



**Humane Slaughter  
Association**

***Newsletter March 2011***

## Chairman's comment

As the new Chair of Trustees it is my privilege to welcome you to the Spring Newsletter for 2011, a great milestone year for the HSA marking 100 years of commitment to the welfare of food animals during transport, marketing and slaughter. The enthralling story of dedication and achievement over these years is the subject of a book now in the final stages of preparation, while other activities marking the Centenary include an international symposium with an exciting line-up of speakers and a Scholarship to support doctorate level research.

The story is ongoing of course and present day staff, even though small in number, continue to achieve much for a great many animals worldwide. You will be able to read about a small sample of this work in the Newsletter.

None of this achievement, past, present or future, would be possible without your interest and support. On behalf of the Trustees and staff, my sincere thanks.



## Poultry slaughterhouse research

The current legislation protecting the welfare of poultry at slaughter is the 'Welfare of Animals (Slaughter or Killing) Regulations 1995, as amended'. In January 2013 this legislation will be replaced by European Council Regulation 1099/2009 on the protection of animals at the time of killing. The new legislation will require some slaughterhouse procedures to be amended.

One of the changes is a requirement for both carotid arteries to be severed during slaughter. This is to ensure that, after stunning, animals are bled efficiently and are unable to recover consciousness. HSA Technical Officer Jade Spence has surveyed neck cutting procedures at a number of poultry slaughterhouses which process chickens and turkeys. The results of the work will indicate what proportion of slaughterhouses will be able to meet the new legislation in 2013 using their current slaughter procedures. This project is part of a larger study of poultry welfare at slaughter and is co-ordinated by the Royal Veterinary College and funded by Defra. The HSA wishes to thank all the companies that agreed to participate in the surveys.



*HSA Technical Officer Jade Spence at the AMI Annual Seminar*

## HSA presentations at the Association of Meat Inspectors 45th Annual Seminar

On the weekend of 11 September 2010, Jade Spence and Heather Barker, HSA Technical Officers, each gave a presentation on the work of the HSA to meat inspectors who work in UK and EU slaughterhouses. Heather discussed the advantages for animal welfare of the HSA Education and Training programme for slaughterhouse employees. Jade discussed the welfare of farmed fish and how scientific research, development of stunning equipment and training fish farm staff, can help to improve fish welfare during harvest and protect meat quality.

## Animal welfare advice to slaughterhouses

Between summer 2010 and spring 2011 the HSA visited a number of slaughterhouses that process ducks, sheep and cattle. The visits assessed animal welfare during handling, in the lairage and at the point of stunning and slaughter. These welfare assessments are designed to identify good practice, to provide advice to abattoir management where procedures can be improved, and in relation to compliance with retailer standards when appropriate. This HSA service allows companies to continually improve their animal welfare standards and to ensure they comply with the current legislation.

## HSA education & training for slaughterhouses

In September 2010 the HSA, in association with Food Chain Consultancy and Auditing, provided training for staff at a multi-species red meat abattoir in Lincolnshire. The staff were trained in the best practice principles for handling livestock during unloading from vehicles, movement into and through the lairage and movement to the stun point. The day comprised a theory and practical session where the principles discussed in the morning were applied to cattle, sheep and pigs in the afternoon. All delegates did well and successfully handled the livestock during the practical.

## Vice-Chair awarded MBE

Dr Lydia Brown, HSA Trustee since 2006 and, since October 2010, the Vice-Chair, has been awarded an MBE in the 2011 New Years Honours List for services to the veterinary profession.

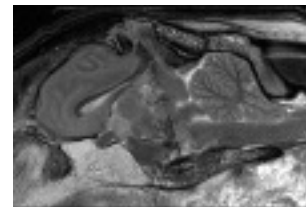
Dr Brown served on the Royal College of Veterinary Surgeons (RCVS) Council from 1991 to 2007 and was President of the RCVS in 1998/99. She was instrumental in the establishing of the Veterinary Surgeons Health Support Programme, launched in 1999, and became a Director of the Veterinary Benevolent Fund in 2005 and its President in 2006.



## RVC captive-bolt project

Work has now been completed on the government-owned equipment and the next stage is to test a given number of captive-bolt instruments in current commercial use. This part will be carried out by HSA technical staff, who have all received the necessary training in the use of the testing equipment by the project leaders. The equipment to be tested is a sample of instruments in everyday use by the knacker industry. The testing is being

carried out with the full co-operation of the equipment owners. Three premises have now been visited by the HSA and it is hoped that this second part of the project will be finished by May. Following that, repeat firing tests will be carried out to complete the project and HSA staff will be assisting with this at the Royal Veterinary College.



