



Foot and Mouth Disease Review (Scotland) 2007



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JIM SCUDAMORE AND JOHN ROSS

**Presented to the Cabinet Secretary
for Rural Affairs and Environment**

June 2008

Review of the Scottish Response to the 2007 Foot and Mouth Outbreaks

FOREWORD BY RICHARD LOCHHEAD	v
EXECUTIVE SUMMARY	vii
SUMMARY OF RECOMMENDATIONS	xiii
CHAPTERS	
1. Introduction	1
2. Scottish Livestock Industry and Trade	5
3. Regionalisation	19
4. Disease Strategy and Movement Controls	36
5. Scientific and Veterinary Advice	51
6. Liaison with Governments and the EU	61
7. Communication with Stakeholders	77
8. Co-ordination with Delivery Agents	83
9. Contingency Planning	91
APPENDICES	
Appendix 1: Oral and Written Evidence Submitted to the Review	101
Appendix 2: Additional Stakeholder Views	104
Appendix 3: FMD Outbreaks 2007	106
Appendix 4: Extracts from the SAC and EPIC Reports.	107
Appendix 5: Regionalisation and International Organisations.	116
Appendix 6: Centre of Excellence in Epidemiology, Population Health and Infectious Disease Control	121
Appendix 7: Glossary	122
Appendix 8: References	124

FOREWORD BY RICHARD LOCHHEAD

The Foot and Mouth Disease outbreaks of 2007 did not see virus reach Scotland but the effects were felt only too keenly throughout the whole country by farmers, crofters and the red meat supply chain. Those whose normal business practices had to be put in hold, or in many cases curtailed, until the disease situation allowed for a safe return to normality experienced significant disruption.



It is clear that all steps must be taken to ensure any future disease-related disruption can be kept to the absolute minimum and that all practicable measures to facilitate this are applied. The lessons learned from the outbreaks of 2001 undoubtedly helped to ensure a swift response when dealing with the outbreaks last summer and allowed for disease to be contained to just one section of Great Britain. I thank all who worked hard and co-operated without hesitation to ensure that Scotland's livestock remained disease free. This period of uncertainty was handled impressively by all involved. I was satisfied that the response in Scotland was timely and robust and was endlessly impressed by the fortitude shown by Scotland's farming community during this frustrating and difficult time.

Looking to the future, I commissioned Professor Jim Scudamore to lead this review into Scotland's handling of the outbreak, beginning work immediately after disease freedom had been reclaimed. Jim brought with him a wealth of experience and local knowledge having been CVO UK during the 2001 outbreaks and also having served in Scotland as CVO. I was delighted he agreed to undertake what is a substantial, and I believe, an extremely valuable piece of work.

The findings of this review are vital as we continue to work to increase Scotland's preparedness for dealing with possible future disease outbreaks. It is my commitment that the recommendations made in this review will be given the full attention of the Scottish Government, in partnership as appropriate with counterparts in the other UK Administrations and in Brussels. Our Scottish stakeholders are key to this process, to foster new levels of co-operation and preparedness, find new and better ways of working on all of the key issues identified and ensure that improvements in preparing for and responding to disease can be brought to fruition wherever there is an opportunity to do so.

Finally, I record my thanks to Professor Jim Scudamore in producing this review and also to John Ross, Chairman of the Moredun Foundation who was invaluable when meeting with stakeholder organisations from all over Scotland as part of the crucial evidence gathering phase of the review and also in providing ongoing advice and input to the review team.

Richard Lochhead

EXECUTIVE SUMMARY

1. The Foot and Mouth Disease (FMD) outbreaks in Surrey during August and September 2007 occurred at the worst time of year for the Scottish Agriculture Industry. The safeguards put in place to halt potential disease spread caused major disruption to the movement and sale of cattle and sheep and to the exports of light lamb, all of which normally occur during this period. The impact of FMD outbreaks around 500 kilometres from the Scottish border was perceived by many as being disproportionate to the problem, especially during the second phase of disease in September 2007.

2. This study was commissioned by the Cabinet Secretary for Rural Affairs and Environment to review the Scottish response to the FMD outbreaks in 2007 and to identify lessons learned for the future, particularly in terms of reducing the risk to Scotland and the associated economic disruption.

3. The review found that there was widespread agreement that the Scottish Government handled the outbreak well and that their actions were in the best interests of the Scottish industry to ensure the return to normal conditions as quickly as possible. The dedication of staff in the Scottish Government and all the delivery partners who worked hard to minimise the impact in Scotland must be recognised.

4. Equally, the vital role played by all stakeholders in attending meetings often at short notice, contributing to the discussions with government officials, providing their expertise and communicating with their members cannot be underestimated. The Scottish agricultural community as a whole should be commended for their role during this difficult period in working with government to reduce the risk to Scotland of disease incursion and spread.

5. This review deals with the overall Scottish response to the outbreak and identifies a number of areas where improvements can be made. Chapter 2 provides the backdrop and contains information on the present structure of the Scottish livestock and meat industry along with details on the movements of livestock into, within and out of Scotland. The factors which contribute to the economic impact of the outbreak are also identified.

6. The review concludes that Scotland remains part of the single Great Britain (GB) epidemiological unit, a view endorsed by the majority of Scottish stakeholders. The structure of the industry and trade patterns confirms that Scottish agriculture is closely integrated into the United Kingdom (UK) economy and cannot be seen as a separate entity. This involves movements of animal products for processing and packaging elsewhere in GB with the return of the products to Scotland for retail. At present processors and multiple retailers operate integrated systems with centralised processing and packaging and in many cases dispatch their products throughout the UK from a single UK distribution centre. Any disruption to the supply chain can have a major impact on Scottish producers and supply to Scottish retailers.

7. Avoiding an export ban and reducing the effects of the national movement ban are the most effective ways of reducing the impact of an FMD outbreak. To avoid the export ban Scotland would have had to be treated differently to the rest of GB. This is unrealistic at present due to capacity constraints on slaughter, processing and packaging in Scotland and the complexity and levels of integration of the supply chains. Unless there is a change in the trading patterns within GB it is difficult to envisage how many of the potential options for regionalisation of Scotland would be economically viable or practical to administer.

8. Regionalisation was recognised as important from the outset of the outbreak and is discussed in detail in Chapter 3. There was general confusion over the concept with an absence of basic factual or economic information on the impact of regionalisation. Consequently it was difficult for the Scottish Government and stakeholders to evaluate the most effective options to provide the best outcomes for the Scottish industry. The European Commission (the Commission) reacted quickly in lifting restrictions on animals and animal products in August and again for animal products in October. This eliminated the demands from producers for a specific Scottish regional approach although there were renewed calls for this approach in September when it seemed that FMD was confined to Surrey.

9. Regionalisation must be clearly defined and all the implications understood before agreeing on such a policy in consultation with industry. A number of regionalisation scenarios need to be developed which involve the whole of the supply chain from producer to retailer. Cost/benefit analysis, full economic impact and veterinary risk assessments for each of the scenarios would be essential in order to build the requisite evidence base. This would enable the Scottish Government and stakeholders to evaluate the options and to agree a clear policy on regionalisation in the event of a future FMD outbreak. Such an approach could be applied to other regions of the UK/GB.

10. The long term objective in any FMD outbreak is to return GB to FMD free status as quickly as possible. In the shorter term the objective is to use regionalisation as a mechanism to minimise domestic disruption and allow as large a geographical area of GB as possible to return safely to normal trading. Dividing GB into different risk areas for national disease control purposes is one way in which the movement restrictions can be relaxed in a risk based manner.

11. The review is clear that the size and boundaries of initial and subsequent risk areas should be determined not only by the epidemiology of the disease but should also take into account economics of the industry, internal trade patterns, supply chain issues and welfare of the animals. Although a veterinary assessment could classify areas as low risk it may be necessary to retain them in a high risk category to minimise the disruption to trade etc. This was the case in 2007 when Scotland remained in a similar risk category to most of England in order to minimise the disruption to internal trade and supply chains.

12. As soon as FMD was confirmed in August and again in September the Scottish Government acted quickly and decisively to impose a national movement ban in line

with their Contingency Plan. Stakeholders agreed unanimously that a national movement ban should be imposed throughout Scotland immediately FMD was confirmed anywhere in GB.

13. Whilst all stakeholders supported the national movement ban, industry wanted swift relaxations based on risk assessment to enable licensed movements to recommence as soon as possible without jeopardising FMD safeguards. For those involved throughout the supply chain the uncertainty around possible relaxations was an issue. The lack of a timetable detailing the likely sequence and timing posed a problem for stakeholders attempting to plan ahead and take decisions to minimise disruption to their businesses. The longer the restrictions were in place the more the problems of husbandry, welfare, and economic pressures and constraints developed. The challenge was how to balance the prevention of FMD spread against resolving the problems caused on a daily basis by the movement restrictions.

14. The relaxation of the national movement ban is dependent on many factors. These include the definition of risk areas within GB, the availability of a risk hierarchy for movements, up-to-date risk assessments for each type of movement and pre-prepared licences with appropriate conditions to minimise any risk of FMD spread. None of these were immediately available when FMD was confirmed in August 2007. The speed with which the ban was relaxed following the September outbreaks demonstrates the value of preparation as part of contingency planning to minimise the disruption caused by the national movement ban. A number of detailed proposals for improvements on disease strategy and movement controls are made in Chapter 4.

15. The review recognises that the Scottish Government adopted a science based approach to the development of its policies for the control of FMD throughout the outbreaks in 2007. High quality and sound, objective veterinary and scientific advice was provided to the Scottish Government. This was instrumental in ensuring that clear evidence based decisions were made when dealing with the consequences of the outbreak. A number of important lessons were learned, especially the benefits of supporting a Scottish resource which was able to identify livestock movements and assess the risks of FMD entering and spreading within Scotland as a result of these movements.

16. The availability of quality controlled and timely information on livestock movements remains critical for scientific analysis to support policy decisions on disease control strategies and for the re-commencement of livestock movements. Major improvements are required in the GB systems for recording livestock movements and ensuring the rapid release of that information for analysis. It is equally important to ensure that the Scottish Government retains access to the expertise necessary to undertake these types of analysis.

17. The relationships between Scottish Government, UK Government Departments and the European Union (EU) are described in Chapter 6. The relationships between the Department for Environment, Food and Rural Affairs (Defra) and the Scottish Government officials ran smoothly but there were a number of misunderstandings

about the development of specific policies and over the timings for re-commencement of licensed movements.

18. From a Scottish perspective devolution had a key role to play in this outbreak. Animal health and welfare policy is fully devolved to the Scottish Government. Provided there is compliance with the overarching EU legislation, alternative policies to those adopted in England and Wales can be developed and implemented in order to control FMD. Every effort was made on all sides to ensure that the FMD policies in England, Wales and Scotland were fully aligned but occasional differences led to friction between Scottish Government and Defra.

19. There has been a perception in England that a number of the actions taken by the Scottish Government were purely for political reasons and not related to best scientific and veterinary advice. From the evidence available this does not appear to be the case. The Scottish Government took appropriate action based on the best veterinary and scientific advice available. This included the Scottish veterinary risk assessments relating to movements of livestock and the detailed risk assessment on movements to Scotland from the rest of GB. Indeed if the Scottish Government had failed to implement evidence based policies for the control of FMD quickly and effectively they would have lost credibility from their industry and electorate. As a consequence the Scottish Government was expected to play a dual role. This involved taking unilateral action to reduce the impact on Scottish agriculture as well as co-ordinating its response with the UK Government and other Devolved Administrations.

20. A number of the misunderstandings arose as a result of the current arrangements for funding FMD control policies in Scotland as most of the budgets are held by Defra and spent on a GB-wide basis. With the devolution settlement it was agreed that Defra would pay for compensation and control measures associated with exotic disease outbreaks. However there was a lack of clarity in the Concordats on where responsibility for funding lay if the Scottish Government wished to pursue a policy of its own which was not agreed on a GB-wide basis. These arrangements were suitable in 1999 and worked well during the 2001 FMD outbreak. However, the continuing progress of devolution means that the present situation has been a potential cause of misunderstanding when developing and arranging funding for animal health and welfare policy.

21. A number of improvements can be made to ensure that misunderstandings and in turn a degree of friction between Defra and the Scottish Government are avoided. An early review is required into the financial arrangements with the intention of transferring the budgets to the Scottish Government to implement its policies on the control of exotic diseases. In addition the budgets for other animal health and welfare activities such as BSE testing and for work undertaken by the Animal Health agency in Scotland could also be transferred from Defra to the Scottish Government. This would mean that in the event of an outbreak of FMD the Scottish Government would need to fund the implementation of policy from its own budget or if necessary approach the Treasury for additional funding from the contingency reserve.

22. At the root of these issues are the outdated Concordats. These need to be reviewed and updated to take account of changed circumstances and then agreed between the Scottish Government and the relevant UK Government Departments.

23. Two specific issues are discussed in Chapter 6 involving the Sheep Welfare Scheme and the derogation for drivers' hours, both of which caused friction between the Scottish Government and UK Government Departments. Each case arose as a consequence of the national movement ban and in future should be anticipated to ensure rapid resolution of the problems.

24. The review endorses the views of stakeholders that communications during 2007 were handled effectively by the Scottish Government with major improvements since the outbreaks during 2001. The Stakeholder Group worked effectively with well structured meetings. Ministerial input was valued and the active role which the Cabinet Secretary adopted in dealing with stakeholders was well received. Lessons can still be learned with a need to continue the development of the Scottish Government's Exotic Diseases Communications Strategy and to consider methods of how best to reach all stakeholders, groups and interested individuals. The increased development and use of modern technology will go a long way to improve communications both within Scotland and with the rest of GB.

25. The review recognises that all the delivery partners were effective, reliable and well co-ordinated. They all made important contributions to resolving any problems and enabling controls to be implemented quickly. Stakeholders considered that the delivery partners were well co-ordinated, although there were a number of areas for improvement.

26. There were questions over resources and payment for services on one or two occasions. It is an anomaly that both the Animal Health agency and the Meat Hygiene Service are responsible for delivering the policies of the Scottish Government but in doing so are funded by Defra. As a result the customer/contractor relationship needs to be re-defined to ensure clarity over responsibility and funding. The current service level agreements between each of the agencies and the Scottish Government could be improved upon and renewed agreements are required. The budgets for the delivery of services should be transferred to the Scottish Government to ensure that they are fully responsible not only for the policy on exotic disease control but also for its delivery.

27. The review endorses the view of officials and stakeholders that Scotland's FMD Contingency Plan (The Plan) was effective during the 2007 outbreak. However, the Plan only had a limited application and was not fully tested as the outbreak occurred outside of Scotland. The findings from a separate study commissioned as part of this review indicated that the Plan does not meet the fundamental principles required of a comprehensive national contingency plan for the strategic management of all aspects of a disease outbreak.

28. The Plan must be revised to incorporate the specific lessons learned in 2007 in relation to pre-planning in order to minimise the impact of movement restrictions. In

addition other lessons and the recommendations from the separate study commissioned by the Scottish Government on the Plan's efficacy should be incorporated into the Plan when it is revised. The Plan must become a comprehensive contingency plan for the control of FMD which is integrated with other contingency plans of the Scottish Government and its delivery partners.

29. The review identifies a number of broad requirements which recognise that Scotland and the rest of GB are a single epidemiological unit with common interests in maintaining trade and integrated supply chains. Although the report is structured around chapters based on the terms of reference the overall conclusions and recommendations fall into the following five key areas:

- **Disease preparedness** is critical and includes contingency planning, disease strategy and movement controls, and economic, scientific and veterinary advice;
- **Regionalisation** although an important component of disease preparedness is treated as a separate topic in view of the importance to Scotland especially given the potential to minimise disruption in the event of an FMD outbreak;
- **Relationships** between Scottish Government and the UK Government Departments must be based on up-to-date mutually agreed Concordats. These should clarify areas of responsibility and service delivery including funding arrangements;
- **Relationships with the EU** and in particular the EU Commission are essential in order to promote Scotland's interests;
- **Communications with stakeholders** are currently very good but improvements can be made especially in the use of technology and in ensuring full coverage to all interested individuals.

30. In order to reduce the risks to Scotland and minimise potential disruption a series of recommendations are made. For ease of implementation these are numbered sequentially in the review and are placed into high, medium and low priority categories within the five key areas listed above.

31. In conclusion the FMD outbreak was handled well by the Scottish Government which reacted swiftly and in line with contingency planning arrangements. There are however a number of lessons which have been identified and improvements which can be made for the future in order to reduce the risk and minimise potential disruption to Scotland should FMD be confirmed anywhere in GB.

SUMMARY OF RECOMMENDATIONS

DISEASE PREPAREDNESS

High Priority (Critical)

Recommendation 20: The Scottish Government should continue to develop a risk hierarchy for priority movements which maps out the sequence of events after FMD confirmation. Different scenarios with appropriate timetables to enable farmers and others to plan for movements and understand how the controls would progress should be prepared as part of the contingency planning process. (High Priority)

Recommendation 23: The Scottish Government, Defra and other Devolved Administrations should develop a full set of veterinary risk assessments for all priority movements listed in the risk hierarchy. The development and up-dating of risk assessments should be a routine component of contingency planning as should regular reviews to take account of changing patterns of trade and other factors. Ideally the three GB administrations should agree to use a single set of risk assessments for GB to ensure a consistent approach to their application. (High Priority)

Recommendation 28: The Scottish Government should work with Defra to review the effectiveness of all the current systems to collect and record animal movement information and take action to ensure the systems are fit for purpose and can provide information on a GB-wide basis. (High Priority)

Recommendation 54: The Scottish Government's FMD Contingency Plan must be updated urgently to ensure it is fit for purpose and to take account of the lessons learned from this review and to incorporate the eight key recommendations from the independent report by Analytic Red. (High Priority)

Recommendation 55: The Scottish Government and Defra should work together to develop an overarching contingency plan which identifies the GB responsibilities and separates these from the specific England component of the current Defra plan. The mechanisms for the implementation of Scottish policy in the event of an outbreak in Scotland must be clearly specified as should the support to be provided by Defra and the funding available. (High Priority)

Medium Priority (Essential)

Recommendation 14: The Scottish Government should undertake a review of the effectiveness of movement standstills in periods of FMD freedom, and consider whether a 6 day or 13 day standstill with variable quality of separation agreements is the most appropriate precautionary measure. (Medium Priority)

Recommendation 15: The Scottish Government should conduct a full risk assessment on the effectiveness of separation agreements during periods when movement controls and licensing are in place and consider whether there is a potential for

utilising separation agreements during an FMD outbreak to minimise disruption to producers. (Medium Priority)

Recommendation 19: The UK administrations should develop a clear policy for the use of the round stamp on carcasses and animal products in advance to ensure the availability of round stamps, and the resolution of the practical problems such as the costs of changing packaging for animal products at short notice. Round stamps should be held in reserve by the Meat Hygiene Service and not destroyed after an outbreak is over. (Medium Priority)

Recommendation 24: The Scottish Government should develop a full set of movement licences and export certificates, based on risk assessments, using a standard set of conditions with clearer definitions. The pre-prepared licences should be reviewed on a regular basis to take account of changes in trade or husbandry patterns. (Medium Priority)

Recommendation 26: The Scottish Government must ensure that it has access at all times to the expertise necessary to analyse information on movements and conduct risk analysis using the most up-to-date methodologies and techniques. (Medium Priority)

Recommendation 27: The Scottish Government should develop and clarify the scientific advice and analysis it requires during times of FMD freedom and during outbreaks in order to ensure appropriate information and analysis are available to enable evidence based decisions to be made on risk areas and control strategies. (Medium Priority)

Recommendation 29: The Scottish Government should continue to participate as an active member of the UK National Expert Group which should operate on a UK-wide basis. Membership of the group should be limited to experts with policy makers and delivery agents acting as observers. The input of policy makers should be limited to requesting advice and providing information as appropriate but not influencing discussions or the outcome of meetings. (Medium Priority)

Recommendation 53: Procedures should be put in place to ensure regular updating of the FMD Contingency Plan in consultation with all stakeholders with a formal review at least every 3-5 years. (Medium Priority)

Low Priority (Desirable)

Recommendation 16: The Scottish Government may wish to review the need for the national movement ban in all circumstances taking into account the routine movement standstills on susceptible animals which are in force during periods of FMD freedom. (Low Priority)

Recommendation 17: The Scottish Government should provide greater clarity on the procedure for authorising slaughterhouses in the event of an FMD outbreak. This information should be available to stakeholders. (Low Priority)

Recommendation 18: The Scottish Government should work with the industry to review the procedures adopted at slaughterhouses and to develop solutions and protocols for dealing with issues such as unexpected arrivals, modifying the 24 hour rule and ensuring that vehicle wash facilities are adequate. (Low Priority)

Recommendation 21: Milk recording needs to be recognised as a priority for dairy farmers and as soon as risk assessment allows, technicians should be allowed on farm under the conditions of licence. A code of practice should be developed and agreed between the milk recording organisations and the Scottish Government. (Low Priority)

Recommendation 22: The Scottish Government and Animal Health agency should consider whether instructions could be developed to enable Divisional Veterinary Managers to use their judgement pertaining to local circumstances in deciding which movements within a farm business could be permitted. Specific licences could be issued under certain circumstance e.g. where a single farm business is identified and the move presents a low risk. It will be essential to balance flexibility against the need to maintain consistency across Scotland. (Low Priority)

Recommendation 25: Contacts should be developed and maintained with hobby farmers who should be registered in order to ensure they are included in the communications network if an FMD outbreak occurs. They need to be aware of their responsibilities for disease control and in order to achieve this the Scottish Government should work with stakeholders to develop programmes to assist hobby farmers. (Low Priority)

Recommendation 30: The Scottish Government should review how the science challenge and peer review aspects of dealing with emerging scientific evidence informing the response to an outbreak of disease can be improved. It should also consider how best to involve independent experts including economic, social and industry expertise. (Low Priority)

Recommendation 31: The Scottish Government should review its existing Science Advisory Committees to assess whether a new committee should be formed to provide ongoing expert advice and a challenge function for scientific and veterinary advice in the animal health and welfare field. (Low Priority)

Recommendation 32: The Scottish Government should review its links to Defra science, evaluate how robust these are and discuss with Defra the possibility of closer involvement within Defra Scientific Advisory Council and its sub-groups. (Low Priority)

REGIONALISATION

High Priority (Critical)

Recommendation 1: The Scottish Government working with Defra and the Devolved Administrations should take the lead to produce a standardised set of terms for regionalisation. The concepts of restricted zones, high and low risk areas as defined

in the Directive and Decisions need to be developed further by the UK Government in co-operation with the European Commission to ensure that a single set of well defined terms is used effectively for the purposes of regionalisation in the event of an FMD outbreak. (High Priority)

Recommendation 3: In the light of experience in 2007 the Scottish Government and Defra should work with the European Commission to review, clarify and develop detailed rules for movement of livestock and their products between different risk areas and zones. (High Priority)

Recommendation 8: The Scottish Government and Defra should identify the criteria for the re-classification of risk areas from high to low risk and finally to disease free status with a view to moving down the chain as quickly as possible. The criteria should be discussed and agreed with the European Commission in the light of lessons learned from the 2007 outbreaks. (High Priority)

Recommendation 10: A number of regionalisation scenarios should be developed by the Scottish Government in order to evaluate the implications and impact of regionalisation taking into account the EU rules which applied in 2007. These should be debated by the Scottish Government with all the stakeholders representing each sector of the supply chain in Scotland to ensure that there is consensus on how regionalisation would be handled in the event of an FMD outbreak. (High Priority)

Recommendation 12: The Scottish Government and Defra should develop a protocol identifying the criteria for classifying GB into risk areas which could be used to relax movement controls in a proportionate manner. (High Priority)

Medium Priority (Essential)

Recommendation 2: The Scottish Government should work with Defra to assess whether compartmentalisation could be used effectively within the pig industry to permit internal trade and exports when an area is in a restricted zone or a national movement ban is in place. (Medium Priority)

Recommendation 4: The prohibition by the Commission Decision 2007/554 on the movement of susceptible animals from low risk to high risk areas should be reviewed by Defra with the European Commission as this could act as a major constraint to the re-classification of the risk based areas. (Medium Priority)

Recommendation 5: The UK administrations should review their FMD legislation to clarify terminology and avoid the requirement to declare a GB-wide restricted zone in order to impose the national movement ban. This review should be undertaken in conjunction with the European Commission and other Member States to incorporate the lessons learned from the 2007 FMD outbreak into UK and EU legislation. (Medium Priority)

Recommendation 6: Discussions should take place between the UK national authorities and the European Commission to determine the way in which areas could

be included in the free zone even if a national movement ban has been imposed on the whole of GB. (Medium Priority)

Recommendation 11: A UK-wide plan and agreement on regionalisation must be developed in partnership with Defra and the Devolved Administrations during an FMD free period to be implemented whenever outbreaks occur in any part of the UK. (Medium Priority)

Low Priority (Desirable)

Recommendation 7: The Scottish Government should ensure detailed up-to-date information on the whole of the supply chain from producer through to retailer is regularly reviewed to ensure that the determination of the size and boundaries of a restricted zone and associated risk areas is based not only on the epidemiology of the outbreak but also takes into account the economic, trade and welfare implications for the areas concerned. (Low Priority)

Recommendation 9: Scottish Government officials should visit other EU Member States to assess their policies, progress and planning to regionalise in the event of an FMD outbreak. (Low Priority)

Recommendation 13: The Scottish Government should review with stakeholders the capacity for the processing and packaging of meat in Scotland to assess whether it could be increased with a view to reducing dependence on facilities in England and Wales. (Low Priority)

RELATIONSHIPS WITH UK GOVERNMENT DEPARTMENTS

High Priority (Critical)

Recommendation 35: The Scottish Government and Defra should prepare a guidance paper on relationships with the Devolved Administrations in order to stress the importance of respecting confidentiality and of being as open as possible. The benefits of agreeing such a protocol with the Devolved Administrations should be emphasised in order to improve working relationships at both Ministerial and official level. (High Priority)

Recommendation 36: In light of political, financial and organisational developments the Scottish Government and the UK Government must urgently review the existing Concordats to take account of these changes. They should ensure that the financial arrangements are clear and that budgets where appropriate are transferred to the Scottish Government to implement all the policies related to exotic disease control. Defra should not be required to fund any exotic disease control measures in Scotland. (High Priority)

Recommendation 37: Scottish Government should consult with the Cabinet Office to review existing arrangements to take account of the lessons learned in 2007 and to agree formally the protocol for involvement by Scottish Government Ministers and

officials in the Civil Contingencies Committee (CCC) when Cabinet Office Briefing Room (COBR) is activated during an FMD outbreak. (High Priority)

Recommendation 49: The Scottish Government should conduct a fundamental review on the way in which animal health and welfare policy is delivered in Scotland in order to bring funding of service delivery into line with its devolved policy responsibilities. This may include the option of establishing a separate Animal Health agency for Scotland funded from a Scottish held budget or for maintaining a GB-wide agency but funded by the Scottish Government for the work undertaken in Scotland. (High Priority)

Medium Priority (Essential)

Recommendation 33: The Scottish Government and Defra should review the role and arrangements for the Animal Disease Policy Group (ADPG) and consider whether a more effective system for agreeing policy and resolving differences on a UK-wide basis should be established to ensure a UK-wide approach to disease outbreaks no matter where the disease occurred or how small the outbreak. (Medium Priority)

Recommendation 42: The Scottish Government must recognise that if FMD occurs at certain critical times of year it may be necessary to introduce a welfare scheme. The trigger points for this should be set out in the Scottish Government's FMD Contingency Plan. (Medium Priority)

Recommendation 43: The Scottish Government should work with Defra and the Department for Transport (DfT) to identify trigger points for requesting relaxations in drivers' hours rules in the light of national movement ban requirements and licensing arrangements, to catalogue the information and analysis required from the Scottish Government for a successful application to ensure derogation is justified and available when needed. (Medium Priority)

Recommendation 50: The Scottish Government, Defra and the Meat Hygiene Service (MHS) should review the current arrangements for service delivery during an outbreak of notifiable disease and a revised service level agreement (SLA) prepared to clarify the position. The SLA should be between the MHS and the Scottish Government alone and funding to support the SLA activities in Scotland should be held by the Scottish Government. (Medium Priority)

Recommendation 52: The Scottish Government should instigate regular meetings between delivery partners at various levels, and agree a new mechanism for Scottish Government, Animal Health agency, Meat Hygiene Service and the Convention of Scottish Local Authorities (COSLA) to work together by developing a joint Memorandum of Understanding. (Medium Priority)

Low Priority (Desirable)

Recommendation 34: As indicated in the contingency plans of the Scottish Government and Defra an official from Scottish Government should be embedded at the National Disease Control Centre (NDCC) from the outset of an outbreak. The reverse should be true if the outbreak occurs in Scotland. A detailed protocol for the

role and responsibility of the liaison officer should be developed jointly by Defra and the Scottish Government. (Low Priority)

Recommendation 48: In the event of an FMD outbreak in GB the Senior Operations Manager, as well as the Scottish Account Manager from Animal Health agency, would need to be based in Scotland for the duration of an FMD outbreak. A detailed job description for both post holders during an outbreak should be prepared based on the role that the Head of Operations for Animal Health agency fulfilled during the 2007 outbreak. (Low Priority)

Recommendation 51: In the event of an FMD outbreak a senior HQ representative of the Meat Hygiene Service with delegated powers to make decisions and responsibility for issuing instructions should be present at the Disease Strategy Group (DSG) and stakeholder meetings in Scotland. Attendance in person would be preferable but failing that use of teleconference or if feasible via videoconferencing. (Low Priority)

RELATIONSHIPS WITH THE EUROPEAN UNION

High Priority (Critical)

Recommendation 38: The Scottish Government should work with Defra and the other Devolved Administrations to develop a clear protocol for formal representation at routine and emergency meetings of the Standing Committee on the Food Chain and Animal Health (SCoFAH) when appropriate. This could be expanded to include representation by Devolved Administrations at other EU Council and Commission meetings. (High Priority)

Recommendation 40: The Scottish Government and Defra should establish a procedure or arbitration process to resolve issues which arise when an agreed UK-line for negotiations in Brussels cannot be established to the satisfaction of all parties. (High Priority)

Medium Priority (Essential)

nil

Low Priority (Desirable)

Recommendation 39: Defra should review the procedures for reporting the outcome of critical EU meetings to ensure that the Scottish Government and other Devolved Administrations receive the details as rapidly as possible. (Low Priority)

Recommendation 41: Relationships between Scottish Government officials and European Commission officials should be developed and improved with regular meetings and visits to Brussels. When arranging such visits the Scottish Government should liaise closely with UKRep. A procedure for information on agendas and minutes of meetings and discussions in Brussels to be passed to Edinburgh for information should be developed with UKRep. (Low Priority)

COMMUNICATIONS WITH STAKEHOLDERS

High Priority (Critical)

Recommendation 44: The Scottish Government must update their Communications Strategy for exotic diseases incorporating the recommendations of the Barkers report, the relevant lessons learned in this report and agree the revised Strategy with all stakeholders. Areas where joint action with stakeholders is practical should be developed and incorporated into the Strategy. (High Priority)

Medium Priority (Essential)

Recommendation 45: The Scottish Government should work with stakeholders to define the precise role and membership of the Stakeholder Group during an outbreak of FMD or other notifiable disease. This should include the practicality of establishing small sub-groups with relevant industry bodies where specialist expertise is required to discuss specific issues. (Medium Priority)

Recommendation 47: Scottish Government should continue to work with stakeholders to use a range of communications and to develop cost effective communication methods to ensure maximum distribution of information that meets the needs of all stakeholders, groups and individuals in the event of an outbreak. (Medium Priority)

Low Priority (Desirable)

Recommendation 46: The Scottish Government should make better use of teleconferencing and develop the facility by obtaining improved and more effective equipment. Videoconferencing facilities should be developed for use by key stakeholders. (Low Priority)

Chapter 1

Introduction

INTRODUCTION

1.1 The series of foot and mouth disease (FMD) outbreaks in Surrey during 2007 had a major impact on the Scottish livestock industry and throughout the food supply chain for animal products. As Great Britain (GB) is considered to be one epidemiological unit the consequences of the cases in Surrey were far reaching in terms of exports, movement controls and the internal trade of a wide range of products. The outbreaks and subsequent control measures occurred at the worst time of year for Scottish Agriculture with the major cattle and sheep movements, sales and exports of light lamb normally occurring during the autumn. There was also an impact on the pig industry especially with the disposal of cull sows.

1.2 The imposition of a GB-wide national movement ban immediately on confirmation of an FMD outbreak anywhere in the country is a policy endorsed following the 2001 epidemic. The impact of outbreaks around 500 kilometres from the Scottish border could be perceived as being disproportionate to the problem. Consequently this review was commissioned to consider the handling of the outbreak in Scotland and to identify whether the impact of future outbreaks of FMD could be minimised. If an FMD outbreak occurred in Scotland remote from the south of England a similar situation would exist in terms of implementing proportionate controls. It is important to develop a GB-wide consensus on ways to minimise disruption to whatever part of the country is remote from the focus of the outbreak whilst at the same time ensuring the disease is not allowed to spread.

1.3 The report is primarily aimed at informing the Scottish Government but is also relevant for the Department for Environment, Food and Rural Affairs (Defra) and the Scottish stakeholder organisations. It is the intention that this review will provide stakeholders with a better understanding of the rationale for the decisions taken during the outbreak. This in turn should assist stakeholder meetings to develop a carefully considered position which will allow for more effective decision making in the event of having to respond to a future outbreak of FMD.

TERMS OF REFERENCE

1.4. To review the Scottish response to the recent FMD outbreak and to identify lessons for the future, particularly in terms of reducing the risk to Scotland and the associated economic disruption.

In particular the review should consider:

- Current contingency planning arrangements where they are appropriate and relevant. It should consider the international, national, local and industry perspectives;

- The development of the disease handling strategy and lessons to be learned from the implementation and relaxation of the movement ban;
- Co-ordination of implementation action within delivery partners such as the Animal Health agency, Meat Hygiene Service (MHS) and the local authorities (LAs);
- Liaison and communications with other United Kingdom (UK) Governments, including the development of appropriate GB/UK policy and international negotiation positions;
- Communication with stakeholders;
- Use of scientific and veterinary expertise;
- How to minimise the disruption to Scotland of a remote disease outbreak within GB and whether regionalisation is a viable option.

STRUCTURE OF THE REPORT

1.5 This is a comprehensive report covering a wide field as specified in the terms of reference. The prime objective is to identify the lessons learned and to make recommendations to minimise future disruption. In order to do this the report is structured around nine chapters. The first two chapters provide an introduction and information on the Scottish industry and trade patterns. This is important in providing background information which will assist in identifying potential risks to Scotland and appropriate measures to reduce the impact of an FMD outbreak. Each of the seven remaining chapters deals with a specific issue linked to the terms of reference and is headed by a section detailing the key findings of the review.

METHODOLOGY

1.6 The review began with analysis of information, papers and reports available from the Scottish Government from the time of first suspicion of FMD in Surrey until the restrictions were finally lifted. Stakeholders were consulted on the terms of reference which once agreed were widely published both on the Scottish Government website and issued to the media. Written submissions were received from a number of organisations.

1.7 The initial stage involved interviews with officials in the Scottish Government, Defra and the UK and Scotland Representations in Brussels during November and December 2007. Every effort was then made to meet with organisations representing the different sections of the industry recognising that the impact of FMD was throughout the whole of the food supply chain from producer through to the retailer and consumer. Interviews were held with a wide range of stakeholders in January and February 2008. These began with a review of the organisation concerned and its role in the outbreak. This was followed by a discussion on each term of reference in turn. A questionnaire was developed and used as a guideline for

the interviews. The interviews were completed with an overview of what went well, and what could be improved on along with the key recommendations each organisation wanted to see in the report.

