FINAL REPORT

RESEARCH PROJECT ON DECENTRALISED MARKET INFORMATION SERVICES IN LIRA DISTRICT

Baseline Study Carried out in Five Sub-Counties of Lira District on Farmers' and Traders' Needs and Sources of Information

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Crop Post-Harvest Research Programme – Project R8250

IITA / FOODNET	**Radio Lira**	**DFID**	**PMA / NAADS**	**Natural Resources Institute**

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Appendices

Abbreviations

ASARECA	Association for Strengthening Agricultural Research in Eastern and Central Africa
AT (U)	Appropriate Technology (Uganda)
BBC	British Broadcasting Corporation
CAO	Chief Administrative Officer
CBOs	Community Based organisations
CDO	Cotton Development Organisation
CEDO	Community Enterprise Development Organisation, CEDO
CPHP	DFID Crop Post-Harvest Programme
DETREC	Development Training and Research Centre, Lira
DFID	United Kingdom Department for International Development
ELF	Extension Link Farmer
FAO	Food and Agriculture Organization of the United Nations
FHH	Female Headed Household
GoU	Government of Uganda
HH	Household
ICT	Information and Communication Technology
IDEA	Investment in Developing Export Agriculture, USAID Funded
IGA	Income Generating Activities
IITA	International Institute for Tropical Agriculture
LC	Local Council
LDLG	Lira District Local Government
LIDFA	Lira District Farmers Association
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries

MHH	Male Headed Household
MI	Market Information
MIS	Market Information Service
NAADS	National Agricultural Advisory Services
NARO	National Agricultural Research Organisation
NGOs	Non-governmental Organisations
NRIL	Natural Resources International Ltd
NRI	Natural Resources Institute, University of Greenwich
PAP	Poverty Alleviation Project
PEAP	Poverty Eradication Action Plan
PMA	Plan for Modernization of Agriculture
PM&E	Participatory Monitoring and Evaluation
PSPC	Private Sector Promotion Centre
PRA	Participatory Rural Appraisal
RL	Radio Lira
RO	Regional Office, Crop Post-Harvest Programme
SAARI	Serere Agricultural and Animal Production Research Institute
UNFFE	Uganda National Farmers Federation
UNHS	Uganda National Household Survey
UOSPA	Uganda Oilseed Producers and Processors Association
UPPAP	Uganda Participatory Poverty Assessment Project
USAID	United States Agency for International Development
WFP	World Food Programme

Exchange Rate

£1 = USh3,100

(mid - 2003)

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We are grateful to the Sub-County survey teams for their efforts in collecting the field data for this study and preparing preliminary reports which have been used for the compilation of this document. The field survey teams included the following:

- Aloi Sub-county: Ms Cecilia Agang, Mr Joseph Atepo Alunga, MrB.M. Etuku and the Rev. Jimmy Agang-Okello
- Adwari Sub-county: Mr Agong Ray Bruno, Mr Geoffrey Opori-Okello, Mr Ogwali Sidney and Mr Okello Moses, NAADS Sub-county coordinator;
- Ogur Sub-county: Ms Kezia E. Oteng, Mr Okello Godfrey, Mr Opota Ronald and Ms Mary Mongo
- Bata and Namasale Sub-counties: Mr Geoffrey Anyach, Mr Sylvano Afai and Mr Alex Oruk of the NGO DETREC.

The survey teams were co-ordinated by Dr Jacob Oweta, Head of Production Department, Lira District, with assistance from Mr Benson Taiwoo of Radio Lira. In addition, AT (U) provided valuable support in testing the checklists and questionnaires.

The inputs provided by Messrs Andrew Muganga and Mwayi Robert in processing and analysing the questionnaire data are gratefully acknowledged.

Last but not least we would like to thank the DFID Crop Post-Harvest Research Programme for providing the funds for this research.

SUMMARY

The two-year project **Decentralised Market Information Services in Lira District** started in January 2003 with a stakeholder workshop in Lira. The main objectives of the project are:

(a) to obtain a better understanding of the information needs of poor rural people in Uganda, and

(b) to test information delivery models for poor farming communities, with emphasis on decentralised market information services, and the use of FM radio stations.

The project needs to be seen in the wider context of GoU initiatives, and has its origins in previous work and activities undertaken by Foodnet, NRI and the PMA Secretariat. The purpose of the baseline study was to gain a better understanding of farmers' livelihoods, and their needs and sources of information, in both general terms and related to marketing. In particular, the assessment was expected to shed light on the impact of the Radio Lira market news programme and provide guidance on how the programme could be strengthened. In addition to the farmers survey, traders were interviewed regarding their information requirements and communication channels.

Sub-counties were chosen at the inception workshop in January 2003 to be as representative as possible of different variables affecting market access, including the growing of different crops, the presence or absence of NAADS, and varying distance to markets of different sizes. Five sub-counties were chosen: Adwari, Aloi, Ogur, Bata, and Namasale.

The methodology used the Sustainable Livelihoods approach as an entry point, focusing on human capital in the context of information requirements, and social capital in the context of farmer group formation. Data collection tools included common PRA methods such as semi-structured interviews and participatory mapping in a group context and on individual basis. In addition, questionnaire surveys were carried out with 175 farmers, and 56 traders. The surveys took place in February and March 2003.

Survey Results - PRA and farmer household questionnaire survey. In the context of human capital and education, two points can be made: men have a significantly higher level of education and functional literacy than women; and few farmers, either men or women, know enough English to listen to radio broadcasts in English.

There are farmers' groups in all five sub-counties surveyed. According to the questionnaire survey, 30% of households reported male membership of groups, whilst 27% indicated female membership. It seems likely that many farmers' groups are basically exchange labour groups with emphasis on agricultural production. On the other hand, few groups are engaged in successful collective marketing initiatives (e.g. shea nut processing groups which receive support from the NGO COVOL). Some groups are formed for purposes which are not directly related to farming; there are brick-making, savings, drinking and religious groups in Ogur sub-county, for example. During the

course of the PRA, the following were expressed as important training needs: group formation, group dynamics, ICT skills, record keeping, savings and credit schemes, approaching farming as a business, and contract production.

Lira is a predominantly rural district, and livelihoods reflect the Lango farming system, which is based on crop production and livestock rearing. The area planted by farmers is considerably less than the actual farm size. The latter is on average between six to eight acres (with the exception of Ogur where it is about 4.2 acres), whilst the area cultivated is of the order of two to three acres for both first and second rainy season respectively.

Approximately 60% of households owned cattle, 70% owned goats, and 70% owned poultry at the time of the survey (March 2003). Livestock numbers in the District have been seriously depleted in recent times due to cattle raiders and insurgents, which in turn has negatively affected household savings.

In all sub-counties, subsistence agriculture plays an important part in people's livelihoods, with little reliance on activities other than farming. Intercropping is very common and a wide variety of crops is grown, including maize, millet, sorghum, beans, peas, cotton, sunflower, sim-sim (sesame), groundnut, soyabeans, rice, cassava, and sweet potato. Fish has been included amongst the commodities analysed due to the importance of fish catching on Lake Kyoga.

PRA groups said that there are no crops which are grown purely by men or women. However, men tend to have more interest in crops which can be sold easily while women are interested in crops which can be consumed at home. In light of this, most of the food crops are produced for both home consumption and cash. Sunflower, maize, cotton, sim-sim and beans are the dominant cash crops in the District. The quantities sold by farmers are relatively small, i.e. mostly below 800kg per crop per annum.

The main locations for selling agricultural produce include community markets, the farmgate, and trading centres. Local village traders, local consumers, and agents of private companies are the main buyers of farm produce in the villages. Selling to non-local traders is less common. Relatively few farmers go to Lira town to sell their produce there, mostly due to lack of transport but also because of market fees that are perceived as high. The main means of transport of crops for sale is on foot or by bicycle, which limits the distance that individuals can go.

Farmers expressed the following specific support requirements for marketing: training in modern methods of farming, farmer friendly loans, assistance in accessing better markets, better storage, assistance in processing to add value to their produce, and support in solving the insecurity problems in the area due to LRA activities and Karamajong cattle rustlers.

According to the questionnaire survey, radio is the most important source of information for the farmers followed by family/friends/neighbours, local government representative,

church person, extension officer, traders, newspapers, political persons, and billboards / posters. At the same time, the PRA revealed that there are location specific variations.

Crop production, followed by market information, health, and livestock production are the main areas on which households need more information. Other topics mentioned include sanitation, LG matters, family matters, group issues, religious matters, community matters, and fishing (near Lake Kyoga). Although men and women indicated similar topics, the latter are more likely to favour domestic issues such as health, nutrition, or family matters.

About 70% of farmer households in Lira District own a radio and in most cases it is working. 20% of households indicated that they do not own a radio but had access to one if required. Access to mobile or pay phones is very low. Women generally said that they listen to the radio when their husbands are listening. This limits the potential for programmes which specifically target women, since their husbands may not want to listen to these. According to Turrall et al (2002), radio is adequate for raising awareness but has limitations when used for education and training purposes.

Radio Lira (83%) is the radio station which is preferred most by the rural population of Lira District, followed by Radio Rhino (63%), Radio Uganda (35%), Radio Unity (17%), and several stations for which less than 10% of the interviewees opted. It ought to be mentioned that Radio Wa was not operational when the survey was conducted (i.e. March 2003). Good reception and good programmes are the main reasons why certain radio stations are preferred. Other aspects such as good presenters were given less importance. Rural households prefer early evening (6 – 8pm), early morning (5-9am), and noon (12 – 2 pm) for listening to the radio.

News, announcements, educational / development programmes, and early morning / gospel programmes are the radio programmes favoured in rural communities. Talk-shows, music, greetings, and drama were rated less highly. As for the reasons why a programme is preferred about 65% of respondents said that it must be informative. This was followed by 'it must be enjoyable', whilst good reception figured less prominently here. Farming, family health and sanitation, market news, and family planning are the preferred topics for educational programmes.

Family/neighbours/friends, Radio Lira (RL) market news, and traders are the main sources of market information. About a third of Lira's rural population listens to the Radio Lira market news programme more often than once per week, and a quarter once per week. Half of the sample population found the Radio Lira (RL) market news programme useful (i.e. more or less equally split between very useful and moderately useful) whilst the remainder either did not find it useful (12%) or did not give a response, most probably because they do not listen to the programme. Regarding the reliability of the information broadcast by the RL market news programme, similar proportions where obtained.

12% of the interviewees said that it had 'a lot of impact', 29% said 'some impact', 16% indicated 'no impact at all', and 43% gave no response. As for the type of impact of this programme, about 25% of households said that it has allowed them to negotiate a higher price in the local market, 24% indicated that they went to another market to obtain a higher price, 17% said that they stored the produce until the price went up and then sold it. 13% of farmers planted a different crop which either fetched a better price, and 14% grew a crop which produced a higher yield, as a result of the programme.

Suggestions concerning improvements of the RL Market News programme include the following: better coverage of community markets, broadcasting the programme more often (i.e. repetition), involvement of villagers / communities in the programme, more information on crop production, group formation, and crop storage.

Information requirements expressed by traders during the survey are mainly related to market prices, and demand & supply. Other categories indicated include information on availability and conditions of credit, processing equipment (cost and availability), crop production forecasts, taxation matters, and other local government issues.

When asked for their main sources of general information, traders indicated radio, other traders, family/neighbours/friends, newspapers, extension officers, and local government representatives as the main sources. Over 80% of traders reported owning a radio receiver that is in working condition, 20% own a mobile phone, and 21% indicated having access to a mobile phone whilst not owning one. 27% have access to a pay phone. Radio Lira, followed by Radio Rhino, Radio Uganda, and Radio Unity are the traders' preferred radio stations according to the survey.

The majority of traders either listen to the Radio Lira market news programme once a week, or more often than once a week. In this context, it is important to recall that it is currently broadcast twice per week. As for the usefulness of the programme, most of the traders stated that it was either moderately useful (43%), or very useful (27%). The remainder of the sample either said that it was not useful or did not give an answer.

Concerning the reliability of the Radio Lira market news programme, 38% stated it was moderately reliable, and 27% stated it was very reliable. Compared to this, 43% of traders said the programme had some impact, and 11% said it had a lot of impact on their business. Those traders who said the programme had an impact on their business were also asked about the type of impact it had. 41% of the traders said it had helped them to negotiate a better price, 29% stated they went to another market and obtained a higher price, and 23% indicated they stored the produce until the price went up and then sold it.

The main suggestions for improvements of Radio Lira's Market News programme, as stated by the traders, include the following: more information on cost and availability of transport, more information on cost and availability of processing equipment, more reliable and precise information in general, coverage of more markets, and more involvement of business people in the programme.

INTRODUCTION

Background to the Study

The two-year project **Decentralised Market Information Services in Lira District** started in January 2003 with a stakeholder workshop in Lira. The main objectives of the project are:

(c) to obtain a better understanding of the information needs of poor rural people in Uganda, and

(d) to test information delivery models for poor farming communities, with emphasis on decentralised market information services, and the use of FM radio stations.

The project has its origins in previous work and activities undertaken by Foodnet, NRI and the PMA Secretariat in relation to market access by small-scale farmers and decentralised market information services (Ferris and Robins 1999, Kleih et al 1999, Okoboi and Ferris 2000, Foodnet and NRI 2002).

The study needs to be seen within the wider context of GoU initiatives such as the development of a communication strategy for the PMA (Campbell and Garforth, 2001), the PMA marketing and agricultural processing strategy (Odwongo, 2003), and the NAADS market information service strategy (Turrall, 2003). Numerous studies indicate the usefulness of radio as a means of communication in rural areas and a medium for market information dissemination (Janowski 2003, Robbins 1998, Shepherd 1997, Bennett 2002).

The purpose of this study is to provide background information to enable an assessment to be made of the impact of the Radio Lira market news programme and to make plans to strengthen it and to provide guidance for the provision of inputs through the medium of radio together with other media, including through the NAADS programme, on other issues related to marketing, in particular by farmers groups. A manual and radio programme on farmer group marketing was subsequently produced with the intention of testing it in Lira District prior to wider dissemination (Robbins et al, 2003).

Methodology

Choice of Sub-counties and parishes for study. Sub-counties were chosen at the inception workshop in January 2003 to be as representative as possible of different variables affecting market access, including the growing of different crops, the presence or absence of NAADS, and varying distance to markets of different sizes. Five sub-counties were chosen: Adwari, Aloi, Ogur, Bata, and Namasale. Within these sub-counties a focus was planned both on households living near the sub-county HQ and on those living in more remote areas, in order to cover differences in access to market and information opportunities.

Table 1: Sub-counties Selected for Research

Sub-county	County	NAADS	Crops/ Commodities	Households Interviewed
Namasale	Kyoga	No	Fish	32
Bata	Dokolo	Yes	Beans, maize	34
Adwari	Otuke	Yes	Beans, pigeon peas, groundnuts	30
Aloi	Moroto	No	Maize, beans	40
Ogur	Erute	Yes	Sunflower, soyabeans	39
			Total households interviewed	175

NB: It is understood that the crops / commodities indicated per sub-county are not the only ones produced in that locality, but some typical produce from the area.

Approach. The study uses the Sustainable Livelihoods approach as an entry point. In particular, emphasis was placed on human and social capital in the context of information needs and sources, as well as farmer group formation. In addition, a better understanding of the general livelihoods situation of the rural population in Lira District was sought.

Tools used. Preliminary PRA sessions were held in two communities by the authors with the assistance of Radio Lira and AT (U) staff before the main survey was commissioned to the aforementioned teams.

Guidelines were produced for the PRAs, under which sessions were to be held with village leaders, teachers and administrative staff; with members of organized farmers' groups in both remote parts of the sub-county and, if possible, with members of other groups operating throughout the sub-county; and with a representative group of about 30 farmers living near the sub-county HQ, to include men and women, better off and not so well-off farmers, and young and old.

As far as possible these guidelines were adhered to. Sometimes there were difficulties in following them, however; for example in Bata it proved difficult to get many women at the general PRA sessions since they were involved in the farming groups sessions. Therefore we have some kinds of data only for some of the sub-counties.

Complementary to the PRA work, a separate questionnaire survey has also been administered within each of the sub-counties. In total, 175 farmer households have been interviewed as indicated in Table 1. Data processing and analysis was undertaken using Access, SPSS, and Excel computer programmes. The report draws on both PRA and questionnaire data as indicated. In addition, 56 traders were also interviewed using a different questionnaire. The results of the latter exercise are presented in a separate chapter at the end of the report.

Structure of the Report. The report starts with an overview of the study area and methodology before analysing livelihoods aspects of the rural population in Lira District. This is followed by an assessment of villagers' general information needs and sources, and an in-depth analysis of farmers' perceptions of the Radio Lira Market News

programme. The last section deals with traders' information requirements and communication channels. References to other work undertaken on similar issues in Uganda, and in particular the Teso and Lango farming systems, are indicated in the text.

Overview of the District and Sub-counties focused upon in the Study

Lira District

Lira District, which has a predominantly rural population, is located in northern Uganda on the north-eastern shores of Lake Kyoga. The area of the district is estimated at about 7,200 sq.km of which 4620 sq.km is estimated to be arable (Kleih et al, 1999).

The districts of Lira and neighbouring Apac belong to the Lango farming system, which is an agro-pastoral system that is traditionally based on the subsistence production of annual crops and livestock in a mixed farming system (Bagnall-Oakeley and Ocilaje, 2002). There are two distinct rainy seasons, with the main rains falling in April / June and the second rains in August / October. Average annual rainfall is recorded at about 1400mm.

Livestock keeping in the district has suffered from cattle raiding during the last two decades, and LRA insurgents more recently. Collection of detailed information on crop production and marketing, and livestock ownership formed part of the survey.

Adwari sub-county

Adwari sub-county is situated in Otuke county, and is bordered by Patongo sub-county in Pader district in the north, Aloi sub-county (another of the sub-counties focused on in this research) in the south, by Orum sub-county in the east and by Okwang sub-county in the west. The sub-county contains 6 parishes (Agweng, Alango, Okee, Okere, Olarokwon and Omito), which cover 64 villages.

Within Adwari sub-county, groups for semi-structured discussion were convened with the assistance of the sub-county administration, particularly the NAADS coordinator, which were representative of all the parishes of the sub-county.

Aloi sub-county

Aloi sub-county is situated in Moroto county, in the eastern part of Lira district. It is bordered by the sub-counties of Barr to the west, Abako to the south, Orum to the north-east, Adwari to the north and Apala to the north-west. The Sub-county contains 7 parishes (Otweotoke, Akura, Akwangkel, Alebtong, Alal, Bardago, Anara and Anyanga). It contains Moroto county HQ, which is on a relatively good, maintained road to Lira town.

Within Aloi sub-county, PRA was conducted in the parishes of Akwangkel and Alebtong.

Ogur sub-county

Ogur sub-county is situated in Erute County. It is located on the Lira-Kitgum road, and is bordered by Aromo, Okwang, Apala and Adekokwok sub-counties and by Pader district. It contains 8 parishes.

Within Ogur sub-county, PRA discussions were held within the parishes of Adwoa and Ogur; these were considered safer than other parishes within the sub-county due to the danger of insurgency in the area.

Bata sub-county

Bata sub-county is situated in Dokolo county, which is 72 km east of Lira town. It borders Amach sub-county in the north-west, Dokolo on the south-west, Abako in the north, and Amuria county of Katakwi district in the south-west. It contains 7 parishes which cover 71 villages. Within Bata sub-county, PRA discussions were held in two parishes.

Namasale sub-county

Namasale sub-county is situated in Kyoga County. Bordering Lake Kyoga it is at the south-western edge of the county, 150 km from Lira town. It is bordered by Awelo sub-county in the north, Muntu sub-county in the east, the district of Kamuli in the south-east, the district of Mukono in the south and the district of Nakasongola in the south-west.

Within Namasale Sub-county, PRA discussions were held in two villages: Ejigwe village near the Sub-county HQ and Acii village which is at some distance from the sub-county HQ.

