

THE ROYAL COLLEGE OF VETERINARY SURGEONS

DIPLOMA IN PIG MEDICINE
PART II EXAMINATION

PAPER I

Tuesday, 4th October 1983 from 10.00 a.m. to 1.00 p.m. (3 hours)

Three questions must be answered.

1. You are consulted by the owner of a 600 - sow herd, where the progeny are fed to bacon weight, in the U.K. Due to disease problems, he has decided to depopulate and re - stock. Discuss the important aspects of planning, and the advice you would give.
2. You are asked to prepare an advisory paper for Ministers, reviewing the progress of the campaign to eradicate Aujeszky's disease from the British pig population. In presenting this submission, you should draw attention to the possible developments and the alternative strategies that would be necessary to meet them. In particular, you should indicate the criteria that would influence the timing for a change of policy, should this become necessary.
3. Discuss the disease and other problems associated with faulty management of a conventional, large verandah house (internal lidded cubicles with outside dunging platforms on slats, holding pigs from three weeks after weaning to 50 kg).
4. Explain in detail how you would investigate a problem of a check in growth, with 2% mortality, in pigs that have been recently weaned at three weeks of age into flat—decks.
5. Discuss the general principles and specific factors that determine the prevalence and effect of respiratory infections (such as enzootic pneumonia and atrophic rhinitis) in large, intensively housed pig herds.
6. Discuss the factors in the management of breeding stock, from just prior to weaning until four weeks after service, that might depress the average level of reproductive performance in a pig herd.

THE ROYAL COLLEGE OF VETERINARY SURGEONS

DIPLOMA. IN PIG MEDICINE
PAST II EXAMINATION

PAPER II

Tuesday, 4th. October 1983 from 2.00 p.m. to 5.00 p.m. (3 hours)

Three questions **must be answered.**

1. How would you investigate problems of (a) delayed puberty in gilts and (b) delayed oestrus after weaning, and what action might you recommend?
2. Litter records in a 300 - sow herd show that the stillbirth rate has risen from 6% to 11.5% over a period of three months. How would you investigate this problem, with regard to possible causes and corrective action?
3. Nineteen % (19%) of the female breeding stock in a 350—sow herd, housed during pregnancy in cubicles on slatted floors, with solid—floor farrowing sections and a service house, show evidence of vaginal, discharge after service. Discuss how you would investigate this problem. What preventative and treatment regimes are relevant to your possible findings?
4. Discuss the so - called SMEDI problem, as seen in large intensive pig herds today. In your experience, what anomalies may arise from a study of parvovirus titres and from different types of immunisation programmes in herds with a history of stillborn and mummified pigs?
5. Discuss the parameters necessary to monitor reproductive efficiency in a mature 300 - sow herd. How would you use these parameters to investigate a problem of low numbers born per litter?

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DIPLOMA IN PIG MEDICINE PART II EXAMINATION

PAPER I

Monday, 19 November 1984 from 10 a.m. to 1 p.m. (3 hours)

Any three of the five questions must be answered. (Answers in note form are acceptable, where appropriate.)

1. List the components of the so-called porcine—stress syndrome (PSS) and assess their importance. Discuss the strategies available for the control of PSS and recommend policies for adoption by
 - (a) an AI boar stud,
 - (b) A large pig-breeding company
 - (c) A government agricultural department in the British Isles.

2. Discuss the epidemiology of classical swine fever and African swine fever, with particular reference to the control of these diseases in Great Britain or Eire, and within the European Economic Community generally.

3. From your experience in Great Britain or Eire, discuss the role of the bacteria in the Haemophilus group in pig herds today, commenting on the clinical signs, epidemiology, treatment and control.

4. How would you attempt to eliminate herd swine dysentery from a pig (100 sows, farrow - to - finish)? What are the main difficulties in such a procedure, the financial considerations, and the determinants of success?

5. Discuss the role of management in controlling the most important and common forms of non- infectious lameness in a pig herd.

The Royal College of Veterinary Surgeons

DIPLOMA IN PIG MEDICINE PART II EXAMINATION

PAPER II HUSBANDRY AND MANAGEMENT SYSTEMS

Monday, 19 November 1984 from 2 p.m. to 5 p.m. (3 hours)

Any three of the five questions must be answered. (Answers in note form are acceptable, where appropriate.)

1. Describe the man - management structure (including wages/salary costs) you would consider necessary to run a 600-sow, commercial, intensively-housed unit, taking progeny to bacon weight. Outline the qualities required by the manager to be appointed. Discuss the most common managerial failures that cause economic loss in herds of this size.
2. The owner of a 300-sow commercial herd (intensively housed and taking progeny to bacon weight) seeks advice on his replacement policy for gilts and boars. Discuss the advantages and disadvantages of the methods available, from the genetic, financial, production and management aspects.
3. Discuss the important management and design features of farrowing accommodation that influence optimum production.
4. Discuss in detail the common problems associated with the management of flat-deck accommodation for pigs weaned at about three weeks of age.
5. How would you advise a pig—breeding company on the management of breeding gilts for sale, with special reference to the problems that might arise when executing an order for 350 in-pig gilts to one customer?

