

DETERMINATION OF AWARENESS OF TRANSPORTATION STRESS BY LIVESTOCK MERCHANTS IN AKINYELE KRAAL IBADAN, OYO STATE, NIGERIA

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ABSTRACT

This study was conducted to examine the awareness of transportation stress by livestock merchants in Akinyele kraal Ibadan of Oyo state. The population of the study consists of livestock merchants in the study area. Simple random sampling techniques procedure was used in selection of the respondents. One hundred and twenty-two respondents were used for the study. Descriptive statistics were used to analyze the objectives of the study while chi square analysis was used to analyze the hypothesis. It was observed that livestock merchants were aware of stocking density ($\bar{x} = 1.74$), fitness to travel ($\bar{x} = 1.72$), journey duration and livestock health status information ($\bar{x} = 1.64$) respectively. The reasons for livestock transportation indicate slaughtering purposes (63.00%), re-stocking (20.00%), change of ownership (11.0%) and leaving drought areas to better feeding area (6.0%). The mode of transportation of livestock with the high percentage recorded in motor vehicle (80.00%) while transportation of livestock to the market was done more than 3 times (47.0%) in a month with a total delivery of over a thousand (54.00%) per month in the study area. Risks factors to animal welfare during transport in the study area revealed that loading and unloading and road conditions and terrain ($\bar{x} = 2.43$) had the highest mean and was ranked first. Oral and injection of vitamin C were the main solutions to stressors in livestock transport. It was there recommended that implementing comprehensive policies that prioritize animal welfare, protect public health, and improve the efficiency and quality of agricultural products in Nigeria should be encouraged.

Keywords: Livestock Merchant, Transportation, Awareness

INTRODUCTION

Transportation of livestock involves grouping and loading of animals at their place of origin, confining them to a moving or stable vehicle, unloading, and eventually lairage or penning at their ultimate destination (Sies *et al.*, 2017). Transportation is an unavoidable husbandry activity to which animals are subjected as a result of marketing and the need to slaughter them for meat in slaughter houses (Adamczyk *et al.*, 2015). As a result of substitution of old stock exhibits, fairs, sports events, seasonal tourism, taming, reproduction and health status, livestock are also transported (Giovagnoli *et al.*, 2002). According to the scholars, livestock are often relocated to achieve translocation for growth and fattening shortly before harvest, and often to sources of less costly or more plentiful feed supplies (Sporer *et al.*, 2008; Ritter *et al.*, 2009; Adenkola and Ayo, 2009). Because these transporting animals are subjected to a number of external environmental stimuli, which are called stress factors (Sies *et al.*, 2017) and thus animal transportation is extremely stressful.

Transportation is an unavoidable component of beef production and involves both physical and psychological stressors that predispose cattle to disease and negatively affect growth performance and carcass characteristics. These stressors can also result in oxidative stress, which further depresses animal health, feed conversion efficiency, and meat quality (Suganya *et al.*, 2015). Hence, the study seeks to investigate the awareness of transportation stress by livestock merchants in Akinyele Kraal Ibadan, Oyo State, Nigeria and it is against this background that the study was embark upon with a view of providing answers to the following research questions:

- i. What are the socioeconomic characteristics of livestock farmers in the study area?
- ii. Are you aware of livestock transportation stress?
- iii. What are the reasons for livestock transportation?
- iv. What are the implications of stressors in livestock transport?
- v. What are the risks factors to animal welfare during transport in the study area?
- vi. What are the solutions to stressors in livestock transport?

The objective of the study was to examine the awareness of transportation stress by livestock merchants in Akinyele kraal Ibadan of Oyo state.

MATERIALS AND METHODS

Study Area: The study was carried out from Ibadan Cattle Market initially located at Bodija in Ibadan North Local Government Area, about one kilometer from the University of Ibadan, along the road to the State Government's Secretariat. It was the main recipient and distributor of cattle moved from different parts of northern states to Ibadan metropolis and some parts of the Yoruba South-west. The main Kraal for receiving of cattle from the northern states was later moved to Akinyele after the 1999 Bodija ethnic conflict which existed between the Hausa cattle traders and the Yoruba marketers (Filani, 2005). The population for this study comprised of all livestock marketers in Cattle Kraal, Akinyele Local Government Area.

