

# Humane Slaughter Association

Improving the welfare of food animals around the world

Spring 2019



## Grant awarded for study to establish a framework permitting “demonstration of life” to Halal certification bodies for use within UK abattoirs

Dr Claire White of the University of Bristol has been awarded the HSA's Special Travel Award to allow her to travel to New Zealand to research and develop a better understanding of their practices and models relating to stunned Halal slaughter.

The practice of non-stun slaughter, particularly of sheep, has increased in recent years in the UK and is associated with significant welfare concerns. Dr White's study aims to build the knowledge acquired during her visit into a project to establish a framework permitting 'demonstration of life' to Halal certification bodies, which may be utilised to allow stunning practices where they are currently discouraged. If adopted, this could lead to a significant improvement to the welfare of millions of animals.

The practice is successfully applied in the New Zealand lamb-processing sector, enabling all exported product to be marketed as Halal,

whilst only permitting stunned slaughter. The practice permits individual animals to be allowed to demonstrate potential for recovery, under controlled conditions in participating abattoirs, no more than twice a year. The demonstration must be supervised by the plant welfare representatives, Veterinary Inspectors and representatives of the certifying Halal Bodies, and is tightly controlled within a general framework for export of Halal products.

To facilitate a detailed understanding of the New Zealand model, Dr White will visit lamb exporting abattoirs and engage with the Ministry for Primary Industries (MPI) which is responsible for verification of welfare compliance in the New Zealand model, as well as Halal certification bodies and meat industry trade bodies, during an eight day trip.

Dr White said: *The study visit is fundamental to achieving the aims of the wider project – to establish a 'Demonstration of Life' framework for use within those UK abattoirs wishing to undertake stunned Halal slaughter. Once established in sheep, the precedent has potential to be applied to other species, including poultry, where a proportion of birds are also processed by non-stun methods.*

You can read more about our other funding projects on page 5. ■



### CHAIRMAN'S COMMENT

As the new Chair of the HSA's Trustees, it is my privilege to introduce the Spring 2019 Newsletter.

The numbers of farmed finfish slaughtered worldwide for human consumption are in the billions, far greater than any other type of mammal or bird; many of these are not humanely stunned before slaughter. The HSA has a proud history of seeking to improve fish welfare and its latest initiative is the production of a video which has also been translated into nine languages plus English – you can read more about this on page 3. The charity also hopes to announce shortly the recipients of its call for funding for research and development to improve the welfare of finfish, crustaceans and cephalopods at slaughter, following what has been a lengthy and detailed scientific review.

Education and training are such essential components of the HSA's work and the first interactive e-learning module, *On-farm Killing of Livestock for Disease Control Purposes* will shortly be completed (see page 4). This e-learning module is a pilot, designed to complement the online guide and, if it proves popular, will hopefully lead to others.

None of this achievement, past, present or future, would be possible without your interest and support – we simply could not continue "caring beyond the farm gate" without you. Thank you.

Alick Simmons BVMS MSc MRCVS  
Chair

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## 2017/18 Livestock Market Survey

As reported last year, as part of the two-hundredth anniversary of the first, purpose-built, livestock market opening in Hawick, the Livestock Auctioneers' Association (LAA) commissioned the HSA, in collaboration with the RSPCA, to carry out an independent survey of a representative sample of 24 livestock markets across England and Wales. The final market visit to complete the fieldwork was carried out at Welshpool Livestock Market on 2nd July 2018.

At the end of October 2018 the findings were presented to the LAA at its Annual General Meeting. The presentation compared the 2017/18 survey results with those of a similar survey, carried out by the HSA and the Royal Veterinary College in 2006/07, and highlighted some of the developments and improvements in management procedures, handling equipment and infrastructure which have taken place since that last survey. All the markets in the survey are part of the Red Tractor Assurance Scheme which has an animal welfare policy which is implemented by written supporting documents, including training records and procedures for dealing with emergency situations such as escapees and injured or infirm animals being delivered to the market.

In terms of facilities, improvements were recorded in the following areas: unloading facilities, penning, gateways, gangways, grading/sorting/ID races and isolation pens. As might be expected, newer markets and those with higher throughputs tended to have better facilities and scored higher, but some of the oldest markets also scored well. Fifty per cent of the markets visited are using CCTV as part of their commitment to animal welfare and to enhance security.

