OIE Animal Welfare and Pig Production Systems Standards

Criteria and measurables used to ensure good outcomes for implementation

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Outline of the presentation

I. Chapter 7.13.

CHAPTER 7.13.

ANIMAL WELFARE
AND PIG PRODUCTION SYSTEMS

Article 7.13.1.

Definitions

'Commercial pig production systems' means those systems in which the purpose of the operation includes some or all of the following: breeding, rearing and management of pigs *(Sus scrofa)* for the production and sale of pigs or pig *meat*.

Scope:

This chapter addresses the welfare aspects of commercial domestic pig production systems. Captive wild pigs are not considered.

Comercial pig production systems:

1. Indoor systems
2. Outdoor systems
3. Combination systems

II. Criteria for the welfare of pigs
(animal-based)

#1. Behaviour
#2. Morbidity rates
#3. Mortality and culling rates
#4. Changes in body weight and body condition
#5. Reproductive efficiency
#6. Physical appearance
#7. Handling response
#8. Lameness
#9. Complications from common procedures

#1. Behaviour

❑ **Indicators of <u>good animal welfare and health</u>:**

✓ **Play behaviour**

✓ **Specific vocalisations**

e.g. video play behaviour - nursery

#1. Behaviour

❑ **Indicators of <u>animal welfare and health problem</u>:**
- ✓ Sudden immobility
- ✓ Escape attempts
- ✓ Changes in feed and water intake
- ✓ Altered locomotory behaviour or posture
- ✓ Altered lying time, postures and patterns
- ✓ Altered respiratory rate and panting
- ✓ Coughing, shivering and huddling
- ✓ High-pitched vocalisations and increased call rate
- ✓ Increased agonistic behaviour (including agression)
- ✓ Stereotypic, apathetic or other abnormal behaviours

#1. Behaviour (stereotypy)

❑ **Definition:** 'stereotypy' is a repetitive behaviour induced by frustration, repeated attempts to cope or central nervous system dysfunction.

❑ **Stereotypies commonly observed: sham chewing, stone chewing, tongue rolling, teeth grinding, bar biting and floor licking.**

e.g. video stereotypy / sham chewing - gestation

#2. Morbidity rates

❑ **Rates of infectious and metabolic diseases, lameness, peripartum and post-procedural complications, injury and other forms of morbidity, above recognised thresholds, may be direct or indirect indicators of *animal welfare* at the *herd* level.**

#2. Morbidity rates

❑ Understanding the aetiology of the disease or syndrome is important for detecting potential *animal welfare* problems.

tail biting
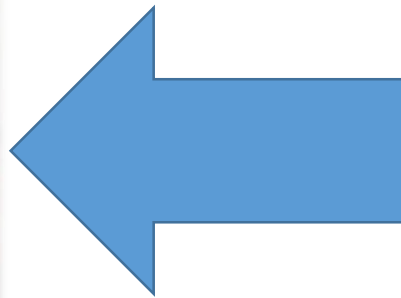
resources limited

#2. Morbidity rates

❑ **Mastitis and metritis, leg and hoof problems, shoulder ulcers in sows, skin lesions, respiratory and digestive diseases, and reproductive diseases are also particularly important animal health problems for pigs.**

leg problems

shoulder ulcers

skin lesions

reproductive diseases

digestive diseases

#2. Morbidity rates

❑ Scoring systems, such as for body condition, lameness and injuries, and information gathered at the *slaugtherhouse/abattoir*, can provide additional information.

#2. Morbidity rates

❑ **Both clinical and *post mortem* pathologic examination should be utilised as indicators of disease, injuries and other problems that may compromise *animal welfare*.**

Morés et al, (2015)

lungs (hepatization)

Ourofinosaudeanimal.com

liver (white spots)

