An Effort to Institutionalize Farmers Research Group (FRG) Through Approach Training for Researchers in Oromia National Regional State: An Experience of Adami Tulu Agricultural Research Center

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Abstract: Based on the achievements of its previous project between 2004 and 2009, “Project for Enhancing development and dissemination of Agricultural Innovations through farmers group FRGs (FRG II)” was implemented from 2010 to 2015. The main objective of the project was to institutionalize the Farmer Research Group (FRG) approach in the national agricultural research system. Adami Tulu Agricultural Research Center was mandated to host trainings on the FRG approach for researchers under Oromia Agricultural Research Institute and agricultural faculties of the universities in Oromia Regional State. Accordingly, trainings were given on various topics related to the approach for more than 70 researchers from 16 research centers and 7 universities in three phases (three times). The methods used in the training were practical experience presentation (sharing), presentations by the trainees, Visit and practice with FRG farmers and Group works on training topics. Evaluation of the training by the participants after sessions show that they understood principles and practices of the FRG approach, use the approach for future research activities, can also be resource person to train other researchers and can modify the guideline based on their situations. Challenges during the application of the approach under the practical farmers’ situation were discussed and experiences were shared on how to overcome or minimize the problems encountered.

Keywords: Farmers Research Group (FRG), Training, Adami Tulu Agricultural Research Center.
1. INTRODUCTION

Agricultural research has evolved through different approaches to improve quality and efficiency of technology generation and adoption by the end users to bring about food security and economic development to Ethiopia, where its population has been rapidly increasing. Based on the nature and methods, research can be divided into conventional and participatory researches. The participatory research is a type of research where different stakeholders take part in its process from problem identification through the stages of research activities. Adami Tulu Agricultural Research Center, established in 1968, is located in the mid rift valley of Ethiopia about 170km south of Addis Ababa at 7° 9' N Latitude and 38° 7' E Longitude with the altitude of 1650 msl. The Climatic condition of the area is hot and dry with Annual average (?) minimum and max temp 24.2 & 30.5°c, Annual average (?) min temp 10.4 & 16.8°c respectively and Average Annual RF 700mm/Yr. The center has a total area of 1100ha where 870ha is allocated for range land; 329ha is used for research facilities including 99ha for Boer goat researches.

The center conducts research organized under four research processes namely Livestock, Natural Resources, Crop and Socioeconomics Research. Multi-disciplinary team approach in collaboration and partnership with different stakeholders is encouraged. The stakeholders and collaborators include Regional and National Research centers, International Research organizations and project donors such as JICA, ICRISAT, ASARECA, World Bank, CYMMIT etc., NGOs, higher learning Institutions, Agri. Development Offices and administrations at different levels, Farmers and private sectors.

FRG approach is a research approach whereby multidisciplinary team of researchers, extension workers, group of farmers and other pertinent actors jointly conduct research on farmers’ field on selected topics based on farmers’ needs (Bedru et al. 2009). It is a development oriented participatory action research approach. The “Guideline To Participatory Agricultural Research Through Farmers Research Group for Agricultural Researchers” was developed during the previous project and FRG II was implemented between 2010-2015 for institutionalizing the approach in the Ethiopian agricultural research system. One of the methods used for the institutionalization was to establish training hubs for the approach. As Adami Tulu Agricultural Research Center was a implementing center during the previous project, the center was selected as one of the six training hubs with the objective to give training on FRG approach for developing the capacity of researchers in Oromia Regional State to conduct participatory researches.

Expected outputs of the training were that researchers will:

a. understand the principles and steps of FRG approach
b. make use of FRG approach for their research activities
c. be resource persons to train other researchers on FRG approach
d. develop their own FRG guidelines
2. TRAINING METHODS

Adami Tulu Agricultural Research Center (ATARC) was given with a responsibility to provide FRG approach trainings for sixteen agricultural research centers and seven universities across Oromia to their researchers. The institutions were grouped into two groups and given the training in 3 Phases: basic, practical and compile progress. During the training session, there is experience presentation by the participants, Presentation on concepts of FRG research principles, key issues to conduct FRG research activities effectively and efficiently, visit to FRG farmers and group work. Prior to the FRG approach training at the center, Trainings of Trainers were organized at the Ethiopian Institute of Agricultural research (EIAR) by the JICA Team to develop training plan. ATARC has successfully completed its mission by training 74 researchers from 17 agricultural research centers and 7 universities across Oromia regional state, Ethiopia.

