INDUSTRIAL SLAUGHTERING AND ANIMAL WELFARE

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Abstract

The welfare of animals is desirable by itself and it is considered that EU legislation should to promote it. Because of this, the EU regulations are adopted that guarantee breeding and slaughtering of farm animals without unnecessary suffering.

Serbia has adopted Law on Animal Welfare, which assume that animals have the same feelings as human beings.

The aim of the paper is to analyze the different experiences and through reviewing of regulations in the field of animal welfare during slaughtering in the European Union and the Republic of Serbia.

From the point of view of animal welfare, the paper discusses procedures with animals in slaughterhouses, after receiving in depot, keeping, movement and guiding, a pre-slaughter stunning, ending with the slaughtering and bleeding. It is specified how to use the equipment, in order to prevent stress of animals.

In addition to the existence of adequate legislation, there must be a clear strategy and training for producers of meat, which are also an important element in the fight for animal welfare. Only due to raising consumer awareness and systematic training of meat producers will be able to reach the European level in the field of animal welfare.

Key words: Animal welfare, Slaughtering conditions, Education.

1. Introduction

In Western European countries, the welfare of animals is desirable by itself and it is considered that EU legislation should to promote it [1]. Because of this, the EU regulations are adopted that guarantee breeding and slaughtering of farm animals without unnecessary suffering.

Thus, when exporting of animal products, the importing country require to be complied all procedures relating to the holding and transport of animals and products of animal origin to the final destination, i.e. the consumers [2, 3]. This requirement exists to prevent the differences between Member States in the field of animal welfare caused by unequal conditions of competition and thus adversely affect the functioning of the internal market of the European Union. If we wish to be included in free trade with the European Union, it is necessary to unify the criteria for holding and using animals with the legal order of the European Union.

By the new Law on Animal Welfare [4], Serbia has adopted the values of modern civilization in the attitude of people towards animals, which assume that animals have the same feelings as human beings. The fight against animal abuse is part of a much broader front - the struggle against all forms of violence in society, because violence is violence regardless of who it is manifested. In addition, the protection of animal welfare is a commercial and economic certainty.

In addition to the existence of adequate legislation, there must be a clear strategy and training for producers of meat, which are also an important element in the fight for animal welfare. In recent years, consumers are becoming more interested in the methods and procedures of food producing [5] and want to know the origin of the byed meat [6]. Consumers interested in whether animals are treated in accordance with the well-being during breeding, transporting and slaughtering [1].
Therefore, it is important the informing of meat producers and animal breeders, with constant reference to social responsibility they have in manufacturing of meat and meat products, animal nutrition, methods of its curing and the use of animal drugs [7]. Informing, which would lead to a socially responsible consumer behavior towards diet, food keeping, knowledge of the nutritional value, it would also reduce the risks of danger to human health [8]. Only due to raising consumer awareness and systematic training of meat producers we will be able to reach the European level in the field of animal welfare.

The aim of the paper is to analyze the different experiences and through reviewing of regulations in the field of animal welfare during slaughtering in the European Union and the Republic of Serbia estimates the importance of educating consumers and producers of meat.

This paper discusses procedures with pigs and cattle, by which are to be provided conditions cited in animal welfare legislation from the time of unloading to the slaughtering. Therefore, it is analysed and mutual compared requirements of animal welfare legislation in the EU and Serbia.

Comparing the prescribed procedures and possible technical solutions in the world and in Serbia, from the unloading of the animals to the depot, following by their storage, starting, guidance and direction till the place for stunning, it is discussed compliance with animal welfare requirements.

Based on knowledge of the theory and practice are discussed various stunning methods (gun, electricity and carbon dioxide), to cause immediate unconsciousness animals before slaughtering.

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2. Law on animal welfare

Concern for the animal welfare arises from the human belief that animals, if there have no properly care, can feel pain and suffering [9].

By adopting the Law on Animal Welfare in Serbia [4], is creates a new, comprehensive framework for the protection of animal welfare and establishes a qualitatively different approach to the treatment of this problem. This document applies to all animal species whose survival depends on the human beings.

The starting point of this law, by which Serbia has adopted the values of modern civilization in the attitude of humans towards animals, is a recognition that animals are sentient beings, beings able to feel pain, fear, suffering, safety and comfort. Following these principles, the law supplies protection for physical, psychological and genetic integrity of animals, precisely defines the treatment of the owner or keeper of the animals, while favoring or prohibits certain uses of animals.

