivas
Scientist (Soil Science)
Andhra Pradesh Water Management Project
The Netherlands Assisted FAO Project
Krishi Vigyan Kendra
Undi
West Godavari District
India

Abstract

Indian Agricultural Extension system has been modeled on the Training & Visit (T&V) system that follows a top-down approach. The Indian agricultural extension system is moving toward the bottom-up approach. Andhra Pradesh Water Management Project (APWMP) of the Acharya N. G. Ranga Agricultural University in India adopted a bottom-up approach in implementing technologies in the farmers’ fields. It is a The Netherlands assisted FAO project.

The purpose of this poster is to present the experiences of APWMP project that implemented an agricultural technology in farmers’ fields with the participation and support from local community. The poster will present information to support for the success of the implemented technology in the fields. The objectives of this project are to improve the Water Use Efficiency of crops, crop yields, and soil fertility levels by empowering farmers through a participatory approach.

Ninety acres of rice fields were selected as the project area where a Sub Surface Drainage (SSD) system was installed. Participatory Rural Appraisal techniques were employed in assessing and prioritizing farmers’ needs. The soil and water analyses conducted by the project indicated that soil salinity and water logging were the primary causes for declining crop yields. Farmers also expressed the same. A series of workshops were conducted to educate farmers about the importance, care and maintenance of the SSD system. Farmers agreed to contribute 10% of the installation costs of the SSD. The SSD was installed in 45 acres of the fields (pilot area) and the next 45 acres served as the control area.

The SSD system was installed in the summer of 2005. The preliminary results after the installation showed increased rice yields and Water Use Efficiency, and decreased soil and water salinity in the pilot area compared to the control area. It was also found that farmers were
approaching the project staff for more of such activities. Data are being collected after every crop season and the impact will be known once the project ends.

The success of this project shows the usefulness of a participatory approach in implementing agricultural technologies. It is recommended that future research projects and extension activities of universities adopt this approach. The experiences gained in this project suggest that involving the local community and taking their inputs in planning and implementing the 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.

**Key Words:** Participatory management, Farmers, Sub Surface Drainage system, Soil salinity, Rice crop