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Assessing approaches for dissemination of research information to farmers within their livelihood situations in Tororo district, Uganda

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Abstract

This study sought to, identify and describe the approaches used by research and service providers in technology dissemination to target different wealth categories of farmers, identify the information that is required by these farmers and their preferences regarding channels and formats for information presentation. Three villages were used as study sites. The case organizations, namely NAADS, Africa 2000 Network, and Sasakawa Global 2000, were selected based on their avowed principle of involving grass root farmers in all stages of the project cycle. This study employed a cross-sectional survey design involving face-to-face individual and group interviews. Findings indicate that the approaches used by the three organizations have only reached a small proportion of the targeted households: NAADS (12%), SG2 (8%) and A2N (33%) in the village. The farmers' groups have limited useful information in such areas as, availability and use of improved crop varieties and livestock breeds, post-harvest processes and virtually nothing on value addition. Service providers used trained extension staff for information dissemination and practical training sessions. Farmers preferred this method of training but called for more of, trainings, availability of improved seed, and implementation of all practical trainings by projects. While SG2 and A2N disseminated technologies targeted to soil improvement, NAADS had a wide scope that included animal husbandry. Farmers supplemented this information with information from other sources. The households in the project areas were ranked by key informants as poor (52%), very poor (30%) and average (18%) and although the registered group membership is mainly female most of them come from male-headed households (82%). Farmers' information needs were limited to technologies that they had been taught. Pests and disease control, and lack of practical training in some projects were the major problems faced by farmers.

Key words: Agricultural servie providers, farmer groups, household.

Introduction

During the 1970s a top-down technology transfer or conventional extension approach characterized extension services in Uganda. In the 1980s Uganda, like many other developing countries followed the World Bank promoted Training and Visit (T&V) extension approach. In the subsequent period, preference has been for approaches that emphasize farmer involvement in the entire process of planning, implementation and evaluation of agriculture programs. Examples include the Participatory Technology Development advocated by Africa 2000 Network, Farmer Led Extension promoted by Kulika Charitable Trust, Farmer to Farmer Extension advanced in the United States and Latin America, and Rural Radio approach encouraged by Uganda Rural Development Training Project (URDT). Concern has nevertheless continued to be expressed about the potential of NGO's which are perceived, not always correctly, as participatory, systems focused and favoring low input technologies, and with an institutional structure that gives them an advantage in responding to the needs of the rural poor (Blackie, 2002). Also instructive are the arguments by Rivera (2000) and ATC (2000) to the effect that no single participatory approach is appropriate for agricultural development contexts and that attempts at using combinations of approaches have seldom delivered the intended outcomes.

Methodology

Site and partner selection

This study employed a cross-sectional survey design involving face-to-face individual and group interviews. Data was collected in Kisoko and Rubongi sub-counties, Tororo district during February to May 2004. Interviewees included research managers, NAADS coordinators, extension workers, service providers and farmers' groups operating in the three locations within the NAADS (NDS), Africa 2000 Network (A2N) and Sasakawa Global 2000 Network (SG2) project areas. Three villages, each of which was associated with a national effort to provide agricultural advisory services to smallholders, were used as study sites. These were Abongit, Awaya, and Achilet C in which NDS, A2N and SG2 are respectively operating. Within each category, farmers were purposively selected on the basis of having attended any training with the responsible organization in order to capture

Table 1. Criteria used in the villages of Abongit B, Awaya and Achilet C to identify wealth categories of farmers

Criteria	Wealth category		
	Very poor	Poor	Average
Land	<0.5	0.6-3 acres	>3 acres & can afford to rent
Livestock	Lack	1-3 (cows/goats)	>3 cows/goats
Shelter	Poor grass thatched hut	Good grass thatched hut/ semi permanent house	Semi permanent/permanent house
Food	Lack	1-2 meals a day (Food available part of year)	>2 all year
Clothing	Lack	Fair	Adequate
Educate children	Nil	Primary	University
Source of income	Dependants Farming (minimum)	Casual labor, formal employment, Kiosks in village	Formal employment, Progressive farmers, Market within /out of village
Characteristics	Sick, female headed	Main labor force	Group leaders, mainly male

*The three villages of Abongit B, Awaya and Achilet C, are areas of operation of NAADS, A2N and SG2, respectively.
Source: Focus group discussion (March 2004)

their view of the issues discussed, to provide information on technologies that were disseminated to them during trainings and how this had been useful. District coordinators for the NAADS program and department of agriculture were purposively selected to provide information on the programs operating in the district and approaches used by these programs. Coordinators and field officers from each project were also selected.

Wealth ranking of farmers

Wealth ranking was conducted with the help of key informants. This involved informal discussions to create a good atmosphere for participation as well as use of flash cards to identify the different households and arrange them into the wealth categories. These wealth categories formed the framework for selecting farmers for subsequent focus group discussions. Each of the wealth categories was engaged in separate discussions to ensure a free atmosphere for participation.

