

*Dryland Networks Programme*

**ISSUE PAPER**

**Pastoral Women and Livestock  
Management: Examples from  
Northern Uganda and Central  
Chad**

Hedwig Bruggeman

**IIED**

INTERNATIONAL  
INSTITUTE FOR  
ENVIRONMENT AND  
DEVELOPMENT

**Paper No. 50  
July 1994**

The author was project coordinator of Oxfam's Pastoral Associations Project "ISHTIRAK" in Central Chad from 1988-91 and carried out research for Oxfam Uganda on *Women and Livestock Production in Dodoth Country, Karamoja, Uganda* (Bruggeman, 1993a).

# **Pastoral Women and Livestock Management: Examples from Northern Uganda and Central Chad**

**Hedwig Bruggeman**

## TABLE OF CONTENTS

LIST OF TABLES .....	i
SUMMARY .....	ii
INTRODUCTION .....	1
THE AGRO-PASTORAL PRODUCTION SYSTEM IN DODOTH COUNTY .....	2
WOMEN'S CONTROL OVER LIVESTOCK IN DODOTH COUNTY .	4
WOMEN'S CONTROL OVER LIVESTOCK PRODUCTS IN DODOTH COUNTY .....	10
WOMEN AND LIVESTOCK MANAGEMENT IN DODOTH COUNTY .....	12
Herding, watering and protecting the herd .....	12
Milking .....	12
Animal health .....	13
CONSTRAINTS AFFECTING WOMEN'S ROLE IN LIVESTOCK PRODUCTION IN DODOTH COUNTY .....	16
Insecurity .....	17
Access to veterinary services and drugs .....	17
Availability of livestock feed at the permanent settlement .....	18
Social constraints .....	19
DISCUSSION .....	21
CONCLUSIONS .....	25
BIBLIOGRAPHY .....	27

## LIST OF TABLES

Table 1:	No. of households and families included in the survey and no. of animals allocated to the families (wives) and households in the permanent settlement	7
Table 2:	Division of livestock ownership in Central Chad	9
Table 3:	Frequency of veterinary drugs bought by men and women respectively during 1992.	15
Table 4:	The order of importance of economic activities to obtain money to buy veterinary drugs by men and women respondents	15

## LIST OF BOXES

The agro-pastoral system in Central Chad	4
Women's control over livestock in Central Chad	9
Women's control over livestock products in Central Chad	11
Women and livestock management in Central Chad	16
Constraints affecting women's role in livestock production in Central Chad	20

## SUMMARY

A common stereotype of pastoralism is that men carry out all significant phases of animal husbandry. This belief has been perpetuated by a large body of literature on pastoral and agro-pastoral societies throughout the world. However, the role played by women in these societies is far greater than originally believed. Examples exist throughout Africa where women are actively involved in animal husbandry especially when it comes to milking, cow and calf health and control over livestock products. Two case studies suffice to illustrate this point: the agro-pastoralist women of Central Chad and the Dodoth in Uganda. In both cases insecurity and degradation of grazing areas have caused many livestock losses. This means that women are losing their traditional rights and therefore what little independence they had. It is vitally important that projects recognise and utilise the role of women in livestock production; women play a crucial role in the pastoral livestock production system and it would be counter productive to exclude them from activities geared towards improving livestock productivity. If livestock development projects do not build on the role and problems of women in livestock management their access to livestock and livestock products will decrease even further.

## INTRODUCTION

The existing literature on pastoral and agro-pastoral societies throughout Africa, the Near East, Asia and in parts of Europe and the Americas, ignores women's economic activities, social status and especially the role of women in livestock management. However, over the last five years there has been some improvement when it comes to research and data collection on agro-pastoralist women's social status, mostly from an anthropologist's point of view (Horowitz & Jowkar 1992). In pastoral development projects this has not, however, led to an increase in women's involvement in livestock management activities. As Oxby (1989) remarked, "if (agro)pastoralist women are involved at all it is usually not in relation to animal production activities (even when it is clear that women play a significant role in animal husbandry) but in relation to other activities like primary health care, literacy, improved stoves and handicrafts."

There is little evidence to suggest that much has changed since 1989. The role of women in pastoral societies is recognised in project planning and implementation phases, but at the same time the phrases "cultural constraints" and "through the men the whole family will benefit" are used as excuses for not directing project activities, especially those related to animal husbandry, towards women. Shanmugarathan et al. (1992) report on the formation of pastoral institutions in government sponsored development projects in West African Sahel and recognise the important role of pastoral women in animal production. At the same time their field impressions confirm findings from other studies that the participation of women in

mainstream programme activities will only be achieved in the long term mainly because of cultural and socio-economic constraints.

Swift & Toulmin (1992) gave four main reasons for the failure of pastoral development programmes in Africa: sectoral and technical focus; weak social and economic analysis; ignorance of available information and inadequate institutional framework. One wonders if ignorance concerning the role of women in livestock management could not be seen as another reason for failure.

