

Real Welfare online training - text

This text is taken from the online training for vets involved in collection of Real Welfare data: it is provided here as an additional resource at <https://rwtraining.ahdb.org.uk>.

The aim of this training is to introduce you to the Real Welfare (RW) project, how this applies to you, and how to use the protocols to collect data on-farm as part of Red Tractor Farm Assurance for pigs or QMS Pigs Farm Assurance. Additional training will be given on-farm, and part of the aim of this online training is to make the most of on-farm training time for practical observation of welfare measures and standardisation of data collection and recording.

Overview

'Real Welfare' is the name given to a series of protocols developed to measure and compare pig welfare at a national level. It consists of five different measures to observe on a sample of finisher pigs (> 50kg) per unit (measures 1-4 are required, measure 5 is optional). The key to 'Real Welfare' is in standardisation of scoring by observers following detailed protocols such that the data collected are robust and results are comparable between different units. Since 2013, all vets, who carry out Real Welfare assessments must complete Real Welfare training and be a member of the Pig Veterinary Society. Data are submitted to the central anonymised database for benchmarking units and collecting information at a national level. The individual farm results can be used on-farm to help target areas of substandard welfare – ie where 75% of units have achieved a better score or the vet deems the level to be high.

The below measures detail what is required for a Real Welfare Assessment of finisher pigs (>50kg).

- Pigs in need of hospitalisation
- Lameness
- Pigs with body lesions
- Pigs with tail lesions
- Enrichment type and use.

(Full definitions and further explanations are provided in the 'measures' pdf, which is provided in the Real Welfare on-farm training pack).

Section 1. Background to Real Welfare (RW) project and protocols



The Real Welfare project was developed in response to the pig industry's need for strong, science-based evidence to demonstrate its husbandry standards and help influence the welfare debate.

The Real Welfare project is a package of five outcome-based protocols and definitions which give a set of repeatable measures of welfare in commercial pigs. These measures include:

- Pigs in need of hospitalization
- Lameness
- Pigs with tail lesions
- Pigs with body marks
- Enrichment use.

Red Tractor implemented RW methods in April 2013 through online and on-farm training. QMS will be using the RW methods from August 2016.

Development



The protocols of the RW project were developed by AHDB Pork following extensive work undertaken from 2006 to 2009 by Bristol University, the University of Newcastle and the RSPCA. During the initial development, over 70 measures with biological and production effects were considered that could be observed on pigs. AHDB Pork, with the assistance of over 20 vets around the country, refined these measures into the current RW package with the aim to produce repeatable and reliable indicators of pig welfare, which are practical to apply.

RW developed and refined welfare outcome measures for both dry sows and finisher pigs, however, only the set of measurements for finishers (>50Kg) has been implemented into on-farm assurance at this stage. The measures have all been verified as independent of each other and have proven effects on production.

Standardisation

Farmers and vets may use inherently different criteria to class a pig as 'tail bitten' or when describing a lesion as 'mild' or 'severe'. The use of standard definitions allows observers to compare prevalence or behaviour between different units. RW standard protocols and definitions, have been thoroughly trialed under farm conditions, to enable benchmarking between units, and act as an aid to identifying unusually high prevalence.



The online and on-farm training provides the standardisation required for assessors to carry out RW assessments and helps to assure the professionalism of data collection.

Parallel projects



A similar approach to recording welfare outcomes has been taken by the Europe-wide Welfare Quality programme (2004-2009). Welfare Quality identified 20-30 measurable lesions and conditions which could be studied for each stage of pig housing. This set of protocols takes over six hours to complete for each housing type on the unit and is, therefore, unlikely to be followed in a commercial setting. RW concentrates on the development of a much more practical set of protocols which can be completed in one hour per unit.

AssureWel is another current project looking at welfare outcomes in a range of species. They have independently developed methods and measures for laying hens and dairy cattle, and have been using the RW protocols and definitions as the core measures within their AssureWel measures for pigs. This may be implemented in the Freedom Foods and Soil Association-farm assurance schemes, but is independent of the RW data collection for the Red Tractor and QMS Pigs Assurance Schemes.

Section 2. Real Welfare protocols in Red Tractor and QMS

Both the Red Tractor and the QMS Assurance Schemes have recognised the merit of measuring welfare indicators using the Real Welfare protocols which are independent of system/housing. The RW protocols for finisher (50Kg) pigs have been adapted to coincide with the routine assurance scheme quarterly visits.

