

Seed information and communication networks of male and female farmers: A micro level study in Bangladesh

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Abstract: *Challenges in getting across the farming information equally to both men and women in many developing countries are partly due to the inadequate attention to gender sensitive information and communication network. This study aimed to understand crop seed information and communication network pattern of men and women in a north-western village in Bangladesh. A sociometric survey was conducted using a 'representative enact system of sampling' encompassing each household. Out of 128 households of which farming being the main source of livelihoods 75 were selected randomly. Two individuals (usually husband and wife), who are the decision-making unit in the household, were interviewed. Data were analyzed using descriptive and chi-square statistic. The findings indicate that women farmers have comparatively lower communication exposure than men. Women have intensive contact with sources only within their neighborhoods. Formal sources of information (extension agent and NGO worker) have fewer ties with both men and women and their ties are negligible with the women farmers. Albeit all possible patterns of network exist (e.g. male-male; male-female; female-male; female-female) female-male and female-female networks have more connectedness compared to male-male and male-female networks. Women are more likely to play important roles as nodal farmers in a community since crop seed information may flow from women to men as well as to other women effectively and in a speedy manner. We argued that locally made videos could be an important communication tool, when used either in the mass media or in the group learning sessions, to complement formal sources and to reach out women farmers in wider geographical area. The outcome will also depend on the types of intermediaries and their competencies to target men and women clients considering clique in the network and gender patterns of communication.*

Keywords: *Information, network, gender, crop seed, Bangladesh*

Introduction

Seeds are a key input for agriculture and account for a substantial portion of crop productivity. Seeds are also one of the vehicles through which research results are transmitted from science to farmers. The quantity and quality of seeds are always paramount considerations for agricultural growth and development in developing countries, like Bangladesh. For instance, quality rice seeds account for about 15-25 percent of rice productivity in this country (Van Mele *et al.*, 2005). Nevertheless, the poor performance of seed production and distribution is one of the constraints to achieve sustainable agricultural development in many least developed countries (World Bank, 2007).

There are different choices and roles of men and women farmers in the seed system of a country. In many countries it is evident that men perform cash crop cultivation while women perform subsistence crop cultivation. According to the Food and Agriculture Organization (FAO), women produce more than 50 percent of the total food grains of the world (FAO, 1995, FAO, 1998). The gendered differentiated breakdown of labour shows that women participate more than men in all major agricultural activities and carry out almost all the post harvest activities (World Bank, 2009). As the main actors in harvesting and post-harvest activities, women manage the local seed systems, particularly the seeds of food crops (FAO, 2006; World Bank, 2009). Women's role in carefully managing seed stocks and maximizing the number of crops grown, helps to maintain seed security

e.g. in southern India and Africa (Pionetti, 2006; FAO, 2007). Many studies all around the world (Jiggins, 1993; Martin & Adams, 1987; Joshi *et al.*, 1995) indicated women's role in in-situ conservation, production and exchange of seed and planting materials through kinship groups, informal work groups and friendship networks. Women have rich knowledge and skills in seed production and processing, which can contribute to the sustainable seed system development also in Bangladesh (Van Mele, 2006; Van Mele *et al.*, 2005; FAO, 1998; Jaim & Rahman, 1998).

Although men and women have the same potential as clients and change agents in agricultural development (Huque & Chowdhury, 2006), contributions of women are usually undervalued as '*helping out*' due to gender blindness and invisibility (UNIFEM, 1995; FAO, 1998; World Bank, 2009). Women's lack of access to productive resources such as lands, credits, labour and organizations (Vega, 2002; Al-amin *et al.*, 2004; Gupta, 1993) are the important impediments for gender equality and development. Despite many initiatives to induce effective communication and diffusion of information among clients' systems, discrimination between men and women in information access and education prevail pervasively across South Asia and Bangladesh (Ramachandran, 2008; Parveen, 2005).

Differences exist between women and men regarding patterns of their networks through which agricultural information and materials flow (Subedi & Garforth, 1996). Agricultural extension services do not pay the required attention to gender sensitive communication networks in developing countries (Jiggins, 1993). It would be important that men and women farmers have equal opportunities to be exposed to different communication sources, but there is a lack of gender disaggregate data about role and preferences of women in agricultural activities in Bangladesh (Al-amin *et al.*, 2004). Little comparative research evidence is available about male and female farmers' crop seed information and communication networks. Understanding communication networks from a gender perspective bears significant importance for undertaking interventions regarding local seed production and processing. The paucity of information and policy initiatives is one of the important obstacles to stimulate a process of women empowerment in agriculture in many developing countries' contexts (Quisumbing & Meinzen-Dick, 2009; World Bank, 2009). It follows that more micro studies are needed to capture women's roles and needs in agriculture and other development issues.

