



Caring beyond the farm gate

Humane Slaughter Association
Annual Report 2008–2009



Caring beyond the farm gate

The Humane Slaughter Association (HSA), established in 1911, is an independent charity that works through scientific and technical advances, education and training towards achieving the highest worldwide standards in food animal welfare at markets, during transport and at slaughter.

To accomplish its aims the HSA provides:

- technical information and advice on all aspects of animal handling, transport and slaughter
- training in humane methods of handling and slaughter of livestock for farmers, vets, abattoir staff, police firearms officers, RSPCA Inspectors, students and others
- educational and technical publications
- independent advice to governments, other welfare organisations and the food industry
- regular visits to markets and slaughterhouses, advising on improvements where appropriate
- funding for research projects
- development and application of scientific advances into industry working practices
- grants towards improvement of animal handling facilities in markets and slaughterhouses

Examples of the HSA's wide range of activities in these areas are outlined in the following pages.

Chairman's report

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It gives me great pleasure to report another year of substantial progress in the work of the Association enabled by the small but dedicated staff. Of particular note is the continuing successful development of education and training services, effective training being widely recognised as crucial in improving welfare standards and good practice. It is pleasing to see that the Dorothy Sidley Memorial Scholarships are receiving high quality interest from both students and industry.

Successful collaboration in important research projects also continues with excellent results, particularly those relating to poultry welfare. The growing international outlook is also highlighted this year with, amongst other projects, the award of the inaugural Humane Slaughter Award for significant advances in welfare at slaughter to New Zealand scientist Dr Craig Johnson of Massey University and his colleagues Dr Troy Gibson, Professor Kevin Stafford and Professor David Mellor (see p4).

I warmly thank our members and supporters who make all of this important work possible.

On a sad note we report the death of Professor Archie Laing, a personal friend and colleague, who gave many years of dedicated service to the HSA including as Vice-President from 1980 to 1988.

John H Pratt

Chief Executive's report



The HSA's main priorities are to:

- promote the development and observation of high standards of livestock welfare during transport, in markets and at slaughter through education, training and provision of advice, and,
- encourage and promote research into more humane methods of livestock transport, marketing and slaughter, where required.

Each year, specific tasks, projects (as illustrated in this Report) and targets are set within these priority areas, and their progress monitored. Operating in this way, and with its practical approach, the charity continues to be highly productive and to play a major role in improving livestock welfare in the UK and internationally. It has been able to do this thanks to the generosity and loyalty of its supporters who, along with all those who work with us, we wish to thank most sincerely. If you would like to find out more about the work of the HSA or to join us in promoting its aims please get in touch.

James K Kirkwood

Thanks to Bluemoondog Pictures for the use of photos:
sheep, cover; cattle, p1; chicken, p3; cow, p4; cattle, p6;
pigs, p7/8; sheep, p10; chickens, p14.
Thanks to Georgina Limon Vega for the llama photo p12.

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Research & Development

Reducing bird stress and discomfort on the poultry shackling line

Electrical waterbath is the most commonly used method of stunning in UK poultry processing. Birds are presented to the stunning equipment suspended upside down by their legs on a moving shackle line. Previous research has shown that poultry are likely to find suspension uncomfortable and even painful if the legs are compressed tightly. Silsoe Livestock Systems Ltd, Paul Berry Technical Ltd, Food Animal Initiative, the University of Oxford, Dave O'Neill Associates and the HSA carried out research funded by Defra, which aimed to improve the welfare of poultry slaughtered in this way. The objective was to design practical modifications to the shackle line which can be applied to existing equipment. This project has now been completed and the results are encouraging:

- Leg compression during shackling: the team developed and evaluated a method that avoided compression of birds' legs during shackling without compromising the stunning current passing through the birds.
- Suspending birds: a breast support conveyor system was used to transport birds on the shackle line without suspending them upside down. Use of the conveyor resulted in a faster, cleaner entry to the stun bath than was achieved using a conventional shackle line.
- Pre-stun shocks: the amount of wing flapping and pre-stun shocks at the entry to the stun bath was reduced by the breast support conveyor.
- Meat quality: use of the conveyor was associated with a lower incidence of wing damage.

