

Real Welfare for Red Tractor Measures for on-farm assessment

There are 5 measures to assess:

- **Hospital pigs**
- **Lame pigs**
- **Tail lesions** - *measurement of mild tail lesions is optional*
- **Body marks** - *measurement of mild body marks is optional*
- **Enrichment type** - *measurement of enrichment use is optional*

The sample pigs (which make up the total sample per visit) are assessed for tail lesions and body marks.

All pigs in those pens are assessed for Hospital pig and lame pigs categories.

All active pigs in those pens are scored for enrichment use (if recording).

If you think that health and safety risks to you or the pigs would be unjustifiable e.g. due to pig excitability or pen layout please note in the comments box and make observations as accurately as possible from outside the pen.

On a typical RW assessment, you would

- 1) Enter the pen and ensure that all pigs are up and walking (unless there is an obvious reason why a pig should not be made to rise).
- 2) Record the number of lame pigs, and the number of pigs which should be in a hospital pen.
- 3) Walking round again, score the sample pigs for tail lesions, then body marks (“sample pigs” are all pigs in the pen if there are fewer than 25 pigs, 25 pigs if there are up to 100 pigs, or 50 pigs if there are more than 100 pigs in the pen and enough large pens to still get the total sample number required; otherwise divide the total sample number by the number of pens available).
- 4) Leave the pen, confirm data entered so far and enter enrichment types present; *optional - quickly assess all sitting or standing pigs for enrichment use or manipulation of other pigs or pen fittings, or whether sitting or standing but not occupied with objects in the pen. (Can also be done before steps 1- 3.)*

Hospital pigs – required measure

Why look for hospital pigs:

- A sick or injured pig has compromised welfare which good farmers will alleviate when necessary through euthanasia or treatment in a dry, comfortably bedded hospital pen or following consultation with their veterinary surgeon.

At individual pig level – Maintenance of good health is the most basic requirement affecting the welfare of the pig (welfare Code p21). A pig that requires hospitalisation, by definition, has poor welfare and is likely to be in pain and/or distress. Measures taken by the stockperson to alleviate this can have a significant impact on the welfare of the pig.

At herd level the prevalence of pigs requiring hospitalization within mainstream pens gives an indication of the stockman's management of these pigs. This measure is independent of disease prevalence – the proportion of pigs in the hospital pigs is not assessed.

Production - Sick and injured pigs take up time and cost money in treatment. However, good management of the pigs can prevent further production losses and improve recovery rates as well as improving staff morale (AHDB Pork - Action for Productivity 15 <http://pork.ahdb.org.uk/media/2029/Action-15-Pen-Management.pdf>).

Legislation – Any animals which appear to be ill or injured must be cared for appropriately and without delay; and where they do not respond to such care, veterinary advice must be obtained as soon as possible WoFAR 2007, sch 1, para 5. Where necessary, sick or injured animals must be isolated in suitable accommodation with, where appropriate, dry comfortable bedding (WoFAR, Sch 1, 2007 para 6).

What to record

Record any pigs seen in the observation pens that would benefit from being separated into a hospital pen. (The nature of the health condition and the pen environment will affect this measure)

Some types of pigs which may benefit from being in a hospital pen include pigs who are sick, injured or lame and are unable to compete for resources, being bullied/ tail bitten or would benefit from access to bedding that is more comfortable than that available in the pen.

Observe all the pigs in your observation pens to assess legislative compliance that states that 'where necessary, any sick or injured pigs shall be temporarily isolated in suitable accommodation with dry comfortable bedding.'

Lameness – required measure

What lameness shows:

- Lameness in any animal is usually a sign that they are in pain. (Welfare code)
- It may be due to injury or infection in the foot or joint, or to longer term skeletal and joint problems such as osteochondrosis.
- Osteochondrosis (cartilage damage in the joint) can be due to fast growth; pigs fed on a diet containing less daily energy than would be consumed ad lib had significantly less joint disease at slaughter.
- Pigs housed on slatted or non-bedded floors have higher prevalence of bursae and associated lameness, especially when floors are poorly maintained.