The full report was submitted to the LAA at the beginning of February and distributed among the LAA membership. As a result of the survey, it is hoped that plans for any new livestock marketing facilities, including improvements to existing markets and other livestock handling facilities such as collection centres and abattoir lairages, will include the improved features highlighted in the HSA report. ■

## Translation of publications into Chinese continues

A generous grant has enabled the HSA to translate a variety of its existing publications into Mandarin Chinese over the last 12 months, including guidance on handling systems in slaughterhouses and group-stunning systems for mammals. Most recently, the HSA translated eight Technical Information Posters on humane moving and lifting of animals, their loading and unloading during transport, and the stunning of cattle, sheep and pigs. The translated publications are available to view, free-of-charge, on a dedicated HSA webpage. The HSA hopes these translations will enhance the accessibility of its publications to the Chinese agricultural and veterinary industry and to audiences in other countries where Mandarin is spoken. ■



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## HSA promotes humane slaughter of fish to consumers around the world

Following the publication of the HSA's 2018 report *Humane Slaughter of Finfish Farmed Around the World*, which encourages more scientific research and technological development for improving the welfare of more species of finfish at slaughter, the HSA published on its website home page a free-to-view video describing to consumers the cognitive abilities of finfish and their capacity to suffer fear and pain. The video informs consumers of the availability of stunning equipment for some fish species and describes how consumers can identify higher-welfare finfish products through some of the farm assurance schemes for fish which require more humane methods of slaughter.

With the generous support of a grant, in 2018 the video was translated into nine other languages to increase awareness of fish welfare around the world, enabling more consumers to make informed purchases. The translated videos are available to view, free-of-charge, from the HSA 'Publications' webpage, in French, German, Greek, Italian, Japanese, Korean, Polish, Portuguese and Spanish. These languages cover countries where fish assurance schemes are available and therefore consumers can look out for these product labels. The languages also cover countries whose industries might be able to adopt stunning relatively soon, and which produce and consume some of the largest amounts of farmed finfish products globally. This video is the first HSA publication to be translated into Korean and we hope it will provide a useful insight into the possibilities for humane slaughter, because South Korea is one of the world's leading aquaculture finfish producers, farming some of the largest numbers of species (approximately 26, including rainbow trout). ■



Credit: HSA

## IN BRIEF

### HSA seminar to address animal welfare at slaughter

Following the success of the CCTV Seminar last May, the HSA is holding a one-day seminar for the meat and livestock industry on Wednesday 9th October 2019 entitled *Animal Welfare at Slaughter – Hot Topics 2019*.

The seminar will address a range of current issues which have the potential to impact on animal welfare, including the implementation of CCTV, research into transferring LAPS technology into pigs, 'demonstration of life' framework for Halal certification and slaughter guidance for seasonal poultry producers.

Further information, including speakers and booking, can be found on the website [www.hsa.org.uk/news-events](http://www.hsa.org.uk/news-events) ■

### Come and visit our stand

Planning for the 2019 show season has been underway and so far, the following shows have been confirmed:

The Smallholding and Countryside Festival at the Royal Welsh showground, Builth Wells on the 18th and 19th of May.

The English Winter Fair at the Staffordshire Country Showground on the 16th and 17th of November 2019 tbc.

As other shows are confirmed, these will be added to the website so please keep checking in to see if the stand will be in your area. The shows give us the perfect opportunity to meet existing and potential members and supporters, as well as display merchandise and our latest publications. ■

Over the autumn and winter months, the HSA technical staff have continued to run training courses and animal welfare assessments as well as provide advice and carry out lectures.

### Training

Animal welfare in the livestock market and handling of livestock for drovers and yard staff at a large livestock market in the north of England.

The use of captive-bolt equipment and firearms for the emergency humane killing of livestock for the Isle of Man state veterinary staff and ferry crews of the Isle of Man Steam Packet. ■

### Lectures

Two lectures to students at Harper Adams – one to animal health and welfare students and one to trainee livestock auctioneers.