1.8 Details of the oral and written evidence received in the course of the review are provided at Appendix 1. During the interviews stakeholders made valuable comments and suggestions quite specific to their particular areas of expertise which they felt would help to increase preparedness and minimise any future disease related disruption. It has not been possible to discuss all these in detail in this report but they are listed in Appendix 2 for information.

1.9 In order to explore specific issues in depth, background papers and reviews were commissioned by the Scottish Government from a number of different sources. These were intended to provide detailed information and reports on:

- the Scottish livestock industry and trade patterns;
- the risks to Scotland of animal movements;
- the fitness of Scotland's current FMD Contingency Plan;
- the economic impact in Scotland.

Where appropriate information derived from these reports is included in this review. Each of the externally commissioned reports will be published separately.

FMD OUTBREAK 2007

1.10 The complexity and rapidly developing nature of FMD outbreaks demands that the risk of disease spread is balanced against the very real consequences and costs of control measures. Much has been written about the 2007 outbreak and this short summary provides some detail of the timelines and major events. FMD was confirmed in Surrey on 3rd August 2007 with a second case confirmed on 6th August. A national movement ban was imposed in Scotland on 3rd August and lifted on 24th August when, apart from a 20 day standstill on movements and the suspension of the separation agreements, everything including exports to European Union (EU) countries returned to normality.

1.11 A further outbreak was confirmed on 12th September and a national movement ban was re-introduced although this omitted Scottish Islands on a risk assessment basis. The EU export ban was also re-introduced and included the whole of Scotland. During the second phase of disease movements to slaughter were permitted immediately under licence. A further five cases were confirmed during this phase with the last case recorded on 30th September. Details of the eight outbreaks are contained in Appendix 3. All cases were in Surrey.

1.12 From 25th September there was a progressive lifting of movement restrictions throughout GB based on the creation by the UK authorities of FMD risk and low risk

areas, the latter including Scotland. The European Commission (the Commission) began to progressively relax the export ban for different parts of GB but with strict controls. All EU export restrictions were finally removed by 31st December 2007. The UK regained its FMD freedom without vaccination from the World Organisation for Animal Health (OIE) on 22nd February 2008.

SCOTTISH GOVERNMENT

1.13 It is not the intention of this review to enter into a debate about terminology but clarification is required on the use of the terms Scottish Executive and Scottish Government. The administration in Scotland was established as the "Scottish Executive" in 1999 by the Scotland Act of 1998. Neither the Scottish Executive nor the Scottish Parliament is able to change the legal name, as this would require an amendment to the Scotland Act which can only be passed by Westminster. The administration's legal name remains the Scottish Executive and this will continue to appear on legislation in the Parliament in Edinburgh.

1.14 Following the elections in May 2007 the current administration announced on 2nd September 2007 that the Scottish Executive was to be re-branded as the Scottish Government. The new name was to be used on all documents, letters, publicity material and signs outside government buildings. The move came after research suggested the term "executive" was meaningless to many people. For the purposes of this report reference will be made to "Scottish Government" as the executive arm of the Scottish Parliament. When referring to matters such as the Concordats and Service Level Agreements (SLA) the legal term "Scottish Executive" will be used.

1.15 Within the Scottish Government there are six Cabinet Secretaries (Cabinet Ministers) including the First Minister and ten ministers who report to a Cabinet Secretary. The administration has six Cabinet Secretary Portfolios one of which is the Cabinet Secretary for Rural Affairs and Environment who has responsibility for Animal Health and Welfare (AHW).

ACKNOWLEDGEMENTS

1.16 We would like to take this opportunity to thank those organisations and individuals who made time to discuss the situation and who provided considerable input to explain their positions and concerns. There was a positive input from all concerned with an acceptance that the outbreak had been well handled in Scotland but that there is still room for improvement. We are grateful to officials in Defra and the Scottish Government for their positive input and openness in providing details of the events which occurred throughout the period from initial suspicion of disease through to the final lifting of restrictions.

Chapter 2

Scottish Trade, Livestock and Meat Industries

KEY FINDINGS

2.1 The analyses of the industry structure, animal movements into, out of and within Scotland and the trade patterns for red meat and meat products provides an overview of the Scottish industry and indicates that:

- GB remains a single epidemiological unit with the potential for rapid spread of FMD through the extensive movements of livestock especially sheep;
- the food supply chain in GB relies on unrestricted movements of animals and their products;
- Scottish sales of both livestock and products to the domestic market in England and Wales are economically more significant than exports;
- in terms of primary products and further processing Scotland is an integral part of the UK economy;
- the current arrangements with respect to lamb processing reflects an efficient market response to the economics of food processing;
- apart from producers, the remainder of those involved in the GB food supply chain often operate integrated systems with centralised processing and packaging and dispatch from a single centralised distribution centre.

2.2 Based on these findings the option of separate regional status for Scotland in the event of an FMD outbreak must be evaluated with considerable caution. The potential impact of regionalisation could be detrimental to Scotland in a number of ways:

- due to slaughtering and processing capacity in Scotland the gains could be limited in practice as a proportion of Scottish animals (especially sheep) are moved either as store animals or for slaughter in England or Wales each year. Sheep and cattle are also moved to Scotland for slaughter;
- further processing of a proportion of Scottish primary produce occurs elsewhere in the UK which means that it might still be affected by an English export ban. In that case the market effect would still extend to Scottish producers even if Scotland was permitted to export;
- retail supply problems could occur in Scotland due to the structure of the long supply chains which in the event of an English export ban could lead to problems even if the raw materials had originated in Scotland.

2.3 An analysis of the seasonal and spatial livestock movements provides invaluable information which can be deployed pre-outbreak to ensure risk based and proportionate measures are implemented in the event of an FMD outbreak.

INTRODUCTION

2.4 One of the key aspects in responding to FMD and other major livestock disease outbreaks is knowledge and understanding of:

- the structure of Scottish livestock industries;
- the livestock movements that take place as part of the normal operations of the industry;
- the risks for disease transmission associated with the organisational structure and movement of the industry;
- the potential economic impact of the disease and its control.

2.5 In order to explore these issues a number of studies were commissioned by the Scottish Government as part of this review. The objectives of the studies were:

- to collate and analyse data and information from a diverse range of sources and to describe the livestock and meat industry structure and operations in Scotland;
- to provide an accurate analysis and representation of livestock movements within each livestock sector in Scotland using data from animal movement tracing systems and expert knowledge;
- to carry out analyses that identify geographical, temporal and sectoral risk areas in terms of disease transmission of imposing and lifting livestock movements controls respectively (discussed in Chapter 5);
- to carry out analyses that identify the economic impact of the movement restrictions associated with the FMD outbreak of 2007.

2.6 As a result of the commissioned work a number of separate reports have been produced. Relevant information from each is included in this review where appropriate and Appendix 4 contains specific details extracted from the reports. Each of the commissioned reports will provide detailed and comprehensive information on specific topics of relevance to the development and implementation of future FMD strategies. The reports also act as reference documents for the future and if updated regularly would become a valuable source of information to enable FMD control strategies to be based on the best scientific and economic information.

2.7 The different analyses are focused on FMD but will serve as useful background for livestock disease control policy development and implementation for a range of diseases currently faced by industry and government.

STRUCTURE OF SCOTTISH LIVESTOCK AND MEAT INDUSTRIES

Introduction

2.8 The Scottish Agricultural College report “The Structure of the Scottish Livestock Industry” (SAC report 2008) describes the size of the livestock sector along with detail on individual sectors, and how they link to the wider supply chain. The report describes the capacity within Scotland to slaughter, cut and process livestock and livestock products, together with an assessment of the extent to which the industry is dependent on capacity and trade with the rest of the UK.

2.9 A report on seasonality of movements and spatial distribution of sheep, cattle and pigs in Scotland was produced by the Centre of Excellence in Epidemiology, Population Health and Infectious Disease Control (EPIC report 2008). Both reports provide details of livestock movements into, out of and within Scotland. Changing patterns in the industry over time are noted.

Livestock industry

2.10 The SAC report demonstrates the importance of livestock to the Scottish agricultural sector where it contributed 53% of the total output which was worth £1.916 billion in 2006. Nearly a third of the livestock output came from finished cattle, finished sheep and pigs in 2006 with dairy products generating a further £245 million. See Appendix 4.1 for further details.

2.11 The SAC report describes the distribution of the main farm types within each parish across Scotland. A detailed map is in Appendix 4.2. Cattle and sheep production dominates in the Highlands and Islands with dairying dominating in the South West. Many of the farms in the North East are mixed and will often have crops and livestock. Many of the livestock finishers are located in the North East. This information is valuable in determining risk of disease and potential spread as well as the likely impact of controls.

2.12 Scottish livestock numbers are shown in the table below which also shows the changes in numbers between 1997 and 2007. Full details of the livestock numbers and the trends within the cattle, sheep and pig industries are contained in the SAC and EPIC reports.

Table 1
Scottish livestock numbers for selected years 1997 to 2007

	1997	2001	2004	2007
Breeding Dairy Cows	216,800	195,950	194,540	197,970
Breeding Beef Cows	513,750	489,070	492,870	471,610
Breeding Ewes	3,810,350	3,277,170	3,179,430	2,916,680
Breeding Pigs	69,650	61,270	48,830	40,150
Total cattle	2,078,900	1,905,320	1,949,730	1,897,180
Total sheep	9,563,190	8,109,890	7,982,300	7,490,700
Total pigs	644,890	596,460	469,700	456,750

Source: SAC (2008). Structure of the Scottish Livestock Industry.

2.13 Data on spatial distributions of the three major livestock species in Scotland were derived from June 2007 Agriculture Census of Scotland by EPIC. This was mapped as the live animal densities calculated at a parish level. The density maps for each species produced by EPIC are at Appendix 4.3 to 4.6. This information is valuable as it enables the potential impact of FMD to be assessed as well as assessing the possible spread and identifying risk areas.

Structure of the meat industry

2.14 The SAC report provides details of the location of cutting plants and slaughterhouses in Scotland. This was derived from the list of approved slaughterhouses, farm slaughter facilities, game handling establishments and cutting plants available on the Food Standards Agency website. There are 38 slaughterhouses in Scotland with eight located on the Scottish Islands. All but three of the slaughterhouses are licensed to slaughter cattle with 29 licensed to slaughter sheep. 24 are registered to slaughter pigs but in reality the majority of pigs are slaughtered in very few units. There are 83 registered cutting plants located throughout Scotland. Details on the throughput of the slaughterhouses were not available in the report due to confidentiality restrictions. This information would be most useful in the FMD context to Scottish Government in order to provide information on haulage distances, drivers' hours, impact of single pickups and reliance on imported livestock.

THE SUPPLY CHAIN FOR MEAT AND MEAT PRODUCTS IN GB

2.15 Modern supply chains are complex involving producers, processors, wholesalers and retailers throughout the UK. The supply chains move thousands of products around the country on a just-in-time basis which requires extensive organisation and planning to be successful. Any disruption to the supply chains such as the implementation of a national movement ban or controls on the movements of products between different parts of the UK can rapidly cause major problems with deliveries to retail outlets.

Detail on trade flows in the red meat sector

2.16 A report by DTZ on Scottish Primary Food and Drink Processed in Scotland (DTZ 2007) provides more detail on the supply chains for beef, lamb, pig meat and milk. The table below summarises information on the extent to which individual livestock sectors are dependent on processing outside Scotland.

Table 2
Percentage of livestock processed in abattoirs in and outside Scotland

Livestock Sector	% sent to abattoirs in Scotland	% to abattoirs outside Scotland
Beef Cattle	95%	5%
Lamb	45%	55%
Pigs	85%	15%

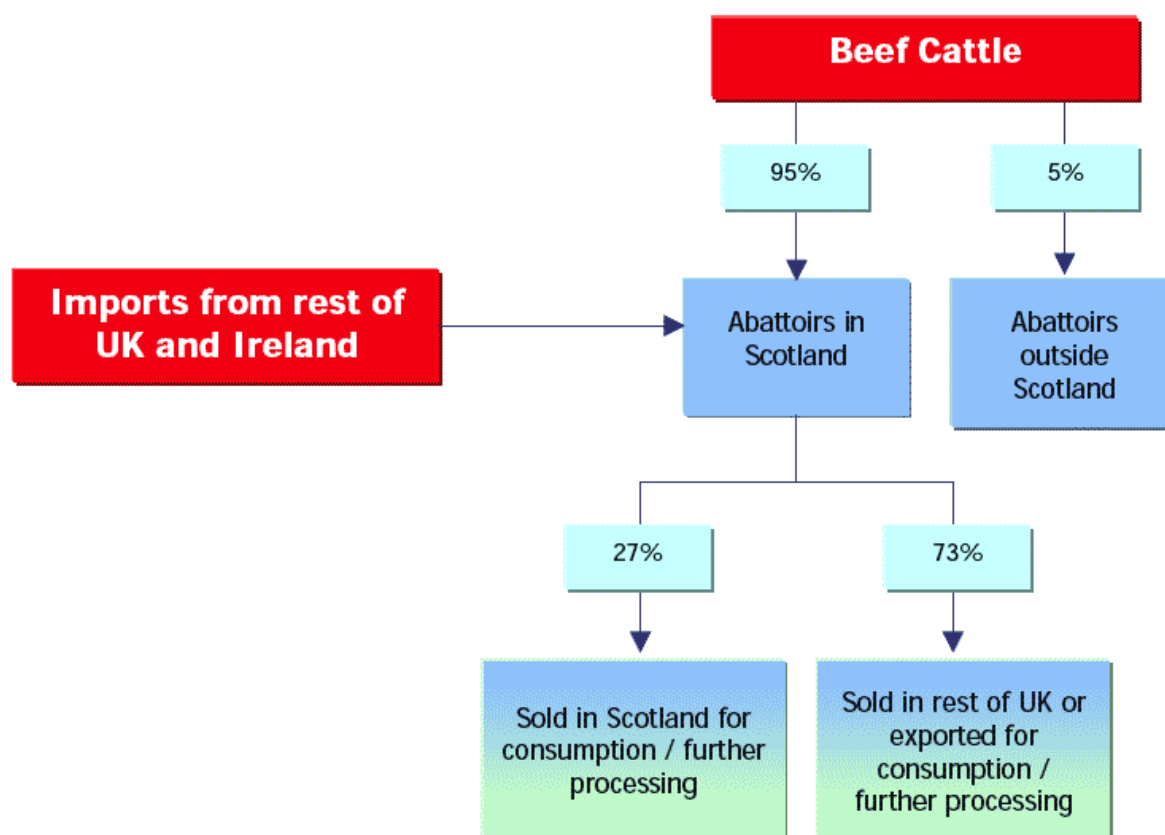
Source: DTZ. Scottish Primary Food and Drink Processed in Scotland (Scottish Government 2007).
<http://www.scotland.gov.uk/Publications/2007/08/29111522/0>

Beef

2.17 Between July 2006 and June 2007 a total of 488,268 clean cattle were slaughtered in Scottish slaughterhouses. In addition at least 10% or 46,801 beef animals slaughtered in Scotland originated from England and Wales of which 51% originated direct from farms and 47% arrived via markets (SAC 2008). Of the Scottish beef slaughtered in England and Wales all came from the mainland and 73% moved direct from farm to slaughterhouse and 22% were sold via markets.

2.18 Low levels of mature cows and bulls were slaughtered in Scotland as few processors in Scotland will accept cull cattle with the result they are exported live for slaughter with re-importation of products in some cases. Scottish abattoirs slaughter almost all cattle reared in Scotland. The small number exported is more than outweighed by imports from the rest of UK and Ireland. Whilst significant investment in processing facilities in Scotland has taken place much Scottish-slaughtered beef is still further processed outside Scotland.

**Figure 1
Processing of beef cattle**



Source: DTZ. Scottish Primary Food and Drink Processed in Scotland (Scottish Government 2007).
<http://www.scotland.gov.uk/Publications/2007/08/29111522/5>

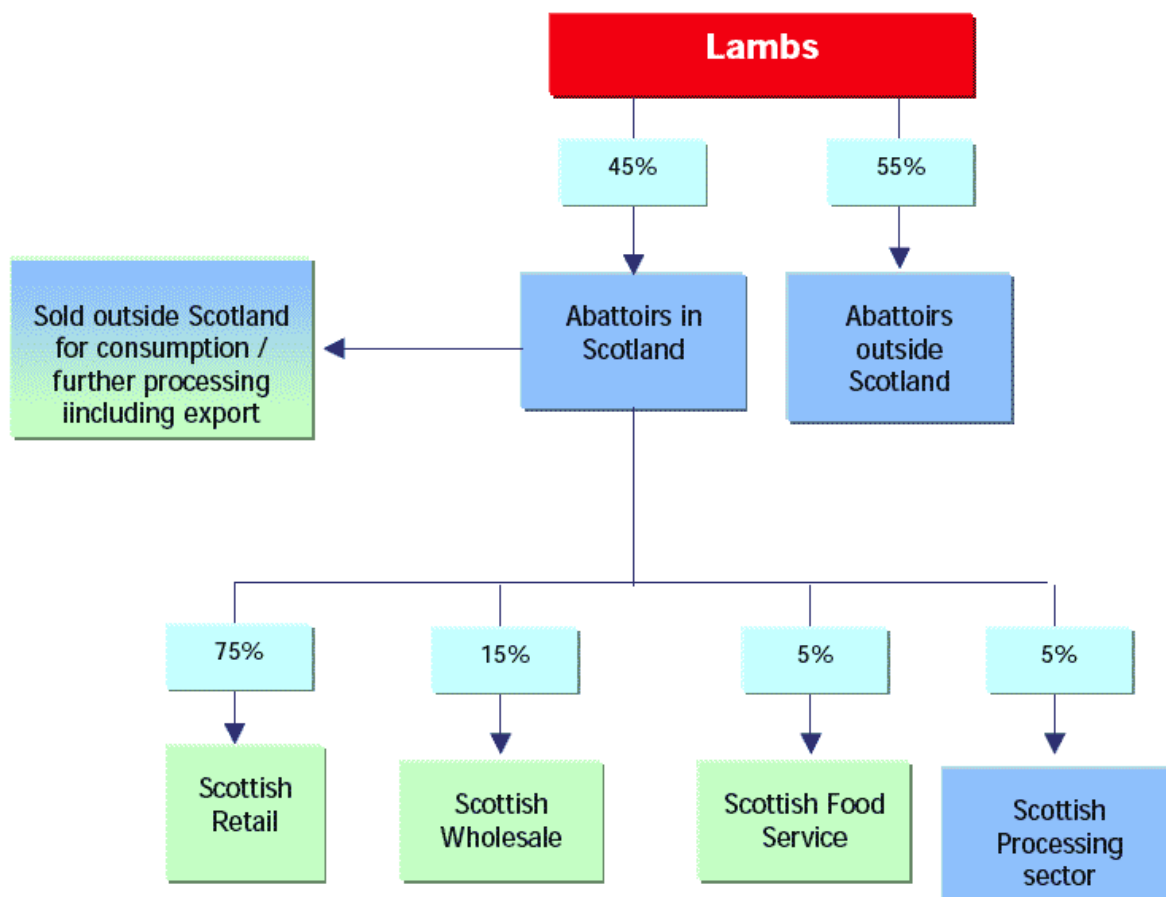
Lamb

2.19 A total of 1,409,260 clean sheep were slaughtered in Scotland between July 2006 and June 2007 (SAC 2008). The level of Scottish produce processed in Scotland is medium with Scottish abattoirs slaughtering around 45% of Scottish lamb. There is a significant outflow to England and Wales. This is partly due to lack of capacity but is also linked to economies of scale and the proximity to the consumer who is mainly in England. The trade is dominated by a small number of players. Further processing of Scottish-slaughtered lamb is limited with little economic incentive for further processing, except alongside other Scottish meats. The DTZ report explains that there are good reasons for the level of processing not being high in the lamb sectors which is largely due to economies of scale that cannot be gained in Scotland. The current situation is an efficient market response to the economics of food processing.

2.20 Between July 2006 and June 2007 84% of the sheep slaughtered in mainland Scotland originated from the mainland with 15% coming from England and Wales. Some Scottish producers import English lamb to maintain their throughput close to capacity during the season. The SAC report also highlights the low levels of ewes

and rams slaughtered in Scotland. The majority of mature sheep are slaughtered in England and Wales as there is a large ethnic market for mature sheep in England.

**Figure 2
Processing of Lamb**

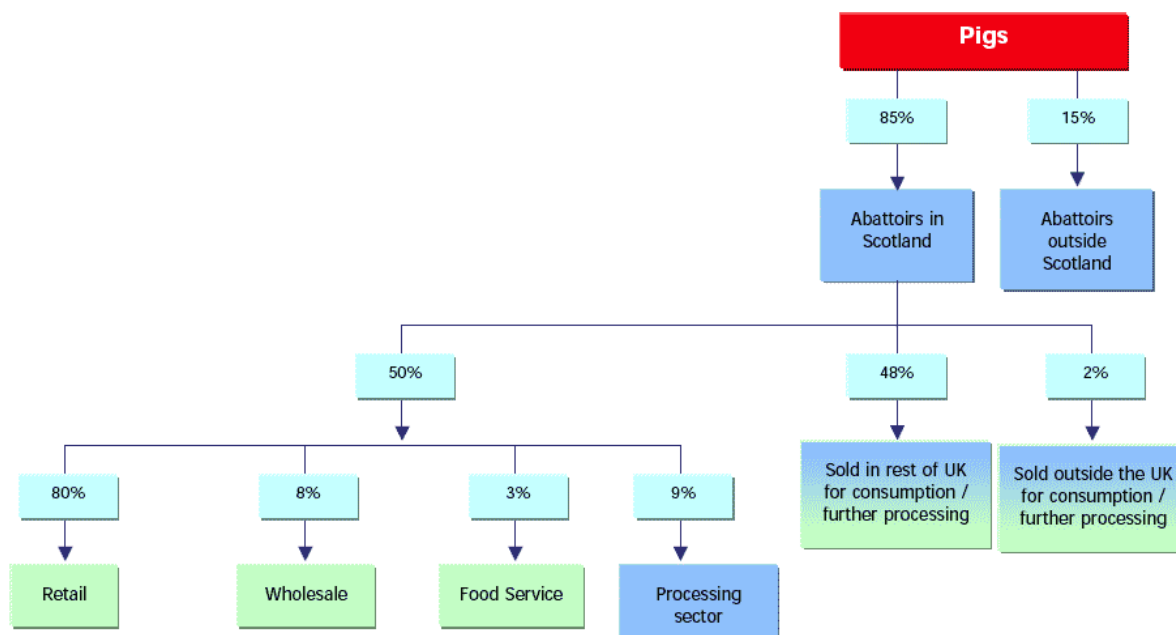


Source: DTZ. Scottish Primary Food and Drink Processed in Scotland (Scottish Government 2007). <http://www.scotland.gov.uk/Publications/2007/08/29111522/5>

Pigs

2.21 A total of 735,718 clean pigs were slaughtered in Scotland between July 2006 and June 2007 (SAC 2008). For pigs, the level of Scottish produce processed in Scotland is high. Dominance of a single abattoir/processor means that little Scottish pig meat is available for other processors, limiting their ability to grow Scottish branded products. Cull sows are slaughtered at one of two specialised premises in England.

**Figure 3
Processing of Pigs**



Source: DTZ. Scottish Primary Food and Drink Processed in Scotland (Scottish Government 2007).
<http://www.scotland.gov.uk/Publications/2007/08/29111522/5>

Dairy

2.22 Scotland is self-sufficient in liquid milk and all of it is processed in Scotland. There is a threat of continuing decline in the number of producers. There is a concentration of dairying in the South West of Scotland. This proximity to the English border means that there is much movement of agricultural outputs between Scotland and England. There is a lack of differentiated and high-value niche cheese products that rely specifically on Scottish milk.

Scottish processed meats

2.23 The Quality Meat Scotland (QMS) report "The Scottish Red Meat Industry Profile (2006)" (QMS 2007) indicated that the turnover of the primary processing sector in Scotland was around £725 million in 2006. The report indicates that in 2006 the most important market place for Scottish red meat was England and Wales. Almost two-thirds of beef, 45% of sheep meat and three-quarters of the pig meat leaving Scottish primary processors is sold into the UK market outside Scotland.

Table 3
Distribution of Scottish red meat sales in 2006

Commodity	Scotland	Rest of UK	Exports
Beef	£168m	£320m	£12m
Sheep Meat	£29m	£40m	£20m
Pig Meat	£34m	£100m	neg
Total	£231	£460m	£32m

Source: QMS (2007). The Scottish Red Meat Industry Profile (2006).

<http://www.qmscotland.co.uk/analysis/info/documents.php?year=2007&month=all>

2.24 Interestingly although Scottish consumers eat more beef than their English and Welsh counterparts, approximately 70% of Scottish beef production, by value, is sold outside Scotland. The DTZ report concluded that “The broad picture is of total primary produce sales of £3billion, of which 26% are sold to the Scottish processing sector, 24% sold directly to Scottish households and 18% to other primary producers. A further 26% go to non-domestic purchasers, reflecting the fact that Scotland is an integral part of the UK economy”.

Market outlets for Scottish products

2.25 The QMS report (2007) identifies the importance of the multiple retailers which along with the independent retailers account for 76% of beef products, 77% of sheep products and 84% of pig meat products. The details are shown in the table below:

Table 4
Distribution of Scottish red meat sales by market outlet in 2006

Outlet	Beef	Sheep Meat	Pig meat
Multiple retailers	57%	62%	69%
Independent retailers	19%	15%	15%
Retail wholesalers	8%	16%	10%
Food Processors	11%	3%	1%
Food Services	4%	3%	5%

Source: QMS (2007). The Scottish Red Meat Industry Profile (2006).

<http://www.qmscotland.co.uk/analysis/info/documents.php?year=2007&month=all>

2.26 In most cases the multiple retailers will source the vast majority of their meat and meat preparations from UK farmers. Centralised processing and packaging is common. This can mean for example that 10 to 20% of the beef and lamb imported into Scotland may originate from Scotland but pass through intermediaries throughout England and Wales which are located from Kent to South Wales and Cornwall to Yorkshire. The multiple retailers will often have a single main distribution centre which can be based anywhere in GB. Products from the centralised packaging units may move to the distribution centre in one of the GB countries for subsequent dispatch throughout the UK and for export.

2.27 During FMD in 2007 the retailers were just about able to withstand the delays in supply but if the ban on movements to slaughter had lasted for more than 1 week in total they may have needed to look for alternative supplies. In the event of Scotland being regionalised at the border it is likely with the volume of trade and the number of movements involved that any certification and audit trail would be impossible to operate and some companies would choose not to send products into Scotland.

LIVESTOCK MOVEMENTS

Introduction

2.28 Livestock movements into, out of and within Scotland are analysed in detail in the EPIC and SAC reports. The two reports complement each other and draw on information from the various animal movement tracing systems. Both reports provide an analysis and breakdown of livestock movements using a combination of tables, graphs and maps to demonstrate the spatial, temporal and sectoral types of movements.

2.29 The information provided can be used to answer three questions in the event of an FMD outbreak:

- What are the movements, into, out of and within Scotland?
- When do they occur?
- What happens if they are stopped based on seasonality, numbers and destinations?

Livestock movements

2.30 The EPIC report describes seasonal patterns of livestock movements in Scotland from 2003 to 2007. The spatial distribution of livestock in Scotland as available from the June 2007 Agriculture Census of Scotland is also described. The report provides a consistent representation of seasonal variations in livestock movements onto and off the four Scottish Island archipelagos from and to the rest of Scotland, and cross-border between Scotland and England and Wales.

2.31 Details of monthly movements of livestock out of and on to each of the 891 parishes in Scotland from July 2006 to June 2007 are contained in the EPIC report. Movements are also categorised by origin and destination e.g. farm to slaughterhouse, farm to market to slaughterhouse etc. A full list of movement categories is shown in Table 1 of the EPIC report. Numerous tables, graphs and maps are provided which illustrate the various categories of livestock movements which are not for slaughter within, into and out of Scotland. (Appendix 4.7 to 4.9). Similar tables are provided for the movement of animals to slaughterhouses. Detailed information of movements into and out of the Scottish Islands is also provided (Appendix 4.10 to 4.11). In some cases not only are the numbers of

livestock moved recorded but also the number of batches which would be useful information when trying to assess the impact of movement controls on drivers' hours.

2.32 To give some indications of the extent of sheep movements Table 5 provides an overall summary of the numbers of live sheep and those for slaughter moved from Scotland to the rest of GB and vice versa. The origins of the sheep, whether on mainland Scotland, the Islands or the rest of GB is indicated. The destination of live sheep movements from the rest of GB to Scotland is also indicated. The table does not include the movements of live sheep within mainland Scotland and the Islands which are not for slaughter within one month.

Table 5
Numbers of Sheep movements July 2006 to June 2007

Movement type	Mainland	Inner Hebrides	Orkney	Shetland	W. Isles	GB crossborder
No and origin of live Scottish sheep movements to rest of GB	1,009,285	14,231	7,724	159	5,305	
No and destination of live sheep movements from the rest of GB to Scotland	123,710	27	83	6	6	
No and origin of Scottish sheep slaughtered in rest of GB	961,079	5,657	308	1,648	481	
No and origin of sheep slaughtered in mainland Scotland	1,169,807	7,306	7,935	4,070	186	205,447

Source: SAC (2008). Structure of the Scottish Livestock Industry.

2.33 During the same period the SAC report indicates there were 2,387,855 movements of live sheep (those not ending up for slaughter within the month) onto Scottish parishes from within Scotland. The importance of cross border movements is reflected in the one million live sheep moved into England and Wales which highlights how important the store lamb trade is to Scottish producers.

2.34 The impact of the movement restrictions was greatest in the sheep sector with its reliance on export markets and the peak time for store sales. Data from the EPIC report indicates that the majority of sales occur during the September to November period and that a proportion of the store animals are moved to England and Wales for finishing.

2.35 To give some indication of the extent of beef cattle movements Table 6 provides an overall summary of the numbers of live beef cattle and those for slaughter moved from Scotland to the rest of GB and vice versa. The origins of the beef cattle whether on mainland Scotland, the Islands or the rest of GB is indicated.

The destination of live beef cattle movements from the rest of GB to Scotland is also indicated.

Table 6
Beef Cattle movements July 2006 to June 2007

Movement type	Mainland	Inner Hebrides	Orkney	Shetland	W. Isles	GB crossborder
No and origin of live Scottish beef cattle movements to rest of GB	27,187	407	124	20	9	
No and destination of live Scottish beef cattle movements from the rest of GB to Scotland	35,415	207	37	4	1	
No and origin of Scottish beef cattle slaughtered in rest of GB	11,758	13	36	5	3	
No and origin of beef cattle slaughtered in mainland Scotland	420,557	3,948	3,726	145	134	46,801

Source: SAC (2008). Structure of the Scottish Livestock Industry.

2.36 The impact of movement restrictions in the beef sector was limited due to the relative speed with which movements to slaughter were permitted. The movement of cull cattle was most affected due to the greater reliance on the export market. In the case of store cattle movement restrictions caused delays and market throughput was reduced due to closure of the auction markets.

Dairy cattle movements July 2006 to June 2007

2.37 There were only 7,357 live dairy cattle movements from Scotland to the rest of GB but 38,561 dairy cattle moved across the border into Scotland. In terms of slaughter nearly 6,000 Scottish dairy cattle were slaughtered in England and Wales with 5,393 dairy cattle originating from the rest of GB slaughtered in Scotland.

Pig movements July 2006 to June 2007

2.38 Only 2,287 live pig movements occurred from the rest of GB onto Scottish pig farms although 123,468 pigs were moved from Scotland to farms in England and Wales. This has implications for the pig industry for finishing if cross border movement restrictions were implemented. The Scottish pig industry is self contained with only 538 pigs coming from the rest of GB to Scotland for slaughter and 42,464 Scottish pigs slaughtered in England and Wales most of which are cull sows.

2.39 The impact of the movement restrictions on the pig industry would be limited to the breeding and finishing sectors. Movements to slaughter were permitted relatively quickly although there appeared to be action by the multiple retailers to source pig meat from overseas in the first week due to lack of information over

when movements to slaughter would restart. Farm to farm movements are important with over 829,843 live movements off Scottish parishes. This reflects the structure of the pig industry with the movement of young pigs from breeding units to finishing units. Cull sows were a problem as the majority would normally be slaughtered in England for the export market which did not exist until the export ban on meat was lifted.

ECONOMIC IMPACT OF THE 2007 FMD OUTBREAK

2.40 A separate report was commissioned to assess the economic impact of the 2007 FMD outbreak (Economic Report 2008). The objective of this review, however, is not to comment on the costs of the outbreak but to identify the factors which contribute to the economic impact and to make recommendations on the way in which the impact could be minimised in the event of a future FMD outbreak.

2.41 The control measures introduced to prevent the potential spread of FMD impose additional economic burdens on the livestock sector and on allied parts of the agri-food supply chain. These result from:

- the export ban imposed on susceptible animals and their products which are considered to be risk;
- domestic restrictions on movements;
- additional control measures to prevent the spread of disease.

2.42 The additional burdens resulting from these control measures fall into three categories as follows:

- market effects due to disruption of the demand and supply balance largely due to the diversion of supply to the domestic market as a result of the export ban;
- withholding costs which arise from the retention of livestock beyond their intended movement off-site and the consequent value changes along with the additional management and feed costs;
- enhanced biosecurity costs due to the disinfection requirements for vehicles, and higher costs of haulage with the single pickup requirements.

2.43 Losses can also be identified beyond the farm level at auction marts, at slaughterhouses and in the haulage industry and can also fall into the three categories listed above.

2.44 The Economic Report concludes that any action which lowered the withholding costs or reduced the losses from handling livestock would reduce the magnitude and pattern of impacts. An absence of the national movement ban would have avoided most of the withholding costs but was not acceptable as it could have

resulted in disease spread. A more rapid relaxation of the movement ban would have lowered withholding costs. It is estimated in the Economic Report that lifting all restrictions a week earlier or allowing multiple pickups a week earlier could have had an impact in reducing the costs.

2.45 The Economic Report considers that one option would be to treat the Scottish Islands as separate from the mainland, such that movements within and from Islands could have been exempted from movement restrictions. This would have avoided withholding costs over the course of the total period considered. Taking this approach would require confidence in the tracing of movements and surveillance on the Islands which with the information available in the reports from EPIC is more feasible now than it was in 2007. Based on the comprehensive information now available on movements into, out of and within the Scottish parishes it may also be possible in future to consider exempting other areas of Scotland such as the Scottish Highlands from the prolonged movement restrictions.

2.46 The main effects were due to the export ban and if this could be avoided the market effects would be much less. To achieve this Scotland would have needed to be treated differently from England and Wales. However, the Economic Report highlights three main reasons why considering this approach should be treated with caution and why measures to avoid costs in a future outbreak would be better focused on flexibility in movement restrictions rather than on achieving separate regional status for Scotland:

- “due to local capacity constraints at specific times of year a proportion of Scottish animals – most notably sheep are slaughtered in England and Wales and the gains would be limited in practice;
- even if disruption to the export of primary produce could be avoided, a proportion of Scottish primary produce undergoes some form of further processing elsewhere in the UK. This means that it might still be caught by an English export ban and therefore the market effect would still extend to Scottish producers;
- due to the configuration of supply-chains, an English export ban might lead to retail supply problems in Scotland – even if the raw materials had originated in Scotland”.

