

## 1. Investigation of Disease Outbreaks

1.1. The candidate will have **sound knowledge** of investigation of disease outbreaks

1.2. The candidate will be able to do the following with **sound expertise**:

1.2.1. undertake a structured investigation of a disease outbreak scenario involving a single farm/enterprise/event and on the basis of this investigation present a summary of key findings, hypothesis/es regarding cause/s of the outbreak, and recommendations for disease control and prevention and for further investigation.

1.2.2. critically appraise investigations of several disease outbreaks that involved multiple farms/enterprises/events, and specify with justification the respective strengths and weaknesses of each investigation in terms of attainment of an objective of timely outbreak containment and/or eradication.

1.2.2.1. Essential components to be included in the investigation:

- an explanation of the objectives of various disease outbreak investigations
- case definition
- confirmation that an outbreak is occurring
- epidemic curve
- creation of an epidemic curve from data provided; incorporate curve into a report with interpretation
- spatial distribution
- attack rate table
- hypothesis formulation
- specification of objective/s for disease control and prevention and further investigation
- definition of trace forward and trace back, and prioritisation of tracing activities.