



THE NEED TO CONSERVE THE ANKOLE LONGHORN CATTLE OF UGANDA: A COMMUNITY PERSPECTIVE;

**USING THE LIFE APPROACH TO DOCUMENTATION OF THE
ANIMAL GENETIC RESOURCES:**

Nyabushozi, Kiruhura District, South Western Uganda

Between February and April 2009



By Elizabeth Katushabe for Pastoral and Environmental Network in the Horn of Africa (PENHA) in collaboration with League for Pastoral Peoples and Endogenous Livestock Development (LPP) and the LIFE Network Africa with financial support from HIVOS – Novib Oxfam Biodiversity Fund, Miserior and Swedbio

ACKNOWLEDGEMENT

Special thanks go to the HIVOS-Oxfam Novib Biodiversity Fund, Misereor, the Swiss Agency for Development Cooperation (SDC) and the Swedish International Biodiversity Programme (Swedbio) at the Swedish Biodiversity Centre (CBM) for providing financial support to the documentation project and this publication.

The opinions expressed in the book do not necessarily reflect those of these organizations.

Herders of Nyabushozi, Kiruhura District, South Western Uganda

KAMPALA
March 2009

TABLE OF CONTENTS

Background	1
Method of documentation	2
1. Description of Ankole cattle and breeding area	2
• What Ankole look like	2
• The Ankole cattle are found in the following areas	3
• Map of the cattle corridor of Uganda	3
• The best area for the Ankole cattle	4
• Map of Uganda's districts of Ankole region	4
2. Social and cultural context	5
• Origin of the Ankole cattle and meaning of name	5
• The first breeders of the Ankole cattle	5
3. Livelihood significance	6
• The products and uses of the Ankore cattle	6
• Socio-culture	6
• Food	6
• Economic	7
• Education	7
• Medicinal	7
• Agricultural	7
• The relationship between the people and their cattle in the Ankore culture	7
4. Management and breeding	7
• The feeding and rearing of the Ankole cattle	7
• Ankole cattle need special care to some little extent but do not need so much pampering	8
• The breeding season for the Ankole cattle	8
• The age at which cows conceive for the first time	8
• The period it takes to conceive again after giving birth	9
• The number of calves per calving	9
• The number of offspring an Ankole cow produces in a lifetime	9
• The number of calves that survive	9
• The life span of an Ankole Cattle	9
• The factors that are considered when selecting an Ankole cow (by importance)	9
• Qualities that make the Ankole cattle special	10

• Advantages and disadvantages of other types of cattle	12
• The breeding methodology used and why it is used	12
• The preferred breeding goals for Ankole cattle	12
• Source for breeding stock and bulls for mating	12
• Only selected bulls are allowed to mate	12
5. Population trends	13
• The percentage of the Ankole Cattle out of the Cattle population in Nyabushozi	13
• The population trend of the Ankole cattle in the last ten years	13
• The future of Ankole Cattle; Threats and Opportunities or Chances for sustainable use	13
• Threats (they would be extinct due to the following factors):	13
• Opportunities or chances for the survival of the Ankole Cattle	14
Reference materials	16
Annexes	17
Annex 1: Participants of the meetings on the documentation of the longhorn cattle held in Sanga, Nyabushozi County, Kiruhura District	17
First meeting, 4th March 2009	17
Second meeting, 5th March 2009	18
Annex 2: Students of Lake Mbuuro Secondary School who participated in the meeting for the documentation of the Ankole long-horn cattle on 6th March 2009	19
Annex 3: Other people met / consulted on the future and conservation of the Ankole long horn cattle documentation	21
Annex 4: A question guide for the documentation of the Ankole long-horn breed (English /Runyankore)	22

BACKGROUND

Between February and April 2009, herders of Nyabushozi, Kiruhura district met with staff from PENHA Uganda, LPP and LIFE Network to carry out a documentation of the Ankole Longhorn cattle. The idea for this project resulted from the participation of the booklet's transcriber (herself a Muhima) in a workshop on "Managing Animal Genetic Resources in Africa; Strategies, priorities, livestock keepers' rights, and the way forward" held in Ethiopia in May 2007. The workshop showed that the existence of an increasing number of local breeds is threatened through crossbreeding and other factors. It made her aware that the Ankole Longhorn cattle are also among the world's breeds being threatened with extinction.

METHOD OF DOCUMENTATION

The LIFE method of documenting indigenous animal genetic resources was employed. This is a conceptual framework which uses participatory and flexible means to understand the breeds from the livestock keeper's perspective.

Arrangements were made and discussions held with people from Nyabushozi (an area for cattle keeping communities) about their views on the future and the need for the conservation of their Ankole Longhorn cattle.

This was done through;

- (1) two consecutive meetings for herders at Sanga Sub-County.
- (2) a meeting with students and teachers of Lake Mbuuro Senior Secondary School.
- (3) visits to homes of herders and government farms.
- (4) consultations with staff of universities and government conservation institutions and farms .
- (5) literature search.

The participants included herders, veterinarians, researchers, conservationists and other stakeholders. About 70 herders and other stakeholders participated in the two Sanga sub-county meetings, 91 students and 5 teachers attended the meeting at the secondary school and 22 other people were met at their homes or work places. Of the 184 participants, 68 were females. The names of all can be found in the Annexes.

Below is a narration of the herders' views about their Ankole Longhorn cattle based on the transcripts of the outputs of the Sanga sub-county meetings. This is supplemented by discussions, comments and views from other stakeholders that were met in different fora during the documentation.

