Dr L Hewitt - Livestock Welfare

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Current and emerging animal welfare requirements in Australian abattoirs

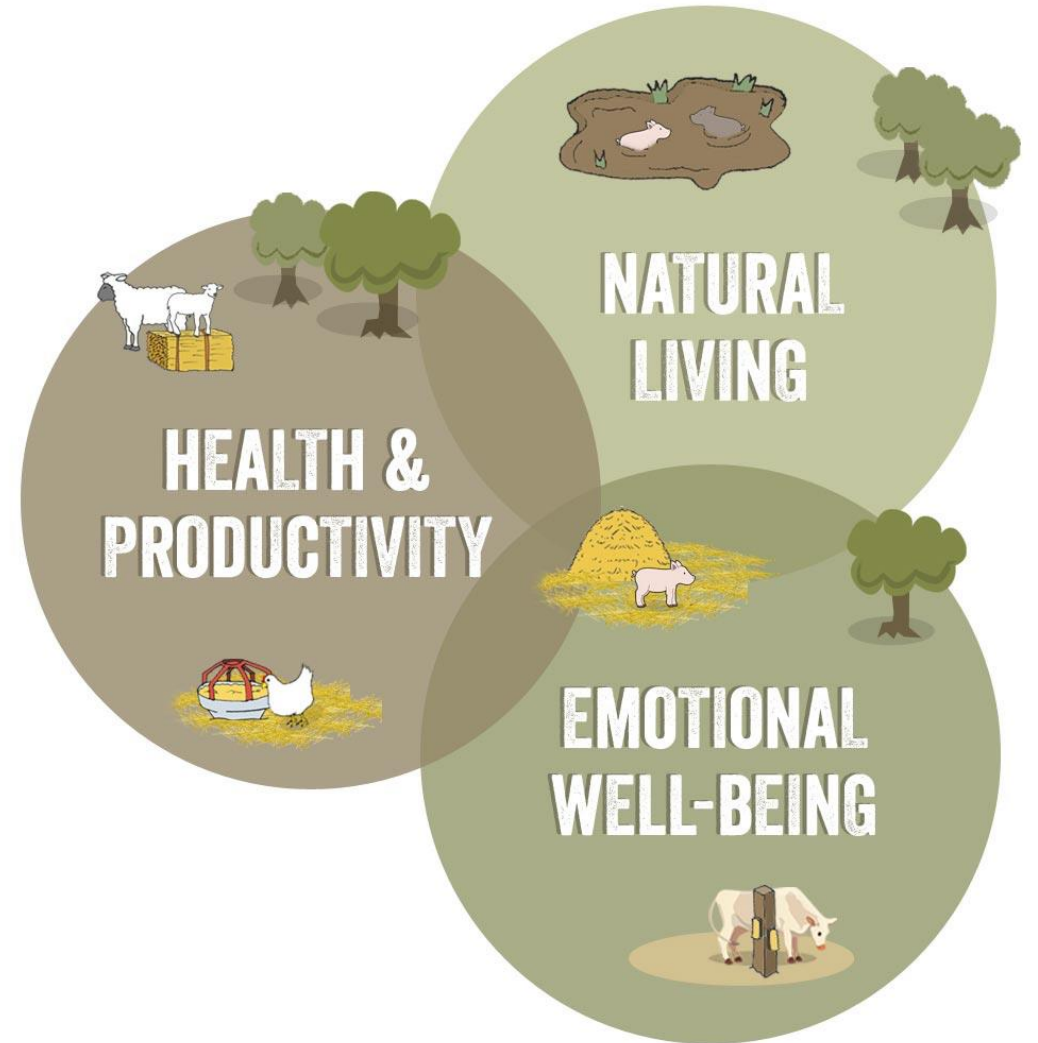Mintrac Conference, 2019

Dr Leisha Hewitt

Topics for discussion

- Changes to animal welfare definitions

- Implementation of animal welfare standards

- The new approach to animal welfare assessment

- Demonstration of effective stunning

Animal welfare state

- General agreement within the scientific community about what broadly represents good animal welfare

