

Ensuring Livestock Welfare at Slaughter in the US: Still A Long Way to Go

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1. Introduction

The Humane Methods of Livestock Slaughter Act (“Act”) is the first U.S. federal law codifying the policy of humane pre-slaughter handling and slaughter (“H&S”) of certain types of livestock destined for human consumption (7 U.S.C. §1901 *et seq.*). The Act explains that the policy aims to avoid “needless [animal] suffering” while furthering human interests in improving slaughterhouse working conditions and slaughter “products and economies” and facilitating commerce (7 U.S.C. §1901).

The Act codifies two humane H&S methods: (1) the animal is “rendered insensible to pain by a single blow or gunshot or an electrical, chemical or other means that is rapid and effective” before it is “shackled, hoisted, thrown, cast, or cut”; and (2) in the context of religious slaughter, the animal loses consciousness after “simultaneous and instantaneous severance of the carotid arteries with a sharp instrument and handling in connection with such slaughtering” (7 U.S.C. §1902). In addition, religious slaughter is expressly exempt from the Act (7 U.S.C. §1906). (Religions that incorporate animal slaughter typically require that the animal die from having its throat cut and therefore reject pre-slaughter stunning (Anil, 2014). The exemption reflects the right to freedom of religion under the First Amendment to the U.S. Constitution.) The processes for humane H&S are detailed in the Federal Regulations, 9 C.F.R. §313 (together with enforcement regulations, “Regulations”).

The Act directs the Secretary of Agriculture (“Secretary”) (the head of the U.S. Department of Agriculture (“USDA”)) to undertake research and experimentation to determine what H&S methods are practicable (as to speed and scope) and humane with “reference to other existing methods and then current scientific knowledge,” and to designate specific methods as being humane or non-humane (7 U.S.C. §1904). The Act does not provide for penalties for violations in relation to ambulatory

animals. The most impactful penalty under the Regulations is the possibility to suspend slaughter operations (Hotis, 2006).

2. Scientific Significance

The Act is scientifically significant in three respects. First, it purports to codify scientific knowledge about humane H&S methods for non-religious slaughter, though during congressional hearings questions were raised whether the Act's H&S measures were as effective and humane as they could have been based on the technology that existed at the time or could have been developed (Hotis, 2006). The Act was passed in 1958 based on a comprehensive review of evidence relating to existing H&S methods, many of which caused extreme pain for prolonged periods of time (Hearings, 1978; Hotis, 2006). The Act's mandate of stunning for non-religious slaughter was (and is) significant because it reflects evidence that pre-slaughter stunning minimizes animal suffering during slaughter (Anil, 2014; Grandin, 2006).

During the hearings on the Act's amendment in 1978, evidence was presented on the efficacy of various stunning methods (Hearings, 1978). It was observed that science and technology advanced between 1958 and 1978, and procedures and equipment not available in 1958 became common (Hearings, 1978). Nevertheless, the humane H&S provisions remained unchanged, and it was confirmed that humane H&S methods used in 1978 were based on "the best available technology" (Hearings, 1978, 26). Scientific evidence on the impact of poor animal welfare during H&S on meat quality (and therefore commerce) was also discussed, both in 1958 and in 1978 (Hearings, 1978; Wigham, 2018).

Second, the Act's establishment of religious H&S without stunning as humane does not sufficiently reflect scientific evidence. During the hearings on the Act's amendment in 1978, there was testimony on the use of the "painful" and "inhumane" hoisting wheels during religious slaughter (Hearings, 1978, 12). Evidence was presented that the Act's prohibition on shackling and hoisting conscious animals before slaughter could – and should – be extended to religious slaughter, given that "harmless" and "painless" technology for positioning animals for slaughter was available and would not contradict religious rules (Hearings, 1978, 10).

Studies show that, during slaughter without stunning, the animal experiences stress in response to the restraint, pain as a result of its throat being slit, and suffering as it gradually dies (Velarde & Dalmau, 2018; Grandin, 2016). Grandin (2006) describes the “stressful[and] cruel” restraint methods used in religious slaughter facilities, noting that the more stressful the restraint, the more the frightened animal struggles, and the more difficult it is to minimize pain during slaughter. There is evidence that religious slaughter without stunning causes pain to the animal (Velarde & Dalmau, 2018; Neves, 2016; Gibson, 2011; Grandin, 2006), especially when performed by less competent operators (Terlouw, 2016). Congress already exempted religious slaughter provisions from the Act’s scope; it did not also need to deem it humane and, in this author’s view, doing so was not supported by science.