At individual pig level: Lameness is usually a sign that an animal is in pain. Lameness in pigs is a sign of ill health and discomfort. It clearly affects an animal's welfare, as well as their performance and production (DEFRA Code <https://www.gov.uk/government/publications/code-of-recommendations-for-the-welfare-of-livestock-pigs>)

At herd level: If a significant percentage of pigs have severe lameness, this is a sign of poor floor maintenance, incorrect nutrition, disease or poor overall welfare standards within the herd (DEFRA Code <https://www.gov.uk/government/publications/code-of-recommendations-for-the-welfare-of-livestock-pigs>)

Production - Lamé finishing pigs have poorer weight gain. Lameness is identified as a cause for culling in ~10% of sows. (Jensen et al 2007; Boyle et al 1998)

Legislation - Where pigs are kept in a building, floors shall a) be smooth but not slippery so as to prevent injury to the pigs; b) be so designed, constructed and maintained as not to cause injury or suffering to pigs standing or lying on them (WoFAR 2007 Sch 8, Part 2, para 11).

Any animals which appear to be ill or injured must be cared for appropriately and without delay; and where they do not respond to such care, veterinary advice must be obtained as soon as possible (WoFAR 2007, Sch 1, paras 5 & 6).

What to record

Record present if a pig is lame:

Include any pig that when standing will not bear full weight on the affected limb and/or appears to be standing on its toes. When moving there is a shortened stride with minimum or no weight-bearing on the affected limb and a swagger of the hind quarters. May still be able to trot and gallop. Consider whether pig should also be recorded under hospital pig category.

This protocol does not include pigs that are showing stiffness or uneven gait as this is more subjective and difficult to interpret in welfare terms; unwillingness to put weight through a limb suggests some pain.

Whilst in the pen, observe as many pigs as possible either stand or walk - making the pigs rise if necessary

Severe body lesions – required;
Mild body marks - optional

What body marks and lesions show:

- Aggressive interactions, fear, and the wounds associated with fighting may be detrimental to the welfare of the pig.
- There is evidence that the risk factors for high lesion scores in commercial pigs include mixing pigs, especially unfamiliar pigs, in a restrictive environment that limits effective dispersal and the display of appropriate submissive behaviour.
- Persistent mounting behaviour.
- Wounds also come from poorly designed pens with rough flooring or sharp edges.
- Pen layout or stocking density increasing opportunities for pigs to tread on other pigs.

The main focus is on identifying and reducing the detrimental causes of body marks, but body marks can also be the result of locomotor and social play – i.e. caused by a positive interaction where the cause is not a welfare issue, but the result may contribute to discomfort.

At individual pig level - single mild lesions probably have little impact on the pig, whereas increased numbers of lesions or more severe lesions are likely to be painful and cause distress. Mild marks are likely to have minimal effect, severe or numerous lesions indicate pain.

At herd level - lesions can be acquired either by aggressive, stressful interactions between pigs, or from sharp pen fittings or collisions with pen fittings. Lesions may also occur when pigs tread on each other to access resources or to avoid other pigs. The transient nature of lesions provides a very direct insight into the harmoniousness of the group of pigs and/or the safety of their environment at the time of the assessment. A high percentage of pigs with mild lesions can be evidence of unrest within the pigs or poor housing maintenance. Where body marks are thought to be the result of positive encounters between pigs, e.g. play – the focus is then on the potential discomfort caused and whether play can be made less risky – e.g. improved floor grip, reducing or deflecting active pigs past obstacles.

Production - Skin lesions provide a route for infection into the body. The time and energy expended by pigs during aggressive interactions can result in poorer food conversion efficiency. Lesions caused by treading on one another indicate poor pen layout or high density regions of pigs in the pen.

Legislation - Where pigs are kept together, measures must be taken to prevent fighting which goes beyond normal behaviour. Pigs which show persistent aggression towards each other or which are victims of such aggression must be separated from the group (WoFAR 2007 Sch 8 para 8(1)). When signs of severe fighting appear, the causes shall be immediately investigated and appropriate measures taken (WoFAR 2007 Sch 8 para 8(2)).