2.47 The Economic Report concludes that “fuller consideration of the costs and benefits of alternative control strategies would require further information on current supply-chain configurations and net cross-border trade flows of primary, intermediate and final processed products, probably within a formal modeling framework rather than the partial and static analysis presented in the paper”.

Chapter 3 Regionalisation

KEY FINDINGS

3.1 The Cabinet Secretary recognised that regionalisation would be an important issue and various options were considered from the outset of the outbreak. There was extensive consultation with stakeholders but the views and opinions of key organisations in Scotland varied considerably, probably due to the lack of basic factual or economic information on the impact of regionalisation. The Scottish Government was under pressure to take action especially from producers to reduce the disruption from the outbreak. However, rapid action by the Commission in lifting restrictions on animals and products in August and again for products in October negated the need for a specific Scottish regional approach in 2007.

3.2 One of the most important lessons is that a risk based approach to regionalisation is practical and desirable to minimise disruption caused by the bans on internal movements and exports. A better understanding of the concept and requirements for regionalisation along with the availability of appropriate technical, industry and economic information would enable the most effective policy to be developed. There are a number of areas for improvement which would assist with this process:

- develop a single set of clearly defined terms for both trade and disease control aspects of regionalisation to avoid confusion;
- improve the clarity and availability of the trade and movement rules which apply to the different categories of zones or risk areas to enable the impact of the different options for regionalisation to be evaluated during periods of FMD freedom;
- specify as far as practical the criteria which would be used for classifying the different risk areas and for moving between risk categories;
- ensure that the domestic legislation necessary to impose the national movement ban does not require the imposition of a restricted zone throughout GB;
- improve contingency planning to include scenarios reflecting possible FMD outbreaks in order to identify and evaluate regionalisation options;
- ensure that the basic movement and trade information necessary to define the free zone and risk areas is available and up-to-date.

3.3 The size and boundaries of initial and subsequent risk areas should be determined not only by the epidemiology of the disease but should also take into account economics of the industry, internal trade patterns, supply chain issues and

welfare of the animals. Although a strictly veterinary assessment could classify areas as low risk it may be necessary to retain them in a high risk category to minimise the disruption to trade etc. This was the case in 2007 when Scotland remained in a similar risk category to most of England in order to minimise the disruption to internal trade and supply chains.

INTRODUCTION

3.4 On 4th August the Cabinet Secretary asked for urgent advice on regionalisation as he was aware that this was an issue which would need consideration depending on future developments. Regionalisation was discussed throughout the first period of disease but became increasingly important following the re-emergence of FMD in September 2007 along with the renewed national movement ban and further impact on industry in Scotland. The hope was that regionalisation of GB would allow the resumption of exports from certain areas designated as FMD free.

3.5 It is important to understand the term 'Regionalisation' in order to consider whether regionalisation is a viable option and whether it would help to minimise the disruption to Scotland in the event of a remote disease outbreak within GB. In assessing the value of regionalisation the following questions need to be considered:

- What is the terminology and what does it mean?
- What are the rules and how do they impact on the reality of regionalisation?
- How are the regions managed and what criteria are used to establish and then reduce the size and geographical boundaries of the regions?
- What practical regionalisation can be applied to Scotland to minimise disruption of a distant outbreak?

DEFINING AND UNDERSTANDING REGIONALISATION

Issues

3.6 The use of different terminology by the OIE, the EU and within the UK leads to confusion and a lack of clarity on the way in which areas, zones or regions should be defined and managed. The OIE uses terms such as zoning and compartmentalisation with three recognised categories: free, buffer and infected zones. The Commission defines restricted zones for disease control purposes but in addition sub-divides the restricted zone into low and high risk areas which are not clearly defined. There is no clear account of the additional categories of risk area which were introduced by the Commission in October 2007 to allow the export of meat under strict conditions from high risk areas. Details of the international organisations and their role are provided in Appendix 5.

OIE definitions

3.7 The OIE is the reference body with responsibilities under international law for the standards, guidelines and recommendations applicable to worldwide trade in animals and their products. The concept of zoning and compartmentalisation was developed as an attempt to overcome the difficulties some countries faced in establishing and maintaining disease free status for the whole country where the control measures to prevent entry across the national boundaries were often difficult to implement successfully.

3.8 The OIE defines a zone as "*a clearly defined part of a country containing an animal subpopulation with a distinct health status with respect to a specific disease for which required surveillance, control and biosecurity measures have been applied for the purpose of international trade*". For these purposes 'zoning' and 'regionalisation' have the same meaning. Zoning is applicable when the subpopulation is defined on a geographical basis whilst compartmentalisation is based on the management systems related to biosecurity. Compartmentalisation is only applicable in highly integrated industries such as the pig and poultry industry. It has the potential to resolve a number of problems especially the movement of animals from breeding units to finishing units without jeopardising disease control. Whilst it is not intended to consider compartmentalisation further in this report, it is a topic which merits further consideration to evaluate the potential value in terms of resumption of internal trade and exports especially within the pig industry.

EU legislation

3.9 Regionalisation is defined in Council Directive 2003/85/EC of 29th September 2003 on Community measures for the control of FMD as "*the delimitation of a restricted zone in which restrictions are applied on the movements of or trade in certain animals or animal products in order to prevent the spread of FMD into the free zone where no restrictions are applied*". EU Member States are obliged to regionalise into one or more restricted and free zones which must be delimited on the basis of administrative boundaries or geographical barriers. Whilst Member States have this obligation the Commission, aided by the other Member States, can decide on regionalisation and the measures to be applied. The Directive specifies only two zones, restricted and free. In 2007 the whole of GB was declared to be a restricted zone while Northern Ireland was classified as a free zone on the grounds that it is a separate epidemiological unit and has long been considered by the Commission and the EU Member States as separate from the rest of the UK for disease control purposes.

3.10 Commission Decision 2007/554/EC concerning protection measures with regard to FMD in the UK was published on 10th August 2007. This defined as a permanent measure the high and low risk areas in the UK for the purposes of prohibiting the dispatch of animals and their products. It also provided for the rules for the movement of safe products. Northern Ireland was not included in the annexes and remained FMD free.

3.11 During the second series of outbreaks the Commission introduced a new concept with a third annex to the Decision. This annex permitted the export of meat from a high risk area under strict residency and other controls. By introducing this annex the Commission appear to have created another category of risk area which was intermediate between high and low risk although in the legislation it remains classified as high risk. In the later stages the Commission introduced additional areas in order to facilitate exports and to provide assurances to the other Member States. These included the FMD free export area, the FMD restricted export area and the FMD no export area. This resulted in further complications about the definition of regions, zones and areas.

Lessons Learned

3.12 It is important to have clear unambiguous definitions for each of the zones or risk areas. Stakeholders confirmed that definitions of regionalisation were confusing and that they would prefer a single set of clearly defined terms. The objective of regionalisation is to prevent the spread of FMD and to define areas which are at a different risk level to ensure that trade can be conducted safely. Whilst the restricted zone can be defined on geographic or administrative boundaries it is implicit in the OIE and EU requirements that risk is the primary determinant of regionalisation and not political boundaries. The reality is that the EU formulates legislation and will use the OIE standards as the basis for the law.

Recommendation 1: The Scottish Government working with Defra and the Devolved Administrations should take the lead to produce a standardised set of terms for regionalisation. The concepts of restricted zones, high and low risk areas as defined in the Directive and Decisions need to be developed further by the UK Government in co-operation with the European Commission to ensure that a single set of well defined terms is used effectively for the purposes of regionalisation in the event of an FMD outbreak. (High Priority)

Recommendation 2: The Scottish Government should work with Defra to assess whether compartmentalisation could be used effectively within the pig industry to permit internal trade and exports when an area is in a restricted zone or a national movement ban is in place. (Medium Priority)

CLARIFYING THE RULES APPLYING TO THE MOVEMENTS WITHIN AND BETWEEN ZONES AND RISK AREAS

Issues

3.13 The trade restrictions applied by the Commission were complex, difficult to interpret and subject to continual amendment as the disease situation evolved. The situation in October 2007 was complicated with the introduction of a third risk category for which some meat exports were permitted from high risk areas under strict residency and other conditions. The Commission prohibition on the movement of susceptible animals from the low to high risk areas was of major importance in

relation to the possible regionalisation of Scotland. There would be major implications if Scotland was in a lower risk category compared to the rest of GB and was prohibited from moving livestock into England and Wales.

3.14 The lack of clarity and the constant change resulted in great difficulty in assessing the potential impact of different regionalisation options in Scotland. There was no clear catalogue of permitted movements both between GB and other Member States and domestically within the UK.

EU rules

3.15 In principle the objective of trade and movement restrictions is to ensure that FMD virus is not transferred into free zones or lower risk areas. This is achieved by ensuring that susceptible animals and their products can only move one way within the risk chain from free to low to high risk and not in the opposite direction. Only in special circumstances with specific risk management measures can animals and products move in the opposite direction. These rules apply to all the risk material and include susceptible animals, meat, meat products, meat preparations, milk and any other product derived from FMD susceptible animals.

During the 2007 outbreaks the EU introduced specific rules in the early stages to prohibit:

- the dispatch of susceptible animals from the high and low risk areas;
- the dispatch of products derived from susceptible animals from the high risk area;
- the movement of susceptible animals either way between low risk and high risk areas;
- the movement of susceptible animals from other Member States to the high risk areas of GB.

3.16 Intra Community trade rules for animal products require the application of an oval stamp indicating the products are fit for movement between the Member States. Whilst GB was in the high risk area a round health stamp was required indicating that the product could only be placed on the national market. Meat acceptable for intra community trade could be exported from the low risk areas or free zones provided it was marked with an oval stamp and accompanied by additional certification.

3.17 Commission Decision 2007/554/EC also permitted the continuing trade in products which were considered to be safe from the high and low risk areas. These included products that had either been produced before the restrictions, from raw material sourced from outside the restricted zone or that had undergone a treatment proven effective in inactivating possible FMD virus. Although this was permitted from day one there were problems with the introduction and administration of the

certificates following the outbreaks in August. This meant that the system was not fully operational until the end of the second week which caused losses to the wholesale and retail industries.

Permitted movements

3.18 Table 7 provides an overall summary of the requirements but cannot describe all the complex options and derogations which were developed and available during the course of the 2007 FMD outbreaks. In general most of the rules contained in the Commission Decisions related to exports and trade between the UK and other EU Member States. There was very little about the rules related to movements within the free and risk areas of the UK as a single EU Member State. This resulted in some initial problems especially over the export of products to Northern Ireland. The rules also changed over time.

Table 7
Permitted movements within and between different risk areas

Zone/ area	Category	Permitted movements
High Risk	Production animals	Within the high risk area only
	Slaughter animals	Within the high risk area only including to a slaughterhouse in the high risk zone
	Meat	Round stamp within the UK but not accepted by NI
	Meat products	Round stamp within the UK but not accepted by NI
	Milk	Pasteurised anywhere in UK
Low Risk	Production animals	Within the low risk area
	Slaughter animals	Within the low risk area
	Meat	Oval stamp anywhere in the UK and export to EU
	Meat products	Oval stamp anywhere in the UK and export to EU
	Milk	Pasteurised anywhere in the UK and export to EU
Free	Production animals	Within the free zone and from NI to low or high areas of GB but not from other M/States to the high risk zone of GB. Exports subject to residency period and certification.
	Slaughter animals	Within the free and to low or high risk areas within the UK but not from other M/States to the high risk zone of GB. Export subject to residency period.
	Meat	Slaughterhouses operate as normal subject to additional certification for exports. Meat with oval stamp anywhere in the UK and export
	Meat products	Oval stamp anywhere in the UK and export
	Milk	Pasteurised anywhere in the UK and export

Lessons learned

3.19 Stakeholders indicated that the lack of clarity and inability to anticipate the rules which would be applied led to considerable difficulties both in interpretation and implementation of the conditions for export and internal movements. It is important that information on the rules is available so that adequate planning can be undertaken in times of FMD freedom. It is equally important to simplify the rules which must be available and easily understood. Straightforward guidance for industry is required to help interpret the more technical parts of the Decisions.

Recommendation 3: In the light of experience in 2007 the Scottish Government and Defra should work with the European Commission to review, clarify and develop detailed rules for movement of livestock and their products between different risk areas and zones. (High Priority)

Recommendation 4: The prohibition by the Commission Decision 2007/554 on the movement of susceptible animals from low risk to high risk areas should be reviewed by Defra with the European Commission as this could act as a major constraint to the re-classification of the risk based areas. (Medium Priority)

MANAGING ZONES AND RISK AREAS DURING 2007

Initial identification of restricted zones and risk areas

3.20 In the early stages the UK authorities considered that the restricted zone for trade purposes should only consist of the counties of Surrey and Hampshire with the possibility of including some of the surrounding counties and were in discussion with the Commission over this. Following confirmation of the second FMD case in August the whole of GB was classified as a restricted zone even though the outbreak was limited to Surrey. The extent to which the restricted zone affected the whole of GB in terms of domestic movement and trade depended on how confident the UK was about the epidemiological picture at the time.

3.21 The whole of GB was placed into a high risk area by the Commission Decision based on information provided by the UK Government. This was based on uncertainty on the outcome of tracing of possible contacts to the infected holding and the need for adequate controls on the movement of animals and products.

3.22 The UK authorities were not obliged to declare the whole of GB to be a restricted zone but in the circumstances it was agreed by all Devolved Administrations that this was the best approach. If details of the historical livestock movement patterns into and out of the Scottish Islands for example had been available it could have been argued that they should have retained their free status. In these circumstances evidence would be required by the Commission and the other Member States to demonstrate that FMD was not present in those areas. At this stage of the 2007 outbreak the implications of regionalisation on internal trade

were not fully understood and it was considered more appropriate for the whole of GB to be in the same risk area within the restricted zone.

Re-classifying the zones/areas

3.23 In the early stages of the outbreak GB remained a high risk area in view of the uncertainty about the evolution of the disease. The re-classification of areas or zones into a lower status was unlikely to occur until conclusive evidence was available to demonstrate the low risk or freedom from FMD virus in the areas concerned as happened on the Scottish Islands. The trigger points for the move from high to low risk and then to free status are important but not clearly stated nor obvious to all stakeholders.

3.24 EU legislation permits the reduction in the size of the restricted zone in the light of epidemiological findings. These investigations provide the evidence on which to base judgements and where appropriate to review and modify the size of the risk areas. Some investigations will be completed quickly while others will take time depending on the number, distribution and complexity of movements to be traced. Until all significant movements had been identified and the animals traced and inspected with negative results no reduction in the size of the areas would occur.

3.25 In addition to the epidemiological investigation the time interval from the last confirmed case is critical in re-classifying risk areas. This is related to the incubation period of FMD. Both the OIE and the EU agree that the incubation period of FMD is 14 days for cattle and pigs. In the case of sheep the OIE accepts 14 days but the EU requires 21 days as there are particular concerns about missing clinical signs in sheep. However, the Commission was clear that as GB has such a large sheep population the incubation period should be 21 days irrespective of which species had the disease. The 2007 FMD outbreaks also raised concerns about the clinical signs of cattle being missed. This time period from last confirmation of FMD is one of the major trigger points for re-evaluating risk areas status as the longer the interval with no cases the more likely FMD is absent from the area.

3.26 Some of the movement information was available quickly but in other cases it was difficult for the authorities to identify risk areas and to define their boundaries clearly. In some cases it was apparent that GB livestock tracing systems needed to be improved to deliver more timely and quality information in order to facilitate the rapid re-categorisation of risk areas. This issue is covered in more detail in Chapter 6 dealing with scientific and veterinary evidence. It is also important to note that not all the information such as the movement of people, equipment and vehicles is recorded to enable risk areas to be defined with certainty in the early stages of an outbreak.

3.27 Any decisions on the initial or subsequent size of risk areas or free zones must also take into account the potential impact of restrictions on the internal trade and supply chains as well as exports. The different impacts are driven by the extent to which each option restricts trade and disrupts the long supply chains which involve

producers, processors, wholesalers and retailers throughout the UK. Details of the supply chains and the movement of products around GB are described in Chapter 2.

EU and UK legislation

3.28 Under current legislation the only way in which Scotland can implement a national movement ban is by declaring a restricted zone using the powers in the FMD (Scotland) Order 2006. Similar legislative requirements apply in England and Wales. The measures which can be applied in the restricted zone include a prohibition on the movement of susceptible animals within, into or out of the restricted zone. This means that for a national GB-wide movement ban to be implemented following confirmation of FMD the whole of GB has to be declared a restricted zone.

3.29 The FMD Directive 2003/85/EC provides for a “temporary ban on movements of all animals in a larger area or on the whole of the territory of a Member State”, where a temporary control zone has been declared on suspicion of FMD. The Directive does not however replicate this provision in the measures to be used when disease is confirmed, rather preferring to use zone measures – in this case the “Restricted Zone”.

3.30 There is a fundamental difference between the UK Government’s declaration of restricted zone which is required to effect the national movement ban and the concept of restricted zone in the EU legislation. Under EU legislation a Member State has to declare a restricted zone when FMD appears to be spreading despite the implementation of control measures and when the epizootic becomes extensive and in any case when vaccination is implemented.

3.31 This means that an effective and proportionate response is available at the suspicion stage but on confirmation of FMD there is no mechanism to maintain the national movement ban unless a restricted zone is declared. The proportionality of using a restricted zone to affect the national movement ban is unacceptable and needs to be reviewed. It should be possible to impose a national movement ban without declaring the whole of the country a restricted zone.

Lessons learned

3.32 Detailed information must be available at the outset of an outbreak to demonstrate historic trade and livestock movements. This would in theory enable decisions on the initial size of restricted zone and associated risk areas to be based on the most up to date and valid information. This could result in certain parts of Scotland being excluded from a restricted zone.

3.33 The current legislation in GB provides little or no leeway for limiting the size of the restricted zone as such a zone is needed for the legal imposition of the national movement ban. Ideally the domestic legislation to impose the national movement ban should be divorced from that which imposes the restricted zone.

3.34 Once the initial Commission Decision is agreed following confirmation of FMD it will be difficult to persuade the Commission and other Member States to modify the risk areas without substantial epidemiological evidence and a time lag to account for at least one incubation period.

3.35 In the interval between the confirmation and the first meeting in Brussels of the Standing Committee on the Food Chain and Animal Health (SCoFCAH), the national authorities must be able to investigate and confirm that there is no risk of FMD in the areas proposed to be free zones. Likewise evidence would have to be provided to support any request for areas to be categorised as low risk.

3.36 The UK is expected to conduct epidemiological enquiries and present the results to the Commission and other Member States. A rapid comprehensive investigation is essential to provide solid evidence on the origin and spread of the virus before the Commission would consider the re-classification of the risk areas.

3.37 An exit strategy must be developed as quickly as possible in order to provide producers and others with a workable timetable for removing restrictions with the caveat that if the disease situation changes so will the timetable.

Recommendation 5: The UK administrations should review their FMD legislation to clarify terminology and avoid the requirement to declare a GB-wide restricted zone in order to impose the national movement ban. This review should be undertaken in conjunction with the European Commission and other Member States to incorporate the lessons learned from the 2007 FMD outbreak into UK and EU legislation. (Medium Priority)

Recommendation 6: Discussions should take place between the UK national authorities and the European Commission to determine the way in which areas could be included in the free zone even if a national movement ban has been imposed on the whole of GB. (Medium Priority)

Recommendation 7: The Scottish Government should ensure detailed up-to-date information on the whole of the supply chain from producer through to retailer is regularly reviewed to ensure that the determination of the size and boundaries of the restricted zone and associated risk areas is based not only on the epidemiology of the outbreak but also takes into account the economic, trade and welfare implications for the areas concerned. (Low Priority)

Recommendation 8: The Scottish Government and Defra should identify the criteria for the re-classification of risk areas from high to low risk and finally to disease free status with a view to moving down the chain as quickly as possible. The criteria should be discussed and agreed with the European Commission in the light of lessons learned from the 2007 outbreaks. (High Priority)

REGIONALISATION FOR SCOTLAND

3.38 Regionalisation has to be considered from a number of aspects:

- Is it possible to regionalise GB and in particular Scotland in times of FMD freedom in order to maintain its FMD free status in the event of an outbreak occurring elsewhere in the UK?
- Are contingency plans in place to regionalise Scotland and possibly other parts of GB immediately in the event of an outbreak to ensure the maintenance of an FMD free status?
- Can contingency plans be developed to regionalise FMD free zones within Scotland?
- Can plans be developed to regionalise Scotland into different risk areas to the rest of GB in order to facilitate exports but maintain internal movements and trade?

Pre-outbreak regionalisation for Scotland

3.39 Northern Ireland has been considered by the Commission and other Member States to be a separate part of the UK for disease control purposes for many years. Their status as a separate epidemiological zone is based on a number of factors. These include geographical separation, relatively low numbers of movements, strict control on imports, and the ability to trace all animals rapidly to their destination. On this basis Northern Ireland was considered free of FMD throughout 2007.

3.40 One option would be for Scotland to adopt an approach similar to Northern Ireland in an attempt to retain free status in the event of an FMD outbreak in England or Wales. Although Northern Ireland is part of the UK strict animal health rules are applied to the trade in live animals between Northern Ireland and the rest of the UK. With devolved powers for all animal health matters the Scottish Government could adopt a similar approach by introducing a legal obligation for all imports to meet the full set of animal health conditions contained in the EU trade Directives. This would require import licences, residency, inspection, certification, and traceability. The borders would need to be controlled on an ongoing basis.

3.41 There are a number of current reasons why Scotland would find it difficult to justify being a separate epidemiological zone:

- unlike Northern Ireland there is no physical barrier between England and Scotland which makes border controls more difficult;
- the very high volume of movements between Scotland and the rest of GB compared to those in Northern Ireland would make administration of the requisite controls very difficult;

- tracing and inspection of all animals moved into Scotland over a specified period in the event of an outbreak would take time due to the numbers of animals involved;
- current computer systems in GB would not permit immediate tracing unlike the systems used for exports which involve loading the information at the time of issue of certificates. There would also be considerable costs involved in the issue of certificates.

3.42 Even if the Scottish Government introduced and enforced the additional animal health requirements on the movements of animals into Scotland it is unlikely that the Commission or the other Member States would accept Scotland as a separate epidemiological zone. Putting in place pre-outbreak regionalisation could probably allow for faster and more efficient decision making but on balance the costs of treating Scotland like Northern Ireland outweigh the benefits. There is also the strong possibility that England and Wales would reciprocate requiring all livestock movements into England and Wales to comply with the same rules which in turn would impact on trade from Scotland.

3.43 In the event of Scotland retaining free status additional controls would still be imposed on the movements of animals and animal products into and out of Scotland as occurred with Northern Ireland in 2007. The impact of this would depend on the structure of the supply chain at that time but evidence currently available suggests it would have a major detrimental impact on all sectors involved. The main advantage would be freedom of movement within Scotland and exports but at the cost of major disruption to the supply and distribution chains.

Contingency planning for regionalisation in the event of an outbreak to maintain exports

3.44 The Netherlands, as a major exporting country is well advanced with contingency planning to regionalise their country in the event of an outbreak on their own territory, in a neighbouring country or in a major trading partner. In some cases these plans are activated if the FMD risk to the country is seen to increase. By developing contingency plans for regionalisation taking into account the main issues it would be possible to justify the maintenance of FMD free status for the regions concerned. This would be dependant on how well the separate regions are segregated for trade and economic purposes and whether they are accepted by the Commission and EU Member States.

3.45 Scotland should also consider contingency planning for regionalisation in the event of an FMD outbreak anywhere in UK. A number of different scenarios should be developed and the options for regionalisation investigated in depth but also recognising that if an outbreak occurred in Scotland there would be pressure from England and Wales for a regionalisation approach. In one series of scenarios the disease status of Scotland could be different to that of England and Wales with resulting controls on the movements into and out of Scotland of animals and animal products.

3.46 Other scenarios would be to regionalise based on risk assessment with the probability that disease was either present or absent in specific geographical areas of GB. In this event Scotland would be included as part of the largest risk area so as not to jeopardise internal trade or movements within GB.

3.47 The option of regionalising within Scotland as occurred in 2001 also needs to be considered. Options include:

- parts of Scotland especially the Islands which are clearly separate;
- areas of Scotland with low livestock density and limited movements into the area at specific times of year;
- other areas of Scotland where there is a clear geographical boundary such as the Forth/Clyde line.

3.48 Regaining exports is important but the continuation of normal movements and internal trade is equally, if not more important in the early stages of an outbreak. A detailed economic analysis would be required for each of the options taking into account the likely movement controls which would be imposed between the areas of different status and the impact at all levels throughout the food supply chain. It would also be important to include an analysis of the likely costs of introducing additional control measures to maintain the regionalised status. It would be essential to determine the most appropriate options for the benefit of the Scottish industry.

3.49 The identification of potential areas for regionalisation should be an important component in contingency planning to ensure that the impact of an FMD outbreak could be minimised. The specification of the information and data which would be required to justify any applications for a regionalised approach would complement this approach. All the evidence to justify regionalisation would need to be readily available before an outbreak occurs.

Development of risk areas for domestic trade and internal movements

3.50 Once the origin of the outbreak has been ascertained, the distance from the FMD focus, whether 40 or 400 kilometres, is not the most important factor. It is the movements of livestock, people, vehicles and equipment between the locations with FMD and other areas which are critical. These need to be identified and taken into account in order to define the FMD status of geographical areas. In 2007 the early epidemiology reports indicated that there was a strong possibility that FMD was restricted to Surrey. As time passed it became clear that there had been no rapid spread in the vicinity of Pirbright. With these findings it should have been possible to gradually allow more and more licensed movements based on risk area and risk assessment, especially after the confirmation of FMD on 12th September. With hindsight it is easy to assume that the movement restrictions in Scotland were not commensurate with the risk to Scotland even though there had been movements to Scotland between the August and September clusters.

3.51 In order to assist with the relaxation of the movement ban it should be feasible to allocate the whole of GB as the epidemiological unit into different disease categories for the purposes of internal movements and control. It would be possible to divide the country into provisionally free, low risk and high risk areas. Based on the epidemiology reports and tracing undertaken in 2007 it was apparent from early in both series of outbreaks that much of the country was low risk or provisionally free. This should have enabled faster relaxation of the controls with the movements strictly controlled by licence conditions to prevent any spread by infected animals. In a small number of cases there was a failure to comply with these conditions but this becomes a question of education and enforcement.

3.52 Dividing the country into the risk categories would require further work. Suggested categories for internal controls which are not dissimilar to those for trade purposes would be:

- high risk areas will be those where infection with FMD virus cannot be ruled out;
- low risk will be those areas where initial findings such as epidemiology, tracing and modeling lead to the conclusion that FMD infection is unlikely suggesting low risk classification would be appropriate;
- provisionally free for those areas where there is little evidence of movements, where the 13 day standstill is enforced and where animals moved in from the other areas can be traced rapidly. This status would seem an appropriate classification pending any additional work necessary to confirm this status.

3.53 The provisionally free status would have applied to the Scottish Islands, especially Shetland, in both August and September. Restrictions could be lifted faster in the low risk and provisionally free areas but maintained for longer in the high risk areas provided these were small enough.

3.54 This approach was adopted at a later stage of the second series of outbreaks in September 2007 when most of GB was classified by Defra as low risk, with a risk area comprising Surrey and the surrounding counties. Relaxation of movements was more advanced in the low risk area. If this approach had been made in the early stages then movement licences could have been issued much more quickly as the disease situation was clearer especially during the September outbreaks.

Scottish Islands

3.55 The situation on the Scottish Islands provides a good example of where national controls can be relaxed but where the export ban remains. During the first series of outbreaks the Islands were included in the national movement ban but movement controls were relaxed more quickly for the Islands on the basis that the risks were assessed to be considerably lower than for the mainland. During the September outbreaks the Scottish Islands were not included in the national

movement ban because the Islands were considered to be free of FMD. This meant that internal movements could take place as normal as could movements off the Islands. Movements onto the Islands were not permitted as otherwise they could lose their national disease free status.

3.56 In spite of this approach by the Scottish Government the Islands remained in the same EU risk category as the mainland with the consequence that potential exports of meat from the Islands remained banned until the ban on the export of meat was relaxed for the whole of Scotland and parts of GB. Whilst the continuation of the EU ban was unfortunate the relaxation of national movement controls on the Scottish Islands resulted in less disruption than was caused on the mainland.

3.57 Since 2007 detailed information on movements into and out of the Scottish Islands is currently available from the EPIC and SAC reports. Shetland has a rigorous health scheme and felt this was not taken into account when the initial restrictions went on across the whole of Scotland. The recording of animal movement in and out of Shetland is comprehensive and every animal coming in is checked by a veterinarian. Animals imported onto the islands can be rapidly traced and examined. The traceability is less for the other Scottish Islands. The priority for the Islands is internal trade but in the future the emphasis may shift to export. Regionalisation of the Scottish Islands for both national disease control and export purposes would be a feasible option although this would be of particular importance in the August to November period.

Priorities for stakeholders

3.58 Stakeholders in Scotland considered that the return to normality for internal trade and movements had priority over the resumption of exports. They all agreed that it was important to categorise GB into high and low risk areas as quickly as possible and that efforts should be made to demonstrate that low risk areas were free of the disease and virus.

3.59 All stakeholders agreed that to have a regionalised approach for Scotland along the lines of the Northern Ireland model was impractical and unnecessary with all the consequences and economic cost involved both for the Scottish Government and the industry. The administration and bureaucracy of such an approach did not warrant introducing extensive controls on the movement of livestock in periods of FMD freedom. Whilst a number of stakeholders would prefer to operate controls at the Scottish border in the event of an FMD outbreak the majority agreed that any regionalisation should be risk based and include the whole of GB. A number of stakeholders considered that as part of contingency planning the potential to slaughter and process more animals in Scotland should be considered to reduce Scottish dependence on facilities in England and Wales.

3.60 Stakeholders made little comment about the possibility of regionalisation within Scotland although those from the Highlands and Islands felt that this should be considered.

Lessons learned

3.61 Regionalisation has the potential to minimise disruption caused by an outbreak of FMD in any part of the UK but must be based on risk areas and economic reality. This in turn is dependant on the epidemiology of the outbreak, time of year, and most importantly the controls introduced by the Commission and their impact on trade patterns and the whole of the supply chain.

3.62 Controls which prevent the movement of susceptible animals from the low to high risk areas will result in a different regionalisation pattern to those which only prevent the movement from high to low risk areas. An approach which permits the movement of stock from low to high risk areas with no movement in the opposite direction would facilitate an earlier return to near normality for those parts of the GB not affected by the disease.

3.63 For regionalisation to work it is essential to consider the issue in periods of FMD freedom to decide how it could be achieved and to develop appropriate plans. It must also be emphasised that each outbreak will be different and the policy on regionalisation will have to be developed to fit the situation at the time. It is however important to consider and debate the range of options in order to make rapid informed judgements at an early stage on which option to follow should another FMD outbreak occur. As part of the contingency planning process a number of scenarios should be developed reflecting the likely FMD outbreaks so that regionalisation options can be considered in depth.

3.64 The national authorities must be allowed to determine risk areas for national disease control purposes in order to enhance movements and minimise unnecessary and disproportionate disruption. This in turn will enable movement restrictions to be relaxed. Speed is of the essence in re-classifying parts of GB into lower risk categories. It must be acceptable for a country to classify risk zones in advance of the export controls in order to ensure a proportionate response to the risk in the restricted zones.

Recommendation 9: Scottish Government officials should visit other EU Member States to assess their policies, progress and planning to regionalise in the event of an FMD outbreak. (Low Priority)

Recommendation 10: A number of regionalisation scenarios should be developed by the Scottish Government in order to evaluate the implications and impact of regionalisation taking into account the EU rules which applied in 2007. These should be debated by the Scottish Government with all the stakeholders representing each sector of the supply chain in Scotland to ensure that there is consensus on how regionalisation would be handled in the event of an FMD outbreak. (High Priority)

Recommendation 11: A UK-wide plan and agreement on regionalisation must be developed in partnership with Defra and the Devolved Administrations during an FMD free period to be implemented whenever outbreaks occur in any part of the UK. (Medium Priority)

Recommendation 12: The Scottish Government and Defra should develop a protocol identifying the criteria for classifying the GB into risk areas which could be used to relax movement controls in a proportionate manner. (High Priority)

Recommendation 13: The Scottish Government should review with stakeholders the capacity for the processing and packaging of meat in Scotland to assess whether it could be increased with a view to reducing dependence on facilities in England and Wales. (Low Priority)

Chapter 4

Disease Strategy and Movement Controls

KEY FINDINGS

4.1 Once the FMD outbreak was confirmed in August and again in September, the Scottish Government acted quickly and decisively to impose a national movement ban in line with their contingency plans. None of the UK administrations' contingency plans gave an indication of the timescale for removing the restrictions nor were the criteria clearly specified. Stakeholders considered that more detail on timescales would be invaluable and enable them to plan more effectively.

4.2 Stakeholders all agreed that such a ban should be imposed immediately no matter where disease first occurred in GB. Whilst all stakeholders supported the ban, the farming community wanted swift relaxations based on risk assessment to enable licensed movements to recommence as soon as possible without jeopardising FMD controls. A phased relaxation was considered crucial. The challenge was how to balance the prevention of FMD spread against the problems caused on a daily basis throughout the supply chain by the movement restrictions.

4.3 Improvements can be made which could help to reduce disruption either by reducing the impact of the movement restrictions or by informing stakeholders of the timescales and likely period so they can plan accordingly. These include:

- the value and role of the routine movement standstills and associated separation agreements need to be reviewed to assess their value both in times of FMD freedom and during outbreaks;
- improve the consistency of implementation both within Scotland and with the rest of GB;
- the identification and evaluation of critical movements for industry and the risks they may pose;
- defining risk areas to enable restrictions to be lifted faster in the lower risk and provisionally free areas;
- preparation and updating of risk assessments for important categories of movements especially for welfare purposes and to slaughter;
- availability of pre-prepared movement licences with clear unambiguous conditions.

Stakeholder involvement in all these activities is crucial for success as is liaison and coordination between all GB administrations.

INTRODUCTION

4.4 The main elements of the disease and movement control strategy are considered in this chapter and include:

- routine movement standstills during periods of FMD freedom to prevent the silent spread of the virus before disease is identified;
- imposition of a national movement ban on confirmation of disease to prevent further spread of FMD;
- relaxation of the national movement ban to minimise disruption and return to normality;
- other disease control strategy issues.

ROUTINE MOVEMENT CONTROLS

Routine movement standstills

4.5 During the 2001 outbreaks risk assessments indicated that a 20 day standstill of all susceptible livestock on farms following the movement of susceptible animals onto the premises would be an appropriate risk management measure. During FMD free periods a routine movement standstill provides an effective mechanism for slowing the potential spread and impact of FMD. As long as a standstill remains in force it prevents the disease being carried by infected animals to otherwise uninfected premises. If infection is present it will circulate amongst the animal population on the farm which will provide an opportunity for FMD to be recognised and investigated before any animals move off.

4.6 The 20 day standstill continued as a precautionary measure after GB was declared free of FMD in January 2002. The industry requested that the rule be changed as the restrictions interfered with normal trade and husbandry practices. The situation was reviewed to assess whether it would be possible to reduce the period but still maintain the additional safeguard to reduce the potential for FMD spread. In England computer models indicated that a 6 day standstill would provide adequate protection. As a result a 6 day standstill was introduced for cattle and sheep in England and Wales with the 20 day standstill remaining for pigs. Scotland adopted a different approach and decided on a 13 day standstill for cattle and sheep.

