NATURAL RESOURCES INSTITUTE

Community Access to Marketing Opportunities:

Options for Remote Areas

Uganda Case Study

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August 1999

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Agricultural Policy Secretariat, Kampala

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ABBREVIATIONS

ACT	Non-governmental Organisation
ACTIONAID	Non-governmental Organisation
ADB	African Development Bank
AIC	Agricultural Information Centre
APCAM	Assemblée Permanente des Chambres d'Agriculture du Mali
APSEC	Agricultural Policy Secretariat
ADMARC	Agricultural Development and marketing Corporation, Malawi
AT	Appropriate Technology
CARE	Co-operative for Relief Everywhere, NGO
CTA	Technical Centre for Agricultural and Rural Co-operation, ACP-EU
DANIDA	Danish International Development Agency
DFID	UK Department for International Development
EU	European Unio
GoU	Government of Uganda
GTZ	German Agency for Technical Co-operation
IDA	International Development Agency
IDEA Project	Investment in Developing Export Agriculture, USAID funded
IDRC	International Development Research Centre, Canada
IFAD	International Fund for Agricultural Development
IFRTD	International Forum for Rural Transport and Development
ITDG	Intermediate Technology Development Group
ILO	International Labour Organisation
IMTs	Intermediate Means of Transportation
KBC	Kenya Broadcasting Corporation
KfW	Kreditanstalt fuer Wiederaufbau
LC	Local Council
LG	Local Government
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries
MASAF	Malawi Social Action Fund
MFPED	Ministry of Finance, Planning, and Economic Development
MWTC	Ministry of Works, Transport and Communications
MIS	Market Information Systems
MNS	Market News Service
MSE	Micro- and Small-scale Enterprises
MWTC	Ministry of Works, Transport, and Communication
NARO	National Agricultural Research Organisation
NGO	Non-Governmental Organisations
NRI	Natural Resources Institute, University of Greenwich
OMA	Observatoire des Marchés Agricoles
PEAP	Poverty Eradication Action Plan
PIRTP	Pilot Integrated Rural Transport Project, Malawi
PMA	Plan for Modernization of Agriculture
RDP	Road Development Programme
RNRKS	Renewable Natural Resources Knowledge Strategy
RSDP	Road Sector development Programme
RTTP	Rural Travel and Transport Programme

SAARI	Serere Agricultural and Animal Production Research Institute
UNDP	United Nations Development Programme
UNFA	Uganda National Farmers Association
URTD	Uganda Rural Training and Development, NGO
URTEL	Union des Radios et Télé Libres du Mali
USAID	United States Agency for International Development

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(March 1999)

£1 = USh2,150
US$1 = USh1,350
£1 = US$1.60

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SUMMARY

The findings of this research are based on the results of a project funded by DFID's Crop Post-Harvest Research Programme between April 1998 and March 1999, with fieldwork taking place in Uganda, Malawi, and Mali. The project was mainly concerned with policy and institutional aspects. It was concluded that holistic approaches are required to improve community access to marketing opportunities in remote areas of Sub-Saharan Africa, but that initiatives needed to be prioritised.

Market liberalisation makes it necessary for farmers to adopt a more commercial approach in pursuing market opportunities. In particular, they need to develop a reputation for good quality and build up supply volumes, so as to attract traders.

An enabling environment is a key condition for the development of agricultural commodity systems including remote areas. The Plan for Modernisation of Agriculture (PMA) will provide the framework for agricultural development in Uganda well into the next century. The economic environment is characterised by the liberalisation process which took place during the 1990s, and which has been an overall success in Uganda, promoting economic growth. At the same time, investors require a minimum of security in order to commit themselves in remoter parts of the country. This entails political stability and legal protection for contractual arrangements. Decentralisation offers a chance for hitherto disadvantaged districts, however planning and implementation capacity, funding, and accountability need to be improved at local government level.

During the field survey in five districts (i.e. Kapchorwa, Katakwi, Kibaale, Lira, and Rukungiri) poor roads, inadequate market information, and poor means of transportation were identified as key constraints to market access, and sources of high transport and transaction costs in remote areas. The scale of the road network in Uganda is generally adequate, but maintenance is often lacking. Whereas so far emphasis has been on trunk and feeder roads, guidelines are required for the construction and maintenance of community roads. Participatory approaches should be encouraged to ensure that roads reflect community needs.

Aside from motorised transport, more emphasis needs to be put on intermediate means of transport (e.g. animal carts). These forms of transportation are sometimes considered out-dated technology but are often the only means of transport available to the poorer segments of rural society. Pilot projects are required to introduce them in remote areas.

Lack of information is another characteristic of remote areas. This is often influenced by poor roads and low traffic volumes, in particular in areas where there is no telephone or other communication infrastructure. Given the limited impact and lack of sustainability of most centrally organised market information systems, decentralised systems should be developed, involving relevant local stakeholders. A pilot project is required to identify how systems should be set up at District level. Lessons can be learnt from the IDRC funded project on "Information Accessibility to the Micro- and Small Enterprises", which is being executed in four pilot districts by the Micro- and Small Enterprise Policy Unit of the Ministry of Finance, Planning and

Economic Development. If deemed appropriate, this project should be expanded to include market information for farmers and traders.

Farmers and traders require other information in addition to prices, for example information on supply and demand, trade contacts, technical matters and the new institutional arrangements brought about by decentralisation. More prominence should be given to cheap mass media (i.e. local FM radio stations), in disseminating information in rural areas.

Farmers should be encouraged to organise so as to reduce their constraints to market access, while taking care to avoid past mistakes in co-operative building. Relevant projects should pay close attention to farmers' capabilities and needs. Market integration and linkage building are important, but were only indirectly touched upon given that DFID have recently funded other research projects in this field. Contract farming and outgrower schemes can overcome some of the constraints related to agricultural service supply. They tend to work best when there are fewer, relatively large, players at some point in the marketing chain, and there is scope for interlocking transactions involving input supply and output marketing. Whilst export commodity chains of cash crops often fulfil this requirement, it is difficult to implement similar schemes with food crops such as cassava, sweet potato, maize and beans. Non-governmental organisations may have a role to play in getting farmers to take the initiative in improving the commodity chains for such crops.

Rural finance, research and extension services have a facilitating role to play in improving community access to marketing opportunities in remote areas. Needless to say that a functioning credit system is a condition for an efficient marketing system. Agricultural research and extension services tend to be biased towards technical and production aspects but, due to market liberalisation, need to focus more on commercial and post-harvest issues.

INTRODUCTION

Background to the project

This research project was funded by DFID's Crop Post-Harvest Research Programme (part of RNRKS[1]), and managed by the Natural Resources Institute, with collaborators in Malawi (Agricultural Policy Research Unit, Bunda College of Agriculture), Mali (Institut d'Economie Rurale), and Uganda (Agricultural Policy Secretariat, Ministry of Finance, Planning and Economic Development).

Given that two other market access projects funded by DFID and carried out by the University of Durham and Wye College/University of London were focussing on micro- and meso-levels, this project had its emphasis on policy and institutional aspects using the macro-level as an entry point. The project started in April 1998 and finished in March 1999.

The project had the following research objectives:

- Policy recommendations to improve community access to marketing opportunities in remote areas
- Identification of sustainable institutional solutions
- Contribution to poverty alleviation in rural areas

Justification of the Research

The need for a better understanding of community access to market opportunities in the countries concerned was expressed at various levels. Following the liberalisation of agricultural markets in Malawi, its was observed that farmers in rural areas where ADMARC withdrew its services faced difficulties in purchasing inputs and food, and selling produce (Marsland and Golob, 1996). Both Mali and Uganda have been able to increase their agricultural production throughout the 1990s but in particular in remote areas farming communities lack access to marketing opportunities. In the light of these and other country specific experiences, a workshop on research priorities, organised by DFID's Crops Post-Harvest Research Programme in1997, identified market access as a priority for further research.

Activities

During the first phase of the project a literature search has been undertaken, which was followed by the development of a conceptual framework. In both Malawi and Uganda, the total amount of survey time was of the order of two months spread between October 1998 and March 1999. In both countries, the fieldwork consisted of the following two main elements:

- In the capital (and Blantyre in the case of Malawi), discussions with key informants of Ministries, donor institutions, NGOs and private sector companies.

[1] Renewable Natural Resources Knowledge Strategy

- Five one-week visits to selected Districts (i.e. in Uganda: Kibaale, Rukungiri, Lira, Katakwi, and Kapchorwa) with isolated farming communities facing problems related to market access. The main elements of these visits included workshops involving various stakeholders of the private and public sector with an interest in market access related issues. In addition, discussions were held with key informants and Rapid Rural Appraisal type exercises were carried out in at least one village per District.

A two-week visit to Mali was carried out in January 1999 with a view to complement the research with findings from West Africa. This involved mainly discussions with key informants in Bamako and Segou.

METHODOLOGY

Definitions

Before embarking on a discussion of approach and survey design, it was deemed necessary to define the following key concepts used in the research:

Market Access: Farmers have sufficient information and the physical, financial and social means to purchase inputs or food, and sell agricultural produce on favourable terms.

Consequences of lack of market access: Low volumes of buying and selling transactions and unfavourable terms for the farmers, leading in turn to:

- Low yields and production of cash and food crops,
- Low income,
- Poverty, also food insecurity and access to basic services such as health and education.

Remote areas: In the context of this report, these are areas where,

(a) transport costs per unit of produce are high, which is the result of several constraints, including:

- Inaccessibility, as a function of distance, road conditions, terrain, and climatic conditions,
- Inadequate and inppropriate means of transportation, and
- Low volumes of produce available for transportation, preventing economies of scale.

(b) producers lack information not only on markets but also other aspects of their business as a result of:

- lack of communication infrastructure,
- insufficient movement of people, and
- limited sources of information.

A Multi-Sector Approach

The above definition of market access implies a multi-sector approach to improve the terms on which farmers participate in the marketing system. Given that single interventions alone are unlikely to succeed, it is felt that a holistic view of the subject is required.

It goes without saying that the most basic of conditions for market access is the existence of market opportunities for produce potentially coming from remote areas. In this study it is assumed that demand exists either on domestic, regional, or international markets. Provided there is a demand there are three main options by which the competitiveness of agricultural suppliers in remote and other areas can be improved,

(a) Reduction of marketing costs,
(b) Productivity increases leading to lower production costs per unit of output,
(c) In the case of domestic markets, protection through tariffs.

In the context of this study, the emphasis is on (a). The importance of (b) is recognised and will also be touched upon. In the light of international efforts to liberalise agricultural markets, the scope for (c) has been deemed to be very limited and, hence, not been further investigated.

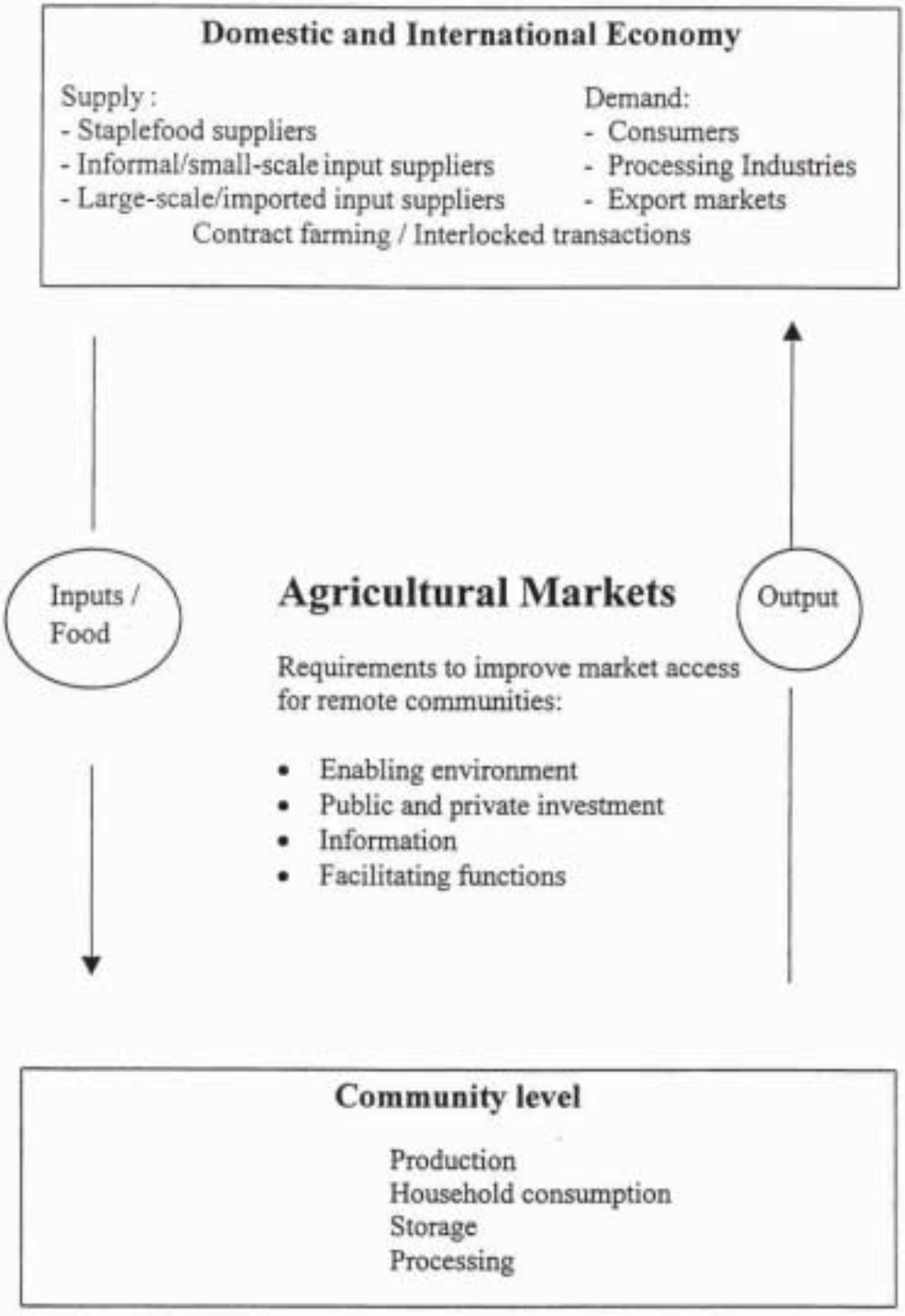
Efforts to reduce marketing margins involve looking at the various elements of marketing costs. As already indicated, it is in particular high transport costs that make a community "remote". Availability and prices of inputs as well as output prices have a bearing on the farming system. The scissors effect of high input costs and low output prices results in decreased financial incentives for agricultural producers, which is likely to lead to more extensive production systems than in areas with better access (Risopoulos, no date). The consequence is lower production of marketable produce (i.e. cash and food crops), and increased prevalence of subsistence production if transport costs are prohibitively high (i.e. leading to negative gross margins).

Transaction costs include costs related to the search for trading partners, negotiating, opportunistic risk, and contract enforcement (Galtier and Egg, 1998). These costs are generally difficult to measure and, due to their 'invisibility', may in certain cases be confounded with traders' profit. Although, in one way or another, they form part of most trading deals, transaction costs are likely to be higher in remote areas. Amongst other things, this is due to a lack of information by which communities in remote areas are characterised. Information is an integral part of all decision-making processes, and as such also essential for farmers and traders operating in isolated areas. It is therefore required to shed light on the types of information required and means of communication suited for these areas. There is a link between transport and information since increased movement of people tends to improve the flow of information. This can be particularly important for isolated areas characterised by a lack of communication infrastructure such as telephone lines.

Storage and processing can improve farmers' options in remote areas. For example intra-seasonal storage may allow a farmer to sell a crop which would be non-tradeable during parts of the year when roads are impassable. Similarly, processing can render a bulky crop into a low volume-high value commodity, as a result of which it can become tradeable.

Capital cost forms an integral part of all marketing transactions. Farmers require access to credit to purchase capital equipment such as means of transportation, and inputs for agricultural production. At the same time, the efficiency of a marketing system depends on the amount of liquidity available in the system. However, remote areas tend to be characterised by a lack of credit facilities.

Figure 1: Flow of physical agricultural inputs and outputs



Social issues are important in the context of market access. Given the role of women in marketing of agricultural produce in many parts of Africa, suggestions to improve access ought to take this fact into account. Although women do not always play a major role in the selling of produce (i.e. in particular of cash crops), they usually carry the main burden (i.e. head-loading) when no improved means of transportation are

available. Equity plays a role insofar as not all community members may benefit to the same degree from market access. Those who benefit more are likely to have priorities different from those expressed by the poorer members of the community.

Figure 1 illustrates the physical flow of agricultural inputs and outputs, and the requirements that need to be in place to improve community access to marketing opportunities in remote areas. It shows that marketing and market access cannot be dealt with as a stand-alone issue. It has to seen as an integral part of the commodity system. On the one hand producers ought to know where they will sell their produce prior to starting production, on the other hand adequate supply in terms of quantity and quality is another prerequisite for an efficient marketing system.

Improving linkages between the different players of a marketing system, namely traders and farmers, is important in the context of market access. However, given that other DFID funded research projects have already looked into this aspect in detail in the context of interlocking transactions and contract farming (e.g. Poulton et al, 1997; Gordon and Goodland, 1999), this will only be touched upon indirectly. At the same time it is expected that improved transport and better flow of information will also improve linkages.

It goes without saying that the most basic of conditions for market access is the existence of a demand for produce potentially coming from remote areas. In this study it is assumed that demand exists either on domestic or international markets.

Given the complexity of the subject, an integrated approach seems appropriate to examine the issues related to market access for rural communities. In the light of decentralisation policies, which have become a main feature of many countries in Sub-Saharan Africa, including Uganda, an integrated, multi-disciplinary approach appears justified. This bears similarities with the Sustainable Rural Livelihoods approach which is also based on a holistic framework stressing that the livelihoods primarily depend on five types of asset, namely: human capital, natural capital, physical capital, social capital, and financial capital (Carney, 1998).

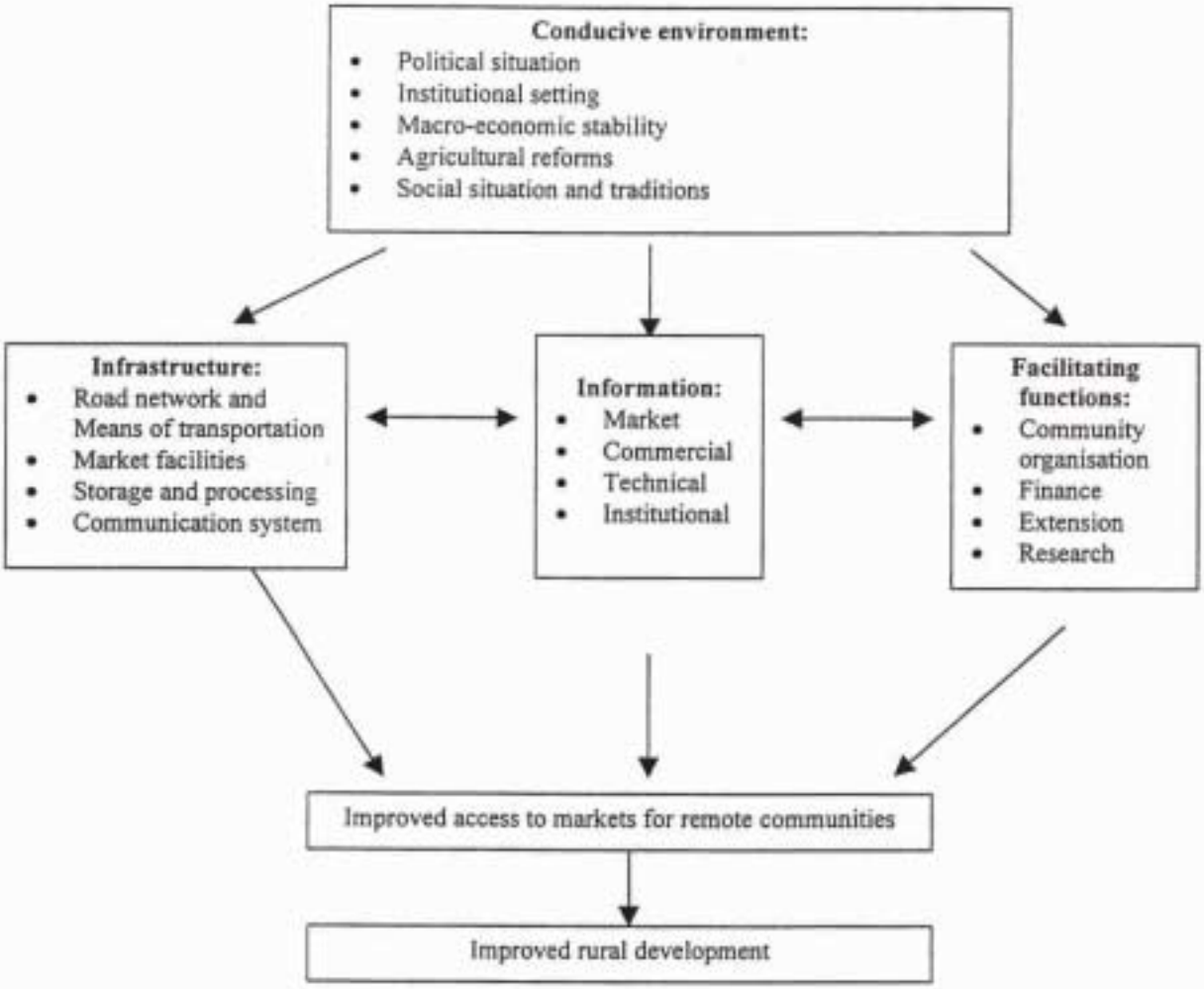
At the same time, it is important to avoid the shortcomings of the Integrated Rural Development (IRD) approach, which was the mainstay of rural development during the 1970s and early 1980s. These shortcomings included:

- Absence of an enabling environment (i.e. political, economic, and institutional).
- Top-down approaches without the participation of the concerned population groups.
- Lack of institution and capacity building on a sustainable basis.
- Dissemination of inappropriate technologies

If an integrated approach is to succeed then these constraints need to be avoided. In particular institutional solutions need to be sought. Decentralisation efforts by the Government of Uganda (GoU) are key in this context. Figure 2 illustrates the relationships of the issues involved in an integrated approach examining community

access to marketing opportunities. Aside from an enabling environment, the study will concentrate on transport infrastructure, means of transportation, information, and the role of community associations. The other issues will be dealt with but not in detail.

Figure 2: Community Access to Marketing Opportunities: a Framework



THE IMPORTANCE OF AN ENABLING ENVIRONMENT

Political Environment

Background

Uganda's system of Government is based on an elected parliament, and a non-party movement, i.e. the National Resistance Movement (The Courrier, 1998, P35.). A referendum is planned for 2000 to decide whether the political system should be based on the movement system or a multi-partyism. Uganda's media are lively, which is a major factor contributing to the relative transparency of Government decisions. This transparency is particularly obvious in the capital Kampala, where most of the decisions are taken, and where most of the media are based. On the other hand, transparency is less visible in remote Districts.

Security

There are three security problems which are of concern for Uganda. Firstly, on the domestic front there is an insurgency, led by the Lord's Resistance Army in the Northern parts of the country. Secondly, cattle rustling by the Karamojong is considered a problem in the East and Northeast of the country. Thirdly, the war in the Congo is a destabilising influence in the Region.

Needless to say that these security issues pose a problem in one form or another, delaying the development of market access by farming communities. The more remote parts of the Districts concerned suffer most from the first two forms of insecurity. This not only contributes to delays in developing the Districts, but can also lead to destruction of infrastructure and human lives. The war in the Congo represents a drain on the country's resources, which could be used otherwise.

Decentralisation

Background

Decentralisation is one of the main features of the Ugandan political system at the end of the 20th century. In fact, in this respect, the country is well advanced and ahead of most neighboring countries in Sub-Saharan Africa. As a consequence, it is often described as a model, from which lessons can be learnt.

The decentralisation process in Uganda started as early as 1986 when a commission of inquiry into the local Government system was set up. By September 1987, a local Authorities Committee was appointed. The process of decentralisation was officially launched in 1992, leading to the 1997 Local Government Act.

General issues

Decentralisation is one possibility for improving public good provision, that is transferring responsibility to independent sub-national government. Experience has shown that decentralised infrastructure projects can reduce costs and, as they are more closely tailored to local needs, improve both the effectiveness of the infrastructure and

its maintenance. "A review of forty-two developing countries found that, where road maintenance was decentralised, backlogs were lower and the condition of roads was better... But decentralisation was also associated with higher unit costs of maintenance (partially reflecting the higher share of paved roads) and with wider differences in quality across regions (reflecting inter-regional differences in institutional or human capacity)." (World Bank, 1994).

Decentralisation is considered as a means of increasing the effectiveness of the public sector (Goodland and Kleih, 1998). This is achieved by better information to policy makers about local problems, preferences, and opportunities. Targeting of resources requires detailed information about who and where the poor are, and what their needs are. Local government may be better placed to gather this information. Sub-levels of government are better placed to respond to the needs of local communities, so local development is enhanced and a more equitable allocation of resources among districts and groups results. Bridging the gap between the central state and local communities is essential. Strong local institutions exist in Africa; for the state to plan and implement policies it has the choice of co-operating with local institutions or suppressing them (Griffith *et al*, 1999). Decentralisation is important for the state to have a constructive relationship with groups in society.

Many decentralisation reforms in sub-Saharan Africa have in effect been exercises in deconcentration, without any significant power being relinquished by the centre (Griffith *et al*, 1999). Local governments have not only lacked power and real decision making, they have also lacked resources, and have typically been unable to raise revenue independently from central government, which continues to hold the purse strings.

Local authorities require strengthening and developing before they can fully utilise local knowledge. Local officials often lack skills in methods for increasing community participation in decision making and resource allocation. There is a view that only at the centre is there the sufficient quality of staff for decision making. i.e. the quality of governance will decline as a result of decentralisation. Furthermore, decentralisation can often reduce equity as local governments can easily be captured by local elites. Small elite groups based at the local level will be in a better position to influence local officials.

It is difficult to evaluate the impact of decentralisation: problems are not due to decentralisation per se, but to more general administrative, economic and development factors (Conyers 1990).

Achievements and shortcomings

As already indicated, Uganda is internationally considered a model for the implementation of decentralisation. According to Musa (Decentralisation in Uganda, Another leap in the Dark, 1998), decentralisation was well-received by the population. It is seen as a vehicle for greater participation of the people at the grass-roots. One of the key challenges in this respect is how communities can influence decision making processes at Local Government level (i.e. LC3 and LC5).

Although it is acknowledged that financial management practice has improved at District level (Musa, 1998), it still seems that a lot more needs to be done in the more remote, "new" Districts. Aside from improved accountability, the capacity of LG needs to be improved to be able to absorb funds. This requires adequate planning and implementation capacity.

It is often implied that decentralisation will lead to improved financial autonomy of LGs, however this is only partly true, since in reality the Districts still depend largely on transfers from the Centre. There is a particular shortage of funds at LC3 level (i.e. sub-county level). Although 65% of local revenue remains at the lower councils (i.e. graduated tax), the resulting funds are insufficient, owing to a small tax-base. There is even a danger that this shortage of funds might lead to efforts by the LC3 to introduce taxes that can become a constraint to agricultural marketing. For example, high taxes on vehicle ownership or movement of goods is likely to have detrimental effects on market access by farmers in remote areas. In particular the taxation of movement of goods at LG boundaries ought to be avoided since it can create significant extra marketing costs.

At present, conditional grants are still the main source of funding of LG government. Agriculture is one of the priority areas with particular emphasis on extension services at sub-county level. However in most Districts agriculture lags behind the other three priorities, i.e. roads, health, and education. Equalisation grants, the objective of which is to reduce inequalities between Districts, are to be introduced in the FY 1999/2000.