Further research and development is needed to refine this equipment before it can be installed in processing plants on a fully commercial basis and the project team is seeking further funding for this.



Broiler chickens on the breast support conveyor system

FAWC report on the welfare of white meat animals at slaughter

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In May 2009 the Farm Animal Welfare Council (FAWC) published their *Report on the Welfare of Farmed Animals at Slaughter or Killing – Part 2: White Meat Animals*.

FAWC identified six key principles for the protection of animal welfare at slaughter, including that “personnel must be...trained, competent and caring”. Its recommendations covered several of the areas the HSA has been working in this year and included the following:

- there should be a legal requirement for staff employed to catch poultry for transport to have training, as for drivers of livestock vehicles and slaughtermen.
- inversion and shackling of conscious birds should be phased out and in the meantime breast supports should be used – see ‘Reducing bird stress and discomfort on the poultry shackle line’ on the page opposite.
- gas mixtures proven to be effective and currently used in mainland Europe should be permitted in the UK (the HSA believes research is required into the mechanical handling of poultry in controlled atmosphere systems to ensure that bird welfare is protected during handling as well as during exposure to gas mixtures).
- research should be undertaken to develop small-scale controlled atmosphere systems for smaller processing plants and for the on-farm slaughter of birds intended for consumption (the HSA is maintaining contact with

manufacturers on this issue and will assist where possible).

- research is carried out to confirm the most appropriate methods for culling small numbers of poultry on-farm (the HSA is already looking into the use of certain types of equipment for culling small numbers of birds on-farm).

FAWC states that “...a wide variety of stunning and killing systems are used for poultry and none is ideal”. The HSA will continue to promote the research and development of slaughter equipment called for by FAWC in our work of improving methods of handling and processing for the welfare of white meat species.

Halibut welfare

In March 2009 the HSA travelled to Oban in Scotland to assess a prototype electrical waterbath stunner designed specifically for use on flat fish.

The equipment uses an electrified waterbath and conveyor belt system to deliver current to the whole body of the fish. Because of anatomical and other differences with these species (fish hearts are two chambered) the system does not cause cardiac arrest and it is therefore important that all fish are bled without delay after stunning.

Award for significant advances in humane slaughter

Scientific advances have resulted in major welfare improvements in livestock slaughter methods during the past century, by leading to both better understanding of the impacts of various procedures on animals and to better technology.

To help promote such work, the HSA launched a new award this year to recognise an individual or organisation for outstanding work in this field. We are delighted to announce that the winner was Dr Craig Johnson BVSc PhD DVA DipECVA, Associate Professor of Veterinary Neurophysiology, Institute of Veterinary, Animal and Biomedical Sciences at Massey University, New Zealand, who with the other members of his research team – Dr Troy Gibson, Professor Kevin Stafford and Professor David Mellor – used new electroencephalogram analysis technology to investigate the effects of slaughter by ventral neck cut without prior stunning. The results were reported in a series of five papers published in the New Zealand Veterinary Journal in April 2009 and concluded: ‘This...demonstrates clearly for the first time that the act of slaughter by ventral neck cut incision is associated with noxious stimulation that would be expected to be perceived as painful...’.



This work provides further support for the value of stunning animals prior to slaughter to prevent pain and distress and the HSA hopes that it will help to change attitudes to the importance of stunning.

Head-only stunning of poultry – seeking improvements in welfare and meat quality

The HSA is collaborating in research funded under the Sustainable Livestock Production LINK Programme. The project is investigating how to adequately stun poultry whilst limiting damage to the carcase, using equipment very similar in design to a standard electrical waterbath. Good progress has been made and the trials assessing the effectiveness of stunning have been completed.

In its role as an industry partner in this project, the HSA has recently assisted in trials to assess meat quality in birds stunned using this new method. The project is likely to yield interesting results, and the HSA looks forward to further work to refine this stunning procedure and assess how it could best be applied as a working system.