The Royal College of Veterinary Surgeons

PART II (DIPLOMA) EXAMINATION IN PIG MEDICINE

PAPER I

Friday 16 November 1990

10.00 a.m. to 1.00 p.m. (3 hours)

An three of the following five questions must be answered. answers in note form are acceptable, where appropriate).

Candidates are warned that illegible handwriting may result in examiners being unable to award marks for information which candidates intended to convey

1. Discuss the syndrome of “non-specific colitis”.
2. What are the economic and disease implications of the lifting of national barriers in the European Community in 1992?
3. A breeding company is receiving complaints of lameness in gilts within three months of arrival on the farm. Discuss the possible causes, the investigations you would carry out, and the advice you would give.
4. Mastitis and metritis are major problems in both lactating and dry sows in a breeding herd. Discuss the epidemiology and control measures, including medication.
5. Discuss the aetiology, manifestations and epidemiology of “atrophic rhinitis” in pig herds, and comment on the problem of definition within this syndrome.

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PART II (DIPLOMA) EXAMINATION IN PIG MEDICINE

PAPER II

Friday 16 November 1990

2.00 p.m. to 5.00 p.m. (3 hours)

An three of the following five questions must be answered. answers in note form are acceptable, where appropriate).

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1. The breeding section of a 1000-sow unit employs six men. Outline a training programme which you would recommend to improve management and productivity.
2. Compare and contrast different husbandry systems for housing dry sows.
3. The owner of an 800-sow breeding/feeding herd has dismissed his manager because of poor production and disease problems. He has asked you to assist in the selection of a new one. Discuss the criteria upon which you would base your selection.
4. Discuss the influence of different types of bedding materials in pig husbandry and health.
5. Discuss the most important issues in the management of newly-weaned pigs, comparing and contrasting different housing systems.

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DIPLOMA EXAMINATION IN PIG MEDICINE

PAPER I

Tuesday 3.6 November 1993

10.00 a.m. to 1.00 p.m. (3 hours)

Any three of the following five questions MUST be answered. (Answers in note form are acceptable, where appropriate).

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1. The owner of a farrow to finish indoor herd, as required by current legislation, has asked you to produce a document to be used on his unit for the Control of Substances Hazardous to Health (COSHH). Detail the contents of such a document and explain the reasons for your recommendations.
2. What systems will you advise different types of pig farms to adopt when they are forced to discontinue using confinement housing? Explain your reasoning for any type of new systems that you recommend.
3. You are asked to develop an experimental design to identify significant factors associated with chronic respiratory disease in growing pigs housed in intensive environments. Discuss such factors and the practical problems associated with their evaluation.
4. Make a critical appraisal of currently available blood tests and other laboratory procedures for the routine monitoring of herds producing breeding stock for sale.
5. Enzymes and probiotics are being widely advocated for inclusion in pig feeds. What are the proposed roles of these two substances in pig nutrition? Discuss any undesirable effects consequent upon their use and comment upon any possible future legislative interest by the EC in these two types of products.

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DIPLOMA EXAMINATION IN PIG MEDICINE

PAPER II

Tuesday 16 November 1993

2.00 p.m. to 5.00 p.m. (3 hours)

Any three of the following five questions MUST be answered. (Answers in note form are acceptable, where appropriate).

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1. You are informed that a fluctuating return rate, some weeks up to 40% in some herds, yet within a normal range for others, has been occurring over the last 5- 6 weeks in a breeding organisation. The records indicate that over 90% of the inseminations are by AI. Detail your plan of investigation and discuss possible measures to stabilise the return rate to more acceptable levels.
2. Detail the hormonal control of the reproductive cycle from the initiation of puberty to 3 days post weaning.
3. A client complains of low litter size in a mature F1 herd of 350 sows. Discuss under the following headings your approach to this problem: -
Disease;
Genotype;
Record Analysis;
Management/Environment;
Reproduction;
Dietary Components
Feed Application.
4. The problem of high levels of sow mortality can result in heavy losses in Farrowing Rate. Typical causes of death include toxæmia consequent upon perforation of a gastric or intestinal ulcer and also pyelonephritis. Discuss the problem and highlight the difficulties with the early diagnosis of these slow developing conditions. Outline possible courses of action to reduce these losses.
5. Discuss the physiological changes and pathology of the embryo and foetus from fertilisation to 114 days of age. Consequent to this highlight important factors that could influence reproductive efficiency.

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DIPLOMA EXAMINATION IN PIG MEDICINE

PAPER I

Wednesday 1 May 1996

10.00 a.m. to 1.00 p.m. (3 hours)

Any **three** of the following five questions **MUST** be answered. (Answers in note form are acceptable, where appropriate).

