Client-Oriented Agricultural Research and Dissemination Project

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Development of Procedures for the Assessment and Management by Farmers of their Agricultural Information Networks and Needs at the sub-county Level in Uganda

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EXECUTIVE SUMMARY

"70% of Uganda's farmers are defined as smallholders (PMA 2000). Smallholder agriculture has several key attributes that condition the types of information services needed (Tripp 2001; Chambers 1997):

- Large number of independent, small-scale, competing decision-makers;
- Wide range of conditions, options, constraints and opportunities;
- Widely dispersed with poor infrastructure hampering access to product and input markets, information, *etc.*

These aspects of smallholder agriculture require a relatively sophisticated and differentiated approach in initiatives to enhance farmers' agricultural knowledge, and to improve information flow in the agricultural knowledge and information systems pertaining in Uganda.

A special study was carried out to develop a simple methodology to assist farmers, extensionists & researchers to assess their information networks and needs. The methodology was developed and tested in four parishes in Soroti and Lira districts. The assessment can be completed in three afternoon sessions with farmers, and can be easily facilitated by extensionists, scientists and other development workers with some experience in participatory methods. The assessments are preceded by a systematic series of interviews with district and sub-county agricultural development organisations, and participatory mapping of information sources active in the district.

Methodology

The methodology and tools are described in detail in the main report. It comprised of the preparation of network diagrams and current and future information media matrices with wealth- & gender- disaggregated groups of farmers at parish level. Information is separated into three categories ("Awareness", "Technical", and "Marketing") in the information media matrix exercises. The ways in which new technologies have been introduced and adopted in the community are analysed in plenary session with the farmers.

A summary of the main results is provided below, followed by an analysis of the implications for the implementation of the PMA.

Principal results

The network diagrams developed by farmers revealed considerable differences in the number and quality of information sources between differing wealth groups, but not much difference between farmers in the "poor men" and""poor women" groupings:

The poorest groups obtained most of their agricultural information from farmer-farmer sources (other farmers and neighbours, family, friends and""contact farmers"), whilst the middle and wealthy groups obtained more information from local government sources, public extension, agri-business sources and NGOs. The more wealthy groups tend to discount farmer-farmer information sources as not always reliable.

Public extension and FM radio were cited as important information sources for all wealth categories, but more wealthy groups gave higher assessments in terms of frequency & quality of information flow to these sources than did the poorest groups. Problems noted with radiobroadcast information included uncertain reliability (few broadcasts use professional agricultural staff), difficulties in knowing when agricultural broadcasts will occur, and choice of commodities and enterprises to be discussed made according to sponsors' interests rather than users' needs. The more wealthy groups reported newspapers as occasional information sources.

Public meetings and participation in groups were cited as important information sources by the poorest group (*especially* women), much more than by the medium and wealthy groups.
There were no noticeable differences between the Soroti and the Lira parishes in information sources of rich & poor or men & women farmers.

NGO coverage was very patchy in the parishes and sub-counties studied. Markets were mentioned as relatively minor sources of information, and information from traders was generally thought to biased and unreliable. Other minor agricultural information sources mentioned included churches, schools, health centres and posters, and in one parish of Lira, wealthy farmers mentioned the Foodnet network of market information.

Awareness information (information on new varieties or breeds existance, for instance):

The principle current media for "awareness information" are radio, extension workers, and local leaders. Men gave higher weight to radio and extension than women did, suggesting unequal access to these media between men & women. Men also indicated newspapers as quite important. Farmer-farmer contacts, churches, other print media and markets were also mentioned by both genders.

Both men and women farmers' recommendations for improved communications of *awareness information* emphasised radio and extension workers, and also mentioned greater use of print materials and newspapers, study tours, workshops and the use of the emerging mobile phone network [only men mentioned study tours as a useful media for communicating awareness information, whereas only women mentioned workshops].

Technical information (how to grow new varieties, manage pests, *etc*):

The main media by which men & women farmers receive technical information are extension, demonstrations and FM radio. Neighbours, family, local leaders, other print media and markets were also mentioned.

Farmer recommendations for improved communication of *technical information* emphasised a variety of media: print media (especially recommended by women), extension workers, and demonstrations, as well as workshops and study tours. The use of video was also suggested (following recent exposure to this medium provided by health workers in the study areas).

