Animal Welfare Assessment
(growing pigs, sows and piglets)

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Integration of animal welfare in the food quality chain:
from public concerns to improved welfare
and transparent quality

ANIMAL WELFARE PRINCIPLES

• GOOD FEEDING
• GOOD HOUSING
• GOOD HEALTH
• APPROPRIATE BEHAVIOUR

Fork to farm approach

Based upon consumer demands and marketing requirements of retailers
WQ assessment protocol for pigs

On Farm

Rearing

(Transport)

Production

Transport

Slaughter

End of life

<table>
<thead>
<tr>
<th></th>
<th>Rearing</th>
<th>Producing</th>
<th>End of life</th>
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<tbody>
<tr>
<td>Sows and piglets</td>
<td>Piglets</td>
<td>Sows</td>
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<tr>
<td>Growing and finishing pigs</td>
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Included in pigs protocol

Not included in pigs protocol
### The principles and criterias of Animal Welfare

<table>
<thead>
<tr>
<th>Principles</th>
<th>Criterias</th>
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<tbody>
<tr>
<td>Good feeding</td>
<td>Absence of prolonged hunger</td>
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*Table showing principles and their corresponding criterias for Animal Welfare.*
The principles and criterias of Animal Welfare

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# The principles and criteria of Animal Welfare

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## The principles and criterias of Animal Welfare

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<td>Good human-animal relationship</td>
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<td></td>
<td>Positive emotional state</td>
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</tbody>
</table>
6.1A Collection of data for growing pigs on farm (measured on farm)

<table>
<thead>
<tr>
<th>Welfare Criteria</th>
<th>Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good feeding</td>
<td></td>
</tr>
<tr>
<td>1 Absence of prolonged hunger</td>
<td>Body condition score</td>
</tr>
<tr>
<td>2 Absence of prolonged thirst</td>
<td>Water supply</td>
</tr>
<tr>
<td>Good housing</td>
<td></td>
</tr>
<tr>
<td>3 Comfort around resting</td>
<td>Bursitis, absence of manure on the body</td>
</tr>
<tr>
<td>4 Thermal comfort</td>
<td>Shivering, panting, huddling</td>
</tr>
<tr>
<td>5 Ease of movement</td>
<td>Space allowance</td>
</tr>
<tr>
<td>Good health</td>
<td></td>
</tr>
<tr>
<td>6 Absence of injuries</td>
<td>Lameness, wounds on body, tail biting</td>
</tr>
<tr>
<td>7 Absence of disease</td>
<td>Mortality, coughing, sneezing, pumping,</td>
</tr>
<tr>
<td></td>
<td>twisted snouts, rectal prolapse, scouring,</td>
</tr>
<tr>
<td></td>
<td>skin condition, ruptures and hernias</td>
</tr>
<tr>
<td></td>
<td>Castration, tail docking</td>
</tr>
<tr>
<td>Appropriate behaviour</td>
<td></td>
</tr>
<tr>
<td>9 Expression of social behaviours</td>
<td>Social behaviour</td>
</tr>
<tr>
<td>10 Expression of other behaviours</td>
<td>Exploratory behaviour</td>
</tr>
<tr>
<td>11 Good human-animal relationship</td>
<td>Fear of humans</td>
</tr>
<tr>
<td>12 Positive emotional state</td>
<td>Qualitative behaviour assessment (QBA)</td>
</tr>
</tbody>
</table>
Animal-based measures

Growing pigs:

150 of 10 pens / farm

INDIVIDUAL level

PEN level

3 POINT SCALE

0
Good welfare

1

2
Poor welfare
1. Growing pigs

2. Sows and piglets
GOOD FEEDING

1. Absence of prolonged hunger
   - Body condition
   - Food provision
   - Age of weaning

2. Absence of prolonged thirst
   - Water supply
Body condition score

Individual level:

0 – Animal with a good body condition
2 – Lean animals

Herd level:

Percentage of lean pigs with poor condition (i.e. score 2)
Absence of prolonged hunger

p < 0.01

0.7

Intensive

Extensive

0.1

p < 0.01
Water supply

- The number of drinking places
- The functioning of the drinkers
- The cleanliness of drinkers: drinkers will be considered hygienic when without faeces and without mould

Classification:

**Number of drinking places**

and

**Functioning of drinkers**

0 – The drinkers function correctly
2 – The drinkers don’t function properly

**Cleanliness of drinkers**

0 – Clean
2 – Dirty
GOOD HOUSING

3. Comfort around resting
   Manure on the body
   Bursitis and shoulder sores

4. Thermal comfort
   Panting
   Huddling
   Shivering

5. Ease of movement
   Space allowance
   Farrowing crates
3. Comfort around resting

**Manure on the body**

The presence of manure/faeces on the body should be visually assessed on one side of the body.

- Pigs to be scored are standing up.
- Visually assessed on one side of the body.
- Choose the side with the optimal view.

Note that this parameter should not be confused with dirtiness- an outdoor pig soiled with mud is perfectly normal, and does not necessarily indicate a welfare problem.
3. Comfort around resting

**Manure on the body**

**Growing pigs**

0 – Less than 20% of the body surface is soiled

1 – More than 20% but less than 50% of the body surface is soiled

2 – Over 50% of the body surface is soiled

**Classification Herd level:**

Percentage of pigs scored 0

Percentage of pigs scored 1

Percentage of pigs scored 2
3. Comfort around resting

**Manure on the body**

**Sows**

0 – Less than 10% of the body surface is soiled

1 – More than 10% but less than 30% of the body surface is soiled

2 – Over 30% of the body surface is soiled

**Classification Herd level:**

Percentage of pigs scored 0
Percentage of pigs scored 1
Percentage of pigs scored 2
Bursitis

• small bursae: in growers comparable in size to a grape; 1.5-2.0 cm
• large bursa: in growers this might be comparable in size to a walnut; 3.0-5.0 cm diameter
• extremely large bursa: in growers this might be comparable to a tangerine; 5.0-7.0 cm diameter
3. Comfort around resting

**Bursitis**

0 – no evidence of bursae,
1 – one or several small bursae on the same leg (1.5 - 2 cm diameter) or one large bursa (3.0 - 5.0 cm diameter)
2 – several large bursae, or one extremely large bursa (≥ 7 cm diameter), or any bursa that is eroded
Comfort around resting

Bursitis

Age (p<0.0001)
Density (p<0.05)
Type of floor (p<0.0001)

<table>
<thead>
<tr>
<th>Bursitis-1</th>
<th>Bursitis-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intensive</td>
<td>45.5</td>
</tr>
<tr>
<td>Extensive</td>
<td>4.4</td>
</tr>
<tr>
<td>Intensive</td>
<td>7.5</td>
</tr>
<tr>
<td>Extensive</td>
<td>0.2</td>
</tr>
</tbody>
</table>

p< 0.0001
Thermoregulatory measures

- **Shivering:**

  Method description
  - Best observed in resting animals
  - Wait a moment to allow animals to settle when first entering the room.
  - The assessor should stay outside the pen.
  - Shivering is defined as the slow and irregular vibration of any body part, or of the body as a whole.

  Classification **Group level:**
  0 – No pigs in the pen/group are observed shivering
  1 – Up to 20% of pigs in the pen are observed shivering
  2 – More than 20% of pigs in the pen are observed shivering
4. Thermal comfort

Thermoregulatory measures

- **Huddling:**

  - Only observed in resting animals
  - Wait a moment to allow animals to settle.
  - The assessor must stay outside the pen.

**Huddling:** when a pig is lying with more than half of its body in contact with another pig (i.e. virtually lying on top of another pig).

It is not considered huddling when an individual is just side by side with another animal.
1. Huddling Behaviour

Examples

No huddling behaviour

Huddling behaviour
Thermoregulatory measures

- Huddling:

The proportion of animals showing the behaviour in relation to the number of resting pigs (hence not in relation to the total animals of the pen/group).