Data collection

Within each village, a total of four discussions were held, each meeting involving between 8-15 farmers. The first meeting involved key informants who included Local Council 1 representatives, representatives of the development groups and some elders in the village. The next three included the very poor, poor and average wealth categories

Data analysis

Data was analyzed using qualitative and quantitative methods. Information obtained from the focus group discussions was first disaggregated into the different wealth categories and recorded under the different projects. Quantitative data was analyzed using tables and figures to enabled the comparison of data from the different categories as well as projects. Qualitative data was recorded in descriptive summaries to depict the situation as mentioned by the farmers. It also helped to elaborate on the figures and tables.

Results

Categories of farmers targeted by the projects

Farmers were ranked into three wealth categories: the very poor (30%), the poor (52%), and the average (18%) (See Table: 1 for criteria). Female-headed households form 18% of the farming households with most of them, 62%, very poor. Few farmers are in groups compared to those that are not in groups. Within the groups the majority of the farmers fall in the poor category (Figure 1). All groups targeted by the projects are composed of at least any two of these categories, thus making it difficult for the projects to focus technologies suited to each category. It is also noteworthy that though the majority of the households are male headed, it is actually the women who dominate the group composition. This finding is in line with those by Sanginga, Lilja and Tumwine (2001) on participation in farmer experimentation groups in Kabale and would thus suggest the groups are relatively mature going by the U-shaped participation curve observed by the Kabale study. It nevertheless raises questions about mechanisms for distribution of benefits within member households when read against findings by Majda (1999) that men are the major beneficiaries of technologies.

Figure 2 illustrates that few farmers were reached by all the projects: NAADS (12%), SG2 (8%) and A2N (33%)of the households in the village. NAADS mainly reached out to the average category while SG2 and A2N targeted the poor. All approaches were not able to meet the interests of the very poor that they claim take the first priority in technology dissemination. This does not seem to address the problem of inequitable access to agricultural advisory services in rural communities to the disadvantage particularly of the rural poor who have remained outside the monetary economy, mainly producing for subsistence and the concern that even the recent approaches will be able to address this (PMA 2000; Blackie 2002).

Approaches used in information dissemination

The approaches used in information dissemination by NDS, A2N and SG2 share several features. First, all the three approaches use groups as their entry point and achievement is counted on number of groups and group members reached. In addition, according to classification of approaches by Ademola (2001), all the three organizations have employed the Problem Solving Approach that involves defining the approach from the viewpoint of the people, participation of target groups in planning and implementation of the project as well as phased planning and implementation. Similarly, all the approaches have advocated what Axinn (1987) describes as the Extension Acquisition System under which farmers are organized in groups or individuals can go beyond the village and seek out information.

Mobilization and teaching are two major areas in the training programs. During mobilization, extension staff / service providers communicate by letter to the group chairperson who informs the group leader in charge of mobilization and informing each member of the training. Occasionally, SG2 has made announcements in church from where those concerned can inform the rest. Most farmers contacted preferred being informed at home since it was more reliable, but because of the few people assigned to this task coupled with the large area of coverage, some farmers where often left out or informed late.

A closer look at the individual approaches, however, indicates that they also differ in terms of available information, methods used and farmers reached. To these differences the discussion now turns.

a) Available research information

Over and above the information from NDS, SG2, and A2N, farmers also accessed information through parents, public extension, and workshops. The information received was production related covering such subjects as row planting, weeding, pest and disease control and livestock management for all the projects (Table 2). Across projects, farmers had little information on availability and use of improved crop varieties and livestock breeds, post-harvest processes and virtually nothing on value addition. Information on post harvest handling was limited to 'time of harvest and drying' with hardly any reference to the 'how' in the case of drying. Farmers collaborating with NDS were more conversant with breeding and seed selection information, while A2N associates had relatively more information on post harvest activities. Only the poor category in NDS and SG2 mentioned breeding. The very poor seemed to have received most information with the poor recording the minimum information available, however these responses did not indicate that most of the very poor had attended trainings.

b) *Methods used*

Projects often operated beyond the village of study and so in order to cover the training content within the given period, trainings were conducted at parish and occasionally at sub-county centers. A2N greatly differed from this having had all its trainings at village level. Trainings at sub-county and parish level attracted fewer participants per village than those at village level, also for sub-county trainings it was farmers living nearest that attended.