2.1 Description of the training phases

The training phases of basic, practical and compile progress have had duration of four, two and two days respectively. In each phase, different topics were covered.

A. Basic Training (4 days)
   - Principles of FRG approach
   - Visit to FRG farmers
   - Practical experience presentations by ATARC researchers
   - Model FRG based research proposal presentations
   - Group work to develop FRG based research proposals and presentations

B. Practical Training (2 days)
   - Experience presentations of participatory research by each invited institutions
   - Visit to and experience sharing with FRG farmers on work done on their farm
• Extension materials development for different target groups

C. Compile Progress (2 days)
• FRG Activity experience presentations by one of the participants
• Identification of challenges and solutions in FRG based research activities
• How to involve female household members in FRG based research activities
• Discussion on demonstration, promotion, on-station research, and participatory research
  Gender sensitization and workshop with farmers

Figure 2: Flow of the training on FRG approach at ATARC (2011-2014)

3. EVALUATION OF THE TRAINING BY THE TRAINEES

In the FRG approach training, theoretical and practical sessions were given and overall training program was evaluated by the participants to understand how much the training was effective in delivering the required knowledge and skills so that further improvements can be made based on the feedback. At the end of each phases of the training, evaluation sheets were filled by participant about their learning experiences. The following figure (figure 2) shows some points identified by the participants at the end of the first phase training. According to the responses, 75% of the participants have answered as they have understood the concept and actual implementation of FRG approach comparing before taking the training. The training was also found to be helping in building confidence of conducting FRG based research activities and in conducting the same content of training to other researchers.

Knowledge training on principles, methods and approaches, Skill based on how to develop competent FRG based research proposal, Motivation visits to the practical FRG research sites and discussion with farmers and experience sharing.
Similar evaluations were also carried out for other two phases. Some of the questions for the evaluation were: Was the presentation on “How to involve female household members and other household members” clear to you? Are the differences among demonstration, on-farm trial, and participatory research clear to you? Was the presentation on the Gender sensitization workshop clear? Are you ready to conduct Gender sensitization workshop to the farmers? Are you confident to train your colleagues so that they become capable of conducting Gender sensitization workshop to the farmers? More than ninety eight percent of the participants were confident and had clear understanding of the topics. They responded that they can give similar trainings to the farmers and their colleagues. Their responses to the questions used to measure the level of their understanding are summarized below in the table below.

Table 3: Responses of the trainees to the questions to evaluate their level of understanding.

<table>
<thead>
<tr>
<th>1) What is the difference between participatory research and promotion/ scaling up/ demonstration, on-farm trial and participatory research?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Promotion/ scaling up/ demonstration</strong></td>
</tr>
<tr>
<td>- Technology dissemination to wide areas</td>
</tr>
<tr>
<td>- To introduce new innovations or technology by comparing with usual practices</td>
</tr>
<tr>
<td>- Transferring new innovations to farmers</td>
</tr>
<tr>
<td>- Scaling up of proven technologies to farmers by advertising or displaying proven technologies</td>
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<tr>
<td>- Showing new technology to the end users/stakeholders by comparing with the existing ones</td>
</tr>
<tr>
<td>- Displaying successful research outputs to stakeholders to facilitate adoption and technology transfer</td>
</tr>
<tr>
<td><strong>Scaling up</strong> - promoting proven technologies through vast area (region, zone)</td>
</tr>
<tr>
<td>- Is validating technologies, seeking advice from farmers</td>
</tr>
<tr>
<td>- Dissemination of research technologies</td>
</tr>
</tbody>
</table>
addresses wider areas  
- promotion of technologies after technologies are approved  
  popularizing the demonstrated and verified technologies

**Promotion:**
- is a type of advertising a certain technology  
- Announcing/advertising or promoting through different  
  media (radio, Television, pamphlet)

**Demonstration:**
- a type of experiment conducted on farmers’ field for  
  validating/evaluating the technology  
- displaying by comparison of the existing with the new one  
- displaying of result/method of technology/idea