1. DESCRIPTION OF THE ANKOLE LONGHORN CATTLE AND BREEDING AREA

What the Ankole cattle look like:

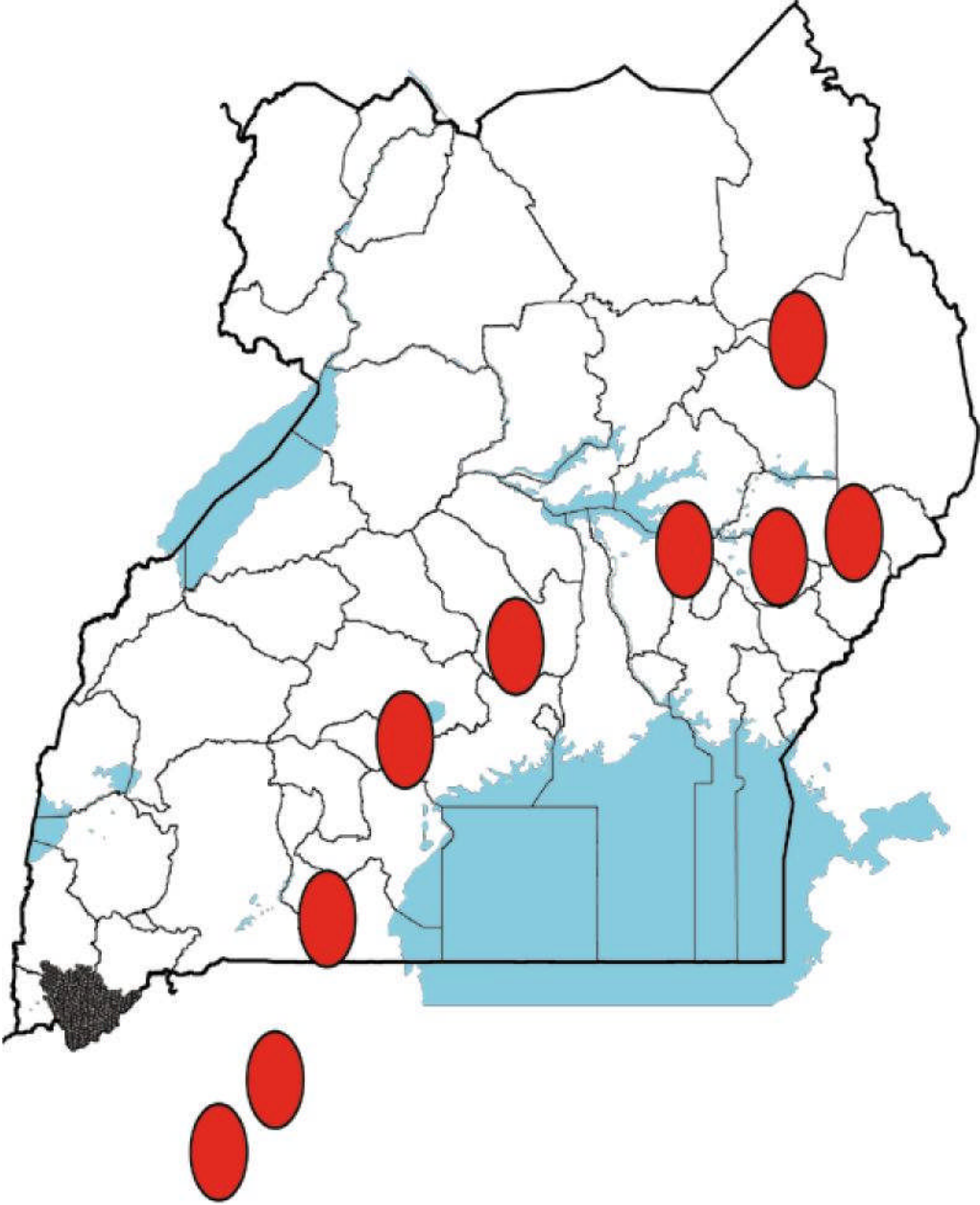
Our Ankole long horn cattle have long white horns though there are those that are hornless. Their eyes, nose and ears are small (however smallness of the nose is relative). They are tall with long legs, have long navels and small humps. They are normally deep or dark brown (Bihogo) though some have different shades of brown (Siina & Gaaju) and others have different colour patterns (mayenje – small spots on the belly) with short hair. They also have a beautiful “moo” (i.e they have a nice sound).

The Ankole longhorn cattle were the first cattle in the whole country and they resist any kind of suffering (ie. they are hardy) and eat little grass.

The Ankole cattle are found in the following areas:

The Ankole Longhorn cattle are found in Nkore / Nyabushozi and the neighbouring areas e.g. Buganda, Bunyoro, Kasese, Karamoja, Luwero, Nakaseke, Nakasongola, Masindi, and in neighbouring countries in Karagwe in Tanzania and in Rwanda. We have also been informed by the elites that they are found all over the world where they have been bred and known as Ankole- Watusi e.g. the Denver zoo in the Colorado and in Texas, USA and in European zoos.

MAP OF THE CATTLE CORRIDOR OF UGANDA



The best area for the Ankole cattle:

The best area for the Ankole cattle is "Nkore" or Ankole. We believe that Nyabushozi County in Kiruhura District (N.B. which is also found in "Nkore") is the best. However the Ankole cattle have done well in areas of Bukanga County in Isingiro District, Kashari in Mbarara (N.B. both these areas are found in "Nkore"). Kiboga District (found in Buganda region) and Masindi District found in Bunyoro region). Generally the Ankole cattle are surviving well in other low lying and sparsely populated areas. *(The areas mentioned are all located in the cattle corridor of Uganda:transcriber's note).*

A map of Uganda showing Districts (Nkore region covered Bushenyi, Ibanda, Isingiro, Kiruhura, Mbarara, parts of Ntungamo and Rukungiri – refer to purple coloured area)



2. SOCIAL AND CULTURAL CONTEXT

The origin of the Ankole longhorn cattle and the meaning of the name “Ankole”

We believe that our Ankole Long Horn Cattle were created by God and they were brought here (in Ankole) by the Abachwezi (*founders of the Ankole Kingdom; Transcriber*). The Long Horn Cattle descended from “Bihogo” (*the first Chwezi Co; Transcriber*).