In this study, we intended to understand male and female farmers' communication and information networks of local crop seed messages. The study aimed at fulfilling the following specific objectives:

- i) understanding communication exposure of male and female farmers;
- ii) understanding communication networks and structures of male and female farmers;
- iii) assessing whether the patterns differ between them;

Research Methods

The study was conducted in Maria village (Sherpur sub-district of Bogra) in NW Bangladesh. Since Maria village is known as a model village for rice seed production and post-harvest activities in Bangladesh, the village was selected purposively for this study. Adopted from Subedi & Garforth (1996) a sociometric survey was conducted using a 'representative enact system of sampling' encompassing each household. In this sampling system, individuals who meet certain criteria are sampled (Rogers & Kincaid, 1981). A list of all households was collected from the available 'voting list' used for political elections. This was then verified with a group of key informants for necessary correction. There were 128 households of which farming being the major source of livelihoods in this village. Considering available time, resources, and willingness of the respondents to take part in the interview 75 households were included for this study. Two individuals (husband and wife), who are the decision-making unit in the household, were selected as respondents. In total 75 female and 75 male respondents were interviewed for this study. Most of the respondents (57%) were between 33 and 50 years of age and a substantial proportion (60%) among them were illiterate. Marginal households with less than 0.5 acres were dominant (40%) in the locality. Most households (56%) had a family of less than five members.

Farmers' communication exposure

In this study communication exposure means whether and how frequently a respondent contact a source for necessary crop seed related information. We adopted the procedure that Subedi & Garforth (1996) followed to determine the extent of communication exposure of men and women for agricultural information in Nepal. In order to find out respondents' communication exposure for crop seed production and processing matters, several formal and informal communication sources were considered and categorized (interpersonal, group and mass communication method).

The category "*Interpersonal*" in this context means face-to-face communication between a source and a receiver. Under the interpersonal category we considered several formal sources e.g. the Sub Assistant Agriculture Officer (SAAO), who is usually known as extension worker (EW) and who is the immediate external source of farming information (works at the village level). Farmers may also contact directly the extension officer (EO) at the sub-district level (called Upazilla). The field workers (FW NGO) of non government organizations that deal with seed system are another interpersonal source. Neighbours, family members and local seed dealers (village/union level) were informal sources considered for this study and category.

Group activities for the dissemination of information (e.g. discussions) were considered as communication sources under the category "group communication". Printed material (leaflets, and posters), radio and television (TV) are three sources considered under the category "mass communication".

Respondents were asked about their contacts with the communication sources. For each source they were asked how frequently (very often, often, seldom and rare or not at all) they contacted or used the sources. If they contacted or used the sources 1-2 times a week the frequency was considered as very often and given a score of 3. Similarly, frequencies of contact or use of a source as 1-2 time a month, 1-2 times a cropping season, and 1-2 times a year or none were considered as *often*, *seldom* and *rare or not at all* and scores of 2, 1 and 0 were given respectively. The scores computed for each source were added together to obtain communication exposure scores under each category. Scores of a respondent under *interpersonal*, *group* and *mass* methods could range from 0 to 12, 0 to 6 and 0 to 9 respectively. Overall communication scores of a respondent could range from 0 to 33. The scores were categorized under two categories: *high* and *low*. The cut-point between *high* and *low* was determined based on the average communication exposure scores under the respective methods.

Farmers' communication network

Farmers' communication networks were analyzed in respect of their discussion and consultation patterns regarding crop seed production practices. Cereal, pulse, oil and vegetable crop seeds were considered that farmers used to produce and store. Farmers were asked two different sociometric questions: '*with whom did you discuss matters related to crop seed production, processing and storage in this village during last one year?*' and '*with whom did you consult about matters related to crop seed production, processing and storage in this village during last one year?*'. '*Discussion*' means interaction, whether as a process of information seeking or general communication on a more regular basis, between individuals about different aspects of crop seed production, processing and storage, while '*consultation*' means purposive and need based information seeking on specific aspect(s) of the matter (Subedi & Garforth, 1996).

