



# **OIE Regional seminar on animal welfare during long distance transport**

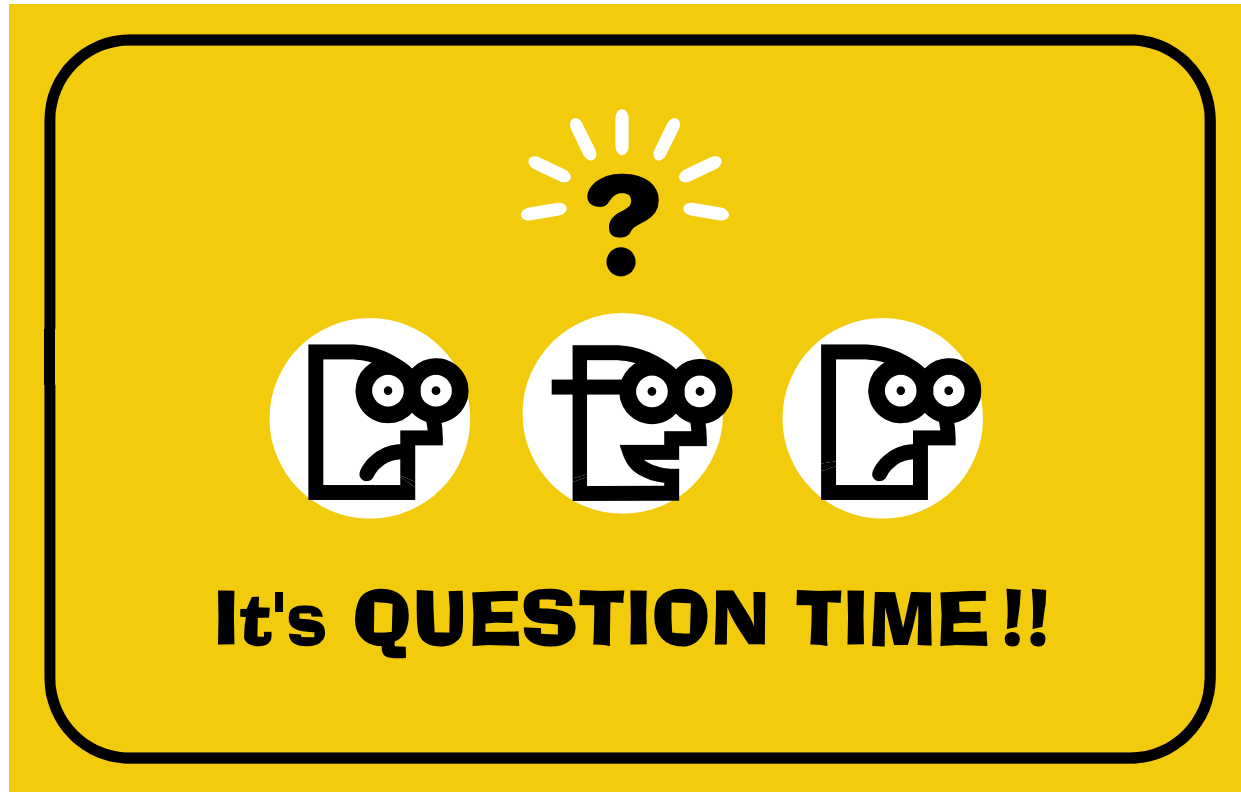
(Chapter 7.3 of the OIE terrestrial Animal Health Code)

13 - 15 March 2018, Chisinau, Moldova

Tomasz Grudnik  
OIE Sub-regional Representation in Brussels

## **2. BEHAVIOUR OF ANIMALS**

# WHY IS KNOWLEDGE OF ANIMAL BEHAVIOUR IMPORTANT?



# WHY IS KNOWLEDGE OF ANIMAL BEHAVIOUR IMPORTANT

- Recognise early signs of stress and distress
- Recognise how animal reacts to features of the environment and use that in:
  - Handling
  - Design of premises
  - Loading animals into lorry compartments
  - Regular check-ups during the transport

## Article 7.3.2.1 OIE TAHC



**Animal handlers should be experienced and competent in handling and moving farm livestock, and understand the behaviour patterns of animals and the underlying principles necessary to carry out their tasks...**

# ANIMAL BEHAVIOUR

- ***Basic instincts or innate behaviour:*** These are built-in or pre-programmed responses many of which are unique to a species
- ***Learned behaviour:*** Where the animal's response is influenced by its past experiences/memory
- .....
- ***Sensory modalities:*** Behaviour influenced by sensory limitations

