Uganda Country Report

Conducted and prepared for ICRAF BY

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Voices of Poor Livestock Keepers in the Lake Victoria Basin

VPLK Document 15

Africa 2000 Network - Uganda
1.0 Introduction

1.1 Poverty in Uganda

From the results of UPPAP, poverty is defined by poor people as more than just the lack of incomes; it is also the lack of the means to satisfy basic social needs, as well as a feeling of powerlessness to break out the cycle of poverty, insecurity of person and property.

The common features of poor households include:
- Few assets for production
- Insufficient food
- Vulnerability and various forms of exclusion
- Inadequate income to meet health care and education costs and to obtain basic household necessities
- Many dependants
- Poor health
- Lack of social support

According to the household survey data 2001, 44% of Ugandans are unable to meet their basic needs and are living below the absolute poverty line, while 25% of the population cannot even meet their daily food requirements and live below the food poverty line. Although, in absolute terms, poverty has decreased by 21% since 1992, close to 9 million Ugandans still live below the absolute poverty line.

The principle dimensions of poverty in Uganda include location, gender, livelihood and seasonality. Although commonalities exist, poverty differs in its nature, extent and trends between regions. Household survey data 2001 indicate that in the East, which has the great proportion of the population 54% of the population live in absolute poverty, compared to 28% in the central region. However, the majority of the local people perceived that in relative terms the rich are getting richer and the poor are getting poorer. In rural areas, where agriculture is the major source of livelihood, 48% of this population is below the absolute poverty line, compared with 16% among urban dwellers.

Poverty eradication therefore must focus on transforming poor farmers both men and women from producing for their own households to producing for the market. The focus on subsistence farmers is to reorient them towards commercial agriculture in order to have a significant impact on poverty eradication in the country.

1.2 Focus on increased agricultural production to reduce poverty

Although the majority of the rural households engage in subsistence agriculture, many poor households cannot produce enough food to feed their families. Many cannot generate enough incomes to meet the household's basic requirements. On average in poor rural households who are net buyers of food, purchase food amounting to 60% of their monthly expenditure. This situation may lead to forced sale of assets in order to meet
household needs. Therefore, increased production is vital for poor rural households in order to improve food security and promote income generation.

## 1.3 Methodology

### 1.3.1 Study area

The study was done in the districts of Tororo, Mbale and Iganga. The study covered the subcounties of Kirewa, Nakalama, Namatumba and Wanale.

### 1.3.2 Research design

The study had two components, a qualitative survey using focus group discussions and an interview-administered questionnaire.

### 1.3.3 Population and sampling

Stratified sampling was employed at the district level based on the animal population of the sub counties. At the village a list of village members was obtained from the L.C chairperson, randomly selecting respondents to the questionnaire. It should be noted that sampling was purposive in the sense that selection was made for only those who were practicing animal husbandry, agro forestry and horticulture.

### 1.3.4 Instrument development

A checklist of issues to be discussed during focus group discussions was generated. The baseline survey questionnaire was developed based on the following objectives:

1. Identify **where** significant numbers of poor livestock keepers are located in the Lake Victoria basin.
2. Describe **how** those poor livestock keepers access new knowledge and technologies, with emphasis on knowledge and technologies pertaining to livestock.
3. Identify **what** levels of demand for new livestock related knowledge and technologies are and to what extent these information needs are being met.
4. Document **which** civil society organizations operate in the Lake Victoria basin and to what extent they actually, and potentially, cater for the interests of poor livestock keepers.
5. Suggest **what** ways civil society organizations can be empowered to enable poor people to better access new information and technologies.

A pre testing of the instrument was done to test the suitability of the instrument, after which necessary changes were made in the instrument for the final survey.

### 1.3.5 Data entry and analysis
This involved questionnaire editing, coding, summarizing details, tabulation and statistical analysis. Coding of open-ended questions was also done. Data was captured using Epidemiological Information (EPINFO) software program with the help of variable data checks. Data entry screen and data check programs were designed and pre-tested in advance to ensure that minimal errors were made during the entry process. After data entry, data cleaning to remove stray errors that might have occurred during the entry was done. Data was analysed using Statistical package for social scientists (SPSS) version 10. Frequencies, measure of central tendency and cross tabulations were used for various variable.
2.0 General Characteristics of the districts covered by the study

2.1 Tororo District

2.1.1 Introduction

Formerly known as Bukedi, Tororo is one of the districts that already existed at independence. It consisted of present day Pallisa and Busia districts. In 1890, Bukedi became Tororo district. The magnificent obtrusive Tororo rock that over looks the town is a tourist attraction with potential for mountaineering.

2.1.2 Location and size

Tororo borders the districts of Pallisa in the north; Mbale in the northeast, Iganga in the west, Lake Victoria in the extreme south and the republic of Kenya in the east. Tororo district covers an area of 2,634sq km with 64,768 hectares under forest.

2.1.3 Relief and climate

It has an approximate attitude of 1,097m and 1,219m above sea level with moderate rainfall and high temperatures. Tororo district is dry with sandy rock soil. Its climate is favourable to crops like millet and cassava, which are widely grown in the District.

2.1.4 Population

Tororo district has a population of 555,574 people. The sex distribution of this population is 282,657 females and 273,220 for males. The urban population is 491,917 and the population per sq km is 211.

2.1.5 Urbanization level

The two major towns in the District are Tororo town, which is the administrative headquarter of the District and Malaba. Tororo district has four counties; Bunyoro, Kisoko, Samia-Bugwe and Tororo municipality with a total of 55 sub counties. The main languages are Japadhola, Lusamia-lugwe, Ateso Lugwere, and Lunyoli.

2.1.6 Economic activities

Agriculture is the major economic activity in the district. The major food crops are; finger millet, rice, maize, cassava, groundnuts, sweet potatoes, sorghum, beans, cowpeas, simsim, bananas and sunflower, with onions being the most grown vegetables. The animal population is 325,341 cattle 270,068 goats and 57,489 sheep. Trade is the second largest economic activity in the district since the district borders Kenya. As an agricultural district, industries in this district are mostly agro- based and include industries in fertilizers and fungicides, laundry soap, jaggery, gunny bags, Hessian cloth,
oil milling and cotton ginning. Other industries deal with corrugated roofing sheets and cement industry. Land ownership in the district is basically customary.

2.1.7 Social services

The district has 341 primary schools, 31 secondary schools, 6 technical institutions and 4 teacher-training colleges. The district has 2 hospitals; Tororo hospital with 226 beds, St. Anthony's hospital and 7 health centres. It is worth noting that district has 228 registered primary societies with South Bukendi Co-operative union at the district level. (See appendix for the district map)

2.2 Iganga district

2.2.1 Introduction

At independence in 1962, Iganga was part of Busoga district. In 1975 it gained district status. It became south Busoga district in then Busoga provision. It was named Iganga in 1981.

2.2.2 Location and Area size

The district is bordered by Tororo district in the east, Jinja in west, Kamuli in the north and Mayuge in the south. The district covers an area of 6434.78 sq. km.

2.2.3 Relief, climate and vegetation

The district lies at an altitude of about 1,070 m and 1,161 m above sea level, with annual rainfall ranging between 1,250 and 2,200mm. Temperatures are always in the range of 21°C. The vegetation here includes thick tropical rain forests.

2.2.4 Population

Iganga district is one of the fast growing urban centres in terms of population. The district has a population of 691,973 people, with 351,383 females and 340,590 males.

2.2.5 Urbanization Level

Iganga town is the administrative headquarters of the district. Other towns in the district are Busembatia, Busesa and Magamaga. The district has 4 counties; Bugweri, Busiki, Kiggulu and Luuka. The district is composed of 26 sub counties. The major language in the district is Lusoga.