Compliance

For compliance with the Farm Assurance schemes, some time on the quarterly vet visits to finisher units must now be spent carrying out the RW assessments. Assessments must be carried out by an RCVS veterinarian who is a member of the Pig Veterinary Society (PVS).



Where a unit has a high prevalence of any of the measures (based on veterinary opinion, but a useful indicator is the top 25% of units from the benchmark results), it must show evidence that it is attempting to reduce this prevalence through recording decisions and advice clearly marked as RW information in the Veterinary Health Plan (VHP) in order to remain compliant with RT farm assurance.

The RW visit is summarised in the assurance scheme's quarterly Veterinary Report, eg number of pigs assessed for RW in the last quarter; have the RW findings been discussed and has the VHP been updated?

When the assurance scheme auditors visit the unit, they will be able to check that the RW visits have been carried out. If the unit has a high level of a measure the auditor can look for evidence that problems are being addressed, eg in the VHP. It is likely that, in the future, auditors will be trained in RW protocols to allow them better understanding of what the vets are recording, and to increase confidence in assessing the success of actions noted in the VHP.

Neither AHDB Pork nor the assurance schemes (RT/QMS) will have access to individual farm data. Individual RW outcomes are owned by the unit and are not used by AHDB, Red Tractor or QMS. Amalgamated, anonymised data (eg National level data) is used by AHDB to further the aims of Real Welfare.

Section 3. Measures



The main aim of this section, along with the on-farm standardisation session, is to become familiar with the measures, definitions and protocols used in the RW assessment. It also provides the opportunity to familiarise yourself with the iPig App which was developed to enhance data collection.

The **five RW** measures, have been selected as occurring at a range of prevalence on different units and with proven links to productivity. The measures are repeatable between different observers, and practical to observe in a commercial setting. The measures can occur independently of one another, and have been selected to avoid duplication of recording. The four pig-oriented measures (1-4) provide the starting point for a discussion of potential issues on the unit. The combination of these measures, along with enrichment use (recording of which is currently optional), can help to pinpoint the causes of the problem.

The five measures to be recorded for RW in RedTractor/QMS are:

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

All pigs in all sample pens are assessed for hospital and lame pigs.

Only the 'sample pigs' (defined on the next pages) are assessed for tails and body lesions

All active pigs (sitting and standing) are assessed for enrichment use (if using)

Body Marks Recording

Severe body mark (required) - Lesion is larger than 5x5cm diameter
Lesion extends into deeper layers of skin
Lesions cover a large percentage of skin (>25%)

All sample pigs scored as 'severe' or 'no lesion'

Mild body mark (recording optional) - Linear lesion longer than 10cm
3 or more 3cm lesions
Circular area larger than 1cm diameter

All sample pigs scored as 'marked', 'no marks', 'too dirty to tell', or 'severe'.

Tail Lesion Recording

Severe tail lesion (required) - Proportion of tail has been removed by biting
Tail is swollen or held oddly
Scab covering whole tip or fresh blood visible

All sample pigs scored as 'severe lesion' or 'no lesion'

Mild tail lesion (recording optional) - Linear lesion extending 1cm or more
Scabs/lesions greater than 0.5cm diameter
Swelling visible

All sample pigs scored as 'mild lesion', 'no lesion', 'too dirty to tell', or 'severe lesion'

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

The number of sample pigs to measure can be calculated using the below table.

Total Number of Pigs in Pen	Number of Sample Pigs to Assess
< 25	All
25 - 100	25
>100	50

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 lesions. Note that '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 if there are more than 100 pigs in the pen. If there are still insufficient pigs to meet the sample number target, divide the total sample number by the number of pens available.
4. Exit pen and record enrichment type(s). If assessing enrichment use: 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. (Enrichment use can also be objectively scored before the other four measures when fewer pigs are active.)



Stoneleigh Park | Pen 1 Pen Size: 250

Total Pigs in the pen today: 250

1. Hospital Pigs
Number of pigs that would benefit from being in a hospital pen. Count / 250

2. Lameness
Number of lame pigs in whole pen. Count / 250

3. Tail Lesions
Pigs with severe lesions on tail Count / 50

Docked ~0.5

4. Body Marks
Pigs with severe marks on body Count / 50

5. Enrichment Use
Ratio of active pigs using enrichment.
Please select the types of enrichment in the pen:
Enrichment Other Active

Material: Straw

Size: Medium

Add

Accurate counting is the major strength of valid data collection but estimating prevalence is likely to be biased when based solely on an observer's opinion. One key feature of the iPig App is tally counters. These handheld gadgets provide a quick visual reference to the number of pigs scored for each measure. In the app, 'yes' and 'no' buttons are provided to allow data to be collected in the same manner. These buttons are also provided to allow data entry of 'severe' lesions and 'too dirty to score' animals. A significant benefit of this is the scoring of 'no' pigs – ie no body marks, no tail lesions – improving the accuracy of data collection, and avoiding a common pitfall of only focusing on and recording 'yes' pigs. Without a record of 'no' pigs, it is easy to continue to find pigs with lesions and marks and overlook unmarked animals.