In order to find out which gender category is likely to have a greater flow of information, a comparison was made based on the density or connectedness. Density represents as the proportion of actual ties to number of possible ties in the system (Scott, 2000; Rogers & Kincaid, 1981). It indicates the degree to which a member in a social system is linked to other individuals in the system (Rogers & Kincaid, 1981: 175). The more number of the nodes (members) is connected the more dense will be the system and hence the information will flow more quickly (Scott, 2000). The density measure of a socio-centric network is as follows (Subedi & Garforth, 1996).

$$\text{Density} = \frac{\text{Number of actual communication links in a system}}{\text{Number of possible communication links in a system}}$$

Data was collected using a structured interview schedule. The draft schedule was pre-tested among 10 respondents. Based on the result of the pre-test necessary modifications were made. Data was coded and compiled in a MS EXCEL (Microsoft, 2003) spread sheet. In order to understand comparative communication exposures and communication network patterns between male and female respondents descriptive and chi-square statistics were computed using the software Statistical Package for Social Sciences (SPSS, version 15).

Results

Farmers' Communication exposure

Male farmers had significantly higher overall communication exposure than female farmers (Table 1, last column). Male respondents do have a highly significant higher proportion of interpersonal communication with formal and informal sources than female respondents. A difference (not significant) between male and female respondents was also observed for group communication and mass communication sources.

Table 1. Respondent's overall communication score by gender (n=150).

| Gender | Interpersonal Communication score* | | Group communication score* | | Mass communication score* | | Overall communication score* | |
|--------|------------------------------------|----------------|-------------------------------------|----------------|--------------------------------------|----------------|-------------------------------------|----------------|
| | Low (≤ 6) | High (> 6) | Low (≤ 1) | High (> 1) | Low (≤ 2) | High (> 2) | Low (≤ 9) | High (> 9) |
| Male | 21 (26)** | 54 (77) | 56 (47) | 19 (61) | 49 (46) | 26 (59) | 29 (32) | 46 (79) |
| Female | 59 (74) | 16 (23) | 63 (53) | 12 (39) | 57 (54) | 18 (41) | 63 (68) | 12 (21) |
| | $\chi^2 = 38.678$ df=1, p<0.01 | | $\chi^2 = 1.992$ d.f.=1, p<0.158 | | $\chi^2 = 2.058$ d.f. =1, p<0.151 | | $\chi^2 = 32.496$ d.f.=1, p<0.01 | |

*The cut point between low and high is determined based on the average score. Low is equal or less than the average score and High is more than the average score under the respective categories.

** Figures in the parenthesis are the percentage of the total respondents having low and high communication exposure under each category.

A significantly higher proportion of male than female respondents reported having contact (contact or use or listen) with extension workers, extension officers, neighbours, seed dealers, demonstrations, printed material and radio (Table 2), except non significant differences for NGO field worker and group discussion. On the other hand, a higher proportion of female respondents reported having watched TV and contacted with family member than male respondents. For television the observation is statistically significant while it is not significant for family members.

Table 2. Communication exposure by gender and source (n=150).

| Respondent category | Percentage of respondents reporting contact/ use/ listen to communication sources | | | | | | | | | | | |
|---------------------|---|-------|--------|-----------|---------------|-------------|---------------------|------------------|--------------------|-------|-------|--|
| | Interpersonal communication | | | | | | Group communication | | Mass communication | | | |
| | EW | EO | NGO FW | Neighbour | Family member | Seed Dealer | Demonstration | Group Discussion | Print material | Radio | TV | |
| Male (n=75)* | 34.7 | 17.3 | 34.7 | 96 | 68 | 56 | 46.7 | 32 | 45.3 | 50.7 | 20 | |
| Female (n=75)* | 1.3 | 0 | 21.3 | 77.3 | 77.3 | 16 | 14.7 | 22.7 | 18.7 | 32 | 57.3 | |
| Total % (n=150)* | 27 | 13 | 28 | 86.7 | 72.7 | 54 | 30.7 | 27.3 | 32 | 41.3 | 38.7 | |
| χ^2 | 28.2 | 14.2 | 3.3 | 11.3 | 1.6 | 26.0 | 18.0 | 1.6 | 12.2 | 5.3 | 22.0 | |
| df | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| p | <0.01 | <0.01 | <0.06 | <0.001 | <0.20 | <0.01 | <0.01 | <0.20 | <0.01 | <0.02 | <0.01 | |

EW =Extension worker; EO= Extension officer; NGO FW= Field worker of NGO; * Respondent mention more than one source