Third, the Act’s mandate to the Secretary to investigate and implement new methods of humane H&S shows legislative desire to keep up with the evolution of scientific knowledge (7 U.S.C. §1904). The Act, however stops short of taking practical steps in support of this directive, such as mandating allocation of funds “for the design of better handling, holding facilities, and transportation vehicles” or toward research to improve “ritual slaughter holding pens to ultimately eliminate the practice of shackling and hoisting fully conscious animals” (Hearings, 1978, 30). As will be explained below, there is evidence that the Act and Regulations have not incorporated advances in scientific knowledge.

3. Ethical Significance

Ethics points us to the morally right course of action in a given situation. The Act raises at least three potential ethical issues. First, whether slaughtering animals for human consumption can be morally justified is an ethical issue (Anil, 2014). While the Act presupposes that humane killing of animals is acceptable, under the animal rights view, founded on the protection of rights of all sentient beings, slaughtering animals for food is unacceptable regardless of how the killing is carried out, unless the killing is in self-defense (Sandøe, 2014; Hotis, 2006).

Second, of the main ethical theories, the Act aligns most closely with utilitarianism. Utilitarianism instructs that the morally right course of action is that which results in the greatest net welfare (Sandøe, 2014), considering all “morally relevant” affected

beings – including animals – and avoiding unnecessary suffering (Gruen, 2011, 34). In balancing human interests against the interests of animals in avoiding suffering during H&S, the Act is more successful in relation to non-religious slaughter, for which it mandates stunning, than religious slaughter, for which it does not (7 U.S.C. §1904 & §1906), “elevat[ing] human ritual over humane animal treatment” (Hotis, 2006, 509).

In this author’s opinion, as to both types of slaughter, the line was drawn too heavily in favor of humans. Tens of millions of cattle are slaughtered in the U.S. every year, with consumption projected to continue to grow in the coming decades (Wigham, 2018). Given the ever-increasing number of animals affected by the Act and the gravity of harm to them (Hearings, 1978), adequate protection of animal welfare during H&S is, then, increasingly important. Moreover, the Act considers only a limited universe of animal interests: the Act applies only to some animals, killed in specific types of facilities, for specific uses (notably, animals not destined for human consumption are not protected) (Hotis, 2006 (emphasizing the overarching importance of human interests over considerations of animal welfare in the Act’s framework)).

Third, the concept of animal welfare, one of the underpinnings of the Act, originates in ethics (Anil, 2014). While there is no universally accepted definition of animal welfare, the growing consensus is around considering a combination of “‘biological function’, ‘natural living’ and ‘feelings’” (Wigham, 2018, 171). This approach is hard to apply in H&S context, as slaughter is “the ultimate insult” to the animal’s biological function, and slaughterhouses are unnatural and scary for the animal (Wigham, 2018, 171-72). Measuring welfare during H&S is subject to ongoing discussion (Wigham, 2018) and difficulties ensuring it continue (see *infra*).

4. Assessment

Overall, the Act improved the welfare of cattle during H&S (Hearings, 1978, 47). Given the number of animals slaughtered in the U.S. every day, any improvement is significant. But, in the more than sixty years that have passed since the Act came into force, much more could – and should – have been done to reduce animal suffering during H&S. The Act addresses only the most egregious issues known to the public,

setting the “minimum acceptable levels of welfare,” and overlooks the need for broader measures that would adequately protect all animals slaughtered in the U.S., in whatever facility, and for whatever use (de Passillé & Rushen, 2014, 103; Hotis, 2006).

a. Enforcement

Although the Act was passed more than sixty years ago, research has revealed a relative dearth of case law concerning the provisions discussed in this note. Litigation efforts appear to have been channeled primarily through animal welfare organizations, likely because slaughterhouses are closed to the public (Wolfson, 1996), and the primary way of obtaining evidence of violations have been undercover investigations by animal welfare organizations (AWI, 2017). Investigation of religious slaughterhouses is further complicated by the U.S. government’s policy of “giving religious authorities complete autonomy” over those facilities (AWI, 2017, 4; Grandin, 2006 (noting serious gaps in visibility and enforcement, jeopardizing animal welfare)). The discussion will focus on enforcement issues identified during congressional hearings, in reports of the Governmental Accountability Office (“GAO”), and in reports and legal actions by selected animal welfare organizations. All sources surveyed concur that the Act’s enforcement has been sporadic and insufficient and call for improvement (*infra*). Hotis (2006) observes that the Act’s “unreliable and erratic” enforcement record reflects the general trend of non-enforcement of U.S. federal animal welfare legislation (Hotis, 2006, 516; Wolfson, 1996).