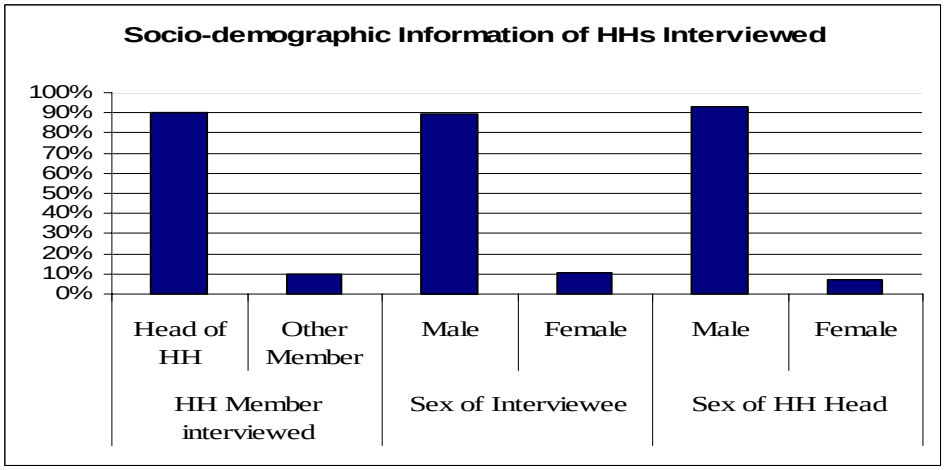
PEOPLE AND LIVELIHOODS IN THE SUB-COUNTIES

Livelihoods Assets

Socio-demographic information of the population

Chart 1 shows the socio-demographic information of the population surveyed in Lira District. The vast majority of the household heads are male, who in most cases also were the interviewees (i.e. about 90%).

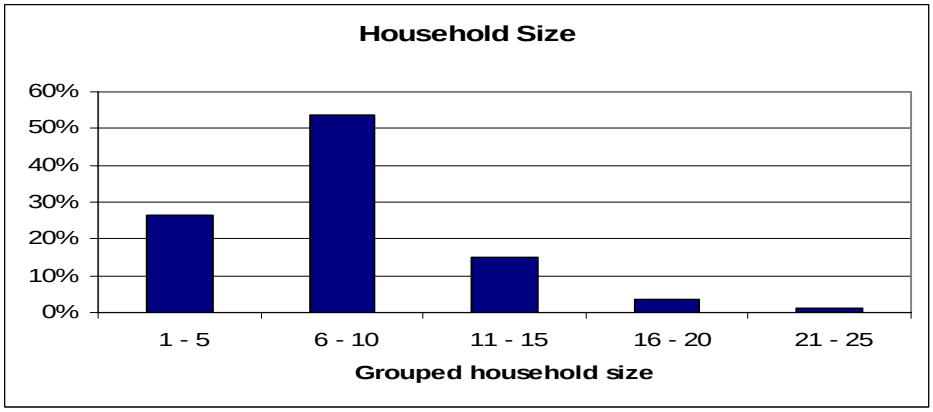
Chart 1



Source: Farmer questionnaire survey

Chart 2 indicates that the majority of households have six to ten household members (i.e. 54%), whilst 27% have one to five members. Only about 20% of households (HHs) have more than ten members.

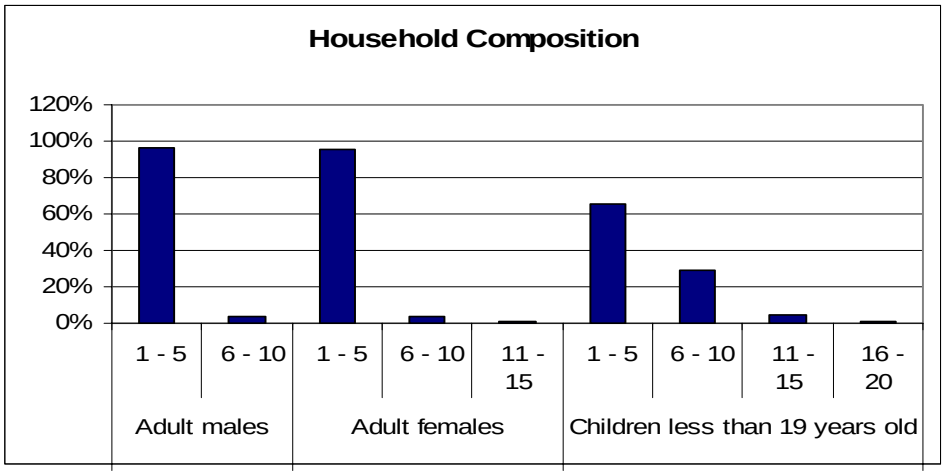
Chart 2



Source: Farmer questionnaire survey

Chart 3 indicates that the vast majority of households have between one and five male and female adults respectively. Two thirds of the households have between one and five children below the age of 19, and about 30% have between six and ten children.

Chart 3



Source: Farmer questionnaire survey

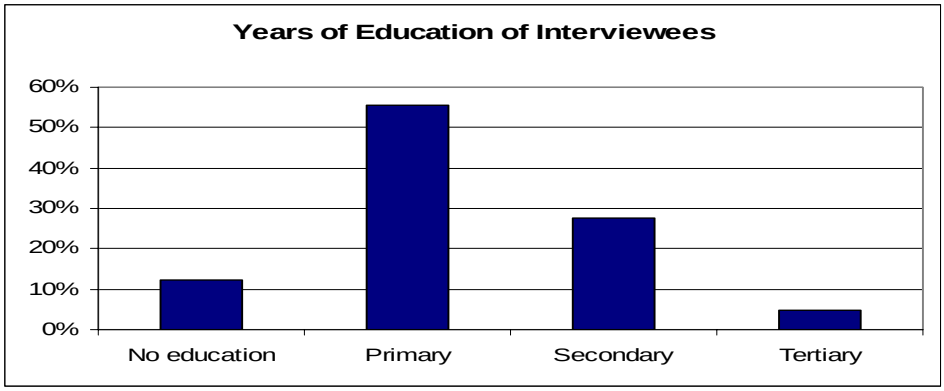
Human capital: education

Generally, two points can be made: men have a significantly higher level of education and functional literacy than women; and very few farmers, either men or women, know enough English to listen to radio broadcasts in English.

According to the PRA groups, in Bata, 40% of women and 60% of men have primary education, and functional literacy is at 10% of women and 40% of men. Only 5% of women and 25% of men have enough English to listen to radio programmes in English. In Namasale, 30% of women and 40% of men have primary education, and functional literacy is 10% of women and 30% of men. 5% of women and 20% of men have enough English to listen to radio programmes in English. In Ogur, 40% of men and 20% of women have primary education, and functional literacy among women is 24% and among men it is 55%. 24% of men and 5% of women have enough English to listen to radio programmes in English. In Adwari, 24.7% of women and 45.2% of men have attended primary school. In Aloi the general functional literacy rate is over 50% but men have a higher level of education than women; it was observed that of the 40 people who were interviewed at household level in Akwangkel and Alebtong, 7 of whom were women, 6 of these were illiterate. Of the 64 people who attended the PRA meetings, 26 of whom were women, only 9 of the women had had a primary education, while most of the men had completed primary education.

Chart 4 shows the results of the questionnaire survey as far as education levels are concerned. 55% of the household heads interviewed have primary education, followed by secondary education (27%), no education (12%) and tertiary education (i.e. approx. 5%).

Chart 4



Source: Farmer questionnaire survey

Natural capital and physical capital: the agricultural system

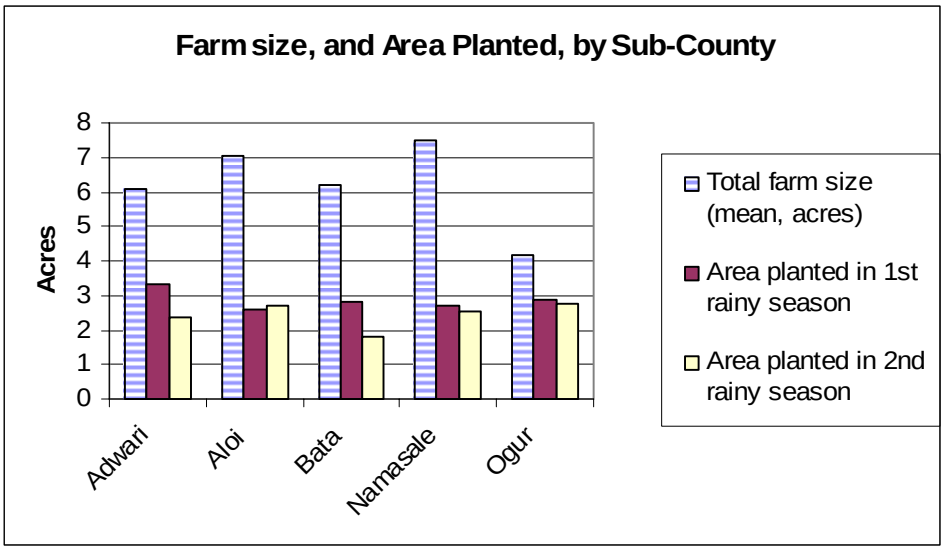
The condition of the natural environment was reported as varying between sub-counties. In Adwari soil degradation is said to be serious, due to rampant deforestation as trees are felled for charcoal making. Land fragmentation and land shortages mean that land is not being allowed to lie fallow. In Ogur, too, tree resources have been depleted and in some areas soil fertility is on the decline due to lack of fallowing, but in general, according to the survey, environmental degradation is not serious in the sub-county. In Aloi the environmental situation is also fair; soil fertility is said to be good.

It was reported in all the sub-counties that land is communally owned and individual households are custodians of land rather than owners, possessing rights to use it but not to sell it off. Land is passed on from father to son; women do not possess the rights to land except through their husbands.

According to the PRA, land utilisation (the proportion of land held by households which is actually cultivated) is low in many areas; in Bata sub-county it was found to average 43%, in Namasale 34%. However, in Aloi it was found to be much higher, at 74%. In Aloi, most households have between 7 and 10 acres. Farm size is less than 10 acres in Bata and 85% of households cultivated less than 6 acres of land in the first rainy season and 76% cultivated only 1-2 acres in the second rainy season. Despite the general low level of land utilisation, which is likely to indicate that households have enough land, shortages of land were reported in some areas; for example in Ogur sub-county, there were shortages of land among young men who have not yet been allocated land by their fathers. In Ogur the amount of land cultivated by the average household per year is only 4 acres and there are significant differences between households in terms of area planted. In Adwari, there also appears to be shortage of land, with households having an average land holding of 3-10 acres, due to land fragmentation, and the average amount of land under cultivation per household per year is 5 acres.

Chart 5 shows farms size and area planted, according to questionnaire survey results. It confirms that the area planted is considerably less than the actual farm size. The latter is on average between six to eight acres (with the exception of Ogur where it is about 4.2 acres), whilst the area cultivated is of the order of two to three acres for both first and second rainy season respectively.

Chart 5

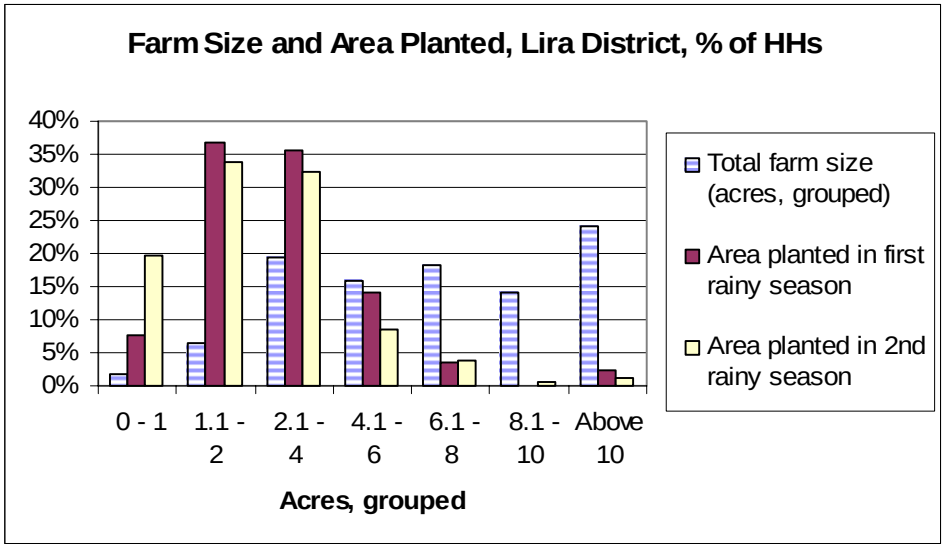


NB: Acreages presented are averages (i.e. means)
Source: Farmer questionnaire survey

Whilst Chart 5 indicated average figures (i.e. means), Chart 6 shows the same issue of farm size and land cultivated for the entire survey population, using grouped acreages. It shows that only about 28% of households have access to less than four acres of land. On the other hand, about 18% have eight to ten acres and 24% have more than ten acres.

At the same time, it is also shown that about one third of households only cultivates between one and two acres, whilst another third farms on two to four acres in both seasons.

Chart 6



Source: Farmer questionnaire survey

In all the sub-counties, subsistence agriculture plays an important part in people's livelihoods, with little reliance on activities other than farming. Intercropping is very common and a wide variety of crops is grown, with the portfolio being broadly similar but varying in terms of the relative importance of different crops as between sub-counties, depending on local conditions. Within Ogur sub-county, for example, there is a difference between the two parishes on which the PRA focused, within one (Akangi) farmers specialise in growing and selling horticultural crops while in the other (Adwoa) they specialise in growing maize. Productivity is low, since traditional farming methods are used. Relatively little surplus is grown. Most crops cultivated are primarily for consumption. In Bata, for example, the PRA found that 80% of the crops grown are for both food and cash; only the variety of sunflowers *sunfola* and cotton were cultivated for sale only. There is little emphasis on post-harvest processing in order to improve the value of the crops, although farmers expressed interest in learning more about this in order to be able to add value to their crops for sale.

In Bata the most important cash+food crops were reported as being, in order of importance (assessed according to the number of households participating in the PRA which grew them): beans, maize, sweet potatoes, millet, peas, simsim (sesame), sorghum, cassava and groundnuts. In Namasale, the only crop grown only for sale is cotton, and the most important cash+food crops, in order of importance, are simsim, millet, maize, cassava and sorghum, with much smaller numbers of households growing beans and sweet potatoes. In Ogur, the most important cash crops were reported as being sunflowers, soya beans and cotton and food+cash crops include millet, cassava, beans, simsim, groundnuts, sweet potatoes, vegetables, rice, peas and bananas. In Adwari, the most important cash crops are sunflowers and cotton and food+cash crops are maize, rice, tomatoes, beans and groundnuts in the first growing season and rice, groundnuts and simsim in the second growing season. Crops grown only for food in Adwari are pigeon

peas, potatoes, cassava and *malakwang* in the first growing season, and sorghum in the second growing season. Shea nuts are also an important source of both food and cash in Adwari, but they are not cultivated but allowed to grow on their own; the NGO COVOL tried to introduce an improved variety for planting but this was not taken up as it takes 30 years for a tree to reach maturity. By percentage sold, PRA groups in Adwari ranked produce sold for cash in this order: rice, pineapples, shea nuts, maize, tomatoes, beans, simsim, sunflowers and groundnuts. In Aloi, the main cash crops in order of importance are sunflowers, maize, rice, cotton, beans and millet. However, most (66%) of crops were sold for both food and cash, and this included, in order of importance: sweet potatoes, sorghum, cassava, peas, simsim, soya beans and groundnuts.

PRA groups said that there are no crops which are grown purely by men or women. However men tend to have more interest in crops which can be sold easily while women are interested in crops which can be consumed at home. Men and women were said to both be involved in cultivation at all stages, and it is mainly at weeding time that there is a difference in their roles, with men only being involved in weeding crops planted in lines, with broadcast crops being weeded by women.

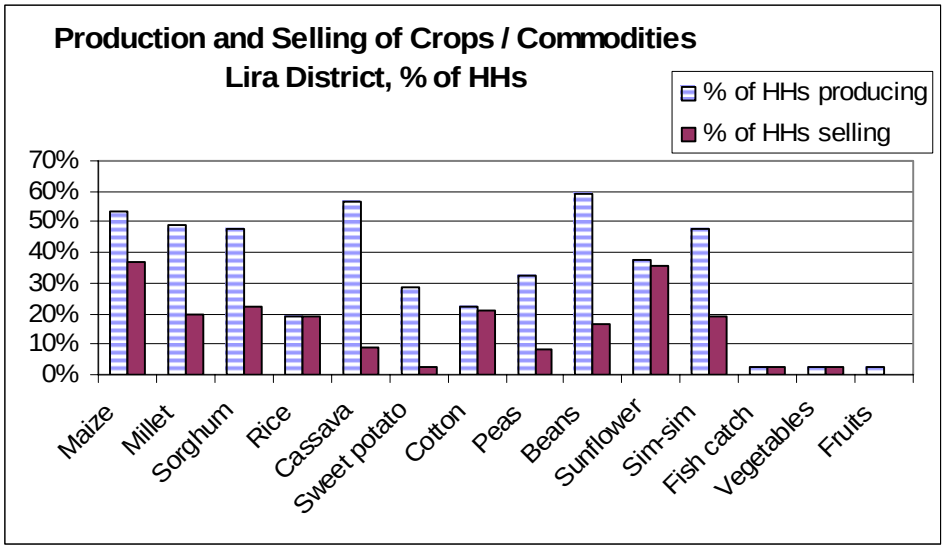
Table 2 indicates the results of the questionnaire survey as far as purpose of growing crops, and household responsibility of producing and selling are concerned.

Table 2: Percentage of H/H Responsibility, purpose of growing and responsibility for sales of crops

	Responsible for growing			Purpose of growing			Responsible for selling		
	Male	**Female**	**Both**	**Food**	**Cash**	**Both**	**Male**	**Female**	**Both**
Maize	20.4	3.2	76.3	17.4	14.1	68.5	50.6	13.9	35.4
Millet	15.1	11.6	73.3	40.5	6.0	53.6	45.5	30.9	23.6
Sorghum	8.4	12.0	79.5	40.5	8.3	51.2	35.8	28.3	35.8
Rice	9.1	-	90.9	5.9	44.1	50	35.5	6.5	58.1
Cassava	10.1	9.1	80.8	45.0	2.0	53.0	42.2	18.8	39.1
Sweet potato	16.0	8.0	76.0	50.9	5.5	43.6	28.1	34.4	37.5
Beans	18.3	13.5	68.3	40.4	6.4	53.2	59.7	19.4	20.9
Cotton	15.4	-	84.6	-	100	-	72.5	2.5	25.0
Peas	7.0	8.8	84.2	60.0	5.0	35.0	43.5	21.7	34.8
Sunflower	25.8	9.1	65.2	4.2	64.8	31.0	61.8	8.8	29.4
Sesame	13.3	8.4	78.3	29.4	7.1	63.5	50.0	24.2	25.8
Vegetables	25.0	25.0	50.0	66.7	16.7	16.7	50.0	50.0	-
Fruits	-	-	100	50.0	-	50.0	50.0	-	50.0
Fish catch	100.0	-	-	-	25.0	75.0	100.0	-	-

NB: Percentage figures relate only to those households that have actually grown the crops.
Source: Farmer questionnaire survey

Chart 7



NB: The question asked for the six most important crops per family; fish was included in this list for simplification.
Source: Farmer questionnaire survey

Chart 7 indicates the percentages of households growing specific crops and selling them, according to the questionnaire survey. The percentages related to marketing only take into account the farmers that actually indicated sales of the specific crops during the last 12 months. Farmers who had indicated that they were planning to sell certain crops in future, were not taken into account.

The **extension services** were considered by those participating in most of the PRA to be very inadequate. In Bata there is just one extension staff member. In Namasale there are three extension staff members, for fisheries, agriculture and veterinary services, but participants in the PRA reported that their services do not have any impact among most farmers. In Ogur there are extension staff members in the fields of production, health and community development; however access to these services by farmers is limited and most farmers at the PRA claimed ignorance of these workers. In Aloi, however, the two officers (agriculture and veterinary) are considered very active, although the information they provide is considered only moderately useful, and farmers rarely ask for their services.