Separation Agreements in Scotland

4.7 As a concession to the 13 day standstill farmers who gave an undertaking to keep incoming and resident animals separate to avoid the spread of disease were given an exemption. The farmers would need to demonstrate separation between animals moving onto the farm from animals already on the farm. The separation agreements were approved by Scottish Government and currently involve around

1,800 farms. The agreements are monitored as part of routine animal inspections. The facilities and the operation of the separation agreements vary considerably from farm to farm. Some involve complete separation to the extent that FMD on one part of a premise would not be spread to another part. Others are not so effective and would not prevent the spread of FMD between different parts of the same premises.

4.8 It was accepted at the time of the initial concession that separation agreements would be invalid during an FMD outbreak due to the heightened risk of disease spread by animals. In these circumstances movements would only be permitted under licence and subject to the re-imposition of the 20 day standstill. When the restrictions were lifted on 23rd August a 20 standstill remained in place as a precautionary measure. This created problems for farmers due to the short period in August/September in which to buy breeding stock while selling finished or store stock.

Issues in 2007

4.9 As a result of discussions with stakeholders and officials three issues arose:

- the overall effectiveness of the separation agreements as a precautionary measure was queried;
- the different requirements in England where there is a 6 day standstill with no separation agreements;
- during the 2007 outbreak a 20 day standstill was reintroduced for all licensed movements and the separation agreements routinely observed in Scotland were suspended. Concern was expressed by stakeholders that all farms had to comply with the 20 day standstill and no account was taken of the separation agreements.

Lessons learned

4.10 It would be helpful if there was less confusion over the different standstill requirements in England and Scotland. While the separation agreements have limitations they encourage good practice and are useful for preventing the spread of some diseases with the adoption of good biosecurity and separating incoming and resident livestock. The benefits of this relate to a range of diseases other than FMD. Whilst separation agreements are of value in peacetime it is questionable whether they are of equal value when national movement controls are in place in order to halt the spread of FMD.

Recommendation 14: The Scottish Government should undertake a review of the effectiveness of movement standstills in periods of FMD freedom, and consider whether a 6 day or 13 day standstill with variable quality of separation agreements is the most appropriate precautionary measure. (Medium Priority)

Recommendation 15: The Scottish Government should conduct a full risk assessment on the effectiveness of separation agreements during periods when movement controls and licensing are in place and consider whether there is a potential for utilising separation agreements during an FMD outbreak to minimise disruption to producers. (Medium Priority)

IMPOSITION OF THE NATIONAL MOVEMENT BAN

Requirement for a national movement ban

4.11 Prior to 2001 national movement controls had not been imposed in GB following the confirmation of the first case of FMD. Following the 2001 FMD epidemic the Lessons Learned Inquiry, the Royal Society and the Royal Society of Edinburgh all recommended that a national movement ban should be imposed on confirmation of the first case of FMD in the UK. A national ban was considered to be a critical response to an outbreak of FMD. The rationale was to minimise potential spread of FMD when disease was known to be in the country and before full details of its extent and geographical distribution were known. This recommendation was accepted by UK Government and endorsed by all the stakeholders.

Objectives of the ban

4.12 The imposition of a national movement ban at the time of first confirmation of FMD serves a number of purposes:

- it stops for a short period of time all movement of susceptible animals thereby preventing the spread of FMD by livestock and greatly reducing the risk of spread by people, vehicles or equipment;
- it allows time for an epidemiological analysis to be undertaken to determine more appropriate risk areas;
- it enables all movements which are gradually permitted on a risk basis to take place under strict controls to minimise the risk of spreading FMD via incubating or diseased animals;
- it helps to alert livestock keepers and other interested parties to the presence of disease in the country. This leads to heightened awareness of the disease outbreak and the need for farmers and others to take precautions and to report suspicions of disease;
- it demonstrates to the public, trade partners and EU Member States that the UK is taking steps to contain the outbreak and prevent spread out of areas which are already infected.

Issues in 2007

4.13 There was uncertainty about epidemiology and spread of FMD immediately following confirmation of disease on 3rd August. There was one herd in Surrey with FMD, which might or might not have been the index case. The origin of the outbreak was unknown, and the reliability of preliminary information on movements on and off the holding was uncertain. In view of this, Defra wished to impose a national movement ban in England and requested Scotland and Wales to implement similar bans. There was unanimous agreement that a national GB-wide movement ban was necessary not least due to the lack of knowledge about disease and possible spread at that time. The national movement ban was introduced in all three countries using as the legal basis the imposition of restricted zones throughout GB.

4.14 Following confirmation of FMD on 12th September a national movement ban was re-imposed but excluded the Scottish Islands. It is a matter of judgement whether a national movement ban throughout Scotland and Northern England was appropriate at that stage or whether a limited ban on the high risk counties around the FMD locus in Surrey was more appropriate. The disease appeared restricted to Surrey and the 20 day routine movement standstill remained although there had been movements to Scotland from Surrey on 10th September. The routine 20 day movement standstills could have reduced the chances of uncontrolled FMD spread as a consequence of the continuing infection in Surrey. Little or no work has been undertaken to assess whether the routine 20 day standstill requirements could reduce the need for a national movement ban in some circumstances.

Lesson learned

4.15 The ease with which FMD can spread and the potential damage that came as a result of being slow to impose movement restrictions in 2001 justifies the immediate imposition of a national movement ban. There was no criticism from Scottish stakeholders about the introduction of the national movement ban in August. The majority of stakeholders also supported the imposition of the national movement ban following the outbreak on 12th September.

4.16 From a risk perspective the need for such a ban with what appeared to be a continuing local outbreak in Surrey and the controls as a result of the 20 day movement standstill could be investigated further to provide information for decisions on the extent and timing of such a ban in future.

Recommendation 16: The Scottish Government may wish to review the need for the national movement ban in all circumstances taking into account the routine movement standstills on susceptible animals which are in force during periods of FMD freedom. (Low Priority)

MINIMISING THE DISRUPTION CAUSED BY A NATIONAL MOVEMENT BAN

Introduction

4.17 Discussion with stakeholders and officials identified six areas where improvements could be made to reduce the disruption resulting from the national movement ban. In each case the situation would vary depending on the strain of virus, the index case, the time between infection and confirmation and the time of year with potential spread of FMD through livestock movements. The six areas for consideration are:

- duration of the ban;
- consistency and co-ordination of implementation;
- timescale and risk hierarchy for priority movements;
- risk areas;
- risk assessments;
- licences and licence conditions.

Duration of the ban

4.18 A number of the enquiries after 2001 recommended that the ban should be speedily relaxed in consultation with stakeholders once the source and potential spread of the disease was understood. The report by the Royal Society of Edinburgh recommended that farmers in accordance with strict biosecurity should be able to move animals within farm units in such a way as to minimise the welfare problems and the risk of spreading disease. It was important to establish a mechanism whereby the animal welfare and commercial pressures which rapidly build up on farms when normal movements are restricted could be alleviated.

4.19 The Scottish Government's FMD Contingency Plan indicates that in principal the movement ban would be introduced as a precautionary measure for an initial period of 7 days. This would depend on the nature and scale of the virus spread. The ban would be kept under constant review to minimise disruption to industry. Limited movements would be permitted under licence to avoid animal welfare problems. Biosecurity and other requirements would be incorporated into the conditions of licences.

4.20 None of the UK administrations' contingency plans gave an indication of the timescale for removing the restrictions nor were the criteria clearly specified. This is understandable as each outbreak will vary considerably and policy will have to be developed in the light of the epidemiology and information on the disease and the industry activities at the time. However stakeholders considered that more detail on timescales would be invaluable and enable them to plan more effectively.

Consistency and co-ordination of implementation

4.21 Movement restrictions were relaxed at different speeds by the three GB administrations. In some cases Scotland relaxed restrictions and permitted licensed movements in advance of Defra. In other cases the reverse was true. Most licences were identical and the main difference was in timing. In other cases general licences were used in one country with specific licence for the same type of movement in another part of GB. All of this led to confusion amongst the industry and difficulties in enforcement especially if cross border movements were to take place.

4.22 The collection of fallen stock from farms etc and the uplift of animal by-products from slaughterhouses etc were included in the original movement ban. Initially there was a difference in policies in England from those in Scotland. On 5th August, in response to pressure from stakeholders, on-farm burial of fallen stock was permitted throughout Scotland. The derogation to bury on-farm remained in place for 5 days until 10th August when collection and movement of carcasses to an animal by-products approved disposal facility was permitted via a general licence and was subject to stringent biosecurity conditions, e.g. single collections only, collection at farm perimeter, full cleansing and disinfection of vehicles etc.

4.23. Although welcomed by stakeholders there was a view from officials that the decision in Scotland to allow on-farm carcass burial was unhelpful. Defra had come under early pressure from stakeholders to allow burial in England too, based on a perception that fallen stock was a significant issue. Close communication with the National Fallen Stock Company meant that Defra knew there was no backlog of fallen stock. In England the establishment of licences for dealing with fallen stock had gone smoothly.

4.24 Generally most functions in relation to the collection of fallen stock are undertaken by the same organisations in Scotland that deliver the same function elsewhere in GB. It is evident the organisations found it difficult to perform their role when the policy instructions coming forward from Defra, Scottish Government and Welsh Assembly Government were not consistent. This was particularly so when fallen stock for TSE surveillance were collected in England for disposal in Scotland.

4.25 Rapid movement of stock to slaughter is essential with even a 24 hour delay having potentially huge impacts on the supply chain. This is especially the case in the pig sector as there is less elasticity in the pork supply chain. There had been a debate around the timing of movements to slaughter. Defra had moved more slowly than Scotland because they were not sure of the extent of disease spread with confirmation of the second case on 6th August. Scottish Government officials were working on the risk assessment and the conditions to allow animals to be moved to slaughter from day one of the outbreak. They were not dealing with an FMD outbreak at first hand, so were able to act quicker than Defra officials who were much more closely involved with the outbreak and its control. In order to permit animals to move to slaughter it was necessary to approve slaughterhouses, establish procedures, identify resources and finalise the round stamp policy. The policy for dealing with by-products was not clear.

4.26 Round stamps were not immediately available and there was some confusion about the requirements for marking products and packaged material where the EU oval stamp was printed on the packaging. This was a major issue for the retailers who moved product around the UK, especially with the lack of clarity in the early stages about the import rules imposed by the Department for Agriculture and Rural Development in Northern Ireland.

4.27 There were a number of other issues which arose in relation to the slaughterhouses. These included the disposal of slaughterhouse waste which caused delays and for which no detailed contingency planning in the event of a national movement ban had been made in any GB country. Dealing with animals which arrived unexpectedly at slaughterhouses needs additional guidance and the industry considered that the 24 hour rule for slaughter should be reviewed to see if the time frame could be extended so that animals could stand overnight for processing the next day.

4.28 Another area which could have been freed up earlier was a range of on-farm services such as milk recording and contract clippers and dippers. These types of activities could be licensed and monitored, and with satisfactory biosecurity the potential risks could be reduced to an acceptable level.

4.29 These are some of the examples of where there were either different policies in different administrations or where the implementation of those policies followed a different timescale. This is not surprising and it should be expected that based on the disease, epidemiology, distance from the outbreak, perceived risk and structure of agricultural industry that differences would be seen.

4.30 Good co-ordination between the Scottish Government, Defra and the Welsh Assembly Government is essential for handling the consequences of the national movement ban. Much of this can be achieved with improved preparation and contingency planning on a GB-wide basis.

Recommendation 17: The Scottish Government should provide greater clarity on the procedure for authorising slaughterhouses in the event of an FMD outbreak. This information should be available to stakeholders. (Low Priority)

Recommendation 18: The Scottish Government should work with the industry to review the procedures adopted at slaughterhouses and to develop solutions and protocols for dealing with issues such as unexpected arrivals, modifying the 24 hour rule and ensuring that vehicle wash facilities are adequate. (Low Priority)

Recommendation 19: The UK administrations should develop a clear policy for the use of the round stamp on carcasses and animal products in advance to ensure the availability of round stamps, and the resolution of

the practical problems such as the costs of changing packaging for animal products at short notice. Round stamps should be held in reserve by the Meat Hygiene Service and not destroyed after an outbreak is over. (Medium Priority)

Timescales and risk hierarchy for priority movements

4.31 Defining welfare, husbandry and economic needs in advance, and then balancing these against the risks involved with movements would remove a lot of the pressure during a disease situation. In the first week welfare and movements to slaughter are considered by stakeholders to be the most important. The Scottish Government needs to be clearer and clarify the risks of different types of movements, brigading these into different levels of risk. This will aid industry's understanding of why restrictions are in place and the likely sequence for relaxation and licensing of movements.

4.32 Whilst licensing welfare movements helped to meet the practical realities, farmers faced the inconsistencies in the hierarchy of permitted movements which must be resolved. The ability to move a bull across a road, to put rams to the ewe, to move sheep to fresh pasture, to wean calves are all examples of normal husbandry practices within a business and need to find a suitable position in the risk hierarchy. Concern was expressed about the tight definition of welfare problems and the lack of flexibility given to Animal Health Divisional Office (AHDO) staff to issue specific licences to resolve difficulties. Specific cases were quoted where farmers were not permitted to move animals short distances or across roads within their own premises for good husbandry reasons especially where grazing pressures developed. Some common sense and judgement should be used in these cases but further work is necessary to assess how local decisions based on risk can be made without jeopardising overall disease control.

4.33 A priority list of movements necessary to alleviate welfare, and husbandry problems linked to risk assessments would ensure that stakeholders were aware of the timescales and could plan accordingly. The option of using specific licences for the initial relaxation followed by general licences at a later stage when the level of risk is lower is a practical solution which was used in 2007.

4.34 Stakeholders need to be involved in producing a priority list of movements which could be based on the table below. The comparative risks are also indicated. This list was used by the Scottish Government during the second phase of the outbreak in September to determine the risks of different movement categories and to decide the timing for relaxing specific movement restrictions. This hierarchy of risk should be expanded to include the majority of movements. It must be recognised that the risk associated with the different types of movement is critically linked to the probability that FMD exists or does not exist in the area which in turn links to categorisation of the risk areas for disease control purposes.

Table 8
Priority movements and possible risk

No.	Movement type	Risk
1	Occupational movement for welfare reasons. Milking cow across the road.	Very low risk of spread reduced with cleaning and disinfection of the road
2	Movements direct from farm to slaughterhouse under a general licence	Minimal risk with C&D of vehicles and controls at the slaughterhouse
3	Local movements over a short distance between premises in the same control	Very little additional risk because same staff and vehicles involved. C&D reduces the risk.
4	Movement to collection centres for slaughter	Slight risk of spread at the collection centre but controlled by C&D before return home
5	Long distance movement within the same business for welfare or other reasons under a specific licence initially and later a general licence but in either event depending on distance	Risk of spread to a new area but slight additional risk as involves same farm staff and vehicle
6	Long distance movement within premises of different ownership or control for welfare or other reasons under a specific licence initially and later a general licence.	Risk of spread to a new area but additional risk as involves different farm staff and vehicle
7	Movement to slaughter with multiple pick ups	Risk of disease spread to at least one or all farms in the chain
8	Farm to Farm movements commencing as a specific licence	Risk of disease spread but only to one new farm but could seed FMD into a new area
9	Movement to slaughter markets	Slight risk of spread at the market centre but controlled by C&D before return home. More mixing of people and vehicles and longer on the premises.
10	Store sales	Intermediate risk
11	Markets	Major risk of spreading disease to all farms receiving animals out of the market. People and vehicles also pose a risk.

4.35 Consideration needs to be given to the possibility of issuing licences with appropriate safeguards for low risk movements soon after the national movement ban is imposed in order to minimise disruption. The feasibility of permitting movements at an early stage will be influenced by the speed with which biosecurity and other controls such as ability to clean and disinfect lorries can be implemented. This will depend on contingency planning by government and the relevant stakeholders.

4.36 On-farm services such as artificial insemination and milk recording are important. Milk recording is essential for dairy farmers especially the individual cow somatic cell counts which are vital to meet buyers' standards. Artificial insemination technicians were allowed back on-farm ahead of milk testing technicians which suggests a lack of parity in making relaxations when considering the level of risk involved in these two activities. Other contractor services involving livestock such as sheep dipping, sheep clipping and foot trimming are important and should be allowed to recommence as soon as practical although the gathering of animals could pose additional risks. This raises a series of issues especially around the levels of biosecurity observed by the contractor and the ability of the farmer to gather the stock safely.

4.37 There are many other potential movements but in general they fall into three categories; occupational, welfare and long distance. Taking practical steps to safely allow for these in a pre-agreed sequence which is seen as reasonable makes it more likely that farmers will accept the whole package of restrictions. It will be of benefit to develop a priority list of the key movements for each species at each main period throughout the year. It is important to identify movements and to ensure that the risks are assessed and licences prepared before an outbreak.

Recommendation 20: The Scottish Government should continue to develop a risk hierarchy for priority movements which maps out the sequence of events after FMD confirmation. Different scenarios with appropriate timetables to enable farmers and others to plan for movements and understand how the controls would progress should be prepared as part of the contingency planning process. (High Priority)

Recommendation 21: Milk recording needs to be recognised as a priority for dairy farmers and as soon as risk assessment allows, technicians should be allowed on farm under the conditions of licence. A code of practice should be developed and agreed between the milk recording organisations and the Scottish Government. (Low Priority)

Recommendation 22: The Scottish Government and Animal Health agency should consider whether instructions could be developed to enable Divisional Veterinary Managers to use their judgement pertaining to local circumstances in deciding which movements within a farm business could be permitted. Specific licences could be issued under certain circumstance e.g. where a single farm business is identified and the move presents a low risk. It will be essential to balance flexibility against the need to maintain consistency across Scotland. (Low Priority)

Risk areas for internal controls

4.38 The determination of risk areas and the level of permitted movement are interrelated. The speed with which parts of the country can be reclassified into lower risk areas determines the rate at which more routine husbandry management, commercial and longer distance movements can be authorised under licensed

conditions. Details of risk areas and their classification are covered in Chapter 3 dealing with regionalisation.

Risk assessments

4.39 During the 2001 a central risk assessment unit was established by the Chief Veterinary Officer in London with four objectives:

- to consider the risks posed by specific activities;
- to identify ways in which these risks could be managed;
- to make recommendations which could be used by policy makers in deciding actions;
- to publicise the risk assessments to enable the stakeholders and public to comment on the assessments.

4.40 The risk assessments were mainly qualitative taking account of literature searches, on-going experimental work, advice from researchers working on FMD, expert opinion and OIE guidelines. Each of the assessments was reviewed by experts. At that time the risk assessments expert advice was obtained from the Risk Research Unit at the Veterinary Laboratories Agency and from the World Reference Laboratory at Pirbright. Over twenty detailed scientific risk assessments were prepared from which a practical version was made available for discussion with the industry and publication on the Defra website.

4.41 In 2007 there appears to have been a much more ad-hoc approach with each of the three administrations conducting their own risk assessments. In Scotland a series of risk assessments based on the practical versions produced in 2001 were prepared and peer reviewed at Glasgow University. They were not considered by a specialist risk unit nor was the expertise of the World Reference Laboratory at Pirbright involved.

4.42 The following table provides a list of the Scottish veterinary risk assessments which supported the decisions taken in lifting restrictions and permitting licensed movement to take place. The assessments 13 to 16 were undertaken following the FMD outbreak confirmed on 12th September 2007.

Table 9
Risk assessments prepared in Scotland

No	Veterinary risk assessment	Date completed
1	Movement direct to slaughter	7.8.07
2	Fallen stock	9.8.07
3	Movement of weaned piglets, sows or cows to parturition	9.8.07
4	Scottish Islands-Removing the Restricted Zone measures form the Scottish Islands	10.8.07
5	Scottish Islands No2-movement from Scottish Islands to a single premises on the Scottish mainland	10.8.07
6	Routine farming operations	16.8.07
7	Welfare movements	16.8.07
8	Sheep shearers and dippers	20.8.07
9	Collection centres	20.8.07
10	Animal Gatherings	22.8.07
11	Livestock movement ban	22.8.07
12	20 day standstill	28.8.07
13	Artificial insemination	14.9.07
14	Movement from markets	14.9.07
15	Farm to farm/livestock services	23.9.07
16	Removing restricted zone controls in Scotland	9.10.07

4.43 A number of other risk assessments are required to cover the movements specified in the risk hierarchy. These would include movements such as moving hill lambs to lowland farms in Scotland or England. A pre-existing schedule of this kind would have been very helpful and probably would have enabled some relaxation of the movement ban to have progressed faster.

4.44 Veterinary risk assessments should be carried out during 'peace time' as part of contingency planning for an FMD outbreak. The risk assessments should be developed and finalised on a GB-wide basis covering the majority of movements identified in the risk hierarchy. The risk assessments should be agreed with stakeholders, not just between governments and should be prepared on the understanding that depending on the type and timing of an outbreak, a particular risk might be more or less significant. This means that there could be no automatic decisions on relaxing the ban. Each of the assessments would need to be peer reviewed and subject to scientific challenge. It would also be appropriate to engage Ministers in each country to agree the assessments.

4.45 A consistent risk assessment methodology should be available ahead of time which would provide a pre-arranged framework for use in different risk areas. This in turn would help to speed up the decision making process. Industry should be consulted when building a hierarchy of risk and essential movements although it will be important to ensure the correct balance between risk and economic concerns.

Recommendation 23: The Scottish Government, Defra and other Devolved Administrations should develop a full set of veterinary risk assessments for all priority movements listed in the risk hierarchy. The development and up-dating of risk assessments should be a routine component of contingency planning as should regular reviews to take account of changing patterns of trade and other factors. Ideally the three GB administrations should agree to use a single set of risk assessments for GB to ensure a consistent approach to their application. (High Priority)

Licences for permitted movements

4.46 Licences which allowed for certain movements were put in place fairly quickly. The vast majority of licences were general so no paperwork was required which was far preferable to the system in 2001 where all moves were completed under specific licence. Users could obtain copies of general licences from the Scottish Government website, AHDOs, LAs or markets. As restrictions continued, members of the AHW Panel of COSLA drafted a consignment note which had to be completed when moving under general licence. Some of the higher risk farm to farm movements were made under specific licence but these were issued by Animal Health agency who copied details to LAs.

4.47 Licences were often issued by the authorities on a staggered basis which created some delays and confusion over what was permitted. In some cases the definitions in the licences should be clearer to avoid inconsistencies e.g. farmers were required to carry a portable disinfection kit when going to markets but not when moving from farm to farm. The licensing system was better than in 2001 as the licences were easier to understand and to access although there were some doubts over the interpretation of the conditions by the AHDOs.

4.48 COSLA provided a daily update on enforcement issues to Chief Veterinary Officer (CVO) Scotland and copied this to NFU Scotland which resulted in greater compliance on the ground. There was very little evidence of non-compliance throughout both phases of disease. Non-compliance was restricted to a small number of cases particularly at some markets. In general poor compliance was due to misunderstandings over what was required. Standardising conditions would assist users as would a simple list of do's and don'ts.

4.49 Following the relatively slow response after 3rd August the speed with which licences were issued after 12th September demonstrates the value of pre-prepared licences and the availability of risk assessments. The outbreak has provided a useful library of licences which can now be reviewed and consolidated. There is a need to have as far as possible ready-prepared off-the-shelf licences for any future outbreak, with variations to cover different levels of risk. Whilst this section deals primarily with movements of livestock it is equally important to have pre-prepared licences covering by-products and waste. Similarly the export conditions and licences for products which are eligible for export from day one of an outbreak should be pre-prepared with the systems established for immediate implementation.

4.50 It was apparent that farmers and others need greater clarity on the difference between specific and general licences and the implications and requirements of the licence conditions.

Recommendation 24: The Scottish Government should develop a full set of movement licences and export certificates, based on risk assessments, using a standard set of conditions with clearer definitions. The pre-prepared licences should be reviewed on a regular basis to take account of changes in trade or husbandry patterns. (Medium Priority)

OTHER DISEASE CONTROL ISSUES

Hobby farms

4.51 In the light of the outbreaks in Surrey, stakeholders expressed concern about hobby farmers in Scotland as well as in England. Disease control and prevention efforts are concentrated on large economic farms whereas the small hobby farms especially in the North and West of Scotland are neglected. Contact was essential with hobby farmers who should be made aware of their responsibilities. In the crofting areas there may be stock on crofts which are possibly not registered, with pigs probably the most likely to be kept without notification. The degree to which this creates a potential problem is unclear and when animals have come from surrounding crofts, knowledge about registering and best practice is generally passed on. In order to reduce risks the issue of policing farming practices must be considered to ensure hobby farmers were on record and subject to the usual checks.

Recommendation 25: Contacts should be developed and maintained with hobby farmers who should be registered in order to ensure they are included in the communications network if an FMD outbreak occurs. They need to be aware of their responsibilities for disease control and in order to achieve this, the Scottish Government should work with stakeholders to develop programmes to assist hobby farmers. (Low Priority)

Chapter 5

Economic, Scientific and Veterinary Advice

KEY FINDINGS

5.1 The Scottish Government adopted a science based approach to the development of its policies for the control of FMD throughout the outbreaks in 2007. High quality and sound objective veterinary and scientific advice was provided to the Scottish Government during 2007, the provision of which was instrumental in ensuring that clear evidence based decisions were made when dealing with the consequences of the FMD outbreak.

A number of important lessons were learned during 2007:

- the benefits of rapid and easy access to emergency advice were highlighted by the information provided by EPIC. This included the identification and evaluation of livestock movements into, out of and within Scotland along with the detailed analysis of risk of FMD spread into and within Scotland;
- the existence of a Scottish resource such as EPIC is an advantage as it can support the specific requirements of the Scottish Government during outbreaks but equally importantly it can also be involved in the development of contingency plans;
- the availability of quality controlled and timely information on livestock movements remains critical for scientific analysis to support policy decisions on disease control strategies. Major improvements are required in the GB systems for recording livestock movements and ensuring the rapid release of that information for analysis;
- it is important to ensure that the capacity to undertake these types of analysis with access to emergency advice is maintained and developed in Scotland;
- the experience in 2007 will enable the Scottish Government to identify the scientific analysis and specialist advice which it requires in future and to ensure that potential providers are aware of these requirements;
- scientific challenge and peer review of the veterinary and other advice was established in 2007. These need to be developed to ensure that assurances are provided that any evidence on which policies depend are scientifically sound and valid.

5.2 The disruption caused by FMD can be minimised if detailed analysis of the potential spread of the virus can be provided quickly and if scientifically valid risk assessments can be used to enable livestock movements to re-commence on a risk basis with minimal delay.

INTRODUCTION

5.3 To ensure that policies were at all times evidence based the Scottish Government relied on the output from a number of sources which included the recently established EPIC and their own Veterinary Advisers headed by the CVO Scotland. The Scottish Government also obtained economic advice and analysis from internal sources and from QMS.

The purpose of this chapter is:

- to describe the role of EPIC and future requirements;
- to identify the types of analysis required in future;
- to consider availability of veterinary advice;
- to assess the effectiveness of scientific challenge and peer review.

THE CENTRE OF EXCELLENCE FOR EPIDEMIOLOGY, POPULATION HEALTH AND INFECTIOUS DISEASE CONTROL (EPIC)

Role of EPIC

5.4 The Scottish Government funded EPIC in 2006 with £2.6m over 5 years to investigate the epidemiology of animal diseases. During the 2007 outbreaks EPIC responded very quickly and effectively to requests from the Scottish Government which demonstrated good foresight in funding this specific Centre of Excellence.

5.5 The EPIC is a virtual centre linking six partners. The objective is to deliver high quality scientific advice and evidence on the epidemiology of animal diseases of current and emerging veterinary and public health concern that are relevant to Scotland. Details of the partners and their role are shown in Appendix 6. The combined experience of the six partners is very broad covering many specialised fields. EPIC responds to requests for advice and information from the Scottish Government and interacts with policy makers and experts to provide the evidence base for developing policy and shaping decisions. In this role EPIC has developed and applied quantitative methodologies to assess risk and potential spread of disease.

5.6 Researchers at EPIC University of Edinburgh were asked to undertake a number of risk assessments by the Scottish Government, although there was a 7 day delay between confirmation of FMD in August and the first request being made. The output of this work with the presentation of reports and associated risk maps and diagrams was particularly helpful in demonstrating the potential risks, especially of markets and in identifying the animals that had to be traced and inspected. The evidence provided by EPIC was widely used at stakeholder meetings to demonstrate the rationale behind decisions on relaxation or otherwise of movement restrictions.

5.7 EPIC provides a good example of applied science which by tracing movements and evaluating potential risk enables sound veterinary risk assessments to be made. There is also potential to utilise the full range of expertise at EPIC to carry out a number of other functions such as more detailed risk assessments on livestock movements. These activities could in turn help to reduce the disruption caused by a distant FMD outbreak and ensure that proportionate measures are implemented.

Arrangements for commissioning work

5.8 While each of the EPIC partners had a contract with Scottish Government there was no arrangement in place to cover the cost of research and contingencies such as requests from Government for the kind of work undertaken in responding to FMD. Any organisation needs to be able to draw on a fund held by Government to cover the cost of unexpected disease work. Any institute involved will encounter difficulties as they will almost certainly have to re-prioritise their work to deal with an emergency and there will be knock-on effects for other projects to which they have contractual commitments.

5.9 It is almost impossible to anticipate accurately what will be needed in terms of expertise and costs but what can be foreseen is that other projects will suffer during emergency work, so having an agreement in place whereby provision of funds is made available to ensure delayed projects are subsequently completed would be helpful.

Lessons learned

5.10 EPIC provided valuable information on risks to Scotland from the outbreaks in Surrey. It is important to ensure the continued development of appropriate methodologies, scenarios, questions, algorithms etc to ensure the availability of rapid, effective, quality controlled outputs which would be required for the development of control strategies in the face of an FMD outbreak.

5.11 A broad range of expertise and capabilities is required at all times. As part of contingency planning the capacity to meet these requirements must be maintained and developed further in Scotland.

5.12 Mechanisms available to contract services and maintain standing capacity from a group of organisations with expertise shared by a number of people across institutes are important and need to be established. A contract may be necessary to ensure that the services are rapidly available in the event of an FMD outbreak.

Recommendation 26: The Scottish Government must ensure that it has access at all times to the expertise necessary to analyse information on movements and conduct risk analysis using the most up-to-date methodologies and techniques. (Medium Priority)

ANALYSIS OF ECONOMIC AND DISEASE RISK

5.13 The risk analysis conducted by EPIC in 2007 provided valuable information to enable the Scottish Government to develop evidence based policies. Further development of these types of analysis with an extension to include economic analysis would enable a more rapid response using a risk based approach to the determination of risk areas and permitted internal movements. This in turn would help to reduce the disruption caused by any future FMD outbreaks.

Pre-outbreak information

5.14 Detailed pre-outbreak information on livestock movements has a number of benefits as it will:

- provide a base line for reviewing changes in the trade and movement patterns and therefore in identifying increased or decreased risks to Scotland;
- inform the development of effective disease control and prevention methods that minimise the disruption caused by movement controls;
- provide the basis for an evidence based approach to the imposition and relaxation of movement restrictions and other controls;
- enable a rapid assessment of the impact of movement restrictions at any stage or time of year and allow the development of policies to minimise the adverse effects of the FMD controls;
- provide information on the practicality and impact of regionalisation which would permit the movements of animals or animal products out of Scotland.

5.15 An analysis which identifies geographical, temporal and sectoral movements will enable risk areas to be clearly defined using quality controlled information and data available prior to the occurrence of an FMD outbreak. The risks of imposing and lifting livestock movement controls in terms of economic impact and disease transmission can be rapidly evaluated provided the temporal limitations of this information are accepted.

5.16 The risks associated with the different categories of livestock movements into, within and out of Scotland need to be evaluated especially as all the categories of movement have been identified by EPIC. Using this information, risk based movement licences could be developed. It will also be possible to estimate the impact of prohibiting such movements.

5.17 To determine the risks to Scotland it would be necessary to identify the movements into Scotland from England and Wales and other areas of the EU including details of species, categories and timing of the movements in relation to

the initial infection on the index case. The destination of the movements whether farm, market or slaughterhouse would be important as a component of the risk analysis. In addition, indications of whether movements are final or involve a series of other movements after arrival in Scotland would need to be assessed.

5.18 Details of movements within Scotland could support regionalisation with specific areas recognised as FMD free. An example relates to the Scottish Islands where full information on the movements into and off the Islands over a one year period is now available from the EPIC analysis. This means if there is the need to impose a national movement ban, as occurred in 2007, the availability of historic data on movements could enable the UK to exclude the Islands from the controls and the restricted zone. The evidence would enable the UK to justify the action to other Member States and the Commission.

5.19 Much of the information has already been provided by EPIC but there is scope for further work within Scotland to include:

- seasonal variation in infectious disease transmission potential within Scottish livestock populations;
- the risk of introduction, connectivity among single and mixed-species livestock holdings in Scotland;
- detailed demographic profiles of the highly-connected livestock holdings in different regions of Scotland;
- contribution of livestock dealers to the risks of infectious disease transmission;
- role of exposure during stays at markets and shows;
- efficiency of the market-day control measures;
- risks associated with multiple pickups of animals for live trade and for slaughter and with animal stays at the collection centres and lairages;
- risks associated with animal gatherings for trade and slaughter could be investigated from both an animal health and food safety stand point.

Recommendation 27: The Scottish Government should develop and clarify the scientific advice and analysis it requires during times of FMD freedom and during outbreaks in order to ensure appropriate information and analysis are available to enable evidence based decisions to be made on risk areas and control strategies. (Medium Priority)

Outbreak information

5.20 At the time an outbreak is confirmed it is important to obtain detailed information of livestock movements for a specific period back to when the initial infection was thought to have occurred. Full details of direct and indirect movements would be needed along with an assessment of risk that FMD had entered and spread within Scotland during that period. Provided information is available from the livestock movement databases this analysis could be completed within a short period.

Data availability for analysis

5.21 Immediate access to the most up-to-date demographic, movement and disease data is essential for a rapid response. Disease data is provided in real time via a web-based system that serves Defra's National Epidemiology Expert Group (NEEG). Demographic data requires that the most recent census records and animal movements have been received and processed. Access to up-to-date movement data remains a problem, during August and September 2007 considerable delays were incurred with consequences for animal movement tracing and risk assessment work. To operate effectively EPIC and similar groups working as part of the Defra NEEG require access to high quality up-to-date data on animal movements which is obtained from three separate databases described below.

Table 10
Animal movement databases in GB

Database	Owner	Coverage	Species
Cattle Tracing system (CTS)	Defra: Regional Payments Agency	GB	Cattle
Animal Movement Licensing System (AMLS)	Defra: Regional Payments Agency	England and Wales	Sheep, Pigs and Goats
Scottish Animal Movement System (SAMS)	Scottish Government	Scotland	Sheep, Pigs and Goats

5.22 It is specified in the Defra framework response plan for exotic disease that "upon suspicion of disease the necessary population and movement data are made available to modelers". During the 2007 outbreak up-to-date extracts from the CTS and AMLS databases were not available immediately. There were problems with the source database for CTS and data could not be loaded onto AMLS. In addition there were problems related to the management information systems which needed to be resolved before the report facility was functional. A different problem arose with the AMLS data where the new copy of the data was only available on a weekly basis. It would appear that the systems were incapable of extracting data and loading and

processing other data at the same time. Furthermore SAMS and AMLS provided different levels of details on animal movements. It was possible to identify farm-market-farm or farm-market-slaughterhouse chains of movements for Scottish holdings, but not for English and Welsh holdings.