This paper seeks to explore the role of women in livestock management in the agro-pastoral context of the Dodoth people in Karamoja, north-east Uganda. In order to create a broader perspective, examples from the women of agropastoral societies in Central Chad will also be presented. In both cases, agro-pastoral herds have declined significantly during the drought years of the early eighties, followed by rinderpest epidemics. The latter has been due to increased insecurity caused by civil unrest and raiding, resulting in the discontinued vaccination campaigns and increased mobility of infected herds.

## **THE AGRO-PASTORAL PRODUCTION SYSTEM IN DODOTH COUNTY**

The agro-pastoral system in Dodoth County (average rainfall 500-750 mm/year) is based on permanent settlements which are complemented by seasonal cattle camps. The basic unit is the household consisting of a man,



his wives and children. Up to five households stay together in a single settlement and a cluster of settlements forms a neighbourhood. The position of the permanent settlements is fixed and the activities performed therein are usually carried out by women. The food consumed is mostly agricultural produce such as sorghum, bulrush-millet and maize with some cattle produce from the milk herd kept in the settlement during the rainy season. Children milk the sheep and goats which are kept year round in the permanent settlement. Agricultural work is mainly done by women, young men (the warrior age set) herd the cattle and the household head moves between the permanent settlement and the cattle camp. Several herds from one neighbourhood join together to form grazing units. In the rainy season the cattle are grazed near the permanent settlements; at the beginning of the dry season the animals may graze crop residues for a few weeks and then move on to pastures near the mountain ridges to the east and west.

Fields are allocated to women by their husbands who open new land or inherit fields from their mothers. Although men participate in some of the agricultural activities (stumping and digging) women have full control over the yield. Manure is only occasionally used on small gardens near the settlement.

## THE AGRO-PASTORAL SYSTEM IN CENTRAL CHAD

In contrast to the Dodoth situation most of the agro-pastoralists in Central Chad (average rainfall 200-400mm/year) live in semi-mobile cattle camps. This means that they move their camps according to the season within a certain area. During drought years they might move to the south of the country in search of water and pasture. The basic unit of the agro-pastoral production system is the family. Only some very rich men have two or more wives at any one time. Usually a family lives in a tent and 6 to 13 tents form a camp in the middle of which animals (mainly cattle and goats and a few sheep) are kept overnight. Depending on the time of year and the prevailing occupation, these camps may consist of smaller or larger units. During and after harvesting each family will have its tent near their fields for harvesting, crop residue grazing and manuring adds (through overnight kraaling in the fields). During the hot dry season they stay together with other families in larger camps and collaborate for long distance night grazing and to be near water sources.

The crops grown are mainly sorghum, berber and sesame. The agro-pastoral women from a farming background have their own fields and granaries. The agro-pastoral women from a herding background do not have their own fields and therefore have no independent rights and are unable to generate income for themselves through cropping.

## WOMEN'S CONTROL OVER LIVESTOCK IN DODOTH COUNTY

Contrary to general belief, women are very active in acquiring livestock. A newly wed wife will be allocated one or two milk animals from her husband's herd. Then she may try to obtain more livestock by brewing beer from sorghum. A woman has the right to part of the bride-price of her co-wives and sisters' daughters but none of these animals will be released unless the claims are followed up by the brewing of beer. If the woman does not brew she will be considered lazy and there is no need to give her the animals. Animals can also be acquired when the husband invites all his friends to drink and the one who "opens the pot" often offers a female calf

or small ruminant to the woman who brewed the beer. If unlucky, these men cheat the woman and the benefits of brewing are lost. Collected data revealed that 50 percent of the animals over which the women have control were allocated by the husband and the rest were obtained through bride-price and brewing. Table 1 shows livestock allocations to women in a sample survey from three parishes. In Nyangia, one of the three parishes, the population has become agriculturalist and none of the women interviewed had any cows allocated to them but three women had two oxen each allocated to them. Only 35% of the women in Nyangia had any goats and/or sheep compared to the overall average for the three parishes of seventy percent and sixty percent respectively. Elsewhere, the majority of agro-pastoral women had one or two dairy cows with followers under their control plus some 5-7 adult small ruminants.

All redistribution of animals for marriage, sale (in times of food shortage) or other household needs is negotiated between a husband and his wives. Each will try to make the most out of the situation. A man's first wife might be quite willing to release some animals (such as those allocated by the husband) to enable him to marry a younger wife of her choice so she can pass on some of her burden to the new wife. During lean periods a woman will try to convince her husband to sell one of his animals and to distribute the food to all his wives. If he refuses she will ask him to sell one of her own livestock in which case the money and/or food will come to her, some of which she will lend to her co-wives and other relatives under reciprocal agreements.

Thus, while a wife gains livestock from her husband at marriage, through the bride-price of relatives, and from brewing beer or other labour, her

disposal rights are limited. In essence her herd is held in trust for her sons who will inherit the livestock. Each newly wed woman has to build up her own livestock and agricultural production unit and start up her own networks.

