

**Humane Slaughter  
Association**  
*Newsletter March 2010*





## Chairman's comment

I have much pleasure in introducing this year's Spring Newsletter which highlights the vital role played by the HSA in so many ways.

Training and research, both areas of work highly valued by members and supporters as shown by replies to the recent survey, continue to prove their effectiveness and importance. The LINK Programme Management Committee's praise of the 'head-only' poultry stunning research project is very pleasing and we look forward to its further development into commercial use. It is also particularly good to see further take-up of training in fish slaughter.

The inaugural Humane Slaughter Award was presented in October to Dr Craig Johnson who also gave a well-received talk at the event on his groundbreaking research on pain in cattle slaughtered without pre-stunning. Such research is essential to advances in animal welfare and it is important that we encourage such work, including through Dorothy Sidley Memorial Scholarships which continue their success.

A special thank you to all who replied to the Members and Supporters Survey, providing much useful information to help us continue to work effectively in the future.



**John Pratt, Chairman**

## Humane Slaughter Award presentation

The HSA presented its first Humane Slaughter Award, for recognition of outstanding advances in this field, at a special meeting held at the Farmers Club in London on October 6 2009.

The Award, won by Dr Craig Johnson and his colleagues at Massey University, New Zealand, for groundbreaking research investigating pain in cattle slaughtered without prior stunning, was presented on behalf of the HSA by Professor Christopher Wathes of the Royal Veterinary College, Chairman of the Farm Animal Welfare Council. Included was a £1,000 prize which will be put towards further research in this field.

Prior to the award presentation, Dr Johnson gave a talk on the research and its findings to an audience representing industry, veterinary, scientific, government, animal welfare and other interests. The research used new electroencephalogram analysis technology to investigate the effects of slaughter of cattle by ventral neck cut without prior stunning. Animals were anaesthetised so that no pain was actually felt during the experiments – the EEG analysis showed that pain would have been felt had no anaesthetic been given.

The research was funded by Defra and the New Zealand Ministry of Agriculture and Forestry, and its results have been published in a series of five papers in the New Zealand Veterinary Journal. The work is a very substantial contribution to efforts to change attitudes to pre-slaughter stunning.



## HSA 'Chronicle'

Preparations are already underway to mark the HSA's Centenary in 2011! One of the ways we are doing this is to produce a 'Chronicle' – outlining the highlights, notable achievements and interesting facts from the HSA's long and illustrious history.

You might be able to help in the production of the Chronicle. Any information or photographs suitable for inclusion would be very welcome. We do not have the annual reports for the first decade of the charity or for the years 1924 to 1927, so any information about these periods would be particularly welcome.

## Research Update

### *Electrical waterbath stunning of poultry*

This 18-month 'LINK' project investigating a novel approach to electrical waterbath stunning is now complete. A new 'head-only' technique was developed to address the potential conflict between electrical parameters sufficient to induce immediate and sustained insensibility in birds, and avoidance of carcass damage.

The new technique involves the use of two currents – one across the head to cause immediate insensibility and a smaller one through the body to suppress involuntary wing flapping. Using this method, carcasses were found to be of equal or higher quality to those produced with electrical parameters commonly used by industry in standard waterbaths. This novel method provides a humane stun and a good quality carcass. Further studies will investigate how best to implement this approach in a commercial setting.

The project was undertaken by Silsoe Livestock Systems Ltd, the University of Bristol, Cargill Meats and the HSA. It was funded by Defra and the Scottish Government under the Sustainable Livestock Production LINK Programme. The Programme Management Committee considered it "...an outstanding project", awarding a score of 9 out of 10 for scientific content and 10 out of 10 for relevance to the industry.

### *An evaluation of the humaneness of puntilla use in cattle*

In 2009 Georgina Limon Vega, a former Dorothy Sidley Memorial Scholar, received an HSA grant to investigate the welfare of cattle at slaughter in Bolivia. Georgina used a variety of indicators to assess the degree of brain dysfunction in cattle after application of a puntilla – a type of dagger used to sever the spinal cord and incapacitate livestock ready for slaughter. Georgina found that the experience of the slaughterman was crucial when applying the puntilla. Heavier cattle tended to receive more than one application before they collapsed, and a quarter of all cattle that were examined received more than one application. After use of the puntilla, 91% of cattle showed signs of brain function suggesting they were still conscious and aware of their surroundings.