Livestock ownership

The presence of the Lords Resistance Army (LRA) rebels and rustling on the part of the Karamajong in the area (see below) have meant that the physical capital of households in the district has been seriously depleted. While most households had more cattle in the past and were able to rely on oxen for cultivation, most now rely on hand hoes, axes and

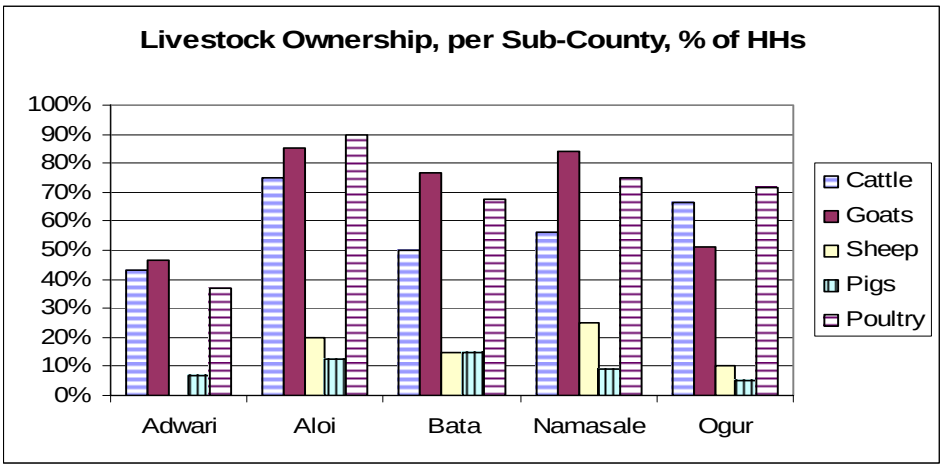
panga (traditional hand tools), and this restricts the amount of land that can be cultivated. In Bata, only 9% of households were reported currently as having oxen for ploughing. Half of the households interviewed in Bata do not have any cattle now and even those that do have only an average of 2 cows. In Namasale, too, most households do not have any livestock any longer. In Ogur, a drastic reduction was reported in the rearing of animals, particularly cattle and goats, because of fear of rustling by Karamajong and LRA rebels; it is said that the LRA rebels particularly like eating goat. However some farmers still have a few oxen for ploughing; and the maximum number of cattle is about 10 head nowadays. In Adwari, 95% of households used to use ox ploughs for crop production, but cattle rustling by the Karamajong since 1987 has reduced the number of households which use ox ploughs to 30%, and others use only hand tools. In Adwari, households now have an average of 1-10 cattle.

In Aloi it was found that very few cattle were being sold – only 10% of the total owned by the 40 households interviewed over the last 12 months. This is not surprising given the low levels of ownership compared to the past.

Among those involved in the PRA in Namasale, which is on Lake Kyoga, surprisingly few were involved in fishing. 98% of the households with members involved in the PRA said that they were not engaged in fishing. In Namasale it was also reported that there is a problem with flooding by lake water, particularly in the parishes of Acii, Wabinua and Izigwe.

Charts 8 to 9 present details of livestock ownership per Sub-county and for entire Lira District from the questionnaire survey. Approximately 60% of households owned cattle, 70% owned goats, and 70% owned poultry at the time of the survey (March 2003). About 30% of all households sold at least one cattle, about 40% sold goats, and 40% sold poultry respectively.

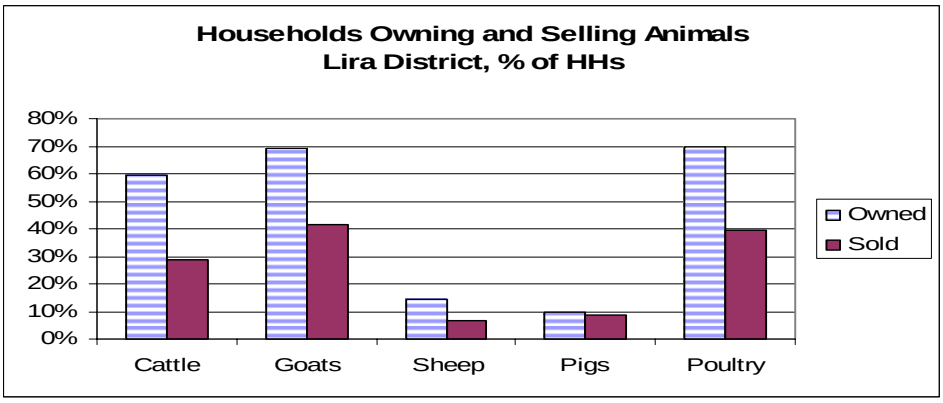
Chart 8



Source: Farmer questionnaire survey

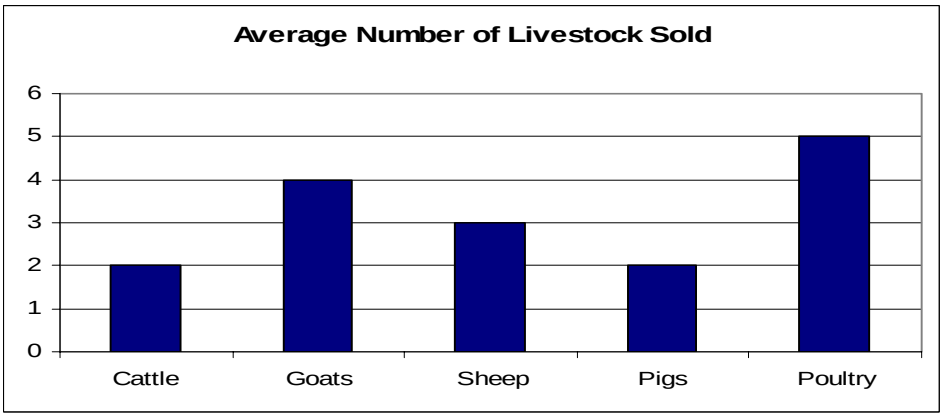
Of the households that own cattle, about 40% of them own between one and two animals. 20% own between three and four, 20% between five and six, 10% between seven and ten, and approximately 10% have more than ten animals. As for goats, 19% of the owners have one to two animals, 28% have three to four, 24% own five to six, 18% seven to eight, and the remaining 11% more than that.

Chart 9



Source: Farmer questionnaire survey

Chart 10



NB: Livestock numbers are rounded and correspond to those households that have actually sold any of the respective animals.
Source: Farmer questionnaire survey

Financial capital

In Adwari, 80% of farmers in the PRA told that when they sell produce and have reserves which they do not immediately need, they save this in kind, as livestock. This is typical of the area, where the traditional form of savings is in this form. It is an important way of saving in this ecological zone, since while in some years farmers are able to produce more than they need, there are also years when they cannot produce enough and saving in the form of livestock tides them over those years.

However, some cash is kept by most households, mainly for daily needs. What cash is kept is the responsibility of the woman of the household according to PRA participants, although they also said that the decision as to what to spend it on would be made by the man. This last point probably refers to cash from the proceeds of sale of a crop specifically planted for sale by the man; cash from the sale of small amounts of produce throughout the year is almost certainly under the control of the woman who sells it. There are a few farmers' groups which focus on cash savings. The *Obed i cuny acel* farmers' group in Adwoa parish is one of these, and this group has opened a bank account; a group called *Bolicap* at Akwangkel parish in Aloi sub-county is another.

Because livestock is in effect a 'savings bank', rustling of cattle by the LRA and by Karamajong has meant that farmers' savings have been depleted and this has put many of them in a precarious position since they have nothing to fall back on in difficult times. In Ogur, for example, most farmers said that they have no savings now.

Sources of cash loans as well as seeds and other in-kind loans were found to be predominantly from neighbours and relatives. There are very few formal sources of credit and practically no access to banks. Although in some areas credit is available from financial institutions, this is not commonly taken up. In Adwari, there have been two institutions providing credit to farmers in the recent past – COVOL and Lira District Development Programme (LDDP). In Ogur, credit is offered by UWESO and FINCA. However this was said to mainly benefit traders since repayment has to be made on a weekly basis and farmers can only make repayment once they have harvested. Thus most farmers do not apply for formal loans.

Social capital: groups

In all of the sub-counties there are farmers' groups. According to the questionnaire survey, 30% of households reported male membership of groups, whilst 27% indicated female membership. It seems likely that many, possibly most, farmers' groups are basically exchange labour groups. A major purpose of groups was reported as being the promotion of social aims, in other words on generating and promoting social capital. Most groups are either primarily women's groups (which usually include a few men) or primarily youth groups, although there are some men's groups. Some women's groups have a male member with a role of authority (for example the *Bedo a beda tek* women's group in Ogur, see below); others have male members who are ordinary members of the group.

However, groups which go beyond exchange labour to engage in other activities, or to market together, are much less common. Some groups are formed for purposes which are not directly related to farming; there are brick-making, savings, drinking and religious groups in Ogur sub-county, for example.

In Bata, members of farmers groups interviewed listed the purposes of groups as:

- Promotion of unity among members
- Promotion of communal work in the community
- Exchange labour between members
- Initiation of self-help projects in the area
- Reduction of poverty among members
- To a lesser extent, to increase household income among members

Some groups cultivate some land together, and share the produce, but most do not market together. In the PRA discussions most farmers in groups were found to market individually. However some instances of groups marketing together were identified – in Ogur, for example there were two groups, the *Okala Amara* farmers' group and the *Obedi Cuny Acel* farmers' group, which market together. They usually market at one of their members' houses or take the produce to Lira town on bicycles. Sometimes they transport their produce to trading centres and markets, particularly Agweng trading centre and Onaka Den market. However, it should be noted that generally most PRA participants in Ogur said that group marketing is not usually successful, and that individuals are usually reluctant in the end to market together. It is likely that there is a reluctance to trust others to sell one's produce and thus that the character of the leaders of the group, who will sell it, is key. In PRA exercises conducted before the main phase of the PRA was begun it was also stated by participants that members felt that they should all receive the same amount of money from sale of produce even if they had put in different amounts of work or produce; it is difficult to assess the quantities of some crops if they are being sold by weight since farmers do not have scales and this may be a reason for this problem.

In Aloi the following cases of groups which marketed together were identified:

Table 3 – Groups marketing together in Aloi (Source: PRA data)

Group	Year Introduced	Natures of Membership	Products sold
OROSGAP Alebtong	1996/7 By: Food for the Hungry International	Farmers produce individually and together	- Sunflower - Soya beans - Goats - Tree seedlings
Kakira Women's group	1994 By: Mrs. Josca Apule	Farmers produce together and individually	- cotton - pineapples
Oloo Rice Growers	1996/7 By: Mr Obira Ben	Farmers produce individually	Rice
Awito Horticulture/vegetable growers	1997 By: Jimmy Opio	Farmers produce individually	Vegetables

In Bata, some farmers groups said that they marketed as a group, but only on a very small scale. This is because very little is produced by the group, most of it is of a low quality, and most of it gets divided among members when they have problems. In addition, they felt that they did not have enough market information and no access to finance to increase their production. In Namasale, none of the farmers groups identified are involved in

group marketing. They said that this is because they focus on production for subsistence, they lack any information on marketing, and they lack any finance to boost their groups' productivity.

Groups in Aloi sub-county

The basis of many of the groups in Aloi was found to be exchange labour. A list of those identified through membership on the part of PRA participants is provided in the appendices.

The PRA exercise in Aloi was carried out with the participation of members belonging to two farmers groups: the Kakira Women's Group, founded in 1994, with an all-female membership, and the Otim-ikomwa oil seed producers and processors group, with 11 men and 8 women, formed in 1996. The former group is engaged in growing and marketing cotton and pineapple.

Groups in Adwari sub-county

In Adwari, 26 groups were identified and members were interviewed. In this sub-county, group formation was said to take place a) in order to organise exchange labour; b) as a prerequisite to work with an incoming NGO; c) for co-operative marketing, in that order of importance. This means that the majority of groups (80%) are currently focused on production rather than marketing (20%). Groups which are focused on production do not normally market together. Only groups formed through the NGO COVOL (see below), which were formed to add value to shea nuts by processing and selling as a group, market together.

Many groups in Adwari sub-county, formed hastily, were reported to have collapsed quickly. This was said to have been because of poor leadership, poor priority setting and planning, greed and unfulfilled promises.

Most groups in Adwari were found to have an average membership of 15 - 40. Most groups include both mixed men and women, even those which are described as women's groups. Even where the membership is female, the overall leader was reported as usually being an influential man assisted by an influential woman. A better-off woman with some education usually takes the position of treasurer, and a younger, educated person takes on the role of secretary. Relatively older, respectable individuals are elected as advisors to the group, and a man with a security background is elected as 'askari' or guard.

Groups in Ogur sub-county

In Ogur sub-county there were found to be 30 groups in Adwoa parish and 33 in Ogur parish. In the PRA study, five were covered, two in Ogur and three in Adwoa. These are:

1. *Bedo a beda tek* womens' group in Ogur parish, started in 1995 to grow cotton. Currently also growing sunflowers, beans, soya beans, simsim and sorghum. The group has 30 members of which 29 are women. The one man is an adviser and is also responsible for plot allocation. They do not cultivate together but combine to exchange labour to clear plots.
2. *Okwala amara* farmers' group in Ogur parish, started in 2002 to grow cotton, as a result of the Cotton Development Organisation (CDO) workshop in Ogur sub-county. The group has 35 members of which 29 are men and 6 are women. They rent land which they prepare and plant together, but after that the members are responsible for their own individual plots. Once the cotton is ready they store the produce together and wait until the price is good to sell. The chairman of the group is responsible for selling the produce.
3. *Obed i cuny acel* farmers' group in Adwoa parish, started in 1999. It has 9 members: 8 women and one man. The function of the group is stated as the production and marketing of crops to raise money for members. They market together, through the group leaders, to produce buyers. They have managed to open a savings account at the Centenary Rural Development Bank in Lira.
4. *Acan mito diro* farmers' group in Akuki and Barmio villages in Adwoa parish, started in 2001 to grow ginger. It has 4 members, one woman and three men. They produce together but market separately.
5. *Can opwonya* group in Adwoa parish, started in 2001 to solve financial problems for members. It has 20 members, 15 men and 5 women. They cultivate for non-members on a loan basis and collect the money in November.

According to the PRA participants in Ogur, factors leading to success in setting up and running a group are:

- Teamwork. Group members need to work together, share ideas and learn from each other
- Assistance from outside bodies is helpful. Such bodies have assisted two of the groups focused upon. The *Okwala Amara* group received assistance from Ogur sub-county, which gave them spray pumps, from the Cotton Development Organisation, which organised the workshop which helped them get started, and the District Farm Institute, which gave them training in modern methods of farming. The *Obed Icuny Acel* group had assistance from the Lira District Development Programme which gave them oxen and ox-ploughs for cultivating larger pieces of land.

Support requirements in relation to group formation

During the course of the PRA, the following were expressed as important training needs:

- Group formation
- Group dynamics
- ICT skills
- Record keeping

- Savings and credit schemes,
- Approaching farming as a business
- Contract production

The CEDO manual on cooperative marketing was shown to farmers in Adwari and discussed with them, and they had very positive views on it, recommending that it should be used to train farmers in Lira District.

Vulnerability: Rebels and Raiders

The security situation in Lira district, particularly in the northern part of the district where Ogur sub-county and Adwari sub-county are situated, was bad when the survey was carried out (i.e. March 2003). The Lord's Resistance Army (LRA) rebels and Karamajong cattle rustlers are both regular visitors. The Karamajong tend to invade during the months of November-March, but the LRA may come at any time. The LRA has abducted many people from some parts of Lira district, especially in the north, and this has led to people abandoning their fields and gardens and moving to town. Because of the insurgency, many people have been displaced and are now living in refugee camps, and they are unable to cultivate their land.

The insurgency has led to an increase in poverty. The LRA loots produce and destroys crops in the gardens as well as stealing livestock, including goats and cattle. The number of cattle in the district has plunged in recent years due to cattle rustling on the part of the LRA and the Karamajong. This is a serious problem for livelihoods since the theft of animals means the destruction of farmers' savings (see above).

The insecure situation was said in Adwari sub-county to have led to extension agents not doing their work properly, since their supervisors do not come to monitor their work. It has also led to traders leaving for town. In Aloi too, participants in the PRA discussions said that the activities of extension agents were hampered by the situation, since they could not move freely about to have meetings with farmers.

Other factors contributing to farmers' vulnerability may be related to climate (e.g. spells of drought), natural resources (e.g. environmental degradation, declining soil fertility in parts of the District), or health (e.g. Aids).

MARKETING OF AGRICULTURAL PRODUCE

Marketing Patterns

There are two categories of marketed crops: those which are grown specifically for sale and those which are grown primarily for subsistence, with any surplus being sold to bring in cash. Although certain crops tend to be selected for specific growing for the market and others are grown primarily for subsistence, the distinction between the two categories is not necessarily between different crops, since a household may plant one field specifically for sale and another primarily for subsistence. Where a crop is planted for sale it is the man of the household who is responsible for it and for marketing it. Where it is planted primarily for subsistence it is a woman (in the context of polygamy, each of a man's wives is responsible for separate fields) who is responsible for it and she usually sells it, although men may also sell it. A man does assist his wife in cultivating her field, and vice-versa, but each field is the primary responsibility of one or the other. Participants at PRA sessions said where a man sells crops planted in a field which is his wife's primary responsibility, this should only be with the agreement of the woman concerned, although they also said that men would sometimes secretly take some of the crop for sale without permission from his wife, usually to buy beer.

Almost all produce is sold individually by farmers, either by the man or the woman depending on whether the crop was intended as a cash crop or primarily as a food crop. If a field is planted specifically as a cash crop, then the crop is sold off all at once, normally by the man who is responsible for planting it. This may be after storage to wait for a good price if the farmer has storage facilities. If a field is planted with a crop intended primarily for subsistence use, then it is stored under the responsibility of the woman who took primary responsibility for planting it, and she may choose to sell off small amounts at intervals through the year if she judges that there is enough of a surplus to do this, in order to get small amounts of cash for everyday needs.

Crops which are particularly oriented towards the market are, it was found, grown and marketed more by men – this is why in Aloi it was found that men dominate the sale of cotton, sunflower and rice. Women sell those crops which tend to be grown primarily for domestic consumption, which is why in Aloi it was found that women tended to be the sellers of millet, sorghum, beans and maize. However where a field of maize, for example, is grown by a man specifically for the market he will almost certainly be the one to market it.

Marketing of agricultural produce was found, in order of importance, to be through a) community markets, b) farm-gate buyers and sale to buyers at trading centres (centres where larger traders have permanent stores at which they buy produce), and c) sale at district markets. In Adwari, PRA groups said that there are community markets operating within the sub-county, at least one in each parish, and this is likely to be true of all the sub-counties. In Bata, for example, the majority of households (71%) was found to sell at community markets, with 35% selling to traders, mainly in the trading centres. The relative importance of sale at the farm gate and to buyers at trading centres appears to

vary from sub-county to sub-county, however, probably depending on the proximity and size of the trading centre, and also on local perceptions of the honesty of the buyers there and those who visit the villages themselves to buy produce. Sale to traders at the farmgate, at trading centres or at district markets is usually of crops which are planted specifically for sale by men and which are sold all at once. Women selling small amounts of surplus almost always sell at community markets. However a proportion of what is sold at community markets is bought by traders who bulk it up and sell it at district markets; the rest is sold to local consumers.

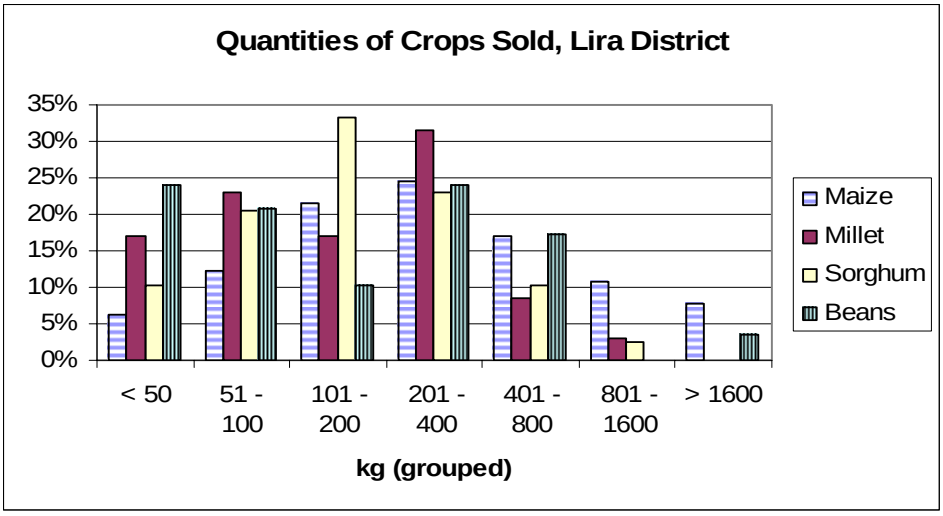
Sale at district markets was found to be more common, as would be expected, in villages which are close to district centres and which are on roads[1]. Generally, however, very little is taken to district markets by farmers themselves. This is due to the lack of transport, to the high cost of what transport exists to go long distances, and to the need to pay high market dues and road dues when taking produce to district markets. Community roads are generally not good in any of the sub-counties; in Adwari PRA participants said that such roads are not properly taken care of and are often only useable in certain seasons of the year. There are few major roads which are managed by local and central government. The main means of transport of crops for sale is on foot or by bicycle, and this limits the distance which individuals can go. The level of bicycle ownership was not ascertained in this study, but from what data we have it would appear that this is likely to vary quite a bit from village to village. It was clear that bicycles that do exist in the households almost always belong to the man of a household.