As for the transfer of funds to Districts, which are earmarked for specific activities, a lot can be learned from World Bank funded health projects (e.g. District Health Services Project). A significant part of their funds included capacity building, which included training of finance officers and accountants. Watertight accountability and control mechanisms had to be put in place.

The creation of certain new institutions at LG level is required by the Local Government Act, however, some of them such as the LG Public Accounts Committee and the LG Tendering Board are in some Districts either not in place or not fully operational (Musa, 1998). "New" Districts and those that are located in remote areas without adequate infrastructure are less likely to attract qualified and experienced staff. Inevitably this will have its bearings on the quality of public services. This includes services required to improve market access for farming communities in remote areas (e.g. agricultural extension, market information services, etc).

To sum up, Uganda has embraced decentralisation in a positive manner, however it must be recognised that the country is only in the early stages of implementing this policy. Decentralisation is a long-term measure and there is still a long way to go.

Economic Policy

Economic liberalisation and privatisation have been the key features of Uganda's economic policy during the 1990s. Though slow at the beginning, the Government gradually embraced structural adjustment policies during the course of this process (Harvey and Robinson, 1995).

With an annual growth rate of about 6% during most parts of the 1990s, the results of the macro-economic reforms have been positive (The Courrier, No 170, 1998). Although only at 5.6% on average per annum between 1993-1997, inflation has increased to levels above 20% in 1998/99. This triggered high commercial interest rates.

Although privatisation was pushed by the Government, there still exist Produce Marketing Boards namely, PMB for food crops, Dairy Corporation for milk and CMBL for coffee that remain to be privatized. Except for Dairy Corporation whose monopoly has been removed by the Act of Parliament, PMB and CMBL have more or less been rendered defunct through competition from private sector participants. The marketing of export crops such as coffee is now firmly in the hands of the private sector. It is recognised that about three to four exporters dominate the market, however, as yet, there are no major concerns about this situation.

Despite the economic growth and investment, there are some sectors in which private business is only emerging, as consequence of which considerable amounts of capacity building are required. The agro-processing sectors is one of them. Given Uganda's agricultural potential, this sector could potentially become one of the cornerstones of the country's modernisation of agriculture.

In the context of market access, economic policies have a bearing on demand for agricultural produce, which in turn influence the marketing opportunities for farming communities. As a result, Government and its various agencies should stimulate domestic and external demand for fresh and processed agricultural produce. This should not be interpreted in the sense of Keynsian policies, but in the sense of guidance at the sector level and provision of favourable investment conditions (e.g. low interest rates, low inflation). As for the domestic market, demand patterns are likely to shift with increasing purchasing power and consumer education. Development of agro-industries should be promoted to increase domestic market for agricultural produce including food crops such as cassava, sweet potato, plantain, grains, legumes, fruits and vegetables. In this context, decision makers ought to recognise that traditional food crops are also cash crops for farmers who depend on their sales for income. Development and modernisation of the agricultural sector will inevitably lead to a situation were food crops will increasingly enter the market place. In that respect, the classical dichotomy of food versus cash crops should be given up.

At the same time, it appears that current and potential agricultural demand is not sufficiently known. **Market demand studies** are required to improve this understanding, based on which adequate measures can be taken. For example, in 1999, DFID are sponsoring a study on industrial cassava markets in Uganda. **Export and cross-border trade** should be promoted. The latter is likely to have strong impact on remote Districts, which often tend to be close to neighbouring countries (e.g. Kapchorwa, Rukungiri). Elements, that require improving in this context include:

- Bilateral trade negotiations to improve access,
- Better infrastructure links with neighbouring countries in border areas,
- Better information exchange,

- Better linkages between traders on both sides of the borders,
- Better legal protection of traders who operate in neighbouring countries.

Agricultural Policy

Reforms emanating from liberalisation of the economy and structural adjustment programme also impact on the agricultural sector. Co-operative monopolies have been dismantled and the privatisation of para-statals is in its final stages. As a consequence, the necessary conducive and enabling environment has been created for active private sector participation in agricultural production, processing, and marketing.

Although it is often argued that marketing boards offered an important if not the only marketing opportunity for remote farming communities, one must not forget that these para-statals were not sustainable in the long-run due to continuous financial and management problems. Although, during the course of the survey, there were a few complaints in farming communities about the pace of the liberalisation process, overall the experience made in the Ugandan context is positive. As a consequence, it can be expected that further private sector development should also improve marketing opportunities in remote farming areas.

The Civil Service reform had also its impact on MAAIF, for example the reduction of staff numbers and divestiture of functions. The remaining responsibilities of MAAIF have been stated as comprising the following:-

- agricultural policy formulation,
- setting regulatory standards in agriculture,
- making national plans for the provision of agricultural services and co-ordinating plans made by local government,
- control and management of epidemics and disasters relating to agriculture,
- conducting national agricultural censuses and compiling statistics related to agriculture.

(Source: Proceedings of workshop on PMA: 14 – 16 September 1998, Page 16)

Following the restructuring of MAAIF and the dissolution of the Directorate of Extension, NARO, a semi-independent body under the supervision of the National Agricultural Research Board, now has overall national responsibility for extension services, and management responsibility for the existing 17 district farm institutes (DFIs). It is planned that in future, some of the latter shall be owned by their Districts.

The Plan for the Modernisation of Agriculture (PMA) is a key feature of Uganda's development efforts in agriculture at the turn of the century. The PMA is being prepared using a sector-wide approach involving participation of all stakeholders (including donor agencies) under the leadership of MFPED and MAAIF and sponsorship by DANIDA and DFID. The objectives and aspirations of the PMA are based on the eradication of mass poverty in Uganda and hence PMA preparation is deeply rooted in the Poverty Eradication Action Plan (PEAP).

Local government is responsible for provision and management of agricultural extension services. However, the services currently appear to be in a limbo due to institutional constraints. Although agricultural extension is one of the priority areas, it often figures behind roads, health, and education on the priority list of LGs.

A viable rural credit system, which is accessible for small-scale farmers is another area of concern for agricultural policy makers. Aside from some commercial farms producing cash or food crops, there is little mechanisation visible on Ugandan farms. This needs to be addressed if farm productivity is to increase. Extension, credit, and mechanisation are areas which will be addressed throughout the text.

Social Environment

GoU has made the Poverty Eradication Action Plan (PEAP) one of the cornerstones of its policy. Other priority areas such as health, education and agriculture are expected to feed into the plan.

Uganda's farming system is based on smallholders with relatively small farm sizes averaging 3.0 ha but ranging from 1ha to 5ha. This obviously has a bearing on agricultural production and marketing. In many areas, subsistence production still dominates. A Land Act has been enacted in 1998 in order to improve, for example, security of land tenure. The resulting likely increases in production can be expected to have an impact on marketing. As already indicated above, production aspects form an important part of marketing. There has to be a minimum quantity and quality of supply to attract buyers.

As in most parts of Sub-Saharan Africa, women play an important role in agriculture. In Uganda, women contribute over seventy percent of the total agricultural labour force. Traditionally they are particularly involved in the production and processing of food crops and significantly contribute to the transport of inputs and outputs around the farm and to markets (i.e. head loading). During recent years, they have started to become more active in marketing of agricultural produce. This may have been in part influenced by the country's market liberalisation and agricultural export diversification policies. An outcome of these policies has been the increased importance of food crops (which have been traditionally produced and to some extent marketed by women) as cash corps.

Despite their significant contribution to economic activity in Uganda, women still face social barriers that prevent them from exploiting their full economic potential. For example, largely due to traditional and cultural values, many have limited access and control over productive resources and in general fair less favourably than their male counterparts with regard to poverty levels, education, employment opportunities and participation in the political process. There are many initiatives currently underway in the country by Government and the civil society to address some of these women concerns. The Government of Uganda, in recognition of the positive role of women in sustainable development, and with the support of the international community have since the late 1980s, strongly supported a positive policy environment for the promotion of women advancement. (Uganda Country Gender Profile, 1996). The country has since 1998 had a Ministry responsible for Affirmative

Action Program for women and gender issues. A National Gender Policy was formulated in 1998 to mainstream gender concerns in the national development process. Non Governmental Organisations and Community Based Organisations (CBOs) are involved in various initiatives that seek to empower women economically, socially and politically.

One outcome of the Government Affirmative Action Program has been the increased prominence of women in the country's political process. With the provision of three seats for women in the district local councils this change in role is expected to feed down to the grassroots.

In evaluating the outcome of gender initiatives in Uganda, the Uganda country Gender Profile, 1996 and the National Action Plan on Women, 1999 Draft Report, conclude that despite progress achieved during the last decade a lot remains to be done to strengthen women's role in the development process.

In direct reference to agricultural markets, Manyire, 1993 and Kamparara, 1996 find that gender differences at household level are to the disadvantage of women participation in rural agricultural markets. They stress the need for policy analysts in poverty alleviation programs to analyse the difference that disadvantage one sex against the other and put in place gender responsive actions.

Legal and regulatory framework

There is a lack of standards (e.g. weights, quality grades) applied in particular in the domestic agricultural marketing chain. As a result, the PEAP (P29) states that the standard of marketing will be improved "by introducing standardised weights and measures". This seems important, however, decision makers ought to bear in mind that similar interventions have often failed in the past due to lack of demand by the players in the marketing chain or lack of enforcement. As a result, it seems appropriate to study this issue carefully prior to implementation.

The efficiency of agricultural marketing depends on how contracts are respected and enforced. If contracts are not respected and law enforcement is insufficient, this will inevitably increase risk and ultimately marketing costs. Lack of effective enforcement of contacts is currently particularly serious for many businesses in Uganda. Because Uganda underwent several years of economic and political turmoil, the commercial justice sector is undeveloped and, therefore, fails to deliver adequate service to the private sector. In addition, there is a lack of awareness by the public of the legal provisions in regard to business contracts. The Government has recognised this problem and has embarked on a comprehensive reform of commercial laws in Uganda using financial assistance from DFID.

SURVEY RESULTS, ISSUES, AND RECOMMENDATIONS

Summary of Survey Results

Table 1 summarises the results of workshops organised in five Districts perceived to face major constraints with market access. Each workshop was attended by about 20 stakeholders, including the private sector (e.g. farmers, and traders), Local Government officials, and NGO representatives.

The following procedures were applied during the workshop:

- Following an introduction to the subject, participants were asked to identify constraints related to agricultural marketing in their District.
- Involving the participants, the results of this brainstorming session were organised into clusters.
- Each participant was then asked to identify the three most important constraints to agricultural marketing according to their perception. This led to the scores listed in Table 1.
- The final main element of the workshop consisted of a discussion of solutions to the constraints.

Roads (i.e. quality and network), market information, means of transportation, and markets (infrastructure and network) were identified as the key constraints. However, at this point no attempt will be made to discuss all the constraints in detail. This will take place in detail in the following sections according to the framework presented above.

It is however worth noting that in addition to the "classic" marketing constraints, other constraints were also mentioned. In particular the constraint "low quality and quantity of production" has an impact on marketing opportunities for rural communities. Low volumes and poor quality of produce for sale discourage traders to travel long distances to remote areas since this is likely to increase risk, transaction costs, and transport costs per unit of produce.

Although it is acknowledged that markets ought to exist before production can start, **adequate supply (i.e. sufficient quantity and quality) is a condition for the efficient functioning of commodity chains**. This calls for specialisation of farm production rather than diversification. In particular in remote areas, where farmers traditionally have a high level of subsistence production of the main food crops, it appears necessary to introduce more specialised production patterns. Although commercial agricultural production will never be a risk free business, changes in farming systems should not lead to undue risks for poor farming communities, in particular if livelihoods are at stake as is always the case in remote communities. As a consequence a gradual approach seems best suited to introduce the changes.

To improve market access, the crops to be produced for sale by farmers in remote areas should have the following characteristics:

- Low volume/weight (i.e. not bulky),
- High value,
- Low perishability.

This should lead to reduced per unit transport costs, and, if storability can be increased, allow producers some flexibility in their sales transactions. Processing may be required for certain types of crops such as cassava. However, this will be dealt with in more detail in the sections below.

Lack and/or cost of inputs, which was indicated as another constraint, directly influences levels and quality of production. For example, the lack of good quality seed for crops such as beans and maize was repeatedly brought up during discussions with farmers and at workshops. Other inputs which are increasingly requested by farmers include fertilisers and pesticides. It is therefore important for the Government to have a coherent policy regarding agricultural input supply. Input supply should be seen as a private sector activity and relevant measures taken.

Table 1: Results of District Level Workshops

Ranked Constraints to Marketing of Agricultural Produce

		Kibaale	Lira	Kapchorwa	Rukungiri	Katakwi
1	Poor roads / network	1	1	2	1	6
2	Inadequate market information	2	2	1	5	4
3	Poor means of transportation	3	11	5	5	1
4	Low quality and quantity of production	7	4	10	7	7
5	Inaccessibility of credit		4	16	11	2
6	Lack and/or cost of inputs	6		3	7	14
7	Inadequate and poor storage	9	4	5	13	7
8	Poor market infrastructure/ Network		8	8	10	4
9	Low produce prices		11	4	2	11
10	Weak farmer organisations / Mobilisation	7		16	9	11
11	Lack of buyers / Unscrupulous buyers	5		5		
12	Weak marketing organisation		3			
13	Inadequate extension services	3		10		14
14	Wide price fluctuations		11	10	2	
15	Labour constraints				13	3
16	Inadequate processing facilities		7		17	7
17	Insecurity	11	8	10		
18	Poor quality of inputs				2	

Note: Figures represent ranks of constraints identified at District level workshops. Scores were converted into proportions, for which averages where calculated for each category. Some of the original scores obtained during the course of the workshops have been combined.
For detailed results including scores see Appendix 4.

Road Network

Survey results

At the District level workshops, poor road infrastructure was identified as the most important constraint to market access. The situation may be summarized for the districts as presented in the sections below.

Rukungiri: The roads are in a poor state and the terrain is difficult. The road from Ntungamo to Ishasha is to be tarmacked as indicated in the 2000/2001 programme. Presently, farmers in Rukungiri cannot compete with farmers from Kasese or Kabale.

Solutions to overcome the problem of poor roads: Construct/tarmac the trunk roads. Maintain the existing road network. Maintenance of community roads is being carried out under "*Bulungi Bwansi*[2]" but this faces problems during periods of elections – the people tend to ask politicians not to enforce *Bulungi Bwansi*. Secondly the community needs assistance when it comes to construction of bridges and culverts. The district hires contractors to maintain feeder roads and the district has benefited from SWRARP and EU/tea projects which had substantial support for feeder road construction and maintenance. These projects, however, have already ended.

Kibaale. Poor roads, especially feeder roads and community access roads were identified as the main constraint to market access at the District level workshop. It was proposed to maintain the institutional set-up whereby trunk roads are the responsibility of the centre and feeder roads are the responsibility of the district. The community access roads were being handled by contracting the communities at a rate of shs2,500/- per day per person and the communities contributing materials in form of bricks, sand, etc. The chiefs and the LCs mobilised the communities. Communities were assisted on the construction of bridges and culverts. The division of responsibilities between chiefs and LCs is not always clear, which can lead to confusion.

Lira. Like in the rest of the other districts there are three types of roads in the district namely trunk, feeder, and community roads. It was found out that trunk and feeder road network were adequate but the problem was on maintenance of the existing road network. The maintenance of the existing road network required the following: clearing bushes at the side of the roads, filling potholes, clearing off-shoots overgrown with grass, repairing or replacing damaged culverts, replenishing murrum, and grading.

The problem of sub-standard work done on the roads featured prominently at the district level workshop discussions. This was attributed mainly to:

- The current arrangement of maintaining the roads which is undertaken by the District Council without adequate technical back-up.
- Inadequate funding.
- Criteria used in tendering the roads for maintenance by private firms is fraught with lack of transparency.

[2] Bulungi Bwanzi – is local phrase for community efforts

- Poor standardisation and inspection of roads which arise due to the following reasons:
  - Low remuneration to the technocrats
  - Understaffing of the engineering department
  - Inadequate guidance by the technocrats to the District Council.
  - Inadequate murrum deposits in some places.

Mainly on account of budgetary constraints, the district still cannot handle road maintenance on its own in the short to medium term. There is still a necessity of external funding especially from the Centre, which should be in form of grants specifically ear-marked for road maintenance.

The district should give due consideration on roads when setting priorities. Besides, at lower levels of administration, fund allocation to road maintenance should be accorded the high priority it deserves.

The technocrats in the district (particularly District Road Engineers), the District Council and the representatives of the users of the road (Local council member) should endorse certification of contracts for road repair and should all be fully involved in the planning, management, and monitoring of road maintenance, inspection and standardisation. This it was felt could raise the standard of roadwork and promote transparency.

Kapchorwa. The district has only one trunk road from Sironko to Kapchorwa to Suam at the (Kenya) border. The road is still a dirt road which is very difficult to drive through during the rains. The terrain is mountainous and the district is not connected to tarmac. During the rainy season, vehicles cannot reach the district. The road from Sironko to Kapchorwa is currently being rehabilitated and resurfaced to bring it up to the standard of good quality murram trunk road. The feeder roads are under the DA, while community roads have no clear arrangements.

Katakwi. The district has a total of 579 km of trunk and feeder roads. Trunk roads, maintained by the Central government constitute 73kms and feeder roads constitute 506km which are maintained by the district. Of the 506 km feeder roads, 361 km are largely inaccessible and require major rehabilitation.

Most of the roads were neglected during the insurgency during late 1980s and early 1990s. Although some have been rehabilitated, these roads are seasonal because they are not tarmacked. The New District will receive road maintenance units by June 1999 but the Ministry of Works office in Soroti is responsible for Soroti, Kumi and Katakwi districts. There is no road rehabilitation project being implemented at the moment. During the survey in the district, the following issues emerged:-

- There is need for the Government to address the swampy sections of community roads and the people to address the remaining sections.
- The road net work is adequate but the resources for road maintenance are insufficient.
- The maintenance of feeder roads should be hired out to the community near the feeder road through transparent tendering.

- The District will not in the foreseeable future be able to raise adequate funds for maintenance of roads.
- The maintenance of community roads should be done by sub-counties but with assistance with respect to swampy sections and culverts.

Background

Uganda's classified main road network comprises 4000 km of primary roads, 3003 km of secondary roads and 1829 km of tertiary roads. (MWTC, 1996). It is indicated that 2105 km out of the total of 8832 km is paved. There are 20,168 km of feeder roads which are generally unpaved. Including 1000 km of urban roads Uganda's road network totals about 30,000 km. In addition, the length of the community road network (*Bulungi Bwansi*) is estimated at 30,000 km.

The establishment of a viable road network is a key priority of GoU, expressed in the Ten-Year Road Sector Development Programme budgeted at US$1.5 billion. As highlighted in the latter (Volume I, page vi), constraints in Uganda's road network include the following:

- About 30% of the gravel main roads and many feeder and community roads remain unusable in wet weather,
- 32% of the unpaved roads are in poor to very poor condition, leading to excessive vehicle operating costs,
- Illegal axle loads are common. The effect on the freight transport roadways is devastating.
- Funding for rural feeder roads and urban roads is inadequate and delays in fund allocation disrupts the maintenance programme,
- Inter-governmental road planning/budgeting is not well co-ordinated,
- Institutional issues include inadequate staffing and motivation levels and some technical / managerial qualification deficiencies,
- There is a lack of operable equipment, and an inadequate physical equipment maintenance infrastructure,
- The private construction industry is largely ill-equipped and semi-skilled.

The Poverty Eradication Action Plan (PEAP) states that "priority will be given to rehabilitating and maintaining rural feeder roads". Spending on rural feeder roads is seen as supporting investment in the Plan for the Modernisation of Agriculture but it is also recognised that spending on this sector "will continue to present a major budget challenge in terms of both the level of spending and the effectiveness of this spending". It is felt that the link between the road sector and the agricultural sector could be improved for example by including a Ministry of Works, Housing &

Communications official on the Steering Committee of the Plan for the Modernisation of Agriculture.

In the past emphasis has been on rehabilitation of the classified road network and only now is the focus shifting towards the feeder road network. This does not mean that there were no feeder road projects, as yet, but highlights that efforts were insufficient and not necessarily well-coordinated. In addition, the needs and requirements regarding community access roads are largely unknown.

At the central level, feeder roads were handled by Ministry of Local Government, and about 10 rehabilitation area units were established in clusters of Districts.
There are numerous road projects funded by donors such as World Bank, DANIDA, DFID, ADB, EU, KfW, etc. The World Bank has started funding the Road Development Programme (US$ 323, out of which US$291 to be funded by IDA) which forms part of the 10 year RSDP. Although phase I and II of the Road Development Programme (RDP) focuses on trunk roads there is a component to study the feeder road sector, which is carried out by the consulting firm Africon. Phases III and IV of the RDP are on upgrading (500km) and rehabilitation (1000km) of feeder roads.

In addition, there is also the World Bank funded Transport Rehabilitation Project, which focuses on five Districts including Palisa, Tororo, Mbale, Busia and Kapchorwa. The Project uses local contractors with equipment lease arrangements. The technology used is labour-intensive with a minimum of equipment support. About 10 contractors have been trained at the Mt Elgon Road Maintenance School.

The World Bank also funds institutional support of the road sector (US$30m) with particular emphasis on the Road Agency Formation Unit.

The Rural Travel and Transport Programme (RTTP) has recently been initiated by the World Bank, which, however, is unlikely to be the main donor of this initiative. GTZ has been contacted for support. RTTP embraces both rural roads and tracks, and means of transportation (more on the later below).

Feeder and Community Access Roads

In the context of improving access for isolated communities, special attention has to be paid to feeder and community access roads and some points need to be addressed as presented in the sections below:

Harmonisation of approaches regarding the involvement of communities in the construction and maintenance of rural roads and tracks. Obviously, it is important not to obstruct priorities and practices to be established by local councils, but to bear in mind that in the past different donor funded projects employed different, sometimes conflicting, approaches. This concerned areas such as technologies (labour-intensive versus capital intensive), and remuneration of local communities (i.e. self-help versus cash or food for work). In this context it is important that Government Departments and donors agree on a standardisation of approaches which would still allow decentralised government authorities to implement their priorities within a specific context.

Greater involvement of the private sector and local communities in road and track maintenance should be encouraged. It is recognised, that besides an inventory of potential operators, this would require awareness-building, and training.

Guidelines should be developed for different levels. Whereas design criteria for national and regional roads should be centrally established, village access roads should be designed at community level, taking into account local requirements. Planning to this end should involve the traders, and other potential users of the roads/tracks.

Design of roads and tracks should reflect current and potential volume of traffic (i.e. vehicles per day). For example, based on a short survey in Zambia, Hine et al (1998) suggest the following indicative figures:

- 100 vehicles per day (vpd): two laned gravel surfaced road and frequent grading;
- 50 vpd: Grading several times a year justified.
- 20 – 50 vpd: there is still the case for some road maintenance, although it is usually unjustified to build and maintain a gravel surface.
- Traffic levels of 20 vpd or less: It is not justified to build a two-lane road; a single lane road with passing places is far more appropriate.

It ought to be recognised that road/track construction by local communities may have its limits, in particular in more difficult terrain (mountains, wetlands, etc). In these cases, external assistance is required for the construction of bridges and other major pieces of infrastructure.

Co-ordination at different levels is required. Prioritisation by local councils is important but this has to take place within District or even regional priorities. As compared to other rural infrastructures such as health centres or schools, where less local co-ordination is needed at local level, roads and tracks linking up several communities need more planning at a higher level.

In particular in areas where population density is low, it is important to identify inexpensive approaches. Local participation in the design of transport infrastructure has been found to lead to lower cost, lower technology solutions. CARE Zambia used an approach were communities provided materials freely and let road workers use their water supplies. As a result feeder roads were rehabilitated relatively cheaply: $3000 per km, including the costs of water crossings (simple culvert $700, drift $400 – 700). Now CARE Zambia has increased the use of private contractors providing training and advise for small-scale contractors who can carry out construction, and maintenance work at local level. (Hine, Nelson and Greening, 1998).

Based on case study work in Ghana, Hine (1993) argues that "it is estimated that replacing a footpath by a vehicle track may have a beneficial effect to the farmer of over a hundred times more than improving the same length of a poor earth track to a good quality gravel road". At the same time he suggests that there is a need for new roads "to open up remotely located agricultural areas".

In the local context, it might be appropriate to put more emphasis on means of transportation (see section below), e.g. combinations of so-called intermediate means of transportation (IMTs), and trucks. (Sieber, 1997, Page 8.). It is argued that combining IMTs (for short distances) and motorised transport (over long distances) should lead to lower total transport costs.

Greater use of labour intensive methods appears to be justified given the erosion of wages of unskilled labour in most Sub-Saharan African countries (Von Braun, 1993). The situation in Uganda is not different. However, it has also been stressed that the increased use of labour-intensive construction technologies is likely to lead to increased management costs.

As for the issue of paying workers on Labour Intensive Public Works Programmes in the form of cash or food for work, there is no blueprint formula. On the contrary, this depends very much on the conditions encountered by targeted population groups. However, decision-making should be based on a sound knowledge of the food and labour markets, in order to avoid distortions of these markets (von Braun, 1993). At the same time, the MASAF (Malawi Social Action Fund, World Bank funded) programme in Malawi prefers cash-for-work arrangements since food-for-work payment requires more logistical preparations (e.g. timely delivery of food as payment).

There is the danger that the use of conflicting approaches in relation to the payment of unskilled workers can damage the drive for self-help initiatives in villages. As a consequence, co-ordination between government departments, donors and NGOs is necessary. The result of this consultation should be guidelines to be used by Local Government.

Technical standards of roads should reflect the real needs in terms of potential vehicle usage. Where this is not the case and where standards are set by central government departments and donors without taking into account real service consideration, the result is excessive roads width and cost and hence fewer roads (World Bank, 1994).

Self-help in the construction and maintenance of roads is most likely to succeed when the project carried out by the community is relatively small-scale, and to its direct and exclusive benefit (World bank 1994, Page 78). This may be the case for village access roads. Trunk roads and feeder roads, which serve a wider public, require contractual arrangements with paid labour.

There is the issue of barriers to close roads after rain in order to avoid damage. Problems with corruption should be easier to handle following decentralisation. Transparency and awareness building at local level is required.

Way forward

To sum up, some points to improve the situation of feeder road and community access roads in remote areas include the following:

- Guidelines are required for road construction and maintenance at community level, encouraging community participation. These guidelines should be flexible enough for implementation at sub-county level;

- Avoidance that roads are too large; Criteria should reflect villagers' needs based on current and potential traffic volume;

- More labour intensive construction technologies should be encouraged, bearing in mind that this is likely to lead to increased management costs;

- Encouragement of self-help initiatives at lowest level, in particular if roads are to the exclusive benefit of one community; however community participation should not take place at the expense of the poorer and vulnerable parts of the rural population; If it is felt that there is a danger in this respect, the possibility of contractual arrangements even at lowest levels needs to be explored.

- Given that communal labour is often associated with forced labour, and the fact that these schemes are notoriously difficult to implement during election times, it appears that a substantial amount of awareness building is required in this respect.

- It ought to be recognised that villagers need outside support in particular where terrain is more difficult (hilly, water streams) or where distances are too large; Contractors should be used for the construction of bridges, culverts or drifts.

- If private contractors are used, it is important to ensure transparency during tendering, implementation and evaluation. Without adequate quality control the private companies are unlikely to be more efficient and effective than the public sector.

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- In the short-term, NGOs should be involved in Districts with weak local capacity. Capacity building would be required for private sector contractors and Local Government to take over in the medium to long-term.

