DIPLOMA IN STATE VETERINARY MEDICINE

Please view the general documents to obtain copies of:

The stages of enrolment information.

B1: Guidance Notes for candidates on general requirements.
B3: General Guidance Notes on preparation for a Dissertation.
E1: Application form E1 - for enrolment and initial approval of experience.
H: Role of Advisers to Certificate Candidates.

The following papers are attached:

B2: Specific requirements for the Diplomas.
C: Syllabus and Commentary for the Diplomas.
D: Reading List
E: Application forms E1A, E1B, E2
   E1A - for specific details of practice/centre
   E1B - for proposed subject of the dissertation or published papers
   E2 - for final approval of experience and for permission to submit an entry to the examination
F: List of Advisers.

April 2007
THE ROYAL COLLEGE OF VETERINARY SURGEONS
SPECIALISATION AND FURTHER EDUCATION

THE DIPLOMA IN STATE VETERINARY MEDICINE

SPECIFIC GUIDANCE NOTES FOR CANDIDATES
[These notes must be read in conjunction with the B1 General Guidance Notes to Candidates]

MEMBERSHIP OF THE ROYAL COLLEGE OF VETERINARY SURGEONS

1. It is a requirement of the Veterinary Public Health (Meat Hygiene) and State Veterinary Medicine Board that ALL Candidates entering for the Diploma are Members of the Royal College of Veterinary Surgeons (MsRCVS).

SPECIFIC EXPERIENCE

2. Please note that candidates are required to submit their original applications plus six photocopies of good quality—i.e. a total of 7 collated sets.

Approved Centre Route

3. There is no approved centre route for the Diploma in State Veterinary Medicine.

Approved Practice Route

4. Candidates following the approved practice route will not be permitted to enter for the examination until they have been Members of the College or held an approved veterinary qualification for at least five years and are required to offer experience in the subject over either (a) at least five years including 200 days spent at an approved centre, OR (b) at least six years if gaining experience solely at an approved practice.

5. The Board has discretion to increase the requirements for experience for any candidate above the minimum specified if it is considered to benefit the candidate.

6. There is no separate application form other than the candidate applications forms included with this Information Pack. Practices are approved for each individual candidate.

7. The Board has discretion to increase the requirements for experience for any candidate above the minimum specified if it is considered to benefit the candidate.

8. Experience accepted for the Certificate will count towards the experience required for the Diploma, at the discretion of the Board, whether the candidate is at an approved centre or an approved practice.
**FINAL APPROVAL OF EXPERIENCE**

9. Either when applying for initial approval of experience or final approval of experience applicants must submit application for E1B for approval of the proposed subject for submitted work.

**THE EXAMINATION**

10. The examination consists of three Sections:

   (a) A Dissertation OR 2 Published Papers
   (b) TWO x 3 hour written papers, and
   (c) a clinical, oral and practical examination.

**SUBMITTED WORK FOR EXAMINATION**

11. For section (a) of the examination candidates must submit either a dissertation or two published papers.

**Dissertation**

12. Application on Form E1B must be made for approval of the proposed subject of the dissertation (see paragraph 9). No exemption is permitted.

13. It is obviously of advantage to the candidate to have as much time as possible to prepare their Dissertation, after having obtained approval of the title. Candidates must therefore plan their preparation carefully.

14. It is strongly recommended that a candidate should seek advice from their adviser before applying to the Board for approval.

15. Candidates may not use all or part of the work prepared and submitted for another postgraduate qualification including Diploma of Fellowship, as all or part of their dissertation for an RCVS Diploma.

16. The dissertation should be based on original material and data and may include contributions to the development of policy whether or not it is implemented by Government.

17. **Three copies of the dissertation are required.** Dissertations need not be bound but should be submitted in a cover in a secure manner. Candidates should loosely insert their completed declaration (a template of which can be found in the B1 Guidance Notes) at the front of the dissertation.

18. The dissertation must be of a high standard, with good literacy and scientific presentation. Candidates may submit laser colour photocopies of photographs in their dissertation, provided that they are of a sufficiently high quality.
19. Candidates are asked to submit an electronic version of their submitted work together with the hard copies. This will be retained at RCVS unless requested by the examiners for purposes such as checking the word count. The electronic version should be Microsoft Office 2000 or XP compatible and should be submitted on CD. Please ensure that the disks are easily identifiable by placing them in an envelope with your name, and ‘Electronic version of submitted work for Diploma in State Veterinary Medicine marked clearly on the front.

Word Count

20. A word count must be shown on the front cover of the Dissertation. The dissertation should be **between 5,000 and 10,000 words** in length (excluding references and appendices) and should **not exceed 10,000 words**.

Two Published Papers

21. Candidates must apply for approval, on Form E1B, of the proposed subject of the Published Papers (see paragraph 9). No exemption is permitted.

22. **Two published papers** are required. Each published paper should be based on original work and the topic must be related to the syllabus. A review paper would not be acceptable.

23. Candidates are advised that work which has already been submitted for another postgraduate qualification cannot be used towards an RCVS Diploma, including the Diploma of Fellowship by Thesis. However, publications in peer reviewed journals **arising from** any postgraduate degree, for example, a PhD or Masters thesis, could be used towards a subsequent Diploma if publications of this type form part of the Diploma requirements and are appropriate to the discipline — this decision to be made by the relevant Subject Board.

24. **Three copies of the papers are required.** The papers should have a common or linked theme and be presented bound in a secure manner, with both introductory and concluding chapters. The candidate may elect to include additional data related to but not included in the papers. Only papers published in a refereed journal by the time of submission may be used. Papers, which have been accepted for publication, will also be acceptable, but a letter from the Editor of the refereed journal, confirming final acceptance, will be required as evidence of acceptance. Short communications are not acceptable.

25. The following statement should be included at the front of each copy of the published papers.

> Published papers submitted in part fulfilment of the requirements for the RCVS Diploma in.............................................................by (name of candidate).