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1. Write *notes* on the options open to intensive pig farmers for the rehousing of their sows after stalls have been banned in the U.K. Give the pros and cons of different systems and the factors that should be taken into account in arriving at a decision.

2. Swine dysentery and pneumonia, in which *Mycoplasma hyopneumoniae*, *Actinobacillus pleuropneumoniae* and Porcine Reproductive and Respiratory Syndrome (PRRS) virus have been identified, are causing problems in a 1000 pig place finishing unit taking pigs in at about 30kg and slaughtering at around 95kg. The unit is part of a large integrated organisation and is stocked on an all - in all - out basis from several sow herds each under independent ownership. What investigations would you carry out? What options are there to reduce the problem and what sequence of actions would you advise?

3. Discuss nutrition as it relates to lameness in pigs.

4. Reproduction analysis in a 600 sow breeding herd shows approximately the same values for three month and six month rolling averages. The non—return rate to first service is 82%, the farrowing rate is 80% and the number of litters per sow per year is 2.22 (annualised). The farmer perceives that he has a problem. How would you investigate it and what advice would you give depending on what you found?

p.t.o. for Question 5

5. Write *short notes* on any *five* of the following:
- a. The importance of the quantity and quality of dietary fibre
 - b. The usefulness of abattoir monitoring for different types of herd.
 - c. Welfare advantages and disadvantages in keeping pigs out – of – doors.
 - d. Problems with the implementation of present and impending regulations governing the transport of pigs.
 - e. Modern methods used in genetic improvement.
 - f. Electrical safety on pig farms.
 - g. Influenza viruses infecting pig herds in the U.K

The Royal College of Veterinary Surgeons

DIPLOMA EXAMINATION IN PIG MEDICINE

PAPER II

Wednesday 1 May 1996

2.00 p.m. to 5.00 p.m. (3 hours)

Any **three** of the following five questions **MUST** be answered. (Answers in note form are acceptable, where appropriate).

Candidates are warned that illegible handwriting may result in examiners being unable to award marks for information which candidates intended to convey

SPECIAL SUBJECT: THE NOTIFIABLE DISEASES OF THE PIG.

1. *List* the taxonomic and physico - chemical characteristics of the viruses of foot - and - mouth disease, swine vesicular disease, African swine fever and classical swine fever and describe how these features influence their survival and transmission.
2. Discuss the role of the pig in the epidemiology of foot – and - mouth disease with particular reference to the risk of the disease being introduced to the U.K.
3. *Discuss* the pathogenesis and associated clinical signs during the different manifestations of Aujeszky's disease in the pig.
4. What are the most likely routes by which swine vesicular disease is likely to be introduced onto a pig farm? Describe the main control measures which should be implemented following the confirmation of an outbreak of that disease in a large commercial pig finishing unit.
5. Write *notes*, highlighting key issues, on any **four** of the following:
 - a. Clinical and laboratory differential diagnosis of classical and African swine fever.
 - b. Swine vesicular disease in the E.U.
 - c. Mechanisms of spread of Aujeszky's disease between pig herds.
 - d. Anthrax in pigs in the U.K.
 - e. *Brucella suis* in countries of the E.U.

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DIPLOMA EXAMINATION IN PIG MEDICINE

PAPER II

Wednesday 1 May 1996

2.00 p.m. to 5.00 p.m. (3 hours)

Any three of the following five questions **MUST** be answered. (Answers in note form are acceptable, where appropriate).

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SPECIAL SUBJECT: SOW MANAGEMENT WITH SPECIAL REFERENCE TO LIQUID INTAKE AND URINARY TRACT DISEASE

1. List the toxic substances and pathogenic organisms that in your opinion might contaminate water supplies to sow herds in Europe and North America. Give an indication of the likelihood of their occurrence and write *brief notes* on each explaining how the contamination may come about, what effect it would have on the breeding animals and their piglets, and what actions you would take to deal with the problem.
2. Discuss the reasons for sow culling and list the conditions you mention in approximate order of their economic importance.
3. Discuss the advantages and disadvantages of liquid feeding and liquid feeding systems including computerised automated systems.
4. An intensive pig farm with about 1,000 mature sows in total confinement (sow stalls and farrowing crates) plus about 300 mated gilts loose—housed in pens, is suffering an unacceptably high level of deaths through cystitis/nephritis which is seriously affecting the farmer's culling and replacement policy. The sows are all liquid—fed once a day manually through hose—pipes from central mixers, the amount given at each feed being judged by eye. The feed is home—mixed, whey—based, with other human food waste materials including lemonade and brewery waste. Outline what you would consider doing to tackle this problem and how soon you would expect to see positive results.

p.t.o. for Question 5

5. Write *notes*, highlighting key issues, on any *four* of the following:
- a. Birth weights and weaning weights.
 - b. Fly control.
 - c. Feeding bought—in gilts prior to mating, during gestation and after tarrowing.
 - d. Water medication for weaned, growing and finishing pigs.
 - e. Pathogenesis of *Eubacterium (Corynebacterium) suis*.