African Journal of Agricultural Research Vol. 3 (8), pp. 542-548, August 2008
Available online at http://www.academicjournals.org/AJAR
ISSN 1991-637X © 2008 Academic Journals

Full Length Research Paper

Lifestyle and herding practices of Bahima pastoralists in Uganda

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Accepted 26 August, 2008

The Bahima in South Western Uganda used to move with their Ankole cattle, but nowadays most of them are settled. The Ankole cattle with its huge and white horns play a keyrole in the livelihoods of these families. This importance is reflected in the status of the cattle. These animals are multi-purpose animals, kept for milk and meat production, as a saving or are given away as dowry. Nowadays cattle keepers own their private land where they can graze their herds, which are still accompanied by a herdsman and guided by him to watering points. Responsibilities are shared between family members and hired workers. Although the lifestyle has changed dramatically over the last decades, cattle keepers are willing to keep these wonderful animals in the near future and preserve their heritage for future generations.

Key words: Pastoralism, Uganda, cattle, Bahima.

INTRODUCTION

Uganda is a landlocked country in East Africa. Agriculture is the dominant sector in Uganda. Agriculture accounts for about 70% of employment and 38% of real GDP. The Bahima are ethnic pastoralists within the Banyankore tribe. They traditionally keep cattle and live in the South-Western part of Uganda. This area is part of what is commonly known as "Uganda's cattle corridor" which traverses the country from the north-east to the South-West. Along this corridor pastoral groups like the Bahima and the Karamajong moved with their herds in search for pasture and water.

The Bahima traditionally keep the Ankole Longhorn cattle, which belongs to the Sanga group of cattle (Rege and Tawah, 1999). The breed is indigenous to the central and eastern region of Africa and is classified as an intermediate *Bos indicus/Bos taurus* breed type with a small hump. It has characteristically long, large and white horns and a red coat colour (Petersen et al., 2004).

Ankole cattle play a major role in the livelihood of the Bahima. They provide the family with milk and meat for home consumption and for sale to meet recurrent needs. The animals are also seen as a symbol of wealth and have a function as a "living bank". This means that cattle are sold if the family needs cash for larger expenses like school fees or medicines. Animals play an important role in many festivals and rituals and the bride price is partly payed with cows and heifers (Nakimbugwe and Muchunguzi, 2003).

The relationship between cattle keepers and their cattle is described as the "cattle complex" (an extensive ritual usage of cattle with an emotional attachment to or identfication with cattle). Klima (1970) distinguishes a "strong" and a "weak" cattle complex depending on whether there is an intensive or extensive involvment of cattle in the lives of the people. Based on this definition the Bahima can be described as having a strong cattle complex.

However, as was pointed out earlier by Fratkin (1997) with further concerns raised more recently by Homann et al. (2004) and Desta and Coppock (2004), the traditional pastoral system, where herds are moved is fast disappearing due to various reasons. These include human population growth and the associated pressure that it has on grazing land as well as political and economic pressure. More and more cattle keepers have adopted a sedentary lifestyle and are practising mixed crop-livestock

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farming and deriving livelihoods from other non-pastoral activities (Nduma et al., 2001; Fratkin and Mearns, 2003; McCabe, 2003; Homewood et al., 2006).

This paper documents the current lifestyle of Bahima pastoralists of Western Uganda and gives a detailed description of the herd management practices.

MATERIAL AND METHODS

Data collection

The study involved individual interviews with pastoralists based on questionnaires as well as focus group discussions. Data was collected between September 2004 and April 2005 in the Nyabushozi and Bukanga counties of Mbarara Disctrict in South-Western Uganda. This district forms the most eastern part of the cattle corridor in Uganda. Sixty cattle keepers were randomly selected through a combination of cluster and stratified sampling procedures and individually interviewed. The sampling procedure was based on a random sampling across parishes, taking into consideration the geographic distribution and economic situation of the households. The questionnaire consisted of open and closed questions; all of which were translated into Runyankole, the local language. Enumerators were trained and a pre-test was carried out before the survey was conducted.

