

EVALUATION OF TRADE CATTLE WELFARE MANAGEMENT PRACTICES IN THE TRANSPORT VEHICLES, AND ENTRANSIT IN NIGERIA.

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ABSTRACT

The study was aimed to evaluate the Data on the welfare management practices for trade cattle in the transport vehicles, and during transportation in Nigeria. The trading, and movement of animals across long and short distances have been shown to interfere with their welfare. It has become a well documented fact that welfare, and quality are related, and that poor welfare practices will result in inferior meat quality. A cross sectional survey of traders and drivers involved in the selling, buying and transportation of trade cattle was conducted at Obinze cattle market in Owerri. The data generated were subjected to descriptive statistics. Traders and transporters used mostly trailers and loaded 60 cattle and above in a double deck trailer as against the recommended welfare standard 40 animals in a double decked trailer. Squatting/lying down was the major positioning of the cattle inside the vehicle. Use of bedding materials was generally adopted by the traders and transporters. Animals were not protected from extreme weather entransit. Traders and transporters did not provide feed and water for the animals during journey time. There were no planned stoppages for feeding and watering enroute, even when the drivers covered about 500 to 1400 km distance, spending about 10 to 30 hours entransit. The animal welfare practices during the long distance transportation of cattle from the northern markets to the south were very poor.

Keywords: Trade cattle, Animal welfare, Management practices, Transportation, Nigeria

INTRODUCTION

Although livestock are reared in almost all geographical zones of Nigeria, the majority available for sale come from northern states, particularly Borno, and Sokoto, where they are produced in excess of demand (Kubkomawa, 2016). In contrast, the southern parts of Nigeria have large conurbations, and concentrations of trees and root crops, which exclude surplus production of livestock (Okoli *et al.*, 2014). Thus, the basic structure of livestock trade in Nigeria, which has influenced all aspects of its operation, is the production imbalance between the northern, and southern parts of the country. This in turn has led to continuous flow of livestock from the north to the south, through a number of marketing networks (Okoli and Kalla, 2008; Benard *et al.*, 2010). Transportation of food animals is of great economic, and public-health concern due to the fact that it can cause severe stress in animals, if appropriate welfare conditions are not provided. Stressful transportation may affect meat quality adversely and may lead to the spread of infectious diseases. In order to reduce the adverse effects of transportation stress on food animals, and the resultant economic losses, some countries, and economic zones have developed welfare regulations for animal transportation. Such regulatory practices are however non-existent in Nigeria, even though there may be laws guiding animal transportation in the country (Appleby *et al.*, 2008). The trading, and movement of animals across long and short distances have been shown to interfere with their welfare. Long-term transportation of livestock by road across various ecological, and climatic zones of Nigeria is therefore a major economic problem because of its costly, and risky nature, which is attributed to the exposure of the transported animals to many stressors like rough handling, deprivation of food and water, poor vehicle design, poor road conditions, extremes of temperature and humidity, and length of the journey (Minka and Ayo, 2009).

MATERIALS AND METHODS

A cross sectional survey of traders and drivers involved in the selling, buying and transportation of trade cattle was conducted at Obinze cattle market in Owerri. The primary data on cattle market operations were generated using a pre-tested structured questionnaire and personal interviews. A total of 20 questionnaires each were distributed to cattle traders and truck drivers respectively. Questionnaires were used to collect data on place of origin of animal as well as conditions of transport. Drivers were



interviewed on arrival at the lairage on issues relating to journey times and transit events, while interviews were carried out on 20 cattle traders during lairage holding periods. The amount of handling prior to transport, distance and duration of journeys and lairage treatments were recorded per consignment.