5.23 It must be accepted that the databases will never be real time due to the delays and constraints on reporting movements and loading the information in to the database. In the case of AMLS, movements may take up-to 6 days to be entered onto the system. The failure of the systems to provide up-to-date information, the incompatibility of AMLS and SAMS, and the inability to extract the information quickly is unacceptable and indicates the systems are not fit for purpose.

Recommendation 28: The Scottish Government should work with Defra to review the effectiveness of all the current systems to collect and record animal movement information and take action to ensure the systems are fit for purpose and can provide information on a GB-wide basis. (High Priority)

VETERINARY ADVICE

5.24 Prior to 2006 the CVO Scotland was a member of State Veterinary Service which was established as a next steps agency in 2005. The CVO Scotland was line managed by the Chief Executive of the Agency. This was not an appropriate arrangement as the responsibility for animal health matters including disease control lay with the Scottish Minister for Environment and Rural Affairs who in turn was responsible to the Scottish Parliament. As a consequence the CVO Scotland and his team of professional advisers were transferred to the line management of the Scottish Executive in April 2007. This fully reflects the importance of providing independent veterinary advice direct to the Scottish Government. The Veterinary Team is highly experienced and was very effective in providing timely and objective advice to policy colleagues and Ministers in the Scottish Government during the outbreak.

5.25 The CVO Scotland or his representative is a member of the UK National Expert Group (UK NEG) on FMD. They were involved in meetings of the group which met twice a year prior to the FMD outbreak 2007. During the 2007 outbreak Scotland was represented at the meetings of the expert group either in person or more frequently via teleconference. The participation by the CVO Scotland or his representative was valued by other group members.

5.26 The UK as the Member State of the EU is legally obliged to create a permanently operational expert group to maintain expertise in order to assist the authorities in ensuring preparedness against an FMD outbreak. The group should consist of epidemiologists, veterinary scientists and virologists. The terms of reference, membership and role of the National Expert Group are outlined in the Defra framework contingency plan.

5.27 The view of those interviewed indicated that the National Expert Group had worked well. There was scope for improvement, particularly in relation to how questions to the group were formulated and attendance at the group meetings. There was also the view that the role of the meetings was to provide a forum for experts to discuss technical issues without undue influence by policy makers who on occasions had been present and influenced the discussions and outcomes. Instead, the conclusions and advice from the group should be passed to policy makers for consideration.

5.28 Whilst the UK is obliged to have a National Expert Group this is not a requirement for the Devolved Administrations. It would not be practical to have Expert Groups in each Devolved Administration as there are unlikely to be enough experts available, especially during a crisis. It would not be an effective or sensible use of limited resources nor would it help to maintain a consistent approach. In dealing with a disease such as FMD it is important to use the limited number of experts from within the UK to best effect and to ensure their advice is provided to all administrations. There should be a clear mechanism for the Scottish Government to put questions or seek advice from the Expert Group on specific Scottish issues.

Recommendation 29: The Scottish Government should continue to participate as an active member of the UK National Expert Group which should operate on a UK-wide basis. Membership of the group should be limited to experts with policy makers and delivery agents acting as observers. The input of policy makers should be limited to requesting advice and providing information as appropriate but not influencing discussions or the outcome of meetings. (Medium Priority)

SCIENTIFIC ADVICE

5.29 In dealing with an outbreak of FMD it is important for the Scottish Government to have access to the most appropriate independent high quality scientific advice. This advice can be obtained from within Scotland or where necessary from elsewhere in the UK. During the 2007 outbreak advice and information was available from a number of sources. The most relevant question is the extent to which the Scottish Government relies on advice from within Scotland as opposed to utilising advice from other GB-wide bodies, either through acting as an observer or as a member of the relevant group.

5.30 The Chief Scientific Adviser Scotland and the Chief Scientific Advisor for Rural Affairs and Environment in the Scottish Government were briefed on the FMD situation by CVO Scotland. As EPIC was established and provided advice there appeared to be little or no further involvement by Scottish Government Scientists. This was a noticeable contrast between the Scottish Government and Defra where there is a Defra Science Advisory Council (Defra SAC) and clearly defined role for the Defra Chief Scientist in the event of an outbreak. This difference did not appear to pose any problems in Scotland during the 2007 outbreak but it leaves a potential weakness in the way in which advice is provided to Ministers and the assurance that

scientific challenge and appropriate peer review has been applied to that advice. It could be of more importance if an FMD outbreak occurred in Scotland.

Scientific challenge and peer review

5.31 During the 2007 outbreaks scientific information was obtained from EPIC and the Veterinary Advisers within the Scottish Government. The reports from EPIC and risk assessments produced by the Veterinary Team were peer reviewed but the process was only established in the face of the outbreak. The peer review was arranged and conducted on an ad-hoc basis and involved only one expert in a specialised field for the risk assessments and two experts for the EPIC reports. In each case the peer review was valuable and confirmed that the analysis and conclusions were sound.

5.32 It is advisable to have a specific scientific challenge or review process of the advice from the Veterinary Advisers other than the risk assessments. A number of stakeholders commented that there should have been the involvement of more experts from other disciplines in reviewing the veterinary advice. It would be more appropriate to develop the peer review process in peacetime and to establish a mechanism whereby the evidence or outcome from scientific analysis could be formally peer reviewed by a group of experts with expertise not only on the disease but also in areas such as economics, social aspects and the industry impact.

Recommendation 30: The Scottish Government should review how the science challenge and peer review aspects of dealing with emerging scientific evidence informing the response to an outbreak of disease can be improved. It should also consider how best to involve independent experts including economic, social and industry expertise. (Low Priority)

Scientific advisory committees/groups

5.33 The Chief Scientist for Rural Affairs and Environment in the Scottish Government is an observer on the Defra SAC along with observers from the other Devolved Administrations. Defra SAC is a Non-Departmental Public Body which offers expert, independent and published advice on science policy and strategy to Defra's Chief Scientific Adviser and through him to Defra Ministers. 15 independent members are appointed to the Council through open competition. Members are selected for their breadth of scientific knowledge across the range of topics covered in Defra's remit, including the social sciences, rather than for their individual specialisms. Others are co-opted as appropriate to provide further expert advice as required.

5.34 The majority of the Council's work is taken forward through sub-groups of which the sub-group on epidemic diseases considered the situation in respect of the FMD outbreak in 2007. A report by the Epidemic Disease Sub-Group on which there was not a Scottish observer, was approved by the Defra SAC and was submitted to the Defra Chief Scientific Adviser in November 2007. It would be advantageous for Scottish representatives to continue to have access to the main Council and where

appropriate to be involved in the relevant specialist sub-groups such as the Epidemic Disease Sub-Group.

5.35 The role of the Defra SAC is to support science and policy making in Defra and not within the Scottish Government although it is valuable for Scottish observers to attend the Defra SAC meetings. Although there is a Scottish Science Advisory Committee it is not clear where the independent strategic advice to the Scottish Government on its science activities in the field of animal health originates. It is debatable whether a similar council needs to be established in Scotland to deal with epidemic diseases. However, in the event of an FMD outbreak in Scotland it would be helpful to have more clarity on where the scientific challenge would originate in order to test the evidence on which policies would be based.

Recommendation 31: The Scottish Government should review its existing Science Advisory Committees to assess whether a new committee should be formed to provide on going expert advice and a challenge function for scientific and veterinary advice in the animal health and welfare field. (Low Priority)

Recommendation 32: The Scottish Government should review its links to Defra science, evaluate how robust these are and discuss with Defra the possibility of closer involvement within Defra Science Advisory Council and its sub-groups. (Low Priority)

Chapter 6

Liaison with UK Departments and the European Union

KEY FINDINGS

6.1 The relationships between Defra and the Scottish Government ran smoothly especially at official level. However in light of the fact that animal health and welfare policy is devolved but budgets are not, the status quo is not sustainable. An urgent review is required into the financial arrangements with the intention of devolving appropriate resources to the Scottish Government to implement its policies on the control of exotic diseases.

6.2 The key finding is that a number of improvements can be made to ensure that misunderstandings and in turn a degree of friction between Defra and the Scottish Government are avoided. These are listed below:

- improved co-ordination for policy development with either specific formal meetings for discussion with Scottish Government and other Devolved Administrations or a more focused approach to current meetings such as those of the Animal Disease Policy Group (ADPG);
- trust and confidence between Defra and the Scottish Government is good but can be improved further to avoid problems developing;
- clarification on participation at Civil Contingencies Committee (CCC) by Scottish Government especially if FMD occurs in Scotland;
- Concordats for the working arrangements between Defra and Scottish Government agreed in 1999 must be updated to reflect the changed political, financial, organisational and delivery realities of 2007;
- financial arrangements for the control of FMD must be clear and should reflect the devolved policy responsibilities of the Scottish Government taking into account the state of the Defra budgets, the need for strict financial accountability on expenditure and the developing responsibility and cost sharing agenda at EU and UK level;
- better clarity on the dealings with the Commission in Brussels and in developing an agreed UK line for negotiation is needed;
- The consequences of a national movement ban should be anticipated to ensure rapid resolution of issues such as welfare problems and derogation to drivers' hours.

INTRODUCTION

6.3 This chapter considers liaison and communication between UK Government and the Devolved Administrations including the development of appropriate GB/UK policy. Relations with the EU and international negotiation positions are also reviewed. In addition two specific issues which arose in relation to welfare slaughter schemes and drivers' hours are explored as these caused concern to the Scottish Government.

FMD POLICY DEVELOPMENT DURING 2007

Devolution and policy development

6.4 On occasions different or varying policies for the control of FMD north and south of the border were developed. On other occasions the timing for the introduction of the policies was different. As far as animal health and welfare is concerned policy responsibility is, for most purposes, devolved to the Scottish Parliament and to Scottish Ministers. It follows that decisions relating to the control and management of FMD in Scotland are within the competence of Scottish Ministers. This is the case both for domestic law and implementation of Community obligations although some general limits on the powers of the Scottish Government are set out in legislation. In particular, the Scottish Parliament and the Scottish Ministers do not have the legal competence to act in a way that is incompatible with Community law or human rights which is a uniform requirement for all EU countries.

Meetings between Defra and the Devolved Administrations

6.5 During the course of the outbreak a range of regular policy meetings were held. These included the ADPG, National Disease Control Centre (NDCC) Birdtables and the CCC of the UK Cabinet. Scottish Government officials participated in many of the meetings either in person or via teleconference. The latter did not facilitate satisfactory involvement as the external participants could not judge the reaction of the other participants nor the most appropriate time to intervene in the discussion.

6.6 The purpose of the ADPG, which is a permanently established group, is to provide advice on disease control strategy and policy advice to Defra Ministers and the CCC. It is also a forum where a consistent GB/UK position can be developed. The advice from the ADPG is based on scientific advice, including that of the UK NEG. The ADPG met monthly until the autumn of 2005 when avian influenza work caused it to move to a weekly (if not more frequent) format. Since the Defra re-structuring in spring 2006 it became more of an ad-hoc group and points of contact within Defra became less clear.

6.7 Once the outbreak was confirmed on 3rd August the ADPG did not meet for the first time under outbreak conditions until 5th August after which the meetings were held at ad-hoc intervals. Scottish Government officials felt that the meetings were not timely and were often either overly technical or discussed a large number of issues relevant to England which were of little interest to the Scottish

Government. If ADPG had met more regularly during the outbreak on more focused issues it would have facilitated a more joined up approach to GB policy.

6.8 Specific Defra/Devolved Administration meetings were set up during the 2nd phase of disease in September and were at times found to be more useful than ADPG. These were attended by fewer people allowing for tight co-ordination between a small number of contacts and became a good forum to discuss policy. These meetings proved a good opportunity to clarify any differences in approaches and could also be used to allay concerns between the participants. In terms of stakeholder management, better co-ordination between administrations would also be useful to avoid mixed messages going out.

Scottish Government Policy Liaison Officer

6.9 The Scottish FMD Contingency Plan indicates that a policy liaison officer would be despatched to the NDCC in London on confirmation of a GB outbreak. This was based on the successful arrangements in 2001 when the presence of a Scottish liaison officer proved invaluable. Similar arrangements were in place for the avian influenza case at Cellardyke when a Defra liaison officer was based in Edinburgh. This did not occur on confirmation of FMD in August 2007 and an official was only sent to London after the outbreak confirmed on 12th September.

6.10 This was an arrangement championed by CVO UK but there were others in Defra who were not as clear as to the appropriateness of the role. The experiences of the two individuals involved varied considerably but would have been more beneficial if a liaison officer had been present from the start of the first outbreak. More clarity is required on the role of the liaison officer to ensure they can meet their obligations and are seen as part of the team dealing with FMD.

Lessons learned

6.11 It is clear that different animal health policies can apply in different administrations within the UK where there is a rationale for doing so, in line with the devolution settlement. For different policies to work effectively, Defra and Scottish Government Ministers and officials must take a pragmatic approach to ensure outbreaks of notifiable diseases are controlled rapidly and without causing confusion for stakeholders on either side of the border, other Member States, international trade partners or the Commission.

6.12 During the 2007 outbreaks Defra Ministers and officials were much more familiar with operating under the devolution settlement compared with 2001. However, a further factor during the 2007 outbreak had been political – about the manner of presentation not the facts – given the Scottish Governments understandable wish to demonstrate their effective handling of the outbreak and take decisions in Scotland's best interests.

6.13 It would be more appropriate for Defra to have a specifically-tailored forum for AHW policy discussion with the Devolved Administrations in order to:

- tackle specific policy questions;
- consider outputs from the UK National Expert Group;
- ensure all were content with the direction of travel;
- discuss the policy-veterinary interface;
- work through cases of policy divergence.

6.14 During the September FMD outbreaks a Scottish Government official was embedded in the NDCC as a liaison officer. This was useful but to be fully effective the role, and skills required of the individual, should be clearly defined. The success of the arrangement will depend on trust.

Recommendation 33: The Scottish Government and Defra should review the role and arrangements for the Animal Disease Policy Group (ADPG) and consider whether a more effective system for agreeing policy and resolving differences on a UK-wide basis should be established to ensure a UK-wide approach to disease outbreaks no matter where the disease occurred or how small the outbreak. (Medium Priority)

Recommendation 34: As indicated in the contingency plans of the Scottish Government and Defra an official from Scottish Government should be embedded at the National Disease Control Centre (NDCC) from the outset of an outbreak. The reverse should be true if the outbreak occurs in Scotland. A detailed protocol for the role and responsibility of the liaison officer should be developed jointly by Defra and the Scottish Government. (Low Priority)

WORKING RELATIONSHIP BETWEEN DEFRA AND SCOTTISH GOVERNMENT

Issues

6.15 On balance the relationship between Defra and the Scottish Government worked well but a few problems had an adverse impact on trust and confidence between the two administrations on animal health matters.

Communication between Scottish Government and Defra

6.16 Liaison with Defra included frequent telephone liaison at different levels and often several meetings a day. At the daily Scottish Government Disease Strategy Group (DSG) meetings a list of meetings for the day ahead were recorded. Typically this involved CCC, NDCC Birdtable and UK NEG which were essential to the flow of information to Scottish officials and Ministers. Scottish Government officials telephoned into the Birdtables as a matter of course and while these didn't allow for

detailed discussion, they often triggered offline discussion. The CVO UK held regular teleconferences with the Devolved Administrations throughout the outbreak. Where necessary, there was bilateral contact, e.g. between Defra and Scotland regarding TB testing during the outbreak and the decision to bury fallen stock. There was also contact at Ministerial level.

6.17 There were a number of incidents where the Scottish Government was not informed of important developments such as when the identity and source of the virus was confirmed. It was embarrassing for Scottish Ministers to learn about important events via the media and not from directly from Defra. In other cases, in spite of requests from the Scottish Government, Defra failed to share its early developing ideas on policy. Often this was due to an oversight related to the heavy workload in dealing with the outbreak in Surrey. In other cases it appears to be related to concern in Defra about the confidentiality of the information which made judgements about sharing genuinely sensitive material more difficult. This had implications for the way in which Defra shared documents and ideas about policy development with the Scottish Government.

Lessons learned

6.18 A formal agreement is necessary between Defra and the Scottish Government to ensure a consistent approach to sharing documents and developing policy. Respect for confidentiality is a cornerstone of sustaining trust between the two organisations. There was guidance in the Defra DG Food and Farming Group asking staff to be as open as possible in their dealings with the Devolved Administrations, but to be clear as to the terms on which documents were shared. Defra Ministers made it clear that they wanted relationships to be as open as possible.

Recommendation 35: The Scottish Government and Defra should prepare a guidance paper on relationships with the Devolved Administrations in order to stress the importance of respecting confidentiality and of being as open as possible. The benefits of agreeing such a protocol with the Devolved Administrations should be emphasised in order to improve working relationships at both Ministerial and official level. (High Priority)

CONCORDATS BETWEEN DEFRA AND SCOTTISH GOVERNMENT

Concordats

6.19 The terms of the initial relationship between the Scottish Executive and Ministry of Agriculture, Fisheries and Food (MAFF) are set out in a number of Concordats. These are administrative rather than legally binding documents. The overall Scottish Executive/MAFF Concordat sets out the principle arrangements with regard to animal health and welfare and veterinary services. A specific Scottish Executive/MAFF Concordat sets out arrangements with respect to the State Veterinary Service (now Animal Health) and animal disease compensation.

6.20 The main Concordats with the Devolved Administrations were developed in 1999 and had not been updated since. A review of the Concordats began in March 2003 but due to a failure to reach an agreement with regard to proposed changes by Defra to the funding regime (principally to repatriate budgets to Scotland and Wales) these were never signed off. The last discussions were in August 2006. There have been many changes since the Concordats were first agreed not only in the way in which services are delivered but also in the funding arrangements. This leads to confusion as to what is delivered by the two parties and greater expectations from the Scottish Government on what is to be funded by Defra.

Financial arrangements

6.21 The Devolution Settlement would have allowed budgets held on a GB/UK basis to be broken down and included in the Scottish block. A decision not to do this for the animal health and welfare budgets was taken in 1999. The principle reason for this was that budgets were generally spent through GB-wide bodies such as the State Veterinary Service (now Animal Health) and to some degree MHS. There is a significant contingent liability to be associated with exotic disease outbreaks and it was considered unreasonable to expect individual Devolved Administrations to bear such liability. More significantly the arrangements acknowledged that MAFF/Defra had a more direct route of access to the Treasury and the contingency reserve at that time.

6.22 As it stands the Concordats explicitly identify those elements for which the Scottish Government is financially liable to provide for in the context of GB disease control. Principally these relate to the costs of animal disease surveillance, TB and Brucella compensation and Warble Fly control and the cost to be associated where Scottish Government policy goes beyond what is needed to implement European Community obligations. There is an expectation that all other costs associated with implementing an agreed GB disease control policy would be met by UK Government. Given the nature of exotic disease outbreaks these are generally unfunded until the outbreak occurs.

6.23 Historically these costs have been fully supported by the contingency reserve but in the 2004 spending review Defra agreed with Treasury that the first £10 million of an outbreak would be funded from Defra's own resources. Like other aspects of the spending review the Devolved Administrations were not consulted as this was a direct matter between Treasury and Defra. There are significant areas for misunderstanding in the current arrangements where Defra would argue that it does not have a responsibility to fund the measures if:

- Scotland goes beyond what is needed to implement EU obligations;
- the implementation is not agreed GB disease control policy;
- there is no funding available as the initial costs would be funded from Defra's own resources up to a specific figure before the Treasury could be approached.

Lessons learned

6.24 Concordats between administrations were essentially entered into in 1999 by politicians of the same party which raises questions about their validity since there have been changes in administrations. The current arrangement did not appear to work well for Scotland in 2007 as Defra was the budget holder. If policy responsibility is fully devolved to the Scottish Government it seems only logical that the budgets to deliver that policy should also be completely devolved to the Scottish Government including the responsibility for identifying the funds necessary to control major outbreaks of disease. The status quo is not sustainable and appropriate resources should be devolved to the Scottish Government to implement its policies.

6.25 It was clear in 2007 that when administrations in UK Government or Scottish Government change aspirations also change and as a consequence it would be appropriate for the Concordats to be reviewed and formally agreed whenever there is a change of administration.

Recommendation 36: In light of political, financial and organisational developments the Scottish Government and the UK Government must urgently review the existing Concordats to take account of these changes. They should ensure that the financial arrangements are clear and that budgets where appropriate are transferred to the Scottish Government to implement all the policies related to exotic disease control. Defra should not be required to fund any exotic disease control measures in Scotland. (High Priority)

CABINET COMMITTEES

Central Government Arrangements for Responding to an Emergency: Concept of Operations (CONOPS)

6.26 The document entitled "Central Government Arrangements for Responding to an Emergency: Concept of Operations" (CONOPS) published in 2005 sets out the arrangements for the response to an emergency requiring co-ordinated UK central government action. It defines the relationship between the UK Government and the Devolved Administrations. It confirms that the Devolved Administrations will play a full role in response to an emergency especially when the incident impacts on the Devolved Administration and where the activity is within the competence of that administration. The response to a serious emergency such as an outbreak of FMD involves activation of the Cabinet Office Briefing Room (COBR) which is UK Government's crisis management facility.

6.27 As indicated in CONOPS, the Prime Minister, the Home Secretary or other senior Ministers nominated by the Prime Minister, will direct the UK Government response from COBR. In cases of doubt, the Home Secretary would at least initially, assume the chair in COBR of the CCC of the UK Cabinet. Other departments and

agencies including the Devolved Administrations will be invited to attend depending on the contingency. The Cabinet Office or the Lead Government Department would chair meetings of officials in COBR.

6.28 In general the CCC meetings are attended by Ministers accompanied by appropriate officials to act as advisers. The discussion at CCC are strategic and do not involve detail which is dealt with at the CCC for officials (CCC(O)). The CCC(O) will review information, ensure the facts are correct, prepare packages to go to Ministers and produce a digest of the information for Ministers. The chair of CCC(O) may be the lead Minister or an official. In the current circumstances it is not clear who would chair meetings if an FMD outbreak occurred in Scotland as the lead department would be the Scottish Government which is not part of the UK Cabinet. This is an important issue which needs resolution.

Situation in 2007

6.29 CCC(O) convened on the Friday evening when FMD was confirmed. The exclusion of Scottish Ministers from CCC held on the morning of Saturday 4th August caused concern. The expectation was that the Civil Contingencies Unit in Scotland (CCU Scotland) would be informed about CCC convening but they were not. Subsequently CCU Scotland was asked to become involved to ensure Scottish officials and Ministers were kept in the loop and given a place at the table. CCU Scotland made contact with Cabinet Office who initially refused to give Scottish officials or Ministers a seat which meant Scottish Government was reliant on read-outs from the Scotland Office. This was resolved and Scottish Government Ministers and Officials were invited to attend meetings from the Saturday afternoon onwards. The Prime Minister or the Secretary of State was often in attendance at meetings that had been confirmed to be at official level only. This lack of clarity between Ministerial and official level caused some difficulties as, understandably, Scottish Ministers wanted to ensure they attended meetings where other Ministers were present.

6.30 The understanding in Scotland was that the initial exclusion from CCC was a political decision although other evidence suggests it was an oversight by the Cabinet Office rather than a deliberate action. It was immediately a significant issue for Scottish Government until officials and Ministers began to get access to these meetings. The Scotland Office has traditionally been used as a go-between but since the May 2007 election in Scotland the relationship has changed and it cannot be taken for granted that it will represent Scotland in the way it previously did.

6.31 In technical terms the attendance of the Devolved Administrations at CCC in 2001 was usually via video link. This had advantages for both those in the room and those participating off-site. This was not the case in 2007 when the Scottish Government officials had to use a teleconference facility to participate in the meeting. The use of the video link is preferable as it enables the participants to see the reaction of those in the meeting room and to judge the most appropriate time to intervene in a discussion.

Lessons learned

6.32 CONOPS gives the impression that Scotland will automatically get a seat at CCC if the emergency has an impact on Scotland. It must be recognised that CONOPS was published in 2005 and since the elections in May 2007 is not a formal agreement between the UK Government and the Scottish Government. Whenever there is a change of administration it would seem sensible for CONOPS to be reviewed and agreed between the UK Government and the Devolved Administration concerned.

6.33 The failure to invite Scottish Ministers to participate in CCC appears to contravene the procedures laid down in CONOPS. FMD is a serious problem with a GB-wide impact and it would seem essential that Scottish Government Ministers and officials should be invited to participate in the appropriate CCC. On the other hand it must be recognised by the Scottish Government that CCC is a Cabinet Committee and as the Devolved Administrations are technically and constitutionally not part of the UK Government they are only in attendance by invitation and not as of right. In view of this it is important to re-evaluate the procedures which would be adopted by the UK Government in relation to COBR and the CCC if an outbreak of FMD occurred in Scotland when the lead department would be the Scottish Government.

6.34 It is essential to improve the communication links between COBR and the external participants in CCC. Effective video links should be developed between the Cabinet Office and the Scottish Government. Training of staff on the use of the equipment will also be necessary.

Recommendation 37: Scottish Government should consult with the Cabinet Office to review existing arrangements to take account of the lessons learned in 2007 and to agree formally the protocol for involvement by Scottish Government Ministers and officials in Civil Contingencies Committee (CCC) when Cabinet Office Briefing Room (COBR) is activated during an FMD outbreak. (High Priority)

INTERNATIONAL NEGOTIATION AND RELATIONS WITH THE EU

Issues

6.35 During the second series of outbreaks in September a problem arose when Defra refused to consider the case for regionalising Scotland if the Commission would not relax the ban on the export of meat. Concern was also expressed that Defra would not permit the CVO Scotland to attend a meeting of SCoFAH when he had been requested to do so by the Cabinet Secretary. In addition, communications from the Commission to Defra as the UK representative did not always appear to reach the Scottish Government.

6.36 The Commission considers the UK as a single entity, and would not change this view unless regionalisation of the UK was enshrined in EU policy in some way. The agreed devolution settlement makes clear that in dealings with the Commission

the UK acts as a single Member State and that Defra represents the UK Government and the Devolved Administrations in international and EU relations with regard to animal health and welfare.

Attendance at meetings

6.37 The CVO UK is the formal UK representative to the SCoFCAH meetings. Defra came under pressure from both the Northern Irish and the Scottish Government for them to be part of the formal UK delegation to attend SCoFCAH. The Northern Irish were particularly concerned at the very start of the outbreak to ensure GB was considered as the epidemiological unit, rather than the UK. The pressure from Scotland to attend came later in the outbreak due to the possible departure from a unified GB position and approach over specific issues.

6.38 Although desirable it was not logistically possible for representatives from each of the Devolved Administrations to be part of the formal UK delegation attending EU meetings. It is appropriate for a Devolved Administration representative to attend meetings when issues of very specific interest to that administration were being considered. It should be possible to institute an arrangement that formal attendance at meetings should be restricted to only one Devolved Administration per meeting. Where SCoFCAH was discussing a GB-wide issue, it would be incumbent upon Devolved Administrations to decide amongst themselves who to put forward as a representative.

Recommendation 38: The Scottish Government should work with Defra and the other Devolved Administrations to develop a clear protocol for formal representation at routine and emergency meetings of the Standing Committee on the Food Chain and Animal Health (SCoFCAH) when appropriate. This could be expanded to include representation by Devolved Administrations at other EU Council and Commission meetings. (High Priority)

Feedback from meetings

6.39 During the FMD outbreak prompt and useful read-outs were received from the Scottish Government EU Office who either sat in on the meetings as an observer or obtained the information from UKRep (UK Permanent Representation to the EU). Mechanisms were in place for the outcomes from meetings to be rapidly relayed to Devolved Administrations as appropriate. Where there was a need to ensure critical points from a meeting with the Commission were relayed quickly to the Devolved Administrations, arrangements should be put in place for immediate teleconferences in addition to the standard 24-hour report system. This should be a standing instruction.

6.40 It was noted that Defra was the only department to adopt the 24-hour report system, at least partly because most other Government departments relied on UKRep to lead their negotiation. It did not help if there was not a quick record of meetings and their outcomes to inform all those with an interest. Consideration must

be given by the Scottish Government to producing a report detailing any discussions they have with the Commission and the outcomes to demonstrate transparency and ensure coherence in the approach by the UK.

Recommendation 39: Defra should review the procedures for reporting the outcome of critical EU meetings to ensure that the Scottish Government and other Devolved Administrations receive the details as rapidly as possible. (Low Priority)

Agreed negotiating position

6.41 The Concordats indicate that the UK negotiation line will be agreed in advance of meetings. Representation in Brussels seemed to work well, however it is important that Defra recognised their role when conducting negotiations. There is a responsibility on Defra to understand UK-wide issues and a responsibility on Devolved Administrations to present issues in a clear and well framed manner. When representing the UK, Defra must take into account the wider agricultural interests throughout the UK and must consult with the Devolved Administrations over decisions which affect other parts of the UK with the Devolved Administrations reciprocating.

6.42 The best way to achieve satisfactory outcomes is for a joined up approach which ensures the UK is speaking with one unified voice. There was an impression in Scotland that Defra did not pursue Scottish interests as they did not really understand the different considerations in Scotland and in particular the situation in the Highlands and Islands. It would be the responsibility of the Scottish Government to ensure that these factors were understood and to get agreement on the Scottish position. It would be the responsibility of Defra to then take this into account when making EU representations.

Recommendation 40: The Scottish Government and Defra should establish a procedure or arbitration process to resolve issues which arise when an agreed UK-line for negotiations in Brussels cannot be established to the satisfaction of all parties. (High Priority)

Visits to Brussels by Scottish Government

6.43 There was an apparent refusal by Defra to consider regionalisation of Scotland as a fall back position when negotiating with the Commission. As a consequence a delegation led by the Cabinet Secretary visited the Commission on 26th September to discuss regionalisation and state aid issues. UKRep attended and this series of meetings which went well, resulted in state aid approval for the Sheep Welfare Scheme and received good feedback. The opportunity for Scottish Government to make direct representations was also valued by stakeholders. It is important for Scotland to have the opportunity to explain its position and perspective to the Commission. This was underlined by the CVO Scotland's successful presentation to the EU Commission Directorate General for Health and Consumer Protection (DG SANCO) during the visit using the information on risk assessment

provided by EPIC. His presentation was circulated by the Commission to other Member States and placed on the Commission website. Overall his presentation bolstered the case for GB as a whole.

6.44 It is important for a Devolved Administration planning an independent visit to the Commission in Brussels to involve UKRep as their presence can be helpful. UKRep should always be invited to attend any representations that Scotland makes in Brussels in order to promote transparency. It was clear that there is benefit in Devolved Administrations making representations where this will enhance the GB case.

6.45 Personal contacts with officials in Brussels at all times are also important to generate an atmosphere of understanding and trust. It is equally important for the representatives of the Scottish Government to visit Brussels on a regular basis to gather information and to explain the situation in Scotland and the issues which are faced. Provided this is done in liaison with the UK Government and with UKRep this will be to the benefit of all.

Recommendation 41: Relationships between Scottish Government officials and European Commission officials should be developed and improved with regular meetings and visits to Brussels. When arranging such visits the Scottish Government should liaise closely with UKRep. A procedure for information on agendas and minutes of meetings and discussions in Brussels to be passed to Edinburgh for information should be developed with UKRep. (Low Priority)

SHEEP WELFARE SCHEME

Welfare situation in 2007

6.46 The period September to October is critically important for the Scottish sheep industry as sheep move from the hills and Islands to markets and lower ground. From the markets the lambs would either move direct for slaughter for export or for over wintering on lowland farms. The light lambs left on the hills during FMD had a low value and it was important to move them off the hills as there would be no feed during the autumn. In theory they could have been licensed to move to abattoirs and markets but there was no domestic market for them and the export ban was in place. With no outlets the consequent build up of lambs had the potential to develop into a serious welfare problem. As a result there was increasing pressure on the Scottish Government to introduce a scheme on welfare grounds to purchase surplus sheep for slaughter and destruction.

6.47 Following the 2001 outbreak the UK Government decided there should be no compensation payments to farmers where animals were slaughtered for reasons other than disease control. The industry was aware of the line on compensation for the welfare schemes but did not expect it to hold in the event of an outbreak. In February 2005 Devolved Ministers in Scotland and Wales had agreed a no compensation policy in relation to welfare disposal. It should be recognised that the

current Scottish administration had not signed up to this agreement. As early as 15th August 2007 Defra made it clear that no UK Government funding would be available for such a scheme although Scottish Government officials had indicated they were considering the introduction of a welfare disposal scheme. The lifting of the controls on 23rd August meant that further discussion stopped until after the confirmation of the September outbreak.

6.48 During September the particular problems associated with sheep farming in the upland areas of Scotland and Wales were recognised by Defra but were seen as a consequential loss to the industry which should bear the costs. Defra's view was that in England, problems could be addressed by licensing movements with appropriate controls, so a welfare disposal scheme was not necessary, whereas Scotland had decided in September that a welfare scheme would be necessary in their particular circumstances. The light lamb situation in England was a smaller issue because large volumes were not produced for the light lamb market. Farmers were suffering significant hardship, but Defra had hoped to get markets going to alleviate these problems. This caused considerable concern in Scotland where it was considered that the UK Government should pay for a disposal scheme.

6.49 On 20th September, the Cabinet Secretary for Rural Affairs and the Environment, Scotland met Defra's Secretary of State and the Rural Affairs Minister for Wales. During this meeting, the Secretary of State had been clear that, while he understood the acute position in Scotland, he didn't consider a welfare disposal scheme appropriate in England. Defra would keep this under review but at this stage it would not be appropriate to work with Scotland to scope out a scheme since England was not intending to introduce such a scheme. It was not clear that Scotland had taken this message since a week later Defra was sent a copy of Scotland's consultation paper on the scheme they had devised proposing that, if other GB Ministers were content, this should be adopted as a GB scheme. The Scottish Government decided after obtaining agreement from the Commission on state aid to introduce a welfare slaughter scheme funded from within the Scottish Government budget.

Lessons learned

6.50 Had Defra agreed with Scotland on the need for a welfare disposal scheme, there would have been a question as to whether to approach Treasury for funding. Since Defra's policy did not include welfare disposal, this question did not arise. As a rough guide, Treasury would not consider drawing down from the Contingency Fund for anything below £100 million. However the cumulative impact of small disease outbreaks on Defra's budget had introduced considerable instability into Defra's budget position. This in turn made the Department a less predictable partner in GB-funded policies. There were also significant differences between the situation in 2001 and 2007 as shown below.

Table 11
Sheep welfare scheme- differences between 2001 and 2007

Issue	2001	2007
Policy	Agreed with Ministers from England, Wales, Scotland and Treasury	Not agreed with all Ministers
Operation	GB-wide scheme	Not GB-wide
Funding	Treasury	Not from Treasury

6.51 The assumption by the Scottish Government that Defra would fund a scheme in Scotland was understandable based on the funding arrangements for a livestock welfare disposal scheme in the 2001 outbreak. However the circumstances were quite different with Defra adopting a policy on non-compensation. Clearly it was not for Defra to fund such schemes but there needs to be greater clarity on the role of the UK Government in funding. The Concordats, although not specific on this type of situation, imply that if Scotland wished to develop its own policies it should either pay for them itself or approach Treasury for funding. This is an important area which needs to be clarified and resolved. Further devolution of budgets would enable more stable relations between Defra and the Scottish Government.

6.52 It was also apparent from discussions with stakeholders that the timing of any announcement for such a scheme must be carefully balanced to ensure that farmers are not panicked into selling their animals in advance of the scheme being launched nor do they just rely on the scheme and take no action to resolve their own problems.