2.2.6 Economic activities

Agriculture is the major economic activity of the district. The major cash crops grown are; coffee, cotton and rice. Food crops grown include; finger millet, maize, sorghum,
rice, bananas and sweet potatoes. Fruits and vegetables include: oranges, tomatoes and cabbages. Fishing is also carried out on Lake Victoria. Iganga town is a growing commercial centre. Its proximity to the border with Kenya has boosted business activity. The predominant land tenure system of Iganga is customary. Agriculture is still at subsistence level except for rice, which is grown specifically for the market. The animal population is 61,157 cattle, 256,724 goats, 2,055 sheep and 4,471 pigs. Agro-based industries are predominant in the district e.g. processing of coffee and rice milling industries.

2.2.7 Social services

The district has 362 primary schools, 79 secondary schools, 1 technical institution, 1 teacher training college. The district has one hospital; Iganga hospital with 117 beds and 10 health centres. (See appendix for the district map)

2.3 Mbale District

2.3.1 Location and area size

Mbale district was formerly known as Bugisu district. It is bordered by the districts of Sironko in the north, Tororo in the southwest, Kumi in the northwest and the republic of Kenya in the east. Mbale district covers an area of 1,429.60 sq. km. The district has enormous tourism potential because of mount Elgon National park, which contains the beautiful Sipi falls.

2.3.2 Relief climate and vegetation

The district lies at an altitude of between 1,299m and 4,321m above sea level, with a sub tropical type of climate. Temperatures are quite low and rainfall reaches up to 1,191mm per annum. Vegetation includes bamboo forests and some giant afro-alpine groundsels and lobelias on mount Elgon. The area under forest is 53,000 hectares.

2.3.3 Population

Mbale district has a population of 745,696 people. The sex distribution of this population is 371,810 females and 373,885 males. The population per square kilometre is 5621.6???

2.3.4 Urbanization level

The two major towns in the District are Mbale- the administrative headquarters and Nakaloke. Mbale district constitutes of four counties; Bubulo, Bungokho, Manjiya and Mbale Municipality with a total of 19 sub-counties. The main language in the district is Lumasaba.

2.3.5 Economic activities
Agriculture is the major economic activity in the district. The major cash crops grown are coffee and cotton, while food crops grown vary from beans, maize, ground nuts, sweet potatoes, cassava, banana, rice etc. Vegetables grown are tomatoes, onions and cabbages. The animal population is 166,723 cattle, 169,755 goats 22,422 sheep and 23,049 pigs. As an agricultural district, industries in the districts are mainly agro-based; such industries include milk processing plants, coffee processing plants, and cotton ginneries. Others include garments, pharmaceuticals and manufacture of exhaust pipes. Land ownership is largely based on the customary tenure system. Owing to land shortages agriculture is mainly practiced at subsistence level. Individual farms are too small to encourage high production for both the market and consumption.

2.3.6 Social services

The district has 330 primary schools, 58 secondary schools, 1 technical institution and 4 teacher-training colleges. The district has 2 hospitals; Bududa hospital with 104 beds and Mbale hospitals with 320 beds and 13 health centres.
3.0 RESULTS AND DISCUSSION

3.1 Coverage of the study

The survey covered the district of Mbale, Iganga and Tororo. In each district at least one sub-county was selected as shown below:

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<thead>
<tr>
<th>Sub-counties</th>
<th>Kirewa</th>
<th>Nakalama</th>
<th>Namutumba</th>
<th>Wanale</th>
<th>Total</th>
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<td>1</td>
<td>33</td>
<td>28</td>
<td>90</td>
</tr>
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</table>

The table below shows the distribution of respondents by village.

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<th>Sub-counties</th>
<th>Village</th>
<th>Kirewa</th>
<th>Nakalama</th>
<th>Namutumba</th>
<th>Wanale</th>
<th>Total</th>
</tr>
</thead>
<tbody>
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<td>14</td>
</tr>
</tbody>
</table>

3.2 Background of the respondents

3.2.1 Sex of the household head

Of the ninety households visited, 78 (86.7%) were male headed while the rest (12.2%) were female-headed households. The smallest size household had 2 members, while the largest had 19 members with an average number of 8 members per household.

3.2.2 Age distribution of the household heads
The eldest household head was 73 years, while the youngest was 19 years old. The biggest percentage (60%) of household heads was in the age bracket of 32 and 50 years.

### 3.2.3 Educational level of household members

Majority household heads had attended primary (50.6%) while 21 (24.1%) had attained secondary education and 1.3% had attended post-secondary. A relatively big proportion (18.4%) had no formal education. Also 52% of the spouses had attended primary, 34% had no education at all and the rest (14%) had attended secondary school. About 62% of the sons and 56.4% of the daughters of the households approached had attended primary, while 28% of the sons and 35% of the daughters had not gone to school at all. See bar graph below.

![Bar Graph](image-url)

### Level of education of H'H heads

#### 3.2.4 Occupation of the household heads

The main occupation of the household heads is farming (88.2%), followed by self-employment (4.7%) and formal employment (4.7%). The rest of the household members (2.4%) were employees of household. About 96% of the spouses engaged in farming while (4%) were self-employed.

### 3.2.5 Settlement and production on the farm
29% of the total households had recently (1990-2002) settled on their farms, while about the same percentage settled on their farms between 1980 and 1989. About 16.7% had settled in their farms earlier than 1962.

3.3 Crop production

3.3.1 Cash crop production.

Coffee emerged as the highly grown cash crop with a percentage of 21.5%, followed by cotton (12.4%), cabbage (9.1%), maize (7.7%), Carrots (6.2%) respectively. The least grown cash crops were; vanilla (0.5%), matoke (0.5%), Soya beans (0.5%) and sorghum (0.5%). The largest and the smallest acreage for cash crops were 12 acres and 0.25 acre respectively. The average size of acreage for cash crops was 0.86. The majority respondents (65.1%) reported that they planted their cash crops as pure stand, while 29.7% used mixed cropping system.

3.3.2 Food Production.

Cassava (20%) was the mostly grown food crop followed by maize (15.1%), sweet potatoes (13.3%), Millet (11%), Beans (10%) respectively. The least grown food crops were; pumpkin (0.5%), tomatoes (0.5%), rice (0.5%) and cabbages (0.5%). The largest and smallest acreage for food crops was 30 acres and 0.12 acre respectively with an average acreage of 0.99 acre per food crop. Most respondents (87.2%) indicated that food crops were grown on less than two acres however the average size of acreage for food crops was 0.98. Pure stand cropping system (54.9%) was mostly practiced for food crop production followed by mixed cropping (41.6%). The least practiced cropping system was second crop with 2.8%. About 15% of the respondents harvested between 10 and 19 bags, while about 5% of the respondents harvested between 2 and 9 bags during the last harvest.

3.4 Land resources

3.4.1 Plot characteristics and attributes

3.4.1.1 Soil type
The majority (41%) of the respondents interviewed indicated that their plots had sandy loam soil, followed by plots with loam (30%), Clay loam (13%), Sandy (10%) respectively. The least number of plots had clay soil (4.7%). See bar graph below.

3.4.1.2 Plot quality ranking in relation to other plots around

Majority respondents (53.5%) ranked their plots as being average in quality relative to other plots in similar locations on the landscape. About 5.6% of respondent ranked their plots as the best around their area while 2.3% indicated that their plots were the worst around the area.
3.4.1.3 Soil fertility

Most respondents (39.5%) reported that their soils were of average fertility, followed by good soil fertility (29.3%). Only 3.7% of the respondents indicated that their soils were of very good fertility, while 21.9% reported that their soils were of poor fertility. However about 55% of those who reported their soil to be of poor fertility had sandy soil type. See bar graph below.
3.4.1.4 Change in soil fertility over the last 10 years or since acquiring the plot

Majority of the respondents (62.3%) also indicated that soil fertility had gotten worse over the last 10 years followed by those who reported that their plots had gotten better (20%) and 13% reported no change on the fertility levels of their land. See bar graph below.

![Change in soil fertility](image)

3.4.1.5 Major reason for observed change in soil fertility

The major reason for the observed change in soil fertility over the last three years reported by the respondents were poor agricultural practices (41%), Manure application (16%) for those who had reported fertility increase in their plots of land. The least major reason reported were lack of fallowing (2.3%), planting of legumes (2.3%) and mulching (1.7%).