The results indicate that male farmers might benefit more from formal sources than female farmers. It seems that extension agents of the public sector institutions (extension worker of the Department of Agriculture Extension) might have less contact with female clients compared to NGOs. Neither of the female respondents reported having contact with the extension officer at sub-district level. Women have comparatively equal access to informal sources, despite the fact that a higher proportion of male respondents reported contact with neighbours. Male and female differed in their access to written, group and mass communication sources. Male might get more information from the radio and female might get more information from the television. Traditionally, male work at agricultural plots in Bangladesh. For male farmers radio is a better mean to listen to agricultural and seed related information while working at the plots. On the other hand, female usually remain within the periphery of the households or village and, if a household owns a TV, they can attend the agricultural programmes in the TV regularly. Male respondent get more information from written sources due to high literacy and more access to training, demonstrations (result and method) and other formal extension events conducted by the department of agriculture extension (DAE). DAE used to conduct several result demonstrations in every cropping season to provide practical information on production and post-harvest of cereal, oilseed, pulse and vegetable seeds to the farmers. Male farmers might get more information from this source, while information derived from the experiential activities of demonstrations might disseminate to female slowly.

Women reported difficulties to get information from the interpersonal sources and group based activities such as demonstrations because of the social and cultural barriers on their mobility to beyond the village. Usually, demonstrations are organized near to highways or main roads where women can hardly attend. Mass media i.e. television played important roles to complement the roles of formal interpersonal sources. This is noteworthy to mention that rice seed health videos¹ have been broadcasted by the Bangladesh Television for the last two years. In an informal interview 12 out of 15 women mentioned that they watched rice seed videos several times in the television, whereas 2 out of 10 men mentioned that they have watched the videos. This is indicative that videos might be watched by more female than male in this village. Women in the households having a TV reported that they and their neighbour could easily watch and learn from the rice seed health videos telecasted by the Mati-O-Manus (Human and soils) programme of Bangladesh Television. Women mentioned that the videos were very entertaining. Watching the fellow women explaining local knowledge and skill of rice seed production and post harvest was very interesting, as per the women respondents, since the videos created stimulus for learning and further knowledge seeking.

Information and communication network patterns of male and female farmers

81.3 (122) percent of the respondents (55 male and 67 female) reported discussion (Table 3 & 4), and 75.3 percent (113, 53 male and 60 female, Table 5 & 6) reported consultation on crop seed matters. All the farmers had at least either discussion or consultation. The findings indicate that farmers in this village have a strong interest in seed production and processing matters. However, the size of the network differs between discussion and consultation of the topic. Not all the farmers discussed the issue and sought advice on specific aspects of crop seed production, processing and storage activities.

Table 3. Discussion of the respondents with male communication counterparts (n = 150).

| Sex of the respondents involved in discussion | Discussion with male (%) | | |
|---|--------------------------|-----------|--------------------|
| | Yes | No | Row total (number) |
| Male | 7.3* (4)** | 92.7 (51) | 55 |
| Female | 28.4 (19) | 71.6 (48) | 67 |
| Column total (number) | 23 | 99 | 122 |

$\chi^2=8.77, p<0.003, df=1$

* Percentage is calculated in terms of the total respondents of either sex (row total) mentioned having a discussion with male

**Figures in the parenthesis indicate number

¹ Seven rice seed health videos were developed by the Rural Development Academy. The videos were developed under Good Seed Initiative Project managed by CABI bioscience during 2005-2007. Selected farmers in this village were brought under video production and facilitated group discussion using video.

Table 4. Discussion of the respondents with female communication counterparts (n = 150).

| Sex of the respondents involved in discussion | Discussion with female (%) | | |
|---|----------------------------|-----------|--------------------|
| | Yes | No | Row total (number) |
| Male | 90.9* (50)** | 9.1 (5) | 55 |
| Female | 71.6 (48) | 28.4 (19) | 67 |
| Column total (number) | 98 | 24 | 122 |

$$\chi^2=7.096, p<0.01, df=1$$

* Percentage is calculated in terms of the total respondents of either sex (row total) mentioned having a discussion with female

**Figures in the parenthesis indicate number

High significant differences exist between male and female farmers for their discussion with both male and female counterparts for communication (Table 3 & 4). Male and female farmers do not differ significantly in their consultation with males (Table 5) while a very high difference exists between in their consultation with females (Table 6). It is apparent that routine communication and specific consultation of both male and female farmers on crop seed related matters exist more with female than male counterparts for communication. Female farmers are more likely to discuss and consult with both males and females. But male farmers are more likely to discuss and consult with females than males.

