

Certificate in Advanced Veterinary Practice

B-PAP.2 Production Animal Practice

(in the context of poultry)

Module Outline



Module Leader: Dr Barry Thorp BVMS PhD MRCVS

Partner, St Davids Poultry Team; Honorary Fellow

The Royal (Dick) School of Veterinary Studies

This document gives additional guidance to candidates wishing to take B-PAP.2 module in the context of poultry.

The Production Animal Practice module covers the principles of practice with any or all production animals – cattle (both dairy and beef), sheep, pigs and poultry. It may be taken in the context of just one species, as the general principles of production animal practice are deemed to be relevant to all. It is relevant to a number of species and discipline based designated modular certificates, including veterinary public health, animal welfare and reproduction. It can also be taken as a stand alone module.

This module is required for all candidates who are aiming to achieve a production animal ‘named’ certificate. It may also be taken in conjunction with other B modules for those who work in mixed practice.

This module can be covered in the context of one or more production animal species.

LEARNING OBJECTIVES

Candidates should have a sound grounding in the areas of practice listed below. They also need to develop the skills needed to create case studies that demonstrate the following competencies:

- The written communication skills required to present case studies
- An ability to demonstrate their competence in observation, data collection, analysis, reasoning, decision-making and advice delivery in the area under discussion
- Reflective skills that enable them to understand the issues raised by the case and their practice more generally, what they learnt from it.

LEARNING TOPICS

1. The Basics

Overview of the Industry

- The National Flock
- Breeding pyramids, integrators, contract producers, egg packing stations
- Importance to the UK Economy
- The UK marketplace
- Structure and organization of the industry in the European Union
- Appreciation of the Global position, and influences
- Current and future trends, UK, EU, World
- Government and EU influences on production systems and requirements
- Key performance indicators
- Economics of disease control, both nationally and flock based

General principles of the needs of poultry

- Housing and environmental needs
- Systems of ventilation
- Principles of nutrition and basic requirements
- Normal behavioural patterns, and their alteration by disease, pain & stress
- Pain recognition and assessment

Legislation relevant to Poultry production (awareness of)

- Legislation affecting poultry welfare
- Legislation relevant to disease control
- Transport regulations
- Slaughter regulations
- Welfare organisations

Welfare:

- The five freedoms
- Codes of practice for the management and welfare of poultry
- Advantages and disadvantages of the different production systems
- Care and welfare of sick and injured poultry
- Euthanasia of poultry
- Mutilations and other routine management practices affecting welfare

Accreditation schemes and codes of practice in the UK:

- For commercial layers
- For Broiler Breeders
- For Broilers chickens

2. Preventative Medicine, Biosecurity and Zoonoses

- Principles of disease prevention and control.
- Management disease control measures
- Principles of Epidemiology
- Routine disease surveillance and monitoring
- Principles of health planning
- Principles of immunisation and vaccination
- Commonly used vaccines in poultry production
- Prevention and control of notifiable diseases
- Principles of Biosecurity: external and internal
- Export and import certification
- Disinfection and disinfectants
- Zoonoses

3. Basic Production Principals

- Principles of egg production in layers and broiler breeders
- The role of day length and nutrition
- Broiler meat production
- The hatchery basic principals

4. Diagnosis and treatment of some common disease in Commercial Poultry

- Principles of clinical assessment of a commercial flock
- Common diseases, their diagnosis and treatment
- Prudent use of medicines
- Pharmacy regulations
- Storage of medicines
- Legal requirements for the use, recording, disposal of medicines

ASSESSMENT

- **5 case reports**, essays or short case series with a word count between 1,000 and 1,500 words each. The candidate should have managed or have had a significant involvement in all of the cases and the cases or essays should cover each of the main areas of the module.

Cases selected should illustrate that the candidate has dealt competently with a range of commonly presented conditions or situations from the area of practice in which they are working.

- A **1,000 - 1,500 word reflective synopsis** justifying the candidate's choice of cases and reflecting upon the candidate's learning during the module. This might include what has changed in their approach to a case, any new procedures or investigations that are now considered, any additional reading which was helpful, and/or any unexpected features of a case which will influence decision making in the future. This essay should only be submitted after all case reports/essays are assessed and returned to the candidate as it is possible that the assessor feedback from the case reports/essays may contribute to the candidate's learning through the module.