# BASIC INSTINCTS

## CATTLE, ARE ANIMALS LIVING IN GROUPS





# CATTLE FORM SOCIAL GROUPS FROM YOUNG AGE







Source WSPA Steps



# PIGS ARE GREGARIOUS ANIMALS (VIDEO)



# HANDLING ONE PIG (VIDEO)



# VIDEO – HANDLING ONE BULL



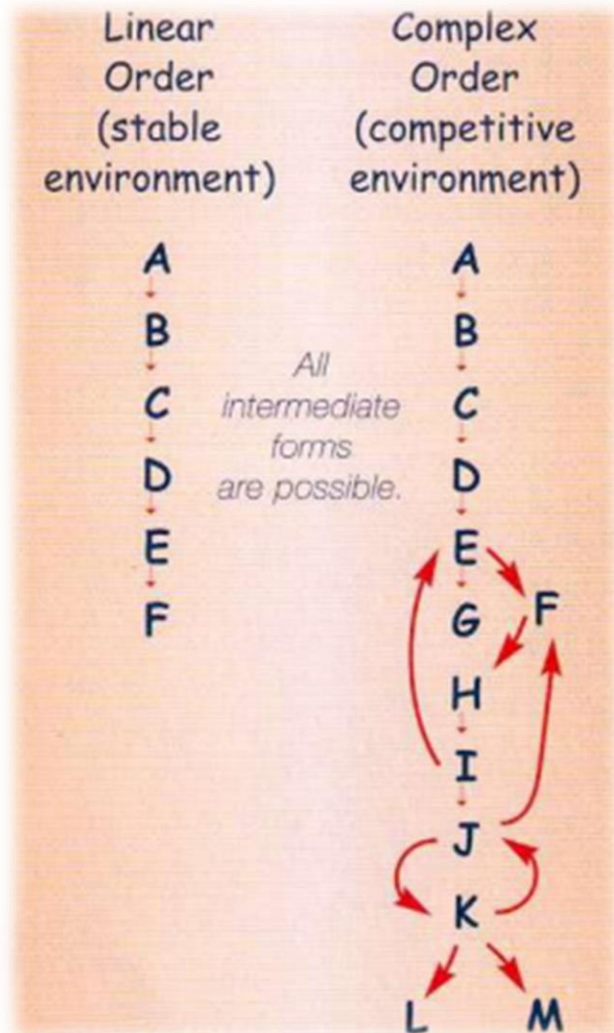
Source WSPA Steps

# FLOCKING AND FOLLOWING INSTINCTS

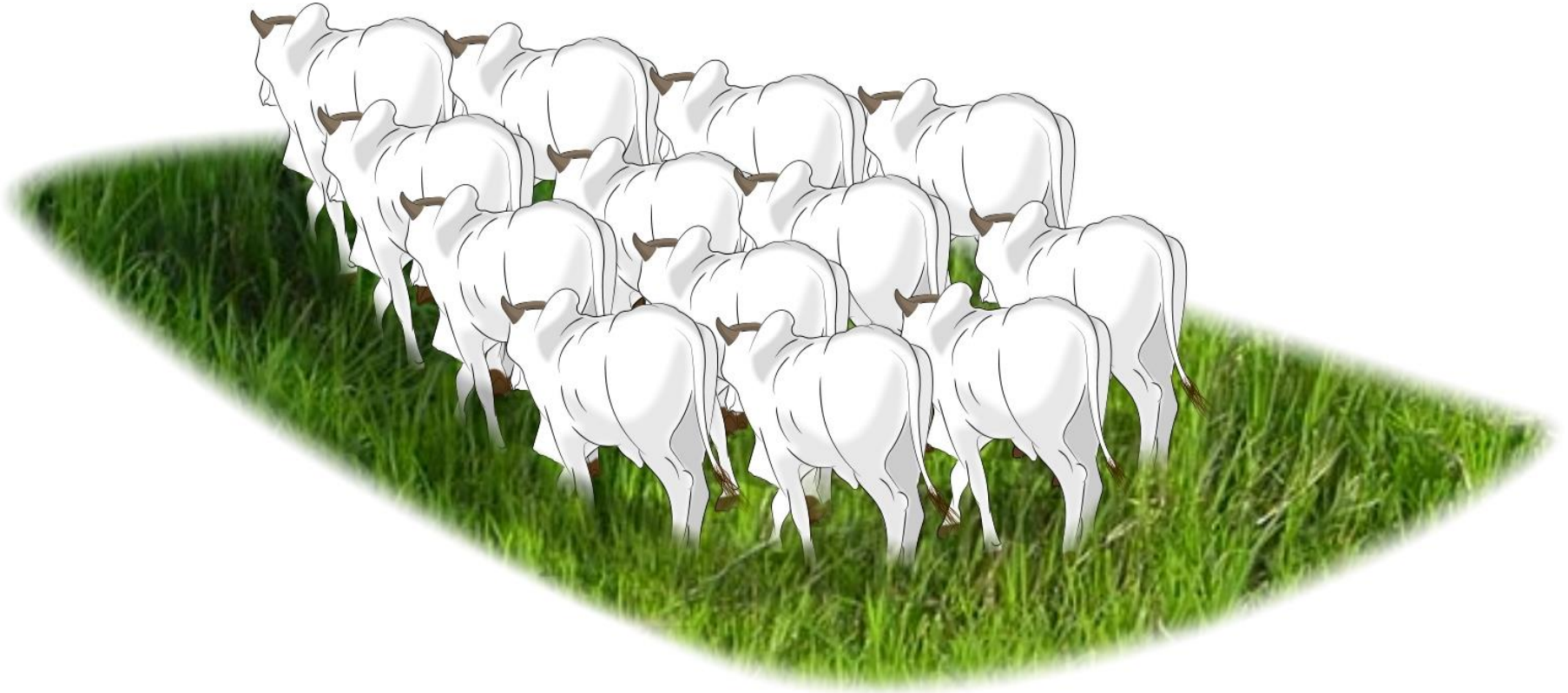




# GROUP HIERARCHY



# LEADERS AND DOMINANT ANIMALS



# MIXING OF ANIMALS





# СМЕШИВАНИЕ ЖИВОТНЫХ





# MIXING OF ANIMALS ON SMALL AREA



# MIXING OF UNKNOWN ANIMALS



The top-ranking pig can be removed from the group for up to 25 days and on return will still retain its position, but only if the social group it left was stable. A pig at the bottom of the hierarchy is treated as a stranger and attacked when returned after three days .



