

# Animal Health 2007

The Report of the Chief Veterinary Officer

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I am pleased to present this Annual Report of animal health for 2007 which describes developments in the fields of animal health and welfare during the calendar year.

It has been a challenging year due to the combined impact of Avian Influenza, Bluetongue and Foot and Mouth Disease. There are lessons to be learned, but I believe there are many positives that can be drawn from our response to these outbreaks, not least the partnership evident between all stakeholders.

In spite of our challenges over the year, we continue to successfully progress with the Animal Health and Welfare Strategy for Great Britain, and in particular its work relating to the delivery of, and participation in, industry-Government partnerships which promote farm health planning. Our aim is to provide a focus on prevention of animal disease over cure.

I am also pleased with the progress that has been made with the UK's Responsibility and Cost Sharing policy, which seeks to develop a new partnership between the Government and farming industry, with each playing their respective role in making a lasting improvement in the health and welfare of kept animals.

In response to the disease outbreaks and the continued spread of Bluetongue in Europe, Defra is jointly funding a research project with the Biotechnology and Biological Sciences Research Council to look at the epidemiology of infection and the role of the *Culicoides* midge in transmitting the disease.

As we look towards 2008 it is likely that our key challenge will continue to be Bluetongue. In December 2007, Defra announced that it had placed an order with Intervet to supply 22.5 million doses of Bluetongue vaccine. We are also developing a delivery plan in conjunction with representatives from farming and veterinary organisations, as well as scientific experts on Bluetongue.

Our objective for Bluetongue is to minimise the economic impact and spread of the disease. We continue to advise farmers to remain vigilant for Bluetongue in their livestock and vaccinate their livestock in risk areas when the vaccine becomes available.

We are concerned about the spread of Avian Influenza across the world and continue to invest in research which seeks to develop better approaches to prevention, detection and control of infection. The Veterinary Laboratories Agency is playing a key role in this expanded research area.

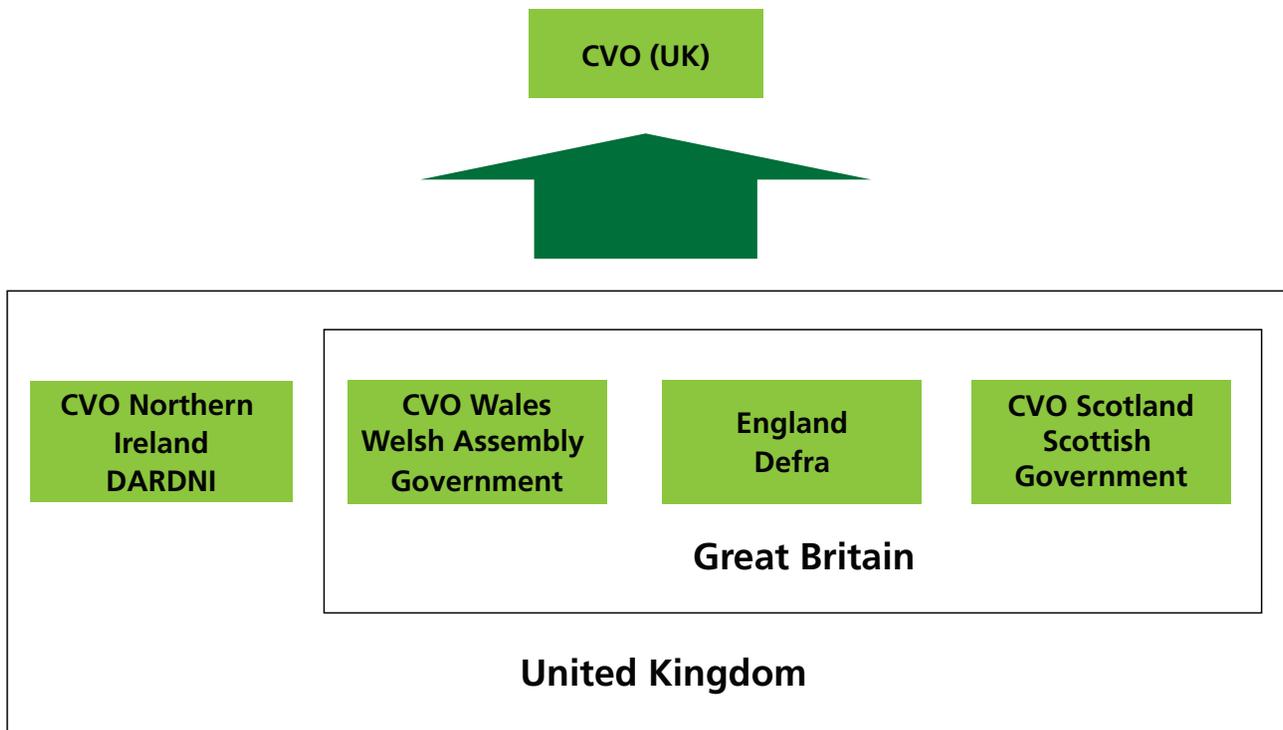
Finally, I am grateful to colleagues across Defra, in particular our former Chief Veterinary Officer, Dr Debby Reynolds, and would like to sincerely thank the Devolved Administrations, Animal Health and other delivery bodies for their hard work and professionalism during this challenging year.

A handwritten signature in black ink, appearing to read 'Fred Landeg'. The signature is fluid and cursive, with a large, sweeping flourish at the end.

**Fred Landeg**  
Acting Chief Veterinary Officer

## Animal Health and Welfare policy and delivery across Great Britain

Animal health matters are fully devolved into the national administrations of the UK. The CVO (UK) meets with the Devolved Administrations of Scotland, Wales and Northern Ireland to ensure each Department is kept up to date on policy issues of mutual interest and help ensure a consistent policy approach across national boundaries. The CVO (UK) is responsible for animal health and welfare issues in England and overseeing developments in the UK, and representing the UK's interests internationally.



In this report, information and statistics on long term programmes working to eradicate animal diseases such as bovine tuberculosis and transmissible spongiform encephalopathies (TSEs), as well as welfare statistics, are generally given on a GB basis.

However there are a number of working groups and initiatives which have representation across the United Kingdom such as the UK Responsibility and Cost Sharing Consultative Forum and the National Wildlife Crime Unit. As a result the information contained within this report predominantly covers Great Britain but in some instances the UK approach will be mentioned.

## Animal Health and Welfare in Scotland

In Scotland, animal health and welfare policy and delivery continued to push forward the Animal Health and Welfare Strategy for Great Britain alongside instigating control measures to reduce the risk of incursions of exotic diseases from outbreaks elsewhere in GB (including Foot and Mouth Disease (FMD), Avian Influenza (AI) and Bluetongue).

The FMD outbreaks in southern England in August 2007 coincided with the annual peak in numbers of livestock movements in Scotland. The Scottish Government aimed to relax necessary movement restrictions as soon as possible to minimise the impact on the industry, and restrictions were eased on the basis of veterinary risk assessment. The assessments were supported by tracing work carried out by the Scottish Government-funded Centre of Excellence in Epidemiology (EPIC), which was launched in 2007. EPIC analysed livestock movements from within 50km of Institute for Animal Health (IAH), Pirbright, produced risk maps and quantitative risk assessments, and this work was critical in enabling timely decisions on recommencing livestock movements to be taken in Scotland.

Professor Jim Scudamore was commissioned to review the response of the Scottish Government to the outbreak and the government anticipates practical recommendations to take forward for the future. Meanwhile, close engagement with the industry continues as it devises an appropriate prevention and control strategy for Bluetongue.

Major developments in the work of the Strategy this year included the launch of a benchmarking system to support farm animal health and welfare recording and planning.

Work continues to reduce the impact of the 12 identified priority diseases. Notable advances include the completion of a Bovine Viral Diarrhoea (BVD) survey, carried out to provide a baseline on prevalence of the disease, and the establishment of an Industry/Government Working Group on sheep scab to develop targeted initiatives to reduce the incidence of scab. The Johne's Disease Initiative continues its promotional activities. The results of the UK prevalence study are due to be reported later in 2008.

## Animal Health and Welfare in Wales

Livestock and poultry keepers in Wales were placed under significant pressures as a consequence of exotic disease outbreaks during 2007. The primary priority for the Welsh Assembly Government (WAG) was to protect Wales from the spread of FMD, AI and Bluetongue. Apart from the confirmed case of low pathogenic avian influenza in May 2007 Wales was successful in ensuring its territory remained disease free. The nature of farming in the border areas, with over 400 holdings straddling the border, required a close and integrated working relationship with colleagues in Defra.

The challenge for the coming year is likely to be Bluetongue. There is a real concern that the disease will become more widespread and enter Wales despite the restrictions currently in place. Welsh farmers are asked to remain vigilant for signs of disease. They may also need to adjust their farming practices in light of the restrictions in Great Britain and across Europe in respect of movements for grazing, where they source their animals and whether they might take up the option of vaccination if it is authorised.

## Devolved Administrations

Concerns over the sustainability and on farm biosecurity of the collection of fallen stock have led to commissioned research from Bangor University into the use of bioreducers. If successful, and subsequently approved by the EU, this process would allow for on farm storage and partial treatment of fallen stock with infrequent and managed collection of residue for disposal.

The date for the introduction of Electronic Identification for sheep and goats is now set for 2010. In order to assess the impact of EID on the stratified sheep industry in Wales and consider how to make best use for the data collected for disease prevention and control WAG is working with the industry and Hybu Cig Cymru to trial electronic tagging and recording equipment.

Following consultations with stakeholders an expanded scheme for genotyping ewes in Wales, WEGS II, was developed and launched as a 3-year scheme. WEGS II was extended in April 2006 for a further 2 years. The main feature of the scheme was that it offered ewe lamb testing of all potential flock replacements, enabling farmers to use scrapie resistance as one of their selection criteria. WEGS II has been promoted by the farming organisations in Wales and also by the industry. It was perceived as a scheme that met a particular need in Wales – to increase genetic resistance to scrapie, particularly among the hill breeds. It has been an excellent example of Government and the sheep industry successfully working in partnership to achieve a common goal. Over the duration of WEGS it is estimated that 625,000 sheep have been genotyped.

In 2007, WAG secured an additional £27 million, over the next three financial years, to deliver the One Wales commitment to vigorously pursue the eradication of bovine TB in Wales. The newly established centre of expertise at Gelli Aur in South West Wales by the Royal Veterinary College has participated in the Intensive Treatment Area project on Tuberculosis in South West Wales together with local practitioners. The centre has also helped dissemination of Farm Health Planning. Contact with large animal practice in the area has greatly helped veterinary students at the centre. If the TB eradication programme is to be successful, this commitment will need to be shared by all stakeholders.

## Government Agencies Highlights of 2007

### **Animal Health**

During 2007, Animal Health responded to an unprecedented number of exotic disease report cases and outbreaks. Working with the Chief Veterinary Officer (CVO) and other operational partners, Animal Health managed 82 positive exotic notifiable disease cases (up from 7 in 2006) including cases of Foot and Mouth Disease, highly pathogenic (H5N1) avian influenza, and the first recorded cases of Bluetongue disease in Great Britain. In addition, 609 ultimately negative disease investigations were undertaken, a rise of 258 per cent from the 236 during 2006.

### **Veterinary Laboratories Agency**

During September 2007, Veterinary Laboratory Agency (VLA) was subject to an independent audit of its science as part of Defra's Quinquennial Science Audit Programme. The audit team, chaired by Professor Quintin McKellar, Principal of the Royal Veterinary College, examined the quality and value for money of the Agency's science as well as the scientific outputs over the last five years. In its report, the audit team acknowledged the VLA as a 'recognised centre of excellence' and rated the science 'good' overall, with many areas of scientific excellence.

One of the many roles the auditors examined was the Agency's emergency response capability and the ability to collaborate and work with other delivery partners across and beyond the Defra network, in order to eradicate disease. This role was important throughout 2007 as the VLA contributed to Defra's response to the Foot and Mouth Disease (FMD), Avian Influenza (AI) and Bluetongue outbreaks.

### **Meat Hygiene Service**

The MHS Veterinary & Technical Directorate was strengthened during 2007, with the appointment of a further two Veterinary Managers based at MHS headquarters in York. MHS HQ now has a Veterinary & Technical Director (Jane Downes); a team of six veterinarians (all of them experienced former Official Veterinarians in GB slaughterhouses); a Meat Hygiene Inspector working as a Technical Adviser, and a qualified Trading Standards Officer working as an Enforcement Adviser. Between them, they offer advice and guidance to front-line inspection teams throughout the country, to the fresh meat industry and to the general public; draft and amend the MHS Manual for Official Controls as necessary, in liaison with the FSA and Defra; and manage the Service Level Agreements (SLAs) that the MHS has with the FSA (public health) and Defra (animal welfare at slaughter).

Work undertaken by the MHS through the Defra SLA includes taking samples for Residues in Meat (RIM) testing on behalf of the Veterinary Medicines Directorate and facilitating brain stem sampling of newly-slaughtered cattle for testing as part of BSE surveillance.

## Animal Health and Welfare Strategy

**Objective: to continue to direct Government and others in their work to bring about long term improvements to the well-being of Britain's kept animals.**

Throughout 2007, the Animal Health and Welfare Strategy for Great Britain<sup>1</sup> continued to underpin the work of Government and others in bringing about long term improvements to the well-being of the nation's kept animals. The Strategy, launched in 2004, provides direction through a vision for the future and a number of principles. It is guiding us towards more and better partnership working, among all who can make a difference, with the aim of reducing the risks and impacts of disease and welfare issues.

The strategy principles are a basis, for example, for the UK's Veterinary Surveillance Strategy (see Chapter Nine). Those principles have also influenced Government's approach to this year's disease outbreaks, encouraging **greater industry participation in decision making**, on Bluetongue, for example.

The Strategy has also influenced what the industry is doing to improve health and welfare. In March 2007, a partnership of industry, veterinary and Government interests launched the **Equine Health and Welfare Strategy for Great Britain**<sup>2</sup>. This strategy aims to achieve high standards of health and welfare and ensure that all involved understand, and fulfil, their duty of care.

During 2007, we also moved forward on a number of key policies that seek to realise some of the outcomes envisioned by the Strategy. Perhaps the most ambitious of these is a **fairer sharing of the responsibilities and costs of animal diseases** between industry and the taxpayer. The Strategy recognises the importance of co-operation and collaboration and the need for personal and collective responsibility by all with an interest in animal health and welfare. See Chapter Two for more information about the developments in this key area.

Good progress was also made in 2007 as we began to see the delivery of, and participation in, the industry-Government partnerships promoting **farm health planning**. This is potentially a powerful tool that will help deliver a focus on prevention over cure and a clearer understanding of the costs and benefits of health and welfare practices, both Strategy principles. See Chapter 13 for more information about this.

The **Government Veterinary Surgeons** (GVS) initiative also made good progress in its goals to further excellence in veterinary roles in government.

Key themes of the initiative are: Continuing Professional Development, supporting veterinary public health teaching within UK Veterinary Schools and providing opportunities for veterinary students to gain experience of government veterinary work.

In 2007 the GVS published a cross government framework on Veterinary Skills and Expertise, which it intends to implement in 2008. It also delivered its Annual Conference, "Europe and You" in partnership with Glasgow University. The GVS initiative has also engaged with key stakeholders such as UK Veterinary Schools and the Royal College of Veterinary Surgeons (RCVS) to deliver elements of the new modular postgraduate Certificate in Advance Veterinary Practice.

1 Strategy available at [www.defra.gov.uk/animalh/ahws/strategy/ahws.pdf](http://www.defra.gov.uk/animalh/ahws/strategy/ahws.pdf)

2 See [www.equinehealthandwelfarestrategy.co.uk/home](http://www.equinehealthandwelfarestrategy.co.uk/home)

In addition to the contribution made by individual government vets to the veterinary curriculum, the GVS delivered dedicated teaching days to around 500 students in 2007 to support training in veterinary public health and statutory veterinary medicine.

Further information on the GVS Programme is available on <http://www.defra.gov.uk/gvs/>

Defra has continued to work with **consumer representatives** in 2007, led by Strategy principles. They have made a difference both to policy and to communications. For example, the combined support of industry and the consumers strengthened the UK's ability to negotiate some improvements to the welfare of meat producing chickens in the EU. In addition, the CVO regularly sought the views of consumer representatives during disease outbreaks.

The Strategy encourages greater clarity of roles and responsibilities as a foundation for good partnership working. Since its formation in 2005, the **Vets and Vet Services Working Group** has provided a forum for discussion on strategic and practical solutions to concerns about the long-term sustainability of farm animal veterinary practice, especially in rural areas. To bring greater structure and focus to the debate, we have appointed Professor Philip Lowe, Director of the Rural Economy and Land Use Programme (RELU) at Newcastle University, to chair the working group.

A series of one day meetings has already started, exploring concrete evidence, which aims to identify pragmatic and achievable solutions. Key themes of the groups' work are: vets as businesses; the 'public good' functions of rural vets; new governance models in farming and food production; and the long-term issues affecting the future of the livestock industry. Professor Lowe will be producing a report in autumn 2008.

In July, the EFRA Committee announced an inquiry into the need to replace the **Veterinary Surgeons Act 1966**. The Committee will consider whether the provisions of the 1966 Act are out of step with developments in the veterinary surgeon and related professions and invited evidence to be submitted on various changes to the 1966 Act which have been proposed by the Royal College of Veterinary Surgeons. As the Government Department responsible for this legislation we consulted informally with the Royal College of Veterinary Surgeons and the British Veterinary Association and submitted written evidence to the Committee in September.

Further information and the questions put by the Committee can be found at [http://www.parliament.uk/parliamentary\\_committees/environment\\_\\_food\\_and\\_rural\\_affairs/efra\\_veterinarysurgeons.cfm](http://www.parliament.uk/parliamentary_committees/environment__food_and_rural_affairs/efra_veterinarysurgeons.cfm)

The Strategy also wants more effective **delivery and enforcement** of health and welfare policies. During 2007, Government continued to strengthen its relationships with delivery partners, as demonstrated during disease outbreaks and in its consultation<sup>3</sup> on its response to the Eves' Review of the Animal Health and Welfare Delivery Landscape. Defra, the Welsh Assembly Government, Animal Health and the Local Authorities Coordinators of Regulatory Services (LACORS, representing local authorities) are working together on a review of the Framework Agreement for the delivery of Animal Health and Welfare services by local authorities.

Defra, the Devolved Administrations and Animal Health continued with the regular monthly meetings of the **Animal Health Delivery Review Board** during 2007 at which performance against objectives was discussed. The strengthening of Animal Health's senior management has laid the foundation for even wider engagement across Defra and other related agencies.

<sup>3</sup> <http://www.defra.gov.uk/corporate/consult/eves/index.htm>

The **Veterinary Laboratory Agency** and **Veterinary Medicine Directorate** have both worked closely with Defra and Animal Health to ensure a joined-up and supportive approach to animal health and welfare. This relationship is underpinned by challenging quarterly meetings encapsulated within the relevant Service Level Agreements (SLAs).

The **Meat Hygiene Service** (MHS) is undergoing transformation as a result of the Tierney Report<sup>4</sup>. Defra is ensuring that any proposals will continue to offer the appropriate level of assurance and service. The CVO is now a full member of the MHS Board.

Throughout the year Defra and Animal Health have worked extremely closely with **LACORS**, who have been particularly supportive during 2007.

### England Implementation Group (EIG)

Putting partnership working into practice, the three administrations in Great Britain (Defra, the Scottish Government and the Welsh Assembly Government) have stakeholder bodies to help guide Strategy delivery. The **England Implementation Group** (or EIG) is an advisory body of experts, representing the range of interests, charged with overseeing delivery of the Strategy in England. During 2007, it made notable progress in:

- encouraging the introduction of three new industry-led sector health and welfare bodies to help set strategic direction for their sectors: the England Cattle Health and Welfare Group, the Sheep Health and Welfare Council and the Companion Animal Sector Council.
- encouraging better coordination of health and welfare in England's regions.
- guiding the introduction of an Animal Welfare Delivery Strategy for England (see Chapter Six for further information), launched in October, which, through its action plan will better coordinate activities under the guiding principles of the overarching health and welfare strategy.

The **Scottish Animal Health and Welfare Strategy Advisory Group** has focused mainly on disease control during 2007 and making available practical advice for producers. The Advisory Group, for example, commissioned the development of an information leaflet which was issued to all farmers in Scotland, when Bluetongue was identified in Suffolk in September 2007.

The Group continued to oversee the development of targets for the priority diseases identified by the Group in consultation with a range of stakeholders. It has taken an active interest in the long term sustainability of the veterinary profession and is considering practical support to the veterinary profession in terms of business development **and** best practice. The Group has also identified the importance of undertaking work to develop welfare indicators.

The **Wales Animal Health and Welfare Steering Committee** comprises of a number of industry representatives.

The most notable initiatives during 2007 included:

- A project to provide measurable improvements in herd health over a 12 month period through the adoption of health planning.

<sup>4</sup> <http://www.food.gov.uk/multimedia/pdfs/fsa070706.pdf>

- A project that aims to establish current information on both the prevalence of ectoparasites and treatment methods and made recommendations on how the impact of ectoparasites on the Welsh sheep industry could be reduced.
- The Steering Committee endorsed animal health planning modules and templates for the sheep, beef and dairy sectors. The modules were produced by the Office of the Chief Veterinary Officer, Wales. Three seminars took place in July and highlighted the processes animal veterinary practices should adopt to encourage uptake of the plans by farmers and to get them fully engaged with the health planning concept.