A lecture on finfish welfare at slaughter for veterinary medicine students at the University of Liverpool. ■

### Assessments

Four animal welfare assessments – three in the UK and one in France, covering pigs, turkeys, ducks and geese. ■

### New e-learning module

The HSA's first e-learning module *On-farm Killing of Livestock for Disease Control Purposes* will shortly be available on our website. It complements the text-based online guide of the same name and offers a novel interactive approach to further engage learners.

It has been created for livestock producers, veterinary surgeons, knackermen, killing personnel, animal welfare inspectors, animal health officers, students and other people who may be involved with the emergency killing of livestock.

At the end of the course, learners will have an understanding of the roles and responsibilities of team members during an on-farm kill for disease control, the appropriate methods for humanely stunning and killing the major livestock species and how to maintain good biosecurity.

With a certificate of completion awarded at the end of the course, which should take approximately 45 minutes to complete, it may be of specific interest to vets as they carry out their annual CPD training. ■



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### Animal welfare advice

Since July 2018 the HSA has provided advice on the welfare of fish and of poultry at the time of killing to NGOs in Hong Kong and in Japan.

The HSA attended the Association of Independent Meat Suppliers Conference, and the World Horse Welfare Conference, in October 2018 and the British Poultry Council Annual Awards in December 2018. It is also a member of the British Veterinary Association (BVA) Abattoir Working Group.

Staff also attended the Veterinary Public Health Association (VPHA) Conference and the Compassion in World Farming effective electrical stunning stakeholder meeting. As well as presenting at the Livestock Auctioneers Association, presentations were also given at the Association of Meat Inspectors (AMI) Seminar at Harper Adams, on-farm and local slaughter consultation meeting at St George's House, Windsor Castle and the RSPCA beef standards advisory group meeting. ■



Credit: HSA

### HSA Special Travel Award

The HSA Special Travel Award offers researchers, and others with an academic interest in humane slaughter, funding of up to £10,000 to undertake research or study visits.

The HSA has so far made three awards. The first was made to Dr Ellie Wigham at Bristol University who is undertaking a study of CCTV monitoring in US slaughterhouses. Ellie's work will be of special interest to operators in the UK now that CCTV is mandatory in all slaughterhouses in England and as procedures for monitoring CCTV are likely to be important if it is to bring about animal welfare benefits.

The 2018 award went to Dr Troy Gibson to facilitate international collaboration which will investigate humane stunning methods for donkeys and on-farm killing of non-viable piglets. Dr Gibson undertook study visits to Brazil and a Brazilian PhD student visited Dr Gibson's laboratory at the Royal Veterinary College in the UK. The results of this study visit to Brazil showed that some methods used for on-farm dispatching of sick or non-ambulatory animals, such as knife stabs in the chest of conscious animals, striking the head of piglets with a bodyweight of more than 5kg, or deliberately leaving pigs to die, do not meet the legal and societal requirements in terms of animal care and protection, and should be discontinued. The development of training, extension activities and psychological support programmes for operators in charge of on-farm killing of animals should be envisaged to improve the welfare conditions of pigs on farms.

You can read about the 2019 award to Dr Claire White on the front cover of this newsletter. ■

### Fish work research funds made available

The HSA made over £1.7 million available to support scientific research to develop humane stunning methods for decapod crustaceans (crabs, lobsters etc); cephalopod molluscs (eg octopus and squid) as well as farmed finfish species which currently do not have well-established stunning parameters. A number of promising applications have been received, and these are currently undergoing rigorous scientific review. The HSA hopes to announce the successful recipients of this funding shortly. ■

### Student/Trainee Scholarships

Every year the HSA offers students and industry trainees the opportunity to undertake a short research project by providing up to £2400 of support through the Dorothy Sidley Student/Trainee Scholarship scheme. In 2018 Mary Elizabeth Aubrey (a student at the Royal Veterinary College) was awarded a scholarship to investigate the electrical current profiles produced by head-only electrical stunning of sheep in UK abattoirs under the supervision of Dr Troy Gibson. Electrical stunning is the most common method for stunning sheep in the UK. Typically, current is applied to the head of the animal, rendering it immediately unconscious. The electrical current delivered, its duration and consistency are all important to ensure a rapid, pain-free loss of consciousness for animals. Mary measured the current delivered during electrical stunning at seven UK abattoirs and her work highlights the need to closely monitor stunning current and identifies some factors which may reduce the incidence of sub-optimal stun profiles. ■

### Latest update – the 2015 HSA Research Training Scholars

The HSA is funding research being carried out by Awal Fuseini at the University of Bristol, and Carlos Rebelo at the Royal Veterinary College.

