

NPA BRIEFING



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NPA briefing note on castration

Background:

- Surgical castration of male piglets is practiced widely throughout Europe. For example, in Denmark more than 90% of male piglets are castrated ^[1]. It is usually performed on piglets in the first few days of their life and often without anaesthetic or pain relief.
- In the UK castration is legal, but prohibited by the Red Tractor assurance scheme as the invasive procedure is considered to negatively impact piglet welfare. More than 90% of the pigs in the UK are reared to Red Tractor standards, meaning castration is extremely uncommon here ^[1].
- Representatives from pig industries across the EU have signed a voluntary commitment to end surgical castration of piglets ^[2], but not before 2018 and the evidence so far suggests that this target will not be met ^[1].
- The Federation of Veterinarians of Europe (FVE) carried out a survey in November 2015 on pig castration in order to see the progress made in respect to the European declaration ^[3]. The results showed that in most countries, male pigs are still being surgically castrated.
- Male piglets are castrated to avoid the presence of boar taint in the meat. Boar taint describes the unpleasant flavour and odour caused by the accumulation of two compounds in the fat of the animal: androstenone and skatole.
- Androstenone is a steroid produced in the testicles of male pigs when they reach puberty and it prevents the breakdown of skatole (produced in the gut when microbes breakdown the amino acid tryptophan) by the liver. Hence, removal of the testicles by castration reduces the presence of these compounds and eliminates the risk of boar taint.
- Boar taint does not occur in every male pig, although its prevalence is known to be highly variable between farms ^[4,5]. Similarly, not all consumers are able to detect boar taint and consumer susceptibility varies between different global regions.
- Boar taint is not considered to be a significant issue in UK pigs as they are traditionally sold at lighter weights, before puberty. However, slaughter weights are increasing so it is something that the UK pig industry will need to pay close attention to.
- Scientific research has shown that surgical castration is a painful procedure, even in piglets younger than 8 days old (although wound healing is better when performed at a young age) ^[6].
- Surgical castration without anaesthetic therefore negatively affects the welfare of the piglet and for this reason other options are being investigated:
 - Surgical castration with anaesthetic and/or pain relief
 - Immunocastration
 - Raising of uncastrated (entire) males, as is done in the UK
 - Other alternatives, e.g. sperm sexing and genetic control of boar taint

- Immunocastration is achieved by vaccinating male pigs against a sexual hormone known as gonadotrophin releasing hormone (GnRH). The vaccine causes the pig's own immune system to neutralise GnRH, which consequently prevents development of reproductive organs. Improvac® was the first commercial product introduced for immunocastration of male pigs^[7].
- In the UK, immunocastration is not currently allowed on Red Tractor assured farms, although use of Improvac may be permitted if the farmer has sought permission to use it as part of a trial. Its use throughout the EU has been limited so far due to the cost involved, practicality of administering the vaccine and in some cases reticence from retailers.
- There are pros and cons to each of these alternatives. For example, entire males can display aggressive behaviour towards other pigs when they reach puberty in the later stages of rearing before they go to slaughter^[4]. However, not castrating male piglets avoids the pain and discomfort of the procedure and entire males grow more efficiently than castrates.
- It may also be possible to reduce aggressive behaviour of entire males by managing the pigs differently, e.g. split sexing pigs to rear male and female pigs separately. However, split sexing requires extra labour and additional pens may be necessary, meaning it is not always a viable option. The reduced aggression is not always apparent if the pens of female pigs remain relatively close to the male pig pens.
- General and local anaesthesia, in combination with long-term analgesia, has been shown to reduce pain during/after surgical castration. But the additional handling and injection/inhalation of the anaesthetic may cause stress to the piglets and the effectiveness and safety margins of the products used must be considered against the welfare benefits^[6].
- Immunocastration avoids the pain of surgical castration, prevents boar taint and avoids the aggressive behaviour seen in entire males. But there are some concerns about this method, namely regarding consumer acceptance of the meat and human safety as it involves close handling of finishing pigs and there are health risks if a farm worker accidentally self-injects with the vaccine^[8].
- Sperm sexing to produce only female pigs and raising entire males after genetic control of boar taint are potentially preferable alternatives to current practices, but need further research, as these methods are not yet available^[9].

NPA position:

- The fact that male piglets are not castrated in Britain means that pig production here is higher welfare compared to many European countries where they surgically castrate piglets without anaesthetic. However, NPA encourages its members to address any welfare issues associated with raising entire males (e.g. through management strategies) and suggests the industry should monitor the prevalence of boar taint as carcass weights in the UK get progressively heavier.
- Different options for castration/to reduce boar taint can affect pig performance differently between farms and the treatments require different management techniques. NPA believes that affected farmers should be encouraged to trial the different options in order to make a well-considered choice for the best practical and profitable alternative for their farm, whilst maximising pig welfare. It is imperative that any action is acceptable to the commercial market.

References

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