> Acknowledgements are due to: name.......................for (description of assistance given).
Grading Scheme

26. The submitted work will be graded “Good Pass”, “Pass”, or “Fail”.

- **Good Pass**—(60% or over)—the work will be lodged in the RCVS Library as a suitable example for future candidates.

- **Pass (defined as 50%)**—the work is adequate to enable the candidate to proceed to the remaining sections of the examination, but the submitted work may need to be revised by the date of the clinical, oral and practical for lodging in the Library if the candidate is successful in the examination as a whole.

- **Fail (below 50%)**—the work is not adequate to enable a candidate to proceed to the remaining sections of the examination for the year in question.

Written Examination

27. Candidates are warned that answers should be given specifically and that illegible handwriting may result in examiners being unable to award marks for information which candidates intended to convey. In addition, the Examiners will take into consideration spelling and whether or not the question has been answered in the form requested.

Format

28. This Section consists of 2 x three-hour written papers. Questions will be set from all sections of the syllabus.

**PAPER 1**

**Section A:** Candidates will be required to answer nine short answer compulsory questions.

**Section B:** Candidates will be required to answer:

i) One compulsory essay question set from section 5 of the syllabus with a choice within the question; AND

ii) One essay question from a choice of three.

**PAPER 2**

**Section A:** Candidates will be required to answer nine short answer compulsory questions.

**Section B:** Candidates will be required to answer two essay questions from a choice of four.
Marks Scheme

Paper I will be marked out of 50 marks
Paper II will be marked out of 50 marks
Total Mark for this Section (b) = 100 marks

CLINICAL, ORAL AND PRACTICAL EXAMINATION

Format

29. The oral examination will commence with a discussion aimed at clarifying any points from the written examination or submitted work which the examiners wish to explore further in order to ascertain the understanding of the candidate.

30. The candidate will be given every opportunity to correct factual errors made in the submitted work or the written exam.

31. There will then follow a period of open questioning from each of the examiners. The questions will be designed to explore the candidate’s practical problem solving skills and will be based upon common situations, which an OVS may be expected to deal with in the course of his/her duties. Practical props such as microbiological reports, thermographs, and audit reports will be used.

32. The candidate will then be taken for a walk through part of a livestock premises and asked to describe and comment.

Marks Scheme

33. Candidates will be given an overall mark for the clinical/oral/practical out of 100.

TOTAL Mark for this Section (c) = 100 marks

ADVISERS

34. Candidates should consult the list of contact names found in the information pack with a view to then being recommended an adviser. Alternatively, candidates should consult the RCVS Register of Members for a suitably willing and qualified individual (someone holding a Certificate/ Diploma or equivalent) who is familiar with the RCVS Certificate or Diploma examination system and clinically active. An adviser should be found prior to enrolment.

35. It is stressed that candidates should keep in touch with their advisers throughout their preparations for the examination. Candidates who seek guidance from advisers benefit significantly in their preparation for and performance in the examination. It is the responsibility of the candidate to take the initiative in this regard.
**ATTENDANCE AT SHORT COURSES**

36. The Board wishes to emphasise to candidates the benefits gained in attending appropriate courses and any other events, which are relevant to state veterinary medicine and would be advantageous to the candidate’s studies.

**ABBREVIATION FOR QUALIFICATION**

37. Successful candidates for the Diploma in State Veterinary Medicine are permitted to use the abbreviation “DSVM” after their names in the RCVS Register of Members, and on practice plates and stationery, etc.

Originated December 1996
Revised Feb 97, Sept97, Nov 97, Jan 02, Jan 03
Commentary

The Syllabus is presented as a guide to the candidate, which sets out the areas of study on which the Diploma examinations will be based. Although detailed it should not be considered exhaustive. Diploma candidates are advised to read the Certificate syllabus in conjunction with the Diploma syllabus and will be expected to demonstrate that they have the breadth and depth of knowledge over and above the Certificate syllabus to meet the demands of their professional role.

At the Diploma level candidates will be expected to have a thorough working knowledge of the principles and practice of State Veterinary Medicine; the control and prevention of notifiable disease, the measures taken by the UK State Veterinary Services to protect public health and the welfare of farm animals, on farms, at markets, in transit and, as far as possible, during export. Candidates will also be expected to have a thorough working knowledge of the other areas covered in sections 2(d), 3, 4, 5, 6, 7(a), 7(c), 8, 9, 10, 11(a), 13(b), and 14.

In addition, candidates will be expected to have no more than a general understanding of sections 1, 2(a)–(c), 7(b), 11(b), 12, and 13(a).

Candidates are also expected to have a general understanding of the importance of State Veterinary Medicine in an international context and in the facilitation of trade in animals and animal products and to have a thorough working knowledge of current legislation in these areas.

Syllabus

1. Role and responsibilities of a Government Veterinary Service.

   (a) The organisation of the Government Veterinary Service in the UK region in which the candidate works. The way in which animal health, animal welfare and public protection policies are formulated. How policies are implemented through the process of consultation and legislation. How policies are funded through public expenditure and the broad mechanisms of public expenditure control. The concept of value for money for the taxpayer in the implementation of policies.

   (b) The duties and responsibilities of a Civil Servant or agent of the Minister. The need to implement policies impartially, fairly, and without bias. The ethical responsibilities of a Government veterinarian arising from the duties of a veterinary surgeon set out in the guide to professional conduct issued by the Royal College of Veterinary Surgeons.
2. **Machinery of Government**

(a) **Europe**

(b) **Central Government**
The structure, composition, and function of Parliament; the House of Lords; the House of Commons and the legislative process. The role of standing committees and select committees. The executive work of central Government, the Civil Service, and other executive bodies. Relationships between the Agriculture Departments and other Government Departments especially the Food Standards Agency, the Department of Health and devolved administrations. The role of cross-Government committees e.g. United Kingdom Zoonoses Group and the Surveillance Group on Diseases and Infections in Animal. The role of scientific advisory committees. The Animal Health and Welfare Strategy and the Veterinary Surveillance Strategy.