*MRI scan of a sheep's brain showing significant damage from the captive-bolt and indicating an effective stun*

## Practical Slaughter of Poultry training courses

The HSA ran three poultry smallholder slaughter courses last autumn; two in East Sussex in September and November and one in West Yorkshire in December. The heavy snowfall across the UK proved a test in ensuring the December course went ahead, but HSA Technical Officer Jade Spence successfully made the journey north and all delegates received their slaughter licences.

## International Conference: Animal Welfare Education

Technical Officer Heather Barker attended the first International Conference on Animal Welfare Education entitled 'Everyone is responsible' at the beginning of October 2010. The two-day conference, organised by the European Commission, was held in Brussels. Four hundred delegates of various organisations from 32 countries were present.

Leaders in animal welfare spoke about the science behind animal welfare education and the importance of it being taught in primary and secondary schools, at universities and colleges providing animal related courses, as part of professional development for relevant careers, and for people working with animals. The experience of various existing animal welfare educational programmes being implemented in developed and developing countries was shared through presentations and also through an exhibition held on the second day. These included: using the internet to create open educational resources; the delivery of animal welfare education to different groups of people in Latin America (including slaughter plants and animal transporters); and training school teachers in Romania to be ambassadors for animal welfare.

The conference concluded that animal welfare needs to be integrated into education. In particular it should be incorporated into the curriculum of the younger generation, although a holistic approach should be used with parents as well as teachers and others being educated about animal welfare. It was also stated that it is important to target the audience in the correct way by finding the right tools, to use information based on science and to create a positive feeling about animal welfare. It was hoped that this conference would be the start of creating a harmonised approach to animal welfare education throughout Europe and in other countries.

## 2011 – the HSA's Centenary

2011 is the HSA's centenary year. To mark this anniversary the charity is organising an international symposium on 'Recent Advances in the Welfare of Livestock at Slaughter', publishing a booklet on the history of the HSA and supporting a PhD studentship in research to improve welfare at slaughter (further details of which are in this Newsletter). We are also most grateful to the Lord Soulsby of Swaffham Prior who is hosting a reception for the charity at the House of Lords in the summer to mark the centenary.



*Portrait of the Duchess of Portland, first President of the Council of Justice to Animals*

## A few events in the HSA's history

A booklet is being prepared on the HSA's activities during its first hundred years. This will be available later in the year. Meanwhile, here are brief notes of a few events.

**The beginning** A meeting was held in London on 17 January 1911 by a group of people concerned with the welfare of animals killed for food and the destruction of unwanted dogs and cats. They agreed to form the Council of Justice to Animals (CJA). The Duchess of Portland was elected President and Dr Charles Rutter, Chairman. The novelist Thomas Hardy was a member of the committee. In 1928 the CJA amalgamated with the Humane Slaughter of Animals Association, which had similar aims, to form the Council of Justice for Animals and the Humane Slaughter Association – which remains the charity's formal title although it has come to be known widely as 'the HSA'.

**1921** The Secretary, Miss Violet Wood, travelled to Paris to promote the use of a humane killer and it was reported that this resulted in its adoption '...for pigs, horses and possibly bulls'.

**1936** By this time there was the Slaughter of Animals Act (1933), which required cattle to be stunned prior to slaughter. The HSA worked for the inclusion of sheep and pigs within the Act (which required the passing of byelaws by Local Authorities). About one fifth of the 1600 Local Authorities did not include pigs within the scope of the Act and about one third did not include sheep.

**1950** The Secretary, Miss Dorothy Sidley, visited Canada with Mr Shelvoke of Accles and Shelvoke (captive-bolt manufacturers) to give demonstrations of the use of the captive-bolt. Subsequently orders were received from several slaughterhouses. Canada passed humane slaughter regulations in 1960.

**1963** Poultry were still being slaughtered without prior stunning. The HSA funded research into the development of an electrical stunning system and went on to purchase and install a demonstration electrical system in a plant in Bedford. Being pleased with the results, the company went on to install similar systems in their other plants.

**1972** The HSA completed its first film showing humane methods of stunning animals. Since then the HSA has produced many training publications and these have been used around the world.