The European Commission's recent review of animal health policy in the European Union (EU) led to the publication in September 2007 of a Communication for an **EU Animal Health Strategy** for the period up to 2013. This sets out a vision for a more coherent approach to animal health policy with an emphasis on disease prevention. The Strategy identifies high level policy objectives: protecting human and animal health; improving economic competitiveness; and supporting Sustainable Development Strategy. These are to be delivered through an action plan focused on four main areas: prioritisation of EU intervention; the animal health regulatory framework; prevention, surveillance and crisis preparedness and science, innovation and research. The strategy is underpinned by two guiding principles: partnership working and communication. The action plan will be developed during 2008.

Further information can be found at

[http://ec.europa.eu/food/animal/diseases/strategy/index\\_en.htm](http://ec.europa.eu/food/animal/diseases/strategy/index_en.htm)

# Sharing Responsibilities and Costs for Animal Health and Welfare

**Objective: to ensure that decisions and delivery mechanisms are robust to meet the demands of government. Central to this is the relationship with stakeholders and delivery partners.**

The *Animal Health and Welfare Strategy for Great Britain (AHWS)* established an aim of developing a new partnership with Government and the farming industry with each playing their respective role in making a lasting and continuous improvement in the health and welfare of kept animals while protecting society, the economy and the environment from the effects of animal diseases.

A new partnership approach with individual livestock keepers, their representatives, and the wider livestock industry will generate improvements by helping to establish:

- Better policy making through an increased understanding of the farming industry.
- More efficient and effective delivery of animal health and welfare policies by allowing those best placed to undertake activities to do so;
- A reduction in the adverse impacts of animal diseases on the livestock industry, society, the economy, the environment, and ecosystems through effective joint working;
- Greater involvement of farmers and the industry in the policy making process resulting in appropriate improvements in animal health and welfare standards;
- A closer partnership to achieve a reduction and simplification of regulatory burdens;
- A rebalancing of costs to achieve a fair share between Government and industry.

## Progress in 2007

Success will depend on Government and industry working together to ensure that roles and responsibilities are more appropriately aligned in the future.

## UK Consultative Forum

A UK Responsibility and Cost Sharing Consultative Forum was established in December 2006 to work together to consider how a greater level of responsibility and costs for animal health and welfare could be shared between the Government and industry in the future. The Forum's membership currently includes senior representatives of the following:

- Department for Environment, Food and Rural Affairs (Defra).
- Scottish Government
- Department of Agriculture and Rural Development (DARD)
- Welsh Assembly Government (WAG)
- National Farmers' Union (NFU)

## Sharing Responsibilities and Costs for Animal Health and Welfare

- Country Land & Business Association (CLA)
- National Farmers' Union Scotland (NFU(S))
- National Farmers' Union Cymru (NFU(C))
- Farmers Union of Wales (FUW)
- Ulster Farmers' Union (UFU)
- Northern Ireland Agricultural Producers Association (NIAPA)
- Scottish Rural Property and Business Association (SRPBA)
- Stewart Houston (ex-Chair of the Joint Industry/Government Working Group on Sharing Responsibilities and Costs of Animal Disease)
- Glenys Stacey, Chief Executive Animal Health
- Barbara Saunders, consumers' representative

Industry and community membership of the forum is kept under review to ensure the group continues to maintain a broad representative group.

The work of the Forum will be guided by the 13 principles that underpin the animal health and welfare responsibility and cost sharing agenda. We consulted on the original principles across the UK between December 2006 and March 2007. The principles have now been revised in light of responses and further work by the Forum.

### Revised principles of responsibility and cost sharing

- Principle 1: Preserving public safety and maintaining confidence both nationally and internationally in UK food production;
- Principle 2: Preserving the principles of the *AHWS* – especially that prevention is better than cure;
- Principle 3: Maintaining and improving capability to deliver policies;
- Principle 4: Sharing responsibilities so that achievement of animal health and welfare outcomes is cost effective, efficient and best value for money;
- Principle 5: Sharing costs only where the activity provides a clear benefit or service;
- Principle 6: Focus cost sharing where it is most likely to reduce disease risk;
- Principle 7: Responsibilities should be shared where costs are shared but cost sharing should not be the boundary to responsibility sharing;
- Principle 8: Industry and Government will be jointly accountable to all stakeholders;
- Principle 9: The total regulatory burden should be reduced and measures simplified wherever possible and be proportional to risk;
- Principle 10: Consistency with EC and international developments with lobbying to ensure that legislation is proportionate;

## Chapter 2

Principle 11: The sharing of costs should take into account affordability and competitiveness for sectors and regions;

Principle 12: The system should be flexible to take into account unforeseen, unpredictable macro-issues; and

Principle 13: Decisions should be based on the best available science and evidence.

Significant progress has been made in 2007 to take the responsibility and cost sharing agenda forward despite timescales being affected by the Foot and Mouth Disease outbreak.

During the first half of 2007, the Forum looked at the mechanisms and structures of responsibility sharing and a case study in a specific area for cost sharing was carried out. Lord Rooker attended a Forum meeting in July to re-iterate the importance of the project and also to emphasise that it needs to proceed on a GB/UK basis on both responsibility and cost sharing. He also stressed that the Forum's work needed to capture the views of the whole food chain and wider community.

Meetings of the UK Consultative Forum were postponed during the FMD outbreak. Engagement with members started again as soon as was possible and the Forum re-started its detailed work programme in December. An 18- week public consultation was launched on 11 December 2007. At the same time the Forum will be developing specific recommendations on establishing full responsibility and cost sharing taking account of responses to the consultation exercise. More frequent meetings are envisaged in 2008.

### Engagement with individual sectors

The re-established Forum will aim to represent the views of the entire livestock sector and related sectors including those not currently represented on Forum, and to take account of the views of wider society. To assist this process a consumer representative, Barbara Saunders, and the Chief Executive from Animal Health, Glenys Stacey, joined the Forum in December 2007.

### Taking the work forward

A Defra consultation seeking views on the ways in which responsibility and cost sharing might work, as well as some specific next steps in relation to BSE and scrapie was launched in December 2007. This was slightly delayed from its proposed launch over the summer due to the FMD outbreak. However real efforts have been made to maintain momentum on the responsibility and cost sharing agenda. Prior to the launch of the consultation Lord Rooker visited his equivalent representatives in the three Devolved Administrations and leaders of the farming unions to re-affirm the benefits of the consultation and to seek their commitment to this process of establishing a genuine partnership on the policy, operation and funding of animal health and welfare.

The European Commission is publishing a Community Health Policy on responsibility and cost sharing in 2009. It will be more beneficial for us to influence EU decisions where possible rather than waiting for Commission proposals. Our current timetable therefore is to deliver a detailed consultation in autumn 2008 and a draft Bill to implement proposals agreed following consultation by autumn 2009.

For more information please see the responsibility and cost sharing webpages <http://www.defra.gov.uk/animalh/ahws/sharing/index.htm> .

## Exotic Disease – new threats and response

**Objective: to reduce the likelihood and impact of exotic disease outbreaks by transforming the way we work to deliver rigorous risk-based prioritisation; a visible shift in responsibility to animal keepers; a robust end-to-end delivery system; policies and plans that focus on the right risks and stand up to cost-benefit analysis; and an effective and efficient response to outbreaks, with animal keepers and wider industry taking the lead where appropriate.**

*An exotic animal disease is an infectious disease that is not normally present within a country's (or region's) indigenous animal population, e.g., Foot and Mouth Disease, Bluetongue and Avian Influenza. Some exotic diseases<sup>5</sup> must be notified to the European Commission. The costs and disruptions to government services and to the economy as a whole resulting from large animal disease outbreaks have made them one of Defra's key areas of threat.*

In England, and working closely with the Devolved Administrations, a new Exotic Disease Policy programme was initiated in April 2007 to manage this threat, the key benefit of which will be better value for money, with government and industry buying more risk reduction for every pound spent. Success criteria were established for this transitional first year and the programme is scheduled to deliver its outcomes by end March 2011. While the programme was paused on 3 August 2007 to focus on the government's response to outbreaks of FMD, Bluetongue and Avian Influenza (see Chapter 4 on Emergency Preparedness) and remained so until the end of December 2007, some early successes were achieved and are described below; we will build on these and our exotic disease outbreak experiences during the year, in recommending a refreshed programme of work early in 2008.

### Key successes under the new programme of work

#### Improving surveillance of exotic disease risk

The quinquennial review of the animal health area of Defra's Research & Development programme highlighted areas for additional risk surveillance, which are being incorporated into future plans. Recommendations made by the Spratt and Callaghan reviews<sup>6</sup> of the most likely causes of this year's Foot and Mouth Disease outbreak in Surrey will also be taken forward as part of our updated risk based approach. New preventative measures will also be put in force. These, together with lessons learned from the Autumn's Bluetongue and Avian Influenza outbreaks will ensure that we are in a strong position to identify and act upon new exotic disease threats.

#### Preventative investment, policy and response capability

A preliminary audit of investment in the early warning systems we have in place and our response capability, plus a review of policy measures designed to prevent or limit the effects of disease incursion have been started. The response capability established early in 2007 was tested successfully during the disease outbreaks in the latter part of the year. Lessons have been learned about the resource, organisational and structural needs of our disease response teams and these

<sup>5</sup> These are listed in Section 88 of the Animal Health Act 1981 or Orders made under that Act.

<sup>6</sup> details available at <http://www.defra.gov.uk/animalh/diseases/fmd/investigations/>

will be assimilated into revamped plans, including for dealing with more than one exotic animal disease at a time, something we have direct experience of having handled Foot and Mouth Disease, Bluetongue and Avian Influenza concurrently during the autumn. Our exotic disease policy programme is working with key delivery partners, notably Animal Health, the Veterinary Laboratories Agency and IAH Pirbright, to agree delivery responsibilities that can and should be transferred to them.

### Policy clarification and simplification

Some simplification of the way we implement our exotic disease policies had already taken place before the programme paused on 3 August, particularly on work to improve preparedness for the movement control and licensing aspects of an outbreak of exotic disease. We were able to put this into practice by publishing movement matrices for Avian Influenza for each combination of decision, showing whether a particular movement was possible and if so, what type of licence would be applied. These movement matrices were applied during the AI outbreak in November 2007.

#### Other policy development successes include:

- **UK Bluetongue policy**

We have been working with industry and Devolved Administrations since 2006 to ensure we had an agreed UK control strategy which reflected new risks, took account of lessons learned on other European countries in terms of disease dynamics, and made sure that the science on midges and the appropriateness of proposed control measures were well understood. We also instigated a communications campaign, through roadshows, veterinary and industry bodies to raise awareness of the disease, particularly clinical signs. The Bluetongue control strategy can be found at <http://www.defra.gov.uk/animalh/diseases/notifiable/pdf/bluetongue-control-strategy0807.pdf> and the published GB Contingency Plan for Bluetongue can be viewed at <http://www.defra.gov.uk/animalh/diseases/pdf/bluetongue-contplan.pdf>

- **Rabies Review & Import Control policy**

Evidence from Defra's review of rabies import policies indicates that the UK's current controls may no longer be proportionate to the risk of rabies entering the UK<sup>7</sup>. This evidence was discussed with stakeholder organisations and scientific advisors during 2007. One of the aims of the UK's review was to inform the UK response to the European Commission's review of some of the requirements of the EU pet movement regulation 998/2003, principally in those areas where the UK, along with Sweden, Ireland, Malta and Finland, has special derogations. The EU's review was delayed and the Commission's report to the European Parliament and Council was published in October 2007 but did not make recommendations for a future regime. The Commission also submitted a proposal to the Council for a Regulation to extend the special derogations for the UK and the four other Member States from 3 July 2008 to 31 August 2009. The Commission is expected to publish its proposals for a revised Community pet movement regime in summer 2008.

7 More details about Defra's review of rabies policies, including the review's terms of reference and veterinary risk assessments, may be found at <http://www.defra.gov.uk/animalh/diseases/notifiable/rabies/index.htm>, together with information on rabies in bats and the Rabies Contingency Plan.

## Rationale for Government intervention in exotic animal disease control and response to disease outbreaks

The principles of sharing responsibility for, and the costs of, responding to exotic animal diseases are being embedded in all our exotic disease related work and provided a sound basis for increasing stakeholder involvement in responding to the disease outbreaks in the latter part of 2007. This partnership approach with industry is something we want to build on for the future in our handling of exotic animal diseases.

### Building our Emergency Response Capability during peacetime

In parallel with the Exotic Disease Policy Programme, we have been focused on ensuring we, and delivery partners, are prepared to respond to animal disease or food emergencies, ensuring pre-emptive action is taken to reduce new risks and threats. Through this work we are directly tackling one of Defra's top threats, actively managing the risks associated with an exotic disease outbreak and specifically seeking to reduce the risk of disease spread through work with industry on improving biosecurity measures, promoted through a series of market roadshows during the year. In parallel, we're focused on ensuring we're in a position to manage an effective and efficient response to an outbreak, should disease occur, activating and co-ordinating control measures, providing policy advice and support based on veterinary risk assessments on individual elements of Defra's emergency response capability.

Disease outbreak management during 2007 is covered separately in Chapter 4 and much of this work was successfully put into practice during the year. Other successes in terms of achieving our peacetime goals have been:

- **Purchasing Bluetongue vaccine**

On 19 December, Defra announced that it had placed an order with Intervet to supply 22.5 million doses of Bluetongue vaccine. The UK was the first Member State affected by the current outbreak to place an order for vaccine. At the end of 2007, a vaccination delivery plan was being developed in conjunction with representatives from farming and veterinary organisations and scientific experts on Bluetongue;

- **Communications Strategy for exotic animal diseases in place**

A Defra roadshow visited livestock markets during Spring 2007, distributing information to help farmers prevent spread of disease, raising awareness of Bluetongue, Foot and Mouth Disease and Classical Swine Fever, and communicating the slogan Let's Give Disease the Boot. The roadshow visited around 80 markets and spoke to more than 4,000 farmers. Awareness on clinical signs of exotic disease and responsibilities during outbreaks was also maintained through regular updates to registered livestock keepers;

- **Resolution of some complex FMD 2001 compensation claims**

Over the year we have been able to settle a number of cases for compensation arising from the 2001 FMD outbreak. There are still a relatively small number of outstanding claims for compensation: three cases are going to mediation shortly and one to arbitration and we hope that they will be settled to the satisfaction of both parties. Offers on 10 cases have been made

where claimants considered that slaughter premium should have been included in their compensation. There are a few cases where we are in negotiation with the claimants and are hopeful that we will be able to settle in the near future;

- **Implementing lessons learned from outbreaks**

Early positive lessons from the February/June AI and August/September FMD outbreaks, particularly in relation to stakeholder engagement, were successfully applied in later Bluetongue and AI outbreaks. A wide range of lessons, in terms of what went well, have been captured and are being embedded into future ways of working, including how we implement our disease control policies and how we manage outbreaks;

- **Refreshing licences needed in a disease outbreak**

Work has continued on the preparation and maintenance of a suite of template movement licences and notices for use with the relevant legislation in the event of outbreaks of notifiable exotic animal diseases. Movement restrictions are imposed when outbreaks occur and licences would be issued to permit certain movements, subject to biosecurity conditions, if it were thought that such movements would not jeopardise disease control.

As with the Exotic Disease Policy Programme, priorities for Emergency Response Capability are being reassessed to build on and incorporate 2007 disease outbreak experiences and lessons.

## Emergency Preparedness and Controlling Exotic Disease Outbreaks

**Objective: to develop and refine outbreak control strategies and communicate these through disease stakeholder groups.**

The CVO (UK) has a responsibility to control incursions of disease that are usually exotic to the UK. Early detection is essential for effective control and to ensure a minimal impact on animal health and welfare, public health, rural communities and trade.

The following is a summary of the work carried out to control the exotic disease outbreaks which occurred in Great Britain during 2007.

### Avian Influenza

*Avian Influenza viruses can be classified according to their ability to cause severe disease (pathogenicity) as either highly pathogenic or low pathogenic. Highly pathogenic avian influenza viruses (HPAI) can cause severe disease in susceptible birds. Low pathogenic avian influenza viruses (LPAI) generally cause mild disease or no disease at all.*

During 2007, four cases of Avian Influenza were confirmed in England, and one in North Wales.



### February outbreak

On 3 February 2007, highly pathogenic H5N1 avian influenza was confirmed on a large turkey farm in Holton, Suffolk. Defra's contingency plan was implemented effectively to control the outbreak, and a large number of turkeys were slaughtered without further spread. The restrictions around the farm were lifted on 12 March 2007.

A lessons learned report was published on 11 October 2007 following this outbreak. This can be viewed at <http://www.defra.gov.uk/animalh/diseases/notifiable/disease/ai/latest-situation/holton.htm> . A final epidemiological report, published on 5 April 2007, can be viewed at [www.defra.gov.uk/animalh/diseases/notifiable/disease/ai/pdf/epid\\_findings050407.pdf](http://www.defra.gov.uk/animalh/diseases/notifiable/disease/ai/pdf/epid_findings050407.pdf) .

### May/June outbreaks

On 23 May a case of low pathogenic H7N2 avian influenza was confirmed in Corwen, Conwy, North Wales. A 1km restriction zone was put in place around the infected premises and the birds were slaughtered. On 15th June, all restrictions around the premises were lifted. A full epidemiological investigation is still underway to determine the source of this outbreak.

On 7 June, tests provided positive results for low pathogenic H7N2 avian influenza in poultry on a non-commercial small holding near St Helens, Merseyside, England. Birds at the holding were purchased from the same market associated with the outbreak in Conwy. The birds were slaughtered. On 3rd July, all restrictions around the premises were lifted.

### November outbreak

On 12 November the CVO confirmed highly pathogenic H5N1 avian influenza in turkeys on premises near Diss in Suffolk. On 19 November, a second infected premises was declared, which had already been identified as a dangerous contact. All birds were slaughtered and restrictions around the Infected Premises were lifted on 19 December.

The preliminary report of the epidemiological investigation into the source of the outbreak was published on 29 November. The report concluded that the outbreak was confined to the first case and the secondary case was as a result of transmission by vehicles, people or other fomites on the sites. It was not possible to categorically identify the source of the outbreak at the time. The report states that there was no evidence at the time of H5N1 infection in the local wild bird population or in Great Britain as a whole. The report can be found at <http://www.defra.gov.uk/animalh/diseases/notifiable/disease/ai/pdf/ai-prelim-epireport071129.pdf>.

### Foot and Mouth Disease

*Foot and Mouth Disease (FMD) is an acute infectious disease, which causes fever, followed by the development of vesicles (blisters) – chiefly in the mouth and on the feet. The disease is caused by a virus of which there are several ‘types’, distinguishable only in the laboratory. FMD is probably more infectious than any disease affecting man or animals and spreads rapidly if uncontrolled. Cattle, sheep, pigs, goats and deer are all susceptible species.*

On 3 August FMD was confirmed on a farm premises in Surrey. The following day, the strain of virus was confirmed as 01-BFS-67. Another case was identified on 6 August (IP2). The third Infected Premises (IP3) was confirmed on 12 September. 5 further Infected Premises were then identified, with the last one (IP8) confirmed on 30 September.

When the first Infected Premises was confirmed, Defra’s contingency plan was implemented and a national movement ban was immediately put in place. Other control measures put in place included a Protection Zone (PZ), which must extend for at least 3km around the Infected Premises, and a Surveillance Zone (SZ), which must extend for at least 10km around the Infected Premises. The premises where cases were confirmed in 2007 included a number of linked parcels of land, and the Zone sizes were designed to encompass all of these. Within these Zones, all premises containing livestock were subject to movement restrictions. A risk-based and staged approach was taken to ease domestic movement restrictions when the evidence indicated it was appropriate to do so.

Epidemiological studies were carried out to determine how the disease spread between these premises, with the origin of the virus suspected to be from the Pirbright laboratories site. Subsequent transmission through mainly human movement between farm premises allowed the virus to spread. The final epidemiological report is published and available at [www.defra.gov.uk/animalh/diseases/fmd/pdf/epidreport300907.pdf](http://www.defra.gov.uk/animalh/diseases/fmd/pdf/epidreport300907.pdf)

The use of live virus for vaccine production ceased at Merial on confirmation that the FMDV strain found at the outbreak farm was being worked at both the IAH and Merial sites in Pirbright. The Health and Safety Executive was commissioned to investigate the potential release of the virus and identified waterborne release and human movements as possible risks.

Professor Brian Spratt was appointed to lead a team of experts in a review of the Pirbright site’s biosecurity arrangements. The findings from the range of investigations and reviews of the response to the FMD outbreak are now available at <http://www.defra.gov.uk/animalh/diseases/fmd/investigations/index.htm>

Defra’s top priority was to effectively contain the outbreak. Based on the epidemiological studies and veterinary risk assessments conducted on the back of extensive surveillance activity in the area, movement restrictions were gradually eased in areas of Great Britain not affected by the outbreak.

A great deal has been done since 2001 on building relationships with a wide range of non-governmental organisations which have an interest in our approach to exotic diseases. Our recent experience has shown that regular contact with stakeholders, and being as open as possible about current and future policy making, has contributed to creating a climate of trust between Defra and non-governmental organisations. This has been borne out by the media coverage of the outbreak.

Very early in the outbreak, Defra established a Core Group of stakeholders, and worked closely

## Chapter 4

with this Group to agree how movement restrictions should be eased to facilitate the resumption of trade. Throughout the outbreak the Core Group worked closely with Defra to develop joint industry-government proposals. Defra also worked with the European Commission to get movement restrictions lifted as soon as possible. EU Decisions were agreed at the Standing Committee on the Food Chain and Animal Health (SCoFAH) which determined the movements and exports allowed from the UK. Restrictions were gradually lifted on a step-by-step basis. For example, in November, SCoFAH agreed a Decision which allowed the relaxation of export restrictions by splitting the UK into 3 areas – a Free Export Area, a Restricted Export Area and a No Export Area. By mid-December, extensive surveillance had demonstrated that the outbreak had been effectively controlled. All restrictions on the export of live FMD-susceptible animals from the UK to other EU Member States were lifted on 31 December. Defra is also working with the OIE to achieve international disease freedom at the earliest possible date<sup>8</sup>.