We also have another legend that says that during the reign of King “Omugabe” Nyabugarobwera Ntare¹, cattle became extinct and people paid “enyonza” fruits as dowry. The King’s men used to roast plantains “ebitookye” for him. And that one day he saw one of the men stealthily eating one of the roasted plantains and he felt guilty on the man’s behalf. He got hold of his bow and arrow which was known as “Enfumura Iguru”, shot at the sky, it rained for four days and on the fifth day when people woke up they found each home full of cattle. Since then they have grazed them in the beautiful land of “Nkore”.

The name “Ankole” is wrong, and the correct one is “Nkore” The writer G. N. Kirindi says that it was the colonialists who named our land “Ankole’ because they could not correctly pronounce the name “Nkore”.

Another name for Nkore is “Kaaro Karungi”. This name is a result of the war between Nkore and Bunyoro. When the Banyoro captured Nkore, they marveled at the beauty of the land and said “aka Kaaro Karungi” meaning “this is a beautiful village”.

There is also another saying about the land of Nkore which says ‘Nkore ekora omunda’ loosely translated “Ankole stabs in the uterus”. This started when a lady, Kibangura, a sister to Ntare 1 the then King of Nkore, lost her son during a war. She was so hurt that she wanted to destroy the throne, however she was restrained and she lamented that “tekiri kaaro karungi yankora omunda” which loosely translates as “it is no longer a beautiful village, it has stabbed me in the uterus”

The first breeders of the Ankole cattle:

The first breeders of the Ankole cattle, are our ancestors, the people of Nkore mentioned below; The Bachwezi (*Founders of Nkore Kingdom and ancestors of the Banyankore*), the Bahima and the Banyankore (*present habitants of the area*).

3. LIVELIHOOD SIGNIFICANCE

The products and uses of the Ankore cattle:

Our cattle are our livelihood because they have several products which are of great importance in our lives and well being. These include socio-cultural, economic, medicinal and other uses as listed below:

Socio-cultural functions:

- They are beautiful and not stout
- They are everlasting
- We use them as dowry or bride price to get a wife
- We use them to create friendship (or strengthen relationships)
- Payment of fine to resolve conflict
- Cleansing sins (e.g. when one abuses a father or an elder or when one kills a person).
- Hides are used for making clothes/dressing, mats or carpets and bedding
- Horns appeal to the eyes but are also used for making beads, trumpets, and violin.
- We use urine for cleaning ‘ebishaabo” and “ebirere” containers for churning milk and keeping and drinking yogurt respectively.

Food:

- We drink the tasty milk that has high fat content and eat the good low cholesterol meat to satisfy our hunger
- Ghee is served as a special soup (eshabwe)
- We used to make bread and gravy out of its blood

Economic uses and functions:

- Our cattle live long
- They rarely fall ill
- They are resistant to hunger and drought
- We use them as a source of income (e.g. sales of live animals for money- hides to those who make shoes, bags, belts and drums, horns for buttons, trumpets, ornaments, handcrafts, and smoking pipes. Hooves are used to produce gum)
- They fetch a higher price than the Nganda breed.
- They produce good dung for energy-biogas
- Our status is rated by the number and beauty of cattle one possesses
- Their maintenance costs us little: e.g. they survive on only grass and water and Nkore has good grass, they survive under any condition and can be owned and managed by anyone (even the poor ones).

Education of our children has been eased since cattle are sold to raise school fees.

Medicinal uses:

- Urine - treats stomach problems and cough (e.g. “Kashumba” a mixture of milk and urine treats fever and cough).
- Dung – used for fixing bones when they are broken (like a cast), it also reduces a baby’s stomach pain e.g. Ankole cow dung would be mixed with water and boiled, and then administered to the baby, it was also used to treat measles; and when a woman lost a baby, dung would be mixed in water, sieved and she would drink it to stop lactation.
- Milk - is medicine for different types of diseases
- Horns - are used to make a tool for inducing bleeding “okurumika” to reduce pain especially around the head but also on any other body parts and also tools for giving enema
- Hooves – boiled and eaten by people with joint pains (source of calcium)

Agricultural uses

- Dung is used as manure for grass and plantations

The relationship between the people and their cattle in the Ankore culture:

Most of our work revolved around the cattle; we used to share our cattle. Giving someone a good bull which would produce good cows was used to gain friendship and bring us together for team work and strengthen relationships. When someone fell in love with a beautiful girl, he would give beautiful cows as dowry. There were several activities around the cattle. For example, we used to hold meetings in the milking area after milking. We would call for meetings and advise one another during these meetings.

We would bring our herds and graze them together. We would bleed the cattle if we diagnosed an illness. We also helped one another in making watering troughs for the cattle. We would compose and recite poems praising our cattle (ebyevugo) and we used to show them off using exclamations (okwesimirana), swearing (okurahira) or during normal conversations. We depended on the cattle for food in form of milk, meat and blood.

4. MANAGEMENT AND BREEDING

The feeding and rearing of the Ankole cattle:

Our cattle should be reared well and protected from wild animals. In the morning Cattle is taken out to the bush to graze on grass. Watering is normally done at 1 p.m. from a trough made out of mud (transcriber’s note: especially brown one from an ant hill) but the cattle are allowed to drink at any time depending on the need. They are provided

with salt as often as necessary; bleeding is done on ill cattle whenever necessary for treatment but we also use modern medicine to deworm them, vaccinate them against diseases and inject them for treatment of different diseases. Every morning and evening a smouldering fire is made in the kraal or in the afternoon at the watering place using dry cow dung to provide warmth. Their environment is kept clean and they are cleaned or groomed (okwiragaza) using a piece of brush /rug (enkuyo) made from sisal or gauze material. We care for our cattle with a lot of love and affection e.g. we stroke them (okuzagaaga) most of the time. The cattle are sprayed (okuzoza – which literary means “bathing them”) weekly with acaricides.

We let the calves suckle the first milk after birth - cholesterol (omuhondo). A shed is constructed (ekihongore) for them and a carpet or mat of grass (ekyarire) is put inside to cushion them while they lie down.