(c) **Local Government**
The structure and functions of local Government and its role in the implementation of animal health, animal welfare, and public protection legislation. The broad legislative framework for animal health, animal welfare, and public protection legislation. The organisation of Public Health Authorities.

(d) **Legislation**
The candidate should have a general understanding of primary and subordinate legislation in the fields of animal health, animal welfare, and public protection.

3. **Non-statutory bodies**

The structure, function, aims, objectives and principal publications of the World Health Organisation (WHO), Food and Agriculture Organisation (FAO) and Office International des Epizooties (OIE) in animal health, animal welfare and public protection, The Codex Alimentarius (FAQ/WHO Food Standards).

The principal animal welfare groups, representative organisations for example, National Farmers Union (NFU) and other principal pressure groups with an understanding of how they exert pressure on Government by direct consultation with Ministers and Civil Servants, lobbying Parliament and general publicity campaigns.
4. **Agriculture and Food Industry.**

The importance of agriculture to the National economy, an overview of the Common Agricultural Policy with respect to livestock, the principle systems of animal husbandry for the major farm livestock species.

The importance of export trade to the National economy.

5. **Principles of statutory disease control**

(a) The rationale behind the statutory control of certain diseases (cf the AHWS—see section 2b), including:
   i) The need for State involvement to control these diseases.
   ii) The risks these diseases pose for public health, international trade and animal health.
   iii) The assurances required by customer countries.
   iv) The maintenance of a trained workforce for epizootic emergencies.

(b) The necessary elements of a statutory disease control programme including:
   i) Understanding the epidemiology of the disease and applying this knowledge to any control measures.
   ii) Formulation of a control policy e.g. preventing entry of the disease, evaluating eradication/slaughter—out against control/vaccination, procedure for dealing with infected animals, herds or areas etc.
   iii) Establishing a cost—beneficial surveillance programme using optimum diagnostic techniques.
   iv) Providing an adequate administrative framework. Promulgating the necessary legislation.

Candidates are expected to apply these principles to each of the notifiable diseases and to be able to argue the merits of including them under legislative control.

6. **Notifiable diseases of animals**

UK notifiable and reportable diseases; their distribution, pathogenesis, epidemiology and diagnosis of the notifiable diseases.

UK/EU legislation relating to notifiable diseases.

Existing control programmes for enzootic, and preventive measures for epizootic, notifiable diseases, and their strengths and shortcomings.

Economic and political implications of the diseases, their control and prevention.
7. Veterinary public health

(a) Zoonoses
   i) Diagnosis and control of zoonotic diseases; notifiable zoonoses. The Zoonoses Directive and Regulation The Zoonoses Orders (in the UK) and a thorough working knowledge of the epidemiology, pathogenesis and control of those zoonotic organisms controlled under the Zoonoses Orders.
   ii) Sampling techniques for on farm sampling of livestock, poultry and their environment for salmonellosis.
   iii) Controls in force regarding salmonella infections in poultry, feeding stuffs including raw materials, rendering plants and feed mills.

(b) Meat hygiene
   i) EU and UK legislation (including the 2007 EU hygiene package) relating to fresh meat, poultry, products, preparations and game.
   ii) Structure and role of the Meat Inspection Services in the UK.
   iii) Differences in legislation between countries of the UK.
   iv) Role of the Official Veterinarian within a meat plant.
   v) Role of auxiliaries and Plant Inspection Assistants within a meat inspection team.
   vi) Principles of humane slaughter.
   vii) Ante- and post-mortem inspection procedures in the food species.
   viii) Principles of hygienic dressing and operation.
   ix) Auditing of hygiene through the application of Hazard and Critical Control Point (HACCP) principles.
   x) Principles of the certification of meat.

(c) Food safety and incident control
   ii) Enforcement of “own checks” as required by the meat products and preparations directives.
   iii) Food complaints procedures agreed by local authority representative organisations.

8. Veterinary Medicines

(a) Medicines
   i) Role of the EU and the European Medicines Agency in veterinary medicine licensing & control
   ii) Role of Veterinary Medicines Directorate (VMD) in UK
   iii) Role of the Medicines Commission
   iv) Procedures for the approval of veterinary medicines
   v) Importation procedures
   vi) Packaging & labelling requirements. Adverse reaction reporting
   vii) Requirements regarding possession, distribution, supply, & records; the codes of practice for prescribing and dispensing medicines.
   viii) Inspection of veterinary practitioners’ dispensing records by State Veterinary Service (SVS)
   ix) Legislation
(b) **Residues**

i) Role of the EU and the defining of the *maximum residue limits* (MRLs)

ii) Roles of VMD, Meat Hygiene Service (MHS), & SVS in national surveillance residues monitoring

iii) Sampling procedures

iv) Measures for the prevention of illegal use of hormones and unlicensed substances and authorised veterinary medicines above the MRL

v) Legislation

9. **Import and Export Control of Animals and Animal Products**

(a) Rationale for import/export controls. The role of OIE in imports and exports and the International Animal Health Code.

(b) System of movement controls of animals and animal products into & within the EU; export of live animals to Third countries.

(c) Legislation—EU & UK.

(d) Export procedures within Animal Health Offices for live animals, semen, and embryos—issue and type of export certificates, registration of export certificates, Animal Movement computerised network (ANIMO) messages, journey plan, notes for guidance, official disease clearance, certification checks & system auditing, supervised loadings, Convention on International Trade in Endangered Species (CITES) awareness, registration of holdings & dealers, multiple consignments, approval of institutes/centres under the “Balai” Directive, portal surveillance.

(e) Responsibility of Local Veterinary Inspectors (LVIs)—12 principles of certification—completion of certificates and schedules, validity of export certificates, re-certification of delayed consignments, security of certificates, support documents, owner’s declarations.