FMD is spread by the movement of animals, people, vehicles and things which have been contaminated with the virus. Clothes, footwear and hands need to be disinfected prior to leaving the site.



Stringent new conditions were applied to work at the Pirbright site, a safety alert was issued to all similar laboratories and the Government accepted all recommendations contained in the HSE and Spratt reports. Since then, HSE and Defra have carried out further joint inspections and work on the Improvement Plan is underway.

Sir Bill Callaghan was commissioned to review the regulatory framework for facilities holding animal pathogens. This review was published on 13 December. The Government has welcomed this report and is implementing its recommendations. These, and other investigations and reviews into this outbreak, can be viewed at <http://www.defra.gov.uk/animalh/diseases/fmd/investigations/index.htm>

Dr Iain Anderson, who conducted the inquiry after the 2001 Foot and Mouth outbreak, was asked by the Prime Minister and Secretary of State to look at the Government's response to this latest outbreak, with the final report and recommendations from this review due to be published during March 2008<sup>9</sup>.

8 The UK subsequently achieved OIE FMD disease free status on 22 February 2008, see <http://www.defra.gov.uk/news/2008/080222b.htm>

9 The Anderson report was subsequently published on 11 March 2008, see <http://www.defra.gov.uk/news/2008/080311a.htm>

### Bluetongue

*Bluetongue (BT) is a virus spread by midges which affects all ruminants, such as cattle, sheep, goats and deer. It is globally one of the most economically important diseases of livestock. The disease is difficult to control and eradicate and control measures such as movement restrictions are potentially economically damaging to the farming industry.*

Defra's strategic objective for Bluetongue is to work in close partnership with stakeholders to minimise the economic impact and spread of the disease and Defra's Bluetongue Control Strategy was developed jointly with industry during the early months of 2007. Following the resurgence of Bluetongue in continental Europe during the summer, Defra anticipated the risk that the disease could spread to the UK; we worked on disease forecasting with the Institute of Animal Health at Pirbright and also put together a Core Group of stakeholders to develop the Strategy, to ensure all were prepared in the event of an outbreak.

On 22 September, laboratory tests identified Bluetongue virus in samples from a number of animals with symptoms of the disease on several different premises in South East England. The virus type identified, BTV-8, was the same as that present in other northern European countries at the time. Based on further evidence Defra confirmed the circulation of Bluetongue virus in the UK between the local animal and midge populations on 28 September in East Anglia. The disease was later confirmed in other parts of South-East England. Surveillance and Protection Zones were established and extended where necessary. As of 31 December 2007, there were 66 premises with confirmed cases of Bluetongue in the UK.

On 30 October, Defra published the first epidemiology report into the Bluetongue outbreak, based on the situation up to 19 October. The report concluded that the infection was likely to have been initially introduced into Norfolk, Suffolk and Essex on the night of 4/5 August by windborne transmission of infected midges from continental Europe. The full report can be viewed at [www.defra.gov.uk/animalh/diseases/notifiable/bluetongue/pdf/epidemiology-report301007.pdf](http://www.defra.gov.uk/animalh/diseases/notifiable/bluetongue/pdf/epidemiology-report301007.pdf) .

Bluetongue is a very different disease to other notifiable diseases such as Foot and Mouth Disease and the strategy to control it is therefore also different. In line with phase 1 of the Bluetongue Control Strategy, Defra remains committed to containing disease within the current restricted areas. This is achieved through rigorous controls in the very early stages of an incursion.

On 19 December, Defra announced that it had placed an order with Intervet to supply 22.5 million doses of Bluetongue vaccine. The UK was the first Member State affected by the current outbreak to place an order for vaccine. At the end of 2007, a vaccination delivery plan was being developed in conjunction with representatives from farming and veterinary organisations, and scientific experts on Bluetongue.

### Useful links

The disease surveillance and control section of the Defra website gives information about other animal diseases, including exotic diseases such as rabies. This information can be viewed at [www.defra.gov.uk/animalh/diseases/default.htm](http://www.defra.gov.uk/animalh/diseases/default.htm) .

## International Trade

### Exports

#### Impact of Foot and Mouth Disease (FMD)

Following the lifting of the UK BSE export ban in May 2006 and up until the outbreak of FMD in August 2007, over 190,000 live cattle were exported from the UK to other EU Member States. Demand for UK cattle breeds led to exports to 7 more Member States in 2007 than in 2006, including to Romania, a new EU Member State. Since the ban on cattle and beef exports was lifted, beef and beef products exports to EU Member States totalled around 60,000 tonnes in 2007, an encouraging 30 per cent increase on 2006.

FMD was confirmed in Surrey on 3 August 2007. EU export controls were imposed on 6 August 2007 and were proportionately relaxed a number of times. This was due to swift containment of the disease and the limited nature of the outbreak. The EU legislation and its amendments always focused on exports from Great Britain leaving Northern Ireland relatively free to continue trading as before (with certain additional certification requirements).

The vast majority of the UK's export trade is with fellow EU Member States. By 10 August 2007 we had made all export health certification required under EU FMD related controls available to UK exporters.

For non-EU trade we were able to negotiate and make available many export health certificates for FMD susceptible animal products. We had considerable success in facilitating non-EU exports of dairy products, hides, skins and wool.

We consulted stakeholders representing the main export sectors who quickly identified key non-EU export markets. Throughout the FMD outbreak, we kept export groups and other industry representatives fully informed by publishing regular Customer Information Notes on the Defra Website and by holding meetings with groups such as the newly formed Hides, Skins and Wool Export Certification User Group.

We also worked alongside the Department for Transport, UK airports, ports and marinas to cascade information on the restrictions of personal exports from the UK, as well as working with Animal Health to put in place arrangements for disinfecting the tyres of vehicles leaving GB ports. The last remaining FMD safeguard measures were lifted on 31 December 2007.

On 8 October 2007, Defra's Secretary of State, Hilary Benn, announced an aid package for farmers in England of some £12.5 million for the 2007/08 financial year, £2 million of which was ring-fenced for meat promotion, both within the UK and to wider markets. Following this announcement, we have been working very closely with the Meat and Livestock Commission to ensure best value for money in our attempts to re-open key non-EU markets to UK livestock and products.

A programme of inward and outward missions commencing in 2007 and continuing into 2008 was drawn up and is being delivered by both Defra officials and industry representatives under Defra's cost and responsibility sharing agenda. We expect to see success early in 2008 once the

OIE grants us official FMD freedom status (without vaccination) – particularly with the USA and our South East Asian and Australasian markets trading partners in pigs and pigmeat. Some key markets may take longer to lift their FMD related import bans.

### Impact of H5N1 – Live poultry, hatching eggs and poultry meat

Following the high pathogenic AI outbreak in February 2007, a number of trading partners outside the European Community imposed either a total ban or certain restrictions on imports of poultry and poultry products from the UK.

We liaised systematically with stakeholders to identify the key export markets. We also worked closely with British Embassies and High Commissions to try to keep export markets open. We achieved this by providing detailed information and reassurance about the disease situation in the UK. We negotiated with the veterinary authorities of Algeria, South Africa, Turkey, Malaysia, Japan, South Korea, Vietnam, Hong Kong, Zimbabwe and many others to get import bans lifted and/or to agree revised export health certification, some of which included regionalisation of the UK.

As a result of the November 2007 high pathogenic AI outbreak, some of these certificates had to be re-negotiated with the authorities concerned. Throughout these AI outbreaks, we kept industry fully informed of the status of poultry export markets by holding stakeholder meetings and publishing regular Customer Information Notes on the Defra website.

### Impact of Bluetongue

Confirmation was made in September 2007 that the Bluetongue virus was circulating in England. At the time, exports of live FMD susceptible animals were already prohibited under EU FMD controls. However, Defra ensured that permitted trade under the FMD controls was able to continue as quickly as possible in compliance with the new Bluetongue controls.

Defra's partnership with its stakeholders was key in ensuring that UK exporters were able to take full advantage of the new, simplified Bluetongue controls laid down in Commission Regulation (EC) No. 1266/2007 when it came into force across the whole of the EU in October 2007.

Most countries outside the EU have reacted proportionately and exports to these countries have experienced few significant difficulties as a result of this disease.

## Imports

### Brazil

There was concern about imports of beef from Brazil in the latter part of 2007. The European Commission's Food and Veterinary Office (FVO) carried out a number of Inspection Missions to Brazil, most recently in November 2007. The Brazilian authorities addressed some issues, although there were some deficiencies still outstanding. The EU agreed in December 2007 to restrict imports of beef from Brazil by strengthening the control and surveillance of holdings from which animals eligible for export to the Community are sourced and by establishing a provisional list of such approved holdings.

### Composite Products

Commission Decision 2007/275/EC came into force on 4 June 2007. It lays down rules regarding animals and animal products to be subjected to veterinary checks at Border Inspection Posts on introduction into the Community. The Decision also lays down harmonised animal health rules for the importation of composite products defined as 'a foodstuff intended for human consumption that contains both processed products of animal origin and products of plant origin and includes those where the processing of primary product is an integral part of the production of the final product'.

### Import of Birds

The Government response to the Independent Review of Avian Quarantine was updated in June 2007. All the findings of the Dimmock report have now been actioned. After consulting with stakeholders, we reformed the rules governing the movement of pet birds to the UK from the rest of the EU in order to allow easier movement for owners whilst still guarding against the risks of AI. In addition, we implemented the EU captive bird regulation within the EU target date of 1 July 2007, providing a longer-term framework for the commercial imports of birds into the UK from outside the EU.

### Publications

The Annual Review of Controls on Imports of Animal Products: April 2006 – March 2007 was published on 23 July 2007 and highlights the main activities of Defra, Her Majesty's Revenue and Customs (HMRC) and the Food Standards Agency (FSA) in combating illegal imports through enforcement activity, understanding the risks and raising public awareness. It is available at <http://www.defra.gov.uk/animalh/illegali/pdf/review0406-0307.pdf>

Aside from this ongoing work, activity in 2007 has primarily focused on progressing action on the FVO's recommendations following their mission to inspect our import controls; working with HMRC to encourage closer co-operation between veterinary and customs authorities within the EU; evaluating our joint publicity campaigns with HMRC and the FSA and refreshing publicity material for launch in 2008.

### Stakeholder engagement

We have continued to work with HMRC and the FSA to communicate with stakeholders by attending events ranging from NFU Regional meetings to a food importers seminar in Brixton.

Defra mobile unit used for community outreach activity in visiting key locations across the country to help raise awareness of the personal food import rules



## Artificial Insemination

The Artificial Insemination of Cattle Regulations 1985 and the Artificial Insemination of Pigs Regulations 1964 have been subject to overhaul and review in order that legislation can fully reflect the latest technological, scientific and financial practices that exist within the modern day Artificial Insemination industry.

New Bovine Semen Regulations were introduced in England and Scotland in May and June 2007 respectively. These lay down the controls on the production, processing and storage of bovine semen used for trade in the domestic market. We involved industry representatives throughout the review process. Included in these new Regulations are the principles for new fees and charges for services associated with the Regulations and these aim for full cost recovery.

Work has continued throughout the year to produce new legislative cover as well as a consultation package and financial legislation for the porcine semen industry. New Porcine Semen (Fees) Regulations came into force in England and Scotland in October 2007 and reinstated the payment for tests suspended since February 2006.

## International disease monitoring and risk assessment

### The International Disease Monitoring Unit (IDMU)

The IDMU provided regular internal monthly reports on the animal disease situation internationally as well as publishing 53 preliminary outbreak assessments and two more detailed qualitative risk assessments. They are available on the Defra website at <http://www.defra.gov.uk/animalh/diseases/monitoring/index.htm> . The IDMU also published quarterly reports summarising the international animal disease situation in "The Veterinary Record" .

## Animal Welfare

**Objective: to improve the welfare of kept animals.**

### Animal welfare on farms

After two years of negotiations, a new EU Directive laying down welfare rules for meat chickens was agreed in 2007. It comes into force in June 2010. The Directive sets conditions from the time chicks are brought to production sites until they leave for slaughter. It applies to holdings with 500 plus birds but does not apply to holdings with only breeding stocks of meat chicken, extensive indoor and free-range or organic chicken. The Directive will deliver real benefits for broiler welfare whilst balancing economic, social and environmental impacts.

ADAS, on behalf of Defra, organised a series of welfare campaigns to raise awareness on topics of welfare concern. During these campaigns, workshops and meetings to review important welfare issues were held for farmers, managers and stock-keepers.

The industry continues to show interest in keeping up to date with best practice on animal welfare and husbandry, and we continue to contribute to an increased awareness and better understanding of many of the key welfare issues. In particular, the campaign on animal transport follows up our success with a very popular campaign from 2006 that helped communicate key points relating to new legislation on welfare during transport.

#### Advisory Campaigns arranged in 2007

Cattle	Avoiding losses and improving welfare in cattle rearing systems
Transport	The new Transport Regulations – Certificates of Competence
Pigs	Nursery Pig Management
Poultry	Improving the Welfare of Seasonally Produced Turkeys

### Animal welfare during transport

EU Regulation 1/2005 on the protection of animals during transport came into force on 5 January 2007. Defra continued to work in partnership with the Devolved Administrations, enforcement authorities, industry and welfare organisations to ensure a successful implementation of the Regulation across the UK.

In taking forward the Regulation's principle requirements, Defra and the Devolved Authorities appointed independent industry bodies to carry out vehicle approvals and to assess transporters for competence. Competence certificates are required from January 2008, however, FMD and Bluetongue effectively prevented livestock transporters from devoting time to obtaining the certificate of competence. As part of the package of aid measures announced by Hilary Benn in October 2007, it was agreed with UK enforcement authorities that no action will be taken against UK-based transporters without competence certificates until the end of April 2008. This arrangement extends only to domestic journeys.

Defra has begun work to implement the Regulation's requirement for road vehicles undertaking long journeys to have satellite navigation systems fitted by January 2009.

### Animal welfare at slaughter

The EU FVO visited the UK in the summer to assess the system of controls on animal welfare at slaughter and during killing. The FVO report has now been published. This makes a number of detailed recommendations whilst concluding that the UK has a well organised and satisfactorily implemented system of controls.

Regulatory changes introduced during 2007 include the Welfare of Animals (Slaughter or Killing) (Amendment) (England) Regulations 2007 and equivalent regulations in Scotland and Wales. These allow the killing of end of lay hens by exposure to gas other than in a slaughterhouse. This can deliver a welfare benefit by removing the need for transportation. They also allow the Secretary of State to authorise the killing of birds by exposure to gas outside a slaughterhouse. In December we published updated guidance on the welfare of poultry at slaughter or killing.

### Companion animals

The Animal Welfare Act came into force in April 2007 and the Animal Health and Welfare (Scotland) Act 2006 in late 2006. A training programme for local authority and Animal Health staff had been run by Defra in partnership with LACORS during the months running up to its implementation to ensure that there was widespread awareness of the changes to the law among front-line enforcement staff.

Initial feedback from key stakeholders is that the new law is working well. The introduction of a statutory duty of care has encouraged those responsible for animals to work constructively with welfare agencies to raise standards where necessary. Early indication is that, as a result of earlier intervention, fewer cases are proceeding to court.

Some further minor exemptions have been requested to the general prohibition on mutilations contained in the Animal Welfare Act 2006 and the Animal Health and Welfare (Scotland) Act 2006. These exemptions are necessary in order to allow essential procedures for breeding, husbandry and conservation purposes. It is anticipated that the exemptions will come into force in the late spring. Work is continuing on secondary legislation to improve the welfare protection given to racing greyhounds.

### 2007 Welfare Inspection Statistics

#### On-farm

In 2007, Animal Health carried out inspections on 3,978 farms to check that legislation and welfare codes were followed. All complaints and allegations of poor welfare on specific farms were treated as a matter of urgency. From January 1st 2007, additional inspections were carried out to check compliance with animal welfare Statutory Management Requirements as part of EU Cross-Compliance Regulations. The majority of these inspections were allocated using a risk model specifically developed for this purpose.

Inspections are categorised into those where there was prior reason to believe that animal welfare might be compromised (complaint, targeted, cross-compliance targeted and cross-compliance scored risk visits) and those where no such knowledge existed (programme, elective and cross-compliance random visits). Levels of compliance with animal welfare legislation recorded during inspections in the former category were far lower (71%) than those in the latter category (92%) demonstrating the importance of responding to complaints and targeted

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information. The detailed results of welfare inspections (which consist of up to 11 assessment criteria) are summarised below to depict results for different enterprises and the different welfare assessment criteria<sup>10</sup>. Figures 1 and 3 show the results of inspections conducted where there was reason to believe that animal welfare might be compromised, and Figures 2 and 4 show the results of the remaining inspections.

Figure 1: Assessments of the welfare of animals on farm in GB during complaint, targeted, cross-compliance targeted and cross-compliance scored risk visits – enterprise (2007)<sup>11</sup>

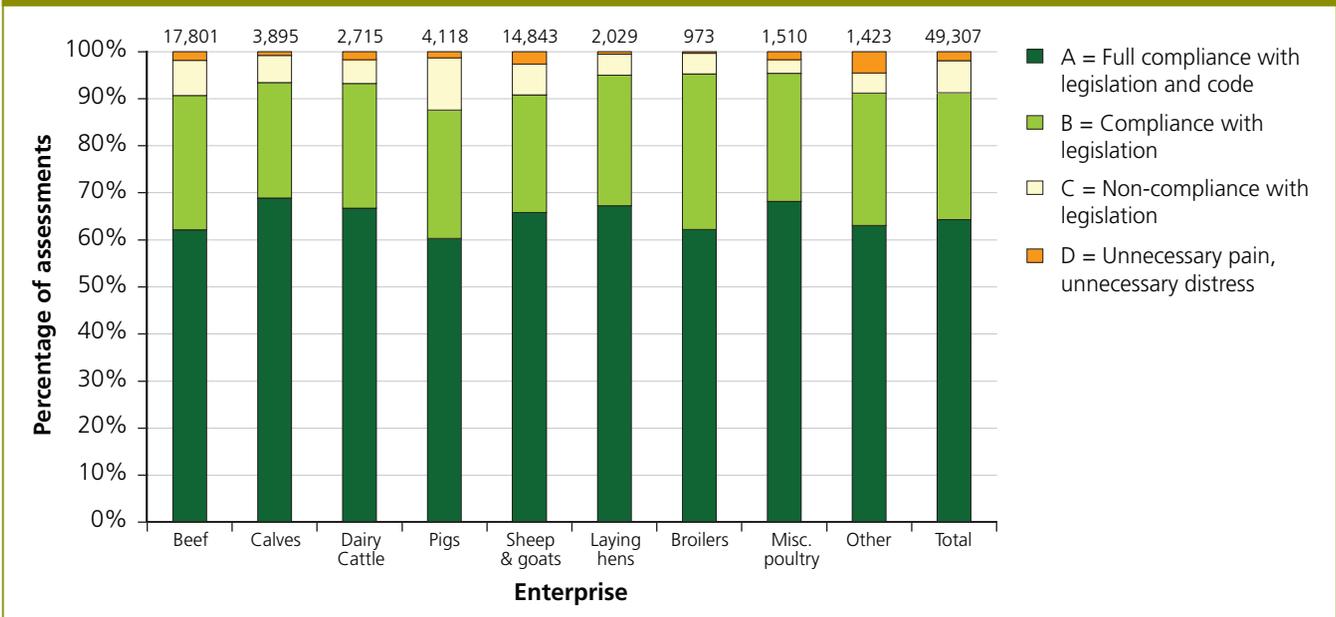
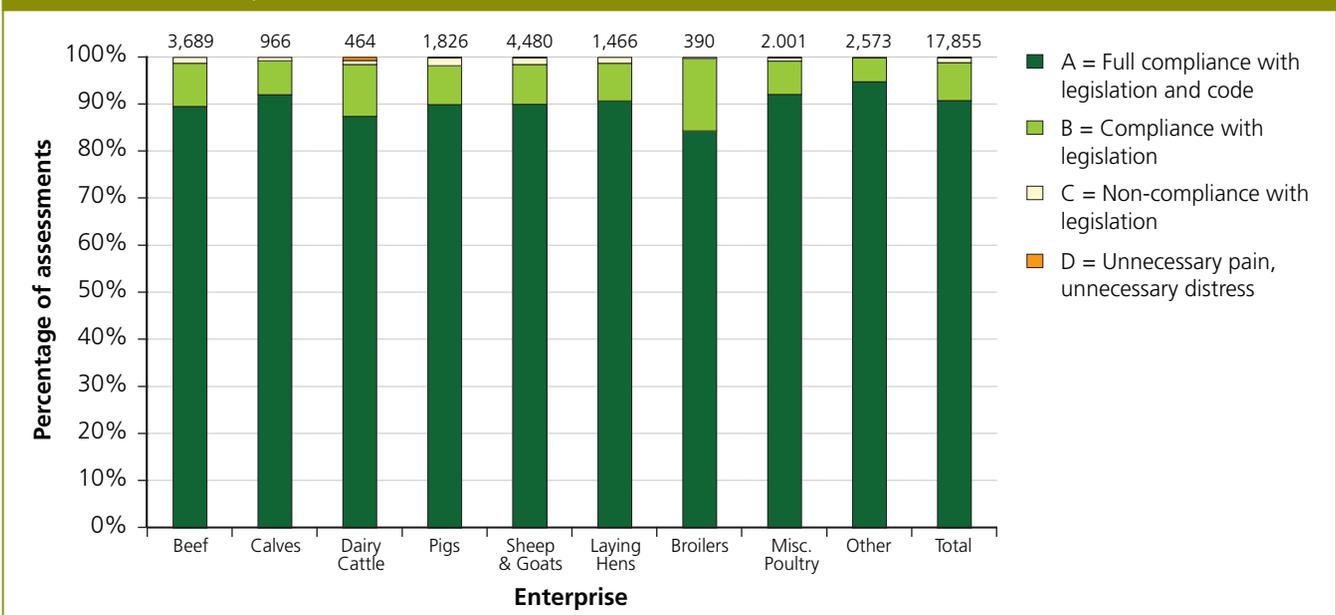


Figure 2: Assessments of the welfare of animals on farm in GB during programme, elective and cross-compliance random visits – enterprise (2007)<sup>12</sup>



<sup>10</sup> Please note that compliance levels based on welfare assessments (as shown in figures 1 to 4) are not strictly equivalent to compliance levels based on inspection numbers because an inspection takes the worst score recorded for any assessment; hence a score of D would be counted once when calculating inspection compliance levels regardless of how many D scores were recorded during the inspection.