Qualification of killing and torturing animals in our criminal law as a crimes carries with it political, social and legal consequences. It is a doubtful expression of changes in state regarding to abusing of animals as a social phenomenon, and is the beginning of understanding this area as an important social values that need to be properly protected. In this way, care for animals and their protection from abuse, are ranked among the values that underpin modern society. Adoption of the law is an important first step and should then be followed by its consistent implementation.

By the Law on Animal Welfare [4], were regulated the rights, duties and responsibilities of legal entities and individuals for the welfare on animals, treatment of animals and the protection of animals from abuse, protection of animal welfare during depriving of animals life, keeping, breeding, trading, transporting, slaughtering and conducting experiments on animals as well as other issues of importance to animal welfare.

2.1 Animal welfare prior to slaughtering

Concerning to the fundamental ethical principles of animal welfare it is required treatment, prior to slaughtering, as humane as possible [10]. Humane slaughtering guarantees welfare till the moment of bleeding. Before slaughtering, the animal must be treated humanely, slaughtering of animals should be done as close as possible to the place of holding, and the animal should be stunned in a manner that causes immediate loss of consciousness.

During stunning, animals should not be restrained on manner that causing pain and suffering, can not be tied on the hind legs, should not be hung before stunning, ie before bleeding.

The basic problems for the welfare of animals in slaughterhouses are stressful equipment and methods, obstacles that hinder the movement of animals, lack of staff training, poor maintenance and poor condition of the animals during the arrival at the slaughterhouse.

To solve the problem of animal welfare, it has to determine the cause. For example, the installation of new equipment for stunning will not solve the problem of abuse that create untrained employees, poorly supervised, or distress of animals caused by noisy air escape.
Ron Kilgour [11] from New Zealand was the first researcher who claimed that more emphasis should be placed on the processes that occur before stunning or slaughtering.

Animals will often flinch and stop to move through the treatment system if there are problems such as reflections, ventilation that blowing in the direction of animal, movements, or loud noise. Those disadvantages would ruined the effect of well-designed device for fixing and corridors, because animals often need to drive when they refuse to go. The movement of pigs or cattle will sometimes be encouraged adding or removing light to eliminate reflections on the floors or walls. Animals tend to move from a darker place to a better-lit places [12, 13]. The light should not shine directly into the eyes when animals approaching. Cockrum and Corley [14] founded that gliding of animals increases stress and noted that this is problematic area. Careful, peaceful treatment of cattle by trained people in good facilities will reduce the appearance of contusion and help maintain the quality of the meat. Improvements in the treatment of pigs and reduction in the use of electric baton or their elimination will reduce the occurrence of petechial bleeding [15]. Better animal welfare can improve the safety of employees, because it is unlikely that calm cattle will tread on employees or that reared.

In the world there are developed and enforced in practice different methods of treatment of animals from unloading to stunning moment, to prevent stress animals. So, for example, in the “Danish Crown” slaughterhouse for pigs are used, all recommended procedures that ensure the welfare of animals. When unloading pigs to the depot it is provided that the animals go out from the means of transportation on the basis of better lighted boxes in which they would be received. Boxes are marked by certain characteristics of pigs. Side of the box are protected to prevent injury animals. The floors are made of a material that prevents gliding of animals. All boxes are in same level. Boxes have movable sides, where animals independently drives from box to box till the stunning devices using CO₂.

2.2 Stunning methods

Effective stunning methods are designed to cause immediate unconsciousness. Good views of stunning gun can be found in the papers of Leach [16], Grandin [17] and Eikelenboom [18]. Stunning methods using electricity that are used for slaughtering of pigs are effective and lead to immediate unconsciousness. To be assuredly caused unconsciousness, a minimum of 1.25 A of electricity has to pass through pig brain [19]. This is particularly important in large body weight pigs (over 100 kg).

Carbon dioxide is used for stunning of pigs in many countries. There are concerns that the animal welfare is jeopardized by using CO₂, because, as sharp gas, it irritates the respiratory tract [20]. Hunderken [19] stated that the stage of motor restlessness comes when a pig is still conscious.

2.3 Regulation for slaughterhouses

Particularly Regulation [21] in detail prescribe the conditions and manners of depriving of animals life, animal treatment prior to slaughtering, the method of stunning and bleeding of animals, conditions and method of slaughtering animals without prior stunning.

