Culling of animals for disease control purposes

Animal welfare perspectives

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Background

WOAH Terrestrial Animal Health Code

- Chapter 7.6 – Killing of animals for disease control purposes: chapitre_aw_killing.pdf (woah.org)
- Covers general principles, the responsibilities and competencies of the personnel carrying out the cull, planning considerations, and methods for the killing of different species.
- Requirements for effective use; advantages, disadvantages, and suitability

- Free bullet
- Captive bolt (penetrative and non-penetrative)
- Maceration
- Electrical methods
- Gas, air and gas mixtures
- Lethal injection
- Oral agents such as anaesthetics in feed and water
- Cervical dislocation and decapitation, and;
- Pithing and bleeding

Australia's emergency animal disease response arrangements

Key Point:

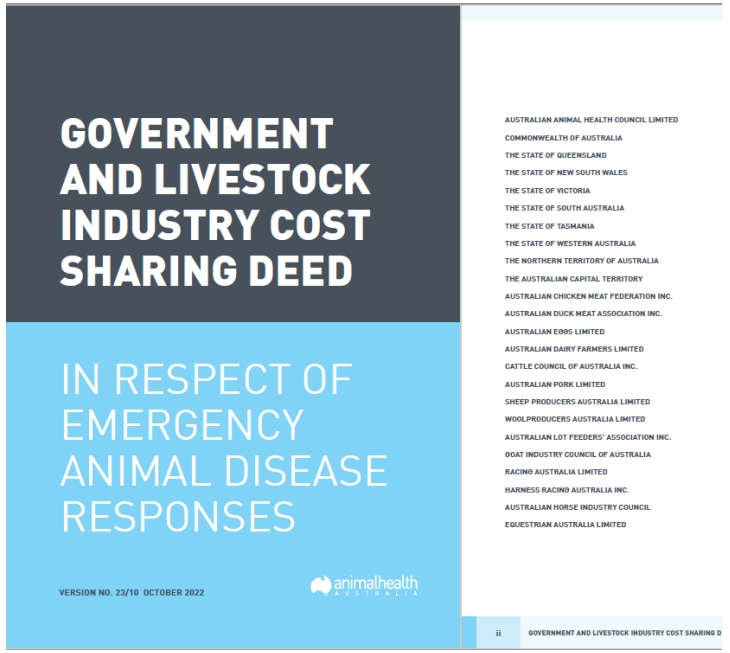
- Good planning, organisational clarity, and appropriate decision-making structures ensure a rapid and effective outbreak response
- Animal welfare outcomes are maintained

EAD Response Agreement

- Legally binding agreement
- Provides certainty in management and funding of responses

AUSVETPLAN

- Australia's veterinary emergency plan
- Technical response plans describing the approach to an EAD
- Agreed to in advance, allowing a rapid response when disease is detected
- Provides guidance on response options (e.g. stamping out/culling, movement controls, disinfection and disposal, testing procedures
- Response strategies are specific to a disease



Australia's animal welfare arrangements in an EAD response

State and Territory governments

- Primary responsibility for animal welfare in their jurisdiction in an EAD response in partnership with livestock industries

Animal Health Committee

- All chief veterinary officers (Australia and NZ), ACDP, and DAFF
- Considers policies for humane culling in an EAD response

Consultative Committee on Emergency Animal Disease

- Convened during an outbreak, includes industry
- Provides advice to National Biosecurity Committee on technical aspects of a response

National Biosecurity Group

- Decision-making for the response

Destruction, Decontamination, and Disposal Working Group (3D)

- Provides advice to Animal Health Committee on humane culling methods

AUSVETPLAN Operational Manual for the Destruction of Animals

- Manual of techniques for the humane culling of animals (currently being reviewed)
- Drafted by a working group (governments and industry)
- Nationally agreed by Animal Health Committee
- AUSVETPLAN Operational Manual for the Destruction of Animals

Reasons for culling animals for disease control purposes

Should culling be undertaken?

Significant impacts of disease may include:

- Animal health and welfare
- Risks to human health (e.g. zoonoses)
- Risks to wildlife populations
- Socioeconomic
- Trade