Pereira et al, (2018)
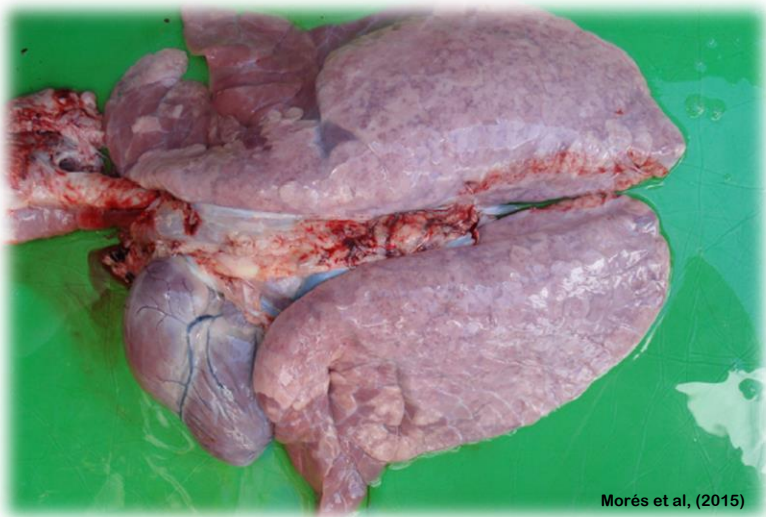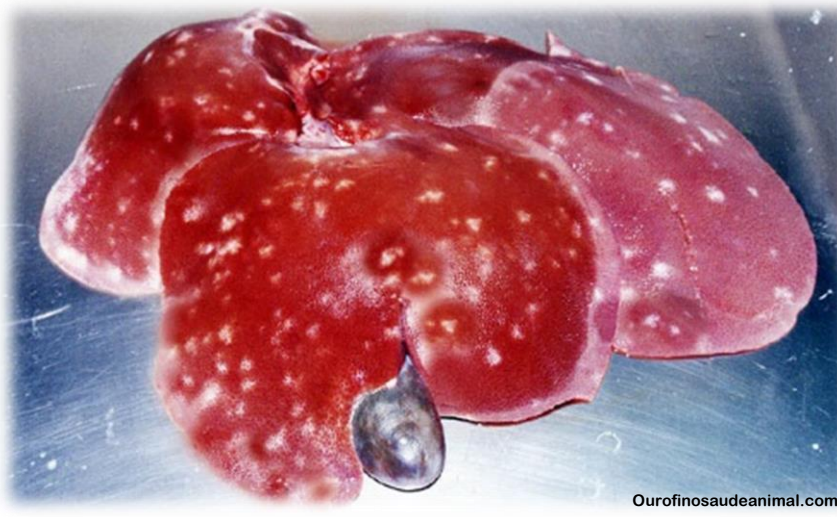
gut (altered)

Slaugtherhouse - abattoir

#3. Mortality and culling rates

❑ Mortality and culling rates affect the length of productive life and, like morbidity rates, may be direct or indirect indicators of *animal welfare* at the *herd* level.

❑ Depending on the production system, estimates of mortality and culling rates can be obtained by analysing the causes of *death* and culling and their temporal and spatial patterns of occurrence.

❑ Mortality and culling rates, and their causes, when known, should be recorded regularly, e.g. daily, and used for monitoring e.g. monthly, annually.

#3. Mortality and culling rates

	Farm A	Farm B	Farm C
Number of sows	4.457	4.500	4.512
Mortality rate (%)	7,53%	8,5%	8,24%
Culling rate (%)	41,8%	41,30%	37,04%
Replace rate (%)	51,4%	56,6%	50,4%
Order parity	3,71	3,62	3,57
Total born	14,78	14,98	14,44
Piglets/sow/year	28,43	29,36	28,33

Personal information

#3. Mortality and culling rates

CAUSES OF MORTALITY													
month	1	2	3	4	5	6	7	8	9	10	11	12	Avg.
Locomotor disorders	24,1	43,2	29,7	16,7	0,0	15,1	21,2	11,1	34,4	12,5	16,1	26,5	22,2
Sudden death	27,6	13,5	10,8	6,7	21,7	36,4	12,1	14,8	12,5	29,2	29,0	26,7	19,7
Ulcers	24,1	10,8	16,2	26,7	4,3	3,0	0,0	3,7	3,1	4,2	0,0	5,8	8,6
Others cause	10,3	13,5	29,7	33,3	43,5	30,3	45,4	14,4	21,9	16,7	29,0	8,8	24,6

CAUSES OF CULLING													
month	1	2	3	4	5	6	7	8	9	10	11	12	Avg.
Old age (%)	37,4	30,5	25,9	28,8	31,2	34,4	21,9	23,5	17,5	16,1	8,9	37,0	26,7
Metrites (%)	15,6	13,9	12,3	17,4	11,7	17,4	28,5	26,5	20,6	14,9	28,3	22,1	18,3
Low productive (%)	18,4	17,8	16,7	23,4	23,4	16,9	19,4	12,7	16,8	20,8	8,3	12,1	16,2