It is only crops which are grown specifically for sale which are usually taken to district markets. These are almost always taken to market by men; they either use bicycles or hire transport to take their crop to market. Those participating in the PRA said that marketing of agricultural produce was dominated by men. However, it should be noted that the small amounts of produce which women sell at community markets throughout the year are quite significant for their household livelihood.

Charts 11 and 12 provide details of quantities of the main crops sold, according to the questionnaire survey. For example, amongst those households (i.e. 37%) that sold maize during the last 12 months prior to the survey, 24% sold between 200 and 400kg, 22% sold between 100 and 200kg, whilst about 17% sold between 400 and 800kg. On the other hand, out of the 35% of farmers that sold sunflower, 24% sold 100 – 200kg, 23% sold 200 – 400kg, and 18% sold 400 – 800kg.

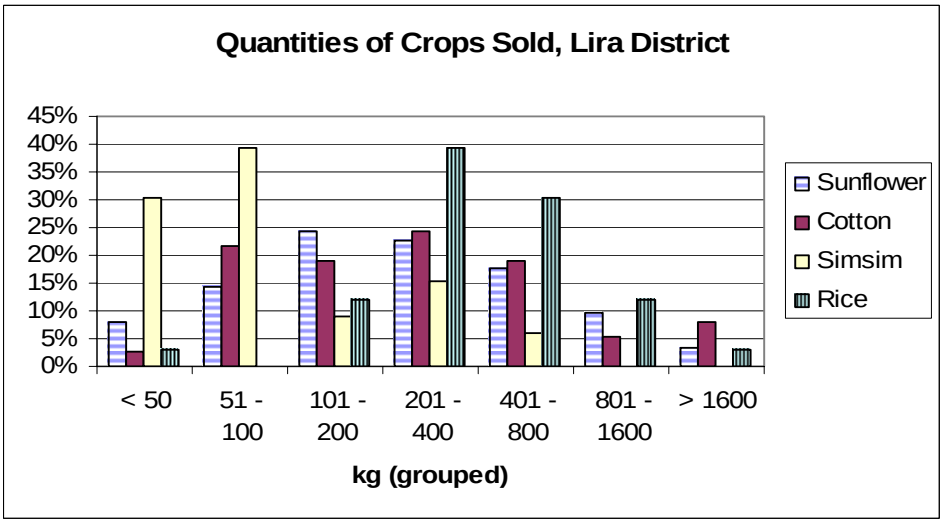
[1] Sub-county maps, which have been produced as part of the PRAs, are attached in Appendix 3. They show the location of major markets and roads.

Chart 11



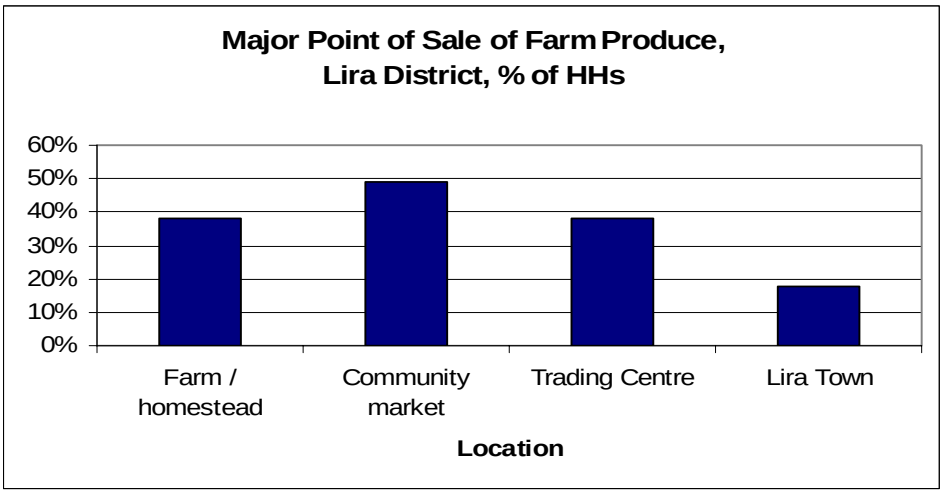
NB: Quantities correspond to households who have sold at least some of the crop.
Source: Farmer questionnaire survey

Chart 12



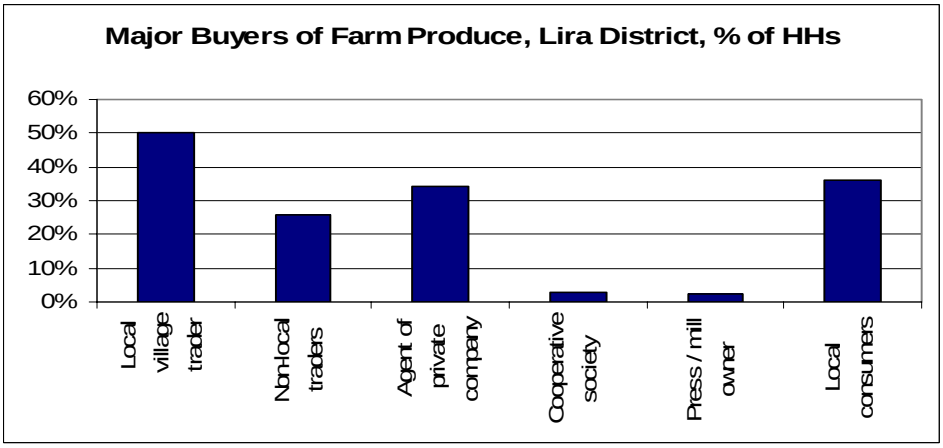
NB: Quantities and percentages correspond to households who have sold at least some of the crop – for households who have sold the crops see Chart 7 above.
Source: Farmer questionnaire survey

Chart 13



Source: Farmer questionnaire survey, two answers were possible

Chart 14



Source: Farmer questionnaire survey, two answers were possible

Major Problems in Marketing

In all of the PRA held with farmers, one of the most important problems associated with marketing of produce was identified as being that traders are considered to be dishonest. They were said to use scales which were not fair. They were also said to offer prices which are much lower than prices in markets further away – or than prices quoted on the Radio Lira market news programme and this was felt to be unfair. In Adwari, for

example, the price given by traders at the community market was said to be around half that in Lira town for beans, maize, sunflowers and rice.

The lack of transport is also a problem. Particularly in more remote areas where there is little traffic, it is very difficult to get to markets which are too far to walk to or to cycle to. The most common ways of taking produce to market were on the head (women) or by bicycle (mainly men, some women). Bicycles are usually owned by men.

Although quite a few farmers are familiar with Radio Lira Market News, they still require more information about prices (i.e. preferably for markets closer to their villages rather than distant District markets), and also about market outlets, and how to access them.

The lack of storage facilities was identified as a further problem, since it means that farmers cannot wait for prices to rise. Farmers expressed interest in finding out more about improved storage structures.

Credit facilities are almost unavailable and this was said to be a constraint in producing for sale.

The fees charged along the road and at the entrance to market (market fees) are considered to be a problem which restricts the possibility of marketing outside the local area. The fees paid at community markets are much less than at bigger markets (e.g. Lira market), and this is one factor leading to marketing there.

Support Requirements for Marketing

Farmers expressed the following specific needs:

- Training in modern methods of farming so that they can become more market-oriented. In particular, they were interested in training in growing sunflower, soya beans, sorghum and simsim, and introduction to new varieties of crops which are fast yielding.
- Loans that are farmer friendly, possibly from the government
- Improved storage structures
- Assistance in getting to better markets
- Assistance in processing to add value to their produce
- Support in solving the insecurity problems in the area due to LRA activities and Karamajong cattle rustlers.

Goodland et al (no date), based on their post-harvest needs assessment in the Teso and Lango farming systems in 1999, suggest the following areas for improving on-farm post-harvest technologies and the efficiency of local markets:

- Developing local skills for market analysis.
- Investigating improved mechanisms for rural market management and taxation.
- Identifying market information needs and uses for farmers and traders.

- Assessing the impact of aid / relief programmes on input and output market development.
- Assisting the developing contract farming schemes in the cotton sector.
- Developing sweet potato processing, storage technology and dissemination.
- Reducing transportation costs for farmers and small-scale traders.
- Financing agricultural marketing activities.
- Controlling rodent pests during crop production, through harvesting and storage.
- Managing insect pests of cereals and pulses.
- Improving drying before harvest.
- Developing improved methods for information dissemination and impact assessment.

INFORMATION NEEDS AND FLOWS: GENERAL

Sources of General Information

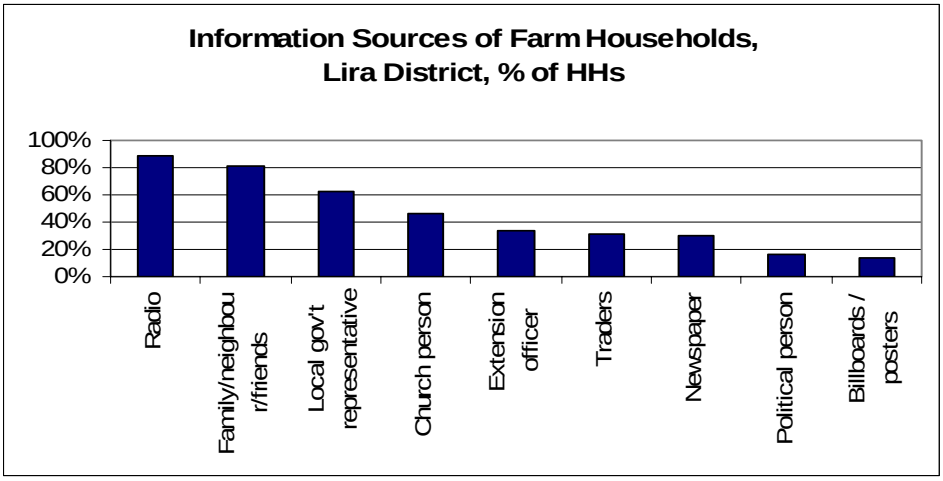
The sources used for information reported through the PRA included family, neighbours and friends; radio; local officials and leaders, including church leaders; traders; political gatherings and group meetings; and to some extent newspapers. Mobile phones are insignificant as a source of information, since there is nil or almost nil ownership or access to them on the part of PRA participants.

In Adwari and Aloi, the most important source of information was family, neighbours and friends, with radio coming second in importance, but in Bata radio was equally important to family, neighbours and friends and in Namasale it came first in importance.

Newspaper coverage is very low throughout the district. In Bata, for example, the PRA found that the supply of newspapers is unreliable and newspapers were said to be bought only by teachers and local leaders. The local newspaper, *Rupiny*, comes into the villages late, while *New Vision* and other papers are only ever to be seen at the trading centre and the primary schools. In Adwari, even male farmers based in trading centres were said by PRA participants almost never to buy newspapers. In Aloi, however, a higher level of access to newspapers was reported, with 25% of men – but only 3% of women – reading newspapers. Women were said very rarely to read newspapers; it should be borne in mind that there is a lower level of functional literacy among women than men (see above). *Rupiny* and *New Vision* are the most important newspapers in the area.

According to the questionnaire survey (Chart 15), radio is the most important source of information for the farmers followed by family / friends / neighbours, local Gov't representative, and church person.

Chart 15



Source: Farmer questionnaire survey

Field studies carried out by Bagnall-Oakeley and Ocilaje (2002) in Lira and Soroti districts, *"revealed considerable differences in the number and quality of information sources between differing wealth groups, but not much difference between farmers in the 'poor men' and 'poor women' groupings:*

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

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

Public meetings and participation in groups were cited as important information sources by the poorest group (especially women), much more than by the medium and wealthy groups."

Information Needs: Differences between Men and Women

While in some areas no big differences were found to exist between men and women, in others there were differences. While in **Aloi**, for example, both men and women identified their major information needs as being, in order of importance, crop production; market information; health; livestock production; and religious matters, with crop production and market information were regarded as being particularly critical, in Ogur and Adwari, different information needs were identified by men and women. Information needs identified in **Ogur** are shown in Table 4.

Table 4 – Information needs by gender in Ogur (Source: PRA data)

MEN	**WOMEN**
1. Farming practices i.e. both crops and animals 2. Price of produce / market 3. Community matters / leadership 4. Childrens rights. 5. Post harvest control.	1. Farming practices 2. Health and sanitation 3. Family planning 4. Immunisation 5. Child nutrition 6. Post harvest control.

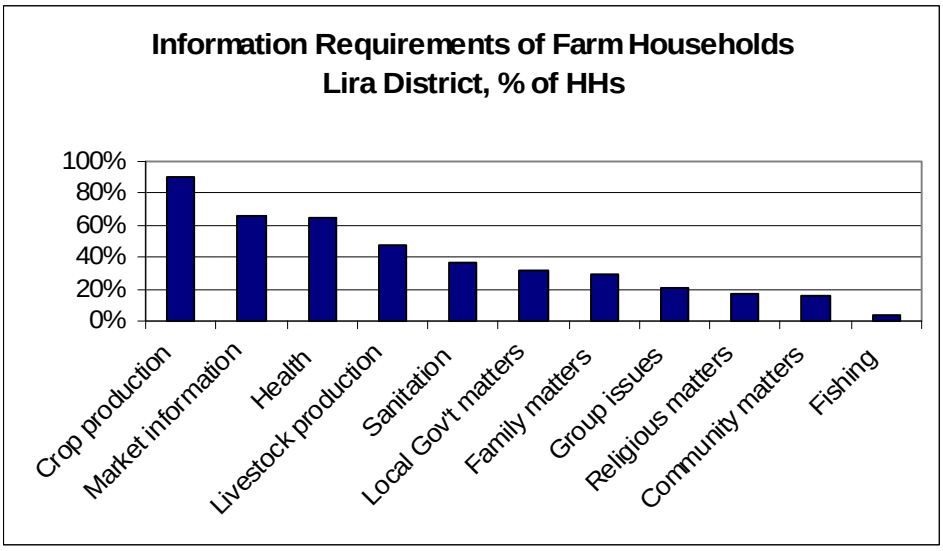
In **Adwari**, information needs were listed as shown in Table 5.

Table 5 – Information needs by gender in Adwari (Source: PRA data)

Type of information	Preference by Gender	
	Male	Female
Price of produce and markets	50%	50%
Price of equipment and inputs.	75%	25%
Proper time of planting/harvesting different crops	60%	40%
Demonstration of new technology in farmers fields.	60%	40%
Names of available chemicals (fertilisers, pesticides and fungicides) their prices and location.	75%	25%
Traditional ways of preserving crops e.g. use of red pepper, ash etc.	20%	80%
Fruit tree nursery establishment and management	90%	10%

Crop production, market information, health and livestock production are the main topics on which information was requested during the questionnaire survey (Chart 16).

Chart 16



Source: Farmer questionnaire survey

The Use and Scope of Radio for Information Flow

Radio was found to be a very important medium of information flow in all of the sub-counties. The view was that a popular radio programme was a good way of transmitting new information on agriculture, complemented by an effective extension service.

It was found that radios are usually owned by men, and they listen to it more than women. Women generally said that they listen to the radio when their husbands are

listening. This limits the potential for programmes which specifically target women, since their husbands may not want to listen to these.

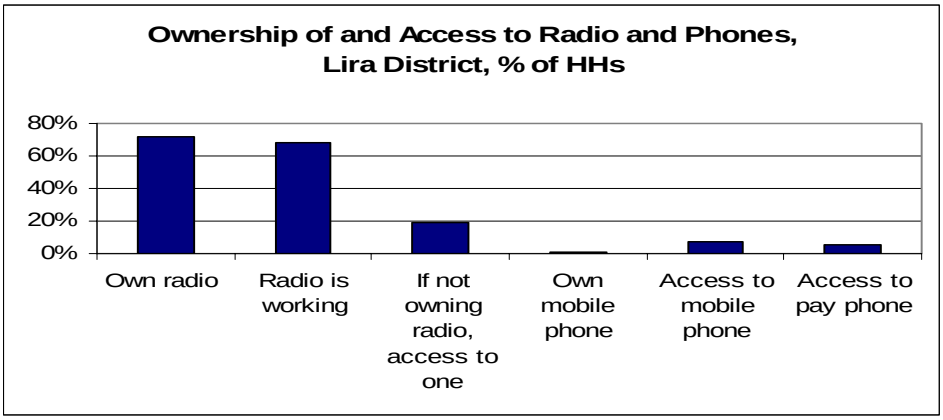
In Bata, most households sampled own radios (79%) and the majority of those who do not own radios do have access to them (71%). In Namasale too, most households (84%) have radios and most of those which do not have access to one (60%). In Adwari, 90% of households have radios. In Aloi, over 80% of homes were found to have radios, and PRA participants told us that both men and women use them. In Ogur, local leaders also said that 90% of households have radios, but those involved in the PRA reported that only 48% of them actually had radios. They said that the LRA rebels had stolen many radios from their owners.

However, the point was made in Ogur that although most people have access to radios this is limited to the times when the owner of the radio is listening, and they are often embarrassed to borrow radios. This is a point which is probably relevant to other sub-counties too.

In Bata, none of those involved in the PRA owned mobile phones and only 6% have access to one. In Namasale 98% of households involved in the PRA do not own mobile phones and 97% do not have access to one.

Chart 17 indicates that about 70% of farmer households in Lira District own a radio and in most cases it is working. 20% of households indicated that they do not own a radio but had access to one if required. As already highlighted in the PRA, access to mobile or pay phones is very low.

Chart 17



Source: Farmer questionnaire survey

In their survey of farmers' sources of information, Campbell and Garforth (2001) found that listening to radio was by far the most frequently mentioned communication channel (i.e. 89% of respondents from subsistence farming households and 98% of semi-commercial and commercial farmers, respectively).

According to Turrall et all (2002), radio is adequate for raising awareness but has limitations when used for education and training purposes due to low ownership, language problems, and the nature of the interface. The same source (Turrall et al, ibid) suggests that written materials, visual dissemination, and radio all have limited effectiveness for up-taking research technologies, and that a multi-media approach to dissemination reinforces lessons learnt.

Popularity of different radio stations

The most popular radio station in **Bata** is Radio Rhino, closely followed by Radio Lira. Radio Rhino's strengths were said to be that it has a good variety of programmes, good music, covers crime prevention and legal education, it has gospel programmes which are liked, and it has good drama. It is also very clear in Bata. Radio Lira was liked because it was said to have good news coverage, good religious programmes, good drama and good farming programmes. Other stations to which people listen in Bata are the Voice of Teso, Radio Uganda, Radio Unity and Radio Variation.

In **Namasale**, the most popular radio station is Radio Lira (81% preferred it). This is because Radio Lira has a wide coverage, is loud and clear throughout the day, has good presentation, Gospel programmes and good farming programmes. Other stations to which people listen in Namasale are Radio Uganda and Radio Kitara.

