

# *Participatory Research: A Tool for Generating Acceptable Technologies for Women Farmers*

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## **ABSTRACT**

Participatory Research is a process of collaborative learning undertaken jointly by professional researchers and local community members, leveraging the stakeholders' respective strengths and skills to develop solutions that are scientifically valid and, most importantly, imbued with local wisdom and cultural context. For instance, in traditional sectarian society like ours, if all women get a chance of self-introduction in a group of village women club, it will help them to see the similarities in their situation. This act of introduction, a very small act in itself, has tremendous effect on their confidence and creates familiarity among themselves. Assembly of the group and discussion on certain problems will lead to collective and systematic analysis of the situation. This paper reflects the Participatory Research (PR) process at conceptual level with the help of two structural diagrams which motivates to strengthen the existing experimental capacity of women farmers and to encourage continuation of the innovations process under local control.

## **INTRODUCTION**

**T**he rural areas are critical to the life of all people. Most of the Earth's natural resources are in rural areas. It would

be a mistake to assume that the only purpose for rural development is for the poor women farmers and disadvantaged people who have

been left behind in a rapid advance towards a technological world of assumption. These rural areas which are so critical to people are inhabited by most of the world's population. Because of lack of appropriate technology and in many cases because of the application of inappropriate technology; life is neither comfortable nor it makes efficient use of local resources. Use of local forest wood for fuel, loss of grains through improper storage and suffering of people due to polluted drinking water are some of the examples.

Only fulfilling the basic needs by providing food, clothing and shelter is not the solution to the problem, but the mechanism by which basic needs are met may promote a dynamic development of the process. At every step of the development, the user's participation is of much more importance than the product or process put to use. Local participation is not the only new criteria by which rural development in general and agricultural development in particular needs to be judged. It is equally important that problem be approached holistically taking into account the full range of human and community potentials (Hare *et al.*, 2003).

### Participatory Research (PR)

Participatory Research is "a systematic process of involvement of people for the analysis of their own situation and finding out solution for improving their present condition". Therefore, Participatory Research implies the process of combining local farmer's knowledge and skills with those of external agents to develop location-specific and socio-economically adoptable farming technologies (Pattanaik, 2002). It seeks to strengthen the existing experimental capacity of women farmers and to encourage continuation of the innovations process under local control. It can be grouped into two parts:

- (A) **Explorative Research (ER):** Is an effort to introduce innovation not known to social system.
- (B) **Ameliorative Research (AR):** It emphasizes in the improvement of what people are doing (at present). It is an effort to make the good better (Compatible).

### Characteristics of Participatory Research

Like the hard-pan is soil tilth, our social system is full of traditions impermeable for modernization. To break this tradition and bring improvement in the condition with the help and participation of the people may be the primary function of PR. For example, in traditional sectarian society like ours, if all women get a chance of self-introduction in a group of village women club, it will help them to see the similarities in their situation (Anayanwu, 1988). This act of introduction, a very small act in itself, has tremendous effect on their confidence and creates familiarity among themselves. Assembly of the group and discussion on certain problems will lead to collective and systematic analysis of the situation. Participatory Research may be characterized as follows:

1. An activity carried out by group of people to understand their own situation for their own benefit.
2. It is a collective effort to bring desirable results taking into consideration the various aspects of problem in a collective manner.
3. It is an analysis that leads to action.
4. Understanding of personal realities and larger social realities: It will facilitate awareness raising about the connections between micro-aspects of their life and the real macro-aspects of society at large.
5. It is the involvement of both the women farmers and extension agents in decision-making, development, ownership and

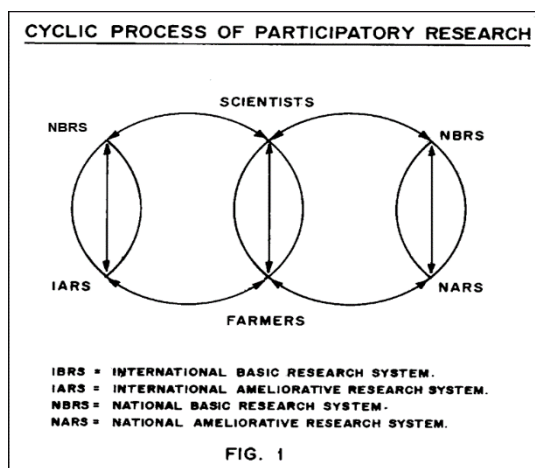
control of programmes, products and process.