Lesions can also be caused by pen fittings; WoFAR 2007 Sch 1 paras 11 and 12 state that materials used for the construction of accommodation, and in particular for the construction of pens, cages, stalls and equipment with which the animals may come into contact, must not be harmful to them, and accommodation must be constructed and maintained so that there are no sharp edges or protrusions likely to cause injury to them.

Floors must also be designed, constructed and maintained so as not to cause injury or suffering to pigs standing or lying on them (WFAR 2007 Sch 8, para 11 (b)).

What to record:

Record present if marks are seen on one side of the pig.

Required: Record as **severe** if lesion is larger than 5x5cm diameter, if lesion extends into deeper layers of skin, or if lesions cover a large percentage (>25%) of the skin.

Optional – record mild lesions if a linear lesion longer than 10cm is seen, or if there are 3 or more 3cm lesions or a circular area larger than 1cm diameter. Marks include raised, reddened areas, (likely to scab), grazed/broken skin, fresh (i.e. bleeding) wounds and healing lesions (scabs). Scar tissue does not count.

Typical fight or clambering/mounting lesions show parallel lines, while lesions from flank biting are generally round.

Regions

(see additional information next page)

1. Assess whether any Flank biting lesions are present – typical ulcerated round lesions on flank area often attributed to repeated rooting by other pigs.
2. Assess whether Ear bitten pigs are present in the pen (not scratches to ears)
3. *If assessing mild body marks (optional) assess whether body marks are predominantly in one location of the animal i.e. Legs (**L**), Shoulder (**S**), or Rear (**R**) (e.g. anywhere on hindquarters), or **G** = general pattern of lesions, no predominant region. Do not count the number of pigs with lesions in each region, just record if there is a noticeable pattern in the pen.*

Stand near the animal and visually assess one side **only**. This could be done from outside the pen if visibility is adequate.

If recording mild body marks (optional):



Mild - More than 3 x3cm long



Mild - circular lesion larger than 1cm diameter

Also record if animals within the sample have more than one handsize of dirt on the side, making assessment of mild marks difficult.

If scoring severe only, in sample of 25 pigs each pig will either be scored as severe or non-lesion e.g 1 severe, 24 non-severe (2 options only, total 25);

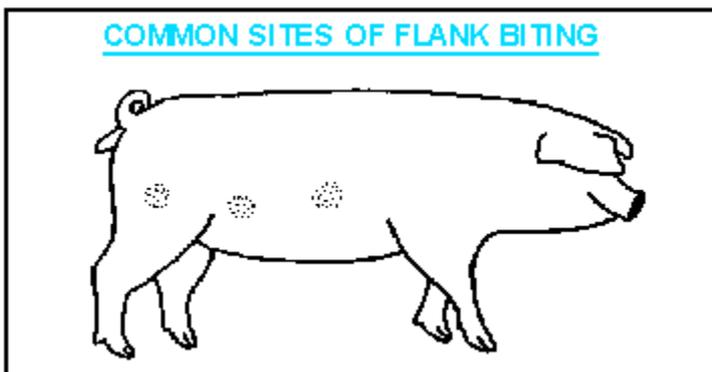
If scoring mild (optional) each pig of the 25 sampled pigs will be scored as either marked, no marks, too dirty to tell, severe e.g. 4 marked; 19 un-marked, 1 too dirty to tell, 1 severe), (4 options, total 25).

Body mark – type and pattern.

In addition to separate body mark scoring, you are asked to note if flank biting or ear biting are present within the pen (as either “yes” or “no” answer; counting is not required) – these are specific lesions, rather than scrapes or bites which happen to be on the flanks or ears. Flank and ear biting behaviours are likely to have similar causes to tail biting.

If more than 25% of pigs in the pen are recorded as having mild body marks (optional), you are asked to note if there is any obvious pattern to the marks (which may help with identifying a cause of the marks).

Flank biting: Flank biting lesions are typically round marks approximately 2.5cm in diameter on the side of the pig, linked with bellynosing behaviour and repeated manipulation of the flank or inguinal region by other pigs. These are initially clean/bald areas on the pig sides (not scored as body mark), but continued manipulation by other pigs results in a blackened round patch (scored), developing into a lesion or scabbed area (scored as body mark). If the scab is removed, further investigation by pigs can result in deeper, bleeding lesions and additional infection.