<sup>11</sup> Numbers above each column represent the total number of assessments made.

<sup>12</sup> Numbers above each column represent the total number of assessments made.

Figure 3: Assessments of the welfare of animals on farm in GB during complaint, targeted, cross-compliance targeted and cross-compliance scored risk visits – criteria (2007)<sup>13</sup>

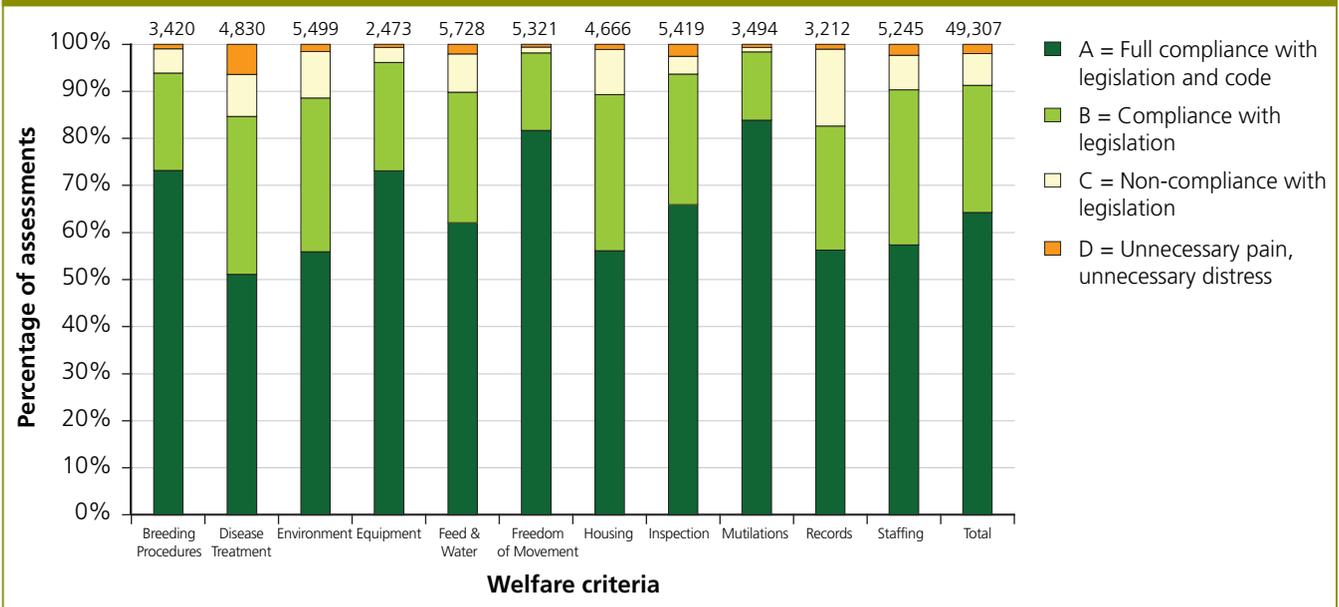
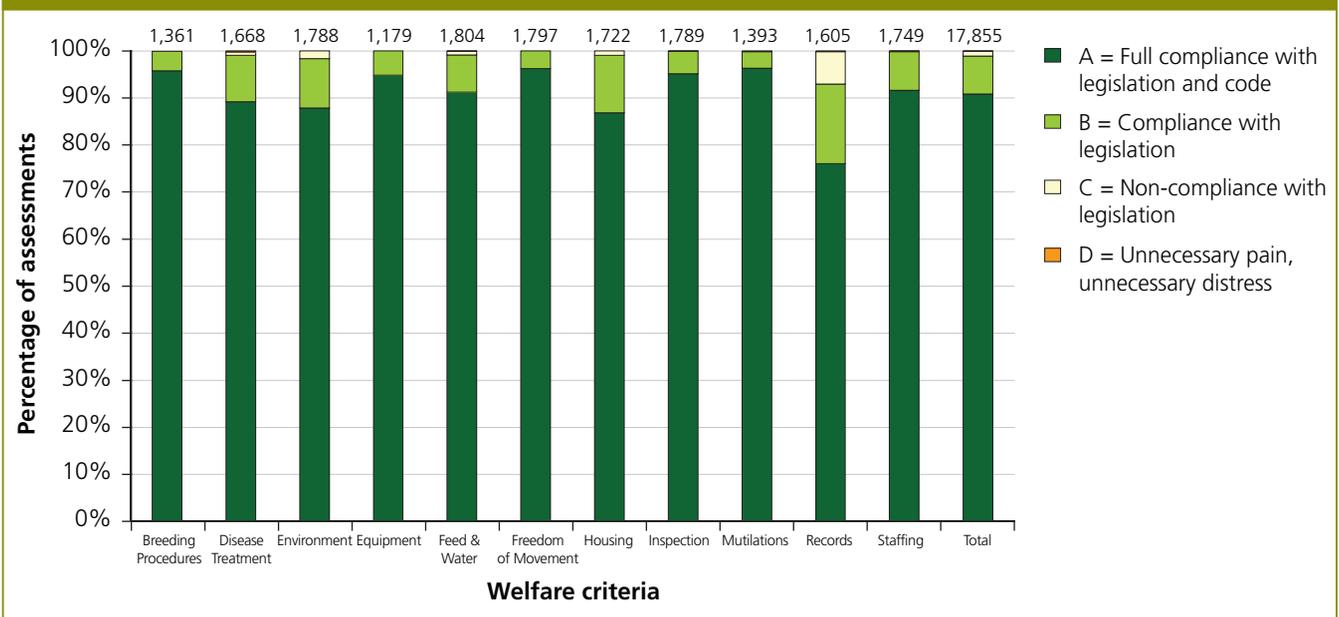


Figure 4: Assessments of the welfare of animals on farm in GB during programme, elective and cross-compliance random visits – criteria (2007)<sup>14</sup>



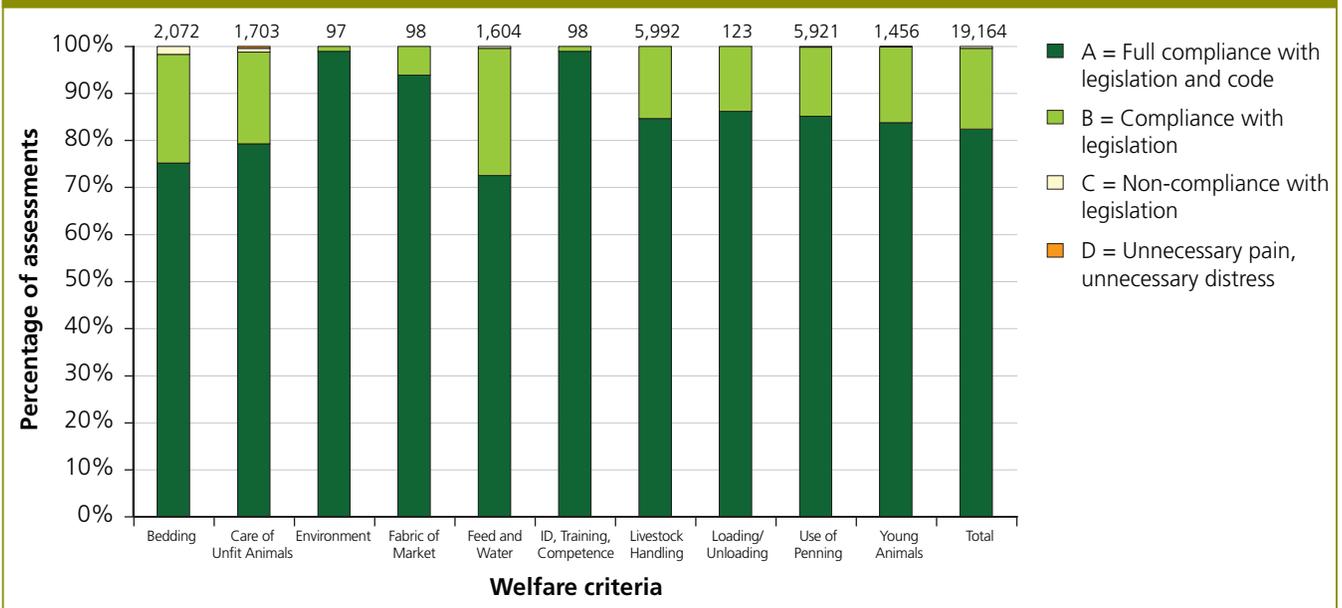
13 Numbers above each column represent the total number of assessments made.

14 Numbers above each column represent the total number of assessments made.

## Markets

In 2007, Animal Health carried out 6,113 welfare inspections at 2,425 visits (2.5 inspections per visit) at markets. Full compliance with animal welfare legislation was recorded during 99% of inspections. A summary of the findings is shown in figure 5.

Figure 5: Assessments of the welfare of animals at markets in GB (2007)



## Animal Welfare Delivery Strategy

The Animal Welfare Delivery Strategy published in October, reinforces the government’s commitment to high animal welfare standards and sets out in detail the goals we are seeking to achieve. Successful delivery will require an increased emphasis on shared responsibility for animal welfare and builds on the achievements already made through legislation and industry initiatives.

### International animal welfare

Consumers increasingly have an interest in the welfare of animals in relation to the food they eat. It is therefore necessary to monitor welfare issues on a global basis. Improvements in animal welfare arise from both advances in legislation as well as by demand for higher welfare products from consumers. Increasingly the rules on animal welfare that apply in the UK are primarily established within the Council of Europe and the EU. The European Commission has been active in seeking bilateral agreements with major trading partners on equivalence of welfare standards, and progress has been made with New Zealand, Canada and Chile. Discussions have started with other South American countries.

As well as providing training to Croatian and Bulgarian veterinary services at the request of the British Foreign Office on practical aspects of welfare assessment, we also contributed to an EU sponsored course on slaughter and killing held in Croatia. An EU sponsored course for the Romanian Veterinary Service on the assessment of welfare of farmed animals and implementation of the new transport regulation offered an opportunity to share our experiences.

Although we have supported European Commission activity to achieve greater acceptance of animal welfare policies at World Trade Organisation (WTO) level, the Doha round has currently stalled. We took part in the German Presidency conference on labelling which developed one pillar of the Community Action Plan on the Protection and Welfare of Animals 2006-2010. The conference considered how best to differentiate products produced to EU welfare standards from others, whilst retaining the progress already made in Great Britain on developing and labelling higher welfare products.

We have contributed to several EU initiatives, including a meeting on exchanging best practice on implementation of EU rules on welfare during transport and the management of killing methods for poultry – a topical issue given the recent concern regarding highly pathogenic AI. In preparation for the revision of the community rules on pig welfare, we contributed to both the conference on pig castration (PIGCAS) as well as an international pig conference in Dublin. Further development of the EU Community action plan depends on improved methods of welfare assessment, which is being taken forward by the international project Welfare Quality ® which reported progress at a conference in Berlin.

The work of the Council of Europe relating to the Conventions on the protection of farmed animals and on the transport of animals was suspended in 2007 due to reorganisation of legal services, which did not provide support for the Standing Committee on the Treaty for Animal Protection (TAP). Activities of the Bureau of the TAP related principally to developing a plan for the future support for the Committee, and publishing the results of the 2006 conference including the surveys of welfare in the 51 countries of Europe. The fish welfare experts of the committee did assist the European Food Safety Authority (EFSA) in developing its opinion on the welfare of fish, taking note of the recently adopted recommendation on farmed fish.

The UK continued to support the development of welfare guidelines by the OIE. In May, four revisions to guidelines on animal welfare were agreed: welfare during transport by sea and by land; at slaughter; and at killing for disease control. These guidelines are subject to further consideration, as further revision is planned. New draft guidelines for welfare of farmed fish and stray dogs were also considered.

### **Farm Animal Welfare Council (FAWC)**

FAWC is an independent advisory council established by Government in 1979. Its terms of reference are to keep under review the welfare of farm animals on agricultural land, at market, in transit and at the place of slaughter, and to advise the Government of any legislative or other changes that may be necessary.

In 2007, FAWC published a report on Stockmanship and Farm Animal Welfare, which offered Council's views on the value of good stockmanship. It addressed the challenge of providing effective education and training for livestock farmers and stockmen and made a number of recommendations for improvements. FAWC also began a new investigation into the interactions between the economics of livestock production and animal welfare in the UK. Work continued on reports in the areas of slaughter of white meat species and castration and tail docking in lambs and towards a long term strategy for farm animal welfare. These reports will be published in 2008. FAWC will start a new investigation into education, communication and knowledge transfer of welfare issues in the livestock sector during 2008.

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FAWC's three Standing Committees namely; Pigs, Poultry and Fish; Ruminants; and Ethics, Economics, Education and Regulation continued work on Opinions identified in FAWC's Strategic Plan 2006-2010. The Pigs, Poultry and Fish Standing Committee issued Opinions on enriched cages for laying hens and beak trimming of laying hens. Opinions on the longevity of the dairy cow, the welfare of farmed gamebirds and policy instruments to improve farm animal welfare will be published in 2008. The Standing Committees also provided advice to Government on issues such as the welfare implications of Bluetongue.

FAWC continued to play an important role in the activities of the European Forum of Animal Welfare Councils (EuroFAWC) the membership of which comprises advisory bodies to European Governments on animal welfare. Government officials from countries without an advisory bodies and international organisations (CoE, OIE, the European Commission and EFSA) attend with observer status. The remit of the forum is to exchange best practice amongst advisory bodies and identify common animal welfare issues to address.

FAWC reports and strategic plan are available at: <http://www.fawc.org.uk>

The Government's response to FAWC reports can be accessed at:  
<http://www.defra.gov.uk/animalh/welfare/farmed/fawc-resps.htm>

## Disease Control

**Objective: to work towards the eventual eradication of diseases such as bovine TB, BSE and other TSEs such as Scrapie that affect the national herd by ensuring programmes are in place and progress is being made.**

### Bovine Tuberculosis

*Bovine tuberculosis (bTB), caused by Mycobacterium bovis (M. bovis), is one of the most difficult endemic animal health problems we face in Great Britain.*

Through the 'Government strategic framework for the sustainable control of bovine tuberculosis in Great Britain' (published in 2005), Defra aims to work in partnership with interested organisations to bring about a sustainable improvement in control of the disease by 2015, tailoring policies to reflect regional variation in disease risk and emerging scientific evidence.

#### 2007 Overview

- Expenditure of approx £80 million in 2006/07
- TB Advisory Group published its advice on the practical delivery and impacts of pre-movement testing in January.
- Pre-movement testing in England and Wales extended to younger cattle from 1 March
- Final report of the Independent Scientific Group on Cattle TB (ISG) published in June
- Husbandry best practice advice published by bTB Husbandry Working Group in February
- Second annual GB TB Conference held in May

### Developments in GB during 2007

#### Incidence of bTB

As summarised in Table 1, the provisional year-end bTB statistics show a 18.2% increase in the number of new TB incidents (herd breakdowns) recorded in GB (4,172) compared to 2006 (3,531). The majority of these incidents were detected through the statutory routine skin tuberculin testing programme paid for by the Government, but 271 new incidents were first disclosed through pre-movement tuberculin skin testing of individual animals intended for movement between holdings. Another 465 incidents were initiated following isolation of *M. bovis* from tuberculous lesions detected at routine meat inspection of cattle carcasses by the MHS. In 2,215 (53.1%) of those new TB incidents there was detectable evidence of *M. bovis* infection on post-mortem or bacteriological examination of slaughtered animals (Figure 6).

Taking into account the overall number of tuberculin tests carried out in unrestricted herds (56,605 in 2007 against 56,722 in 2006), this equates to a herd incidence of bTB breakdowns of

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7.4% (4.5% if pre-movement tuberculin tests are counted in the denominator), compared to 6.2% (4.5%) for the previous year. Likewise, the provisional average herd incidence of *confirmed* bTB breakdowns for the year was 3.9%, compared to 3.6% for 2006. For historical annual bTB incidence and charts going back to January 1996 see:

<http://statistics.defra.gov.uk/esg/statnot/tbpn.pdf> .

A total of 26,071 cattle were slaughtered as test reactors in 2007, an increase of 30.4% on 2006. However, 2,773 of these were cattle that had given a positive result on the ancillary gamma interferon blood test (g-IFN) (recorded in previous years as direct contacts). Another 498 were reactors to a dedicated pre-movement tuberculin skin test. The number of test reactors disclosed represented 0.44% of the 5.88 million animal tests carried out during the year (i.e. 44 reactors per 10,000 animal tests or one reactor for every 225 cattle tested) (Figure 7). Other cattle were slaughtered as direct contacts (1,554) or inconclusive reactors (575), bringing the total number of cattle slaughtered for TB control reasons to 28,200.

A detailed breakdown of these national bTB statistics by country, region and county is available on the Defra website at <http://www.defra.gov.uk/animalh/tb/stats/latest.htm> .

Table 1: Headline TB statistics for GB in 2007, compared with equivalent figures for 2006<sup>15</sup>

	2006	2007	Change
Registered cattle herds (year end)	89,804	86,281	-3.9%
Total tests on herds <sup>16</sup>	50,399	51,266	+1.7%
Tests on unrestricted herds (including pre-movement tests) <sup>17</sup>	56,722 (77,819)	56,605 (91,891)	-0.2% (+18.1%)
New TB herd incidents (breakdowns)	3,531	4,172	+18.2%
Herd incidence of new TB breakdowns (including pre-movement tests)	6.2% (4.5%)	7.4% (4.5%)	+18.4% (-0.1%)
New confirmed TB herd incidents <sup>18</sup>	2,045	2,215	+8.3%
Herd incidence of confirmed new TB breakdowns (including pre-movement tests)	3.6% (2.6%)	3.9% (2.4%)	+8.5% (-8.3%)
Total cattle tested (of which were tested with the gamma interferon blood test)	5.47m (7,979)	5.88m (30,644)	+7.5% (+284%)
Total test reactors identified (of which were gamma interferon blood test reactors)	19,995 (463)	26,071 (2,773)	+30.4% (+499%)
Reactors per 1,000 skin tests	3.7	4.4	+21.3%
Other cattle slaughtered	2,287	2,129	-6.9%
Apparent prevalence at year end (herds under restrictions due to a TB incident only)	3.6%	3.6%	-1.0%
Percentage of cattle herds officially TB free (OTF) at year end (remainder includes herds under restrictions for other reasons – e.g. overdue TB test etc.)	92.4%	90.9%	-1.6%
Bovine carcasses reported with suspect TB lesions at routine slaughter (individual slaughterhouse cases)	853	961	+12.8%
Proportion of individual slaughterhouse cases that yielded a positive culture for <i>M. bovis</i>	65.6%	65.5%	0%

<sup>15</sup> All figures are provisional and subject to change as more data becomes available.

<sup>16</sup> Includes tuberculin & gamma interferon tests

<sup>17</sup> Includes tuberculin & gamma interferon tests

<sup>18</sup> A number of incidents were still unclassified (awaiting culture results) when this report was produced.