Group level:
0 – No pigs in the pen/group are displaying huddling behaviour
1 – Up to 20% of resting pigs in the pen/group are displaying huddling behaviour
2 – More than 20% of resting pigs in the pen are displaying huddling behaviour
Thermoregulatory measures

- Panting
  - Best observed in resting animals
  - Wait a moment to allow animals to settle when first entering the room.
  - The assessor must stay outside the pen.

Panting is breathing rapidly in short gasps carried out with the mouth.

**Group level:**
0 – No pigs in the pen/group observed are panting
1 – Up to 20% of pigs in the pen observed are panting
2 – More than 20% of pigs in the pen observed are panting
5. Easy of movement

**Space allowance**

- The same pens/area where the groups of animals are assessed for health measures

- Count the total number of animals in the pens/group of animals.

- Ask the farmer about the average weight of pigs.

- Assess the length and width of the area provided to the animals.

- Space allowance is calculated as the area provided to animals divided by the number of animals multiplied by their weight.

**Classification**
Space allowance expressed in m²/100 kg animal
GOOD HEALTH

6. Absence of injuries
   Wounds on body
   Vulva lesions
   Lameness

0 1 2
Wounds on body

- The assessor shall maintain a distance of approximately 0.5 m from the animal at all times.

- Wounds on the body are visually assessed by inspecting one side of the body.

- Choose the side with the optimal view for observation.
Wounds on body

6. Absence of injuries
6. Absence of injuries

Wounds on body

Superficial scratches: lesions (surface penetration of the epidermis)

Wounds: penetration of the muscle tissue.

Where scabs have formed, they will count as a single lesion if they form a continuous line.
6. Absence of injuries

**Lameness**

- Is the inability to use one or more limbs in a normal manner.
- It can vary in severity from reduced mobility or inability to bear weight, to total recumbency.

**Method description**

- The assessor must assess the pig walking.
- Ensure that the pig has walked a certain distance before starting the assessment.
- Have a clear and unobstructed view of the moving animal.
6. Absence of injuries

### Lameness

#### Individual level:

0 – Normal gait or difficulty in walking, but still using all legs; swagger of caudal body while walking; shortened stride.

1 – Severely lame, minimum weight-bearing on the affected limb.

2 – No weight-bearing on the affected limb, or not able to walk.

#### Herd level:

- Percentage of animals affected with lameness score 0
- Percentage of animals affected with lameness score 1
- Percentage of animals affected with lameness score 2
6. Absence of injuries

**Tail biting (growing)**

- a – No evidence of tail biting
  
- b – Indication of superficial biting along the length of the tail, but no evidence of fresh blood or of any swelling (red areas on the tail are not considered as wounds unless associated with fresh blood)
  
- c – Fresh blood is visible on the tail; there is evidence of some

**Herd level:**

0 – Percentage of pigs with no tail biting (score ‘a’) or score ‘b’

2 – Percentage of pigs with a bleeding tale and/or swollen infected tail lesion, and/or part of tail tissue missing and presence of crust (score ‘c’)

7. Absence of disease

Mortality
Coughing, sneezing, pumping
Rectal prolapse, scouring, constipation
Metritis, mastitis, uterine prolapse
Skin condition, local infections
Neurological disorders, splay leg

8. Absence of pain induced by management procedures

Nose ringing, tail docking, castration, teeth clipping
Mortality

-‘Uncontrolled’ death of animals (as distinct from culling/euthanasia).

-Ask the manager about mortality management on the farm based on data collected from farm records.

Number of animals placed in house from previous animal unit (A)
Total number of animals which died and were found dead (but were not actively culled) during the last 12 months (M)

Calculate the percentage mortality using the following equation:
Percentage of mortality = (M/A) x 100 during the last 12 months

7. Absence of disease
Health measure

**Coughing, sneezing**

- At a total of 6 points and from each point of observation at least two pens
- Stand up the animals
- 5 minutes at each observation point. (waiting period before the social and exploratory behaviour assessment)
- The total number of pigs observed (in the group or in the pen) will be considered.
- The number of coughs occurring in five minutes is recorded.