<http://www.thepigsite.com/pighealth/article/379/flank-biting>



Flank biting lesion, *already scored as mild body mark (>1cm diameter)*



Aggravated flank biting lesion

Ear biting

Record whether ear biting lesions are present in the pen, e.g. sections of ear removed, or ear edge crumbling or scabbed (as opposed to scratches and liner lesions on the main section of the ear). Ear biting is likely to target the ventral edge of the ear.

NB ears can also be damaged by Ear tip necrosis, with different aetiology and remedial action, starting as damage to the ear tips as a result of bacterial infection. This initial infection can become a later target for ear biting. (Mark White, <http://www.nadis.org.uk/bulletins/ear-tip-necrosis.aspx>).

Body regions – *pattern of mild marks*

These preliminary explanations are offered as a starting point for discussions on tracing any body mark issues; the actual development of the lesion pattern will be specific to the individual situation and previous experiences of the pigs.

Marks on the head, ears and **shoulders** often indicate bite marks from fighting to establish or maintain social rank (likely to be high following mixing). High front-end lesion scores are likely to indicate repeated fights amongst a number of individuals. (Can also be the result of rough play fighting.)

Marks on the **hindquarters** are likely to indicate competition around the feeders – but can also be the result of social fighting where the defeated pig is unable to escape the aggressor (bullying).

Marks on the back and **flanks** (especially parallel scrape marks) indicate mounting behaviour (which can indicate disturbance or excitement in the pen, as well as increased sexual maturity). (Please note separately under Flank if these marks are typical, round flank-bite lesions, rather than linear scrapes.)

Marks on the **legs** are likely to indicate an issue with flooring, e.g. abraded bursae are associated with rough/uneven surfaces.

Also worth looking for any specific cause of marks within the pen (or previous pens), e.g. worn equipment, steps, hinges, etc. – E.g. an unusual pattern of upper snout markings in animals at lairage could be attributed to the pigs rooting up heavy rubber mats, and abrading the top surface of the snout; deep linear lesions in the flank can be from high speed contact with unprotected nipple drinkers.

A general pattern (i.e. not concentrated on forequarters, hind quarters, legs or flanks) could indicate general disturbance or activity in the pen –

- Potential contributory factors would include - pen layout meaning that active pigs are likely to be walking through resting animals in order to get between feed, drinkers and dunging area,
- Ventilation / temperature issues leading to pigs lying on top of each other,
- Active pigs, e.g. just unloaded, frequently disturbed or flighty.
- Can also indicate high activity e.g. play – if this is observed or likely, aim would be to reduce potential risks from contact with pen walls, fittings or floor, rather than reducing the behaviour.

Severe tail lesions – required;
Mild tail lesions - optional

What tail lesions show:

- Tail biting can cause very poor welfare through pain, internal abscesses and generalised blood infection (pyaemia), and tail-docking is also likely to cause short term pain.
- Tail biting is considered an abnormal behaviour, indicating reduced opportunity to perform foraging and exploration behaviour, and which can also occur when pigs are frustrated and hence experiencing reduced welfare, and can also be the result of rogue individuals.
- Tail biting has a multi-factorial origin and there is evidence that some causal factors have more weight, such as the absence of a manipulable material such as straw or poor environmental conditions.
- In some instances mild tail lesions caused by initial tail manipulation can stimulate additional tail interest and manipulation by other pigs, increasing the risk of further manipulation and more severe lesions.

At individual pig level – pigs receiving gentle chewing of their tails appear not to be adversely affected by this, but those pigs whose tails have been injured or who are subject to vigorous biting are likely to be in pain and distress. Mild lesions are likely to have minimal effect (although underlying bruising is common); severe lesions cause pain.

At unit level - a high percentage of pigs with mild lesions is considered to be evidence of restriction of opportunities to perform normal behaviour and increased risk of a clinical outbreak. A high percentage of pigs with severe lesions has severe production and welfare impact.