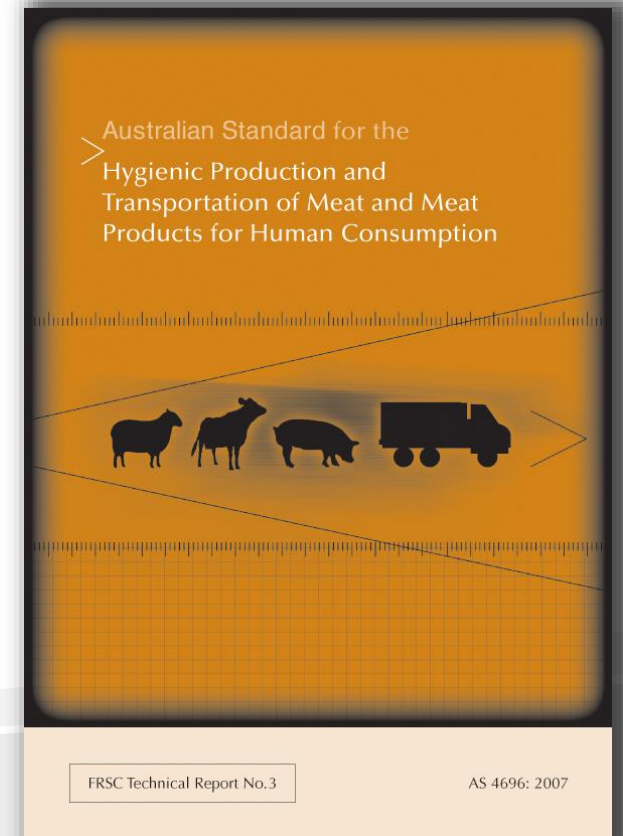- *"Welfare refers to the state of an individual as it attempts to cope with its environment."*

What is animal welfare?

- The animals fitness or physiological state

- The animals stress level

- The animals behaviour

- The animals emotional state

Delivery of good animal welfare

- Animal welfare and cruelty legislation

  - The animal welfare laws

  - The codes of practice

- OIE - World Animal Health Organisation

  - Terrestrial Animal Health Code

- Animal Welfare Standards and Guidelines

- Private animal welfare schemes

Australian Standard for the
Hygienic Production and
Transportation of Meat and Meat
Products for Human Consumption

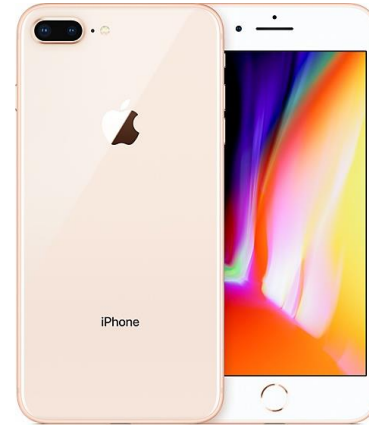FRSC Technical Report No.3   AS 4696: 2007

Animal welfare Standards and Guidelines

- Land transport
  - Regulated
  - Red meat and poultry
  - Handling
- Saleyards
  - Being regulated
- Cattle and sheep
  - Being regulated

- Goats
  - Voluntary and not regulated
- Poultry
  - Public consultation
- Horses
  - Not developed

AUSTRALIAN INDUSTRY WELFARE STANDARDS AND GUIDELINES FOR GOATS

JULY 2016

Animal welfare schemes - Timeline

- 'Any standard developed by an entity outside of government'

- Soil association - 1973

- Egg sales fell 60% - 1988

- 80 - 99% UK production under a scheme (RSPCA, 2014)

EXPOSING AUSTRALIAN SLAUGHTERHOUSE CRUELTY

Photos and videos from the inside

- GET THE FACTS
- WHAT'S WRONG WITH SLAUGHTER?
- TAKE A STAND
- REPORT CRUELTY
- DONATE

Driving the growth

- Eurobarometer (2016)
  - 82% - Welfare needs to be better protected
  - 62% - Imported products meet EU standards
- Animal welfare rated top - Higher than fair price for producers
- Retailers continued to drive the animal welfare agenda
- Less animal welfare regulation
- Private schemes to demonstrate compliance - third party
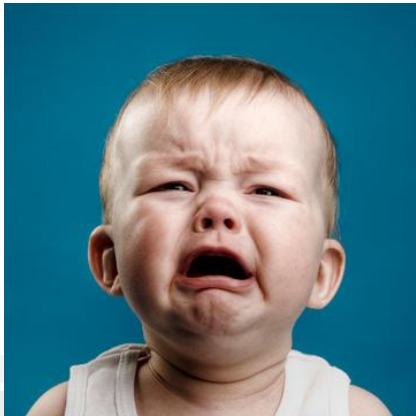
Do they deliver good welfare?