# MIXING PIGS



# BASIC INSTINCTS

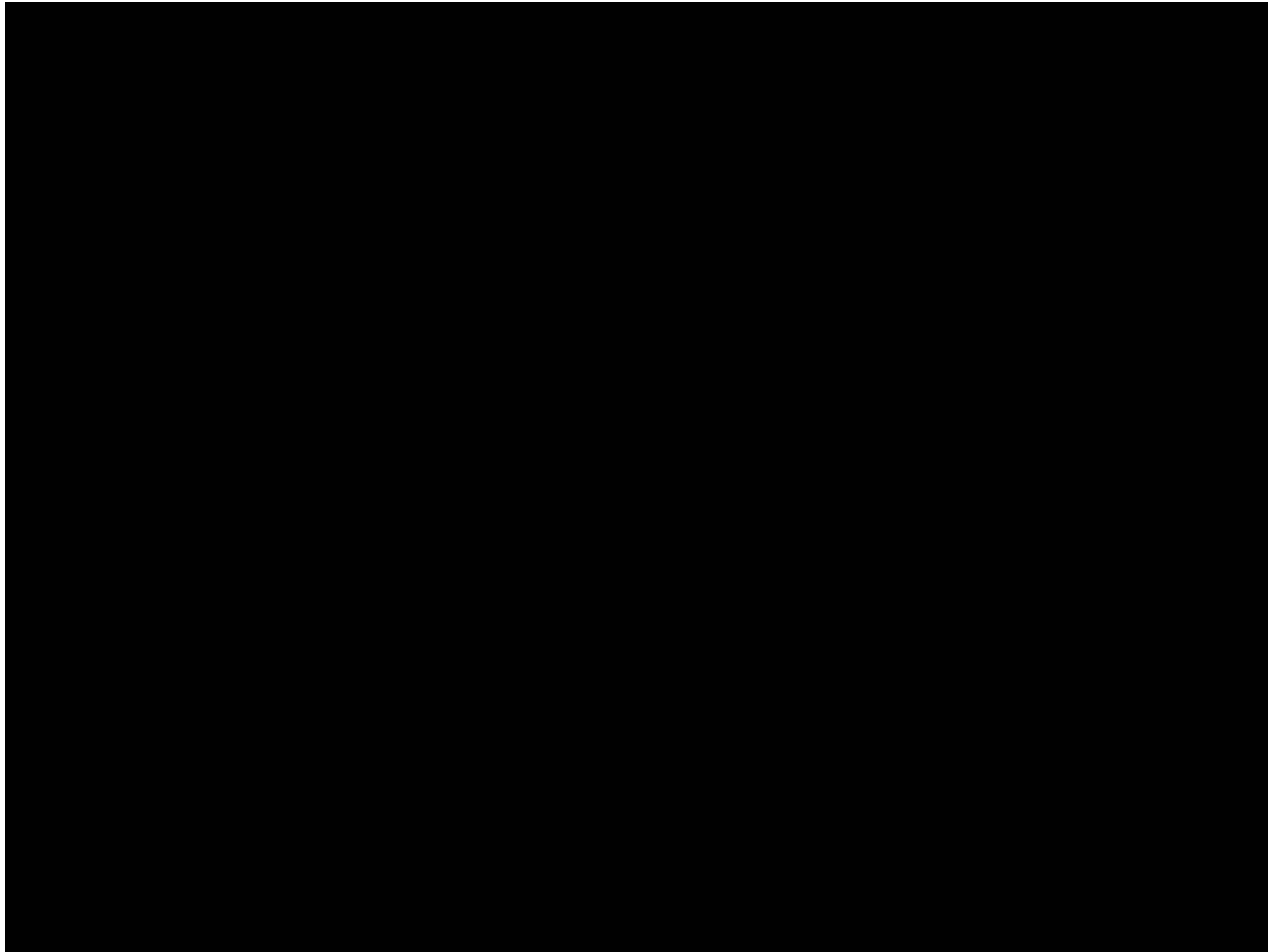
## VIDEO – SOCIAL HIERARCHY



Source WSPA Steps programme



# PIGS BEHAVIOUR – BASIC INSTINCTS (VIDEO)



# KEY SENSES



Smell