The women like to keep their milk cows near the homesteads for as long as possible (from the onset of the rains until after the crop residue grazing) in order to obtain dairy products like ghee and butter-milk. During that period the women have control over their dairy cows. The small ruminants are normally kept around the homestead all year round. If the cows are in the camps, the women said that they had no problem in keeping track of young followers. When a calf is born the herdsboys come to report on the colour of the newborn and when an animal dies the skin is brought back to the woman so that she can check on the colours. When the animals are near the homestead the women will not hesitate to check on their animals in person.

By contrast, Lochhead (1990) reported women not being informed about their animals, particularly in cases concerning widows with small children, because as soon as a man dies his debts are recovered by relatives and friends and these might be tempted to take the woman's animals (Bruggeman, 1993). In most cases, widows are inherited by one of the husband's brothers or when she has adult sons these will take care of her so her situation with regards to her own animals will not change.

Table 1: No. of households and families included in the survey and no. of animals allocated to the families (wives) and households in the permanent settlement (Bruggemann, 1993a).

Partia	Eosangbu	Nyungbu	Logara	Average
No. of households interviewed	9	9	9	9
No. of families(wives)	31	17	22	23
Average no. of families/household	3.4	1.9	2.4	2.6
Average no. of dependent children/family	4	3.3	3.7	3.7
No. of women owning cows	29 94%	0	20 91%	16 70%
Average no. of cows/woman owning	2.6	0	2.4	1.7
Range	1-7	0	1-6	1-7
No. of women owning oxen	16 53%	3 18%	9 41%	9 40%
Average no. of oxen per woman owning	2	2	2	2
No. of women owning goats and/or sheep	20 65%	6 35%	16 73%	14 60%
Average no. of sheep+goats per woman owning	6	7.5	6.8	6.8
Range	1-13	2-10	1-17	1-17
No. of households with sheep+goats allocated to children	9 100%	3 33%	6 67%	6 67%
Average no. of sheep+goats allocated to children/household	49	26	36	37
Range	25-97	10-37	6-101	6-101
No. of women owning chickens	20 65%	6 35%	13 59%	13 56%
Average no. of hens per woman owning	3.4	5.5	5	4.6

When a divorce occurs, a settlement must be made concerning the bride price paid for her and the animals obtained by the woman during her stay with the husband. Animals obtained by the woman from her own relatives are considered hers, unlike those allocated by her husband. Although everything depends on negotiations, it is rare for the family of a divorced woman to pay back the full bride-price if the husband keeps the woman's animals. Whatever happens, the woman usually comes away with no animals because they remain either with her ex-husband or with her parental family. If the woman is young and strong she can remarry and try her luck again, starting from zero. If she is elderly and has no adult sons, she will be doomed to a difficult life because her family will not be very eager to take care of her, let alone allocate animals for her to milk.

## WOMEN'S CONTROL OVER LIVESTOCK IN CENTRAL CHAD

In Central Chad like other parts of west Africa, women can own and inherit livestock, although a woman may inherit only half of what her brothers inherit. Women also obtain cattle through bride-price. It is customary that the husband gives at least one cow to the mother-in-law and one to his future bride. These animals cannot be replaced by cash as is sometimes done with the rest of the bride-price. It is not uncommon that girls like boys receive an animal from their father on special occasions. Agro-pastoral women invest their surplus income from petty-trade such as the sale of butter-oil, mats and agricultural produce in livestock. A survey among 24 herds found that on average 25% percent of the cattle belonged to women (Table 2). According to the women it was more difficult for them than for the men to rebuild their livestock herd after drought years. The situation was more difficult for pastoral women as they do not have control over agricultural resources. The same survey found that only 14% of the total cattle herd belonged to the women of this latter group (Bruggeman, 1991).

Table 2: Division of livestock ownership in Central Chad (Isiraké, 1991)

owner	represented in No. of herds (total No. = 24)	total No. of cattle owned	average No. of cattle owned	percentage of cattle owned
in charge	21	306	14	30%
sons	5	43	9	8%
brothers (incl. of)	11	167	15	21%
mothers	2	23	11	4%
other men		64		7%
wife(s)	8	64	8	9%
mother (of her)	3	70	2	10%
daughters	2	14	7	2%
sister	3	29	1	4%
total women		177		25%
total herd		711		100%

## WOMEN'S CONTROL OVER LIVESTOCK PRODUCTS IN DODOTH COUNTY

Milking and the production of butter-oil in Karamoja are traditionally female tasks although when animals are kept far away from the permanent settlement young men will do the milking. The livestock products that are used include meat, milk, ghee, skins and blood. Meat is consumed at the camps or permanent settlements when animals die of disease, or during traditional ceremonial slaughters. Animals are also sold on the hoof for slaughter, mainly to Mbale. Skins are used by women to make clothes (although it is becoming less common for young women), for sleeping on or are sold to traders. If animals die at the camps the skins will be returned to the woman who owns the animal. This will prove that the animal has indeed died. If an animal of the husband dies, the skin will be allocated to one of the wives. Blood is consumed by the herdsmen in the camps. Milk is consumed fresh at the cattle camps by the herdboys, and any surplus is churned into ghee. Women can send their girls to the kraals for limited periods of time in order to help out with milking, making ghee, watering the animals and preparing food for the herdsmen. Part of the ghee will then be consumed at the camp and part of it brought home by the girls, according to the women's share of the animals.

