

**On the Methods of Live Stock Slaughter in the US: Laws,
Regulations, and Expert opinions.**

Abdel-Hameed A. Badawy

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

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ABSTRACT

This paper is concerned with the methods of animal slaughter commonly used in slaughterhouses all over the US. All the reported results herein are from two sources only. The first source is publicly available, peer-reviewed articles published by faculty in Animal Sciences. What is most interesting is the finding that researchers in Animal Sciences research scientifically and publish information about whether or not the animals die before bleeding starts. The author has also conducted an interview with a pious Muslim working at the US Department of Agriculture (he is a director for a large area in the country) who works at the Food Safety and Inspection Service (FSIS). His opinion(s) will be outlined in the body of the paper. The conclusion is many methods of slaughter actually comply with the methodology Muslims adopt for animal slaughter.

INTRODUCTION

There are three main concerns that dictate whether meat slaughtered in the US daily is HALAL or not. The first is the religion of the person performing the slaughter. The second is whether Basmallah (بِسْمِ اللّٰهِ) is mandatory or not. The third is the methodology of the slaughtering process itself. This paper is concerned with the third issue only. Dr. Hossam Ashour will address the first two concerns in his paper.

The United States Department of Agriculture (USDA) is the governmental body in the US that is concerned with Food Safety and Inspection (FSIS) [1]. The website entry page always lists the latest recalls of Foods because of the possibility of contamination with different contaminants. The most recent recall is as follows: **“Salads With Hard-Cooked Eggs Recalled Due to Possible *Listeria* Contamination”** dated February 7th, 2012.

The US has a regulation called the Humane Handling of Livestock and Poultry [2]. This regulation is concerned with how the animals and birds are treated during their lifetime. It is concerned with providing them with food and drink while in wait before slaughtering them, transporting the animals to the slaughterhouse, herding then animals and leading them to the slaughter conveyor belts etc., and finally the slaughtering process itself, which requires bleeding at the neck in such a way to cut jugular veins below the neck. The animals should not be prevented food for a period more than 24 hours, and allowed access to water at all times. The rules dictate that birds should be kept neither in too cold conditions so they freeze nor in very hot conditions where

they might die out of dehydration or heat-fatigue. The booklet that I have referenced above in [2] is a very good read. I suggest that all the Imams and the Scholars in AMJA read or at the very least skim through it.

The good thing about these regulations is that the USDA through its inspection and safety division routinely and randomly inspects slaughterhouses and food processing establishments for possible violations. They do random testing and through the freedom of information act, any citizen and resident should be able to get the record of violations against any slaughterhouse.

The major part of this regulation that most concerns us as Muslims is the part that governs the rules and regulations for making the animal “insensible” before slaughtered them. Insensibility is a term defined there to mean lack of response to external stimuli but it does not necessarily mean that the animals are dead.

EFFECT of STUNNING

Stunning is the process that renders the animal insensible. Depending on species, an animal or bird is rendered insensible to pain by various methods, including captive bolt, electricity or chemical. Not all stunning methods necessarily kill the animal.

Dr. Grandin at her website discussing different stunning methods [3]: “Since the 1980s, head only electrical stunning has been used in New Zealand prior to Halal slaughter. When the electrical current is applied across the head only, it causes a temporary loss of consciousness. If the animal is not bled promptly, it will wake up and fully recover. Unconsciousness is induced by causing an epileptic seizure (صرع). To prevent the animal from returning to sensibility it must be bled within 15 to 23 seconds [5, 6]. Head only stunning is completely reversible. In the 1980s, a test was done that showed that cattle stunned with a head only stunner could graze on a pasture after they recovered. When head only electrical stunning is performed, the heart continues to beat [4, 9].

There is a second type of electrical stunning. It will stop the heart and kill the animal. When it is done correctly, the animal will not recover. It is called cardiac arrest stunning because it stops the heart [4, 8]. When this method is used, electrodes are applied to both the head and on the body near the heart. Electrode position is the main variable that differentiates head only reversible electric stunning from cardiac arrest stunning. When head only reversible electric stunning is used, the electrodes are placed only on the head.

Some religious authorities use heartrate to determine whether the animal is dead. When either penetrating or non-penetrating captive bolt is used, the heart will continue to beat for up to 8 to 10 minutes if bleeding is delayed [7]. The heart will continue to beat even when the brain has been destroyed. It will continue to beat until the heart runs out of oxygen. The heart eventually runs out of oxygen because captive bolt stunning stops breathing. However, if cessation of a heartbeat is used as a definition of death, then an animal shot with a captive bolt will be alive for 8 to 10 minutes. This provides sufficient time for death to be induced by a throat cut on the neck". This is the end of the quote from Dr. Grandin's discussion of death of animals when different stunning methods are used.

According to Dr. Y (the USDA scientist whom I interviewed), he is not aware of the spread of the cardiac arrest method. He actually has never seen it at any slaughterhouses. He even is not sure that we can conclude death of the animal because of this method. A simple research about cardiac arrest reveals the following: cardiac arrest is different from (but may be caused by) a heart attack, where blood flow to the muscle of the heart is impaired [10]. Arrested blood circulation prevents delivery of oxygen to the body. Lack of oxygen to the brain causes loss of consciousness, which then results in abnormal or absent breathing. Brain injury is likely if cardiac arrest goes untreated for more than five minutes [11, 12, 13]. For the best chance of survival and neurological recovery, immediate and decisive treatment is imperative [14]. The least we could do is that if the animal is bled quickly enough (which is the case in slaughterhouses) most probably the animal is not dead.

ACKNOWLEDGEMENT

This paper with the paper presented and submitted by Dr. Hossam Ashour will provide a complete picture to the issue of animal slaughter in the US. We have talked before submitting this and we think it might be more convenient to merge the two papers at presentation together since they talk the same issue from different perspectives. Also, by the time of the conference, there is another USDA veterinarian that I will be able to interview him to have two expert opinions on the matter. I would like to thank Dr. Adel Gharib for providing the contacts to the first USDA expert and Imam Nader Elmarhoumi for the contacts of the second expert.

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