Productivity - Tail biting injuries can lead to pathological changes which may be associated with reduced growth rate, and full or partial carcass condemnation; production costs increase due to medication, staff time and reduced feed efficiency, disruption to pig flow.

Legislation – Presence of tail lesions provides evidence to show that injury to pigs' tails by biting has occurred, which is necessary to justify tail docking (Mutilations regulations 2007; SI 1100).

What to record:

Record the approximate dock length (proportion remaining) i.e. <1/3 of full length, approx. 1/2 of full length, >2/3 full length or full length.

Required – severe tail lesions

Record as severe if at least a proportion of the tail has been removed (by biting), tail is swollen or held oddly, scab covering whole tip.

Optional – mild tail lesions

Score as present if there are any linear lesions extending 1cm or more e.g. scratches and scrapes, or if score if scabs or lesions greater than 0.5cm diameter are present (e.g. circular or polygonal) or if swelling is visible on any part of the tail. Fresh blood and scabs contribute to lesion scoring, scarred tissue is not recorded.

Look at the animal from behind. Investigate carefully if the tail is swollen or shorter than normal and for scabs and lesions. This could be done from outside the pen if visibility is adequate.



Tail length reduced, swollen (severe)



Fresh blood visible on tail (severe)



Mild – 0.5cm diameter



Mild – 0.5cm diameter



Mild – 0.5cm diameter

NB – assessment of tail length remaining and hence proportion of tail removed will depend on general tail length of pigs in the pen.

If recording mild lesions also record dirtiness of animal around tail area if this affects ability to observe tail lesions.

If scoring severe tail lesions only, each of the sample of 25 pigs will have either severe lesion or no lesion (2 options) i.e. 2 severe, 23 no lesion.

If scoring mild tail lesions (optional) each of 25 sample pigs will either have mild lesion, no lesion, too dirty to tell or severe lesion (4 options) e.g. 6 lesions, 2 severe lesion, 3 too dirty to tell, 14 with no lesions.

Keeping a record of mild lesions could contribute to evidence for continued tail docking where severe lesions are not found but pigs are still showing signs tail biting.

Enrichment type – required:
Enrichment use - optional

What enrichment use shows:

- Is the enrichment and or manipulable material provided for the pigs keeping the pigs occupied productively i.e. is it what they choose to root or chew? Pigs rooting or chewing other pigs, muck or pen fittings indicate motivation to root but lack of desirable outlet.
- Pigs have evolved as opportunistic omnivores who use rooting behaviour as a tool for finding food and the correct balance of nutrients.
- We have not bred out the need for our domesticated pigs to root with their snout and manipulate materials with their mouth.
- Domestic pigs continue to root in the absence of food rewards - there is evidence that this behaviour has become 'hard-wired' as strongly selected for in past evolution.
- Studies have shown that free-living and farmed pigs spend the majority of their active time investigating and manipulating.
- *Farms need to provide suitable manipulable substrate or objects to keep pigs occupied. Failure to do so can increase risk of tail biting outbreaks.*

At individual pig level – the domestic pig has retained the evolutionary need to perform exploratory oral behaviour, even in the absence of food rewards. Pigs will work hard for access to desirable manipulable materials, and show a strong preference for complex, destructible (chewable), novel and edible rewards. Exploration of alternatives, such as pen fittings, is a less satisfying redirection of the pig's natural behaviour

At herd level – good levels of oral behaviour directed towards suitable manipulable materials have shown protective effects against abnormal penmate directed behaviours, such as tail and ear biting, and aggression, and in sows against development of stereotypies and abnormal penmate directed behaviours, such as vulva biting, and aggression.

Production - Tail biting and aggression are both costly to the producer in terms of time, medication and performance; destruction of pen fittings is also costly in terms of time and replacing pen equipment. These costs could therefore be reduced by increasing appropriate oral behaviour.

Legislation – To enable proper investigation and manipulation activities, all pigs must have permanent access to a sufficient quantity of material such as straw, hay, wood, sawdust, mushroom compost, peat or a mixture of such which does not adversely affect the health of the animals (WoFAR 2007, Sch 8 para 15).