The questionnaire covered a large range of topics including general information about the households, breeding strategies, herd management practices (that is, animal health and pasture management etc.). To capture information about selection criteria, cattle keepers were first asked to list the principal traits and then rank the five most important ones from 1 (most important) to 5 (least important).

Focus group discussions were held, where different topics were discussed. One workshop was about herd management, human-animal-interaction and animal-animal-interaction. Local expressions for a specific animal behaviour or treatment were recorded. Another workshop covered activities related to livestock and agricultural production. Participants were asked to draw a seasonal calendar, indicating the rainfall patterns in the region and showing the most relevant activities. Each workshop was conducted with 8 to 12 persons and repeated in each county. All information was entered into a database.

Data analysis

Frequency counts and means were calculated for particular data sets using SAS (2002). Total size of mixed herds were computed by aggregating herd-class sizes (bulls, cows, heifers, calves and steers) of pure bred Ankole, other pure bred and crossbred animals.

RESULTS AND DISCUSSION

Household, lifestyle

Household size was defined as the number of persons having their daily meals prepaired together, but not necessarily eating together. The average houshold size is 11 persons and ranges between 3 and 34 persons. The average number of children under 10 years of age is 4 per household and ranges between 1 and 10. The household heads were mostly males (56 of 60), aged between 20 and 70 years.

All families live sedentary, except for cases of very severe and prolonged dry seasons which result in pasture and water shortages, herds are moved to other locations, leaving the rest of the family behind. Seventy-five percent (75%) of the interviewees stated that either their parents or grandparents had settled between 1963 and 1990. One person mentioned the year 1936 as the time when his grandfather had decided to settle. Twenty five percent (25%) of the interviewed persons had given up the nomadic livestyle themselves. A wide range of different reasons for settlement were given: (i) less pressure of animal diseases (ii) better protection against predators (iii) land was given out (sub-divided) by the government (iv) better access to education for children and (v) becoming member of the catholic church.

Seventy two percent (72%) of the participating households stated that, while livestock is the only source of their income, 28% indicated that livestock and crop production equally contribute to the household income.

Meat, milk and different dairy products like ghee, sour milk and yoghurt are consumed at home and are also sold. Five percent (5%) of cattle keepers mentioned the use of cattle urine, which is mixed with milk and used as a laxative. Morning urine from cattle is used as a detergent for cleaning milk pots. In concoction with herbs, urine-herb mix is also used as a mouth wash or for treatment of skin infections (Nakimbugwe and Muchunguzi, 2003). Only 3 % of farmers also mentioned the use of blood mixed with milk as a beverage. Both products are exclusively used for home consumption.

Labour division

Regarding responsibilities of the herd management, labour is clearly divided. Breeding decisions, purchasing or selling of cattle are always done by the household head. Only in a few cases the spouse or the son is allowed to contribute to decisions made by the household head. Hired workers carry out the daily work routine chores such as herding, watering and milking. Children were rarely mentioned having any cattle husbandry responsibilities. This is in contrast to the practices of the Maasai pastoralists (Mwarcharo and Drucker, 2005). Whereas milking is the domain of men, milk processing is exclusively done by female members of the household.

Seasonal calendar

All activities related to livestock and crop production follow the pattern of the rainy and dry seasons (Figure 1). The average annual precipitation is about 900 mm with a bimodal distribution. There are two distinct peaks in March/April and October/November. The mean monthly minimum and maximum temperature values are respec-