- Co-ordination at higher level (e.g. Region) is required where roads and tracks form part of a local network.

- The issue of feeder and community access roads ought to be fully included in the PMA. Hence, members of the Ministry of Works should form part of the PMA technical committee.

- It is vital that the above issues are fully recognized in PMA and become part of the operational arrangements for feeder road and community access road development in Uganda.

Means of Transportation

Survey results

With the exception of Katakwi, where it was not identified as a top priority, means of transportation figured high (third most important) among the constraints to market access at District level workshops. A brief summary is given for each district below:

Kibaale. A general lack of means of transportation was observed in Kibaale. Bicycles are the main means, but not many farmers own them. Women stressed that due to cultural attitudes, they were not "supposed" to ride bikes. One women at the District workshop asked about the possibility of introducing donkeys in the District. ACT (i.e. an NGO) is running a project on animal traction in Nalweyo, Kibaale District. It appears important for NARO to assess the success of this project and make use of lessons learnt. [also see below in section on ox-carts]

Funded originally by IFAD project and currently by the IRISH Aid, the District Administration has established a vehicle pool system, where the public can hire tractors and trailers. There are question marks behind the sustainability of the pooling system once the project will be finished.

Otherwise it was noted that due to road improvements during the last few years there are now more motorised vehicles (i.e. trucks, pick-ups, and motor-bikes), making the District more accessible as a whole.

Rukungiri. There is a general lack of motorised means of transportation. Bicycles are not popular due to the hilly terrain. Donkeys and motorcycles (*boda-boda*) have been introduced, and are both popular. Source of donkeys is not near.

Lira. The most readily available means of transport (i.e. bicycle) in the District is limited in capacity. Ox-carts could be used but farmers do not value this as very important. There is need for sensitisation and training of the community on the use of animal traction implements.

Kapchorwa. Improved roads are expected to lead to better and more means of transport. The local communities have adopted the use of donkeys for transportation of farm produce to considerable extent.

Katakwi. There are insufficient heavy means of transport and buses/taxis for people. It was suggested that business people should be given loans to purchase heavy commercial vehicles. Government should honour the claims for vehicles looted from individuals/companies. People originating from the District do not allow their vehicles to operate here due to insecurity, and cultural beliefs in bewitching vehicles owners. Problems to obtain credit, due to lack of banking facilities and absence of land titles have been mentioned as a major constraint to vehicles ownership. Property has been lost during insurgency and business people have not been compensated. All this seems to refer primarily to motorised means of transportation.

Discussions in Kampala revealed that local councils try to raise taxes from the transport sector either through vehicle movement or ownership. However, there is a danger that trade will be hampered as a result of excessive taxing.

Given that bicycles are the most common IMT in rural Uganda, the supply of women friendly bikes (i.e. without cross-bares) should be encouraged.

Rural Travel and Transport Programme will be launched at road review workshop (i.e. in early April). Baseline studies are required. In seems important to establish a link with the Uganda Debt Network to look at poverty issues.

Tractor schemes have not been successful in the past. This was due to unprofitability of schemes, maintenance and management problems.

Research into IMTs is mainly undertaken by the Serere Agricultural and Animal Production Research Institute (SAARI) and the Department of Agricultural Engineering. Uptake of the technologies developed has been disappointing, which is linked to constraints faced by the extension services.

Given the prevalence of rivers, lakes and swampy areas, the issue of water transport (i.e. boats, canoes, and ferries) should not be overlooked. There are issues surrounding the ownership of ferries. It was felt that private operators are likely to be more efficient than Government run schemes.

Privatisation of the railway system is envisaged, but it seems unlikely that the system will be rehabilitated beyond the Kampala - Mombassa line in the near future given the initial heavy capital investment required in rail road construction.

A **review of GoU policy documents** indicates that, aside from the roads sector, little importance is given to rural transport. The Poverty Eradication Action Plan (Page 26, Para. 4.4.6) states that "efforts will be made to upgrade the technological capacity of agricultural equipment in use through introduction of low-cost and scale neutral technology such as draught power". The Background to the Budget 1998/99 emphasises infrastructure, however there is little on means of transportation, in particular rural travel and transport. In the Plan for the Modernisation of Agriculture in Uganda there is not much on mechanisation and nothing on IMT or rural travel.

Some facts on rural transport

"Rural people in Africa devote a significant amount of time and effort to transport, much of which involves walking in and around the village and is geared to domestic and subsistence needs" (Ian Barwell, The World Bank, Discussion Paper n0. 344, 1996; found on World Bank web-site January 1999). Women are often the ones who are responsible for the bulk of the transport burden in rural areas, and in many cases this is aggravated by male migration to urban centres. (Ellis, 1997). According to Dawson and Barwell (1993, quoted in Ellis, 1997), women have been reported of taking up to 85% of total transport effort in terms of tonnes per kilometer travelled.

Head-loading , in particular by women, is a common feature of rural transport in remote areas in Uganda. This includes transport of produce from the field to the farm,

and from there to markets. According to a study by Barwell (1996, cited in Akidi et al 1997) in Mbale District, domestic transport – mainly for water and firewood collection - constitutes 73% of household transport demand. Travel and transport for farming activities and marketing made up only 18% and 6%, respectively. To some extent, the latter figures are likely to have been influenced by a high degree of subsistence production in the farming system studied.

According to Akidi *et al* (1997), at the national level, about 70% of the agricultural produce sold at local markets are transported by head-loading (i.e. mostly by women and children). Bicycles, which are mainly used by men, account for 20%, motorised transport for 8%(i.e. mainly pick-up trucks), and donkeys for 2%. The use of ox-carts or donkey carts is very limited, due to lack of technical know-how on their fabrication, high initial cost and lack of traction animals. 93% of transport of produce between the farm and homestead takes place by head-load.

Bicycle ownership and use for hire (Bodaboda) is common especially in Eastern Uganda. Where road conditions are good pick-up transport is available on market days (ibid).

Motorised and intermediate transport

Motorised transport. Lorries, trucks and pick-ups play an important role in long-distance marketing of agricultural produce. Although the capital cost of lorries is highest, they also have the highest transport cost effectiveness (i.e. kg.km/$) (Grebresenbet et. al 1997). Both, capital cost and cost effectiveness are lower in the case of smaller modes of motorised modes of transportation such as pick-up trucks or mini-buses. Nevertheless, in terms of effectiveness the latter are still far ahead of any other means of rural transport, such as ox-carts or two-wheel tractors and carts.

Tractor schemes, including in Uganda, have failed in most countries of Sub-Saharan Africa (Ellis, 1997). Amongst other things, this was due to lack of profitability of the operations, and management and maintenance problems.

In goes without saying that motorised transport need a minimum of rural road infrastructure. At the same time, there are question marks behind the road standards required in remote rural areas. It is widely acknowledged that trunk roads have an important role to play in opening up an agricultural region, however, the exact requirements for motorable feeder and community access roads are less well known.

Given its role in the economy, it seems important that Central and Local Governments take measures encouraging the development of a competitive transport sector. This includes for example:

- Avoidance of cartels in the form of transport unions or otherwise;
- Avoidance of excessively high taxes on fuel, and vehicle importation and ownership;
- Although safety and environmental concerns are important, relevant regulations should not impede the development of a transport sector.

Intermediate Means of Transportation (IMTs). Given the limited quantities which can be transported, the speed involved and the maximum distances to be covered, head-loading is one of the most expensive means of transportation. At the other end of the spectrum, motorised transport (e.g. trucks, tractor-trailers) is often not profitable in isolated villages. As a consequence, it has been argued that Intermediate Means of Transportation (IMT) have an important role to play in this context. For example, Sieber (1997) argues that the shift from headload to donkey cart can reduce the transport costs by 60%, and the shift to an ox-cart by nearly 90%.

Sieber (ibid) runs different scenarios for transport systems to connect villages to a market centre. Highest transport costs occur when trucks or pick-ups visit all villages to collect produce. The best cost efficiency is achieved when a combination of animal traction is used with truck transport. Ox carts can transport loads on poor roads to collection points, where trucks carry bigger, aggregated, loads to the marketing centres. Sieber backs this up with empirical evidence from Tanzania, where marketing revenue is substantially higher for households owning donkeys.

Box 1: ACT (NGO) Animal Traction Project in Kibaale District

The project covers the period from1996 to 2000. The animal traction component of the project includes a metal/carpentry workshop and a parent stock of local Zebu. 48 farmers were trained by November 1998 and 170 farmers will be trained in 1999.

There is a high demand for ox-carts. Farmers can acquire carts on hire-purchase arrangement, however the project does not envisage a credit facility. In November 1998, the farmers could purchase equipment and animals at the following prices: Carts: Sh350,000 – 370,000; Plough: Sh100,000; Pair of oxen: Sh300,000 – 400,000.

Given the need to intensify agricultural production, the project covers an important area and the use of animal traction forms an essential element of mechanisation of agriculture. Five years may not be sufficient for the project to become sustainable and work on a private basis as planned. Carts have a recommended capacity of 300kg only. This seems low compared to the "normal capacity" of ox carts (i.e. up to 1000 kgs). Due to lack of interest from Government extension services, the project has created its own extension service, which operates in a rather small part of the District. In order to publicise the project's activities on a wider scale in the District, it seems important to look into ways how the link with Local Government services and other NGOs such as URDT can be improved.

Between 1992 to 1996, the UNDP/ILO sponsored Pilot Integrated Rural Transport Project (PIRTP) which was carried out in Malawi by the Ministry of Local Government and Sports. The project has later given birth to the Malawi Rural Travel and Transport Programme, which is a World Bank initiative but looking for support from other donors as well. Bicycles were by far the most numerous IMTs which were

given out on credit by PIRTP, followed by wheel-barrows, and farm carts (Table 2). Men were the main beneficiaries of the project. Besides means of transportation, the project also covered aspects related to infrastructure such as bridges in rural areas and community access roads.

Table 2: IMTs given out on credit by PIRTP in Malawi

Type of IMT	Lobi		Embangweni (Mzimba)		Neno (Mwanza)		Total
	Male	Female	Male	Female	Male	Female	
Bicycles	145	67	110	26	192	17	557
Bicycle trailers	3	2	7	0	3	0	15
Wheel barrows	31	2	23	1	23	2	82
Farm carts	16	0	12	1	16	1	46
Hand carts	1	0	0	0	0	0	1
Donkeys	0	0	0	0	4	0	4
Tricycle	0	0	0	0	1	0	1
Stretcher	2	0	1	0	0	0	3
Total	198	71	153	28	239	20	709

Source: Anonymous, 1997.

"Although donkeys are universally ridiculed, they can be invaluable providers of transport energy for women in semi-arid and mountainous areas. Donkeys are more gender-neutral than other work animals and in many societies, it is uncomplicated for women to own and / or have access to donkeys. By facilitating women's access to donkeys, development programmes can have important social and economic impacts" (Starkey, 1998). In Mali, the majority of carts are drawn by donkeys. In fact, for cost reasons, even owners of oxen often prefer to use donkeys and donkey carts for transport. In that respect, the country benefits from its large population of donkeys, which was 574,000 in 1991. (Gordon, 1997).

The main constraint to access to IMT for resource poor households is the initial capital expenditure - appropriate credit schemes would be necessary for households to be able to pay for donkeys/carts etc. Evidence from Kenya showed that farmers were able to pay off their loans for ox carts after only one harvesting period (IT Transport, 1996).

Potential manufacturers of IMTs require training and credit for setting-up a business. (e.g service delivery, parts and repair workshops, etc.) In Malawi, one of the problems encountered in this respect, was that carpenters or metal workers did not have sufficient education to operate certain types of machinery or lacked access to electricity which was a problem for welding.

Below is an overview of the performance and effectiveness of the various modes of intermediate means of transportation, including small motorised vehicles, and their key characteristics.

Table 3: Performance of intermediate means of transportation

Mode	Max load (kg)	Max speed (km)	Max range (km)	Topography Required
Wheelbarrow	100	5	10	Flat narrow path
Bicycle	75	20	20	Flat narrow path
Bicycle and trailer	200	10 –15	15 - 20	Flat wide track
Bicycle and slider	150	10 – 15	15 - 20	Flat wide track
Pack animals	100 – 250	5	15 - 20	Hilly, narrow path
Animal-drawn sledge	200 – 400	5	10	Flat
Animal drawn cart	500 – 1500	5	15 - 20	Flat wide track
Motorcycle	100	40 – 90	100	Motorable path
Motorcycle and side-car	250 – 500	30 – 60	60	Flat
Motorcycle and trailer	250	30 – 60	60	Flat
Single-axle tractor and trailer	1500	15 –20	40	Flat
Asian utility vehicle	1000	60	60	Motorable road / track

Source: Riverson and Carapetis, 1991, quoted in Gebresenbet *et al* 1997.

Table 4: Pros and cons of selected non-motorised means of transportation

Bicycles

Pros	Cons
Don't require fuel Relatively fast Cheap Can be used on narrow paths Local manufacturing and repair capacity exists in many countries Bicycle trailers can be used for heavy or bulky loads, however this requires improved, wider paths/tracks. In the past, bicycle trailers have not been very successful.	Often not used by women, owing to cultural attitudes, or lack of appropriate equipment (i.e. bikes without cross-bars) Pay load is limited to about 100 kg. Difficult to use in hilly terrain, in particular if paths/tracks are not sufficiently smooth

Ox-carts

Pros	Cons
High pay-load (i.e. up to about 1000 kg) Advantageous if animals are also used for ploughing Cows can be used for transport (e.g. Southern Europe); as a result milk can be an additional benefit of the traction animal	Mostly used by men Pair of oxen plus cart are fairly expensive and often beyond the reach of resource poor farmers Animals have relatively high feed and fodder requirements which can be a problem in areas were farm sizes are small (i.e. below 2 hectares) Problems with diseases such as tripanosomiasis in particular in the more humid parts of Sub-Saharan Africa Cattle rustling can be problem

Donkeys

Pros	Cons
Due to the animals' size, they can be used by women and even children Relatively inexpensive Can be used on foot-paths, in particular in hilly terrain where there are no roads or tracks which can be used by bikes Require little management, in particular in arid or semi-arid regions In some parts of Africa (e.g. Mali), there is widespread use of donkey carts Owing to their low value, theft of donkeys is rare compared to cattle rustling	Donkeys survive best in arid or semi-arid regions. Disease prevalence and mortality rate increase if annual rainfall is above 700 – 1000 mm. If used as pack animals, carrying capacity is limited to about 70 – 100kg.

Source: Personal communication, Paul Starkey

Way forward and issues involved

- The government ought to avoid regulatory barriers (i.e. including high taxes) blocking the widespread up-take of motorised and non-motorised means of transportation.

- Adequate availability of credit for farmers and workshop owners is important for the up-take of appropriate means of transportation.

- Government staff have to be made aware of the benefits of Intermediary Means of Transportation. In the context of small-scale farming, animal traction and other forms of IMTs do not represent an out-dated technology. IMTs should be given more prominence in training and extension curricula.

- Due to socio-cultural constraints, awareness building amongst the rural population is necessary. This should make certain means of transportation more acceptable to women (e.g. bicycles, donkeys, etc).

- A programme supporting the introduction of intermediate means of transportation should have an adequate element on animals (i.e. management, nutrition, and health of draught animals such as oxen and donkeys).

- Pilot projects should be carried out to (re)introduce IMTs and agricultural mechanisation. Issues to be considered in this context:
  - Pre-conditions for project success need to be established and Participatory Rural Appraisal carried out. This includes assessment of economic viability of certain types of IMT.
  - It is preferable to start such a project in areas were farmers already keep animals and may be familiar with animal traction from the past.
  - Given that IMTs represent a relatively large investment, in its initial stages the project should focus on an area were cash crop production is common and were farmers have a higher income.
  - Adequate training and incentives for blacksmiths are necessary to stimulate the creation of workshops in remote areas. This includes provision of credit.
  - Subsidised sale of equipment and animals should be considered at the beginning but later on this may be phased out.
  - Networking with other countries should be encouraged.
  - Project should have a minimum scale to develop a critical mass in a particular District.
  - A pilot project may require an element of community road construction and maintenance.
  - Transport and its various components are a private sector activity (e.g. Government run animal breeding programs or equipment factories should be avoided).

Market Infrastructure

Poor market infrastructure and lack of an adequate network was rated as a constraint to marketing at four out of five District level workshops. Below are summaries of discussions at selected workshops.

Lira. Market network, market facilities, and maintenance of facilities were discussed. It was observed that the market network was adequate in the district but a lot of problems arose in areas of market facilities and their maintenance. It was noted that most markets lack facilities such as sheds and toilets. The problem is even more serious at fish landing sites, where in addition to the above problems, there are no provisions for disposal of fish offal.

More seriously, the market authorities demand fees from the trader that should have been used to provide these facilities. Problems arise because the local markets in the rural areas which are most affected by this problem are owned by District Local Government. These markets are tendered to individuals or companies that operate it for a given period of time. At the same time, the private operators do not have the willingness to invest in the market structure.

It was therefore recommended that:

- Grassroots institutions and agencies including primary societies should be strengthened to operate these markets.
- District Local Governments should put some structures in markets since they are the ones who own the market. Sub-county administration should contribute greatly to this effect.
- The running and maintenance should be tendered out but the bids should be properly evaluated.

Katakwi. There are three grades of markets i.e. grade I, II and III. In category 1, there are three markets i.e. Ochorimongin which specialises in livestock; Unyaniguro-rice, and Libalango which has a speciality of livestock and green gram. These markets are managed by tenderers. The number of markets are adequate but their structure is basically open air with a few grass thatched stalls and with no other amenities e.g. stores, waybridges for livestock, toilets etc.

Review of Government documents. The establishment of rural markets is one of the areas highlighted in the PMA. It is suggested that initially public investment is required but later it should be privately run (MAAIF/MFPED December 1998, Page 26).

The following points can serve as **guidelines** for the establishment of markets:

- Markets should be located at central points reducing distances for producers and traders,

- Markets need a minimum of infrastructure to be provided by LG, such as platforms, permanent shades for all weather business, sanitary facilities, and water

supply. The construction of warehouses should be undertaken by the private sector.

- The system of weekly or fortnightly markets may need enhancing. Announcements through the mass media (i.e. in particular local radio) should be envisaged.

- Following an initial, moderate investment, the running of the markets should be tendered out to private operators.

Storage

Storage was mentioned as a problem at all district workshops. The following summarises some of the discussions.

Lira. Storage was seen as a problem at all levels. The storage structures easily expose the produce to insect damage. It is one of the reasons why farmers rush to sell their produce immediately after harvest when the price is still very low. It was also observed that other aspects of post harvest handling (e.g. drying) is not being done properly thus making the produce vulnerable to pest infestation. Another observation made was that construction of appropriate storage facilities requires high initial investment that farmers cannot afford.

It was therefore recommended that:

- Post harvest handling and storage, particularly at the farm level, should be strengthened more, especially in training all the stakeholders involved in marketing agricultural produce.
- Produce buyers should be encouraged to fumigate at an appropriate storage facility so that they are able to tap the high prices at the period of scarcity. But this should be done with technical back-up and supervision.

Kapchorwa. Lack of storage facilities was seen as having three negative effects, (a) farmers cannot store to wait for better prices, as a result of which they sell at low prices, (b) in case of maize, no chemicals against weevils are available, which affects the quality, (c) the moisture content required by the market is not met.

Katakwi. Storage both at on-farm and off-farm level is grossly inadequate and where it exists, it is out-dated and of traditional type. The basic function of storage, i.e. bulking and prolonging the storage shelf life of commodities, is thus not met and most crops are sold immediately after harvest at very low prices thus reducing the farmers' incomes.

Rukungiri. Due to lack of storage facilities farmers cannot wait for good prices and traders take advantage of this.

Kibaale. Storage was found critical at farmers' level;. It was recommended that extension services should introduce new storage technologies.

General comments. Storage allows greater flexibility in the timing of marketing. At the local level, storage enables producers and traders to delay the marketing of produce in order to take advantage of seasonal price fluctuations. In the context of remote communities, storage periods are likely to be longer owing to the lack of marketing opportunities. In addition, it may be necessary to bulk up produce prior to selling in order to achieve economies of scale for transportation.

Storage is a private sector activity. As such it is important that research and extension services prepare relevant messages on technical aspects and the economics of storage for the main players, i.e. namely farmers, traders, and manufacturers of storage facilities. Farmers generally will require small storage facilities, which are appropriate for the scale of their business. Traders generally need warehouses, which can be owned or hired.

Protection of stored produce against insects, rodents, moulds, etc is important to preserve the value of the commodity. Aside from technical messages on the use of chemicals or natural protectants such as inert dust, it is important that these means are available.

Table 5, prepared by Dr P Golob, NRI, provides some guidance on the extent of agricultural storage losses. The Table in general demonstrates that considerable losses occur during grain storage at farm level particularly when storage periods are extended over several months.

Table 5: Weight losses in local cereal and pulses during storage on small farms in Africa

Country	Crop	Storage period (months)	Cause of loss	Mean % weight loss (±SEM) or range	Reference
Zambia	maize	7	Insects	1.7-5.6	Adams, 1977
Kenya	maize	Up to 9	insects, rodents	3.5 ± 0.2	De Lima, 1979
Malawi, Lilongwe	maize	Up to 9	Insects	3.2 ± 3.4	Golob, 1981
Malawi, Lower Shire	maize	Up to 9	Insects	1.8 ± 3.5	Golob, 1981
Malawi, Lower Shire	sorghum	Up to 9	Insects	1.7 ± 0.5	Golob, 1981
Tanzania**	maize	3-6.5	insects (LGB)	8.7	Hodges *et al.*, 1983
Swaziland	maize	Unspecified	Insects	3.7	De Lima, 1982
Swaziland	maize	Unspecified	Moulds	0.5	De Lima, 1982
Swaziland	maize	Unspecified	Rodents	0.2	De Lima, 1982
Ethiopia!	sorghum	9	Insects	4.0-9.2	Lemessa and Handreck, 1995
Togo	maize	4-6	insects	5.1-6.4	Pantenius, 1988
Togo*	maize	6-8	insects (LGB)	30.2-44.8	Pantenius,1988
Tanzania*	maize	4	insects (LGB)	17	Keil, 1987
Ghana	cowpea	5-9	Insects	1.1-4.7	Golob *et al.*,1998
Ghana	bambara	5-9	Insects	1.4-1.6	Golob *et al.*,1998

*Data do not take into account food removals during storage, no allowance made for declining quantities.
** Spot estimate on samples collected at one point in time.
! Storage in lined, underground pits which were untouched for the entire storage period

Storage is associated with capital costs. Traders often depend on credit (e.g. inventory credit) to be able to purchase commodities which can be stored. Although farmers may not require capital to store produce, storage still leads to opportunity costs. In many cases farmers are forced to sell produce after the harvest to meet their financial commitments. This could be prevented if farmers had better access to credit facilities.

Processing

Inadequate processing facilities was mentioned as a constraint to market access at three out of five district workshops.

Lira. Most of the agricultural produce bought or sold are mainly in primary form fetching very low prices. There is therefore a need to add value to these produce by processing but the low level of processing machines among the rural community hampers this.

It was therefore recommended that:

- Policies should be instituted to encourage cottage industries that can process agricultural produce. This would be more viable especially if the processing units are within reach of the farmers.
- At higher levels, processing facilities should be encouraged and developed because this constitutes a very important outlet for farmers' produce.
- At farm level, the produce should if possible be graded so that farmers benefit from premium prices. This, therefore, calls for emphasis on quality at farm level.

Kapchorwa. Other than coffee whose processing plant is being revived under a joint venture between Divinity Union Ltd and Sebei Elgon Co-operative Union Ltd, there is no other agro-processing facility in the district. AT(U), an NGO, had introduced small oil mill extractors for sunflower, but the crop has not picked up well in the district.

Katakwi. Due to insecurity, no major processing facilities have been established in the district. Although a lot of cotton is grown in the district, there are no ginneries and oil extraction mills. Lack of electricity is a major factor in the slow rate of industrialisation of the district. Of recent, Appropriate Technology (AT) has established its branch office in Katakwi and has introduced small scale oil presses, water pumps, etc at affordable prices.

General comments. Processing can range in scale from household level, low technology processing, to fully mechanised factories. Farming communities lacking opportunities to sell their produce in fresh form are often forced to endeavor in processing activities (e.g. drying of roots, fruits and vegetables, smoking of meat).

With respect to marketing, processing serves two main functions:

- it can add value to the good, thereby increasing the potential marketability and profitability of the product; and
- processing can preserve the produce, thereby increasing the time available for marketing.

At national level, agro-processing industries can generate demand for agricultural raw materials, including crops traditionally viewed as foodcrops. "New market opportunities are now providing a still largely unexploited niche for small-scale processing" (Spore 65, September/October 1996). Urbanisation, increasing purchasing power, and changing consumer preferences are likely to be driving forces behind the establishment of processing industries.

The final processed product may be exported or consumed domestically. Aside from the traditional cash crops, other examples include:

- Vegetable processing (e.g. RECO in Kasese),
- Vanilla processing and export (UVAN Ltd)
- Fruit processing (Fruit of the Nile),
- Animal feed processing (e.g. by-products from oilseed processing and maize milling, dried cassava),
- Starch industries (e.g. cassava or sweet potato, in particular in Asia),
- Milk processing,
- Fish processing.

A favourable investment climate is a condition for the creation of a successful agro-industry. It is important that the investment climate is conducive not only in Kampala but also in the Districts. Needless to say that a minimum of infrastructure is required to stimulate agro-processing industries, such as water, electricity and communication facilities.

NGOs such as AT (Appropriate Technology), ITDG (Intermediate Techology Development Group), and Technoserve are specialised in the establishment of processing industries in particular at community level. In addition, institutional arrangements involving the public and/or the private sectors need to be encouraged to provide processing companies (i.e. small- and large-scale) with appropriate technical and managerial know-how. Contract farming may be an option to be considered in this context. The export of non-traditional export crops (e.g. vanilla, paprika, maize) is encouraged by the USAID funded IDEA project.

(also see section on community organisation and market linkages)

Information

Survey Results

After roads, the lack of market information was the second most important constraint to agricultural marketing identified at the District workshops as indicated below.

Kibaale: Efforts should be made by the District and subcounty administrations to use the following media: FM Radio Stations, Local Newspapers, churches, NGOs, Farmers and Traders Association, Extension workers, local councillors, study tours etc.

Rukungiri: The farmers lack knowledge of prices in Kampala and in neighbouring countries like Congo and Rwanda. They also lack knowledge on quality requirements of the various.

It was observed that the Field Extension Workers (FEWs) based at each sub-county collect agricultural data, including price data but this is never disseminated to the farmers. It is only utilised in-house by the agricultural staff and planners. There was a need to disseminate market information using the "Orumuri" newspaper and Rukungiri FM radio station.

Lira: It was observed that marketing information is necessary from various marketing levels namely – international, national, district and rural levels. The type of information required includes: Prices of the produce, market, quality and quantity, products available etc.

The prominent problem that featured in market information was information gathering and dissemination. The office of the District Marketing Officer who should be doing this is grossly understaffed and underfunded. Yet this information is required on timely basis to enable farmers negotiate with the buyers in fixing prices of produce.

It was therefore recommended that:

- The effort of the District Marketing Officer should be supplemented by other government agencies such as Agricultural Extension Staff and Civic Leaders.
- Other stakeholders namely Local Councils, UNFA, and projects involved in agricultural production should be made aware of the importance of marketing information and they should therefore be involved in the funding, collection, and dissemination of marketing information.
- The media, especially radios should be fully utilised in the dissemination of marketing information. This should be put on air at an appropriate time of the day.
- Farmers' organisation should be strengthened so that they are able to collect and disseminate marketing information.