- Proliferation of animal welfare standards

- Focus was resources rather than animal-based measures
  - Facilities and management input

- No explicit measurement of subsequent implications for animal welfare
  - Health
  - Behaviour

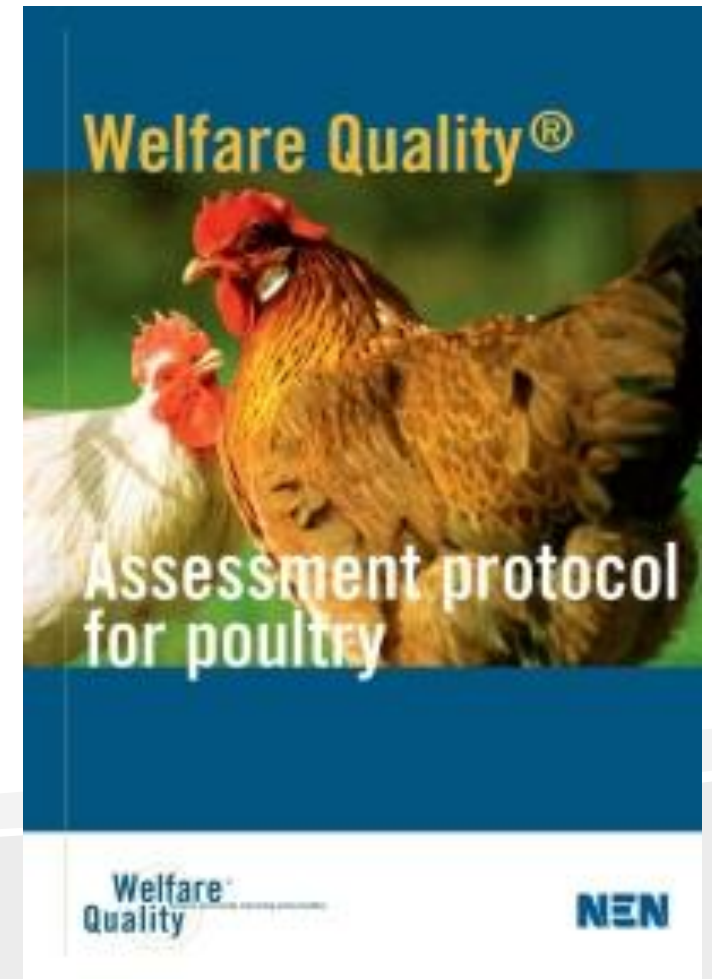| Higher on FF farms |
| --- |
| Swollen hock |
| Thick hairy coat |
| No. of lame cows |
| Ulcerated hock |
| Poor claw conformation |
| Rising restriction |
| Lameness cases (records) |
| Milk fever cases |

Animal welfare science

- Very careful about extrapolating human experience to possible conscious experiences in other species

- Defined objectively in terms of animal health and what animals want

- Often defines welfare as 'what the animal feels'

Animal welfare assessment

- Animal-based measures increasing importance
- Contemporary animal welfare standards
  - Outcome-based
  - Flexible
  - Evidence that good welfare achieved
- Principles of good welfare
  - **Good housing**
  - **Good feeding**
  - **Good health**
  - **Appropriate behaviour**

