

**BUSITEMA  
UNIVERSITY**  
*Pursuing Excellence*

**EVALUATION OF CATTLE HERD STRUCTURE IN THE  
AGRO-PASTORAL DISTRICTS OF SOROTI AND KATAKWI**

**By**

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## DECLARATION

I hereby declare that this research work titled "Evaluation of Cattle Herd Structure in the Agro-pastoral Districts of Soroti and Katakwi," submitted in partial fulfilment of the requirements for Bachelor of Animal Production and Management of Busitema University, is entirely my own work, unless otherwise acknowledged or referenced. This work has not been submitted for any other Degree or examination in any other university or institution.

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**APPROVAL**

**APPROVAL**

I hereby declare that this research dissertation has been done under my supervision as the institutional supervisor and is approved for submission to the University

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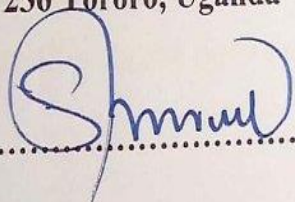
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## **ABBREVIATIONS OR ACRONYMS**

AI	Artificial Insemination
BRD	Bovine Respiratory Disease
CBPP	Contagious Bovine Pleural Pneumonia
EASZ	East African Small Zebu
FAO	Food and Agriculture Organization
FMD	Foot and mouth disease
GDP	Gross Domestic Product
NAGRC & DB	National Animal Genetic Resources Centre and Data Bank
ROU	Republic of Uganda
SPSS	Statistical Package for Social Sciences

## ABSTRACT

This study addresses the critical aspects of cattle herd structure in Soroti and Katakwi districts, Uganda, emphasizing the significance of understanding the composition, demographics, and management practices for sustainable livestock farming. Cattle rearing play a pivotal role in the livelihoods of communities in Soroti and Katakwi, yet the industry faces challenges such as poor health practices, limited knowledge, and inadequate market access. The absence of comprehensive information on herd structure hinders effective interventions. This research there for aimed at filling existing gaps in information, providing policymakers, agricultural extension services, and local farmers with valuable insights. The study employed a cross-sectional design, combining qualitative and quantitative approaches. Sixty cattle herds were randomly sampled from three Sub Counties. Data on herd size, breed composition, age structure, and sex ratio were collected between November and December 2023. The mean herd size was 16.5 cattle, indicating substantial variability influenced by economic resources, cultural practices, and reproductive performance. Zebu breeds dominated (64.5%), with Ankole Longhorn, Nganda, and mixed breeds also present, reflecting cattle movement and uncontrolled breeding. Cows constituted the largest portion (37.2%), emphasizing their significance for herd growth and milk production. There was a notable imbalance in the sex ratio, with a higher proportion of females (68.3%) than males (31.7%). The study provides crucial insights into the dynamic cattle herd structure in Soroti and Katakwi. In conclusion, the prevalence of zebu breeds, imbalance in sex ratio, and the significance of cows for milk production underscore the need for targeted interventions and improved management practices. The study recommended need for improved breeding practices, focusing on desirable traits and productivity, education on herd management to improve practices, including breeding, nutrition, and health care, encourage sustainable integration of exotic breeds through controlled crossbreeding, and developing climate-resilient strategies in cattle farming



## CHAPTER ONE: INTRODUCTION

### 1.1 Background

Herd structure refers to the composition of cattle in a herd in terms of age, sex, breed, and production purposes. It reflects the management practices that farmers employ and the dynamics and challenges that they encounter in their livestock farming systems. The global cattle herd structure is diverse, with variations in breed, purpose, and management across different regions (Fordyce *et al.*, 2021).

The breeds that make up the global cattle population are *Bos-taurus* and *Bos-indicus*, among others. Every breed has distinct qualities that are ideal for particular uses, such as production of dairy or beef. Cattle are used for several things, including meat, milk, hides, and draught power. The primary purpose of cattle typically dictates the choice of breed and management techniques (Bett *et al.*, 2013).

The usual members of a cattle herd include bulls, heifers, cows, and calves. A balance between young replacement animals and mature, productive cows is maintained by age structure management. Because females are necessary for the production of both milk and meat, the sex ratio is usually skewed in favour of having more of them (cows and heifers). Fewer bulls, are available for reproduction (Holden & Butler, 2018).

The cattle population in Africa is varied, consisting of both native and foreign varieties. While foreign breeds are frequently introduced for increased output, native cattle are well suited to the local environment. Because they provide many rural people in Africa with milk, meat, and revenue, cattle are essential to their way of life. Additionally, they are essential to social and cultural processes (Mapiye *et al.*, 2020).

Because different management techniques are used in African cattle herds, age structures differ greatly. While some herders maintain a variety of age groups, others place a more priority on holding older livestock. Since cows are needed to provide milk and meat and fewer males are kept for breeding, the sex ratio usually favours more females (Akpa, G, *et al.*, 2012).

The cattle population in Uganda consists of both imported exotic varieties for increased productivity and native types like the Ankole, which are suited to the environment. In Uganda, cattle are mostly employed for cultural and social purposes, as well as for the production of milk and meat. An important component of Ugandan agriculture is dairy farming according to

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