From an animal welfare perspective, use of the puntilla is of great concern since cattle may not be insensible to fear or pain. However as Georgina states in her report, "the challenge in developing countries is to find the strategy that encourages use of a method which compromises animal welfare as little as possible and at the same time is accessible for everyone". The HSA is currently investigating ways of doing this and, in particular, of making captive-bolt equipment available in Bolivia.

### *New research proposals submitted to Defra*

In response to Defra's call in July 2009 for submissions for its research requirements in animal health and welfare, the HSA in collaboration with other organisations has submitted proposals relating to two of Defra's requirements. Both relate to the welfare of poultry at slaughter; a cost-benefit analysis of methods of culling on-farm; and a study to identify alternatives to electrical waterbath stunning in small-scale processing plants.





## HSA Education & Training

### *...for fish farmers*

Training activities have substantially expanded over the last year, and we are pleased that this has included HSA courses relating to farmed fish welfare.

In September 2009 HSA staff delivered a one-day training course, in collaboration with Food Chain Consulting and Auditing (FCCA), to a salmon producer group in Norway. The course, including both theoretical and practical sessions relating to humane harvesting of large salmon and sea trout, was tailored to the company's requirements. It incorporated group discussions and assessment of the company's harvesting process, from food withdrawal and 'crowding' through to slaughter. Fish stunning at the site utilised a dry electrical conveyor system developed in light of a ban on the use of carbon dioxide which came into effect throughout Norway in January 2010.

A training course for a trout farming company in Oban was held in October 2009. The HSA and FCCA trained 20 delegates from multiple farm sites, again with a format tailored to the company's equipment, facilities and stunning system – a pipeline electrical stun/kill system. The HSA made a significant contribution to the development of this type of stunning equipment, now used widely in the British trout industry.

### *...for slaughterhouse personnel*

The HSA again collaborated with FCCA to provide training to a fully integrated poultry processor in Thailand, including welfare in the hatchery, on-farm and at slaughter. Staff from a UK turkey processor also received training in November 2009 at a two-day course held at Easton College, Norwich in partnership with the HSA and Mr Stephen Lister of Crowshall Veterinary Services (and formerly of the Farm Animal Welfare Council).

Practical training has also included animal handling in the lairage undertaken for a major retailer at two of its red meat processing sites in September 2009 and January 2010, and humane handling and slaughter skills for a pig processor in December last year.

### *...for smallholders*

A further three poultry welfare courses were held for smallholders during the autumn: at Plumpton College in East Sussex, a regular venue for the HSA; at Sparsholt College, Hampshire; and at Kingston Maurward College, Dorset. Training at the latter two venues included instruction for college staff seeking poultry slaughter licences.



### **Meetings with the Farm Animal Welfare Council**

In August 2009 the HSA attended a meeting of fish welfare experts in Edinburgh convened by the Farm Animal Welfare Council's Pig, Poultry and Fish Standing Committee. Discussions reviewed progress in farmed fish welfare since the FAWC report on this subject in 1996. Ideas for future research, possible knowledge gaps and priority areas for welfare improvement were considered, with transport and slaughter a focus of the discussions.

In October 2009 the HSA participated in FAWC's Animal Welfare Contingency Planning Workshop which looked at the potential natural and man-made disasters that could occur within the UK, along with their implications for farm animal welfare. The strategies for preventing and mitigating such emergencies were discussed and suggestions made for contingency planning to limit potential damage. The workshop brought together representatives from the fire service, trading standards, Animal Health and Defra, the farming industry, animal welfare charities and a major retailer. The HSA looks forward to the publication of the FAWC Opinion on this topic.



## Action on fish welfare indicators

Work continues under the EU-funded 'COST Action 867', the objective of which is to create operational welfare indicators for use by the aquaculture industry. The HSA attended a progress meeting in Paris in September 2009 and is continuing co-authorship work on a paper entitled 'The Slaughter of Fish' for submission to the journal *Fish Physiology and Biochemistry*. A planned special edition of this journal will consider the biology and needs of fish, the creation of operational welfare indicators and the use of a HACCP style approach to explain how welfare indicators can be used in a commercial environment to define, monitor and control the welfare of farmed fish. The journal edition will encapsulate all the work and progress achieved by the five-year COST Action initiative.