Hearing

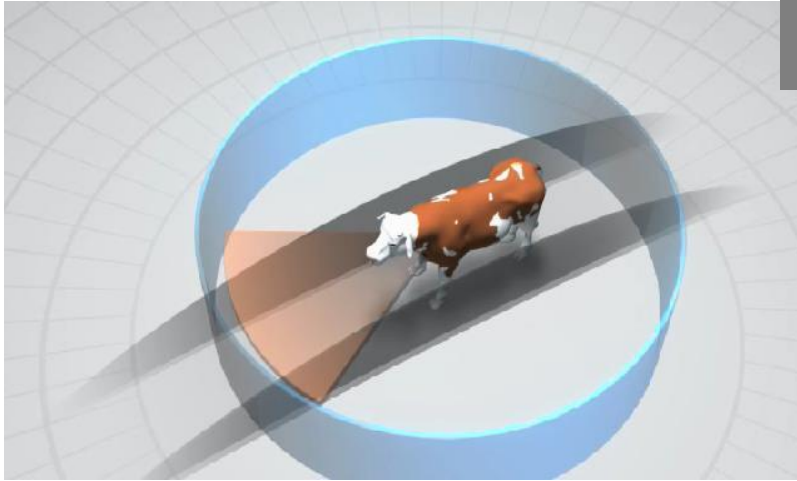


Vision

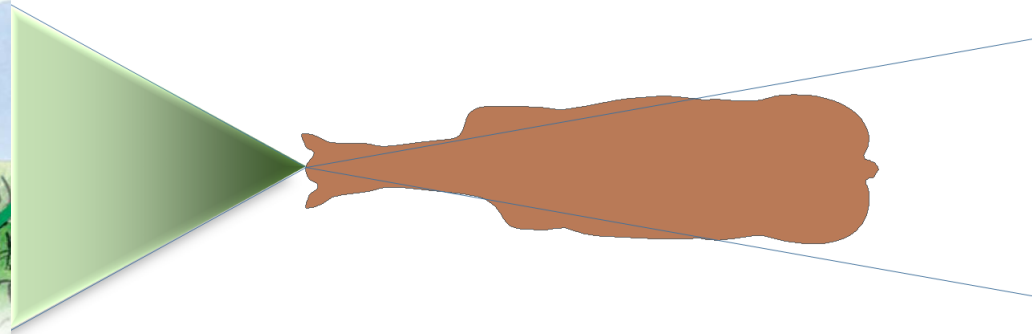
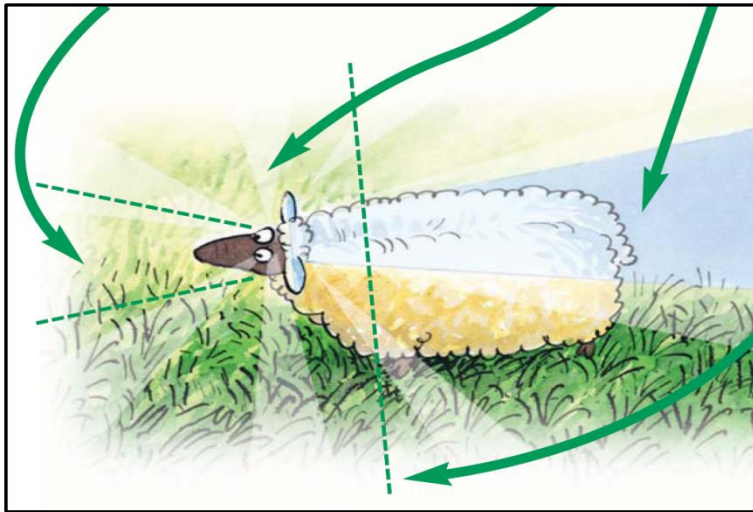
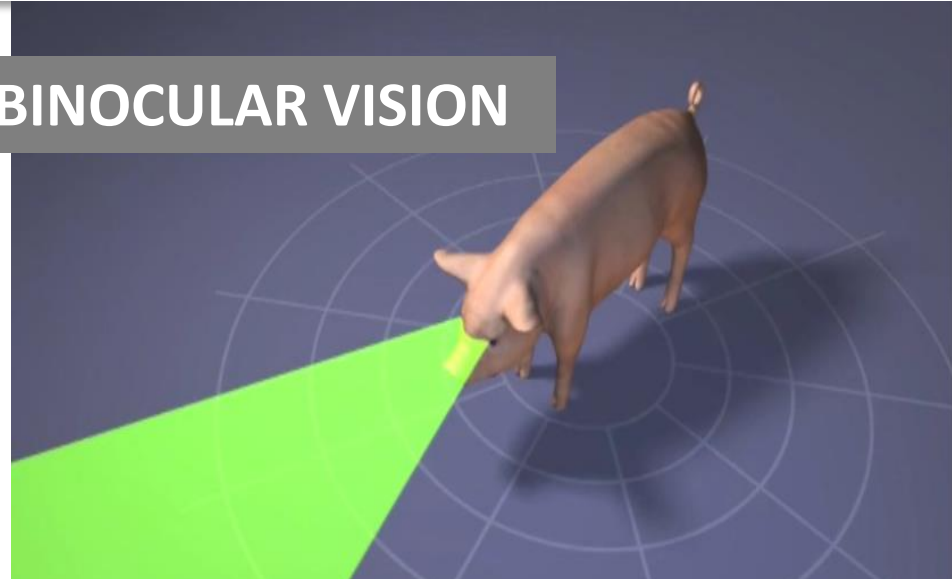
# VISION