Ankole cattle need special care but do not need so much pampering:

Since we love our cattle very much, they in turn love us and the milking cows that we show a lot of affection, can be milked without a calf (it is normally not easy to milk an Ankole cow without its calf near it or without tying it with a short rope –(emboha) around the legs.

An Ankole cow does not need a lot of pampering since they do not need special feeds, they do not need many exotic drugs, they do not need much water and they require relatively less work compared to exotics.

The breeding season for the Ankole cattle:

The Ankole cattle breed between the wet and dry season. This is between the 1st to the 3rd months of the year (February and March) though at times it goes on up to May. This period is divided into three seasons and we have different names for the different parts: During “Akatarango” season grass has sprouted but is still little and short, then comes the “Omumirari” when the grass has grown and the cattle eat to the full and grow fat and finally during “Akanda” the rainy season ends and the dry season begins but the weather is not yet very dry.

The age at which cows conceive for the first time:

Most of the Ankole heifers conceive for the first time between the ages of 2.5 to 4 years. However some well-suckled heifers conceive for the first time between the ages of 1 and 2 years.

The period it takes to conceive again after giving birth:

An Ankole cow, if well fed or given proper care, can take between 2 weeks to 8 weeks to conceive after giving birth and if not given proper care, it can take four months. The cows with short calving intervals commonly have little milk and those with long calving intervals can produce 7 – 10 litres. The well-fed cows will give milk for up to a year but towards the end of this period the amount will decrease.

The number of calves per calving:

Most Ankole cows normally produce one calf per calving but a few have twins and seldom do they produce three which is referred to as “Ekihangukano” (something that is unusual).

The number of offspring an Ankole cow produces in a lifetime

Our cows, especially those as strong as horses, produce a range of 10-20 offspring in a life time. Few cows can have up to 25 calves.

The number of calves that survive

Some of us say that 10 – 20 out of 25 calves might survive and others report 10 out of 16 calves might survive. In rare instances, all the calves might survive however if say there were 12 calves only 8 would remain in the herd since some bulls are sold off, others would die, and some would be given away to friends.

The life span of an Ankole Cattle

Our Ankole cattle if provided with water and grass and if not slaughtered for food, would live for 10 to 30 years.

The factors that are considered when selecting an Ankole cow (by importance)

- When selecting our cows, we consider beauty as number one. [Beauty includes size (big with long legs), colour (especially deep brown “Bihogo” and other beautiful colour patterns), and height, (white and beautifully shaped horns)]. If there is a beautiful bull, the offspring shall be beautiful
- High and good quality milk production and character /temperament are very important.
- We select our cattle in order to get offspring of the same colour or pattern since these would look beautiful, would always move together, love one another and other people would love them and they would be easily identified e.g. if lost or stolen.
- Our prestige or status comes with our carefully selected herds for their strength and beauty.



Ruhogo” (deep brown coloured bull) – with some of the special qualities considered for selection

Qualities that make the Ankole cattle special

- They are “long lasting” or they live long.
- They have beautiful hair colour, unique colour patterns e.g. a few small dots on both sides of the belly “Mayenje”, deep brown colour “Bihogo” which provide good quality hides.
- They walk long distances.
- Concentrated milk with high butter content and good, tasty and lean meat. The ghee that is produced is also good and tasty.
- Our cattle know us i.e. they can tell a stranger from a family member (e.g. the National Animal Genetic Resources Centre and Data Bank (NAGRC) in Entebbe bought a bull for collection of semen for artificial insemination, but it became very hostile, however one day when the former owner came, he called it and it was very docile.
- They are clever, when called by their names, they respond by giving a moo or coming to you.
- They are hardy; for example, they do not fall ill easily and they are resistant to sun, drought and diseases, they survive on un-cleared land, eat little grass and drink little water and therefore they are easy and not expensive to look after.
- They have beautifully shaped long horns which they use to protect themselves and function as a cow’s air conditioner as the NAGRC doctor mentioned.

Mostly deep brown coloured herd, at Ruhengyere Government Breeding Farm, relaxing under trees after drinking water in the afternoon



- Some cows, when they deliver, hide their calves from humans and wild life and they keep checking on them and feeding them.
- They have relatively small manageable udders.
- Do not destroy land and are selective when eating grass, they avoid poisonous weeds
- They produce twins and at times triplets (ekihangukano) (more often than Holstein Friesian or crosses)

Advantages and disadvantages of other types of cattle

Most of us are now rearing the Holstein Friesians which are the main exotic cattle in the area:

Advantages	Disadvantages
1.Exotics have much milk	1. Their milk is diluted (higher water content?)
2. They grow fast	2.They die easily
3.They are bigger and weigh more	3.They are not hardy to the environment or climate (e.g. sun, diseases,)
4.They bring in much money quickly	5.They are expensive and costly and complicated to maintain
5.They eat all types of food	6.They eat a lot
6.They are very heavy	7.They can't walk long distances
7.They have a high price	8.They fall ill more often
8.They conceive at an earlier age	9.They are susceptible to drought (i.e. need much water)
	10. Their meat is not tasty

The breeding methodology used and why it is used:

We use bulls for breeding (not artificial insemination) because we want the best of the characteristics described under selection above. (*Artificial insemination is not easily accessible by most average herders*) (transcriber)

The preferred breeding goals for Ankole cattle:

We carry out selective breeding in order to get good big and beautiful cows with high milk production. (*However with commercialization, today they also select for size and weight for meat production*) (transcriber)

Source for breeding stock and bulls for mating:

Most of our breeding stock is inherited from our parents, for example sons would get stock from their fathers especially after marrying. Though originally girls or daughters used not to inherit cattle from their parents, with changes, some daughters are given inheritance, cattle inclusive. Furthermore, fathers, brothers, uncles and guardians get stock from the dowry when they marry off their daughters, sisters, nieces or beneficiaries. We also get stock as gifts or by asking it from friends or relatives or by mixing our herds with the herds of friends or relatives, at times we breed the stock ourselves or buy them.