Achieving good welfare in the abattoir

- Good animal welfare requires:
  - Humane handling
  - Effective stunning
  - Effective slaughter
- More emphasis on
  - Understanding the system
  - Competency - Animal Welfare Officer
  - Demonstration that welfare-outcomes achieved
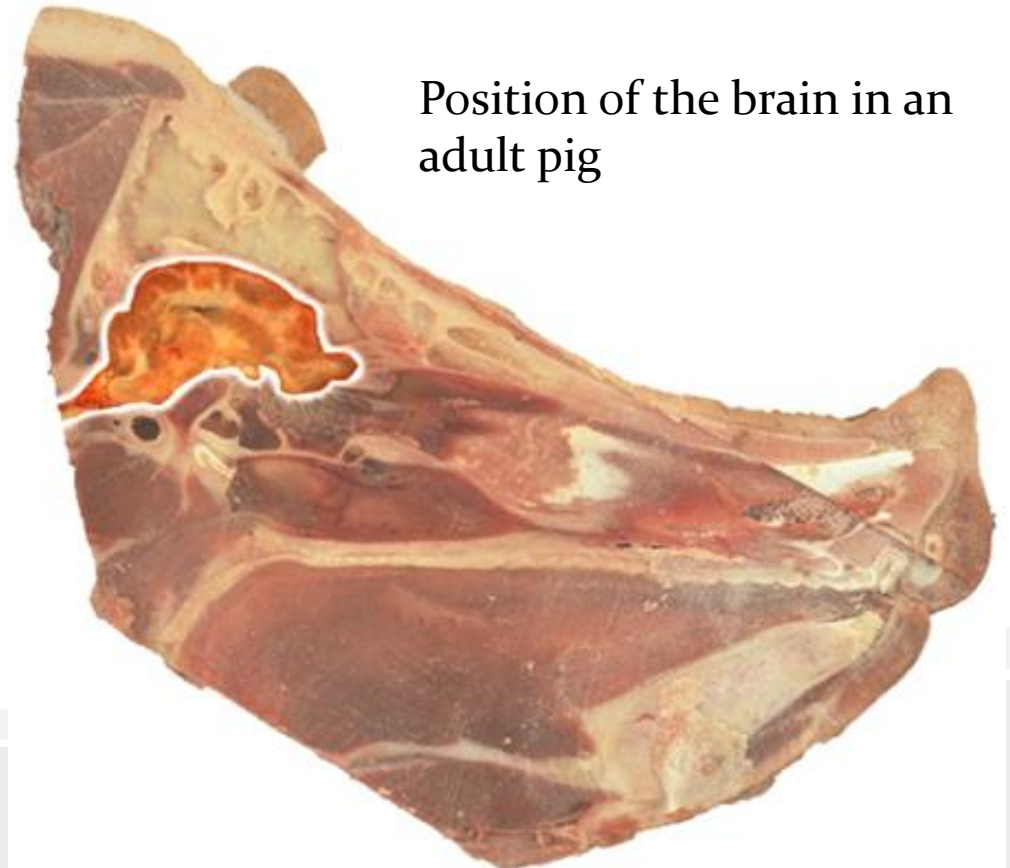
Non-penetrative percussive stunner

- Non-penetrative - widely used in Australia for cattle - Halal

- Non-penetrative not permitted in EU >10kg

What is stunning?

- Consciousness is individual awareness. Feeling pain and distress requires the animal to be **conscious**

- An inactive brain is **unconsciousness.** If the brain is inactive, the animal <u>can not feel pain</u> and <u>distress</u>

- **Stunning** produces unconsciousness

- **Death** occurs when the brain stem is irreversibly inactive
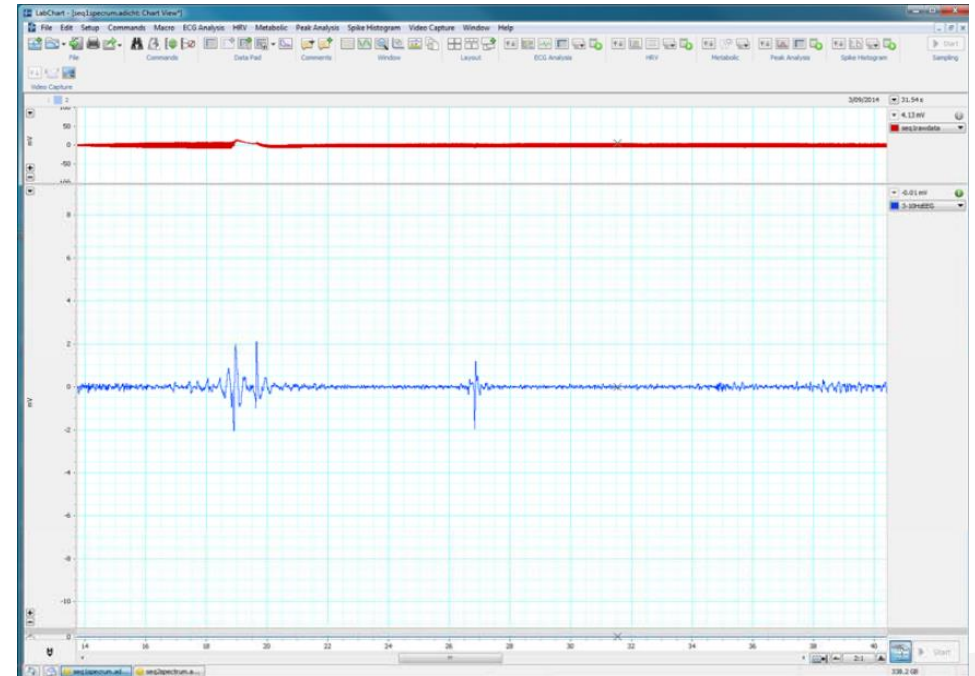