Poultry Welfare Forum

In February 2009 the HSA attended a Poultry Welfare Forum in Westminster which aimed to agree standard terms to describe the various poultry production systems and discuss how best to use and communicate these terms to the consumer. This meeting was chaired by the University of Bristol, Compassion in World Farming and the RSPCA and it was attended by representatives from industry, animal welfare charities, government departments and retailers.

Although the focus of the meeting was on labelling to indicate on-farm welfare such as rearing conditions, the HSA pointed out that there were also requirements for labelling for welfare at slaughter. For example, labelling to indicate slaughter methods to aid consumers in choosing products. There are likely to be similar meetings arranged for red meat species and the HSA also aims to attend these.

HSA visits to processing plants

The HSA has been invited to visit a number of slaughterhouses this year, including two turkey processors, a duck processor and a pig processor.

These visits provide an opportunity to meet with management teams, see animal management on farms, and observe animal handling and animal welfare at the point of slaughter. The visits also benefit the processing facilities because the HSA provides advice on welfare and gives suggestions for improvements where necessary. Further visits to facilities are currently being arranged.

We would like to thank all the animal facilities that have invited the HSA onto their premises in the last year.

Humane stunning of crustaceans

As concern over the humane stunning and slaughter of crabs and lobsters, and research into their capacity to feel pain continue to grow, the HSA has taken a keen interest in demonstrations of an electrical stunner developed for use on these animals. In February 2009 the HSA was invited to a private demonstration of new equipment at Billingsgate Fish Market and also attended the equipment's official national launch at London's Food Innovation Centre in April.

The 'Crustastun' system is intended to humanely stun crabs and lobsters by application of an electric field to the whole body. The steel box stunner consists of an electrode covered with a wet sponge which is applied to the entire body of the crustacean along the dorsal surface of the exoskeleton. Initial research at Bristol University, contributed to by the HSA, investigated the electrical parameters required for inducing an effective stun.

This equipment is designed for small-scale use in restaurants. A larger-scale system for use by producers is already in use in small numbers in the UK for the commercial processing of crabs and lobsters.



HSA Centenary

The year 2011 marks the centenary of the founding of the Council of Justice to Animals, which later merged with the Humane Slaughter Association to become the CJA & HSA - now known as the HSA. In order to commemorate the occasion we are hoping to produce a short history of the charity, and with this in mind we would be grateful to receive any information or photographs suitable for inclusion in such a publication. Unfortunately we do not have copies of the annual reports for the first decade of the charity or for the years 1924 to 1927, so we would be interested, in particular, in any information about these periods.

We would like to thank Tony Hughes for his valuable work in this, and many other HSA projects, as a volunteer.



Education & Training

New brochure boosts education and training

Good training is vital in helping to ensure best practice and the implementation of improved welfare knowledge. Education and training are accordingly key elements of the HSA's work and these services received a boost during the year with the publication of a new brochure which has been widely distributed to the industry and to educational institutions. This is already stimulating further development and expansion of the services.

HSA team up with Animal Health for training initiative

Animal Health's Contingency Planning Division recently requested the assistance of the HSA for theory and practical training for its staff, alongside Animal Health trainers, in poultry welfare during culling for notifiable disease control. This is a major training programme for Animal Health staff from across the UK.

Three courses were successfully completed during the summer of 2009 and regular refresher courses may feature in coming years. The aim of the training is to prepare Animal Health staff for disease outbreaks which require birds to be culled on-farm using the most appropriate method, whilst maintaining a high level of poultry welfare.



New HSA posters

The HSA has information posters on how to use slayers correctly. These encourage best practice in display in slaughter relevant processes. Posters have been produced for mechanical stunning (stunning cattle with captive-bolt), electrical stunning of sheep) and a poster has been produced for mechanical percussive

The poultry poster is also suitable for use since this type of equipment can be used as an emergency culling tool. The cattle posters have been provided to a number of organisations. The poultry poster is on display in all Animal Health offices across the UK and in a number of other locations. More red meat posters are to be produced for other species and equipment. All posters can be viewed on the HSA website (www.hsa.org.uk) where they are available for download or ordered from the HSA.





ers for industry

produced three posters which illustrate slaughter equipment which are designed to practice and are for slaughterhouses at the killing points. Two mammalian species equipment, and poultry poster has massive devices.

