

Animal Welfare and Consumer's Health**Veterinary Medicine**

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**Belegu, K¹., Ozuni, E¹.,
Andoni.E¹., Laçi, D².,
Mavromati. J²., Bizhga, B².**

Agricultural University of Tirana, Faculty of Veterinary Medicine

¹Department of Morphofunctional Matters,

²Department of Veterinary Public Health.

Abstract

Transportation is considered as a major stressor for farm animals and might have deleterious effects on the health, wellbeing, performance and ultimately on product quality, (E. H. van Borell 2001). So, the welfare of animals during transport is the joint responsibility of all people involved, (Broom, D. M. 2005). Many studies have proved that there is a direct connection between the health of animal and consumers. This study aims to monitor animal welfare during transportation based on controlling the respect of animal transportation standards in accordance with the "Regulation (EC) No 1/2005" on the Protection of Animals During Transport". The methodology used to realize this study was that of direct interviewing of merchants and farmers at the animal market in the suburbs of Tirana, which is the only animal market in Tirana. The evaluation period was December 2012 until February 2013. From all the people interviewed resulted that 55% of them, or 11 persons, were merchants and 45%, or 9 of the interviewed were farmers. As a result of the sellers interviewed, most of them transport animals locally and only one of the sellers were licensed to realize international transportation of the animals. The majority of the interviewed do not possess a specific vehicle for the transportation of the animals. Currently, they use other vehicles for goods transportation for this purpose. Based on the discussions with the 20 farmers and animal merchants resulted that their knowledge regarding animal transportation is very poor. None of them has ever been trained in relation to the rules of animal transportation that guarantees animal welfare.

1. Introduction

Broom (2001) defines that the welfare of an animal is its state as regards its attempts to cope with its environment. Welfare therefore includes the extent of failure to cope, which may lead to disease and injury, but also ease of coping or difficulty of coping, (Terrestrial Animal Health Code 2007). One important part of the animal's state is that which involves attempts to cope with pathology (i.e., the health of the animal); so, health is part of welfare, (Scientific opinion 2011). Many studies have proved that there is a direct connection between the health of animal and consumers. Also, several studies of different authors have outlined the connection between the various problems manifested in the reproductive human health and the increasing level of hormones, provided by foods of animal origin. Assessment of stress during animal transportation requires non-invasive methods as classical approaches of collection with direct human interference (i.e. for blood collection and heart rate measurement) might directly alter the stress response. Telemetric devices for measuring heart and respiration rate, body temperature and blood pressure are useful tools to obtain undisturbed responses. Also, noninvasive measurements of stress indicating metabolites in saliva, feces or urine have been recently developed and validated. Parallel to behavioral observations, these physiological measurements provide valuable information on how livestock handling and transportation can be improved, (E. H. van Borell 2001). In cows, (Palme R, *et al.*, 2000), was demonstrated that road transport for 2 hour was followed by an increase in 11.17-DOA concentrations in the feces. The authors Möstl E, *et al.*, 2002, described that after transport into a new stable the cortisol excretion via the feces was elevated for about 1 week and declined thereafter to normal values. Apart from

methodological solutions for measuring stress and welfare (Gary C. Smith., *et al.* 2004), the appropriate handling of farm animals during transportation and the pre-slaughter period should be monitored as part of a quality assurance scheme. Based on the Hazard Analysis of Critical Control Point (HACCP) concept, critical control points for pre-slaughter handling and transport of calves are proposed. (E.H. von Borell and D. Schäfferb 2005).

This study aims to monitor animal welfare during transportation based on controlling the respect of animal transportation standards in accordance with the "Report (EC) No 1/2005 on the Protection of animals during transport". So, in few words the object of this study is not to measure the stress during animal transportation but to monitor the implementation of animal local transportation standards (Baltussen, W., *et al* 2011) on the Protection of Animals During Transport") that would prevent stress during transportation and would guarantee animal welfare.

2. Justification

The concern about consumers and animals health has been intensified and lately consumers themselves and many NGO's protecting animal rights have made their voice heard. Recently, the European community has approved and enforced the strategy of animal welfare (2012-2015) for all member countries of the community through setting up Referential Centers in the level of member countries. Currently the veterinary service in Albania has been improved significantly from the legislative approach viewpoint, as well as its restructuration regarding the organizational viewpoint. The most important think to be mentioned and which also concerns mostly to the European Community is Animal Welfare. No animal will ever be healthy if its welfare is not guaranteed, (European Commission, Health & Consumer Protection 2002).