Depot in a slaughterhouse, in addition to the conditions stipulated by a special regulation, must has: floors should be done on the way to reduce on minimum the risk of gliding and which do not cause injury to the animals when they are in contact with them; adequate ventilation; artificial lighting that is strong enough to enable the inspection of animals at any time; equipment for tying animals; adequate bedding for animals that are keep in the depot at night.

Corridors for the animals at the depot have to be constructed and organized so that for animals reduced the risk of injury to a minimum. Bridges, ramps and corridors in the depot must have a sides. Fence or other type of side protection, to prevent falling or dropping of animals, but the output, or the entrance ramp in slaughterhouse must have the minimum possible incline.

Manners of animal treatment prior to slaughtering is also defined in the Regulation [21], which provides that upon arrival at the slaughterhouse, the animals must be unloaded as soon as possible. If animals can not be immediately unloaded, they must be protected from adverse weather conditions and should be provided with adequate ventilation. If they can hurt each other, the animals are kept and stored in the depot separately, according to species, sex, age or origin. In depot animals must be protected from adverse weather conditions, and if exposed to high temperatures and high humidity, have to cool in an appropriate manner. The state and health of the animals in the depot must be checked in the morning and evening. If they are exposed to pain or suffering during transport or upon arrival at the slaughterhouse and animals that are breastfed, have to be immediately slaughtered, and if that is not possible, they must be separated and slaughtered as soon as possible and no later than the next two hours. In case they can not walk, animals should not be dragged to the place of slaughter, and must be transported on a cart to the place of slaughter. For animals that are placed in the depot, access to drinking water in appropriate equipment have to be provided at all times. Animals that within 12 hours of arrival at the slaughterhouse could not be slaughtered, must to feed with moderate amounts in appropriate intervals.
Starting, guidance and direction of animals from one to another place in the slaughterhouse must to do carefully with possible soft shot, using canvas, flags and plastic spatula. On the occasion of starting, guidance and direction, the animal should not be hit by strong shot, nor must apply pressure to sensitive parts of the body, tail animal should not be crushed, twisted or broken and are not allowed to press animal eyes. Tools used for starting the animals for guidance and direction can be used for a short period of time and may not be used for any other purpose. Accessories for causing electrical shocks for initiating, leading and directing the animal may only be used for adult bovine animals and pigs which refuse to move ahead and if there is, in front of them, enough space to move. Using of accessories for electric shocks should not apply whenever possible. Electro shocks may be applied only to the muscles of the hind legs of animals, and must not last longer than two seconds, between them must be left long enough period for the animal’s reaction.

Before stunning and slaughtering animals have to be controlled in a manner to ensure, as far as possible, minimum pain, suffering, agitation, injury or contusions. Before stunning or slaughtering animals legs could not be tied, neither animals may not be hanged. Animals that are stunned by applying mechanical or electrical equipment on the head area, should be placed in such a position that the equipment can be applied and used easily, accurately and for the appropriate time. For ungulates and cattle might be applied appropriate tools to restrict movement of the head. Animals should not be kept in restrainer, to postpone stunning and slaughtering. Electrical stunning equipment should not be used to restraint or immobilization, or for pushing of animals.

Problems that can occur during slaughtering in relation to animal welfare are when animals may see slaughtering of other animals, mistreatment of animals prior to slaughtering, the pain during stunning before slaughtering and ineffective stunning.

The animals that are not bred for fur production may be stunned using gun with a penetrating wedge, by hitting in the head with a mechanical device, by using electricity, or by exposing to carbon dioxide. The animals that are killed in the households and for their own needs, can be performed only by a person trained in animal welfare during slaughtering.

Training for the animal welfare at slaughterhouse has also been prescribed in the Regulation [21] and shall be conducted in accordance with the training program. The training program includes a test of knowledge of laws and regulations relating to the protection of animal welfare, as well as their practical application. The training program for the welfare of animals covered the transportation of animals also [23].

3. Conclusions

- In the paper it is shown that in Serbia exist adequate legislation, which is one of the important factors for the animal welfare respect.
- Given that the most important factor that ensures the animal welfare is standpoint of staff in a slaughterhouse, it is clear that in addition to the existence of adequate legislation there must be clear education strategy of meat producers who are also an important element in the fight for animal welfare.
- Only with a constant increase awareness and systematic training of meat producers will be able to reach the European level in the field of animal welfare.

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4. References