At the permanent settlements fresh milk is not consumed (except when given to malnourished babies) but everything is converted into ghee and butter-milk. The ghee and butter-milk are all consumed at home for food and smearing (ghee). The women said that, in the old days when there was



## WOMEN'S CONTROL OVER LIVESTOCK PRODUCTS IN CENTRAL CHAD

In Central Chad, milking and the production of butter oil are also controlled by women. Milk, fresh or converted into ghee and butter oil, are the most important livestock products from cattle. Small ruminants are milked by the children and usually slaughtered at home for visitors, special occasions and traditional healing. Surplus small ruminants are sold to meet family needs. Cattle are sold on the hoof, mainly in the dry season, to meet family needs and for paying taxes and vaccinations. Small ruminant skins are used to make household utensils. Cattle skins are used for sleeping on or sold to traders. Manure (applied to fields through overnight trampling after the harvest) is a very important aspect of the agro-pastoral system in the region.

Milking and making butter oil are women's tasks. Generally speaking the women decide for themselves how to use the produce to meet household needs. Milk and butter oil are used for home consumption and the surplus butter oil is sold directly or stored for home consumption or sale at a later date. The revenue obtained by selling butter oil and milk belongs to women. In most cases, men do not know how much milk and butter oil is produced, stored or sold by their wives.

The milk production available for the household was estimated (ISHTRAK, 1991a) at 269 l per lactation per cow and at 132 l per lactation per goat. The quantity of butter oil from cows' milk that one family produced and sold was also calculated from the data available and estimated at 8-20 bottles (or 75cc) for a herd of 12 and 40-52 bottles produced for a herd of 30-50. Approximately half of the butter oil produced is sold by the women, the rest is used for home consumption (food and smearing of the skin).

Milk production, and therefore the production of butter oil, are at a peak during the rainy season. This is also the period when cereal stocks are finished or very limited. Good food is necessary because it is the period of hard work in the fields, and milk and milk products are a very welcome addition to the daily menu. The sale of butter oil provides an important source of income with which to buy additional food items (salt and dried tomatoes) as there is no grain left to sell and animal prices are very low due to the presence of transhumant pastoralists. A survey among agro-pastoralists in the area revealed that a household (average size of 7) normally consumes 4.5 kg of cereals per day when there is no milk in the diet but only 2.5 kg per day if there is milk (Ishttrak, 1991).

plenty of milk, they would consume everything and smear themselves until their skins were beautiful. According to women, the condition of their skin clearly reflects the availability of milk in their compounds.

When asked about milk yields, the women estimated 2-4 litres per cow/day (not including the calf's part) in the rainy season to 0.5-2 litres in the dry season. A nutritional survey in Dodoth County (Blak, 1990) confirmed that the availability of livestock and their products has a significant impact on nutritional levels.

## **WOMEN AND LIVESTOCK MANAGEMENT IN DODOTH COUNTY**

The most important aspects of livestock management in the Dodoth agro-pastoral system are: herding, watering and protecting the herd; milking; and disease control.

### **Herding, watering and protecting the herd**

The young men, most of them armed, herd, water and protect the cattle at the cattle camps. Each woman interviewed gave the same answers as her husband when asked about grazing patterns during the different periods of the year. They were also familiar with the availability of water sources, mineral licks and salty grazing areas, as they all used to be involved with the work at the cattle camps when they were girls. Around the permanent settlement, the herdboys and girls decide where to graze the animals with advice from the adults that are present (mostly the women).

### **Milking**

The women decide how much milk they can take from a cow for human consumption and how much to leave for the calf. Women thus have control over herd viability. The shortage of cows, and therefore milk for the family,

could be a reason for the very high calf mortality of male and female calves alike. Although women realise that high calf mortality is counter productive, as it reduces lactation periods and total lactation yield, they might be tempted to risk such deaths, if milk is in short supply.

Most women stated that they prefer to send one of their girls (their own daughter or one from a co-wife) to milk the cows and churn the ghee, because they are more reliable than the men in dividing the milk for different purposes, such as milk for the calf, milk for consumption and butter oil. The girls will also divide the ghee correctly between the different women according to their cows' production and bring it home.

#### Animal health

Women play an important role in disease control because a sudden drop in milk yield is an important indicator of illness. Close contact with cow and calf during milking time in the cattle corral ensures the early spotting of sick animals.

If one of her animals is sick, the woman will try to buy some veterinary drugs or use traditional medicines. A survey showed that 60% of the men and 70% of the women use traditional veterinary drugs and treatments regularly and with varying results. The women themselves look for the roots and leaves needed for treating the animals. The men usually call upon the knowledge of their wives.