The Ministry of Agriculture, Food and Consumer Protection has already done the first steps through approving the law no.10465 date 29.09.2011, For the Veterinary Service in the Republic of Albania, as well as the approval of the Regulation "On animal protection during transportation" date 21.12.2011 which is the Albanian translation of the "Report (EC) No 1/2005 on the Protection of Animals During Transport". A special focus in this law is given to the component of animal welfare, especially to the meat of animals to be consumed by end-users. The most important think to be mentioned here is the fact that in order to guarantee and provide animal welfare it is important to monitor all the steps during all the processes such as breeding and transportation up to the end-users, (OIE, 2007). In few words, the aim is to provide animal welfare which will be guaranteed in all the above mentioned steps. In addition, the legislation also covers the existence of different individual operators or companies dealing with animal transportation that need to be trained and licensed for transporting animals to be consumed by end users, (C. C. Crouney and S. T. Millman, 2007). On the other hand, the legislation also covers the process of licensing of the vehicles that will transport animals in the local level within the territory of the Albanian Republic. Apart legislation, it is also important to see how it will be implemented in the field.

3. Materials and Methodology

The main objective of the study was undertaken in order to understand the level of information and animal welfare rules or norms applied by the merchants of livestock (destined to be butchered or undergo breeding), especially rule No 1/2005 of European Community for animal protection during their transportation as well as "European Union Strategy 2012-2015" for animal welfare and protection. The purpose of this study is to gather data and prepare a report regarding the assessment of the current situation of animal welfare in relation to the rules. The methodology used to realize this study was that of direct

interviewing of merchants and farmers at the animal market in the suburbs of Tirana, which is the only animal market in Tirana. The evaluation period was December 2012 until February 2013. The market operates only two days a week, on Wednesday and Saturday, implicating that the interviews were taken during these two days. Livestock sellers were mainly merchants and farmers who sell their animals directly in the market. The total number of livestock sellers in this market amounts 50. Taking into consideration that the livestock market was composed of different sellers, the main focus was given to those sellers who had a considerable number of animals and as a consequence also they had trucks to transport their animals. That is the reason for interviewing only 20 of these merchants of (calves, sheep and goats). The questions of the questionnaire focused on the fulfillment of animal welfare standards during transportation and those of the market itself because according the rules of the European Community the markets are considered as gathering centers for animals, that is, part of the process of their transportation.

Another important issue to emphasize is the fact that the institutions of the local and central government consider this market to be informal. The number of animals sold in this market is large enough and so they fail to fulfill the sanitary controlling measures of the market conditions, including also the lack of controlling the proper documents about the origin of these animals, make this situation even more critical.

4. Results and Discussions

From all the people interviewed resulted that 55% of them, or 11 persons, were merchants and 45%, or 9 of the interviewed were farmers. Based on the discussions with the 20 farmers and animal merchants resulted that their knowledge regarding animal transportation is very poor. None of them has ever been trained in relation to the rules of animal transportation that guarantees animal welfare (Table.1).

Table 1. Level of education, training received and veterinary certificate own by respondents.

Level of education	Trained to transport animals, calves		Local/international veterinary certificate for the animals	
	yes	no	yes	no
8 class	-	8	7	1
Elementary	-	1	-	1
High school	-	10	10	-
No education	-	1	-	1
Grand total	-	20	17	3

As for the education level of the interviewed, it resulted that 40% of them had completed their 8-grade education, 50% had completed middle education, 5% had completed no education and 5% had completed the primary education (Table.1). Also, about 15% of the interviewed, or 3 of the merchants pointed out that they do not have veterinary certificate (Table.1). One of these three farmers, who transported sheep and lambs from Korça, pretended that the fact that they were matriculated was enough and there was no need for veterinary certificates. Also in this case none of the interviewed was asked to show the veterinary certificate of their animals because the approached used was that of self-declaration in order to avoid discussions with the interviewed.

As a result of the sellers interviewed, most of them transport animals locally and only one of the sellers was licensed to realize international transportation of the animals. This license was taken in Bulgaria and the

seller also is equipped with specific vehicles for the transportation of the animals. He pointed out that our institutions do not have the necessary capacities for providing sellers with license to conduct local and international animal transportation.

Figure 1. Vehicle used for transportation of calves.