(f) Export procedures within Animal Health Offices for meat and other animal products—intra—community trade, additional certification requirements, exports to Third countries, issue of certificates in regular use, internal movement, disclaimers, security in transit.

(g) Import controls for live animals and animal products — post importation procedures for intra—community trade, legislation, ANIMO risk assessment, operation and control of Border Inspection Posts, illegal imports and rejected consignments.

10. **General Disease Control Measures**

(a) Principles & legislation of general disease control—animal identification and records systems in use in the UK, movement control, registration of herds & holdings, breeding & movement records, movement controls for pigs—cattle passports—registration of dealers waste food controls on farm, at ports, & airports — controls on disposal and handling of animal by—products — market controls — transit controls.

(b) Principles of cleansing and disinfection — legislation — approval of disinfectants.
11. **Jurisprudence**

(a) The importance of gathering and storing of evidence e.g. video, photographic, and samples.
   The preparation of a witness statement.
   The role of the witness of fact and the role of the expert witness.
   The role of the relevant enforcement authorities for the UK eg. Police, Local Authority, Defra/SEERAD/WAG/DARD.

(b) Police and Criminal Evidence Act as it applies to the giving of evidence and equivalent legislation in NI and Scotland.
   Court procedures in all Courts.

12. **Artificial breeding**

(a) Historical rationale for control of artificial breeding.
(b) Deregulated approach to control of artificial breeding.
(c) Legislation and control in genetic materials intended for EU trade (licensing and inspection procedures). (Refer also to unit on imports and exports.)
(d) Legislation and control of domestic (within UK) trade in genetic materials (licensing and inspection procedures).
(e) Variation between the domestic species in the control of the following aspects of artificial breeding:
(f) **Semen:** collection, processing, storage, distribution, transport, sale, provision of commercial insemination service, ‘DIY’ (owner) insemination.
(g) **Ova / embryos:** Collection, production, processing, storage, distribution, transport, sale, transportation. Embryo Transfer Code of Practice and Regulations.

13. **Voluntary Herd/Flock Health Programmes**

(a) Rationale for voluntary herd/flock health programmes and assurance schemes — principles upon which they operate — recognition within the EU — health scheme programmes currently in operation in UK.

(b) The candidate will be required to have a thorough working knowledge of the above programmes where there is direct State Veterinary Service involvement.

14. **Animal Welfare**

(a) Principles of animal welfare including the codes of recommendation for the welfare of cattle, sheep, goats, pigs, domestic fowls and turkeys.

(b) The rationale for State involvement in the protection of animals. EU and UK legislation.

(c) Animal welfare problems on farms, at markets, in transit and at abattoirs; investigation, reporting, advising animal owners and / or preparation for prosecution.

(d) Roles of private and state veterinary surgeons, police, voluntary animal welfare organisations and others in the implementation and enforcement of animal welfare legislation.
(e) Role of the Farm Animal Welfare Council.
(f) Licensing and inspection procedures for animal boarding and breeding establishments, riding establishments, pet shops and zoos.
(g) Dangerous Wild Animals Act.

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READING LIST

Candidates should note that the reading list for the Diploma in State Veterinary Medicine was frozen in 2002 and will eventually be withdrawn.

Candidates are expected to research the literature for themselves and are recommended to make use of the RCVS Library and Information Service for this purpose (http://www.rcvslibrary.org.uk/, e-mail—library@rcvs.org.uk or telephone 020 7222 2021). Candidates should also seek advice on suitable reading matter from their advisers.

The reading list below has been compiled to aid candidates in their preparation for the examinations and to attempt to delineate the depth of knowledge required. The references marked with a *C are considered essential reading for the Certificate examination and references marked with *D are considered essential reading for the diploma examination.

ROLE AND RESPONSIBILITIES OF A GOVERNMENT VETERINARY SERVICE

*C DANI The Veterinary Service in Northern Ireland 1993, ISBN 1 85527 106 0
{Including Inserts}

*C DANI Veterinary Service Code of Practice


*C MAFF State Veterinary Service: Service Standards for the Veterinary Field & Investigation Services. Including the Code of Practice on Enforcement 1994, PB 1631

DARDNI Veterinary Service Website: http://www.dardni.gov.uk/

DEFRA Website: http://www.defra.gov.uk/

MACHINERY OF GOVERNMENT


Northern Ireland Office Website: www.nio.gov.uk

The Northern Ireland Act 1998 (resource pack) Personnel Development Branch, Department of Agriculture for Northern Ireland, Room 1007, Dundonald House, Belfast BT4 35B.

Future Structures (resource pack) Personnel Development Branch, Department of Agriculture for Northern Ireland, Room 1007, Dundonald House, Belfast BT4 35B.


NON-STATUTORY BODIES


Great Britain Pressure Groups 1994, ISBN 01 1701849X, HMSO


*C Office International des Epizooties OIE: Brief Overview 1996

AGRICULTURE AND FOOD INDUSTRY


PRINCIPLES OF STATUTORY DISEASE CONTROL

NOTIFIABLE DISEASES OF ANIMALS

Articles found in the State Veterinary Journal may be useful for this section.


State Veterinary Journal Special Issue, Notifiable Diseases (Volume 5, No. 3), October 1995


VETERINARY PUBLIC HEALTH

Zoonoses


Advisory Committee on Dangerous Pathogens, Microbiological Risk Assessment: An Interim Report ISBN 113211629 HMSO

*D Advisory Committee on the Microbiological Safety of Food Interim, Report on Campylobacter 1993, ISBN 11 3216629 HMS0


*C Palmer S R, Soulsby L, Simpson, Zoonoses


EC, Trends and Sources of Zoonotic Agents in Animals, Feeding Stuffs, Food and Man in the European Union in 1995- an Evaluation of the trend reports of the year 1995 by the member States to the European Commission ace. to ART 5 of Directive 92/1 17/EEC as amended by 97/22, obtainable from Tolworth.