For display on-farm, can be used as an and sheep posters of abattoirs and the Animal Health offices processing plants. produced for further can be viewed on the are a printable order HSA office.



Firearms training

Following the successful completion of six basic firearms courses followed by six refresher courses for Animal Health CW 70 holders (staff qualified to supervise the use of firearms), the HSA has been retained to deliver another series of similar courses for government Animal Health Officers (AHOs) and Veterinary Officers (VOs). The first of these took place at Penrith in June 2009 and will be followed up in the autumn.

In addition to these courses, the HSA continues to provide firearms and captive-bolt training, on demand, for veterinary undergraduates at the University of Cambridge, RSPCA staff, police officers, veterinary surgeons and others.

A captive-bolt course for pig farm staff was held in July 2009 in conjunction with the Eastern Training Alliance and recent enquiries have been received from BPEX and the Home Office for similar instruction.

Practical slaughter of poultry training

In February 2009 the HSA provided training in the humane slaughter of poultry using equipment designed for use on-farm. The course was hosted by our regular venue, Plumpton College, at the Netherfield Centre for Sustainable Food and Farming, East Sussex.

This course is ideal for smallholders who wish to produce a small number of birds commercially and use a more welfare-friendly method of slaughter than neck dislocation or decapitation.

Along with FINDS (Food Industry (North) Development Services) the HSA also provided a poultry slaughter course at the Scottish Agricultural College, Inverness, in June 2009. All participants reported feeling "confident" or "very confident" with the methods and equipment by the end of the course.



Website FAQs

The HSA has recently updated its website with the addition of a 'frequently asked questions' page (FAQs). The questions and answers are split into two sections. Firstly, there are those applicable to the general public that include introductory information regarding the welfare of animals during transport, stunning and slaughter. The text explains legislation and how it protects animal welfare at these times, describes how the principal farmed species are stunned and slaughtered in licensed UK slaughterhouses, and other key welfare issues.

The second part of the FAQs is essentially for industry professionals, farmers, smallholders, academics or veterinarians wanting more specific, detailed information about stunning methods and equipment, training services and best practice. References to HSA publications which provide further reading on specific subjects are made where appropriate.

This readily accessible and targeted information will provide answers to many of the frequent enquiries made to the HSA office, and a bank of useful information about the humane transport, stunning and slaughter of farmed animals.

Dorothy Sidley Memorial Scholarships 2009

This year the HSA received a number of high quality applications from students in the meat science, veterinary and agriculture fields of study. We were also pleased to receive an application from within industry. Three scholars have been chosen for 2009:

- Dr Muhammad Asif, MSc Meat Science and Technology, University of Bristol '*The effect of pre-stun shocks on the implementation of carcass and meat quality in broilers.*'
- Ms Helen Fielding, BVM, Royal Veterinary College '*Relationship between time to collapse and aneurysm formation in the carotid arteries during slaughter without stunning in cattle.*'
- Mrs Jacqueline Pickering, Meat Hygiene Service (and trainee slaughterperson) '*Reducing pain and fear in cattle at point of slaughter.*'

We look forward to the presentations of their studies on 9 December at the annual UFAW/HSA Vacation Scholars Meeting, University of Nottingham.

Posters and information leaflets for the 2010 Dorothy Sidley Memorial Scholarships will be posted on the HSA website. If you are thinking of investigating an area of farm animal welfare during transport, at markets or during slaughter you could be eligible for up to £2000 funding from the HSA.

Animal welfare in markets

The HSA continues to make a significant contribution to the welfare of animals in markets. In January 2009 the Technical Director was again asked to give a lecture to students on the University of Cumbria's foundation degree course for livestock auctioneers.