Only selected bulls are allowed to mate:

In our herds, not all bulls are allowed to mate. To prevent unwanted ones from mating, we either castrate them, eat them while still young or sell them off. Some of us who

are blessed with traditional knowledge, prevent a bull from mating its daughters (in-breeding), by administering traditional herbal medicine on the bulls (okutsirika).

Our bulls are normally kept in a herd to mate for a range of 2 – 7 years. However the period is mainly determined by the breeding objectives one has e.g. a bull can be kept as long as it still gives good off springs. We normally have two bulls (an older and younger one) in a herd. However a bull can handle or service a range of 50 to 100 cows .

5. POPULATION TRENDS

The percentage of the Ankole Cattle out of the Cattle population in Nyabushozi:

The population trend for the Ankole Cattle in Nyabushozi County is that out of every 10 cattle, 1 to 6 would be Ankole cattle. (This makes it range between 10% to 60%).

The population trend of the Ankole cattle in the last ten years:

We realise that our Ankole herd size has decreased during the last 10 years or the last generation and it is getting extinct due to the following reasons;

- Low milk production
- Small portions of land
- Restricted movement (they are no longer able to graze free)
- High expenditure for other things (i.e. there is more need for money)
- Because of the high income from the exotic cows' milk and the money got from the sale of the exotics.

The future of Ankole Cattle; Threats and Opportunities or Chances for sustainable use:

Some of us are pessimistic that the Ankole cattle will get finished or extinct, but some of us are optimistic that Ankole cattle numbers will decline and therefore their prices would rise.

Threats (they would be extinct due to the following factors)

- Due to the reasons that have led to their reduction in the last 10 years mentioned above like decrease of grazing land or reducing due to population increase.
- Spread of exotics and crossbreeding them with Ankole
- Friesians being considered more "useful" than the Ankole cattle because the former bring higher income.
- We are selling off the Ankole cattle because they have lost value in terms of sales

- The government has programmes of prosperity for all and National Agriculture and Development Services (NAADS) which aim to increase household income to 20 million per year. These programmes have promoted the rearing of exotic cattle and crossing them with the Ankole cattle.

Opportunities or chances for the survival of the Ankole Cattle

The Ankole cattle shall survive if the following factors are maintained:

- If we start selecting not only exclusively for beauty but also for milk.
- Government land is made available to us for the Ankole cattle rearing i.e turn the national parks into grazing land
- We and other stakeholders should stop talking negatively about the Ankole cattle and instead value them.
- We should carry out alternative income generating activities to avoid depending on the Ankole cattle only.
- We should carry out careful crossbreeding.
- We should provide as much good care for the Ankole Cattle as that provided to the exotics.
- Start breeding with selected high yielding Ankole cattle and selecting their bulls.
- We should maintain the Ankole culture and provide the Ankole cattle with love like it used to be before the introduction of exotics.
- Look for market for the Ankole cattle and their products e.g. sensitizing the business community to promote it because of its relatively healthier milk and meat.
- Sensitize the people about the beauty, goodness, usefulness, advantages and value of the Ankole cattle.
- Creating or forming organizations or associations that will support the conservation of the Ankole cattle even if there is not enough land for free range grazing. The tour guide advised us to start conservation community projects before foreign NGOs or donors can come in to support the conservation programme
- Taking their photographs and taking them to other countries showing the beauty of their long horns and their colour patterns (e.g. Bihogo, Mayenje, Rurunga, Kihonzi)
- Keeping (conserving) the semen of the good bulls which shall improve local breeds.
- We should provide information about the Ankole longhorn cattle to the Tour Guide Association so that the guides can interest tourists about the same.
- Tourists should be attracted to our homes to see activities for the long horn cattle e.g. milking, preservation of milk and churning it for ghee
- We should be party to the team that guides the tourists
- The Wild Life Authority should allow the cattle to utilize the park as a special species.



Participants during the herders' meeting held on 4/3/09 in Sanga, Nyabushozi, Kiruhura District



Participants during the herders' meeting held on 5/3/09 in Sanga, Nyabushozi, Kiruhura District

- The government should tax highly those who are rearing the exotic cattle
- We should be provided with milk cans to ease costs of delivering milk from farms to market.
- Government should set up a demonstration conservation farm (*there is one already: transcriber*)
- Restrict human population.
- Since there is Universal Primary and Secondary Education, and thus we do not need a lot of money for education of our children, we should go back to rearing of the Ankole cattle.
- We should keep sustainable herds instead of very big herds.
- Improve pasture/grass to stop cattle moving long distances for selective grazing
- NGOs should encourage those of us keeping both breeds to reduce exotic cattle and provide support to some of us who are still maintaining the traditional lifestyle to enable us to conserve them.

REFERENCE MATERIALS

1. Patrick G.N. Kirindi; **History and Culture of the Kingdom of Ankole, Fountain Publishers, Kampala, 2008**
2. Ndumu Deo Birungi; **Identification and Characterisation of “Elite performing Longhorn Ankole Cattle for milk production, 2007**
3. Christine Echokit Akello; **Access to Genetic Resources and Benefit Sharing in Uganda, 2008**
4. UPPC, Entebbe, by Order of government; **Animal Breeding ACT, June 2001**
5. **The State of the World’s Animal Genetic resources, Copy of the Uganda Country Report, Feb 2004**
6. **UBPA, Beef day 2005, Magazine pg. 16**
7. M. Wurzinger, D. Ndumu et al, **Lifestyle and herding practices of Bahima Pastoralists in Uganda Aug 2008**
8. **Watusi International Registry, 22484 W239 St. Spring Hill, Kansas, 66038-9306**
9. Ministry of Agriculture and Animal Industry and Fisheries; **Cattle Breeds and Population, 1996**
10. Ilse Koehler-Rollefson et al; Local Breeds, **Livelihoods and Livestock Keepers’ Rights in South Asia, September, 2008**
11. Mark Infield, **Conserving Cows, Culture & Wildlife. An Interdisciplinary Case Study of Integrating Ankole Longhorn cattle into National Park Management, L.Mbuuro National Park, Uganda, July 1996 – June 2000**
12. Muntungi Emmanuel & Sarah Osiya, **Images of Uganda Pastoralists, Photograph Exhibition from different Clusters, Nommo gallery, March 15-20, 2004**
13. Mark Infield et al, **The Names of Ankole Cows, 2001**