Figure 6: Number of new confirmed and unconfirmed TB incidents disclosed annually in GB since 1994

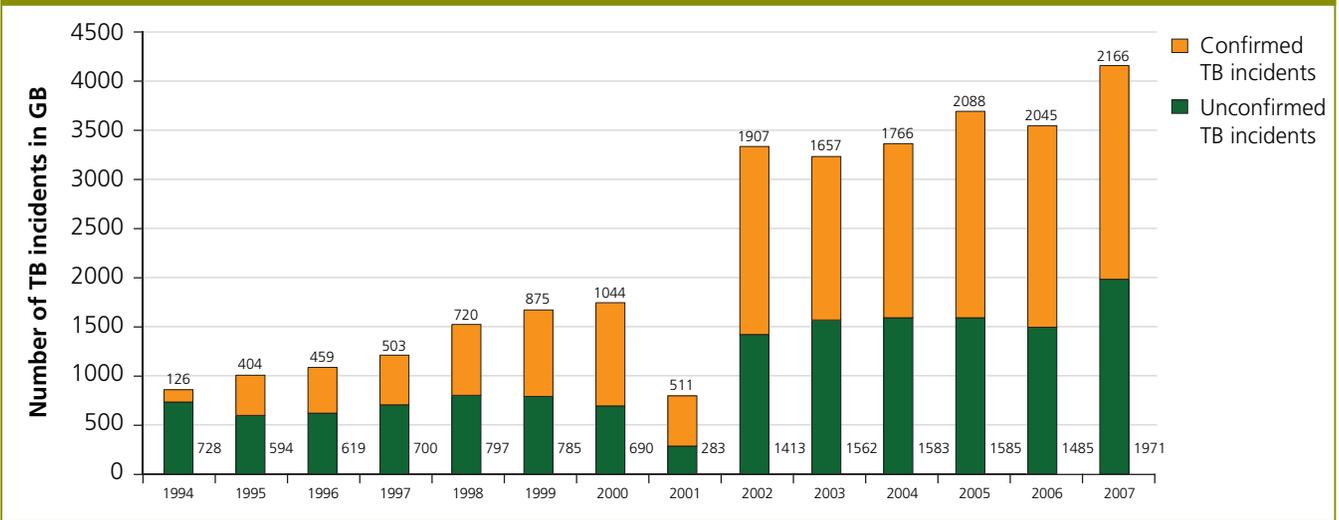
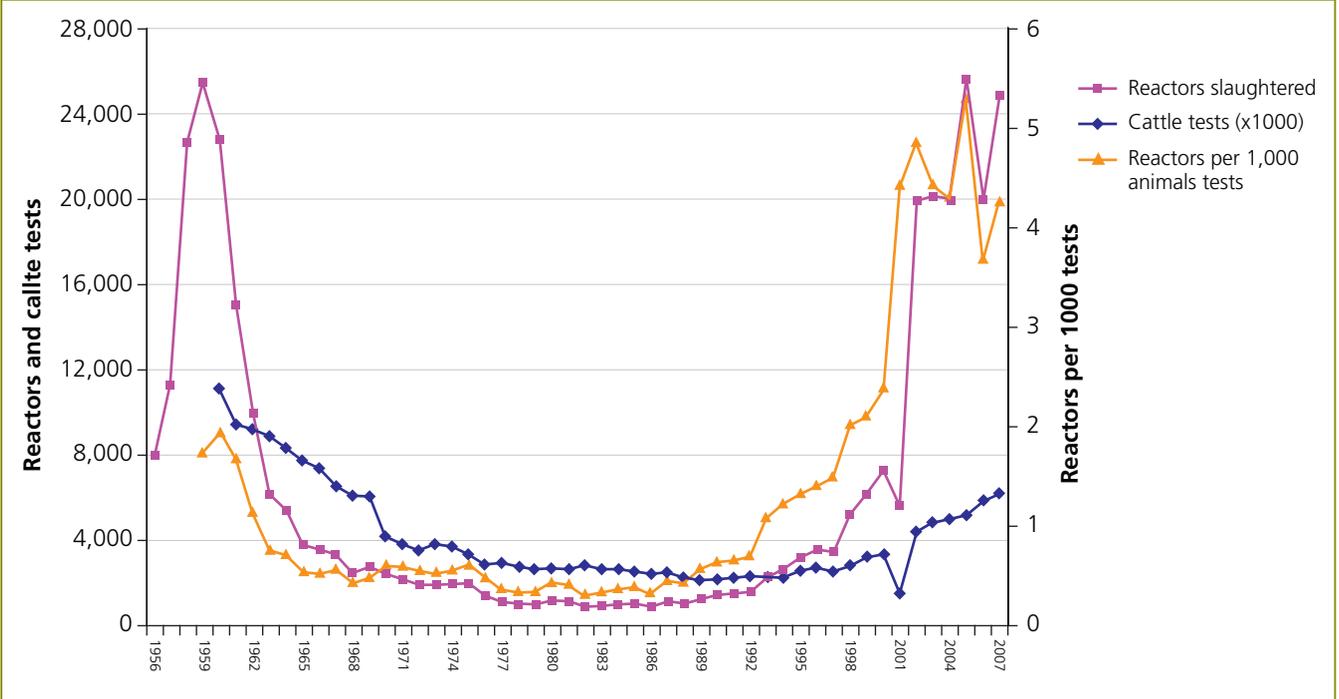


Figure 7: Number of tuberculin cattle skin tests and reactors<sup>19</sup> and rate of reactors per 1000 tests disclosed annually in GB (figures exclude g-IFN blood test reactors, direct contacts and slaughterhouse cases).<sup>20 21</sup>



19 Note: An observed drop occurred in the number of herd and animal tests carried out in August and September 2007 as a result of Foot and Mouth Disease and Blue Tongue disease

20 Note: TB testing was significantly reduced due to the Foot and Mouth Disease outbreak in 2001

21 Note: Variation in recent years may be due to new policies and changes in the definition of reactors

### Pre-movement Testing

On 1 March 2007, statutory pre-movement testing was extended to cattle over 42 days old moving out of a 1 or 2 yearly tested herd in England and Wales, unless the herd or movement is exempt. Lowering of the age requirement brought the pre-movement testing arrangements into line with those which had been introduced in Scotland in September 2005.

The impacts of pre-movement testing are being monitored and key statistics for England and Wales are published monthly at: <http://www.defra.gov.uk/animalh/tb/premovement/monitoring-data.htm> . Statistics show new TB incidents are being prevented by pre-movement skin tests and infection is picked up earlier in high risk herds. Furthermore, the obligation to carry out pre-movement tests discourages what was common practice of moving cattle prior to a routine herd test, so fewer cattle should be escaping Government funded routine surveillance tests.

### Gamma Interferon Testing

During 2007 we continued to use the gamma interferon (g-IFN) diagnostic blood test across Great Britain to enhance the cattle testing programme. Since October 2006 use of the g-IFN test, alongside the skin test has been mandatory in certain prescribed circumstances – primarily in confirmed breakdown herds outside of disease hotspot areas – and also as a tool that can be used in high incidence areas. 30,644 g-IFN tests were carried out in 2007 and 2,773 positive animals for removal were identified. Detailed g-IFN related statistics are updated on a monthly basis and can be found at: <http://www.defra.gov.uk/animalh/tb/stats/gamma-stats.htm> .

A review of the current g-IFN policy has been initiated and is expected to be completed during 2008.

### Animal Husbandry

The Bovine TB Husbandry Working Group published advice on husbandry best practice to help reduce the risk of bTB transmission from cattle to cattle and between cattle and badgers. The advice has been publicised to farmers through various routes, including vets, and can be found at <http://www.defra.gov.uk/animalh/tb/abouttb/protect.htm> . In Wales, a related initiative continued to improve the level of biosecurity knowledge of private veterinary practices and herd owners within an Intensive Treatment Area in south west Wales. The aim is to help reduce the incidence of bovine TB within cattle in the area through improvements in the level of biosecurity on farms.

### European Convention on Human Rights

The European Convention on Human Rights provides that the right to manifest religion can be circumscribed by the need to protect public health, if this is necessary and proportionate. In a landmark case, the Court of Appeal concluded that the Welsh Assembly Government's decisions to issue and confirm the slaughter notice in respect of a TB reactor animal owned by a religious community were a lawful and proportionate response to the public health objective being pursued.

## Collaborative Working

### TB Advisory Group

The TB Advisory Group continued to meet regularly during 2007, listening to the views of a broad range of interested organisations on tackling bTB in England, which has helped inform its advice to Defra. During the year the Group provided Defra with its views on the practical delivery and impacts of pre-movement testing, the Bovine TB Husbandry Working Group's husbandry best practice advice and updated Ministers on the Group's work and discussions with stakeholders.

Further information is available at

<http://www.defra.gov.uk/animalh/tb/partnership/advisorygroup.htm> .

### Annual bTB Conference for Great Britain

The second Annual Bovine TB Conference for GB was held in London in May 2007. A summary of the event is available at: <http://www.defra.gov.uk/animalh/tb/partnership/annualconf-2007.htm> .

The event was well attended and delegates' feedback indicated it was well received.

## TB and Badgers

### Independent Scientific Group on Cattle TB (ISG) Report,

The Independent Scientific Group on Cattle TB (ISG), which oversaw the Randomised Badger Culling Trial (RBCT)<sup>22</sup>, published its final report in June 2007, followed by two open meetings, in London and Cardiff. This report was the culmination of nearly ten years work by the Group.

The report is available at <http://www.defra.gov.uk/animalh/tb/isg/index.htm> .

The conclusion of the final report of the ISG was that "badger culling can make no meaningful contribution to cattle TB control in Britain". However, the evidence from the RBCT is complex. The results show small scale culling can increase levels of TB in cattle, however they also suggest that co-ordinated and efficient culling carried out over areas larger than the RBCT and sustained over a number of years could prove beneficial. The report also highlighted that cattle control measures are critical to tackling bTB. Following a request from Defra, the Government's Chief Scientific Advisor (CSA) provided advice on the ISG's findings, available at

<http://www.defra.gov.uk/animalh/tb/pdf/badgersreport-king.pdf> .

Ministers continued to give careful consideration to the evidence on badgers and bTB in cattle during 2007. The publication of the ISG report, along with the CSA's analysis, added to the scientific evidence base under consideration.

### Environment, Food and Rural Affairs Committee

The Environment, Food and Rural Affairs Committee began an Inquiry into bTB following publication of the ISG's Final Report. The Committee gathered evidence from stakeholders, experts, independent scientists and Ministers. The Inquiry is continuing into 2008.

<sup>22</sup> The RBCT was designed to test the impact of two badger culling strategies (proactive and reactive culling) on the incidence of bTB in cattle herds.

### Research

Science plays a critical role in providing the evidence base for policy development and Defra continues its investment into a significant wide-ranging programme of bovine TB research which includes studies into: developing vaccines for cattle and badgers; improved diagnostics, including differentiation of infected from vaccinated animals; epidemiological factors influencing the prevalence and persistence of the disease in cattle and wildlife; investigations of husbandry measures to reduce risks associated with farmyard contact between badger and cattle; ecology; and economic analyses of TB control strategies. Consideration is now being given to policy options for how a vaccine might be used for cattle and badgers, along with other control measures, and a TB Vaccines Programme has been set up within Defra to bring together research and policy development.

During the year, we also put in place new work to validate a PCR detection assay to investigate *M. bovis* in environmental samples and, with funding by the Welsh Assembly Government, research examining the extent of genetic variation for resistance of cattle to infection by *M. bovis*.

Expenditure on bovine TB research in 2006/07 was approximately £8.5m. Further information on Defra's wide-ranging bovine TB programme is available at <http://www.defra.gov.uk/animalh/tb/research/index.htm>.

### TB in species other than cattle and badgers

In 2007, *M. bovis* was cultured from 25 of 67 deer carcasses notified to Animal Health or VLA as presenting with tuberculous lesions at postmortem inspection. These cases originated from farmed (1 of 19), park (4 of 7) and wild, or other, (20 of 41) deer populations.

In addition, Defra has commissioned a wild deer density and disease prevalence study to ensure that our evidence base is robust enough to allow the Department to take decisions on possible future disease control measures for wild deer.

The survey of bTB prevalence in wild deer populations in the Cotswolds and the South West peninsula started in December 2006 and the results are expected to be available in April 2008. A full analysis of the results will be published once the survey has been completed and the laboratory results confirmed.

*M. bovis* was identified in 15 of 103 feline tissue submissions referred to VLA following suspicion of mycobacterial disease. This included two *M. bovis* isolates from cat tissues initially submitted to diagnostic laboratories of the Health Protection Agency but subsequently genotyped at VLA. All these positive cases involved cats kept in regions of England and Wales where TB is endemic in cattle and wildlife. Other mycobacteria frequently isolated from cats presenting with suspect tuberculous lesions were *M. microti* (20 cases) and *M. avium* (3 cases).

Three new outbreaks of TB caused by *M. bovis* were reported in camelid herds, one in llamas (in Carmarthenshire) and two in alpacas (in Powys and Dorset). Another commercial llama herd in Devon underwent TB testing throughout 2007 following diagnosis of *M. bovis* TB in 2006, with a view to eliminating the infection and lift the movement restrictions.

The MHS reported a total of 66 tuberculous pig carcasses at slaughter. Of those, the majority were negative for mycobacteria on culture, but 6 were infected with organisms of the *M. avium* complex and 4 animals from different premises (all in the West of England) had *M. bovis* infection confirmed by culture at VLA.

Tuberculosis caused by *M. bovis* was also diagnosed in a small goat herd in Wiltshire.

A project has been scoped to take forward a review of TB controls in non-bovine domestic species, specifically camelids, cats, goats and deer. Defra is looking to work in partnership with the industry and Devolved Administrations to consider whether new policies are needed and if so, to develop options that are effective, affordable and proportionate to the risks involved.

## Bovine Spongiform Encephalopathy (BSE)

*Bovine spongiform encephalopathy (BSE) is a transmissible spongiform encephalopathy (TSE) which typically causes neurological signs in adult cattle.*

BSE was first identified in the UK in 1986. The UK epidemic peaked with over 37 000 cases in 1992 and there was a cumulative total of over 183 000 cases by the end of 2007, more than 99.9% of which were born before August 1996. The disease has been linked to TSEs in domestic cats and exotic felines and ruminants. In March 1996, BSE was linked to a new (variant) form of the human disease Creutzfeldt-Jakob Disease (vCJD). By the end of 2007, there had been 166 cases of definite or probable vCJD in the UK. Further details are available at <http://www.cjd.ed.ac.uk/>. In 2001, the EU adopted Regulation (EC) No.999/2001 which applied controls to prevent, control and eradicate TSEs.

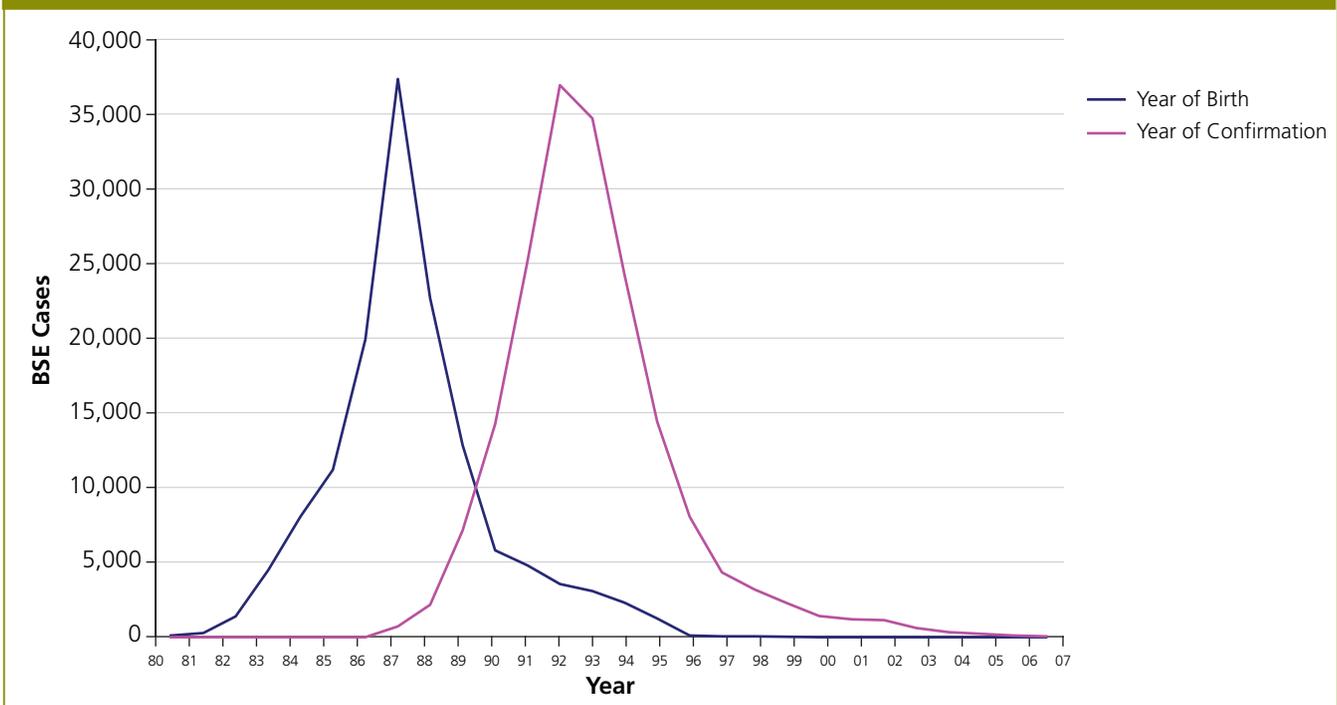
### Overview of work in 2007

The incidence of BSE in the UK continued to decline (Figure 1). A single case of TSE (FSE) was detected in a 18 year old lion in a zoo.

- Expenditure of approx £80 million in 2006/07
- Total BSE cases confirmed by passive surveillance decreased 53% from 15 in 2006 to 7 in 2007
- Total BSE cases confirmed by active surveillance decreased 39% from 99 in 2006 to 60 in 2007

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Figure 8: BSE cases in the UK by year of birth and year of confirmation



## Progress in 2007

### Ongoing Measures

The Government continued to apply BSE controls and surveillance in accordance with Regulation (EC) No.999/2001. Further information is available at

<http://www.defra.gov.uk/animalh/bse/index.html>

<http://www.dardni.gov.uk/index/animal-health/animal-diseases/bse.htm> and

<http://www.food.gov.uk/bse/what/beef/controls>

### International Developments

The Government worked with national and international stakeholders to progress some of the objectives of the EU's TSE Roadmap<sup>21</sup> which was published in 2005. These included:

- Country Categorisation – EU Member States applied to the OIE for BSE risk categorisation according to the system first agreed in 2005. The EU adopted Regulation (EC) No. 2007/722 which brought EU trade measures in line with OIE rules and and Commission Decision 2007/453 which provisionally categorised EU Member States for trade purposes.
- OCDS Hides – The EU adopted Commission Decision 2007/411/EC which allowed the UK to use the hides of cattle slaughtered through the Older Cattle Disposal Scheme (OCDS) for leather rather than being destroyed.
- Vertebral Column – EU Member States unanimously supported an increase in the age limit for bovine vertebral column as Specified Risk Material from 24 to 30 months. Adoption will be subject to the result of European Council and Parliamentary scrutiny.

- Monitoring – the European Commission began to discuss amendments to the BSE monitoring programme, with Member States.
- Feed – the European Commission began to discuss a proposal to feed fish meal to young ruminants, with Member States.

### Domestic Targets

Defra continued to work towards its Public Service Agreement (PSA) target of eradicating BSE in GB by 2010. Due to the long incubation period of BSE, achievement of this target will be determined by past events and will be affected by the EU's surveillance regime and the longevity of cattle born before August 1996, in which the prevalence of infection is highest. The Government continued to work with industry leaders to encourage producers to dispose of these older cattle into the Older Cattle Disposal Scheme before it closes at the end of 2008. Future BSE cases born after the August 1996 reinforced feed ban (BARBs) could also impact on the achievement of the 2010 target although epidemiological back-calculations have demonstrated a clear decline in the prevalence of infection in successive birth cohorts born after July 1996.

## Transmissible Spongiform Encephalopathies (TSE)

*Scrapie is a TSE which affects sheep and goats. Classical scrapie has been present in the UK for nearly three centuries. Atypical scrapie has been detected in recent years using new diagnostic tests but has been present in the UK since at least 1989. Chronic wasting disease (CWD) is a disease of deer which has not been detected in the EU.*

### Overview of work in 2007

- Total confirmed classical scrapie cases decreased 77% from 155 in 2006 to 36 in 2007
- Total confirmed atypical cases decreased 38% from 52 in 2006 to 32 in 2007.
- Reduced EU requirement for number of sheep and goats tested through active surveillance at abattoirs and as fallen stock
- Regulation (EC) No.999/2001 amended to reduce the compulsory restriction period from three years to two years and to allow more appropriate response to atypical scrapie.

## Progress in 2007

### The National Scrapie Plan (NSP)

Since 2001 19,000 flock owners have had 3 million breeding sheep genotyped for scrapie resistance in NSP schemes. Disease has been brought under control on 450 affected holdings since 2004. In major breeds there has been a significant reduction in scrapie susceptible genotypes and an increase in flock resistance without any compromising of performance or survival traits in those breeds. Evidence from surveillance over the last few years suggests that the combined effects of NSP schemes is contributing to a significant reduction in classical scrapie cases. Compulsory controls for classical scrapie were implemented on 17 holdings. Further details are available at: [http://www.defra.gov.uk/vla/science/sci\\_tse\\_stats\\_sheep.htm](http://www.defra.gov.uk/vla/science/sci_tse_stats_sheep.htm)

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As part of the Responsibility and Cost Sharing consultation launched in December 2007, Defra is consulting on the future of the NSP Ram Genotyping Scheme and the Semen Archive.

Further information on the NSP is available at:

<http://www.defra.gov.uk/animalh/bse/othertses/scrapie/nsp/index.html>

### International Developments

Following detailed discussions on the TSE Roadmap, the EU amended Regulation 999/2001 to allow Member States greater flexibility in how they dealt with cases of classical and atypical scrapie with effect from 17 July 2007. However, in September 2007, the European Court of First Instance suspended part of the amendment to Regulation 999/2001 that allowed greater flexibility in dealing with classical scrapie in sheep flocks and goat herds, pending the outcome of a case brought by France against the Commission (Case T-257-07). The UK Government is intervening in support of the Commission in this case.

### Surveillance

The Government continued to carry out surveillance for TSEs in sheep and goats accordance with Regulation (EC) No.999/2001. The UK launched a surveillance programme for TSEs, including CWD in farmed and wild red deer, in accordance with Commission Decision 2007/182/EC.

Further information is available at: <http://www.defra.gov.uk/animalh/bse/index.html>

<http://www.dardni.gov.uk/index/animal-health/animal-diseases/bse.htm>

### Animal By-Products (ABP)

*The ABP Regulation (EC) No. 1774/2002 sets down the rules for the handling of animal byproducts in order to protect public and animal health. It ensures that ABPs i.e. animal carcasses and those parts of animals that are not fit, or intended for, human consumption are used, treated and/or disposed of appropriately and safely to minimise risks of outbreaks of serious animal diseases and any potential risks to public health. The Regulation, introduced across the EU in May 2003, introduced stringent conditions throughout the food and feed chains requiring safe collection, transport, storage, handling, processing, uses and disposal of animal by-products.*

### Animal By-Products

A number of implementing and amending measures were agreed to improve the operation of the ABP Regulation in 2007 and the Commission issued a formal consultation paper as part of its wider review of the Regulation in the summer. This followed earlier preliminary discussions at working groups. Throughout the consultation, Defra has taken into account UK stakeholder views and argued the case for a more de-regulatory approach with a reduction in controls so that they are proportionate to the risks presented. Although progress has been slower than originally hoped, the Commission has announced its intention to put a proposal to the Parliament and Council in the first quarter of 2008.