The majority of the interviewed do not possess a specific vehicle for the transportation of the animals. Currently, they use other vehicles for goods transportation for this purpose (Figure.1)

Only one of the interviewed possesses a suitable vehicle for animal transportation in the local level. Another farmer, who transports lambs with the purpose of selling them, said that he was thinking of buying a specific vehicle for animal transportation. Regarding the question about the conditions of the roads during animal transportation, the interviewed said that in general the roads are in relatively good conditions and they are not an obstacle in relation to the animal transportations conditions.

Only 5% of the interviewed said that they have permission for animal transportation in the local level, permissions which he pretended were given by the Ministry of Agriculture, Food and Consumer Protection, the Municipality of Tirana as well as from other communes or municipalities. However, in none of the cases, the interviewed were not asked to show these documents because the gathering of the information was done based on their self-declaration (Table.2).

Table 2. Vehicle licensed for animal transportation and opinion of interviewees about animal welfare during transportation

	Animal transportation guarantees welfare		Grand total
	Yes	No	
Vehicle licensed for animal transportation(local)	1	-	1
Vehicle not licensed for animal transportation	19	-	19
Grand total	20	-	20

Based on the fact that most of the interviewed transported calves and lambs because Albanian consumers show a tendency to consume the meat of these two animals most, the object of the research was also focused in this direction.

All of the interviewees pretended that the free space between animals during their transportation, as well as the airing conditions of their vehicles were sufficient, but when they were asked about the necessary space

for an animal/m², depending on the species, they did not know how to answer because they had no information according to this issue. According to them, the number of animals they transport depends on the number of animals they buy in order to sell them in the market, which varies all the time. There were also cases where the truck was divided into 2 floors to transport sheep and goats and their number would vary up to 70 heads in an area of about 14.4 m² with low level of airing conditions in a trip of about 4 hours long.

Regarding the disinfection of the trucks before and after transporting the animals, 85% of the interviewed said that they wash their vehicles before and after the transportation while 15% of interviewed said that they disinfected them with proper equipments and solutions. While regarding the animal death rate or accidents during animal transportation, 95% of the interviewed said that nothing like that had happened to them so far. There was only one merchant that had dealt with an animal death during transportation and he said that he got rid of it. All of the interviewed are unsatisfied with the market conditions although they continue to think that animal transport conditions they offer guarantee animal welfare. Also, one of the interviewed said that calves like staying in muddy environments.

Figure 2. A No licensed butcher's shop near the market of animal



Another fact to be mentioned is that 95% of the interviewee believed that there is a connection between following the driving rules while transporting the animals that guarantee animal welfare destined to be sold for their meat and consumers health.

Only 5% of the interviewee said that the meat of Albanian animals (not imported) is good and there is no risk consuming it. None of the vehicles being used to transport animals is equipped with animal food accessories, water equipments, ventilation system as well as temperature measuring and controlling system.

5. Conclusions

Transport conditions, including the type of vehicles used for animal transportation, lack of knowledge and rule application in the gathering centers or markets, all make up for the indicator that shows how animal welfare is not guaranteed. This situation can be even worse because the private structure that administrates this market does not control if the merchants who operate in this market have or lack veterinary certificates, but they are satisfied with the payment per head, that is for the place they occupy in the market. Moreover, the veterinary inspectorate itself considers this market informal and as such they do not control if the merchants operating in this market are equipped with the appropriate veterinary certificates. Considering that the various controlling steps for animal welfare have not functioned up to the trading phase, it is likely that there is also no control from the veterinary inspectorate for the remaining phase (animal butchering). Consumer's health in relation to consuming the meat of these animals is at risk because near this market operate several meat sellers or butcheries not licensed, but that buy the animals in this market and sell during the days when the market is open.(Figure.2).

6. Recommendation

Currently in Albania, the law on the veterinary service, including also the rules on animal welfare assurance during their transportation is a good signal guaranteeing animal welfare. Despite the above mentioned laws and rules, they are not carried out and remain valid just in papers. Moreover, the institutions that should take care of animal welfare do not possess the legislation that guaranteed animal welfare. As a result, based on the rules of animal welfare it is necessary a preliminary consultation with all the actors involved in animal transportation in order to discuss the opportunity to providing them with specific vehicles for the transportation of animals because they are expensive, as well as other opportunities such as providing training for the drivers, the staff accompanying the animals, other workers in the animal market and of the staff of the institutions directly responsible for the controlling of the standards. Ours suggestion is that there is a direct link between monitoring and guaranteeing animal welfare during transportation as well as protecting consumer's health by consuming the meat of these animals.

7. References

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