Results and discussions

Table 1: Trade cattle welfare management practices in the transport vehicles

Parameter	Trader Frequency	percentage	transporter Frequency	percentage
(a). Stocking Density				
20 - 30	0	0.00	0	0.00
31 - 40	0	0.00	0	0.00
41 – 50	0	0.00	0	0.00
51 – 60	0	0.00	0	0.00
60 and above	20	100.00	20	100.00
(b). Loading Pattern				
Standing	0	0.00	0	0.00
Squatting/ laying down	20	100.00	20	100.00
(c). Use of Bedding Material				
Yes	20	100.00	20	100.00
No	0	0.00	0	0.00
(d). Protection from extreme weather				
Sun/Heat				
Yes	0	0.00	0	0.00
No	20	100.00	20	100.00
Rain				
Yes	6	30.00	6	30.00
No	14	70.00	14	70.00

(a) Stocking density

Table 1a shows that all the traders, and transporters stocked above 60 cattle per truck or trailer. The recommended stocking density needed to maintain animal welfare is however a maximum of 40 animals for a double decked lorry truck (Appleby *et al.*, 2008; Minka and Ayo, 2009). This indicates that cattle traders, and transporters in Nigeria are more or less trying to cut costs per animal head transported, while the issue of animal welfare with regards to stocking density is neglected.

(b) Loading pattern

Table 1b showed that all the respondents reported squatting/lying down as the major positioning of the cattle inside the vehicle. All the animals are loaded to lie down in a resting position throughout the journey, and well restrained or tied to one another with ropes. Confinement on a moving vehicle has been reported to be the most stressful aspect of the transportation chain for cattle (Tarrant and Grandin, 2000). Minka and Ayo (2009) reported that during the journey through bends, and ascending or descending

(c) Use of bedding materials in the vehicle before loading animals

Table 1c reveal that all the cattle traders, and transporters in Nigeria adopted the use of bedding material in the vehicles. They stated that it helps in preventing injury as well as absorbing urine and faeces. This management practice has been suggested by Knowles *et al.* (1999b) as a good welfare practice to prevent injury during long distance transportation of calves.

(d) Protection from extreme weather

Table 1d shows that non of the respondents protected the animals from excessive sun, while 70.00% did not protect the animals from rain fall during the journey. These findings agree with the reports of Appleby *et al.* (2008) that animal welfare issues attributed to livestock transportation are common



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throughout Africa, since livestock are not protected from extreme heat or chill during long distance transportation.

Welfare management practices entransit

(a) Feeding and watering in transit

Table 2a showed all the traders and transporters did not provide feed and water for the animals during journey time. These practices have been shown to have physiological, and metabolic impacts that affect final products especially milk, and meat (Tarrant and Grandin, 2000). Appleby *et al.* (2008) reported that because of the general bad condition of roads, and the need to move animals as quickly as possible, and the perception that time is money, livestock are usually not allowed to rest, drink water or feed during long-distance transportation in Africa.

Table 2: Trade cattle management practices entransit

Parameters	Traders		Transporters	
	Frequency	Percentage	Frequency	Percentage
(a).Feeding/Watering in Transit				
Yes	0	0.00	0	0.00
No	20	100.00	20	100.00
(b). Stoppages during Journey time				
None	14	70.00	14	70.00
Once	6	30.00	6	30.00
Twice	0	0.00	0	0.00
Thrice	0	0.00	0	0.00
(c).Time Spent During Stoppages				
None	14	70.00	14	70.00
1 - 2hour	0	0.00	0	0.00
3 - 4hours	6	30.00	6	30.00
(d).Feeding/Watering During Stoppages				
Yes	0	0.00	0	0.00
No	20	100.00	20	100.00
(f). Distance covered				
100-400km	0	0.00	0	0.00
500-900km	0	0.00	7	35.00
1000-1400km	0	0.00	13	65.00
(g). Journey Time From Departure to Arrival				
5-10 hours	0	0.00	0	0.00
11-15 hours	0	0.00	7	35.00
16-20 hours	0	0.00	8	40.00
21-25 hours	0	0.00	3	15.00
25-30 hours	0	0.00	2	10.00
31 hours and above	0	0.00	0	0.00

(b) Stoppages during journey time

Table 2b shows that majority of the traders, and transporters (70.00%) did not make any planned stoppages during the journey, while only 30% of them made only single stoppages, principally because of the need to reduce the journey time. Regulations governing the transportation of livestock differ among countries, with the European Union recommending that journey times should not exceed 8 hours. However, this may be extended to 14 hours of travel, if the transporting vehicle meets additional

requirements, after which a rest period of at least 1 hour with watering is specified for adult animals (Tarrant and Grandin 2000).

