

# Learning to communicate on farmers' terms

Over the past decade, Bangladesh has achieved considerable increases in rice production enabling this densely populated country to become self sufficient in this food staple. Agricultural research has played a role in this achievement and, as a consequence, research to ensure sustained increases in productivity of food staple crops still predominates. Implicit in this emphasis is the assumption that increased productivity of commodity crops will lead to the improved economic well-being of those who depend on agriculture for their livelihood.

## A MORE COMPLEX PICTURE

Whilst this research is important, it is not clear that it does enable farmers and landless workers to improve their livelihoods. They perceive a more complex picture not just of low yield but also low and unfair prices, high input costs and a lack of organic manures resulting from pressures on feed supplies and animal ownership. They are aware that they lack knowledge of new technologies but they perceive lucrative markets for alternative crops and are interested to assess new varieties and new techniques. If farmers are to improve their livelihoods they need better access to information. This means exploring more effective ways in which extension, research and other service providers can interact with farmers so they can begin to respond to the opportunities they perceive.

## CHANGING THE SYSTEM

The livelihoods of those who depend on natural resources have many elements. The concept of Integrated Crop Management (ICM) is seen as one way of capturing this

broader dimension in farming and moving beyond the idea of commodity based productivity. ICM is a whole farm approach providing a basis for efficient and profitable production that is economically viable and environmentally responsible. It can be achieved through a combination of crop rotation, use of organic residues, fertilisers and crop protection chemicals, integration of livestock, cultivation choice, variety selection and improved energy efficiency, together with a positive management plan for environmental issues.



Although the underlying principles of ICM are well established, as far as resource-poor farmers in developing countries are concerned, this definition is incomplete. It must include access to

information in forms from which poor farmers can benefit. Adding communication to ICM means recognising that the current pathways of delivering scientific research to farmers via extension is not working well. A more collaborative approach is needed that draws on the potential contributions of all stakeholders and recognises the synergies between their perceptions, skills and capabilities. Farmers need to be able to bring their views to bear on how agricultural research supports rural livelihood systems and on how extension staff work with rural people.

## IS ICM HAPPENING IN BANGLADESH?

Broader and more integrated approaches have been promoted in Bangladesh for at least five years as part of a reaction to the agriculturally

biased approach to flood control in the country. But just how extensively ICM is promoted and practised by farmers is not known.

Asking the farmers



Groups of farmers and landless workers were asked to explore their agricultural enterprises using Scored Causal Diagrams. They first identified a common

end problem of 'low income from rice production' from which came their perceptions of the causes. Low prices for rice and high input costs were high on the agenda and blamed mainly on the inefficiencies and corruption of marketing channels. Lack of storage on the farm also meant that buyers, not farmers, determined the price. Low yield was also a factor and this was attributed to low soil fertility as a result of excessive use of inorganic fertiliser and a lack of organic fertiliser. This in turn was linked to the decline in cattle numbers, associated with farm mechanisation and more intensive land use for cropping.

Farmers were clearly aware of the complexity of factors that affect their livelihoods. A poor quality diet was blamed on the reduced animal population and also on reduced fish stocks in rice fields resulting from the high levels of pesticides and fertilisers in the water. This led to poor health that affected their ability to work.

Interestingly, all the groups were well aware of the benefits of 'modern' technology but recognised they needed more information to make use of it. They knew, for example, that improving fertility and pest management could increase yields but they did not know how to use inorganic fertiliser properly.

Asking the extension workers

Representatives of 22 organisations, responsible for delivering information and agricultural support, were brought together to share ideas on how their programmes might support the integrated nature of agricultural enterprises and to discuss ways in which farmers, researchers and intermediaries can interact. It was clear from these discussions that most intermediaries now follow a farming systems approach and recognise the need for systems thinking in agricultural extension and technology development. However, they agreed that their general strategy in the past was to ignore the individual nature of farming livelihoods and to treat farmers as homogeneous groups from the point of view of communicating agricultural knowledge.

There was frustration that a large body of available technical research was not reaching farmers. Whilst programmes were in place to try to achieve this, analysis of the technologies from the national research institutes suggested that predominantly the technologies and research findings were judged by scientists rather than farmers, to be appropriate for dissemination. There was little evidence that technologies were validated by farmers.

Asking the scientists

A literature review confirmed the rather narrow nature of research in agriculture. Most scientific studies were targeted on crop management and increasing yield rather than the wider issue of how these farming activities impact on livelihoods. Problems were also apparent with data obtained from research stations where conditions differ from those on farmers' land. Even on-farm research excluded farmers from its management and so ignored the long standing recognition that farmers are active experimenters and have much to offer in terms of farming practice.

## ICM IS HAPPENING BUT...

Evidence suggests that elements of ICM are happening in Bangladesh. Farmers recognise the interaction of farming activities with their livelihood-related outcomes. Intermediaries are promoting more integrated farm management systems such as fish-rice systems, crop rotations and the incorporation of livestock in ways that are beneficial to farmland and crops.

Priority setting in research and extension is still in the hands of the professionals but they realise that farmers must become part of this process and there are signs that they are beginning to base their planning on an assessment of farmers' priorities and needs. This development has also shown the importance of communication and information exchange, rather than a simpler concept of delivery of technical information. Agricultural research findings must feed into the knowledge base on which farmers make their livelihood-related decisions. This is even more important as agriculture in Bangladesh continues to shift from subsistence farming to production for sale and the range of agricultural products diversifies.

A key question is whether significant institutional changes will be needed to support the changes in the way that scientists and extension staff work with farmers. Taking a more integrated approach also has cost implications and it needs to be demonstrated that the benefits outweigh any additional costs.

## WHAT NEXT?

This study has highlighted the need for new communication tools that can help to improve farmers' knowledge and aid their decision making in such things as assessing trade offs between rice and vegetable production, use of land for cropping or fish farming and whether or not to invest labour

in a particular soil management practice such as compost application.

A clear need was identified for more innovative approaches and tools for enabling information exchange centred around ICM. Under a new project, some communication tools and processes are being developed and tested in collaboration with farmers and some key service providers in extension and research. An additional asset is that NRSP has links with a regional agricultural research network which can ensure that the findings are regularly communicated in South Asia by the project's own local partners.

## R7600 An assessment of strategies for integrated crop management

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