The app contains the key information needed to follow standard protocols and definitions for the five scores. These are presented in a logical order and layout such that all components of each question (eg pattern of body marks) are easy to complete, and it is possible to return to adjust previous scores, eg if an additional hospital pig is observed.

Section 4 Sampling numbers: total sample, building level, pen level

RW protocols allow for flexibility in the number of pigs to sample per unit and the number of visits per year that these should be spread over. The total number of pigs to observe over the year depends on the size of the unit. Buildings need to be sampled from representatively, and different pen types within buildings also need to be represented. Individual pen selection must be randomised to avoid inadvertent bias in pen selection. Set criteria are provided for the number of pigs per pen to sample for each measure, according to group size.

iPig App

AHDB Pork have developed a Smartphone App to assist in data collection and submission called iPig. The app is available on both apple and android devices and does not require an internet connection to record data. A key feature of the App is the selection of pens and prompts for number of pigs to sample for each measure, as well as features to speed up data collection and display benchmarking information. It also submits data automatically to an anonymised central database. Use of the app can assist with identifying the correct number of animals to sample, based on the number of finisher (>50Kg) places and proposed number of visits.

It is, however, also useful to be aware of how these sample numbers are calculated. Once you are familiar with the sampling strategies, they are not as obscure as they first appear.

Please note the difference between finisher places and finisher pigs:

- **'Finisher places' refers to the building set up and physical places on the unit which will (at some point) house pigs >50kg**
- **'Finisher pigs' refers to pigs >50kg present on the day.**

Sampling numbers are based on finisher places, which are assumed to remain fairly constant, with the exception of building construction, demolition or change of use. Finisher pigs on the day may well vary due to pig flow, movements to slaughter, etc. Sampling is based on number of finisher places in order to provide a consistent representative sample of pigs on the unit.

Sampling numbers (farm level)

- For units of 300 finisher places or less, a minimum of 300 pigs should be sampled per year a minimum of 100 pigs should be sampled per visit (whether 3 or 4 visits). If a unit has less than 100 places, all of the pigs should be sampled
- For units of 900 pigs or more, a total of 900 pigs should be sampled per year
- For units between these sizes, a representative proportion should be sampled, which coincides with the total number of finisher places, eg 400 pigs per year from a 400 finisher place unit, 500 from a 500 finisher place unit, 600 from a 600 place finisher place unit, etc.

Number of Finisher Places on Unit	Number of pigs sampled per year	Number of pigs sampled per visit	
		3 visits a year	4 visits a year
300 or less	300	100	100
500	500	166	125
900 or more	900	300	225

Visit numbers

- The annual total number of pigs required to be assessed for real welfare for each unit can be reached as either 3 or 4 visits per year, at your discretion eg for a batch finisher unit which only completes 2-3 batches per year, 3 visits per year would be more suitable. For a continuous flow unit with finishers at all times, 4 visits per year may be preferred.
- Where a unit only completes 2 batches a year, only two sets of RW data can be completed.
- Ideally, units should be sampled when finishers are 50kg or more. If there are not enough 50kg+ pigs present, make up the total with 30kg+ pigs.

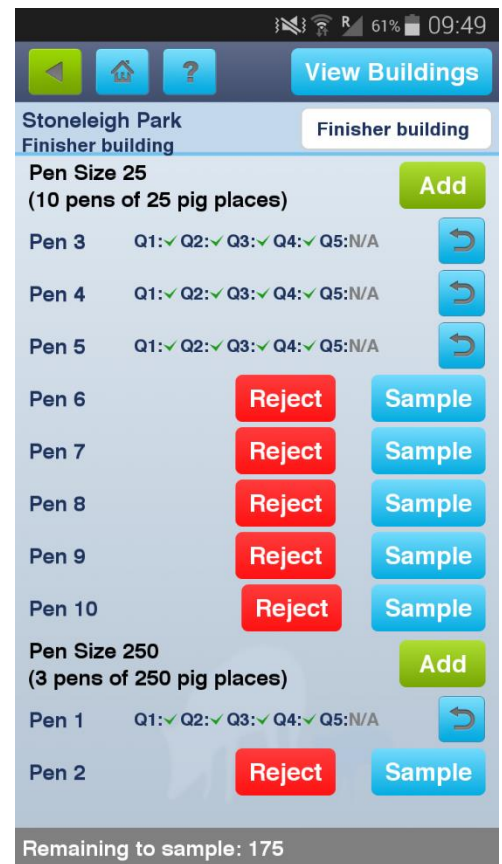
The iPig app directs users to the correct number of pigs to sample per visit based on the number of finisher places on the unit and the number of proposed visits.