Average **frequency of coughing per animal per 5 minutes**
Pumping (laboured breathing)

When the pig’s breathing is heavy and laboured, and it is easy to see the chest rising and falling with each breath.

The assessor must score the number of pigs presenting with pumping.

Individual level:
0 – Percentage of pigs with no evidence of laboured breathing
2 – Percentage of pigs with evidence of laboured breathing
Twisted snouts

- Characteristic of atrophic rhinitis.
- Can vary in severity from a slight deformity of the snout to severe nasal distortion.

Individual level:
0 – Percentage of pigs with no evidence of twisted snouts
2 – Percentage of pigs with evidence of twisted snouts
Rectal prolapse

- When internal tissue extrudes from the rectum.

- Number of pigs presenting prolapse (the first visible sign of a rectal prolapse is often blood on the faeces).

Individual level:
0 – Percentage of pigs with no evidence of rectal prolapse
2 – Percentage of pigs with evidence of rectal prolapse
6. Absence of diseases

Health measure

- Scouring (enteric disorders)

- When the faeces become more fluid in consistency than normal.
- Visible and fresh dung on the floor of the pen, or from the surroundings of the area where pigs are kept.
- The number of animals in the pen should be recorded.

Group level:

0 – No liquid manure visible
1 – Some liquid manure visible
2 – All faeces visible is liquid manure
6. Absence of diseases

**Skin condition**

- Characteristic inflammation or discoloration of the skin.
- Visually inspection of each animal.
- Assess on side of the body.
- Consider the total area affected in relation to the rest of the body not affected.

**Individual level:**

0 – No evidence of skin inflammation or discoloration
1 – More than zero, but less than 10% of the skin is inflamed, discoloured or spotted
2 – More than 10% of the skin has an abnormal colour or texture

**Herd level:**

Percentage of pigs scored 2
6. Absence of diseases

• Ruptures and hernias

Observe the animal from the front, back and side.

Hernias and ruptures occur when there is protrusion of a bodily structure or organ through the wall that normally contains it, resulting in a lump under the skin in the umbilical or inguinal area.
6. Absence of diseases

**Ruptures and hernias**

The presence of umbilical or inguinal hernias is assessed.

0 – No hernia/rupture
1 – Hernias or rupture present, but the affected area in not bleeding, not touching the floor and not affecting locomotion
2 – Bleeding lesions, hernias/ruptures and/or hernias/ruptures touching the floor

Herd level
Percentage pigs scored 0
Percentage pigs scored 1
Percentage pigs scored 2
7. Absence of pain induced by management procedures

Castration (mutilations)

Method description
The animal unit manager is asked about mutilation management with regard to castration (what proportions of pigs are castrated). Furthermore ask whether anaesthetics are used during the procedure.

Classification

0 – No castration
1 – Castration with use of anaesthetics
2 – Castration without use of anaesthetics
7. Absence of pain induced by management procedures

**Tail docking (mutilations)**

Method description
The animal unit manager is asked about mutilation management with regard to tail docking (what proportions of pigs are tail docked). Furthermore ask whether anaesthetics are used during the procedure.

Classification

0 – No tail docking
1 – Tail docking with use of anaesthetics
2 – Tail docking without use of anaesthetics
9. Expression of social behaviour
Social behaviour

10. Expression of other behaviours
Exploratory behaviour
Stereotypies
9. And 10. Expression of behaviours

**Behaviour**

- Observations should take place in the morning when the animals are more active.

- If animals are not fed ad libitum, observations are made outside the feeding period, at least one hour after the morning meal.

