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A Survey of Pathological Conditions of Public Health Importance in Slaughtered Cattle in Ilorin Central Abattoir, Nigeria

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Abstract

The prevalence of disease constitutes a serious setback to livestock industry in Nigeria. An effective livestock disease control programme, needs up-to-date record of common diseases prevalent in an area. The knowledge of the magnitude to which the public is exposed to certain zoonoses through beef consumption is very useful in preventive medicine. Ilorin central Abattoir was visited between January and December 2011 to collect information on pathological conditions of public health importance found in slaughtered cattle during the period. Records were kept on sex, breed, foetal wastage and on results of laboratory findings on faeces and worms collected from the disease organ. A total of 38,560 cattle were examined. Pneumonia constituted (42%), Helminthiasis (18%), Abscesses in liver, lung and kidney (10%) and other problems (30%) of the pathological conditions noted. Out of the 4,550 organs infected with diseases 1,350 (27.47%) portions were salvaged while 3200 (72.53%) whole organs were condemned. Twenty nine whole carcasses were condemned. Foetal wastage was estimated at 18% of the 20,150 female cattle slaughtered while 18,410 male was slaughtered during the period. Mycobacterium spp., Salmonella sp, Staphylococcus sp and Bacillus sp isolated from disease organs were of Public Health importance. Suggestions were made for improving the meat inspection practices of the Abattoir and for providing better education to the butchers.

Keywords; Abattoir, Public Health, Slaughtered Cattle, Ilorin, Kwara State

Introduction

Food animals are useful as they supply quality protein and revenue to man. The consumption of animal protein by the average Nigeria is low, beef constitute the major source of meat consumed in Nigeria (Alonge, 1995; FAO 2005). The prevalence of disease constitute a serious impediment to cattle production by causing high mortality and low production. The extent to which the masses are exposed to pathological conditions of public health importance through consumption of beef is very useful in preventive veterinary medicine. Abattoirs provide excellent opportunities for detecting diseases of public health importance. This survey reports on diseases of public health significance in cattle slaughtered in Ilorin between January and December 2011, highlights the control measures adopted, administrative problems encountered and hindrances to standard meat inspection. This study is valuable in the area of monitoring pathological condition of zoonotic importance in cattle and in ensuring availability of wholesome beef for human consumption.

Materials and Methods

The central abattoir in Ilorin was visited between January to December 2011. Data were collected on pathological conditions of zoonotic importance in slaughtered cattle during the period. Collection of data was by structured questionnaire and on the spot assessment of the carcasses at the abattoir. Antemortem and postmortem inspections were performed by visual observation, palpation and by incision of suspected organs. Specimen of disease organs and adult worms were collected for laboratory examination for confirmatory diagnoses.

Results and Discussions

The estimated age of cattle slaughtered in central abattoir, Ilorin ranges from 1-8years. 38,560 cattle were examined out of which 18,410 (47.74%) were male and 20,150 (52.26%) were female. The commonest disease condition was pneumonia (42%) helminthiasis (18%) abscesses in liver, lung and kidney (10%) others (30%). Out of 4,550 organs infected with disease 1,350 (27.4%) portion were salvaged while 3,200 (72.53%) whole organ were condemned. 3,627 pregnant cows were slaughtered representing foetal wastage of 18%. Twenty nine whole carcasses were condemned for generalized tuberculosis.

Conclusion and Recommendations

The study is valuable in the area of monitoring pathological conditions of public health importance. The general public is saved from acquiring zoonotic diseases through this study. It also ensured that only wholesome beef is passed for human consumption. The high incidence of some of the conditions observed may indicate the significant role they play as diseases of cattle in Ilorin, Nigeria. This also calls for improved control and preventive measures such as routine vaccination, deworming and medication for cattle in this area. The high incidence of foetal wastage recorded in this study indicates poor and improper ante-mortem examination by the meat inspectors, illiteracy and high poverty level of our farmers and socio-economic loss to the nation. It is therefore recommended that condemned meat must be properly disposed, hygienic condition of the abattoir upgraded and the butchers education improved.

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Tables

Table1: Disease conditions observed in slaughtered cattle in Ilorin between January and December 2011

Disease conditions	Number of cattle examined	Number with disease condition	% incidence
Pneumonia	38,560	16,195	42
Helminthiasis	38,560	6,941	18
Abscess (liver, lung and kidney)	38,560	3,856	10
Others (mange, pericarditis, tuberculosis)	38,560	11,568	30

Table2: Common causes of organ condemnation in cattle at Ilorin central abattoir (January to December 2011)

Reason for condemnation	Organs Type	Numbers	Portion salvaged	Whole organ condemned
Pneumonia	Lungs	1,775	794	981
Helminthiasis	Intestines, lungs ,livers	1,070	206	864
Abscesses	Lungs, livers, kidney	590	150	440
Others(TB, Mange)	Lungs, skin, Lymph nodes,	1,115	200	915
		4,550	1,350 (27.4%)	3,200 (72.53%)

Table3: Breed and sex distribution of slaughtered cattle and the incidence of foetal wastage in Ilorin

Breed	Male	Female	Pregnant cows	Foetal wastage%
White Fulani (Bunaji)	9,136	10,182	1,627	6.1
Red bororo (Rahaji)	3,170	2,421	203	5.5
Others (Ndama, Zebu)	6,104	7,547	1,797	6.4
	18,410	20,150	3,627	18

Table4: Bacteria cultured from condemned tissue of slaughtered cattle at Ilorin

Type of bacteria	Source
Salmonella spp, E.coli, Bacillus cereus, Pasteurella multocida, Staphylococcus sp	Udder, lung, intestine, lymph nodes, uterus, liver, kidney