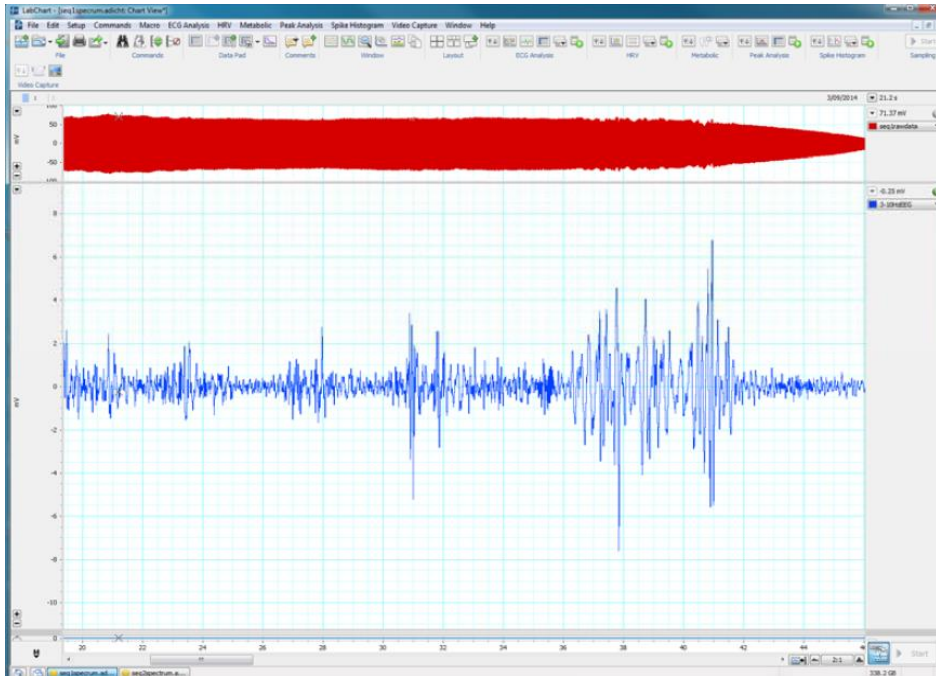Position of the brain in an adult pig

Mechanical stunning - principles

- Application of a percussive blow

- Transfer of sufficient kinetic energy

- Attempt to induce cerebral concussion

- Disruption of normal neural function
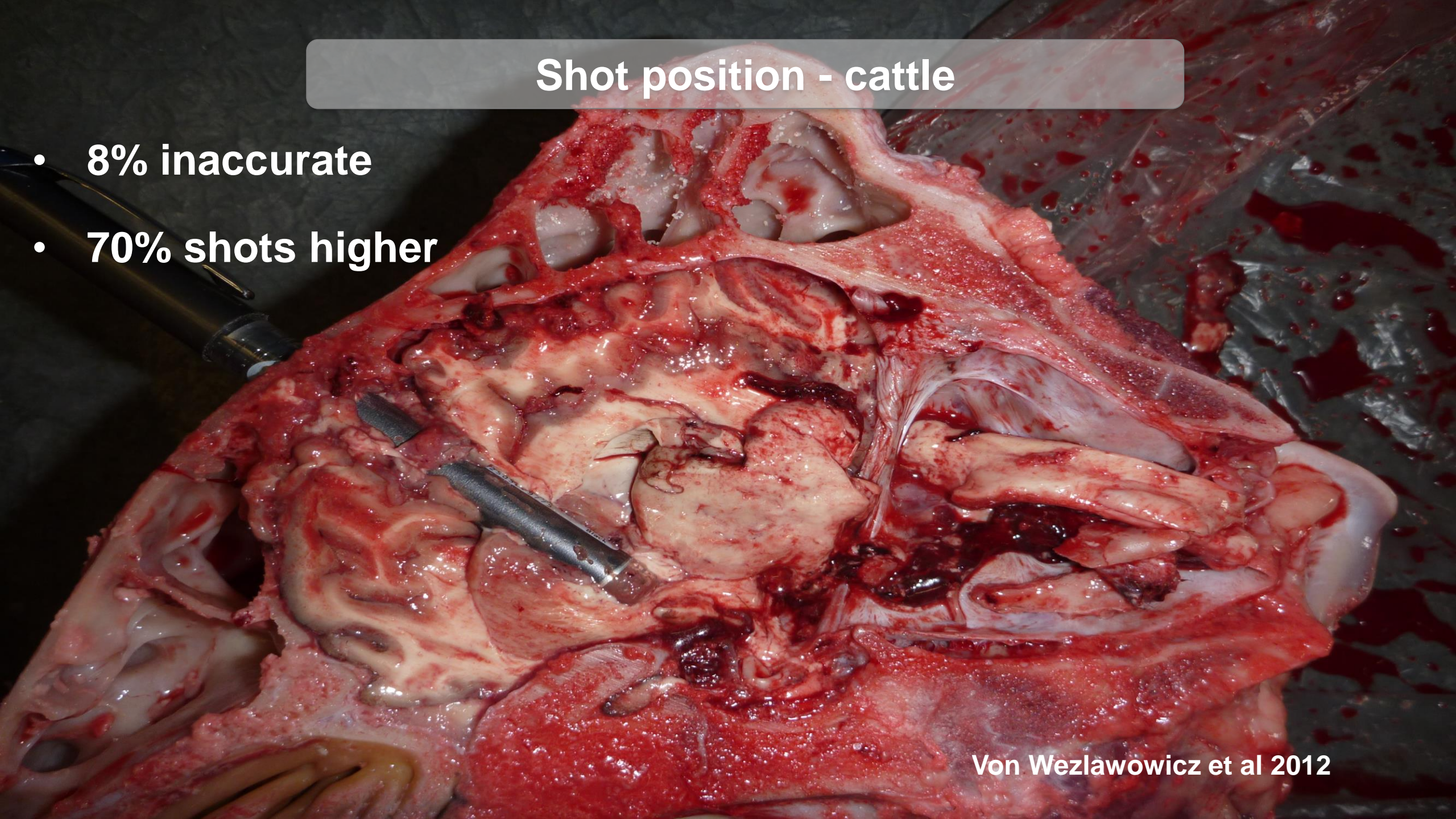
- Change in EEG