Trainings by SG2 and NDS included a class session in which all the aspects of the enterprise were studied before proceeding to the field. It sometimes took several days or months after the class training to have the field practice. Preference by farmers on the methods used to receive this information was through class discussion and then field practical. They were also of the view that field practical be done within one week of the training when they can still remember what they learnt. A2N on the other hand works on the principle that the field is the classroom. Farmers had more field exposure since all activities were implemented in the field. Due to the limited staff within SG2 and A2N, they have come into agreement with the public extension service to use its staff. These are trained on the working principles of the organizations. NDS on the other hand with the guidelines formulated by farmers and the NDS secretariat, has entrusted the service providers to implement field activities on their behalf.

Farmers' objectives for involvement in agricultural activities

The farmers' objectives may be described as aimed at expanding the five different capital assets (financial, human, natural, social and physical) as suggested by Scoones (1998). As indicated in Table 3, all farmer wealth categories were primarily involved in agriculture to increase their financial and human capital assets. Farmers sought to improve their ability to pursue different livelihood strategies through enhancing their food security, health, clothing and children's education. Most farmers also sought to enhance their social status by raising the animals for meeting their bride price obligations. The farmers collaborating with A2N, probably due to the increased sensitization to NRM, also indicated a desire to increase their natural capital through such activities as renting land, soil management. The poor in the NDS and A2N villages had interest in house construction. While land is very limited in Tororo, the 'very poor' in all the projects were not involved in soil improvement practices for the reasons that they are expensive. Only the average farmers in A2N thought their activities would lead them to have security for loans.

Information needs of farmers targeted by the projects

Across the projects, the most commonly cited information needs related to pest and disease control, availability of inputs and marketing (Table 4). Information on pests and diseases

Table 2. Agricultural information available to farmers targeted by NDS, SG2 and A2N

Information	NDS			A2N			SG2		
	V. Poor	Poor	Average	V. Poor	Poor	Average	V. Poor	Poor	Average
1.Breeding		✓						✓	
2.Seed selection	✓	✓	✓	✓		✓	✓		
3.Planting in rows	✓	✓	✓	✓	✓	✓	✓	✓	✓
4.Weeding		✓	✓	✓	✓	✓		✓	✓
5.Pest ctrl (crop)	✓		✓	✓	✓	✓	✓	✓	✓
6. Pest & diseases ctrl	✓	✓	✓	✓	✓	✓		✓	✓
7.Feeding livestock	✓	✓	✓	✓		✓	✓	✓	✓
8.Housing const. & mgt	✓	✓		✓		✓	✓	✓	✓
9.Soil improvement	✓	✓	✓	✓	✓	✓	✓	✓	
10.Harvesting		✓	✓	✓	✓	✓			✓
11.Drying & store	✓		✓	✓	✓	✓	✓	✓	
12.Marketing	✓			✓		✓		✓	

Source: Focus group discussion (May 2004)

Table 3. Livelihood objectives of farmers targeted by NDS, SG2, and A2N

		NDS			A2N			SG2		
Capital assets	Objectives	V. Poor	Poor	Average	V. Poor	Poor	Average	V. Poor	Poor	Average
Financial	Sale food	✓	✓	✓	✓	✓	✓	✓	✓	✓
Human	Food	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Health	✓	✓	✓	✓		✓	✓	✓	
	Clothing	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Education	✓	✓	✓	✓	✓	✓	✓		✓
Natural	Rent land			✓	✓		✓			
	Soil mgt					✓				✓
Social	Dowry	✓	✓		✓	✓	✓	✓		✓
	Security						✓			
Physical	Construct house	✓			✓	✓				

Source: Focus group discussion (May 2004)

Table 4. Information needs of farmers in villages targeted by NDS, A2N and SG2

	NDS			A2N			SG2		
Information	V. Poor	Poor	Average	V. Poor	Poor	Average	V. Poor	Poor	Average
Breeding		✓			✓				
Planting in rows			✓				✓		✓
Pest and disease	✓	✓	✓	✓	✓	✓	✓	✓	✓
Feeding livestock	✓		✓		✓	✓	✓		
Soil improvement	✓	✓		✓	✓	✓			
Storage	✓	✓	✓					✓	✓
Marketing	✓	✓		✓	✓	✓	✓		
Transport to market			✓						
Available inputs	✓		✓	✓	✓	✓	✓		✓
Price subsidies (inputs)				✓	✓	✓			

Source: Focus group discussion (May 2004)