## Government Veterinary Journal

HSA Technical Officer Liz Bilbe submitted a paper entitled 'An overview of fish welfare at slaughter - a European focus' to the *Government Veterinary Journal*, the official journal of the Government Veterinary Service, compiled and produced by the Department for Environment, Food and Rural Affairs (Defra) for veterinary surgeons and interested government employees. The paper has now been published (Vol 20 No 2) and it is hoped it will reach a wide audience promoting the welfare of farmed fish at slaughter.

## British Trout Association

Liz Bilbe was invited to speak at the British Trout Association's Annual General Meeting in Windermere, Cumbria on 17 September 2009. The meeting provided an excellent opportunity to meet with trout farmers, those involved in aquaculture research and industry representatives for the UK trout industry. The talk focused on the work of the Association (with particular reference to recent developments in fish slaughter) and its new fish welfare training services.

*Many thanks to all those who completed the Members and Supporters Survey! We are now working on much useful information to see how best to take it forward. Your help is very much appreciated.*

## Building relationships and knowledge

The HSA's achievements in promoting high welfare during transport, at markets and at slaughter are due in large measure to its working constructively with industry and the research community. In addition to visiting livestock facilities to provide training or welfare assessments, the HSA continues to visit facilities both to advise and to learn, keeping up to date with developments.

Since the Summer of 2009, a wide range of facilities have been visited including two hatcheries, three poultry processors, a salmon farm/processor and a livestock market. We were also pleased to be able to visit an aquaculture research facility at the University of Faro in Portugal and a nearby Sea Bass and Sea Bream farm, establishing links with international researchers while having the opportunity to observe practices with fish species farmed only in very small quantities in the UK.







## Pig & Poultry Fair 2010

The HSA will take up its regular position at the Pig and Poultry Fair 2010 to be held at the Royal Agricultural Society of England's Stoneleigh Park on 11 and 12 May. We are looking forward to meeting the smallholders, large-scale farmers and processing companies that regularly visit the HSA stand at these events. If you plan to attend the fair, please do come along to the HSA stand and meet the team.



*Dorothy Sidley Memorial Scholars  
(from left to right) Jacqueline  
Pickering, Helen Fielding and  
Muhammad Asif*

## 2009 Dorothy Sidley Memorial Scholars

The 2009 Dorothy Sidley Memorial Scholars have submitted their project reports to the HSA. All three scholars produced informative reports and presented their studies at the UFAW/HSA Scholars Meeting on 9 December 2009 at the University of Nottingham.

Muhammad Asif of the University of Bristol studied the effects of pre-stun shocks in electrical waterbath stunning systems for poultry. He reported that not only did pre-stun shocks increase the risk of welfare-compromising 'miss' stuns, they also affected the prevalence of carcass damage – another good reason, he noted, for scientists, welfare groups and industry to work together to minimise pre-stun shocks.

Helen Fielding of the Royal Veterinary College investigated the welfare of cattle slaughtered without prior stunning. She reported that, for cattle slaughtered in the upright position, time to collapse (taken to be the onset of loss of consciousness) was approximately 20 seconds. Moreover, some cattle developed false aneurysms in the carotid arteries, further prolonging time to collapse. Helen also described how inverting cattle for slaughter could lead to aspiration of blood, which may cause distress prior to insensibility.

Jacqueline Pickering of the Meat Hygiene Service investigated the potential of placing images of cattle in stun boxes to encourage entry and make the use of electric goads unnecessary. While determining that there was no direct effect of the images on cattle behaviour, Jacqueline made a number of observations that have the potential to improve cattle handling at slaughter.

## Staff News

Technical Officer Liz Bilbe left the HSA in November 2009 to take up a position with the International Food Information Service. We are most grateful to Liz for all her work while at the HSA and wish her the very best for the next phase in her career.



*Humane Slaughter Association*

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