Marketing information (commodity prices at different locations, formation of producer/marketing groups, *etc*):

Little marketing information is currently available to farmers, and a considerable demand for this was expressed.

The main media by which men & women farmers receive such marketing information as is available are radio, extension workers and newspapers (all of these were rated more highly by men than women), as well as local leaders, neighbours, newspapers and markets.

Farmer recommendations for improved communication of *marketing information* emphasised radio, extension, local leaders and family. Newspapers, other print media, markets and the emerging mobile phone network were also suggested.

Based on their experiences of the introduction of new technologies, farmers recommended:

- Include all stakeholders throughout, from development to processing & sale;
- Farmer group approach is more effective – with regular meetings;
- Group formation can take a long time and this should be catered for;
- Demonstrations should be farmer-managed, not research/extension – managed;
- Where appropriate, all group members should receive samples of the new technology (*e.g.* seed);
- Technologies should be introduced at the appropirate time of year;
- Several different information media should be used.

119 NGOs active in Soroti and Kaberamiado are registered with SODDAN in Soroti, of which 57 undertake agricultural development activities – this NGO network is potentially a very important uptake pathway for information exchange between NARO, NAADS and farmers. NGO activity is much less in Lira district, but the DETREC network does represent an information uptake pathway for farmers, and so for NARO and NAADS.

97 CBOs are registered with the Bugondo sub-county NAADS coordinator (July 2002) and more are being registered. Only 28 of these are more than 18 months old, however.

Implications for implementation of the PMA

The NAADS initiative of the PMA is likely to re-define the agricultural knowledge and systems "landscapes" of Uganda, through its systematic approach to the development of farmer interest groups, sub-county and district farmer fora. Many of the issues arising from this study are already addressed in the NAADS design, and are to be strongly commended. However, some points that should be borne in mind include:

The multiple and restrictive nature of information networks within communities should be acknowledged and taken into consideration when designing communications

strategies. Information flow between the more wealthy and the poorer sectors of communities is limited, and special attention is required if information is to even reach the poorer sectors of rural communities. The methodology developed in this study may be of considerable use to NAADS coordinators (at all levels – sub-county, district and national) in development and implementation of systematic, effective and ***inclusive*** information dissemination and feedback.

It is often argued that it would be impractical and self-defeating to focus development efforts on the poorest sectors of communities. Such a debate is beyond the scope of this study, but it would be useful for NAADS, NARO and other PMA implementation arms to consider the introduction of "poverty-checks" in their implementation programs – requiring staff to consider the impact of the design and implementation of their programs on the poorer sectors of communities, and how these might be modified to increase inclusiveness and positive impact on poverty reduction.

The issue of limited information flow between wealthy and poorer sectors of the community (and the overall competitive nature of smallholder agriculture itself) is likely to be even more important as NAADS trail-blazes the establishment of marketing producer associations. Without built-in "poverty-checks" and a special focus on ensuring that poorer farmers are not excluded by default rather than design, there is a risk of such associations becoming dominated by the existing elite and even exacerbating poverty, rather than reducing it.

These issues will also be of considerable importance for the Micro-Finance initiative of the PMA"– if sub-county micro-finance advisers are introduced, similar systematic procedures to address the unequal access to information and to promote inclusiveness will be required. The methodology developed here, with some modifications, may also be of assistance.

Special attention should be paid to the potential for working with existing farmer and civil society organisations when designing communications, dissemination, on-farm research, and other development programs, rather than forming new groups and associations. The recent registration of CBOs in response to the NAADS trail-blazing initiative is very promising, but the likely long-term sustainability of these CBOs should be carefully examined on a case-by-case basis before engagement in development activities, to ensure proper and effective use of resources.

A slight change in emphasis in trail blazing and in on-farm research strategies may be called for; to include capacity building of existing groups to enable them to participate in NAADS fora and/or carry out on-farm research, *etc.*

There is little or no systematic "community information storage" within farmer communities. Community-based resource centres were suggested by some farmers, but may represent a rather costly initiative. A community resource person (or "contact farmer") may be a more practical way of organising and managing information storage and flow in communities. Capacity building is likely to be required however, to ensure the inclusion of poorer groups and their information networks.

