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Family Approach in Extension

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SUMMARY

Rice cultivation in Bangladesh is a family activity as all household members contribute to it and have a say in decision-making. Therefore it is imperative to consider families as rice producing units rather than categorically divide training into gender-specific domains. The Agricultural Advisory Society (AAS), a small national non-government organisation, compared the impact of training either a whole family (with children), half a family (husband and wife), or husband and wife individually. Training husband and wife together gave equally good results compared to the whole family approach. Including women in training enhanced learning within the family and community overall, but particularly for insect and disease management. The latter seemed to be the most difficult topic to teach. Women, when interviewed separately, encouraged the project to give them more training, as men are often busy working the land. Women are eager to learn about all agricultural topics, not just post-harvest.

ACTORS AND NETWORKS

We are often told that Bangladesh is a resource-poor country that is over-endowed with people and under-endowed with the resources to feed them all. But as executive director of AAS, I do not accept this. AAS has, from its earliest days, approached the challenges of agricultural development in Bangladesh from the perspective that Bangladesh, after all, is a rich country, blessed with abundant agricultural resources. We believe that Bangladesh's poverty is simply a reflection of its lack of capacity to effectively manage its rich endowment of resources. Accordingly, AAS has focused its energy on helping Bangladesh's farmers to become more productive in the context of their rich land, small plots, labour resources and abundant supplies of fresh water. AAS has developed a network of more than 150 non-government organisations (NGOs) and community-based organisations and is working hand in hand with them in sustainable agriculture and extension.

From January 2003 to June 2004, we implemented a project on family training in three districts of Rajshahi division: Sirajganj, Pabna and Natore, in partnership with the NGOs Women Development Project, Pabna Protisruti and Lustre.

EVOLUTION OF THE METHOD

Traditionally, the Department of Agricultural Extension (DAE) targets mainly male farmers. Although in Bangladesh men are mostly engaged in transplanting and field work, while women play a major role in post-harvest, this does not imply that training should be restricted to these areas and players. Because all immediate family members participate in rice farming and are affected by decisions and results, it is important to understand the role of women in using and disseminating improved rice knowledge.

Families have their own ways of allocating household labour, so it is essential to show respect for the family's internal dynamics by training households as rice producing units rather than dividing training into stereotyped gender-specific segments.

Providing training to women creates a window of opportunity

The idea to test the family approach in extension arose when research in Bangladesh by the International Maize and Wheat Improvement Center (CIMMYT) found higher adoption rates of wheat technologies when all family members were trained together (Meisner, 1998; Meisner *et al*., 2003). We assumed the same would be true for rice technology, since the tasks of rice cultivation and wheat cultivation, in many ways, are pretty similar.

TESTING THE FAMILY APPROACH IN EXTENSION

With financial support from the DFID-funded Poverty

Elimination Through Rice Research Assistance project (PETRRA), we compared the impact of training a whole family versus half a family (both husband and wife), husband alone, and wife alone.

Setting the frame

To test the approaches, we selected 12 villages, four from each district. In each district, one village was selected for studying a particular approach, so that each approach had three replicates. We identified 25 families in each village with the help of our partner organisations. Families needed to have less than 0.4 ha of land and three to eight months of rice provisioning ability.

Where older children were in school and therefore unable to participate in the training, those families were classified under the half family group.

Roadmap for research

In each village we then organised a meeting to discuss with participants about the project's purpose and strategy. At the end of the meeting, groups were formed to make implementing the research activities easier.

At first, we conducted a benchmark survey with selected research farmers and non-research farmers. Forty farmers joined in group discussions in each of the villages. A simple semi-structured questionnaire was used to gather information on farmers' knowledge of rice, crop and pest management, post-harvest, and quality seed technology. Finding out what people know laid the basis for developing our training curriculum and impact assessment.

Needs-based training

For two rice seasons, we taught farmers mainly in those areas where they needed improvement. Trained female field staff of our partner organisations and a female agronomist from AAS conducted the sessions, sometimes assisted by a male colleague.

From the various projects we implemented, we learnt that male trainers alone are unacceptable to women, whereas female trainers are accepted by men and women alike.

The training module, contents, materials and schedule were not imposed, but negotiated between the farmers and trainers. The courses covered basic knowledge on rice plant, rice cultivation during *aman* (July - November) and

Rogueing involves the removing of different varieties or off-types in order to get higher seed purity. Although normally done by men, women need training on these and other field activities as their husbands may be doing off-farm jobs at crucial times in the season.

boro season (November - May), plant health management, post-harvest and modern rice seed production. Participants only received a light refreshment at Tk 15 (US$ 0.26) per head.

Monitoring

To assess the impact of the training, staff of AAS and its partner organisations held group discussions followed by individual field visits. A checklist was used to allow for comparisons between villages.

Impact

One and half years later, a two-week evaluation mission revealed that training half a family or a whole family had more advantages than the training of either spouse alone, particularly in gaining more knowledge, applying the new technologies, enhancing rice production, and influencing others within their community to adopt technologies. Differences between half family and whole family were negligible, so both can be termed as family approach.

For assessing changes in knowledge, we asked twenty eight questions to each group of farmers. The score for each extension approach was determined as the percentage of correct answers based on the averages of the three villages. Groups were also interviewed in a control village (Table 4.1).