Participatory Research emphasizes that the application of research and its transfer should begin and end with the participants and involve interdisciplinary team-work in all phases of continuous research/diffusion process (Giri, 2002)

The success of Participatory Research lies if team members of different disciplines function as equal partners with joint responsibility for the final outcome of the research. It is a series of goals at achieving acceptable solutions to participant's problems which are linked in circular form by a number of activities (Mishra and Dhaka, 2001)

### Cyclic Process of Participatory Research

Participatory Research is a cyclic process starting from grass-root level women farmers (practitioners) to international level scientists. In this process, all those are involved, who equally participate in making the programme executing and getting benefit out of it. It is a group activity as depicted in Figure 1.



The diagram shows an integrated system where each sector relates to the other and can influence them in turn. To be most effective, each element of the system needs to be responsive to the others. It is timely to remind ourselves that any social system cannot work successfully in isolation from other part of the

system. If at certain level something is inadequate or obscure or delayed by maladministration or any other reason, additional help may be procured from the other level for the welfare of the society (Lilja et. al. 2004).

The model comes together at the point of intersection and shows that the demand for participation will affect the support required and delivery system will be conditioned by the materials provided and so on. The limitation of the present model may be the least participation of Practitioners in various systems. There is need to consider the importance of Participatory Research at various levels of society. So far, it has remained confined to isolated efforts. The UN sponsored institutions, based on crop or live-stock research do have made some attempts in this direction. However, we need to break the compartment in institutional and non-institutional efforts and involve the ultimate users in the process. It will save us from costly mistakes and enhance the process of dissemination in the communities and sharpen the facets of efforts also.

Following are the various steps in conducting a Participatory Research:

#### 1. To Know the Problem

All the members of the group should first agree on a common statement of a problem, for example, low income, indebtedness, pest incidence, irrigation facility, unavailability of inputs etc. by appropriately linking farmer's indigenous knowledge with the formal (modern) knowledge system. The problem should be stated clearly and concretely.

#### 2. Solution is Needed or Not?

Sometimes it happens that we have the problems but we are not interested in its solution at a time. We do not make any

effort for its solution. This may happen in two situations.

- (a) When we know that solution is within our control and it can be solved at any time, or
- (b) When the problem is beyond our control and we think that it is wastage of resources and time because we cannot solve it.

Therefore, the group should express interest in solving the problem.

### **3. To Know the Present Status and Additional Information Needed for the Problem to be Tackled**

All previous information (history) known to the group should be recorded about the problem. For example, if the problem is 'incidence of pests', then they can each describe the damage pattern, crop growth and pest intensity interaction, weather condition, in which variety damage is more, and how they were tackling the incidence in past etc. from their past experiences. This helps in focusing on the problem in a concrete way.

After articulating and recording the thing known about the problem, one can begin to identify what is more they need to know about the problem. Taking into consideration the same example of pest incidence, the group may need to know how many acres of land have been affected by the pests, why the incidence occurs, what are the ways to prevent the incidence etc.

### **4. The Ways of Collection of Additional Information**

This involves the steps of data collection. How to get the information, whose assistance is needed, who will do what and up to what time the information will be available.

### **5. Analyzing the Available Information**

Having obtained the information the group collectively analyses that information. It is important to note that analysis and reflection is undertaken as collective process, not to be done by one person alone. This will help the group to understand the group, the possible causes and provide clues for solutions.

### **6. What Actions are Needed for Possible Solutions**

Various solutions to the problem are sorted out, their work ability is assessed and the choice of solution is made. Then, for solving the problem a decision has to be made that what actions are to be taken, by whom, when, where and how. After this, actions are taken.