Personal information

#3. Mortality and culling rates

❑ **Necropsy is useful in establishing the cause of** *death.*

mortality
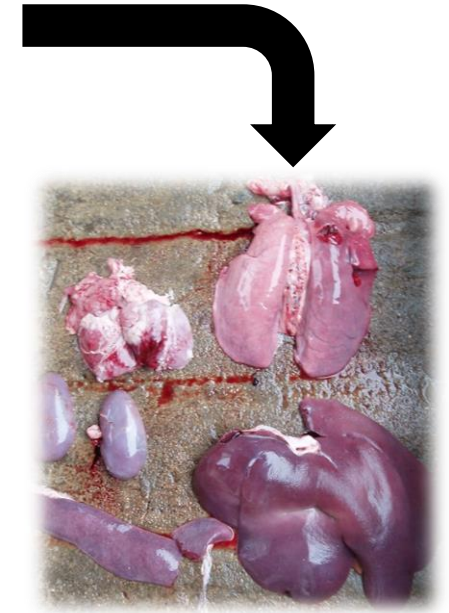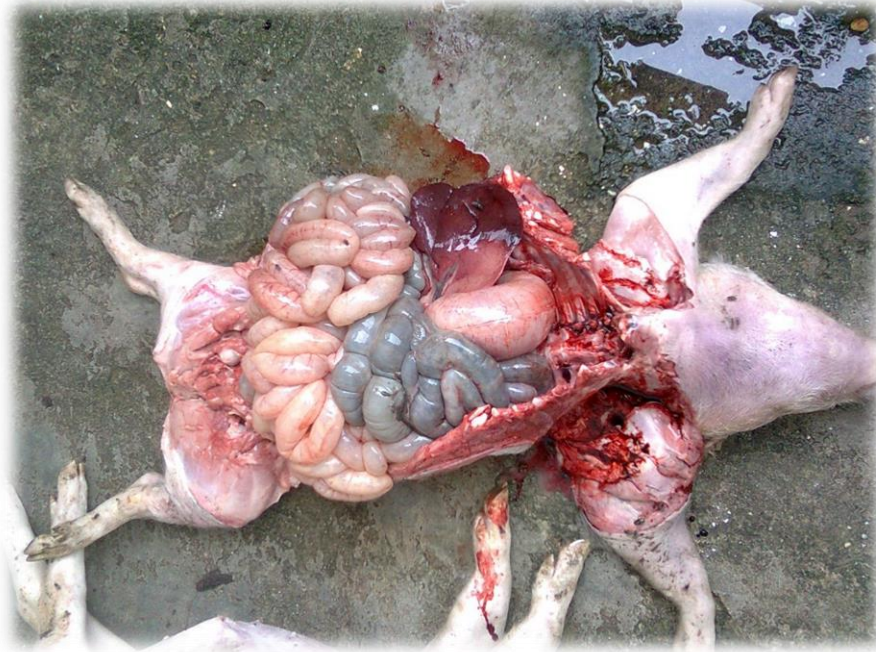
necropsy

#4. Changes in body weight and body condition

❑ In growing animals, body weight changes outside the expected growth rate, especially excessive sudden weight loss, are indicators of poor *animal welfare* and health.

#4. Changes in body weight and body condition

❑ Body condition outside an acceptable range or large variation amongst individual animals in the group may be an indicator of compromised *animal welfare* and health, and reproductive efficiency in mature animals.

#5. Reproductive efficiency

❑ Reproductive efficiency can be an indicator of *animal welfare* and health status. Poor reproductive efficiency, compared with the targets expected for a particular breed or hybrid, can indicate *animal welfare* problems.
   Examples may include:
   ✓ low conception rates,
   ✓ high abortion rates,
   ✓ metritis and mastitis,
   ✓ small litter size (total born),
   ✓ low numbers born alive,
   ✓ high numbers of stillborns or mummies.

#5. Reproductive efficiency

	FARM A	FARM B	FARM C
Reproduction loss	6,53%	7,99%	6,42
Parity rate (%)	93,41%	91,98%	93,53
Abortion rate (%)	1,65%	1,54%	1,75
Metritis + mastites (%)	3,01%	4,85%	3,59
Total born	14,78	14,98	14,44
Born alive	13,26	13,71	13,13
Stillborns (%)	6,53%	4,80%	6,37%
Mummies (%)	3,71%	3,68%	2,68%

#6. Physical appearence

❑ **Physical appearance may be an indicator of *animal welfare* and health. Attributes of physical appearance that may indicate compromised *animal welfare* include:**

- body condition outside an acceptable range,
- presence of ectoparasites,
- abnormal texture or hair loss,
- excessive soiling with faeces,
- skin discolouration, including sunburn,
- swellings, injuries or lesions,
- discharges (e.g. from nose or eyes, including tear staining),
- feet and leg abnormalities,
- abnormal posture (e.g. rounded back, head low),
- emaciation or dehydration.