In **Ogur**, where we have data disaggregated by gender, the preferred radio stations were reported as being, in order of preference:

Table 6 – Preferred stations in Ogur sub-county by gender (Source: PRA data)

MEN	**WOMEN**
1. Radio Lira 2. Radio Rhino 3. Radio Unity 4. Radio North 5. Radio Uganda 6. Mega FM (Gulu) 7. Apac FM	1. Radio Lira 2. Radio Rhino 3. Radio Unity 4. Radio North

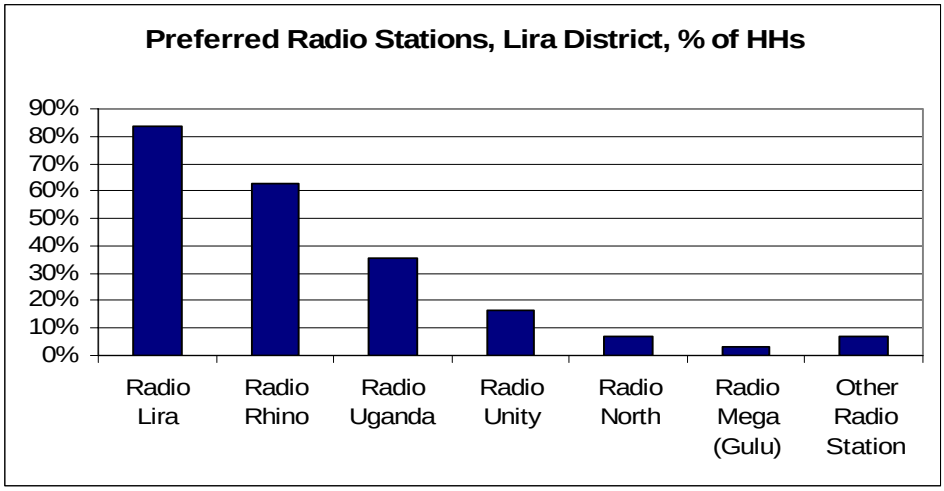
The fact that women listen to radios when their husbands are listening (because men have control over radios – see above) was reported to be the reason why they say they prefer the same stations.

In **Adwari**, the favourite radio station in the past was said to have been Radio Wa, which was loud and used the presenter J.J. Kakaba, whom people very much liked. However Radio Wa was burnt down by LRA rebels recently. Now, 50% said that they preferred

Radio Lira, 40% Radio Rhino, 8% Radio Unity and 2% Radio North. There is poor reception for the last two in the Adwari area and they cannot be received during the day at all.

In **Aloi**, Radio Lira, Radio Rhino and Radio Uganda came top, in that order, with more women listening to Radio Rhino. Some respondents said that they listen to the BBC World Service in Aloi.

Chart 18

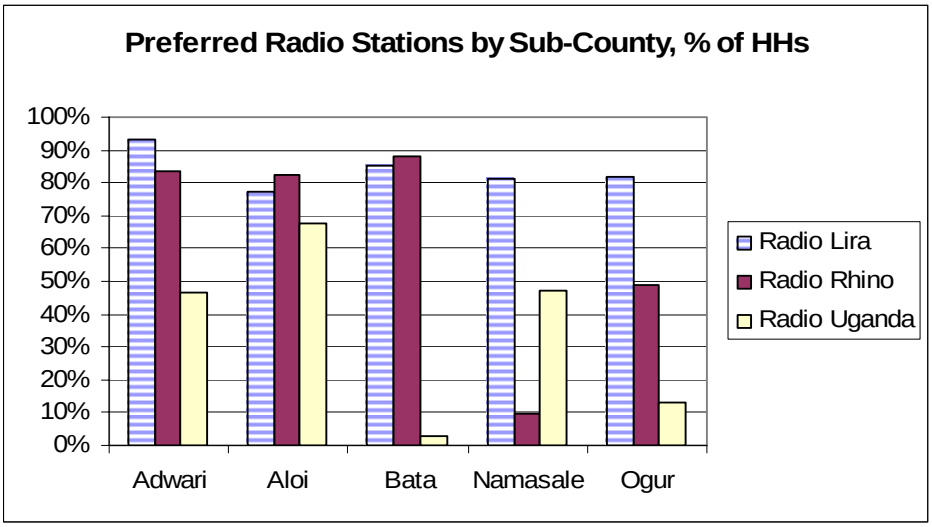


Source: Farmer questionnaire survey

Chart 18 indicates the preferences of Lira's rural population for radio stations according to the questionnaire survey. Overall, Radio Lira (83%) is the station which is preferred most, followed by Radio Rhino (63%), Radio Uganda (35%), Radio Unity (17%), and several stations for which less than 10% of the interviewees opted. Chart 19 shows the questionnaire results by sub-county, highlighting that all sub-counties except Namasale, have a preference for Radio Lira and Radio Rhino. In Namasale, Radio Lira came out top followed by Radio Uganda. At the same time it ought to be mentioned that Radio Wa was defunct at the time of the survey (i.e. March 2003).

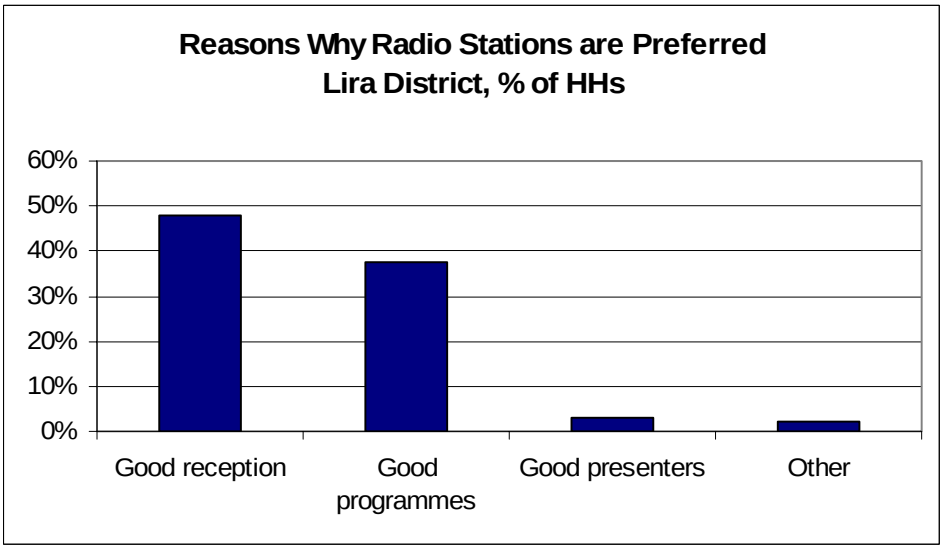
Chart 20 shows that 'good reception' and 'good programmes' are the main reasons why certain stations are preferred. Other aspects such as 'good presenters' were given less importance.

Chart 19



Source: Farmer questionnaire survey

Chart 20



Source: Farmer questionnaire survey

Preferred times for listening to the radio

In **Bata** and **Namasale**. the preferred time for radio listening in order of preference were early evening 6-8 p.m, morning 5-9 a.m., and midday. In **Adwari**, the order of preference among both men and women was early morning 5-9 a.m., late evening 6.30-9 pm and midday 12 noon – 2 p.m.

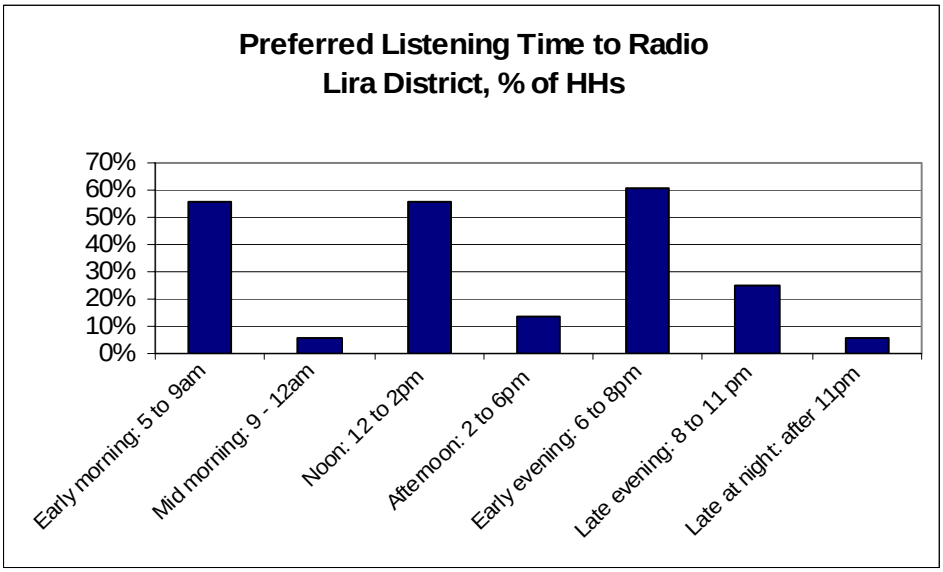
However, in **Ogur**, men and women had different views on their preferred times of listening:

Table 7 – Preferred radio listening times in Ogur, by gender (Source: PRA data)

MEN	WOMEN
1. 12 : 00pm – 1 : 00pm 2. 03 : 00pm – 06 :00pm 3. 07 : 00pm - 10:00pm	1. 06: 00am – 07: 00am. 2. 12: 00pm - 02 :00pm 3. 07 : 30pm - 10 :30pm

Chart 21 demonstrates to what extent rural households prefer early evening (6 – 8pm), early morning (5-9am), and noon (12 – 2 pm) as the preferred times for listening to the radio.

Chart 21



Source: Farmer questionnaire survey

Preferred programme types

Farming programmes generally scored highly in terms of preference in all the sub-counties. This was found to be true among both men and women, where we have data disaggregated by gender.

The best liked programme types in **Bata** were news, educational /development programmes, announcements, talk shows, drama, farming programmes and gospel programmes. In **Namasale** the favourites were news, announcements, farming programmes, gospel programmes, programmes on health and sanitation, marketing programmes and educational/development programmes.

The programmes and stations best liked by the population of Adwari are shown in Table 8.

Table 8 - Preferred programmes in Adwari (Source: PRA data)

Programme	Radio Station
News and Announcements	Radio Lira/Rhino
Traditional dance + songs	Radio Rhino
Unity Doctors	Unity
Farmers programme	Radio Lira
Market information	Radio Lira

In Aloi and in Ogur, we have information on differences in preferences disaggregated by gender. In Aloi, the best liked types of programmes were ranked by men and women as follows in Table 9.

Table 9 – Preferred types of programmes in Aloi by gender (Source: PRA data)

Men	Women
1. News	1. News
2. Educational/Development programmes	2. Educational/Development programmes
3. Announcements	3. Morning Gospel show
4. Morning Gospel Show	4. Family Planning
5. Talk Shows	5. Music/Traditional Songs

Although the news ranked first in terms of frequency of listening in Aloi, both men and women said that programmes on education and development issues were their second priority. Within this topic, men and women listed their preferences as follows in Table 10.

Table 10 – Preferred topics for programmes on educational and development topics in Aloi (Source: PRA data)

Men	Women
1. Farming	1. Farming
2. Market news	2. Market news
3. Family health and sanitation	3. Youth matters
4. Community matters	4. Women's affairs
5. Local governance	5. Family planning

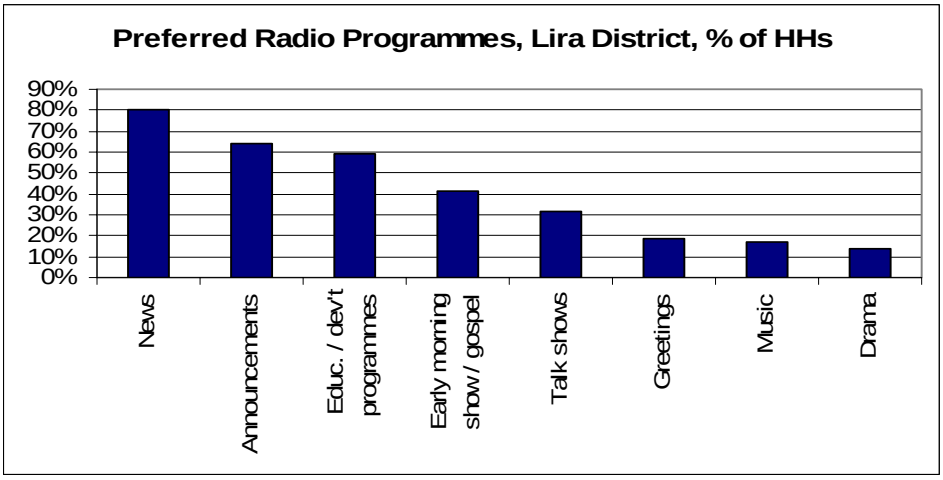
In Ogur, the preferred types of programme are as indicated in Table 11.

Table 11 – Preferred types of programmes in Ogur sub-county by gender (Source: PRA data)

MEN	WOMEN
1. News	1. Gospel / early morning shows
2. Educational / development programmes	2. Farming
3. Announcements	3. Family planning
4. Farming	4. Health and sanitation
5. Talk show	5. Crime prevention
6. Security matters.	6. Family and youth
7. Cultural topics	7. Drama
8. Children's rights	

The questionnaire data (i.e. Chart 22) shows to what extent news, announcements, educational / development programmes, and early morning / gospel programmes are the radio programmes preferred overall in rural communities of Lira District.

Chart 22

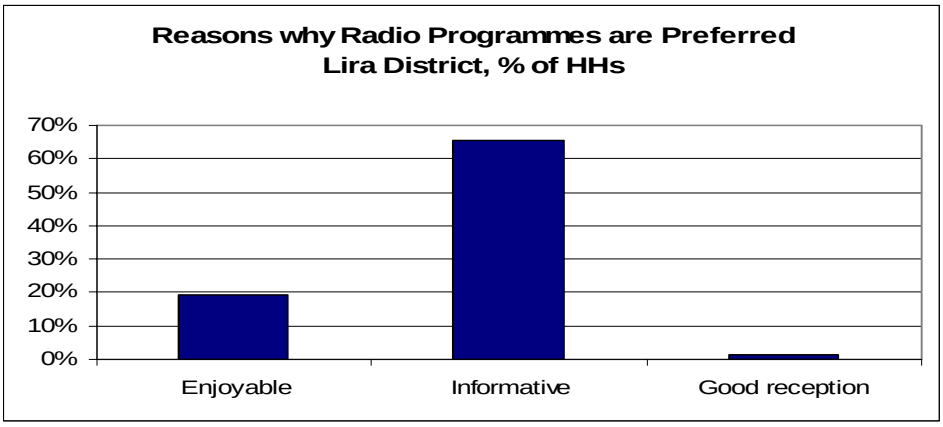


Source: Farmer questionnaire survey

As for the reasons why a programme is preferred about 65% of respondents said that it must be informative. This was followed by "it must be enjoyable", whilst "good reception figures less prominently (Chart 23).

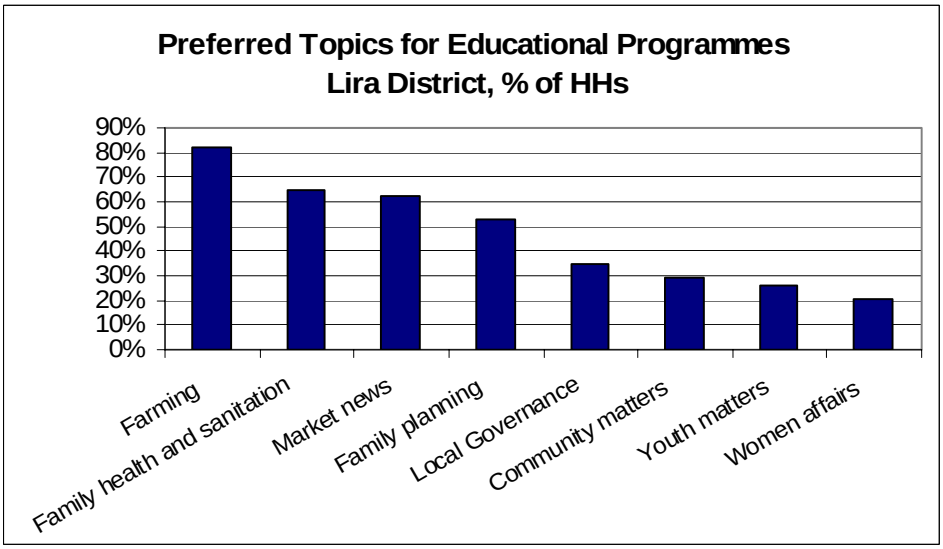
When asked for their priorities regarding their preferred topics for educational programmes, farming, family health and sanitation, market news, and family planning were the preferred choices in rural parts of Lira District, according to the questionnaire survey (Chart 24).

Chart 23



Source: Farmer questionnaire survey

Chart 24



Source: Farmer questionnaire survey; NB multiple answers were possible

MARKET INFORMATION AND THE RADIO LIRA (RL) MARKET NEWS PROGRAMME

Assessment of the Radio Lira (RL) Market News programme

For market information, traders were an important source according to the PRA. This was explicitly stated to be the case in both Bata and Namasale, where traders came first, followed by friends, neighbours and family, whilst radio came third in importance.

There was found to be a lot of variation in the level of awareness of the Radio Lira market news programme and also in views on its usefulness. In Aloi, the programme was identified as being the major source of market news, followed by family, neighbours and friends and lastly traders. This may be because Aloi is on a reasonable road going to Lira town and so people can take advantage of the information. Most of the participants in the PRA exercise listened to the programme more than once a week and found it to be moderately useful and reliable. Interestingly, in Aloi traders participating in the PRA said that they found it not very useful or reliable, possibly because it enables farmers to negotiate better prices. The programme was said by participants from some areas present at the PRA to have had some impact on their livelihoods by strengthening their negotiating position for better prices in the local markets, by causing them to take their produce to different markets where there were higher prices and by causing them to store produce to wait for a higher price. However, participants from other areas in Aloi, possibly those in more remote areas, reported that it had had no impact.

In Adwari over 80% of the people at the PRA sessions had heard about the Radio Lira market news programme and listen to it, but they said that they have not been paying much attention to it because they are unsure about its usefulness and reliability. They felt that it had not had any positive impact on them as yet. In Bata more than half of the PRA respondents, and in Namasale nearly three-quarters, said that they had never heard of the Radio Lira Market News programme. Just under half in Bata said that they do listen to the programme at least once a week but in Namasale less than a quarter ever listen to the programme. Of those who do listen to the programme, just under two-thirds in Bata and more than three-quarters in Namasale said that they do not find it useful in selling their products, and do not believe it is reliable. This is because they only listen to it by chance since they are not sure when it is on; and it quotes the town price, which are never used by buyers who come to buy in villages. In addition, the prices are often on crops which they do not grow.

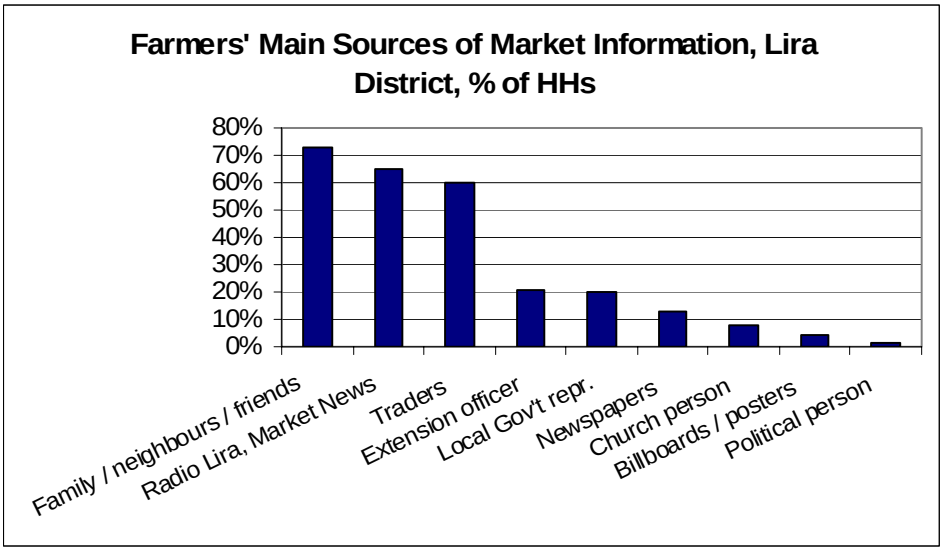
In Ogur, it was found that while all of the officials involved in the PRA did listen to the Radio Lira market news programme, a much lower proportion of farmers involved in the general PRA discussion knew about the programme – only 10 of 38 people present in Adwoa and 16 of 51 present in Ogur. Of those who knew about the programme, only 4 listened to the programme in Adwoa and 5 in Ogur. Those who do listen said that they find it reliable and useful. They said that they prefer the format being used at the moment to the question and answer format used formerly. The reason why a number of those who know about the programme do not listen to it is that the time is not convenient for them,

since on Saturdays there is a big market in Agweng trading centre and the programme timing at 2.00pm on Tuesday is one when most men are resting.