Agriculture Select Committee Report on Food Safety 1998

Parliamentary Office of Science and Technology Microbiological Food Safety. Trends and Their Implications October 1997

*C MAFF A Guide to the Poultry Breeding in Flocks and Hatcheries Order 1993 1993, PB 1435, MAFF

*D MAFF Code of Practice for the Control of Salmonella During the Storage, Handling and Transport of Raw Materials Intended for Incorporation into, or Direct use as. Animal Feeding stuffs 1995, PB 2202, MAFF

*D MAFF Code of Practice For the Control of Salmonella for the UK Fish Meal Industry. 1995, PB2203, MAFF
MAFF Code of Practice For the Control of Salmonella in the Animal By-Products Rendering Industry 1995, PB2199, MAFF

MAFF Code of Practice For the Control of Salmonella in the Production of Final Feed for Livestock in Premises Producing Less than 10,000 Tonnes Per Annum 1995, PB2210, MAFF

MAFF Code of Practice For the Control of Salmonella in the Production of Final Feed for Livestock in Premises Producing More than 10,000 Tonnes Per Annum 1995, PB2200, MAFF

MAFF Code of Practice for the Prevention and Control of Salmonella in Breeding Flocks and Hatcheries 1994, PB 1564, MAFF

Code Of Practice for the Prevention and Control of Salmonella in Commercial Egg Laying Flocks 1995, PB2205, MAFF

Code of Practice for the Prevention of Rodent Infestations in Poultry Flocks 1996, PB2630, MAFF

MAFF Salmonella in Eggs: Response of the Government to the Progress Report from the House Of Commons Agriculture Committee 1990, ISBN 0101099320, HMSO Cm 993

MAFF Salmonella in Livestock Production 1995, obtainable from Salmonella Section, Epidemiology Department, CVL


Schwabe C W Veterinary Medicine and Human Health 1984, ISBN 0683075942, Williams and Wilkins


The Medical Impact of The Use of Antimicrobials in Food Animals Report of a WHO Meeting in Berlin Germany, 13-17 Oct 1997 {WHO/EMC/zoo/97.4}


The House of Lords Select Committee on Science and Technology, Sub Committee One Report:
MEAT HYGIENE


Microbial Antibiotic Resistance in Relation to Food Safety 1999, Advisory Committee on Microbiological Safety of Food Report

European Directives:

91/497/EEC {Fresh Meat}

92/45/EEC {Wild Game}

92/116/EEC {Poultry Meat}

92/5/EEC {Meat Products}

94/65/BC {Minced Meat and Meat Preparations}


HMSO The Fresh Meat {Hygiene and Inspection} Regulations 1995 Statutory Instrument 539

HMSO The Fresh Meat {Hygiene and Inspection} {Amendment} Regulation 1995 Statutory Instrument 3189

HMSO The Fresh Meat (Hygiene and Inspection) (Amendment) Regulations 1997
ISBN 011064881 1 5.1 No. 2074

HMSO The Meat Products (Hygiene) Regulations 1994 Statutory Instrument 3082


HMSO The Poultry Meat, Farmed Game Bird Meat and Rabbit Meat (Hygiene and Inspection) Regulations 1995 Statutory Instrument 540

HMSO The Wild Game (Hygiene and Inspection) Regulations 1995 Statutory Instrument 2148

HMSO Zoonoses Order, 1989


VETERINARY MEDICINES


RESIDUES

*D Commission of the European Communities’ Rules Governing Medicinal Products in the European Community: Volume VII- Establishment of Maximum Residue Levels


Veterinary Medicines Directorate Keep Meat Free of Unacceptable Residues of Veterinary Medicines 1992, MAFF


IMPORT AND EXPORT CONTROL OF ANIMALS AND ANIMAL PRODUCTS

Animals and Animal Products (Import And Export) Regulations 1998

European Directives:

64/432/EEC (as amended by 97/12)-Intra-Community Trade in Bovine Animals and Swine

88/407/EEC- Bovine Semen

89/556/EEC-Bovine Embryos

90/425/EEC-Vet Checks

90/426/EEC-Equidae

90/429/EEC-Porcine Semen

91/68/EEC-Intra-Community Trade in Ovine and Caprine Animals


96/93/BC- On Certification of Animals and Animal Products

97/78/BC: Council Directive of 18 December 1997 laying down the principles governing the organisation of veterinary checks on products entering the community from third countries


92/118/BC: Balai directive for products of animal origin not detailed in other directives
GENERAL DISEASE CONTROL MEASURES

Control of Dogs Order of 1992

D of A (Approved Disinfectants) Order 1978- as amended

D of A (Waste Food) Order 1973- as amended

Markets. Sales and Lairs Order of 1925- as amended

Processed Animal Protein Order 1989

Sheep and Goats (Records, Identification and Movement) Order 1996

The Bovine Animals (Records, Identification and Movement) Order 1995

The Pigs (Records, Identification and Movement) Order 1995

The Cattle Identification Regulations. 1998

JURISPRUDENCE


Criminal Procedure and Investigation Act 1996 Code of Practice [S.23(1)] 1997, RN/ISO


ARTIFICIAL BREEDING

88/407/BC Bovine Semen Trade Directive

90/429/BC Porcine Semen Trade Directive

ADAS, Embryo Transfer: Its Use and Techniques in Dairy Cattle 1988, PB 3146, MAEF


MAFF Veterinary Code of Practice for Embryo Transfer in Great Britain 1980, MAFF

Report of the Committee to Consider the Ethical Implication of Emerging Technologies in the Breeding of Farm Animals (The Banner Committee Report) ISBN 0112429653, RN/ISO


ANIMAL WELFARE

2nd Standing Committee on European Community Documents- European Community Documents Nos 7648/89 and 7654/89, Relating to Animal Welfare
Council Regulation (EC) No 2843/94 of 21 November 1994 Amending Regulations (EEC) No. 2328/91 and (EEC) No. 866/90 with a view to expediting the adjustment of production, processing and marketing structures as part of the reform of the common agricultural policy L302 25/11/94 p1