<table>
<thead>
<tr>
<th>On-farm trial</th>
<th>Performance evaluation of different technologies on farmers field</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>Conducting research on farmers field</td>
</tr>
<tr>
<td>-</td>
<td>Is conducting an experiment in a controlled environment to get</td>
</tr>
<tr>
<td></td>
<td>new technology</td>
</tr>
<tr>
<td>-</td>
<td>Researchers controlled research activity which is not participatory</td>
</tr>
<tr>
<td>-</td>
<td>Adapting/checking/testing new technologies</td>
</tr>
<tr>
<td>-</td>
<td>Carrying out research to create new technologies</td>
</tr>
<tr>
<td>-</td>
<td>Experiment undertaken on farmers field which is managed by</td>
</tr>
<tr>
<td></td>
<td>researchers and farmers</td>
</tr>
<tr>
<td>-</td>
<td>Research on the field of farmers</td>
</tr>
<tr>
<td>-</td>
<td>Research activity that participate farmers on their own</td>
</tr>
<tr>
<td></td>
<td>field/animals</td>
</tr>
<tr>
<td>-</td>
<td>conducting research on farmers land /contracted land</td>
</tr>
<tr>
<td>-</td>
<td>activity conducted outside on-station</td>
</tr>
<tr>
<td>-</td>
<td>A trial that is done on farmers field (contractual based)</td>
</tr>
<tr>
<td>-</td>
<td>Conducted by researchers on small plots at specific area</td>
</tr>
<tr>
<td>-</td>
<td>A biophysical research which can be participatory or not</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Participatory research</th>
<th>A type of research which participate different stakeholders</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>Involvement of farmers with the researchers to generate</td>
</tr>
<tr>
<td></td>
<td>appropriate technology</td>
</tr>
<tr>
<td>-</td>
<td>Research that can be done by participating farmers and researchers</td>
</tr>
<tr>
<td>-</td>
<td>Conducting experiments in a multidisciplinary team and farmers</td>
</tr>
<tr>
<td>-</td>
<td>A research type that is multidisciplinary and farmers participate on it</td>
</tr>
<tr>
<td>-</td>
<td>A research activity that is jointly controlled and incorporates the idea of farmers mostly</td>
</tr>
<tr>
<td>-</td>
<td>Experiment done with multidisciplinary approach with different concerning stakeholders including farmers</td>
</tr>
<tr>
<td>-</td>
<td>Is carrying out research by participating all stakeholders</td>
</tr>
<tr>
<td>-</td>
<td>Type of research which participate the community starting from the planning, in the monitoring , evaluation up to reporting</td>
</tr>
<tr>
<td>-</td>
<td>A research which is conducted by involvement of farmers</td>
</tr>
<tr>
<td>-</td>
<td>Showing the performance of new technology</td>
</tr>
<tr>
<td>-</td>
<td>A research activity that involve farmers/ stakeholders from the</td>
</tr>
<tr>
<td></td>
<td>design to evaluation</td>
</tr>
<tr>
<td>-</td>
<td>A research which involve farmers and other stakeholders in its the every stage</td>
</tr>
</tbody>
</table>
- A type of research where researchers, farmers, development agents and other stakeholders participate in different stages of the research process
- A type of research which include the farmers participation
- A type of research involving all actors in all activities of the research
- Is an activity (trial) that all stakeholders equally participate

2) *What can you actually do to let or involve female farmers (including wives) in your participatory research activities?*

- By giving chance for them to participate
- Empowering females by encouraging them to participate in research activities
- Advise them to involve in participatory research
- Giving chance to participate in participatory research activities
- Awareness creation through trainings
- Trying to minimize their workload as a result of the cultural division of labor
- Awareness creation/ gender sensitization workshop on both male and female groups
- Selecting appropriate technologies for females which reduce
- Coordinate meeting for both husband and wife so that the husband can understand what the wives are going to do in the research process
- Include the gender role in my research objective
- Bring both female and male together and aware about the agenda
- Inviting husband and wife for joint action planning
- Involve them on the very important stage of the research such as problem identification, prioritization, and implementation
- Create awareness to improve their participation
- Empowering females in necessary aspects
- Introducing the necessity of the research
- Designing female based research activities
- Identify their roles
- Treat and inform them all the necessary information about the research system appropriately
- Training them, providing technologies so that they can benefited from technologies
- Identifying gender division of labor to understand who has workload and involving women to the right work on the right time
- Create awareness as much as possible

3) *What have you learned from the farmers you visited today?*

- Female farmers are working on both productive and reproductive works while males are involved on productive activities
- Females work on average 18hrs a day while men work for around 13hrs
- I learnt females work more than males and there is a workload on them
- The male farmers are aware of gender inequality and female farmers have equal right on property
- Farmers understand the disparity between male and females but are influenced by their culture
- The actual division of labor, access and control over resources and roles and responsibilities of men and women in the community
- The farmers we visited are transparent than from other areas
- With proper procedure, farmers attitude can be changed towards expected positive change
- As there is workload on female farmers on both peak and slack seasons.
- As there is no equality on work load and as resource control is dominated by males
- Farmers are motivated and eager, as well as honest to give information
- Farmers awareness about gender inequality
- The easy and simple tools to conduct gender sensitization workshop and to collect gender disaggregated data
- Transparency of farmers
- How to document and aware the difference between male and female in agricultural activity
- The workload among male and female is different, as well as their access and control over resources favors men