PRA participants in Ogur said that the programme had had positive effects for them. They said that the price of cotton and sunflower had risen because the programme cited higher prices in other markets and produce buyers who came to Ogur had to offer better prices since the farmers there knew the prevailing prices. They also said that the programme had caused some farmers to start planting groundnuts in September and maize in August.

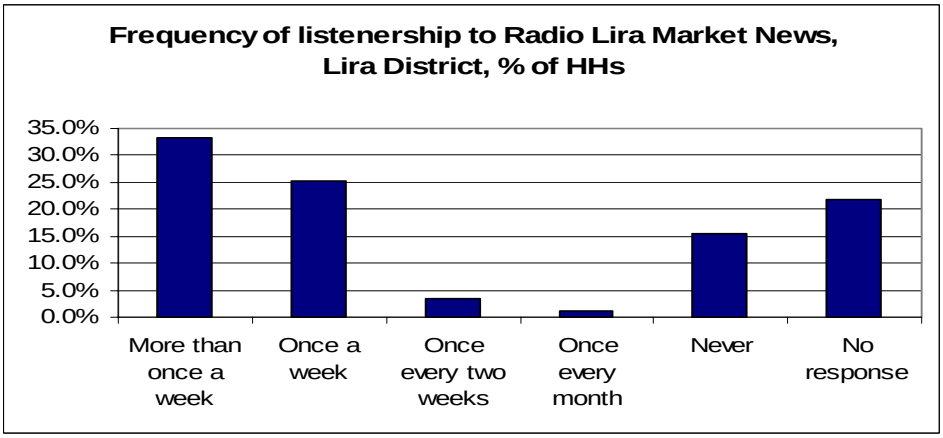
Chart 25 shows the main sources of market information according to the questionnaire survey, i.e. mainly family / neighbours / friends, Radio Lira market news, and traders.

Chart 25



Source: Farmer questionnaire survey

Chart 26

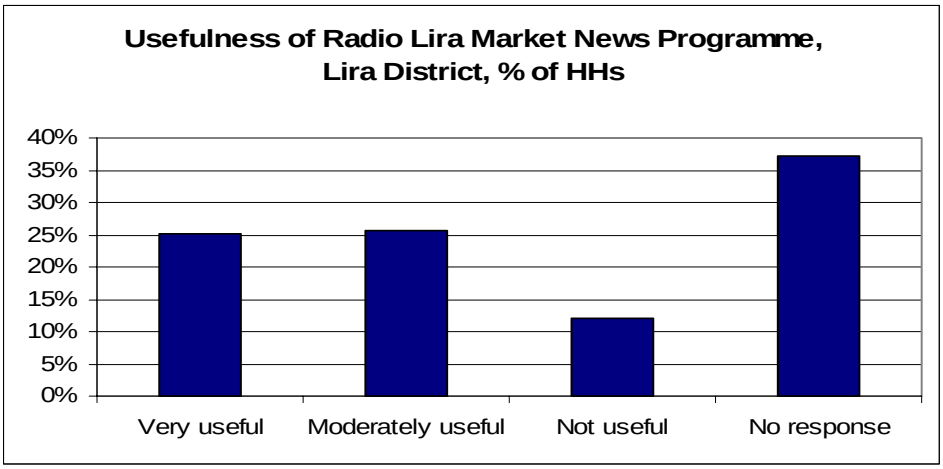


Source: Farmer questionnaire survey

Chart 26 indicates the frequency of listening to the Radio Lira market news programme - i.e. about a third of Lira's rural population listen to it more than once per week, and a quarter once per week. A few farmers (i.e. about 5%) listen to it once every two weeks or once every month. Approximately 37% either never listen to it or did not give an answer.

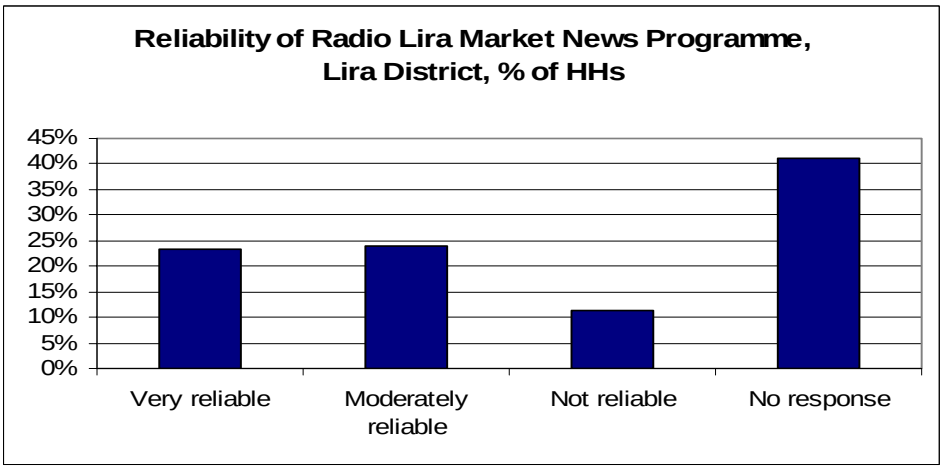
Out of the total population sampled for the questionnaire survey, about half found the Radio Lira (RL) market news programme useful (i.e. more or less equally split between very useful and moderately useful) whilst the remainder either did not find it useful (12%) or did not give a response (Chart 27), most probably because they do not listen to the programme owing to the reasons explained above. Regarding the reliability of the RL market news programme, similar proportions where obtained (Chart 28).

Chart 27



Source: Farmer questionnaire survey

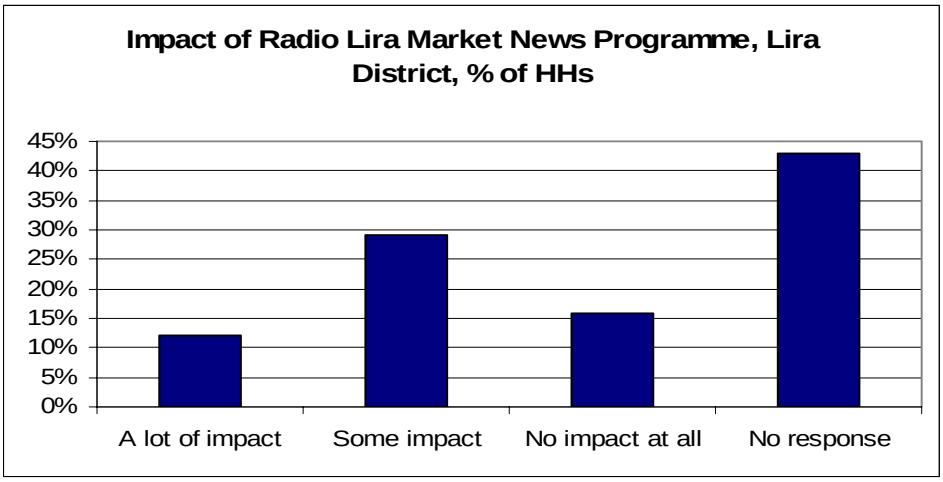
Chart 28



Source: Farmer questionnaire survey

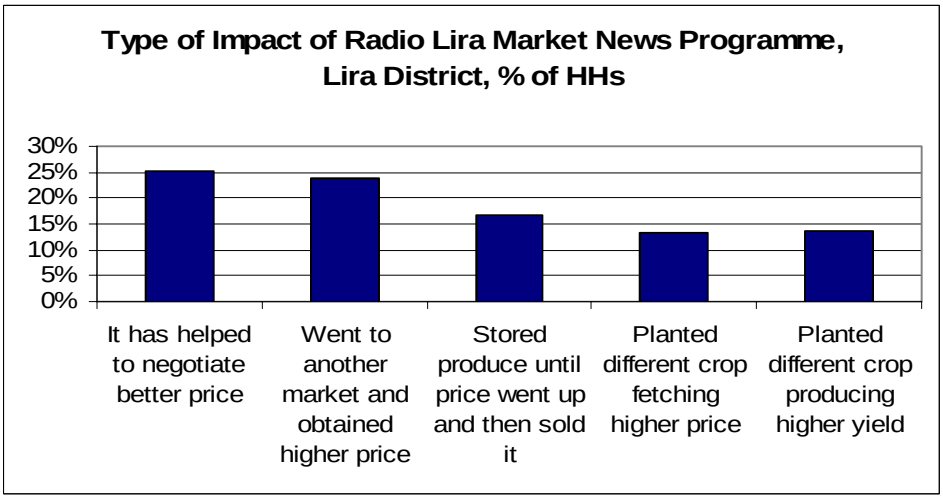
When asked about the impact of the RL Market News programme, 12% of the total sample said that it had "a lot of impact", 29% said "some impact", 16% indicated "no impact at all", and 43% gave no response (Chart 29). As for the type of impact of this programme, about 25% of households said that it has allowed them to negotiate a higher price in the local market, 24% indicated that they went to another market to obtain a higher price, 17% said that they stored the produce until the price went up and then sold it. 13% of farmers planted a different crop which either fetched a better price, and 14% grew a crop which produced a higher yield, as a result of the programme. It is worthwhile noting that multiple answers were possible to this question (Chart 30).

Chart 29



Source: Farmer questionnaire survey

Chart 30



Source: Farmer questionnaire survey

Farmers' Recommendations for Improvement

Some of the suggestions made by farmers in PRA groups as to how the Radio Lira market news programmes could be improved were:

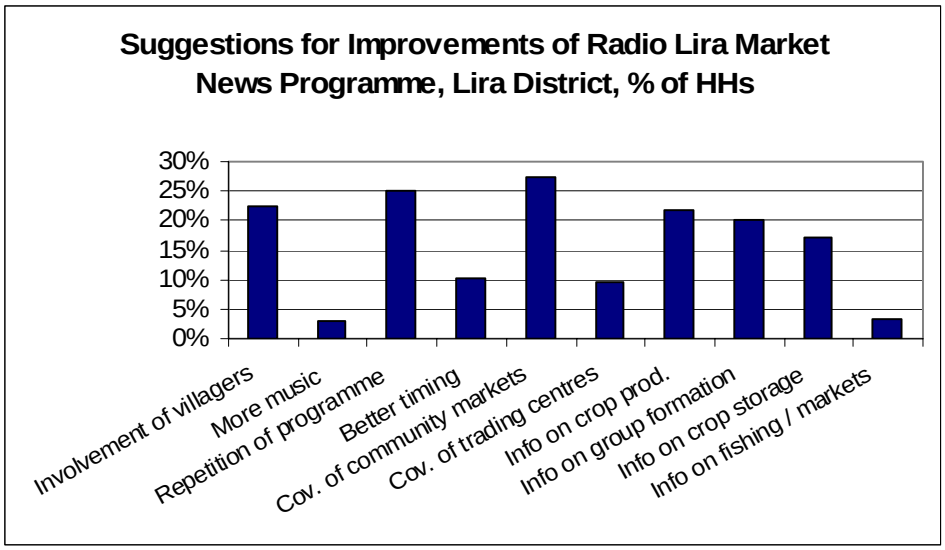
- Advertise the times and days of broadcast.
- Most farmers suggested changing the time of broadcast to between 7 and 9 p.m., which is when farmers are home and can listen to the radio. However in Aloi 1-2 p.m. and 5-9 p.m. were suggested.
- The programme should be longer. In Adwari, 45-60 minutes was suggested. The programme should be broadcast more often; in Ogur at least 3 times a week was suggested.
- There should be more involvement of people in the sub-counties and programmes should be tailored to community needs. In Adwari, it was suggested that farmers should participate themselves in the programmes through talk shows, phone-ins and through sending in questions about matters which affect them, with answers being provided by specialists. It was also suggested that local radio agents could be appointed to link communities to the station.
- Linkages with the District Production Department and sub-counties should be improved in order to get detailed market and production estimates for each commodity
- Present in both English and Luo
- Information could be provided on other agricultural matters including the availability of various products in different places in the district, and advice should be included on storage of crops, and transport costs.
- The programme could be broadcast on other radio stations as well. In Bata, Radio Rhino was suggested since this is particularly clear in that area.
- Price quotations should be for markets in rural areas and for local produce
- Information and advice on the formation of farmer groups could be included

Farmers suggested the following in relation to programmes on agriculture in general, which could be included in the market news programme:

- Include entertainment such as music, traditional songs and plays, and/or more adverts, to make the programme attractive and lively. Incorporate weekly quizzes for farmers, with prizes, to encourage listenership and participation. Prizes should be agriculturally related e.g. seeds, gumboots, tools
- Improve the presentation of programmes, making it simpler. Many presenters were said to have too high an opinion of themselves, and this makes many listeners end up not liking their programmes. It was also advised that presenters should avoid 'loose talk', should be energetic, vigilant and more focused than they sometimes are. Presenters should be in direct touch with farmers to get their views.
- Include information about credit schemes, business skills, crop production and storage, livestock production.
- Facilitate exchange visits by farmers

Chart 31 provides the results from the questionnaire survey as far as suggestions are concerned regarding improvements of the RL Market News programme. The main points include, coverage of community markets, broadcasting the programme more often (i.e. repetition), involvement of villagers / communities in the programme, more information on crop production, group formation, and crop storage.

Chart 31



Source: Farmer questionnaire survey

INSTITUTIONAL ISSUES

Farmers' Views on NAADS

NAADS is very new in Lira, and has not been introduced at all in some sub-counties. In Namasale, where it is not yet present, local views on it were found to be quite negative, with those involved in the PRA saying that it would probably be similar to the PMA and that the same extension staff would be involved, who have been very inefficient and ineffective in executing their duties in the past. They did not feel that NAADS would in any way solve the problems of farmers. However, where NAADS has been introduced, views of its prospects were more positive. In Ogur, for example, it was reported to have encouraged them to form new farmers' groups and evoked interest in strengthening existing farmer's groups.

Expectations of what NAADS will be able to do for farmers included general dissemination of farming skills and knowledge, but also focused on improving ability to market produce. This was the case in Bata, Ogur and Adwari.

In Adwari, farmers commented that the contribution of 2% should be abolished.

NGOs active in the Sub-counties

In Bata, these include DETREC, whose main activity is training community-based organisations. Here, it has trained three farmers groups – *Atabu* Women's Development Association, *Atoo Ipur* Women's Group, and *Abyenek* Women's Group. The Christian Children's Fund (CCF) is also active in Bata, which has as its main activity the provision of material and financial support to children and their families, and the provision of credit. Finally, the Atabu Development Association is engaged in Bata in the promotion of modern farming technologies including the provision of good quality goats to farmers groups.

In Namasale there are very few NGOs. The only one cited by the PRA participants was the Adventist Relief Development Agency (ARDA) which used to operate in the area in the field of micro-finance, adult literacy and tree planting. The adult literacy programme was considered to have been a success but not the other areas in which it was working.

In Aloi UOSPA is active in distributing sunflower seed, and DETREC is active in training farmer groups in financial management.

There are a number of NGOs active in Adwari sub-county, as described in Table 12.

Table 12 – Institutions active in Adwari sub-county (Source: PRA data)

Institution	Main activities	Performance judgement
COVOL	• Trains farmers on shea nut production and management. • Provides loans to groups for purchase of processing equipment and raw material (shea nuts for seeds)	They have provided good support to groups
CMDB (Cooperative Marketing Development Board	• Builds group capacity on cooperative marketing	No longer active. No adoption of the ideology .
UOSPA	• Provides improved oilseed to farmer groups • Trains farmer groups on oil seed production. • Trains groups on group dynamics & sustainability	Farmers slowly demanding quality sunflower planting seeds. Group formation is ongoing. Demand for effective extension service on the rise.
LDDP	• Used to provide production loans to farmers	The programme has ended. Loans given to individuals for specific activities were diverted to other activities. Therefore the programme didn't achieve its objectives.
VODP	• Trains farmers on sunflower production and provides seeds of the variety *sunfola* to farmers	Very acceptable initiative but the quantity is too small for the demand.
UNICEF	• Sinks boreholes, protects spring water and distributes essentials like blankets, and saucepans to needy households.	A lot of local interest in this NGO because most people believe it will provide hand outs and free services.

TRADERS' ACCESS TO MARKET INFORMATION

Background to the Trading Sector

In addition to the above farmer household survey a separate questionnaire survey was carried out in February and March 2003 with 56 traders in the five sub-counties as indicated in Table 13.

The majority of the traders interviewed are small-scale operators that can fulfil different roles in the marketing chain depending on the season and circumstances (i.e. middlemen, small wholesalers, retailers). Two interviewees are involved in grain milling or processing of oilseeds. About two thirds of the traders interviewed (i.e. 63%) are owners of the enterprise whilst the others were employees. 84% of the interviewees were male. A large proportion (i.e. 40%) of the trading enterprises are relatively young (i.e. founded after 2000), whilst 36% were founded between 1996 and 2000, 10% between 1990 and 1995, and only 14% were older than that.

Reflecting their small scale of operation, the majority of traders interviewed sell most of their produce within Lira District (i.e. 93%) or in other Districts (29%). Only few of the traders sell in Kampala or in neighbouring countries (i.e. 7% each). 38% of traders belong to associations such as Lira Produce Buyers and General Traders (LPBGT) Ltd, Uganda Oilseed Producers and Processors Association (UOSPA), or Agweng Development Association.

Table 13: Sample of Traders Interviewed

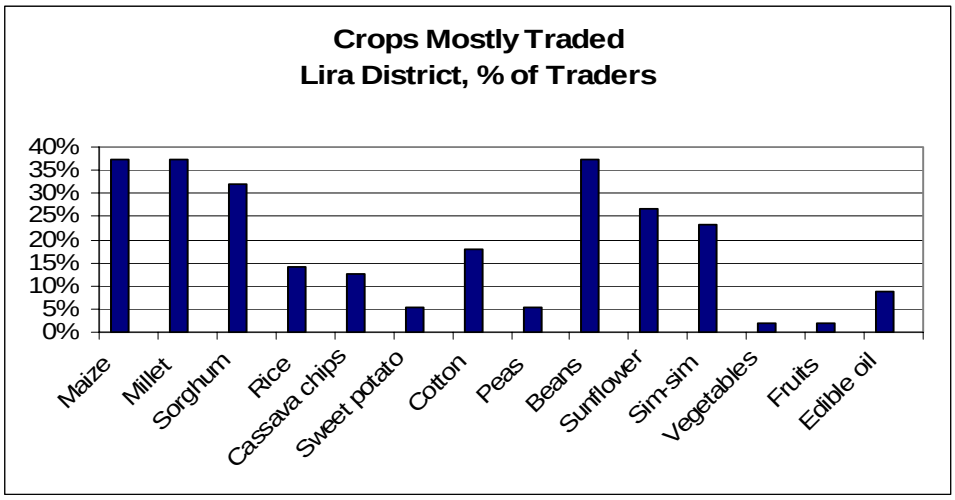
Sub-county	No of Traders Interviewed
Namasale	16
Bata	9
Adwari	8
Aloi	9
Ogur	14
Total	**56**

Chart 32 highlights the crops that are predominantly traded by the interviewees, i.e. maize, millet, sorghum, beans, sunflower, sim-sim, and cotton. In addition to crops, a few traders were also involved in trading of livestock, fish (i.e. Namasale), processed oil, or household goods. Not all the traders were willing or able to provide information on the quantities traded during the last 12 months (i.e. up to March 2003).

30 traders (54%) either did not provide valid information or indicated that they were trading less than one tonne of produce during the twelve-month period prior to the survey. 13 traders (23%) indicated that they had traded in quantities between one and ten tonnes. Seven traders stated quantities of between 10 and 100 tonnes. Three traders stated they were trading in quantities of 100 to 1,000 tonnes, and another three traders

stated quantities of 1,000 – 2,000 tonnes. Most of the larger traders are based in Lira town.

Chart 32



Source: Trader questionnaire survey

Reflecting the answers provided by farmers regarding their points of sale (i.e. Chart 13 above), traders buy mostly at the farmers' homestead, community markets or trading centres (i.e. Chart 33). Traders who sell in Lira town include those who purchase produce or goods in town in order to retail it in the sub-counties.

