

# **FARMERS PARTICIPATORY ACTION RESEARCH**

## **PROGRAMME (FPARP)**

### **Executive Summary**

#### **Introduction:**

MOWR, Govt. of India initiated Farmers Participatory Action Research Programme for implementation through generating synergy among the water crop, agronomy practices, macro and micro nutrients in soils, appropriate implement and best harvesting technology, etc. The programme was proposed to be implemented in 5000 villages of the country through the involvement of identified Agricultural Universities / WALMIs / other R&D Institutions dealing with water conservation and management.

WALMI, Aurangabad was identified for implementation of FPARP and assigned to conduct 50 numbers of the demonstration in the command of different irrigation project of Maharashtra. FPARP was planned and implemented on five different Irrigation Projects of **Maharashtra viz. Jayakwadi, Mula, Neera, Waghad and Nalganga**. Farmers Training Programmes were also organized on these projects for water literacy and improved crop-water management practices.

#### **Objectives:**

- 1) Demonstration of Improved Irrigation Practices, and
- 2) Water Literacy and Training to the Farmers

#### **Study Area:**

The Farmers Participatory Action Research Programme (FPARP) was implemented in 5 districts of Maharashtra State viz; Aurangabad, Ahemadnagar, Pune, Nashik and Buldana in the command area of 5 different Irrigation projects. This study has conducted in different agro-climatic zones comprising the river basins of Godavari, Bhima and Tapi (Purna).

#### **Pre-Launching Workshop:**

One day pre-project launching workshop was arranged at WALMI, Aurangabad on 30 October 2007. 10 participants from each selected project were invited from the command of above mentioned five irrigation projects to attend the workshop. The pre-project launching workshop was found to be very fruitful in developing clarity and transparency about implementation of FPARP with active participation of farmers and concern officials of selected projects. Selected WALMI Publications were given to all the participants as a course material at the time of registration. Also the printed pamphlets specially designed for FPARP on improved irrigation methods were also provided to the farmers.

### **Water Masters Training:**

As proposed during launching workshop, Water Masters training programme was organized in WALMI, Aurangabad from 10 to 12 September, 2008 i.e. in Kharif 2008. Programme was organized for the selected farmers from the demonstration area to develop them as a water masters, so that they can guide to the demonstration farmers about irrigation and water management and also to all others who wants to adopt this technology. It also helps in promoting water literacy and extension of technical knowledge.

### **Role of Farmers in FPARP:**

The farmers were involved actively in the demonstration plots by giving them technical know how about the cultivation of crops with emphasis on improved irrigation methods. All the inputs for demonstration plots were provided by the farmers themselves to full extent. The role of selected farmer thus became the role of trainer/demonstrator for communicating the recommended practices to other farmers in their vicinity. The selected farmers have played a very important role in the Farmers Participatory Action Research Programme for the demonstrations and trainings conducted during three crop seasons viz., Rabi 2007-08, Kharif 2008 and Rabi 2008-09. They acted as:

1. A facilitator and demonstrator during the field visit to demonstration plots and themselves explained the visitors about package of practices and irrigation method they had followed in this programme.
2. A trainer in the farmers training programme by sharing their experiences regarding improved technology with the participated farmers.
3. An extension worker organized the demonstrations and also narrated their experiences in detail and motivated the farmers to adopt the improved irrigation and crop management practices.
4. A catalyst between WALMI and farmers of the project area in implementation of FPARP.

### **Farmers Training and Field Demonstrations:**

When the Rabi crops on demonstration were ready to harvest, one day training programme of farmers selected from different WUA's from nearby villages were organized at all five irrigation projects. The concerned officers of Water Resources Department were also invited for the one day training programme. All the farmers were invited through the concerned officers of Irrigation Sub-division by issuing a letters to the WUA's from WALMI, Aurangabad. The lectures were organized on farmer's participation in water management, irrigation methods and crop practices by the various faculty members of WALMI, Aurangabad, which were also

perceived to be practically very useful by the farmers. Among the previous practices and FPARP trials it is found that crop production and water saving is increased with increase (in some cases) in small input cost under FPARP trials. The results of these trials are highly appreciated by the farmers.

During the programme, farmers who have conducted the trials, also narrated their experiences in detail and appealed the farmers to cultivate crops as per recommendations of WALMI, Aurangabad. The queries of farmers regarding crop and water management practices were discussed during the programme and satisfied by the faculty members from WALMI and gave them an appropriate knowledge to solve their problems.

Field visit to demonstration plots was organized and the farmers who conducted the demonstration trials on their fields themselves explained the visitors about package of practices and irrigation method they had followed. Most of the farmers expressed their interest for the participation in the FPARP and to adopt these technologies on large scale in future. Throughout the whole programme (i.e. from October 2007 to March 2009) training and demonstration were given to total 3457 farmers from 251 villages of the above five districts.

#### **Transfer of Improved Technology and Impact of FPARP:**

The demonstrations of the trials were arranged to the farmers of the nearby villages with the different locations to demonstrate impact of improved irrigation practices on the farmers fields in terms of water saving and increase in the yield through a farmers training programme. The basic objectives of these farmers training programmes were to explain the various improved irrigation practices viz., Border, Straight furrow, Broad base furrow, Sprinkler, Drip etc. conducted in the farmer's field. Also to motivate the farmers to transfer this improved technology to the maximum number of farmers in the nearby villages, so that it will helps in saving of irrigation water, to increase the irrigation efficiency, project efficiency and to increase the production.

#### **Impact:**

The results obtained through the demonstration trials in the farmer's fields are clearly indicates the improvement in the yield with water savings at all the locations. It is clear that from the results there is a significant and positive impact of these demonstrations by the adoption of improved technology and helps in changing of farmer's attitude about traditional irrigation methods. The results are demonstrated and explained to the farmer groups participated in the farmers training programme along with demonstrations. Most of the farmers expressed their desire for adopting improved irrigation practices in their fields to increase their yield and savings in water.

### **Constraints of Participating Farmers:**

1. Most of farmers not having the good economical conditions and sufficient land holding to purchase the equipments, machineries, Drip and Sprinkler sets which is used for the application of irrigation by improved method.
2. At most of the places the canal water is not reaching at right time and of right quantity and also not getting the required depth due to limited rotations.
3. Lack of in time availability of fertilizers and pesticides to farmers at remote locations.
4. Due to the load shading electricity supply is not available for required time.
5. Due to less rainfall ground water table is found to be very low in the scarcity zone.
6. Most of the farmers can't use the improved technology due to lack of the technical knowledge.
7. Lack of marketing facilities and market price discourages the farmers in adoption of new technology.

### **Conclusion and Suggestions:**

1. One of the important lesson learned from FPARP conducted by WALMI, Aurangabad is that if the technical knowledge regarding crop management practices along with improved irrigation methods are given to the farmers at right time will definitely improve the crop productivity.
2. The demonstration plots taken under FPARP acts as a source of inspiration for the farmers to adopt improved technology.
3. It is observed during the demonstration that a financial condition of farmers is a major constraint in timely purchase the required amount of inputs. The adoption of Drip or Sprinkler irrigation requires an external financial assistance to the weaker layer of farmers for wider use of these modern water saving devices.