ASSESSMENT TIMETABLE

Report submission dates
1 st February
1 st May
1 st August
1 st November

You may submit as many reports as you have completed by these dates and results should be available within 4 weeks.

MENTOR

You may wish to have a mentor with which you can discuss cases. Ideal mentors would have post-graduate qualifications (for example, certificate, diploma) relevant to poultry practice. RVC academic staff and the module leader will not be available as mentors.

LEARNING SUPPORT

Learning support is provided to aid self-directed learning and to provide easy access to published articles. You will be given a username and password which will allow you to log on to 4 different systems:

- **RVC Learn (<http://learn.rvc.ac.uk/>)**

- Articles of interest for all areas covered in the module
- Discussion boards between other candidates enrolled on the module and with RVC tutors
- Access to SCOUT, RVC's solution for the discovery and delivery of resources including books, ebooks, journal articles and digital objects, all in one single search. Log in to SCOUT using your RVC username and password to save items on your eshelf. If you are able to use the library in person, you can borrow a book for one week with photo ID. IT and Library support is available for this facility (email library@rvc.ac.uk or helpdesk@rvc.ac.uk).

- **RVC Intranet (<https://intranet.rvc.ac.uk>)**

Access to all information available to all RVC students and employees, for example, news, events, policies, committees, services, Library, IT helpdesk, etc.

- **Athens (<http://www.openathens.net/>)**

Athens is an access management system which controls access to many electronic information sources. When you log in to an Athens protected resource it checks to see if you are a member of an institution that has paid to use that resource, and if your username and password are correct it lets you through.

- **Email (<https://mail.rvc.ac.uk>)**

You are given an RVC email address, which you can choose to use for your CertAVP communication. You will also receive general RVC emails to this account.

CASE REPORT GUIDANCE

The case reports should be written in the third person in a style suitable for publication in a journal, such as Avian Pathology. The case reports should vary in species and diagnostic scenarios and across the 5 reports should cover Broiler Chickens, Breeders, Commercial layers, rearing and laying stages of production, in addition ducks or turkeys may feature in a report. Investigations should include management and nutritional factors as well as specific diseases.

The following frame work should be used as a guide to the structure of the case report:

- Unit / Farm description (size, type, company or independent, etc.)
- History (disease, medications, vaccines, monitoring programme)
- Clinical Picture/ flock records etc.
- Investigation
- Diagnosis
- Treatment/ disease control (short. Medium and long term)
- Other implications (e.g. zoonosis, local, wider)
- Discussion
- References

THINGS TO CONSIDER FOR THE CASE REPORTS

- Write a case report up to 1,500 words, using the problem-based approach, on an interesting medical case you have managed in your practice. The focus of the case report should be on the problem based assessment of the presenting problems and discussion of the diagnostic procedures used including assessment of laboratory data obtained. Details of treatment and follow-up are usually relatively brief unless the case is relatively straightforward.
- The assessor will provide feedback on your first version of one report (feedback received within 4 weeks). Sample cases written using the problem-based approach are available on Learn. The candidate may also choose to attend relevant CPD at the RVC or purchase notes available at the RVC on problem-based clinical reasoning in small animal medicine.

The following is a guide to writing a B module report in medicine. The reviewer is looking for evidence that you can keep an open mind during the initial assessment but that you can assess the problems as a whole and consider the most relevant differential diagnoses:

- Select a case that is interesting to you but not too unusual or complex. It will be much more straightforward to write a report about a flock that has one clinical problem (or two closely related problems) when the diagnosis is certain, or at least you are able to acknowledge any limitations in the final diagnosis and investigation.
- Try to avoid selecting medical cases that do not enable you to demonstrate your problem solving ability and clinical reasoning (for example, those with an obvious diagnosis on presentation and/or with limited clinical pathology or imaging findings).
- Give a succinct but informative clinical history and summary of your clinical and post mortem findings. Ask yourself what questions the reader might want answered based upon the final diagnosis.
- Identify what the problems are in the case you have chosen, which are specific and which are the most important. Order them on the problem list with the most specific problems first. Specific problems tend to have shorter differential diagnosis lists and are therefore very useful when considering how best to approach your investigation.
- Make an assessment about whether all problems are related to one diagnosis. If they are (i.e. if it is inconceivable there could be different explanations for the problems) you can select one key specific problem and use this as your 'diagnostic hook'. If there is anything to suggest they may not be (different chronology, unusual association of clinical signs etc.) then you need to assess each specific problem separately.
- Ensure you have appropriately defined each problem if necessary (this varies from problem to problem). Remember that define means – 'do I really know what the clinical problem is e.g. low egg

production because of poor production by a proportion of the flock or by all the flock' – it doesn't mean having to write a wordy definition of the problem.

