

NATURAL RESOURCES SYSTEMS PROGRAMME
Project R 8083
Strengthened Rural Services for Improved Livelihoods in Bangladesh

FINAL TECHNICAL REPORT¹

Annex C.1

**Field Study of Rural Knowledge and Information Systems
in North-west Bangladesh**

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Acronyms

AEZ	Ago-Ecological Zone
BADC	Bangladesh Agricultural Development Corporation
BKB	Bangladesh Krishi Bank
BRAC	Bangladesh Rural Advancement Committee
BIRI	Bangladesh Rice Research Institute
BS	Block Supervisor (of DAE)
DAE	Department of Agricultural Extension
DFID	Department for International Development
EO	Extension Officer
FO	Field Officer
GB	Grameen Bank
GKF	Grameen Krishi Foundation
GoB	Government of Bangladesh
IRRI	International Rice Research Institute
KIS	Knowledge and Information System
NCDP	North West Crop Diversification Project
NGO	Non Governmental Organization
NRSP	Natural Resources Systems Program
PETARRA	Poverty Elimination Through Rice-Research Assistance
PLA	Participatory Learning and Action
PPS-BD	PRA Promoters' Society- Bangladesh
PRA	Participatory Reflection and Action
RDRS	Rangpur Dinajpur Rural Service
UP	Union Parishad
VDP	Village Defense Party

Summary

This is the report of a study of knowledge and information systems of poor farmers in the NW of Bangladesh carried out in January 2003, using a set of PRA methods adapted for the particular purpose. It is believed that the study has pioneered the use of PRA/PLA approach to exploring knowledge and information systems.

In all 32 groups were covered, totalling 546 people. 20 of the groups were existing RDRS groups (male and female), while 12 were non-RDRS ('control') groups (p. 2 tables 1, 2).

The hypothetical population for the study was the RDRS target population (i.e. households with not more than 1.5 acres of land). 82.3 percent of the people in the study fell into this category, with only 17.7. percent owning more than 1.5 acres). 21.1% of participants were landless. 46 % owned less than 0.5 acre (Table 5a, 5b). Because RDRS targets women groups, 14 of the RDRS groups were women's and 6 men's: of the control groups, 5 were women's and 7 men's.

As expected, the women's groups had lower levels of education than the men's with over 65% of participants of women's groups having no education, as against 38% for the men's groups. Members of RDRS women's groups showed a slightly higher level of literacy than the control, but whether this reflects the situation over all RDRS women participants is uncertain. (Tables 3, 4)

Well over 50% of respondents (including at least some participants in all of the 32 groups) gave their primary source of income as agriculture. Some 20% described their primary source of income as business, which *includes* day labouring at skilled trades (e.g. carpenters, masons, mechanics, tailors, welders, leather workers). (Unskilled) day labouring (including rickshaw/van drivers, plus stone collection by women in Panchagarh) was said to be their main livelihood source by some 15% of respondents. (Table 6).

During the initial planning of the study (May 2002 onwards) the intention was that the study should cover knowledge and information systems in general (i.e. covering all aspects of livelihood). Subsequently it was decided to focus on crop production, for several reasons (the PETRRA link, the NRSP funding, the predominance of agriculture in the livelihoods of the target population and RDRS's own focus on natural-resource-based livelihoods). This meant that the field teams had to direct or guide the groups towards a discussion on information related to crop production when some indicated they regard other topics of more concern to them (notably health) and would probably have chosen to discuss knowledge and information related to a different topic.

During the PRA, participants were therefore first asked to identify a crop-related **topic** and then identify – and rank - **themes** related to this topic about which they needed information. Rice predominated overwhelmingly among the topics chosen (20 of the 32 groups). 4 groups mentioned wheat (in Panchagarh and Thakurgaon), 2 groups potato (in Thakurgaon) and one group watermelon (also Thakurgaon) (Table 7).

Among the themes chosen by those selecting rice as a topic, seed was the most common closely followed by fertiliser. With respect to seed, respondents said they needed information on where to get good quality seed, what types of seed to use, how to identify good quality seed, and seed preservation techniques. With respect to fertiliser, the need was for information on how fertiliser should be used, price and adulteration (Table 9). More generally, respondents felt that much of the information to which they have access is incomplete or unclear. One reason for this is language – a problem which is said to apply not only to broadcast media but to printed media (posters etc.). Beyond this, institutional and structural constraints prevent people from using information which they do obtain (e.g. the opportunity to sell paddy at government price to the food department is frustrated by officials of the Department demanding bribes), while access to information is of course restricted for many simply by lack of money to (e.g.) travel to an Upazilla or District Centre or to attend events at which information would be exchanged, and by the lack of free time in which to do this.

In only 2 RDRS groups had more than 50% of members received information on particular themes, and in almost half the groups [9/19] it was 25% or less. In the control groups, more than half [7/12] showed 25% or less of participants received information. This points to a situation of information gap (Table 10).

In RDRS groups, RDRS field workers were said to be the main *source* of information, closely followed by 'other farmers'. In non-RDRS groups other farmers were most important. In RDRS groups, RDRS were also the *preferred* information source; control groups stated DAE as their preferred source (Table 11). Very few groups made positive comments about the Block Supervisors of the Department of Agricultural Extension (DAE). There was an indication that DAE as an information provider was not adequately responsive to the needs of the poor farmer because more involved with larger farmers.

With regard to information *channels* (which were not always clearly distinguished from information *sources*), respondents preferences were assessed through pairwise ranking. Face-to-face discussion (i.e. farmer to farmer) and field staff visit were the preferred channels. Radio is also important, but there were also some negative comments on radio: several groups commented that the language was difficult, and they lacked the facility for asking questions. TV was ranked quite highly; but discussion with respondents showed that they have limited access to TV (typically only a few households in a village have TV equipment and lack of electricity restricts the use of TV). (Tables 12 – 15)

Information about seed, fertilizer, insecticides and pesticides, technical knowledge and marketing are key needs identified by most of the groups visited. This was true of rice farmers as well as those interested in wheat, potato or vegetable cultivation. A majority of the respondents who were members of RDRS groups looked to RDRS to address most of their information needs.

Within individual groups, only a very small proportion had ever received information on the strands of a selected theme (e.g. seed) chosen for further discussion. In only 3 of the 32 groups was this proportion greater than 50%, and even then, only to a maximum of 67%. In 16 of the 32 groups, fewer than 25% of the group had ever received any information previously about the strands under discussion.

Concern was expressed on many occasions about information provided by dealers and seed companies. In many cases, seeds bought from dealers were found to be poor, while some groups commented on being sold adulterated fertiliser.

Women groups clearly had very little access to direct information from outside and had to depend on their husbands for receiving information. Those belonging to RDRS groups were a bit more fortunate in that they receive information also from RDRS staff.

In spite of this being the 'information era', the overall picture from the study is one of people largely dependent for information on face-to-face contact and facing quite serious gaps in access to information about topics which are important to their livelihood.

It is expected that these findings will contribute usefully to discussions in Phase 2 of the project: this aims to explore interventions that will strengthen mechanisms through which information is transacted, and thus to impact on the livelihoods of poor rural people in the project areas.

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1. Background

Under the DFID Natural Resources Systems Programme (NRSP), the UK Institute of Arable Crop Research (IACR) Rothamsted¹ implemented a project on the *Feasibility of Integrated Crop Management* (ICM) in Bangladesh (R7600). During its implementation the project identified the need for a decision-support system capable of strengthening farmers' access to information on ICM-related technologies. This then became a major component of the current project *Strengthened Rural Services for Improved Livelihoods in Bangladesh* (R8083).

One of R8083's outputs was to establish an understanding of instruments and mechanisms by which people obtain information from available sources, the perceptions that different client groups have of the quality of information itself and the reasons for choosing different information sources. To address this output, studies were undertaken at selected locations in the Northwest and North-East of Bangladesh, which form two of the three areas where the DFID/IRRI PETRRA (*Poverty Elimination Through Rice-Research Assistance*) project is operating. The initial expectation was that field work will also take place in the South West, but this work was later abandoned due to resource limitations.

This report relates to fieldwork carried out in the Northwest by members of the PRA Promoters' Society of Bangladesh (PPS-BD), with support from the major NGO and collaborating partner institution in the northwest i.e. the Rangpur-Dinajpur Rural Service (RDRS).

2. Methodology

2.1 Pre-fieldwork Activities

Short field visits were undertaken in April 2002 to three working areas of RDRS in the northwest to explore the feasibility of some common PRA tools for gathering information about information flows. A draft methodology for the fieldwork, based on conducting several participatory exercises, was developed and pre-tested in November 2002. Two members from the University of Reading and three members of PPS-BD were involved in discussing and documenting the planned field procedures and the de-briefing documents to be used for recording the findings from field activities in a systematic way after completion of each focus group discussion.

2.2 Field work

The main study took place in January-February 2003, and was based on group interactions structured around a set of activities using established PRA/PLA techniques, which the project team adapted for this purpose. An aim was to develop a method of recording knowledge and information systems (KIS) that went beyond a case-study approach – i.e. that could generate a series of comparable observations from which findings could be generalized (in this case to the RDRS target beneficiary population in NW Bangladesh).

Meetings were held with groups (32 in all) selected by the sampling process described below (section 2.3). Each meeting took 2-3 hours, and the number of participants was typically 16-17. A field sheet ('debriefing document') was devised to ensure that the same PRA exercises were carried out with all the groups in the same way, and to record the outputs (both the diagrams or charts drawn up in the groups and the discussion around these). A set of guidelines ('field manual') was also used by each of the teams in the field. A copy of the field manual is in Appendix 1a and a sample of a debriefing document in Appendix 1b.

The exercises used and their purposes are noted below:

¹ Since 2003 Rothamsted Research. Rothamsted Research is also lead institute for the present NRSP project (R8083)

PRA exercise	Purpose
1. Scored diagram	Identify main topic for group discussion (crop-focused) and all the information needs (themes) corresponding to this
2. Listing and scoring (by show of hands) using modified matrix	Rank score information needs (themes) according to importance, identify information gaps and sources
3. Flow chart	Identify information channels from sources to community to farmers
4. Pairwise ranking	Evaluation of information channels
5. Scoring using pocket chart	Evaluation of and preferences for information sources

Apart from the pocket chart, all the diagrams were drawn in marker pens on large sheets of brown paper; seeds were used for scoring in exercise 1, but for exercise 2 a show of hands was found to be much faster and equally effective.

The following comments are offered on the methodology, from the experience of the fieldwork in the NW:

1. *limitations of the group interview approach*: in the group interview it was not possible to discriminate between individual and group responses. However the groups were (inevitably) made up of some people who had made use of particular information providers or pieces of information and some who had not; responses therefore were almost certainly based on a mixture of real experience and expectation.

2. *heterogeneity of groups in terms of income and wealth*: members of the groups were found to vary somewhat in terms of income and wealth, as shown below (section 3, tables 5a, 5b). In that the study set out initially to target RDRS's target beneficiary population (see section 2.3 below) this was a reflection of variation within this population. However, it may be noted that

- (a) landless people made up only just over 20 percent of respondents,
- (b) over 17 percent of respondents had more land than the RDRS ceiling of 1.5 acres, and
- (c) the *relatively* better-off members of the groups were probably more articulate in the group discussions,

It could thus be argued that the groups were too heterogeneous to give a very focused picture of the information needs of poor rural people.

3. *use of the field sheet / debriefing document*: it was found in practice that use of the field sheet tended to inhibit the recording of general discussion around the topics covered by the various PRA exercises.

The issue at (1) was recognized during the pilot, and an attempt was made to ensure that exercise 6 (the ranking of information providers using a pocket chart) was carried out only by those who had accessed information from particular providers. This however proved rather cumbersome, time-consuming, and a bit damaging to the dynamic of the group interview.

The issue at (2) was raised by the project mid-term review. It was accepted that the extent to which the outputs the study relate to very poor people could have been given a sharper focus by application of more detailed indicators of income/wealth/well being, and restriction of the variability within groups.