During the 1978 hearings on amending the Act, the Act’s enforcement since its enactment was described as “nonexistent,” with poor recordkeeping and over-reliance on slaughterhouse self-certification, “without a reliable way to determine what is actually occurring” (Hearings, 1978, 28, 37). The areas of concern related to the H&S equipment being insufficiently humane, the non-use or unskilled use of equipment, and the intentional misuse of equipment to injure or torture animals (Hearings, 1978). Dr. Grandin’s congressional testimony is replete with examples of intentional cruelty, despite the Act having been in force for nearly 20 years at that time (Hearings, 1978).

Several recent studies identify significant shortcomings in the Act's enforcement. A GAO study, released in 2010 following a number of investigations by animal welfare organizations uncovering egregious and widespread abuse during H&S (AWI, 2017), acknowledges numerous deficiencies in USDA's enforcement of the Act (GAO, 2010).

The Animal Welfare Institute ("AWI"), a U.S. non-profit dedicated to relieving human-inflicted animal suffering, recently released its latest assessment of the Act's enforcement (AWI, 2017). The assessment showed that, over 2010-2015, enforcement slightly increased, but remained inconsistent and insufficient; recidivism levels were high; dedicated resources were inadequate; and humane H&S remained a low priority for the government (AWI, 2017). The assessment set out many examples of serious violations, including routine and systemic "egregious cruelty" (AWI, 2017, 1). AWI's findings are in line with those of Hotis (2006), who cites inconsistencies in the Act's interpretation, its limited application, minimal enforcement, and significant recidivism.

The American Veterinary Medical Association's Guidelines ("AVMA") also acknowledge inadequate enforcement of the Act (AVMA, 2016). They explain that, while enforcement and resource allocation have improved in recent years, particularly after a 2008 scandal exposing widespread egregious cruelty during H&S at a facility overseen by the federal government and audited by a third party, more remains to be done (AVMA, 2016).

Over the years, animal protection organizations have filed a number of actions seeking improvement in Regulations and more comprehensive enforcement of the Act. There is no evidence of meaningful consideration of these petitions. For example, in 2010, AWI filed a petition seeking improved enforcement of the Act (Petition, 2010). AWI's 2013 petition seeking amendment of the Regulations to address documented concerns resulting in multiple, serious humane H&S violations remained unanswered for years, and was denied in 2017, after AWI filed a lawsuit to compel a response (AWI, 2017).

In 2015, several animal protection groups filed a petition to compel the U.S. government to enforce the Act, citing evidence of egregious violations and lack of enforcement (ALDF). In 2019, a coalition of animal protection organizations filed a

complaint challenging newly issued USDA regulations concerning high-speed pig slaughter which, *inter alia*, removed limits on the number of pigs that could be slaughtered per hour and reduced the number of slaughterhouse inspectors, despite evidence of significant and repeated welfare issues even in facilities with speed limits and with greater numbers of inspectors (Complaint; *see also* Hotis, 2006 (observing that maximum slaughter numbers should be reduced to enable federal inspectors to do their job); AWI 3, 2020 (observing that prevailing high-speed slaughter practices make humane H&S impossible)).

In recent decades, large U.S. meat buyers have used non-governmental welfare standards in procurement (de Passillé & Rushen, 2014). Compliance with these standards, usually based on higher animal welfare requirements than the Act, is audited by third parties (Mench, 2008). While audits have helped improve animal welfare during H&S, evidence that behaviour improved only during audits has spurred the introduction of measures for on-demand, remote third-party monitoring (Wigham, 2018; AVMA, 2016). The implementation and adherence to good animal welfare practices in audited slaughterhouses is driven primarily by the threat of losing business from large buyers, rather than any meaningful consequences of violating the Act (Wigham, 2018; Mench, 2008). While incrementally beneficial, voluntary recommendations and certification programs are unlikely to systematically and sufficiently improve animal welfare during H&S (Mench, 2008). Recent surveys of the U.S. public show support for humane treatment of animals – more and better laws and greater enforcement are needed to “help the billions of animals stuck in the gap between humane attitudes and public policy” (Lovvorn, 2005, 148).