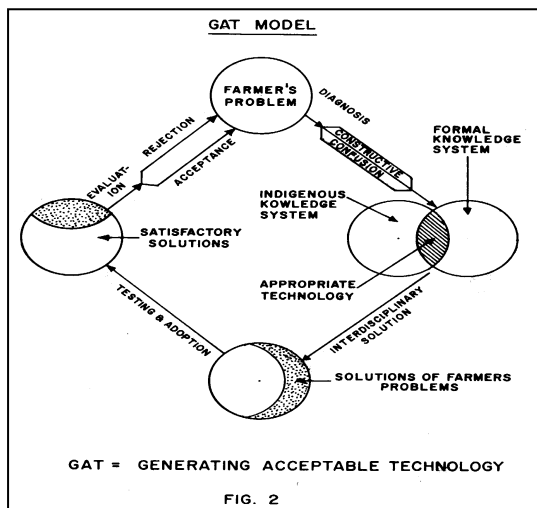
### **7. Review of the Actions**

Systematic assessment of the impact of the actions taken should be made to see if the problem is fully or partially solved. The actions taken may sometimes create new problems. For example, if in a community there is need for safe drinking water and tap water is provided to solve this problem, this solution of problem may create another problem of drainage in the lanes (which used to be otherwise dry). Now, a group exercise will be needed to work out agreed solution for creating a drainage system in the community.

### **Generating Acceptable Technology (GAT Model)**

The Figure 2 emphasizes the involvement of interdisciplinary teamwork in all phases of ongoing research and its transfer for the use of practitioners (women farmers) at the grass root level. It is based on the assumption that the outcome of research should be applied and transfer should begin and end with the farmer's community. For official utilization of

available resources a proper assessment of problem is essential. Through a process of interdisciplinary dialogue and interaction in the form of debate and constructive conflict, the different facets of problems are brought together to arrive at a common definition (Lewis, 2006). After this step, an attempt should be made by the team to develop potential solutions of the problem and proceed for testing and adaptations. In cooperation with the women farmers, potential solutions are evolved and compared with existing practices. The women farmers make a final decision after evaluation of technology under their own situation, using their own resources and management. The scientists monitor the technology time to time to determine how it is beneficial for participants and consumers.



For the best use of available resources, proper diagnosis of the problem is most important step. It may require the help of research scientists to make in-depth observation. At this stage some constructive suggestions may come but at the same time statements creating confusion may emerge which might jeopardize the depth and importance of the problem for the time being. The next step becomes very important to sort out the common problems of the women farmers for which solutions are to be evolved. In the process of defining the common problem, interdisciplinary dialogue and interaction, generally initiated by debate, taking into

consideration the socio-technical perspectives together, constructive suggestions are noted.

In this stage, the farming community may put forth some solutions by itself that should also be thoroughly examined and if only improvement in the same is needed the possibility should be worked out. The research team should make all efforts to evolve some potential solution of the problems. It should be tested in the community situation for adoption. When the solutions are worked out, it should be finally evaluated by the scientist in cooperation with women farmers under the existing resources and management. Even at this stage the community may accept or reject the technology. If rejected, it gives further path for research to find out the reasons of rejections and may find ways to improve the performance and acceptability of the technology. If accepted. The scientists monitor time to time to determine how it is beneficial to other communities.

### CONCLUSION

This paper highlights the various dimensions of use of Participatory Research (PR) in the technology development process for women farmers. The above discussion establishes that Participatory Research must integrate the traditional practices and improved technology without disturbing the production situation and the on-farm researchable problems must be identified based on the consensus and priority. Understanding, sharing, and offering approaches as opposed to avoiding, monopolizing, disregarding, and extracting approaches will be the keys to the success of PR. The agricultural extension system has encountered many difficulties in various ways. It is no longer able to meet all of the diverse needs of farming systems that are becoming more and more diversified (Singh & Dubey, 2021). To properly handle the recently emerging difficulties, the extension service delivery machinery needs to be



strengthened. In one hand, there is a need to extensively adopt the market-led models, and on the other hand farmer led innovations are to be further promoted. The documentation of effective extension practices from around the nation, the globe at large, and developing countries specifically is necessary for their use in the national context.

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