Clearly people learnt a lot about agroecology, insect and disease management, and seed storage. Disease management scored lowest across groups indicating not only the complexity of the topic, but also the difficulty of teaching the topic. Lack of

Table 4.1 Knowledge after receiving training in various modules. Control group did not receive training. (Average percentage of correct answers.)

TRAINING MODULES	WHOLE FAMILY	HALF FAMILY[1]	MEN'S GROUP	WOMEN'S GROUP	CONTROL GROUP
Morphology	74	87	77	66	44
Agroecology	75	79	64	40	42
Seedling production	95	93	92	91	54
Intercultural operation[2]	98	99	92	93	89
Insect management	80	79	64	63	37
Disease management	56	48	35	27	17
Post-harvest	97	98	92	90	84
Seed and seed storage	73	90	79	51	40
Average	81	84	74	65	51

[1]Half family means husband and wife without children. [2]Weed, water and soil fertility management.

good diagnostic skills and advice on plant disease management at the community level is a global issue. We also recognised that our staff lacked these skills and to address this, we embarked on a new project with CABI Bioscience (www.globalplantclinic.org) in 2003.

That the women's group achieved relatively poor results on seed and seed storage came as a surprise. But in hindsight we learnt that some of the questions asked, such as 'what are the parts of a seed?' were not that relevant or important to change their seed storage practice. Table 4.2 indicates that groups where women were included stored their seed better than when men only were trained. But none of the farmers in any group applied all the new technologies that they learnt.

In all groups people learnt that putting sticks in their field attracts birds and helps them manage insect pests, free of charge. Some started using a sweep net and destroying egg masses of stem borers, which can be easily seen as brownish clusters on rice leaf blades.

What is important here is the concept of the family approach. Rice cultivation is entirely a family issue where all members make decisions together. This was confirmed during all focus group discussions. Yield increases of 20% and 27% were obtained when men only and husband and wife were trained, respectively. However, higher yields are only a portion of the measurement of technologies delivered and

Table 4.2 Percent of farmers adopting new rice technologies in their own fields. Control group did not receive training. (Average percentage of correct answers.)

NEW TECHNOLOGIES	WHOLE FAMILY	HALF FAMILY[1]	MEN'S GROUP	WOMEN'S GROUP	CONTROL GROUP
Modern rice variety	100	100	100	100	50
Seed bed preparation	80	86	87	75	0
Standard seed rate	69	67	75	33	0
Line sowing	52	57	72	67	25
Seedlings per hill	60	66	45	48	0
Balanced fertiliser	69	75	71	89	0
Insect management	67	71	65	56	0
Disease management	52	50	40	20	0
Water management	60	62	55	56	10
Quality rice seed	56	45	40	51	0
Rice seed storage	58	85	45	59	25
Average	66	69	63	59	10

[1]Half family means husband and wife without children.

"Whenever my wife has to attend a training, I look after our baby," says Bulbuli's husband. Since his wife joined the federation in 1991 (a community institution, see Chapter 20), their life has improved significantly.

implemented that can increase farm incomes.

Training either the men or women alone would be cheaper in the short run, because with the same budget the project could train more families. But in the long run, the family approach may be more cost-effective as better results are obtained, there are more family members trained, and this knowledge is better shared with other families in the community. When we asked a random sample of 15 non-participating farmers in the villages where families had been trained, all of them had heard about the training and applied several new technologies in their field, compared to only 87% and 67% in the villages where women only and men only were trained, respectively.

Besides, when both husband and wife were trained together, they gained more confidence as they applied the new knowledge in whole fields; when they were trained separately, they tried it out only in a portion of their field.

Difficulties, Risks and Assumptions

Children were occasionally distracting during training sessions, and either the husband or wife would then leave the session for a while in order not to disturb the group.

If possible, husbands should take training with their wives, and if they do not have older children or grandparents to tend the little ones, arrangements could be made for some community members to tend the small children during the event.

Overcoming social and cultural constraints for women's participation in training remains an issue in some areas, where villagers discourage women from leaving their homestead. Using women farmers as extension agents to train women's groups is one way to overcome this hurdle, as described in the previous chapter. Another way is to use video in women-to-women extension (see Chapters 5 and 7).

Scaling Up

Although funded by USAID for the past 5 years, currently the Wheat Research Centre of the Bangladesh Agriculture Research Institute (BARI) is using government funding for whole family training. Additionally, they began using this approach for maize cultivation in 2002 and have trained over 5,000 families. A number of other projects funded by USDA and the Asian Development Bank will train growers in

maize cultivation using the whole family approach. But also the World Fish Centre of Bangladesh is applying this approach for fish cultivation, using many of the key concepts illustrated by CIMMYT (Meisner *et al*., 2003).

Conclusion

The whole family training approach was developed by CIMMYT for disseminating post-harvest technologies on maize. AAS developed this concept further for rice and found that women should be given training on all aspects of farming, not just post-harvest. Even if women do not work in the fields, they have a voice in household decision-making, and they can convey new ideas to their husbands, who may miss training if they are busy with fieldwork. Including women in training on all agricultural topics enhances learning within the family and community, and should be encouraged by all means. The project also showed that it is not necessary to have the whole family involved; training husband and wife together gave equally good results as the whole family approach. It should be left to the household to decide how many additional members should attend.

References

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