One of the key requirements of RW is that the welfare score of finishers on a unit is representative of all finishers on the unit. In order to do this, pigs from all the different finisher buildings must be sampled from. If there are different pen types within a building, these should also be sampled from in a representative manner. While an uncommon pen type on a unit may only house a small percentage of the finisher population, it may carry its own welfare risks which need to be addressed. Overlooking that pen type may allow pigs to continue to be housed in suboptimal welfare, which should be avoided.

Select pens to sample before entering the building; in an ideal world this could be done using full randomisation in practice, it is more practical to decide before entering the building the location of the pens to be sampled, eg if 5 pens are to be sampled, decide to sample the 2nd pen on the right, then the 3rd on the left, then 4th on the left, the 2nd on the right and the 5th on the left – obviously this depends on the layout of pens in the building.

The iPig Smartphone app will select pens at random to help users avoid unintentional bias.

If a randomly selected pen is not appropriate, eg is the hospital pen, contains farm equipment or an atypical number of pigs, eg last 2 when all others have gone for slaughter, select either the next valid adjacent pen, or pen across the aisle, or re-randomise and go to another pen. It is important that a set of rules are selected and adhered to (eg opposite pen, new random pen, or adjacent pen) to avoid pig activity or eye-catching features in a pen inadvertently affecting selection and, therefore, biasing results.



The total number to sample is based on the number of concurrent finisher places for finishers over 50kg only – this is then divided according to the frequency of visits the minimum number of pigs to sample on any visit is 100. If there are no finishers over 50kg on the unit, apply these sampling guidelines to finishers over 30kg.

On a batch finisher unit with **2000 finisher places** (all occupied):

The total number of pigs to sample is **900 per year** (maximum total sample)

- On **3 visits a year** this would be $900/3 = 300$ **pigs per visit** should be sampled
- On **4 visits a year** this would be $900/4 = 225$ **pigs per visit** should be sampled

On a unit with 1800 pig places, the number of pigs to assess still depends on the number of finisher places. If pigs are moved through weaner, grower and finisher accommodation, this is likely to be approximately **600 finisher places** a year.

If visiting **3 times a year**, $600/3 = 200$ **pigs per visit** should be sampled

If visiting **4 times a year**, $600/4 = 150$ **pigs per visit** should be sampled.

If a unit has less than 100 finisher places, then all finisher pigs must be sampled.

If, on a visit to a unit, most pigs have already been pulled to slaughter, the sample should still be based on the total number of concurrent finisher places.

Sample numbers within pens

*The 'sample number' refers to the number of pigs within a pen which will be observed for **tail lesions and body marks** and which contribute to the total number of pigs to sample per visit. All pigs in selected sample pens are assessed for hospital pigs and lameness.*

- In pens of fewer than 25 pigs, all pigs contribute to the total sample, and should be scored for tail lesions and body marks
- In pens with 25-100 pigs, sample 25 pigs for tail lesions, and 25 for body marks (not necessarily the same pigs)
- In pens with more than 100 pigs, sample 50 pigs per pen it is the total of these samples which makes up the total sample number per unit per visit
- Where sampling 50 pigs per pen will not reach the total sample size needed, divide the number of pigs needed from this pen type by the number of pens available (eg if 150 pigs are needed from two pens of 100, sample $150/2 = 75$ pigs per pen)

The two remaining measures (hospital pigs and lame pigs) are carried out on all pigs in the sample pens (giving a larger total to establish prevalence if the pens contain more than 25 pigs). This method improves the accuracy of recording hospital pig and lameness prevalence because these usually occur in low prevalence. Assessing all

pigs in the pen avoids inadvertent bias in selecting pigs to assess. Tail lesions and body marks are assessed in the pen sample as these are often smaller marks to identify, are time consuming, and require more detailed observation of animals than hospital pigs and lame pigs.