3.4.2 Access to land (land tenure)

3.4.2.1 Year when land was acquired

About 28% of the households reported as having acquired land between 1990 and 1999 followed by those who acquired land between 1980 and 1989 (24%), 1970 - 1979
(21.4%) and 2000 - 2002 (11.4%), while the least number of households (5%) acquired land earlier than 1960. See figure below.

Bar graph showing period when land was acquired

3.4.2.2 Land acquisition

Most respondents (47.8%) reported to have acquired their plots of land from relatives, while 40.8% had purchased the land and 7.5% had rented from other village members. Only 1% of the total respondents were squatters. About 90% of the land, which was got from relatives, was formally crop field, 6% was bush/forest land, 3% was grazing grounds and 1% of it was communal grazing land. 81% of land, which was acquired through purchasing, was crop field, while 71% of land acquired through renting was also crop field. See bar graph below.
3.4.2.3 Possession of land title deed

Majority of the respondents (93%) had no land title deed, while 6.5% had title deed for their plots. Among those who had land title deed, 46% of them had acquired the land from the relatives and 39% had acquired the land through purchasing. See pie chart below.
3.4.2.4 Land use before acquisition

The majority of the respondents (84%) reported that their plots of land were used as crop fields before the households acquired it, while 11% of the total respondents reported that their plots of land were bush/forest land before acquisition and 4.5% of the total respondents reported that they were grazing grounds. Only 0.5% of the acquired land was formally used as communal grazing land.

3.4.2.5 Current land use

The majority respondents reported to use land they acquired for cultivation (98%) while (1.5%) respondents used the acquired land as pasture/wooded land.

The major reason as to why most respondents acquired land was for farming (78%) followed by establishments/settlement (12%). About one percent (1%) of the land was acquired for pasture establishment. See figure below
3.4.2.6 Access to communal land

Majority of the respondents (95%) reported that, they had no access to communal land, while (5%) had access to communal land, (25%) of those whom had access to land used it for grazing. Those who had no access to communal land, grazed their animals mainly on own land (68%), followed by zero grazing (18%), (12%) grazed their animals on their neighbour's land and (2%) had some other ways of grazing their animals.

3.43 Rights over land

3.4.3.1 Rights to sell land

50% of the respondents who owned plots could sell them only after consultation with family members, (29%) could only sell their plots under circumstances, (18.3%) could sell their plots completely under their own discretion. 1.4% could sell their plots after consulting the village leaders.

3.4.3.2 Renting out land

The majority of respondents (45%) reported that they could rent out their land after consulting their family members, followed by those who reported that they could only rent out their land under circumstances (28%) and those who can sell land completely under their own discretion were (25.4%) of the total respondents. The least percentage (0.5%) reported that they could only sell their land with permission from the village leaders.

3.4.3 Rights to share crop

About (42%) of the respondents said, sharecropping is completely done under their own discretion. However the same percentage (42%) said they share crop but after consulting the family members and 15% do not share crop but do so under circumstances. The least percentage (0.5%) share crop but after seeking permission from the village leaders.
3.43.4 Rights to giving out land

Majority of the respondents (38.5%) do not give out land but do so under circumstances, while (37.6%) give out but after consulting the family members, 21% give out land completely under their own discretion and 2.3% give out land after consulting village leaders. The least percentage of respondents (0.5%) gives out but after getting permission from the village leaders.

3.43.5 Rights to exchange land

Thirty nine percent (39%) of the total respondents do not exchange land but do so only under circumstances, (33.5%) exchange land after consulting family members, (24.5%) exchange land completely under their own discretion and 2% exchange only after consulting the village leaders. The least percentage (0.9%) exchange land after getting permission from the village leaders.

3.43.6 Rights to choice of crops on land

Majority respondents (59%) have crop choice on land but consult family members; followed by those who have choice completely under their own discretion (39%) and the rest (2%) of the respondents have no crop choice but do so under circumstances.

3.43.7 Rights to fallow land

40% of the respondents can fallow their land completely under their own discretion, 34% fallow after consulting family members, while 22% do not fallow but do so under circumstances. The least percentage (0.5%) fallow land but first consults village leaders.

3.43.8 Rights to plant Trees

44% of the respondents plant trees after consulting family members, followed by those who plant trees completely under their own discretion (43%). while 12% do not plant trees but do so under circumstances, 1% plant trees after consulting village leaders.
3.4 Income sources

51% of the total respondents reported their household members had informal/formal sources of income during the period 1st January 2001 to 31st December 2001.

3.4.1 Informal activities

Most household members, who had informal sources of income, got it through farming (40%) followed by trading (26%), shop keeping (19%). The least percentage (1.7%) got their income through hawking. The members with informal sources of income worked for a minimum of 2 hours a day and a maximum of 19 hours a day while the average time worked was 8 hours. The average amount earned by members with informal sources of income was 71,523/- per season while the maximum and minimum amounts earned per month were 1,800,000/- and 2,000/- respectively.

3.4.1.2 Formal activities

Most household members (57%) who got their income formally were teachers followed by administrators (14.3%) while the least were nurse/medical officers (7.1%), guards (7.1%), clerical/secertaries (7.1%). Members with formal sources of income worked for a minimum and a maximum of 4 and 12 hours a day while the average time worked for was 10 hours. The average amount earned by members with formal sources of income was 136,214/- per month while the maximum and minimum amounts earned per month were 300,000/- and 10,000/- respectively.

3.4.2 Income from other sources

Most of respondents got this kind of income in form of remittances from relatives with a maximum and minimum amount of 150,000/- and 5,000/- respectively. However, on average remittances from relatives was 28,888/- while the average number of times these remittances was got was two times a year. Among those who had remittances from relatives some raise up to a total of maximum of 300,000/- with a total minimum of 5,000/-.
The second recorded source of income was bride wealth with a maximum amount of 300,000/- and a minimum of 20,000/- per time it is got. The total amounts received in form of bride wealth reached a maximum and a minimum of 400,000/- and 40,000/- respectively with an average of 248,000/- per year.

The source of other income that provided the least number of respondents was government pension, which had a maximum and a minimum of 2,500,000/- and 30,000/- respectively. However, those who received government pension had an average income of 853,333/-.

3.4.3 Main source of income

The greatest percentage of respondents (91%) reported that sale of farm produce was their main source of income. Furthermore, 84% ranked farming as the first main source of income during last year. Petty trade (29%) came second and the least ranked main source of income was remittance from family/relatives.

3.5 Cash use in farming

3.5.1 Expenditure on farm inputs

Most of the farm inputs were bought as shown by the percentage distribution of the method of acquisition below.

<table>
<thead>
<tr>
<th>Farm Inputs</th>
<th>Bought (%)</th>
<th>Loaned (%)</th>
<th>Free of charge (%)</th>
<th>Borrowed (%)</th>
</tr>
</thead>
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<tr>
<td>Seeds</td>
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<td>10</td>
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<tr>
<td>Panga</td>
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<tr>
<td>Animal feeds</td>
<td>52</td>
<td>0</td>
<td>44</td>
<td>4</td>
</tr>
</tbody>
</table>
3.5.2 Cash expenditure in farming

Most households spent on farming cash crops, food crops and trees. Among the respondents interviewed nobody spent money on bee keeping between 1999 and 2001. The highest average amount of cash used in farming cash crops (84,261/-) was realized in the year 2000 with a maximum and a minimum of 1,500,000/- and 2,000/- respectively followed by an average amount of 70,621/- realized in horticulture in 1999 with a maximum and minimum amount of 320,000/- and 800/- respectively.

3.5.3 Income realized from farm produce

Most respondents indicated as having realized income from farm produce between 1999 and 2001, this source of income was followed by food crop production. The highest average income (160,967/-) was realized from livestock production in the year 2001 with a maximum and minimum of 1,050,000/- and 10,000/- respectively followed by food crop production (101,647/-) in the year 2001. However, nobody realized any income from bee keeping between 1999 and 2001.