Awal is attempting to develop a novel type of electrical stunning known as SPUC (single pulse ultra-high current), which has the potential to improve the welfare of cattle undergoing Halal slaughter. SPUC stunning may benefit animal welfare at slaughter by producing an extended duration of unconsciousness (enabling death to occur with less risk of recovery of consciousness) and may benefit health and safety and meat quality by reducing unconscious, involuntary convulsions after stunning.

Awal recently published a scientific paper discussing the compatibility of modern slaughter techniques with Halal and the aspects of modern slaughter that cause disagreement amongst Muslim scholars as to what is 'authentic' Halal meat, based on their differing interpretations of the Quran. The lack of consensus amongst Halal certification bodies means a global Halal standard is not yet available.

Carlos is exploring how to further develop the design of dry electrical stunning systems used for small-scale, on-farm slaughter of turkeys in order to improve animal welfare and produce acceptable meat quality. He is considering the effects of electrode design on the magnitude and consistency of the current applied and, in turn, on the duration of unconsciousness produced and the quality of the meat. Carlos is now continuing his PhD studies on a part-time basis. ■

## It's hard to believe today but, when the HSA was founded in 1911, there were no laws protecting animal welfare at slaughter.

By 1928 there were over 20,000 private slaughterhouses in England, to which no-one involved in animal welfare had the right of entry, except with the permission of the owner. There was no requirement for those carrying out the slaughter to be assessed as to their fitness for the task, nor for their equipment to be inspected as to its suitability.

Just over 60 years ago, on the 1st of December 1958, The Slaughter of Pigs (Anaesthesia) Regulations came into force which legalised the use of CO<sub>2</sub> stunning for pigs. This new method had been developed in the USA and Denmark and used a mixture of 65% CO<sub>2</sub> in air to render pigs unconscious before slaughter and until death from exsanguination. The charity's General Secretary, Miss Dorothy Sidley, observed pigs being anaesthetised in a plant in Northern Ireland. The gas concentration was maintained automatically and a visible and audio signal warned operators if the concentration varied beyond the programmed limits. At the time of its introduction, it was considered an

improvement on electrical stunning and less open to human error. Notwithstanding, the HSA persuaded the Ministry of Agriculture to include a protective clause in the Regulations requiring a captive-bolt pistol to be available at all times in case of an emergency.

In 2018, the use of CO<sub>2</sub> gas to slaughter pigs was the subject of media coverage as a result of CO<sub>2</sub> supplies running low due to an unusually high number of closures of the factories which produce the gas as a by-product of the fertiliser industry. Over the years, there have been concerns about the humaneness of CO<sub>2</sub> and research has established that pigs find exposure to high concentrations of the gas aversive.

Since its foundation over 100 years ago, the HSA has led and/or contributed to major changes in attitudes towards animals, with scientific and technological developments resulting in huge improvements in methods for slaughter or killing. In September 2013, the charity held a workshop in London to discuss the use of Low Atmospheric Pressure Stunning (LAPS) for food animals at slaughter. The HSA's purpose for

organising the meeting was to learn of the development and use of this new system, discuss scientific findings relating to humaneness, and consider its potential for wider use and what further research might be needed relevant to this. The meeting was attended by participants with an interest in the topic from scientific, technical, animal welfare and legislative perspectives.

In 2017 the charity, in conjunction with UFAW, organised a seminar on Controlled Atmosphere Stunning (CAS) methods to examine the latest developments in research into these methods. The meeting was oversubscribed with speakers and attendees from as far afield as New Zealand, Canada and the USA. Amongst other issues the meeting highlighted the importance of air-hunger as an extremely unpleasant physiological state, the need for high-quality science in this area and the practicalities of translating scientific information and advances into changes in legislation and practice. As part of its commitment to ensuring the welfare of animals at slaughter, the HSA announced at this conference a collaboration with Defra to provide funding of up to £400,000 for research into alternatives to carbon dioxide for the humane slaughter of pigs.