- Before starting the assessment:
  - Enter the room
  - Record the number of animals per pen/group
  - Ensure that all the animals are standing up.
  - 5 - 10 minutes later make the observations from the passageway.
1. **SCANNING SAMPLING OF BEHAVIOURS**

- **SOCIAL** behaviours
- **POSITIVE** (e.g., Nosing)
- **NEGATIVE** (e.g., Aggressions)
- **EXPLORATION**
  - Pen
  - Material
- **“OTHERS”**

2. Active pigs

3. Waiting
   - 1
   - 2
   - 3
   - 4
   - 5

4. 5 min
   - 2 min
   - 2 min
   - 2 min
   - 2 min
   - 2 min

5. 3 points in a farm

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9. And 10. Expression of behaviours
**Behaviour**

**Group level:**
Number of sample points (= number of scans multiplied by the number of animals observed)

Number of sample points during which a P, N, S, E behaviour was observed

**Classification Herd level:**
Number of sample points when a P, N, S, E behaviour was observed from the total sample points when an active behaviour was observed
11. Good human-animal relationship

**Fear of humans (growing pigs)**

- Whether the animals show a panic response towards humans or not.
- Panic is defined as animals fleeing, or facing away from the assessor or huddling in the corner of the pen.
- Firstly, the assessor should enter the pen, or stand next to the group of animals in extensive conditions, and then walk around the group very slowly.
- Then, the assessor arrives at the starting point and must stop and wait for 30 seconds.
- After 30 s the assessor must change direction and walk around the pen/group of animals very slowly, considering the response of the animals to this second contact.
- When walking through the group the assessor shall not initiate any physical interactions or talk to the animals. Limited physical contact may occur during walking, such as a gentle touch when pigs are ahead of the assessor and therefore very close.
11. Good human-animal relationship

**Fear of humans (growing pigs)**

**At pen Level**

**NO panic**  →  **PANIC**

(> 60% of pigs frightened)
11. Good human-animal relationship

Fear of humans

0- The sow allows the assessor to touch her between the ears or the sow withdraws when it is attempted to touch her but then approaches.

1- The sow withdraws initially but the approaches when the assessor is at the start or in the step 2 and when the sow withdraws definitively in step 3.

2- The sow withdraws when the assessor is at the start position, or the sow withdraws and remains withdrawn when the assessor crouches down in front of her.

2) 10 seconds
3) 10 seconds

In group

2) 10 s
3) 10 s

In stalls

12. Positive emotional state

QBA
12. Positive emotional state

**Qualitative behaviour assessment**

(QBA) considers the expressive quality of how animals behave and interact with each other and the environment i.e. their ‘body language’.

Select between one and eight observation points (depending on the size and structure of the farm) that together cover the different areas of the farm.

Decide the order to visit these observation points, wait a few minutes to allow the animals to return to undisturbed behaviour.

Watch the animals that can be seen well from that point and observe the expressive quality of their activity at group level. It is likely that the animals will initially be disturbed, but their response to this can be included in the assessment.
12. Positive emotional state

Qualitative behaviour assessment

Total observation time shall not exceed 20 minutes, and so the time taken at each observation point depends on the number of points selected for a farm:

<table>
<thead>
<tr>
<th>Number of observation points</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration of observation per observation point in minutes</td>
<td>10</td>
<td>10</td>
<td>6.5</td>
<td>5</td>
<td>4</td>
<td>3.5</td>
<td>3</td>
<td>2.5</td>
</tr>
</tbody>
</table>
When observation at all selected points has been completed, find a quiet spot and score the 20 descriptors using the visual analogue scale (VAS).

Scoring is not done during observation, and that only one integrative assessment is made per farm.
12. Positive emotional state

**VAS**

-To score each term, draw a line across the 125 mm scale at the appropriate point.

-The measure for that term is the distance in millimetres from the minimum point to the point where the line crosses the scale. Do not skip any term.

-Left ‘minimum’ and right ‘maximum’ point.

-‘Minimum’: the expressive quality indicated by the term is entirely absent in any of the animals you have seen.