- Poor depth
- Binocular vision versus monocular
- Dichromatic vision

# BINOCULAR VISION



**BINOCULAR VISION**





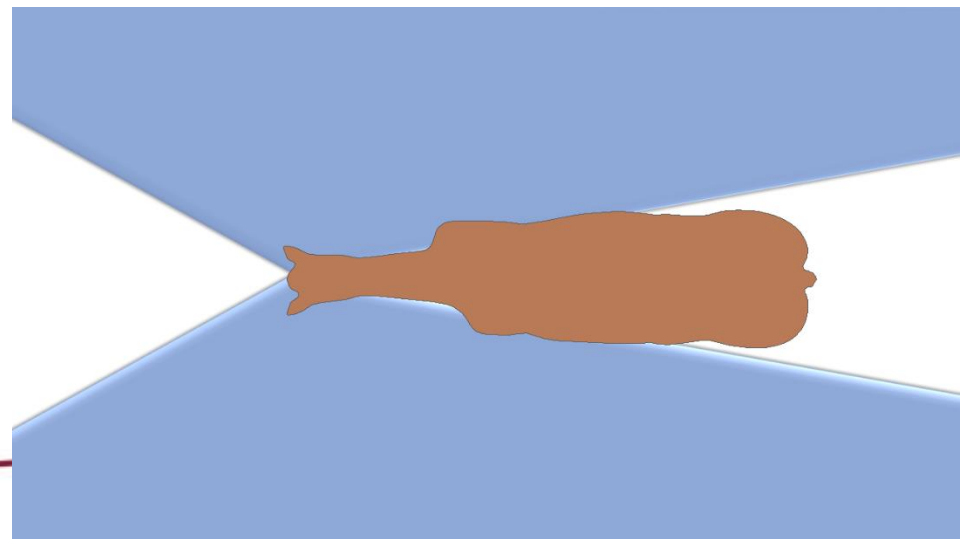
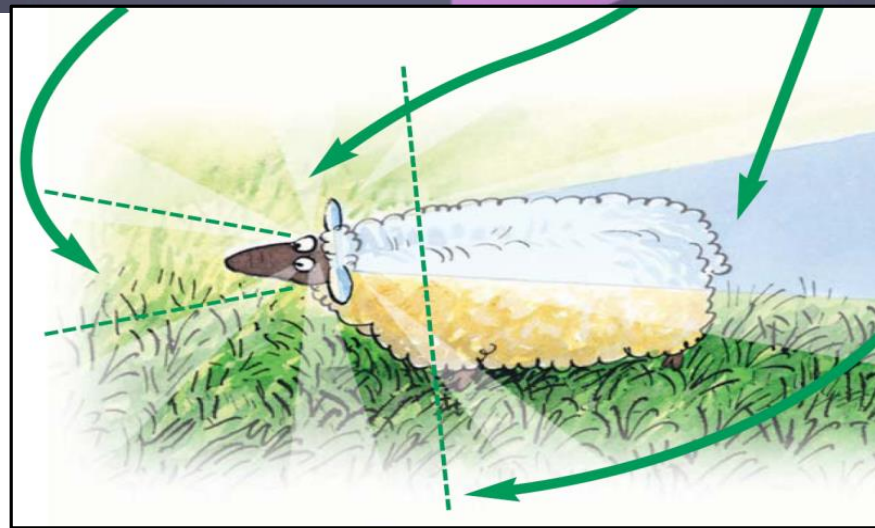
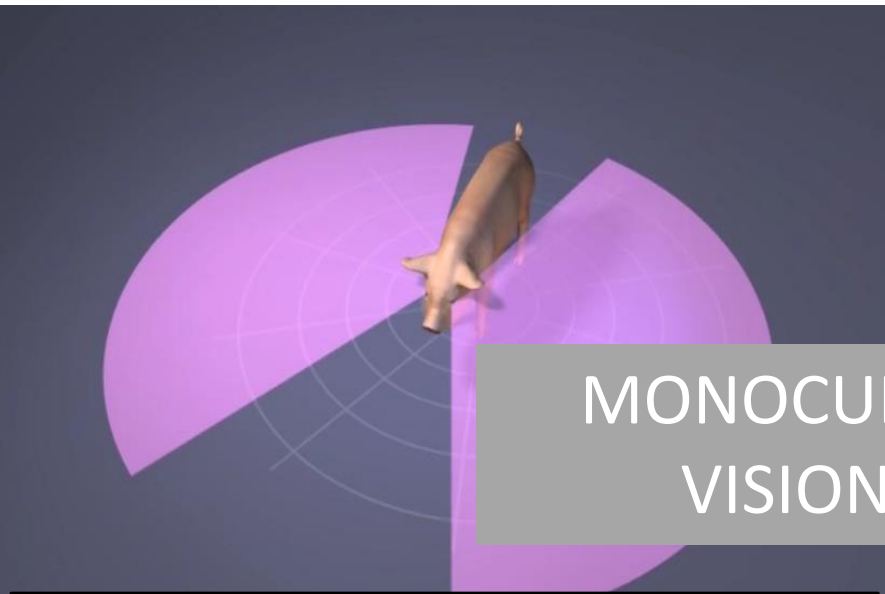
# BINOCULAR VISION