Copies of the HSA's new training brochure have been circulated to all livestock market operators in England and Wales, through the offices of the Livestock Auctioneers' Association (LAA). Initial feedback has been good, with a number of positive enquiries about provision of bespoke, in-house courses for drovers and auctioneers.

The HSA has also been invited to send a representative to a meeting of experts, convened by Defra, to discuss journeys through markets and the proposal to amend EC Regulation 1/2005 on the protection of animals during transport and related operations.

A selection of feedback received from HSA training courses this year

"A very well presented and well organised course, thank you."

"I don't think I could have got any more out of the session than I did."

"Excellent course, very informative."

"One of the most useful courses I have attended."

"Hands on element was very useful."

"Excellent, just what I was hoping for, clear and concise detail with no unnecessary info delivered by practical trainers."

"Very satisfied with content and delivery."

"The best course that I have attended. Good balance of practical and theory."

"A practical course run for practical people by practical people who knew what they were talking about. More like this please."

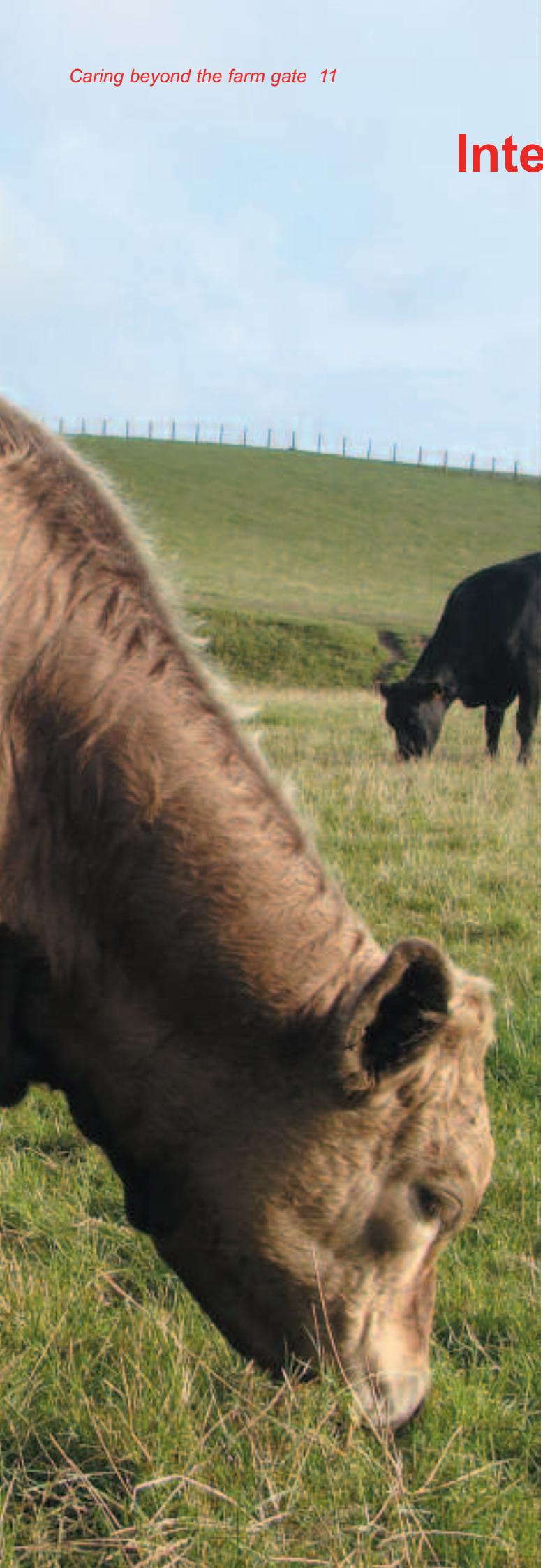
"I have learned quite a lot easily in a very pleasant way. No fear of...not learning or understanding. Good!"

"Excellent course, well worth it!"