As in all other related studies, farmers indicated a preference for "hands-on" approaches to information dissemination and management (demonstrations, study tours, etc), and a strong appreciation of local radio. However, the differentiation of information into awareness, technical and marketing revealed a strong farmer preference for print media for transmission of technical information, particularly so that information may be retained and referred to, not possible with demonstrations.

NARO is a major source of information on improved technologies. These technologies should be "packaged" in media useful and appropriate for NARO's principal clients – smallholder farmers. On-farm research programs should not restrict themselves to technology development alone, but should also consider issues of information packaging and dissemination with participating farmers and extensionists (including NAADS service providers where available), to ensure more effective information dissemination, and impact on poverty reduction. The assessment methodologies developed here may assist scientists in answering some of these questions, and tailoring their efforts accordingly.

Agricultural researchers in Uganda tend to emphasise print media when involved in the development of information materials for farmers (*e.g.* Turrall *et al.* 2001 analysis of the NARO/DFID COARD Project). This is supported by farmers' endorsement of print media as suitable for technical information in this study, but farmers' emphasis on'"hands-on" information dissemination should not be ignored by NARO and NAADS. In particular, the development of "demonstration kits" by NARO scientists (together with participating farmers and extensionists), that can be accessed and utilised by NAADS advisory service providers, should be considered.

The availability and effectiveness of different media for information dissemination was discussed with farmers, but their impact was not directly assessed. It is not clear for instance, how many farmers have actually made positive changes in their farming practices as a result of radio broadcasts, or of district and sub-county level demonstrations. There is a need for further research on these issues, to further fine-tune information dissemination efforts in support of the PMA.

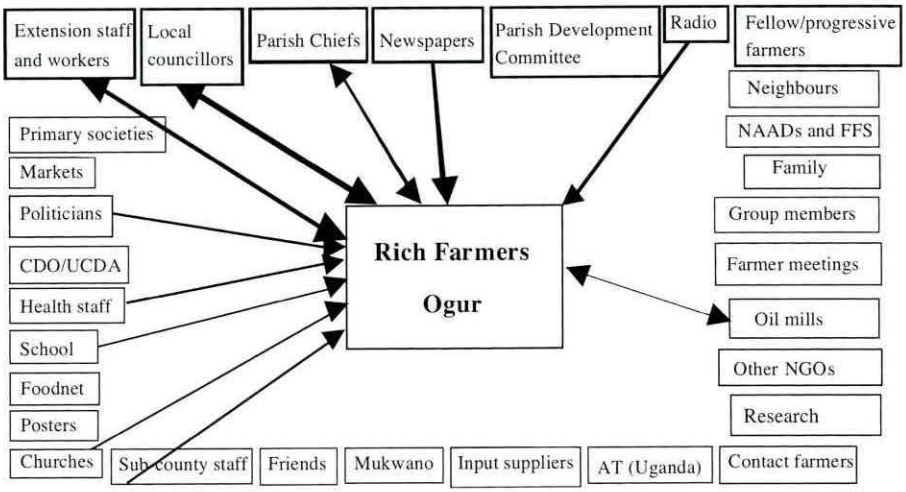
There is almost certainly a need for additional capacity building for NARO's (also MUK and other technology developers) technology development teams in the development of information materials for farmers– including leaflets and brochures, but also "demonstration kits" as well as radio and video scripting. Ideally, client-oriented researchers should be able to evaluate the appropriateness of different media and uptake pathways with their clients, and develop information materials tailored to particular audience groups, uptake pathways and technology characteristics.
The PMA and NAADS will have profound impact on the agricultural knowledge and information systems of farming communities in Uganda. Additional questions that have emerged during this study include:

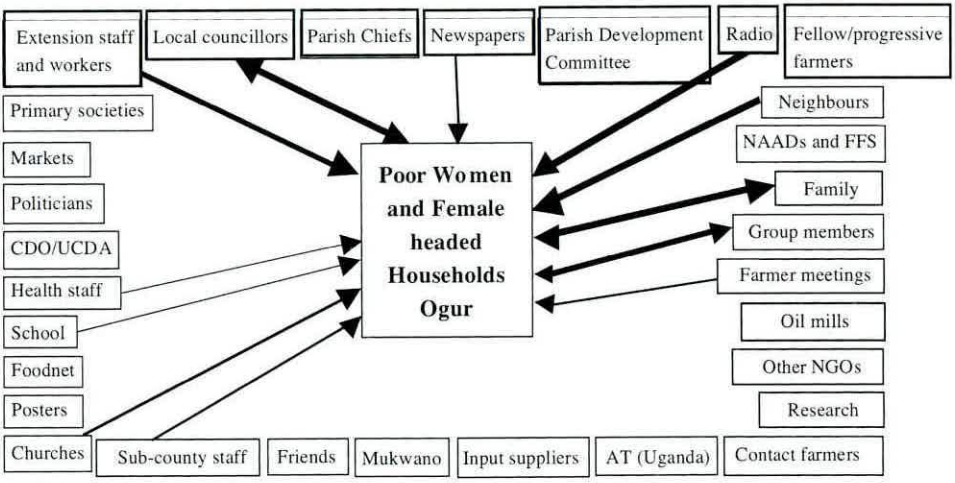
- What (if any) other structures are needed for effective scaling-out oimproved agricultural technologies?

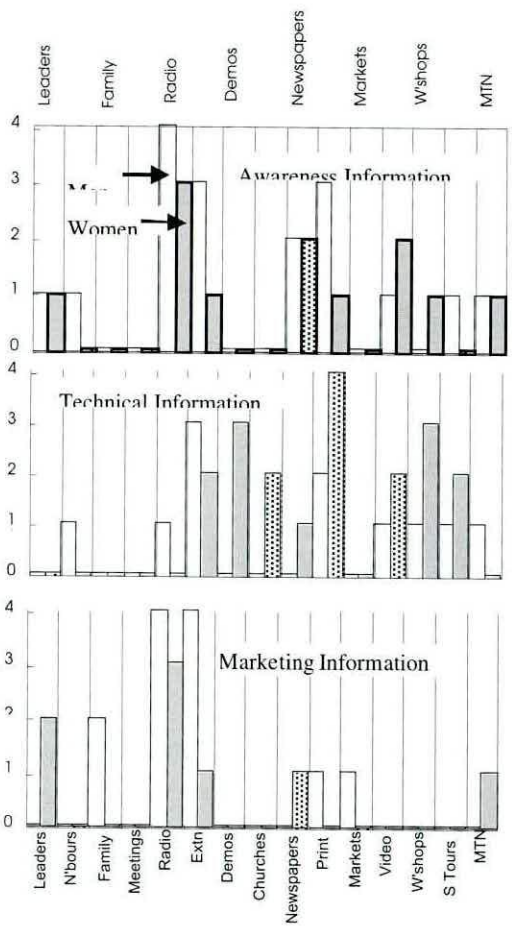
- How can private sector involvement in information dissemination (and feedback) be strengthened?
- Private sector support to technology development is likely to focus on high-value, profitable commodities and enterprises, which may have only small and indirect impacts on poverty reduction. As government divests itself of direct involvement in support to agriculture, should it continue supporting "orphan commodities and enterprises", or should it purchase the services of the private sector in dissemination of information on these commodities?
- Who should NARO promote its technologies to? – Farmers and farming communities, or should it restrict its promotional activities to advisory service providers and the private sector?
- Is there still a role for publicly funded national and local agricultural shows (including seed fairs, technology barazas, *etc.*), and who should initiate and organise these? - NARO/ NAADS Secretariat/ District NAADS Coordinators and Farmer Fora/ Other?
- What government organisation is responsible for the production of information materials for farmers (in whatever medium)? Can this be left to the demands of farmer fora? Should NARO scientists be tasked with designing information materials together with participating farmers and extensionists, as part of their technology efforts? Should NARO promote such materials to uptake pathways, or simply maintain a "stock" or database of such materials, those advisory service providers can access, if asked to do so by farmer fora? What should be the role of the NAADS Secretariat and District & Sub-county coordinators in this?
- Is there still a need for the public sector in the mass production of farmer-endorsed information materials? If not, how will service providers be able to make these available to their client farmer-fora?

It is hoped that these questions may contribute to developing "lessons to be learnt" in the NAADS trail-blazing and NARO's implementation of participatory and demand-driven research services.

Examples of information network diagrams – Ogur parish, Lira







Future information media proposed by men and women farmers