- Discuss each specific problem - list the possible body systems involved or if further down the diagnostic track consider actual differential diagnoses (what you actually discuss here will depend on the problem and the case but usually initially it will be the body system, later on you will be considering specific diagnoses).
- After discussing each specific problem, provide a brief overview of the likely affected body systems/diagnoses you are considering when all the clinical signs/data are considered as well as the age, sex, breed and other relevant data such as nutrition and management factors.
- Your assessment should explain your diagnostic plans - if you are having difficulty articulating your assessment, write down why you want to.... take blood, do tests, sample feed, carry out post mortems, etc. Your reasons are your assessment and if you can't articulate them then you probably don't have a good reason for spending the client's money! It therefore follows that there should not be a diagnostic (or treatment plan) that does not relate to your assessment, e.g. don't do a worm test if you have never mentioned in your assessment the possibility of worms as a diagnosis.
- Don't just state 'I want to do serology or other tests. Tell us what tests you are interested in and why. Serology is often a cost effective way to obtain data, it is still important to consider which specific tests you are interested in and why. This (1) ensures you don't overlook important tests that may not routinely be available to you (strain specific IB PCR) and (2) intellectually prepares you to appropriately assess the significance of the results for your particular case.
- Diagnostic test results should be summarised in the text and interpreted fully. If you wish it may be helpful to include full laboratory results in an appendix although this is not essential. Then summarise how these results lead to your diagnosis. Also consider if the diagnosis explains all of the presenting problems.
- Once a diagnosis has (hopefully) been made, summarise the case management and follow-up. The length of this section and the final discussion will depend upon the length of the previous sections. The emphasis for B module medicine reports is on the initial problem based approach and assessment of laboratory findings and other data rather than extensive detail on case management (the latter is much more important in C module reports for medicine). However for completeness we do expect to know the case management (even if summarised) and outcome and for you to discuss selected important aspects of the case using reflective skills and evidence derived from your further reading. Reflecting on case investigation and management might include: discussing any possible alternative diagnostics that might have been used; consideration of any limitations in the final diagnosis; acknowledgement of any aspects that might be improved in a similar case in the future.
- In each report the reason any drug selection in that case should be briefly stated and the mechanism of action, relevant pharmacokinetic features and potential adverse effects and interactions of the drug outlined as well as a brief statement on the therapeutic outcome. The candidate's knowledge

and understanding of the relevant clinical pharmacology of the drugs discussed i.e. the drugs not the clinical details should be the focus of the reports.

- The source of information for the reports should be varied and permit the candidate to demonstrate that they have a good understanding of the pharmacology of the drug discussed. Sources should extend beyond the drug data sheet and the BSAVA formulary. Suitable sources in addition to these are a recent edition of veterinary pharmacology textbook and relevant journal articles.
- The assessor will be looking for evidence that you have read around the topic of your case including review articles, relevant book chapters and research articles. Try to include a variety of references and use the most recent editions of texts and newer publications if possible. This will depend upon the disease as a more rare condition will have relatively little published information available. Throughout your report use the information gained from your reading to justify statements made, diagnostic tests chosen or treatments given. This assessment of evidence in clinical decision making is one of the hallmarks of an advanced practitioner. Finally, don't be afraid to consider the quality of the reference you are using.

SUMMARY ESSAY

The final submission is a 1,000 - 1,500 word reflective essay discussing the reasons for your choice of cases, your learning during the module and how this learning has influenced your and/or your team's current and future practice. This might include what has changed in your approach to a case, any new procedures or investigations that are now considered, any additional reading or learning strategies which were helpful, support you have been able to give to your colleagues, and/or any unexpected features of a case which will influence decision making in the future.

It can be helpful to base the essay using the reflective **Three Whats** approach:

- **What?** (did I do/observe/write about)
- **So What?** (did I learn)
- **Now What?** (how will this change my practice in the future).

This essay should only be submitted after all case reports are assessed and returned to you, as it is possible that the assessor feedback from the case reports may contribute to your learning through the module.