International

HSA provides assistance to the World Bank

A large, detailed photograph occupies the left two-thirds of the page. It shows a close-up of a cow's head and neck, facing right. The cow has dark brown or black hair. In the background, another cow is grazing in a green, rolling field under a clear blue sky.

Following attendance at the Conference on Global Trade and Farm Animal Welfare held at the European Commission in January 2009, the HSA was asked by the World Bank to review a research report entitled '*Global Study of Livestock Markets, Slaughterhouses and Related Waste Management Systems*'. This report was undertaken for the Bank by Nippon Koei Co. Ltd and ProAnd Associates Australia Pty. Ltd., funded by a Japan Country-Tied Fund (JCTF) grant.

The study, although primarily designed to gather data on the management of waste disposal by livestock markets and slaughterhouses in developing countries, identified numerous welfare issues on which the HSA was asked to provide guidance.

The HSA has also expressed willingness to review the Bank's global study on the reconstruction of public live markets, slaughterhouses and meat processing facilities from an animal welfare perspective. We understand that the Bank is also considering a proposed Alliance for Humane Sustainability in Livestock Production and Processing.

We look forward to further collaboration with the World Bank.

COST fish welfare meeting in Iceland

In Iceland, June 2009, HSA technical staff attended a European Cooperation in Science and Technology (COST) meeting of the European network for fish welfare researchers. The network's 'actions' are organised in an open forum format to promote the exchange of knowledge and encourage collaboration between individual attendees.

The meeting in Iceland was the fourth in a five-year action to examine fish welfare, based on expert knowledge of their biology (particularly regarding stress and pain) in order to create operational welfare indicators (OWIs) that will be readily supported by the aquaculture industry and implemented in commercial settings. The four-day meeting consisted of presentations and working group meetings.

The HSA was part of a working group considering ways that OWIs may be used by the aquaculture industry to assess and monitor welfare, using Hazard Analysis and Critical Control Point (HACCP) analysis and a species specific approach for the main farmed fish species within Europe.

A special issue of the journal Fish Physiology and Biochemistry will publish the work achieved by the COST action and the HSA plans to contribute to an overview article on the slaughter of salmonids. It is expected that the special issue will be published in late 2010 or early 2011.

Former Dorothy Sidley Scholar collaborates with HSA

In 2008, Georgina Limon Vega undertook a Dorothy Sidley Scholarship project on '*An evaluation of the welfare of llamas and sheep before and during slaughtering in the community of Puxara, Bolivia.*' Georgina now works for the Royal Veterinary College as a research associate and is continuing her vocation in Bolivia.

In light of Georgina's research findings as a Dorothy Sidley Scholar, she and the HSA are working to develop contacts with abattoirs in Bolivia to promote training in the

use of modern humane methods of slaughter. The HSA hopes to visit Bolivia towards the end of 2009 to provide education and training in humane slaughter and the use of captive-bolt guns.



Focus Group and Member Survey

Many thanks to the participants in an HSA Focus Group earlier this year looking at the promotion of the HSA and its work. One of the outcomes was a member and supporter survey and we would like to express our appreciation to all who responded. Your input will be of great benefit in moving the HSA forward.

Professor JA Laing

We are sad to report the death of Professor Archie Laing. Archie gave many years of dedicated and valuable service to the HSA, including as Vice-President from 1980 to 1988. He was also both a Council Member from 1963 to 1984 and Chairman of the Council from 1975 to 1977 for the HSA's sister charity the Universities Federation for Animal Welfare (UFAW).

Administration & Finance

General Meeting 2008

The General Meeting was held at the Old School, Brewhouse Hill, Wheathampstead. As in previous years this was held in conjunction with the AGM of the Universities Federation for Animal Welfare (UFAW). The members of UFAW Council are Trustees of the HSA. Joint meetings are held to save time and money.

The notice convening the meeting had been sent to all subscribers and was taken as read. The meeting agreed the Minutes of the General Meeting of 2007 and resolved to receive the Accounts and Auditor's Report for the year ended 31 March 2008. There were no questions on the Report of the year's work and the meeting resolved that the Report and Accounts be received.