3.5.4 Labour constraint

The greatest percentage (90%) of respondents reported that land preparation had labour constraint in 1999 yet 89% reported land preparation had labour constraint in 2001 and 88% reported that land preparation had labour constraint in 2000. The greatest percentage (57.2%) of respondents indicated that the family members were the source of labour for land preparation between 1999 and 2001, followed by hired labour (32.2%) and the least was animal traction (1%).

Majority of respondents also reported planting had labour constraint in 1999 (74.2%) and 73% in 2000 and 72.7% in 2001. Family members (78.2%) were the major sources of labour for planting between 1999 and 2001 the rest of the labour (21.8%) was hired. About 79.8% reported there was a labour constraint in weeding in 1999 and 76.1% in 2000 while 77% reported it had labour constraint. Also family members (76%) provided
most labour for weeding between 1999 and 2001 while the rest (24%) was hired labour. About 70% said soil and water conservation had labour constraint in 1999, 70% in 2000 and about the same percentage (71%) in 2001.

Family members (78%) provided most labour for water and soil conservation, followed by hired labour (21%) and the rest (1%) was hired labour. A greatest percentage (57.3%) reported there was no labour constraint on establishment and maintaining trees in 1991, 59% reported no labour constraint in 2000 and 55.4% reported no labour constraint in establishment and maintaining trees in 2001. Family members (85%) contributed most labour for establishment and maintaining of trees in 1999-2001 the rest (14.9%) was hired labour.

48.2% reported that there was labour constraint on livestock production in 1999, 51.8% said in 2000 and 51.2% in 2001. Family members (77.5%) were the greatest source of labour for livestock production between 1999 and 2001 while the rest 22.5% was hired labour.

### 3.5.5 Failure of implementation due to labour shortage

Majority of respondents (79%) agreed that there were enterprises/technologies, which were not implemented due to a labour shortage.

#### 3.5.5.1 Enterprises that failed due to shortage of labour

Most respondents (46.6%) reported that tree planting wasn't possible because of labour shortage, followed by manure application (35.4%). The least enterprise that failed due to labour shortage was weeding (18%).

### 3.6 Credit

#### 3.6.1 Credit reception

Most households 69.3% did not receive any credit during the last three years. The rest 30.7% had received credit. Among those who received credit, 59% received cash credit, while the rest (41.2%) received it in kind.
3.6.2 Type of credit providers

The bank was the highest recorded provider of credit with 29.4 percentage responses followed by friends and relatives (26.5%) and co-operatives (14.7%). The least provider of credit was Entandikwa 1 with 2.9%. See bar graph below.

![Bar graph showing type of credit provider](image)

3.6.3 Mode of repayment

Most of the households (80%) who received credit were meant to pay it back in cash while 15% paid in form of a revolving fund and 5% paid it in kind. On average 288,190/- was borrowed by each household with a maximum and a minimum of 20,000,000/- and 300/- respectively.

3.6.4 Repayment period

Majority of the credit (51.2%) was required to be repaid between 0-5 months followed by 6-10 months (24.3%) and the rest (17.1%) between 11-15 months. See pie chart below.
3.6.5 Rate of interest per month

The average interest rate per month was 24.3%/- while the maximum and minimum interest rates were 51% and 0.5% per month respectively.

3.6.6 Training before going for credit

73% of the total respondents reported not to have received any information or training on how to use the credit before getting it. The rest (27%) received information or training on how to use the loan. See pie chart below.
3.6.7 Kind of training received before credit was given

Most respondents indicated that business management was the major training component they mostly received, followed by sustainable agriculture (37.5%). The least training component recorded by the respondents was post harvesting (6.3%). See bar graph below.

![Bar graph showing kind of training received before getting credit](image)

3.6.8 Use of credit

Ten percent (10%) of those who received credit used it on livestock production, while others used the loan for cash crops (9%), food crops (9%), school fees (8%), and vegetable crops (8%).

Vegetable production was given first priority followed by cash crops, livestock (third), food crops and health (fourth).

The average amount of credit spent on livestock was 252,142/- with a maximum and a minimum of 1,070,000/- and 35,000/- respectively while cash had an average expenditure of 185,500/- and school fees (185,000/-). The least item on which credit was spent on was fuel wood (30,000/-).
3.7 Marketing

3.7.1 Sale of farm produce/livestock products

Almost all respondents (96%) reported that they sell some of their farm produce/livestock products and the rest (4%) do not sell any. See pie-chart below.

3.7.2 Products sold

The major sold farm produce/livestock products are maize and coffee (19%) followed by cotton (16%), cassava (15%), Irish potatoes (9%) and Groundnuts (8%). The least sold products are sweet potatoes and beans (1%).

3.7.3 Place where farm produce/livestock products are taken to sell

Most of the respondents sold their produce from the farm gate (70%), followed by market (24%). The least percentage of places where farm produces are sold were schools and cooperatives (1%). See graph below.
3.7.4 Distance travelled to markets

Of those who do not sell their farm produce at the farm gate, 69.7% travel between 0.1km and 5km, 18.2% travel more than 10km while 7.8% travel between 5.1 and 9.9kms in order to access market for their produce. See pie chart below.

23.8% sell their produce outside the above-described area while 76.2% sell within that area.
3.7.5 Marketing problems faced

The marketing problems recorded by the respondents varied from low production (62.5%), lack of market for the produces (25%) and low prices (12.5%). See pie chart below.

![Pie chart showing percentage distribution of reasons why produce is not sold](chart.png)

3.7.6 Difficulties in marketing farm produce

Most respondents (87%) had difficulty in marketing produce from their farm enterprises while the rest (13%) had no difficulties.

3.7.6.1 Farm enterprises facing marketing problems

Among others, the farm enterprises that mostly face marketing problems include; maize (25.2%), coffee (16.5%), cassava (15%), cotton (11.8%) while the least affected were sweet potatoes (0.8%) and sorghum (0.8%). See bar graph below.
Most respondents (32.3%) face problems in transporting their produce to distant markets where market prices are good, 23% have problems with engaging in other economic activities. The least number of respondents was recorded in the problem of engaging in hiring bicycles (1.6%). See bar graph below.

3.7.6.2 Problems faced in marketing farm produce

Most respondents (32.3%) face problems in transporting their produce to distant markets where market prices are good, 23% have problems with engaging in other economic activities. The least number of respondents was recorded in the problem of engaging in hiring bicycles (1.6%). See bar graph below.
3.7.6.3 Remedies to the farm produce marketing problems

Most households (60%) have no solution to the above problems while 15% reported that they usually store their produce until prices are high or they take their produce to distant markets where prices are good (15%). The least percentage (3.3%) reported that engaging in other economic activities was the solution. See bar graph below.
3.7.7 Need for marketing information

Market identification (48.2%) is the information mostly sought by the respondents in order to ease marketing of their farm produce. The second most needed information was knowledge about prevailing prices (24.7%) followed by identification of marketable crops (farm produce with inelastic demand) (16.5%). The least information needed is transport availability (3.5%).

See bar graph below.
### 3.7.8 Kind of roads in the village

Ninety one percent (91%) reported that the type of roads which pass through their villages are feeder roads, while 5.1% reported foot roads and 3.8% reported main roads.

See bar chart below.
3.8 Information and Technology adoption

3.8.1 Livestock

3.8.1.1 Possession of different livestock species

Among those who had zebu cattle species, each one of them had an average of 3 animals with a maximum and minimum of 35 animals and 1 animal respectively.

Zebu bulls more than three years old while have an average of about 2 bulls with a maximum and minimum of 5 bulls and 1 bull respectively.

In addition, the zebu heifers and bull calves between the age of one month and three years in an average range of 1 - 2.

Cross cows have an average of 1 with a maximum and minimum of three and one respectively, while cross bull more than three years old have an average of one. The cross heifers and bull calves between the age of one month and three years are on an average of one per household with a maximum and minimum of one.

Nobody had either Ankole or grade cattle species.

Among those who had female and male sheep, each household had an average of about 3 sheep with a maximum and minimum of 6 and 1 respectively.

Those who either had goats for either local, dairy or meat species had an average range of about 1 - 5 goats with a maximum and minimum range of 1 - 8 goats.

