



# Food Animal Initiative

ENVIRONMENTS FIT FOR ANIMALS FIT FOR THEIR ENVIRONMENT

## FAI Technical Datasheet P4 - Improving eating quality in pork - Update August 2005

Fresh pork sales have taken a down turn in recent years as the consumer has turned to alternatives such as chicken which provides a superior and more consistent eating experience. This is supported by consumer research demonstrating that the potential for premium type products is 20% and also that 11% of consumers are interested in buying British products. These market opportunities in the pork sector are not saturated.

### 'the facts.....'

A substance called skatole, which is present in pig faeces, can be absorbed through the skin and lungs of pigs and can cause taint in meat<sup>1</sup> - 'boar taint'. This effect may be stronger in uncastrated male pigs because of the presence of male hormones and it is generally accepted that male meat has a higher risk of being tainted. High class butchers will often only source gilts. In the UK pigs are not routinely castrated, although this is permitted in law, however in Europe castration is the norm. Castration causes significant pain.<sup>2</sup>

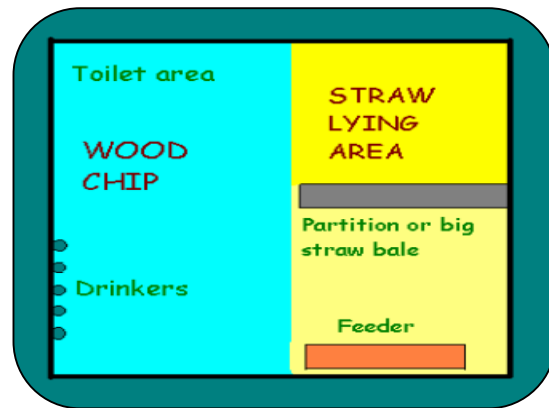
Pigs cannot sweat and so can only lose heat by wallowing in liquids which then evaporate from the skin surface. In many systems pigs wallow in their own faeces and urine as the only method of losing heat because there is no alternative. Pigs kept in dirty conditions contain higher concentrations of skatole in their tissues.

Pork has become increasingly lean in recent years in response to customer concerns over health. A small increase in fat content has a positive effect on the taste and succulence of pork and this has been demonstrated by taste trials.<sup>3</sup>

Any growth checks (e.g. at weaning) and disease causing extended finishing times can change muscle structure which can have negative effects on meat quality.

In addition stress, a high risk during mixing of pigs, transport and slaughter, can lead to poor quality meat known as PSE (pale, soft, exudative) meat. This is an acute condition occurring in the period immediately prior to slaughter due to glycogen in muscle causing acidity after death at a faster rate than is seen in unstressed animals.<sup>4</sup>

1. Hansen LL et al 1994 Animal Production 59: 1, p99-110
2. Taylor AA & Weary DM 2001 Applied Animal Behaviour Science 73: 1 p35-43
3. Lucy Goodchild, Undergraduate Harper Adams, 2004
4. Warriss PD 2003 Veterinary Record 153: 6 p170-176



FAI pen design with functional areas

### '... the FAI response!'

Different breed combinations are being trialled in order to produce meat which is tasty and succulent, not fatty and free from boar taint. Results from Gloucester sows crossed with a commercial boar have been consistently successful in taste trials.<sup>3</sup> Males are not castrated and the use of a Gloucester cross has meant later maturing pigs which reduces aggressive interactions which occur when females come into heat in a mixed group.

Pigs are provided with a pen design where they can separate their functional activities into feeding, drinking/wallowing, a bed area and a toilet area. Here they learn to create a wallow in woodchip provided in the drinking area by pressing the drinker to wet the woodchip. Evidence over the hot summer of 2003 showed that the pigs did not wallow in their faeces and chose the woodchip wallow in preference. Pigs were not observed to defaecate in the woodchip wallow.

To remove mixing stress and avoid growth checks pigs are late weaned (6 weeks plus), kept in their family groups from birth until finished and sudden diet changes are completely avoided.

Pigs are moved regularly in their family groups as part of the management process. They are also moved for weighing. This learning process helps reduce the stress of transport and handling for slaughter.