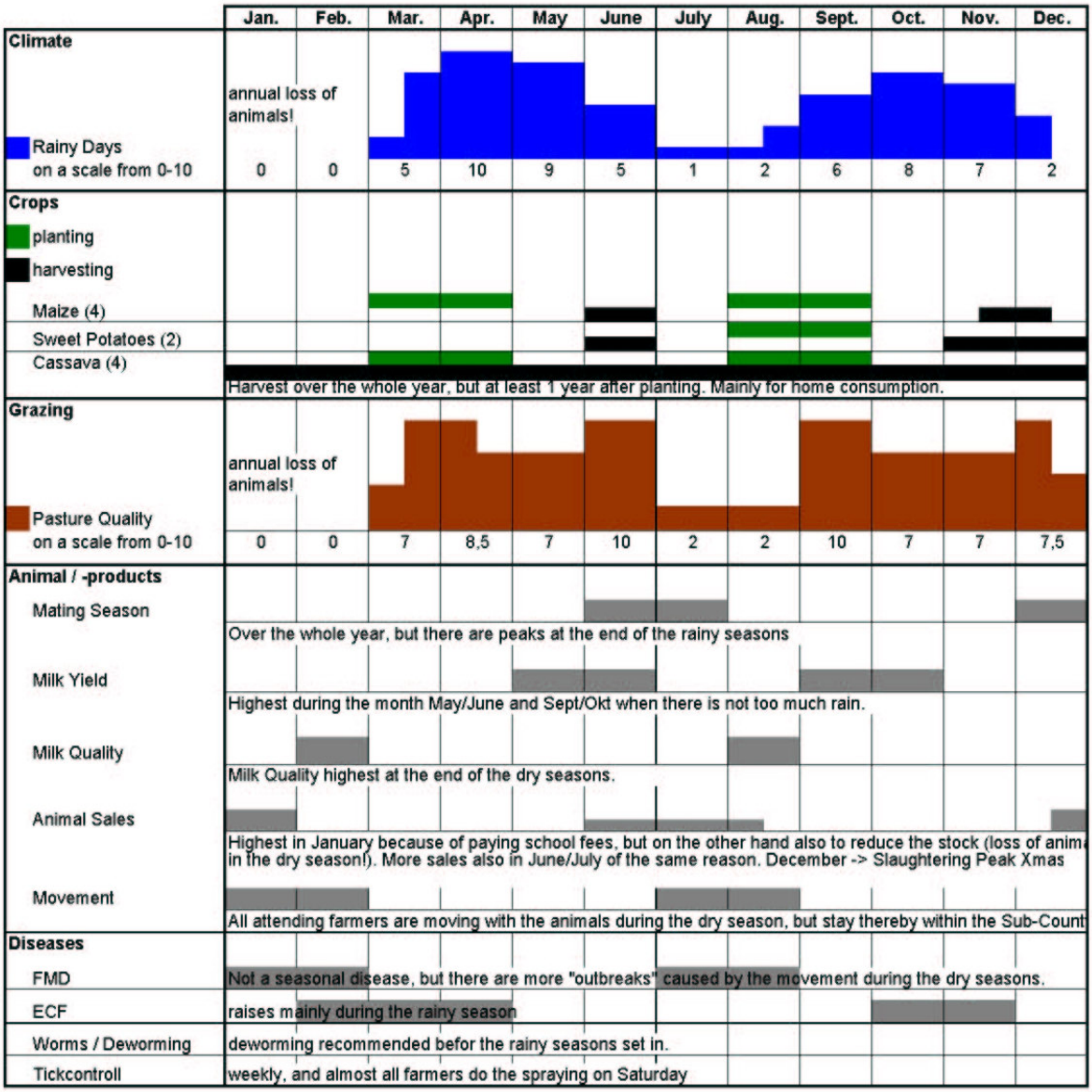

Figure 1. The seasonal calendar of agro-pastoral activities in the study area.

tively, 14.3 and 26.3°C (UBOS, 2003). Twice a year, at the beginning of the rainy seasons, cassava, sweet potatoes, maize and beans are planted. The harvesting time for maize and sweet potatoes is during June and November/December. Cassava is harvested throughout the whole year, depending on maturity that takes on average one year. Matoke (green banana) is also harvested throughout the whole year.

Although the bulls stay within the herd all year around, two major mating seasons are observed, which coincide with the rainy seasons. In conformity with the seasonal rythm, pasture quality and quantity improves during the rainy season and deteriorates during the dry season.