Other male and female livestock had an average of 3.4 per household with a maximum and minimum of 14 and 1 respectively.

3.8.1.2 Possession of poultry

A good number of households also had local poultry for dual purposes as reported that each household had an average of 13 birds of local dual purpose species while a few of those who had exotic poultry for dual purpose had average of 1 bird, exotic poultry for eggs were on an average of 6 birds per household.
### 3.8.2 Importance of livestock

About 94% of the respondents indicated that the importance of livestock to them home consumption food. Also 91.1% indicated that livestock is important as a source of income, use of manure (58.9%), social cultural functions (57.8%), security (26.7%), drought power (20%), status (20%).

### 3.8.3 Person consulted about change in livestock farming

The respondents reported that when they want to change the practice in livestock farming they mostly consult veterinary officers (44.8%) and extension staff (20.8%). The least source of consultant reported was the family members (6.3%). See bar graph below

![Bar graph showing percentage distribution of person consulted for change in farming practice](image)

### 3.8.4 Information sought about livestock

The major information sought from the above sources was reported to be mostly pest and disease control (31.7%), followed by animal feeding (26.2%), disease diagnosis (24.6%) and Artificial insemination (A.I) (10.3%). The least information sought is information on housing (7.1%). 57.1% reported that they got information they wanted, while 42.9% reported not to have got it from the above sources.
3.8.5 Accessibility of veterinary services

59.3% of the respondents reported to have access to veterinary services while the rest (40.7%) reported not to have accessibility to veterinary services. See pie chart below.

3.8.6 Kind of veterinary information Accessed
Most respondents (45.3%) reported that they access information about the treatment of animals, followed by pests and disease control (40.6%) and feeding (7.8%). The least information accessed is housing (1.6%). See bar graph below.

![Bar graph showing information accessed by respondents.]

### 3.8.7 Type of fodder given to animals

The respondents reported that they mostly cut for their cattle banana stems (28.9%) followed by Stover (26.3%). The least cut fodder for cattle were Napier (2.6%), kikuyu (2.6%) and Tanzanian (2.6%). See bar graph below.
3.8.8 Fodder bought from off-farm

The majority of respondents (71%) reported that they do not buy fodder from off-farm for their animals, while 29% reported they normally buy it.

Among those who normally buy fodder, a majority (38%) bought Napier, 24% bought banana stem cuttings, and 17% bought maize Stover. The least percentage of respondents bought Tanzanian grass.

3.8.9 Information needed about fodder

37.6% of the respondents reported that they mostly want to know information concerning fodder management, while 30.8% reported they want to know about fodder use by type in milk production and 22.2% want to know about fodder establishment. The least kind of information needed about fodder for increased livestock production is pasture storage (2.6%). See bar graph below.
3.8.10 Months when fodder is bought

The respondents who normally buy fodder reported that they buy fodder during January (29.5%), and February (29.5%) followed by March (18.9%). The least percentage of respondents bought fodder during November (1.1%). No respondent reported to have bought fodder during the months of July, August and September; See graph below.
3.8.11 Place where the animal is kept

Majority respondents indicated kept their cattle outside (69%) while 19% and 8% said they keep their cattle in a kraal and house respectively. The smallest percentage (4%) keeps cattle in a kitchen. See bar graph below.

3.8.12 Use of bedding for cattle

Majority of the respondents (92.6%) do not use bedding for their cattle while only 7.4% reported to use them.

Among those who used bedding for their cattle, 33.3% used stems of Napier grass, 33.3% used banana leaves.

Those who reported as not having used bedding for their cattle did so because it's not necessary for animals (56.5%) followed by ignorance (37.1%). The least reasons reported were lack of labour (3.2%) and bedding materials being expensive (3.2%).
3.9 Cattle dung management

3.9.1 Cattle dung usage

Cattle dung is mostly used for making composite manure (39.6%) or is scattered in the gardens (37.7%). The least percentage of respondents reported that they burn the dung (7.5%), used for smearing baskets/houses (7.5%) or heaped it in one place (7.5%). See bar graph below.

![Bar graph showing the usage of cattle dung](image)

3.9.2 Source of knowledge about cattle dung management

Most respondents got to know about cattle dung management from either their fellow fanners (45.3%) or extension workers (45.3%). The rest (13.2%) got to know about it from NGOs/ CBOs.

3.9.3 Quality of farmyard manure

Most respondents (52.1%) are not satisfied with the quality of farmyard manure while 47.9% reported that they were satisfied. The respondents reported that they mostly need information about farmyard preparation (43.8%), application (36.2%) and management (20%).
3.10 Horticulture

3.10.1 Horticultural Crops grown in 2001

The most grown horticultural crops in the respondents' farms in 2001 were jackfruits (11.2%), cabbages (9.6%), passion fruits (9.6%) and tomatoes (8.8%). The least grown crops included lemons (0.4%), pumpkin (0.4%) and vanilla (0.4%).

The most important purpose or use of these crops was for food (74.4%) followed by income (24.4%), the least purpose was shade (0.4%).

3.10.2 Horticultural crops grown in 2000

The most grown horticultural crops in the respondents' farms in 2000 were jackfruits (12%), cabbage (10.3%), tomatoes (9%) and passion fruits (8.1%). The least grown crops included lemons (0.4%), pumpkin (0.4%).

The mostly reported purpose or use of these crops was for food (73.7%) followed by income (24.6%), the least purpose was medicine (0.9%) and shade (0.9%).

3.10.3 Horticultural crops grown in 1999

The mostly grown horticultural crops in the respondents' farms in 1999 were jackfruits (12.6%), mangoes (12.1%), passion fruits (10.7%) cabbage (9.8%) and avocado (8.4%) respectively. The least grown crop was cynrida (0.5)

The mostly reported purpose or use of these crops was for food (76.8%) followed by income (22.4%), the least purpose was medicine (0.4%).

3.10.4 Horticultural crops introduced in the last three years

Most respondents reported that the following were the horticultural crops introduced in the last three years: - jackfruit (13.5%), passion fruit (10.8%), avocado (9.5%), Pineapples (8%), Yams (8%), Tomatoes (8%) and Cabbages (8%) respectively. The least reported horticultural crops grown during the last three years were; Onions and Amaranthus red all with a percentage response of 1.4%
3.10.5 Source of horticultural crops planted during the last three years

The respondents also reported that the agency or source of crops was mainly the market (49%); followed by fellow farmers (30%), while the least source reported was NGOs (3%). See bar graph below

![Bar graph showing agency/source of crops](image)

3.10.6 Interest in growing other horticultural crops

The greatest percentage (89%) of the respondents said that they have interest in growing other horticultural crops, while the rest (11.3%) said they have no interest.

Of those who had the interest in growing other horticultural crops, 41.7% indicated that they have interest in growing pineapples followed, by cabbages (33.3%). Other crops listed include garlic (8.3%), onions (8.3%), and vanilla (8.3%).

The information needed about the crops mostly included: - their management (pest and disease control) (37.8%), followed by source of seeds/planting materials (24.4%), establishment (21.3%) and varieties available on market (16.5%) respectively.
3.11 Community Based Natural Resource Management (NRM)

3.11.1 Source of information on natural resource management

The information on natural resource management (agro-forestry, soil and water conservation, spring protection, soil fertility) is mostly got from fellow farmers (28.4%) followed by extension workers (24%), Media (Radio) (16%), NGOs/CBOs (9%) and agricultural officers (9%). The least reported sources are forest officers (1.1%) and local councils (1.1%). See bar graph below

3.11.2 Technologies learnt through extension agencies

The greatest percentage (95%) of respondents reported that they had learnt crop production through extension agencies over the last three years; the mostly specified area of crop production was Banana production. Other technologies, which respondents learnt included: Soil improvement (49%), soil conservation measures (47%), Tree establishment/intervention (40%), Land preparation and planting (32%) and livestock production (32%). It is important to note that concerning livestock production most respondents specified that they mostly learnt pests and disease control, artificial insemination and cattle dung management.