- Abolishes evoked responses

EEG - Evaluation of stunning methods

Shot position - cattle
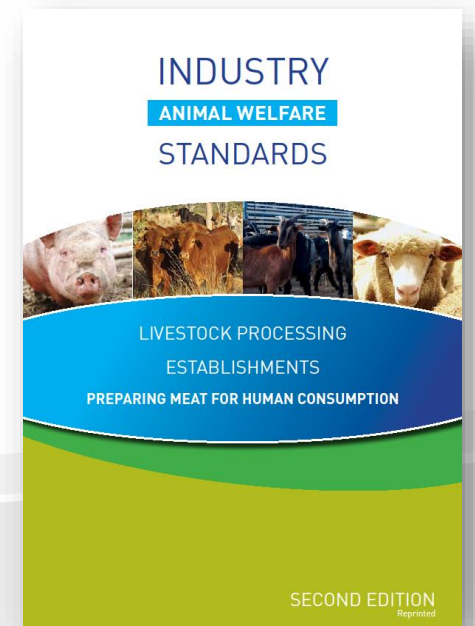
- 8% inaccurate

- 70% shots higher

Von Wezlawowicz et al 2012
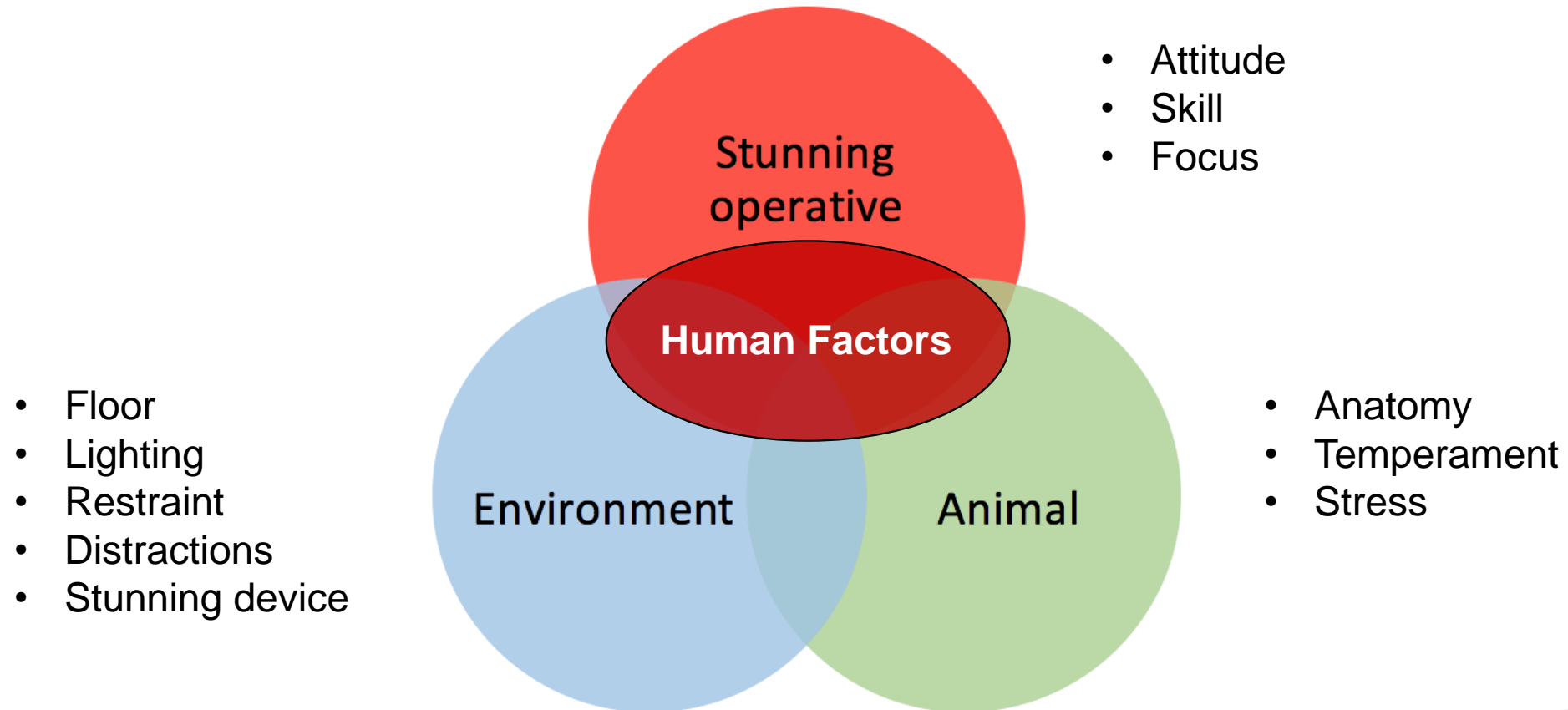
Industry findings

- 2014 - 2015 industry audits

- 2437 cattle shot with non-penetrative device
  - 96.4% stunned effectively

- 670 cattle shot with a penetrative captive bolt
  - 99.6% stunned effectively

- Auditor collected information on cause

INDUSTRY
ANIMAL WELFARE
STANDARDS

LIVESTOCK PROCESSING
ESTABLISHMENTS
PREPARING MEAT FOR HUMAN CONSUMPTION

SECOND EDITION
Reprinted

Main challenges for effective stunning

- Attitude
- Skill
- Focus

- Floor
- Lighting
- Restraint
- Distractions
- Stunning device

- Anatomy
- Temperament
- Stress

Stunning operative

Human Factors

Environment

Animal

Attitude, skill and experience

- Attitude towards the task and the animal

- Complex operant task

- Practice

Table 01 Percentage of cattle accurately shot by each stunning operative in the study (related to task experience) Adapted from - (Atkinson et al., 2013)

Operator	Accurate shots (%)	Employment period
1	90	5 years
2	94	5 years
3	81	3 months
4	90	3 years
5	95	15 years

Monitoring effective stunning and slaughter

- Handling and restraint

- Unconsciousness and death

- Physical signs in the animal - Absence of brain-stem reflexes

- Position on the slaughter line?

- Number of animals checked

- Data analysis and corrective action

Future issues

- Emergency planning

- Casualty euthanasia

- Novel stunning and slaughter methods

- Mobile abattoirs

- Farming of exotic species (e.g. buffalo, crocodile, kangaroo)

- CCTV requirements

- Remote monitoring of supply chains

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