Table 3 gives an overview of the frequency with which veterinary drugs were bought in 1992 as recorded by the household head and his wives. Women seem to be just as active as men when it comes to buying drugs.

Table 4 gives the order of importance of activities for obtaining money to buy veterinary drugs. It seems that all the income generating activities, apart from selling animals and a few cases of labouring, are performed by women. The fact that men say that selling cattle is the main cash earner for buying drugs might be explained by the fact that they are responsible for the vaccinations of the whole herd of the household, including all the animals allocated to their wives. During vaccination campaigns, (CBPP is being paid for these days, rinderpest vaccinations are still free of charge) the women will top up the payment for the actual vaccine with fresh milk and butter oil for the veterinary personnel. The men will also sell small ruminants in order to buy drugs on request for a wife when one of her animals is sick.

The actual treatment the women leave to the men or herdboys, but when the need arises they can do it themselves, "After all what is so difficult about handling animals?" the women say.

**Table 3: Frequency of veterinary drugs bought by men and women respectively during 1992**

Frequency of vet drugs bought 1992	Total Respondents	
	men	women
No. of times	21	18
1-5	8	10
6-10	11	2
11-15	1	1
16-20	0	1
> 20	1	4
No. of respondents using ethno-veterinary drugs	13 60%	13 70%

**Table 4: The order of importance of economic activities to obtain money to buy veterinary drugs by men and women respondents**

	Men	Women
1	Selling milk	Selling firewood
2	Brewing by their wives	Trading beef
3	Selling chickens	Collecting wild fruits
4	Selling small ruminants	Selling small ruminants
5	Selling firewood	Selling milk
6	Labouring	Selling chickens
7	Old mining/collecting grass	Selling cows/bull milking
8	Selling milk	

## **WOMEN AND LIVESTOCK MANAGEMENT IN CENTRAL CHAD**

Cattle management systems used in Dodoth County are similar to those in Central Chad with the exception of herd protection. Several herds from one cattle camp are grazed together and the herding is done by children, except during the late dry season, when long distance night grazing is practised, and then a few men will accompany the children. The men are responsible for watering the animals. Milking, the production of butter oil and control over milk yields are in the hands of women. Yet depending on circumstances, men can milk the animals and women can water cattle. The fact that young men are not needed for herding the cattle, means that they contribute significantly to the agricultural work, or can find temporary employment outside the agro-pastoral system.

The agro-pastoral women of Central Chad see themselves as responsible for cow and calf health. Quite often, men ask women to pay for vaccinations and other veterinary treatments of the herd for which the women generally sell butter oil. During vaccination campaigns, the women give the veterinary assistants milk and butter oil for their labour. The women consider animal health care as very important as they depend on the animals for their milk and ghee. The Oxfam livestock project in the area has been training male para-vets for several years, but recently the women in the project area requested project involvement in the animal health programme. They want women from their associations to be trained as para-vets (Martin, 1993).

It is quite obvious from discussions with the women that they have a basic knowledge about animal health, and that they regularly apply traditional medicines to treat their animals.

## **CONSTRAINTS AFFECTING WOMEN'S ROLE IN LIVESTOCK PRODUCTION IN DODOTH COUNTY**

The most significant constraints affecting women's role in livestock production in Dodoth County are insecurity, access to veterinary services and drugs, availability of livestock feeds and social constraints.

### Insecurity

Insecurity, rather than lack of grazing or water, means that the cows can rarely be kept at the homestead. When danger is in the air, the men take the animals away, even during the rainy season. Insecurity makes it more difficult for women and girls to visit the cattle camps and check on their animals. Grazing patterns have also changed, as large areas along the border with Turkana in Loyoro and Kathile are no longer used, resulting in high grazing pressure on the other dry season grazing areas.

One consequence of insecurity has been increased movement of people to the permanent settlements, and high pressure on agricultural land. This has led to a rapid decrease in soil fertility, caused mainly by sheet erosion, and the fact that nutrients are not replenished. This results in more frequent crop failures and a decreased availability of crop residues. The use of cattle manure through overnight kraaling is unknown and, if suggested, the possibility is dismissed because insecurity requires that cattle be kept on the move. A major problem caused by declining soil fertility and climatic conditions is crop failure which means that women have no grain to brew and therefore no way of obtaining animals. The crop failures may even force them to sell their stock in order to survive.

### Access to veterinary services and drugs

Access to veterinary drugs is a constraint upon both women and men alike. Most of the time the correct drugs are simply not available. Most drugs are bought from the local shops and travelling businessmen. Some of the local shop keepers also treat the animals. The veterinary department has a very

irregular supply of vaccines (Rinderpest and CCBP), and veterinary drugs and has logistic problems when organising vaccination campaigns.

#### Availability of livestock feed at the permanent settlement

As long as water and grazing are available in the vicinity, the milk herd is kept in the permanent settlement, sent out to graze each day, and brought back to the settlement each night. When grazing becomes scarce, the milk herd is moved away towards more distant grazing where it may join with the camp-herd for a period, until grass in the permanent settlement zone has improved.