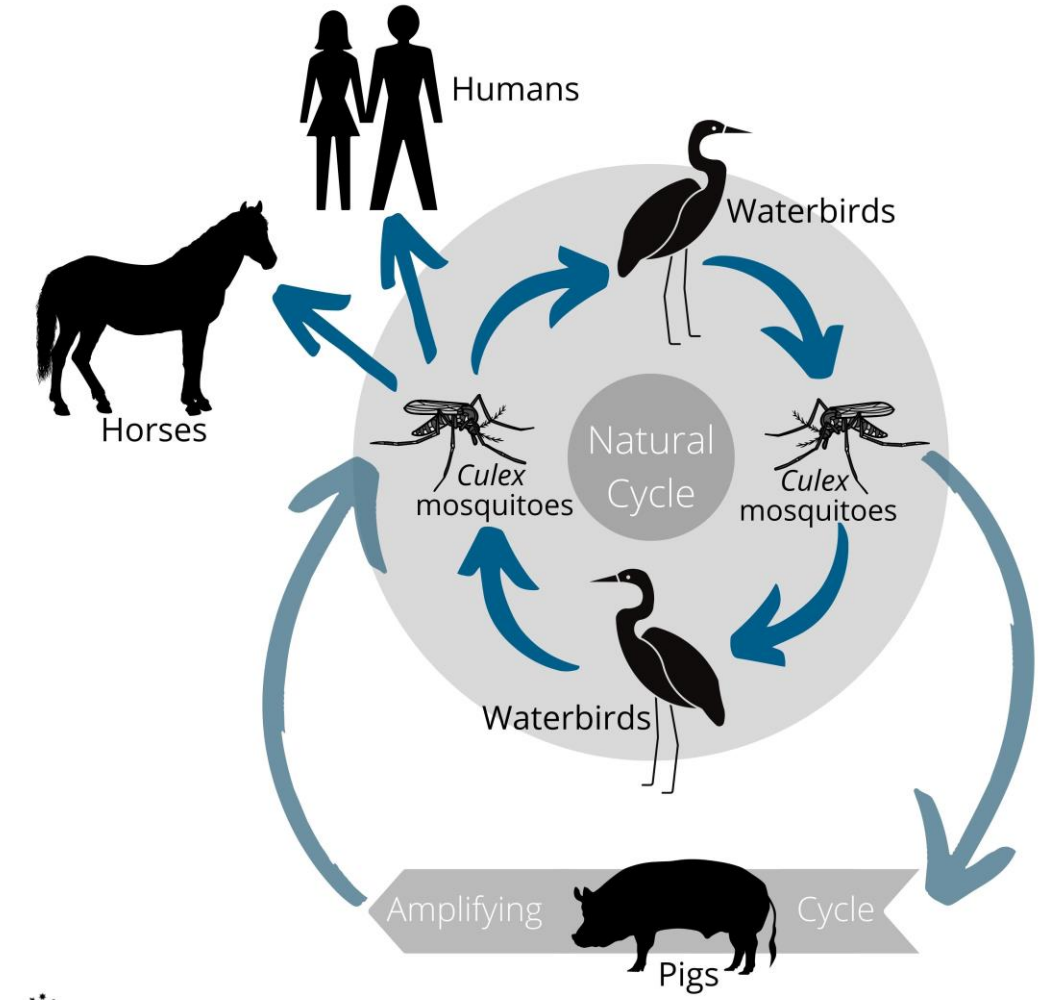
Key questions to ask:

- Will culling be epidemiologically effective?
- Will it be cost-effective?
- Is the disease eradicable?
- What are the benefits and disadvantages of an eradication campaign? (long and short term)
- Can alternative approaches be used?

Should culling be undertaken?

Japanese encephalitis virus (JEV)

- Incursion in 2022
- Mosquito-borne, usually asymptomatic but can cause encephalitis in horses and reproductive losses in pigs
- In rare cases, can affect humans
- National JEV Plan - One Health response across health/agriculture/states/federal
- No culling of affected animals
- Mosquito control, vaccination (people, horses, pigs), surveillance
- Communication (incl. WOAH/WHO/trading partners)



Australian Government
Department of Agriculture, Water and the Environment

Japanese encephalitis disease spread pathway

Animal welfare considerations

Animal welfare considerations

- Handling methods and facilities which minimise stress
- The use of competent, well trained and caring personnel
- Appropriate equipment that is fit for purpose, effective, reliable
- An effective process that induces immediate unconsciousness and insensibility, or immediate death without distress
- Non-recovery from the lethal method chosen
- Confirmation of death before disposal.

Practical considerations

- Enterprise type, location, species
- Resources available (people, equipment)

Challenges for Northern Australia

- Extensive range lands
- Minimal infrastructure (e.g. abattoirs)
- Mustering may be by helicopter
- Movement restrictions may put pressure on stocking density and feed availability
- Culling of animals presents an animal welfare and workplace health and safety challenge

Example of humane culling for disease control– HPAI & LPAI

Highly Pathogenic Avian Influenza

- Victoria, 2020
- HPAI (H7N7) and LPAI (H5N2 and H7N6)
- Culling of affected poultry flocks with WOAH approved methods
- Control and eradication response was successful
- Australia has been free of HPAI since February 2021

Agriculture Victoria (2020). On-farm set-up used for the humane culling of emus.

ABC Ballarat (2020). Adult emus. Source: https://www.abc.net.au/news/2020-08-27

Humane culling of emus - LPAI

- Modified stamping out
- Victorian government sought advice from an experienced emu veterinarian, emu processors, and undertook literature reviews
- Existing emu processing plants were considered
- Mobile electrical stunning device, purpose-built gantry and a pneumatic cervical dislocation device
- Monitored by veterinarians, including confirmation of death
- Captive bolts as a back-up

Future-focused work

Culling of pigs and chickens on-farm

- Logistical and practical challenges
- Limitations on the use of abattoirs due to movement restrictions

Challenge in undertaking research

- Options for mass culling of pigs on farm
- Strong case for improved animal welfare must be presented

Commissioned research into available humane methods

- *An independent animal welfare assessment of mass destruction methods for poultry on-farm*
- *An independent animal welfare assessment of mass destruction methods for pigs on-farm*

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Thank you!

Acknowledgements: Megan Scott, Samantha Chiew (Agriculture Victoria), Emily Orchard-Mills, Kathy Gibson, Guy Weerasinghe, Kelly Widdows (Department of Agriculture, Fisheries and Forestry).

https://www.agriculture.gov.au

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