Simple random sampling techniques were used which involved random selection of 40 market units located around the Cattle Kraal, at least two respondents per block were interviewed in order to determine the awareness of transportation stress by livestock merchants in Akinyele kraal. Three (3) respondents were randomly selected from each of these blocks making a total of 120 respondents in all. The data collected was analysed using both descriptive and inferential statistics such as Chi square.

RESULTS AND DISCUSSION

The results showed that most (83.6%) of the respondents were male with mean age of 50.4 years, about 73.80% of the respondents had either primary or secondary education. 53.30% of the respondents had between 11-20 years of livestock transport experience with 57.0% of the respondents participated in livestock marketing association while 51.6% of the respondents' source of labour were hired or paid labour. It was observed that livestock merchant were aware of stocking density ($\bar{x} = 1.74$), appropriate Fitness to travel ($\bar{x} = 1.72$), journey duration and livestock health status information ($\bar{x} = 1.64$) respectively, pregnancy status of the animal ($\bar{x} = 1.57$), acclimatization periods and withdrawal of food and space allowance ($\bar{x} = 1.55$) with level of their awareness higher than 1.50 and was ranked first, second, third, fourth and fifth respectively. The reasons for livestock transportation in the study area with the greater percentage was slaughtering purposes (63.00%), other mentioned were re-stocking (20.00%), change of ownership (11.0%) and leaving drought areas to better feeding area (6.0%). The mode of transportation of livestock with the high percentage recorded in motor vehicle (80.00%), other mentioned were transit through hoof (10.80%), train medium (5.00%) and transport through sea (4.20%). Transportation of livestock to the market was done more than 3 times (47.0%) in a month with a total delivery of over a thousand (54.00%) per month in the study area.

The implications of stressors in livestock transport in the study area were 72.10% of the respondent said thirst (mean = 1.74) ranked 1st stressor followed by hunger (mean = 1.72), aggressive interactions (mean = 1.64) ranked 3rd, fear (mean = 1.59) ranked 4th and injury (mean = 1.56) was ranked 5th as major stressors in livestock transport. Risks factors to animal welfare during transport in the study area revealed that loading and unloading and road conditions and terrain ($\bar{x} = 2.43$) had the highest mean and was ranked first, other very severe risk includes; journey duration, food and water deprivation time, inability to observe the livestock during the journey and take necessary action, space allowance on the vehicle with mean rate of 2.34 respectively, Weather conditions ($\bar{x} = 2.31$), and selection and preparation of the livestock for the journey ($\bar{x} = 2.28$)

The solutions to stressors in livestock transport with the greater percentage recorded in oral and injection of vitamin C (30.00%) and following policy and regulation of livestock transportation (28.10%). Other mentioned were use of supplement (20.70%), monitoring handling (12.60%) and appropriate handling aids (8.50%). Welfare in cattle production cannot be separated from sustainability and quality. This is because welfare practice improves not only cattle health and productivity but also food safety and its quality (Alimi et al., 2023). According to Buckham-Sporer *et al.* (2023), one of the concerns regarding cattle transport is that the handling and marketing of animals prior to a journey may lengthen the period of feed withdrawal. Furthermore, feed withdrawal can impact animal welfare through hunger and

metabolic stress. Therefore, strategies geared towards decreasing stress during the handling and transportation of cattle may improve welfare as well as subsequent production.

CONCLUSION

Based on the findings of this study, majority of the respondents were aware of stocking density, fitness to travel, journey duration and livestock health status information, pregnancy status of the animal, acclimatization periods, withdrawal of food and space allowance. The main variables to be controlled to reduce stress are transport processes, time and handling facilities. The physical condition of the animal before transport, and food and water deprivation during the journey play important roles in the way that animals should be managed during the transport process and in their fitness to travel. Transportation of animals is associated with a number of handling and environmental stressors, such as vibration, climate conditions in the vehicle, thirst, hunger, humidity, high stocking density or overloading, inadequate ventilation and mixing of unfamiliar animals while the hypothesis tested to relationship between livestock merchant characteristics and awareness level was significant except of age, household size and years of experience.

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