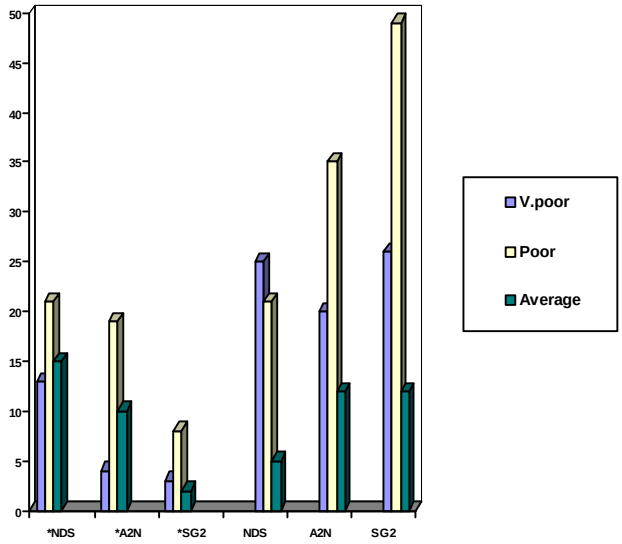
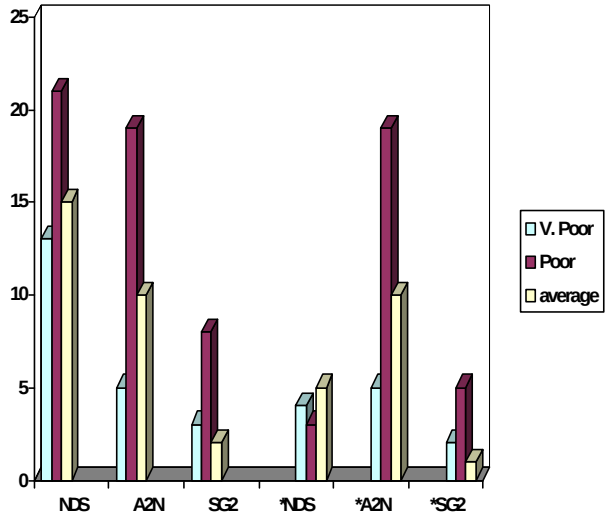


Figure 1. Percentage of farmers per total population in each project area that are in groups compared to those not in groups



*Attended training in the respective projects
Source: Focus group discussion (Feb-May 2004)

Figure 2. Percentage of farmers reached during training per total population, per project compared to those that were in groups

was crucial for all farmers because some of the pests had become resistant to the pesticides available. On the other hand the low soil fertility status may go some way in explaining the interest in improved production inputs and hence the need to look for markets essentially for farmers to at least offset the relatively high production costs.

A2N requested the most information from farmers followed by NDS, which may be a reflection of the relatively higher intensity of training or scope of enterprises covered in such training. The kind of information requested for varied per project as well as category. NDS and SG2, for example had more common mention of information needs related to storage while A2N had all its categories of farmers citing information needs related to price subsidies for agricultural inputs. SG2 had the shortest list of areas where farmers needed information something that may be explained by its relatively narrower focus on two enterprises (maize and groundnuts) and the emphasis soil fertility management. All

information requested for had been received from any one of the sources already mentioned. This confirms studies with smallholders in East and Southern Africa that the farmers' ability to express their needs was weak, and limited to technologies they had received (Blackie 2002). Training sessions and group meetings offered occasions for farmers to express their problems but these were limited. It is therefore important that farmers are exposed to more technologies from where they can be able to select what is suitable to them.

Conclusion

The approaches used in the study have tried to disseminate useful information to farmers using participatory methods that included group discussions, as well as, field demonstrations. These approaches have not been able to reach all farmers targeted, with the very poor being the least reached. Projects were only aware of the groups they were interacting with but not how representative this was to the total population targeted. Projects should be able to identify the households in the areas they are operating in, those that are in groups and not in groups, and what resources are available to them. This would enable the projects to know their coverage per village and how they are reaching out to the different categories of farmers within the target area. Focusing on the village would also enable projects identify strategies of discussing with farmers and obtain ideas to improve on attendance in trainings.

Due to the large coverage communication on planned trainings was not received by all in good time and at times some farmers were left out. The need for facilitators in each village in addition to making announcements in places of gathering like churches would ensure that everyone is informed.

Due to the narrow scope of topics by some of the projects and the less intensive training, farmers received less information. This also had an effect of limiting them on their ability to express their information needs. Projects that have a narrow focus should therefore plan their training programs in a way that allows farmers to access trainings from those sources that can provide them. This at times would necessitate joint meetings by the implementing projects together with farmers to ensure there are no clashes in the timetable.

The topics selected by projects were seen to be lacking in some important areas like post harvest handling and marketing. These trainings were in some cases conducted much early before carrying out the field demonstrations when farmers were likely to have forgotten what was taught in the class. The topics selected should allow time for group discussions, setting up of field demonstrations and farmers to practice on their own before the next training is done. The group discussions should be handled alternatively with the field practical to allow farmers to immediately digest what has been taught and cater for those who cannot read and write. The use of visits to other farmers as a way of enhancing group training should also be encouraged.

Given the fact that although male headed households form the majority in the groups, it is the females that mainly compose the groups. Strategies should be put in place to involve the male members of the households in some of the trainings in order to address the concern for equitable distribution of resources.

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