**1987** The HSA, in collaboration with the Universities Federation for Animal Welfare, held its first Symposium on the Humane Slaughter of Animals for Food.



*Thomas Hardy, Committee Member of the Council of Justice to Animals*



*Dorothy Sidley, HSA General Secretary from 1930 to 1978*



*Humane stunning*

# Century 1911 - 2011 Hundred Years at the farm gate



*Welfare during transport training material wins Gold Award*



*Delegates at the international workshop run by the HSA for the European Commission*

**1994** The HSA's training video 'Humane Slaughter – Taking Responsibility' was launched. Subsequently it received a Gold Award from the International Visual Communications Association (IVCA).

**2001** The training video 'The Road Ahead - Livestock Welfare in Transit' also received a Gold Award from the IVCA. This video (now a DVD) was taken up widely in Europe for training about welfare aspects of livestock transport. The HSA was involved in providing hands-on expertise, advice and training in the humane killing of livestock during the major foot-and-mouth disease epidemic in the UK.

**2004** The HSA had contributed funds for the development of an electrical stunning system for farmed trout and organised a workshop at Lochearnhead in Scotland for the demonstration of this new system. Until recently very large numbers of farmed fish were not stunned prior to slaughter. Now, effective electrical systems are widely used.

**2006** The HSA was awarded a contract by the EC to run an international workshop on standards for stunning and killing livestock. This three-day meeting held in Bristol was attended by 85 delegates from 53 countries.

**2010** The HSA offers a Research Training Scholarship to promote advances in livestock welfare at slaughter through research into improved methods.

The HSA is very grateful to all those who have supported its work through its one hundred years.



## **HSA Centenary International Symposium** **Recent Advances in the Welfare of Livestock at Slaughter** **30 June & 1 July 2011, Portsmouth, UK**

The HSA Centenary International Symposium 'Recent Advances in the Welfare of Livestock at Slaughter' is proving to be very popular with 32 speakers scheduled to talk on a range of topics (see list over page) and a display of at least 40 poster presentations.

The aims of the symposium are to present and discuss scientific and technical advances in the humane slaughter of farmed animals (mammals, birds, fish and others); the uptake and application of these advances around the world and their relevance to current farming methods; to provide a forum for sharing information and experiences; and to help identify future priorities and consider how these may be tackled. It is hoped that the symposium will be attended by scientists, stakeholders in the meat and agricultural industries, retailers, policy makers, government officials and others with interests in the field from around the world.

The symposium is being held at Portsmouth Historic Dockyard on the 30 June and 1 July 2011. There will be a drinks reception aboard the historic HMS Warrior on the evening of the 30 June and delegates will be able to visit the other attractions at the dockyard during the event.

Places are limited and will need to be booked and paid for before the event. If you would like to attend please contact HSA Technical Officer Heather Barker ([heather@hsa.org.uk](mailto:heather@hsa.org.uk)) for further information or visit the HSA website [www.hsa.org.uk](http://www.hsa.org.uk).

## Speakers at the HSA Centenary Symposium

**Dr Gry Aletta Bjørlykke**, Institute of Marine Research, Norway: *Slaughter of Atlantic salmon (*Salmo salar*, L) in the presence of carbon monoxide (CO) and the importance of neuroglobin (NGB).*

**Dr Lotta Berg**, Swedish University of Agricultural Sciences, Sweden: *Stun and meat quality of sheep under commercial conditions.*

**Dr Terence Cassidy**, Food and Veterinary Office, Ireland: *Equivalency between EU and third country standards for animal welfare at slaughter (findings from inspections of the Food and Veterinary Office of the European Commission).*

**Professor Grahame Colman**, Monash University, Australia: *The attitudes and behaviour of stock people at Australian sheep and cattle abattoirs.*

**Dr Mary Cullinane**, DAFF, Ireland: *A statutory period of validation on veterinary certificates for emergency or casualty slaughter of animals is essential in the interest of animal welfare.*

**Dr Antoni Dalmau**, IRTA, Spain: *Assessment of unconsciousness during slaughter without stunning in lambs.*

**Dr Véronique Deiss**, INRA, France: *Reduction of stress reactions of lambs at slaughter by improving their reactivity to human beings.*