As announced in the spring newsletter last year, the funding was eventually awarded to a consortium led by Dr Dorothy McKeegan at the University of Glasgow, with collaborators at University of Edinburgh (Dr Jessica Martin) and SRUC (Dr Emma Baxter). Work has begun on the HSA/Defra funded research to examine whether LAPS is more humane for stunning pigs than CO<sub>2</sub> and will conclude in Spring 2020. The work should provide an indication of both whether LAPS is less aversive than CO<sub>2</sub> for pigs and whether it is likely to become a viable method for their commercial slaughter. ■

## Violet Wood 1866-1932 The woman who travelled the world to help animals

This March, the HSA marked International Women's Day with the story of Violet Wood, the HSA's very first Secretary, who paved the way for the next generation of women vets and scientists.

Violet was instrumental in seeking improvements in animal welfare across the globe, travelling throughout Europe and further afield to countries such as Tangiers and Albania, undertaking arduous journeys and difficult work.

Violet was born in Brixton in 1869, to Henry and Harriet Wood. Her father was an architect and Violet was the youngest child. She had no real vocation and, by 1911, was a companion to her widowed mother and helping the fledgling Humane Slaughter Association as a volunteer.

At a Council meeting of the HSA held on the 5th of March 1920, Violet was appointed Secretary. At that meeting, she outlined a number of proposed activities including arranging demonstrations of the humane killer in slaughterhouses, writing to all the Chief Constables regarding the destruction of stray dogs and approaching the traffic managers of the railway companies regarding the transport of cattle. A room at 1 Weymouth Street, Marylebone, was set aside for her to use as an office and two months later she was able to report on satisfactory progress with her proposals, as well as the fact that she had also written to a number of shipping companies asking them to carry a humane killer when transporting live animals.

Over the next decade, Violet was active in promoting the aims of the charity widely across the UK and throughout Europe. By 1923, she had made visits to Tangier, Gibraltar, Madrid, Lisbon, Barcelona, Marseilles and Paris to promote the humane treatment of animals. The following year, she visited Italy and Greece with the objective of introducing the humane killer into these countries and by 1930, was

able to report that the humane killer had been introduced to half the countries of Europe. She was instrumental in seeking improvements in animal welfare across the globe, travelling throughout Europe and further afield, visiting shelters for stray animals, public slaughterhouses and giving lectures and demonstrations. It was difficult and often harrowing work, with travel much more arduous than it is today, particularly as a single woman.

In 1927, Violet was appointed a member of a Government committee set up to investigate the Weinberg Pen which was used for casting animals for Shechita, the Jewish method of slaughter.

By 1930, her health was failing and she resigned as Secretary, leaving her young protégé Dorothy Sidley to continue in her stead. She died on the 15th of June 1932 at the Hospital for Epilepsy & Paralysis, Maida Vale, having devoted her life to animal welfare.

Violet not only made a real and lasting impact in animal welfare, but also led the way for the generations of women scientists and veterinarians to come. Examples include Gillian Weyman, who was the first recipient of the Dorothy Sidley Memorial Scholarships in 1986 and Ellie Wigham who was given a Special Travel Award in 2018. Gillian undertook a study of cattle lorry tailboards and unloading and loading procedures for her scholarship – the idea for this research project coming as a direct result of observations she had made whilst working as a Research Assistant with the HSA. She had noticed, on a number of occasions, cattle slipping whilst being moved on and off transporters and felt there was a need for a study in this particular area.

In February 2018 Ellie Wigham, a student at the University of Bristol, was awarded funding for her project to assess the use of CCTV data to monitor and improve welfare in slaughterhouses in the USA. She



subsequently travelled to the States to assess the effects of independent CCTV auditing on animal welfare in lairage and at slaughter. This funding was timely as legislation came into force in England a few months later requiring all slaughterhouses to have CCTV installed.

More recently, Dr Dorothy McKeegan was awarded a joint HSA/Defra funding for her programme of research to determine whether Low Atmospheric Pressure Stunning (LAPS) might be a more humane way to render pigs insensible during commercial slaughter.