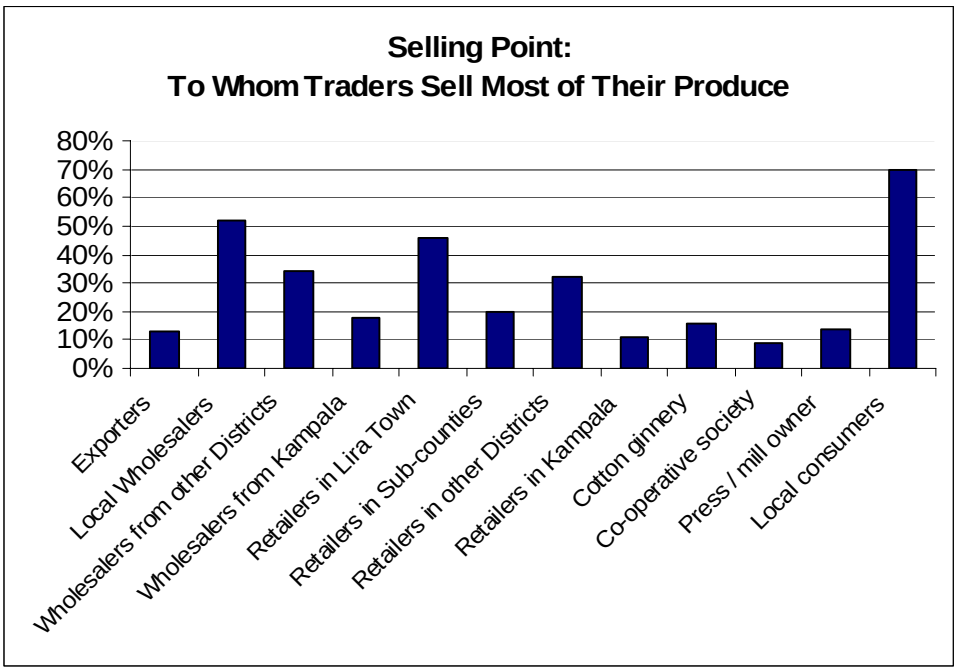
Chart 33

Source: Trader questionnaire survey, up to two answers were possible

Chart 34 indicates that the majority of traders interviewed (i.e. 70%) sell to local consumers. This is followed by wholesalers and retailers, who are either based in Lira

(i.e. local), or in other districts. Relatively few traders in Lira district sell directly to wholesalers and retailers in Kampala. Sales to cotton ginneries, co-operative societies, or press / mill owners attracted relatively few responses (i.e. less than 20% respectively).

Chart 34

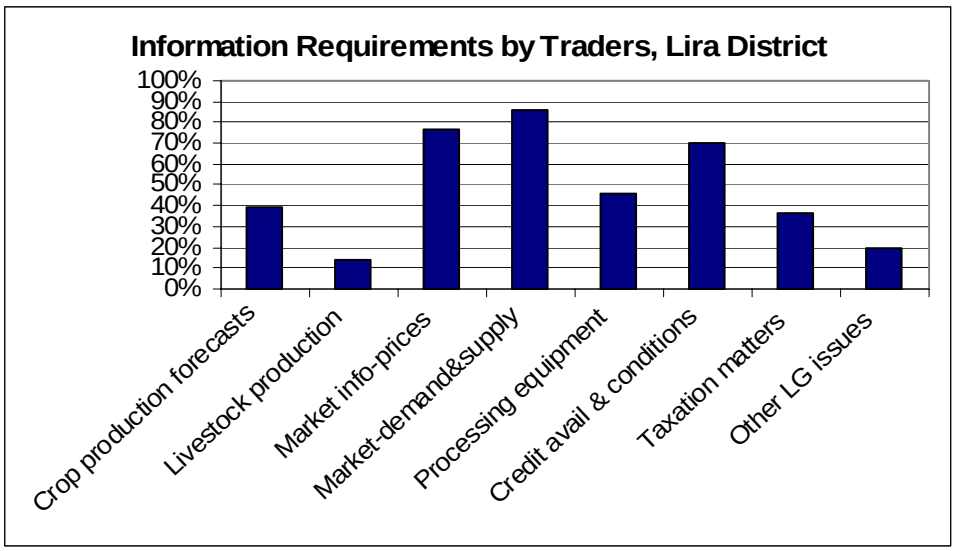


Source: Trader questionnaire survey, multiple answers were possible

Traders' Information Requirements and Channels of Communication

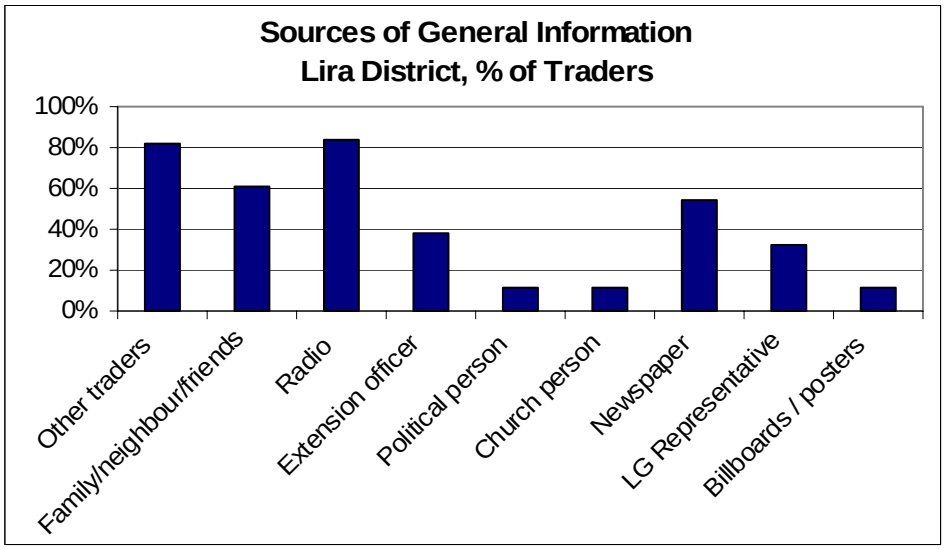
Unsurprisingly, traders' information requirements as expressed during the survey are mainly related to market prices, and demand & supply. Other categories indicated include information on availability and conditions of credit, processing equipment (cost and availability), crop production forecasts, taxation matters, and other local government issues. Traders in Lira complain about high local council taxes.

Chart 35



Source: Trader questionnaire survey

Chart 36

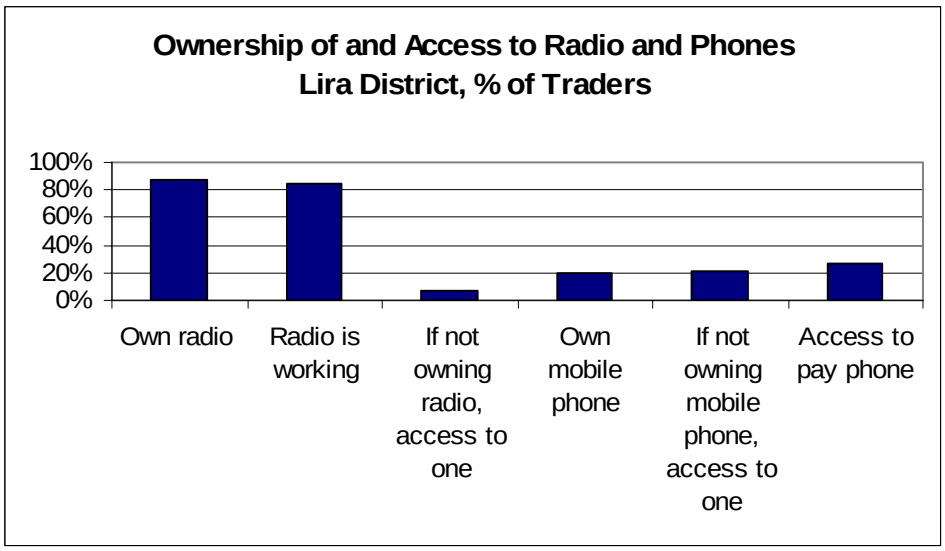


Source: Trader questionnaire survey; multiple answers were possible; answers were not prompted (i.e. not read out).

When asked for their main sources of general information, traders indicated radio, other traders, family/neighbours/friends, newspaper, neighbours, extension officers, and local government representatives as the main sources. Over 80% of traders reported owning a

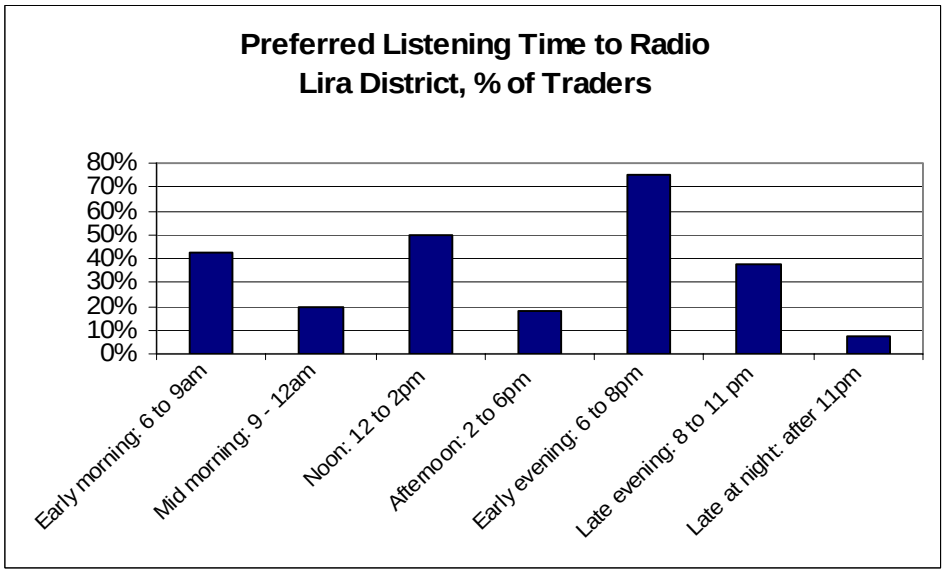
radio receiver that is in working condition. 20% of interviewees own a mobile phone, and 21% indicated having access to a mobile phone whilst not owning one. 27% have access to a pay phone.

Chart 37



Source: Trader questionnaire survey

Chart 38

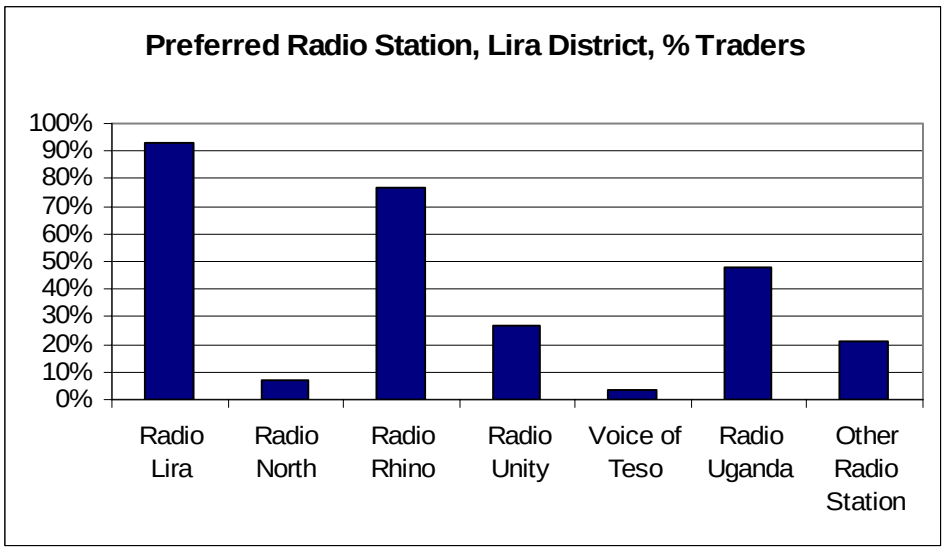


Source: Trader questionnaire survey, up to three answers were possible

Traders interviewed (most of whom are male) stated that early evening is their preferred time to listen to the radio, followed by noon, early morning, and late evening. As for their preferred radio stations they stated Radio Lira, followed by Radio Rhino, Radio

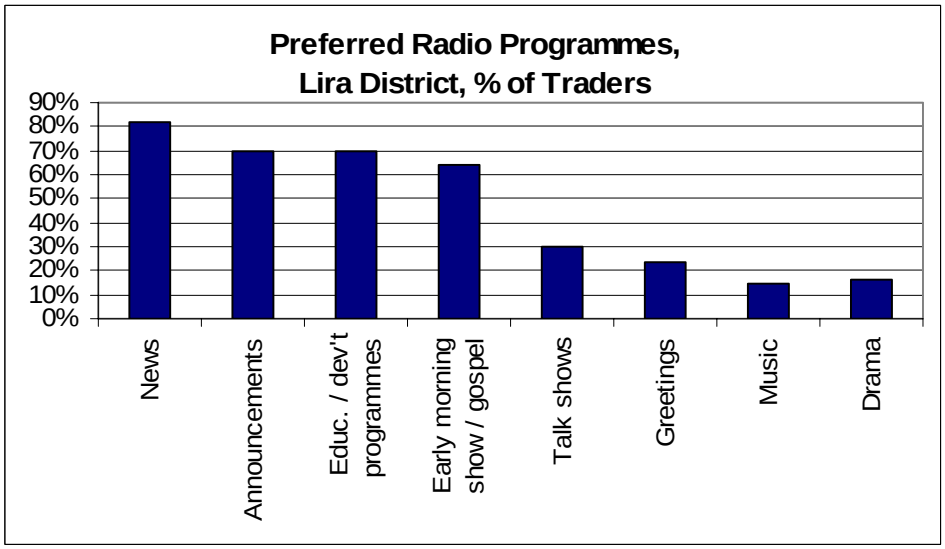
Uganda, and Radio Unity (Chart 39). It needs to be mentioned that Radio Wa was not functioning when the survey was conducted (i.e. March 2003).

Chart 39



Source: Trader questionnaire survey, up to three answers were possible

Chart 40



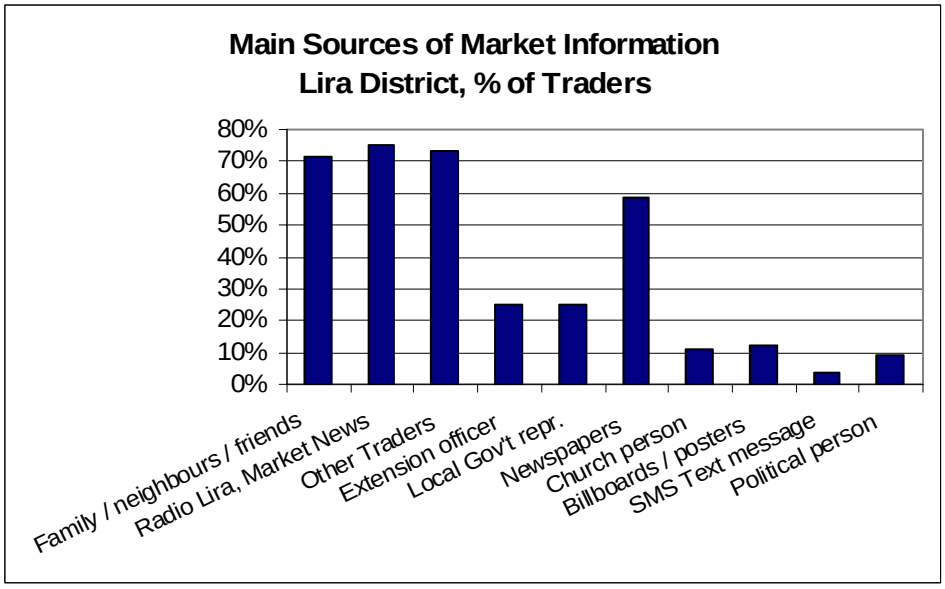
Source: Trader questionnaire survey, multiple answers were possible

According to traders, their preferred radio programmes include news, announcements, educational / development programmes, and early morning shows / gospel. Talk shows, greetings, music, and drama were given less importance (Chart 40).

Traders' Access and Use of Market Information

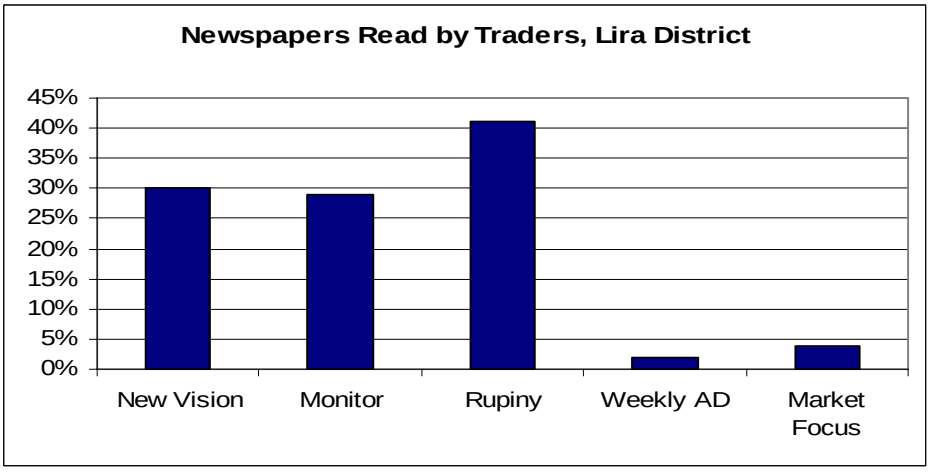
Traders' main sources of market information include Radio Lira's Market News Programme (75%), other traders, family / neighbours / friends, and newspapers (Chart 41).

Chart 41



Source: Trader questionnaire survey, multiple answers were possible

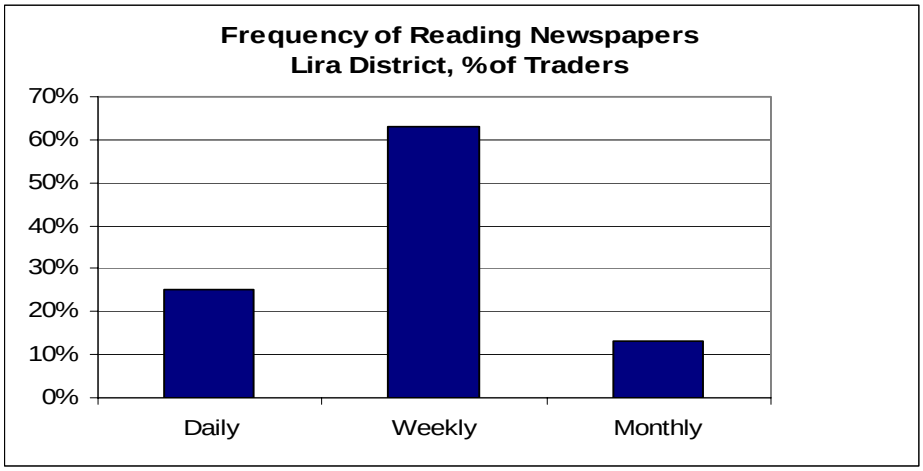
Chart 42



Source: Trader questionnaire survey, multiple answers were possible

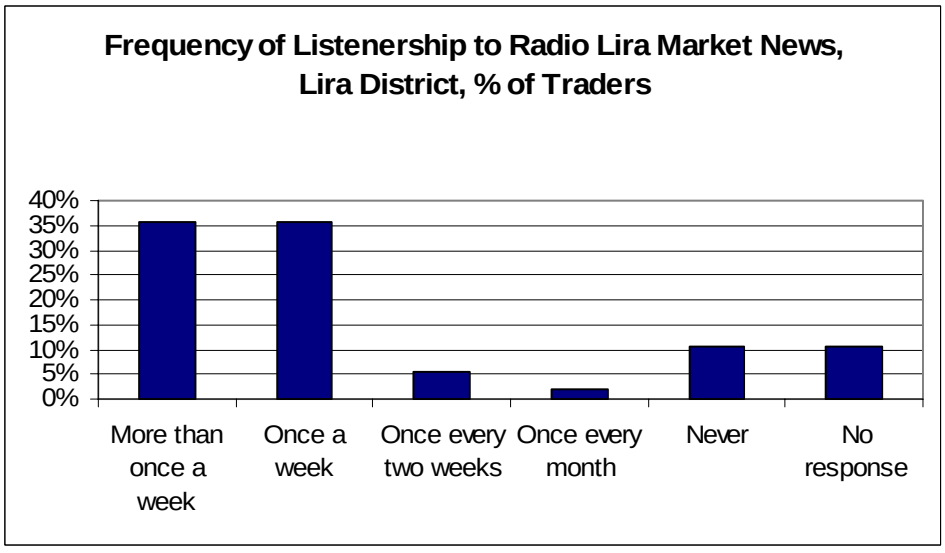
The local language weekly Rupiny is the newspaper mostly read by traders (41%), followed by New Vision, and the Monitor. Interestingly, the use of the Market Focus and Weekly AD is negligible as a source of market information for traders. It is important to bear in mind that not all traders read newspapers (i.e. slightly less than 60%), and quite a few of those who do read more than one. The majority of the traders stated that they read the papers on a weekly basis (i.e. once or twice a week), rather than on a daily or monthly basis.