-‘Maximum’: the expressive quality is dominant across all observed animals.

-It is possible to give more than one term a maximum score; animals could for example be both entirely calm and content.
12. Positive emotional state

Qualitative behaviour assessment

<table>
<thead>
<tr>
<th>State</th>
<th>Min.</th>
<th>Max.</th>
</tr>
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<tbody>
<tr>
<td>Active</td>
<td></td>
<td></td>
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<tr>
<td>Relaxed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fearful</td>
<td></td>
<td></td>
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<tr>
<td>Agitated</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Content</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tense</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enjoying</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frustrated</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bored</td>
<td></td>
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</tbody>
</table>
12. Positive emotional state

<table>
<thead>
<tr>
<th>Qualitative behaviour assessment</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>4 points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Playful</td>
<td>Min.</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Positively Occupied</td>
<td>Min.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Listless</td>
<td>Min.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lively</td>
<td>Min.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indifferent</td>
<td>Min.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Irritable</td>
<td>Min.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aimless</td>
<td>Min.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Happy</td>
<td>Min.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distressed</td>
<td>Min.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sociable</td>
<td>Min.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Welfare assessment

1. Farmer interview (management-based measures)
2. Animal-based measures
3. Resource-based measures
1 Farmer interview (management-based measures)

- Overview of the protocol
- Health management
- Hygiene management
- Record keeping
- Mutilation routine
- Euthanasia criteria
2. Animal-based measures:

Outside the pen:

- Qualitative behaviour assessment
- Respiratory problems (coughing, sneezing)
- Behaviour (social, exploratory)
- Thermoregulatory measures

Inside the pen:

- Human-animal relationship
- Clinical measures, health measures, lameness, bursitis
<table>
<thead>
<tr>
<th>Information collected</th>
<th>Sample size</th>
<th>Place</th>
<th>Time required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management-based measures Y</td>
<td>—</td>
<td>Animal unit manager</td>
<td>10 minutes</td>
</tr>
<tr>
<td>Qualitative behaviour assessment (QBA)</td>
<td>2 to 8 Points of view</td>
<td>PENS C</td>
<td>20 minutes</td>
</tr>
<tr>
<td>Coughing</td>
<td>6 Points of view</td>
<td>Intensive farm: Minimum 2 pens</td>
<td>30 minutes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Extensive farm: 40-60 animals</td>
<td></td>
</tr>
<tr>
<td>Sneezing</td>
<td></td>
<td>PENS A or B</td>
<td></td>
</tr>
<tr>
<td>Social behaviour</td>
<td>3 Points of view</td>
<td>PENS A</td>
<td>60 minutes</td>
</tr>
<tr>
<td>Exploratory behaviour</td>
<td>50-60 animals/point</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outside the pen:</td>
<td>150 pigs from 10 different pens/groups (15 per pen/group).</td>
<td>PENS B</td>
<td>20 minutes</td>
</tr>
<tr>
<td>Huddling</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shivering</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Panting</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inside the pen:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fear of humans</td>
<td></td>
<td></td>
<td>170 minutes</td>
</tr>
<tr>
<td>Body condition</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bursitis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Absence of manure on body</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wounds on body</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tail biting</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lameness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pumping</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Twisted snouts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rectal prolapse</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scouring</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skin condition</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rupture and hernias</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water supply</td>
<td>—</td>
<td>PENS B</td>
<td>20 minutes</td>
</tr>
<tr>
<td>Space allowance</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Total time:** 330 minutes

(5.5 hours)
Guidelines for visit to the animal unit

**Bio–security**
- Ensure that there was no previous contact between pigs and assessor for at least 48 hours prior to assessment

**Equipment required**
- Appropriate disposable clothing and footwear (should the farm not provide any)
- Recording sheets, clipboard and a supply of writing materials
- Head–torch
- Stopwatch
- Stock marker spray
- Knapsack sprayer containing disinfectant
- Buckets and disinfectant for boots
- Thermometer
- Device to measure distances
Commencing the visit

- Find the animal unit manager and introduce him/herself.