It was resolved that Yianni, Neil & Co Ltd, Registered Auditors, be appointed as auditors to HSA.

There were no new candidates for election and in accordance with Clause 45 of UFAW's Articles of Association Professor A Nolan, Dr J C Anderson and Mr A G Sains were re-elected.

Notice of General Meeting 2009

The General Meeting of the HSA will be held at 2.00pm on Wednesday 14 October 2009 at The Old School, Wheathampstead, Hertfordshire (HSA's office premises). The formal notice and agenda have been sent to all members and are available from the Secretary at the registered office.

Finance and Accounts

The summarised accounts set out overleaf have been extracted from the full accounts and have been prepared in accordance with the 2005 Statement of Recommended Practice – Accounting by Charities (SORP) and applicable UK Accounting Standards, which were approved by the Trustees and signed on its behalf on 9 July 2009.

The full accounts have been audited and the auditors' opinion was without qualification. The accounts will be filed with the Charity Commission after the general meeting on 14 October, 2009. Full accounts, and the audit report can be obtained from the HSA Secretary, The Old School, Brewhouse Hill, Wheathampstead, Herts AL4 8AN.

Accounts

SUMMARY OF FINANCIAL ACTIVITY YEAR ENDED 31 MARCH 2009			BALANCE SHEET AS AT 31 MARCH 2009		
	2008/09 £	2007/08 £		2008/09 £	2007/08 £
Incoming resources	598,293	400,904	Fixed assets:		
Less: Costs of generating funds	20,091	19,423	Tangible fixed assets	304,069	311,937
Charitable activities	176,211	159,404	Investments	1,668,767	1,676,243
Governance costs	2,056	2,252			
Other resources expended	51,999	45,600			
Total resources used	250,357	226,679	Current assets:		
Net incoming/(outgoing) resources in year	347,936	174,225	Debtors	44,065	79,617
Other recognised gains and losses:			Deposits at bank	456,656	220,829
Loss on disposal of assets	(108)	-	Cash at bank & in hand	6,168	41,964
Net realised gain on investments	38,157	30,046		506,889	342,410
Unrealised (loss) on investments	(238,568)	(44,867)	Net current assets	490,479	327,718
Unrealised surplus on revaluation of freehold property	-	120,000	Net assets	2,463,315	2,315,898
Net movement in funds	147,417	279,404	Funds:		
Balance brought forward	2,315,898	2,036,494	Designated	2,060	-
Balance carried forward	2,463,315	2,315,898	Unrestricted	2,461,255	2,315,898

The summarised accounts were approved by the Trustees and signed on their behalf on 9 July 2009

John H Pratt BVM&S DVSM FRCVS
Chairman

Michael T Bird FCA
Hon Treasurer

The summarised accounts set out above have been extracted from the full accounts and have been prepared in accordance with the 2005 *Statement of Recommended Practice - Accounting by Charities* (SORP). The full accounts have been audited and the auditors' opinion was without qualification. The accounts will be filed with the Charity Commission after the General Meeting on 14 October 2009. Full accounts and the audit report can be obtained from the Secretary, The Old School, Brewhouse Hill, Wheathampstead, Herts AL4 8AN.

Independent Auditors' Statement to the Trustees of the HSA & CJA

We have examined the summarised financial statements that comprise the summary statement of financial activities and summary balance sheet.

Respective Responsibilities of the Trustees and Auditors

You are responsible as the Trustees for the preparation of the summarised financial statements. We have agreed to report to you our opinion on the summarised financial statements' consistency with the financial statements, on which we reported to you on 9 July 2009.

Basis of Opinion

We have carried out the procedures we consider necessary to ascertain whether the summarised financial statements are consistent with the full financial statements from which they have been prepared.

Opinion

In our opinion the summarised financial statements are consistent with the full financial statements for the year ended 31 March 2009.

Yianni, Neil & Co Ltd, Registered Auditors, London, 9 July 2009

**The Humane Slaughter Association
and Council of Justice to Animals
(Registered in England Charity No. 209563)**

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