(c) Time spent during stoppages

Table 2c reveals that those traders and transporters that observed stoppages during the journey spent about 3 – 4 hours during the single stoppage. This stoppage time is usually between the hours of 10pm and 1am during the night. The European Union recommends a 1 hour duration stoppage for feeding, and watering (Tarrant and Grandin, 2000).

(d) Feeding and watering during stoppages

Table 4.5d shows that all the traders, and transporters did not feed or water the animals during stoppages. The findings again corroborate the reports by Minka and Ayo (2009) that deprivation of feed and water is common practice during long term transportation in Nigeria and may cause stress reactions that overtax the body systems of the animals (Appleby *et al.*, 2008).

(f) Distance covered

Table 2f showed that 35% of the distances covered by the trade cattle transporters ranged between 500 – 900km, while 65.00% ranged between 1000 – 1400 km. This shows that these journeys need at least one stoppage in order to optimize welfare conditions of the animals. Appleby *et al.* (2008) reported that long distance transportation of trade cattle in West Africa ranges from 500 – 1000 km on the average.

(g) Journey time from departure to arrival

Table 2g shows that 40.00% of the transportations required 16 – 20 hours journey, while 25.00% required 21 – 30 hours. Appleby *et al.* (2008) had reported that poor road conditions and numerous check-points on the routes usually results in as much as 12 hours being spent on a 500 km journey.

CONCLUSION

The animal welfare practices during the long distance transportation of cattle from the northern markets to the south were very poor and characterized by the wrong type of vehicles, overloading, feed and water deprivation, lack of stoppages along the journey to rest the animals and mixed animals of different sizes among others.

RECOMMENDATION

There is the need to reappraise the animal welfare policies in the country with the objective of making them science and technology driven, similar to the practice in western countries.

REFERENCE

- Appleby, M. C., Cussen, V., Garcias, L., Lambert, L. A., and Turner, J. (2008). Long distance transport and welfare of farm animals. Wallingford, Oxfordshire, UK: CABI Publishing, 1 – 450.
- Knowles, T. G., Warriss, P. D. Brown, S. N. and Edwards, J. E. (1999b). Effects on cattle of transportation by road for up to 31-hours. *Veterinary records*, 145: 575 – 582.
- Kubkomawa, I. H. (2016). Studies on Characteristics of Pastoral Cattle Production in Adamawa State, Guinea Savannah Zone of Nigeria. A PhD Thesis in Animal Management: Federal University of Technology, Owerri, Nigeria, Department of Animal Science and Technology.
- Minka, M. S. and Ayo, J. O. (2009). Physiological responses of food animals to road transportation stress. *African Journal of Biotechnology*, 8 (25): 7415 – 7427.
- Navarro, G., Bravo, V., Gallo, C. and Philips, C. J. C. (2019). Physiological and behavioural responses of cattle to high and low space, feed and water allowances during long distance transport in the south of Chile. www.mdpi.com/journal/animals.
- Okoli, C. I., Kubkomawa, H. I., Ugwu, C. C., Unamba-Opara, I. C., and Okoli, G. C. (2014). Links between pastoral practices and agro-pastoral conflicts in the rainforest zone of south-eastern Nigeria. 4th Agricultural Science Week and 11th 358 General Assembly of CORAF/WECARD, 16 - 20th June, 2014, Niamey - Niger Republic.
- Tarrant, V. and T. Grandin. (2000). Cattle transport. Pp. 151 - 173. (In: Livestock Handling and Transport. Ed. T. Grandin). CABI Publishing, New York, NY.
- Zulkifli, I., Abubakar, A. A., Sazili Q. A., Goh, Y. M., Imlan, C. J., Kaka, U., Sabow, A. B., Awad, E. A., Othman, A. H., RazlinaRaghazali, Phillips, C. J. C., Nizamuddin, N. H. Q. and Helen Mitin (2019). The effects of sea and road transport on physiological and electroencephalographic responses in brahman crossbred heifers. *Animals*, 9: 199