

# AN ABATTOIR STUDY OF BOVINE MASTITIS IN INDIGENOUS BREEDS OF CATTLE IN NIGERIA

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## SUMMARY

An abattoir survey of the macroscopic examination of the udder of cattle was carried out on, 2,392 heads of cattle originating from different states in Nigeria. 38.75% of these were female animals. The overall incidence of bovine mastitis was 12.30%. Majority of the confirmed cases were aged cows, (70.18%). The view was expressed that the White Fulani breed offers tremendous potential for the dairy industry in Nigeria.

## INTRODUCTION

Mastitis is one of the major diseases of cattle against which no real progress has been made in the past years in Nigeria. A review of the literature shows that there has been no account of any real survey conducted in both indigenous and exotic breeds of cattle in Nigeria. Between 1951 and 1952, nine out of eleven specimens received at Vom (Annual Reports) were positive for mastitis; this is about 82% infection rate. The report did not specify whether the specimens were from either the exotic or the indigenous breeds of cattle, although it was reported

that the materials were received from various farms located in the country. Very little information is available concerning the economic loss sustained by the few Dairy farms in Nigeria as well as the Fulani herdsmen as a result of the disease in cows.

This paper describes the findings in the udder of cows examined at Abeokuta abattoir in Ogun State. These cows were derived from the Northern and the Southern States of Nigeria.

### MATERIALS AND METHOD

This investigation was conducted during the period July to September, 1976. Daily visits were paid to the abattoir during which an ante-mortem examination was carried out. For each animal, the breed was identified and ages were determined from incisor teeth (Ladds, Dennett and Glazebrook, 1973) and were grouped as follows:

Young cows	-	less than 3 years,
Mature cows	-	3 to 7 years,
Aged cows	-	more than 7 years.

Two criteria were used for the diagnosis of mastitis, these were the clinical examination of udder tissue and the clinical examination of the udder secretion using a strip-cup test. All the cattle were indigenous breeds locally reared in various parts of the country. They were derived from herds in Northern and Southern States

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of Nigeria. The majority came from the Northern States via one of three routes viz - train, haulage by long trucks or on hoof. The abattoir was selected for the examination so as to represent as wide a range of husbandry practices and environmental conditions as possible. Information on previous reproductive history and husbandry practices in herds of origin were only sometimes available.

### RESULTS

The findings are summarised in Tables 1 & 2. A total of 2,392 heads of cattle were examined; 927 (38.75%) were female animals. There were three main indigenous breeds of cattle all of the zebu type or the *Bos indicus*; 320 (13.38%) were of undetermined breed. The predominant breed was the White Fulani accounting for 54.60% of the total animal examined, Sokoto Gudali approximated 23.24% while Bunaji (Red Bororo) was 8.78% of the total animal examined. The overall incidence of clinical mastitis was 12.30%. The incidence in Bunaji (22.22%) was higher than in White Fulani (10.65%). Majority of the affected animals were aged cows (70.18%) while the others were mature cows. No mastitis was detected in young heads of cattle brought for slaughter, at the abattoir.

### DISCUSSION

This survey provided basic information on clinical mastitis in cows from a large number of herds in Nigeria. In addition, it provided the basis for an appraisal

Table 1. Incidence of Bovine Mastitis relative to the Breed

Breeds	Total animal examined	No. of females examined	No. with clinical Mastitis	Percent of females
White Fulani	1,306	526	56	10.65
Sokoto Gudali	556	145	18	12.41
Bunaji (Red Bororo)	210	36	8	22.22
Undermined breeds	320	220	32	14.55
Total	2,392	927	114	12.30

Table 2. Incidence of Bovine Mastitis relative to the age and breed.

Breed of Cattle	Young cows	Mature Cows	Aged Cows	Total with Clinical Mastitis
White Fulani	-	17	39	56
Sokoto Gudali	-	4	14	18
Bunaji (Red Bororo)	-	3	5	8
Undermined breeds	-	10	22	32
Total	-	34	80	114

of this condition in relation to milk production. A possible limitation of the survey was that the latent infection could not be diagnosed using the clinical examination

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methods. However, this limitation was compensated for by the large number of animals that were examined using abattoir methods. Munch-Petersen (1934), Little and Plastridge (1946) and Schalm, Carroll and Jain (1971) have suggested that the clinical diagnosis of mastitis is the oldest, most natural, logical and practical method to examine mastitic udders. Recommendations to combine various laboratory diagnostic methods have been waived in this investigation in favour of the clinical examination of the udder tissue and secretion.

The overall incidence of bovine mastitis (12.30%) is considered to be low because in most countries surveys of the incidence of mastitis, irrespective of cause, show a comparable figure of about 40 percent, (Blood and Henderson, 1971). A possible explanation might be that the indigenous cattle are not heavy milk producers as compared to the exotic breeds. The low incidence of bovine mastitis is consistent with the three main breeds but was highest in the Bunaji (22.22%). It would appear that the White Fulani may offer a tremendous potential as a good breed that could be developed for the dairy industry in Nigeria. Further investigation is in progress.

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