Table 5. Consultation of the respondents with male communication counterparts (n = 150).

| Sex of the respondents involved in consultation | Consultation with male (%) | | |
|---|----------------------------|-----------|-----------|
| | Yes | No | Row total |
| Male | 26.4* (14)** | 73.6 (39) | 53 |
| Female | 43.3 (26) | 56.7 (34) | 60 |
| Column total | 40 | 73 | 113 |

$$\chi^2=3.522, p<0.06, df=1$$

* Percentage is calculated in terms of the total respondents of either sex (row total) mentioned having a consultation with male

**Figures in the parenthesis indicate number

Table 6. Consultation of the respondents with female.

| Sex of the respondents involved in consultation | Consultation with female (%) | | |
|---|------------------------------|-----------|-----------|
| | Yes | No | Row total |
| Male | 83* (44)** | 17 (9) | 53 |
| Female | 58.3 (35) | 41.7 (25) | 60 |
| Column total | 79 | 34 | 113 |

$$\chi^2=8.152, p<0.004, df=1$$

*Figures in the parenthesis indicate number

* Percentage is calculated in terms of the total respondents of either sex (row total) mentioned having a consultation with female

**Figures in the parenthesis indicate number

Female farmers consulted by male farmers were mostly within the same households or kinship, although some male farmers reported consultations with other females in the neighborhoods as well. Female farmers consulted males both within the same households and neighborhoods but few reported consultation outside these boundaries. These women are mostly household heads. In Bangladesh the households are usually male led, but there are few households where females are the household heads because of male migration or male working as labour outside the village or sub-district or district. In that case women need to consult or seek information from experienced male farmers working in adjacent farms or neighboring village. Few women among who reported contact with males and females, their consultation and discussion crossed beyond kinship or neighborhood boundaries to others in the social system. For men who reported contact with men, most of their consultation and discussion took place with the persons both within kinship or neighborhood and outside these boundaries.

Table 7. Density of male and female farmers' discussion and consultation network.

| Sex of the respondents | Density | |
|------------------------|----------------|-----------------|
| | Discussion | Consultation |
| Males | 55/2775=0.0198 | 53/2775= 0.0190 |
| Females | 67/2775=0.0241 | 60/2775=0.0216 |

Possible communication links $\{N \times (N-1) / 2\}$ for male and female 75 $(75-1) / 2 = 2775$

On the other hand, female farmers are more connected (Table 7) than male farmers in discussion as well as consultation networks. More information will flow through female to female or female to male networks than male to male or male to female networks. Higher levels of communication activities as reported by women reflects their greater involvements in seed production, processing and storage activities. It women are usually more involved in seed processing, post-harvest and storage activities. Female respondents indicated their interest in these activities. They try to discuss and know any issue that concerns seed production, post-harvest and storage.

Discussion and Conclusion

In order to reach out to women farmers who are usually isolated from the mainstream research and development network is a major concern worldwide. Several methods and approaches have been tried out to develop a gender sensitive communication strategy. Most if not all attempts were made with the assumption that information would flow to all male and female members of the social system. Many research and development programmes adopted communication strategies without looking into the network and communication patterns of women (World Bank, 2009).

The results of this study have indicated that women farmers have comparatively lower communication exposure than men. Women were dependent on family members and neighbours for information exchange, while men could get information from other local sources which are external to the social system (e.g. extension agent). This indicates women's limitation to go beyond specific social boundaries for need based information. In Bangladeshi Muslim communities, such as in this village, women are usually discouraged to move beyond the household and to work in the field (Hartman & Boyce, 1983). NGO field workers had some contact with women farmers. But extension agents of the public sector institutions had very negligible contact with women farmers. This might be due to the fact that most extension agents in developing Asian nations such as Bangladesh are men and multiple institutional and organizational bottlenecks exist for reaching out women farmers (Van den Ban & Samanta, 2006; Chowdhury, 2007). Considering significant differences between men and women in using written sources and low literacy level of the respondents, these are not preferable for providing crop seed message.