The issue at (3) reflects the problem faced in any people-based research of achieving balance between, on the one hand, being able to leave the field with sheets ready for coding and analysis (as in a 'traditional' questionnaire) and, on the other, providing for the rich information which arises from open discussion and observation to be recorded (but which subsequently needs more processing).

In a parallel study in the North East, an attempt was made to remedy these problems (see report on the NE¹).

2.3 Sampling Methods

In anticipation of Phase 2 of project activities, which would involve RDRS trying out one or more new interventions to improve their information provision, it was decided that the survey sample would be based on RDRS's target population, i.e. those with no more than 1.5 acres of cultivable land. It was recognized that since it's the project's focus is on people as users of information for the purpose of making decisions about resource allocation, innovation and investment in crop production, and in particular integrated crop management, then it would focus on those with some land rather than the poorest people, who are very largely landless. Char lands in the far east of RDRS's working area were also excluded from the universe since the livelihoods of char dwellers are not mainly dependent upon crop based agriculture.

To maximize the chance of observing an impact with interventions put in place by RDRS in phase 2, it was decided to sample two recently formed (less than 1 year old) RDRS groups for every single control group. The aim was to select male groups as well as female groups according to this procedure from each of five purposively chosen upazilas (sub-districts) in the RDRS working area, thus giving a total of 30 groups. The purposive selection of upazilas ensured crop-based agriculture was a primary livelihood, provided a reasonable coverage of the north-west region, and represented the two major agro-ecological zones in the area. Within the chosen upazilas, unions were selected as randomly as possible, but ensuring they were non-neighbours and included newly formed RDRS groups. At the time of the fieldwork however, some changes were made because of practical difficulties encountered by the field team.

The selection of a group (RDRS or control) within a union was made after discussion with RDRS staff and visiting the village. Although 30 group discussions were initially expected, the team also felt a practical need to carry out two more participatory exercises, one with an Adibashi² female group and the other with a poor Hindu community, bringing the total number of discussion groups to 32.

Tables 1 and 2 show the distribution of the number of groups across the upazilas covered during fieldwork and the total number of people participating in the discussions. Appendix 1 shows further details.

With respect to the sampling procedures outlined above, it must be emphasized that there was no expectation that the results of this study would give a complete representation of information flows in the northwest. Firstly it is restricted to crop-based agricultural systems. Secondly the use of participatory methods as a tool to elicit an understanding of information flows means that the number of samples (focus group discussions) had to be limited to just 32 groups. This is quite a small sample size for reporting numerical summaries, particularly when the summaries are split by different factors such as whether or not the groups were RDRS members and their gender. However, the primary aim was to gain an *understanding* of information flows, and in this respect, the sampling procedures were reasonably adequate in capturing, within the available resources, some of the diversity amongst communities dependent on crop-based agriculture for their livelihoods.

Table 1. Distribution of groups across upazilas by gender and whether in RDRS working area

Zone	Upazila	Number of participating groups				Total
		RDRS Male	RDRS Female	Control Male	Control Female	
Tista- Korotoa Flood Plain	Aditmari	3	1	1	1	6
	Kaliganj	2	2	1	1	6
Old-Himalayan Piedmont zone	Panchagarh		4	1	1	6
	Pirganj	1	3	1	2	7
	Thakurgaon		4	3		7

¹ Appendix C2

² Indigenous disadvantaged people suppressed by neighbouring communities.

Totals	6	14	7	5	32
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Table 2. Participating numbers across upazilas by gender and whether in RDRS target area

Zone	Upazila	Number of people participating in discussions				Total
		RDRS Male	RDRS Female	Control Male	Control Female	
Tista-Korotoa Flood Plain	Aditmari	58	17	15	15	105
	Kaliganj	39	42	19	21	121
Old-Himalayan Piedmont zone	Panchagarh		68	15	15	98
	Pirganj	17	46	15	28	106
	Thakurgaon		71	45		116
Totals		114	244	109	79	546

2.4 De-briefing at different levels

Prior to field work, a meeting was organized with Ahmed Salahuddin of PETRRA in early December to keep him informed about progress on the planned activities. The methodology and the study plan were explained. Based on a suggestion by Mr. Salahuddin, it was decided that another session to share the methodology and objectives of the study would be organized at RDRS in Rangpur in early January, inviting all PETRRA Focal Area members in the NW region.

Eleven participants from RDRS Mohendranagar Federation, BRRRI, DAE and GKF, including PETRRA, attended a meeting of the Focal Area Forum on 2 January 2003. They were briefed by the Project R8083 team about the background of the project and the methodology. The participants suggested that it would be good if the team make a presentation on the findings in every study area after completion of the study. The suggestion was accepted by the study team and accordingly four sharing meetings were organized in four venues (Panchagarh, Pirganj, Thakurgaon and Lalmonirhat. Federation Chairman and the Secretary of RDRS Federation, concerned RDRS officials and field staff and DAE officials attended the meeting. The participants (with Federation members taking the lead) contributed comments to strengthen the knowledge information system. These are summarized in Figure 1.

2.5 Process of the study in the NW

A flow chart depicting the process of the study as a whole in the NW is below:

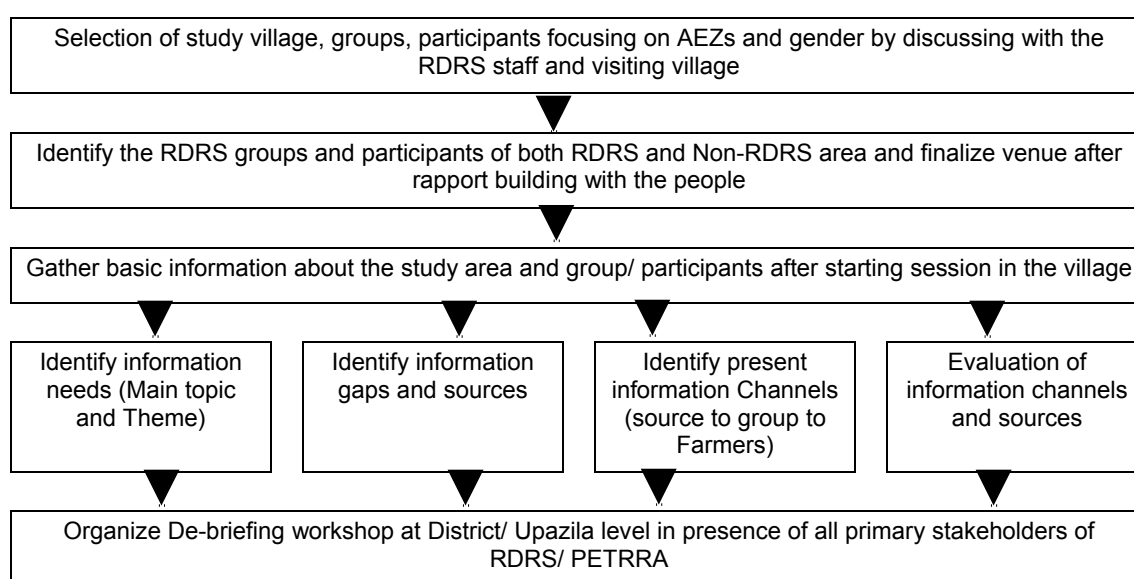


Figure 1. Output of meetings with Federation members, RDRS and DAE field staff (BS)

1. Present information flow system from Federation to Group members and other farmers	<p>Federation has Executive Committee (EC) and Liaison Committee who generally contact with different service providers and receives information and communicate to the members and other farmers through:</p> <ul style="list-style-type: none"> • EC and General Committee meeting (one meeting per month) • Farmer's field day • Agriculture fair • Observance of different national and international days • Attend training and disseminate learning through sharing • Research conducted by the students of the University and inform the results to the farmers through meeting • Posters-leaflets from RDRS • Field demonstration by the good farmers
2. Easy access to information	<p>The members identified some sectors in agriculture which have easy access but it was few:</p> <ul style="list-style-type: none"> • Varieties of rice seeds • Irrigation
3. Difficult access to information	<p>The members mentioned lots of problems in getting right information by the farmers:</p> <ul style="list-style-type: none"> • Quality seed, timely availability of seed and seed preservation • Sources, types and price Pure fertilizer • Soil test and sources of testing laboratory • Quality pesticides • Marketing of rice • Information on modern rice cultivation technology • Different Government's circular on purchasing of rice and selling of seed
4. Present and preferred information channels	<ul style="list-style-type: none"> • Different NGOs (RDRS, BRAC) and GoB (DAE, BADC, BRR) Preferred by the participants • Training • Visit of field staff (preferred by the participants) • Posters, leaflets • News letter • Radio program • TV program • Field demonstration • Farmer's Field day • Agriculture fair • Miking • Seed-Pesticide-fertilizer Company • Dealers of companies • Open seller/ Market • Meeting of groups • Government's Food department • Discussion with good farmers • Research done by the students and different projects
5. Suggestions to make information channel more effective	<p>The participants forwarded the following suggestions for effective information flow at farmers level:</p> <ul style="list-style-type: none"> • On behalf of GoB, DAE should take lead in disseminating knowledge information to the farmers • Union Parishad (UP), as the local government body at the grassroots level should be the focal point for information dissemination at farmers level. An information cell can be established at the UP level • Increase number of field staff and orient them for information dissemination with necessary tools (pictorials, leaflets, models) • Organize training for all the farmers at village level on different information sources and their activities

3. A profile of people participating in group discussions

At the start of each focus group discussion, some basic information was collected from the attending participants. The aim was to determine a basic socio-economic profile for the group, and to have the ability to judge how far this same group would be represented if at a later stage another group discussion was held in the same village to explore the effectiveness of an improved system (new interventions) for information provision.

The information collected included the name of the participant, his/her education level (class), reading ability, whether or not land was owned/rented, the main source of household income and the secondary source of income. With respect to the land ownership question, most groups also specified the amount of land they owned/rented. The units used were noted, and the data converted subsequently to represent land size in acres.

An overall profile of the responding groups is given in Appendix 2. Some summaries appear in Tables 3 to 6 below. For example, the average percent of respondents with (a) education level better than class 5; (b) reading ability; (c) with own land and (d) with rented land, appears in Table 3, while Table 4 shows the educational distribution of the group respondents. As expected, the women groups on average had lower levels of education than the men, with over 65% of participants in the women groups having no education. This percentage was about 38% in the men groups. In each of the groups, large numbers owned land, while about 45% in the male groups, and 23-37% in the women groups worked rented land. It is known that RDRS largely targets women groups rather than male groups, but it cannot be ascertained from results below whether there may a slight bias towards slightly better educated women groups.

Table 3. Some summary information regarding group respondents (sample size for calculation of within-group percentages ranged from 12 to 23 persons)

Type of group	% with >class 5 education	Percent with reading ability	Percent with own land	Percent with rented land
RDRS Male (n=6)	40.3	42.1	89.9	44.8
RDRS Female (n=14)	14.7	20.1	74.3	37.2
Control Male (n=7)	34.6	45.0	85.9	45.7
Control Female (n=5)	13.9	11.3	73.4	23.4
Total (n=32)	23.7	28.3	79.6	38.3

Table 4. Educational level distribution amongst group respondents

Type of group	% with no education	% with class 1-5	% with class 6-10	% with SSC,HSC,BA
RDRS Male (n=6)	38.2	21.6	20.9	19.4
RDRS Female (n=14)	66.3	19.1	11.4	3.2
Control Male (n=7)	38.8	26.6	28.3	6.3
Control Female (n=5)	74.6	11.5	6.8	7.1
Total (n=32)	56.3	20.0	16.2	7.5

Table 5a shows the average (mean) amount of land (in acres) that is owned and rented. All summary statistics shown in this table have been computed from group averages across those participating in the focus group discussions. The maximum and minimum values demonstrate considerable variability in the amount of land owned and rented by group participants, but on average RDRS appear to be targeting (as they expect) those with < 1.5 acres of land.

Table 5b shows the distribution of land ownership. It is interesting to note that a greater percent of the female groups have no land compared to the male groups. This is likely to be because some women may have reported land that they themselves owned rather than land owned by the family. Although it had been stressed by the field team that the latter was required, more emphasis had been given on the need for reporting “cultivable” land, i.e. land which respondents use for cultivation.

