SHORT COMMUNICATION

Seasonal abattoir foetal wastage, food security and the National economy

[1]Tizhe, M.A., [1]Daniel T. K., [1]Kubkomawa, H.I., [2]Dass, D. and [2]Butswat, I.S.R.
[1]Department Of Animal Production and Health, The Federal Polytechnic, P.M.B 35, Mubi. Adamawa State, Nigeria.
[2]Department Of Animal Production, Abubakar Tafawa Balewa University, Bauchi, Nigeria

Abstract

The study was conducted to evaluate seasonal abattoir foetal wastage and assess its impact on the national economy and food security in Nigeria. A total of 10,176, 19,078 and 16,226 fetuses were recovered from cattle, goats and sheep at three abattoirs located in three towns namely: Michika, Uba and Mubi over a period of four years (2005-2008) to assess the extent at which fetuses wasted affect farmers and the national GDP. Estimated market value of the fetuses from the three abattoirs assuming they were given the opportunity to survive and attain maturity before sales were N712,320,000, N228,936,000 and N243,390,000. This amount of money would have been added to the national domestic revenue. On the average, 2,544 calves, 4,769.75 kids and 4,111.5 lambs valued at N178,070,000, N57,237,000 and N61,672,500 are lost every year. On monthly bases, Nigeria is losing the sum of N59,360,000, N14,078,500 and N2,028,200 through foetal wastages from two local governments areas alone. Season has high significant effect (P<0.01) on the number of fetuses wasted especially during the dry seasons. Means of foetal recovery were highest in the year 2006, and lowest from cattle and sheep in the year, 2008. Higher number of foetal recovery was recorded in Mubi abattoir followed by Uba and then Michika. This practice of killing pregnant animals has enormous consequences on the farmers, other stake holders in the livestock industry and the national GDP.

Key words: Foetal Wastage, Food Security, National Economy, Nigeria

Introduction

The need for humans to consume adequate animal protein in their diet cannot be over emphasized. Yet most countries of the sub-Saharan Africa are faced with acute protein deficiency. This situation has become so endemic in Nigeria due to inadequate development of the livestock industry. Coupled with this, is the absence or inadequate meat inspection practices, thus leading to the collapse of the veterinary public health duties paving way to indiscriminate slaughter of pregnant animals. From time immemorial, livestock sub-sector of the economy has been a major contributor to the national economy, not only in terms of its contribution to the GDP, but the substantial supply of animal protein as 36.5% of the total protein intake is obtained from animal and animal by-products (NISER/CBN,1991; FDLPCS,1997).

Kubkomawa *et al.* (2009), Hale *et al.* (1997) and Abiola *et al.* (1999) alongside several other authors have reported several cases of abattoir foetal wastage from different parts of Nigeria. This has been happening un-abated and the government showed little or no concern. Some people attribute the slaughtering of the pregnant animals to high demand for meat while others attribute it to economic reasons, where pregnant animals attract higher premium than non-pregnant animals due to abdominal fill. At times references are made to this act taking place due to lack of feeds especially during late dry season and early wet season thus forcing the farmers to reduce the number of animals irrespective of sex or physiological status of the animals.

The slaughter of pregnant domestic animals will no doubt worsen the already precarious

supply of animal protein to the populace if not controlled (Abdullahi, 1987). Economically, substantial amount of money is lost each year in form of attainable revenue on the side of the farmers and the national GDP (Oyekunle, *et al.*, 1992). This practice is criminal, un-ethical and un-economical and must be discouraged and discontinued. The practice is unhealthy for a growing economy like Nigeria. It is a monster, a deadly act and a serious threat to the Nigerian livestock industry. It is on the strength of this that this study was conducted to look into the gravity and or the consequences of slaughtering of pregnant animals on the national economy and food security in the country.

Methodology

Data were obtained from daily records of three abattoirs viz: Michika, Uba and and Mubi for the period of four years (2005 to 2008). Records were grouped into month, year and seasons. The seasons were early dry (October to December), Late dry (January to March), early wet (April to June) and Late Wet (July to September). Data generated were analyzed using Statix.8.0 statistical package (2009) USA. Treatment means comparison was done using the Least Significance Difference (LSD) at 5% level of probability. Season, month and year were the major factors (fixed variables) considered. The covariates (random variables) were the number of fetuses encountered and the estimated cost of the fetuses. The financial implication of the fetuses wasted was computed based on year, month, season and location.