The study has provided empirical evidence about the gender based pattern of crop seed communication and information networks in the village studied. Four possible patterns of networks were observed: male-male; male-female; female-female and female-male. Male farmers had strong heterogeneous networks (male-female) while female had both strong homogenous (female-female) and heterogeneous networks (female-male) for discussion and consultation on crop seed production and post-harvest issues. Given the findings that men had high communication exposure to formal personal cosmopolite sources (agricultural extension worker, NGO field worker and seed dealers) and strong heterogeneous networks, one might contend that information would flow from men to women effectively. But field observations indicate that male farmers discussed and consulted women because most women members are usually known as experienced in post-harvest processing of crop seeds. Howard (2003) also observed that women are usually known as seed custodians in most developing societies. On the other hand, women were found to have communication links with men as well as women to a greater extent. Women's networks were found to have a higher level of connectedness than male networks. It can be argued that information may flow from women to men as well as to other women effectively and in a speedy manner.

The findings are contradictory to the findings of Subedi & Garforth (1996) who found that men had homogenous networks while women had both homogenous and heterogeneous networks for information exchange on maize cultivation in Nepal. Their analysis indicated that women had double disadvantages since information might not flow from male to female. They also found that men had more connectedness than female. Since maize is field crops male might be more involved in most of its cultivation practices. In our study female's connectedness was observed higher for seed related matters although the interaction was limited to personal localite sources. Considering possible consultation and discussion network of male and female it is apparent that women's network was limited to few personal sources within the boundary of social system while men had more diverse network sources. Although female had interest to go beyond their immediate social boundaries (family member and neighbour) to contact experience farmers for need based information (consultation) it might be constrained by different social barriers.

Several extension and communication reforms accentuating women farmers' right to agricultural information have been undertaken since 1990s in Bangladesh. The findings of our study support that women farmers still find it difficult to rip the benefit by accessing information. Considering male biasness and weak roles of the formal institutions (e.g. public extension services) as the intermediary sources in the women's network what would be the suitable extension strategy to reach out to both men and women farmers equally? To this issue, it is important that extension organizations target farmers within the clique of the networks based on either specific gender or on inter-gender categories. A clique is a set of actors in which every member is connected to every other and hence interact each other more frequently than with other members of the social system (Hanneman & Riddle, 2005; Rogers & Kincaid, 1981). There are limited numbers of women extension agents in the department of agriculture extension (DAE, 1999) and it may not always possible to contact directly women farmers due to social and cultural reasons. In that case, it is suggested to target men and women farmers who have strong links with women members in the neighborhoods. The results of our study show that neighbours and progressive farmers have strong roles as intermediary sources in the network of both male and female. These farmers can be termed as nodal farmers. Furthermore, information may quickly pass through the networks of female (female-female or female-male) compared to the networks of male (male-female or male-male). In a study in Bangladesh Huque *et al.* (2008) observed that male farmers usually treat key messages as farm secrets and do not share with the potential users. Therefore, it is likely that targeting women has more impacts on gender based seed information access than targeting men as nodal farmers in the community.

In response to the limitations of the extension agents and to target both men and women through face-to-face extension methods, group and mass methods are mostly suggested in the new extension policy of Bangladesh (DAE, 1999). But we have seen that group based activities have limitation for equal participation of men and women because of power and cultural hierarchy in a typical village in Bangladesh. Women are usually excluded from the group activities and discussion in Bangladesh (Nash & Bentley, 2003). It follows that group based events such as demonstration might not work well for reaching out to men and women farmers equally. On the other hand, the results of this study indicate that locally made rice seed videos are useful means to reach out more women farmers through mass media. Experiences, however, suggest that it may not always possible to get across the message to the intended audience by using video as a form of mass media (Lie & Mandler, 2009).

Recent studies have depicted that video can be used as a tool to complement roles of formal sources of information by reaching out more women in wider geographical locations (Van Mele *et al.*, 2005; Van Mele, 2006; Van Mele *et al.*, 2007; Van Mele *et al.*, 2009). Experiences on video-mediated group learning sessions to train rural men and women on improved rice parboiling innovations in the central Benin indicate that women in villages had an equal chance to watch the farmer-to-farmer video, confirming the democratic character of the learning sessions (Zossou *et al.*, 2009). With regard to the Bangladeshi rice seed videos Van Mele *et al.* (2010) observed that videos when shown to African women could mediate cultural limitations on communication, depicting potentialities to bridge farmers of the two continents. It follows that, if extension agents of both public extension services and NGOs organize rural video shows, apart from the broadcasting of locally made crop seed

related videos in mass media, information may flow to women effectively. Nevertheless, impacts of the video as a communication tool will depend on the types of intermediaries and their competencies to target clients within clique in the network considering gender patterns of communication.

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