Following a poor harvest, the short "grass rains" of the dry season can make the difference between sufficiency and deprivation, or even between survival and starvation for those left in the permanent settlement. The "grass rains" make it possible for dairy cow milk yields to increase and allow the keeping of dairy cows at the permanent settlement for a brief period (if security allows this frequent movement of animals in small units).

Long use of pastures around permanent settlements has led to a degradation of vegetation in this zone. The areas around most permanent settlements are now poor in grass but abundant in thorn trees and scrub. Sheep and goats can remain the whole year round in the permanent settlement areas, although the poor quality of the browse in the dry season will only result in a few drops of milk for the children. It becomes extremely difficult, even during the long rains, for dairy cows to maintain themselves, let alone produce a reasonable quantity of milk for calf growth and human consumption, when around the permanent settlement. Water availability for animal use does not



seem to be a bottleneck for keeping dairy animals in the permanent settlement in Dodoth County.

### Social constraints

Inheritance systems in East African pastoral societies reduce women's involvement in livestock production considerably. Each newly wed woman has to build up her own livestock and agricultural production unit and to start up her own networks for which she depends on her husband. The husband is supposed to allocate her a piece of land and one or two milk cows, plus some small stock.

With the shortage of animals, bride prices go down (they used to be 70-100 head of cattle, but now are down to 30-50 head of cattle). The actual handing over of bridewealth is being delayed more and more, thus reducing women's access to animals. If crop harvests are poor and women are unable to brew, their access to animals is reduced even further.

It was also observed that due to the shortage of animals, it has become increasingly common for little or none of the bride price to be paid. Some women had given birth to several children, whilst still staying with their parents. These women will continue to have the low status of unmarried girls, meaning that they have no chance to build up their own social kin-based networks because they are supposed to help their parents. Any other man that comes and pays part of the bride price can take them and the children away.

## CONSTRAINTS AFFECTING WOMEN'S ROLE IN LIVESTOCK PRODUCTION IN CENTRAL CHAD

In Central Chad, cattle raiding among rival tribes is not a problem although cattle thieves exist. Civil unrest has been a problem for many years, but it does not seem to influence daily life to any great extent. Droughts in combination with civil unrest have led to a reduction in herd sizes. However, over the last few years herd growth rates have been positive (4 per cent over 1989/90 (Ishirak, 1991)).

The main problem is the influence of civil unrest on veterinary services, resulting in the non-availability of veterinary drugs and irregularity of vaccination campaigns. This problem has increased the motivation of herders to organise themselves into pastoral associations and be more involved in the health care of their animals, through the training of para-vets from their own community. The women have also realised the value of veterinary drugs and services, and now wish to be involved in an animal health care programme, so they do not have to rely on the male para-vets.

The main constraint facing women concerns the availability of livestock feeds. In Central Chad we also find increased sedentarisation and opening-up of agricultural land. The system of overnight kraaling on agricultural land is now threatened by the shortage of grazing around agricultural lands. Overgrazing and degradation in the area is not caused by the transhumant pastoralists, who pass during certain periods of the year, but by the agro-pastoralists themselves. The herders (men and women alike) in the area complain especially about the reduction in the quality of available grazing, due to degradation, whilst the lack of quantity is blamed on the variability of rainfall. This has resulted in falling agricultural and animal production. It was also observed that the herds move away to the South more frequently in search of grazing areas, leaving the women behind to work on the fields with a few goats and cows to milk.

The main social constraint in Central Chad seems to exist for agro-pastoral women who have no fields of their own and therefore no control over agricultural produce. When they and their husbands owned large herds, this was not a problem, as they had complete control over the milk yields and agricultural production was just a minor activity. The women, however, are now expected to provide the daily food items, as men are very reluctant to sell animals to provide for family needs outside the milking season, as they had done before, when they were still purely pastoralist.

## DISCUSSION

A common stereotype of pastoralism is that men tend to carry out all significant phases of animal husbandry. However a critical assessment of what women actually do (and not only what they are said to do) proves that such a stereotype needs to be qualified (Dahl, 1987). In most pastoral societies, milking and especially the management of milk resources are only very rarely allocated to men, although if the cattle have to move far from the settlements men will milk the cows. On the other hand it is also not uncommon in pastoral societies for young girls to join the cattle camps for long periods to help with watering, milking and herding the animals besides preparing food for the men. According to Oxby (1987), in most cases women's major contribution to livestock centres on the care of stock kept close to the campsite. Such stock normally consist of small flocks of sheep and goats, or large stock requiring particular attention. The latter category may include pregnant cows, newborn calves and animals suffering from disease or injury. Joekes and Pointing (1991) go so far as to say that in sub-Saharan Africa, the balance of work is such that women frequently spend more time than their husbands in animal care.

