

# The Extent of Draught Cow Use in the North Bank Division of the Gambia

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## Abstract

*This paper presents the results of a survey which was carried out in the North Bank Division of The Gambia to determine the extent of draught animal use and the sex and species of the animals used. More than 70% of all work units surveyed use animal traction. Fifty-five% use donkeys, 42% cattle and 32% horses. Only 9% use draught cows. The results may indicate that the use of draught cows is slowly spreading. The authors suggest that more research is needed on the use of cows as compared to equids and oxen. A greater use of cows may alleviate the pressure on traditional farming systems in the Gambia.*

## Introduction

The Gambia is predominantly an agricultural country with more than 80% of the population deriving their livelihood from agricultural activities. Agriculture accounts for 30% of the gross domestic produce (GDP).

The introduction of farm mechanisation began in the 1950s with an oxenisation programme and the development of appropriate implements for Gambian farmers.

Farmers often have difficulty in purchasing a pair of draught oxen and the number of oxen used for animal traction (AT) has remained fairly constant in recent years. The use of donkeys for AT, however (Sowe et al. 1988; Sumberg and Gilbert 1988), has increased rapidly because of the low cost, the availability of light implements developed in Senegal and the advantage of using a single donkey to perform all necessary farm operations.

A major omission in the oxenisation programme was the exclusion of the use of cows for AT. The use of cows is common in Senegal (Reh and Horst 1985; Lhoste 1986), India, Indonesia and Egypt. Farmers are traditionally reluctant to use females for AT because they are regarded as being less powerful than males. Also it is felt that work adversely affects milk yield and fertility. However, studies at the International Livestock Centre for Africa (Ethiopia) have shown that work does not affect the

performance of cows under research station conditions. Cows used for animal traction in Sine Saloum, Senegal, had higher levels of productivity than herd cows because draught cows were given supplementary feed in the dry season.

The use of cows for AT may allow more efficient use of feed resources because the farmer obtains milk and calves in addition to work and manure. There are approximately 180,000 cows in the Gambian national herd which could be used to alleviate the problem of draught animal supply.

However, the use of draught cows in the Gambia is limited and does not appear to be spreading rapidly despite positive reports from farmers who use cows. The use of cow traction increased rapidly from 0 to 26% in 1970 to 1981 in Sine Saloum, a region of Senegal which forms the northern border with the North Bank Division of The Gambia. The objectives of this study were to obtain quantitative information on the use of draught cows compared to other draught animals in the North Bank Division.

## Materials and Methods.

A questionnaire was developed to determine the extent of use of AT and the sex and species of animals used. If the farmer used cows for traction then the enumerator asked questions concerning management and productivity. Only the proportion and type of traction animal used is reported in this paper.

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The study used enumerators and villages selected for the National Agricultural Sample Survey (NASS) of the Programme Planning and Monitoring Unit, Ministry of Agriculture. There are 6 villages in each district of the North Bank Division. The questionnaire was administered to all 'dabadas' (work units) in each of the NASS villages (40) and 2411 dabadas were interviewed. The survey was conducted in May, 1990. Immediately before the survey, a workshop was conducted to introduce NASS supervisors and field enumerators to the objectives of the study and questionnaire. The results were analysed using the SAS tabulate procedure (SAS Institute Inc. 1988).

### Results and Discussion

Of all dabadas interviewed, 71.4% use AT. Among the dabadas that use AT, 41.2 % use cattle, 55.4 % use donkeys and 32.3 % use horses. The majority of dabadas using cattle have 2 or more draught animals. This result indicates that cattle are worked in pairs while equids are worked as singles. It may also reflect the greater wealth of dabadas using cattle.

Only 9 % of the dabadas interviewed use cows for AT. However, there appear to be large differences among the districts in the percentage of dabadas using cows. Sixteen % of the dabadas in Lower Niimi and Upper Baddibu use cows but only 5% or less of the dabadas in Central Baddibu, Jokadu and Lower Baddibu. This result may indicate that the use of cow traction may be spreading slowly from one district to another, but a firm conclusion on the spread of cow traction is not possible based on a single survey.

Thirty-two % of the dabadas using donkeys and 29% of those using horses use a single female for AT. Only 6% of the dabadas using cattle are using a pair of females.

Most of the dabadas that use cows for AT stated that they also milk the cows and that the cows are able to perform all the operations required. However, cow traction may not be widely used because cows are more expensive than donkeys and farmers work them in pairs.

More research is needed on the use of cows as compared to equids and oxen. Equids have much higher mortality and poorer reproduction than cattle because of diseases. Trypanosomiasis is very common among both horses and donkeys. N'Dama cattle are resistant to trypanosomiasis but equids are not. Culled horses and donkeys have little or no value, whereas culled draught cows may be sold for meat. Milk is an important source of income especially for women and can also be consumed in the dabada to improve the nutrition of children.

Cattle in The Gambia are still managed in a traditional system. Cows owned by a few wealthy individual are usually herded by a Fula herdsman who keeps the milk in return for his labour. The herd depends on grazing in uncultivated areas and on crop residues after harvest. Grazing time is restricted during the cropping season because of the potential crop damage. As the amount of land cultivated increases in The Gambia, this system of management is under pressure to change. The use of cows for AT may help alleviate this pressure.

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### Résumé

*Cette communication rend compte des résultats d'une enquête menée dans la North Bank Division en Gambie afin de déterminer la fréquence d'utilisation de la traction animale ainsi que le sexe et l'espèce des animaux utilisés. Plus de 70% des unités de travail enquêtées pratiquaient la culture attelée. 55% utilisaient des ânes comme animaux de trait, 42% des bovins et 32% des chevaux. Seuls 9% utilisaient des vaches de trait. Les données enregistrées montrent toutefois que l'utilisation de la vache en culture attelée se répand progressivement.*

*Les auteurs font ressortir la nécessité de mener davantage de recherches sur l'utilisation des femelles en culture attelée par comparaison aux équidés et aux bovins. Un recours plus large à cette pratique permettrait de réduire la pression qui s'exerce sur les systèmes de production traditionnels de Gambie.*

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