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PRA and its role in reorienting IGFRI's research agenda

By NAGARATNA BIRADAR and CR RAMESH

Introduction

The importance of livestock in Indian agriculture is well recognised. However, the low productivity of livestock is a matter of great concern, which is mainly due to the poor quality and insufficient quantities of fodder and feed resources. The fodder production in the country is not sufficient to meet the requirements of the livestock population, and also the forages so produced are poor in quality. The Indian Grassland and Fodder Research Institute (IGFRI), Jhansi has been involved in addressing this fodder deficit since its inception, through research on fodder and forage production. IGFRI and its three regional research stations at Dharwar in Karnataka, Avikanagar in Rajasthan, and Palampur in Himachal Pradesh have been investing enormous amounts of scientific manpower and economic resources for more than 25 years, on fodder and forage production research. In spite of large investments of human and financial resources, there was a general failure to serve the majority of the farmers, especially smallholder farmers in rain fed areas. This posed a serious challenge for IGFRI - to reorient its research to address the practical needs of its 'clients', the farmers. Hence, rethinking the research and development process became crucial for IGFRI.

This paper documents the outcome of IGFRI's experience in reorienting its technology development process, as seen by the authors. In three sections, the paper deals with IGFRI's research before the experience with Participatory Rural Appraisal (PRA), why PRA was introduced and the period of building PRA skills in IGFRI, and lastly, IGFRI's research after PRA.

IGFRI's research before PRA

Like any other Indian Council of Agricultural Research (ICAR) institute, IGFRI's research initially concentrated on developing discipline-based specialised technologies. The various divisions, organised according to discipline, e.g. plant breeding, agronomy, soil science, economics, extension, plant pathology etc. were conducting research only on issues relevant to their field. There was no mechanism for coordinating research between these divisions; hence, there was no sharing of information. This resulted in long lists of technologies, with each addressing one side of the problem only. As a result it was proving difficult to address the problems, which were often complicated. The watertight discipline-oriented research approach of IGFRI and technologies developed thereafter did not garner popularity among the farming community. A few technologies meant for irrigated areas gained currency, as farmers with irrigation can usually bear the risk associated with any technology. The most important shortcomings identified during a client orientation workshop at IGFRI in 1997 were:

- inadequate identification of clients' needs and inadequate participation in order to identify the needs;
- the predominance of researchers' criteria in identifying research priorities and limited awareness that farmers' criteria may be entirely different;
- inadequate linkages with development agencies whose activities include a livestock component;
- the need for patience in soliciting farmers' needs, given their limited ability to articulate them;
- weak linkages among the different disciplines at IGFRI; and
- limited search for feedback from farmers by scientists.

The awareness that there had been a poor adoption of technologies paved the way for IGFRI to look back on its technology development processes, and to analyse and identify ways to improve them. Simultaneously, there was growing feeling among the scientific community that the situation at farmer field level differs from that at the research level, and this was a decisive factor for technologies not being used by or benefiting the clients. There was a need for stronger 'bottom up' planning processes, for stronger links with development agencies capable of identifying their clients' needs and implementing technologies on a large scale, and to seek fuller feedback on technologies that were being tried out.

One of the main objectives of the Indo-UK collaborative project on Forage Production, operational since April 1994, is to benefit the farmers in rain fed areas through IGFRI's technologies. It was clear that to achieve this objective, the participation of farmers from the initial stages of technology development was essential. This would ensure adequate specification of the socio-economic and biophysical conditions of the intended clients at the research design stage. However the concept of involving farmers in the research process was new for the IGFRI scientists who were used to conventional methods of research. It required changing the mindset and attitudes of scientists and encouraging new perspectives on the problem identification and technology development process. IGFRI started looking into alternative methods for technology development that could increase the relevance of research. Analysis of the research and development needs of farmers calls for methods that are quick, powerful, cheap, insightful and multidisciplinary in nature. The strengths of PRA were perceived by IGFRI and it was felt to be a suitable answer to the shortcomings of the technology development process. The decision was then taken to train IGFRI scientists in PRA under the Indo-UK collaborative project, and IGFRI became the first ICAR institute to take the unusual initiative of involving farmers in the research process.

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Building PRA skills

Why PRA for fodder technologies?

The majority of IGFRI technologies are identified as 'off the shelf', with potential for uptake mainly in rain fed areas. These fall into two groups: those intended for small farmers and those intended for rangeland. These two groups of technologies demand PRA for effective dissemination and uptake, because of certain unique factors associated with the fodder.

A major problem for the small farmers is the lack of irrigation facilities, making it difficult to grow fodder in the lean periods. A more generic difficulty is that farmers operating under these difficult conditions invariably give primary attention to food crops on available arable land. In most cases they face acute fodder shortages in summer. The quality of fodder they feed to their livestock is also extremely poor.