Thanks to women like these and also to the backing of people like you who share the charity's concern for the welfare of animals, the HSA has delivered initiatives which have made a difference to millions of animals at a time when they are most vulnerable. Please help us to continue their legacy by continuing your support of the HSA and helping to spread the word about the charity and the work it does. Thank you.

*"Our special thanks...to our wonderful secretary in London, Miss Violet Wood, whose work for the better treatment of animals in foreign countries is now so well known."* From the Council minutes 1928. ■



## The HSA needs you!

The HSA's work is as relevant today as it was over 100 years ago. We've already made significant improvements and a real, lasting difference but there's so much more to do and we can't do it alone. Quite simply, we need your help to be able to continue to be a significant force in improving the welfare of animals at a time when they are at their most vulnerable. As a charity, we rely on voluntary donations and new members in order to continue. ■

## How your support makes a difference

Just £3 a month could help us to provide up-to-date technical information and advice on all aspects of animal handling, transport and slaughter

£10 a month could help us to expand and progress our outreach work to help food animals around the world.

A £20 donation will help us to fund training and education in humane methods of handling and slaughter of livestock for farmers, vets, abattoir staff and students.

£50 helps us to fund projects such as the programme of research to determine whether Low Atmospheric Pressure Stunning (LAPS) might be a more humane way to stun pigs during commercial slaughter.

Please help us to continue our vital work by sending a donation or becoming a member – every donation that the HSA receives makes a difference. Thank you. ■

## An extraordinary legacy

When Norman Child Graham died on the 22nd of April 1931, he left a legacy to the HSA which continues to this day.

Norman was born at Herne Hill, Surrey in 1859 to a wealthy family and had a varied career as a tea merchant, an artist and an engineer. In 1920, he was one of the co-founders of the Humane Slaughter of Animals Association and worked closely with the Council of Justice to Animals organisation. In 1928, the two amalgamated and are known today as the Humane Slaughter Association.

Norman was Vice-chairman of the organisation, with the Duchess of Portland as its President, holding this position until his death in 1931. Norman was one of the pioneers of the humane slaughter movement in the UK, tirelessly working to improve the conditions of animals in markets and at slaughter during his lifetime and, on his death, his legacy ensured that today, that work continues. In his will, Norman wrote *"I leave the above sums to animal societies as I do not consider that in this country animals either domestic or wild receive the consideration to which they are entitled and which in some countries they receive."* Having taken care of his loved ones, Norman directed that the HSA receive £3,000 (equivalent to approximately £195,000 in today's money) plus any remaining funds after all other expenses and legacies had been paid.

The 1930s were a period of national economic downturn and the UK was in the grip of its largest and most profound economic depression of the 20th century. The HSA's revenues showed a fall of 47% compared to the average for the period 1928-1930 and the charity had to restrict its overseas activities due to a shortage of funds. At the time of Norman's death in April 1931, the HSA had a policy of donating captive-bolt guns to butchers and others to promote humane killing but again due to financial constraints, was also unable to meet all the requests for captive-bolt guns. Norman's legacy was a lifeline, helping the charity to continue and ultimately to make great strides forward in improving conditions for animals at markets (you can read about the latest markets survey on page 2). As the charity wrote at the time in its Annual Report *"Every year some 16,000,000 cattle, calves, sheep and pigs as well as millions of head of poultry pass through our markets, and there is ample evidence to show that on their journeys in the sale yards and in the markets the unfortunate animals undergo such needless suffering. It is a common sight to see very young calves shivering and stiff with cold, exposed for hours without shelter or straw, roped to the rails in such a way that they can only lie down with difficulty..."*

The results of Norman's legacy can still be seen to this day. Legacies remain vital to the ongoing survival and work of the HSA, helping us to continue to make a lasting difference to the welfare of food animals during marketing, transport and slaughter.



If you haven't already done so, please consider leaving a gift to the HSA in your will – you can find more information on our website [www.hsa.org.uk](http://www.hsa.org.uk) or request a copy of our legacy guide by calling **01582 831919**. Thank you. ■



Credit: HSA



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