Table 5a. Size (acres) of owned and rented land*.

Type of group	Size of owned land (acres)			Size of rented land (acres)		
	Mean	Maximum	Minimum	Mean	Maximum	Minimum
RDRS Male (n=5)	1.13	1.67	0.45	0.30	0.43	0.12
RDRS Female (n=12)	0.65	1.34	0.19	0.22	0.50	0.02
Control Male (n=7)	1.29	3.11	0.44	0.34	0.92	0.14
Control Female (n=4)	0.93	1.24	0.57	0.09	0.18	0.02
Total (n=28)	0.94	3.11	0.19	0.24	0.92	0.02

* This information was not collected from all groups.

Table 5b. Cumulative distribution (except for final column) of size of owned land.

Type of group	% with no land	% with <0.5 acres	% with <1 acre	% with <1.5 acres	% with ≥ 1.5acres
RDRS Male	10.1	21.6	40.9	77.6	22.4
RDRS Female	29.3	59.8	83.2	86.2	13.8
Control Male	14.1	43.6	66.7	79.2	20.8
Control Female	22.5	39.4	68.6	81.8	18.2
Total (n=28)	21.1	46.0	69.5	82.3	17.7

Table 6 gives the number of groups that include persons whose primary source of income falls into one of the broad 8 categories shown, together with the average percent of group participants having these income sources.

Table 6. Percent of group respondents (out of 32) (and number of groups involved) in different activities as their primary income source.

Primary sources of income	RDRS Male	RDRS Female	Control Male	Control Female	Total (n=32)
Agriculture	77.2 (6)	38.2 (14)	67.5 (7)	57.5 (5)	54.9 (32)
Business	18.4 (3)	29.0 (13)	13.7 (5)	8.9 (3)	20.5 (24)
Driver(van/rickshaw)	3.5 (2)	7.7 (11)	4.8 (4)	4.6 (2)	5.8 (19)
Day labour	0	6.0 (9)	9.5 (5)	25.9 (3)	8.8 (17)
Livestock	0	1.3 (2)	1.0 (1)	.	0.8 (3)
Service(army/teaching/etc)	0	7.9 (7)	0.8 (1)	1.3 (1)	3.8 (9)
Stone collection	0	6.1 (2)	0	.	2.7 (2)
Other(fishing/shop/etc)	1.0 (1)	3.8 (7)	2.9 (2)	1.9 (1)	2.8 (11)

Each of the 32 groups had respondents whose primary income was agriculture. This includes involvement in general agriculture as well as agriculture and fish, agricultural labour, power tilling, rice farming, sharecropping and growing vegetables. Many of the groups also had participants involved in some form of business and drivers of vans¹ or rickshaws. The “business” group includes those

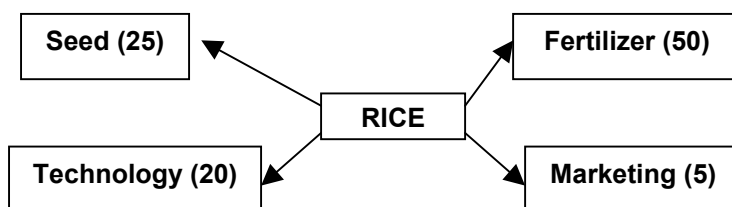
¹ ‘van’ – a rickshaw-type 3-wheel pedal-driven vehicle with a flat platform, used for carrying goods or passengers

working as carpenters, masons, mechanics and tailors, those working in welding, rice mills, saw mills, trade, furniture, decorations, leather, and those selling betel leaf, chickens, local seeds, vegetables and fertilizer. There were very few groups where respondents gave livestock as their primary occupation. Two women groups were involved in stone collection, while quite a high percentage of women (26%) in the control groups did day labour.

4. Identifying information needs within a crop-related topic

During the planning phase, it was felt that exploring information systems in general would be too wide a topic to deal with within the scope of the project. It was therefore decided that fieldwork would be limited to a crop related theme in order to narrow down the range of topics about which the rural poor would want information. Of course this does mean that it has not been possible to see how important crop-based agriculture would be in the livelihoods of the participating groups.

During the group discussion, participants were therefore first asked to identify a crop-related topic, and then to identify themes relating to this topic about which they would like information. To elicit the relative importance of these themes, participants were asked to distribute 100 seeds amongst these themes. An example is the following:



A distribution of the themes identified by different groups is given in Table 7 below. Since rice is a prominent crop in the North West most groups chose to discuss information needs with respect to rice cultivation.

Table 8 shows the distribution of scores across the different information needs (themes). Note that for an overall comparison, the column headed “sum” is useful since the “mean” column is dependent on the topic chosen for discussion and the number of groups responding. However, a study of the mean values is useful to understand the information needs of the groups who selected a less frequent theme.

Table 7. Topics chosen for discussion

	Tista-Korotoa Flood plain	Old Himalayan Piedmont	Total
Rice	9	11	20
Agriculture	1		1
Vegetable	1	1	2
Tobacco	1		1
Wheat		4	4
Watermelon		1	1
Potato		2	2
Maize		1	1
Total	12	20	32

At an overall level, most groups wanted information about seeds and fertilizers and rated their level of importance to be high. About two-thirds of the groups wanted to learn about markets and irrigation.

After seed and fertilizer, highest scores showing the relative importance of different information needs were given for markets, technical knowledge, irrigation, pesticides and insecticides. The low frequencies for some themes are largely the result of the specific topic that had been chosen for discussion. Thus for example, although both the groups choosing vegetables for their topic of discussion, gave seed as a main information need, one group ranked information about the appropriate season for growing vegetables as the most important, while for the other group, importance of information about good quality seed was followed by marketing, and vegetable cultivation and diseases. One group also commented that although they also grow rice, growing vegetables is better for its commercial value.

Table 9 shows the selected themes for the 20 groups who chose rice as the main topic. Scores given by these groups were again highest for seed and fertiliser, followed by technical knowledge, markets, insecticide/pesticides, and irrigation.

Table 8. Themes and their importance according to the distribution of 100 seeds among them.

Information need	N	Minimum	Maximum	Sum	Mean
Seed	31	10	40	809	26.10
Fertiliser	31	8	50	686	22.13
Pesticide	15	5	40	233	15.53
Market	22	4	30	332	15.09
Irrigation	21	4	25	275	13.10
Technical Knowledge	13	8	36	305	23.46
Equipment (power tiller, threshing)	4	5	20	52	13.00
Soils/Testing	3	17	45	92	30.67
Insecticide	12	6	35	196	16.33
Weather	2	10	17	27	13.50
Vegetable cultivation	1	15	15	15	15.00
Vegetable diseases	1	16	16	16	16.00
Vegetable season	1	35	35	35	35.00
Crop Production	2	10	15	25	12.50
Vitamins	1	12	12	12	12.00
Preservation/Storage	1	20	20	20	20.00
Potato disease	1	60	60	60	60.00
Medicine to control maize in fog	1	10	10	10	10.00

Table 9. Themes chosen by those who selected rice as a topic for discussion.

Information need	N	Minimum	Maximum	Sum	Mean
Seed	20	12	40	532	26.60
Fertiliser	20	12	50	461	23.05
Pesticide	9	5	40	153	17.00
Market	13	5	30	176	13.54
Irrigation	11	4	25	154	14.00
Technical Knowledge	12	8	36	280	23.33
Soils/Testing	2	17	45	62	31.00
Insecticide	10	6	35	165	16.50
Weather	1	17	17	17	17.00

In the discussions surrounding the above results, some of the main comments made by many of the group participants was about the lack of information about good quality seed, about fertilizer use, about wanting more information about marketing, and about insecticides and pesticides. With respect to seed, they requested information on where to get good quality seed (6), what type of seed to use (7), identifying good quality seed (8) and preservation techniques (10), while with respect to fertilizer, the request was for how fertilizer should be used, e.g. how much to apply and when to apply, and the price. Several groups voiced their concerns about dealers who sell them poor quality seed that do not germinate and adulterated fertilizer and pesticides. One female group made an appeal for more information on seed preservation since their husbands get angry when they did not supply seed in good condition at the start of the season.

Two of the groups (rice, potato growers) mentioned an instance of disease outbreak when they had had no help from BS (Block Supervisor) or GO (Government Organization) or NGO (Non-Government Organization) about what to do. Training and information about new technological developments for rice cultivation was another request by a few of the groups. Two groups also mentioned that in recent times their soils were decreasing in fertility and they needed information on testing the soil, while another group requested information on methods to improve land fertility. The full set of comments given by respondents is provided in Appendix 3.

5. Identifying the degree of information gaps among participants

Although the original expectation was that all themes regarded as important by the group would be further discussed, this was done only for the theme that received the highest score due to time limitations. For this theme, the group was asked to identify related strands about which they wanted information. The number of strands varied from group to group. Most identified 2 or 3 strands, while 2 groups identified 4 strands, and 1 group identified 5 strands. The strands within a particular theme were very varied, e.g. with respect to seed, 10 different types of information were mentioned by the groups. For fertiliser, there were 5 types.

For each strand, group participants were individually asked to indicate whether they had ever received information about that strand, and if they had, who had supplied the information. Groups were generally quite divided in whether or not they had received information. Across the strands for the theme being discussed, the average number of participants who received information (those responding “yes”) and the average number who had not received information (those responding “no”) was derived. The total number of persons responding was then calculated, and used to calculate on average, the percentage of “yes” answers per group. This percentage was then summarised across all groups.

Table 10 shows these summaries separated by group type. We observe that in about half the groups, less than 25% of the group (on average) received information about the strands under discussion. The pattern seems slightly worse for the control group than for groups already targeted by RDRS, but the numbers are too small to be very definitive.

Table 10. Distribution of group percentages that have received information.

Level of receiving information	RDRS		Control		Total	
	Count	%	Count	%	Count	%
None have had info.	1	5.3%	2	16.7%	3	9.7%
>0 - 25% have rec. info	8	42.1%	5	41.7%	13	41.9%
>25 - 50% have rec. info	8	42.1%	4	33.3%	12	38.7%
>50% have rec. info	2	10.5%	1	8.3%	3	9.7%
Total	19	100.0%	12	100.0%	31	100.0%

Those who had received information, often said that this was through RDRS officers. Whether it was RDRS or another source, the general impression from comments made is that the information was not

adequate, and was often incomplete and therefore could not be used. There was again a lack of confidence in information provided by dealers who were trying to sell their products. There was generally trust in DAE with a view that they expected DAE to provide the necessary information, but little satisfaction in DAE's adequacy and timeliness.

Some further reasons given were:

- a. *Government circulates that quality seed is available, but when DAE is visited, they are told they don't have such information;*
- b. *Financial crises (too far to go to avail the services or very high price) – 2 groups said this;*
- c. *DAE have information about agriculture but we don't get it in time.*
- d. *Male members of our family collect information from different sources, but most of such information are either not clear or complete, so we cannot use them.*
- e. *We get information from neighbouring farmers but we don't know how far the information is authentic – and that is why sometimes we cannot use such information. Another group also said that info from neighbours could not be used due to incompleteness.*

Additional comments are provided in Appendix 4.

6. Information channels

A flow chart of information sources and the media through which participants have received or expects to receive information, led to results shown in Tables 11 and 12. Clearly, the sources through which participants have received most communication, or expect to receive information, are other farmers, RDRS and DAE. About 35% of the groups also thought of the market as a source through which they could receive information. Only about a third of the groups mentioned government organizations or other NGOs.

Table 11. Source through which information has been, or is expected to be, received

Source	RDRS		Control		All groups	
	No. of gps	% (n=20)	No. of gps	% (n=12)	No. of gps	% (n=32)
Farmer	16	80.0	10	83.3	26	81.3
RDRS	18	90.0	4	33.3	22	68.8
DAE	15	75.0	11	91.7	26	81.3
NGOs (other)	6	30.0	3	25.0	9	28.1
Government Organizations	5	25.0	8	66.7	13	40.6
Markets	8	40.0	3	25.0	11	34.4
Banks	1	5.0	1	8.3	2	6.3
Others (hotels/ truck drivers/..)	3	15.0	2	16.7	5	15.6

With respect to the media through which information has been received or is expected to arrive by, the radio, visits by field officers, face-to-face discussions and television were the most frequently mentioned. Other media were mentioned by less than 30% of the groups.