Almost without exception, the technologies recommended for rangeland require collective action from the community to be successful. Hence the common property management regime is an essential component of a healthy fodder situation. Typically, this occurs in watershed and wasteland rehabilitation efforts that run on participatory concepts. So, to mobilise the community to introduce and sustain fodder technologies on common land, PRA becomes very useful.

In total, 45 scientists at IGFRI have been trained intensively on aspects of PRA in small groups of five or six. The training was organised by two pioneering organisations in PRA – KRIBHCO (Krishik Bharati Cooperation), Dahood and AKRSP (Aga Khan Rural Support Programme, Ahmedabad, India). A few scientists have also been trained in focused PRA and Participatory Plant Breeding (PPB) methods.

I (Nagaratna Biradar) had participated in one of the PRA training sessions. Some observations about how it had been perceived by my fellow scientists participants are mentioned here:

- initially some scientists could not see the usefulness of PRA and were critical of it. Used to conventional research

methods, they were looking for large amounts of quantifiable data;
• once the practical exercise of PRA in villages began, the amount and quality of the information from farmers helped them appreciate the merits of PRA;
• the flexibility of PRA tools and the scope for creativity and triangulation impressed scientists during the training.

Some participants' experiences described in their training reports are given below. They illustrate the perceptions held by various scientists at IGFRI, of the usefulness of PRA in research.

Agricultural Extension Scientist:

Earlier demonstrations were conducted without considering the farmers' preferences. Technology was imposed on farmers and our aim was to prove the superiority of a variety or technology over the existing one and popularise it. But, from PRA training I learnt that farmers are the best decision-makers to evaluate and select the technologies. So, farmers' voices will be given priority in my work from now onwards.

PRA training helped me to realise that women and men view the technology differently and their choice of technology is related to their daily farm and household activities. Ensuring women's participation is essential for the sustainability of the technology.

Animal nutrition scientist

Farmers' knowledge about locally grown grasses and fodder in terms of their contribution to milk yield, energy, seasonal availability, bulkiness etc. is very thought provoking and useful. It helps me to plan my research work according to characteristics that farmers expect in grass and fodder crops.

Soil scientist

Farmers could very well reveal their hidden knowledge about soils, their types, reclamation of soils etc. Also their knowledge about depth of ground water flow and the direction it flows. This rich knowledge helps me to plan my work with the farmers in order to conserve soil and water.

PRA training created a snowball effect on the perceived importance of PRA techniques, further leading to changes in the technology development process of IGFRI.

IGFRI's research after PRA

Some prominent changes observed in the institute's work were:

Mechanisms to integrate PRA in IGFRI's research

Substantial experience gained in PRA among IGFRI staff was consolidated, and then included in various activities at the institute, especially project preparation and during the stages of obtaining feedback on clients' responses to the technologies offered.

A PRA cell comprising of more experienced scientists with substantial PRA experience has been established with a mandate for providing support and guidance to other scientists using PRA. It will provide comments on any research proposal containing an element of participation prior to formal submission, and liaise with groups of scientists undertaking new client oriented initiatives such as participatory varietal selection.

Multidisciplinary research

There is currently much enthusiasm at IGFRI for multidisciplinary teamwork. Various multidisciplinary teams are now effectively operating in the institute on various aspects. The defined discipline research boundaries have been broken, and active interaction between scientists of different divisions has become routine. Shared responsibilities and information have also resulted from this positive development.

Links with development organisations

Direct contact between scientists and the end users of technology (i.e. farmers) has been well established, by using PRA to identify their needs and develop or adapt the technology. Such interaction is conducted on an ongoing basis. Also, to scale up the adoption of technologies, IGFRI started working with NGO's like BAIF Development Research Foundation in Dharwar. Effective links with watershed or wasteland rehabilitation agencies are also well established.

Task driven research

Some tasks have been identified through PRA, and task driven research, conducted 'on farm' and functioning in a participatory mode, has been underway since 1997. Two important large-scale projects in farmers' fields have been initiated under Indo-UK collaborative projects. These are 'Appropriate systems for producing fodder on bunds in rain fed areas in Jhansi and Dharwar' and 'Forage seed production in smallholder farming systems'. The results of these two projects are highly encouraging. The number of farmers participating in the seed project exceeded 300.

Other outcomes seen in IGFRI research work due to PRA are:
• bottom-up needs assessment and research planning for the end-user;

• stronger multidisciplinary input into the preparation of projects and programmes, including microeconomic planning;
• the use of PRA techniques for group discussions with development agencies;
• stronger interaction between research staff and farmers during training courses, fairs, field days and exhibitions; and
• the search for better feedback on IGFRI technologies at all levels.

PRA has brought tremendous positive changes in IGFRI's research approach.

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