Recommendation 42: The Scottish Government must recognise that if FMD occurs at certain critical times of year it may be necessary to introduce a welfare scheme. The trigger points for this should be set out in the Scottish Government’s FMD Contingency Plan. (Medium Priority)

DRIVERS’ HOURS

Relaxation of drivers’ hours

6.53 A relaxation of the drivers’ hours regulations can be introduced as a derogation to EU legislation by the UK Government for a period of 30 days after which Commission approval is required for any further extension to the relaxation. The decision to introduce a derogation has to be notified to the Commission by the UK Government. The Commission may then decide to investigate and to avoid any criticism of the UK at a later stage there must be clear justification for the relaxation. The possibility of relaxing driver’s hours was discussed in the early stages of the outbreak. Despite repeated requests, the Scottish Government could not persuade

Department for Transport (DfT) to relax the hours in spite of the considerable problems being caused in Scotland.

Drivers' hours in 2007

6.54 The livestock transport industry provides a vital link in the food chain between the farmer and the meat processor relying on highly specialist equipment and the skills of the driver in handling the animals and the vehicle. It is an industry which is contracting primarily due to the problem in recruiting livestock drivers. The recent animal disease outbreaks have revealed how finely balanced and in short supply these skills are.

6.55 The gradual reduction in the national movement ban and the opening up of transport to slaughter imposed increasing demands on drivers' hours. The long distances traveled in Scotland, the single pickup journeys, the need to arrive at the slaughterhouse first thing in the morning and the time to wash vehicles all exacerbated the problem. Inadequate cleaning and disinfection facilities at the abattoirs along with the long queues made worse by farmers washing heavily soiled farm vehicles all added to the hauliers turnaround time at abattoirs.

6.56 There was some surprise that other parts of GB did not also push for a relaxation to drivers' hours as it was very clear that it was needed in Scotland. During the outbreak, Scottish Government officials liaised closely with DfT to try to make this happen, with the Scotland Office also becoming involved to help with the process. Support for a derogation which would have allowed drivers' hours to be increased did not seem to the Scottish Government to be viewed as a high priority by DfT who requested further information on a number of occasions. On the other hand DfT required detailed information and analysis from the Scottish Government to justify the relaxation and to be able to respond to the Commission if there was a subsequent investigation. It is a difficult issue to resolve as a derogation might increase the risk of road accidents.

6.57 A 30 day derogation for drivers in GB who transported cattle, pigs, sheep and lambs was eventually secured on 4th October. It increased the driving hours available by a third over a fortnight. This came at the point of markets re-opening in England. At the end of October, Scottish Government made a case for a 2 week extension which was granted and was sufficient to deal with the problem.

Lessons learned

6.58 During FMD restrictions it is important to have a resolution to drivers' hours quickly so that stock can start moving in tandem with the first movement licences coming into effect. It is important to consider what can be done in terms of relaxing drivers' hours for future outbreaks. An appropriate policy should be included in the Contingency Plan. A four pronged approach is needed:

- to reduce the time wasted by hauliers by having adequate facilities at abattoirs or alternative arrangements to clean and disinfect vehicles;

- to identify the trigger points for requesting a relaxation of drivers' hours;
- to identify clearly the information and analysis required to enable DfT to consider and issue derogations;
- to establish systems to provide the necessary information in order to obtain the derogation.

Recommendation 43: The Scottish Government should work with Defra and the Department for Transport (DfT) to identify trigger points for requesting relaxations in drivers' hours rules in the light of national movement ban requirements and licensing arrangements, to catalogue the information and analysis required from the Scottish Government for a successful application to ensure a derogation is justified and available when needed. (Medium Priority)

Chapter 7

Communication with Stakeholders

KEY FINDINGS

7.1 The overall view of stakeholders was that communications during 2007 had been handled effectively by the Scottish Government. The communications strategy was good and a major improvement since 2001. The Stakeholder Group worked well as specific issues could be discussed in the margins. Meetings were well structured. Ministerial input was valued and the active role which the Cabinet Secretary adopted in dealing with stakeholders was well received. The mix of e-mail, text updates, and meetings with teleconferencing facilities worked well. In particular, e-mails proved to be a good way of getting information out to a blanket group instantaneously. The website was good and the text messaging system which alerted stakeholders to updates on the Scottish Government site was useful. In spite of this there are still lessons to be learned and improvements to be made which include:

- continued development of the communications strategy;
- improve the representation, and facilities for the stakeholder meetings;
- consider methods of reaching all stakeholders, groups and individuals;
- increased development and use of modern technology to improve communications.

COMMUNICATIONS STRATEGY

7.2 The importance of stakeholder relationships was highlighted after the 2001 FMD outbreak. The Scottish Executive response to the FMD inquiries emphasised the important role that stakeholders have in the ongoing development of animal health and welfare policy. In 2003 a Communications Strategy was produced as part of contingency planning arrangements for dealing with exotic animal disease. This indicated that the lead role in communications would be taken by the Scottish Executive working in close partnership with the stakeholders and operational partners.

7.3 Whilst the Strategy provided an effective plan a number of improvements were identified following the avian influenza and Newcastle disease outbreaks in Scotland during 2006. As a consequence the Scottish Executive commissioned Barkers Public Relations to devise a communications strategy fit for use during any animal disease outbreak. Stakeholders were consulted and the Barkers report was presented in April 2007. The report concluded that the Strategy was basically sound and fit for purpose and that rather than a full redraft of the Strategy the current version should be amended and updated.

7.4 Their report entitled "Exotic Disease Stakeholder Consultation Report" contained 27 recommendations of which 14 were high, 11 medium and 2 low priorities. A number of areas needed amending for reasons linked to resources, availability of new technology, and the need to communicate with some smaller

groups. The report also identified a number of areas which had not been implemented during the 2006 avian disease outbreaks. The recommendations had not been incorporated into the Communications Strategy prior to the 2007 FMD outbreak nor had the report been circulated to stakeholders for discussion. However, many of the recommendations were implemented administratively and were in place during the 2007 outbreak. It is important that the recommendations in the Barkers report and in this report should be incorporated into a revised and updated Communications Strategy which should be circulated to all stakeholders for discussion and agreement.

7.5 Stakeholders played a vital role in transferring information to their members and developed a number of different communication strategies for achieving this. In some cases these were considered by stakeholders to be more effective or complementary to those of the Scottish Government. A number of stakeholders felt that it would be a sensible approach to develop a more integrated Scottish communications strategy using their resources as well as those of the Scottish Government while avoiding duplication of effort. In doing this it would be important to clearly identify the potential for using stakeholder communication channels and to define their roles in an outbreak.

Recommendation 44: The Scottish Government must update their Communications Strategy for exotic diseases incorporating the recommendations of the Barkers report, the relevant lessons learned in this report and agree the revised Strategy with all stakeholders. Areas where joint action with stakeholders is practical should be developed and incorporated into the Strategy. (High Priority)

STAKEHOLDERS

Stakeholder Group

7.6 There was some concern that the size of the Stakeholder Group was possibly too big for effective discussion. Others considered that stakeholder membership was about right with the wide mix of representation playing an important role in bringing together a diverse set of representatives covering a range of issues. The value of Animal Health agency sitting on this group was recognised and it was considered helpful if the MHS was also regularly represented.

7.7 One popular solution to keeping the group manageable and effective was to limit the number of representatives from each body. This would depend on the importance of the organisation involved, its role and the topic under discussion. On balance the number of organisations represented on the Stakeholder Group was considered to be about right but the number of representatives per organisation should be limited to two in the majority of cases to ensure manageable numbers.

Stakeholder meetings

7.8 Under normal circumstances the AHW Stakeholder Group meets approximately every quarter. After confirmation of FMD the first stakeholder meeting was held the next day. Meetings were then held on an ad-hoc basis but at least weekly with membership based on the standing AHW Stakeholder Group. Other interests were invited to attend as required.

7.9 Stakeholder meetings were considered by all to be very useful but it will be important in the light of the 2007 outbreak to define exactly what function the full stakeholder meetings perform. Stakeholder meetings were more for liaison, information gathering and onward dissemination rather than for decision making but they did give the stakeholders the opportunity to contribute and explain their position. Towards the end of the outbreak meetings were primarily for communications only. While this is a two way process between Government and stakeholders, the former may need to show more awareness of the issues on the ground. E.g. animal welfare issues that arise through overstocking when movements are not permitted.

7.10 Bi-lateral meetings were also held between government and various stakeholders on a range of issues. In some situations pre-stakeholder meetings took place which allowed industry expertise to be shared and help frame discussion. Industry also found it useful to get together ahead of stakeholder meetings to discuss specific issues and agree what lines to take. Stakeholders found the veterinary and policy presentations given at the meetings to be very helpful in explaining the disease situation and the rationale for the control measures. A number of stakeholders felt it would have been helpful to have electronic copies of the presentations for use with their own members.

7.11 Stakeholders appreciated the presence of the Cabinet Secretary who chaired the meetings as it demonstrated his commitment to resolving the problems. In addition it lent weight to the Stakeholder Group and gave stakeholders the opportunity to air their concerns directly with him as well as raising matters of importance about the outbreak.

Recommendation 45: The Scottish Government should work with stakeholders to define the precise role and membership of the Stakeholder Group during an outbreak of FMD or other notifiable disease. This should include the practicality of establishing small sub-groups with relevant industry bodies where specialist expertise is required to discuss specific issues. (Medium Priority)

Meeting facilities

7.12 Teleconferencing was a practical option especially for the smaller stakeholder organisations based some distance from Edinburgh. Although a good idea, there were constraints especially for the larger stakeholder meetings where it was difficult for external participants to hear everything that was said due to the limitations of

the microphones. There was also concern that teleconferencing was satisfactory for obtaining information but not particularly conducive to holding a discussion. Better facilities for dial-in to meetings either through video or telephone conferencing are needed. Management of the meetings can also be improved by having an awareness of microphones and remembering to introduce external speakers.

Recommendation 46: The Scottish Government should make better use of teleconferencing and develop the facility by obtaining improved and more effective equipment. Videoconferencing facilities should be developed for use by key stakeholders. (Low Priority)

COMMUNICATION METHODS

Introduction

7.13 A priority for good communication is to ensure that all stakeholders receive first hand information as quickly as possible from the Scottish Government rather than through the media. During the 2007 outbreak the Scottish Government followed their Communication Strategy closely and provided a quick response through a number of different communication methods. In terms of obtaining information, the Scottish Government website was found to be a helpful source of information while their e-mail communications were preferred to texts.

7.14 A variety of methods were used to pass information to stakeholders and on to their members including websites, e-mails, text messages, news releases, factual based business guide updates and a round the clock helpline. NFU Scotland found text messaging and email alerts a good means of communicating with their members and would adopt this from day one in the future. The Scottish Government text system was also thought to be useful but messages could have gone out quicker. Information from stakeholder meetings was incorporated by a number of organisations into their website updates or weekly e-newsletter.

7.15 Stakeholders put a lot of effort into co-ordinating communications and most had their own websites. There was some concern that the information disseminated by stakeholders to members was not always entirely consistent and was failing to reach the entire farming community. At one point an e-mail was issued to stakeholders encouraging them to co-ordinate information to their members. This was done to encourage the dissemination of important information but primarily to try and reduce the huge call volume being experienced by many of the senior officials in the Scottish Government.

7.16 Communications were especially good for those who were members of stakeholder organisations but for others there were gaps in the information. A key difficulty was that in order to receive information it was often necessary to have internet access and an e-mail account. More thought should be given to the anticipated recipient of communications as many farmers do not have internet access and are largely dependant on the agricultural press and television for information. Post is a good option to reach most farmers. The 'Dear Producer' letters

from the Cabinet Secretary were appreciated and the fact that they were more frequent than in 2001 helped to keep people better informed as they explained the 'why' as well as the 'what'. More of these letters would have been appreciated by some of the stakeholders. The Scottish Government and industry needs to consider how to reach farmers who do not have internet access and are not members of a stakeholder organisation.

Helpline

7.17 A Scottish Government helpline was established on 4th August led by Rural Payments and Inspections Directorate (RPID). The Scottish Government Strategy Unit provided a Key Brief which was updated daily and used by helpline staff, among others, as the core script to ensure consistency when disseminating information. Helpline staff also received daily briefings. The helpline was of considerable importance as it had a dual function to provide assistance to farmers and others with queries but also to gather intelligence on developing problems. The helpline calls were monitored and the key issues arising which highlighted pressure points and potential developing problems were referred to the daily DSG meetings for action. The Key Briefing document was circulated for internal use to helpline staff and others and included information tailored for public consumption which was placed on the website.

Websites

7.18 The official FMD website was installed on 4th August. During the outbreak there were picture links taking users from the Scottish Government homepage or the Agricultural homepage into the FMD section. The website contained a range of information from details of the disease, the outbreak, biosecurity guidance, movement restrictions and the movement licences. It was noted that farmers found the Scottish Government website useful although there were a number of comments about the difficulty in navigation around the site. The NFU Scotland website was also a good source of information as was the Defra website. The Scottish Government website was particularly good for downloading movement licences. The majority of stakeholders had their own websites and in most cases provided links to the Scottish Government website and the FMD section in particular. In some case the smaller organisations would appreciate help from the Scottish Government to populate their websites during a disease outbreak.

Other

7.19 **E-mail:** Most organisations received the daily e-mail updates from the Scottish Government. These were considered to be valuable and were generally forwarded on to their members. In some of the organizations 60-70% of members would receive the emails.

7.20 **Text alerts:** A text messaging service for the general public was launched in August which gave people the opportunity to sign up to the system in order to receive regular text updates. This alert system was a useful means of informing

groups or individuals when information such as licence conditions had been modified. Messages were sent to advertise the bigger announcements but the service was restricted in so far as there was a 160 character limit on messages. The text messages were a useful way to signpost stakeholders to more detailed e-mails or web information. The text facility helped to capture those not on-line and was particularly useful way of reaching drivers who were out on the road and needed to know about licence changes. It was also a useful innovation as mobile phone use is almost universal among farmers. However stakeholders commented that on occasions the text updates issued by the Scottish Government arrived later than those from the NFU Scotland who got the message out first. A text messaging service specifically for stakeholders was also launched in August in order to give group members notice of upcoming meetings.

Media

7.21 As Scotland has dedicated agricultural correspondents there was scope for briefing them and for passing information to farmers and the public via the press. There was a general feeling that whilst the Scottish Government News Releases were useful there was more and clearer information from the NFU Scotland which released some 111 News Releases.

7.22 Key tasks for the Rural Affairs and Environment Communications Team included drafting News Releases and also providing more specialist briefing to the agricultural press. Information was going out virtually on a daily basis, with the overriding message that relaxations were being made wherever it was judged safe to do so. News Releases are broad formal releases and sent to a ready list of recipients before being placed on the Scottish Government website. Ministerial Statements have the same process of approval but might arise where there is immediacy and might then be followed by a more detailed News Release.

7.23 There was however a feeling that the Scottish Government Press Office suffered from being geographically remote from the policy areas which they cover. During a disease situation, if not more regularly, Communications Officers should be embedded with the policy teams. As an ongoing issue, more continuity in staffing arrangements at the Communication Office would also be helpful in terms of maintaining a knowledge base. Any staff changes in the Communication Office should be staggered to avoid the departure and arrival of whole new teams.

Recommendation 47: Scottish Government should continue to work with stakeholders to use a range of communications and to develop cost effective communication methods to ensure maximum distribution of information that meets the needs of all stakeholders, groups and individuals in the event of an outbreak. (Medium Priority)

Chapter 8

Co-ordination with Delivery Agents

KEY FINDINGS

8.1 The key finding is that all the delivery partners were effective, reliable and well co-ordinated. They all made important contributions to resolving any problems and enabling controls to be implemented quickly. Stakeholders considered that the delivery partners were well co-ordinated although there were a number of areas for improvement.

8.2 There were questions over resources and payment for services on one or two occasions. It is an anomaly that both Animal Health agency and the MHS are responsible for delivering the policies of the Scottish Government but in doing so are funded by Defra. As a result the customer/contractor relationship is unsatisfactory with a lack of clarity over responsibility and funding. The current SLAs between each of the agencies and Scottish Government are inadequate and new agreements are required. The budgets for the delivery of services should be transferred to the Scottish Government to ensure that they are fully responsible not only for the policy on exotic disease control but also for its delivery.

8.3 Since 2007 both Animal Health agency and the MHS are subject to major restructuring. There is some concern that this may have an impact on their ability to respond effectively in future.

INTRODUCTION

8.4 The Scottish Government is fully responsible for FMD policy in Scotland. In a situation where FMD does not exist in Scotland the implementation of the agreed policy is undertaken by four main delivery partners. Only one of these, RPID, is under the direct control of the Scottish Government. Both Animal Health agency and the MHS are agencies and operate to SLAs. The 32 Scottish LAs play a major role in the enforcement of the FMD controls whilst the Convention of Scottish Local Authorities (COSLA) acts as a co-ordinating body and a conduit through to the Scottish Government. There are a number of other important delivery partners but they have a less significant role to play when an FMD outbreak is outside Scotland.

8.5 The purpose of this chapter is to consider the activities of RPID, Animal Health agency, the MHS and the LAs, identify the lessons learned but also to take account of the potential impact of the restructuring of Animal Health agency and the MHS. The financial arrangements and the SLAs under which the two agencies operate also need to be reviewed in the light of the current situation.

RURAL PAYMENTS AND INSPECTIONS DIRECTORATE

8.6 RPID is part of Scottish Government and sits within the Rural and Environment Portfolio. It operates from a network of 16 Area Offices across the

country with its Headquarters in Edinburgh. It is responsible for implementation and delivery of grants, subsidies and other government policies including plant health, wildlife and the management of some 100,000 ha of crofting estates, to the agricultural industry. Currently the Director is also the Chief Agricultural Officer (CAO) for Scotland and provides professional agricultural advice and information to Scottish Ministers, colleagues in Scottish Government and the general public. This was an important role in 2007 when the CAO and his staff provided intelligence on the structure of the industry, the major issues affecting farmers as a result of the movement restrictions, the potential impact of the restrictions along with assessments of the various alternative options of control.

8.7 During 2007 RPID was responsible for the Scottish Government helpline and also provided support and agricultural advice both locally and nationally. The feedback of information and the provision of updates was an important communication channel to locally based agricultural staff who in turn were able to respond to queries from farmers in their areas. The agricultural knowledge and backgrounds of RPID staff means they are well equipped to take the lead in many of the non-veterinary functions during an outbreak of FMD whether it occurs in Scotland or elsewhere in GB.

ANIMAL HEALTH AGENCY

8.8 Animal Health is an Executive Agency of Defra which works throughout GB on behalf of Defra, the Scottish Government, the Welsh Assembly Government, and for the Food Standards Agency. It is responsible for managing outbreaks of notifiable animal diseases, protecting the welfare of farmed animals and safeguarding public health from animal borne disease. The agency is responsible for implementing animal health and welfare policies primarily on farms, at livestock markets and during transport on behalf of the Scottish Government.

8.9 During the FMD outbreak the Head of Animal Health agency in Scotland or a deputy attended all the daily DSG and stakeholder meetings. This provided Animal Health agency with a link between the Scottish Government and stakeholders. This input was excellent and took on a number of important roles in providing feedback to the DSG and in implementing the policies which were agreed at the daily DSG meeting. Animal Health agency operated effectively and delivered on all requests for action such as tracing and checking animals moved into Scotland.

8.10 Animal Health agency is undergoing a re-structuring with the appointment of a Senior Operations Manager covering the north of England and Scotland. As a consequence the post will have to operate within two different legal and political systems. These changes have created some concern but it is acknowledged that there is a requirement to modernise Animal Health agency. It is important that Scottish Government gets the senior agency support necessary to implement policy and that enough feedback to and from the field is provided. The Scottish Government would expect the Senior Operations Manager to attend DSG and stakeholders meetings even if disease was in the North of England.

8.11 A second component to the restructuring will be the appointment of the Scottish Account Manager who will manage the SLA on behalf of the agency. The aim of this post would be to manage requests from the Scottish Government for change, including advising on the practicality of proposals and the resource implications. Ideally this post should be based in Edinburgh to provide close links to the Scottish Government policy groups.

8.12 Currently the SLA is between Animal Health agency and the Scottish Executive and signed by representatives of each although it is made clear in the SLA that Defra is also a party to the agreement. The Scottish Government can influence and determine the work of the agency in Scotland through representation on the Animal Health Strategic Board and the Customer Review Boards. The funding for carrying out delivery services and disease compensation is predominantly through GB budgets held by Defra. The Scottish Government contributes funding to cover certain items such as TB, brucellosis compensation claims and Warble Fly control. Scotland has the option of providing extra funding for additional work. At present there is a general understanding that Defra funds additional expenditure for disease control during outbreaks but that the Devolved Administrations had to fund 'new work'. However there was scope for disagreement about what was covered under disease control and what was classified as new work.

8.13 As animal health and welfare policy is devolved it could be argued that the budget for this work should also follow as the present arrangements for the funding of policy agreed in Scotland inevitably creates tensions. There are forces pushing toward a better alignment of policy and funding and these stresses are increasing as political priorities in Scotland differ to those in England and Wales. There are a number of options for the future which include:

- the status quo;
- maintenance of a GB agency but transfer funding for all agency activities in Scotland to Scottish Government;
- create a separate Animal Health service for Scotland with contractual arrangements for GB services such as databases and information systems;
- create a completely separate Animal Health Service for Scotland supported by its own information and data systems.

8.14 Whilst it may be feasible for Animal Health agency to be split into separate agencies covering each administration the likely economies of scale by splitting up of the Agency would need to be carefully evaluated. A number of the stakeholders supported the idea of a Scottish Animal Health Agency as they considered that the devolution of service delivery should reflect the policy making arrangements.

8.15 In wider terms, First Minister of Scotland made a statement on 30th January 2008 in the Scottish Parliament on effective government which set out the intention to rationalise public services with the aim of providing a more joined-up service for

the end user. This is an ongoing challenge which Scottish Government has embarked upon. What this might mean for animal health issues is a better integration of reporting and checks. A Scottish Animal Health Agency could have advantages but it would be important to ensure that it did not add significant cost. One way of keeping down cost would be to contract work in and out.

Recommendation 48: In the event of an FMD outbreak in GB the Senior Operations Manager, as well as the Scottish Account Manager, from Animal Health agency would need to be based in Scotland for the duration of an FMD outbreak. A detailed job description for both post holders during an outbreak should be prepared based on the role that the Head of Operations for Animal Health agency fulfilled during the 2007 outbreak. (Low Priority)

Recommendation 49: The Scottish Government should conduct a fundamental review on the way in which animal health and welfare policy is delivered in Scotland in order to bring funding of service delivery into line with its devolved policy responsibilities. This may include the option of establishing a separate Animal Health agency for Scotland funded from a Scottish held budget or for maintaining a GB-wide agency but funded by the Scottish Government for the work undertaken in Scotland. (High Priority)

MEAT HYGIENE SERVICE

8.16 The MHS is an Executive Agency of the Food Standards Agency. It has responsibility for the protection of public health and animal health and welfare in GB through enforcement of legislation in approved fresh meat premises including approved slaughterhouses, cutting plants, farmed and wild game facilities, and co-located minced meat and meat products premises. The MHS has a statutory duty to provide these services on demand, 24 hours a day, 365 days a year, throughout England, Scotland and Wales.

8.17 During August 2007, under EU regulations on FMD control, slaughterhouses had to be approved and listed as being able to accept animals once licences were available for movement to slaughter. There was some criticism about the speed with which the MHS processed the slaughterhouse approvals and implemented the controls to enable animals to be licensed to slaughter. The MHS had an important role to play at slaughterhouses to ensure that animals for slaughter were checked for symptoms of FMD. The MHS were also responsible for monitoring the correct cleaning and disinfection of lorries to prevent potential spread of FMD virus and ensuring that good biosecurity was practiced. In the later stage of the outbreak the MHS were also involved in the process to resume exports. The MHS provided the required services at slaughterhouses throughout this period, but it was stretched with available staff.

8.18 The MHS were reluctant to take direction from the Scottish Government as they needed confirmation from Defra that the extra work would be funded. Some of

the apparent delays occurred while MHS HQ was waiting for clearance and decisions from Defra as occurred when slaughterhouses had to be listed to permit the movement of animals to slaughter under licence.

8.19 During 2007 MHS personnel did not regularly attend either the DSG or the stakeholder meetings. During the August outbreaks the MHS regional office in Scotland worked closely with the Scottish Government although the regional office had no responsibility for finance or issuing instructions. During the September outbreaks Scottish Government officials were expected to deal only with the MHS HQ in York on matters related to FMD control and not with the regional office.

8.20 The MHS is due to be re-organised with the closure of the regional office in Scotland. In future there will be two business managers based in Scotland under the control of one of the two business directors of the MHS. The Scottish Government needs better links with the MHS and clearer lines of communication particularly in terms of stakeholder engagement and general feedback on operational issues. Areas for improvement include the speed and co-ordination with MHS as there was a lag period between information being given out at stakeholder meetings and MHS passing instructions to the Official Veterinarians in the field. The need for ratification from York HQ slowed the process down.

8.21 The MHS has a joint SLA with Defra, the Scottish Government and the Welsh Assembly Government. The 2007 SLA includes a number of annexes detailing MHS responsibilities but none of these cover detailed instructions or actions in the event of an FMD outbreak. The SLA requires notification to the MHS in writing of any changes to the requirements by customers. Even in a crisis situation it is still important for MHS to have in writing clear directions of additional duties to avoid any conflicts over responsibility or payment at a later stage. The proposed SLA for 2008/09 has been amended with agreed approval processes and additional duties to be carried out.

8.22 There was some confusion in the first few days in relation to the additional work required in the slaughterhouses to enable animals to be licensed to move from farms under strict conditions direct for slaughter. This arose as Scotland was ahead of England in wishing to licence the movements of animals to slaughter. A verbal request was made by Scottish Government for 100% supervision of cleaning and disinfection of the vehicles delivering animals to the slaughterhouse. In the initial period there was a lack of clarity about the level of supervision required by Defra and the Scottish Government. However, by 10th August agreement had been reached that only 25% supervision was required and this became the agreed GB-wide policy for which written directions were issued by Scotland.

8.23 This has caused the MHS considerable problems as Defra have refused to refund the costs of work involved in the supervision of the cleaning and disinfection of vehicles at Scottish slaughterhouses as they believe that the SLA only covered payment for the agreed level of work for England and Wales. In December Defra informed the MHS that they would not pay for the additional FMD controls and the cleaning and disinfection work carried out in Scotland. The Scottish Government

considered that these controls were part of the GB-wide requirement and that the concordat indicates that Defra should cover the costs of FMD related work. The reason for the Defra decision is unclear but to date appears to be to be unresolved. Current advice from Defra is for the MHS to invoice the Scottish Government who would then possibly be reimbursed by Defra.

8.24 The relationship between the MHS and the Scottish Government is not always clear. This is especially so when responding to requests from the Scottish Government where the MHS has to seek permission from Defra to confirm that funding is available. This is understandable as Defra has the budgetary responsibility and cannot give the Scottish Government uncontrolled access to limited funds. This is an unsatisfactory situation and the responsibility and funding for activities under the SLA needs to be reviewed. It would seem appropriate for the MHS to have a separate SLA with the Scottish Government so that a proper customer contractor relationship can be developed. To complement this, funding should be transferred to the Scottish Government to fund these requirements.

Recommendation 50: The Scottish Government, Defra and the Meat Hygiene Service (MHS) should review the current arrangements for service delivery during an outbreak of notifiable disease and a revised service level agreement (SLA) prepared to clarify the position. The SLA should be between the MHS and the Scottish Government alone and funding to support the SLA activities in Scotland should be held by the Scottish Government. (Medium Priority)

Recommendation 51: In the event of an FMD outbreak a senior HQ representative of the Meat Hygiene Service with delegated powers to make decisions and responsibility for issuing instructions should be present at the Disease Strategy Group (DSG) and stakeholder meetings in Scotland. Attendance in person would be preferable but failing that use of teleconference or if feasible via videoconferencing. (Low Priority)

LOCAL AUTHORITIES

8.25 Local Authority Environmental Health and Trading Standards provide the animal health services in Scotland. COSLA represents LAs and also acts as the conduit with the Scottish Government. It is LAs and not the police who take enforcement action. During an outbreak, LAs adopt additional roles which include taking part in police patrols to monitor compliance with the movement ban and once the licensing regime is in place, enforcing licensing conditions. The main activities for the LAs began when the movements were permitted under general and specific licences.

8.26 The Chief Officer Societies for Trading Standards and Environmental Health administer the Scottish AHW Panel. This is divided into area panels which are based on the AHDO boundaries. Above this sits the AHW Strategy Group which is comprised of chief officers from both Societies, with representatives from the National Panel and a representative from COSLA. While it is for the Panel and

Strategy groups to advise LAs, it is for each LA to decide on how they will undertake enforcement. This resulted in some inconsistencies regarding enforcement which probably related to resourcing issues. There are 31.5 dedicated Animal Health Inspectors in Scotland to cover markets and all other welfare inspections and while LAs could draft in staff from other service areas this has a knock-on effect on other work. On communications, arrangements were made for the COSLA representatives to e-mail stakeholder updates and Key Briefing to all 32 Scottish LAs immediately on receipt.

8.27 Resourcing is a major issue for LAs in peacetime in terms of enforcing animal health and welfare legislation and when disease occurs it becomes even more difficult to provide the level of service desired. There is a clear expectation that movement licence conditions are checked and enforced but roles and responsibilities in achieving this are not always clear.

8.28 COSLA received information on the developing disease strategy through the Stakeholder Group. The group forum was a good means of gathering information but the relationship between Scottish Government, Animal Health agency and LAs needs to be considered outside of this context as there were issues relevant to these three organisations that needed to be discussed in another forum. COSLA need to be consulted as a delivery partner as well as a stakeholder and need to have information early as on occasions there was no notification or prior notice given to COSLA. An example was the change which was needed once the export of meat was permitted.

8.29 COSLA representatives were very positive when asked to do things and very good at disseminating information to and from all 32 councils. COSLA representatives provided a daily update on enforcement issues to the CVO Scotland and copied this to the NFU Scotland which resulted in greater compliance on the ground. Good relations are maintained with COSLA through the standing AHW Stakeholder Group. In recent times COSLA have adopted a more specialised approach to animal health and welfare with them fielding two representatives at the AHW Stakeholder Group.

8.30 As part of their contingency planning arrangements it will be important for the LAs to identify where resources will come from in order to achieve enforcement. Consideration also needs to be given to the overall regulation and enforcement of AHW legislation.

8.31 COSLA should consider seconding a representative from a Local Authority to Scottish Government during disease outbreaks to assist with licensing issues, co-ordination and communications.

CO-ORDINATION

8.32 Co-ordination between delivery partners is good and helps when responding to disease. In the last 2 years, Memorandums of Understanding which cover normal

day to day work have been agreed with all Scottish LAs and Animal Health agency. Close links are also maintained with the 8 police regions.

8.33 There is good co-ordination between the 5 AHDOs and the 16 Area Offices of RPID of the Scottish Government. Each AHDO is co-located with an Area Office. Feedback from Area Offices comes via the Principal Agricultural Officer to the CAO and then on to DSG.

8.34 Specific stakeholders made comments about co-ordination and in one case there was felt to be a lot of duplication of effort by Animal Health agency and LAs. In some cases the interpretation of licence conditions by enforcement agencies was inconsistent. Closer working between the delivery partners is important to improve co-ordination.

Recommendation 52: The Scottish Government should instigate regular meetings between delivery partners at various levels, and agree a new mechanism for Scottish Government, Animal Health agency, Meat Hygiene Service and the Convention of Scottish Local Authorities (COSLA) to work together by developing a joint Memorandum of Understanding. (Medium Priority)

Chapter 9

Contingency Planning

KEY FINDINGS

9.1 Scotland's FMD Contingency Plan (The Plan) was considered by officials and stakeholders to be effective during the 2007 FMD outbreak. By contrast the key findings from a study into the Plan commissioned as part of this review indicated that it does not meet the fundamental principles required of a national plan for the strategic management of all aspects of a disease outbreak. It must be recognised that the current Plan is part of a wider package of plans which includes the Defra plans, Animal Health agency instructions, the LA plans along with those of the local AHDOs. Consequently the present Scottish Plan is not a stand-alone document nor is it a comprehensive national plan for dealing with FMD.

9.2 The current Plan has worked but needs to be updated in the light of the lessons learned in 2007 and the recommendations made by the separate study. In doing this the Plan must:

- become an effective national plan for managing all aspects of FMD outbreaks either inside or outside Scotland;
- adequately support disease control decisions in the context of their wider impact, costs, and benefit linking in with the wider Scottish response;
- provide a resource for specified users and target audiences with close links to stakeholder plans;
- incorporate the specific lessons learned in 2007 in relation to pre-planning in order to minimising the impact of movement restrictions and the export ban.

INTRODUCTION

Overview

9.3 As part of this Review the impact of the Plan in 2007 was evaluated along with an assessment of stakeholders' views and perceptions of the efficacy of the Plan. In order to assist with the Review a separate desk top study was commissioned from an independent company, Analytic Red. Their remit was to analyse and evaluate the Plan and prepare a report on its scope, content, layout, relevance, practicality and to identify any gaps.

EU obligations

9.4 The EU Directive 2003/85/EC requires Member States to draw up a contingency plan which has to be sent the Commission for approval. The detailed criteria and requirements for the plan are contained in an annex to the Directive.

Plans have to be modified in the light of the lessons learned from either outbreaks or real time exercises run to test the plan. In any event Member States are required to review and update the plan every 5 years and submit it to the Commission for approval. The objective of the plan is to specify the national (Member State) measures required;

- to maintain a high level of FMD awareness and preparedness and environmental protection;
- to be implemented in the event of an FMD outbreak;
- to be implemented in the case of a worst case scenario which is defined in the annex to the Directive.

9.5 In order to meet the UK Member State obligations Defra produced the Framework Response Plan for Exotic Animal Diseases and The Overview of Emergency Responses for Exotic Diseases. Defra's remit not only covers England but also UK and EU/international responsibilities and the Animal Health agency GB responsibilities. Scotland, Wales and Northern Ireland each produced their own separate contingency plans which are submitted together with the Defra plan to the Commission as a composite for the UK national plan.

Scotland's FMD Contingency Plan

9.6 The need for detailed contingency plans capable of dealing with worst case scenarios was demonstrated during the 2001 outbreak. The outcome of the inquiries following that outbreak, whilst accepting that contingency plans had existed, made it clear that much work was needed in terms of contingency planning and increased stakeholder involvement. The Scottish Executive published a draft contingency plan in 2002 which went for consultation before it was finalised. Since then, the Plan has been updated twice off the back of light touch consultations. Stakeholder meetings are used to remind people to feed in their comments and a dedicated mailbox is available for comments. The quarterly stakeholder meetings can be used to discuss any changes.

9.7 The current Plan was dated October 2005 but since then did not appear to have been formally updated to incorporate the recommendations from the review of the Communications Strategy or the lesson learned from the avian influenza and Newcastle disease outbreaks. Lessons learned exercises have not in the past been published as many of the issues identified were internal to Scottish Government and had no direct impact on industry. A number of the lessons learned were incorporated into the departmental desk instructions. The disease outbreaks delayed proposed work to update the Plan until July 2007 when an internal Scottish Government post was made available to focus on contingency planning work. This was superseded by events in August 2007.