From farmers themselves, information appeared to be passed only to other farmers. This was mostly through discussions, and less so through demonstrations and field visits (see Table 13).

Table 12. Channel/medium through which information has been, or is expected to be, received

Information communication channel/medium	No. of groups	% (out of 32)
Miking ¹	7	21.9
Face-to-face discussions	24	75.0
Verbal discussion (also telephone)	3	9.4
Radio	25	78.1
Newspaper/ magazines	8	25.0
Television	22	68.8
Documentary films/ videos	4	12.5
Posters/ sign boards	8	25.0
Farmer discussions & experience	5	15.6
Meetings with organisation/individuals	7	21.9
Publications/ books/ leaflets/publicity	3	9.4
Farmers visit the institute offices	4	12.5
Visit by Field/Staff Officers	25	78.1
Training	4	12.5
Demonstrations/ field visits/ observation	3	9.4

The comments made during these discussions support the findings above. Most groups felt that information was mainly received through visits and face-to-face discussions, and this appeared to be the most preferred choice for many. Some comments emerging from those who mentioned the radio or TV as information media were that the radio broadcast was restricted to agriculture and did not specifically cover vegetable cultivation, that the information was very limited and not useful, that the language could not be understood, and that there was no scope for asking questions. One group preferred posters, but said that many could not read or write. There were positive comments about RDRS field offices and the information they receive through them and the DAE (via documentaries, miking, posters, and mostly direct discussions) but some said such visits were few and irregular.

A full list of comments made regarding information sources appears in Appendix 5.

Table 13. Media through which information flow from farmers to other farmers

Channel from farmer onwards	No. of groups	% (out of 32)
Discussions	23	67.6
Read out written material (posters, etc)	1	2.9
Meetings	2	5.9
Demonstrations/ field visits/ observation	8	23.5

7. Preference for different information channels

A preference ranking exercise was carried out to determine which channel(s) were most preferred. Each ranking exercise resulted in a set of scores (0, 1, 2, 3, etc), representing the number of times each channel (of those under discussion) was preferred over another. These scores are dependent on the number of items chosen for comparison. For example, if 3 items were compared, the maximum score possible is 2. Therefore, for analysis, each score (for a particular information channel) was expressed as a percentage of the total number of items discussed minus 1. Table 14 gives a summary of these percentages (rounded) across all 32 groups. It must be noted however that the denominator used in calculating these percentages is very low and hence attention should be

¹ Miking: public announcements (often pre-recorded) by loudspeaker carried on a vehicle, usually a rickshaw. This is a common method of commercial advertising.

given only to the relative differences across the channels compared rather than the absolute percentages.

Table 14. A summary of percentages used as an indicator of information channel preference

Channel	N	Minimum	Maximum	Sum	Mean
Miking	4	29	100	271	67.75
Contact with office	4	33	86	244	61.00
Staff or Field Officer visit	23	33	100	1683	73.17
Radio	21	20	100	984	46.86
Newspaper	3	14	33	67	22.33
Television	16	17	67	583	36.44
Farmer discussion & experience	7	33	100	505	72.14
Face-to-face discussion	24	33	100	1934	80.58
Verbal discussions	1	50	50	50	50.00
Posters and sign boards	8	20	100	460	57.50
Meetings	5	40	83	280	56.00
Training workshops	5	67	100	442	88.40
Field demonstrations	1	67	67	67	67.00
Film/documentaries, videos	2	25	75	100	50.00
Bioscope	1	60	60	60	60.00

Above results indicate that face-to-face discussions are the most preferred channel, followed by visits by staff or field officers, and then radio. Other preferences expressed include television (although it was clear during discussions that this was not available to most), posters and sign boards, training workshops and meetings.

Comments made during the discussions are given in detail in Appendix 6. Note that the subsequent pocket chart was expected to capture what groups thought about the quality of information they had received, whereas the pairwise ranking was meant for determining what channels (media) they prefer. But some group answers appeared to reflect the groups' currently experienced best source, rather than the medium they would most like. There were also some inconsistencies between the results of the pairwise ranking and the comments made by the same group (see Appendix 6).

The comments in general were similar to comments made in response to the previous question (section 6) regarding information channels. Direct contact discussion was clearly preferred by almost all the groups, since they wanted to have the option of being able to ask questions and clarify their understanding. Many were not keen on newspapers since money was needed to buy it, but mostly because few could read. Although a couple of groups mentioned they were able to watch TV at a tea stall and learn some information about agriculture, the radio featured more often in the list of channels chosen for discussion compared to TV due to its accessibility, but where both were compared (by 10 groups), exactly half preferred TV. The comments indicated that TV was preferred because it was more visual, e.g. one group mentioned a case where the measurement of pesticide amounts using a cup had been described in a radio programme but the dilution level could not be ascertained because they did not know the size of the cup. They felt that a TV programme would overcome this difficulty.

The occasional showing of a documentary film in the village was welcomed and said to be useful. Miking was liked, but it was noted that it was rare. Two female groups said they did not have time to watch TV or listened to radio because of household work, and one of them said it would be better if their husband communicates with others so they get complete information. Radio programmes were also said to be problematical in terms of the language being unclear – except when broadcasted through Rangpur Radio Station.

8. Evaluation of information channels

A pocket chart was used to get participants to score individually each selected strand according to their views of the quality of the information they had received from different sources. This was done by giving a score out of 5 (through allocation of 5 seeds into a pocket for each strand by source combination). Interpretation of the results here was quite difficult, firstly because there was no record of the number of persons participating in the voting. Comparisons across the 32 groups could therefore not be done by analyzing the raw scores in their current form.

Secondly, it was clear from some of the recording forms that those who had received information before, had usually received them via different sources. So their ability to be able to judge the quality of the information that others in the group had received is seriously in doubt.

The difficulty in the first point above was addressed by taking the maximum of the source totals (across the strands) and expressing the total for each source as a proportion of this maximum. For any single group, this gives the value 1 for the source that is scored most highly, and a value less than 1 for the remaining sources. A summary of these values appears in Table 15 below.

At face value, it appears that the sources most liked are farmers, RDRS and DAE. However, given the difficulties raised above, too much emphasis cannot be placed on these results. These results are nevertheless consistent with various comments that respondents have made in earlier discussions.

Table 15. A summary of an indicator (score between 0 and 1) to evaluate different sources

Sources	Group type (RDRS or not?)				Group Total	
	RDRS		Control		N	Mean
	N	Mean	N	Mean		
Farmer	14	.84	7	.90	21	.86
RDRS	16	.84	4	.74	20	.82
DAE	13	.72	8	.75	21	.74
NGOs	4	.43	2	.75	6	.54
Government organizations	5	.50	4	.67	9	.58
Bank	1	.54	1	.05	2	.30
Market/shops/whole sellers	8	.62	4	.36	12	.53
Other sources	3	.83	4	.52	7	.65

9. Some tentative conclusions

It is clear from the above findings that information about seed, fertilizer, insecticides and pesticides, technical knowledge and marketing are key needs identified by most of the groups visited. This was true of rice farmers as well as those interested in wheat, potato or vegetable cultivation. A majority of the groups were members of RDRS, and looked to RDRS to address most of their information needs. Very few groups made positive comments about BS (Block Supervisor) of DAE (Dept. of Agriculture and Extension) – there was an indication that DAE as an information provider was more often ineffective and not adequately responsive to the needs of the poor farmer. Other comments indicated that the BS only visits rich farmers, that BS does not visit their fields, that it was very rare to receive information from BS of DAE, and that BS was not available regularly.

Within individual groups, only a very small proportion had ever received information on the strands of a selected theme (e.g. seed) chosen for further discussion. In only 3 of the 32 groups was this proportion greater than 50%, and even then, only to a maximum of 67%. In 16 of the 32 groups, fewer than 25% of the group had ever received any information previously about the strands under discussion.

Most groups were very positive about the value of face-to-face discussions, whether this was with neighbouring farmers or with RDRS or DAE officers during their visits to the farms. Nearly all groups

emphasized their preference for this method of communication. With respect to other media, radio and TV were most popular, and although it was clear that TV was not accessible to all, its ability to provide visual information was a point in its favour. However, with both radio and TV, several groups commented that they lacked the facility for asking questions and that understanding the language was difficult.

Concern was expressed on many occasions about information provided by dealers and seed companies. In many cases, seeds bought from dealers were found to be poor, while some groups commented on being sold adulterated fertiliser.

Women groups clearly had very little access to direct information from outside and had to depend on their husbands or neighbouring farmers for relevant information. Nearly all such groups mentioned that their mobility was very restricted, and that they did not get exposed to information sources. However, they expected that DAE should provide more information. Those belonging to RDRS groups were a bit more fortunate in receiving information also from RDRS staff.

Some differences were seen between responses given by RDRS groups and the control groups. Most of the control groups said that they had to depend totally on neighbouring farmers for any information, that they feel DAE could supply them with much information but they don't receive any, that they have poor linkages with GO/NGOs and hence do not get adequate information. Two of the control groups also commented that they were in a border village which meant that they get no information from either RDRS or DAE, and that they often get cheated by smugglers who supply them with poor quality seeds and fertilizer.

Comments from those who were part of RDRS formed groups were rather mixed. Most said they get information from RDRS or DAE or both, but some felt that the information from RDRS was better and found visits by their field staff useful (compared to irregular visits by BS), and one group said RDRS had also given training and regular information. However some other groups felt that they did not get enough information from RDRS and they get more information from DAE (via BS). One group said they were an RDRS group, but totally dependent on neighbouring farmers to get information, adding that RDRS put very little emphasis on agriculture and that their staff were mostly busy with credit and other programmes. One group mentioned that because they were group members of RDRS, they prefer RDRS as their main information source, but that no GO/NGO was providing needs based information to the farmers, especially the poor/marginal farmers.

Respondents feel that much of the information to which they have access is incomplete or unclear. One reason for this is language – a problem which is said to apply not only to broadcast media but to printed media (posters etc.). Beyond this, institutional and structural constraints prevent people from using information, which they do obtain (e.g. the opportunity to sell paddy at government price to the food department, which many people know about, is frustrated by officials of the Department demanding bribes). Another problem restricting access to information is of course simply lack of money, which prevents poor people from being able to travel to an Upazilla or District Centre to attend events at which information would be exchanged, and lack of free time in which to do this.

It was not always clear whether the respondents' answers related to information they had already received or whether it related to information they expected to receive. Time limitations did not permit probing further to follow some of the comments made by group respondents, e.g. reasons why information received (if any) were inadequate, what the group participants felt about the quality of the information received, whether and they were able to use the information easily, and their reasons for preferences given to different information channels and sources. The study was also limited in being unable to ascertain how importantly information about crops featured in the livelihoods of the responding participants and evidence to demonstrate the level of poverty amongst the responding groups.

Despite these limitations, some valuable insights have been gained through this work. The results demonstrate that the link between information providers and beneficiaries is weak, very few receive information relating to their key needs, and where they do, these are often incomplete or unusable. It is also clear that there is a heavy dependence on learning from each other and from neighbouring ideal farmers. The study also provided an indication of beneficiaries' views on the media through which they prefer to receive information.

It is expected that these findings will contribute usefully to discussions in Phase 2 of the project, which aims to explore new interventions that will improve mechanisms through which information is disseminated.