Department of Agriculture for Northern Ireland Animal Welfare Initiative 1990

Department of Agriculture for Northern Ireland Animal Welfare: New Codes for Fowls and Turkeys 1990

Department of Agriculture for Northern Ireland DAM Announces Further Consultation on Animal Transport Directive (91/628 as amended by 95/29) 1996

Department of Agriculture for Northern Ireland EC Directives on Animal Welfare 1992

Department of Agriculture for Northern Ireland New Animal Welfare Legislation 1995


EU Directive on Protection of Animals During Slaughter and Killing


Frienne, D E - Report on EC Inspections Regarding Welfare of Livestock


*D Farm Animal Welfare Council Advice To Ministers on the Handling and Transport of Poultry
1990 PB0125, MAFF


Great Britain House of Commons Agriculture Committee 1st Report {Vol. 2): Animal Welfare in Poultry, Pig and Veal Calf Production- Report together with the


*C MAFF Code of Recommendation For the Welfare of Cattle 1983, PB0074, MAFF
*C MAFF Code of Recommendation For the Welfare of Pi2s 1983, PB0075, MAFF
*C MAFF Code of Recommendation For the Welfare of Domestic Fowls 1987, PB0076, MAFF
*C MAFF Code of Recommendation For the Welfare of Rabbits 1987 PBO080 MAFF
*C MAFF Code of Recommendation For the Welfare of Turkeys 1987 PB0077, MAFF
*C MAFF Code of Recommendation For the Welfare of Ducks 1987, PB0079, MAFF
*C MAFF Code of Recommendation For the Welfare of Farmed Deer, PB0055, MAFF
*C MAFF Code of Recommendation For the Welfare of Goats 1989, PBOO81, MAFF
*C MAFF Code of Recommendation For the Welfare of Sheep 1989, PB0078, MAFF
*C MAFF Welfare of Horses, Ponies and Donkeys at Markets, Sales and Fairs 1990, PB0408
*C MAFF Welfare of Poultry at Slaughter 1991, PB0733, MAFF
*C MAFF Welfare of Red Meat Animals at Slaughter 1992, PB 1130, MAFF
*C MAFF Construction and Layout of Red Meat Slaughter Houses in Relation to Animal Welfare. PB1129, MAFF
*C MAFF Guidance On the Transport of Casualty Farm Animals , PB 1387 Reprint May 1998
Scottish Office Agriculture and Fisheries Department Draft Code of Practice: The Construction and Layout of Red Meat Slaughterhouses in Relation to Animal Welfare 1991


**NB** Readers may wish to refer to Complete Legislation relating to state veterinary service work. This can be found on the MAIDEN or local area network system. Access is via file manager then by selecting the “P-drive”, directory named “Legislat” and then the document entitled “legsltn.doc”

In addition, the world wide web has some sites that may also contain useful information, amongst these are; OIE, NTO, USDA, MAFNZ, AQIS, WAFFWEB and B.S.E INQUIRY

July98
Nov99
July05
THE ROYAL COLLEGE OF VETERINARY SURGEONS
SPECIALISATION AND FURTHER EDUCATION

DIPLOMA IN STATE VETERINARY MEDICINE

Details of the establishment in which experience is being gained to meet the requirements of the byelaws for the Diploma in State Veterinary Medicine:

(If more than one practice/establishment, please photocopy this form and complete in respect of each such establishment).

1. Place of employment and address __________________________________________
   __________________________________________
   __________________________________________

2. Date of commencement of employment _______________________________________
   and date of leaving if you are no longer employed at this address: ________________

3. Number of veterinary surgeons usually working in your place of employment
   __________________________________________

4. Proportion of establishment time spent on work related to the Diploma syllabus:
   __________________________________________ %

5. Proportion of candidate’s time spent on work related to the Diploma syllabus:
   __________________________________________ %

6. Referring to the syllabus tick the following subject areas in which you personally work:

   Notifiable diseases ☐ Veterinary Public Health ☐
   Meat Hygiene ☐ Veterinary Medicines ☐
   Import Controls ☐ Export certification ☐
   Artificial Breeding ☐ Animal Welfare ☐
   Voluntary Herd/Flock Health Programmes ☐
7. Names of senior colleagues in the practice/establishment who are prepared to assist you in your training.
(Note: This is in addition to your Adviser who may be outside your practice).

________________________
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________________________

PLEASE RETURN ORIGINAL FORM PLUS FOUR COPIES

Name ____________________________________________
(Block capitals)

Signature ___________________________ Date ____________

Note: No acknowledgement will be sent. If an acknowledgement is required please enclose a stamped addresses envelope.

Dec 1996
Feb 1996
Nov 1997
Feb 2000
Feb 2003
THE ROYAL COLLEGE OF VETERINARY SURGEONS
SPECIALISATION AND FURTHER EDUCATION

DIPLOMA IN STATE VETERINARY MEDICINE

Applications to be completed and returned to the RCVS, Belgravia House, 62–64 Horseferry Road, London SW1P 2AF by 1 November for consideration at the same time as enrolment or at a subsequent Board meeting.

1. NAME (block letters)

2. PROPOSED TITLE FOR DISSERTATION—giving a brief outline

Signed: ____________________________  Date: ____________________________

PLEASE RETURN ORIGINAL FORM SIX COPIES

OR
THE ROYAL COLLEGE OF VETERINARY SURGEONS
SPECIALISATION AND FURTHER EDUCATION
DIPLOMA IN STATE VETERINARY MEDICINE

Published Papers
Two published papers are required

Applications to be completed and returned to the RCVS, Belgravia House, 62–64 Horseferry Road, London SW1P 2AF by 1 November for consideration at the same time as enrolment or at a subsequent Board meeting.