3.11.3 Technologies being practiced through extension agencies
The greatest percentage (94%) of respondents reported that they had been practicing crop production through extension agencies over the last three years; the mostly specified area of crop production being practiced was Banana production. Other technologies, which the respondents are practicing included; Soil improvement (46%), soil conservation measures (43%), Tree establishment/intervention (31%) and Land preparation and planting (30%). The least practice recorded was farm planning and record keeping (8%).

**3.11.4 Technologies familiar with before extension influence**

The greatest percentage (92%) of respondents indicated that they were familiar with crop production before extension influence over the last three years, followed by livestock production (91%). The mostly specified area of livestock production was pests and disease control. Other technologies that the respondents were familiar with included; tree establishment/intervention (30%), Land preparation and planting (30%), Soil improvement (28%), Harvesting and storage (26%) respectively.

**3.11.2 Tree management**

**3.11.2.1 Kind of trees in the farms**

The following were most kind of trees recorded by the respondents; Jack fruit (10%), Mango (9%), Eucalyptus (7%), Avocado (6%), Acacia (5%) and Pawpaw (5%). Seventy seven percent (77%) of these trees were planted while 23% were naturally grown. Forty five percent (45%) of the respondents indicated that trees on their farms were scattered all over the farm, followed by intercropped with crops (32%). The least percentage of responses (7%) indicated woodlot type of configuration. See figure below.
The greatest percentage of respondents reported that they used trees on their farms as a source of food (42%), followed by source of firewood (18%), for building (15%). See figure below.

3.11.2.2 Uses of trees on the farm

The greatest percentage of respondents reported that they used trees on their farms as a source of food (42%), followed by source of firewood (18%), for building (15%). See figure below.
3.11.2.3 Information asked about tree management.

Most respondents (60%) reported that they don’t find out more about the species of trees they plant in their farms while the rest (40%) find out about the tree species.

Those who find out about the tree species they plant in their farms mostly ask about tree management (45.7%), varieties available 45.7% and grafting (8.7%). The source of this information in most cases was forest officers (34.1%), agricultural officers (19.5%), and extension workers (19.5%). The least persons approached were the local councils (2.2%) and the sub county chiefs (2.4%). See bar graph below.

The following information is not provided so far: - varieties available (36.4%) various uses of tree species (21.8%), nursery establishment and management (16.4%). The least was grafting (7.3%). See bar graph below.
3.11.2.4 Sources of tree seedlings

The sources of tree seedlings reported mostly were: - within the farm (39.5%), fellow farmers (34.2%) and market (15.8%) while the least sources were local council (1.3%), sub county (1.3%) and forestry department (1.3%). See graph below.

3.11.2.5 Production estimates and income from on farm nursery
The respondents reported the following tree species to be found on the nursery of their farms: eucalyptus (27.3%), musamba (18.2%) and jack fruits (18.2%). See graph below.

3.11.2.6 Quantities of trees produced in the last three years.

The qualities produced in 1999 ranged between 0-100 trees (80%) and between 100 and 500 trees (20%). The quantities produced in 2000 ranging between 0 and 100 trees were (87.5%) and 101-500 trees were 12.5%.

3.11.2.7 Tree seedlings planted out

The number of seedlings planted out in 2001 was in range of 50-100 trees with an average of 77.5 trees, while in 2000 the tree seedlings planted out were in the range of 200-600 with an average of 400 tree seedlings and 1999 the average was 200 tree seedlings. The income obtained from the sale of tree seedlings for the years 1999-2001 was the range of 30000/- - 140000/-.

3.12 Investment in the land

The table below shows kind of practice respondents mostly paid for or would have paid during the last one year (2001) in order to improve their land.
### 3.12.1 Soil and water conservation

#### 3.12.1.1 Fallowing land

Fifty percent (51%) of the total respondents reported to be practicing fallowing. The main reasons for not practicing fallowing the land were lack of enough land (92.5%) and lack of knowledge (7.5%).

Those who leave their land to fallow mostly used the natural type of fallow (82.5%) while the rest (17.5%) used improved type of fallow.

The crops grown in the field in case the type of fallow is improved include canavaria (28.6%), crotalaria (14.3%) and calliandra (14.3%).

#### 3.12.1.2 Reasons for fallowing land

Seventy five percent (75%) of the respondents reported that the reason as to why they leave their land to fallow was to restore soil fertility, followed by drop in crop yields (8.3%), Can not prepare the land (lack of labour and cash) (6.7%) and lack of seeds to plant respectively. See graph below.
Most respondents reported that they fallow their land for a period of two years (36.2%) fallowed by one year (27.7%). The least duration reported was one and a half years (4.3%). See graph below.

3.12.1.3 Length of the fallow

Most respondents reported that they fallow their land for a period of two years (36.2%) fallowed by one year (27.7%). The least duration reported was one and a half years (4.3%). See graph below.
61% of the total respondents reported that they had problems with leaving their land to fallow.

The problems faced in the course of land fallowing include; uncontrolled bush burning (51.6%), followed by labour constraints to open the land again (22.6%). See graph below.

However the information needed in order address the above problems include more agricultural training (59.4%), loan accessibility (34.4%) and growing of legumes in a farm (6.3%).
3.12.1.4 Comparison of yields between 5-10 years ago and current yields.

The majority of the respondents reported that the current yields are less (78.4%) than the yields 5-10 years ago. While 15.9% of respondents said the current yields are more than yields 5-10 years ago and the rest 5.7% reported that it was still the same. See pie chart below.

3.12.1.5 Causes of change in yield

The causes of the above variations in yields were exhaustion of soil nutrients (33.8%), soil erosion (21.3%), over cultivation (20%), poor farming practices (17.5%) and change of weather (7.5%) respectively. See graph below.
In addition, most respondents (87%) also reported similar problems are prevailing on their neighbour's farms.

3.12.1.6 Soil erosion problems

The majority (93%) of the total respondents reported soil erosion as a problem on their respective farms.

Those who reported soil erosion existence on their respective farms, face mainly rill erosion (36%), crop roots exposed (36%) and crops washed away (22.5%). See graph below.
Fifty percent (50%) of the total respondents agree that conservation activities have increased agricultural production in their area. Also 23.3% strongly agree and 14% were undecided. Those who disagree were 10.5% while those who strongly disagree were 2.3%.

The biggest percentages of respondents (42.7%) agree that the way conservation activities are organized in their area motivates the community action group. However, 21.3% were undecided, 21.3% disagree and 7.9% strongly disagree. Only 6.7% of the respondents strongly agree that organization conservation activities motivate the community action group.

The greatest percentage (47.7%) of the respondents strongly agrees that community members are always wishing to listen to advice from field worker/officer regarding soil and water conservation. Also 39.5% agree, 15.8% disagree, 4.7% were undecided and 2.3% strongly disagree.

About 37.3% of the respondents disagree with the statement that community members consider land degradation as over exaggerated; while 20.5% agree with the statement and 17% of the respondents strongly agree, 17% were undecided. Only 8.4% strongly disagree.
The majority of the respondents (41%) agree with the statement that community members wish to take remedial action but constrained by age, health, and personal circumstances. About 24% strongly agree with the statement, 10% are undecided, 14% disagree and 10.3% strongly disagree.

Fifty eight percent of the respondents strongly agree with the statement that community members recognize need for attention to soil productivity. Also 37.5% agree with the statement while 2.3% were undecided and 2.3% disagree.

About 51.2% of the respondents agree with the statement that community members wish to take remedial action but available solutions are too costly; 18.6% strongly agree, 15.1% undecided. Those who disagree with the statement were 12.8% and 2.3% strongly disagree.

The highest percentage of respondents 44.7% agree with the statement that community members wish to take remedial action but have insufficient information to make decisions. Also 37.6% strongly agree with the statement 9.4% are undecided, 5.9% disagree while 2.4% strongly disagree.

Most respondents (43.5%) strongly agree with the statement that community members wish to take remedial action but availability is the constraint. In addition, 42.4% agree with the statement while 7.1% were undecided. 4.7% disagreed and 2.4% strongly disagreed.