## **National Fallen Stock Scheme**

The National Fallen Stock Scheme has been running since November 2004. During the 2007 Foot and Mouth outbreak the National Fallen Stock Company provided an invaluable service to ensure the bio-secure collection of routine fallen stock and assisted with setting up the Culled and Fallen Stock Disposal Scheme in the FMD restricted zone. Following the report into the future of the Scheme by Bob Bansback in 2006, the Company has been preparing a business plan to take its business forward when Government support for the Scheme ends in November 2008, and to move away from Rural Payments Agency to a private provider of administration and IT services due to be completed in Spring 2008.

## Identification and Tracing

**Objective: to try and stop the spread of disease by imposing strict rules controlling the identification and movements of livestock.**

### Sheep and goat Identification

The double tagging derogation which the UK had previously obtained for sheep and goat identification expired on 30 June 2007. This required the UK to introduce double tagging to replace the existing national system (which involved one holding of birth tag and a tag for each subsequent holding of residence). Under double tagging, breeding sheep and goats must be uniquely identified by means of two tags, one in each ear. Slaughter animals will continue to require a single tag. Double tagging applies from 11 January 2008.

Council Regulation (EC) 21/2004, which requires double tagging, also mandates electronic identification (EID) and the recording of the individual identifiers of sheep when they move between holdings. At the Council of Ministers meeting on 17 December 2007, it was agreed that EID for sheep will take effect from 31 December 2009. This means that, for breeding animals born on or after that date, the secondary identifier must carry an electronic transponder. Agreeing the 31 December 2009 date gives our industry two years longer than was originally agreed to adjust to the introduction of EID. We will be working in partnership with industry over the coming months to discuss how to implement EID in a way which is practical and workable.

### Pig Identification

Amended rules for pigs came into effect on 6 April 2007 to improve the identification of pigs moving to markets. This will improve our ability to trace animals in the event of notifiable disease outbreaks such as FMD.

### National Equine Database

The Core element of the National Equine Database (NED) continues to work well and supports the EU Horse Passport Legislation (2000/68EC), as well as contributing to the surveillance and control of exotic equine diseases.

Recently, the responsibility for completing the development of the NED project was passed to the British Equestrian Federation (BEF). BEF are committed to finalising the project on behalf of the Equine Industry.

The National Equine Database is an excellent example of Government and the Equine Industry working in partnership, to create a source of information that should enable the improvement in the overall quality and competitiveness of horses in the UK.

### Independent Review of Livestock Movement Rules

During 2007, the recommendations outlined in the Review of Livestock Movement Controls (known as the Madders Review) were analysed. The main recommendation is the introduction of Livestock Movement Units (LMUs) to replace County/Parish/Holding numbers in reporting births, movements and deaths of livestock. The task of implementing LMUs has been taken on by the Livestock Partnership Programme team in Animal Health. LMUs will have a wide impact on stakeholders both within government and industry and these will be consulted throughout the implementation process and key representatives invited to sit on Working Groups.

Implementation of the other recommendations made in the Review will be taken forward alongside the development of LMUs. This is being overseen by a Project Board under the Chairmanship of Bill Madders.

## Veterinary Surveillance and Zoonoses

**Objective: to deliver faster, better targeted disease prevention and control measures via earlier detection of animal-related threats; open, transparent and defensible prioritisation of surveillance activities and a well-defined evidence base.**

### Key Developments in 2007

#### Rapid Analysis and Detection of Animal-related Risks (RADAR) progress and key highlights

RADAR is an information management system, which has been developed as part of the Veterinary Surveillance Strategy to collect and collate veterinary surveillance data from different sources around the UK. This will allow disease data and a range of disease factors to be compared directly with each other and against the population of animals. Further details, including the latest RADAR reports can be found at:

<http://www.defra.gov.uk/animalh/diseases/vetsurveillance/radar/index.htm> .

RADAR currently connects to and provides information on the Cattle Tracing System (CTS), the VLA's Salmonella dataset, GB Poultry Register and Animal Health's Disease Control System. In 2007, RADAR was also connected to the Animal Movements Licensing System (movements about sheep, pigs, goats and deer in England and Wales), English Agricultural and Horticultural Survey (livestock data), the Sheep and Goat Inventory and was also able to provide information of cattle movements to and from locations. Of the many RADAR reports produced, a particular highlight was the statistical report on the 2006 GB Cattle Population, based on the information from CTS, see: <http://www.defra.gov.uk/animalh/diseases/vetsurveillance/pdf/radar-cattlebook06.pdf> .

RADAR has proved an invaluable tool during the exotic disease incursions of AI, Bluetongue and the FMD outbreak in 2007. RADAR data was used to produce analyses, reports and maps which supported Government decision making and helped to inform farmers and academic researchers.

#### Prioritisation project

Development of the prioritisation project has continued during 2007. The project was initiated to provide a mechanism to inform and enable evidence-based, socially and economically appropriate distribution of government funds for Animal Health and Welfare issues. The project relies on a database that contains a number of disease profiles. Each profile contains detailed information on a specific disease. The profiles are structured to describe the disease in the context of the reasons for government intervention described in the Animal Health and Welfare Strategy (protection of public health, protection and promotion of animal welfare, protection of the interests of the wider economy, environment and society and ensuring opportunities for international trade). Each profile has been drafted by experts in the specific diseases, and will be peer-reviewed before publication. In addition, important aspects about the epidemiology of each disease are included so the risk of a detrimental change can be assessed for each disease.

During the year, the specific questions within each profile, the option criteria and guidance have been reviewed and updated. Until this year the evidence in the profiles was captured in a Microsoft Word document, but in November 2007, the Profiles Database was released as a live IT system with all the existing profiles migrated into it. The next phase is due to go live in March 2008, and will allow staff throughout Defra to access the information held via a number of automatically produced reports. This release will also permit different diseases to be automatically ranked for any of the four reasons for Government intervention described above, which will assist in assessing resource allocation within Defra. Following the November 2007 release of the first phase of the database each of the disease profiles is being validated ready for publication via the database during 2008. As these updated profiles are published they will replace the original profiles that have been available until now on Defra's website. These, and further information about this project, can be found at:

[www.defra.gov.uk/animalh/diseases/vetsurveillance/programme/prioritisation.htm](http://www.defra.gov.uk/animalh/diseases/vetsurveillance/programme/prioritisation.htm)

## Veterinary Laboratories Agency Emerging Disease Surveillance

### Cattle

An investigation was carried out into a severe outbreak of disease caused by BVD virus type 2 (New York strain) which caused the deaths of seven percent of the cows in a 200 dairy cow herd in Warwickshire. This was the first report of this virus in UK.

The first report of *Toxocara vitulorum* infection (an intestinal parasite usually found in Bison) affecting British cattle was made in June, following the investigation of ill thrift and deaths in beef calves on a farm in South Wales.

### Sheep

Haemonchosis was a common and notable problem, particularly in the south and midlands. Anthelmintic resistant *H. contortus* worms pose a significant threat to the viability of sheep farms and several instances of benzimidazole resistance were confirmed by in vitro testing. A warmer climate will continue to favour this parasite in the future, and its ability to cause severe disease in all ages will need to be addressed by the Sustainable Control of Parasites in Sheep (SCOPS) strategy.

The wet weather conditions also predisposed to an increase in liver fluke infection.

### Pigs

Porcine reproductive and respiratory syndrome (PPRS) and Porcine circoviral associated disease; Post-weaning multisystemic wasting syndrome (PMWS), continue to be the main causes of pig morbidity and mortality. Reproductive failure and myocarditis although diagnosed are still not a significant problem associated with the virus.

Salmonella typhimurium remains the predominant serotype isolated from pigs, with the commonest phage type being U288. This continues the trend of recent years.

A novel clinical presentation of congenital tremor type A2 was investigated, conventional and microarray techniques failed to detect any causative virus.

### Birds

The value of scanning surveillance was demonstrated by the detection of low pathogenicity avian influenza (LPAI) H7N2 virus infection from chicken carcasses submitted as part of a routine, non-statutory disease investigation in a small poultry flock in north Wales.

The QX strain of Infectious Bronchitis Virus was isolated from a 6 to 8-week-old bantam from a backyard flock in Kent. IBV sequences showed that the isolate was related (98%) to the so-called Chinese QX strain of IBV which causes death due to kidney damage. This is the first occasion that it has been detected in the UK.

### Miscellaneous species

A camelid stakeholder group has been established with Defra and this discussed the major emerging problem of *Mycobacterium bovis* infection. Since the first VLA report in 1999 infection has been identified in seventeen herds of alpacas / llamas. One major breakdown in a llama herd was investigated and reported in the Veterinary Record. Investigations during the year have led to the publication of articles in peer reviewed journals on coccidiosis, Malignant Catarrhal Fever infection in Ankole cattle and skin diseases.

### Wildlife

Nine cases of squirrel pox were diagnosed in red squirrels (*Sciurus vulgaris*). A new disease of red squirrels, adenovirus enteritis, was described by VLA in an article in the Veterinary Record (2007, 160, 11, 384). The first isolation of a ranavirus from a smooth newt (*Tritus vulgaris*) was made in a collaborative investigation with the Institute of Zoology. Ranaviruses are known to cause disease in frogs however their clinical significance in newts is unclear at present.

## Other surveillance projects

### Johne's Disease Prevalence Survey

Johne's disease (caused by *Mycobacterium avium* subspecies paratuberculosis) has been an important disease of cattle in the UK since the 1950s, affecting animal health and welfare and farm level profitability. Further information and a Q&A on Johne's disease can be found at:

<http://www.defra.gov.uk/animalh/diseases/other/johnes.htm>

Defra has commissioned a statistically based survey, which started in October 2006, to determine disease in the UK dairy herd. The survey also aims to advance the understanding of Johne's disease and to assess new methods for its diagnosis with the aim of providing improved mechanisms for ongoing and future surveillance to assess the effectiveness of any implemented control strategy.

Samples were collected from October 2006 to May 2007 from nearly 15000 animals on 136 farms throughout the UK and the majority of the diagnostic testing was completed by the end of 2007. Collation and analysis of the results is underway and a report should be available to the public in late spring 2008.

## Stakeholder Engagement

### Consultation on GB Poultry Register

A consultation on possible changes of use of personal data held on the GB Poultry Register was launched on 13 November 2007 with a closing date for receipt of replies of 5 February 2008. Further details at: <http://www.defra.gov.uk/corporate/consult/poultry-register07/index.htm>

The GB Poultry Register was created in response to an increased threat of an outbreak of the highly pathogenic strain of AI. The personal data held on the Register has mainly been used for the prevention and control of AI and we wished to explore the feasibility of widening the use of this data.

The consultation document describes a range of different areas or issues where views were invited. These included a wider use of personal data for notifiable animal diseases as well as seeking views on the principle of sharing personal data with other Government Departments and Non-Departmental Public Bodies. A summary of responses will be prepared and placed on the Defra website in due course.

### Sustainable control of parasites in sheep (SCOPS)

SCOPS is an industry lead initiative which is chaired by the National Sheep Association (NSA) and supported by Defra, the Scottish Government and the Welsh Assembly Government. SCOPS aims to slow down the build up of parasite resistance to available treatments by promoting good management practices to control parasites and to provide information on the correct use of the available treatments. The SCOPS endoparasite manual was updated during the year and Defra sponsored a sheep scab workshop to involve all sectors of the sheep industry. More information at: [http://www.defra.gov.uk/animalh/diseases/control/parasite\\_control.htm](http://www.defra.gov.uk/animalh/diseases/control/parasite_control.htm)

## Zoonoses

**Objective: to reduce the prevalence of zoonotic infections in animals on farm where this is possible and proportionate to public health benefits**

## Key Developments in 2007

### Salmonella Control Programmes

Defra has continued its programme to introduce National Control Programmes (NCPs) for the reduction of Salmonella in primary production sectors as required by the EU Zoonoses Regulation (EC) No 2160/2003. <http://www.defra.gov.uk/animalh/diseases/zoonoses/ncp.htm>

### Breeding flocks

A National Control Programme for breeder flocks of domestic fowl (*Gallus gallus*) was enhanced in 2007 to comply with the Zoonoses Regulation. Changes from the previous regime involved a shift

to sampling on farm (instead of at the hatchery), introducing the amended method for isolation of *Salmonella* according to Annex D of ISO 6579 (2002), and extension of the control programme to cover *S. Hadar*, *S. Infantis* and *S. Virchow*, in addition to *S. Enteritidis* and *S. Typhimurium*. Results from 2007 showed that of these serotypes only *S. Typhimurium* was reported from an operator sample in one breeder flock at the end of the laying period. The flock of broiler breeder parents was slaughtered, and no further eggs were sent for incubation and hatching.

### Laying flocks

Following approval by the European Commission of the UK's overall approach to controlling *Salmonella* in laying flocks, Defra consulted on proposals to introduce, from February 2008, a National Control Programme for *Salmonella* in Laying flocks. Details of the consultation available at: <http://www.defra.gov.uk/corporate/consult/ncp-layingflocks/index.htm>

Defra has supported operators in their preparations for the National Control Programme by:

- Producing a new code of practice for the prevention and control of salmonella in commercial egg laying flocks  
<http://www.defra.gov.uk/animalh/diseases/zoonoses/pdf/Laying-Flocks-A5-web.pdf>
- Producing guidance on the sampling and testing regime along with a *Salmonella* publicity calendar for 2008 and helping to fund industry roadshows  
<http://www.defra.gov.uk/animalh/diseases/zoonoses/pdf/20738-flock-calendar.pdf>

### Baseline *Salmonella* surveys

The results of a 12 month baseline salmonella survey of chickens reared for meat, which was completed in October 2006, were analysed and published during 2007. *Salmonella* Enteritidis was not isolated in any of the samples taken from 383 flocks, and *S. Typhimurium* DT104 was found in one flock. Other types of *Salmonella* were found on 40 of the holdings (10.4%). These results indicated that the types of *Salmonella* of most public health significance are at a low levels in the UK. The results from all Member States are published on the European Food Safety Authority website at <http://www.efsa.europa.eu> .

Following negotiations with the Commission, a target for reduction of *Salmonella* Enteritidis and *S. Typhimurium* in chickens reared for meat was agreed as no more than 1% of flocks remaining infected by the end of 2011 (Regulation (EC) No 646/2007).

During 2007, two further 12-month baseline salmonella surveys in UK turkeys and pigs were completed. Results will be published during 2008.

## Implementing the Zoonoses Directive

The Zoonoses (Monitoring) (England) Regulations 2007 came into force in October 2007 following full public consultation in 2006. These regulations bring together into one place Government powers to monitor all zoonoses and zoonotic agents as required under the Zoonoses Directive (2003/99/EC).

The overriding aim of the legislation is to provide Government with the best tools possible to be able to investigate and monitor sources of known zoonotic diseases and uncover as early as possible significant new and emerging issues so that appropriate action can be taken to protect public health and support healthy and profitable animal populations. Full details can be found at: [www.defra.gov.uk/animalh/diseases/zoonoses/directive.htm](http://www.defra.gov.uk/animalh/diseases/zoonoses/directive.htm)

## Zoonoses Reporting

### Trends and sources

In line with Directive (EC) No 2003/99, an annual report was submitted to the Commission on the trends and sources of zoonotic agents in animals, feed, and food in the UK. Data on zoonoses in humans were also included in the report.

The report submitted to the Commission and EFSA for analysis is available at: <http://www.defra.gov.uk/animalh/diseases/zoonoses/trends-sources.htm>

The complete report for the Community is available on the EFSA website at: [http://www.efsa.europa.eu/EFSA/efsa\\_locale-1178620753812\\_1178671312912.htm](http://www.efsa.europa.eu/EFSA/efsa_locale-1178620753812_1178671312912.htm)

### UK Zoonoses Report 2006

The ninth UK Zoonoses Report was published in November 2007 and is available on the internet at: <http://www.defra.gov.uk/animalh/diseases/zoonoses/reports.htm> .

The 2006 report, produced by a cross-Governmental Working Group, draws together information on animal and human health issues from a number of sources on zoonoses in man, food and animals and, where appropriate, providing comparable data from previous years.

Notable points in the 2006 report included an outbreak of Q fever, a small increase in the number of Campylobacter and Salmonella cases in humans and an increase in Lyme Borreliosis seen throughout the UK during the year. Anthrax, was diagnosed in cattle and in an unconnected human fatality case during the year. Details of the hydatid disease awareness campaign implemented by the Welsh Assembly Government are also included in the report.

Although some increases were seen in 2006, generally, there is a continued downward trend in major zoonoses incidents, indicating that Government and industry policies are contributing to the successful control of these diseases.

### Other reporting

The Zoonoses Order, 1989, requires operators of laboratories to report to a government official the presence of Salmonella in certain samples taken from animals, or associated with them. Data is collated into an annual report, which provides a valuable source of information on the types of Salmonella found in animals, both in clinical disease and in routine monitoring by industry, and the occurrence of antimicrobial resistance in Salmonella isolates. The report for 2006 is available at: [www.defra.gov.uk/corporate/vla/science/science-salm-intro.htm](http://www.defra.gov.uk/corporate/vla/science/science-salm-intro.htm)

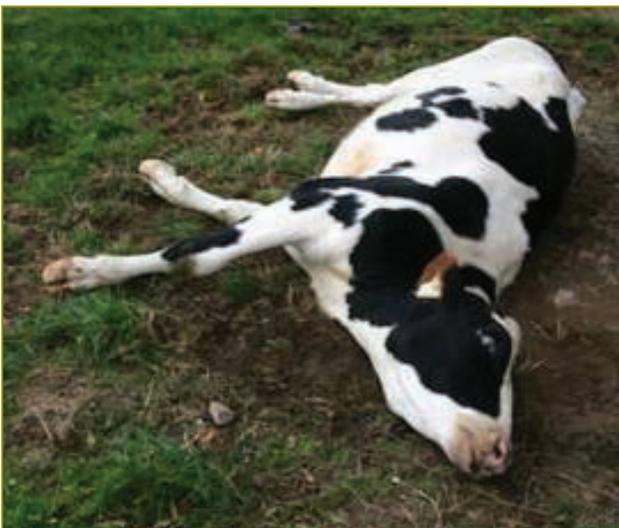
### Food safety incidents

During 2007, the VLA provided assistance to the FSA on 103 potential food safety incidents on farms. Nearly half of these investigations were associated with lead poisoning, and most of the others were a consequence of botulism incidents in ruminants, the vast majority of which related to the storage or spreading of poultry litter on or near grazed fields.

The Animal By-Products Regulations (England) 2005, and equivalent legislation in Scotland, Wales and Northern Ireland, prohibits the composting of poultry carcasses or the spreading of litter or manure containing carcass material. Defra has recommended good practice in litter management and disposal, including expansion of biosecurity messages to broiler farmers to highlight the risks of disease transmission caused by poor carcass removal practices. Advice and guidance is available via the VLA and Defra websites, and this advice has been considered and endorsed by the Advisory Committee on the Microbiological Safety of Food (ACMSF). The respective links are: <http://www.defra.gov.uk/corporate/vla/science/documents/sci-foodsafe-chem-bot-adv.pdf> <http://www.defra.gov.uk/animalh/diseases/zoonoses/botulism-cattle.htm>

Veterinary practitioners have been alerted to the issue through joint letters from the VLA/Defra to the Veterinary Record, and botulism associated with poultry litter has been included in a British Cattle Veterinary Association newsletter. Advice on the risks of botulism associated with broiler litter and how these risks may be reduced has also been an agenda item in meetings between the VLA and farmers. One such meeting was held in North Derbyshire on 9 October 2007.

The remainder of the investigations included a number of incidents relating to copper, plus a number of individual incidents, and included four investigations when a specific cause could not be identified. Regular summaries of the findings are available at: <http://www.defra.gov.uk/corporate/vla/science/science-foodsafe-chem-report.htm>



## Antimicrobial Resistance

Cases of Methicillin-resistant *Staphylococcus aureus* (MRSA) have continued to be identified in companion animals during 2007. However this work is generally undertaken by private laboratories who do not produce summary statistics and therefore the prevalence of these resistant bacteria cannot be estimated. In farmed livestock the Veterinary Laboratories Agency (VLA) has continued to monitor all *Staphylococcus aureus* isolates from cattle for methicillin resistance. Cattle were selected for monitoring as they can be clinically affected by *Staphylococcus aureus* (many animals can act as carriers of this bacterium, but actual animal disease is rare). Since this surveillance scheme began 940 *Staphylococcus aureus* isolates have been tested from 465 different herds, but none have been found to be methicillin resistant strains.

The emergence of an apparently new strain of MRSA mainly in pigs and pig keepers in continental Europe has been monitored closely. To date none of the MRSA isolations from animals in Great Britain have been found to be of this strain. However in late 2007 the first isolations of this strain of MRSA were made in people living in Great Britain, and further testing and epidemiological investigations are ongoing. Therefore the significance of this finding in relation to animals in the UK cannot be assessed at present, but future developments will be monitored closely.

Another type of bacterium of importance to public health which can also acquire resistance to specific antibiotics is *Escherichia coli*. Recently a new resistant form has been identified which produces an extended-spectrum beta-lactamase enzyme (ESBL *E. coli*). Certain *E. coli* bacteria are resistant to several related antibiotics of the penicillin and cephalosporin families as they possess genes to synthesise an enzyme that breaks down the antibiotic molecule. Such organisms are an increasingly significant issue in public health, and the first animal isolation in the UK was made in 2004 on a dairy farm in Wales. Since then the VLA has increased their monitoring so that the majority of *E. coli* isolated from animal samples and subjected to susceptibility testing are also tested for the presence of this type of resistance. This additional surveillance of clinical veterinary diagnostic samples began in June 2006, and, as a result of this and a programme of visits to affected farms, ESBL *E. coli* were identified in sheep and horses on one premises in Great Britain, as well as on a further 14 cattle farms during 2006. In 2007 ESBL *E. coli* were isolated from clinical veterinary diagnostic samples from a further 22 cattle farms by VLA (this figure is provisional as identification of all isolates has not yet been completed). In addition in 2007 the first report of the isolation of ESBL *E. coli* in dogs living in Great Britain was made.