REVIEW OF RESPONSE IN 2007

Scottish Government response

9.8 As specified in the Plan, the DSG and the FMD Stakeholder Group met as quickly as possible after FMD was confirmed in Surrey. The DSG met daily throughout the outbreak and considered a wide range of issues but at times became too focused on media handling. The role of the DSG is a strategic one with a need to discuss the priorities of the day whilst specifics should be dealt with in separate forums. It was noted that a revised agenda was used for the DSG meetings and this should be incorporated into the Plan. Membership of the DSG did not include as routine two of the operational partners. In future COSLA and MHS should be represented at the daily DSG.

9.9 No formal sub-committees were set up as suggested might be done in the Plan but an Economic Impact Group was established with a light touch with work undertaken by Scottish Government economists drawing on expertise from QMS. Setting up an economic impact sub-group may have been helpful. An economist's assessment of the problem and associated controls could have been used to balance advice from CVO Scotland. The Scottish Cabinet Sub-Committee on Civil Contingencies (CSC-SEER) was not called, but this is not an automatic response and will only be called when appropriate.

9.10 The Plan is about process and structure and was considered by Scottish officials to be appropriate and relevant in responding to the 2007 outbreak. A number of gaps were identified especially as the Plan was based around dealing with active disease in Scotland. It was also noted during the review that no Scotland-wide real time exercises had been held to test the Plan.

Civil Contingencies Unit (CCU) Scotland (now Scottish Resilience)

9.11 The role of CCU Scotland is to co-ordinate the corporate response of the Scottish Government to any major emergency. This is a dual role which requires increasing levels of preparedness and management of the government response and an understanding of the interface between the activity of government and the role of local emergency responders and stakeholders in managing the consequences of any significant event. The CCU will support the development of particular contingency plans and espouses the concept of an integrated approach to emergency response. The sector specific detail for individual plans will be for the relevant directorate within the Scottish Government to decide but such detailed plans must be consistent with the generic co-ordination arrangements that apply to the government's corporate response to any emergency.

9.12 During the FMD outbreaks of 2007, CCU's role was limited as the disease incursion was in South East England and did not bring with it wider consequences with significant impact e.g. impact on tourism, community issues, and economic impact. In the event of such wider consequences arising, CCU would co-ordinate by bringing all the relevant policy experts together to consider the corporate response

of government. This could be at Ministerial level as well as official level similar to the activity of COBR but for the devolved aspects. If the outbreak was sufficiently serious, CSC-SEER would be convened.

9.13 There is an important distinction to be made between fighting disease and managing the wider consequences. AHW policy division (AHWD) of the Rural Directorate in the Scottish Government very much leads on the former and CCU would manage the latter as necessary. It is worth noting that AHWD is one of the few areas within Scottish Government where decisions taken by officials directly affect the management and control of local respondees. CCU is strongly of the view that the disease control and wider consequence management functions require to be closely integrated between AHWD and CCU.

9.14 CCU monitors for any potential wider implications of the disease control measures. It is recognised that the consequential effects of disease might go on for some time and that there is a resilience issue in terms of resource when dealing with FMD. There needs to be clarity over the point at which CCU would become involved in a co-ordinating role in supporting the response to disease.

Stakeholder views

9.15 The Plan was acceptable to stakeholders who confirmed that they had been fully consulted with the opportunity to comment on the draft before it was published in 2005. Overall the processes contained in the Plan appeared to stakeholders to have worked satisfactorily during the FMD outbreak. Comments were made that the Plan should be updated regularly with a formal review every three to five years with updates made and agreed in-between as required. Stakeholders should be consulted regularly about any changes proposed by the Scottish Government. Opinions were divided on the question of whether the Plan should be put to the Scottish Parliament for formal agreement each time it was reviewed.

9.16 Whether there should be a generic plan for all diseases or a single plan for separate diseases was debated. Stakeholders were split on the issue but a small majority would prefer a separate plan for each disease as they considered it would be easier to use in the event of an outbreak.

9.17 The Plan should not only address disease control aspects but also the difficulties likely to be experienced throughout the supply chain not only by farmers but by the other organisations involved. Trade issues need to be covered in the Plan and product certification should be available immediately to avoid delays in resuming exports of permitted products. It is important to consult with trade representatives as well as farmers when preparing for and dealing with disease outbreaks. While the initial focus is on the control of disease, trade issues and consumer messages soon become vital.

9.18 An FMD outbreak has serious implications for all stakeholders as well as government. It is important for all those involved throughout the supply chain to consider the implications of an FMD outbreak on their business and where

appropriate to develop their own contingency plans. Markets have contingency plans for dealing with disease, irrespective of the type of disease. Farmers should have some idea of how to deal with disease situations although it is impractical to expect farmers to have their own detailed contingency plans.

9.19 Farmers need to buy into the Plan, which should include details for them on biosecurity and fallen stock. It is best practice for farmers to think about how they might deal with disease but it will be important not to add to the levels of bureaucracy already present. From the point of view of farmers, they already have a number of systems in place such as farm assurance requirements, herd health plans and biosecurity codes. The Livestock Quality Assurance standards in Scotland have already had the effect of implementing generic Hazard Analysis Critical Control Points on all QMS Producer members. This may be a route which could be explored to include more detail on biosecurity and dealing with fallen stock. Another option would be for the Scottish Government and the industry to develop generic contingency plans which could be made available to farmers.

Lessons learned

9.20 The Plan was immeasurably better than in 2001 due to lessons learned. The structures were basically sound with DSG working well. The Plan did not envisage dealing with the consequences of an FMD outbreak around 500 kilometres away and outside of Scotland. It was also probably predicated too much on events during 2001.

9.21 The focus of the Plan should be on government actions so some separate guidance for delivery partners, mapping out the expectations of them, might be the best way to ensure that they are aware of their potential roles and responsibilities. Contingency planning is perceived as being for government, and industry maybe need to think a bit more about how they interlink with these arrangements. In terms of guiding the response the Plan appeared to work well.

9.22 The Plan itself dealt with processes and procedures to control FMD and eliminate the virus. It had not been constructed to deal with a whole range of other issues which arose during the course of the outbreak. These have been discussed elsewhere in this report but are summarised below. With hindsight it is easy to identify the areas which need to be covered either in the contingency plan or elsewhere. These include:

- a clear statement of the strategic objectives of the Governments response;
- clear protocols and procedures for allowing movements after the introduction of the national movement ban;
- prepared up-to-date risk assessments to be available;
- draft movement licences for use as the ban is relaxed to be readily available;

- the trigger points for the derogation of driver's hours specified and the information required by DfT to consider such a derogation;
- the implications of the movement ban on the industry and the impact on animal welfare considered, measured or catered for in the Plan.

9.23 The Plan should recognise the potential for wider consequences of an outbreak anywhere in GB and must be integrated into the overall Scottish response for dealing with emergencies. The impact on the whole of the supply chain must be taken into account and where appropriate all aspects should be reflected in the Plan. There must be good co-ordination with CCU and other interested policy areas. CCU and AHWD should work together to achieve a shared understanding of when CCU should be notified of an animal disease outbreak or potential outbreak.

9.24 The plan must be updated regularly in order to include lessons learned from outbreaks, the latest scientific developments, the lessons learned from exercises and changes in legislation. Contingency Planning should be a standing agenda item at AHW Stakeholder Group meetings at least once a year. Any proposed changes or amendments should be passed to stakeholders for comment and agreement. A formal review should take place every 3 years and the revised Plan be made available for full consultation.

Recommendation 53: Procedures should be put in place to ensure regular updating of the FMD Contingency Plan in consultation with all stakeholders with a formal review at least every 3-5 years. (Medium Priority)

INDEPENDENT ANALYSIS AND EVALUATION OF SCOTLAND'S FMD CONTINGENCY PLAN

Background

9.25 Analytic Red, a private consultancy, was commissioned by the Scottish Government to undertake a review of the Plan. The study specifically aimed to:

- evaluate if the plan provides sufficient information to facilitate an effective response to an FMD incursion in GB;
- analyse if the Plan is suitable for leading a response to a disease outbreak in Scotland;
- identify the steps to take in the event of an FMD incursion elsewhere, specifically in relation to the identification of animals arriving from infected countries prior to confirmation of disease.

It was conditional that their report would be published alongside this report and that their recommendations would be included in the body of this report.

Report from Analytic Red

9.26 The key finding in the report from Analytic Red is that "*Scotland's FMD contingency plan does not meet the fundamental principles required of a national plan for the strategic management of all aspects of a disease outbreak*". In reaching this conclusion a needs analysis was undertaken which considered some of the main drivers that the Plan would need to anticipate. The analysis and evaluation of the plan was based on detailed evidence and came to three key judgements that:

- the Plan fails to meet the fundamental principles of a national plan;
- the Plan is opaque, confused and incoherent with no logic or structure to it;
- the Plan is not a plan and mixes briefing material, policy guidance, forms and technical assessments.

9.27 The Analytic Red considers that the main basis for these failings is a lack of fundamental elements in particular the absence of Strategic Objectives and Planning Assumptions in the plan. They identify four implicit strategic objectives:

- deliver EU "Stamping-Out" Policy for infected or dangerous contacts to return to infection free state;
- respond immediately to all aspects of an FMD outbreak;
- manage a widespread or limited outbreak of FMD;
- ensure Scottish Governments priorities are effectively represented at Whitehall.

Conclusions and recommendations by Analytic Red

9.28 The three main conclusions and eight key recommendations made by the Analytic Red are shown in Table 12 below. A number of other recommendations are also contained in the body of the report.

**Table 12
Analytic Red Recommendations**

Recommendation number	Conclusions and Recommendation
Conclusion 1	The Plan is not an effective national plan for managing all aspects of an FMD outbreak.
1	The Plan should be rewritten as a national plan for the strategic management of FMD outbreaks
2	The Plan should be based on Strategic Priorities and Planning Assumptions
3	The Plan should regard an outbreak of FMD as a crisis and focus the national response around Scotland’s crisis machinery
4	The refined Plan should be co-operatively designed and robustly tested with all disease control and wider impact stakeholders
5	The Plan should incorporate work undertaken following acceptance of the recommendations from previous FMD inquiries, review and recommendations.
6	The Plan should be benchmarked against the requirements of international and domestic legislation amongst other drivers
Conclusion 2	The Plan does not adequately support disease control decisions in the context of wider considerations of impact, cost and benefit
7	Future versions of the Plan must support decision-making that simultaneously considers disease control option against wider impacts
Conclusion 3	The Plan is not a resource for specified users or target audiences.
8	Future versions of the Plan are a resource for users and target audiences both within and out with the Scottish Government.

Source: Analytic Red (2008). Independent Analysis and Evaluation of Scotland’s FMD Contingency Plan.

9.29 Analytic Red considers that with focused effort the Plan could become effective and indicates in the report that this can be achieved by drawing on:

- work undertaken following the then Scottish Executive’s acceptance of the findings of a number of inquiries, consultations and reviews around previous FMD outbreaks;
- the knowledge and experience held by those consulted as part of this project;
- a needs analysis of the key users of and target audiences for the Plan;

- civil contingencies planning expertise elsewhere in the Scottish Executive and UK.

Conclusions

9.30 Analytic Red have conducted a detailed review and identified a series of major issues with respect to the Plan. Their conclusions and recommendations are comprehensive and should be considered carefully as a way of making the Plan more robust and fit for purpose. A number of issues raised in their report are also considered in the context of GB controls especially with the increased Ministerial involvement by the Scottish Government.

Recommendation 54: The Scottish Government's FMD Contingency Plan must be updated urgently to ensure it is fit for purpose and to take account of the lessons learned from this review and to incorporate the 8 key recommendations from the independent report by Analytic Red. (High Priority)

IMPLICATIONS FOR CONTROL IN GB IF FMD OCCURRED IN SCOTLAND

9.31 The Defra Framework Response plan for Exotic Animal Diseases clearly indicates that Defra takes the lead in planning and responding to outbreaks of FMD in England. The Defra plan is complemented by the separate contingency plans in Scotland and Wales. In the event of an outbreak there would be close liaison between the three countries. However in the event of an outbreak in Scotland the Defra plan is clear that Scotland's DSG will be convened and will be responsible for supervising the handling of the Scottish outbreak.

9.32 In Scotland disease would be confirmed by Scottish Ministers on the advice of the CVO Scotland although all the reporting of suspicion of disease will be made by the Divisional Veterinary Manager to the relevant group in Defra. The policy would be decided by the Scottish Government but the information and evidence on which to formulate the policy would be provided mainly by Animal Health agency, the National Emergency Epidemiology Group and the UK NEG all of which are funded and provided by Defra.

9.33 The implementation of the Scottish Government policy would be carried out by the Animal Health agency and the MHS both of which would be funded by Defra to undertake disease control. An NDCC would be set up by the Animal Health agency in London with the operational teams in effect providing a service to Scotland. Whilst the NDCC would normally be responsible for policy and operations for England under the control of the CVO UK it is assumed that the NDCC in the event of an outbreak in Scotland would only provide logistical support to the Scottish operation although who would have overall control of the NDCC in these circumstances is unclear as the responsibility for the operational activities in Scotland would lie with the Scottish Government.

9.34 The contingency plans make little or no mention of where funding would be obtained and rely on the agreements in the Defra/Scottish Government Concordats. These arrangements require goodwill on all sides. During outbreaks the Scottish Government would clearly want to demonstrate that they were effectively dealing with the situation. Potential problems could occur if the Scottish Government wished to pursue a specific course of action with which Defra Ministers disagreed. As Defra holds the funding for implementation there could be problems if no mechanism is in place to resolve these kinds of issues.

Lessons learned

9.35 Scotland's FMD Contingency Plan was not developed as a stand alone plan but more as an integral part of the Defra plan. This means that Scotland relies on Defra for much of the planning arrangements and for the provision of resources to implement the policy. The relationship between the Plan and arrangements elsewhere in GB is fundamental to the way in which the Plan should be developed. There is no clarity on the way in which the plans will interface and who would be responsible for which actions in the event of an outbreak in Scotland. This needs to be urgently investigated to provide clarity of where operational responsibility, funding and other activities will lie and who would resolve disputes over policy and operational issues.

Recommendation 55: The Scottish Government and Defra should work together to develop an overarching contingency plan which identifies the GB responsibilities and separates these from the specific England component of the current Defra plan. The mechanisms for the implementation of Scottish policy in the event of an outbreak in Scotland must be clearly specified as should the support to be provided by Defra and the funding available. (High Priority)

APPENDIX 1: ORAL AND WRITTEN EVIDENCE SUBMITTED TO THE REVIEW

INTERVIEWS

Ministers

7 February 2008	Richard Lochhead , Cabinet Secretary for Rural Affairs and the Environment
27 February 2008	Richard Lochhead , Cabinet Secretary for Rural Affairs and the Environment
8 April 2008	Hilary Benn , Secretary of State for the Environment, Food and Rural Affairs

Scottish Government Officials

26 October 2007	Maggie Gill , Chief Scientific Advisor, Rural Affairs and Environment
13 November 2007	Andy Robb , Chief Agricultural Officer
13 November 2007	Ian R Anderson , Deputy Director, Animal Health and Welfare (AHW) Division
19 November 2007	Charles Milne , Chief Veterinary Officer (Scotland)
20 November 2007	Martin Morgan , Head of TSEs and Animal By-Products Policy, AHW Division
20 November 2007	Neil Ritchie , Head of AHW Strategy, Planning and Exotic Diseases, AHW Division
18 December 2007	David Henderson-Howat , Head of Agricultural Division
20 December 2007	Craig Egner , Senior Policy Advisor (Rural Affairs), EU Office
14 January 2008	Chris Holme , Head of Rural Affairs and Environment Press Desk
22 January 2008	Charles Milne , Chief Veterinary Officer (Scotland)
5 February 2008	Peter Russell , Head of Rural Directorate
8 February 2008	John Nicholls & Scott Miller , Civil Contingencies Unit, Fire and Civil Contingencies Division (now 'Scottish Resilience')

Other Government Departments and agencies

21 November 2007	Katrina Williams , Director General, Food and Farming, Defra
21 November 2007	Andy Lebrecht , Director General, Food and Farming, Defra
17 December 2007	David Dawson , Director, Food and Farming, Defra
17 December 2007	Fred Landeg , Acting Chief Veterinary Officer, Defra
17 December 2007	Rob Paul , Director of Veterinary & Technical Services, Animal Health agency
17 December 2007	Ann Waters , Director of Contingency Planning, Animal Health agency
20 December 2007	Simon Stannard , 1 st Secretary, Food and Veterinary, UK Rep
20 November 2007	Derick McIntosh , Senior Operations Manager, Animal Health agency
19 December 2007	Spencer Dawson , Regional Director (Scotland), Meat Hygiene Service
25 January 2008	Helen O'Neill & Mungo Howat , Animal Health and Welfare, Convention of Scottish Local Authorities
11 February 2008	Bruce Mann , Director, Civil Contingencies Secretariat Cabinet Office

Organisations and Individuals

19 November 2007	The Centre of Excellence for Epidemiology, Population Health and Infectious Diseases (EPIC) Mark Woolhouse Nick Savill Julie Fitzpatrick David Buxton Victoriya Volkova Paul Bessell
14 January 2008 (SSPCA)	Scottish Society for the Prevention of Cruelty to Animals Stuart Earley Mike Flynn
15 January 2008	Scottish Association of Meat Wholesalers (SAMW) Allan Jess Alistair Donaldson
15 January 2008	National Farmers Union of Scotland (NFUS) Jim McLaren Nigel Miller Bob Carruth James Withers
16 January 2008	British Retail Consortium (BRC) Andrew Opie
18 January 2008	Scottish Dairy Cattle Association (SDCA) Jack Lawson
18 January 2008	Road Haulage Association (RHA) Phil Flanders, RHA Ian Murrie, Ian A Murrie Andrew Redpath, Valley Transport George Stewart, R W Stewart Derek Armstrong, W M Armstrong (Longtown) Ltd Jennifer Wyberd, W M Armstrong (Longtown) Ltd
22 January 2008	Scottish Beef Cattle Association (SBCA) John Cameron Brian Simpson John Bell Keith Redpath
23 January 2008	Moredun Research Institute (MRI) Julie Fitzpatrick David Buxton Willie Donachie
24 January 2008	National Sheep Association (NSA) John Cameron George Milne Jimmy Sinclair
24 January 2008	Institute of Auctioneers and Appraisers Scotland (IAAS) John Gregor Jack Clark Alex Wilson

25 January 2008	National Beef Association (NBA) James Irvine Hamish McBean
5 February 2008	Scottish Rural Property and Business Association (SRPBA) Jon Don Doug McAdam Karen Smyth
6 February 2008	Quality Meat Scotland (QMS) Donald Biggar Andy McGowan Stuart Ashworth
6 February 2008	Scottish Crofting Society (SCF) Patrick Krause Norman Leask
7 February 2008	Scottish Food Quality Council (SFQC) David Whiteford
12 February 2008	Aberdeen and Northern Marts Group Ltd (ANMG) Brian Pack
12 February 2008	British Veterinary Association (BVA) Frank Stephen Sandy Clark
28 February 2008	Shetland Isles Representative (Independent) Jim Budge
28 February 2008	Orkney Representative (Independent) John Copland
28 February 2008	Western Isles Representative (Independent) Donald Murdie

SUBMISSIONS RECEIVED

23 October 2007	Tim Deakin, Orkney Cheese Company Ltd
1 November 2007	British Veterinary Service (BVA)
2 November 2007	British Cattle Veterinary Association (BCVA)
5 November 2007	Dumfries and Galloway Council
5 November 2007	Scottish Environment Protection Agency (SEPA)
6 November 2007	Road Haulage Association (RHA)
12 November 2007	T W Tennant (Independent)
5 December 2007	Strategic Co-ordinating Group, Dumfries and Galloway Council
12 December 2007	Highland Council
14 December 2007	Moredun Research Institute (MRI)
17 December 2007	National Farmers Union of Scotland (NFUS)
17 January 2008	Deer Commission for Scotland
24 January 2008	Gordon Johnstone (independent)
25 January 2008	Argyll and Bute Council
25 January 2008	Scottish Crofting Foundation (SCF)

APPENDIX 2: ADDITIONAL STAKEHOLDER VIEWS

During interviews stakeholders made valuable comments and suggestions quite specific to their particular area of expertise which they felt would help to increase preparedness and minimise any future disease related disruption. It has not been possible to discuss all these in detail in this report but they are listed below for information:

Regionalisation

- The pig sector has a good tracing system so animal specific regionalisation could work for pigs.
- There needs to be a discussion with the UK and the European Commission over the way in which the control of export products is dealt with.
- There should be larger surveillance zones around infected premises and smaller restricted zones to minimise impact on low risk areas like, in this case, Scotland. Consider how to make the Scottish Islands secure and separate epidemiological units.
- More local slaughterhouses would reduce the need for moving animals large distances and thereby helping with disease control and branding.
- There must be more pre-outbreak planning so the Scottish Islands can rapidly identify animal movements.
- Better recording of incoming movements in line with the systems in place on Shetland would be helpful for Orkney and the Western Isles.

Disease Strategy and Movement Controls

- The issue of facilities for cleansing vehicles in peacetime needs to be reviewed.
- Where there is a requirement for vehicle washes, slaughterhouses need to be able to deal with the vehicles that supply them.
- Farmers and hauliers should ensure that their vehicles are clean at the start of a journey to reduce the time spent washing vehicles at the slaughterhouses.
- Guidelines for emptying markets already in progress when a movement ban is imposed need to be available. Animals should be able to move to buyers' destinations within a certain time limit.
- Establish collection centres faster where the level of risk allows. Additional biosecurity requirements are preferable to continued delays.
- The need for vaccination for experimental animals on research establishments should be reviewed.
- Laboratories with animals on site must be prepared when receiving incoming samples for diagnostic purposes as they may contain pathogens that are unknown or notifiable.

Economic, scientific and veterinary advice

- Researchers from overseas should be consulted with, particularly those from the major centres in the United States.

- It is recognised that the UK Government must consider vaccination as part of the contingency planning arrangements but when doing so they should automatically consult with Devolved Administrations. A more general view of vaccination is required and this should include consideration of what the exit strategy should be.

Liaison with UK departments and the European Union

- Trading Standards should meet with the Road Haulage Association to develop a common understanding.
- Consider building a requirement of proof of ownership into any future welfare schemes.
- Any scheme to cull animals should be for producers only to limit abuses.
- Where possible any scheme to cull animals should make use of local facilities to reduce the distance animals have to travel.

Communication with stakeholders

- An agreed communications line, possibly based around a simple list of do's and don'ts would help stakeholders advise their members.
- Need to set up a GB/UK-wide trade group in the event of a major outbreak of disease.
- Communications could be focused through agricultural correspondents.
- Discussions could take place with the main Scottish newspapers to identify the most effective methods for providing information to the industry especially in relation to permitted movements.
- It would be helpful if a daily update were sent to all veterinary practitioners at a regular time so that vets would know when to look for information and be ready to pass it on to their farmer clients. In this way farmers would receive up-to-date information.
- The legal implications of decisions could be made clearer at stakeholder meetings to encourage well informed decision making.

Co-ordination with Delivery Agents

- Provide stakeholders with high quality, targeted advice and education on compliance issues which should reduce the need for enforcement.

Contingency Planning

- Industry to consider developing their own contingency plans on how to deal with national movement bans.
- Consider inserting a question on disease contingency planning in the Farm Assurance Scheme to raise awareness among farmers.
- The FMD Contingency Plan must recognise the potential welfare issues that may arise, particularly in sheep, depending on the time of year.
- Provide stakeholders with a refresher on the format of licences every few years to keep this fresh in peoples' minds.

APPENDIX 3: SUMMARY OF FMD CASES IN SURREY 2007

Eight cases were confirmed

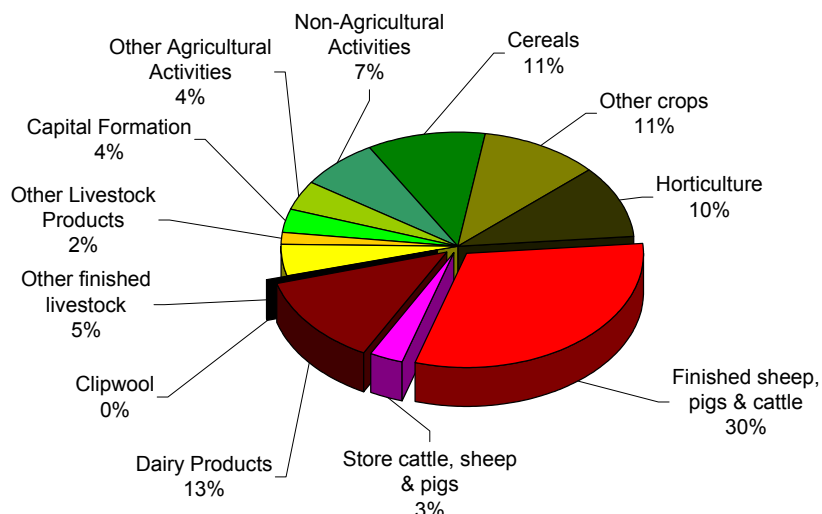
Case number	Date of confirmation	Location
IP1	3 August 2007	Surrey
IP2	6 August 2007	Surrey
IP3	12 September 2007	Surrey
IP4	13 September 2007	Surrey
IP5	17 September 2007	Surrey
IP6	21 September 2007	Surrey
IP7	24 September 2007	Surrey
IP8	30 September 2007	Surrey

APPENDIX 4: LIVESTOCK INDUSTRY AND MOVEMENTS

The figures and information is a selection from the SAC and EPIC reports

4.1 Livestock Industry

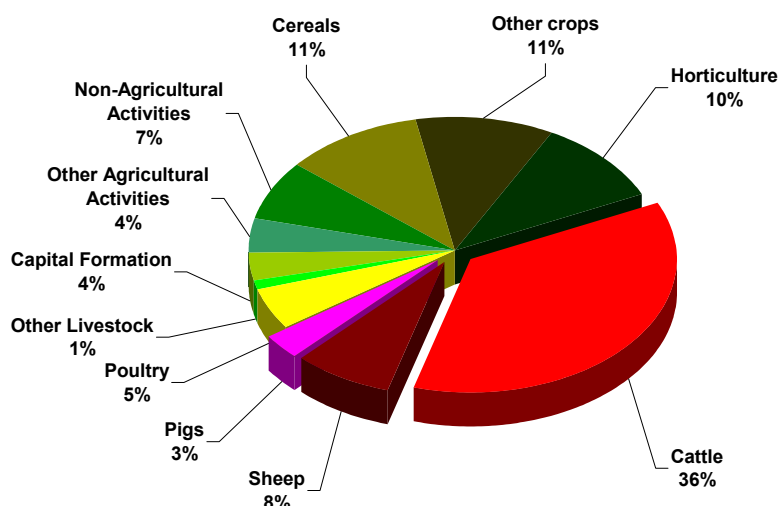
Livestock's share of gross Scottish agricultural output 2006 (£1.9156 billion)



Source: Adapted from *Scottish Agriculture Output, Input and Income Statistics 1997 to 2006*

<http://www.scotland.gov.uk/Publications/2007/03/28161150/0>

Gross Scottish agricultural output split by livestock sector, 2006 (£1.9156 billion)

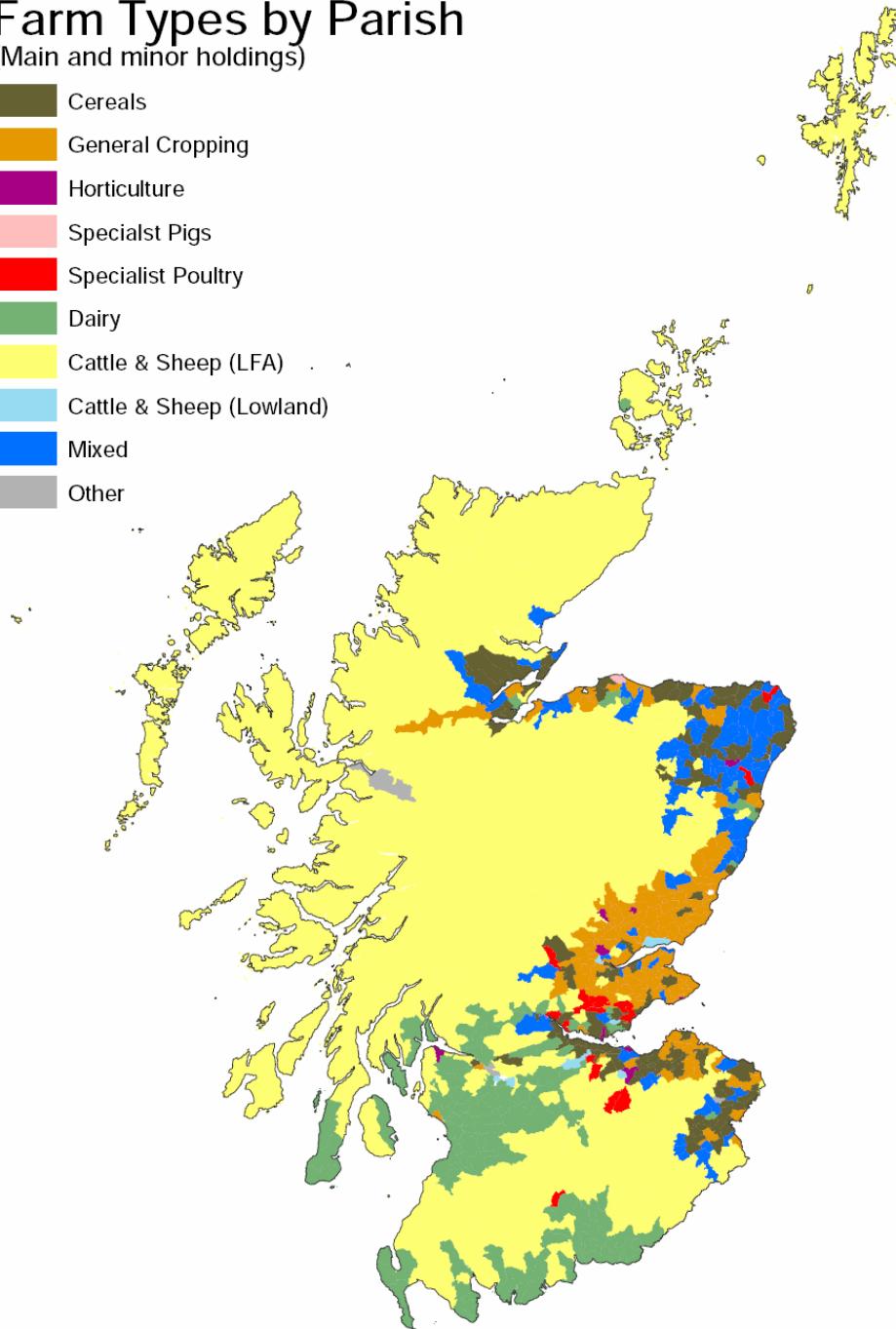


Source: Adapted from *Scottish Agriculture Output, Input and Income Statistics 1997 to 2006*

<http://www.scotland.gov.uk/Publications/2007/03/28161150/0>

4.2 Farm types by Parish

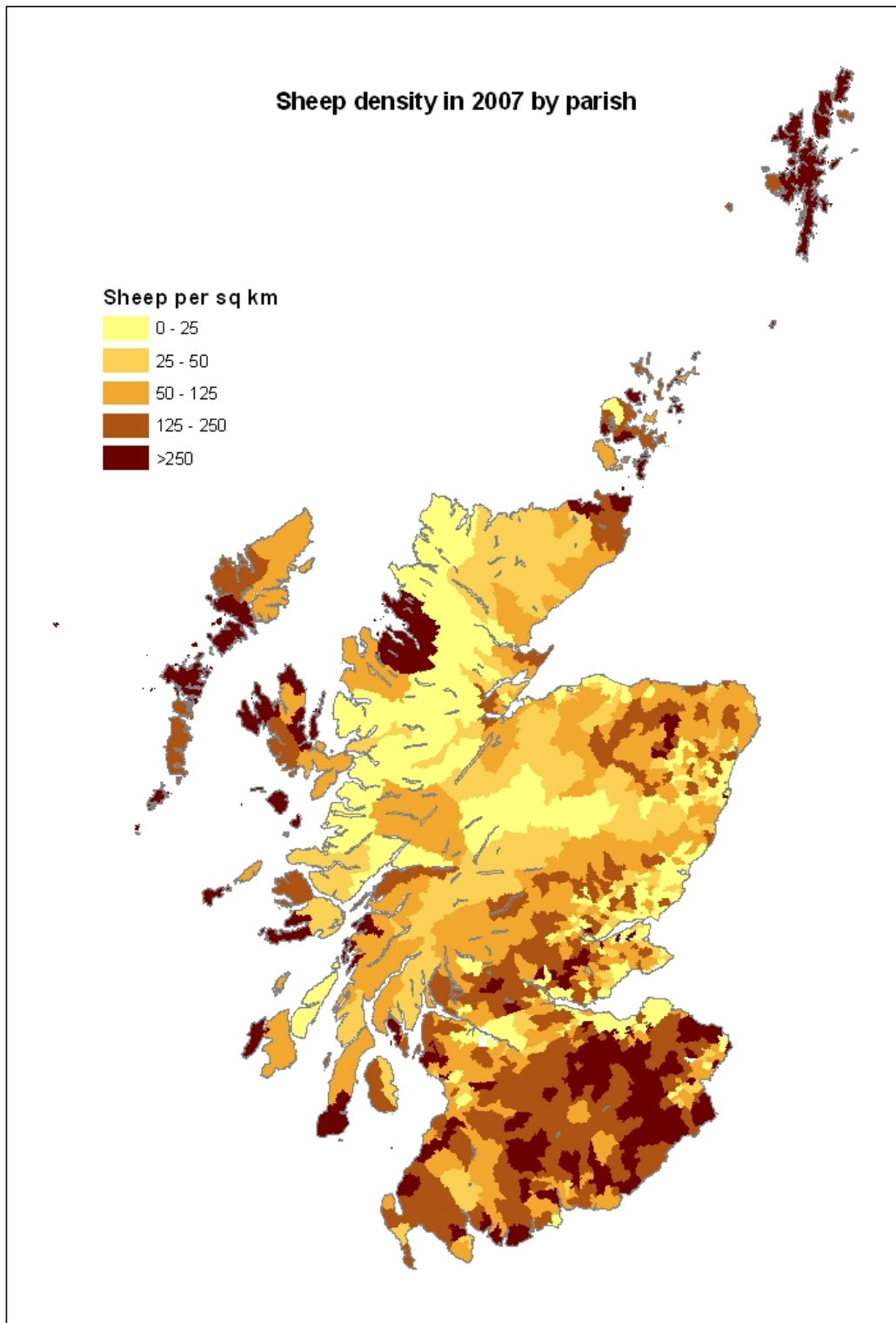
Farm Types by Parish (Main and minor holdings)