3.13 Collective action for natural resources management

3.13.1 Involvement in a group

Forty-four percent of the total households had an adult (or adults) belonging to a group (project) or cooperative during the past 5 years. The rest (56%) had no member belonging to a group or cooperative.

Of those who belonged to a group or cooperative, 91% reported their groups/ cooperatives still existed, while 9% reported their groups no longer existed by the time of our visit.

3.13.2 Number of members in a group
Most groups where the household members belonged to had the number of members ranging between 1-25 members (42.5%) and 26-50 members (42.5%). See the graph below.

![Graph showing number of members in groups]

### 3.13.3 Distance travelled to usual meeting/working place

Sixty four percent (64%) of group members had to travel at least 1 kilometre to usual meeting/working place. The least number of respondents (2.1%) reported walking a distance of 10 kilometres while 6% worked 20 kilometres.

### 3.13.4 Groups and natural resource management

29.6% of the total respondents belonged to groups that address issues of natural resource management (soil, water, land, forests, etc) while 70.4% were not members. See pie chart below.

![Pie chart showing groups and natural resource management]
3.13.5 Group formation

Of the total groups that existed groups, 76% were formed through community's own initiative, 8% of the groups were formed through government influence, 8% through NGO/CBO influence and 4% through peer group pressure. See graph below.

3.13.6 Group affiliation

32.7% of the total respondents reported their groups as being affiliated to a larger organization/federation.

Those groups affiliated to bigger organizations benefited from the affiliation in form of agricultural training (67%), financial accessibility (22%) and market accessibility (11.1%).

3.13.7 Membership to Natural Resource Management group

The majority respondents (97.6%) reported that they would like to be members of a natural resource management group given chance, while 2.4% reported not to be interested.

Of those who would want to be members of a natural resource management group, 74.8% reported if they joined the group, they would benefit from agricultural training offered,
19.6% said they would benefit from loan accessibility, while 5.6% said they would benefit from market accessibility.

### 3.13.7 Purpose and activities of the group

Ninety-seven percent of the groups reported were of C.B.O type while the rest 3% are reported their groups as being NGO’s.

The main purpose of these groups was poverty eradication (58%), followed by helping while a member is in need (21%); market accessibility (12%) and Loan provision (9%) respectively. See graph below.

![Bar graph showing purpose and activities of the group](image)

Most members joined their groups between 1999 and 2002 (65.7%), followed by 1994-1998 (25.7%) and those who joined their groups earlier than 1988 were 5.7%, while the least percentage of household members (2.9%) joined their groups between 1989 and 1993.

### 3.13.8 Activities of the groups
The activities engaged in by group members include; pooling funds (37.9%), growing crops together (27.6%) and animal rearing (10.3%). The least activity reported was exchange of ideas (3.4%). See graph below.

3.13.9 Technologies/innovations adopted through the group

Most respondents (33.3%) have not adopted any technology/innovation from their respective groups while 23.8% had adopted commercial farming/marketing and agro-forestry (23.8%). The least percentage of respondents (19%) had adopted horticultural management technologies/innovations. See graph below.
3.13.9 Groups addressing issues of Natural Resource Management (NRM)

Thirty five percent (35%) of the respondents reported existence of groups in their villages addressing issues on natural resource management. The rest (65%) reported the non-existence of such groups in their respective villages.

The groups addressing issues of NRM mostly are involved in activities concerning agro-forestry (45%) followed by agricultural training (41%) and the least activity reported was vegetable cultivation (14%).

3.13.10 Technologies group members are using and promoting.

Majority respondents (42%) reported that group members are promoting agricultural training and agro-forestry (37%). The least technology being used and promoted is vegetable cultivation (21%). See pie chart below.
Most serious land and water problems affecting community action groups.

The greatest percentage (26%) of the respondents in their opinion reported that the most serious land and water problems affecting community action groups in their areas include; soil erosion (26%), followed by land degradation (24%). The least number of respondents reported small size of land (9%). See graph below.
3.14 Incentives for environmental management and communication channels

3.14.1 Factors that glues together members in a group.

Most respondents 33% reported that they glued together in their groups by the rules and sanctions with in the group, followed by goals (19%), co-operations (19%), Membership fee (10%) and Sound leadership (10%). The least gluing factor reported was resources (8%). See graph below.

3.14.2 Factors glues together members in groups

The major factor listed by the majority respondents was rules and sanctions (31%), followed by cooperation (20%), Resources (18%) and Goals (13%). The least reported factor was sound leadership (8%). See graph below.
3.14.3 Sources of information on technologies related to environmental management.

Twenty-five (25%) of the total respondents reported that their source of information on technologies related to environmental management was extension workers (25%) and media 25%, followed by fellow farmers (18.3%) and agricultural officers (15%). The least percentage of respondents reported as obtaining information from cooperative societies (1.7%). See graph below.
3.15 Leadership within groups

3.15.1 Election of group leaders

Ninety percent (90%) of the respondents reported that leaders in their groups are voted into power following the principle one-man one vote. The rest of the respondents (10%) said no elections are done in their groups.

3.15.2 Rating of leadership groups

The majority of the respondents (71.8%) rated the leadership in their groups as being good, while the rest (28.2%) reported their group leadership as being average.

3.15.3 Qualities of good leadership

Majority respondents (25%) considered good leadership as the one with transparency, 14% considered good leadership as one in which the leaders are honest. The least percentage (5%) considered good leadership where leaders are engaged in communal work participation. See graph below
4.0 Conclusion

The foregoing account gives an overview of the livestock status in the three districts. Detailed reports for each district are available specifying. The report is not comprehensive but indicative of the poor livestock farmers’ situation in the country. Further studies of a longer term and coverage could be a good follow up to this for comprehensive documentation. This study gives a good starting point.
## Annex One: CSOs in livestock promotion within the Lake Victoria Basin