**Professor Robert Elwood**, Queen's University, UK: *Do crustaceans experience pain?*

**Dr Andrea Gavinelli**, European Commission: *Future challenges of the new European regulation on the protection of animals at the time of killing and its relevance to international trade.*

**Dr Troy Gibson**, Royal Veterinary College, UK: *Effectiveness of captive bolt guns as a killing method without exsanguination for horned and un-horned sheep.*

**Dr John Gilliam**, Oklahoma State University, USA: *Captive bolt euthanasia of cattle: determination of optimal shot placement and evaluation of the cash special euthanizer kit for the euthanasia of cattle.*

**Professor Neville Gregory**, Royal Veterinary College, UK: *Complications during halal slaughter and shechita in cattle.*

**Dr Temple Grandin**, Colorado State University, USA: *Auditing animal welfare and making practical improvements.*

**Dr Chris Good**, The Conservation Fund's Freshwater Institute, USA: *Deep tank fish harvest technologies and evaluation of a percussive stunning system for rainbow trout slaughter.*

**Dr Craig Johnson**, Massey University, New Zealand: *Pain perception at slaughter.*

**Ms Nikki Kells**, Massey University, New Zealand: *Assessment of the relative welfare impacts of three gas treatments for the euthanasia of suckling piglets.*

**Dr Bert Lambooi**, Wageningen UR, The Netherlands: *Electrical stunning of farmed fish.*

**Ms Georgina Limon-Vega**, Royal Veterinary College, UK: *Current methods of livestock slaughter in Bolivia.*

**Dr Jeff Lines**, Silsoe Livestock Systems, UK: *Improving the poultry shackle line.*

**Dr Pol Lluch**, IRTA, Spain: *Aversion to the inhalation of nitrogen and carbon dioxide mixtures compared to high concentrations of carbon dioxide for stunning rabbits.*

**Dr Dorothy McKeegan**, Glasgow University, UK: *High expansion gas-foam: a humane agent for emergency killing of poultry?*

**Ms Diana Quilquini**, Agriconsulting Europe S.A, Belgium: *The Italian approach to welfare during transport of deer bred for meat: implementation of Regulation (EC) 1/2005.*

**Dr Fiona Roberts**, Kingston Maurward College, UK: *The use of a single empirical outcome measure to assess welfare in slaughter plants: between and within sector comparisons of the supply base for a major retail multiple.*

**Dr Victoria Sandilands**, Scottish Agricultural College, UK: *Methods for whole house gassing of poultry.*

**Dr Claudia Terlouw**, INRA, France: *Stress at slaughter in cattle: role of reactivity profile and environmental factors.*

**Dr Hans van de Vis**, Wageningen UR, The Netherlands: *Electrical stunning of captured fish.*

**Dr Katja van Driel**, FERA, UK: *Journey duration and welfare of pigs transported to slaughter in the UK.*

**Dr Karen von Holleben**, Bsi Schwarzenbek, Germany: *Licensing poultry gas stunning systems with regard to animal welfare – investigations under practical conditions.*

**Dr Martin von Wenzlawowicz**, Bsi Schwarzenbek, Germany: *Identifying reasons for stunning failures in slaughterhouses for cattle, sheep and pigs – a field study.*

**Ms Sofia Wiberg**, Swedish University of Agricultural Sciences, Sweden: *Welfare of animals and employees in connection with slaughter or euthanasia of animals.*

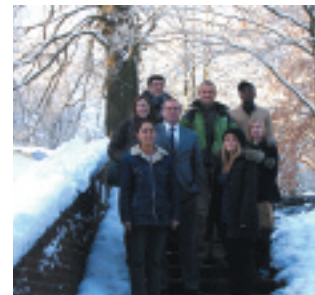
**Ms Jennifer Woods**, J Woods Livestock Services Ltd, Canada: *The welfare of horses at slaughter: the development of recommended handling guidelines and animal welfare assessment tools for horses.*

**Mr Jia Zili**, Beijing Chaoyang Anhua Animal Product Safety Research Institute, China: *WSPA and APSRI humane slaughter programme in China – STEPS®.*



## Dorothy Sidley Memorial Scholar battles through snow to present his research

The 2010 UFAW/HSA Animal Welfare Student Scholarship meeting took place at the University of Glasgow's School of Veterinary Medicine on 8th December. Due to heavy snowfalls across much of the UK, only five of the expected 15 scholars, only one member of HSA staff, Technical Officer Jade Spence, and one member of UFAW staff, Development Officer Stephen Wickens, made it to the meeting. Despite this, the event was a success and discussion between the student scholars and the audience was informative. HSA Dorothy Sidley Memorial Scholar, Bernard Mwakifuna of the University of Bristol, successfully battled the weather conditions to present his research on electrical waterbath stunning of chickens. Bernard identified variations in impedance when chickens are stunned in an electrical waterbath. Bernard's work has reconfirmed the need to develop constant current waterbath stunners because they can overcome the variable resistance between chickens.



