

Incidence of Fetal Wastage in Cattle Slaughtered at the Shahrekord Industrial Slaughter House, Shahrekord, Iran

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Abstract: The aim of this study is to determine the proportion of fetuses destroyed due to the slaughter of pregnant cows at Incidence of Fetal Wastage in Cattle Slaughtered at the Shahrekord Industrial Slaughter House, Shahrekord, Iran. A retrospective study was conducted on abattoir records kept by the Chahar-Mahal-O-Bakhtiari State Department of Veterinary Services over a 4 years period. The study showed an incidence rate ranging from 1.50-2.10% over the 4 year study period (Average of 1.8%). This practice constitutes a huge drain on the animal protein availability for human consumption in a developing country like Iran. It is therefore recommended that appropriate legislation be put in place and enforced to control the slaughter of pregnant animals. Comprehensive ante-mortem inspection should also be carried out by abattoir staff on all animals intended for slaughter for human consumption.

Key word: Fetal wastage, cattle, pregnant cows, abattoir, animal protein

INTRODUCTION

The United Nations in 2003 estimated Nigeria's population to be 58,000,000 making Iran the most populous country in Middle East and one of the top most populous countries in the world. As a result of this huge population, there is a high demand for animal protein to meet the dietary protein requirements of the populace. Meeting this high protein requirement is therefore a great challenge for a developing country like Iran.

Meat from cattle slaughtered at the various abattoirs in the country constitute the largest source of animal protein for the Nigerian populace (Idahor *et al.*, 2009b). There is however, a disturbing trend in the bid to provide meat for the consumption of the human populace which involves the slaughter of pregnant female animals. The slaughter of pregnant animals for meat is unethical (Khan and Khan, 1989).

This practice frustrates the efforts of geneticist, nutritionist and livestock breeders and is a drain on breeding animals thus widening the gap of animal protein between the ever increasing human populations (Khan and Khan, 1989).

These fetuses are discovered during routine post-mortem meat inspection and are totally condemned by the meat inspection officers at the abattoir. Previous researches have shown the occurrence of slaughter of pregnant animals in different countries of the world and

these reports have shown some very disturbing figures. This trend poses a threat to efforts to meet the dietary protein requirements of many developing countries. A study conducted at the Faisalabad abattoir revealed 11.65, 8.61, 21.28 and 19.22% in buffaloes, cattle, sheep and goats, respectively for frequency of pregnant animals slaughtered (Khan and Khan, 1989). A study by Tchoumboue (1984) reported that 16% of slaughtered cattle in Yaounde abattoir in Cameroon were pregnant while Ndi *et al.* (1993) reported an average of 22.1% female cattle pregnant in Bamenda and as much as 45% in Yaounde.

A similar situation was also reported by Al-Dahash and David (1977). Occurrence of fetal wastage has also been reported in various abattoirs in different parts of Nigeria. A 2.6% rate of slaughter of pregnant cattle was reported in Enugu (Wosu, 1988) while 0.32% of pregnant cattle were reportedly slaughtered at the Doma abattoir (Idahor *et al.*, 2009a).

Idahor *et al.* (2009b) also reported 4.6, 10 and 29.5% for cows, does and ewes, respectively at the Lafia abattoir. A similar trend has also been reported in Gombe state (Mohammad *et al.*, 2008), Sokoto state (Maigandi *et al.*, 2008; Mohammad *et al.*, 2007), Bauchi and Jos (Sanusi *et al.*, 2006) while Abdulkadir *et al.* (2008) reported an incidence rate of 3.9% for slaughter of pregnant animals in Makurdi abattoir, Benue state from 1997-2002.

There was however, no published report on fetal wastage from the Shahrekord in West of Iran.

The aim of this study is therefore to determine the rate of fetal losses encountered during routine post-mortem meat inspection at the Sharekord slaughter house and some possible implications of these losses.

MATERIALS AND METHODS

Study area and animals: The Shahrekord is located at Chahar Mahalo Bakhtyari province in the Western part of Iran. It is one of the largest and best organized abattoirs in Iran and receives cattle from various parts of Iran (Cadmus *et al.*, 2006; Ibironke *et al.*, 2010).

Although, the abattoir has the daily maximum handling capacity of >1300 heads of cattle, it presently operate with the slaughter of an average of around 1000 heads of cattle daily (Ibironke *et al.*, 2010).

Since, most abattoir slaughters are done early in the morning in Iran due to lack of good storage facilities and good preservation systems, the abattoir appears congested in the mornings, a situation that makes it seem incapable of handling the number currently slaughtered on a daily basis.

The abattoir receives animals from wide geographical areas of West and it provides meat to a cosmopolitan population of the city of Shahrekord and some part of Khozestan province, the choice of the abattoir as a point for data collection is therefore considered representative for monitoring animal disease incidences and patterns that present in an average Iranian abattoir.