Women are generally responsible for the management of milk, the availability of milk to calves and, hence, herd productivity and herd viability. It is often said that women give first priority to satisfying the milk needs of their children, and that men put the calves' needs first and by implication that of the herd (Joekes and Pointing, 1991). This is said to lead to conflicts between men and women, especially when herd size is small or under pressure. Long term herd surveys in Mali would support this view.

They show that there is a highly significant negative correlation between the quantity of milk taken for human consumption and calf mortality (Wagenaar, 1988).

This conflict between the interests of men and women was also shown by ILCA researchers during the testing of fodder banks in Central Nigeria among settled agro-pastoralist Fulani. The expected response to increased fodder availability had been increased milk production (off-take and calf consumption) from lactating and pregnant cows. However, the Fulani saw the role of fodder banks to be in maintaining animal condition and herd numbers (Taylor-Powell, 1987). Among the Fulani, milking is commonly a male task, and the household head divides the milk among the women in his household. Women are in charge of all milk processing and marketing. The Fulani women are reluctant to contribute anything towards herd inputs (drugs, ropes, mineral supplements) because they are not sure they would receive more milk in return (Waters-Bayer, 1985). As men pay for the fodder bank inputs, the funds have to come from animal sales, not from milk sales, and so their interest is in general herd survival. The above example shows that the exact role of women in the management of livestock and livestock products should be thoroughly investigated when interventions are developed.

Dahl (1987) concludes that pastoralism is a form of production where male and female contributions are intertwined. Women are associated with livestock as the means of subsistence, as "milk managers", while men are associated with animals as wealth, as managers of herds (Joekes and Pointing, 1991). Some also argue that women's rights and access to livestock are decreasing firstly because increasing sedentarisation and degradation of

grasslands means that the herds are kept at cattle posts in remote areas and, secondly, the growing importance of beef production and marketing is adversely affecting women's property rights in livestock (Joekes & Pointing, 1991).

In the two cases presented in this paper, it is obvious that women spend less time than men in animal care because time consuming jobs, such as watering and herding, are normally tasks of young men and children. In both Dodoth and Central Chad, it is the women who milk the cows and allocate the milk and, as they are close to calves and cows whilst milking, they take great responsibility for the health of cows and calves. However, this is now less and less the case in Dodoth, as the cows and calves are kept with the main herds for much longer periods than before, because of insecurity and degradation of grasslands. In Central Chad, the herds move to the south more frequently in search of grazing due to degradation, leaving women behind to work on the fields with a few goats and cows to milk.

Ocan's (1992) findings in Karamoja also confirm this change in access and rights, due to insecurity in the area. He found that milking in Karamoja was traditionally a female task, so not only had women control over harvests, but they also controlled the milk. Now, animals are mainly kept far away from homesteads because of insecurity, and are herded by male warriors. Therefore milking and the control of milk yields have tended to fall on men's shoulders. In his research Ocan (1992) found that 41% of the respondents in Dodoth considered milking an exclusively female task, whilst this figure was only 32% for the whole of Karamoja.

The complexity of livestock rights is demonstrated by the fact that different people often have a range of rights in the same animal (Joekes & Pointing 1991). Horowitz (1992) analysed research work on pastoral women in East Africa and concluded that "East African Pastoral Societies are generally known to have inheritance laws that are strongly discriminatory and men have nominal control over all cattle in the homestead but the man must customarily ask permission from the woman before he can sell any of her cattle".

In Dodoth and to a lesser extent in Central Chad, it is obvious that ownership is indeed a complex term, but that in both cases women have control over the distribution of livestock products from all cows. However in Central Chad, women are definitely better off as they can acquire livestock and maintain control over the livestock they owned after being divorced or widowed. The Dodoth women only have control over livestock and livestock products as long as they remain with their husband. Even the livestock that she has acquired through her own efforts will remain with the husband, or be returned to her parental family after a divorce or being widowed. The fact that agro-pastoral women in Central Chad move with the herds for a large part of the year gives them a far greater access and control over livestock products than the Dodoth agro-pastoral women. The continuous insecurity in Dodoth county reduces the access of women to the herd and its products even further.

The women in Central Chad argue that since the drought years, men have been in a better position to rebuild their herds than women, mainly through seasonal labouring in towns. In the Dodoth case, men have rebuilt their

herds through raiding of neighbouring tribes. In both cases, women can only rely on their surplus agricultural and animal produce to rebuild their herds.

## CONCLUSIONS

One can conclude from the two cases that agro-pastoral women are involved in livestock production in terms of management and disposal of livestock and livestock products. They do not often own animals outright, but they have control over cattle, sheep, goats and chickens.

Although women's workload is already high, they should not be excluded from a livestock development programme. Excluding women would not be very sensible because they play a crucial, but not always very visible, part in the agro-pastoral production system.

Women say their control over livestock and livestock products has been declining over the last two decades. Development programmes should not weaken women's say over livestock further, but try to strengthen their position.