*Jade Spence (left front) and Steve Wickens of UFAW (behind) with the Scholars who had been able to get through the snow to the Glasgow meeting*



*Dorothy Sidley Memorial Scholar Bernard Mwakifuna presents his work*

Dorothy Sidley Memorial Scholar for 2010, Marin Anastasov, also of the University of Bristol, tackled the difficult issue of assessing effective stunning in electrically stunned poultry. He examined chickens following waterbath stunning and neck cutting to determine patterns of expression of behavioural reflexes. His results indicated that pulsed DC stunning at low currents led to a higher incidence of recovery in birds compared with the use of AC stunning at higher currents. Marin's results also suggested to him that fewer birds displayed signs of recovery following a ventral neck cut, which severs all the major blood vessels in the bird's neck and therefore leads to a rapid death. Marin believes that tighter regulations are required on the parameters used for electrical waterbath stunning and also on the extensiveness of neck cutting, with a ventral neck cut being the preferred method. Marin also believes that birds should be sorted at catching to ensure that groups of relatively similar sized birds are processed together; this will ensure birds are effectively targeted by the stunning and neck cutting machinery. Marin also suggests that further research is required to understand the avian brain and how electrical stunning affects it. This will help to correlate behavioural reflexes, which are used in slaughterhouses to assess the effectiveness of stunning, with the actual state of consciousness in the bird.

### PhD Scholarship

In this, its centenary year, the HSA offering a Research Training Scholarship for a student to carry out scientific investigations into improving animal welfare during transport, marketing or at slaughter. The scholarship was devised to celebrate the centenary of the HSA and its aim to always use science to inform HSA policies. Three candidates were shortlisted from initial applications and the winner will be announced shortly. This PhD scholarship will encourage a young scientist to continue a career in the field of animal welfare science and particularly the specialist subjects of transport, marketing and slaughter.



## The Sheep Event

Once again the HSA was present with its stand at the biennial sheep event held at the Three Counties Showground near Malvern in Worcestershire. The 2010 event took place on Tuesday 3 August and was extremely well attended by an enthusiastic and knowledgeable crowd, which was almost certainly swelled by the hot, dry weather the UK was experiencing at the time.

HSA technical staff were kept busy most of the day by a steady stream of interested visitors. These included sheep farmers making enquiries about on-farm humane destruction of diseased and injured stock, students seeking information and help with various projects, representatives of processors and retailers with an interest in quality assurance, teaching staff from agricultural and veterinary institutions, and representatives of other welfare organizations, such as the Sheep Veterinary Society. Whilst at this event, the HSA was approached to provide a speaker for a smallholders' group in the north of England and invited to consider attending another regional sheep event currently in the pipeline.



*The HSA stand at the Feast of Dorset event (top). HSA Technical Director Charles Mason presenting a talk at the event on welfare at slaughter with particular regard to crustaceans (bottom)*

## Feast of Dorset

In early 2010, the HSA was approached by a former member of staff to exhibit at a relatively new food event in the south-west of England. The Feast of Dorset was first held in September 2009 and attracted a crowd in excess of 8,000 visitors, mainly from the general public interested in fine foods with provenance. The organisers donate a proportion of the takings to recipients of their choice and in 2010 the HSA was chosen along with the British Beekeepers' Association. The event took place over two days (Saturday 18 and Sunday 19 September) and attracted a gate of over 10,000, resulting in a donation of over £1,000 to the HSA.

As well as the trade stands and other exhibitions, there was a full programme of cookery demonstrations in a central marquee, featuring a number of well-known culinary experts, including the journalist Rose Prince who visited the HSA stand to learn more about the transport, marketing and slaughter of commercial livestock. Sunday lunchtime saw the HSA's Technical Director, Charlie Mason, give a short talk on animal welfare at slaughter with particular regard to crustaceans, before the celebrity chef, Matt Follas, cooked lobster thermidore.



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