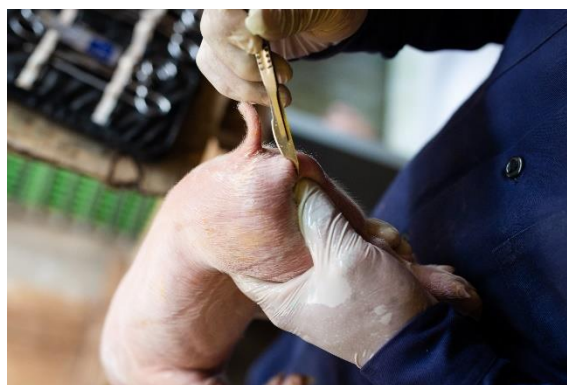


## Surgical castration – an issue that needs your attention

### 1. What is surgical castration?

In most countries, male piglets are routinely castrated with surgery: the skin is cut open, their testes are removed, and their spermatic cord is either cut or torn. The surgery is often done without any anaesthesia and pain relief, which causes tremendous pain and stress to the animal. Antibiotics are routinely provided. During the healing process, infections can still occur so some piglets may need additional antibiotics. Currently, scientific studies have shown that all pain mitigation strategies that are practical on farm failed to reduce pain experienced by pigs after the procedure.



### 2. Why is surgical castration carried out?

The main reason that surgical castration is routinely carried out is to prevent boar taint. Boar taint has an unpleasant odour and taste, and naturally occurs in a small percentage of uncastrated male pigs yet 100% of male piglets may be pre-emptively castrated. The odour occurs mainly because of two compounds, androsterone and skatole, and they increase after puberty in uncastrated male pigs. Slaughtering pigs at a younger age, keeping their housing environment clean, providing special diets for them or using specific breeds can reduce the occurrence of boar taint. Not all male pigs will generate level of boar taint that is detectable by human and not everyone is sensitive to boar taint. One third of consumers do not smell androstenone at all. It varies from individual to individual.

### 3. Are there alternatives to surgical castration?

There are currently commercially available options to replace surgical castration. In some countries, like the UK and Ireland, uncastrated male pigs are raised and the consumers do not have issue with boar taint. In Germany and some other countries, uncastrated male pigs are slaughtered at a younger age to avoid boar taint.

There is another existing very cost-effective method using vaccination against boar taint (sometimes referred to as immunocastration). It uses a vaccine to generate an immune response in the pig to produce antibodies that delay puberty and prevent

boar taint. In some countries, a large proportion of pork producers are using the vaccination method, and it is also more and more widely used in other countries such as Canada, Norway, Sweden, US, Russia, Poland, etc.

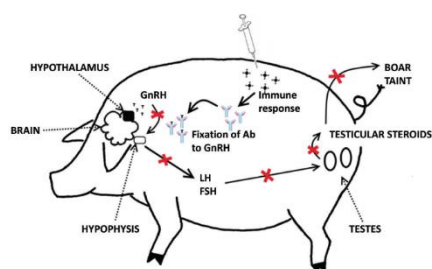


Illustration of the mechanism of using vaccination against boar taint. Čandek-Potokar et al. (2017) <http://dx.doi.org/10.5772/intechopen.68650>

#### 4. Comparison between the three options:

	<b>Surgical castration</b>	<b>No castration</b>	<b>Vaccination against boar taint</b>
Pain and stress of pigs due to invasive surgery	High	No	No
Stress of pigs due to human handling	High (forcibly inverted, held)	No	Low (vaccination)
Risk of boar taint	No	High	Very low with good quality control
Meat quality	Fatter, more tender	Lean, less tender	Medium fat but more tender
Overall benefit to cost	Lower	Higher	Medium
Other negative health or welfare consequences for pigs	Infection, umbilical hernia, increased antibiotic use	Aggression and unwanted sexual behaviour if pigs are slaughtered older	None, usually.

#### Global trend: alternatives to surgical castration

<b>Country</b>	<b>Solution</b>
Brazil	65% of heavy male pigs vaccinated against boar taint
Columbia	More than 90% of male pigs vaccinated against boar taint
Australia	More than 42% of male pigs vaccinated against boar taint
Thailand	20% of male pigs vaccinated against boar taint
UK, Ireland	No castration practiced
Spain, Portugal, Greece, the Netherlands	Majority of male pigs not castrated (10-30% surgical castration)
US/Canada/Russia/Czech/Norway/Poland/Romania/Spain/Sweden/Argentina/Mexico all increase use of vaccination against boar taint	

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