



## AUSTRALIAN AND NEW ZEALAND COLLEGE OF VETERINARY SCIENTISTS

### MEMBERSHIP GUIDELINES

#### *Pig Health and Production*

#### INTRODUCTION

These Membership Guidelines should be read in conjunction with the *Membership Candidate Handbook*.

#### ELIGIBILITY

Refer to Section 2 of the *Membership Candidate Handbook*.

#### OBJECTIVES

To demonstrate that the candidate has sufficient knowledge of and experience in medicine and production of pigs to be recognised as an advanced practitioner. Successful completion of Membership exam represents a middle-tier of knowledge, competence and experience in medicine and production of pigs.

#### LEARNING OUTCOMES

1. The candidate will have a **basic**<sup>1</sup> **knowledge** of:
  - 1.1 Structure and the issues facing the pig industries in Australia and New Zealand. This includes describing the common pig production systems in Australia and New Zealand.

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#### <sup>1</sup> Knowledge levels:

**Sound knowledge** — candidate must know all of the principles of the topic including some of the finer detail and be able to identify areas where opinions may diverge. A middle level of knowledge.

**Basic knowledge** — candidate must know the main points of the topic and the core literature

- 1.2 Presentation, diagnosis, epidemiologic features, and response options of exotic diseases that could be of potential significance to pig health in Australia and New Zealand.
- 1.3 Relevant Codes of Practice on animal welfare, transport, and use of registered veterinary medicines.
- 1.4 Nutrition and feeding of pigs.
2. The candidate will have a **sound knowledge** of:
  - 2.1 Aetiology, epidemiology, pathology, diagnosis, treatment and control measures and public health implications for endemic infectious and non-infectious diseases of pigs.
  - 2.2 Pharmacological and immunological agents used in pigs, including issues related to antimicrobial residues and resistance.
3. The candidate will be able to demonstrate **sound<sup>2</sup> expertise in**:
  - 3.1 Procedures associated with the practice of pig medicine and production such as performing routine herd health inspections, disease surveillance, prescribing guidelines, pregnancy diagnosis, artificial breeding techniques, body condition scoring, abattoir monitoring, restraint, anaesthesia, blood sampling and euthanasia.
  - 3.2 Procedures for control and eradication of infectious diseases including strategic and preventative medication programs, vaccination programs including use of autogenous vaccines, and management techniques used to control and eradicate disease (for example segregated production, batch farrowing, Swiss depopulation, total depopulation).
  - 3.3 Interpretation of breeding and growing herd production performance records including an understanding of common reports generated by commercially available herd recording programs.
  - 3.4 Post-mortem procedures, gross pathology, collection and processing of the appropriate samples for disease diagnosis and selection of appropriate laboratory investigations of field samples for correct diagnosis of individual diseases.
  - 3.5 Appropriate submission of appropriate diagnostic samples and interpretation of laboratory results.

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<sup>2</sup> **Skill levels:**

**Sound expertise** — the candidate must be able to perform the technique with a moderate degree of skill and have moderate experience in its application. A middle level of proficiency.

**Basic expertise** — the candidate must be able to perform the technique competently in uncomplicated circumstances

## EXAMINATIONS

For information on the required standard and format for both the Written and Oral examinations, candidates are referred to the *Membership Candidates Handbook*. The Membership examination has **two separate, components**:

### **Written Examination** (*Component 1*)

**Written Paper 1** (two hours): Principles of the Subject

**Written Paper 2** (two hours): Applied Aspects of the Subject

### **Oral Examination** (*Component 2*)

**Oral** (one hour)

The written examination will comprise of two separate two-hour written papers taken on the same day. There will be an additional 15 minutes perusal time for each paper, during which no writing in an answer booklet is permitted. In each paper there will be four (4) questions, each worth 30 marks, giving a total of 120 marks per paper. There is no choice of questions. Questions may be long essay type or a series of shorter answer sub-questions. Marks allocated to each question and to each subsection of questions will be clearly indicated on the written paper.

#### **Written Paper 1:**

This paper is designed to test the Candidate's knowledge of the principles of Pig Medicine and Production as described in the Learning Outcomes. Answers may cite specific examples where general principles apply but should primarily address the theoretical basis underlying each example.

The examination will cover infectious and non-infectious porcine diseases and will require knowledge of epidemiology, pathogenesis, differential diagnosis, methods of treatment and prevention, and the potential implication on public health related to the disease or its control.

Candidates are expected to have an understanding of how disease, production systems and management affect pig welfare.

#### **Written Paper 2:**

This paper is designed to (a) test the Candidate's ability to apply the principles of medicine and production to hypothetical clinical case presentations of related to (a) pig health and (b) herd productivity in Australia and New Zealand.

#### **Oral Examination:**

This examination requires the candidate to demonstrate achievement of the above-mentioned Learning Outcomes and the ability to communicate responses verbally. The duration of this examination is approximately forty-five minutes to one hour and will include 5 to 10 major questions. Cases and supporting questions are delivered verbally. The oral examination has a total of 100 marks.

Clinical and clinicopathologic images, laboratory test results and piggery performance records are likely to be used during this examination.

## RECOMMENDED READING MATERIAL

The candidate is expected to research the depth and breadth of the knowledge of the discipline. This list is intended to guide the candidate to some core references and source material. The list is not comprehensive and is not intended as an indicator of the content of the examination.

### Textbooks and Reading Material

#### Recommended Textbooks:<sup>3</sup>

Zimmerman JJ, Karkiker LA, Ramirez A, Schwartz KJ, Stevenson GW and Zhang J. Diseases of Swine. 2019. 11<sup>th</sup> Edition. Wiley Blackwell.

Carr J, Chen S, Connor JF, Kirkwood R, Segales J. Pig Health. 2020. 2nd Edition. CRC Press.

Neumann EJ, Ramirez A, Schwartz KJ. Swine Disease Manual. 2020. 5<sup>th</sup> Edition. American Association of Swine Veterinarians.

Muirhead MR, T J L Alexander TJL, Carr J (ED). Managing Pig Health: A Reference for the Farm. 2013. 2<sup>nd</sup> Edition. 5m Enterprises

#### Suggested Textbooks

Rushton J. *The Economics of Animal Health & Production*. 2009. CABI International.

Harris, DL. *Multi-Site Pig Production*. 2000. Iowa State University Press. (available free online)

#### Recommended Journal<sup>4</sup>

*Journal of Swine Health and Production* – American Association of Swine Veterinarians

#### Additional Reading Materials:

*Annual Proceedings of American Association of Swine Veterinarians Meeting*

*International Pig Veterinary Society Proceedings*

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#### <sup>3</sup> Definitions of Textbooks

**Recommended textbook** – candidates should own or have ready access to a copy of the book and have a sound knowledge of the contents.

**Suggested textbook** – candidates should own or have ready access to a copy of the book and have a basic knowledge of the contents with a sound knowledge required only for the subjects specified in the guidelines.

**Additional references** – candidates should have access to the book and have a basic knowledge of the contents.

#### <sup>4</sup> Definitions of Journals

**Recommended Journal** – candidates should have ready access to either print or electronic versions of the journal and have a sound knowledge of the published articles in the subject area.

**Additional Journal** – candidates should be able to access either printed or electronic versions of the journal and have a basic knowledge of the published articles in the subject area.

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## **FURTHER INFORMATION**

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