

NPA BRIEFING



Date: May 2015
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NPA briefing note on keeping pigs on slatted floors

Background:

- Pigs housed in indoor systems are usually kept on one of the following floor types
 - Fully slatted floor
 - Part slatted / part solid concrete
 - Deep straw yard with solid floor
 - Solid floor kennel with bedding and scrape through dunging passage
- In England, it is estimated that the majority (60%) of finisher pigs are housed in straw-based systems, 25% on fully slatted flooring and 10% on partially slatted floor ^[1].
- For sows, aside from the 40% that are housed outdoors for the entirety of their life, the majority are housed in groups on deep straw, with only 2% housed on fully slatted floors ^[1].
- Slatted flooring may be concrete, plastic or metal. Where young pigs are housed on fully slatted flooring, the slats tend to be plastic which is more appropriate for smaller feet.
- Flooring type is closely linked to how the manure is handled on the unit. In slatted systems, urine and faeces falls through gaps in the floor to physically separate it from the animals. Partially slatted systems have a solid lying area combined with a slatted dunging area.
- Straw is not suitable for these systems because it drops through the slatted flooring, creating blockages in the slurry system. It also has the potential to completely block the gaps between slats and create a much dirtier environment for the pigs. However, it is sometimes possible to provide chopped straw in small amounts or suspend it over the pen within reach of the pigs.
- The nature of modern indoor pig production means that thermal comfort, traditionally provided by bedding, can now be achieved through correct temperature control and ventilation in pig accommodation.
- The absence of bedding in slatted systems does not necessarily mean that the environment is 'barren'. Pig farmers are legally required to provide some form of environmental enrichment to satisfy the pigs' need to investigate and manipulate ^[2], e.g. moveable and biteable objects.
- A key benefit of slatted flooring is that the manure is continuously removed from the pen so that pigs have reduced contact with it. This minimises the risk of spread of enteric diseases, such as Salmonella, Listeria and dysentery. An EFSA Opinion reported that slatted flooring results in better pen hygiene and reduced incidence of post-weaning diarrhoea compared to solid flooring systems ^[3].
- However, the prevalence of respiratory disease can be higher in slatted floor systems ^[3]. This can be reduced by maintaining good air quality through ensuring frequent removal of slurry from the building and appropriate air extraction between the surface of the slurry and the floor.

- A consideration for any flooring system is how well the pigs are able to move about on it. Floors must be smooth but not slippery and designed, constructed and maintained so as not to cause injury or suffering to the pigs. It must also be suitable for the size and weight of the pigs ^[2].
- The risk of injuries to pigs kept on slatted floor is influenced by the slat and gap width in relation to the size of the foot. Hence the appropriate slat/gap combination is different for different sizes of pig and thus changes as the pigs grow in size.
- For concrete slatted flooring, the maximum width of the slats and gaps is stipulated in European Union legislation for pig welfare ^[2]. These dimensions are also included as a requirement of Red Tractor Assurance standards, under which 92% of pigs are produced.
- Slats made of plastic and steel do not have long continuous gaps between them; instead drainage is through a series of small holes.
- Recent research at Newcastle University using motion capture technology to assess pig walking patterns found that the development of lameness was not affected by the floor surface when comparing pigs housed on fully slatted flooring, partial slats and straw bedding ^[4].
- Pig units that adhere to Red Tractor Assurance are required to have their pigs assessed for welfare indicators as part of the Real Welfare scheme ^[5]. The assessment is carried out by trained vets and measures the incidence of lameness and body lesions. Any problems with the flooring would likely be highlighted by high levels of these, which the farmer would then be able to address.
- Slatted floors and slurry based production systems are generally considered to be more environmentally efficient due to the reduced and more easily controlled emissions of ammonia, dust and odour to the atmosphere.

NPA position:

- The British pig industry is committed to monitoring and further enhancing pig welfare. The NPA fully supports the Real Welfare scheme as an excellent tool for measuring pig welfare indices to demonstrate good welfare and highlight any problems that might need addressing.
- A recent EFSA report highlighted that the behavioural needs of pigs and the welfare consequences of not meeting those needs is an extremely complex subject in which multiple factors are known to interact ^[6]. While providing bedding is certainly a good way to satisfy a pig's need to explore, which is why many UK pig farmers use it, NPA argues that it is not a "one size fits all" solution and other forms of enrichment may be suitable.
- Regulations on slat and gap widths for concrete slats were introduced to protect pig welfare. Adapting current legislation to increase the gap widths to enable straw use in slatted systems, as suggested by some EU member states in a recent position paper ^[7], would significantly financially burden farmers (through having to replace or adapt existing flooring) and potentially pose an increased risk of injury to pigs.
- NPA urges all of its members to routinely check and maintain flooring in pig housing to ensure that all legal requirements are being met and risk of injury to pigs is minimised.

References

- [1] National Statistics from Defra Pig and Poultry Farm Practices Surveys 2009 - England
- [2] European Council Directive 2008/120/EC laying down minimum standards for the protection of pigs
- [3] The welfare of weaners and rearing pigs: effects of different space allowances and floor types *The EFSA Journal* (2005) 268, 1-19 (<http://www.efsa.europa.eu/en/efsajournal/doc/268.pdf>)
- [4] Stavrakakis S, Guy JH, Warlow OME, Johnson GR, Edwards SA (2014). Longitudinal gait development and variability of growing pigs reared on three different floor types. *Animal*, 8: 338-346
- [5] <http://pork.ahdb.org.uk/health-welfare/welfare/real-welfare/>
- [6] EFSA Panel on Animal Health and Welfare, 2014. Scientific Opinion concerning a multifactorial approach on the use of animal and non-animal-based measures to assess the welfare of pigs. *EFSA Journal* (2014) 12(5):3702
- [7] http://en.fvm.dk/fileadmin/user_upload/FVM.dk/Nyhedsfiler/position-paper.pdf

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