When an ESBL *E. coli* is isolated by VLA an on-farm investigation is generally undertaken, with the objectives of:

- advising, in conjunction with the private veterinary surgeon, on appropriate antimicrobial usage to treat the endemic disease problems currently affecting the livestock, whilst minimising the emergence of resistance;
- providing advice on control of the ESBL *E. coli* and advising on practical measures to attempt to limit its spread and hasten its decline or elimination;
- monitoring how the situation is developing by collecting and testing samples collected during the visit;

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- investigating possible sources of the ESBLs (though it should be noted that it is notoriously difficult to determine the source of a bacterial organism once secondary spread and multiplication have occurred, following a primary event at which an organism was introduced); and
- taking samples to test for ESBL-resistance in any other significant pathogenic bacteria, including Salmonella, present on the farms.

Up to January 2008, only one of the ESBL *E. coli* strains identified by the VLA in animals belonged to a serotype known to be commonly associated with human ESBL *E. coli* infections. This particular animal strain was compared to human isolates by the Health Protection Agency and was found to be different at the molecular level from those isolates commonly found in people in the UK.

Defra's policy on general issues relating to antimicrobial resistance may be viewed via the following link: <http://www.defra.gov.uk/animalh/diseases/vetsurveillance/antimicrobial-res.htm> with further specific links respectively for MRSA and ESBLs: <http://www.defra.gov.uk/animalh/diseases/zoonoses/mrsa.htm> and <http://www.defra.gov.uk/animalh/diseases/zoonoses/esbl.htm>

The Animal Health and Welfare Strategy for Great Britain highlights the need for working in partnership. Defra's Antimicrobial Resistance Co-ordination (DARC) Group continues to provide guidance on policy relating to antimicrobial resistance. The membership of the DARC Group reflects this partnership approach. DARC created a MRSA Sub-Group in 2005, through which Defra is assisting and encouraging various initiatives from the Bella Moss Foundation (now a UK registered charity), industry and the veterinary profession. In addition Defra has funded research to better understand the epidemiology of MRSA in companion animals and livestock and any role it may play in human infections. In 2007 the DARC Group liaised with the newly formed Advisory Committee on Antimicrobial Resistance and Healthcare Associated Infections (ARHAI) on the identification of ESBLs in farmed animals. The DARC Group secretariat has been tasked with the formation of a new ARHAI Sub-Group for ESBLs. This will help provide a source of independent expertise on the human and animal aspects of ESBLs. The following link is to the DARC Group pages on the VMD's website, where more information on the DARC Group's role and activities may be found: <http://www.vmd.gov.uk/General/DARC/DARC.htm>

## International Zoonoses Conference

Defra supported the 2007 International Zoonoses Conference entitled "Zoonoses – from Science to Policy" which was held in Glasgow from 5th to the 7th November 2007. This was the third in a series of international zoonoses conferences, aimed at facilitating discussion and resolving issues concerning the prevention and control of zoonoses.

The delegates and speakers consisted of leading national practitioners, researchers and policy makers in both human and veterinary science from all over the UK, Europe, Asia and North America. Speakers covered topics relating to the conference themes of zoonoses prioritisation, resistant agents and hosts, our changing world: ecosystems services and health and occupational/recreational and food-borne zoonoses.

## Brucellosis Surveillance

Great Britain remains a Brucellosis Free Region of the EU for Cattle, Sheep Goats and Pigs. The most recent confirmed case of brucellosis in cattle in Great Britain was in 2004. A disease factsheet can be found at:

<http://www.defra.gov.uk/animalh/diseases/notifiable/brucellosis/index.htm>

### Review of Brucellosis surveillance in cattle

Following a review of the National brucellosis surveillance programme; the level of surveillance carried out in beef breeding herds was reduced. Two yearly blood testing of beef breeding herds ended with effect from 9th April 2007; monthly bulk milk testing of all dairy herds continued. For more details on the review see:

<http://www.defra.gov.uk/animalh/diseases/notifiable/brucellosis/surveillance.htm>

Cattle	<i>Brucella abortus</i>	5967 bovine abortion investigations were carried out. Post import tests for brucellosis were carried out on 3279 cattle which were imported from non-OBF countries and post calving check tests were carried out on 1082 imported cattle.
Sheep and Goats	<i>Brucella melitensis</i>	In the course of the annual Sheep and Goats survey, a total of 31486 sheep from 1,850 flocks and 949 goats from 224 herds were tested, all with negative results. Abortion submissions from 2376 sheep were screened for <i>B. melitensis</i> with negative results.
Sheep and Goats	<i>Brucella ovis</i>	Additional testing for <i>B. ovis</i> is carried out in accordance with International Trade regulations. Tests for <i>B. ovis</i> were carried out on 240 serum samples from sheep and goats with negative results.
Pigs	<i>Brucella suis</i>	Herds which show clinical signs are investigated. Samples from 70 herds were tested for <i>B. suis</i> with negative results. Additional testing is carried out in accordance with International Trade regulations. Tests for <i>B. suis</i> were carried out on 90 pig serum samples with negative results.
Wild Hares	<i>Brucella suis</i>	Wild hares which are submitted to the VLA regional laboratories as part of the wildlife disease surveillance programme, are screened for <i>B. suis</i> ; 16 hares were examined. All were negative.
Dogs	<i>Brucella canis</i>	Dogs are serologically tested prior to export to New Zealand and Australia. The rapid slide agglutination test is used for dogs being exported to New Zealand, 983 animals were tested. Dogs for export to Australia are tested by the Serum Agglutination Test; 2132 dogs were tested. All negative

This year the VLA also had a total of 44 submissions from marine mammals. *Brucella* marine species were isolated from 12 of these.

### Enzootic Bovine Leukosis (EBL) surveillance

Great Britain is an Enzootic Bovine Leukosis Free region of the EU, the most recent confirmed case of EBL in Great Britain was in 1996.

An average of 20 per cent of dairy herds are randomly selected for EBL testing twice each year using the bulk milk test ELISA and each selected herd is blood sampled twice during the year. All slaughtered cattle are inspected; tumour lesions which could be caused by EBL virus must be reported and if EBL cannot be ruled out further investigation is undertaken. Bovine tumour samples were submitted for examination on 94 occasions during 2007 and all were negative for EBL.

### Work of Advisory Committees

The **Surveillance Group on Diseases and Infections of Animals** co-ordinates the UK's Agriculture Departments' and the FSA programmes of surveillance of animal health and welfare on farms, including pathogens of both animal and human health significance. Details of the work of the group can be viewed at:

<http://www.defra.gov.uk/animalh/diseases/vetsurveillance/sgdia/index.htm>

The **United Kingdom Zoonoses Group** brings together those in government with an interest and role in the assessment and management of the risks from zoonoses and zoonotic agents. Details of the work of the group can be viewed at:

<http://www.defra.gov.uk/animalh/diseases/zoonoses/ukzg/index.htm>

The **Advisory Committee on Dangerous Pathogens** advises the Health and Safety Commission, the Health and Safety Executive, Health and Agriculture Ministers and their counterparts under devolution in Scotland, Wales and Northern Ireland, as required, on all aspects of hazards and risks to workers and others from exposure to pathogens. Details of the work of this Committee can be found at: <http://www.advisorybodies.doh.gov.uk/acdp/index.htm>

## Wildlife Health

**Objective: to protect human health and animal health, to reduce the risks of the introduction, emergence and spread of new diseases and to protect biodiversity and threatened species.**

### Wildlife Health Strategy

The Wildlife Health Strategy has been developed through extensive consultation both within government and with external stakeholders. An initial governmental scoping workshop identified the key focus areas that should form the basis of the proposed strategy. From this, a project board with representation from core Defra, executive agencies and stakeholder organisations was formed to direct strategy development.

Numerous meetings between the strategy team and individual government departments, agencies, non-governmental public bodies and wildlife organisations were held to obtain advice and input on specific and specialised issues. The outcomes of these meetings provided the basis to a public consultation which was issued on the 15th July 2007. This document sought to gather the opinions of stakeholders on a range of actions which were proposed to implement the strategy.

49 responses were received from a range of stakeholders including the major countryside, farming and wildlife organisations. A summary of the responses will be published early in 2008. Please visit: <http://www.defra.gov.uk/corporate/consult/wildlifehealth-strategy/> for further information on the consultation. Please also visit: <http://www.defra.gov.uk/animalh/diseases/vetsurveillance/species/wildlife/index.htm> for background information on the Wildlife Health Strategy.

### Foresight Initiative Workshop

The Office of Science and Innovation co-ordinates and develops good practice on how Government should seek and use scientific advice in policy making, the presentation of that advice and decisions based on it. They facilitate cross governmental working so that a strategic approach is ensured.

The Foresight Project on Detection and Identification of Infectious Diseases (DIID) was initiated in 2006 and aims to take a challenging view of future disease risk and its implications for policy making and research. Its report highlights wildlife as a major potential source of future disease risk, about which we know comparatively little.

The Wildlife Health Strategy team held a joint workshops with the Foresight Programme in June 2007 to focus on the wildlife role in disease in kept animals and humans. This meeting, attended by 35 leading scientists, investigated the application of innovative science to wildlife health policy. Please visit: <http://www.defra.gov.uk/animalh/diseases/vetsurveillance/species/wildlife/foresight.htm> for further information on the Foresight Initiative Workshop.

## Amphibian Health



Diseases of amphibians are becoming increasingly important both in terms of aquatic animal health policy and biodiversity policy. Chytridiomycosis, caused by the chytrid fungus *Batrachochytrium dendrobatidis* has been identified as the cause of the largest mass extinction of amphibian species ever recorded. Natural England is undertaking small scale control and surveillance projects in order to develop an evidence base for the impact of this disease on biodiversity. A group of Defra policy leads, agency staff and stakeholder experts in amphibian health have met on two occasions in order to share current scientific evidence, assist in design and implementation of the research and management projects being undertaken by Natural England on Chytridiomycosis and ensure all interested parties are working co-operatively.

It is proposed that due to the increasing importance nationally and internationally of this area of work and the success that these initial informal meetings have had in facilitating information dissemination, stakeholder engagement and cross governmental co-operation, this group will be formalised in 2008.

Alison Peel, an MSc Student studying Wild Animal Health, was commissioned to produce an import risk assessment for chytridiomycosis in amphibians which will be used to guide policy development for this disease.

## Notifiable Disease Outbreak Support

The wildlife veterinary adviser provided technical advice and support and acted as a coordination point for wildlife issues during the outbreaks during the year. Management of wildlife carcasses, sourcing wildlife population information to rapidly describe wildlife presence and abundance in areas surrounding disease outbreaks and advising on potential surveillance methodology for wildlife species were key areas requiring advice during the 2007 outbreaks.

Examples of the issues handled include management of wildlife carcasses, sourcing wildlife population information to rapidly describe wildlife presence and abundance in areas surrounding disease outbreaks and advising on potential surveillance methodology for wildlife species.

## **Wildlife and Countryside Act Licensing**

Captive breeding, rehabilitation and release programs can potentially transfer pathogens into previously unexposed wild populations. A licensing system for the release of non-native species and species listed on Schedule 9 of the Wildlife and Countryside Act (1981) already exists. A veterinary disease risk assessment has been developed and implemented to ensure that potential disease risks are considered when licenses are issued under the Wildlife and Countryside Act (1981). This has been a joint initiative between Natural England and Defra.

## **Wild Boar Risk Assessment**

A veterinary risk assessment for exotic notifiable diseases in wild boar was commissioned by Defra's Wildlife Management team to contribute to the evidence base during development of policy regarding the management of free-ranging wild boar in England. This will be made available for wider use in 2008.

## **Contributing to Wildlife Health Veterinary Training**

Provision of expertise in wildlife health issues can only be provided if suitably trained individuals are available. Defra supports a Veterinary Residency Programme with the University of Cambridge and other partners, in Wildlife Disease Investigation. Defra also supports research projects undertaken by students studying for the Masters degree in Wild Animal Health run jointly by the Royal Veterinary College and Institute of Zoology and contributes to veterinary teaching in this field.

# Chapter 11

## Equine Health

**Objective: to achieve high standards of health and welfare of equines in Britain and to ensure that everyone responsible for equine health and welfare understands and fulfils their duty of care.**

The latest research estimates that the total number of horses, ponies and donkeys in Britain has now exceeded 1.3 million, including those privately owned as well as those in the care of industry professionals. The estimated private ownership population of 720,000 owners or primary carers, equates to 1.2% of the UK people population, with the majority of horses being used as pleasure animals.

This year saw a major milestone in equine matters with the publication of the Equine Health and Welfare Strategy document in March 2007. The text of this document is available on the Strategy website at: <http://www.equinehealthandwelfarestrategy.co.uk> .

The majority of GB's estimated 1.3 million horses, ponies and donkeys are used as pleasure animals



Developed by the whole of the equine industry, stakeholders, veterinary interests and government, the equine health and welfare strategy is a vision for the health of horses for the next 10 years. Its aim is to achieve high standards of health and welfare of horses throughout Great Britain. The strategy aims to ensure that everyone responsible for equine health and welfare understands and fulfils their duty of care for these animals. Horses and ponies in the UK are used mainly for sport and recreation and the use to which they are put determines the risks to which they are exposed. With the recent expansion of equine ownership, the strategy provides a timely framework to support private owners who may have less experience in equine care and management.

Under the strategy, Defra have a particular remit with other organisations to review, in the medium term, health and surveillance arrangements for endemic and exotic equine disease and to consider ways in which Britain can prepare itself for the economic implications of outbreaks of such infectious disease. This includes assessment of present contingency planning for notifiable equine diseases and vigilance for new and emerging threats to horse health and welfare in order to implement proactive or remedial action to reduce such threats. New areas must be identified that may require surveillance measures and any necessary review of legislation carried out to ensure it is up to date and has incorporated lessons learned from other new or similar disease threats in other species. For example the recent Bluetongue outbreak has highlighted the possibility of vector borne diseases which could affect equine species occurring in a more temperate UK climate.

## Equine Notifiable disease

As regards equine notifiable disease, 2007 was a quiet year. There was one confirmed case in May of the Contagious Equine Metritis Organism (CEMO). Once actually reported, outbreaks of this notifiable venereal disease are controlled by the industry itself following the guidelines drawn up and published by the Horserace Betting Levy Board (HBLB). This is a good example of Government and industry working together to solve health problems with cost and responsibility borne primarily by the industry.

There were no report cases of the other notifiable venereal disease, Equine Viral Arteritis, although some cases were identified in France – see Tripartite agreement on page 64.

There were three reported suspect cases of Glanders (*Pseudomonas mallei*). Two of these were identified by pre export testing in October and were negated quickly by further laboratory investigation. The other case was amongst a consignment of 36 donkeys imported in March from Romania. As repeated laboratory testing could not rule out the disease, the animal was slaughtered and subjected to intensive laboratory investigation before the suspect case was finally negated.

There was one report case of each African Horse Sickness, and Equine Infectious Anemia which were both negated on laboratory investigation. There was also one report case of suspected vesicular stomatitis in a donkey that was negated on clinical examination.

To update the STEED plan (Specified Type Equine Encephalitis Diseases) and in preparation for possible such new disease threats, these diseases have now been included in the Defra generic plans for emergency preparedness for exotic disease. Regular discussions have also started and are continuing with veterinary experts on awareness of, and preparations for, possible incursions of African Horse Sickness.

## Horse Passports, Equine Identification Proposal and the National Equine Database (NED)

The Core element of the National Equine Database (NED) continues to work well and supports the EU Horse Passport Legislation (200068EC), as well as contributing to the surveillance and control of exotic equine diseases. NED now holds over 1 millions records of which approximately 900,000 are considered to be extant passports.

Recently the British Equestrian Federation (BEF) has, on behalf of the equine industry, agreed to take over responsibility for completing the NED project which will involve the delivery of “NED Online”, a website containing horse performance and pedigree information to enable the improvement of the overall quality and competitiveness of horses in the UK.

The NED is an excellent example of Government and the Equine Industry working in partnership, to create a source of information that should enable the improvement in the overall quality and competitiveness of horses in the UK.

### **Tripartite agreement**

This agreement continues to work well with regular contact between the three parties concerned – France, Ireland and the United Kingdom. France kept the UK informed of two outbreaks of equine infectious anaemia during the year and also of some cases of equine viral arteritis that is controlled in France, as in the UK, by the industry itself. There was little or no significant effect on movement of horses between UK and France on account of these outbreaks. There was no recurrence in 2007 of the previous year's outbreak of equine infectious anaemia in Ireland and no other notifiable equine diseases there were notified to Defra.

### **General**

The outbreak of FMD in Surrey did have some initial effect under the EU safeguard legislation on export horse movements from the UK overall, but these restrictions were removed by amendments to the safeguard measures at the first revision of the safeguard measure in the course of the outbreak. Clear guidance for horse owners on the movements that they could and could not undertake with their animals was posted on the Defra website early in the outbreak.

### **Surveillance**

#### **Quarterly Equine Disease Surveillance Reports**

As part of the UK Veterinary Surveillance Strategy to enhance veterinary surveillance, the species-specific quarterly surveillance reports published by the VLA and the Scottish Agricultural College were extended to include a quarterly equine disease surveillance report.

The Equine Surveillance Reports are a combined initiative between Defra, the Animal Health Trust (AHT) and the British Equine Veterinary Association (BEVA). The reports are an important step towards improving equine disease surveillance by collecting equine disease data arising from a broad network of different laboratories, specialist equine practices and veterinary schools throughout the UK. The information received is collated by the AHT. This allows a unique insight into equine disease occurrence on a national scale. These reports are a clear example of how working in partnership to achieve common goals can and does work.

The reports continued to be produced in 2007 and are published in the Veterinary Record in addition to the web sites of the AHT, Defra and BEVA. The number of contributors to the reports has expanded and the recipient list for electronic notification of the latest publication is now international.

The reports published in 2007 can be accessed at:

<http://www.defra.gov.uk/animalh/diseases/vetsurveillance/vsinfo.htm#who>

## Animal Health and Welfare Research

**Objective: To support and fund research either wholly or in collaboration with others to provide scientific information and advice that is used in developing sound evidence-based policies in line with the objectives of the Animal health and Welfare Strategy.**

The allocations of research funding within various programmes for the financial year 2007/08 are listed in Table 3. Further details of the wide range of animal health and welfare research projects funded by Defra can be found at: <http://randd.defra.gov.uk/>

### Progress in 2007

#### Key developments

Defra funds a wide-ranging programme of animal health and welfare research and it is not possible to describe all the areas that are being supported but a number of key developments are:

- Increased concern is being expressed at the continued spread of Bluetongue in Europe. In a project jointly funded by Biotechnology and Biological Sciences Research Council (BBSRC) and Defra, valuable information is being gained on the epidemiology of the infection and the role of the local species of *Culicoides* midges that transmit the disease. A collaborative project between the Met Office and the Institute for Animal Health has developed a predictive model that is being used in informing Defra of climate conditions that favour the wind-borne spread of *Culicoides*.
- With the spread of AI in the world, there continues to be a substantial investment in research aimed at developing better approaches to the prevention, detection and control of infection and gaining a better understanding of the epidemiology of the disease. The VLA are playing a key role in this expanded research programme.
- Recently, different forms of BSE in cattle have been recognised world-wide and the first case of H-type BSE was identified in a Defra-funded research project and subsequently published in June 2007. These hitherto unrecognised forms of BSE have been shown to be transmissible to cattle and mice in European laboratories and a study to examine their behaviour in sheep is under negotiation for Defra funding.
- A Europe-wide study to investigate the influence of prion protein genetics on the susceptibility of goats to scrapie and BSE has started.
- Initial findings from a long-term research project indicate that classical scrapie may be naturally transmitted from ewes to their lambs via milk.
- A novel method to assess animal welfare through qualitative, 'whole animal' assessment was validated in collaboration with the Animal Health. This potentially provides an approach which can be utilised during on farm welfare inspections.
- Research was commissioned into the development of a cost-effective, automated, early lameness detection for cattle. Lameness is one of the main animal welfare problems in the dairy industry.

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- We continue to invest in a significant programme of bovine TB research of which a major component is development of vaccines for use in badgers and cattle. In parallel with this, work is in place to develop improved diagnostics for the disease including means to differentiate infected from vaccinated animals. The development of a vaccine is a long term aim, but Defra expects that it will one day form an important part of a balanced package of measures to control bovine TB.

### Collaborative Working

Progress has been made in forging closer links with industry, other stakeholders and other funders in order to ensure best use of research funds.

The partnership principles have led to improved industry focus on research on non-statutory diseases through the Poultry Disease Research Advisory Group and the British Pig Executive. Improved collaboration with other UK research funders, including DFID, Scottish Government, DARD, WAG, BBSRC and Wellcome Trust is provided through the Animal Diseases Research Funders Forum. In addition, over the past year, four animal health and welfare projects submitted to the BBSRC under the Responsive Mode system were identified for joint support under the Government Partnership Award Scheme.

The Defra-coordinated Collaborative Working Group (CWG) on Animal Health and Welfare, under the EU Standing Committee on Agriculture Research, which is concerned with improved collaboration on animal health and welfare research across EU Member States and Associated Member States, continued to develop with the expansion of activities and the participation of more countries. Defra led the bid by CWG members in response to the EU Framework Programme 7 call for proposals for the establishment of a funder's network (an ERA-NET) on infectious diseases of livestock. This proposal, involving 26 funding organisations in 19 countries with a combined research budget in the region of 250 million euros for research on animal health and welfare, has been strongly recommended for funding.