1. NAME (block letters)

2. TITLES, DATES AND DETAILS OF PUBLICATIONS—giving a brief summary of content of each

Signed: ________________________________ Date: ________________________________

PLEASE RETURN ORIGINAL FORM PLUS SIX COPIES

December 1996, Sept97, Nov97
THE ROYAL COLLEGE OF VETERINARY SURGEONS

SPECIALISATION AND FURTHER EDUCATION

DIPLOMA IN STATE VETERINARY MEDICINE

Application for FINAL approval of experience and for permission to submit an entry to the next examination

This form must be completed and returned to the RCVS, Belgravia House, 62–64 Horseferry Road, London SW1P 2AF by 1 November prior to the year in which you wish to enter the examination. Your application should be accompanied by six photocopies of the completed form that are clear and of a good standard.

NO LATE APPLICATIONS WILL BE ACCEPTED

1. NAME in full (block letters)

   

2. DEGREES/DIPLOMAS/CERTIFICATES (in abbrev.form)

   

3. ADDRESS for all correspondence (block letters)

   

4. (a) TELEPHONE No(s) (for contact during day) (b) FAX No. (for contact during day)

   

5. DATE OF ENROLMENT (month/year)

If application for enrolment is being submitted concurrently with this application, please state ‘concurrent’.
6. QUALIFICATION FOR ENTRY
Are you a Member of the RCVS? YES/NO

If Yes, please state veterinary degree obtained, name of the awarding University, and date of graduation and/or date of obtaining Membership:

If No, please give details of the veterinary qualification, which you hold which entitles you to practise veterinary surgery in your home country (i.e. full title, recognised abbreviation, awarding University or other examining body, date obtained, length of the course) *(Please note that you must be a member of the RCVS when you sit the examination)*:

7. PERIODS OF EXPERIENCE BEING OFFERED to meet the requirements of the byelaws

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<th>Approved Veterinary Practice (name and address)</th>
<th>Period of Employment (from/to)</th>
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If there has been any change in the workload of the establishment, or in your personal work-load, since you applied for enrolment, please give details below:

8. ATTENDANCE AT RELEVANT SHORT COURSES

Candidates must attach a copy of their RCVS CPD Record Card for each year for which they are applying for final approval of experience. Details of all relevant short courses, conferences and meetings attended should be recorded on the Record Card. Candidates must comply with the annual recommended minimum hours of CPD otherwise final approval of experience and permission to sit the next examination will not be granted.
9. OTHER INVOLVEMENT IN RELATION TO STATE VETERINARY MEDICINE

List below any other relevant courses, conferences, congresses, meetings, symposia etc which are not detailed on your RCVS Record Card.

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10. PUBLICATIONS/ARTICLES/PAPERS/LECTURES

Give details below (including any involvement in the instruction of others):

11. OTHER POSTGRADUATE STUDIES

During the period of experience being offered, have you been or are you studying for any other postgraduate qualification? YES/NO

If yes, please give brief details:

12. I HEREBY APPLY FOR FINAL APPROVAL OF EXPERIENCE AND FOR PERMISSION TO SUBMIT AN ENTRY TO THE CERTIFICATE EXAMINATION IN STATE VETERINARY MEDICINE.

I certify that the period of experience being offered has not been/is not being offered to meet the requirements of the byelaws for any other RCVS Certificate or Diploma.
13. CONFIRMATION OF INTENT TO SIT THE NEXT EXAMINATION

If approval of experience is granted, I do/do not (delete as appropriate) intend to submit an entry to the next examination (closing date for receipt of entries is 1 March).

Name

Signature

Date

PLEASE RETURN ORIGINAL FORM PLUS SIX COPIES

THE FOLLOWING SECTION SHOULD BE COMPLETED BY YOUR ADVISER

I confirm that I am acting as this candidate’s Adviser.

Name

(block capitals)

Signature

Date

Note:

• Please ensure your application is accompanied by six photocopies of the completed form. The photocopies should be clear and of a good quality.

• No acknowledgement will be sent. If an acknowledgement is required please enclose a stamped addressed envelope.

• Candidates will be advised of the outcome of their application by early January and MUST NOT telephone or write for this information in the interim.
DIPLOMA IN STATE VETERINARY MEDICINE

Candidates should refer to the lists of Specialists and Diploma holders published in Section 3 of the RCVS Register of Members

April 2007
Candidates are required to answer **ALL NINE** questions on this paper, and only short answers are required.

Allow 10 minutes per question.

The use of simple labelled diagrams where appropriate, is encouraged.

*Illegible handwriting or failure to answer the question in the form requested may result in examiners being unable to award marks for information which candidates intended to convey.*

### SECTION A

1. **Discuss** the indications and contra-indications of vaccination of domestic birds in the current worldwide outbreak of avian influenza (H5N1 virus).

2. In reviewing its policy on the control of bovine tuberculosis, Government is considering a selective culling of badgers. **Discuss** briefly the **advantages and disadvantages** of embarking on a badger culling programme within Great Britain.

3. **Describe briefly** the roles of the Official Veterinarian.

4. How can the risk of introduction of infection into a country be minimized?

5. **Describe FIVE** reasons why there might be problems with control of endemic disease.

6. Explain the aims of a biosecurity programme and why it is important. Indicate how realistic it is to apply these principles to a farm.

7. Using Bovine Spongiform Encephalopathy (BSE) as an example, describe how a Veterinary Surveillance Scheme relating to food producing animals could be implemented.

P.T.O. for questions 8 - 9
8. Veterinary Surgeons play an important role in protecting animal health, animal welfare, public health and the environment. Indicate the national needs in respect of an outbreak of infectious disease in animals that has significant implications for public health, including a description of how to ensure readiness and coordination of the effort to protect the country against infectious disease.

9. The use of the “farm to fork approach” is increasingly being used in the production of safe food of animal origin. Discuss why food borne zoonoses could be better controlled (or eliminated) on the farm, rather than at slaughter, at post mortem meat inspection or during processing.