Kapchorwa: Farmers in remote areas are generally ignorant of prices prevailing in Kapchorwa Town, Mbale, Soroti and Kumi, let alone the capital Kampala. Traders tend to dictate the prices due to farmer ignorance.

At the District workshop it was recommended that efforts be made to improve the provision of market information through mobile film vans, newspapers and radios.

Katakwi: There is a lack of means of communication e.g. telephone, fax, etc. The only way information travels is by people. There is no information dissemination mechanism. There is only one officer manning the marketing department. The Government through the Ministry of Trade and Industry (MTI) together with traders' and farmers' organisations should be responsible for market information dissemination.

Although it is recognised that the provision of market information is necessary to improve domestic marketing, it may also be assumed that due to the modernisation of agriculture some market information will be supplied by private sources charging user fees. However, if the information is to be targeted at poor farmers predominantly active in subsistence production, then this approach is unlikely to work. More on this in the sections below.

Current supply of market information in Uganda

There are a number of institutions, which are or have been involved with market information collection and dissemination. A brief discussion of a selected few of these institutions is given in the sections below.

The Market News Service (NMS), - based at the Ministry of Tourism, Trade, and Industry was funded primarily by USAID until September 1998. The MNS struggled with a number of shortcomings including: shortage of funds, delays in data communication, and poor dissemination of information in particular as the service was heavily centralised. The data was published in newspapers and broadcast through one FM Station (i.e. Radio Simba). It was recognised that publishing the data in English was not sufficient, and that vernacular languages should be included. The Service mainly targeted traders by publishing the prices of food crops in 21 Districts. It was expected that this would lead to greater competition in the market place to the benefit of the producers. Once the funding had stopped the service became more or less defunct.

The USAID funded IDEA project - used to collect and disseminate market information. However, in March 1999, IDEA did not have an Information Officer, as a result of which this activity was not fully covered by the project. There was only a monthly meeting involving, amongst others, project staff, traders, and FEWS staff, for the exchange of market information.

The USAID FEWS project - is publishing a monthly report on the food security situation in the country. However, the information is more geared towards decision makers rather than private sector operators, and is presented from a food security perspective.

Uganda National Farmers Association (UNFA)- publish agriculture related news through the quarterly magazine Farmer's Voice and radio broadcasts. Unfortunately, although the information is very useful, in remote areas it reaches only few farmers.

Some NGOs - disseminate market information to farmers in their area. However, although the information may be of good quality, it only reaches relatively small numbers, and, more importantly, the data is not shared by a network of agricultural information providers.

The Agricultural Policy Secretariat (APSEC) - has a substantial amount of agricultural production and marketing data, gathered primarily for the purpose of their annual report on economics of crops and livestock production.

The Agricultural Extension Services - have traditionally focused on production aspects, leaving the dissemination of commercial information at district level to the Trade Officer of the Ministry of Tourism, Trade and Industry.

Given the above, there is relatively little information on domestic agricultural markets reaching the majority of the private sector, i.e. traders, farmers and consumers. In particular, farmers in remote areas lack information.

As for the export market and small- and medium scale enterprises, there are a number of initiatives trying to provide data for their respective clients. These include

The Uganda Export Promotion Board (UEPB) - publishes a bimonthly export bulletin providing information on export markets for agricultural and other products. In addition, there is a weekly 15-minute broadcast. Prices are also published on a weekly basis.

The Micro- and Small Enterprise Policy Unit (MSE) of the MFPED - is currently undertaking a 14-month IDRC funded research project on "Information Accessibility for the Micro- and Small Enterprise Sector". The findings of a pre-project survey show that there is a fairly large number of organisations providing commercial, technical and managerial information to the micro-and small enterprise sector, including:

- Institutions which provide information to MSE entrepreneurs free of charge (e.g. Uganda Small-scale Industries Association),
- Government institutions providing information to MSE entrepreneurs as part of their mandate (e.g. UNCST, Department of Trade and Industry at District level),
- Private businesses that charge fees for their information, e.g. Bushnet, TIPS (Technological Information Promotion Services), and FIT Ltd (Farm Implements and Tools).

Facts about information

The need for market information is unquestionable. "Up-to-date, or current, market information enables farmers to negotiate with traders from a position of greater strength. It also facilitates spatial distribution of products from rural areas to towns and between markets. Well-analysed historical market information enables farmers to make planting decisions, including those related to new crops. It also permits traders [and producers] to make better decisions regarding the viability of intra and, perhaps, inter-seasonal storage." (Shepherd, 1997).

Shepherd (ibid) distinguishes between market information and marketing information. The former emphasises collection and dissemination of prices, and, in some cases, quantities, whereas the latter represents a much wider concept, including information on market channels, potential buyers and their contacts, payment requirements, quality standards, etc. In this report, only the term market information will be used.

In particular larger-scale traders usually have their own information networks relying on more or less modern communications technology (e.g. fax, e-mail, etc). Although generally quite well informed of local markets, small-scale traders lack the resources to monitor markets on a regular basis (Sheperd, 1997, P10). They depend more on "word-of-mouth" information, which depends on the existence of traditional communication channels such as telephone lines, and a functioning transport infrastructure. The latter not only result in larger quantities transported but also improved flow of information.

Although it is increasingly argued that users should pay for information, in the context of resource poor farmers this seems unrealistic. For the time being, information should be considered a public good in the context of small-scale farming in Sub-Saharan countries. Especially where mass media such as radios are used it is difficult to recover costs. Information provided through the printed media (e.g. newsletters or newspapers) could be charged directly or indirectly to the user, but there are issues such as affordability, delivery delays, quality of information, and presentation (i.e. usually not in vernacular language).

It must be recognised that the provision of information for small-scale farmers ought to be seen in the context of adult education. Universal Primary Education (UPE) is expected to generate long-term benefits, however, if agricultural modernisation is to take place within the next decade, then adult farmers will require more information not only of markets but their business and environment in general.

In particular in remote areas, demand for information needs to be created. Farmers need to be made aware of their right to information, how they can make use of it, and how to influence its delivery. This can take the form of "pressurising" an extension officer to provide a particular piece of information or request better packaged agricultural radio programmes from the local FM station.

At the same time it is important to bear in mind that provision of information alone, however good its quality, is not sufficient. Markets must be sufficiently competitive so that farmers or small-scale traders can take advantage of opportunities offered. Aside from the availability of production factors, farmers must have the entrepreneurial spirit and knowledge to be able to make use of information. Obviously, and last but not least, if increased market orientation would lead to unjustified risk to their livelihoods then farmers cannot be expected to adjust production accordingly.

Types of information required

According to Robbins (1998), "farmers need to be able to compare local market conditions with those further away, ... prices between one grade of product and another, ...and they need information on individual traders' track records so that they

can avoid those that are untrustworthy". Appendix 3 provides an overview of perceived information needs by stakeholders in Ghana (Robbins, ibid).

In Mali, the execution of needs assessment studies was one of the first activities of the newly established "Observatoire des Marchés Agricoles". Target groups for this exercise included, farmers, traders, processors, and institutional decision-makers.

According to Sanogo (1998), farmers requested the following types of market information: Different food security and cash crops (i.e. not only cereals should be covered), Supply and demand situation and prices on markets, Availability and prices of inputs (including transport, equipment, fertiliser, etc), Availability and conditions of credit.

As for processing and storage, the following information needs were expressed by producers: Storage technologies, Availability and price of chemicals, and Demand for processed products. Livestock producers requested information on, disease control, availability and price of inputs such as drugs and feed, livestock prices.

The survey also revealed that farmers have a preference for local radio stations broadcasting in vernacular language. This indicates that at least part of the information should be related to the context of a specific locality (i.e. Commune or region) rather than the nation as a whole. This may in particular apply to farmers operating in remote areas.

Traders expressed the following information needs: Traders buying and selling on the domestic market, prices, demand and supply volumes, contacts of traders, information on storage technology.

Export traders requested information on, prices, supply and demand situation, contact details of traders, quality standards, regulations, market opportunities. In the context of traders it is important to mention government policies affecting domestic and export markets. For example, unannounced subsidised imports of cereals or inputs such as fertilisers can create problems for traders.

Processors require three types of information related to, raw material supply (prices, volumes, sources, production statistics), processing technology (prices and suppliers of machinery, new technologies), and sales (price, demand and distribution of products, information on competing imported products).

Decision makers require information on: Commodity system, agricultural statistics, food aid, food security stocks, regulations on national and international markets, support programmes for operators active in the respective commodity chains, availability and conditions of credits, prices of agricultural products on the national, sub-regional, and international markets.

This clearly shows that farmers and traders require more than market information, which is primarily based on prices. Technical information includes both pre- and post-harvest aspects of farming. Traditionally, extension services were given a leading role in providing this information, however, at best, their results have been mixed.

Particular emphasis has been on production whereas farmers in a commercial agriculture equally require technical information on post-harvest aspects, including storage, transport, processing and marketing. As a consequence the latter points need to be strengthened. More about this below in the Section on extension.

If agriculture is to be modernised then farmers need a more commercial approach to their business. This requires a minimum exposure to farm management concepts such as gross margins, profitability, etc. In this respect, extension officers, be they from Government departments, NGOs, or private sector, have an important role to play in communicating these concepts. Needless to say that the extension staff themselves require more exposure to commercial approaches.

Although not directly linked to market information, institutional information has an important role to play in rural development. This may correspond to civic education whereby villagers are made aware of their rights and duties. In particular, following decentralisation, it is important that Local Government actions and decisions are made as transparent as possible.

Means of Communication

Rural Radio

"Radio is clearly the most effective and appropriate means of communicating information in remote areas to farmers many of whom have poor literacy skills." (Robbins, 1998). This certainly also applies to the dissemination of market information.

Broadly, there are three types of radio stations in Uganda:

- National radio station (i.e. Radio Uganda)
- Commercial local radio stations (e.g. Voice of Toro)
- Community radio stations (small radius, about 50 – 100km) often set up by NGOs (URDT plans to open a station in Kibaale District)

Radio Uganda is used for informing the rural population with messages related to agriculture or health issues. The main advantage is the large coverage national radio stations can achieve. This is partly due to the fact that listeners are used to the programmes and schedules of the national radio and therefore prefer to tune in despite the existence of new stations.

Disadvantages of national radio stations include:

- generally high fees for airtime,
- sometimes political interference,
- if there are many languages and dialects spoken in the country, it may become difficult to reach the majority of the population,
- National radios, which are usually based in the capital city, may be useful for spreading very general messages concerning the entire country, but they cannot take account of local information requirements.

Commercial FM Stations. In early 1999, Uganda had about 10 commercial FM stations covering the bulk of the country. As the term already implies these private stations tend to have a commercial, profit-making approach. They often charge relatively high rates for airtime, which may be an indication of lack of competition, or high demand for airtime. Income may not only come from advertising, but also broadcasting of development programmes, and personal messages.

Although generally set up without support, in some countries such as Mali they receive a subsidy at least during the first years of operation. Often the owner of the station or key employees have a background in journalism, which is of advantage when it comes to issues such as programme making and broadcasting.

The radius of FM Stations can vary considerably. Smaller stations with less expensive equipment have a radius of about 50 km which can increase to 100km if the transmitter is well positioned (e.g. on top of a mountain). Larger stations with several transmitters can cover several regions of a country as the example of Voice of Toro in Uganda shows.

Box 2: Voice of Toro, the Example of a Commercial FM Station

Created in the mid-1990s, Voice of Toro (VOT), a private FM radio station, which has its headquarters in Fort-Portal, Western Uganda, has four 3KW transmitters located in Fort-Portal, Mbarara, Mubende, and Kampala. In addition to the usual media aspects like entertainment and news updates, the focus of the corporate mission is on basic social concerns such as poverty alleviation, agriculture, education, and other aspects of rural development.

According to their factsheet, VOT covers 16 Districts in Western and Central Uganda with a population of over 15 million, and is also received in parts of Northern Rwanda and Eastern Congo. The languages used by the station include: Runyoro/Rutoro, Runyankole/Rukiiga, Lukonzo, Rwamba, Kinyarwanda, Swahili, English, Lingala, and Luganda.

The average airtime cost for advertising spots is between Sh10,000 to Sh15,000. Airtime for news adjacent journals will attract an extra charge of 50%. The production of one commercial/advert costs Sh150,000, and a 15 minute programme Sh450,000. At the same time it was indicated that cheaper rates could be negotiated if, for example, the station would be used for regular broadcasts of agriculture related extension or market information messages.

During the early years of their existence, VOT have also sold low cost FM receivers to the population in their area in order to boost radio ownership and listenership.

Community Radio Stations, often sponsored by NGOs or donors, are stations that can be particularly useful in remote areas where no commercial FM station can be received. In some cases they are based on volunteer work. As a consequence they are

obviously in close contact with their listeners, but are also likely to lack professional broadcasting and management staff. This can be a problem once the initial enthusiasm for the new station is gone and programme making becomes routine. They require financial support from donors, NGOs, or the Local Government.

Estimates of costs of setting up a Community Radio Station vary widely. According to Myers (1998, based on Louarn, Panos 1994), small stations "cost as little as £15,000 (US$24,000) to set up in terms of initial investment in equipment". Larger stations may cost up to £50,000 ($80,000) and more, including costs for broadcasting equipment, transmitters, studio, vehicles, and training of personnel. In addition, there are often unpaid inputs from volunteers. Insufficient funding and the absence of adequate training and support (e.g. means of transportation for volunteer staff) can jeopardise the success of a station.

Cost of FM equipment for Community Radio Stations starts with US$1,500 for a small transmitter suitable for villages or small areas increasing to about US$7,000 (ex-works) for a 1200 Watts package comprising transmitter, power supply, and four-bay antenna system (Source: Mallard Concepts Ltd., Brixham, UK).

With 107 licensed radio stations, out of which 92 were operational in early 1999, Mali can be considered a communication laboratory. For example, there are five stations alone in the secondary urban centre of Segou and a total of 14 in the Segou Region. The rapid expansion of radio stations was sparked by the downfall of the Traoré regime in 1991. Until then only one, Government run, radio station existed in Mali.

The Italian NGO Terra Nova played an important role in providing associations (i.e. political, cultural, and other) with broadcasting equipment. The population's interest and donor support, led the government to subsidise new radio stations from1992 onwards. In the earlier years the annual subsidy of a larger station was of the order of 2 million FCFA (approx. US$3,500) and 0.2 million FCFA for smaller stations. For 1999 larger stations hope for a contribution of about 1 million FCFA.

The more successful stations manage to work on a budget which is much higher (e.g. FCFA 10 million), with funding coming from advertising, association's membership fees, projects or development services wishing to broadcast information.

The radio stations are classified into the following categories:
- association/community
- commercial
- Religious
- rural.

In reality it is difficult to draw exact lines between these categories, as their programmes often tend to cover more than one of them. The radio stations have their own association called "Union des Radios et Télé Libres Du Mali (URTEL). The number of radio stations and the fact that subsidies are declining suggest that competition between the stations will increase and some of them will have to close. In particular those with insufficient backing and weak management structures are likely to loose out.

Competition is likely to increase the commercial element in broadcasting, requiring stations to take close account of listeners' wishes. For example Radio Foko, the antenna of the cultural association Jamana, have recently changed their programmes and broadcasting formats following consultation with their listeners.

Findings from survey work as part of a workshop organised by CTA and GRET in Mali in 1997, highlight the importance of "staying in touch" with the audience (Sultan, 1998). For example, it was found that women prefer to have "their" programmes broadcast during the evening hours after 8pm, when they have more time, as compared to the rest of the day. Another lesson drawn was the fact that "listeners frequently regard a radio station as their 'property' and therefore tend to use the language of the 'stakeholder', when talking about the subject".

In particular in cases where villagers contribute financially through subscriptions to the running costs of the local station, they have a strong interest that their concerns are addressed and there is adequate coverage (Sultan, 1998). Rural population groups have a strong interest in technical matters related to their daily work and tend to ask for programmes more related to agriculture, livestock and fishing. Mediation between villagers and their external partners, and reinforced solidarity within villages are other beneficial outcomes of rural radio stations.

Myers (1998) describes the successful use of local radio broadcasting in an NGO project promoting reafforestation around Douentza in Mopti Region. The success of the radio campaign was due to the following factors:

- "Firstly, the radio campaign did not stand alone,; it backed-up an on-going extension programme of face-to-face contact between development workers and villages.

- Secondly, the radio promoted ideas and techniques, which were not totally new to listeners; it intentionally built on traditional knowledge and recommended small adaptations to what people were already doing.

- Thirdly, the campaign benefited from being attached to a popular local radio station which people trusted.

- Fourthly, the campaign was run in a relatively remote area where people do not have access to much information or entertainment.

- Finally, and crucially, the radio campaign provided new information with which listeners could make their own decisions".

This suggests that not only market information as such but also technical information can be successfully broadcast to target population groups. As a consequence, extension services should be encouraged to make wider use of local radio stations, in particular in remote areas which, as yet, have been neglected by projects and extension services.

However, Myers (1998) also highlights the need for increased funding of rural radio. According to her, "the problem is that almost everywhere rural radio is chronically

under-funded". She describes the case of one town in Burkina Faso, "where the district government is meant to support a community radio station, the regional administration is so poor that it has had to requisition the radio station's only motorbike to enable it to collect local taxes".

Based on project experience in Meru District in Kenya, Lloyd Morgan and Mukarebe (1998) describe "how audience research and imaginative programming have enabled radio to reach women farmers". The project was in support of Kenya's Agricultural Information Centre (AIC), trying to develop new approaches to radio programming in order to meet rural women's needs.

In a first step, the AIC radio research team, which was based on 13 Ministry of Agriculture Technical Assistants, was trained in Participatory Rural Appraisal techniques. This helped the team to undertake both quantitative and qualitative audience research on issues such as: radio ownership, access to radios within households, liked and preferred programme content, style (including language), time and duration.

Based on the research findings, a soap opera was produced, which was supposed to be entertaining as well as able to raise awareness. The fact that different population groups of the target area found themselves represented in the drama significantly contributed to its success. In addition, the soap opera was supported through a sister, magazine programme, offering factual messages related to issues raised in the soap opera. The 13 technical assistants collected all the material for the programme, ensuring at the same time constant feedback from the audience. The programmes reached a weekly listenership of 23 percent of the target population.

Following an evaluation, a similar approach has been taken in developing two programmes that are broadcast on the KBC National Service in Ki-Swahili. As for financial sustainability, a commercial company, which was at the same time advertising its product, was found to cover the expensive air-time on KBC. In addition, development organisations such as Plan International, GTZ, and CIP use the radio programme to transmit their messages on a commercial basis.

At the same time one must bear in mind that the project benefited from donor support, as a result of which there were sufficient resources to produce well-presented programmes. The question remains to what extent such an approach would be feasible without initial external sponsorship.

The cost of programme production, including script writing, transport etc. was £250 ($400) per 15 minutes soap opera in Kenya, excluding airtime (pers. comm. Lloyd Morgan). In the case of the USAID funded DISH project in Uganda, the cost of producing a 30 minutes drama on health isues is approximately $300 (pers. comm. Cheryl Lettenmaier). For comparison, Myers (1995) estimates production and broadcasting of natural resources related programmes at £75 ($120) per hour in the context of a Community Station. These figures need to be seen in comparison with the number of listeners reached. Overall, radio is an inexpensive, cost-effective medium for reaching large numbers of listeners in remote rural areas.

Comparing commercial and community stations, it appears preferable to establish the latter primarily in areas, where commercial FM stations cannot be received. Otherwise it seems best to use commercial stations for the dissemination of the different types of information required by isolated farming communities. Different avenues of funding need to be explored. For example, one option consists of companies involved in input supply also sponsoring agricultural programmes on the radio.

In some countries, radio ownership and availability/cost of batteries can be of an issue. The latter constraint led to the invention of the clockwork radio by Trevor Baylis in 1993, which is now manufactured by BayGen in South Africa (Myers, 1998, P30). The idea was to provide poor people living in remote areas with a cheap communication tool not requiring batteries. "The energy storage and release mechanism is based upon energising a steelspring by winding it from one spool to another" (Robbins, 1998). 30 seconds of winding are required to have a listening time of 30 minutes. A new version of the radio using a built-in solar panel, has recently been developed (ibid).

Due to its energy saving characteristics, the radio was well received by Governments and donor agencies alike. However, despite its good intentions, there are a number of snags, which require sorting out to make the radio more accessible for resource poor farmers. This includes in particular its relatively high price and a design default, which can lead to broken springs if the radios are wound up the wrong way around. Table xx summarises the pros and cons of the clockwork radio.

Table 6: Pros and Cons of clockwork radio

Pros	Cons
The radio does not need batteries, hence no energy costs and environmentally friendly	Purchase price of $40 – 60 in Africa (excluding retailers' mark-up), which is high for resource-poor farmers
The radio is best suited not for individual ownership but for group listening	Design fault, i.e. handle must be turned clockwise otherwise it will break. Once the radio is broken it is not repairable except by specialists
The clockwork radio has good sound quality and volume	
If not mishandled, they are sturdy and hard-wearing. The radio is well equipped to deal with dust and heat.	
They can receive short wave as well as FM and MW frequencies.	

Source: Myers 1998, Robbins 1998.

Box 3: Radio Dzimwe, Malawi

Dzimwe Community Radio Station, Malawi

"You develop a woman, you develop a whole nation."

by Francois Laureys, 22 December 1998

Dzimwe Community Radio Station is one of the first women's radios in Africa. In a men's world, female groups find it increasingly important to develop their own structures to be able to bridge the historical and social gap between the sexes. In Malawi, the Media Women's Association took the initiative to set up a radio station of their own. Coordinator Patricia Chipungu-Thodi tells why and how the radio was founded.

"We are the first in Southern Africa to set up a women's community radio station. With funding by UNESCO amongst others, we had the equipment installed, and we rented some premises as an office and a studio. That is at the Wild Life Society offices in Mangochi, which is the Lake district of Malawi, where the radio will be situated. We recruited 14 women and trained them during September, October and November, so we were able to start broadcasting before the end of 1998."

"First, the programme makers will work on a voluntary basis. Later, they can try to sell advertisements on the stations. When these come in, the station will be able to pay the programme makers. But I think this will be at a later stage. Since there is some donor-fatigue, I guess we will have to try and be as self-supporting as possible pretty soon. Meanwhile I'm trying to find as many sponsors as possible. For instance, at this moment, we don't have telephone, we don't have fax-possibilities, we don't have internet... So it's quite difficult to get in touch with us. That will have to change."

"The Malawi Media Women's Association did extensive research throughout the country to see what problems were imminent, especially for women. We discovered that this part of Malawi has a lot of problems. Here, we have high illiteracy – most of the grown-up women have never been to school, and a large part of the young women still don't go now. Health hazards are our other big problem due to the location near lakes. People don't have latrines, they don't have bathrooms, they bathe in the lake, drink water from the lake where they defecate too etc. So we said, 'how can we help these people?'. We thought radio would be a good medium to inform and educate the women about hygiene, since most of them are illiterate."

"What we do is to ask some women from the community to participate in the radio. These same women will be going to see and will be speaking to their fellow-women in the villages. They will be teaching them what they should do and avoid in terms of health. In this way, we hope to develop the whole area, at least within one or two years after opening the station."

"We are not barring men from working with us. But what we are saying is that it should be seen as the women doing most of the job. Because, so far as I know in my country, most of the people who are developed are men. Even if you compare our government's ministers, most of them are men. We only have two, maybe three women in the cabinet. At the National Radio, we are approximately 200 women against 600 men! All that shows that men have already monopolized the whole political and media sector. We want to work with women to get them on the same level as the men, so that the positions can be divided more equally. Another thing of which I am convinced is that we will only be able to develop this country through women. Like they say: "You develop a woman, you develop a whole nation; you develop a man, you develop an individual."

Contact:

Fax: 265 671257/353

E-mail: dgmbc@malawi.net

Source: website of Radio Netherlands: http://www.rnw.nl/realradio/community/

Other means of communication

For a start there is the word-of mouth communication, which plays an important role in most parts of rural Africa. This type of information flow is influenced by the volume of traffic and movement of people, which in turn is a function of road infrastructure. availability of means of transportation, etc. Markets and other centres of social gathering are places of high turnover of word-of-mouth information.

Dialogue is the type of communication used at workshops or seminars where, for example, members of medium and small-enterprise associations benefit from an exchange of information on various aspects of their business (MSEPU, 1998). At the same time, this type of communication is commonly used by agricultural extension staff providing farmers with information. Exhibitions, trade fairs, and study tours are a form of communication where farmers and traders mainly benefit from the visual impression of an object. Although they can be very useful, it is unlikely that the majority of the population in remote, rural areas will be able to benefit from this type of communication.

In the past, printed media have played an important role in Market Information Systems. Often, information was disseminated in newspapers, newsletters, and bulletin boards. Key problems with printed media include literacy language. The majority of farmers in isolated communities are unlikely to read English. Other constraints with printed media such as newspapers are delays in reaching remote villages. On the other hand, posters written in vernacular languages have proved to be effective in communicating straightforward technical messages.

Mobile video vans are an effective form of audio-visual tool in areas with easy road access. However, they are less appropriate in remote areas and where large population numbers need to be reached. Maintenance of equipment can be an issue.

New communication technologies, which started only to exist during the 1990s can be very useful. Examples include cellular phones, e-mail connections and the internet. Cheaper satellite technology has greatly helped to spread these means of communication. It may well be the case that due to this rapid technological development, the construction of traditional telephone lines may become superfluous in the very near future. The usefulness of telecentres (radios, phone and fax ,all in one), which have been installed in sub-counties on a pilot basis, needs to be monitored.

At the same time, according to Bay Petersen (quoted in Robbins 1998), "in our enthusiasm of what electronic information systems can do, we must not forget the problem of equity. If this is overlooked, it seems likely that unequal access to highly effective information systems is going to follow and reinforce the present inequalities of wealth. If we emphasise electronic technology too much in agricultural information we may find that we are helping only those who already have the best access to information to get more of it."

Market information systems and the way forward

Mali's experience

"Market Information Systems (MIS) have repeatedly proven to be unsustainable and where they have endured they have often failed to provide commercially useful advice, confining themselves to the gathering of, frequently unused, data." (Shepherd, 1997).

Mali's agricultural Market Information System provides an interesting case in this respect. Introduced in 1989 it concentrated on the collection, processing and dissemination of information on cereals and livestock markets (Sanogo, 1998). However, according to Galtier and Egg (1998), Sanogo (1998), Timbo (1998), it was increasingly recognised that this system had a number of shortcomings, which were to some extent influenced by agricultural and economic policy changes, such as the devaluation of the Franc CFA in 1994. The shortcomings of Mali's MIS can be summarised as follows:

- Too much emphasis on price,
- Emphasis on cereals and livestock only,
- System too bulky and expensive,
- No projections / forecasting,
- Inappropriate dissemination techniques, and
- Lack of demand for information.

As a consequence of these shortcomings it was decided to revamp the MIS and change its institutional setting. The new project, Observatoire des Marchés Agricoles (OMA), which started in 1998, is funded by USAID and implemented by APCAM (Assemblée Permanente des Chambres d'Agriculture du Mali), in collaboration with Michigan State University. The objectives of the project were to create a decentralised market information system which is efficient, viable and sustainable (i.e. not requiring donor support) (Timbo, 1998).

A participatory needs assessment exercise was carried out to identify the information requirements of the different stakeholders such as farmers, traders, etc. This exercise was certainly a step in the right direction. Private sector stakeholder involvement is one of the keys to the success of an MIS.

As for the financial independence, it is difficult to foresee the system working without donor support. The annual operating costs of the new system is estimated at 100 million FCFA (i.e. approx. US$170,000). Although part of the costs can be recovered through the sale of information, this is likely to work only with commercial operators. In remote areas, information, in particular that disseminated through radio, has more of the characteristics of a public good.