b. Scientific Knowledge

The Act and Regulations have not been amended in relation to humane H&S since coming into force over 60 and 40 years ago, respectively (AWI, 2017). As many commentators have observed, updates to reflect current scientific knowledge are long overdue. The AVMA notes that “additional innovation [in H&S] is needed and possible” and emphasizes the importance of professional training of slaughterhouse employees, including to master the correct use of equipment and to better understand animal behaviour (AVMA, 2016, 5). Hotis (2016) calls for the Secretary to bring the Act in line with current scientific knowledge regarding humane H&S

practices. AWI (2017) mentions evidence calling into question the efficacy and humane nature of some methods sanctioned by the Regulations.

This author has not been able to locate evidence of the Secretary investigating – as directed by the Act – the latest science relating to animal welfare during H&S (*see* Wigham, 2018, for an overview of recent studies of H&S welfare). A brief review of scientific literature shows that science has continued to study and develop new methods of humane H&S, which may lead to better welfare outcomes than the methods provided for under the Act and Regulations:

- There is evidence that using carbon dioxide to stun or slaughter, as provided for under the Regulations (9 C.F.R. §313.5), results in a long delay before loss of consciousness and often generates aversive reactions (Terlouw, 2016). Current scientific recommendations include the use of anoxic gases (AGW, 2017) or nitrous oxide gas, which is “much less aversive” than carbon dioxide (Rault, 2015, 37).
- There is evidence that conventional captive bolt stunning (9 C.F.R. §313.15) raises welfare concerns and is “considered unsuitable by many animal scientists” (Vesilind, 2018; Gregory, 2007), and that stunning by pulsed ultrahigh current can improve animal welfare (Robins, 2014). In addition, the Regulations do not expressly address the need for different captive bolt gun positioning depending on animal breed (Terlouw, 2016).
- The Regulations still allow the use of electric prods to drive animals to slaughter, (9 C.F.R. §313.16(a)(2) (prescribing minimizing reliance on electric tools and limiting voltage). Electric prods, deemed problematic from animal welfare perspective, have been banned from use on certain types of animals by the OIE World Health Organization and restricted in the most modern slaughter plants (Grandin, 2014). Grandin (2014) recommends using flags or plastic paddles instead.

Scientific knowledge on consciousness, unconsciousness, and animals’ perceptions during H&S continues to evolve (Terlouw, 2016) and the Act and Regulations should be updated accordingly. The Regulations should also be updated to mandate modernization of slaughterhouses and implementation of best practices for the design of holding areas and slaughter lines (Hotis, 2006).

The Act's religious slaughter provisions also do not reflect the latest science. For example, animal suffering during religious slaughter could be reduced by a number of methods acceptable to at least some religions, including post-cut stunning (Terlouw, 2016); pre-cut reversible stunning (Small, 2019 (reporting positive outcomes using a reversible microwave stunning system); Terlouw, 2016 (describing a reversible electrical stunning system)); and considering knife positioning during slaughter (Gregory, 2012). It is this author's view that the Act did not – either as of its enactment or thereafter – sufficiently examine possible ways to safeguard free exercise of religion while minimizing animal suffering by using available scientific knowledge and technology.

(While not discussed here separately from slaughter, pre-slaughter handling raises distinct welfare issues, particularly given that animals can spend long periods of time in holding pens, exposed to unfamiliar environment, including disturbing noises and smells (Grandin, 2014; Hearings, 1978). Here, too, the Act and Regulations are behind the current state of scientific knowledge (Grandin, 2014).)

5. Conclusion

The Act is far from being an effective, comprehensive, and modern law. The Act has been aptly called a “mild and modest beginning in the field of humane slaughter” (Hodges, 2010, V). While the Act sought to codify a policy of humane H&S at least for some animals and provide for updates as science evolves, its success has been undermined by its limited scope, weak enforcement (Wolfson, 1996), and lack of effort to keep up with advances in scientific knowledge. Much more stringent measures and “thorough and rigorous enforcement” (Hearings, 1978, 26) are still needed to appropriately ensure the welfare of cattle during H&S in the United States.

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