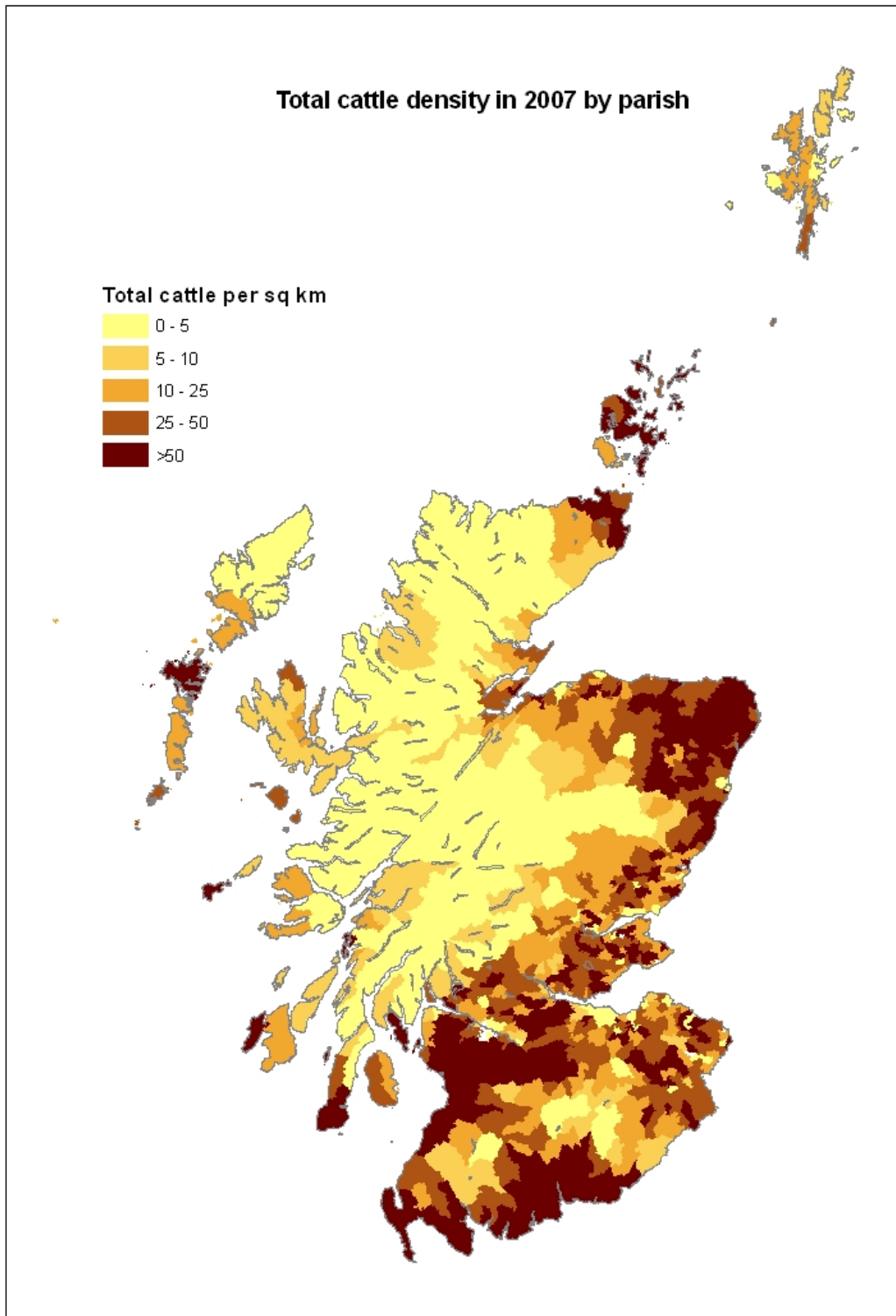
Parishes have been assigned a farm type, where the total European Size Units (ESUs) for that type exceeds the total ESUs for each of the other types

Source: SEERAD 2007
© Crown copyright 2007. All rights reserved Scottish Executive.
Licence number 100020540 2007.
Scottish Executive Geographic Information Service

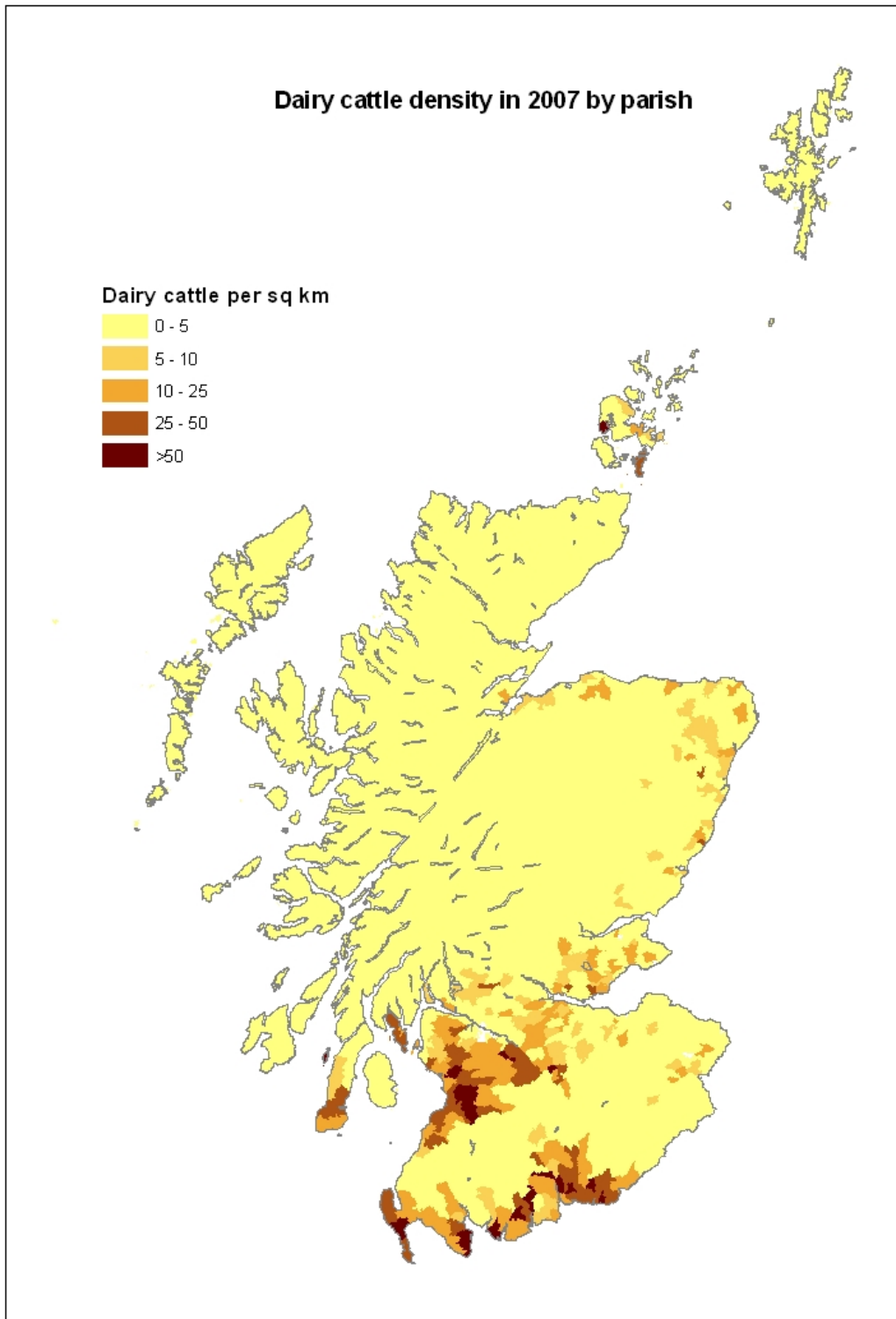
4.3 Sheep Density Map



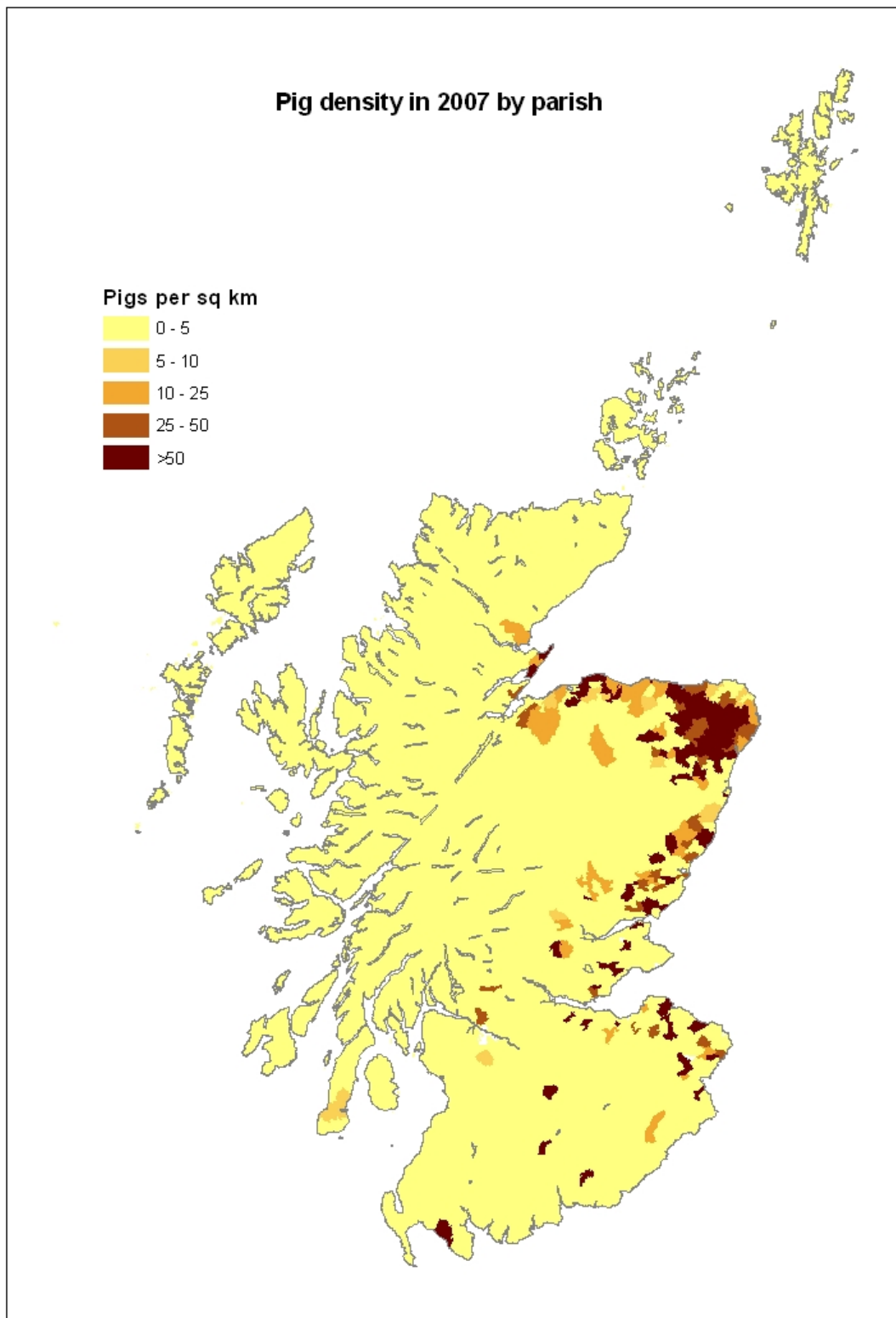
4.4 Cattle Density Map



4.5 Dairy Cattle Density Map



4.6 Pig Density Map

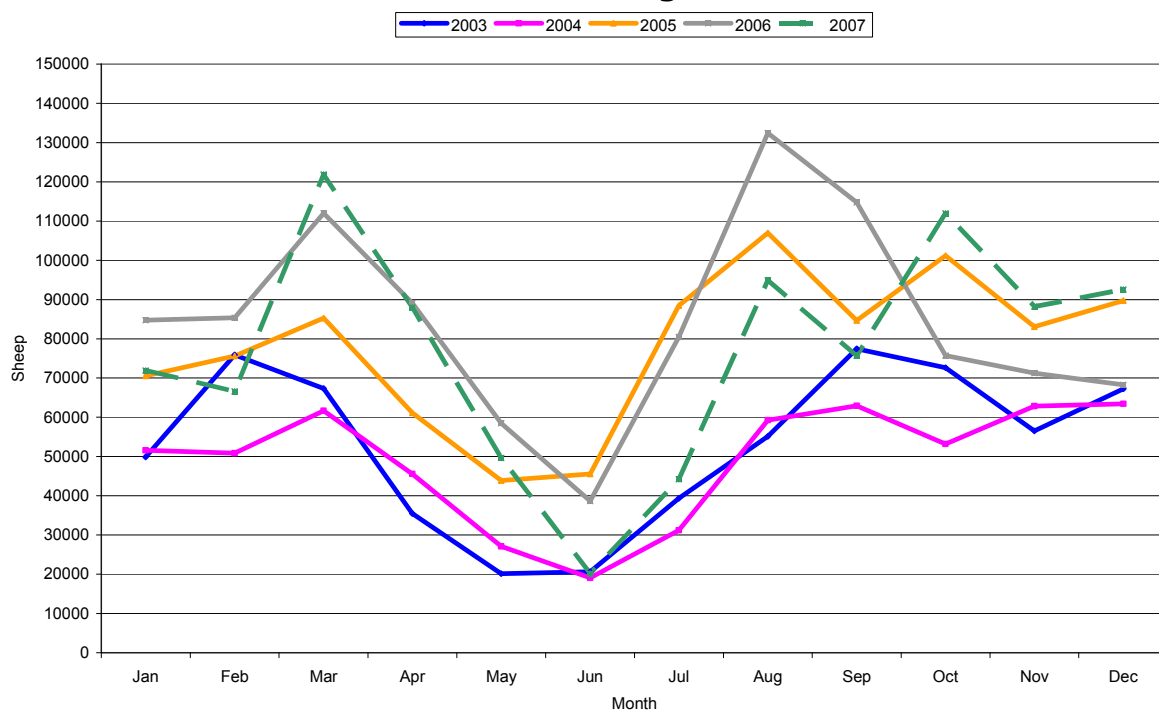


4.7 Numbers of sheep and sheep batches moved onto Scottish livestock holdings and abattoirs in 2003-2007^a

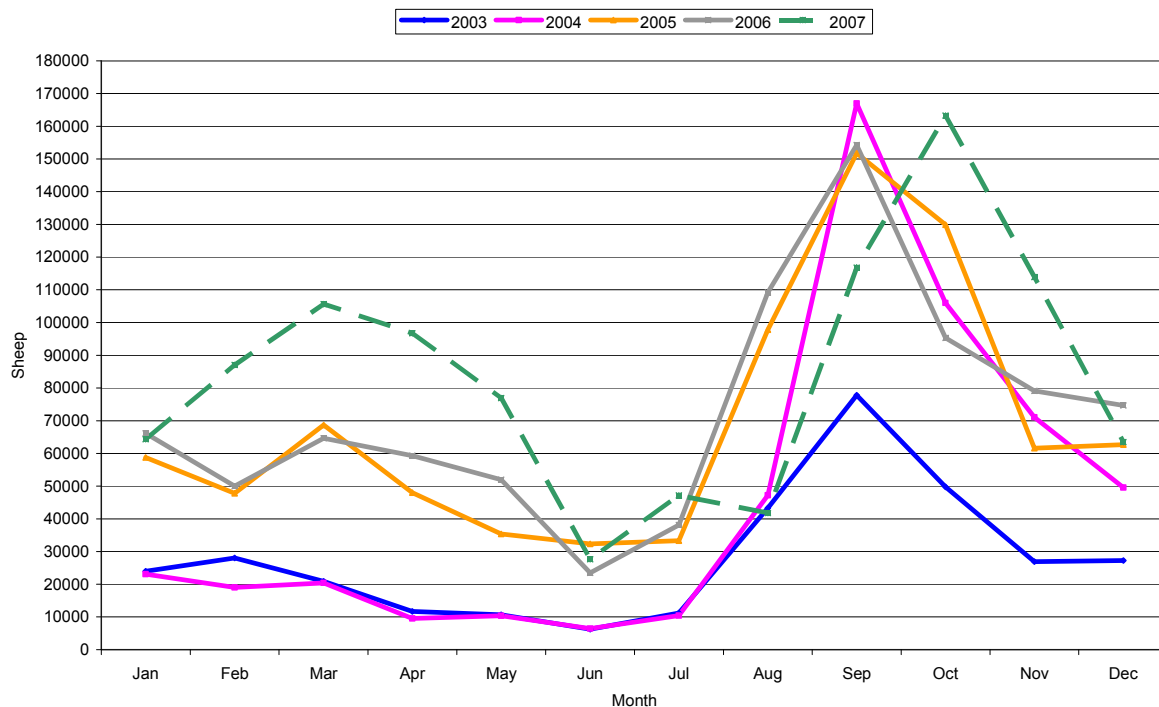
Year	Number of animals Number of batches	Live animal trade from		Total live	For slaughter from		Total for slaughter
		Cross-border	Scotland		Cross-border	Scotland	
2003	Sheep	74,079	2,322,682	2,396,761	229,442	1,363,738	1,593,180
	Batches	2,815	124,634	127,449	10,491	72,054	82,545
2004	Sheep	88,425	2,430,803	2,519,228	193,584	1,182,062	1,375,646
	Batches	3,528	138,424	141,952	7,149	63,113	70,262
2005	Sheep	95,624	2,232,392	2,328,016	153,374	1,157,850	1,311,224
	Batches	3,338	132,374	135,712	2,476	62,364	64,840
2006	Sheep	130,756	2,541,400	2,672,156	204,129	1,212,990	1,417,119
	Batches	3,612	134,518	138,130	3,355	66,245	69,600
2007	Sheep	137,880	2,131,020	2,268,900	160,195	1,349,892	1,510,087
	Batches	5,620	99,282	104,902	5,430	59,923	65,353

^a Imports and exports outside GB are not included

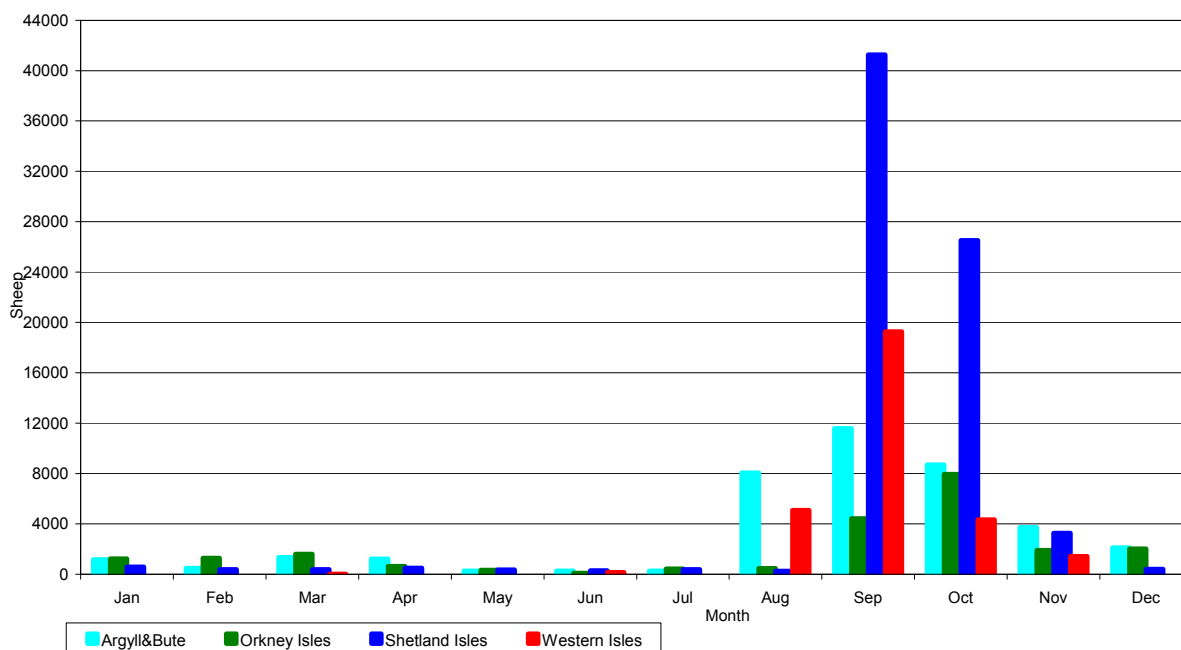
4.8 Chart of Monthly movement of sheep from mainland Scotland to rest of GB 2003 to 2007 not for slaughter



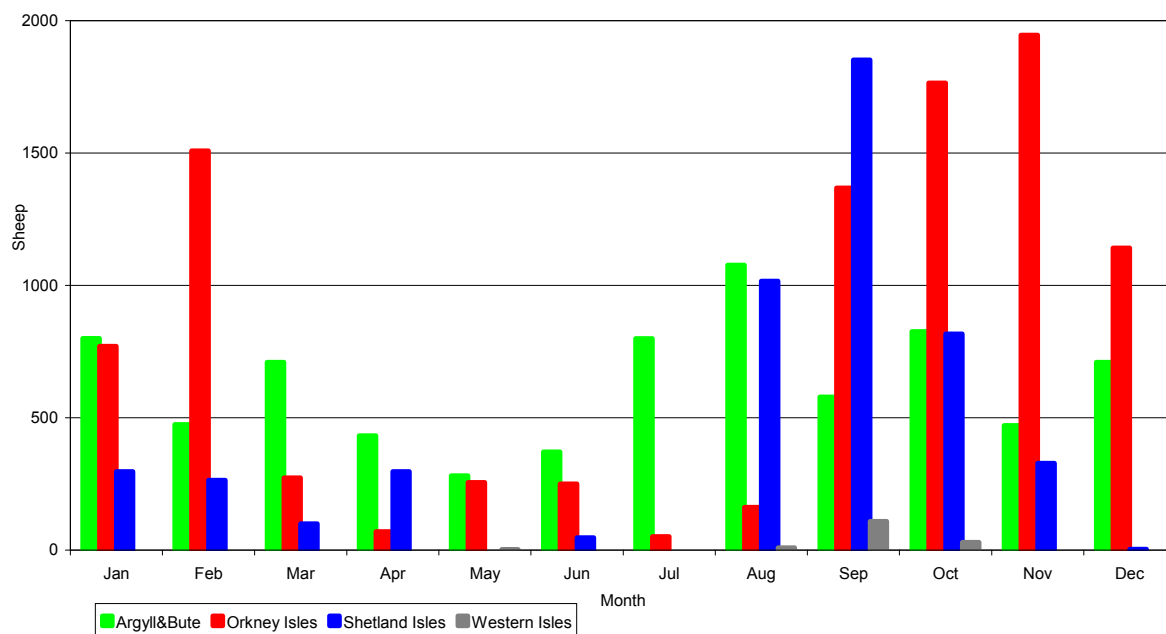
4.9 Chart of Monthly movement of sheep from mainland Scotland to rest of GB 2003 to 2007 for slaughter



4.10 Chart of Monthly movement of sheep from Scottish Islands to Mainland Scotland in 2006 not for slaughter



4.11 Chart of Monthly movement from Scottish Islands to mainland Scotland in 2006 for slaughter



APPENDIX 5: INTERNATIONAL ORGANISATIONS

THE WORLD ORGANISATION FOR ANIMAL HEALTH (OIE)

The Terrestrial Animal Health code

The World Organisation for Animal Health (OIE) is an intergovernmental organisation created in 1924, which currently has around 167 Member Countries. In 1994 the World Trade Organisation (WTO) recognised the OIE as the international reference body with responsibilities under international law for specifying the standards, guidelines and recommendations applicable to international trade.

The Terrestrial Animal Health Code (the Code) is produced by the OIE and details the health measures and safeguards which veterinary authorities should adopt in relation to imports and exports of animals and their products. These measures are important to ensure that importing countries are protected and that pathogenic agents such as FMD are not transferred during trade. Under the rules of the WTO it is equally important to ensure that any import/export controls are based on risk and do not create unjustified sanitary barriers.

The Code is divided into four parts, each of which has relevance to FMD.

- Part 1 deals with general provisions and includes sections on general definitions, risk analysis including zoning and compartmentalisation and import export procedures.
- Part 2 deals with the priority diseases with a specific chapter devoted to FMD. This provides recommendations to prevent the introduction of specific diseases into the importing country by taking into account the disease, the commodity and the status of the exporting countries.
- Part 3 contains a number of appendices of which appendix 3.8.7 deals with detailed guidelines for the surveillance of FMD.
- Part 4 provides a number of model international veterinary certificates for use in live animals and their products in order to assist with in harmonisation.

The Code is now an integral part of the regulatory system established by the WTO for trade in animals and their products. Veterinary authorities are encouraged to base their import health measures on the OIE standards. In the case of the EU much of the current measures are based on the OIE standards. Whilst countries should follow the OIE standards there is no specific legal obligation for them to do so although if they do not and a complaint is made to the WTO, failure to comply with the standards could be serious. It is EU legislation which dictates what rules and standards have to be followed by Member States including the UK.

OIE standards on regionalisation

In Part 1 of the Code the OIE defines a zone or region as "a clearly defined part of a country containing an animal subpopulation with a distinct health status with respect to a specific disease for which required surveillance, control and biosecurity

measures have been applied for the purpose of international trade". For the purposes of the Code 'zoning' and 'regionalisation' have the same meaning.

A free zone is defined as "a zone in which the absence of the disease under consideration has been demonstrated by the requirements specified in the Code for free status being met. Within the zone and its borders, appropriate official veterinary control is effectively applied for animals and animal products, and their transportation".

An infected zone is simply defined as a zone in which the absence of the disease under consideration has not been demonstrated by the requirements specified in the Code being met.

The buffer zone means a zone established to protect the health status of animals in a free country or free zone from those in a country or zone of a different animal health status, using measures based on the epidemiology of the disease under consideration to prevent spread of the causative pathogenic agent into a free country or free zone. These measures may include, but are not limited to, vaccination, movement control and an intensified degree of disease surveillance.

Part 2 of the Code dealing with FMD specifies the conditions under which FMD freedom can be obtained and maintained. The chapter also details the procedures for regaining freedom in the event of outbreaks in the free country or free zone. Equally important, the standards recommended by the OIE for movements within and between countries or zones of differing disease status are detailed.

The movements of live animals are prohibited and movements of meat are restricted out of an infected zone. In the case of the buffer zone, meat may be traded provided that it is traceable to an origin outside the infected zone. Live animals cannot move out of this zone to the free zone but should be able to move into the infected zone for slaughter. Within the free zone normal movements are allowed of both live animals and meat but with certification to assure importing countries that they do originate in the free zone. This was the situation with Northern Ireland during the whole of the period in 2007.

On this basis trade would be subject to the following principle. Controlled movements would be permitted from free to low to high risk areas but not in reverse. Detailed rules for the trade between the different zones are available in the OIE Terrestrial Code. In some circumstances such as animals moving direct for slaughter, the animals would be allowed to go from the high risk areas into lower risk areas but under very strict controls which would reduce any risk of infection being spread.

THE ROLE OF THE EUROPEAN UNION

Decision making in the European Union

European Union (EU) law has direct effect on the Member States, and overrides national law in many areas. The European Parliament, the European Commission (the Commission) and the Council of Ministers are empowered by the Treaties to legislate on all matters within the EU's competence. Secondary legislation includes Regulations, Directives, Decisions, Recommendations and Opinions. Of specific relevance to FMD are the control Directive and the Commission Decisions produced at the time of the outbreak.

A **Directive** requires Member States to achieve a particular outcome without dictating the means of achieving that result. Normally they are transferred within a certain deadline into national laws by the national parliaments. Directives can be distinguished from EU Regulations which are self-executing and do not require any implementing measures. The reasoning behind the Directives is that it allows Member States to take account of special domestic circumstances when implementing Community rules. In principle they are free to determine the form and methods used to transpose their Community obligations into domestic law. If a Member State fails to pass the required national legislation, or if the national legislation does not adequately comply with the requirements of the Directive, the Commission may initiate legal action against the Member State in the European Court of Justice.

Council Directive 2003/85/EC of 29th September 2003 on Community measures for the control of FMD, repealing Directive 85/511/EEC and Decisions 89/531/EEC and 91/665/EEC and amending Directive 92/46/EEC, is the basis for the control measures used in an FMD outbreak. This Directive was produced following the 2001 outbreak and many of the measures are linked to the lessons learned from that outbreak. However the controls are directed to an outbreak such as the FMD 2001 outbreak and are not always appropriate for the smaller contained outbreak which occurred in 2007.

Whilst a Directive such as this binds the Member State to achieve certain targets the national authorities have choice of form and method of implementation. This choice in the case of the UK is exercised by the UK Department or Devolved Administration concerned which in the case of FMD are Defra and the devolved authorities in Northern Ireland, Scotland and Wales. The consequence is that provided the Scottish Government meets the requirements of the Directive they may implement the provisions in a different way to other UK administrations as animal health policy has been devolved to Scotland.

A **Decision** is EU law which is not of general application, but of individual application, i.e. it only applies to the particular addressee (persons, companies, Member States) of the Decision. It is distinguished from a Directive by being binding in its entirety. In the case of the FMD outbreak of 2007 the Commission Decisions

were addressed to all Member States and laid down the rules under which all should operate.

The Standing Committee on the Food Chain and Animal Health (SCoFAH) has representatives from the 27 Member States and the Commission. In the case of an FMD outbreak the representatives on the committee will be officials from the veterinary services of the Member States or from their country's permanent representations in Brussels.

The committee is chaired by a representative of the Commission Directorate General for Health and Consumer Protection (DG SANCO). In the event of the FMD outbreak in GB the Commission would propose a Decision and the members of the committee would discuss and vote on the Decision. In general the Commission will attempt to obtain a unanimous agreement to the proposal. However Decisions can be taken by qualified majority voting. The UK has 29 votes, the same as France, Germany and Italy. A total of 255 votes out of a possible 345 votes are needed to pass a Decision.

From this it can be seen that the UK acting alone is unable to block a Decision and to achieve its aims the UK must provide good scientific arguments and appropriate evidence. Lobbying other Member States and the Commission is important to obtain the best outcome for the UK. In general when dealing with FMD outbreaks the Member States need time to digest the information provided by the UK and will err on the side of caution. Equally the Commission will not be swayed by the economic arguments against a perceived uncertainty in the epidemiology.

EU legislation on FMD regionalisation

The basis of the EU animal health policy is to prevent the introduction into, or spread within, the EU of pathogens. To achieve this there is harmonised legislation on imports and livestock identification and movements along with harmonised control measures for specified diseases such as FMD. Wherever possible the EU bases the disease legislation on the provisions laid down in the OIE Terrestrial Code. As the principles of regionalisation have been agreed at OIE level they are embedded into the overall EU strategy for disease control.

It has to be recognised that the role and responsibility of the Commission in the event of an outbreak in a Member State is twofold. Firstly to protect Member States and third countries from a disease by imposing a risk based and proportionate ban on exports from the affected Member State in order to protect the others. Secondly the European Commission has an interest in the efficient eradication of the disease as this will both enhance the protection of the other Member States and also permit a resumption of trade in animals and their products.

A specific definition of regionalisation is contained in Directive 2003/85/ EC Article 2 q to s inclusive. "Regionalisation means the delimitation of a restricted zone in which restrictions are applied on the movements of or trade in certain animals or animal products as provided for in Article 45 in order to prevent the spread of FMD into the

free zone where no restrictions are applied in accordance with this Directive". A region "means an area as defined in Article 2(2) (p) of Directive 64/432/EEC; whilst a sub region means an area specified in the Annex to Decision 2000/807/EC".

Under article 45 of Directive 2003/85/ EC Member States are required to regionalise into one or more restricted and free zones when FMD virus appears to be spreading despite the measures taken in accordance with this Directive and the epizootic becomes extensive and in any case when emergency vaccination is implemented. The Commission can review and amend the regionalisation introduced by the Member States as can SCoFCAH. The restricted zone should be delimited on the basis of administrative boundaries or geographical barriers.

The important component of this Directive is that the restricted zone may be reduced in the light of the results of the epidemiological inquiry to an area of the size not less than a sub-region, and where necessary the surrounding sub-regions. In the event of the FMD virus spreading, the restricted zone could be enlarged by including additional regions or sub-regions. It is this which is of importance in freeing up the country.

The European Communities are convinced that regionalisation is the best approach to maintain adequate disease control with minimum restrictions to trade. Regionalisation and a high level of protection are compatible and can be implemented in the single market.

APPENDIX 6: THE CENTRE OF EXCELLENCE FOR EPIDEMIOLOGY, POPULATION HEALTH AND INFECTIOUS DISEASE CONTROL (EPIC)

6.1 Organisations involved

Organisation Name	
University of Glasgow	GUVS
Scottish Agricultural college	SAC
Moredun Research Institute	MRI
University of Edinburgh-Centre for Infectious diseases	CID
Macaulay Land Use Research Institute	MLURI
Biomathematics & Statistics Scotland	BioSS

6.2 Modules

Module No	Module subject	Partners
1	Enhanced field surveillance: developing improved strategies with improved test interpretation linked to risk assessment.	GUVS & SAC
2	Molecular Epidemiology.	MRI
3	Host demography and the spread of infectious diseases.	CID
4	Environmental change and drivers for the risk and spread of disease	MLURI
5	Advanced methods of statistical inference in animal epidemiology	BioSS

APPENDIX 7: GLOSSARY

Acronym	Term
ADPG	Animal Disease Policy Group
AHDO	Animal Health Divisional Office
AHW	Animal Health and Welfare
AHWD	Animal Health and Welfare Policy Division
AMLS	Animal Movements Licensing Scheme
BSE	Bovine Spongiform Encephalopathy
CAO	Chief Agricultural Officer
CCC	Civil Contingencies Committee
CCC(O)	Civil Contingencies Committee for Officials
CCU	Civil Contingencies Unit Scotland
COBR	Cabinet Office Briefing Room
“The Code”	The Terrestrial Animal Health Code
‘The Commission’	The European Commission
CONOPS	Central Government Arrangements for Responding to an Emergency: Concept of Operations
COSLA	Convention of Scottish Local Authorities
CSC - SEER	Scottish Government Cabinet Sub-Committee on Civil Contingencies
CTS	Cattle Tracing System
CVO	Chief Veterinary Officer
C & D	Cleansing and Disinfection
DARDNI	Department for Agriculture and Rural Development in Northern Ireland
Defra	Department for the Environment, Food and Rural Affairs
Defra SAC	Defra Science Advisory Council
DfT	Department for Transport (UK Government Department)
DG	Directorate General
DG SANCO	Health and Consumer Protection Directorate General (EU)
DSG	Disease Strategy Group
DVM	Divisional Veterinary Manager
EPIC	The Centre of Excellence for Epidemiology, Population Health and Infectious Disease Control
EU	European Union
FMD	Foot and Mouth Disease
GB	Great Britain
LA	Local Authority
MAFF	Ministry of Agriculture, Fisheries and Food (former UK Government Department, replaced in 2001)
MHS	Meat Hygiene Service
NDCC	National Disease Control Centre
NEG	National Expert Group
NEEG	National Emergency Epidemiology Group
NFU Scotland	National Farmers Union Scotland

OIE	The World Organisation for Animal Health
'The Plan'	The Scottish FMD Contingency Plan
QMS	Quality Meat Scotland
RPID	Rural Payments and Inspections Directorate
SAC	Scottish Agricultural College
SAMS	Scottish Animal Movement System
SCoFAH	Standing Committee on Food Chain and Animal Health (EU)
SLA	Service Level Agreement
SVS	State Veterinary Service (now Animal Health)
TB	Tuberculosis
TSE	Transmissible Spongiform Encephalopathy
UK	United Kingdom
UKRep	UK Permanent Representation to the EU
WTO	World Trade Organisation

APPENDIX 8: REFERENCES AND COMMISSIONED RESEARCH

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<http://www.scotland.gov.uk/Publications/2005/02/20639/51785>

Commissioned Research

All work commissioned as part of the FMD Review (Scotland) 2007 is published on the Scottish Government website in tandem with the Review and can be accessed at the following link:

<http://www.scotland.gov.uk/Publications/Recent>

The Structure of the Scottish Livestock Industry
SAC, 2008

Report on Seasonality of Movements and Spatial Distribution of Sheep, Cattle and Pigs in Scotland
EPIC, 2008

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Pareto Consulting, 2008

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Analytic Red, 2008



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