Given the amount of information requirements there is a danger that the "new" system will become even bulkier than the old one. As a consequence, data collectors and

analysts ought to be careful not to repeat the mistakes of the past. A flexible approach is required.

The information requirements identified through the survey also suggest a number of different sources of information. Market information as such should be supplied as much as possible through the MIS. However, other types of information may be better supplied by extension services, private companies, or directly by research institutions (e.g. on new processing technologies). Obviously this depends on the location.

Galtier and Egg (1998) suggest several tracks to be pursued beyond the traditional Market Information System. In particular, this would require tracking of the problems causing high transaction costs (i.e. high cost of partner search, high negotiating cost, high opportunistic risk), lack of innovations, low investment and inadequate storage facilities. For example, the high costs of partner search could be reduced through the establishment of fairs or the broadcasting of ads specifying the exact needs of buyers and sellers in terms of quantity, quality, price, terms of payment, etc.

Although, in the farmers' interest, it is desirable to have several sources of information available (i.e. information pluralism), it is also important to co-ordinate efforts between suppliers. In particular, if there are projects (i.e. NGOs or other) collecting or disseminating certain types of information, it seems appropriate to avoid duplication. This is particularly the case in remote areas, where resources are often scarce. Decentralised government structures should allow a better co-ordination in this respect.

Ideas on a decentralised Market Information System (MIS) for Uganda

The following paragraphs do not attempt to provide a complete blueprint for a Ugandan MIS but to provide some ideas for a possible way forward. This would include the following elements:

- A decentralised, flexible, information system, bringing on board all the main stakeholders (e.g. LG, private sector associations, NGOs, Radio Stations) should be envisaged.

- Government (Centre and local), donors and NGOs ought to acknowledge the importance of information and make necessary resources available. Information, in particular if broadcast through mass media, is a public good in remote areas. Private sector sponsorship should be sought for the MIS but this is unlikely to cover the bulk of the funding requirements.

- A pilot project is required to identify how system should be set up at District level; lessons can be learnt from the IDRC funded project on "Information Accessibility to the Micro- and Small Enterprises", which is executed in four pilot districts by the Micro- and Small Enterprise Policy Unit of the Ministry of Finance, Planning and Economic Development. If deemed appropriate, this project should be expanded to include market information for farmers and traders.

- Possibilities where MIS should be placed at local level include Chambers of Commerce and Industry, Private Sector Promotion Centres supported by UNDP project, or the planned District Agricultural Training and Information Centres; this may differ from District to District depending on the resources available. Given the scarce resources available, establishment of several, independent, information centres at District level should be avoided.

- A District market intelligence unit should involve players from several local institutions including agricultural extension. District Information Officers are likely to have a leading role to play in running the system. They have to know what the stakeholders' requirements are and where to obtain the information. Private sector stakeholders ought to have an influence on the design and management of the MIS.

- Given that the various stakeholders require different types of information beyond agricultural prices and quantities, the designers of a decentralised MIS have to be careful that the new system will not become even bulkier than the old one.

- As far as possible, there should be direct exchange of information between information officers of different Districts. However, although the system should be based on decentralised and flexible principles, it requires a Focal Point at the Centre for two reasons, namely (a) network co-ordination, and (b) a place, where some selected District level data (e.g. key market indicators) are gathered and processed. This focal point can be located at the Statistics Department of the Ministry of Agriculture but it needs to be closely monitored to what extent the latter is capable of meeting the needs of District Information Centres. Ease of accessibility and timeliness are important if data are required from the Centre. If these criteria cannot be met by a Government institution, then contracting out of (a) and (b) ought to be considered.

- District Information Officers should be able to access information from as many sources as possible. The Focal Point in the Centre is only one of them, and although it may not necessarily always hold the information required it should be able to point into the direction of those who do. Information sources include national research centres, private sector associations, companies that sell information, or information centres that are based in neighbouring or overseas countries.

- The system should be demand-driven reacting to the needs of the target population groups (i.e. primarily small-scale farmers and traders). This process should start with a participatory needs assessment, followed by an on-going contact between target groups and District Information Officers. Agricultural extension staff may have to play an intermediary function in passing on farmers' information needs, which should not be regarded as static but changing depending on the agricultural calendar and other factors.

- Local Radio should be the principal means of disseminating information. If possible, commercial stations should be used. Other modern technologies should be used for data gathering and processing. Radio spots and programmes, however long they may be, need to be well presented (i.e. should not be boring), and

broadcast at the right time and in the right form (i.e. language, etc). This requires training on behalf of the District Information Officers and others involved in the Market Information System. Radio stations have to carry out audience research to keep in touch with their clientele.

- NGOs may have a role to play where local capacity is weak. This may involve assistance to the Local Government in setting up a community radio station, training of information officers, and provision of transport and equipment. At the same time it is important that the institutional side of the MIS is sustainable. The creation of unsustainable units, which do not form part of the local institutional set-up, should be avoided.

Facilitating Functions

Community organisation and market linkages

Community organisations or associations for every category of players involved in marketing were identified during the survey as being crucial for increasing marketing access through improving the business environment and offering various types of support services required for the development of vibrant business enterprises. It was, however, at the same time recognised that at present such organisations are few in Uganda and where they exist they are still at the infancy stage and require to be strengthened. Some of the organisations currently in existence in Uganda, which are associated with marketing, include various farmer and women groups at the grassroot level, Uganda National Farmers Association (UNFA) with branches in all districts, horticultural associations, grain producers associations, grain processors associations, Uganda Commercial Farmers Association, Uganda Oil-Seed Processors Associations (UOSPA), etc. The associations require to be nurtured and developed to increase their out-reach capacities, provisions of services and their sustainability as well as their capabilities to undertake promotional, technical and business advisory services for their respective stakeholders.

Group action by various categories of stakeholders farmers has considerable potential for increasing market access. Co-operative action can be defined as "a group of economic entities who agree to act collectively in order to further their joint and individual private interests". (Jaffee, 1995). With respect to market access, the advantages of group actions are as follows:

- counter problem of lumpy investments in infrastructure and services: costs can be shared and access to value adding activities enhanced. Individuals are unable to make relatively large capital investments, especially in the absence of credit sources. By pooling funds, groups can make joint investments in processing facilities, storage facilities, transport infrastructure or vehicles, and so on.
- they can internalise certain externalities and therefore allow for the private provision of certain public goods.
- they can reduce risk by pooling individuals risk (though this may lead to unwise and over-risky decisions).
- can lower transaction costs: e.g. by performing screening roles; gathering and disseminating information about members;
- co-operatives can exercise or counter market power: collective negotiations; controlling with-holding members supply to the market and so on.
- economies of scale can be realised by joint activities, for instance the purchase or marketing of goods.

Although the potential advantages of farmer co-operation have long since been recognised, implementing group formation and operation has proven far more difficult (Goodland and Kleih, 1998). Reasons for failure include:

- Groups have been formed too quickly and too much has been expected of groups too soon.
- Responsibilities given to the groups have exceeded their capacities. Responsibilities range from co-ordination of activities, such as marketing, to the joint ownership of assets, such as vehicles, storage or processing facilities. Evidence shows that the former tend to have better chances of success as skills

and experience for such activities are typically less complex (Stringfellow et al, 1997);

- Groups which have been formed in communities where there is not a culture of co-operation often fail, especially if the management of jointly-owned assets is involved. This stresses the need to understand local social and cultural conditions prior to attempting to foster co-operation.
- Co-operation has been enforced in some cases, especially when justified on ideological grounds. When these approaches have failed, it has led to a general resentment and suspicion of the concept of externally-led co-operation initiatives. Groups only succeed when their members perceive the benefits of co-operation and then come together in a group over which they have a sense of ownership. Self-selection is important for peer pressure to be effective.
- Potential problems of group activities includes the free-rider problem occurring when an individual from inside or outside the group is able to capture the benefits of the group without contributing to the costs.
- Size of group may be important: small groups may have advantages over larger groups as they are easier to manage. In some cases it may be preferable that group members undertake some activities on an individual basis (e.g. processing), and others on a collective basis (e.g. marketing).
- Subsidised activities or donated equipment may undermine farmer groups. Groups may form merely to get access to subsidies, and quickly disband after the benefits of forming a group have been reaped.

Linkages between the groups and the wider economy will determine the potential benefits of co-operation, and the chances for the success of the group. Stringfellow et al (1997) identify two types of relationship that groups have with other market entities. Firstly, there are those which are termed "linkage-independent", where groups act independently in forging economic relations with other market intermediaries. For example, groups may make bulk purchases from input suppliers. The second type are "linkage-dependent" which are dependent upon an outside agency which has a heavy involvement in the activities of the group.

This second type includes credit groups and outgrowers schemes. Marketing frequently plays an important role in these groups (see examples in Stringfellow et al (ibid): UVAN Ltd. Uganda; ITDG, Chivas Region, Zimbabwe). They are based on the understanding that both sides - the group members and the private company - benefit from the linkage. Farmers may benefit from having a secure market for their produce at a pre-determined price. Companies benefit from having a secure supply of raw materials which may be produced at lower cost than by the company using employed labour. Companies also benefit from a lowering of transaction costs, i.e. transactions are interlocked (Dorward et al, 1997). Risks and costs to the private company are reduced as:

- communication with the producers is facilitated by channelling information through contact farmers;
- peer pressure amongst the members may prevent producers from reneging their contracts.

Even though these linkage-dependent marketing-based groups provide a potential means of increasing market access, their applicability to remoter areas is not always

obvious. High transportation and transaction costs may dissuade private companies from engaging with remoter communities.

Nevertheless there are examples where communities in areas considered remote have been able to take advantage of marketing opportunities. This includes, for example, production of tea, tobacco, and coffee in Rukungiri, *waragi* (i.e. banana gin) in Kibaale, maize in Kapchorwa, and tobacco in the West Nile Region. One of the main conditions for the success of these operations is the existence of demand at domestic, regional or international levels.

Contract growing arrangements are often in place in the case of export crops. This is favoured by the fact that export commodity chains tend to have fewer players at least at some point of the marketing system. Given that contract farming often entails a number of services such as input supply, extension and marketing, traders need to have a minimum business size to be able to enter into these arrangements with farming communities.

The challenge is how to better integrate the domestic food crops commodity systems. These systems tend to be characterised by a large number of often small operators. This makes it particularly difficult to implement contract farming arrangements in the case of crops such as cassava, sweet potato, beans and maize. Large numbers of farmers are faced by large numbers of traders. As a consequence it is suggested that farmers who predominantly grow these crops need to become commercially more proactive. This involves attempting to find group solutions to typical constraints such as input supply, transport or marketing.

CARE are pursuing such an approach in their 'Development through Conservation' Project in Kabala District (Kindness, January 1998). They have developed a marketing strategy whereby farmers and farmer groups try to identify and analyse markets for their produce. This also includes the identification of marketing constraints, opportunities, and appropriate solutions by the farmers themselves. CARE are providing training for the farmer groups using participatory methods and also have a facilitatory role to play in linking producers with other players in the commodity chain. It was felt that the project should work with farmer groups rather than entire communities, since the former are generally more focused and cohesive, and the numbers are smaller. It seems worthwhile to follow up on this project to learn from its lessons.

It is important that these projects use an open approach whereby production should follow market demand. In the past, similar projects have often started with an intervention in the production system, only adding a marketing component once selling of the produce became a problem. Only if there is an established marketing opportunity farmers should be encouraged to produce crops in sufficient quantity and quality. As already indicated above, large quantities are important to allow economies of scale when it comes to marketing activities such as transport and they are preferred by traders since this reduces their search costs.

Policy implications. The state has a role to play in facilitating the formation of self-help groups and by forging relationships between these groups and other market actors. There is a clear need for training in business and management skills. The

provision of training itself requires careful consideration, as financial self-sufficiency (through, for example, charging groups for training) is likely to be difficult unless groups are well-established and see the benefits in receiving such training. Donor assistance may be necessary, possibly channelled through local NGOs or UNFA. Following decentralisation, the formation of associations of groups should be encouraged at District level.

Local NGOs can also facilitate the linking of self help groups to trading partners. In northern Tanzania, the FAIDA NGO, plays an active role in seeking out both groups and private companies, and helps to forge relationships between them. By acting as a neutral facilitator, the NGO can reduce transaction costs involved in the identification, screening and negotiating between buyers and sellers, and in the case of FAIDA, to draft contracts between individual farmers and private companies (Ellman, 1998).

Research and extension

A production bias is one of the key features of agricultural extension services in many countries. This is not different in Uganda. In the past the marketing of agricultural commodities was controlled by marketing boards and co-operative associations, however following liberalisation, farmers now rely more on their own judgement in commercial decision making. Unfortunately this is not reflected in the current state of agricultural extension, whose staff are primarily trained in production aspects. Only very few of the current staff are able to effectively deal with marketing and post-harvest issues.

However, in order to increase farmers' commercial and business skills they need more exposure to relevant extension information. In addition, research systems also need to take account of this fact. As a consequence the following steps are suggested:

- Post-harvest and commercial aspects of agriculture need to be given a higher priority in national research organisations,

- Extension officers' training requires more emphasis on commercial aspects of agriculture as the future focus of agricultural production under PMA is envisaged to take on more commercial orientation. As a consequence training institutions ought to change their curriculae correspondingly,

- Appropriate extension material has to be developed. It should be adapted to local farming systems and it may well be in vernacular languages. In this context, UNFA have already made steps in the right direction. However there remain some constraints, for example the bulk of the material is in English whereas the majority of farmers in remote areas is illiterate and primarily speaks vernacular languages.

- Different media should be used, and this may well require some research in itself to identify to what extent the current extension communication system requires up-dating.

Newer approaches to extension should be tried out in remote areas. For example, aside from more use of the radio as a means of communication, networking and

exchange programmes between communities on a national and international basis ought to be considered.
A task force was set up to prepare guidelines on how NGO activities should be integrated into district agricultural programmes. The guidelines have identified a number of areas where integration can be enhanced: policy issues, memoranda of understanding between MAAIF and NGOs, planning and budgeting, deployment of staff and logistical support, input distribution, research, training and technology transfer, and monitoring and compliance (Task Force, 1998).

In the context of decentralisation efforts, NGO activities should be embedded in local district administrations. The creation of unsustainable services in parallel to Government structures should be avoided as much as possible. In particular, at the lower levels of decentralised government, there is a great need for capacity and institution building. As such these organisations have an important role to play in improving the effectiveness and efficiency of local institutions including agricultural extension services.

Credit

Development efforts during the past three decades in developing economies particularly in South-East Asia and Latin America have clearly demonstrated that provision of reliable and effective credit and savings facilities are instrumental in the eradication of mass poverty in that they help poor rural households manage and often augment their otherwise meagre resources to acquire adequate food and other basic necessities for their families. Specifically, credit facilities enable poor households tap financial resources beyond their own and take advantage of potentially profitable investment opportunities. Well managed savings facilities on the other hand provide incentives for households to build up funds for investments or future consumption. For the agricultural sector, in particular, credit and savings facilities enable farmers to invest in land improvement or agricultural technology such as high yielding seeds and mineral fertilisers, which increase farm household incomes and effectively reduce mass poverty and ensure an economically secure life.

At the trader and processor levels, financial services are required not only to meet the investment capital requirements but also for working capital needs. However, in many developing countries attempts to design and implement workable and sustainable credit and savings facilities in rural areas, where the majority of the populations, live and typically have limited assets, have produced largely unsatisfactory results.

In Uganda, under the Plan for Modernisation of Agriculture (PMA), due consideration has been given to the key role that provision of rural financial services to rural areas can play in the future economic development of the country. It is against this background that the development of viable and sustainable rural financial system has been identified as one of the key areas of focus under PMA. A task group has therefore, been appointed and assigned the task of designing a national strategy for developing such a rural financial system for implementation in the medium and long-term perspectives. The work of the group will be completed in July 1999.

Without going into details, the following highlights some of the research projects recently funded by DFID in the context of credit and the building of linkages in the agricultural marketing sector:

- Gordon and Goodland (1999) on input credit schemes by private companies.
- Coulter and Shepherd (1995) on inventory credit and private warehouse receipts.
- Poulton et al (1997) on interlocking transactions in agricultural markets.

APPENDICES

Appendix 1

Contact list

Contact List - Uganda

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Appendix 2

Bibliography

Bibliography

ABBOTT, J. *Commodity marketing through cooperatives: some experiences from Africa and Asia and some lessons for the future*. In ABBOTT, J (ed.) Agricultural and food marketing in developing countries: selected readings. Food and Agriculture Organization: Rome

ABBOTT, J. The state and agricultural marketing from doer to facilitator. *IRDCurrents*. 1992, No. 3, 12-16.

AGRICULTURAL RURAL TRANSPORT PROJECT FOR EAST AFRICA: *Report on the East Africa Regional Planning Workshop - 2-8 November, 1997, Thika, Kenya*

ANONYMOUS (1997). Pilot Integrated Rural Transport and Project. Phase I. MLW89/008 and Phase II (MLW/93/003. Terminal Report, Ministry of Local Government and Sports, Government of Malawi.

AKIDI P., KAIRA C., KWAMUSI P., OKURE M. AND SERUWO L. (1997), Agricultural Rural Transport and Development – Uganda, Country paper presented at an East Africa Regional Project Planning Workshop (2 – 8 November, 1997) in Thika/Kenya, as part of Agricultural Rural Transport Research Project, sponsored by DFID.

BARWELL, I. (1996), Transport and the Village, World Bank Discussion Paper No 344, Africa Region Series, The World Bank, Washington D.C.

BAY-PETERSEN J. (1996), Equity for the Information Poor: Marketing Information for Asian Farmers in Remote Areas. Quarterly Bulletin of the International Association of Agricultural Information Specialists. Vol. XLI No1.

BARWELL I (1996), Discussion Paper n0. 344, found on World Bank web-site January 1999).

BENZIGER, V. (1993) China's rural road system during the reform period. *China Economic Review* 1993 4:1 pp 1-17

BRAUN, J. VON (1993) *Labour intensive public works: addressing the food security and rural infrastructure problems simultaneously*, in THIMM, H-U. & HAHN, H. (eds.) Regional food security and rural infrastructure (Volume 1): International Symposium Giessen-Rauischholzhausen May 3-6 1993. Schrifen des Zentrums fur Regionale Entwicklungsforschung der Justus Liebig Universitat Giessen 1993 No. 50.

CARNEY, D. (1995a) Changing public and private roles in agricultural service provision: a literature survey. *ODI Working Paper* No. 81

CARNEY, D. (1995b) *Management and supply in agricultural and natural resources: is decentralisation the answer?* ODI Natural Resources Perspectives No. 4

CARNEY D. (1998). Implementing the Sustainable Rural Livelihoods Approach, in: Carney D (ed) Sustainable Rural Livelihoods – What contribution can we make, Natural Resources Advisers' Conference, DFID

COLE, D.C. and HUNTINGTON, R. (1997) *Between a swamp and a hard place: developmental challenges in remote rural Africa.* Harvard Institute for International Development, Harvard University; Cambridge, MA; USA

COULTER, J. (1994) *Liberalisation of cereals marketing in sub-Saharan Africa: Lessons from experience.* Marketing Series 9 Natural Resources Institute: Chatham, UK

CONYERS, D., KAUL, M. (1990) *Strategic issues in development management: learning from successful experience.* in *Public Administration and Development: an international journal of training research and practice* vol. 10: 3

DORWARD, A., KYDD, J. & POULTON, C. (eds.) (1998) *Smallholder cash crop production under market liberalisation: A New Institutional Economics perspective.* CAB International

ELLIS S.D. (1997), *Key Issues in Rural Transport in Developing Countries*, TRL Report 260, Transport Research Laboratory, Crowthorne, UK.

ELLMAN A. (1998) *Smallholder cash crop production, processing and marketing in Tanzania: Who benefits? An action research programme to develop a model for co-operation between farmers' organisations, private buyers, servicing and financing organisations through the NGO intermediary.* Agricultural Research and Extension Network, Newsletter, 37, January. Overseas Development Institute, London.

ENGEL, A. (1998) *Decentralisation in Africa: New scope for regional rural development.* entwicklung and laendlicher raum 3/98, Frankfurt.

FARRINGTON, J. & BEBBINGTON, A. (1993) *Reluctant partners? non-governmental organisations, the state and sustainable agricultural development.* Routledge: London

GALTIER, F. and EGG, J. (1998), *From Price Reporting Systems to Variable Geometry Oriented Market Information Services*, Paper presented to the 57th EAAE Seminar "Agricultural markets beyond liberalisation", Wageningen, The Netherlands, September 23 – 26, 1998.

GEBRESENBET G., O'NEILL D., MUTUA J. AND ORAM C. (1997), *Technological Support for Rural Agricultural Transport and Development*, Paper presented at an East Africa Regional Project Planning Workshop (2 – 8 November, 1997)

in Thika/Kenya, as part of Agricultural Rural Transport Research Project, sponsored by DFID.

GOLDMAN I. (1998), *Decentralisation and Sustainable Rural Livelihoods*, in: Carney D (ed) Sustainable Rural Livelihoods – What contribution can we make, Natural Resources Advisers' Conference, DFID

GOODLAND A., ONUMAH G. and AMADI J., WITH GRIFFITH G (1999) Rural Finance. Policy Series 1. Chatham, UK: Natural Resources Institute.

GOODLAND A. and KLEIH U, (1998*), Community Access to Marketing Opportunities – A Literature Review*, Draft, Natural Resources Institute [unpublished working document]

GOODLAND A. and GORDON A (1999), *Credit Provision for small-holder farmers: lessons from Uganda and Zimbabwe.* Natural Resources Institute, UK.

GORDON A. and GOODLAND A. (1999), *Production credit by small-holders growing cotton, in: The use of purchased inputs by small-holders in Uganda,* Proceedings of a workshop held at Mukono, Uganda, 4 – 5 February 1999

GORDON, A. (1997) *Strengthening Research Linkages with Agricultural Markets in Sub-Saharan Africa, Uganda Case Study*; Discussion paper No. 97-4, ISNAR, The Hague.

GRIFFITH, G., KINDNESS, H., GOODLAND, A. & GORDON, A. (1999) *Institutional Development and Poverty Reduction.* Policy Series 2. Chatham, UK: Natural Resources Institute.

HARVEY, C AND ROBINSON, M. (1995), *Economic Reform and Political Liberalisation in Uganda*; Research Report 29, Institute of Development Studies, UK.

HINE, J. (1993) *Transport and marketing priorities to improve food security in Ghana and the rest of Africa.* in THIMM, H-U. & HAHN, H. (eds.) Regional food security and rural infrastructure (Volume 1): International Symposium Giessen-Rauischholzhausen May 3-6 1993. Schrifen des Zentrums fur Regionale Entwicklungsforschung der Justus Liebig Universitat Giessen 1993 No. 50.

HINE, J.L., NELSON, V., AND GREENING, P.A.K. (1998), *A project to improve feeder and community access roads in Southern Province: An Initial Assessment,* Unpublished report based on a visit to Zambia 27/10 – 6/11/1998. Transport Research Laboratory / Natural Resources Institute, UK.

HUMPLICK, F. and MOINI-ARAGHI, A (1996) *Decentralised Structures for Providing Roads: a cross-country comparison.* Policy Research Working Paper 1658, World Bank : Washington.

HUMPLICK, F. and MOINI-ARAGHI, A. (1996) *Is there an optimal structure for decentralised provision of roads?* Policy Research Working Paper 1657, World Bank: Washington.

IT TRANSPORT (1996) Promoting Intermediate Means of Transport. SSATP Working Paper. The World Bank: Washington.

JAFFEE, S. and MORTON, J. (eds) (1995) *Marketing Africa's High Value Foods: comparative experiences of an emergent private sector.* Kendall/Hunt, Iowa.

KINDNESS H. (1998), Marketing Strategy for CARE's 'Development through Conservation Project', Consultancy commissioned by CARE International in Uganda, Natural Resources Institute [unpublished].

KLIVER, N.E. *Maintenance management of rural infrastructure*, in THIMM, H-U. & HAHN, H. (eds.) Regional food security and rural infrastructure (Volume 1): International Symposium Giessen-Rauischholzhausen May 3-6 1993. Schrifen des Zentrums fur Regionale Entwicklungsforschung der Justus Liebig Universitat Giessen 1993 No. 50.

KULLENBERG, L. & PORTER D. (1998) *Decentralisation and accountability : Recent experience from Uganda;* entwicklung and laendlicher raum 3/98, Frankfurt.

LIESHOUT, J.O.A.VAN, HUIJSMAN, B. and DAANE, J. (1997) *Market opportunities from a producer's perspective.* In, Farmer strategies for market orientation in ACP agriculture: proceedings of a CTA / Teagasc / Department of Agriculture, Food and Forestry, Republic of Ireland, seminar; Dublin, Ireland 23-27 October 1995. CTA: The Netherlands

LLOYD MORGAN K. AND MUKAREBE J. (1998), *Kenya: experience with rural radio – How audience research and imaginative programming have enabled radio to reach women farmers,* in: The Rural Extension Bulletin June 1998, The University of Reading.

MAIFF/MFPED: Statement to the December 1998 Consultative Group Meeting, Towards a Sector Wide Approach: Developing a Framework for the Modernisation of Agriculture in Uganda.

MAXWELL, S. (1993) *Can a cloudless sky have a silver lining? The scope for an employment based safety net in Ethiopia.* in THIMM, H-U. & HAHN, H. (eds.) Regional food security and rural infrastructure (Volume 1): International Symposium Giessen-Rauischholzhausen May 3-6 1993. Schrifen des Zentrums fur Regionale Entwicklungsforschung der Justus Liebig Universitat Giessen 1993 No. 50.

MDOE, N. and WIGGINS, S. (1996) Dairy products demand and marketing in Kilimanjaro Region, Tanzania, in *Food Policy* Vol 21 No. 3 pp 319-336

MYERS M. (1998), Mali: 'it's on the radio – so it must be true' – Using radio to promote reafforestation, in: The Rural Extension Bulletin June 1998, The University of Reading.

MUKHERJEE, K.K. Management of co-operative agricultural marketing societies in Kenya: some lessons from Indian experience. *African Quarterly* 1990 30: 3-4 pp 89-95

MUSA B. (1998), *Decentralisation in Uganda: Another leap in the dark.* In: Forging Links: Research and Policy Making in Uganda. Economic Policy Research Bulletin. EPRC, Kampala.

MWTC (Ministry of Works, Transport and Communications) (1996), Ten – Year Road Sector Development Programme 1996/7 – 2005/6, Main report, Entebbe, Uganda.

NWEKE, F. (1997) *Crop production response to improved market access: cassava in Africa.* In, Farmer strategies for market orientation in ACP agriculture: proceedings of a CTA / Teagasc / Department of Agriculture, Food and Forestry, Republic of Ireland, seminar; Dublin, Ireland 23-27 October 1995. CTA: The Netherlands

ONUCHEYO, E. (1997) *Implementing market-orientation strategies: roles of governments, farmers and farming organisations.* In, Farmer strategies for market orientation in ACP agriculture: proceedings of a CTA / Teagasc / Department of Agriculture, Food and Forestry, Republic of Ireland, seminar; Dublin, Ireland 23-27 October 1995. CTA: The Netherlands

OPPEN, M. VON, NJEHIA, B.K. and IJAIMI, A (1997) The impact of market access on agricultural productivity: lessons from India, Kenya and the Sudan. *Journal of International Development.* 1997, 9: 1, pp. 117-131.

PARKER, A. & KIRSTEN, J. (1995) Decentralisation: toward a revitalised strategy for rural development. *Agrekon* Vol 34 no. 4

PEAP (Poverty Eradication Action Plan), Volume 1, Kampala.