Results and Discussion

Total number of fetuses encountered during the four years of study is presented in tables 1, 2 and 3 on yearly, monthly and seasonal bases according to specie. Their market values were assessed on the assumption that the wasted fetuses were given the opportunity to survive to maturity. At the age of 3years for cattle, 1.5years for goat and sheep, they could be sold at the rate of N70,000; N12,000 and N15,000) per animal, after the cost of managing animals to attain age of sale based on market assessment in the Mubi International cattle market.

During the four years of study, a total of 10,176, 19,078 and 16,226 fetuses were recovered from cattle, goats and sheep. Their estimated market values assuming they were given the opportunity to survive

Table 1: Yearly Foetal Recovery and Associated Financial Implications.

Year	Fetus (cattle)	Value(N)	Fetus (goat)	value(N)	Fetus(sheep)	Value(N)
2005	2564	179480000	4378	52536000	3698	55470000
2006	3546	248220000	6666	79992000	5254	7881 0000
2007	2044	143080000	4217	50604000	3906	58590000
2008	2022	141540000	3817	45804000	3368	50520000
Total=10176		712320000	19078	228936000	16226	243390000

Table 2: Total Monthly Foetal Recovery And Associated Financial Loss

Month	Fetus (cattle)	Value (N)	Fetus (goat)	value(N)	Fetus(sheep)	Value (N)
Jan.	1225	85750000	2045	24540000	1702	25530000
Feb.	903	63210000	2160	25920000	1589	23835000
Mar.	672	47040000	1704	20448000	1184	17760000
Apr	1063	74410000	1808	21696000	1903	28545000
May.	643	45010000	1297	15564000	1110	16650000
Jun.	336	23530000	1302	15624000	1177	17655000
Jul.	730	51100000	1397	16764000	1082	16230000
Aug.	543	38010000	947	11364000	988	14820000
Sept.	819	57330000	1285	15420000	863	12945000
Oct.	807	56490000	1286	15432000	1055	15825000
Nov.	954	66780000	1753	21036000	1819	27285000
Dec.	1481	103670000	2094	25128000	1754	26310000
Total.	0176	712330000	19078	228036000	16226	297390000

and attain maturity before sales were N712,320,000, N228,936,000 and N243.390,000 respectively. This amount of money would have been added to the national domestic revenue. On the average, 2,544 calves, 4,769.75 kids and 4,111.5 lambs valued at N178,070,000, N57,237,000 and N61,672,500 are lost per year. Similarly, Mathew *et al.* (1982) reported an estimate of ^1.59 million per annum from Kaduna, Jos and Oyo states in the 1980s.

Table 2 depicts means of monthly foetal recovery. The months of January and December shows higher number of foetal recovery (1,225 and 1,481) with an estimated value of N8,575,000 and N103,670,000 for calves. Number of kids wasted was highest during the month of February (2,160). More lambs were encountered during the months of April, November, December and January 91,903, 1,819, 1,754 and 1,702) respectively. Mean total monthly foetal recovery was 848, 15,898.83 and 1,352.17 for cattle goat and sheep respectively. The variation that existed between the fetuses encountered and the months gave a true reflection of what is happening in most abattoirs and slaughter houses across the state and the country at large.

On monthly basis, Nigeria is losing the sum of N59, 360, 000, N14, 078, 500 and N2, 028, 200 through foetal wastage from cattle, goat and sheep in two local government areas alone. The question is, how much is Nigeria losing looking at the country as a whole? Such a quantum loss is beyond imagination. This result is in agreement with similar findings on economic implication of slaughter of pregnant cows in Nigeria reported by Oyekunle *et al.* (1992).