Data collection: The retrospective data covering periods from 2004-2008 were collected and analyzed based on abattoir records available through the effort of the meat inspectors and veterinary officers of the Shahrekord State Department of Veterinary Services (SSDVS).

Data of period prior to August, 2004 were excluded due to inaccuracy and inconsistency. The SSDVS kept effective and accurate records from 2004 onward following a government directive to commence the monitoring of key zoonotic and infectious diseases at the abattoir. All of the records of abattoir slaughtering of cattle, carcass and

offal condemnation were obtained for a period of 3 years (August, 2004-2007). Daily visits were made to the abattoir by the researchers between 15th November, 2007 and 15th January, 2008 to ascertain the current status and scope of the problems on the slaughter slabs. Oral interviews were held with butchers, cattle traders and meat inspection officers at the abattoir.

RESULTS AND DISCUSSION

A total of 1,170,492 cattle were slaughtered at this abattoir over the survey period with the monthly slaughter figure ranging between 21,875 and 30,070. Of the 1,170,492 cattle slaughtered at the abattoir, 392,062 were cows (females) and the rest were bulls (males). Over the survey period, the rate of slaughter of pregnant cattle ranged between 1.50 and 2.10% (average rate of 1.8%) with a total of 7,406 fetuses condemned from pregnant females in the abattoir.

Table 1 shows the slaughter figures, number of fetuses condemned and the percentages. The result of this study confirms that pregnant cows are frequently slaughtered at the Oko-Oba abattoir. This study revealed an incidence rate ranging from 1.5-2.1% (average of 1.8%) over the 4 years studied. The result of this study is lower than results obtained from previous similar studies (Tchoumboue, 1984; Wosu, 1988; Ndi *et al.*, 1993; Abdulkadir *et al.*, 2008; Idahor *et al.*, 2009a, b).

Visits to the abattoir showed that meat inspection staff available on the slaughter slabs seemed to be overwhelmed by the number and rate of slaughter carried out at the abattoir especially during the mid-morning rush period when meat inspection was observed to be carried out haphazardly due to staff inadequacy.

As a result of this, some fetuses may be missed and smuggled away from the abattoir without being detected. This may partly explain the low figures recorded for pregnancy in slaughtered cows at the abattoir.

Under conditions on anonymity, some butchers also confessed to the researchers that they smuggled undetected fetuses outside the abattoir and sell this to dog breeders and owners who use it to supplement

Table 1: Incidence of fetal wastage at the Oko-Oba abattoir

Periods	Total cattle slaughtered	Total cows (females) slaughtered	Percentage of cows (females) slaughtered	No. of foetuses condemned	Fetuses condemned to number of cows (%)
Aug. to Dec. 2004	156,953	51,813	33.01	778	1.50
Jan. to Dec. 2005	381,855	128,025	33.53	2,692	2.10
Jan. to Dec. 2006	402,139	133,719	33.25	2,592	1.94
Jan. to Dec. 2007	229,545	78,505	34.20	1,344	1.71
Total	1,170,492	392,062	-	7,406	Average = 1.8%

their dog's feed and pay varying sums of money for the fetuses; a practice that should be discouraged as it can spread diseases like brucellosis to both the dog and humans. This may also explain why recorded figures are lower than expected.

CONCLUSION

Slaughtering of pregnant animals for meat purpose is unethical and is contrary to the rules of slaughter under which only unproductive, infertile, sterile, old or accidentally injured animals are allowed to slaughter (Khan and Khan, 1989). It also frustrates the scientific endeavors of geneticist, nutritionist and livestock breeders working for the propagation of animal species (Khan and Khan, 1989).

This practice also ultimately reduces the quantity and quality of animal protein available for human consumption which worsens an already bad situation in most developing countries. The practice of slaughter of pregnant animals should therefore be discouraged as it is even cruel to the animals and contrary to the principles of animal welfare.

RECOMMENDATIONS

The following recommendations are however made to stem the tide:

- Legislation on the prohibition of slaughter of pregnant animals should be passed into law and enforced by the law enforcement agents. Stiff penalties should be stipulated for non-compliance
- There is need for more meat inspection staff at the abattoirs to meet the rate of slaughter and carry out more comprehensive meat inspection
- Ante-mortem inspection should be comprehensively carried out on animal before they are passed as fit for slaughter. This process will help detect pregnant cow and reduce the current level of wastage
- Butchers and the general populace should be educated on the implications of slaughtering pregnant animals or handling animal fetuses
- In more advanced countries of the world, serum progesterone levels of animals meant for slaughter can be measured to detect pregnant animals prior to slaughter
- Endoscopy can also be employed in sheep and goat to detect pregnancy in the more developed countries of the world (Khan and Khan, 1989)

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