PORTER, G. Mobility and inequality in rural Nigeria: the case of off-road communities. *Tijdschrift voor economische en sociale geografie.* 1997 vol 88 no. 1

PORTER, G. The impact of road construction on women's trade in rural Nigeria. *Journal of Transport Geography* Vol 3 No. 1 pp. 1-14

POULTON, C., DORWARD, A. and KYDD, J. *Interlocking transactions: market alternatives for RNR services?: Final report*, submitted to Policy Research Programme, Natural Resources Policy and Advisory Department, Department for International Development, UK.

PUTTERMAN, L. (1995) Economic reform and smallholder agriculture in Tanzania: a discussion of recent market liberalisation, road rehabilitation and technology dissemination efforts. in *World Development* Vol 23, No. 2 pp 311-326.

RISOPOULOS J., RAMATU AL-HASSAN, CLARK S., DORWARD A., POULTON C., AND WILKIN K. (no date), Improving smallholder access to maize marketing opportunities in southern Africa: A literature review, Wye College, University of London [unpublished]

RIVERSON, J. GAVIRIA, J. AND THRISCUTT, S. (1991) *Rural roads in sub-Saharan Africa: Lessons from World Bank experience.* World Bank Technical Paper number 141, World Bank, Washington

ROBBINS P. (1998), Review of market information systems in Botswana, Ethiopia, Ghana and Zimbabwe, Study commissioned for the Technical Centre for Agricultural and Rural Coopoeration (CTA), CMIS, London.

SANOGO O. (1998), Etude sur l'identification des besoins d'information (Producteurs, Eleveurs, et Pecheurs), Ministere du Développement Rural et de l'Eau, République du Mali.

SHEPHERD, A. (1997) *Market Information Services: Theory and Practice.* FAO, Rome

SIEBER N (1997), *Economics of Appropriate Agricultural Transport – A broader approach towards on-farm and market transport*; Paper presented at an East Africa Regional Project Planning Workshop (2 – 8 November, 1997) in Thika/Kenya, as part of Agricultural Rural Transport Research Project, sponsored by DFID.

SMITH, L. and A. THOMSON. (1991) *The role of public and private agents in the food and agricultural sectors of developing countries.* Rome FAO

SPEECE, M. and AZRAG, B.A. *Marketing policy issues for agricultural development: a case study from Western Sudan.* in JAMES, V. Urban and rural development in Third World countries: problems of population in developing nations. McFarland: Jefferson.

SPORE (June 1997), *Market Information Systems: empowering the private sector,* Spore No 69, CTA, Netherlands.

STAAL, S., DELGADO, C. and NICHOLSON, C. Smallholder dairying under transactions costs in East Africa. *World Development.* 1997, 25: 5, 779-794

STARKEY P., MWENYA E. AND STARES J. (eds) (1994), *Improving Animal Traction Technology*, Animal Traction Network for Eastern and Southern Africa, CTA and GTZ.

STRINGFELLOW, R., COULTER, J., LUCEY, T., MCKONE, C. and HUSSAIN, A. Improving the access of smallholders to agricultural services in sub-Saharan Africa:

farmer cooperation and the role of the donor community. *ODI Natural Resource Perspectives* No. 20 June 1997

STRINGFELLOW, R., COULTER, J., LUCEY, T., MCKONE, C. and HUSSAIN, A. (1996) *The provision of agricultural services through self-help in sub-Saharan Africa: a synthesis report for Phase 1.* Natural Resources Institute and Plunkett Foundation. Unpublished

SULTAN, J. (1998). Rural radio stations – Listening to the people of the countryside; in: *the Courier* no 170, Brussels.

THE COURIER (1998), *Country Report Uganda*, No 170, EC, Brussels.

THIMM, H-U. & HAHN, H. (eds.) *Regional food security and rural infrastructure (Volume 1): International Symposium Giessen-Rauischholzhausen May 3-6 1993.* Schrifen des Zentrums fur Regionale Entwicklungsforschung der Justus Liebig Universitat Giessen 1993 No. 50.

THOMAS-SLAYTER, B. (1994) Structural change, power politics, and community organisations in Africa: challenging the patterns, puzzles and paradoxes. *World Development,* Oxford. 22: 10

THOMSON, A. and TERPEND, N. (1993) *Promoting private sector involvement in agricultural marketing in Africa.* FAO Agricultural Services Bulletin. 1993, No. 106, Food and Agriculture Organization (FAO); Rome; Italy

TIMBO G. (1998), Etude sur l'identification des besoins d'information sur les marchés agricoles – Rapport de synthese, APCAM – PASIDMA, Bamako, Mali.

WORLD BANK (1994) *World Development Report 1994: Infrastructure for Development.* World Bank: Washington.

Appendix 3

Examples of market information needs

Excerpts from:

Robbins P (1998), Review of market information systems in Botswana, Ethiopia, Ghana and Zimbabwe, A study commissioned by the Technical Centre for Agricultural and Rural Co-operation (CTA), CMIS, London.

Economic observatory of Senegalese horticulture

The 'Economic Observatory of Senegalese Horticulture' has been operating in the Dakar market since 1994. Its strategy is very different from that of state-managed systems and consists of organising operators in the marketing chain in order to make it more efficient. The initiative was taken by the Horticultural Department of the Ministry of Agriculture and by scientists of the Agricultural Research Institute (Institut sénégalese de recherche agricole, ISRA) which was already collecting price data in Dakar. The origin of the system is thus in the state sector, but the private sector was also involved right from the start. Foremost among the latter group was the National Horticulture Association (Conseil national interprofessionel di l'horticulture, CNIH) which was set up to right the challenge of other exporting countries, particularly Burkina Faso and Kenya, competing for the European Market. CNIH's membership comes from all levels of the marketing chain, including one association of large and one of small exporters. All parts of the chain from both public and private sectors meet every week to discuss developments.

The Agricultural Research Institute provides information on the market prices, the Customs Service supplies data on imports and exports and the producers talk about the stage of development of their crops and indicate disease problems that might be of interest to the research organisation. The downstream side looks at what it might do if it seems that there is going to be a gap in production and the upstream side can set about trying to respond to the market demand.

Papa Abdoulaye Seck, special adviser to the Director-General of ISRA, has said that 'As President Senghor would have said, the association both gives and takes because once people are together they can talk about their problems and find common ground from which to manage the conflicts that are inevitable in a market chain in which the problems of one section are not necessarily the same as those of another. Discussion leads to mutual understanding and to a consensus from which everyone, including the consumer benefits'.

The effectiveness of the Observatory could be improved still further, particularly as a provider of information by, for example, distributing to the various media the two page minutes of its weekly meeting. This would be cost effective because 'as everyone freely gives of the information that he has there is very little additional expense.'

The Senegalese Horticultural Observatory is lean, participatory and has practically no formal organisational structure. It has, however, benefited from one especially favourable circumstance which Pap Seck considers very important: 'Agricultural policy in our countries since independence has resulted in very little interference in the horticultural sector. When one is not circumscribed and encumbered by directives it is natural to be self-reliant and to grasp the initiative. Horticulture was well to the front when 'liberalisation' and 'disengagement' became the watchwords. This is why private sector initiatives in horticulture have flourished in recent years compared to those in other agricultural sectors that were for long under the yoke of tight government control.'

This clearly confirms that a single type of market information system cannot be applicable to all situations. It also shows the need for those most closely involved in the business to be fully part of it.

From 'Harnessing the informal sector' – Spore – No 69 June 1997 (CTA)

Information needs of stakeholders in Ghana

Perceived Needs for MIS by User Groups

USER GROUP	PERCEIVED INFORMATION NEEDS	WHO TO PROVIDE
Farmers	Market outlets, current prices, demand, quality preference, credit availability, trends in consumer preference, farm inputs	Government agencies, NGOs, private companies, banks, extension agents, district assemblies, churches
Traders	Supply, demand, price trend, current price, production forecasts, quality preference, credit availability, packaging, quantities stored, transport data, consumer preference	Government agencies, District Assemblies, trade associations, banks, consumers, transport unions
Exporters	Supply, export demand, current prices, price trend, future market potential, importers, packaging, export tariffs and taxes, crop forecast, consumer preference	Government agencies, foreign trade partners, exporter and producer associations, customers/importers
Processors	Raw material availabilities, prices, production trend, packaging, credit availability, quality	Processor associations, producer associations, customers, NGOs
Planners and Policy makers	Production and price trends, current production and prices, production and price forecasts, consumer preferences, credit availabilities, input availabilities, transport, quality	Government agencies, District Assemblies, NGOs, International agencies, news agencies (newspaper, radio, television)
Bankers	Prices, yields, margins, insurance	Banks, customers, Government agencies
Consumers	Current prices, supply, location, supply and price forecasts, quality	Traders, processors and public services

Appendix 4

Summary of District Workshop Results

RESULTS OF DISTRICT WORKSHOPS

Ranked Constraints to Marketing of Agricultural Produce

		Kibaale	Lira	Kapchorwa	Rukungiri	Katakwi	Overall Proportion
1	Poor roads / network	1 (14)	1 (9)	2 (12)	1 (10)	6 (5)	14%
2	Inadequate market information	2 (11)	2 (8)	1 (13)	5 (7)	4 (6)	13%
3	Poor means of transportation	3 (8)	11 (1)	5 (5)	5 (7)	1 (13)	9%
4	Low quality and quantity of production	7 (3)	4 (5)	10 (2)	7 (6)	7 (3)	6%
5	Inaccessibility of credit		4 (5)	16 (1)	11 (3)	2 (12)	6%
6	Lack and/or cost of inputs	6 (4)		3 (8)	7 (6)	14 (1)	5%
7	Inadequate and poor storage	9 (2)	4 (5)	5 (5)	13 (2)	7 (3)	5%
8	Poor market infrastructure/ network		8 (3)	8 (3)	10 (4)	4 (6)	4%
9	Low produce prices		11 (1)	4 (6)	2 (8)	11 (2)	4%
10	Weak farmer organisations / mobilisation	7 (3)		16 (1)	9 (5)	11 (2)	3%
11	Lack of buyers / Unscrupulous buyers	5 (7)		5 (5)			3%
12	Weak marketing organisation		3 (7)				3%
13	Inadequate extension services	3 (8)		10 (2)		14 (1)	3%
14	Wide price fluctuations		11 (1)	10 (2)	2 (8)		3%
15	Labour constraints				13 (2)	3 (9)	3%
16	Inadequate processing facilities		7 (4)		17 (1)	7 (3)	2%
17	Insecurity	11 (1)	8 (3)	10 (2)			2%
18	Poor quality of inputs				2 (8)		2%
19	High taxes	9 (2)	10 (2)				1%
20	Uncertainties (price, vermin, weather)	11 (1)			17 (1)	15 (0)	1%
21	Perishability of produce			10 (2)			1%
22	Inadequate skills					11 (2)	1%
23	Slow adopt. of new profitable enterprise/ technology					7 (3)	1%
24	Illiteracy / education			10 (2)			1%
25	Poor farming methods			8 (3)	13 (2)		1%
26	High post-harvest losses			16 (1)	11 (3)		1%
27	Government Policy						0%
28	Too many middlemen				13 (2)		0%
29	Poor marketing policies	11 (1)					0%
30	Poor and inadequate communication infrastructure	11 (1)					0%
31	High transport costs		11 (1)				0%
32	Restrictive cultural practices			16 (1)	17 (1)		0%
33	Poor management		15 (0)				0%
34	Overproduction (milk)			16 (1)			0%
35	Lack of standard measures		15 (0)				0%

Note: Figures in bold represent ranks of constraints identified at District level workshops. Figures in brackets represent scores. Scores were converted into proportions, for which averages where calculated for each category (right-hand column). Percentage sums may not add up to 100 due to rounding errors. Some of the original scores obtained during the course of the workshops have been combined.

Appendix 5

District Case Studies

COMMUNITY ACCESS TO MARKETING OPPORTUNITIES WITH EMPHASIS ON REMOTE AREAS

REPORT ON

LIRA DISTRICT

Produced Jointly by: *MAAIF, Lira District*
Agricultural Policy Secretariat (APSEC) Kampala
Natural Resource Institute (NRI), United Kingdom

March 1999

LIRA DISTRICT PROFILE

Crop Production

Lira district is situated in northern Uganda on the north-eastern shores of L. Kyoga. The area of the district is estimated at about 7200 sq. km of which 4620 sq. km is estimated to be arable. The current (1999) population of the district is estimated at 635,000.

Agriculture in the district is still largely subsistence in nature and is entirely rain-fed. There are two distinct rain season, with the main rains falling in April/June and the second rains in August/October. Average annual rainfall is recorded at about 1400 mm. The natural vegetation is mainly savannah with a lot of spear grass and fairly thick/dense tree cover.

The major crops grown in the district are finger millet, sorghum, maize, beans, pigeon peas, simsim, groundnuts, sunflower, cassava, sweet potatoes, and cotton. Other crops grown in lesser amounts are soya beans, green grams, upland rice, cow peas, sugar cane and vegetables. Apart from cotton which is grown exclusively as a cash crop, all the other crops are grown for domestic consumption and also these days increasingly for cash income.

Finger millet

There are short term and medium term local varieties grown. It is normally a broadcasted crop often sown with pigeon peas and also a little sorghum and sometimes with maize, and it requires only one thorough weeding. The crop is often dry sown or right at the onset of rain (at which time the rains have not yet stabilized) and occasionally when rains over-delay the seeds can germinate and dry off requiring resowing.

Poor germination may occur when sown at the time of heavy rains due to deep buying of the seeds. Other problems may occur due to damping off diseases. However, the main problem with this crop is labor intensity at weeding and harvesting periods, weaverbirds also do considerable damage to the crop.

Sorghum

There are both short term and long term varieties. Both are predominantly broadcasted, needing only one weeding. The short-term variety is either grown as pure stand or interplanted with finger millet. The long-term variety is in most cases intercropped with small seeded beans, and it is very tolerant to weeds and bird damage. The main problem with these varieties is low yield and low prices. The short-term varieties are very susceptible to bird damage in the field and storage pests.

Beans

There are two types of beans grown in the district; broad beans and small seeded (mixed beans). The broad beans of various varieties are often row planted right at the onset of rains, either as pure stand or interplanted into maize, sunflower, cassava or cotton. Chop-and-plant method is used with average spacing of 60 cm x 15 cm and 2-4 seeds per hole. The small seeded varieties (mixed) are in most cases broadcasted either as pure stand but mostly with long term sorghum

The main problems are usually vegetarian ladybird beetles. Other problems are low yielding varieties, bean anthracnose, angular leaf-spot and common blight.

A few farmers practice use of insecticides to control the ladybird beatles and other pests.

Pigeon Peas

It is always sown with millet, weeded once and after the millet harvest it is left on its own. There are two varieties; medium and very long-term varieties. These varieties are tolerant to weeds and drought.

The problems, however, are long time of maturity (9-10 months) and low yields. Solutions can be seed multiplication of new high yielding short-term varieties developed by research particularly from the ICRISAT regional office in Nairobi in collaboration with Kawanda and Serere Agricultural Research Institutes.

Simsim

It is a first rain crops in southern half of the district and the other half it is mainly a second rain crop. There are two main local varieties; short term and medium term. As a main crop, it is always grown pure stands and broad-casted. It normally requires only one main weeding.

The main problem with these varieties are low yields, shattering tendencies, heavy labor at harvest and rains can affect the quality during drying in the rack. It is, however, a very marketable crop. There have been some on-farm trials of a new variety KM14 conducted in the district last year but the results have not yet been released.

Groundnuts

It is mostly planted as pure stand, chop-and-plant is the main way of planting giving an average spacing of 30 cm x 15 cm with two seeds per hole, giving no definite straight lines. Red beauty is the dominant variety and there is also local variety which is smaller seeded and pale-green in colour.

The main problems are Rosette disease, hole rats and squirrels, high cost of seed and susceptibility to drought especially at podding stage.

On Farm trials have been conducted in the district with RMPI2 variety. The crop, however, attracts good price in the market.

Cassava

There are several local varieties grown in the district but dominant one is BAE. It is always row planted and inter-planted with beans, maize or groundnuts. It requires several weedings.

The main problem with the crop are; inadequate supply of disease-free planting material and bacterial blight of cassava on NASE 1 and 2.

There is need to train farmers to identify plants infected with ACM for rouging, rapid multiplication techniques of NASE 1 and 2 varieties and develop resistant varieties to cassava Mealy-bug.

Sweet potatoes

They are planted on heaps of 60 cm high often as pure stand. There are many local varieties with various qualities and giving satisfactory yields. Planting begins as soon as the planting materials (vines) become available and continue up to September. Some farmers plant dry season sweet potatoes in valley bottoms.

The main problems are lack of planting material at the beginning of the season, infestation by the sweet potato weevil, infestation of sliced potato by flour beetles, prices are low at the main harvest time and infestation by the sweet potato fly. The main solution would be to encourage farmers to slice sweet potatoes for drying and introduction of technology for storage of fresh sweet potatoes.

Cotton

Most of the cotton is planted during the first rains. The common spacing is 80 cm x 45 cm. It is often interplanted with broad beans. Four weeding are required.

Only a few farmers practice spraying for pest control due to high cost of insecticide. In some parts of the district, farmers practicing organic farming, i.e. pests are controlled by a species of black ants locally known as "ngini ngini".

Main problems are inadequate seed supply, expensive insecticides and spray pumps. Emphasis should be laid on cultural pest control and organic farming should be encouraged where it is feasible.

Livestock Production

Lira district which was one of the traditional cattle keeping districts was seriously affected by cattle rustling during the late 1980s. The cattle population was reduced from a population of over 200,000 to less than 10,000 during the early 1990s. Current estimates put the population at about 30,000 cattle mainly of the indigenous Zebu type.

The recent restocking efforts have begun to restore traditional ox-cultivation in the district.

The current goat herd is estimated at about 300,000 and poultry numbers are reported at about 1.8 million. There is a brisk trade in poultry/indigenous types) between Lira and Kampala

Fishing particularly in L. Kyoga and in the numerous rivers and water bodies in the district is an important commercial activity in the district. The main markets for the fish from the district are Busia and until recently the Democratic Republic of the Congo. Sudan is also an important market particularly for "mukene" or hypochloris fish.

Another important economic activity which is being introduced in the district and has shown a lot of potential is commercial bee-keeping.

PROCEEDINGS OF WORKSHOP ON IMPROVING MARKETING ACCESS (LIRA DISTRICT) 24TH FEBRUARY, 1999

1. BACKGROUND

Dr. Willy Odwongo of APSEC made the introductory remarks. He mentioned that the workshop was organized as one way of addressing marketing of agricultural produce especially in the rural areas. He said the ultimate objective of the workshop was to make a policy recommendation on how to improve the marketing of agricultural produce especially in the rural areas.

The workshop was organized by MAAIF, Lira District in collaboration with Agricultural Policy Secretariat, (APSEC) – Kampala and Natural Resources Institute (NRI)- UK, and the latter organization being the funding body. The workshop was not only being done in Lira but in other districts of Rukungiri, Kibale, Kapchorwa, Mukono and Katakwi.

The recommendations that would come out of these workshops will be immediate inputs in the modernization of agriculture plants.

It was mentioned that this exercise was also being done in other countries namely, Tanzania, Malawi and Mali. It is hoped that findings from these countries would help a lot in the formulation of policy recommendations.

Heads of sections were asked to give briefs on produce marketing.

1.1 Activities in Lira District - Overview

Marketing of agricultural produce is now fully liberalized and produce buyers have formed an association.

It was mentioned that the main crops marketed include simsim, beans, groundnuts, soybean, maize, finger millet and sorghum. It was also reported that there are two main marketing seasons; the first and the main season falls in July/September. This is when there is high supply of produce but low prices.

The main marketing problems were reported as post harvest handling and storage at all levels and poor roads where productive parts of the district are not accessible.

Participants were told that market surveys for produce prices used to be done on a weekly basis and these are disseminated to produce dealers. But it was noted that there was problem with dissemination. This was because of financial support to market survey continues to be minimal and the department is understaffed. The weekly surveys were funded by USAID but this project has recently come to an end.

1.2 Fishery Activities in Lira District - Overview

The Fisheries Officer pointed out the following.

i) That fisheries is taken as natural resource whose marketing problems are not taken seriously by the stakeholders.

ii) Fish marketing is undertaken mainly by resource constrained people and there is very limited investment capacity.

iii) During peak harvesting season, fish being perishable can result in a heavy loss of income.

iv) There are a lot of difficulties in organizing fishmongers into co-operative societies for the purpose of selling fish.

1.3 Entomology Activities in Lira District - Overview

The following were pointed out by the Entomology Officer:-

i) At the moment there is only marketing of honey in small quantities even.

ii) A new approach to bee keeping is being introduced as a way of modernizing agriculture

iii) The initial investment on Apiary is very high and most farmers may not be able to afford.

iv) The seasons for harvesting honey which are February/April and August/October are affected by the fluctuations of the rains.

v) One problem that featured was that the quality of the honey so far produced in the district is still very poor. This may partly be attributed to lack of knowledge and skills in processing honey.

2.0 PARTICIPANTS

Most stakeholders involved in produce marketing attended the workshop (See attached list). This included:-

i) Representatives of the farmers.

ii) Extension staff from Production Departments.

iii) NGOs and Projects involved in Agricultural Production.

iv) Produce dealers.

v) Transporters

3.0 OPENING CEREMONY FOR THE WORKSHOP

This was done by the Deputy Resident District Commissioner, Mr. Haruna Sebbi who represented the Resident District Commissioner. He commended the workshop organizer and more especially the APSEC officials for organizing the workshop with the consent of his office, a thing that is not done by other workshop organizers.

The Deputy Resident District Commissioner appreciated the importance of the workshop because the income of the people of Lira district is agro-based but he expressed disappointment on the less attention given to the Production Department, which promotes agricultural production. He hailed the government policy now in place aimed at reviving the department.

He expressed his concern that marketing is an area which is letting our farmers down. He said farmers have no bargaining power in price determination, which leads to exploitation by middlemen.

On marketing information, he said that this is also an area of concern so he asked the workshop participants to come up with a recommendation which can enable marketing information to be disseminated to the grass root.

He asked the produce dealers to work as a team so that some buyers are not thrown out of business due to competition.

On liberalization, he said that this tends to make economics of scale favour large scale buyers so he asked the participants to come up with a recommendation which can synchronize liberalization policy with poverty eradication policy.

He was, however, grateful to NGOs involved in agricultural production. But he cautioned some NGOs who come and start working in the district without involving the Production Department. He said this implementation of activities without the technical backing from relevant technocrats could lead to deterioration of our resources.

He also cautioned the participants on some fake technocrats who come into the district in the names of some government institutions/organizations. He said these people should fully identify themselves before executing their work.

He concluded by encouraging the participants to take whatever they have learnt from the workshop and disseminate it to the fellow colleagues. He requested that the office of the Resident District Commissioner and that of the Chairman LC 5 should be involved in the dissemination of marketing information to the farmer.

4.0 IDENTIFICATION OF PROBLEMS AND ISSUES

Problem identification was done in a participatory manner whereby each participant was given five stickers. On each of the stickers, the participants were asked to write one constraint.

A wide range of constraints came up which were categorized and prioritized in a participatory manner by the participants. The categorized and prioritized constraints are indicated in Table 1 below and the possible solutions to the constraints are briefly discussed in the subsequent sections.

Table 1: Prioritized Categories of Constraints

Nos	Constraints	Score	Rank
1.	Poor roads	9	1
2.	Lack of marketing information	8	2
3.	Poor marketing organization	7	3
4.	Poor storage facilities	5	4
5.	Lack of capital	5	4
6.	Inadequate processing facilities	4	7
7.	Poor marketing infrastructure	3	8
8.	Insecurity	3	8
9.	High taxes	2	10
10.	Inadequate transport facilities	1	11
11.	High transport cost	1	11
12.	Poor quality produce	5	4
13.	Low prices	1	11
14.	Price fluctuations	1	11
15.	Poor management	0	15
16.	Lack of standardization of units of measures	0	15

5.0 IDENTIFICATION OF SOLUTIONS

5.1 Poor Roads

There are 3 types of roads in the district namely, trunk, feeder and community roads. It was found out that trunk and feeder road network were adequate but the problem was on maintenance of the existing road network.

The maintenance of the existing road network.

i) Clearing bushes at the side of the roads.
ii) Filling potholes.
iii) Clearing off shoots overgrown with grass.
iv) Repairing or replacing damaged culverts.
v) Replenishing murrum.
vi) Grading.

The problem of substandard work done on the roads featured prominently. This was attributed mainly to:-

i) The current arrangement of maintaining the roads which is undertaken by the District Council without adequate technical back up.

ii) Inadequate funding.

iii) Criteria used in tendering the roads for maintenance by private firms fraught with lack of transparency.

iv) Poor standardization and inspection of roads which arise due to the following reasons:-

a) Low remuneration to the technocrats.
b) Understaffing of the engineering department
c) Inadequate guidance by technocrats to the District Council.
d) Inadequate murrum deposits in some places.

It was concluded that all the above problems revolve around inadequate funding. This resulted in the following recommendations:-

i) Mainly on account of budgetary constraints, the district still cannot handle road maintenance on its own in the short to medium term. There is still a necessity of external funding especially from the centre, which should be in form of grants specifically ear-marked for road maintenance.

ii) The district should give due consideration to roads when setting priorities. Besides, at lower levels of administration, fund allocation to road maintenance should be accorded the high priority it deserves.

iii) *The technocrats including District Road (Engineers) the District Council and the representatives of the users of the road (Local Council Members) should endorse certification of contracts for road repair and should all be fully involved in road maintenance, inspection and standardization. This it was felt could raise the standard of roadwork and promote transparency.*

5.02 Lack of Marketing Information

It was observed that marketing information is necessary at various levels namely:- international, national, district and rural levels. The type of information included:-

i) Price of the produce
ii) Market
iii) Quality and quantity
iv) Products available.

The prominent problem that featured in market information was information gathering and dissemination. The office of the District Marketing Officer who should be doing this is grossly understaffed and under funded. Yet this information is required on timely basis to enable farmers negotiate with the buyers in fixing prices of produce.

It was therefore recommended that:-

i) *The effort of the District Marketing Officer should be supplemented by other government agencies such as Agricultural Extension Staff and Civic Leaders.*
ii) *Other stakeholders namely Local Councils, UNFA and projects involved in agricultural production should be made aware of the importance of marketing information and they should therefore be involved in the funding, collection and dissemination of marketing information.*
iii) *The media especially radios should be fully utilized in the dissemination of marketing information. This should also be put on air at appropriate time of the day.*
iv) *Farmers' organization should be strengthened so that they are able to collect and disseminate marketing information.*

5.03 Marketing Organization

What emanated from the long discussion on marketing organization was that the existing marketing organizations are still very weak. They don't work as a unit thus making them vulnerable to exploitation by middlemen at farm level and being thrown out of business at urban produce buying centres by external big buyers mainly from Kampala.

It was therefore, recommended that:-

i) *Produce Buyers Associations should be strengthened by possibly instituting commodity exchange arrangements to enable them compete favourably with external big buyers.*

ii) *Farmers' organizations at farm level should be strengthened and encouraged to sell their produce jointly to exploit better markets that require large quantity of produce.*

5.04 Poor Storage Facilities

This was seen as a problem at all levels. The storage structures available expose the produce to insect damage so easily. It is one of the reasons why farmers rush to sell their produce immediately after harvest when the price is still very low.

It was also observed that other aspects of post harvest handling e.g. Drying is not being done properly thus making the produce vulnerable to pest infestation.

Another observation made was that construction of appropriate storage facilities requires high initial investment that our farmers cannot afford.