Appendix 1a: Field Manual

Strengthened Rural Services for Improved Livelihoods in Bangladesh
(NRSP Project R8083)

KIS PARTICIPATORY EVALUATION IN THE NORTH-WEST OF BANGLADESH
FIELD MANUAL

Strengthened Rural Services for improved livelihoods in Bangladesh (NRSP Project R8083)

FIELD MANUAL – NORTH WEST

Topic	Method	Equipment	Process	Section see below
1. Background	Checklist	Proforma: 'debriefing document'	<ul style="list-style-type: none"> Record: <ul style="list-style-type: none"> - information about the group, - education, landholding (Yes/No) and livelihood of each member. 	1
2. Information needs	Scored 'causal' diagram	Blank cards Picture cards? Masking tape Brown paper Pens	<ul style="list-style-type: none"> Identify <i>topic</i> on which discussion will centre Identify and score <i>themes</i> Identify <i>strands</i> (within themes) 	2
3. Information gaps & sources; unused information	Matrix construction & scoring	Brown paper Pens	<ul style="list-style-type: none"> Construct chart recording: <ul style="list-style-type: none"> - strands - nos of participants who have accessed or not accessed info (Yes/No) on each strand - <i>actual</i> sources / info providers for (Yes) - <i>expected</i> sources / info providers for (No) Score chart by show of hands Identify <i>unused</i> or <i>partial</i> information + reasons 	3
4. Information channels (media)	Flow chart	Brown paper Blank cards Masking tape Pens	<ul style="list-style-type: none"> Identify means by which info is received from different sources Identify how information is passed to others (if applicable) 	4
5. Evaluation of channels (media)	Pair wise ranking	Brown paper Blank cards Masking tape Pens	<ul style="list-style-type: none"> Construct matrix of channels/media (from 3 & 4 above) Rank pair wise 	5
6. Evaluation of sources	Matrix construction & scoring	Pocket chart Beans Blank cards Masking tape Pens	<ul style="list-style-type: none"> Construct matrix of <i>strands</i> and <i>sources</i>: (from 3 above) Score sources 	6

Free-form discussion (semi-structured interview) can / should be used at all stages

1. Background

Once the study site has been located and participants (ideally 15 but no more than 20) have been assembled, the Facilitator explains the purpose of the gathering and the teams' interest in crop-focussed knowledge and information systems. The facilitator and co-facilitator introduce themselves and ask the participants to do the same. These names will be noted. Where duplicate names are found, an additional name will be noted, e.g. the spouse's name or the name of the father.

If the group is an RDRS Primary Group, the team's connection with RDRS will be explained. Ask the date on which the group was formed. Verify this is the same as that obtained from RDRS.

Ask if group members have been involved with any external body (other than RDRS) doing research and/or development work. If Yes, ask for brief details about this.

Check that note has been made of the following information:

1. Date:

--	--	--

month date year

2. Upazila/Village _____

3. Group Gender

M	F
---	---

4. Group Type

RDRS	Non-RDRS
------	----------

5. If RDRS, date of formation of group(s): _____ (mm/dd/yy)

6. Brief details if any of involvement with external research/development activities.

7. Explain that some background details need to be recorded and to bear with the team while this is done with each participant. Record this in the format below.

Name	Education level (CLASS)	Reading ability? (✓ / X)	Own cultivable land? (✓ / X)	Lease-in land? (✓ / X)	Income source (or occupation)	
					Main Source	Secondary source[1]
1.						
2.						
3. etc etc etc						

[1] This last column may be left blank if there is only one occupation

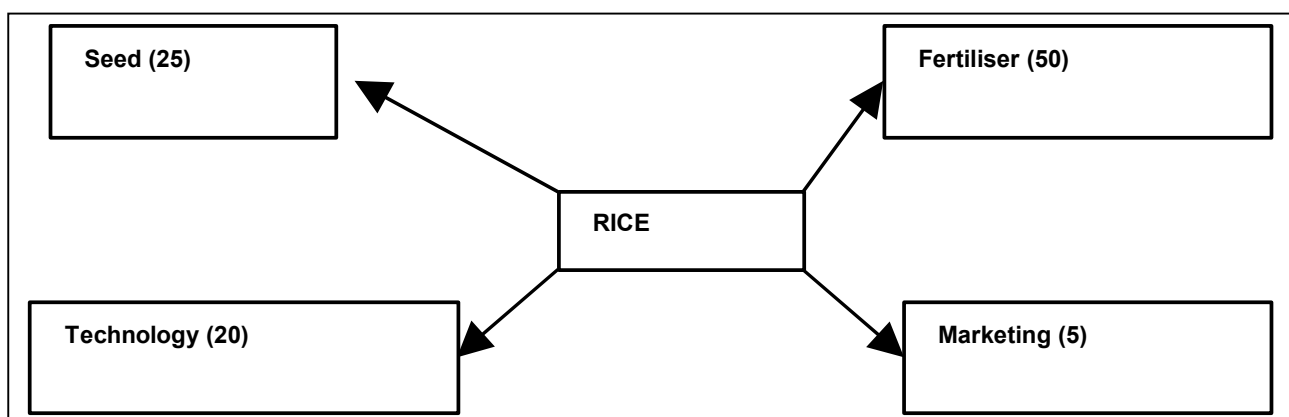
2. Information needs

Invite participants to choose a topic, which is crop related, e.g. rice, vegetables, etc. A card or picture relating to this is set in the middle of the ground/floor area.

Related to the chosen topic, major needs (“Themes”) about which information is sought are identified by group members. So, for example, for RICE, major themes might be: Agricultural inputs, technology, irrigation, and marketing. Cards with names or pictures are placed around the central theme to show the full set of themes identified.

Seeds, out of a total of 100 seeds, are distributed amongst the themes according to their importance to the group – with more seeds to show greater importance.

The picture may then look like the following. It should be roughly sketched in the field books. Any discussion points raised should also be noted. For example, reasons for giving a higher score to some themes and/or a low score to some.



Discuss with the group whether they would like to further discuss all of the themes, or only just the ones, which they regard as being the most important. Usually one theme should be selected.

For each of the themes selected for further discussion, ask what type of information is needed. So for example, if fertiliser is one theme, farmers may want to know about which type of fertiliser to use, how much to apply, when to apply, etc. List as many such “information strands” as participants mention

3. Information gaps & sources

List the all brown paper (as below), with a YES row and a NO row against each.

Ask participants to 'vote' by show of hands whether or not they had received information about the strand under discussion. Then count the number of votes for YES and the number of votes for NO. (This is an indication of the information gap for the strand under discussion.)

Next, ask questions about each of the YES/NO responses. Where response is YES, ask, "from whom, or from where, did you get this information?" From those responding NO, ask, "from whom, or from where would you **expect** to get this information?" If the answer is not known, write down "don't know". Note down the responses. Make a special note if there are information sources that have been generated by the participants' own knowledge.

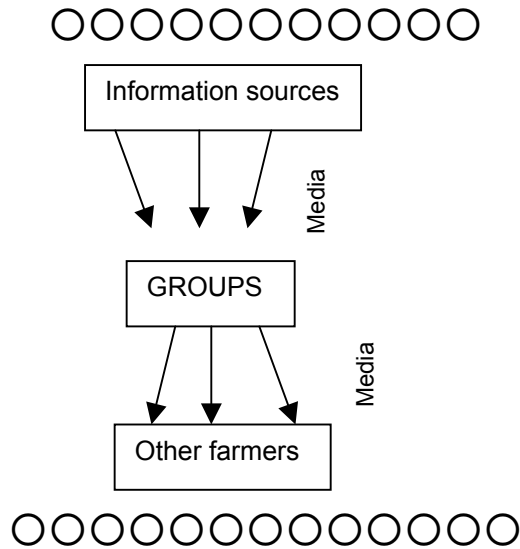
Repeat the above exercise for all the strands.

Ask participants for examples of information received, which they could not act upon, and why they could not.

Themes	Most important types of information needed within theme (Strands)	Have you ever received this information?	No. of votes	If YES, from whom or from where did you get this information? (write name) If NO, from whom or from where would you expect to get this information? (write name)
1. Fertilizer	1. Quality	Yes	●●●●*	
		No	●●*	
	2. Price	Yes	●●●*	
		No	●*	
	3.	Yes	●●●●*	
		No	●●*	
	4.	Yes	●●●*	
		No	●*	

4. Information channels

Ask the participants to explain how they are getting information from different sources i.e. means / media. Ask them to show on the ground by drawing a flow chart in two steps. Step one is how they receive the information from different sources including means/ media. Step two is how they are disseminating those information to the next lower level or neighbouring farmers. Use colour cards to draw the flow chart and make it visible. The flow chart will look like as follows:



5. Evaluation of channels (media)

Note down the different **media** that group members mentioned as possible means of receiving information from the various sources, i.e. make a list of the media for each source. This list should be based on actual experience of one or more group members about the medium/source.

Engage in a discussion about the effectiveness of these different media as a means of receiving information about agriculture. Note down their comments about the effectiveness of the media with respect to each source from which information has thus far been received.

Get participants to identify a number of different media by which they would like to receive information.

[Should the facilitator also present some alternatives to the group and see what they feel about such sources, e.g. radio, or TV brought in by the BS from time to time, demonstration plots, leaflets, bill boards, song and dance, etc., so that participants are aware there are potentially a large number of avenues/mediums for information provision].

Make a list (perhaps as pictures) of all these media (e.g. radio, song and dance, personal contact, visits by block supervisor), and do a pair-wise ranking of these.

Write the list (or draw pictures) of the media on a sheet of paper, one under the other as shown below. Then consider them in pairs, i.e. first 1 & 2, then 1 & 3, then 1 & 4, then 2 & 3, then 2 & 4, then 3 & 4. For each comparison, ask which is preferred and why. The co-facilitator notes down the two items being compared, circles the preferred one, and notes down the reasons why that item is preferred.

Information media/ means	Radio	Song and dance groups	Personal contact	Regular visits by Block supervisor (Field staff)
Radio	x			
Song and dance groups	x	x		
Personal contact	x	x	x	
Regular visits by Block supervisor (Field staff)	x	x	x	x

6. Evaluation of sources

Explain the project's need to understand each participant's views of the **value** of the information they have already received from different sources, i.e. how participants would rate the information they have received. Those sources for which a YES answer was given in 3 above should be considered for inclusion. Ask the group to select at most **five** of the most important sources from where information on the main strands has been received. List them on cards and pin them at the top of the pockets (one source per column).

Also write down the main strands (as in exercise 3 & 5) on cards and pin them also on the matrix scoring cloth (one strand for each row). Explain each strand will be considered in turn. Explain about the form of the voting procedure as set out below.

The person voting should consider whether he/she has some knowledge (direct or indirect) to form a judgment about the information source being evaluated. If not, a small card (the co-facilitator would provide this) should be placed in the corresponding pocket. If the participant knows something about the source and is able to give an opinion, then he/she should decide how many seeds, out of 5, he/she would allocate to that source (for the information strand being considered). The greater the number of seeds allocated, the greater is his/her opinion about the value of the source. If the participant thinks the source is really useless as an information provider for the strand being considered, he/she may decide not to allocate any seeds (i.e. allocation of a zero score).

Perhaps the facilitator could go through one row of the matrix, pretending to be the person voting, and show how his/her opinion is captured through the allocation of different numbers of seeds. Use different scenarios for each source, e.g. "I think BS is extremely good, so I will give BS a score of 5". The group as an information provider has chosen BRRI, but I know nothing about BRRI, so I will just place a card in the pocket. I know RDRS gives advice, and I believe this has been useful to my neighbour, so I will score it 3 seeds. We have progressive farmers in the next village, but they never help us, although we have asked, so I will give "other farmers" nothing!

The facilitator helps each participant to 'score' using the chart, handing them 5 seeds for *each* information source and explaining how to score out of 5 as above

Once everyone has completed their scoring, lay the cloth on the ground (taking care not to spill out the seeds). Then take the seeds out of each pocket and place them over the pocket. The co-facilitator should count the seeds in each pocket and note down the results. After the matrix scores have been noted (including the number of "Not applicable" cards), pile all the seeds at the bottom of the "source" columns, and show this result to the group. They will then be able to observe the results of their scoring. Discuss why some sources have more seeds than others. Note down relevant comments that group members make.

An example:

Needs/ Themes	Important sources				
	DAE	RDRS	BADC	Dealer	Farmers
1. Fertilizer	••••	•••		•••••	•••••
2. Seed	•		•••••	••	••••••
3. Technology	••••	•••		•••••	•••••
4. Marketing	•		•••••	••	••••••
TOTAL:	10	6	10	14	22

Note: if for some reason, not all persons in the group got up to vote, then make a note of the number that did do so.