# VIDEO – BINOCULAR VISION

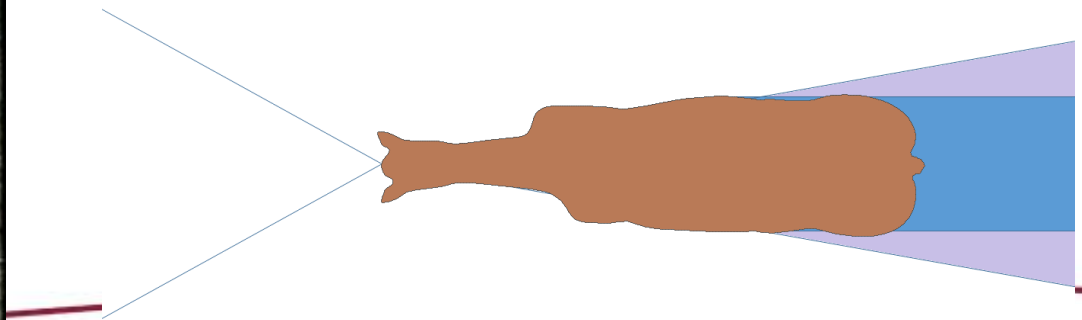
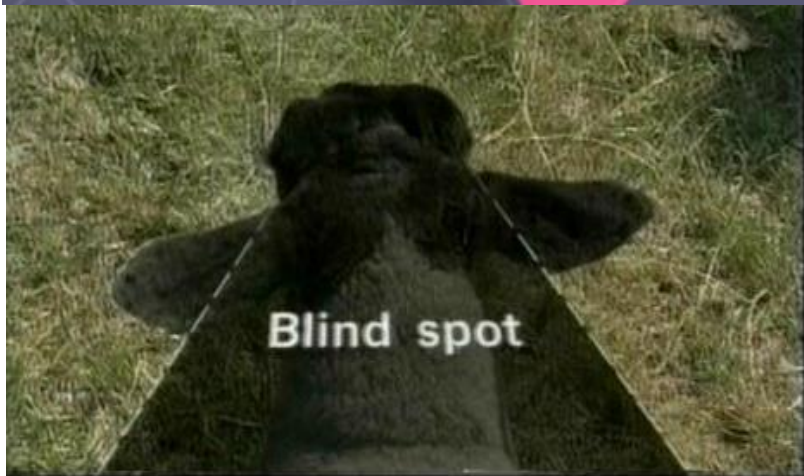
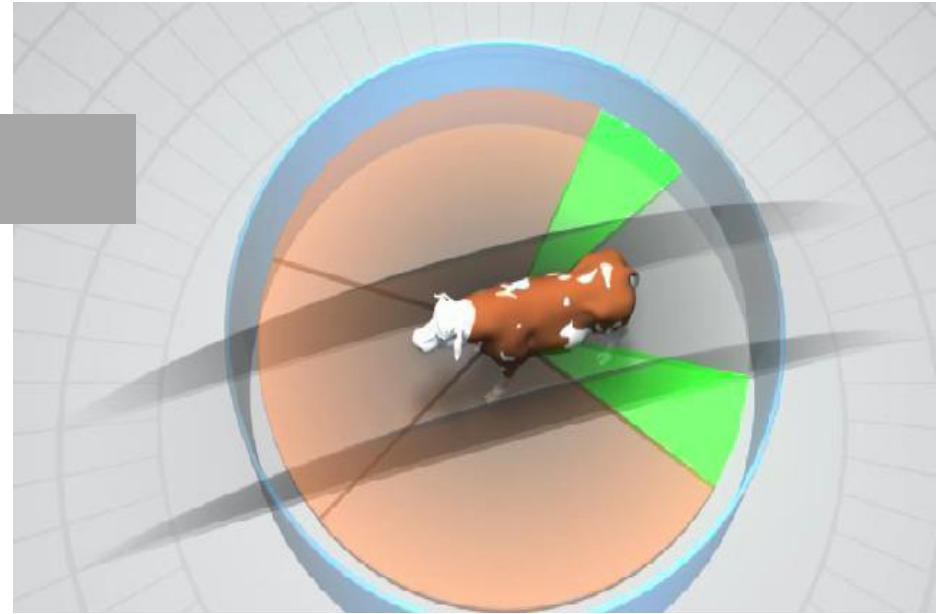
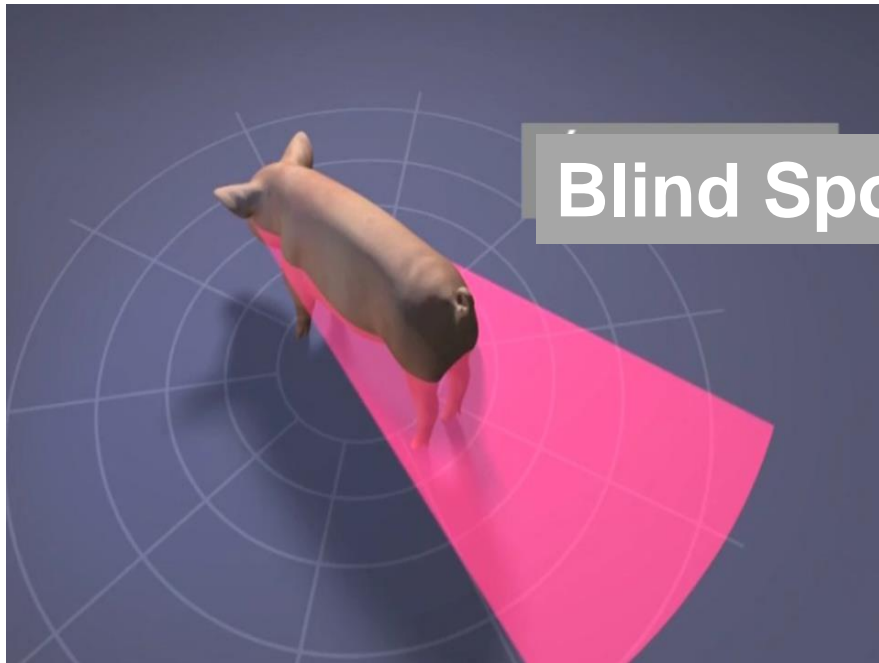