Milk and ghee are sold at the local markets all year around. Unlike the sale of milk, slaughter animals are sold on a seasonal basis, most animals are brought to the local markets during the dry seasons, around Christmas time and when school fees for children have to be payed.

Cattle keepers are well aware of the importance of good animal healthcare. In order to reduce the risk of East Coast Fever outbreaks, tick control (spraying with acaricides) is done weekly. The entire herd is dewormed twice a year at the end of each rainy season.

Ownership of cattle

Forty-three percent (43%) of the herds are exclusively owned by the household head. Otherwise herds are owned

Table 1. Mean, minimum and maximum herd size in the study areas.

	n	Mean	Standard deviation	Minimum	Maximum
Size of pure Ankole herds	20	85	46.8	19	182
Size of mixed herds	40	170	197.9	30	1284
% of Ankole in mixed herds	40	71.6	22.7	15.4	99.0

Table 2. Herd composition, proportion of each category in % (n = 60)

Category of animals	Mean	Standard deviation	Minimum	Maximum
Cows	49.5	10.6	20.5	68.3
Heifers	29.3	9.3	11.4	61.8
Calves	17.8	6.4	6.7	34.6
Bulls	2.1	1.1	0.7	6.6
Steers	1.3	3.1	0	11.1

by household members in conjunction with the head. Spouse (30%), son (22%), and daughter (5%) were also named as owners. In very few cases, the household head's mother, father, aunt, brother or friend were also mentioned as owners of some cattle. This compares well with traditional practices among the Maasai and Borana pastoralists of Kenya (Hodgson, 1999).

Breeding strategies, selection criteria

The majority of the Bahima cattle keepers replace their breeding stock from their own herd. In addition, breeding animals are obtained from neighbours, friends or relatives and to a lesser extent through purchase at local markets.

Selection criteria differ between cows and bulls. The most important selection criterion in cows is coat colour, followed by milk yield and body size of the animal. Horn size and shape is ranked 4th and fertility 5th. In bulls, again coat colour is highly ranked by the interviewees (Wurzinger et al., 2006; Ndumu, et al., 2008). The preferred coat colour is called "*bihogo*" which means "a dark red coat colour" and the preferred pattern is one solid coat colour without patches (Kugonza et al., 2005). The second most important trait is the information about the bull`s father, followed by horn shape and colour of the bull and body size. In both sexes, other traits like disease resistance, temperament and ancestral information are mentioned by cattle keepers, but have less influence on the selection decision (Wurzinger et al., 2006; Ndumu et al., 2008).

Herd size and composition

In general, herds are very large, ranging from 19 to 1284 animals (Table 1). Many pastoralists have begun with crossbreeding pure Ankole cattle with Holstein Friesian with the aim of improving the former's milk yield. Therefore, herds consisting of pure Ankole and crossbred animals are common. The size of pure Ankole herds are smaller than those of mixed (Ankole and Ankole crosses) herds (Table1). However, the proportion of pure Ankole animals in the mixed herds is 71.6% and varies between 15.4 and 99.0%. Table 2 presents the composition of herds. There were no significant differences between pure and mixed herds, the data was pooled and presented together. Reproductive females (cows and heifers) constitute on average 78.8% of the herd, while cows alone constitute 49.5%. This figure is higher than reported by Jaitner et al. (2003) in The Gambia.

Pasture management

The cattle herd is kept on pasture throughout the whole year. The only supplementation is salt which is provided to the animals in the kraal. Animals also lick natural salt licks that are found in the various grazing and watering areas. As is the case with other pastoralists (Fernandez - Giemenez, 2000; Coppolillo, 2000; Oba and Kitile, 2001; Mapinduzi et al., 2003), good use is made of indigenous knowledge to assess range pasture compositions, and conditions (nutritive values) and their suitability to the various classes (calves, lactating and pregnant cows, etc.) of cattle. Key indicator forage plant species are used for this purpose, a practice which is consistent with those of Nepalese (Thapa et al., 1997; Walker et al., 1999); and the Tanzanian Maasai (Goldman, 2003) pastoral communities.