Appendix 1b: De-briefing document

Strengthened Rural Services for Improved Livelihoods in Bangladesh
(NRSP Project R8083)

KIS PARTICIPATORY EVALUATION IN THE NORTH-WEST OF BANGLADESH
DE-BRIEFING DOCUMENT

Strengthened Rural Services for Improved Livelihoods in Bangladesh
(NRSP Project R8083)

KIS PARTICIPATORY EVALUATION IN THE NORTH-WEST OF BANGLADESH

DE-BRIEFING DOCUMENT

Upazila/ _____

Identification Number¹

--	--	--	--

Name of Group _____

Village: _____ Union _____ Date: _____

Facilitator: _____ Co-Facilitator: _____

I. BACKGROUND INFORMATION CONCERNING THE FOCUS GROUP

(Circle appropriate answer where relevant)

Group Gender: 1=Male; 2=Female

Group Type: 1=RDRS; 2=Control

If RDRS, (a) Date of joining: _____ (mm/dd/yy)

(b) Which RDRS Extension Officer is in charge of Group: Crops (✓)

EO Crops	EO Livestock	EO Fisheries	EO Soc.Dev&Ed	Other

Has anyone in group been involved with external research/development activities? 1=Yes; 2 = No.

If YES, give details (e.g. PETRRA, FLE, etc):

Information concerning each member of the group. For yes/no answers, yes = ✓ and no = x.

¹ For field work in the North West, the ID number should start with the letter NW, followed by sequential numbers 01, 02, etc.

R8083 FTR Annex C.1: Field study of Knowledge and Information Systems in North-west Bangladesh

Name	Education level (CLASS)	Read-ing ability? (✓ / X)	Own cultiv- able land? (✓ / X)	Rent land? (✓ / X)	Income source (or occupation)	
					Main source	Secondary source ¹
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						
13.						
14.						
15.						
16.						
17.						
18.						
19.						
20.						
Add more rows if necessary						

¹ This last column may be left blank if there is only one occupation
C.1-28

2. INFORMATION NEEDS

Sketch diagram of main topic (crop-focused) and all the information needs (themes) corresponding to this, as identified by the group. Show the allocation of 100 seeds into ALL themes. Select for further discussion only 5 of these at most, i.e. the most important ones.

Notes

3. INFORMATION GAPS AND SOURCES

THEMES	Most important types of information needed within theme (i.e. STRANDS)	Have you ever received information on this?	No. of votes	If YES, from whom, or from where did you get this information? If NO, from whom, or from where would you expect to get this information? (If unknown, then write "don't know").
1.	1.	Yes		
		No		
	2.	Yes		
		No		
	3.	Yes		
		No		
	4.	Yes		
		No		
	5.	Yes		
		No		

Notes - especially on *partial* information and *unused* information, including reasons why not used. (continue overleaf if necessary)

4. INFORMATION CHANNELS

Ask the participants to explain how they are getting information from different sources i.e. means / media. Ask them to show on the ground by drawing a flow chart in two steps. Step one is how they receive the information from different sources including means/ media. Step two is how they are disseminating those information to the next lower level or neighbouring farmers. Sketch the flow chart below:

5. EVALUATION OF INFORMATION CHANNELS (MEDIA)

Construct a matrix with all identified information channels from the flow chart. Carry out pairwise ranking and record below (Add rows / columns as necessary)

Information media/ means	1	2	3	4
1	x			
2	x	x		
3	x	x	x	
4	x	x	x	x

Notes

6 EVALUATION OF SOURCES

Use pocket chart to construct a matrix of STRANDS and SOURCES (as many as have been identified) and facilitate participants to score individually using seeds (max 5 seeds per cell) Add rows/columns as necessary.

STRANDS	SOURCES				

TOTALS:					
---------	--	--	--	--	--

Notes

Any further comments about the group or key points emerging from the group discussion.

Appendix 2. Sampling structure of groups selected in the North West

id	upazila	gpname	village	union	date	gpsex	gptype	joindate
NW01	Kaliganj	Bairati Bandherpar	Mohila Dal	Bairati	4-Jan-2003	Female	RDRS	1-Mar-2002
NW02	Kaliganj	Bairati Purbo Para	Bairati	Tushbhandar	4-Jan-2003	Female	RDRS	1-Mar-2002
NW03	Kaliganj	Kakina Balatari (FLE)	Kakina	Kakina	5-Jan-2003	Male	RDRS	8-Aug-2001
NW04	Kaliganj	Chapartol Pashchim (west) Para	Chapartol	Kakina	5-Jan-2003	Male	RDRS	2-May-2002
NW05	Kaliganj	Non-RDRS	Nawadabash, Chandrapur, etc.	Chandrapur	6-Jan-2003	Male	Control	
NW06	Kaliganj	Non-RDRS	Chandrapur, Batrishajar	Chandrapur	6-Jan-2003	Female	Control	
NW07	Aditmari	Modhupur (NCDP) Male Group	Modhupur	Sharpukur	8-Jan-2003	Male	RDRS	31-Dec-2001
NW08	Aditmari	Khruraj Mohila	Khruraj	Sharpukur	8-Jan-2003	Female	RDRS	21-Mar-2002
NW09	Aditmari	Mohishtuli Male Group (NCDP)	Mohishtuli	Velabari	9-Jan-2003	Male	RDRS	18-Jan-2002
NW10	Aditmari	Talukdulali 1# Male Group	Talukdulali	Velabari	9-Jan-2003	Male	RDRS	15-Jan-2002
NW11	Aditmari	Non-RDRS	Bhadai	Vadai	10-Jan-2003	Female	Control	
NW12	Aditmari	Non-RDRS	Vadai S Para Kholahati	Vadai	10-Jan-2003	Male	Control	
NW13	Panchagarh	South Golehakantomoni	Golehakantomoni	Garinabari	12-Jan-2003	Female	RDRS	10-Feb-2002
NW14	Panchagarh	Dangabari Mohila Dal	Dangabari	Garinabari (#10)	12-Jan-2003	Female	RDRS	23-Feb-2002
NW15	Panchagarh	Chilkarpar Female Group	Chilkarpar	Satmera	13-Jan-2003	Female	RDRS	13-Oct-2001
NW16	Panchagarh	Khasmahal Female Group	Khasmahal	Satmera	13-Jan-2003	Female	RDRS	1-Mar-2002
NW17	Panchagarh	Non-RDRS Female Group	Mohon Bagan	Haribasha	14-Jan-2003	Female	Control	
NW18	Panchagarh	Non-RDRS	Daborbanga	Haribasha	14-Jan-2003	Male	Control	
NW19	Pirganj	Boirchuna Uttar Para Female Group	Boirchuna	Boirchuna	15-Jan-2003	Female	RDRS	7-Feb-2002
NW20	Pirganj	Purbo Boarder Haut Mohila Dal	Boirchuna	Boirchuna	15-Jan-2003	Female	RDRS	10-Oct-2001
NW21	Pirganj	Mondol Para Female Dal	Bhomradaho U. Para	Bhomradaho	16-Jan-2003	Female	RDRS	3-Sep-2002
NW22	Pirganj	Jongaon Bazar Male Group	Jongaon	Bhomradaho	16-Jan-2003	Male	RDRS	8-Feb-2002
NW23	Pirganj	Non-RDRS	Danajpur	Sengaon #9	17-Jan-2003	Male	Control	
NW24	Pirganj	Non-RDRS Female	Danajpur	Sengaon	17-Jan-2003	Female	Control	
NW25	Pirganj	Non-RDRS Adibashi Female Group	Gorura	Kosha Raniganj	17-Jan-2003	Female	Control	
NW26	Thakurgaon	Modhupur Female Group	Modhupur	Ruha	19-Jan-2003	Female	RDRS	8-Aug-2002
NW27	Thakurgaon	Mumshipara Mohila Samity	Sinni hari	Ruha	19-Jan-2003	Female	RDRS	10-May-2002
NW28	Thakurgaon	Dhakhin Raipur Mohila Dal	Raipur	Raipur	20-Jan-2003	Female	RDRS	25-Mar-2002
NW29	Thakurgaon	Raipur #1 Female Group	Raipur	Raipur	20-Jun-2003	Female	RDRS	12-Jul-2001
NW30	Thakurgaon	Non-RDRS Male Group	Kohorpara	Nargun #16	21-Jan-2003	Male	Control	
NW31	Thakurgaon	Non-RDRS Male Group	Purbonargown Moulavi Parq	Purbonargown #16	21-Jan-2003	Male	Control	
NW32	Thakurgaon	Non-RDRS Male Group	Kohor Para (East)	Purbonargown #16	21-Jan-2003	Male	Control	

Appendix 3. Some characteristics of the group respondents

ID	Group type	gender	Number in group	% with no education	% able to read	% with own land	Size of own land		
							Maximum	Minimum	Mean
NW01	Female	RDRS	23	78.3	0	91	.	.	.
NW02	Female	RDRS	19	73.7	26	100	.	.	.
NW03	Male	RDRS	19	21.1	79	89	.	.	.
NW04	Male	RDRS	20	45.0	55	85	1.32	.00	.45
NW05	Male	Control	19	31.6	68	95	1.62	.00	.72
NW06	Female	Control	21	100.0	0	57	.	.	.
NW07	Male	RDRS	18	44.4	39	100	3.00	.50	1.53
NW08	Female	RDRS	17	76.5	24	76	.87	.00	.33
NW09	Male	RDRS	20	40.0	35	100	3.00	.67	1.67
NW10	Male	RDRS	20	55.0	45	100	1.98	.60	1.14
NW11	Female	Control	15	73.3	0	100	2.00	.33	.93
NW12	Male	Control	15	53.3	47	100	2.00	.20	.65
NW13	Female	RDRS	18	50.0	50	89	5.28	.00	1.18
NW14	Female	RDRS	15	40.0	0	60	2.64	.00	.68
NW15	Female	RDRS	19	94.7	5	68	1.65	.00	.49
NW16	Female	RDRS	16	68.8	0	88	3.96	.00	.85
NW17	Female	Control	15	93.3	7	60	3.30	.00	.98
NW18	Male	Control	15	33.3	0	93	8.25	.00	1.52
NW19	Female	RDRS	14	7.1	93	93	3.30	.00	1.34
NW20	Female	RDRS	14	92.9	0	43	.66	.00	.19
NW21	Female	RDRS	18	94.4	6	44	4.95	.00	.50
NW22	Male	RDRS	17	23.5	0	65	3.00	.00	.84
NW23	Male	Control	15	26.7	73	93	20.00	.00	3.11
NW24	Female	Control	16	56.3	0	100	3.30	.14	1.24
NW25	Female	Control	12	50.0	50	50	3.96	.00	.57
NW26	Female	RDRS	18	50.0	50	83	.99	.00	.39
NW27	Female	RDRS	19	78.9	0	63	2.31	.00	.29
NW28	Female	RDRS	18	72.2	28	78	3.30	.00	.61
NW29	Female	RDRS	16	50.0	0	63	3.30	.00	.98
NW30	Male	Control	15	33.3	67	87	10.00	.00	2.00
NW31	Male	Control	15	60.0	0	93	1.16	.00	.44
NW32	Male	Control	15	33.3	60	40	3.30	.00	.63

Note: NW01 - NW12 are in the Tista-Korotoa Flood plain, while NW13 – NW32 are in the Old Himalayan Piedmont zone.

Appendix 4 Comments made by group participants (page-3 of de-briefing doc.)