<table>
<thead>
<tr>
<th>No.</th>
<th>Organisation</th>
<th>Contact address</th>
<th>Services/Activity</th>
<th>Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Send a Cow Uganda</td>
<td>Plot 446 Kitakule Crescent Namirembe Hill P. O. Box 23627 Kampala - Uganda Tel. +256-41-271035 Fax. +254-41-348553 Email: <a href="mailto:sendacow@africaonline.co.ug">sendacow@africaonline.co.ug</a></td>
<td>Poultry farming</td>
<td>Iganga District Sironko District Kamuli District Tororo District Soroti District Kumi District</td>
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<tr>
<td>2.</td>
<td>Bukoli Rural Allied Youth/Women Development Association</td>
<td>P. O. Box 289 Bugiri</td>
<td>Poultry farming</td>
<td>Bugiri District</td>
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<tr>
<td>3.</td>
<td>Bukooli Development Forum</td>
<td>P. O. Box 37 Bugiri</td>
<td>Livestock services</td>
<td>Bugiri District</td>
</tr>
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<td>4.</td>
<td>Uganda National Farmers’ Association</td>
<td>P. O. Box 81 Bugiri</td>
<td>Veterinary services</td>
<td>Bugiri District</td>
</tr>
<tr>
<td>5.</td>
<td>ASASURUDEUSAID</td>
<td>P. O. Box 37 Ruhinda County</td>
<td>Poultry services</td>
<td>Bushenyi District</td>
</tr>
<tr>
<td>6.</td>
<td>Busshenyi District Farmers’ Association (UNFA)</td>
<td>P. O. Box 37 Busshenyi</td>
<td>Livestock Services</td>
<td>Busshenyi District</td>
</tr>
<tr>
<td>7.</td>
<td>Busshenyi Diary Industries Ltd. (BUDICO)</td>
<td>C/o Vet. Sub-sector P. O. Box 1 Busshenyi</td>
<td>Diary Industry</td>
<td>Busshenyi District</td>
</tr>
<tr>
<td>8.</td>
<td>Diary Corporation (MCCS)</td>
<td>P. O. Box 37 Busshenyi</td>
<td>Govt. project Kigarama for AI Service</td>
<td>Busshenyi District</td>
</tr>
<tr>
<td>9.</td>
<td>Land '0 ' Lakes</td>
<td>P. O. Box 4795, Kampala Email: <a href="mailto:lol@starcom.co.ug">lol@starcom.co.ug</a></td>
<td>Private sector Dairy Dev. Prog. Supply semen to farmers</td>
<td>Busshenyi District</td>
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<tr>
<td>10.</td>
<td>The Gospel of Jesus Christ</td>
<td>P. O. Box 37 Busia</td>
<td>Animal Husbandry</td>
<td>Busia District</td>
</tr>
<tr>
<td>11.</td>
<td>Buwolomera Bunyoro Abantu Development Association</td>
<td>P. O. Box 631 Iganga Tel. 043-52359</td>
<td>Diary Farming</td>
<td>Iganga District</td>
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<tr>
<td></td>
<td>Community Association for Rural Development</td>
<td>P. O. Box 544 Iganga</td>
<td>Zero Grazing, Organic Farming, Fish Farming and Poultry Management</td>
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<td>13.</td>
<td>Community Based Organisation for Rural Development</td>
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<td>Zero Grazing, Organic Farming, Bee Keeping, Fish Farming and Poultry Management</td>
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<tr>
<td>14.</td>
<td>Kasolo Bakusekamajja United Farmers Association</td>
<td>P. 0. Box 210 Iganga Tel. 049-52359</td>
<td>Bee-keeping, Mixed farming and Agroforestry</td>
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<td>15.</td>
<td>IADAC</td>
<td>P. 0. Iganga</td>
<td>Support AIDS victims especially prevention of diseases, improvement of community incomes</td>
<td>Iganga District</td>
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<td>16.</td>
<td>Kalungami Health Care Programme</td>
<td>P. 0. Box 17 Kaliro</td>
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<td>17.</td>
<td>Red Cross</td>
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<td>18.</td>
<td>Heifer Project International</td>
<td>P. 0. Iganga</td>
<td>Improves livelihood of the poorest of the poor</td>
<td>Iganga District</td>
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<td>19.</td>
<td>Produce for Income, Employment and Development Farmers</td>
<td>P. O. Box 619 Iganga</td>
<td>Poultry farming</td>
<td>Iganga District</td>
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<td>No.</td>
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<td>20.</td>
<td>Support Women in Agriculture and Environment</td>
<td>P. O. Iganga</td>
<td>Nutrition improvement and income projects for women</td>
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<td>21.</td>
<td>Africa 2000 Network Uganda</td>
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<td>Information documentation and dissemination, livestock distribution, Fishing</td>
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<td>22.</td>
<td>Women’s Diary Project</td>
<td>P. O. Box 61 Iganga</td>
<td>Diary products and animal husbandry</td>
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<td>23.</td>
<td>Adult Education Centre</td>
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<td>Fishing</td>
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<td>24.</td>
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<td>AI Services, Goat housing project</td>
<td>Jinja District</td>
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<td>25.</td>
<td>Bosoga Pensioners Welfare Association</td>
<td>P. O. Box 1610 Jinja Buwenge</td>
<td>Bee-keeping, Poultry farming</td>
<td>Jinja District</td>
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<tr>
<td>26.</td>
<td>FESTCA</td>
<td>P. O. Jinja</td>
<td>Farm network, Financial institution offering loans to farmers</td>
<td>Jinja District</td>
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<td>27.</td>
<td>Foundation for Inter-community Assistance</td>
<td>P. O. Box 1659 Jinja</td>
<td>Credit and training farmers</td>
<td>Jinja District</td>
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<td>28.</td>
<td>Help the Aged</td>
<td>P. O. Jinja</td>
<td>Purchase one animal facility</td>
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<td>33.</td>
<td>Uganda fisheries and fish conservation</td>
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<td>Fishing industry, fish production, fish conservation and fish protection</td>
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<td>34.</td>
<td>Uganda National Farmers Association</td>
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<td>Train farmers on livestock and their products improvement</td>
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<td>Urban Rural Environment and development Project</td>
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<td>Fish ponds</td>
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<td>36.</td>
<td>Wanyange Children's Christian Fund</td>
<td>P. 0. Jinja</td>
<td>Distribute goats and pigs to orphans</td>
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<td>Uganda Women Finance Trust</td>
<td>P. 0. Jinja</td>
<td>Farm network, financial institution by providing loans to farmers</td>
<td>Jinja District</td>
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<td>38.</td>
<td>Bufumira Island Development Association</td>
<td>P. 0. Box 1164 Kampala</td>
<td>Setting normadic fishermen into developmental fishing villages and agriculture</td>
<td>Kalangala</td>
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<td>39.</td>
<td>Action Aid Uganda</td>
<td>P. O. Box 676 Kampala</td>
<td>Development activities such as income generation relating to livestock</td>
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<td>40.</td>
<td>Akiika Embuga Women Self-help Association</td>
<td>P. O. Box 6650</td>
<td>To develop Women's skills which are of economic benefit in poultry farming.</td>
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<td>41.</td>
<td>Alliance for Rural Development Organisations</td>
<td>P. O. Box 11842 Kampala</td>
<td>Sustainable agriculture, Environment, Networking, women in development and Appropriate technology</td>
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<td>42.</td>
<td>Animal Traction Development Organisation</td>
<td>P. O. Box 40010 Kampala</td>
<td>Promotion of use of animal power in Agric, Transport and agro livestock training.</td>
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<td>43.</td>
<td>Association for Country wide Afforestation</td>
<td>P. O. Box 527 Mengo Kisenyi</td>
<td>Agriculture, Ecology and Environment</td>
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<td>44.</td>
<td>Bukoggolwa widows and orphans care centre</td>
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<td>Poultry farming, diary farming</td>
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<td>45.</td>
<td>Bukora Integrated Action for development</td>
<td>P. O. Box 7178 Kampala</td>
<td>Provision of agricultural inputs and loans</td>
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<td>Poultry farming, agriculture</td>
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<td>47.</td>
<td>Care International in Uganda</td>
<td>P. O. Box 7280 Kampala</td>
<td>Improved agriculture, fish farming, ox-ploughing training</td>
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<td>48.</td>
<td>Central Uganda farming association</td>
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<td>49.</td>
<td>Church of the rock</td>
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<td>Fanning and Animal husbandry</td>
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<td>50.</td>
<td>Danish association for International Co-operation</td>
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<td>Crop husbandry and farmer training</td>
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<td>51.</td>
<td>Environmental Alert</td>
<td>P. O. Box 11259 Kampala</td>
<td>Organic farming, apiary, fish farming, animal traction, poultry, diary farming, small ruminants and piggery</td>
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<td>52.</td>
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<td>53.</td>
<td>Foundation for Disabled Employees Development association</td>
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<td>54.</td>
<td>Gwosussa Emwanyi Women's Association</td>
<td>P. 0. Box 7121 Kampala</td>
<td>Poultry farming, educating people on sustainable agriculture.</td>
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<td>Integrated Veterans association</td>
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<td>livestock services</td>
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<td>Iskcon Bhakti Vedanta Institute</td>
<td>P. 0. Box 1647 Kampala</td>
<td>Transmitting vedic theology farming</td>
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<td>Main Activity/Services</td>
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<td>57.</td>
<td>Kitintale Adult Education Association</td>
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<td>58.</td>
<td>Kyosimba Onanya Women Group</td>
<td>P. O. Nsangi</td>
<td>Poultry, Zero grazing and piggery</td>
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<td>60.</td>
<td>Mukono multi-purpose Youth Organisations</td>
<td>P. O. Box 7838 Kampala Tel. 041232716</td>
<td>Poultry farming, cattle keeping, savings and credit scheme</td>
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<td>61.</td>
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<td>62.</td>
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<td>63.</td>
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<td>64.</td>
<td>Nsangi Women's Association</td>
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<td>Animal husbandry</td>
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<td>Organic farming, credit scheme and extension services</td>
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</tr>
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<td>66.</td>
<td>Reinforce WID</td>
<td>P. O. Box 56714 Kampala</td>
<td>Training Income generation in poultry management</td>
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</table>