All households own land and cattle graze only on private pasture as no communal land exists any more in this region. 80% of the interviewees mention that they fence their land and 8% partly fence it. The remaining 12% do not fence at all and do not carry out any form of pasture management. Those who fence their land, usually

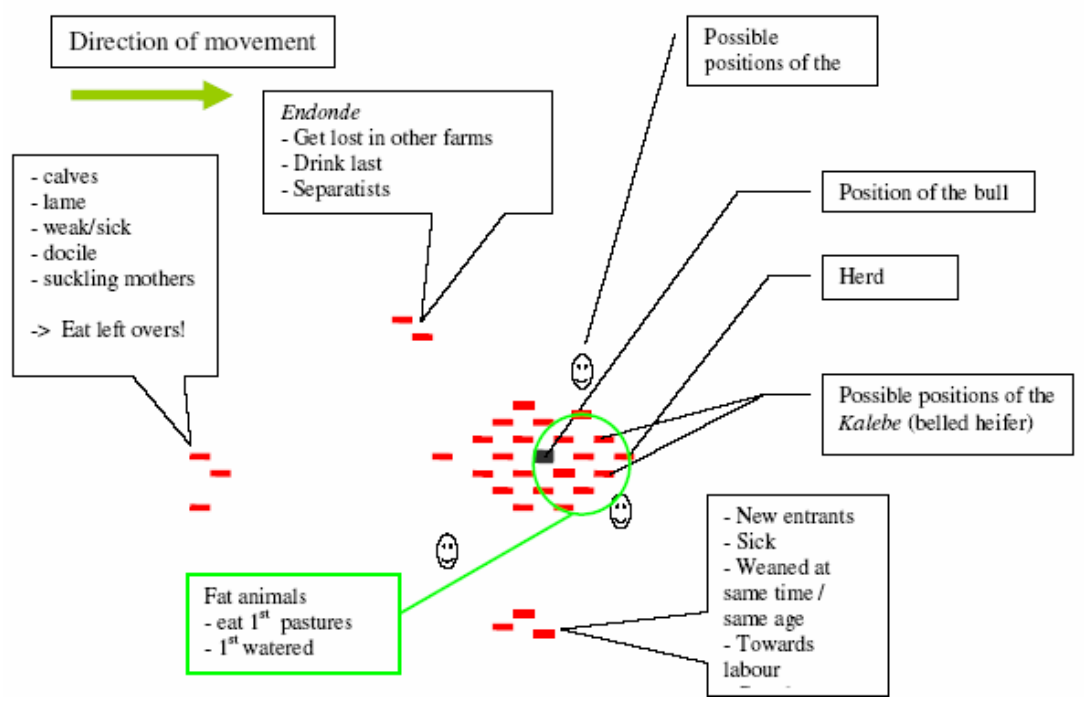

Figure 2. A schematic representation of a moving herd.

do bush clearing and rarely bush burning, which is officially forbidden, as part of pasture management practice.

Herd management

During the focus group discussions cattle keepers gave a detailed description of the daily routine chores and the responsibilities of the herdsmen.

After the morning milking the herd leaves the kraal and moves in the form of a tail, almost a queue to the pasture. Figure 2 shows the different position of the cattle in a moving herd and that of the herdsmen. At the front of the herd are the strong and mature cows leading the herd, they get the best pasture and are the first animals to be watered. These are the most preferred cows and are especially used for dowry payments. Cattle keepers prefer bulls that take a leading position as its believed that their offspring will be very strong. A bull which stays in the middle or at the end of the herd, unless with a cow/heifer which is on oestrus is disliked and is a likely candidate for culling. In herds with more than 100 animals, the best heifer in the herd (*Kalebe*) carries a bell to indicate the location of the animals while grazing, and is also cosmetic for that particular animal as well as for the herd as a whole. In smaller herds – below 100 cattle – the cattle keepers frequently use a neckband of little bells for the Kalebe.