Comments made by group participants during the discussion on information needs (Page 3 of de-briefing document)

(Note: Where the topic of discussion is not rice, this is indicated in bold)

- a. We are always cheated with poor quality seed. We don't know the techniques of seed preservation. We also don't know where to go to get good quality seed. Information on seed is very important for us. We also don't get enough information on fertilizer and pesticides (NW01).
- b. To us, information on modern agricultural techniques is very important. We would like to know how we can increase our yield per acre. Other important information that we need are seed, fertilizer and marketing. Without quality seed how can we produce a good crop. Information on irrigation practices are also important (NW02).
- c. We need every information on agriculture but the most important is modern technical knowledge on agriculture/cultivation. This will help to increase our production. We need information on seed, fertilizer and marketing as we have poor knowledge of quality seed, pure fertilizer and marketing facilities to sell our products with right price. Though we put less weight on marketing, sometimes it is very important to us. Generally we go not get information on marketing from any offices. Then we have to depend on neighbouring farmers and middle man. (NW03- **agriculture**).
- d. Production per acre is decreasing gradually, so we want to know more information on seed and fertilizer to increase crop production. We also need information on insecticides, soil fertility and irrigation process for different crops (NW04).
- e. This is a border village of Bangladesh and far away from Upazila headquarters. So it is difficult for us to visit DAE office. We mostly dependent on BS of DAE. The BS resides in our village. Unfortunately the poor farmer cannot contact him regularly. We have never been exposed to any training in agriculture – hence our very poor knowledge. We need information on quality seed and fertilizer. We generally use adulterated and poor quality fertilizer coming from India by the smugglers. (NW05).
- f. Farmers said that marketing information is very important for them to get a good price for their products. On the other hand, they lack knowledge on modern rice cultivation and quality seed. Finally they ranked seed as most important information need and then modern knowledge and marketing (NW06).
- g. We grow both rice and vegetables. But almost all farmers prefer to grow **vegetables** for its commercial value than rice. We need information on all aspects of vegetable cultivation, but the most important is quality seed. We buy seed imported by dealers or the companies, but we cannot expect that the seed will germinate properly. During peak season, the market is flooded with vegetable but the prices fall. Sometimes we even throw our unsold vegetables in the garbage. We need the right information about marketing. (NW07).
- h. Technical knowledge is the most important at every step in crop cultivation. We are women and heard that many modern technologies have evolved in rice cultivation but we don't know where we will get knowledge of modern rice cultivation. (NW08).
- i. We are growing rice with traditional knowledge; we don't have knowledge on modern rice cultivation. Sometimes we get information but it is very insignificant. Due to lack of information we are using wrong fertilizer and pesticides, which is dangerous for our health and damage rice. (NW09).
- j. We are suffering in every season from lack of quality seed. We buy seed from the local market and sometimes we are cheated by poor quality seed, which do not germinate properly. We need information on other issues too and to us information on fertilizer use, modern agricultural

- practices, insecticides, irrigation required for different crops and marketing are important. (NW10).
- k. Poor farmers in Bhadai village grow **tobacco** as a cash crop and they identified 5 information needs for tobacco cultivation. To us, sources of quality fertilizer, tobacco seed are very important. We are mostly cheated by adulterated and poor quality fertilizer, which hampers tobacco production seriously. (NW11).
 - l. We have poor knowledge on modern rice cultivation. None (GO/NGO) gives us information on modern rice cultivation technology. During last Aman season plant roots were affected by disease but we did not get any information how to solve those problems. (NW12).
 - m. If we don't get quality seed, we cannot produce good crop. For information our major concern is seed and then technical knowledge, fertilizer and pesticides. We are cheated by the dealers with adulterated fertilizers. We need information on "how to preserve seed". We also need training with practical demonstration. (NW13).
 - n. We are losing rice every season due to insect attack and disease. Many a time we get un-fill grains. So we would like to know how to save our crop from insects and diseases. (NW14).
 - o. We know good seed will give good crop but we don't get enough information on seed; e.g. which seed is good? How to identify good seed? How to preserve seed? Where to get quality seed? (NW15).
 - p. Our main need is seed. Next is fertilizer and pesticides. We (women) are responsible for preservation of seeds. Our husbands become angry if we cannot supply seed in good condition in the beginning of the season (NW16).
 - q. Want to know when to apply which fertilizer? What proportion? Also about which pesticide to use and how to regain fertility of land. (NW17).
 - r. We don't get information on cost of fertilizer in time and sources of quality seed and pure fertilizer. BS do not have contact with farmers. (NW18-**wheat**).
 - s. Need more information on rice cultivation techniques, as we did not receive any training on it. If we get this information, we can produce more rice. (NW19).
 - t. We have poor knowledge on seed. Where do you get quality seed? How to select HYV seed? How to know pure fertilizer? How to select right fertilizer for right crop? (NW20).
 - u. We are being fed with adulterated fertilizer, poor quality seed and adulterated insecticides. We want to learn about these 3 inputs. We need this information correctly on time. (NW21).
 - v. Farmers in this area face serious problems in selling **watermelon**. They earn more profit than rice if they can sell watermelon with right/high price during summer. Almost all farmers grow watermelon because of its economic value. (NW22)
 - w. Just from last 5-6 years, we have observed that soil fertility of our agricultural land is decreasing gradually. After using good seed, fertilizer and insecticides, we failed to grow desired quality of rice. We need information on where we can test our soil and get advice to improve it. (NW23).
 - x. Female and male farmers in this village grow **vegetables** throughout the year. We preserve seed from our own vegetable and buy from the market. But we do not have any idea about quality seed that germinate well. Therefore we need information on which season is best for which vegetable. (NW24).
 - y. No comments from group NW25 (**wheat**).

- z. We are to buy seedling by Tk14/15 per 100. We don't know where to get quality seed. We need information on fertilizer, vitamin (for soil fertility), insecticide and irrigation techniques. (NW26-**wheat**).
- aa. We grow **potatoes** commercially and keep it in the local cold storage. We also get credit from the cold storage but during peak season we cannot sell it with proper price because we don't know which market is good for potato selling. (NW27).
- bb. We need to know how to preserve good seed, varieties of seed and right use of seed plantation. (NW28).
- cc. Farmers in this area grow wheat but they face problems in selling wheat. They don't have any correct information in which market they can sell **wheat** with right price. (NW29).
- dd. While we grow **potato** it was attacked by disease (black spot). Asked BS but he could not give us any information. Need this information urgently. We also want to know how the fertility of soil should be increased. (NW30).
- ee. We need more information on **maize** seed, fertilizer to be used in maize field, machine to thresh maize, pesticides to be used in maize field and marketing of maize. (NW31).
- ff. We are suffering seriously for lack of quality seed. We need information on quality seed, HYV seed, seed preservation and seedling. (NW32).

Appendix 5 Comments made by group participants (page 4 of de-briefing doc.)

Comments made by group participants during discussion on gaps in information needs (page 4 of de-briefing document)

- a. *We buy seed from dealers but we cannot expect that the seed will germinate properly;*
- b. *We don't have knowledge about quality seed, or high yielding varieties, so we cannot buy good seed – every dealer says they are selling good seed, and we are confused.*
- c. *We are not confident about the information from the dealers because dealers try to motivate illiterate farmers to sell their goods.*
- d. *We hear that government is providing training to farmers (women) but we don't know whom to contact (2 groups).*
- e. *We don't know the exact price of seed so sometimes we are paying more;*
- f. *Only few farmers have information on good seed and seed preservation, but most of us don't have the information;*
- g. *DAE:BS can provide them better information if they are well-trained. They also couldn't help to protect from black spot disease (see NW30).*
- h. *They have no idea about DAE and never saw the BS (female group);*
- i. *We do not get the right information for marketing of potato. We know that bank provides loan for potato cultivation but we don't know about the amount of loan, interest rate, etc. Bank deals with big farmers only.*
- j. *Our neighbouring farmers generally provide us information but in most cases these are not complete and sometimes they don't give us information through jealousy.*
- k. *There is no rest for our cultivable land. Our land should get some rest. We need advice and information on what to do with our land.*
- l. *Farmers producing watermelon are mostly dependent on transport broker, truck drivers and hotel for getting marketing information. Truck driver knows it better where watermelon has good demand. Hotel owners know it better which driver and businessman resides where. Still farmers do not get proper information.*
- m. *When BS gives us information on seed we try to go to procure seed but because of our financial problem we cannot go too far. BS told us that BADC sell seeds but cannot buy it, because they do not sell small quantity to small farmers (NW20).*
- n. *Neighbouring farmers cannot give us exact information.*
- o. *Farmers do not get information/support from Union Parishad (UP). Publicity Dept (mass media) do not visit remote area and never came to this village.*
- p. *We would like to get information from the field staff of DAE. They should visit our plot, listen to our problems and give right information to solve these problems. Now we are dependent on good neighbouring farmers.*
- q. *Know about BS, but no one has seen him in the village (2 groups). One of these groups said – still we prefer DAE as the information source since we don't know others.*
- r. *A newly formed RDRS group said they have very few information about other organization because they are a new group.*

- s. *We have poor knowledge of seed preservation and how to maintain quality of seed. We cannot go out and discuss with others and depend on our husbands to collect information from dealers and others including RDRS (this from an RDRS targeted gp).*
- t. *We don't have any information on sources of quality fertilizer and use of fertilizer in tobacco cultivation. We think farmers who grow tobacco for long time can give us information. We also expect information from the Agriculture office (DAE) and authentic dealers.*
- u. *We don't know the exact price of seed so sometime we are paying more.*
- v. *Poor farmers are restricted in using information by some corrupted officials.*
- w. *At present we are getting some information from RDRS and farmers on quality seed, use of fertilizer and sources of training. But we need more information, present information is not enough.*
- x. *Quality of "East-West seed Bangladesh" is very good but they do not purchase seed from the farmers. Only farmers buy seed from them. Sometime it became scarce in the market. Farmers learn from each other. They know that govt. purchases rice from the farmers with fare price but the poor farmers do not get any scope to sell their rice. The officer ask for bribe if they are interested to sell.*
- y. *We have no knowledge which seed is good in quality. Sometimes we are misguided by the dealers and seed company. We heard that many new rice varieties are available that gives high yield but we have no information on the sources of new varieties. We need training information. Without training we cannot produce quality rice. For information on rice presently we are dependent on neighbouring farmers. Sometime we get information from DAE through demonstration plot and radio broadcast.*
- z. *From a (control) group where about $\frac{3}{4}$ of the group said they did not receive information: We get most of the information from BS of DAE. In addition, we get information from the field staff and group members of RDRS. We have good relationship with both BS and field staff of RDRS. We also get information from Bangladesh Krishi Bank while we go to bank for getting loan on agriculture. Local BADC officer sometimes gives us information on seed. UP informs us while govt. decides to buy paddy from the farmers who sell seed. We get very few information from the staff of CKF(NGO) and very irregular.*
- aa. *Again from a (RDRS) group where about $\frac{3}{4}$ of the gp said they did not get information about seed preservation and seed type (but about $\frac{1}{2}$ said they had received info about seedlings: We get information on seed preservation, quality of seed, and seedling process. If we fail to select good quality seed we will not get desired production. We are getting information from DAE and expecting that they will provide information regularly. We feel confident in getting information from our neighbouring farmer. RDRS staff provide us some information but that is not adequate. We get some information from the dealers but mostly on seed of different companies.*
- bb. *Being members of RDRS we have regular access to information through field staff. We expect more information from DAE as they are the main authority for providing correct information. We know that DAE provide training to contact farmers but we don't know about other organizations that provide any training to farmers. We get information on training from experienced farmers who already received training. Book and handouts on training must be available from DAE, RDRS and government publications.*
- cc. *We get training from RDRS field staff as he visits house to house and we get scope to ask questions directly to get any information.*
- dd. *Some said that they have information but not full (partial). We don't go out to gather information as our husband generally has contact with different offices and go to the market for collecting information. (see similar remark made before). We know only agriculture office and RDRS but we have never visited those offices. We get many information from our neighbouring farmers.*

Appendix 6 Comments made by group participants (page 5 of de-briefing doc.)