It was therefore recommended that:

i) *Post harvest handling and storage particularly at the farm level, should be strengthened more especially in area of training all the stakeholders involved in marketing agricultural produce.*
ii) *Produce buyers should be encouraged to fumigate at an appropriate storage facility so that they are able to tap the high prices at the period of scarcity. But this should be done with technical back-up and supervision.*

5.05 Lack of Capital

Capital accumulation was seen as a major problem especially among the rural community. This leaves the rural populace with no capital to boost their production thus their continued low household income earning capacity.

It was recommended that:-

i) *Rural community, mostly farmers should be encouraged to take farming as a business but not as a way of life. This will enable them make profit which will contribute greatly to capital accumulation. The business attitude will also make the farmer creditworthy to financial institutions.*
ii) *The issue of subsidies and relief was found to lead to dependency syndrome that has negative effect to production. A lot of sensitization should be encouraged and strengthened so that he community should not rely heavily on government subsidies and relief in the production process.*

5.06 Low pricing

This was seen as a symptom of other marketing problems and it was felt that discussions on other areas will cover this issue adequately.

5.07 Inadequate processing facilities

Most of the agricultural produce bought or sold are mainly in primary form which fetch very low prices. There is therefore need to add value to these produce by processing but the low level of processing machines among the rural community hampers this.

It was therefore recommended that:-

i) *Policies should be instituted to encourage cottage industries that can process agricultural produce. This would be more viable especially if the processing units are within reach of the farmers.*

ii) *At higher levels, processing facilities should be encouraged and developed because this is very important outlet for farmers' produce.*

iii) *At farm level, the produce should if possible be graded so that farmers benefit from the premium price. This, therefore, calls for emphasis on quality at farm level.*

5.08 Insecurity

This was seen as an issue that the workshop cannot address exhaustively. But the concern of the workshop participants was that insecurity affects marketing of produce by:-

i) *Lowering production*
ii) *Causing loss of produce*
iii) *Risk of losing life.*

It was, however, pointed out that there should be a national policy of eradicating insecurity. And that the issue of insecurity should be channeled to and discussed at the appropriate fora.

5.09 Poor marketing infrastructure

Areas that were discussed were:-

i) *Market network*
ii) *Market facilities*
iii) *Maintenance of facilities.*

It was observed that marketing network was adequate in the district but a lot of problems arose in areas of market facilities and their maintenance.

It was noted that most markets lack facilities such as sheds and toilets. The problem is even more serious at fish landing sites where in addition to the above problems, there are no provision for disposal of offals of fish.

More seriously, the market authorities demand fees from the trader that should have been used to provide these facilities.

Problems arise because the local markets in the rural areas which are most affected by this problem are owned by District Local Government. These markets are tendered to individuals or companies that operate it for a given period of time. So these tenderers do not have the willingness to invest in the market structure.

It was therefore recommended that:-

i) Grassroots institutions and agencies including primary societies should be strengthened to operate these markets.

ii) District Local Governments should put some structures in markets since they are the ones who own the market. Sub-county administration should contribute greatly to this effect.

iii) The running and maintenance should be tendered out but the bids should be properly evaluated.

5.10 High taxes

It was appreciated that in order to operate effectively, government has to collect tax. But the heavy burden of these taxes to stakeholders in produce marketing leave a lot to be desired.

Taxes are levied right from production level upto the final level of selling the produce to the consumers. Worse till, the proceeds are not ploughed back as inputs to production, marketing and processing activities.

i) It came out clearly that agricultural produce is being heavily taxed. It was therefore recommended that the taxation policy on agricultural produce should be reviewed and relevant authorities should closely monitor their implementation.

5.11 Inadequate transport facilities

The most readily available means of transport (bicycle) in the district is limited in capacity. Ox-carts could be used but farmers do not value this as a very important means of transport.

There is therefore need for sensitization and training of the community on the use of animal traction implements includings ox-carts.

5.12 High transport costs

There was not much the workshop could do since transport costs are determined by the following:-

i) Transport cost was found to be directly related to cost of fuel and spares. World markets determine the prices of these items. Besides taxes levied on fuel is very high.

ii) Transport cost can fluctuate according to demand for means of transport.

5.13 Inadequate quantity of produce

Exporters of produce opt to buy from buyers who sell several tons of produce. It is these exporters who offer good prices but most produce buyers and farmers sell their produce in small quantity thus missing the good price.

It was recommended that:-

i) Produce buyers should form and strengthen their marketing organizations for the purpose of pooling together their produce and selling it to exporters.

ii) Farmers should be encouraged to form farmers' marketing organizations so as to pool their produce together and sell to bigger buyers and effectively compete with middlemen.

5.14 Lack of Standardization of units of measures

It was noted that small farmers who sell their produce in small bits to produce buyers suffer unscrupulous traders who operate faulty weighing machines. A way out of this was thought to be strengthening the Weights and Measures department of Uganda National Bureau of Standards in terms of staffing and mobility.

List of Participants

Name	Title	Institution/ Organization
1. Haruna Sebbi	Deputy RDC	President's Office
2. Geoffrey Opori-Okello	Extension Supervisor(Gulu)	UOSPA
3. Francis Odongba	Field Officer (Lira)	UOSPA
4. Alex Odongo	Field Extension Officer(Lira)	UCA
5. David Odwar	General Secretary	Alunyalo Akwonga GCS
6. Rolex Okwir Phal	Sec. To the Coop Soc.	Aucihoho GCS Ltd
7. Mrs Anna Okwi	Chairperson	Lira Produce Dealers
8. Ariong John Peter	District Fisheries Officer	Production Department
9. Ebonga Samuel	Agri. Officer	Production Department
10. Clement Ojele	Agric. Officer	Production Department
11. Robert Alepo	Trader	Lira Produce Dealer
12. Ayo Ogwal George	Entomologist	Lira Local Govt.
13. Okot David	Farmer/Trader	Produce Dealer
14. Joel Odongo	District Marketing Officer	Lira Local Govt.
15. Adupa Robert	Program Coordinator	AT (Uganda)
16. Adea John	Farmer	Amitomot Group
17. Amodo Engola	Extension Officer/Lira	Agric. Department
18. Ms Susan Alip	Agricultural Officer	Production Department
19.Chaka Basilio	Sales Manager	AT (Uganda) Lira
20. Moses Odongo	News Reporter	The Monitor
21. Patrick Oyee	Press Reporter	The New Vision
22. Ajungo P.	Co-ordinator Primary	Lira District Co-operative Association (LIDFA)
23. Tobias Oree Okello	Chairman	Lira District Farmers Association (LIDFA)

COMMUNITY ACCESS TO MARKETING OPPORTUNITIES WITH EMPHASIS ON REMOTE AREAS

REPORT ON

KAPCHORWA DISTRICT

March 1999

KAPCHORWA District Profile

Kapchorwa District is located in Eastern Uganda and is bordered by the districts of Moroto in the North, Mbale in the South, Kumi in the West and Kenya Republic in the East. The administrative headquarters is in Kapchorwa Town.

The district is made up of 3 counties, namely Kongasis in the East, Kween in the Centre and Tingey in the West and a total of 11 subcounties and 54 parishes.
The population of Kapchorwa was estimated at 145,500 as per 1998 population projections.

The total area of the district is 1738.3 sq.km of which 671.7 sq km is under forest, and 100 sq km is under mountains, 966.6 sq km is arable land. The population density is 67 persons per sq km which is among the highest in Uganda.

The district produces the following:-

Food Crops: Maize, beans, bananas, finger millet, wheat, sunflower, sweet potatoes, irish potatoes, field peas, groundnuts, cassava, onions, rice, sorghum, passion fruits, tomatoes, cabbages, vegetables.

Export Crop: is mainly arabica coffee which is 15.3% of the national production. Before liberalisation of coffee marketing, the Sebei-Elgon Co-operative Union Ltd was operating a big Coffee Factory processing arabica for export. After liberalisation, farmers sell to any processor and the Union has lost the monopoly. Part of the maize is also grown for export. Farmers in the lowlands (Kaserem) have started growing cotton.

Livestock: The livestock industry consits of cattle estimated at 45,800 in 1998, goats, sheep, donkeys, horses, pigs, bee keeping, chicken and fish. This subsector is seriously affected by the Karamojong rustlers especially in the lowlands.

Timber: Timber is from the Mt. Elgon Forest Reserve.

Infrastructure: The district has only one trunk road from Sironko-Kapchorwa-Suam (Kenya) Border. This road is still a dirt road which is very difficult to drive through during the rains. The terrain is mountainous and rises to 4,324m above sea level. The whole district is situated along the Mt. Elgon range which is an extinct volcano. The road network is so poor that it was ranked 35 out of 39 ranked districts after adjusting for area. There is electricity power from Jinja Owen Falls Dam, a post office with over 400 telephone lines, and a branch of Uganda Commercial Bank.

The Soils are deep, fertile, and well structured as they are from volcanic ash and agglomerate. The rainfall is high between March-May and August-November and low between December-February and June-July.

Rationale for Selecting the District

Just like the other districts in this study, Kapchorwa was selected due to its remoteness in terms of distance from Kampala, the difficult terrain, the very poor road network and the limited means of transport. The road from Sironko to Kapchorwa passes through very steep terrain through the Mt. Elgon range and due to the soft volcanic soils, the road is usually very slippery during the rainy season. This makes it difficult for vehicles to travel to Kapchorwa to lift the agricultural produce to the markets. The few vehicles that make it charge extra to cover the time and fuel spent on the steep, slippery road.

The district is one of the most productive districts in Uganda [see section 1(d)] especially of maize, arabica coffee, and bananas (edible plantain). Farmers use ox-ploughs and tractors on the plateau for opening land and for maize, the district relies on Kenya Hybrid seed for planting every season. Kenya Republic borders the East of the district. This offers good potential for export marketing to the neighbouring country. The constraint is the poor road linking Kapchorwa to the Suam border and the high cost of production per unit.

Consultations in the District

The following district officials and stakeholders were involved in this study:

- The District Agricultural Office
- The LCV Chairman and the Production Team
- The Chief Administrative Office
- UCOBAC (NGO) Women group officials
- The District Commercial Officer
- The UNFA District Branch
- The District Planner
- The LCII Chairman
- The District Road Engineer
- The Red Cross Representative
- The UNCCI Branch Chairman
- The Farmers

We wish to thank the Deputy DAO, Mr. Okwi Ekwiit and the District Commercial Officer, Mr. SemuSatya for the organisation and co-ordination of the study in the district.

Workshop

The workshop, intended to identify constraints to market access in the district and the possible solutions to these contraints, was held on 11th March, 1999 at the DMO's office

and attended by 21 persons (see attached list). The workshop was officially opened by the LCV Chairman, Mr. Chepkrui Christopher Songhor. In his opening remarks, he stressed the importance of market access to the district. He noted that the district was heavily disadvantaged by its isolated location in a difficult terrain, and by colonial neglect where there were no investments from both the Europeans and the Asians.

Background to the Workshop

At the beginning of the workshop, participants were given a background to the study as a collaborative effort, the source of funding, basic objectives, scope and expected outcome. The study was linked to the on-going efforts to finalize the Plan for the Modernisation of Agriculture. Key definitions were given to the participants; and the methodology to be used in the workshop was outlined as participatory, in which the participants would merely be facilitated to identify the market access constraints and to offer solutions themselves. The workshop was quite successful and the level of participation high.

Identification of Constraints and Solutions

In the course of the discussions with the various stakeholders and during the Workshop, the following constraints and solutions were identified (see Table 1, page 6):-

Poor roads: The terrain is difficult and the district is not connected to tarmac. During the rainy season, vehicles cannot reach the district. The road from Sironko to Kapchorwa is currently being constructed. The feeder roads are under the DA, while community roads have no clear arrangements.

Lack of Storage facilities: This has three negative effects:

- Farmers cannot store to wait for better prices so they sell at low prices.
- In case of maize, no chemicals against weevils are available, this affects quality.
- The moisture content required by the market is not met.

Low prices: This affects area planted in the following season. It also affects the profit margin of the farmer.

Lack of Market Information: Farmers in remote areas are generally ignorant of prices prevailing in Kapchorwa Town, Mbale, Soroti and Kumi and even as far as Kampala. Traders tend to dictate the prices due to farmer ignorance.

Excess Milk Production: The district lacks milk processing plants and yet milk produced cannot be consumed by the district. No suitable means of transport for milk to Mbale is available.

Lack of Group Marketing: Since the collapse of the Co-operative Union, it has been difficult to organise farmers for group marketing. UNFA Branch has tried to introduce "Pool Marketing" but this has failed because of lack of assured buyers.

Lack of adequate feeds: for poultry, piggery and zero grazing especially during the rains when the roads are impassable.

Heavy bird damage - in case of sunflower This is a big problem in the areas near the Forest Reserve.

Insecurity - in a form of Karamojong cattle rustlers. Areas in the lower belt are constantly attacked by the cattle rustlers. Yet the district relies on oxen for ploughing.

Inadequate Arabica Coffee Seedlings: UCDA has introduced a new Arabica Coffee variety which is popular but nurseries for multiplication are too few to meet farmers demand.

Illiteracy - There is a high illiteracy rate in the district (46%) which affects dissemination of information.

High input cost - This goes for hybrid maize seeds which are supplied by Kenya Seed Co. at a price of shs 23,000 per 10 kg pack; fertiliser which costs shs 35,000/= per 50 kg bag; chemicals for spraying tomatoes, irish potatoes beans, coffee and vegetables; and feeds for poultry, piggery and zero grazing.

Land Shortage: Due to a high population density, the soils are being mined and fertility is declining.

Poor Extension Service It was noted that the ratio of extension/farmer is very high and the FEWs are not adequately facilitated with transport and allowances.

Lack of Agro processing Facilities - Other than coffee whose processing plant is being revived under a joint venture between Divinity Union Ltd and Sebei Elgon Co-operative Union Ltd, there is no other agro processing facility in the district. AT(U), an NGO, had introduced small oil mill extractors for sunflower, but the crop has not picked up well in the district.

Table 1 **The Workshop Identified the following Constraints and Solutions**

Constraints (No. of Participants)	Solutions
1. Lack of Market information (13)	- Provide market information through mobile film vans, newspapers and radios
2. Poor access roads (12)	- Improve the road network
3. High Input prices (7)	- Avail affordable inputs, encourage local input production
4. Low producer prices (6)	- Diversify agriculture
5. Poor Storage facilities (5)	- Improve on farm storage
6. Poor means of transport (5)	- Improve the road network
7. Suppressive middlemen (4)	- Identify markets
8. Distant markets (3)	- Identify markets
9. Poor Extension Service (2)	- Facilitate extension service and conduct demonstrations
10. Perishability of produce (2)	- Add value through agroprocessing
11. Price instability (2)	- Encourage contract growing
12. Low volumes (Crops) (2)	- Provide modern technologies
13. Illiteracy (2)	- Organise/sensitise farmers
14. Poor Farming methods (2)	- Provide modern technologies
15. Insecurity (rustling) (2)	- Empower local community indefence supply
16. Overproduction (Milk) (1)	- Encourage agro-processing
17. Poor farmer mobilisation (1)	- Organize/sensitise farmers
18. Poor ploughing technology (1)	- Provide weeders
19. Lack of inputs (1)	- Train input stockists
20. Monopoly buyers (1)	- Identify markets
21. Traditional farmer attitudes (1)	- Sensitise farmers
22. Lack of credit (1)	- Encourage microfinace business
23. High post-harvest losses (1)	- Encourage cost sharing of dryers and shellers and enforce bye-laws

General Issues Raised

Farming Methods: Kapchorwa relies heavily on ox-ploughing for opening land. What they lack is ox-weeding technology. Tractors are only used for ferrying produce in the difficult terrain.

Major Market outlets - The main market outlet is Mbale Town especially for maize. In fact, the best quality maize in Kampala is branded "Mbale Maize" when actually it comes from Kapchorwa. Kumi, Soroti and Lira, Kampala are outlets for bananas and irish potatoes. Besides Mbale, Kenya is a major outlet for Bogoya (sweet bananas).

Wheat Production - This crop used to be prominent because the Co-operative Union assured farmers of the market. After the collapse of the union, production of wheat has declined and the little that is produced is for the Kenyan market.

The Role of UCOBAC (NGO) in the District: UCOBAC (Uganda Community Based Association for Children) is a European Union/Finland Solidarity Foundation NGO which started its operations in Kapchorwa in 1992. Its main target was to organise Women Groups in the district for production. The funded women groups produce the following items:-

-Poultry	-	4 groups
-Turkey	-	10 groups
-Sunflower	-	1 group
-Passion fruits	-	2 groups
-Beekeeping	-	10 groups
-Goat rearing	-	3 groups
-Zero grazing	-	7 groups

They are altogether 117 women groups, and each group is first trained on production techniques and then given a grant of shs 500,000 to shs I million to finance its operations. So far 37 women groups have been funded under the grant scheme. Each women's group consists of 10-15 members. The women operate savings and credit among themselves. They also reported that they learn from each other and this has strengthened their social relationships.

It was observed that this type of grant funding is not sustainable. It was learnt that FOCCAS, a microfinance agency from Mbale, has started operations in Kapchorwa and the Women Leaders were encouraged to mobilise their groups so that they can access credit from this agency instead of relying on grants. So far 20 women groups have joined FOCCAS 1st loan cycle of shs 50,000.=

Maize seed - Maize is a staple crop in this district. The major seed planted is Kenya hybrid maize seed K640. Kawanda composite was tried and failed in the area. The major

seed suppliers are Kenya Seed Company, Sukra, and Kapchorwa Farm Enterprises (a branch of UNFA). Last year, the Kenyan seed was contaminated by supplying seed from Zambia packed in Kenya packs which failed to germinate. This affected farmers attitude to seed supplies this year. There is a strong need to strengthen supervisory bodies in charge of seed imports in the country.

The Role of UNFA Branch - The district branch is known as Kapchorwa District Farmers Association. It offers training, information on farm methods, marketing and study tours. The training offers a Yellow Farm Management Certificate Course which trains farmers how to run a farm as a business. The programme is funded by Danida in phases. The 1st phase covered 5 districts of: Ntungamo, Kamuli, Bushenyi, Masindi and Masaka. Kapchorwa is in the 2nd phase - under which Danida gives a district grant for one double cabin pick-up and 3 motorcycles. The salaries of the officers using these vehicles are deducted and the cost of these vehicles is recovered and extended to other officers. Danida pays 65% of the cost and the district contributes the difference of 35%.

The membership covers 1500 couples and 1000 singles. Recruitment starts in November and ends in October and each member pays shs 1000/= membership fee per year. It was feared that there may be a problem of sustainability when Danida stops funding.

Food Security - Although the district produces a variety of food items, they face food insecurity due to:

- droughts
- Karamojong rustlers
- The circumcision year (even years). It was reported that during the circumcision year, the ceremonies are extravagant with food and the following year is marked with severe famine. The district is generally deficient in proteins.

Projects -The district is participating in the following national projects

- UPE (Primary Education)
- Poverty Perspective Assessment Project
- Uganda Transport Rehabilitation Programme (Feeder Roads)
- Uganda Wild Life Programme (Mt. Elgon National Park)
- UCDA Arabica Seed Multiplication Programme.

Economic Environment

- Need to decentralise the development budget
- Project funds tend to go more on administrative costs than on target groups
- New land law is not yet implemented in the district

Political Environment

- Production receives a low priority at the district level
- Problem of accountability at lower level (LCIII, LCII and LCI)

Regional Trade

- Pests across borders is a big threat to production

Social Environment

- Problem of Karimojong cattle rustlers
- Women circumcision

Legal Framework

- Bye-laws are too relaxed
- Policy implementers do not appreciate the rule of law

ATTENDANCE REGISTER OF A WORKSHOP ON COMMUNITY ACCESS TO MARKETING OPPORTUNITIES HELD AT KAPCHORWA DMO'S OFFICE ON 11-3-1999

	Name	Title
1.	Mwoko Musobo	DDCO/MO
2.	Teko F.R.	Member UCOBAC
3.	Takwar C.W.	Community Farmer
4.	Jafari Boyo	Red Cross
5.	Lyagoba J. S.	DAO
6.	Okwi Ekwiit	DDAO
7.	Apil Nelson	AO
8.	Satya Semu	DCO
9.	Kityo Moses	
10.	Anguria Albert	DE (District Engineer)
11.	Allison Toskin	Secretary
12.	Chepkurui C.S	Chairman LCV, Kapchorwa
13.	Kasumba Hawa	Sec. Information Mass Mobilisation
14.	Dr. Kamatei G. S	District Coordinator KADFA
15.	Dr. Kapwomu N. K.	for DVO
16.	Charicha Kesi	DPO
17.	George Toskin	Chairman LVIII Kapchorwa
18.	D. S. Kapcheron	for Sec. Production LCV
19.	Paul Mumya	Chairman UNCCI Kapchorwa
20.	Cherotich Catherine	Farmer
21.	Cherop Annet	Farmer

COMMUNITY ACCESS TO MARKETING OPPORTUNITIES WITH EMPHASIS ON REMOTE AREAS

REPORT ON

KATAKWI DISTRICT

March 1999

Location

Katakwi district is located in North Eastern Uganda between longitudes 53.9°E-63.6°E and latitudes 18.2°N. The district is bordered in the East and North-East by Moroto and Kotido districts respectively; in the South by Kumi district and in the West and North-West by Soroti and Lira districts respectively. The district headquarters Katakwi, lies 52 km on Soroti-Moroto road and 380 km from Kampala, the capital of Uganda.

The district consists of three (3) counties, fifteen sub-counties and eighty parishes. There are a total of six hundred and forty two villages (642) and 28,445 households.

Administration

The district local council consists of 30 elected members of which 16 are male and 14 females. The council instituted four committees as follows:-

Finance and planning
Works and General purpose
Health, Education and Children Affairs
Production and Environment

There is a technical planning committee comprising of all heads of the 19 departments.

In the district, there is one town, Katakwi and thirteen (13) trading centres.

Source of Revenue

As per 1998/99 revenue estimate, 94% of the district revenue comes from the Central Government and Donors and NGO funds. The district can only raise 6% of its budget requirement.

Graduated tax is a major source of district revenue. There is a total of 23,659 graduated tax payers of which 22,000 are non-salaried tax payers and 1,659 are salaried graduated tax payers.

Revenue Estimates 1998/99

Source	Shs	Percentage
Local Revenue	327,453,716	6
Central Government Transfers	2,957,419,484	55
Donrs & NGO Funds	2,088,710,290	39
Total	5,373,583,490	100

Geographical Features

The district covers about 4,430 sq km of which 4250 sq km is land and 177 sq km is water. Only 1500 sq km is under cultivation and 5745 hectares is under forest. The soils, mainly of ferrallitic type are well drained and friable. The landscape is generally a plain with gently undulating slopes in some areas.

Population

The total population of the district is 211,018 of which 104,186 are males and 106,161 are females. This gives an average population density of 47 people per sq km. The economically active age group, 15-64 years, constitute 52.8%, while children under 14 years make up 43.2% and those above 65 years constitute only 4%.

Economic Activities

The main economic activities are agriculture, trade, fishing and small scale industry. In 1998 crop production was as follows:-

A. **Food crop** — **Tonnes**

Cassava	16,000
Sorghum	5,985
Groundnuts	2,625
Cowpeas	281
Sweet potatoes	10,000
Finger millet	3,150
Green grams	188
Soya beans	875
Simsim	58

B. **Cash Crops**

Cotton	275 (Sold 100%)

Sunflower	261 (Sold 100%)
Rice	777 (Sold 90%)

Livestock

Cattle, goats and sheep and pigs are kept on free range method. As per table below, this is a major source of income as indicated by the number of animals sold per month.

Type of Livestock	Population	Average No sold per month
Cattle	40,424	200
Goats	85,893	500
Sheep	14,971	100

Fisheries

Fish production is mainly from the two lakes, Bisina and Opeta. There are fifteen (15) landing sites with about 200 fish mongers. Together with the lakes, there are also 8 fish ponds.

Infrastructure

The district has a total of 579 km of trunk and feeder roads. Trunk roads, maintained by the Central Government constitute 12.6% i.e. 73 kms and feeder roads constitute 87.4% i.e. 506 km which is maintained by the district. Of the 506 km feeder roads, 71.3% i.e. 361 km is inaccessible and require major rehabilitation.

Other Infrastructure

The district is not connected to the national electricity grid and it has no telephones and banking services. Poverty Alleviation Project (PAP), Presidential Commission for Teso (PCT), SOCADIDO Soroti Catholic Diocese Development Orgnisation and Katakwi District Development Programme (KDDP) are the only developent organisations operating in the district and some are sources of credit.

Proceedings of Workshop on Improving Marketing Access (Katakwi District) 10th March, 1999.

Opening Ceremony

The workshop was opened by LCV Chairman Mr. Ilemukorit Stephen Okure. He underscored the recent tendencies of the technocrats and politicians of calling upon the farmers to increase production without addressing the marketing bottle-neck. The recent experience of lack of market for increased crops has led farmers to mistrust the advice and call for increasing production. To regain the confidence of farmers, Government Policy

on Marketing in light of liberalisation policy should be formulated taking into account lack of basic conditions necessary for operation of a perfect market.

The farmers have for long been used to government controlled prices and have not yet got used to free market determined prices which are subject to fluctuations. The workshop is therefore, not only timely but very relevant for the development of the district.

Identification of Problems and Issues

The workshop indentified seventeen problems, listed below, which are impendiments to proper functioning of marketing and therefore an obstacle in community accessing to marketing opportunities.

No.	Problem/Issue	Total Score
1.	Transport	13
2.	Storage	3
3.	Low price	2
4.	Capital	12
5.	Roads	5
6.	Market Information	6
7.	Processing	3
8.	Distance from Market	0
9.	Quality	3
10.	Lack of Market	6
11.	Skills	2
12.	Farmers and other organisation	2
13.	Uncertainties	0
14.	Lack of inputs (chemicals)	1
15.	Lack of labour	9
16.	Facilitation of skilled staff	1
17.	Slow Rate adoption of new profitable enterprise/ technology	3

Prioritisation of Constraints

The above constraints were ranked in descending order according to their relevant to and importance in marketing as follows:-

1. Transport
2. Capital
3. Market information
3. Lack of market

4. Roads
5. Storage
5. Processing
5. Quality
5. Slow rate of adoption of new profitable enterprise/technology
6. Low price
6. Skills
6. Farmers' and other organisations
7. Lack of inputs (chemicals)
7. Facilitation of skilled staff
8. Distance from market
8. Uncertainties
8. Lack of labour

Identification of Solutions

1. **Transport**

- The people in Katakwi do not own light and heavy commercial vehicles for transport and buses/taxis for passenger transport.

- Business people should be given loans to purchase heavy/commercial vehicles.

- Government should honour the claims and compensate for vehicles looted from individuals/companies from Katakwi district.

- People originating here, because of insecurity, do not allow their vehicles to operate here due to cultural beliefs in bewitching vehicle owners

- There is lack of banking facilities and even if it was there, there are only very few people with land titles because the process of getting titles is very expensive and the Land Board is not yet operational.

- Private Sector Development Project is not yet in the district.

- Mechanism for loan appraisal at district, county and subcounty levels is being established by Uganda National Chamber of Commerce and Industry (UNCCI).

- The business people have had the bad experience of having to wait for 2 or 3 or more days before being allowed to withdraw their money from the nearest banking outlet in Soroti.

- There is dire need for transport in the district and is hampered by insecurity, real or perceived. A lot of people lost a lot of property during insurgency and have not yet been compensated.

- There is need to put in place district committee to attract investment into the new district.

- There is lack of banking services in the district.