### Programme reviews and workshops

A review of TSE research funded by Defra during the 4 year period from 2003-2006 was held at the end of January 2007 and the report published at the end of March 2007

[http://www.defra.gov.uk/science/publications/tse\\_review.htm](http://www.defra.gov.uk/science/publications/tse_review.htm) . A supplementary review to examine the Defra's spend on resources to support research (sheep flocks and the VLA Tissue Archive) was held in November 2007.

Defra continues to work closely with the other funders of TSE research in the UK and a joint workshop was held in December 2007 to explore the status of research investigating the fundamental question of the relationship between the abnormal forms of the prion protein that are used as markers in current diagnostic tests with the presence of TSE infectivity.

A review was also carried out of the Statutory and Exotic Diseases research that had been funded from 2003 to 2007. The report of this review will be available shortly.

All research commissioned by Defra in the last five years into the welfare of farmed fish was reviewed in November 2007. The outcome of this will be used to inform policy and direct research in this area in the future.

## Looking to the future

The steady decline in the proportion of Defra's research budget allocated to work on TSEs is being managed to minimise the impact on key research teams and to maintain the UK's global reputation as a source of TSE expertise.

Table 3: Funding levels for research programmes for the financial year 2007/2008

<b>Veterinary Science Programme</b>	<b>Includes research on</b>	<b>Allocation for 2007/08 (£'000s)</b>
Statutory and exotic diseases	Bovine tuberculosis	6,000
	Foot and mouth disease	2,880
	Swine fever	750
	Rabies (and related viruses)	600
	Brucellosis	300
	Influenza and Newcastle disease	870
	New and emerging diseases	300
	Bluetongue (and related viruses)	700
	Others	1,100
Veterinary Training and Research Initiative		2,100
Zoonoses	Salmonellosis	1,450
	Campylobacteriosis	980
	Others	160
Endemic diseases and alternatives to pharmaceutical control	Bovine mastitis	110
	Non-statutory viral disease	910
	Non-statutory parasitic disease	610
	Antimicrobial resistance	710
	Others	200
Transmissible spongiform encephalopathies (TSE's)	Sheep TSEs	7,460
	Diagnostics	2,340
	BSE and animal by-products	1,620
Veterinary medicine	Veterinary medicine	2,000
Animal Welfare	On-farm	1,850
	Slaughter	660
	Transport	650
	Others	190
Fish Health	Fish health	1600
<b>Total</b>		<b>39,100</b>

## Farm Health Planning

**Objective: to work in partnership with industry to facilitate a clearer understanding, and implementation, of good practice in farm health planning.**

*The Farm Health Planning (FHP) project is a key initiative of the Animal Health and Welfare Strategy in putting into action "Prevention is better than cure". Defra has been working to facilitate industry to develop and deliver mechanisms to encourage greater uptake and better use of FHP and to capitalise on existing achievements. The partnership aims to encourage a culture of active farm health planning and a better understanding of the costs and benefits.*

### Progress in 2007

#### Farm Health Planning in England

During 2007, we have built on the achievements of 2006, and implemented each of the programmes of change initiatives developed by each sector partnership. Each sector's approach was tailored to the issues on FHP that concerned them the most and was delivered in the most appropriate way. A common theme amongst all the programmes was helping farmers and advisers work more closely together to put FHP into practice, and this includes the development of case studies, advocates and communicating about FHP more widely by bringing people together and giving them the opportunity to share their experiences.

FHP in the cattle sector encourages the involvement of the vet as part of the farm management team



The response to the initiatives has been very good and, even with some meetings and farm walks postponed during the disease outbreaks, very good progress has been made. To assist in delivery of the initiatives, Defra seconded a number of staff to key stakeholder organisations to help take the initiatives forward as part of their own delivery programmes. The secondees have been working throughout the year to co-ordinate the initiatives in the sheep, cattle and pig sectors.

Defra has also been working to identify communications opportunities throughout the year to raise the profile of FHP and has participated, with our industry partners, at a number of events. We have worked closely with the farming press and FHP has received substantial coverage during 2007.

### The Cattle Initiative

Defra is funding 27 interlinked projects in the Cattle Initiative using partnership working to widen awareness of the costs and benefits of putting FHP into action, and to emphasise that prevention is better than cure. The projects are using the FHP tools developed for industry and are generating a network of FHP champions.

The Cattle Initiative is assisting the livestock industry to help as many livestock keepers as possible use FHP. Some of the achievements of the Initiative in 2007, which will continue to run during the first part of 2008, include:

- Over 400 regional workshops and meetings will have been held during the life of the Initiative. Demonstration farms are being set up together with other opportunities for bringing people together and working through shared experience
- 2,100 farms will have received advisory visits/design of individual action plans to address problems
- Promotion of farmer champions and developing over 60 case studies
- Disease testing, data collection and benchmarking are features of many projects
- Building on existing farmer and vet networks or establishing new ones
- The British Cattle Veterinary Association is running veterinary training events as part of the Initiative, addressing herd health management, farm biosecurity, and new health planning tools. Each vet trained under the course will then use this knowledge and implement health planning techniques on a further ten farms. The feedback from veterinarians has been extremely positive and farmer uptake is increasing.
- Liverpool and Bristol veterinary departments have run two veterinary facilitation training events under the Initiative. Each trained vet then works with a small group of up to 8 farmers to address health issues on farm.

Most of the projects are led by independent private veterinary practices working in collaboration. Overall 95 veterinary practices are involved across England. Two projects are managed by veterinary associations, one by producers, one by agricultural consultants and one by a breed society.

Farm Health Planning discussions on pig units can be carried out as part of the routine 3-monthly veterinary visits



### Pig projects

A pilot project on the use of IT based farm health plans in the pig sector has been running during 2007, the results of which are due in early 2008. During the project a new, interactive health plan has been designed and tested, which will simplify the health planning process, provide a variety of background information and will allow health planning to be tailored to individual needs. Defra also worked with the British Pig Executive to design

and commission a research project which has so far established 21 veterinary-led producer self-help groups. The groups are looking at various elements of the health planning process and, in particular, the value to producers of understanding the different kinds of information available to them on the disease status of their animals. These groups are driven by the needs of the producers and provide a forum for discussion and the sharing and development of new ideas. The groups also provide a means to finding solutions for problems and enable farmers to meet targets identified under individual farm health plans.

For those who keep pigs on a smaller scale or for hobby purposes, the British Pig Association, funded by Defra, ran a successful series of regional workshops on FHP looking at how health planning can be applied to this kind of animal keeping. A template for a pig health plan was made available. Attendees will be surveyed during early 2008 to establish uptake and usage of FHP.

### The Sheep Campaign

A Sheep Farm Health Planning communications initiative was launched in June 2007. The campaign stresses the need to take a long term view of health and welfare. It encourages farmers to contact a vet or adviser to go through a three stage process (measuring existing performance; managing the health planning process and its implementation; and monitoring ongoing progress adapting health plans in the light of experience). The initiative steering group, comprising farmers, vets, advisers and sheep organisation representatives, has identified the most important areas of husbandry to consider in sheep health planning. A series of information

A sheep flock health plan is a product of an active planning process with health professionals



leaflets and press features have been published which provide examples of successful farmer implementation of elements of the FHP process. Accurate data collation on the health and disease status of flocks, to enable health planning from a sound information base on a specific farm, has been addressed by contributing to a yearly sheep planner/diary recording system made available by industry to sheep farmers.

Demonstration of best practice was the subject of a Defra funded sheep FHP pilot project running throughout the calendar year amongst representatives of the majority of sheep farming types in England. Use of cost benefit models on disease control and treatment as well as financial modelling tools have been covered in a series of open farmer meetings tracking the progress of the pilot project. The project report, due in early 2008, will aim to analyse the cost benefits to each enterprise of adopting proactive health planning so that this information can be used to promote these farms as champions. Defra also supported innovation and best practice in the sheep sector by sponsoring the Farmers Weekly 2007 Sheep Farmer of the Year award which was presented by Lord Rooker.



### The Visual Identity

In considering how best to refresh the view of FHP, industry groups advised that a distinct visual identity was needed to draw together the common strands of information on FHP and to make it instantly recognisable. The new visual identity was developed with industry and is now being used widely throughout the initiatives. To make it as easy as possible to use we developed a 'Partner's Pack' containing adaptable formats for things such as information sheets, handout leaflets or show stands. The Partner's Pack has been distributed as a CD-Rom to all members of the partnership and it has already become recognised widely.

### Evidence baseline project

In order to gather information on how FHP is currently used, Defra commissioned an Independent Evidence Baseline study. This looked at a cross section of the livestock sectors and small, medium and large-scale livestock keepers. Together with information from existing surveys, this baseline will provide key information to allow us to track and measure changes in the way that FHP is used. The report will be published in early 2008.

We have also developed a **FHP website**, [www.defra.gov.uk/fhp](http://www.defra.gov.uk/fhp), which contains further information on the partnerships and gives access to the various free tools which have been developed to support the initiatives. This includes wall-planners, farm-level cost-benefit models, case studies and a diary of events. The website provides a summary of activities in each sector and links to partner organisations.

### Farm Health Planning in Scotland

Through the Scottish Rural Development Programme, the Scottish Government has continued to support the development and implementation of individual Animal Health and Welfare Management Programmes. A particular innovation in 2007 was the launch of the IT system developed by the Scottish Government to support the recording and analysis of benchmarking information for specified Animal Health and Welfare conditions. More information can be obtained at: <http://www.scotland.gov.uk/Topics/Agriculture/grants/Schemes/LMCMS/Options/AHWMManagement/Intro>

### Farm Health Planning in Wales

#### Progress in 2007:

- Sector specific health planning templates for dairy, beef and sheep sectors have been printed and are now available free of charge to industry. The Welsh Assembly Farm Liaison Service became involved in raising awareness and have started to promote and distribute the plans at agricultural shows and demonstration farm open days.

## Chapter 13

- Three veterinary training events were organised by the Welsh Assembly Government to raise awareness of animal health planning principles and raise awareness of the planning documents. Feedback from veterinarians was positive and uptake is steadily increasing.
- Twelve case studies, highlighting the benefits of health planning in practical circumstances were commissioned by the Welsh Assembly Government and completed by the Farming Connect development centres.
- Reports suggest that Animal Health Planning is well integrated on some farms, mainly those that participate in farm assurance schemes. Welsh Lamb and Beef Promotions Ltd have continued to promote the farmer/vet relationship by the provision of Objective 1 support from the Welsh European Funding Office for members of its Farm Assured Welsh Livestock scheme in qualifying areas in order to facilitate animal health planning in line with the agreed principles of the Welsh AHWS.

## Aquatic Health

**Objective: to reduce likelihood and impact aquatic animal disease by raising the standards of aquaculture health and containing the risk of serious disease.**

The UK has a long history of rigorous aquatic animal disease controls and, as a result, has enjoyed a high standard of fish and shellfish health. This has benefited our indigenous fish and shellfish stocks, and has helped to create the conditions in which our aquaculture industry can develop and thrive, and in which freshwater fisheries can flourish. It is estimated that the 4 million regular recreational anglers generate economic activity worth £3 billion per year in the pursuit of their sport. While on the farming side salmon production alone in Scotland is worth £280 million pounds a year in sales and is a key industry in the Scottish highlands.

The UK currently enjoys freedom from a number of serious, controlled diseases, which have the potential to severely damage, or in some cases completely destroy fish stocks, which are otherwise prevalent in the European Community and elsewhere in the world. The UK is committed to maintaining, protecting and, where possible, enhancing this status, and thereby safeguarding the interests of the anglers and the aquaculture industries which draw benefit from it.

Since 1993 many of our national disease control measures have been subject to the EU single market fish health regime. This sets firm rules which must be applied throughout the Community to safeguard areas of proven health status. Rules are based on import controls and disease containment measures. Imports to the UK may only come from areas of the EU which have a health status at least as high as our own. The same principle will continue to apply when the new aquatic animal regime, under Directive 2006/88 (discussed below), is brought into effect in August 2008.

### Major Fish Disease Issues in 2007

The UK was particularly concerned with two fish diseases during 2007. Following the outbreak of the fish disease Viral Haemorrhagic Septicaemia in Spring 2006, the European Commission suspended our approved zone status for this disease, however, as explained below, good progress is being made in regaining this status. The UK, also in 2007, for the first time introduced statutory control on Koi Herpesvirus disease.

### Approved Programme To Regain Viral Haemorrhagic Septicaemia-Free Status For The Entire Territory Of GB

Following the 2006 outbreak of Viral Haemorrhagic Septicaemia (VHS) disease in a trout farm in North Yorkshire, the National Control Centre for VHS at Centre for

Cull of Rainbow trout after an outbreak of VHS



Environment, Fisheries and Aquaculture (CEFAS), Weymouth completed two epidemiological reports on investigations into possible spread of the disease and the likely source of the outbreak. Defra submitted these to the European Commission, the first in March 2007 and the second in November 2007 they are available at: <http://www.efishbusiness.co.uk/news/>

The UK's application for a programme to regain VHS-free approved zone status in respect of the VHS eradication area (the catchments of the rivers Nidd, Ure and Swale as well as the river Ouse) was approved by the EU in Commission Decision 2007/570/EC. The programme, which began in October 2006, requires 2 years of inspection and testing in accordance with Article 49 Of Directive 2006/88 (the new Aquatic Animal Health Directive). If all tests prove negative for VHS virus by October 2008 and all other requirements of the programme have been met, the UK will make application for that area of North Yorkshire to rejoin the VHS-free approved zone for GB.

### The Statutory Control Of Koi Herpesvirus (KHV) Disease: A Joint Government/Industry Approach

Koi Herpesvirus (KHV) is a highly virulent disease posing a serious disease threat to native carp populations in the UK. In April 2007 Koi Herpesvirus (KHV) Disease was made a notifiable disease in England and Wales. This disease was first isolated in England in 2000 in imported koi carp, and has subsequently emerged as a significant and economically important cause of mortality in ornamental carp, and in common carp in managed fisheries and in the wild.

Koi carp. Carp on left is infected with KHV, this can sometimes cause recessed eyes



Following extensive consultation, organisations participating in the Fish Welfare Group representing ornamental, fish farming, fish supply, fishery management and angling sectors have worked closely with government to develop a partnership approach to the control of outbreaks of KHV Disease.

Under the new statutory control arrangements, the Fish Health Inspectorate of Cefas investigate reports of suspicion of clinical infection of KHV Disease. Where disease is confirmed the affected site is identified and the fish stocks placed under movement controls, thereby enabling the industry to take precautions to reduce the risk of further spread.

The industry sectors concerned have developed guidance notes and codes of practice on the risks posed to businesses and to fish in the wild from KHV disease, as well as the means of mitigating those risks through robust biosecurity. This is the first example of a joint Government/industry approach to the control of an aquatic animal disease.

### Council Directive 2006/88 on Aquatic Animal Health<sup>24</sup>

This Directive was adopted on 24 October 2006. It will replace the current EU regime.

The aim is to raise standards of aquaculture health and contain the risk of serious disease, finding the right balance between freedom for enterprise and regulation to control pathogens.

'Aquatic animals' means fish, molluscs and crustaceans. It does not extend to any other animals. The primary focus of the Directive is on aquaculture (that is, fish and shellfish farming). It also contains important provisions relating to aquatic animals for angling, ornamental purposes, and in the wild. Aquatic animals caught for the purposes of production of fishmeal, fish feed, fish oil and similar products are outside the scope of the Directive.

Compared with the current regime, there are new obligations placed on both the private and government sectors and a broader range of businesses and people affected. An important new provision is that all aquaculture production businesses will need to be authorised by the Competent Authority, in this case, the Fish Health Inspectorate. In a similar way to the current regime, outbreaks of some specified diseases must be controlled by government.

Consultations began in December 2007 on implementation in England and Wales and in Scotland. A consultation is also being taken forward in Northern Ireland. Under the Directive, the implementing regulations should be made by May 2008 and should come into force by August 2008.

<sup>24</sup> Council Directive 2006/88/EC on animal health requirements for aquaculture animals and products thereof, and on the prevention and control of certain diseases in aquatic animals (L 328); and Corrigendum (L 140)

# Appendix A

**Table 1: GB Exotic Notifiable Disease Investigations 2007**  
Confirmed investigations (final positive result)

Disease	Month investigated											
	Jan	Feb	Mar	April	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Foot and Mouth Disease									2	6		
Notifiable Avian Disease			1			1	1					2
Bluetongue									16	45	5	1
Rabies								1				
Contagious Equine Metritis						1						

**Table 2: GB 2007 Negative Exotic Disease Investigations**

Disease	Month investigated											
	Jan	Feb	Mar	April	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
African Horse Sickness											1	
Anthrax			1	2			1					
Aujeszky's Disease							1					
Notifiable Avian Disease	3	5	3	10	17	15	12	7	3	3	18	10
Bluetongue					1	4	7	6	40	116	49	10
Classical swine fever		1				1			1	2		
Equine Infectious Anaemia										1		
Foot and Mouth Disease		1	1		2			87	88	39	3	2
Glanders			1							2		
Rabies		1	1	3	5	9	5	2				
Swine Vesicular Disease	1						1		2			
Vesicular Stomatitis											1	
<b>Total</b>	<b>4</b>	<b>8</b>	<b>7</b>	<b>16</b>	<b>24</b>	<b>29</b>	<b>28</b>	<b>102</b>	<b>134</b>	<b>163</b>	<b>72</b>	<b>22</b>

**Table 3: GB 2007 Endemic Disease**

Disease	Confirmed Cases in 2007
BSE	53
Classical Scrapie	31 (11 passive, 20 active)
Atypical Scrapie	29 (1 passive, 28 active)

## Abbreviations and acronyms

### A

ABP	Animal By Products
ACMSF	Advisory Committee on the Microbiological Safety of Food
AHT	Animal Health Trust
AHWS	Animal Health and Welfare Strategy
AI	Avian Influenza
ARHAI	Antimicrobial Resistance and Healthcare Associated Infections

### B

BARB	Born After the Reinforced Ban
BBSRC	Biotechnology and Biological Sciences Research Council
BCG	bacille Calmet-Guérin
BCVA	British Cattle Veterinary Association
BEF	British Equine Federation
BEVA	British Equine Veterinary Association
BSE	Bovine Spongiform Encephalopathy
BT	Bluetongue
bTB	Bovine Tuberculosis
BVD	Bovine Viral Diarrhoea

### C

Cefas	Centre for Environment, Fisheries and Aquaculture Science
CEMO	Contagious Equine Metritis Organism
CLA	Country Land and Business Association
CoE	Council of Europe
CSA	Chief Scientific Advisor
CTS	Cattle Tracing System
CVO	Chief Veterinary Officer
CWD	Chronic wasting disease
CWG	Collaborative Working Group

## Appendix B

### D

DA's	Devolved Administrations
DARC	Defra's Antimicrobial Resistance Co-ordination group
DARD	Department of Agriculture and Rural Development
Defra	Department of Environment, Food and Rural Affairs
DIID	Detection and Identification of Infectious Diseases

### E

EBL	Enzootic Bovine Leukosis
EC	European Commission
ECUG	Export Certification User Group
EFSA	European Food Safety Authority
EHC	Export Health Certificate
EID	Electronic Identification
EIG	England Implementation Group
EPIC	Excellence in Epidemiology
EU	European Union

### F

FAWC	Farm Animal Welfare Council
FHP	Farm Health Planning
FMD	Foot and Mouth Disease
FSA	Food Standards Agency
FVO	Food and Veterinary Office

### G

GB	Great Britain
g-IFN	Gamma interferon blood test

### H

HBLB	Horserace Betting Levy Board
HCC	Hybu Cig Cymru
HSE	Health and Safety Executive
HMRC	Her Majesty's Revenue and Customs
HPAI	Highly Pathogenic Avian Influenza

### I

IAH	Institute of Animal Health
IDMU	International Disease Monitoring Unit
IP	Infected Premises
ISG	Independent Scientific Group

### L

LACORS	Local Authorities Coordinators of Regulatory Services
LPAI	Low Pathogenic Avian Influenza
LMU	Livestock Movement Units

### M

MHS	Meat Hygiene Service
MRSA	Methicillin-Resistant <i>Staphylococcus aureus</i>

### N

NED	National Equine Database
NFU	National Farmers' Union
NFU (S)	National Farmers' Union Scotland
NFU (C)	National Farmers' Union Cymru
NIAPA	Northern Ireland Agricultural Producers Association
NSA	National Sheep Association
NSP	National Scrapie Plan

## Appendix B

### O

OCDS	Older Cattle Disposal Scheme
OIE	World Organisation for Animal Health

### P

PCR	Polymerase Chain Reaction
PSA	Public Service Agreement
PZ	Protection Zone

### R

RADAR	Rapid Analysis and Detection of Animal-related Risks
RCVS	Royal College of Veterinary Surgeons
RPA	Rural Payments Agency

### S

SCoFAH	Standing Committee of the Food Chain and Animal Health
SCOPS	Sustainable Control of Parasites in Sheep
SLA	Service Level Agreements
SRM	Specified Risk Material
SRPBA	Scottish Rural Property and Business Association
STEED	Specified Type Equine Encephalitis Diseases
SZ	Surveillance Zone

### T

TAP	Treaty for Animal Protection
TSE	Transmissible Spongiform Encephalopathy

### U

UFU	Ulster Farmers' Union
UK	United Kingdom

### **V**

vCJD	Variant Creutzfeldt-Jakob Disease
VHS	Viral Haemorrhagic Septicaemia
VLA	Veterinary Laboratories Agency
VMD	Veterinary Medicines Directorate

### **W**

WAG	Welsh Assembly Government
WEGS II	Welsh Ewe Genotyping Scheme II
WTO	World Trade Organisation