P.T.O. for Sections B(i) and B(ii)
Candidates are required to answer **ONE COMPULSORY** question in this **Section B(i)** set from Section 5 of the syllabus with a choice within the question.

Allow 45 minutes per question.

The use of simple labelled diagrams where appropriate, is encouraged.

*Illegible handwriting or failure to answer the question in the form requested may result in examiners being unable to award marks for information which candidates intended to convey.*

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**SECTION B (i)**

**COMPULSORY QUESTION**

10. A nation-wide animal health and welfare strategy should include herd/flock health programmes.

   **Discuss**

   a) the role of such programmes in achieving high animal health and welfare status at the farm and national levels.

   Or

   b) the direct control mechanisms for a major notifiable epizootic disease. Include in your answer the limitation(s), if any, to the effectiveness of your suggested measures.
SECTION B (ii)

11. H5N1 avian influenza virus continues in its spread to many countries of the world.

   Discuss the steps that the United Kingdom Government, poultry industry and veterinary profession should take to reduce the potential of any introduced virus gaining access to domestic poultry.

12. Discuss the management and operation (by a Government veterinary service) of large scale killing of livestock during emergencies, identifying the advantages, disadvantages and limitations of each approach given.

13. Describe briefly the rationale for import/export controls.

   What is the system of movement controls of animals and animal products into and within the European Union and export of live animals to Third Countries? Include in your answer the role of the World Organisation for Animal Health [Office of International des Epizooties (OIE)] in imports and exports and the International Animal Health Code.
Candidates are required to answer **ALL NINE** questions on this paper, and only short answers are required.

Allow 10 minutes per question.

The use of simple labelled diagrams where appropriate, is encouraged.

*Illegible handwriting or failure to answer the question in the form requested may result in examiners being unable to award marks for information which candidates intended to convey.*

1. In a cross-sectional study to estimate the herd level frequency of Johne’s disease and number of farms were randomly selected from all dairy farms in the area and classified as Johne’s disease ‘positive’ or ‘negative’. The results of the study indicated a prevalence of 0.3 (30%) positive herds with a 95% confidence interval between 0.22 and 0.38.

   How would you interpret this confidence interval?

   What would the effect of increasing the size of the study (increasing the number of farms included in the study) on bias and precision?

2. What defines stereotypic behaviour pattern? **Discuss** how social factors can affect health and productivity in housed animals.

3. When investigating the role of an infection in a herd you can choose between two tests:
   - An ELISA with Sensitivity = 0.85 and Specificity = 0.95
   - An IFA test with Sensitivity = 0.95 and Specificity = 0.85

   a. In a scenario in which false positives were more undesirable than false negatives which test would you use?

   b. If you apply the test to herds with differing prevalence of the disease:
      
      (i) Would sensitivity and specificity be different when applying the test on different herds?
      (ii) Would predictive values be different when applying the test on different herds?

   c. Which parameter measures the ability of the test to correctly detect individuals with disease or condition of interest?
4. **List FOUR** types of residues which may be found associated with animal production. Identify the statutory controls that are in place in United Kingdom at this time.

5. In a controlled environment Animal House describe the importance of maintaining various conditions within acceptable limits.

6. A welfare complaint, in the Spring, alleging that sheep were collapsing when brought in for head count by Department of Agriculture is to be investigated. It is on an isolated hill farm of 700 hectares run solely by an aged tenant farmer who has farmed there all his life. Farm comprises stone built sheds around a yard and a new cubicle shed with 850 outwintered spring lambing Cheviot ewes, 100 suckler cows plus followers, suckled calves sold at one year old through local markets.

Sheep - 14 ewes collapsed whilst walking in from hill, all ewes very thin and weak, Condition Score 0-1.5; 20% of flock were lame, foul smelling feet, many overgrown feet, horn separated from underlying tissue, bleeding feet; 21 sheep carcases lying scattered on hill; no evidence of field troughs or supply of sheep/cattle concentrates on farm.

Cattle - 100 suckler cows (Luing and Shorthorn crosses) housed in new cubicle shed (internal water troughs and external feed barrier) fed straw and concentrates at the feed barrier; Cow condition scores ranged from 0.5-1.5, due to calve April/May; No water in sheds housing young stock (approximately 100); cattle let out on a daily basis to drink at a trough in the yard; A heavily pregnant cow in the cubicle shed went down and was unable to rise; 4 dead cows were found in the adjacent hay shed.

    a) What investigations would you carry out on the sheep?
    b) What are your views on what you have seen?
    c) What criteria are important in your assessment?
    d) Any offences with the sheep carcases? What is their significance?
    e) Any welfare offences involving the cattle?
    f) Could ignorance of the law be a valid defence?

7. Describe briefly how the primary and subordinate legislation in the fields of animal health, animal welfare, and public protection are formulated in the United Kingdom.

8. **Discuss** the advantages and disadvantages of food animal production in intensive and in outdoor systems.

9. **Describe briefly** the key points relating to the gathering of evidence for a prosecution.

P.T.O. for Section B
Candidates are required to answer TWO of four essay questions.

Allow 45 minutes per question.

The use of simple labelled diagrams where appropriate, is encouraged.

Illegible handwriting or failure to answer the question in the form requested may result in examiners being unable to award marks for information which candidates intended to convey.

10. **Draw a template** for a Quantitative Risk Assessment of Zoonotic Potential of emerging infections if a new animal infection was discovered.

11. Foods for human consumption are frequently subjected to microbiological examination. **List** the **THREE** particular objectives of this sampling and **discuss briefly** the disadvantages of using microbiological criteria. Include in your answer comment on the use of indicator organisms (giving an example if possible) for monitoring purposes.

12. **Briefly describe** the four components of Risk Analysis showing clearly the ways in which they are related to each other.

13. In an animal enterprise, production function, may be regarded as an important index.

   **Describe** the benefits and limitations of using this value in animal production with regard to **both** energy and protein utilization. Base your answer on any chosen monogastrics and any ruminant.