The iPig app follows the same rules and calculates the number of pens to sample based on the group size, and identifies how many sample pigs are needed per pen for the different measures.

Summary

- 1) Total number of pigs to sample depends on the number of finisher places on the unit: minimum 300, maximum 900 over the year
- 2) Sample pigs from each building and pen type representatively
- 3) The number of pens to sample from depends on the number of pigs in the pen:
 - Sample all if less than or equal to 25;
 - Sample 25 if there are between 25 and 100 pigs;
 - Sample 50 if there are more than 100 pigs
 - OR divide the total needed from >100 pig pens between the number of pens available.

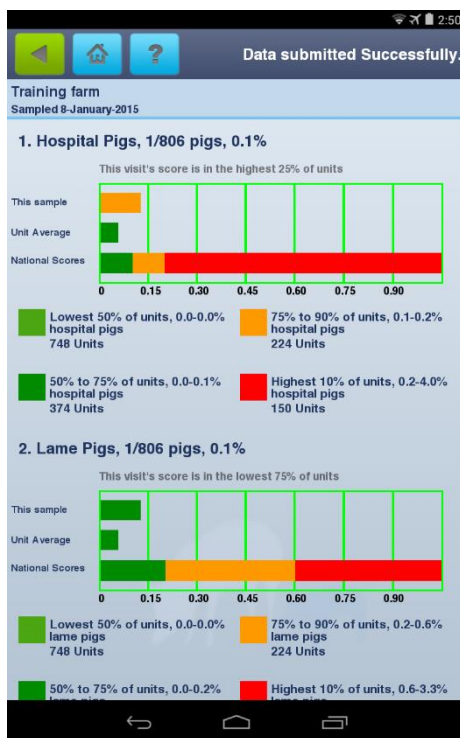
Section 5 Feedback to farmers

Benefit for Farmers

The Real Welfare scheme offers benefits to farmers and to the industry. For farmers, it provides a tool for recording indicators of pig welfare which can then be used to monitor changes and identify areas for improvement. It also demonstrates how each unit compares to others, allowing farmers to benchmark their unit against all other pig units across the industry. For the industry, the scheme provides evidence of welfare standards in place, which can then be demonstrated to the consumer.

Providing feedback and advice to farmers is a crucial part of Real Welfare this is where vets familiar with the unit are invaluable. Real Welfare assessments enable instances to be identified where the system is not fulfilling the pig's needs even when all legislative requirements have been met. Because we're highlighting farms in the top 25% of scores, for every measure, one in every four farms will automatically fall into this category. Some farms will score well in all categories and the benchmarking can help to show them this, as well as giving them additional targets to aim for if they wish.

Benchmarking



Most farms are aware of their production figures and how these compare with local and national figures, but welfare figures, such as lameness prevalence, are less obvious. The results of RW assessments can be benchmarked against a national database to give an indication of how each farm is performing in terms of welfare. Any poor scores can be used to focus on possible actions to take, which will benefit both welfare and production.

By using the app on-farm, the unit's results can be compared to the national prevalence of each measure, which highlights whether they are within the lowest 75%, in the highest 25% or highest 10% of units. This information can then be used to start discussions on the welfare areas to target, and to point out where prevalence is better than most of the industry. These

measures can also give farmers an indication of where production may be affected (eg higher than standard prevalence of lameness).

High scores

Where units are within the highest 25% of scores, or you consider the score to be high, please ensure that actions are specified in the VHP. Units will be compliant with Red Tractor/QMS irrespective of their scores but units with high scores over repeated visits with no evidence of actions taken to change the situation, may be classed as non-compliant. A unit with repeat high scores where there is evidence of ongoing efforts to address the issue is still Red tractor/QMS compliant.

When Red Tractor/QMS assessors visit the farm, they may be aware of welfare issues but this section of the standards will be satisfied providing that issues are identified and a course of action agreed and recorded in the VHP. Red Tractor/QMS assessors will not have access to the individual farm results, unless provided by the farmer or producer. The only Real Welfare information visible to them is the QVVR form and VHP.

The advice given to the farmer is down to you – you know the individual farm and staff, the history of the unit, measures that may have been tried in the past, and current unpredicted changes (eg machinery breakdown, wind damage, illness etc.). The measures taken at the finisher stages are an indication of the pigs' experience so far - it may be that the original cause of a problem (eg a body mark pattern, or tail biting behaviour) began at an earlier housing stage – which can still be addressed and benefit future batches.