(i) Trunk roads - Central Government 73 km
(ii) Rural Feeder Roads and Urban Road 506 km
(iii) Community Roads -- subcounty
(iv) Institutional Roads - NIL

Most of the roads were neglected due to insurgency. Although some have been rehabilitated, these roads are seasonal because it is not tarmacked. The New district will receive road maintenance units by June 1999. There is no road rehabilitation project being implemented at the moment. There is need for Government to address the swampy section of roads and the people to addressed the remaining sections.

The road net work is adequate but the resources for maintenance is not adequate. The maintenance of feeder roads should be given the community near the feeder road through transparent tendering.

The road system need rehabilitation. The Government is intending to form a road authority. Ministry of works office in Soroti is responsible for road maintenance in Soroti, Kumi and Katakwi districts.

The district will not in the foreseeable future be able to raise adequate funds for maintenance of roads. The maintenance of community roads should be done by sub-counties but with assistance with respect to swampy sections and culverts.

2. <u>Capital</u>

Savings culture has not yet permeated to all sections of Katakwi district. Capital is composed of own savings and/or borrowed funds. Its formation is hampered by rampant poverty; lack of title deeds for obtaining loans, lack of banking institutions low capital formation base and lack of saving culture.

- There is need for Government to institute a deliberate policy favouring the most disadvantaged districts.

- The savings culture has not yet been embraced by the people and this should be incalculated in the people. The drinking habits should be targetted and decampanied by civil and religous leaders as it would increase savings and investment.

- The District Profile Study, aimed at forming the basis for equalisation grants, should lead to more resource allocation to disadvantaged districts. The districts should themselves follow this up.

3. **Lack of Markets:**

There are three grades of markets i.e. grade I, II and III. In category 1, there are three markets i.e. Ochorimongin which specialises in livestock; Unyaniguro-rice and Libalango which has a speciality of livestock and green gram. These markets are managed by tenderers.

The number of markets are adequate but their structure is basically open air with a few grass thatched stalls and with no other amenities e.g. stores, waybridge for livestock, toilets etc.

4. **Market Information**

There is lack of means of communication e.g. telephone, fax etc. The only way information travel is by people.

There is no information dissemination mechanism. There is only one officer manning marketing department.

The Government, through Ministry of Trade and Industry (MT)I together with traders' and farmers' organisations, should be responsible for market information dissemination.

5. **Slow Rate of Adoption of New Enterprises**

The slow rate of adoption by the farmers of new technology and enterprises need a concerted effort by civil leaders, politicians, technocrats and even educated children originating from the district in getting the people to change their attitude towards agriculture by getting freed from the old cultures.

6. **Storage**

Storage both at on-farm and off-farm level is grossly inadequate and where it exists, it is out-dated and traditional type. The basic function of storage i.e. bulking and prolonging the storage shelf life of commodities is thus not met and

most crops are sold immediately after harvest at very low prices thus reducing the farmers' incomes and contributing and intensifying rampant poverty.

7. **Processing**

Due to insecurity, no major processing facilities have been established in the district. Although a lot of cotton is grown in the district, there is no ginnery and oil extraction mills. Lack of electricity is a major factor in the slow rate of industrialisation of the district. Of recent, Appropriate Technology (AT) has established its branch office in Katakwi and has introduced small scale oil presses, water pumps, etc at affordable prices.

8. **Quality:**

This is a result of good seeds, proper husbandry and initial on-farm and off-farm processing and storage. Quality is hampered by a complexity of seed types, varieties and different husbandry practices.

9. **Farmers' and Others Organisation**

There is no organisation of farmers, traders and processors in the district. Farmers, traders and processors should be encouraged to form groups/organisations to take advantage of large quantities and enhance their bargaining power. The traders, farmers should be encouraged to form groups. Most groups are formed with specific objectives e.g. for accessing credit. The only organisation of farmers in the district is primary co-operative societies most of which are non-functional since trade liberalisation was adopted.

10. **Skills**

This embraces knowledge of determining what enterprises to undertake, the right type of seeds, business, husbandry, storage etc. The farmers, traders and processors need assistance from the technocrats, NARO etc to acquire this know-how.

11. **Price**

This is the resultant of many factors e.g. information, market, good quality, storage etc. The farmers have not yet assimilated price determining mechanism in a liberalised market environment. There is need for mass education in this regard to avoid farmers calling for re-introduction of controlled (fixed) pricing.

12. **Inputs (Chemicals)**

At time of need, the technocrats, are not at hand to give proper guidance to the farmers as to the appropriate chemicals.

The farmers lack knowledge of the appropriate type and times for application and may buy expired chemicals.

There is an agricultural Chemical Board at MAAIF. Hence dealing in chemicals is granted by application through District Agricultural Office to MAAIF headquarters.

The law for importation, storage and dealing in chemicals is in place but machinery for enforcement is not effective.

13. Labour

There is need to adopt labour saving technologies.

14. Uncertainties:

Farming in the district depends entirely on rain feed agriculture. The farmers have not adopted water harvesting technology for irrigation.
The Government should identify the disadvantaged districts and allow tax free holidays for investors who venture in those districts. The districts should give additional incentives to attract both local and foreign investors.

The Government law relating firearms should be applied equally in all districts to increase security in the district.

List of Workshop participants

No.	Name	Organisation/Firm	Address
1.	Odongol Benedict	Chairman UCCI	Katakwi Dist.
2.	Onyait John R.	Abarilela Growers & Produce Dealers	
3.	Ariko Anselm	Hamesco Ent.	Katakwi Town Council
4.	Okwi Ignatious	Katakwi	Katakwi Town Council
5.	Mrs Betty Ebasu	Katakwi	Katakwi
6.	Alupo Cecilia Engole	Usuk Farmer	Usuk Sub County
7.	Edeket Ven Adieku	County Extension Coordinator Usuk County	Agri. Dept Katakwi
8.	Oguti Stephen	Ag. DCO Katakwi	Box 1 Katakwi
9.	Ipoot Samsom	Farmer	Box 42 Katakwi
10.	Emodu Joseph	Emibako Enterprises	Box 42 Katakwi
11.	Andrew Moses Okotel	Chairman Numa	Katakwi
12.	Edep Hillary	Sec Production LCV	Katakwi District
13.	Dr. Adungo Richard	Chairman Kadifa (UNFA)	Katakwi
14.	Oryokot R. Jolly	Ag. DFO Katakwi	Katakwi
15.	Nelson Esemu	Trader	Katakwi
16.	Otim James Augustine	Ag. District Fisheries Officer	Katakwi
17.	Elingat Augustine	Ag. District Fisheirs Officer	Katakwi
18.	Alajo Teresa	Chairperson WFA	Kapelebyong
19.	Okware Justis	Supervisor of Works	Katakwi
20.	Esim Tom	Trader	Katakwi
21.	Ibulo Peter	Farmer	Usuk
22.	Eragu Samuel	Farmer/Businessman	Katakwi
23.	Ongom B. Silver	DAO Katakwi	Box 1 Katakwi

COMMUNITY ACCESS TO MARKETING OPPORTUNITIES WITH EMPHASIS ON REMOTE AREAS

REPORT ON

RUKUNGIRI DISTRICT

March 1999

Rukungiri District Profile

The district grows the following food crops: beans, maize, bananas, groundnuts, simsim, millet, cassava, peas, irish potatoes, vegetables, pineapples, passion fruits and for cash crops, they grow coffee, tea, and tobacco. These are grown at small household level and marketed individually (for more details, see Appendix 2). The district used to grow wheat, barley and soya beans on contract with Uganda Grain Milling Co., Uganda Breweries Ltd. and Mukwano Industries Ltd. but when they stopped buying, the farmers had no market.

2.0 Field Work

2.1 The field work involved holding discussions with the following stakeholders:-

Date	Institution	Officers met
23.2.99	Rukungiri District Administration	DAO - Mr. L. Katsigazi Dep.DAO - Mr. Z. Karyaija RDC - Mr. Kalule-Ssengo Dep.CAO - Mr. W. Tibugenda DCo-op Off - Mr. F Tuwange
	Uganda Chamber of Commerce and Industry - Rukungiri Branch	Chairman-UCCI Branch - Mr. F.Ntabuize Transporter - Mr. J. Byamugisho Coffee Processor - Mr. Tumwesigye
	Uganda Small Scale Industry Association - Rukungiri Branch	Chairman USSIA Branch - Mr. Kyamatuku
24.2.99	Bikongozo Parish Women's Group -Nyakishenyi Sub-county	Chairperson - Mrs. C. Byarugaba
	Horticultural Farmer near Kirimbe Trading Centre - Rutenga Sub-county	Farmer - Mr.David Sunday
25.2.99	Rukungiri District Stakeholders - Workshop	Attended by 23 persons including:

		- District Administration Officials - UCCI Branch - UNFA Branch - USSIA Branch - UCDA Branch - 3 Women groups - Produce Buyers - Feeder Road Unit staff

3.0 Field Findings

3.1 Background

The Team Leader, Mr. P. Karuhanga, briefed the stakeholders on the objectives of the study. He defined market access as the ability to access farm inputs, ability to sell farm produce, and ability to buy household food requirements in case of a food deficit. The objectives of the study were:

- To identify constraints to market access.
- To identify consequences of these constraints.
- To propose solutions to these constraints.

This study was to form an input in the finalisation of the Modernisation Plan for Agriculture (MPA). The Modernisation Plan was targeting Poverty Eradication.

3.2 Constraints identified in the field during discussions with the stakeholders.

The majority of stakeholders in the field identified the following constraints:-

(i) **Poor Roads**: The roads are in a poor state and the terrain is difficult. The road from Ntungamo to Ishasha is to be tarmacked in 2000/2001 programme. Presently, farmers cannot compete with farmers from Kasese or Kabale.

(ii) **Market Information**: The farmers lack knowledge of prices in Kampala and in neighbouring countries like Congo and Rwanda. They also lack knowledge on quality requirements.

(iii) **Land Shortage:** There was a serious land shortage and the soils had deteriorated. Farmers cannot afford to buy needed fertilizers.

(iv) **Lack of Capital**: It was argued that there were no credit facilities available for farmers in the district.

(v) **Producing in small volumes:** The farmers produce on small plots of land which are scattered. This results in small volumes which means that for a trader to accumulate enough bulk to lift from an area takes time and involves travelling long distances under difficult terrain.

(vi) **Too many price fluctuations**: This constraint is manifested in two ways:

- Generally at harvest time, prices fall.
- This had damaged attempts to introduce high yielding varieties e.g. maize and passion fruits. High yielding varieties flood the market and prices fall.

(vii) **Lack of Storage Facilities**: Farmers cannot wait for good prices due to lack of storage facilities. Traders take advantage of this and pay them low, then store and wait for good prices locally or in Kampala.

(viii) **Lack of agro-processing facilities**: Farmers wish to add value to their commodities through agro processing. Coffee processing has been hit by the Coffee Wilt Disease which is affecting 20% of the crop.

(ix) **Frequent Weather Changes:** Farmers are getting confused by the frequent changes in weather.

(x) **Lack of organised farmer Associations**: Due to production in small quantities, the farmers need to market in bigger groups so as to accumulate needed bulk.

(xi) **Poor Research/Extension/Farmer Linkage:** Extension Field workers are not well funded.

b) The constraints identified affecting the marketing of animals and animal products are:-

(i) Poor disease control especially ticks and tsetse flies near the National Park.

(ii) Too much milk during the rainy season which dampen the prices.

(iii) Milk processing plants in Mbarara have low capacity and there is no land earmarked as an Industrial Estate in Rukungiri Town Council to be able to attract possible investors.

(iv) Pastures are not good.

(v) Grazing is not properly controlled - with small fenced plots, the land is overgrazed.

(vi) Although the market for poultry and eggs is quite good in Congo, the farmers find the prices of feeds very high. The quality of these feeds is sometimes low.

3.3.0 **Workshop Proceedings on 25-2-99**

3.3.1 **Opening Remarks:** The workshop was officially opened by the Deputy CAO, Mr. Wilson Tibugyenda. In his opening remarks, he apologised for the absence of the CAO, who was attending another workshop at Colline Hotel, Mukono. He informed the participants that the them of this workshop quite relevant to the district because marketing pauses a big problem in the district. He attributed this problem to the following constraints:-

- Lack of market information on what and where to market.
- Lack of community mobilisation.
- Poor roads and difficult terrain.
- Need to pool production together.
- Lack of outside markets.
- Frequent weather changes - mitigation measures.
- Need for district bye laws covering
  - drinking hours - men start in the morning
  - promotion of famine crops like cassava etc.

3.3.2 **Background for the Workshop**

The Team Leader, Mr. P. Karuhanga, informed the participants that this study of "Community Access to Marketing Opportunities with special emphasis to remote areas" is sponsored by DFID and is being implemented by NRI and APSEC. The study outcome will constitute an important input into the finalisation of the final document of the Plan for Modernisation of Agriculture (PMA). The consultations on the PMA started in 1996 at Tororo and have been going on till now using a participatory approach. The draft document was presented to the donors who found it was lacking in the following areas:-

- The PMA was too ambitious (7.5% growth rate p.a.)
- The Plan was not matching with the national resource envelope.
- There was a need for prioritisation of major activities.
- Plan was not linked to the Plan for Poverty Eradication (PEAP).
- The Plan was not coherent with the macro-economic policy.
- The Plan did not clarify the roles of government, the districts and the private sector.
- The Plan did not indicate where the Donors would intervene

DFID, World Bank and Danida offered support to the Technical Committee (TC) which was charged with the job of improving the PMA Document. The Document was finalised and presented to the Consultative Group (Paris Club) in December 1998 in Kampala in a form of a government statement currently named the "Green Report". The Donors welcomed the Statement because it addressed their previous concerns. The participants were advised to get copies of this document.

3.3.3 Workshop Objectives:

He indicated that the workshop objectives were to:-

- Identify constraints to market access
- Propose solutions to the above constraints
- Link Modernisation of Agriculture to Poverty Eradication

The participants were advised to consider institutional constraints as well - are they effective, are services provided at reasonable costs, are they accountable.

3.3.4 The Workshop Participants Identified the following constraints and solutions

Constraints (No. of Participants)	Solutions
1. Poor Roads (10)	-Construct/Tarmac the Trunk Roads -Maintain the existing road network
2. Low Prices (8)	-Supply market information
3. Price fluctuations (8)	
4. Lack of Market information (7)	-Use mass media to disseminate market information.
5. Means of Transport (7)	-Use donkeys in difficult terrain
6. Low Quality seeds (7)	-Promote private seed supply at low cost
7. High Input Costs (6)	-Promote private input supply at low cost
8. Lack of mobilisation (5)	-Encourage formation of Farmer Organisation
9. Small volumes (4)	-Increase production at farmer level -Improve farming methods
10. Lack of markets (4)	-Identify new markets
11. Post Harvest Losses (3)	-Improve on farm storage
12. Lack of capital (3)	-Avail credit to farmers
13. Too many middlemen (2)	-Use the mass media e.g. FM Radio
14. Poor quality (2)	-Strengthen Regulatory Bodies like UNBS
15. Poor farm practices (2)	-Facilitate Extension Workers
16. Poor storage (2)	-Improve on farm storage
17. Labour shortage (2)	-Improve on farming methods
18. Lack of agro-industries (1)	-Promote agro-processing units
19. Unpredictable weather (1)	-Use mass media
20. Expired drugs (1)	-Strengthen regulatory bodies
21. Gender roles (1)	-Sensitise the men and women

4.0 General Issues Raised During the Workshop

The participant highlighted the following issues which should be taken into account:-

a) It was observed that the FEWs based at each sub-county collect agricultural data, including price data, but this is never disseminated to the farmers. It is only utilised inhouse by the agricultural staff and planners. There was need to disseminate market information using the "Orumuri" Newspaper and Rukungiri FM Radio Station.

b) The community conducts informal credit schemes under the name of "Biika-Oguze" but the interest rate is very high (Shs 100.= per 1000.= per month).

c) Maintenance of community roads is being carried out under "Bulungi Bwansi" but this faces problems during periods of elections - the people tend to ask politicians not to enforce bulungi bwansi". Secondly, the community needs assistance when it comes to construction of bridges and culverts, the district hires contractors to maintain feeder roads. The district benefited from SWRARP and EU/Tea Projects.

d) The rural markets are gazetted by the District Administration. They fall into two categories - The weekly markets at every parish and the bimonthly markets at every sub-county. These markets are tendered out to private businessmen who administer them on behalf of the administration at a fee. However, it was observed that no efforts have been made to provide elementary sanitary facilities like toilets and washing bays.

e) In respect of Means of Transport, there are few lorries in the district (4). The major means of transport are pick-ups (average 2 per sub-county). Bicycles are not popular in the district due to difficult terrain. The district has introduced donkeys in the area and this is popular except source of donkeys is not near. Boda-boda (motorcycles) have also been introduced and they are also quite popular.

f) On research and extension, the district benefitted from AEPI but now extension workers have limited funding. NARO has identified pilot subcounties in the district. They have also identified Kachwekano DFI as a ZAROC. The district administration is happy with decentralisation of extension services but finds it uncomfortable due to a narrow revenue base. They blame the centre for giving priorities of budget allocation in this order:-

i) UPE/Primary Education
ii) Primary Health Care
iii) Feeder Roads
iv) Production

Even when district revenue is being allocated, it follows this order which relegates agriculture to the bottom in priority.

g) It was noted that the Uganda Chamber of Commerce and Industry, the UNFA and Co-operative Societies (Marketing) are weak. Only Savings and Credit Co-op Societies are gaining strength and are quite active. It is planned to open a Business Promotion Centre under the auspices of the UNDP Private Sector Development project. The private sector bodies seem to be declining at a time when government is pulling out of many services it used to deliver.

h) On the Decentralisation Policy of government, it was observed that other than being affected by the poor revenue base at the districts, the Planning and Budgeting Process of the Centre should also be decentralised. All resources should be targeted to the grassroots and the Government Plan Document should be derived from the district plans. District staff should be transferrable to other districts especially in the technical fields. The NGOs should not impose themselves on districts - they should deliver services according to district priorities.

i) There was a need for Capacity Building at the Sub-county and Parish levels especially in financial management.

j) In order to provide land for Industrial Development, the district is planning to shift the Prison to Kibimbiri Public Land.

COMMUNITY ACCESSSS TO MARKETING OPPORTUNITIES WITH EMPHASIS TO REMOTE AREAS

REPORT ON

KIBAALE DISTRICT

November 1998

Kibaale District Profile

a) Kibaale District is located in Western Uganda and is bordered by the districts of Hoima in the North, Kabarole and Mubende in the South, Kiboga in the East, and Lake Albert in the West. Although the administrative headquarters is at Kibaale, the main trading centre is at Karuguza, a distance of 1 km.

b) The population of the district was 220,261 in the 1991 Census and is projected at 257,100 by Mid 1998.

c) The total area of the district is 4,302 sq.km with a population density of 52 persons/sq.km (1991 Census).

d) The district produces the following:-

i) **Food Crops** - Bananas (mainly for beer brewing) cassava, maize, beans, groundnuts, sweet potatoes, cabbages and tomatoes.

ii) **Export Crops** - Robusta coffee, tobacco, tea and a little cotton.

iii) **Livestock** - The district keeps poultry and piggery but has very few cattle due to the effects of rinderpest, tsetse flies and a wrong vaccination administered by Mpongo in 1921.

iv) **Timber** - The district consists of 25,523 hectares of forest reserve from which timber is supplied to major towns in the country.

e) **Infrastructure:** The district has 422 km of dry weather roads, electricity mains are just being extended to the district, and there is one branch of Uganda Commercial Bank. There are no telephone links in the district. The only hospital is at Kagadi, a distance of about 20 km away.

2. Rationale for Selecting the District

The district was the first to be visited in this Study. It was selected because of its peculiar location. The district is about 100 km from Mubende Town on a dry weather road. Mubende town is 160 km from Kampala on a tarmac road. Compared to the other districts, it looks so near yet so remote due to poor roads linking the district to the rest of the world, and due to the poor road network within the district. In addition, the district has a lot of agricultural potential in coffee, tobacco, tea, timber and other food crops if it is helped to link with the main urban centres.

3. Consultations in the District

The following district officials and stakeholders were consulted during the study:-

- The Deputy District Agricultural Officer,
- The AO Agribusiness,
- The LCV Chairman,
- URDT (Kagadi),
- URDT (Narweyo Branch)
- Narweyo Seed Co. and the Animal Traction Project,
- The District Economist,
- Input Dealers at Karuguza Trading Centre,
- Produce Buyers at Karuguza Trading Centre and Kagadi Trading Centre,
- Women Groups at Kisojo Parish, Kyebando Sub-county

We wish to thank the Deputy DAO, Miss Perepetua Nakacwa and Mr. John Bahindura, the AO (Agribusiness), for organising and co-ordinating the study in the district.

4. The Workshop

a) A workshop intended to identify constraints to market access in the district and their possible solutions was held on 5th November 1998 at Kibaale IFAD Hotel. The Workshop was officially opened by the LCV Chairman, Mr. Ssali Sekitoleko and attended by 30 persons (see Annex 1). In his speech, the LCV Chairman reported that in the past, the poor road network used to be a big constraint to marketing, but the roads had improved due to Irish Feeder Road Project being implemented in the district. This project introduced road construction and maintenance using manual labour. The district authorities only contribute during the construction of bridges and culverts. He noted that farmers are growing too many crops and requested that they should be assisted to select crops which maximise their incomes.

b) **Background to the Workshop**

At the beginning of the workshop, participants were given a background to the study as a collaborative effort, the source of funding,

basic objectives, scope and expected outcome. The study was linked to the on-going efforts to finalize the Plan for the Modernisation of Agriculture. Key definitions were given to the participants; and the methodology to be used in the workshop was outlined as participatory, in which the participants would merely be facilitated to identify the market access constraints and to offer solutions themselves. The workshop was quite successful and the level of participation high.

5. Identification of Constraints and Solutions

In the course of the discussions with the various stakeholders and during the Workshop, the following constraints and solutions were identified and ranked as follows (see Table 1 below):

a) Poor roads especially feeder roads and community access roads
b) Poor market information of all types and their timeliness
c) Poor means of transport - vehicles, tractors, bicycles, animal traction etc.
d) Extension Services - staffing, facilitation, supervision and training
e) Lack of buyers - internal and external
f) Lack of inputs - seeds, chemicals, machinery, credit etc.
g) Poor quality and low quantity - low level of production
h) Limited group formation
i) Poor storage facilities
j) High taxation (graduated taxes and licences).

Table 1. Identified Constraints and Proposed Solutions During the Workshop

Constraints (scores in brackets)	Proposed Solutions
a) Poor Roads (14) (feeder and access roads)	- The institutional arrangement whereby trunk roads are the responsibility of the centre and, feeder roads are a responsibility of the districts should be maintained and strengthened. - The community access roads were being handled by contracting the communities at a rate of shs 2,500/- per day per person and the communities contributing materials in form of bricks, sand etc. The chiefs and the LCs mobilised the communities. Communities were assisted on bridges and culverts.
b) Poor Marketing Information (11)	Efforts should be made by the District and subcounty administrations to use the following media. - FM Radio Stations - Local Newspapers - Churches - NGOs - Farmers' and Traders' Associations - Field Extension Workers - Local Councillors - Study Tours
c) Poor means of Transport (8)	There are many types of transport means but the ones affordable by the rural communities include bicycles, motorcycles, oxen, donkeys and pick-ups. The District Administration through Irish Aid had established a vehicle pool system hired out to the public. This way the farmers and small traders were able to access lorries, tractors and pick-ups for bulky loads.
d) Extension Service (8)	It was recommended that MAAIF and NARO should disseminate guidelines to Districts concerning extension budgets, role of NGOs, staffing facilitation and supervision. The issue of putting a graduate

		at the sub-county level when the subcounty chief was not a graduate was found tricky. The allowances of this graduate were considered too high for the subcounty budget.
e)	Lack of Buyers – internal and external (7)	This was tied to quality and quantity available for the buyers. It was recommended that smallholders should pool their produce together as it is done under the system being implemented by UNFA. Subcounties should try to specialise in a few crops where they have a comparative advantage.
f)	Lack of Inputs (4)	It was recommended that Traders should be trained in handling chemicals, seeds and other inputs. In respect of credit, farmers were encouraged to form "Village Banks".
g)	Storage Facilities (2)	Storage was found most critical at the farmer's level. Extension service should introduce new storage technology.
h)	Low level of Production (3)	Extension service should introduce high yielding varieties of seeds and better agronomic practices.

6. **General Issues Raised**

a) **Cotton Growing:** Cotton used to be a big export crop in the 60s but this was abandoned in the 70's and 80's due to lack of a ginnery to purchase the crop. Lonrho has put up a ginnery in Nakasongola and it is trying to revive the crop in the district.

b) Tobacco (firecured) is promoted by B.A.T but when new companies entered the market (e.g. Mastermind) farmers are selling to the best buyer, yet inputs are supplied by BAT. This is likely to raise input supply problems for the farmers.

c) Locally raised revenue is too small to meet the budget for extension especially at the sub-country level.

d) The following NGOs and Projects are operating in the district and involved in rural community development:-

- URDT - Training farmers in project management and microfinance.

- Narweyo Animal Traction Co Ltd (NASECO) - training farmers in use of animal traction and fabricating trailers.

- Hoima/Kibaale Districts Integrated Community Development Project (IFAD/BSF) - involved in water and sanitation, rural feeder roads, primary education and capacity building of the district administration.

- Kibaale District Dev. Programme (KDDP)-Irish Aid - covering rural feeder roads, primary health care, and animal traction

- Uganda Women Finance Trust (Kibaale Branch) - offering microfinance services.

- UNFA - Kibaale Branch - not quite active

Annex 1

KIBAALE DISTRICT WORKSHOP ON COMMUNITY ACCESS TO MARKET OPPORTUNITIES HELD AT KIBAALE HOTEL ON 5TH NOV. 1998

LIST OF PARTICIPANTS

	NAME	DESIGNATION/OCCUPATION	ORGANIZATION/ LOCATION
1.	Ilumu Mike	Dist. Coordinator	UCDA Kibaale
2.	Bahindura	SMS/Agribusiness	MAAIF
3.	Nakatuura	DCO	Prod. Kibaale
4.	Kajubi Mark	DPO/Planner	Kibaale
5.	Byenkya Leonard	Farmer	Kibingo LC1
6.	Tinka Rosemary	Farmer	Kisonjjo
7.	Asiimwe Leonard	Trader	Kaluguuza
8.	Nyamurangwa	Farmer	Kibaale/Kahyoro
9.	Bagonza Godfrey	ACAO	Kibaale
10.	Bizobwire L	Trader	Kibaale
11.	Tibuhoire Paul	Trader	Kirangwa
12.	Kasaija C	ACO/Farmer	Karuguuza
13.	Busuurwa V	Trader	Karuguuza
14.	Kyaligonza C	Farmer	Kakindo/NSECO
15.	Tinkamanyire C	DFO	Kibaale
16.	Muluubye E	EO(B)	Kibaale
17.	Dr. Kumalirwa	Vet Officer	Kibaale
18.	Warwo E	Business man	Ntutu/Kezimbira
19.	Dr. Tabani	DVO	Kibaale
20.	Mbaziira Hedwig	Vice C/person LC V	Kibaale
21.	Bisibu George	District Councilor LCV	Kibaale
22.	Birungi	District Planning Economist	Kibaale
23.	Kakyomya	for DEO	Kibaale
24.	Beyanga	for DISO	Kibaale
25.	Katabazi	Cadre RDC	RDC Office
26.	Tumusiime	NASECO Kadebede Extension	Nalweyo Seed Company
27.	Muwonge L	D/DAO	Kibaale
28.	Joseph Mussewesibi	Coordinator URDT	URDT Kagadi
29.	Ndyanabo Vincent	Farmer	Nalweyo
30.	Bwesige S	Secretary/Farmer (Ext. Staff)	Kibaale

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