### 4) What are the things you have to be careful upon conducting daily activity calendar exercise?
- Respect the culture of the society
- Let females work their group work freely by separating them from males
- Subdividing the time into working hours
- The active working hours for women is more than men and women also participate in farm activities
- The reality of working hours and the activities done through those working hours
- Men and female have to do the calendar independently
- Not to exaggerate the activity of one sex over the other, not to create conflict
- Identify peak and slack seasons
- At the end trying to minimize the workload on women by sharing common activities
- Inviting both male and female during design of our projects
- Range of time and the types of works conducted in those times
- Time to conduct such exercises should be on the free time of farmers
- Let farmers explore the reality

### 5) What are the things you have to be careful upon conducting control and access over resources exercise?
- Don’t make the group emotional and feel one is benefited and the other is not
- Knowing the things to be accessed, by whom it is accessed as well as who has control over resource
- Resource is more controlled by males, trying to participate females is important
- Giving chance to all participant farmers
- In detailing all the resources
- Listing the resources a family owns and allowing them to clearly mark who can access and who can control those resources
- On getting female’s idea because they accept the control and access over resources as a natural gift for males
- Listing the major resources carefully by identifying from reproductive activity
- We have to identify all the resources that are owned by household to differentiate the access and control among men and women
- Type of resources and its allocation (in the house and on farm)
- Giving the right recommendation after conducting access and control over resources

### 6) What are the things you have to be careful upon conducting division of labor exercise?
- Try to respect the culture and show them how to break the taboos
- Not to make people emotional
- Division of labor depend on activities each household performs
- Giving chance to male and females equally
- It is different from place to place, zone to zone, region to region
- List down the activities clearly by the two parties
- Avoid conflict between male and females
- Aware about the cultural taboos that make female’s participation passive
- Aware the community about the labor division
- Show the tangible activities that they undertake
- Let the farmers evaluate their calendar and make conclusion
- Identify the productive, reproductive and community management roles
- Planning, listing the roles of men and women equally
- Culture of the society
- Language
- Time

7) Any other comments
- Really it is good experience sharing discussion
- Shortage of time to exhaustively discuss on each topics
- The training is important, participatory and practical
- I want to appreciate the session because it is practical and participatory
- Gender sensitization training was interesting. It introduced me with good tools to get original data
- I will be happy if such trainings are facilitated in the future
- Easy way of practicing / exercising to list and document gender analysis

3.1 Lessons learned by training participants
a. Ability to organize trainings for different stake holders
b. Experience in multidisciplinary research work
c. Usefulness of documentation and keeping it
d. The need of focusing and commitment to achieve stated objectives
e. The need for capacity building for effective and efficient delivery of out puts.

3.2 Challenges in practicing FRG approach
a. Lack of experience in multidisciplinary research
b. Lack of enough technological options
c. Inadequate involvement of extension workers and other stake holders to the expected level
d. Extension Workers turnover
e. Farmers’ expectations (Looking for an immediate benefits)
f. Farmers’ dependency syndrome (seeking inputs for free)

4. CONCLUSION

ATARC has successfully completed its mission by training 74 researchers from 17 agricultural research centers and 7 universities across Oromia regional state, Ethiopia. It was expected that each participant would participate in all the three phases but in some cases this was not successful due to staff turnover.

The center has benefited in both human and logistic capacity building. The training programme has helped in communicating the major principles, practices and issues related to FRG approach and share the experience of ATARC to other researchers in the region.

The training was also helpful in learning from each other by discussing challenges and suggested solutions in the process of applying FRG approach. Furthermore, from the evaluation of the participants, it can also be understood that the training contributed in improving their understanding about the practical issues concerning FRG approach.
5. ACKNOWLEDGEMENT
The FRG Team at Adami Tulu Agricultural Research Center acknowledges all the technical, logistical and financial support from JICA - Ethiopia through FRG projects. The team is also thankful to all stakeholders which either directly or indirectly contributed for the success of the training program.

6. REFERENCE