Table 3: shows the seasonal trend of foetal recovery from the three species of animals (cattle, goat and sheep). The highest seasonal foetal wastage was 3,242 for cattle (early dry), 5,909 for goats (late dry) and 4,628 and for sheep (early dry). Season has high significant effect ($P<0.01$) on the number of fetuses wasted especially during the dry seasons, as indicated in table 4. Means of foetal recovery were highest in the year 2006, and lowest from cattle and sheep in the year, 2008. However, the number of fetuses recovered during the early and late dry seasons were highest on

Table 3: Seasonal Recovery Of Fetuses And Economic Losses

Season	Fetus (cattle)	Value(N)	Fetus (goat)	value(N)	Fetus(sheep)	Value (N)
Early dry	3242	225400000	5133	61596000	4628	69420000
Late dry	2800	196000000	5909	70908000	4475	67125000
Early wet	2040	142940000	4407	52908000	4190	62850000
Late wet	2092	146440000	3629	43548000	2933	43995000

Table 4: Means ± SE by Year and Season of Foetal Wastage

Variables	Cattle	Goat	Sheep
Overall mean	212.00 ± 26.12	397.27 ± 56.43	338.04± 43.22
Year	*	***	*
2005	213.67 ± 24.81	264.83 ± 28.86	308.17±23.97
2006	295.50 ±48.03	555.50 ± 75.14	437.83±63.63
2007	170.33 ± 19.65	350.67 ± 31.90	325.50±23.49
2008	168.50 ± 20.99	318.08 ± 24.55	280.67±24.33
Season	*	**	*
Early dry	270.17 ± 39.87	427.00 ± 34.25	385.67±45.44
Late dry	233.33 ± 34.40	472.42 ± 70.34	372.92±47.23
Early wet	170.17 ± 29.81	350.67 ± 31.90	325.50±23.49
Late wet	174.33 ± 20.35	302.42 ± 32.27	244.42±13.06

*= (P<0.05) **= (P<0.01) ***= (P<0.001)

the average during the late dry season and for early dry season for cattle, goats and sheep respectively. This result contradicts the report made by Waba, (2006) that higher foetal wastage was witnessed among cattle, sheep and goats in Borno state during the wet season. Fetuses wasted seem to be higher in goat and sheep compared to the cattle. This was due to the presence of twins and triplets among the goats and sheep as against the cattle that rarely produce twins (Wilson, 1980).

Table 5 shows the number of fetuses encountered in each location. Higher number of foetal recovery was recorded in Mubi abattoir followed by Uba and then Michika. This is due to higher number of animals slaughtered for meat and it is the biggest of the three towns with higher human population. This also agrees with Waba, (2006) who reported from Maiduguri in Nigeria that the rate of foetal wastage increases with increase in number of female animals slaughtered for meat depending on the population, location and economic status of the people.

Conclusion

Nigeria lost about one billion, one hundred and eighty four million, six hundred and forty six thousand Naira (N1,184,646,000) through foetal wastage from the three abattoirs. From this assessment, it shows that Nigeria as a country could have been on the global map as one of the countries that

Table 5: Economic Analysis Of Foetal Wastage Based On Location

Location	Specie	Fetuses	Monetary Values (N)
Michika	Cattle	1755	122850000
	Goat	4558	54696000
	Sheep	3730	55950000
Uba	Cattle	3408	238560000
	Goat	4780	57360000
	Sheep	3632	54480000
Mubi	Cattle	5013	350910000
	Goat	9740	116880000
	Sheep	8864	132960000

has a highly sustainable livestock industry. Apart from the financial loss, there is a huge reduction in the population of potential breeding animals, dairy product from which the cattle owners derive their livelihood and quality / quantity of meat available to the teeming human populace.

Recommendation

The practice of killing pregnant animals from all ramifications has drastic consequences on the farmers, other stake holders in the livestock industry and the national GDP. The practice led to elimination of animals in their prime productive life. This phenomenon has been in practice unchecked due to lack of strict adherence to the rule of law. To obtain self sufficiency in animal protein and guide against serious economic loss, slaughtering of pregnant animals must stop. Legislative orders have to be instituted to guard against the slaughter of pregnant animals. Nigerian livestock sector should increase domestic animal protein production to attain national self sufficiency in meat production and increase in farmers' income. All stake holders in the livestock industry should come together to see that all laid down government policies in respect of livestock production is implemented to the letter. Also adequate funds should be provided by the government at the three tiers of government to rejuvenate and invigorate the pregnancy diagnoses procedures at the lairage before slaughter. Lastly, cattle owners should be educated on the consequences of selling and slaughtering of pregnant animals.

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