Comments made by group participants during discussion on information channels (page 5 of de-briefing document)

- a. *We get information through 6 different channels but all are not equally effective and important for us (3 groups).*
- b. *Direct contact is our main information channel though we expect that field staff of DAE and RDRS should provide maximum information.*
- c. *We like to know all our necessary information through training and practical demonstration.*
- d. *From groups that did not receive any information: No linkages with other stakeholders of agriculture (NW29). Have no idea about different sources of information (NW11). (Note: NW 30, despite having said they received no information to Q3., was one group included under 1st bullet above).*
- e. *We discuss with local farmers and field staff to get information.*
- f. *We listen to radio to learn about many new things and sometimes govt. do miking.*
- g. *Direct contact is always good to get right information.*
- h. *DAE office sometimes do miking to give information on an important issue, e.g. selling of seeds during crisis and purchasing paddy at a fair price.*
- i. *Also we get information by discussing with other farmers.*
- j. *Personal contact is good for us to get information – we can ask questions.*
- k. *TV explains only once and all of us do not have TV.*
- l. *Radio broadcast information is about agriculture in general but not on vegetables.*
- m. *Most of us cannot read newspaper.*
- n. *Field staff can explain to us again and again.*
- o. *Jute Research Centre provided training for some selected farmers.*
- p. *We believe we can get much information if concerned field staffs visit us regularly, or we can discuss with the officials or attend training organized by different offices.*
- q. *Personal contact (with farmers, truck drivers, hotel, big businessman) is the main information channel for us.*
- r. *On the other hand we use mobile phone to get information from distant place.*
- s. *BS of DAE, radio and TV give very little information and which is not useful for us.*
- t. *We get information through four different channels but we feel discussion with others and training is very important for us.*
- u. *We get information from BS while he visits our village.*
- v. *We can listen to radio and get much information.*

- w. *Miking is done once and suddenly. (This bullet and the 2 above were given by an illiterate (1 had class 6 education – others none) female (RDRS) group. To previous question, only 6 said they had received info before (out of 14) on seed type, but most had not received info on seed quality or planting).*
- x. *Our husband and son attended training in RDRS. We got some information from them.*
- y. *Farmers generally listen to radio.*
- z. *Only 2 TVs in village. No electricity.*
- aa. *Newspaper are not available here. Sometimes some men bring old newspaper.*
- bb. *Out of 5 channels we prefer discussion. We can get many information through discussion with farmers and agriculture officers.*
- cc. *We get information quickly when our husband communicate with others.*
- dd. *Discussion with the neighbouring farmers is the main information channel (2 groups).*
- ee. *We get information from dealers and other farmers through our husband.*
- ff. *Sometimes we listen to radio but some of the languages are not understandable to us.*
- gg. *We get most information from the field staff during meeting.*
- hh. *In addition, we get information through radio, TV, posters and discussion with different officers.*
- ii. *Other farmers get information from us while they found good crop in the field.*
- jj. *After receiving the information, farmers cannot use those information as they don't have cash/money.*
- kk. *Researchers are not available in time.*
- ll. *We get maximum information from the field visit of RDRS staff.*
- mm. *During Adult Education program we got some information on rice cultivation (e.g. good seed gives good paddy). All information were provided through picture in the book.*
- nn. *We can get information from radio but there is no scope for asking questions.*
- oo. *We get information from farmers, seed company, dealers, vendors, through personal contact visiting the shop, demonstration plot/field.*
- pp. *DAE and RDRS are next to Seed Company. Field staffs of DAE & RDRS give us information.*
- qq. *We also disseminate information to other farmers through discussion and they visit our demonstration plot. (This bullet and the 2 above are from a (RDRS) group involved with an external project on crop diversification).*
- rr. *Sometimes after showing the demonstration plot farmers feel interest to know how to grow good crops and then try to contact with the respective farmers/DAE/BS office.*
- ss. *Exhibition fields of successful farmers have been displayed to other farmers with the help of BS (DAE).*
- tt. *We get information through 5 channels but we prefer field staff (BS of DAE) and other NGO staff as authentic information channels.*

- uu. We get information through discussion with BS of DAE, field staff of RDRS (irregular and few).*
- vv. Posters also displayed by DAE.*
- ww. RDRS showed documentary film on agriculture.*
- xx. We listen to radio programme and watch TV (we don't have) in the tea stall.*
- yy. We observe good crop field of other farmers and discuss with them.*
- zz. RDRS staff and DAE BS provide us information through discussion.*
- aaa. We also get information through newspapers, radio, TV and personal communication.*
- bbb. Other farmers get information from us during cultivation. If they observe good yield then they come to us to know about the process of cultivation and sources of good seed and fertilizer.*
- ccc. We get most of the information through discussion with neighbouring farmers and dealers. Our husband visits markets and discuss with dealers.*
- ddd. RDRS provide information through posters, conducting meetings. Field staff visits our Samity regularly.*
- eee. During meeting we discuss many issues and collect information.*
- fff. We also pass information to other interested farmers through informal discussion.*
- ggg. Though farmers prefer poster, many of them cannot read or write.*
- hhh. The literate farmers help others to understand the posters by reading out.*

Appendix 7 Comments made by group participants (page 6 of de-briefing doc.)

Comments made by group participants during discussion on preference for different information channels (page 6 of de-briefing document)

NW01 – Farmers considered “staff” (agriculture staff) as the main media of information because he/she visited the area, talked with farmers and give advice instantly. *(Note: Pair wise ranking of “staff” with “contact with office” gave the latter as the preferred choice – rather contradicting this statement).* We don’t have any TV. We don’t understand the language of TV clearly and no scope to ask questions. Everyone cannot read newspaper and it is costly. Most of us have radio - we listen to radio program. Newspaper is permanent and some of our husbands can read it. Radio is available in every house. As farmers, we have some previous knowledge and skills on agriculture.

NW02 – From facilitator: Meeting and Field Officer both got 2 points. Participants prioritized Field Officer than Meeting because FO can visit every house to provide information. *(Note: As in NW01, this is contradictory to results of the pair wise ranking which showed that when meeting and FO were compared, they preferred meeting. Farmers also get much information during monthly meeting. In the meeting generally field staff and all members present and staff provides information on behalf of the organization. Poster is also good but sometimes they cannot understand the message of the posters. (Note: In pair wise ranking, poster is preferred to meeting, and meeting is preferred to FO. But in the end, it is FO that they seem to favour!).*

NW03 – We generally prefer field worker as our main information channel. Field worker is available in the village and we have scope to discuss with him. We also communicate with office to get more information. We listen to radio, but only broadcasting from Rangpur Radio Station is understandable. We don’t have TV, still we watch TV in the tea stall in the local market.

NW04 – We always prefer BS of DAE and field staff of RDRS as we get scope to discuss with them and ask questions to get more information. Verbal discussion with farmers, officials and staff of different offices helps us to get information in time. Though most of us don’t have TV but we get more information on agriculture by watching TV in the tea stall. Sometimes RDRS and other NGO show documentary film in village, where both men-women and children and join and watch film.

NW05 – (Group ranked FO highest, then film) FO/BS only gives priority to the rich farmers. General farmers do not even know what BS is – still we have no other alternative. Few years back one NGO (or Govt – unsure) came here and showed some documentary films on agriculture. We enjoyed those films and learned many things. Women also enjoyed with us. As information we put stress on visit of BS and NGO staff and show film on a regular basis.

NW06 – Signboard and discussion got equal votes but participants emphasized discussion as they have more scope to know through this process. *(Note: Ranking of sign board with discussion gave a preference for signboard!).* Through discussion they can exchange information and ask questions to clarify many unclear issues. They also get more information by visiting demonstration plot. Though they put “training” as another important information channel, they have never received training. They hope that they will be able to learn more and get more information through training.

NW07 – We think that personal contact is the best way of getting information. People can explain to us the good and the bad and provide us with right information in time. Field worker of RDRS and DAE also give us information. At present they are our secondary sources of information. Seed Company (East-West Seed Company) is playing the key role in providing information. The representative of the company came to us to explain everything related to seed and sources. But the problem is that they are always try to sell their products.

NW08 – If farmers are able to know crops cultivation through field visit of staff it will be more fruitful for them. Through other media it is not possible to ask any questions but in the verbal discussion farmers get scope for this.

NW09 – Newspaper cannot be read by everyone. It is also not available. To buy a newspaper they need money. In their village there is only two TVs, whereas total population is 1000. Only few families have radio, so they think that communication with the DAE office is more effective. Farmers prefer poster because it is free of cost. Moreover, everybody cannot read the magazine but poster information is easily communicated. Miking (the most preferred choice in this group) is more suitable due to everybody being able to hear and easily communicated.

NW10 – Reasons of giving more vote to field staff: they are always available in the village. We can discuss with them. They visit our field and give necessary information and advice. They are more practical in providing information.

NW11 – All farmers cannot read the newspaper but miking (the second choice) is easily understandable to them. They prefer miking more than TV and radio because everyone haven't those. Between newspaper and TV, farmers prefer TV because through TV they directly seen the agricultural demonstration. But all farmers said direct contact is the better to get any information.

NW12 – We have no idea about any field staff of GO/NGO. Our main information channel is discussions with neighbouring farmers and dealers. Radio is the alternative source.

NW13 – Discussion with other farmers is the best way to be informed. Documentary Film – once a year. We also prefer radio programme as we get many information and government decisions. Field staff also important for us as they visit our village, attend group meetings and give us many information and knowledge.

NW14 – It is better if our husband communicate with others. In that case we get complete information. It is much better than field staffs visit (Group most preferred "Communication"). We do not understand language used in the TV. Even we cannot ask questions to the TV. Field staff is better than radio. Radio is better than TV as many poor farmers have radio.

NW15 – RDRS field staff visits only once a week and he become busy with all other project activities than agriculture. Farmer is our neighbour and we can discuss with him any time of the day. We sometimes listen to radio but because of our busyness with household work, we cannot listen to radio carefully. Sometimes we don't understand the language.

NW16 – We get many information from neighbouring farmers. Listening to radio is good but we have no time. Very few families have TV.

NW17 – We prefer discussion because we can collect many information if our husband visits office or field staff visits our field.

NW18 – Farmers prefer radio because they generally listen to radio at night time. They also prefer personal contact with dealer, other farmer. But they complain about BS(DAE). BS do not visit their village and only keep contact with rich farmers.

NW19 – We can learn more practical knowledge from training. Don't have time to watch TV.

NW20 – We prefer personal contact because we can ask many questions to clarify ourselves. Request concerned person to visit our field and give us advice.

NW21 – We prefer training because during training we get scope to know more about agriculture. We also prefer discussion as we can share information through discussion. Field staff visit only once a week.

NW22 – Compared to different information channels, neighbouring good farmers are our best information channels. We keep regular contact with farmers (exchange information). To get clear market information we visit big businessmen who stay in the local residential hotels. They also visit our field.

NW23 – Group gave 3 points to 3 different media. But they prioritized training than the other two because they think they can learn more details through training sessions.

NW24 – Participants in this group were well aware of their information need. Being women of very remote border belt village they are interested to get more information through different channels.

NW25 –

NW26 - We prefer discussion with people (farmers and officials) and visit of field staff to get information.

NW27 – Direct contact with the farmers and office staff is always good to get information. We also prefer miking so that we can listen from our home. Sometime we listen to radio broadcast but sometimes cannot understand the language. We don't have TV but sometime we watch TV in the neighbouring rich people's house.

NW28 – Through discussion we can exchange information that is why we prefer discussions. We get many new information from radio program. But sometime we need some new information, which we don't get from radio programme. Field staff of RDRS sometimes provide us information but that is not enough. Miking is very rare in our village (*Note: Miking got no votes at all*).

NW29 – Preference ranking not done as group had no clear idea about different information channels. But they gave vote by raising their hands – 7 votes for publicity by posters; 5 for visit by field staff; 4 for publicity by miking. They preferred posters because literate persons can read out posters for others; everyone understands pictures of posters; posters always stay in front of them and they can remember the message of the posters.

NW30 – We think we can learn many things if some organizations came forward to give practical training.

NW31 – We get information from the RDRS field staff though we are not the members of RDRS. We also get information from neighbouring farmers through discussions. We like TV as we can see/watch how to do what. We listen to radio but we do not like it as we cannot ask questions. We cannot read newspapers, it's costly and not available in the village.

NW32 – We think that we will get many information when we discuss with farmers, field staff (GO/NGO), and dealers. We listen to radio program on agriculture. Field staff also provide us information sometime. We get information while we attend any meeting on agriculture. We know many things if any company do their publicity. As we don't have TV, so we do not get any information through TV.