Chart 43



Source: Trader questionnaire survey

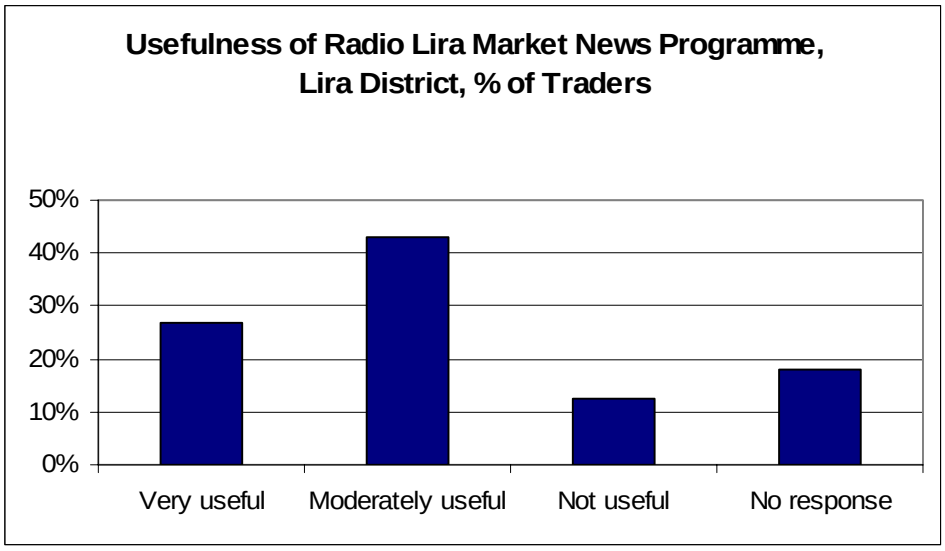
Chart 44



Source: Trader questionnaire survey

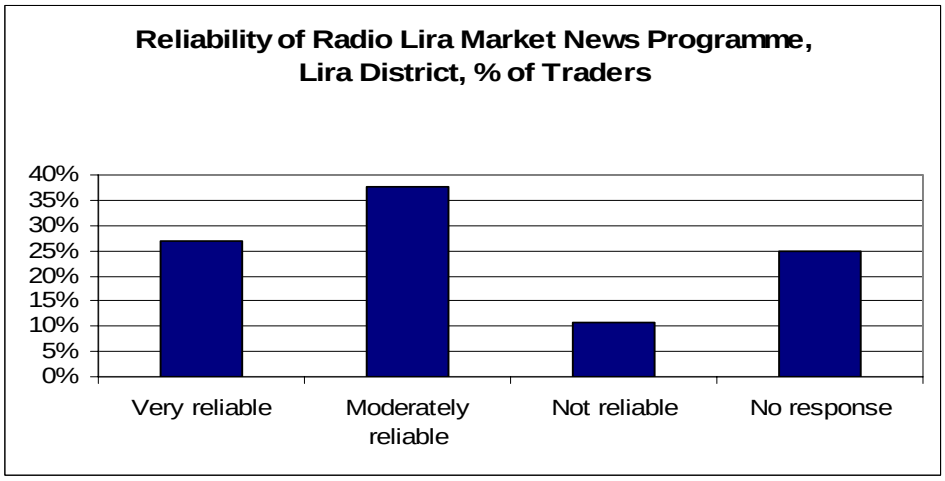
When asked about the frequency of listening to Radio Lira Market News (Chart 44), the majority of traders stated that they either listen to the programme once a week, or more than once a week. In this context, it is important to recall that it is currently broadcast twice per week. As for the usefulness of the programme (Chart 45), most of the traders stated that it was either moderately useful (43%), or very useful (27%). The remainder of the sample (i.e. 30%) either said that it was not useful or did not give an answer.

Chart 45



Source: Trader questionnaire survey

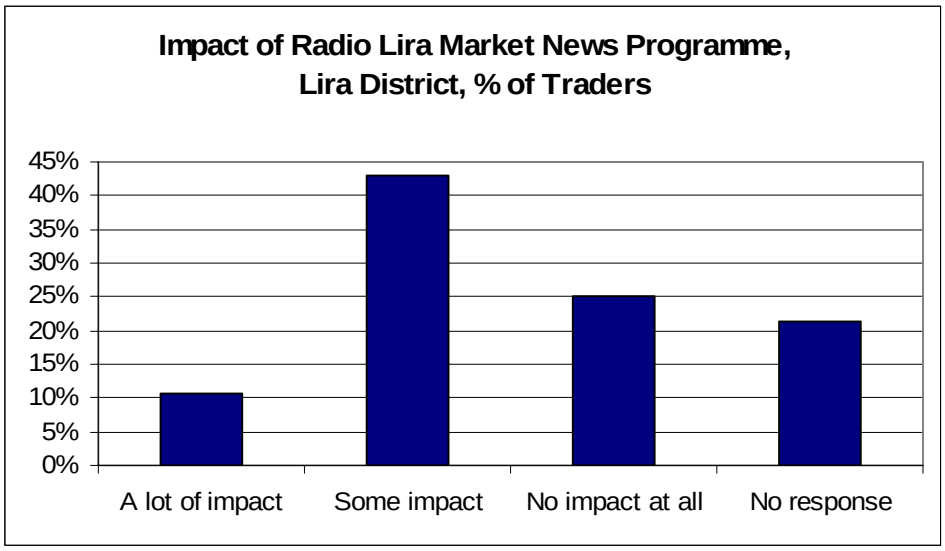
Chart 46



Source: Trader questionnaire survey

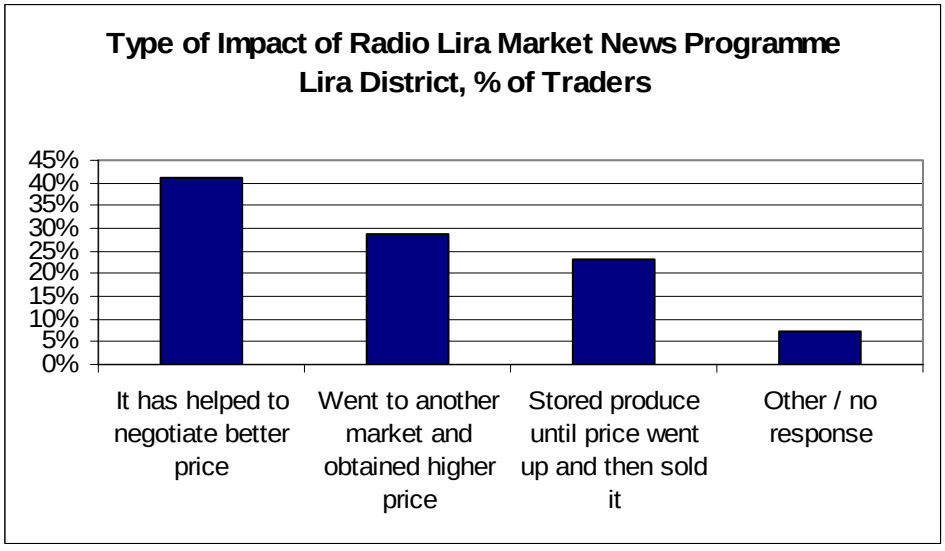
Concerning the reliability of the Radio Lira Market News programme, 38% stated it was moderately reliable, and 27% stated it was very reliable (Chart 46). Compared to this, 43% of traders said the programme had some impact, and 11% said it had a lot of impact on their business (Chart 47).

Chart 47



Source: Trader questionnaire survey

Chart 48



Source: Trader questionnaire survey, multiple answers were possible

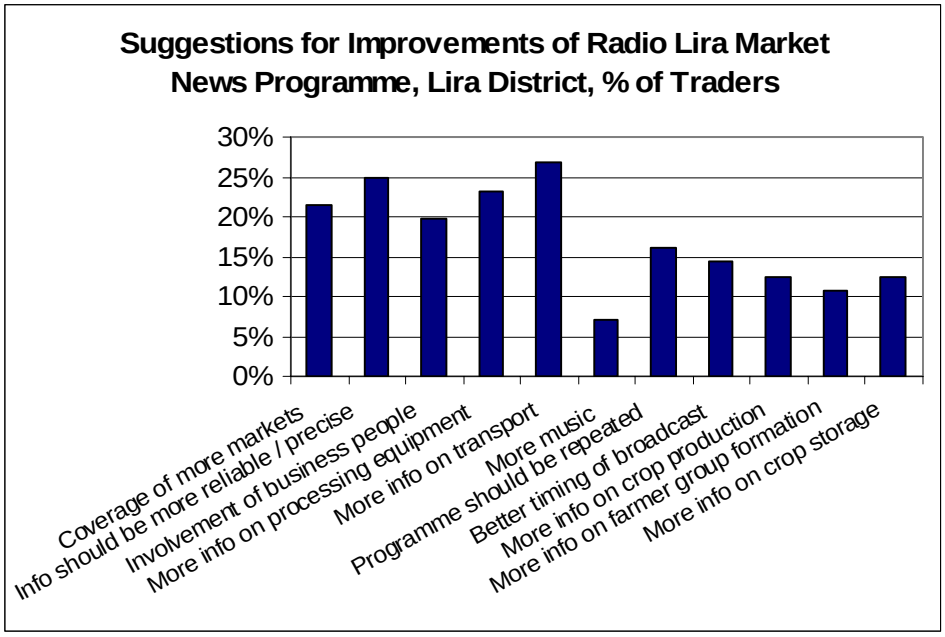
Those traders who said the programme had an impact on their business were also asked about the type of impact it had (Chart 48). 41% of the traders said it had helped them to negotiate a better price, 29% stated they went to another market and obtained a higher price, and 23% indicated they stored the produce until the price went up and then sold it.

Chart 49 highlights the main suggestions for improvements of Radio Lira's Market News programme, as stated by the traders. The main suggestions include:

- more information on cost and availability of transport,
- more information on cost and availability of processing equipment,
- more reliable and precise information,
- coverage of more markets, and
- more involvement of business people in the programme.

Other suggestions include, more repetitions of the programme, better timing of the broadcasts, more information on crop production and storage, and more information on the formation of farmer groups.

Chart 49



Source: Trader questionnaire survey, multiple answers were possible; answers were not prompted (i.e. read out)

APPENDIX 1

Table 1 – Farmers' groups in Aloi sub-county (Source: PRA data)

Name of member interviewed	Name of farmers group	Number of members		Parish
		F	M	
Mkayo Twoni	Bedo Ber	20	10	Alebtong
Odongo George	Otim ikomwa			
Okwir Samuel	Okwong communal group	11	5	
Micheal Odongo	Unnamed digging group	7	8	
Marry Olwa	Arwot Olwonga	2	5	
Orech Bosco	Alyec	10	5	
Ejang Sarah	Alebtong Oil seed dealers	8	10	
Odwee Jackson	Puti Piny	16	6	
Oceng Patrick	Kokcan Ikweri	6	7	
Mike Okao	Imato Ingio	6	0	
Atim Betty	Imato Ingio	6	6	
Ekwan Moses	Otimikomwa	8	10	
Karomela Akena	Gen Badi	5	7	
Onyango Peter	Otim ikomwa	8	10	
Santa Ejang	Imato Ingio	6	6	
Sirino Ogwal	Alyec	8	10	
Etuku Martin	Imato ingio	6	6	
Ekweng Alfred	Otimikomwa	8	10	
Akena Charls	Gen badi	8	15	
Benard Obira	Olo Dev Ass	?	?	Akwangkel
Erin Orech	"	?	?	
Omara Kenedy	"	?	?	
Obwor Yuventino	"	?	?	
Okello Geofrey	Bolicap	?	?	
Opio Jimmy	Awito Vegetables growers	13	3	
Odongo William	Co kede Kweri	11	11	
Awany Solomon	Co kede kweri	11	11	
Hellen Okello	Opok pit	8	10	
Okangara Samuel	Pit Anganya	10	8	
Odongo Milton	Kakira womens	14	16	
Mary Tia	Group II	8	11	
Marichalina	Owiny Awito vegetable growers	13	5	
Ogwang Johnson	Opok Pit growers	8	11	
Richard Awany	Co kede kweri	11	11	
Okangara Charls	Oribcing	11	11	

Table 2 – Farmers groups in Adwari sub-county (Source: PRA data)

No	Name of group	Location (villages)	Origin	Activity
1	Can omia mingo	Acoke	Self initiative	Fish farming
2	Adag goro	Agweng	Self initiative	Crop production Groundnuts
3	Apur pe lwor	Obala	Self initiative	
4	Onot tam	Obala	CMB/UOSPA	Agric. Production onions , sunflower
5	Ket can itic	Okere	Self initiative	Agric production rice
6	Icelpi lung	Okere	Agric Extension Officer	Agric Pdn (G/nuts)
7	Awe ayela	Ober	Self initiative	Agric production rice
8	Nen Ayim	Aringo	Self initiative	Agric production cotton
9	Okwongo Nen piny iwangi	Agoba	Self initiative	Agric production peagon peas
10	Kokcan ikweri	Apur	UOSPA	Agric production s/f, rice
11	Okwongo W.group	Okwongo	Agric. Extension Officer	Agric. Production (G/nuts)
12	Apur pe tur	Agweng	Self initiative	Agric production rice
13	Acane Youth Group	Okere	Self initiative	Agric pdn of (G/nus)
14	Akonkora	Alango	Self initiative	Agric pdn rice & cassava
15	Odicuny	Omito	Self initiative	Agric pdn sunflower
16	Momot atwero	Angwalo	COVOL	Oil production
17	Apur pe lwor	Obala	COVOL/UOSPA	Oil production
18	Acan dyang	Akwalo akwal	Self initiative	Agric production
19	Abworoyere	Abwor	Self initiative	Agric production
20	Agweng Dip	Apel	Self initiative	Agric production
21	Adag lworo	Akona	Self initiative	Agric production
22	Amito mot	Omito	Self initiative	Agric production
23	Pe ituk iyao	Atwero	COVOL	Oil production
24	Alok abalo B	Okere	COVOL	Oil production
25	Alok abalo A	Okere	COVOL	Oil production
26	Dic pe	Ayibi	Self initiative	Agric. Pdn rice
27	Abedo ber	Ayere	Extension Officer	Fish farming
28	Odong tic	Adwar Central	COVOL	Oil production
29	Obanga dit	Angwalo Central	COVOL/UOSPA	Oil production
30	Adag woro	Akoma		

APPENDIX 2

Bibliography

AKWANG, A.A., OBUO, J.P., OKWADI, J. and ORYOKOT, J. (eds) (1999) *Needs Assessment for Agricultural Research in the Lango Sub-Farming System.* DFID / NARO, Kampala.

AKWANG, A.A., OKALEBO, S. and ORYOKOT, J. (eds) (1998) *Needs Assessment for Agricultural Research in the Teso Farming System.* NARO / DFID, Kampala.

Hugh Bagnall-Oakeley and Michael Ocilaje (2002), A special study on "Development of Procedures for the Assessment and Management by Farmers of their Agricultural Information Networks and Needs at the Sub-County Level in Uganda", NARO/DFID Client-oriented Agricultural Research and Dissemination Project.

BENNETT N. (2002) Connecting farmers worldwide through radio; in LEISA Magazine on Low External Input and Sustainable Agriculture, July 2002, Volume 18 no. 2.

CAMPBELL, D. AND GARFORTH, C. (2001), Communication Strategy for the Planfor the Modernisation of Agriculture; Report for the PMA Steering Committee – Government of Uganda; The Mediae Company, Nairobi.

FERRIS S. and ROBBINS P. (1999) Stakeholder Meetings for Strengthening the Market Information Service in Uganda, IITA, Foodnet and CMIS, Kampala.

FOODNET and NRI (2002) Transaction Cost Analysis, Study undertaken for the PMA, Kampala.

GOODLAND, A., TRAN, B., and GOLOB, P. (no date), Post-harvest Needs Assessment in the Teso and Lango Farming Systems of Uganda: Marketing Systems Analysis and Farmers' Perspectives.

JANOWSKI, M. (2003) Communicating Innovation through Radio-The experience of BBC "In the Field Series", Presentation at the inception workshop of project 'Decentralised Market Information Service in Lira District', 27 January 2003 in Lira, Uganda.

JANOWSKI M. and JANOWSKI K. (2002), Communicating innovation: the 'In the Field' project; in LEISA Magazine on Low External Input and Sustainable Agriculture, July 2002, Volume 18 no. 2.

KLEIH, U. (2003), 'Decentralised Market Information Service in Lira District', Project Inception Workshop in Lira, 27 January 2003 in Lira; Workshop Report funded by DFID Research Project R8250. Natural Resources Institute.

KLEIH U., ODWONGO W. and NDYASHANGAKI C. (1999) Community Access to Marketing Opportunities: Options for Remote Areas; Uganda Case Study; Research report funded by DFID project R7148; Natural Resources Institute/Chatham and Agricultural Policy Secretariat/Kampala.

LYNCH K and ASHIMOGO G. (1999) Overcoming informational constraints: improving horticultural marketing and technical information flows to smallholders, Tanzania Country Report, Report for DFID project R7151 (ZB0126).

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.

ODWONGO, W. (2003) The Role of Market Information in the Plan for Modernisation of Agriculture; Presentation at the inception workshop of project 'Decentralised Market Information Service in Lira District', 27 January 2003 in Lira, Uganda.

OKOBOI, G. (2003), Foodnet Activities of the Uganda Market Information Service (MIS) Project; Presentation at the inception workshop of project 'Decentralised Market Information Service in Lira District', 27 January 2003 in Lira, Uganda.

OKOBOI G. and FERRIS S. (2000), Micro-Market Information Services Project – Uganda; First Progress Report Sept. – Dec. 2000; IITA/Foodnet, CMIS, CTA.

POOLE N. (1999), Overcoming informational constraints: improving horticultural marketing and technical information flows to smallholders, Summary report for DFID project R7151 (ZB0126).

ROBBINS, P., BIKANDE, F., FERRIS, S., KLEIH, U., OKOBOI, G., and WANDSCHNEIDER, T. (2003), Advice Manual for the Organisation of Collective Marketing Activities by Small-scale Farmers; 2nd Draft Report for DFID Research Project R8250 'Decentralised Market Information Services in Lira District'.

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.

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

SHEPHERD, A (no date) Farm Radio as a Medium for Market Information Dissemination, FAO, Rome.

SHEPHERD, A. (2000) Understanding and using Market Information, Marketing Extension Guide 2, FAO, Rome.

TURRALL, A. (2003), The NAADS Market Information Service (MIS) Strategy, Presentation at the inception workshop of project 'Decentralised Market Information Service in Lira District', 27 January 2003 in Lira, Uganda.

TURRALL, A., MULHALL, A., REES, D., OKWADI, J., EMEROT, J., and OMADI, R. (2002), Understanding the Communication Context in Teso and Lango Farming Systems: The Agricultural Information Scoping Study, NARO / DFID Client-Oriented Agricultural Research and Dissemination Project, Soroti, Uganda.

WORLD BANK (1999), World Development Report 1998/99 – Knowledge for Development, Washington D.C.

APPENDIX 3

Sub-county maps prepared during the PRA exercises

Appendix 4

Farmers and Traders Questionnaires used for the Survey