- Give a brief explanation of what is about to be done during the course of the visit.

- Make a brief sketch of the building for personal records.

- Explain how long these will take to complete, and that his/her assistance will be required when assessing the management,- and resource–based measures.
### Social and Exploratory Behaviour for growing pigs

<table>
<thead>
<tr>
<th>Scan</th>
<th>Pen</th>
<th>Behaviour</th>
<th>Scan</th>
<th>Pen</th>
<th>Behaviour</th>
</tr>
</thead>
</table>

*P: Positive social behaviour
*N: Negative social behaviour, including social behaviour with flight aggressive or flight reaction of the other pig
*S: Pen investigation (floor, wall, pen fittings except toy/straw)
*E: Enrichment investigation (toy/straw)
*O: Other active behaviours
*R: Rest (lying motionless)*
Respiratory disorders (coughing and sneezing) for growing pigs

Assess the respiratory disorders while the animals become comfortable with your presence before to begin with the Social behaviour or at the end of the visit. Time required: 5 min per point.

Please, specify: ___________ done with social behaviour ___________ done at the end of the visit

<table>
<thead>
<tr>
<th>PENS Id:</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of coughs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of pigs coughing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of sneezes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of pigs sneezing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of pigs in the pen</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Health and other measures into the pen for growing pigs

Panting and shivering could be done before entering the pen, while counting the number of pigs per pen. The result is in general the proportion of animals with a score 2. In order not to evaluate the same animal twice you have to put a mark (blue for example) on each of them once it has been scored. In large pens, you should use 2 colours and put a mark every nth pig in order to have 15 or more pigs per pen.

<table>
<thead>
<tr>
<th>Room / Pen:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of pigs in the pen</td>
<td></td>
</tr>
<tr>
<td>Huddling</td>
<td></td>
</tr>
<tr>
<td>Pen cleanliness</td>
<td></td>
</tr>
<tr>
<td>Human Animal Relationship</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of pigs scored</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Body condition</td>
<td>Presence:</td>
</tr>
<tr>
<td>Bursitis</td>
<td>Score 1:</td>
</tr>
<tr>
<td>Manure</td>
<td>Score 1:</td>
</tr>
<tr>
<td>Wounds on body</td>
<td>Score 1:</td>
</tr>
<tr>
<td>Tail biting</td>
<td>Score 2:</td>
</tr>
<tr>
<td>Lameness</td>
<td>Score 1:</td>
</tr>
<tr>
<td>Respiratory PT</td>
<td>Pumping:</td>
</tr>
<tr>
<td>Rectal prolapse</td>
<td>Presence:</td>
</tr>
<tr>
<td>Scouring</td>
<td>Score 1:</td>
</tr>
<tr>
<td>Skin condition</td>
<td>Score 1:</td>
</tr>
<tr>
<td>Rupture/hernia</td>
<td>Score 1:</td>
</tr>
</tbody>
</table>
Integration of animal welfare in the food quality chain: from public concerns to improved welfare and transparent quality

- **Measures**
  - ~30 Measures

- **Criteria**
  - 12 Criteria

- **Principles**
  - 4 Principles

- **Global assessment**

- **Available information**

**IRTA**
Integration of animal welfare in the food quality chain: from public concerns to improved welfare and transparent quality.

Animal welfare is of considerable importance to European consumers. Nowadays food quality is not only determined by the overall nature and safety of the end product but also by the perceived welfare status of the animals from which the food is produced. This project aims to accommodate societal concerns and market demands, to develop reliable on-farm monitoring systems, product information systems, and practical species-specific strategies to improve animal welfare. Therefore institutes and universities (representing thirteen European countries) with specialist expertise participate in this integrated research project. The project started in May 2004 and will take five years to complete.

Italian text:  [Link to Italian language]

Spanish text:  [Link to Spanish language]
Thank you!!!

antoni.dalmau@irta.es