How to assess enrichment materials

Once enrichment materials are in place, it is important that checks are made to ensure that what is provided is sufficient and used by the animals. It is recommended that methods for assessing enrichment materials should include checks that are based on both animal and non-animal indicators, such as those given in the table below:

Table 2 – Welfare indicators of enrichment materials[11]

Non-animal based indicators	Animal based indicators
• **Sustain interest**: is the material sufficiently frequently renewed? • **Access**: is the material easily accessible to the pigs? • **Sufficient quantity**: Are all pigs able to have enough materials to use at the same time? • **Clean:** is the material soiled with excreta?	• Abnormal behaviours such as: – Pigs do not often use the materials provided over time – Pigs bite other elements than the materials provided (bars, tails/ears of other pigs, etc.) – Pigs root and manipulate their dung – Pigs compete or fight for the use of materials – Sows perform increased false nest building behaviour • Presence of bitten tails • Presence of severe skin lesions

The following assessment method for enrichment materials is that used by the Real Welfare Scheme in order to assess on-farm pig welfare, as required for those finishing pigs under the Red Tractor Farm Assurance Pigs Standard. One of the welfare outcome measures assessed by the Real Welfare protocol is environmental enrichment use (as well as lameness, hospital pigs, tail damage, and body marks). This is adapted from the Coordinated European Animal Welfare Network (EUWelNet), a version of which is also published in the **Commission Staff Working Document on best practices with a view to the prevention of routine tail-docking and the provision of enrichment materials to pigs**[11].

Real Welfare environmental enrichment use assessment

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

2. 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.

3. Recorded as the 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

The enrichment use is expressed as a ratio and is calculated as:

$$\frac{\textbf{the number of pigs engaged in manipulating the environmental enrichment (1)}}{\textbf{total number of pigs manipulating either enrichment or pen mates or pen fittings (1+2).}}$$

Under this assessment, the higher the ratio the better. Any value over 0.5 suggests that pigs are displaying a preference to use the enrichments provided; 0.5 indicates that the provided enrichments are equal in preference to pen mates or pen fittings, so there is scope for improvement in providing enrichments; under 0.5 suggests that the enrichments are relatively ineffective, with pigs preferring to investigate other pen mates or fittings, and so consideration may need to be given to making management changes by introducing more optimal and sub-optimal enrichment materials. Additionally, the welfare indicators given in table 2 should be checked in order to ensure pigs benefit from proper enrichment provision.

New or Replacement Housing

When any new or replacement housing is being planned, this should be designed with consideration of enrichment provision, to comply with legislation. For example, farmers should consider whether the flooring that they plan to install will permit them to comply with the requirement to provide enrichment materials that "*enable proper investigation and manipulation activities*". New handling systems for manure should also ensure the provision of destructible materials.

Afterword

As this guide shows, there are several options available to farmers to enrich the environment of their pigs. Some options are more expensive or more easily sourced than others. However, environmental enrichment can be done at a relatively low cost by re-using a range of materials or objects already available on the farm. Even so, it is important that these hold the pigs' interest, and this means changing the enrichment items on a regular basis. The practice of providing environmental enrichment is required to comply with legislation. However, it can also have beneficial effects on animal productivity, so farmers may see advantages to adopting this above animal welfare reasons.

Environmental enrichment is just one aspect of a pig's environment and it is important that its adequate provision for pigs is not seen in isolation to other factors such as ventilation, health, nutrition, water provision and competition for resources, are well managed too[9].

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