Each case report has a 20% weighting of your final module result. The final summary essay will not receive a mark but submitting and passing it is a condition of passing the module.

INSTRUCTIONS FOR SUBMITTING CASE REPORTS

Each case report should be no more than 1,500 words. A case report/essay that exceeds the permitted word count will be returned to the candidate for re-submission within the word limit. This is in the interest of fairness as it is difficult to compare an essay exceeding the word limit with one which has been kept to the required limits. Additionally, the ability to keep a discussion tightly focused, with every word counting, is an important skill to have developed at this level. Information included in a table will be included in the word count unless it is mainly numerical information (e.g. laboratory data in a table is not included in the word count).

Please email your work to certavp@rvc.ac.uk, naming your files to include the following: module code, your name, and the type of work you are submitting, for example:

BPAP Poultry Your Name – REVIEW.doc

BPAP Poultry Your Name – CASE REPORT 1 - MARKING.doc

BPAP Poultry Your Name – CASE REPORT 2 - MARKING.doc ...etc

BSAP Poultry Your Name - Summary - MARKING.doc

If a piece of work is a re-submission, please name your file like this:

BSAP Poultry Your Name – CASE REPORT 5 – MARKING RE-SUB.doc

Please ensure that the beginning of your case reports include:

- Module name
- Your name
- Case report title
- Word count (excluding the above, tables, photo titles and references)

References:

- Use Avian Pathology as guidance to both citation of references within the text and format of references in the reference list.
- Avoided listing references that were not cited in the text or vice versa.
- We recommend using Harvard referencing as described by the Anglia-Ruskin University.
- You will find it very helpful to use a program such as Endnote® or Reference manager® to organise your references.

Plagiarism:

All written work submitted to the Royal Veterinary College is passed through plagiarism detection software. Work submitted for this module should not have been submitted for any other courses at RVC or other institutions.

RECOMMENDED READING LIST

The following list is given as a guide as to where to start and for this reason cannot be considered 'complete'. We also don't expect candidates to read texts from cover to cover or to use all of the texts listed, however we do recommend you make use of the most recent edition of textbooks where available. We apologise if candidates feel a particular favourite is missing - feel free to use the Learn discussion board to pass on additional suggestions to other candidates. Please note that we also expect you to read selected articles from peer reviewed publications such as the Journal of Veterinary Internal Medicine, the Journal of Feline Medicine and Surgery etc, that are relevant to the particular case that you choose to write up.

Health and Disease

Poultry Diseases. Pattison, McMullin, Bradbury and Alexander

Disease of Poultry

Diseases Of Poultry A Colour Atlas 2nd Edition Author: Ivan Dinev

Color atlas of diseases of the domestic fowl & turkey (1985) C. J. Randall

Diseases and Disorders of the Domestic Fowl and Turkey(1991) C. J. Randall

Nutrition

Nutritional and Digestive Disorders of Poultry (2006) eds Simon M. Shane, Lucy A. Tucker Nutrition of Chicken 4th edition eds. Leeson and Summers

Hatcheries and incubation

ROSS TECH Investigating Hatchery Practice October 2009

Avian Incubation (Poultry Science Symposium Series) [Hardcover] 1991 S. G. Tullett

<http://www.howtoincubate.com>

<http://www.natureform.com>

Poultry slaughter and processing

Poultry Meat Processing By Alan R. Sams - CRC Press (2009)

Handbook of Poultry Science and Technology : Primary Processing , Volume 1 Isabel Guerrero– Legarreta (editor) Wiley-Blackwell (2010)

Management Guides

Aviagen - Breeder and Broiler Manuals and Technical notes available online

Cobb - Breeder and Broiler Manuals and Technical notes available online

Hyline – Layer Manuals and Technical notes available online

Hendrix Poultry - Layer Manuals and Technical notes available online Hubbard -
Breeder and Broiler Manuals and Technical notes available online Lohmann - Layer
Manuals and Technical notes available online

Codes of Practice

DEFRA Codes of Practice for Welfare Assured

Chicken Production

Code of Practice for Lion Eggs - The British Egg Industry Council

RSPCA Welfare Standards for Laying Hens

Poultry Science Symposium Series Volumes 1-30.

Volumes 1-24 published and may be available from Carfax Publishing Company. Volumes 25 on are
published by CAB International (CABI).

Journals – which also contain some good review articles

Avian Pathology Poultry

Disease