# MONOCULAR VISION





# BLIND SPOT





# DICHROMATIC VISION CONTRASTS, DARK VERSUS LIGHT



# DISTRACTIONS (VIDEO)



# DISTRACTIONS

## Article 7.3.2.2

- **Visual**

- Contrasts
- Moving objects and people
- Changes in structures
- Dead ends
- Dark areas
- Drainages and other objects

- **Sounds**

- High frequency sounds

- **Smell**

- Other animals, unusual odours

- **Physical/Touch**

- Wind blow

# HEARING

32 Hz Cattle

37 kHz

125 Hz Sheep

42 kHz

20 Hz Human 20 kHz





# SMELL



# OLFACTORY SIGNALS

- Recognition of members of the group
- Blood smell insignificant to cattle and sheep, may attract pigs
- Stress pheromones in urine, may distract following animals
- Chemicals, machinery strange odours....

# VIDEO - SENSORY MODALITIES



Source WSPA Steps



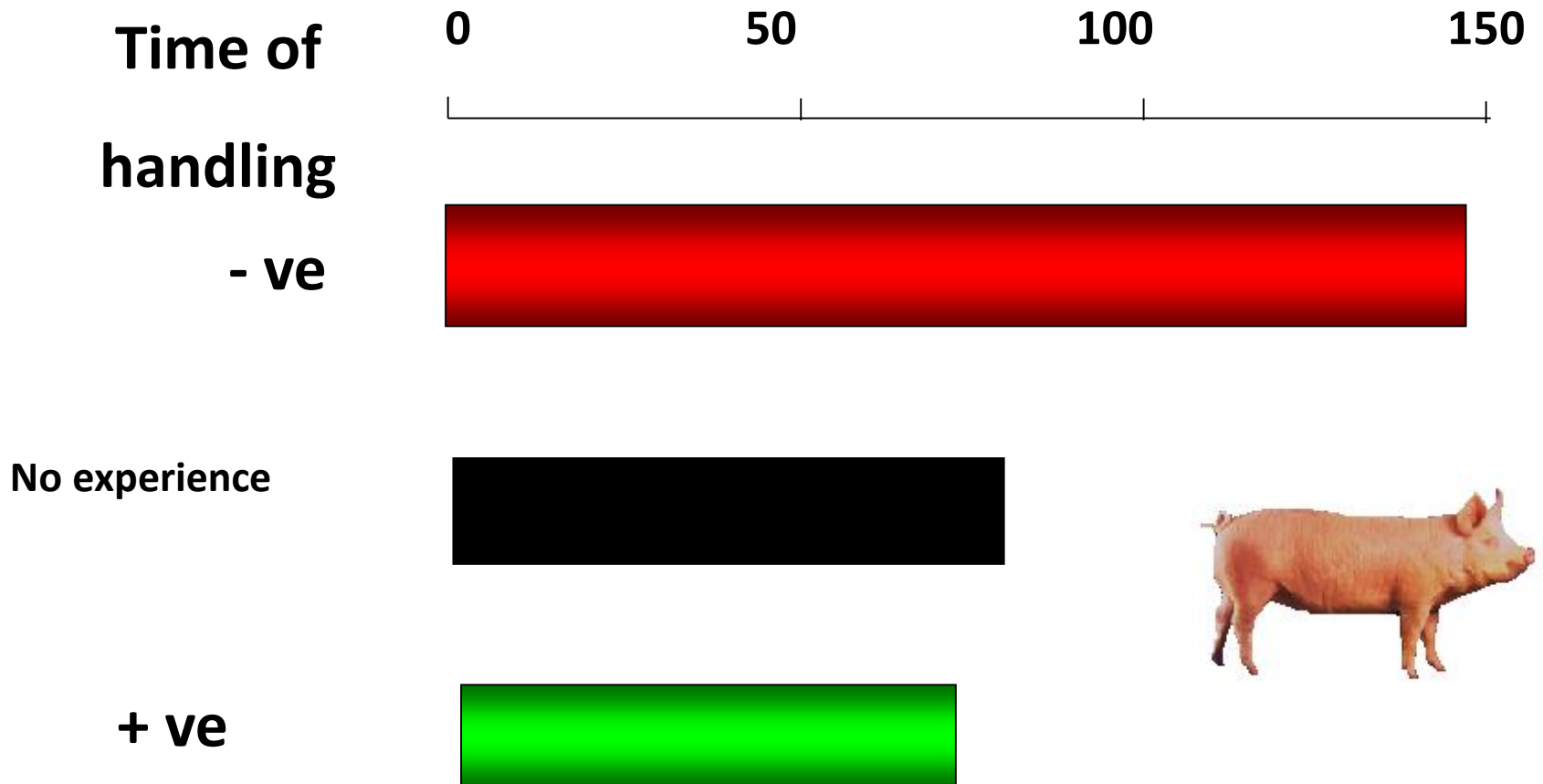
# PIGS SENSORY BEHAVIOUR - VIDEO



# LEARNED BEHAVIOUR - EXPERIENCE



# LEARNED BEHAVIOUR - EXPERIENCE



*(Gonyou et al., 1986)*

# HOW DO CATTLE SEE US?

(Sheridan 2012)