Women's role in calf rearing, disease control of goats, sheep, chickens and milking cows and their role in the disposal of cattle products like milk, ghee and skins should be recognised in a livestock development programme. Women should be trained in disease control, and trained as female para-vets. This training may need to take place in different gender groups.

Availability of grazing will in the future only decline further with increasing pressure on agricultural land due to insecurity and population growth. If women therefore want to secure their access to the milk production of their dairy cows, supplementary feeding methods should be introduced based on the development of crop-livestock interactions.

In the Dodoth case, an important constraint on women's involvement in livestock production is the insecurity in the area. The present situation results in milking animals being hardly present at the permanent settlement. Women and girls are reluctant to visit the cattle camps in order to get their share from their cows production. Worst of all, the insecurity results in the death of many young men and an unusually high incidence of widows. It can therefore be said that the security issue has to be solved before any sustainable development can take place.



## BIBLIOGRAPHY

Blok, L.M.D. 1990, Report on nutritional survey Dodoth County, MSF Holland.

Bonfiglioli, A.M. (1990), 'Pastoralisme, Agro-pastoralisme et retour: Itinéraires Sahéliens', Cah.Sci.Hum. 26 (1-2) 1990: pp. 255-266.

Bruggeman, H.I.J. (1991), Résultats de l'enquête sur la situation de l'élevage des agro-pasteurs dans la sous préfecture d'Oum-Hadjer, Oxfam/Secadev Chad.

Bruggeman, H.I.J. (1993a), Gender and Pastoral Development in Dodoth County, Karamoja. Consultancy report for Oxfam, april 1993.

Bruggeman, H.I.J. (1993b), Pastoral associations in Chad: Experiences from an Oxfam Project. Oxfam Research Papers No. 7. 1993.

Dahl, G. (1987), Women in pastoral production, some theoretical notes on roles and resources. In Ethnos 52: 1987, I-II, pp. 246-279.

Ishtirak, (1989), Les femmes et les associations pastorales. Project report Oxfam/Secadev Chad April 1989.

Ishtirak (1990), Une enquête sur la situation alimentaire dans la zone d'intervention du projet Ishtirak; la sous préfecture d'Oum-Hadjer. Project report Oxfam/Secadev Chad October 1990.

Ishtirak (1991), Résultats de l'enquête sur la situation d'élevage des agro-pasteurs dans la sous-préfecture d'Oum-Hadjer. Project report Oxfam/Secadev Chad Mai 1991.

Ioekes, S. & Pointing, I. (1991), Women in pastoral societies in East and West Africa. IIED, Drylands Network Programme, Paper No. 28. International Institute for Environment and Development, London. September 1991.

Jowkar, F. & Horowitz, M.M. (1991), Gender relations of pastoral and agro-pastoral production: a bibliography with annotations. IDA Working Paper No.79. Institute for Development Anthropology, Binghampton. October 1991.

Iowkar, F. & Horowitz, M.M. (1992), Pastoral women and change in Africa, the Middle East and Central Asia. IDA Working Paper No. 91. Institute for Development Anthropology, Binghampton. August 1992.

Lochhead, A. (1990), Gender and development in Dodoth County, Karamoja. Consultancy report for Oxfam, 1990.

Martin, A. et al. (1992), Evaluation of the Ishtirak project, Oum-Hadjer. Consultancy Report for Oxfam, 1992.

Ocan, C. 1992, Pastoralism and crisis in Northeastern Uganda. Factors that have determined social change in Karamoja. Working paper No. 20. Centre for basic research, Kampala, Uganda.

Oxby, C. (1983), Women's contribution to animal husbandry and production. World Animal Review No. 48:2-11.

Oxby, C. (1989), The involvement of pastoralist and agro-pastoralist women in livestock programmes. Oxford, UK: Oxfam. (GADU [Gender and Development Unit] Newspeak No.9.)

Shanmugaratnam, N. et al. (1992), Resource management and pastoral institution building in the West African Sabel. World Bank Discussion Paper No. 175. The World Bank 1992.

Swift, J. & Toulmin, C. (1992), Guidelines and strategies for pastoral development in Africa. Discussion paper. UNICEF/UNSO project for Nomadic pastoralists in Africa.

Taylor-Powell, E. (1987), Fodder bank testing among Fulani agropastoralists in Central Nigeria: Feeding decisions in the use of improved forages. ODI Pastoral Development Network Paper No. 24b. London August 1987.

Wagenaar, K.T. et al. (1988), Productivité des bovins peuls transhumant dans le delta intérieur du Niger au Mali. CIPEA Rapport de recherche, No 13.

Waters-Bayer, A. (1985), Dairying by settled Fulani women in Central Nigeria and some implications for dairy development. ODI Pastoral Development Network Paper N. 20c. London 1985.



**Dryland Networks Programme**

**INTERNATIONAL INSTITUTE FOR ENVIRONMENT AND DEVELOPMENT**

**3 Endsleigh Street, London WC1H 0DD, England**

**Tel: (44-71) 388.2117 Fax: (44-71) 388.2826**

**Telex: 261681 EASCAN G**

---