#6. Physical appearence

abnormal texture or hair loss

excessive soiling with faeces

skin discolouration

swellings, injuries or lesions

emaciation or dehydration

#7. Handling response

❑ Improper handling or lack of human contact can result in fear and distress in pigs. Fear of humans may be an indicator of poor *animal welfare*. Indicators may include:

✓ evidence of poor human-animal relationship, such as marked avoidance of handlers and abnormal or excessive vocalisation when being moved or when *animal handlers* interact with pigs,

✓ animals slipping or falling during handling,

#7. Handling response

fear of humans

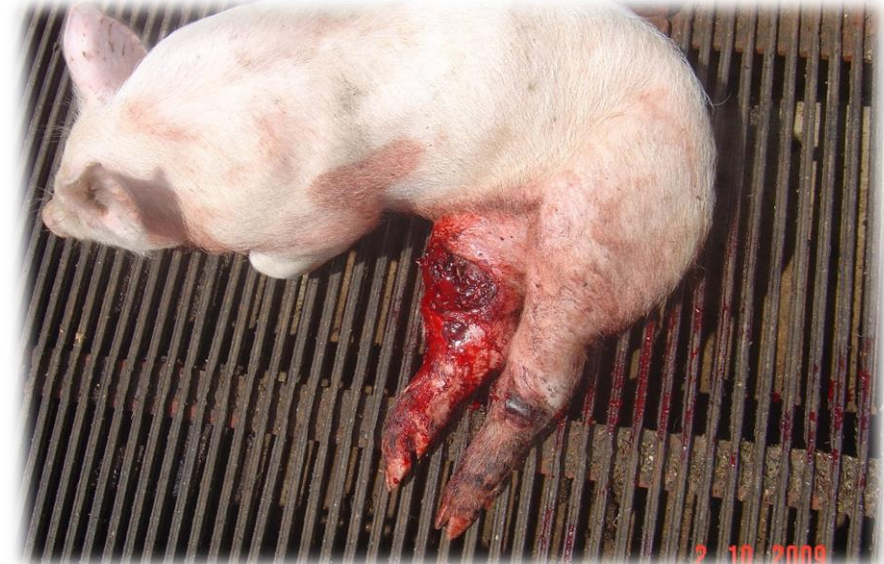no fear of humans

#7. Handling response

✓ **injuries sustained during handling, such as bruising, lacerations and fractures.**

bruising

lacerations

fractures

Image: Mauro Pozzobon,

#8. Lameness

❑ **Pigs are susceptible to a variety of infectious and non-infectious musculoskeletal disorders. These disorders may cause lameness and abnormalities. Pigs that are lame or have gait abnormalities may have difficulty reaching feed and water and may experience pain and distress.**
❑ **Musculoskeletal problems have many causes, including genetic, nutrition, sanitation, floor quality, and other environmental and management factors.**
❑ **There are several gait scoring systems available.**

#8. Lameness

lameness - gestation

lameness – growing/finishing

Ton Kramer - Zinpro

#9. Complications from common procedures

❑ Some painful or potentially painful procedures such as surgical castration, tail docking, teeth clipping or grinding, tusk trimming, identification, nose ringing and hoof care are performed in pigs to facilitate management, meet market or environmental requirements and improve human safety or safeguard *animal welfare*.

❑ However, if these procedures are not performed properly, *animal welfare* and health can be unnecessarily compromised.

#9. Complications from common procedures

Indicators of problems associated with these procedures could include:
- ✓ post-procedure infection and swelling,
- ✓ post-procedure lameness,
- ✓ behaviour indicating pain, fear, distress or suffering,
- ✓ increased morbidity, mortality and culling rates,
- ✓ reduced feed and water intake,
- ✓ post procedure body condition and weight loss.

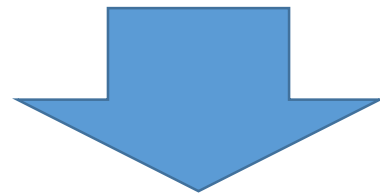# #9. Complications from common procedures

III. Recommendations

Articles 7.13.6. to 7.13. 27.
Provide recommendations for measures applied to pigs

Ensuring good welfare of pigs

Each recommendation in Article 7.13.6. to 7.13.24. includes a list of relevant animal based criteria.
(This does not exclude other criteria being used where or when appropriate)

IV. Concluding remarks

❑ Users of the standard should select the most appropriate animal-based measures for their farming system…

❑ Outcomes can be measured by an assessment of individuals or animal groups…

❑ Competent Authorities should collect all data relevant for the users to set target and threshold values.

Chapter 7.1. - Introduction to the recommendations for animal welfare

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3–6 de septiembre de 2019, Belém do Pará (Brasil)