Next to the main herd, are new entrants, calves which were weaned at the same time or bigger cows from the same herd which do not want to graze along with others. Animals which separate themselves from the rest of the herd are called *Endare*. Behind the main herd there are also some animals, usually these are the very old ones or sick ones or mothers with very young suckling calves.

The herdsman should be a male preferably, over 15 years of age, who can withstand all-day herding duties. More recently, females are also allowed to herd. The herdsman directs the animals to the pasture and water as well as protects them from wild animals and thieves. He protects docile animals from aggression by other herd members and he makes sure that no other cattle from elsewhere get into his herd. He also watches over the heavily pregnant, sick and young animals.

His position is at the head of the moving herd. He is equipped with a stick and sometimes a spear which he uses to guide the herd to pastures, preferably those which have not been recently or previously grazed by other herds. In this position the herdsman is able to control the speed of the animals in order to make sure that all animals can follow on. The traditional spear is nowadays not very common. It used to have different functions, like protection against predators. When the spear is beaten against the wooden stick, the resulting sound signals the time for watering. Animals are either watered at a dam or a valley tank once per day. The herdman fetches water with a bucket from the dam or pond and pours it into a trough made out of clay. This prevents animals from stepping into the water, defecating or urinating in the water and polluting it. In the evening the herd is driven back to the kraal where the cattle are

confined over night. The lactating cows are milked in the evening and early every morning.

Social interactions

During the focus group discussions cattle keepers described not only what different forms of social interactions take place between animals, but also between humans and their animals.

Animal-animal-interaction

Cattle keepers described the Ankole cattle generally as very friendly, calm and docile. Cattle keepers distinguish between agonistic and non-agonistic interactions between cattle. They explain that some animals become friends. This friendship is expressed in non-agonistic social interactions like walking and resting together, playing with their horns (*Okuzaana*) and licking each other (*Okurigasana*). Fights between animals are also reported, and when fights break out, it is the responsibility of the herdsman to separate fighters.

Human-animal-interaction

The herdsman massages the animals at the horn base, around the ears and the dewlap to make them docile; this massage is known as *Okwagaaga.* The animals are groomed with the *Enkuyo*, a bundle of sisal, threads or fibres from a tree bark tied together, this is called *Okuragaza* (Infield, 2003). It is also done with heifers before giving birth to make them familiar with the herdsman and accept more easily to be milked. Cruelty to cattle is totally unacceptable among the Bahima. Smoking the kraal or smoking at the water point is performed to chase away flies, but is not very common today. Workshop participants explained that one reason for not smoking the kraal anymore is that crossbred animals do not like the smoke.

When the dam rejects the calf (*Rwiira*) cattle keepers use special herbs which they place into the vulva of the dam and smear afterwards these herbs on the calf. This treatment is known as *Okuhatika*. Ropes to tie animals are used only on rare occasions, like during milking of difficult milkers.

Outlook for the future

All cattle keepers stated that they are content with their way of living and do not want to go back to a nomadic lifestyle. The majority of them still would like to keep pure Ankole cattle in the near future, but they also state that they would like to keep Ankole-Friesian crosses to increase milk production. Sustainable forms of pastoralism would however only be viable through strong community-based collective action. There is need for pastoralists to form pastoral associations that would help play advocacy roles for supportive natural resource managements, livestock marketing and infrastructural development and service delivery in general. Besides, such associations would also help preserve good husbandry practices through continued documentation and passing on of the related pastoral indigenous knowledge.

ACKNOWLEDGMENT

The authors thank the Government of Austria for its financial support and the Government of Uganda and especially NAGRC&DB for its technical and logistical support. In particular, the support of all the livestock owners for their cooperation and Dr D. K. Semambo (NAGRC&DB) for overseeing the activities are highly acknowledged.

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