ANNEXES

ANNEX 1

LIST OF PARTICIPANTS OF THE MEETINGS ON THE DOCUMENTATION OF THE LONG HORN CATTLE HELD IN SANGA, NYABUSHOZI COUNTY KIRUHURA DISTRICT

4th March 2009

No.	Name	Sex	Address/Telephone Number	Sub county & District
1	Florence K. Kafamaisho	F	0782 401463	Kikaatsi
2	Inidi Katabazi	F	Rwamuhuku	Sanga
3	Cucuuri Stephen	M	Kiribwa	Sanga
4	Rwomuhanda Banard	M	Kiribwa	Sanga
5	Ndisha Geoffrey	M	Rwamuhuku	Sanga
6	Rwamagaaju Benon	M	Kiribwa	Sanga
7	Amumpaire Amon	M	Rwamuhuku	Sanga
8	Muteera Wilson	M	0782 545299	Sanga
9	Tubebamwe Edith	F	0772 309505	Sanga
10	Rubagyema Patrick	M	Cultural Values for Conservation Project P.O. Box 880, Mbarara	Sanga, Kiruhura
11	Jane Cucuuri	F	Sanga	Sanga, Kiruhura
12	Twine Milliam	F	0715 686854	Sanga, Kiruhura
13	Andrew Rukundo	M	0755 959510	Sanga, Kiruhura
14	Kashokye George R.	M	0772 423273	Sanga
15	Birungi Margaret	F	0776 037770	Sanga
16	Ninyenda Francis	M	0392 944857	Sanga
17	Kansiime Micheal	M	Nombe 1 Parish	Sanga, Kiruhura
18	Mugyenyi Safari	M	Sanga	Sanga, Kiruhura
19	Tayebwa K. Wilson	M	Kigarama	Sanga
20	Bagwangi David	M	Kigarama	Sanga, Kiruhura
21	Dr. Kiyemba Ronald	M	Veterinary Officer 0782632500	Sanga
22	Kirungi Flavia Rubuubi	F	0772 305491	Sanga
23	Mucunguzi Amos	M	Sanga	Sanga, Kiruhura
24	Mwesigye Nathan	M	Rwamuranda 0772 357852	Kanyanyeru, Kiruhura
25	Kakazi Molly	F	Kasharara	Sanga
26	Manuel Kyeisha Mwesiga	M	Rushere 0774 230060	Rushere, Kenshunga
27	Sekihooobe James	M	Rwamuhuku	Sanga, Kiruhura
28	Bashaija	M	Kiribwa	Sanga
29	Mugume Donald	M	Sanga	Sanga

LIST OF PARTICIPANTS OF THE MEETINGS ON THE DOCUMENTATION OF THE LONG HORN CATTLE HELD IN SANGA, NYABUSHOZI COUNTY KIRUHURA DISTRICT

5th March 2009

No.	Name	Sex	Address/Telephone Number	Sub county & District
1	Kuteesa Sam Muganga	M	0774 633578	Kanyaryeru
2	Kacuucu Godfrey	M	0712 199980	Sanga
3	Asiimwe Enos		0772 899443	Sanga
4	Kyomugasho Monica	F	0772 363529	Sanga
5	Kyoheirwe Beatrice	F	0782 858888	Sanga
6	Mafara Grace	M	0753 076877	Sanga
7	Tindyebwa Stanley	M	0782 3220507	Kanyaryeru
8	Karakire George	M	Nyarutegura 0774 433928	Kiruhura
9	Tibasiimwa Edward	M	0754 879126	Kanyaryeru
10	Sabiiti Kosia	M	075 5079170	Kanyaryeru
11	Bwereere Robert	M	0782 402755	Kanyaryeru
12	Matama Alex	M	0774 684257	Sanga
13	Mapoori G	M	0752 624873	Kanyaryeru
14	Tubebamwe Edith	F		Sanga
15	Birungi Margaret	F		Sanga
16	Kirungi Flavia	F		Sanga
17	Rwakishaija Andrew	M	Chairperson LC3 Nyakashashara s/c	Nyakshashara
18	Wakami Anania	M		Nyakashashara
19	Kashokye George	M	0772 423273	Sanga
20	Kabandize Isaac	M	Chairperson LC3 Kanyaryeru s/c	Kanyaryeru
21	Bagarukayo Fred	M	0752 853217	Kiruhura
22	Mugyenyi Freddie	M	0782 197687	Kanyaryeru, Kiruhura
23	Karongo Sam	M	0755 133786	Kanyaryeru
24	Kabandize Patrick	M	0751 937488	Kanyaryeru
25	Mugisha John	M	0775 467290	Sanga
26	Ntungire Stephen	M	0751 983566	Sanga
27	Tumusiime Patrick	M	0782 538821	Sanga
28	Kashamba F.	M	0774 703079	Sanga
29	Mwebaze David	M	0774 538559	Sanga / Kiruhura
30	Beinomugisha Fred	M	0753 882296	Sanga
31	Natukunda Loy	F	0782 388977	Sanga / Kyapa
32	Natukunda Jane	F	0774 040323	Kyapa
33	Nayebare Molly	F	0782- 725829	Kyapa

34	Twine Milliam	F	0715 686854	Sanga
35	Kyeishe Emmy	M	0774 230060	Kenshunga
36	Bukaragye Patrick	M		Nyakashashara
37	Karungi Moses	M	0782 529610	Kanyanyeru
38	Kiiza Yofes	M	0782 176003	Kanyanyeru
39	Kansiime Micheal	M		Sanga
40	Rubagyema Patrick	M	Cultural Values & Conservation Project P.O. Box 880, Mbarara	Sanga, Kiruhura
41	Ampurira Emmanuel	M	0772 657752	Sanga