The Welfare Code (P 81) states that objects such as footballs and hanging objects can satisfy some of the pigs' behavioural needs, but can quickly lose their novelty factor. The long term used of such items is not, therefore, recommended unless they are used in conjunction with materials such as those listed above, or are changed on a weekly basis.

Red Tractor Farm Assurance, Section AH.1.1 (April 2010) - Key changes to the standards:

- Chains alone are not acceptable
- Tyres are not acceptable as some may contain wire which could hurt the pigs
- Objects must be shown to be of interest to the pigs – i.e. not fouled
- Objects must be within the pigs' reach

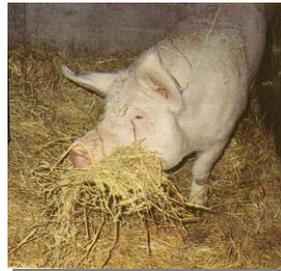
What to record

Enrichment type (required) – record the type(s).

*Enrichment use (optional): Observe and record the oral behaviour of **standing and sitting** pigs in a pen in turn (ignore lying pigs). This should be done quickly as it can be difficult to keep track of which pigs have been assessed. Where there are more than 100 pigs in the pen and viewing is difficult, aim to record behaviours from each quarter of the pen, e.g. view active animals within four groups of 25 pigs. Behaviours fall into one of **two** categories for this exercise:*

1. Record number of standing or sitting pigs investigating a manipulable material, i.e. substrate or toy provided as enrichment.

*Include if the snout/ mouth is manipulating straw, hay, wood[chip], sawdust, mushroom compost, peat (or other material that enables proper investigation and manipulation) OR in contact with an object/toy such as a hanging object or ball. **N.B. Objects not intentionally provided as enrichment (e.g. broken pen fittings) do not count as enrichment.** In outdoor systems turf or clean areas of ground count as suitable manipulable materials.*



2. Record number of standing or sitting pigs manipulating other pigs, pen fittings, pen floor or muck

*Include if the snout/ mouth is in contact with any part of another pig. Include if the snout/mouth is in contact with muck or the floor, fixtures or fittings of the pen. Pay attention at feeders or drinkers to discriminate between manipulation of pen furniture and eating/drinking. **N.B.** in outdoor systems, clean areas of floor (natural soil) count as suitable manipulable materials but rooting in dunging area counts as “other”.*



3. Record number of sitting or standing (active) pigs not using in “enrichment” or “other” categories.

I.e. pigs feeding, drinking, defecating, standing or sitting with mouth/snout not in contact with anything



Dirtiness – if scoring mild lesions

Whilst dirtiness of pigs has its own implications in terms of thermal discomfort and opportunities to wallow and substances available to wallow in, measurement of dirtiness is included in these protocols in order to qualify tail and body lesions. **Ability to observe mild tail lesions and mild body marks may be compromised if pigs are dirty** – because potential concealment of lesions is the main reason for recording dirtiness in this protocol, the source of dirt is irrelevant. Ability to score severe marks is not likely to be reduced.

This category can also be used where observation of mild marks is difficult for other reasons e.g. dark skinned pig breeds, or very hairy pigs, where skin surface is too difficult to observe.

Time of day, opportunity to wallow, temperature, free draining flooring etc. will all affect the ability of pigs to become dirty, but are not relevant to whether dirtiness is obscuring presence of lesions.

Sample size should not be affected by scoring of “dirty” animals, e.g. of 25 sampled animals, 10 may score body marks +10 with no body marks + 5 too dirty to tell = 25.

What to record

On pigs in sample -

Mild body marks - Record if one side of the pig is soiled with > a handsize (15cm x 10cm) of fresh/old slurry/urine/faeces, or mud which is dense enough to conceal lesions.

Mild tail lesions – record if tail end or whole tail is soiled making assessment of lesions difficult.



Clean



A handsize area of thin dirt – not affecting lesion assessment = “clean”



>1 handsize area of opaque dirt
–mild body mark lesion assessment affected = “dirty”
Tail also obscured = “dirty”.