



**BUSITEMA
UNIVERSITY**
Pursuing Excellence

**ASSESSING FARMERS' PERCEPTION TOWARDS BREEDING
METHODS ON CONCEPTION RATES OF CATTLE IN BUKEDEA
DISTRICT**

BY

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UNIVERSITY**

OCTOBER, 2024

DECLARATION

DECLARATION

I **Ekusai Stanely** do declare that this piece of work is original and has been developed as my own research dissertation for the award of a degree in animal production and management at Busitema University. It has not been duplicated or submitted anywhere else or institution.

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APPROVAL

APPROVAL

The entire work relating to the research dissertation development and writing has been supervised by Ms. Akurut Immaculate

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DEDICATION

This report is dedicated to my family members (parents, spouse and brothers) and all my course mates for the sacrifice and efforts they've put toward my academic progress.

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My sincere appreciation goes to the almighty God for enabling me reach this point of life. I would also like to appreciate my friends and family for their support throughout my studies. Special thanks also go to my supervisor madam Akurut Immaculate for her guidance and support, not forgetting all my lecturers for skilling and guiding us as students.

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ACRONYMS

AI	Artificial Insemination
CL	Corpus Luteum
ART	Assisted Reproductive Technologies
MAAIF	Ministry of Agriculture Animal Industry and Fisheries
NAGRC & DB-	National Animal Genetic Resources Center and Data Bank
GDP-	Gross Domestic Product
USD-	United States Dollars
FAO-	Food and agriculture organization
UBOS-	Uganda Bureau of Statistics
NARO-	National Agricultural Research Organization
AFS-	Age at First Service
BCS-	Body Condition Score
PGF2a-	Prostaglandin F2 alpha
FSH-	Follicle Stimulating Hormone
LH-	Luteinizing Hormone
GnRh-	Gonadotrophin Releasing hormone
Mi-	Miles
Km-	Kilometers

ABSTRACT

This study aimed at assessing the effect of breeding methods on conception rates of cattle in Bukedea district. The research study was inspired by the need to improve reproductive performance of cows as it's of significance in influencing dairy sector profitability. For this study, descriptive research design was used and the research approach involved both qualitative and quantitative approaches through conducting interviews, survey and statistical analysis of data respectively.

Across all the sub-counties, natural mating dominates the breeding system practiced by farmers with highest figures reported in Kolir (n=183) and lowest number reported in Kabarwa (n=19). Low figures were reported on Synchronization + natural mating for all the sub-counties with highest figures in Kabarwa (n=12) and Suula (n=12) and the lowest in Bukedea t/c (n=2). Synchronization + AI (72.04%) had the least conception rate while, synchronization + natural mating followed with 72.73%. Other methods that did not use synchronization like Natural mating and AI on natural estrus had higher conception rate of 80.40% and 78.56% respectively. The results also highlight various factors affecting the breeding programs ranging from nutrition, availability of the bulls, cost of operation, availability of AI technicians, heat detection problem, stress, body condition score, age of the animals and time of insemination.

Natural mating is the favorite breeding method in the area and with this practice, there is low adoption of improved breeding technologies like AI and synchronization. This can be attributed to the purpose for which most farmers rear animals for beef and traction power. Also, local breeds dominate the herds and this highlights the need for improve extension services in the area. The study recommended, implementation of targeted awareness campaigns to educate farmers, enhancing accessibility to artificial insemination services, providing training programs and capacity-building initiatives and collaboration with relevant stakeholders for optimal results in the district. Future research should focus on the cost effectiveness of synchronization technology.

CHAPTER ONE: INTRODUCTION

1.0 BACKGROUND

Uganda's population is rapidly growing and is anticipated to be 106 million in 2050 compared to 45.9 million today. As for this population growth, the demand for animal resource food is exponentially increasing. As a response, the livestock sector is growing and transforming to become one of the most important sectors in agriculture. Agriculture is dominated by small holder farmers contributing about 25% to GDP, 71% to employment, 54% to export value (FAO, 2018).

Cattle rearing is the most important livestock subsector in Uganda contributing to 4.4% of the GDP, beef production fetched 1.018 trillion shillings while the export value of milk and products increased to USD 103 million (UBOS, 2021). Cattle also provide draft power, income, food, social capital, and insurance to the population among others. Sustainable agricultural development fosters growth in domestic earnings, improved standards of living for rural communities and providing nutritional needs of the increasing population. Series of international conferences were conducted by international development partners such as UN targeting poverty alleviation, this was done by formulating the MDGs as an intervention to counter this problem (IFAD, 2011). Livestock are capital asset; they are endowment resulting from production activities which increase household earnings beyond that got from the input of land and labor. Wealth growth by increasing livestock numbers is a common practice of accumulating income and amassing wealth (FAOSTAT, 2014).

Controlling livestock diseases and provision of animal health services plays a significant role livestock productivity and lowers the risk of loss. Studies point out that 30% of livestock are lost due to illnesses. Furthermore, general disease control programs increase the production costs. Furthermore, veterinary service delivery is faced with many recognized challenges.

Some livestock farmers still practice ethno-pharmacological medicine. However, with advancement in scientific research, new control strategies of disease have been made available and some leading to even eradication (Beux *et al.*, 2016).

The Ugandan government has in the recent years introduced a strategy for wealth creation through parish development model (PDM) by organizing and delivering public and private interventions. It is a model for social economic transformation of small holder farmers by moving them from subsistence to money economy (UBOS, 2022). According to Uganda National Household Survey

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