ANNEX 2

LIST OF NAMES OF STUDENTS OF LAKE MBUURO SECONDARY SCHOOL DURING THE MEETING FOR THE DOCUMENTATION OF THE LONG-HORNED CATTLE

6th March 2009

No.	Name	Sex	Class
1	Busingye Evas	F	S. 6
2	Ocen Emmanuel	M	S. 6
3	Nankunda Enock	M	S. 3
4	Kawamala Ivan	M	S. 3
5	Kakimbiri Stephen	M	S. 3
6	Asiimwe Frank	M	S. 2
7	Beinomugisha Aaron	M	S. 3
8	Kansiime Benjamin	M	S. 3
9	Arekaho Allan	M	S. 3
10	Kagina Herbert	M	S. 1
11	Musinguzi David	M	S. 3
12	Kyakunda Phionah	F	S. 2
13	Kikondo Winnie	F	S. 6
14	Tashobya Evas	F	S. 3
15	Nuwabine Hellen	F	S. 2
16	Kyasiimire Sharon	F	S. 4
17	Nyebaza Sharlot	F	S. 2
18	Kyomugisha Edith	F	S. 2
19	Bashemba Georgina	F	S. 5
20	Abaho Francis	M	S. 2
21	Ntama Danielson	M	S. 5
22	Aijuka Rodgers	M	S. 5
23	Musoni Samuel	M	S. 5

24	Acan Gloria	F	S. 3
25	Rwamushaija Moses	M	S. 4
26	Kazeire Hamson	M	S. 6
27	Kusima Abert	M	S. 6
28	Mugira Abel	M	S. 6
29	Kakuru Peter	M	S. 6
30	Amanya Brendah	F	S. 2
31	Kansiime Ronah	F	S. 4
32	Katushabe Phionah	F	S. 6
33	Kamwine Robinah	F	S. 6
34	Nayesiga Naome	F	S. 6
35	Ayebesa Allen	F	S. 6
36	Aryamumpa Joy	F	S. 6
37	Bashishana Jackie	F	S.2
38	Kyasiimire Nellon	F	S. 5
39	Namada Charity	F	S. 2
40	Nduhukire Ruth	F	S. 4
41	Asiimwe Jovia	F	S. 4
42	Kainembabazi Mercy	F	S. 2
43	Okwangabire Annet	F	S. 4
44	Nasasira Inesa	F	S. 4
45	Mukundane Enid	F	S. 4
46	Nankunda Jolly	F	S. 4
47	Natukunda Winnie	F	S. 3
48	Kamwine Sylvia	F	S. 4
49	Taremwa Godfrey	M	S. 4
50	Nayebare Jovulyan	F	S. 2
51	Natamba Josline	F	S. 2
52	Nyamwiza Daphne	F	S. 3
53	Nyirankomeza Pascazia	F	S. 3
54	Mbabazi Phionah	F	S. 3
55	Amutuhair Ronah	F	S. 1
56	Andihaihi Monick	F	S. 1
57	Karungi Annitah	F	S. 3
58	Nkamushaba Elinah	F	S. 1
59	Nuwahereza Judith	F	S. 3
60	Ampaire Winnie	F	S. 3
61	Barekye Doreen	F	S. 2
62	Ampurira Allen	F	S. 2
63	Nabireba Apophia	F	S. 2
64	Ninsiima Doreen	F	S. 4

65	Kamukama Ruth	F	S. 1
66	Katwiine Esther	F	S. 1
67	Kukunda Glorious	F	S. 1
68	Ampaire Stella	F	S. 1
69	Muzooro Andrew	M	S. 4
70	Najuna Phionah	F	S. 5
71	Beingana Daniel	M	S. 6
72	Ayesiga Patrick	M	S. 6
73	Kabaije Dianah	F	S. 5
74	Kyambondo Abel	M	S. 3
75	Tinyefuza Asaph	M	S. 3
76	Kakye Daniel	M	S. 3
77	Tashobya Dickson	M	S. 3
78	Kanjungu Enoch	M	S. 3
79	Asasiira Elizabeth	F	S. 1
80	Mwesigye Doreen	F	S. 3
81	Kabazarwe Winnie	F	S. 3
82	Akankunda Moses	M	S. 6
83	Tandeka Isaac	M	S. 1
84	Kirabo Vailot	F	S. 1
85	Kato Deo	M	S. 6
86	Nuwamanya Emmanuel	M	S. 4
87	Mwesigye Godfrey	M	S. 2
88	Kusasira Jane	F	S. 5
89	Natukunda Allen	F	S. 3
90	Ataho Jackie	F	S. 2
91	Kansiime Enoth	M	S. 1
92	Benon Katsinzi	M	Deputy Headmaster

ANNEX 3

LIST OF NAMES OF OTHER PEOPLE MET / CONSULTED ON THE FUTURE AND CONSERVATION OF THE LONG HORNED CATTLE DOCUMENTATION

	Name	Sex	Adress/Telephone Number
1	Dr. Evelyn Mathias	F	Muellenberg 5, 51515, Kuerten,Germany
2	Dr. Wanyama Jacob	M	LIFE Network, Africa Region, 254 73 6520043
3	Dr. Arthur Tumwine	M	NAGRC & DB, Entebbe. 075 2405849
4	Dr. Helen Nakimbugwe	F	NAGRC & DB, Entebbe.0772 485388
5	Dr. Daniel Semambo	M	NAGRC & DB, Entebbe.0772 421 469