ANIMAL'S PRIOR EXPERIENCE OF PEOPLE	PERSPECTIVE	ANIMAL'S STATE OF MIND	
		If 'calm' nature	If 'flighty' nature or cow with calf
No experience	possible predator	alert	very alert
Some experience (+ or -)	possible predator	alert to very alert	extremely alert
Extensive experience			
• Group 1 – mostly +ve	possible friend	alert and inquisitive	alert and touchy
• Group 2 - mostly -ve	probable threat	extremely alert and pre-stressed	<b>extremely alert and aggressive</b>

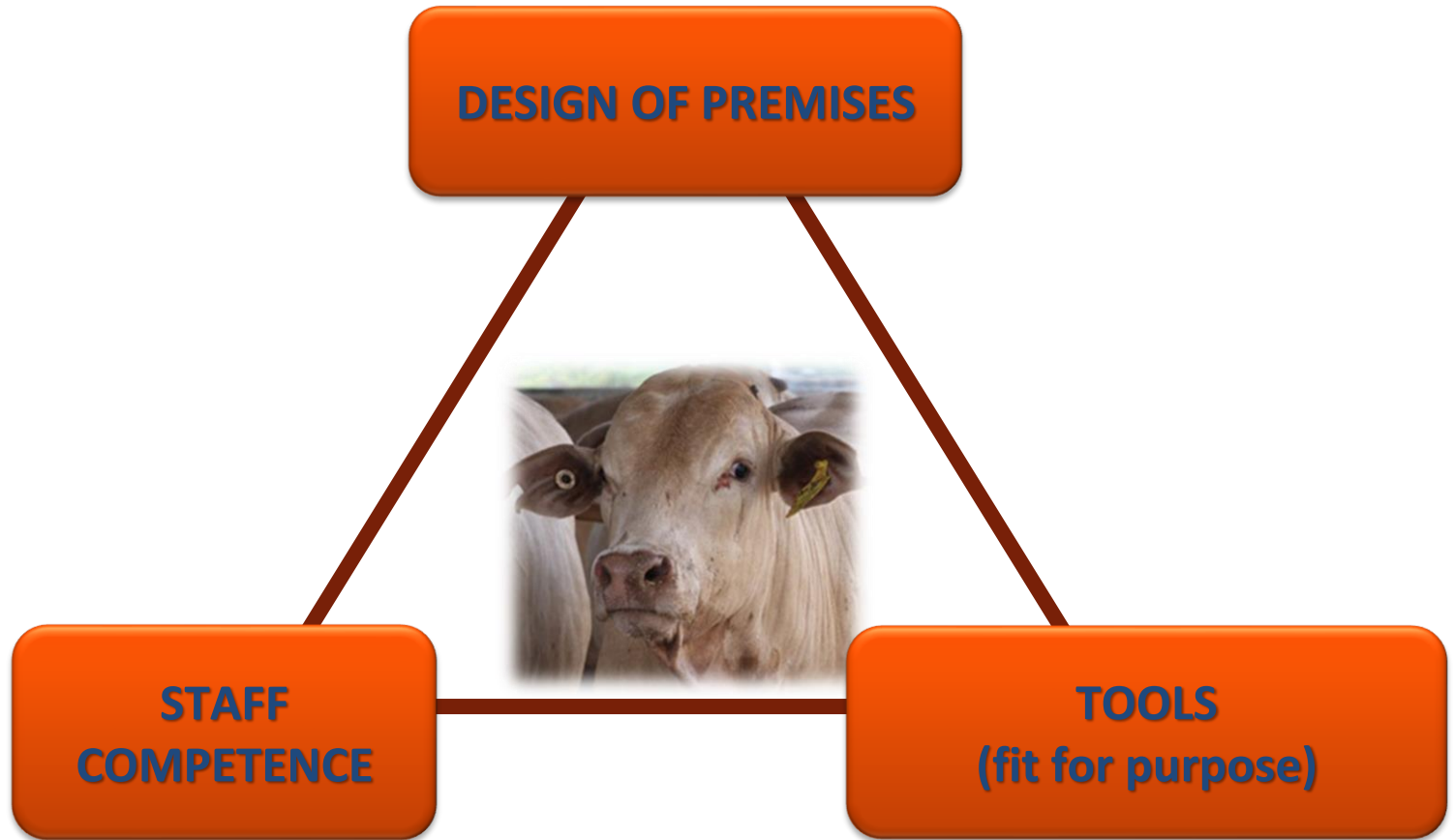


# VIDEO - LEARNED BEHAVIOUR



Source WSPA Steps

# KEY COMPONENTS OF ANIMAL HANDLING



# REMEMBER

- Why understanding of behaviour is important
- Instinctive behaviour
- Hierarchy and mixing of unknown animals
- Sensory modalities
- Monocular, binocular vision and blind spot
- Distractions
- Hearing and vocalisation
- Smell and olfactory stimuli
- Learned behaviour

*Thank you for your attention*



**WORLD ORGANISATION FOR ANIMAL HEALTH**  
*Protecting animals, preserving our future*