6	Sam Mugasi	M	Foundation for the Development of Pastoralism (FODEPA), 0772340067
7	Katharina Hartwig	F	Germany Secondary School, Entebbe
8	Janina Gruneit	F	Germany Secondary School, Entebbe
9	Vanice Mirembe	F	Community Conservation Unit, Uganda Wildlife Authority
10	Patrick Rubagyema	M	Project Officer, Cultural Values & Conservation Project
11	Noel Abaho	M	Conservation Ranger, 0754 848369
12	Prof. Francis Ejobi	M	MUK, Head Dept of Vet. Public Health & Preventive Medicine
13	John Rukundo	M	Ankole Longhorn cattle herder, Sanga, Nyabushozi
14	Hope Kegiraasi	F	Ankole Longhorn cattle herder, Sanga, Nyabushozi
15	Stephen Nkuba	M	Ankole Longhorn cattle keeper, Ngoma, Nakaseke
16	Grace Muyambi	F	Ankole Longhorn cattle keeper, Ngoma, Nakaseke
17	Ruteera Sam	M	Ankole Longhorn cattle keeper, Ngoma, Nakaseke
18	Ronald Musoke	M	Church Hill Safaris- Tour Guide, 0782318681
19	Nathan Kabahigi	M	Nshaara Ranch, Nyabushozi 07712 255144
20	Livingstone Sserwanja	M	Manager, Ruhengyere Conservation Farm, 0392966135
21	Eriya Kyamanyanga	M	Herder, Kikaatsi sub county, Kiruhura district
22	Onesmus Anyongyeireho	M	Herder, Kikaatsi sub county, Kiruhura district

ANNEX 4

QUESTION GUIDE THAT FORMED THE BASIS FOR THE HERDER WORKSHOPS AND DOCUMENTATION OF THE ANKOLE LONGHORN BREED (ENGLISH /RUNYANKORE)

Names of group members (**Amaziina ganyu**)

SOCIOECONOMIC INFORMATION

Where did the Ankole cattle come from?

Ente y'enyankore ekarugahi?

Where does the name Ankole come from? (Who gave the name, what does it mean?)
Eiziina “Enyankore” rikarugahi? (Noha owazetsire eizina eri? Nirimanyisaki?

Who were the first breeders of the Ankole cattle?
Ababandize kuzaaza nari kworora enyankore nibaha?

What are the Ankole cattle used for? And why?
Ente ze nyankore ziine migashoki?

What are the traditional rules that governed the access, sharing and exchange of Ankole breeding animals?

Omubuhangwa bw’Abanyankore bakaba batwaza bata ningashi bakaba bakwatanisa bata ahabikwatireine n’ente ez’okutunga?

GEOGRAPHICAL REGION

Where are Ankole cattle found?
Ente z’enyakore nishangwahi?

Which area is best for the rearing of the Ankole cattle?
Nikicwekaki ekirikwororagye ente z’enyankore?

How are the Ankole cattle kept and fed? Do they need any special care? (fodder, medicine, etc)
Ente z’enyankore zororwa zita? Nizetenga endebererwa eyomutaano? (Okuzihira obunyatsi, emibazi)

BREED’S SIGNIFICANCE

What products do you get from the Ankole cattle?
Nibintuki ebimurikwiha omunyankore?

What do you do with the products?
Ebimurikwihamu nimubikozesaki

How long does the Ankole cow live?
Ente y’enyankore ehangara emyaka engahi?

Are there specific seasons for breeding?

Hariho ebiro omumwaka ebirikumanywa ngu nibyo ente z'emera mu?

At what age do cows give birth for the first time?

Enyana eyemera ahamyaka engahi?

What is the period between calvings?

Ente kwezaara emara biroki okugaruka kwema?

How many calves per calving?

Ente burikuzaara, ezaara enyana zingahi?

How many calves does an Ankole cow have per life time? How many of these calves survive? What do you do with them?

Omumagara g'enyankore ezaara amazaarangahi? Omumazaara aga goona hagumaho enyana zingahi?

SELECTION PROCESS & LOCAL PREFERENCES

How does a typical Ankole cattle look like?

Ente y'enyankore eshishaki? (Shoborora okw'enyankore ishisha)

What do you consider when selecting an Ankole cow and a bull? (List according to importance)

Kwoba n'ocooka, oba oine bigyendererwaki?

What is special about the Ankole cattle & how is it different from the other cattle types you have?

Ente y'enyankore eine bintuki ebyomutaano? N'enki ebirikugitanisa ahazindi nte?

What are the advantages & disadvantages of the other types of cattle you have?

Gamba ebirungi n'ebibi ebyente ezindi ezorikuriisa?

What breeding methodology do you use and why (insemination or use bull)

Ente zaanyu zeema zita?

What are your preferred breeding goals for Ankole cattle?

N'ahabwenki n'obikira?

Where do you source your breeding stock? Where do you get the bulls for mating from?

Ente zoon (n'enimi) ezimutunga muzihahi? Enimi z'okubikira muzihahi?

Are all the bulls always allowed to mate? If not, how do you prevent them from mating?

Enimi zoon ezimwine omunte zaanyu nizikirizibwa kwemya? Mwaba mutarikuzikiriza zoon, mwizibira muta kwemya?

How long is a bull commonly used?

Enimi n'eyemeza emyaka engahi waza kugijha omunte?

If you have your own bull, how many years do you keep it in the herd? How many bulls do you keep in a herd?

Enimi n'ogibikira emyaka engahi? N'obikira enimi zingahi buri busyo bw'ente?

How many cows can one bull handle?

Enimi yaaba eri omunte yonka, n'ebaasa kwemya ente zingahi?

POPULATION SIZE AND TRENDS

Out of every 10 cows in your community, how many are Ankole?

Omuri Nyabushozi, buri nte ikumi, harimu ente z'enyankore zingahi?

Has the community's Ankole herd size increased or decreased during the last 10 years or the last generation? What are the reasons?

Omumyaka ikumi ehweire, ente z'enyankore z'eyongyeire nari zibaganikire? Nishongaki?

CHANCES FOR SUSTAINABLE USE AND CONSERVATION

What is the future of Ankole cattle?

Ente z'enyankore, nimuzireeba muta omubiro ebirikwija?

What are the threats?

Nibintuki ebimurikureeba nari ebimurikuteekateeka ngu nibiza kuhezaho enyankore?

What will enable it to survive?

N'enki ekyakubaasa kurinda enyankore?